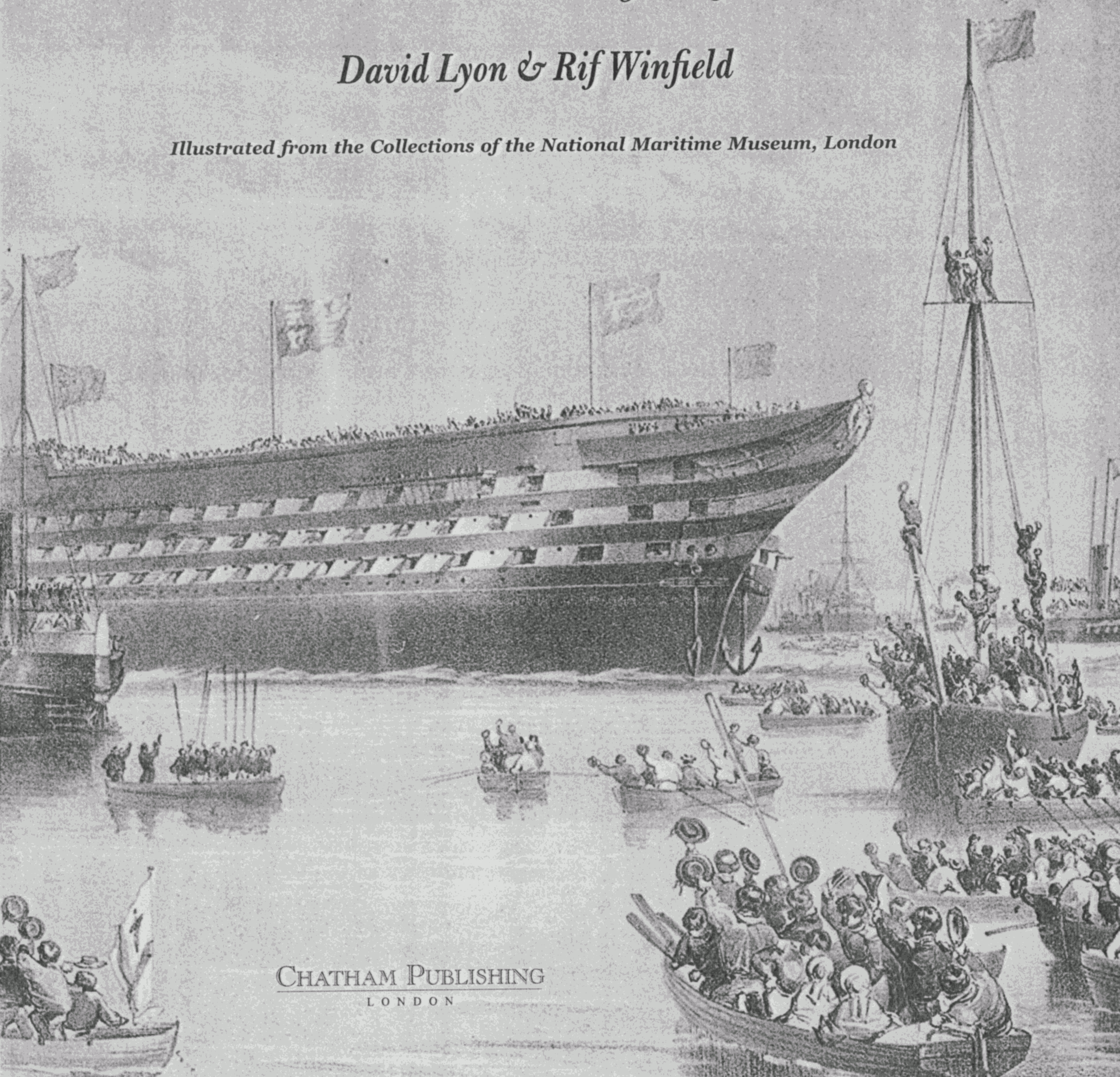
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THE SAIL & STEAM NAVY LIST

ALL THE SHIPS OF THE ROYAL NAVY 1815–1889

David Lyon & Rif Winfield

Illustrated from the Collections of the National Maritime Museum, London



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FRONTISPIECE: The launch of the *Royal Albert* at Woolwich, 13 May 1854. The ship was converted while on the stocks to a screw-propelled steam three-decker of 121 guns. *X438*

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Preface

This book lists all the ships of the Royal Navy from the close of the Napoleonic Wars in 1815 to the passage of the Naval Defence Act of 1889. As such it covers in full the transition from the great sailing three-deckers and frigates of Nelson's day to the emergence of the steam-driven, armoured steel battleships and cruisers that played their role in the World Wars of the twentieth century. It includes all vessels built during the Napoleonic era (or before) which remained afloat at the end of that era; and since the year 1889 reflects the final date of ordering, all vessels entering service up to the end of 1890 are also covered. Altogether, some 4,000 warships and auxiliaries are individually described in detail.

This was the period of the Pax Britannica, during which its naval dominance of the oceans and seas produced British hegemony over much of the world, and for much of which period Britain was, in modern terms, the sole global superpower. To understand how this was maintained we need to understand the tools through which British seapower was deployed around the world; this book seeks to record all pertinent detail of the evolving nature of those implements.

A decade ago, David Lyon produced his ground-breaking study of the sailing vessels of the Royal Navy from the Glorious Revolution of 1688 until the close of the end of sail (all reference hereinafter to 'the previous volume' is understood to identify this *Sailing Navy List*). Among many other involvements, he subsequently began work in preparation for the current volume. While much has been written upon the nature of changes in the nineteenth-century navy, no systematic guide to the entire and ever-changing composition has been attempted. The nature of the revolutionary changes themselves were a barrier. Most studies concentrated upon one aspect of change, or upon one period of change among the several which took place during these 75 years.

David Lyon tragically died in 2000, leaving the work partially complete. Having contributed to the previous volume, and been in possession of the results of many years extensive research through official records – my own as well as that of David and of other colleagues – it fell to me to complete and bring to fruition the work which hopefully serves as a testament to David's passion for historic detail as well as a definitive record of the approximately 4,000 vessels which served in the British Navy between 1815 and 1889.

This book obviously benefits from being a 'sequel' to the previous volume. The first chapter records all those vessels which survived the Napoleonic conflict – a vast level of ships which was numerically not to be matched again for a century, until the massive expansion of the World War of 1914-18. As wartime needs had prevented the disposal of what rapidly became surplus capacity, this snapshot taken on the date of Napoleon's second and final abdication includes almost all the vessels which had fought the Napoleonic Wars (wartime losses apart), including many whose service history stretched back over previous decades. The second chapter contains all those sailing warships which joined the British Navy after this date, until the demise of sailing warships. Ten years of further research following the publication of the previous volume has enabled me to incorporate into these two chapters the corrections and additions to that earlier book which David himself began to record as soon as *The Sailing Navy List* was published, as well as others which have come to light since. In that sense, differences between the two illustrates how far research has come during the intervening 10 years. The previous volume thus fulfilled David's aim of a catalyst which stimulated and drove forward this research.

The remainder of the main listing of this book depicts the gradual evolution of the steam-driven warship (and naval auxiliaries) from their initial minor role as tugs and tenders, to the era when all naval vessels were driven by steam-powered screw propellers. While the revolutions in armament, construction material and propulsion took place at different times and over differing periods (and in each case suffered some reverses), the book falls naturally into two epochs, with the year 1863 serving as a natural break between the old and the new for a variety of purposes. The essay on technical change which forms part of this introductory section best describes a series of processes too complex for precis in this paragraph, perhaps best summed up by the quotation from Admiral George Ballard which begins it.

I have gone beyond 1889 in a number of minor respects. As intended by David, I have included the last of the Victorian gunboat navy – the masted steel sloops and gunboats built in the period up to 1905 – in order to give comprehensive coverage to that type of vessel. I have also chosen to include those remaining torpedo gunboats, all authorised under the 1889 Naval Defence Act, in order to bring the story up to 1892 and the situation immediately prior to the orders placed for the earliest torpedo-boat destroyers which formed the subject of David's 1996 book (see Bibliography).

Acknowledgements

First and foremost, the credit for this book must go to David John Lyon, who conceived and undertook much of the original work on this book, and who I hope would be satisfied and pleased with the completed result. With his premature departure, my thanks go instead to Leo (Eleanor) Sharpston, who graciously allowed me to bring his work to completion.

An undertaking like this must inevitably be the product of contributions from a large number of enthusiastic friends and colleagues, without whose help all David's work and my own labourings would have resulted in a much less complete product.

I should firstly like to express my thanks to Fred Dittmar, who unstintingly over the years has supplied me with literally reams of papers from his own long-standing research, supported by constant advice and painstaking attention to detail in helping me with every query raised; this has helped me in filling out the details in every part, indeed on probably every page, of the book. In particular, the appendices on warships built in Britain for foreign navies, on harbour craft and on coastguard vessels are almost entirely based on data

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supplied by Fred, leaving me with substantially an editorial task on what should be considered his authorship.

Also extensive was the information supplied by David Hepper, who checked out earlier drafts of these chapters and generously filled in some of the gaps and drew attention to a number of points needing correction or better description. Brian Hillsdon subsequently provided a wide variety of additional data and clarified a number of items on later drafts. John Houghton at a later date kindly undertook a large amount of extra research, meticulously sifted through the later drafts and at short notice came up with a large volume of additional data and suggestions for improvements.

Encouragement and help on various specialised aspects have come also from Paul Blackburn, John Landels, Michael Ludden, Hugh Lyon, Dr Roger Owen, Michael and Jane Phillips, Stuart Rankin and David Spender; to all of them in lesser or greater amounts I respectfully owe my thanks, as well as to others to whom I would also apologise for being unable to name. This must inevitably include many who supplied David Lyon with help and support during his research and compilation, and of whose contributions I am thus unaware; they will know who they are, but I have no doubt that they would include the names of Brian Lavery, Andrew Lambert and Roger Morriss.

Along with them I must thank the staffs of the Caird Library at the National Maritime Museum, Greenwich, and at the Public Record Office at Kew, Richmond for this assistance to me in undertaking research over a large number of years, as well as staff at a number of other museums and libraries who cordially tried to answer my lengthy and convoluted queries and helpfully referenced source material for me.

I am exceedingly grateful to Andrew Lambert, not only for his superb and typically comprehensive article on strategy and on the administrative, political and international background to the events with which these vessels were involved, but also for his kind help on a variety of queries.

I am doubly grateful to Robert Gardiner, not only for entrusting me with the task of realising David's intentions, but for undertaking the thankless task of publishing, and in particular for his patient efforts in selecting and arranging the more than 200 illustrations which illuminate the text of this volume. To Rob and his team at Chatham, particularly Julian Mannering and Stephen Chumbley, I offer thanks for their patience and tolerance in the lengthy period of gestation.

My wife Ann, who once more put up with my periodic disappearances within the house or further afield, and with years of books, papers and documents strewn around, has as ever been a constant source of support and encouragement.

Rif Winfield
September 2003

A Note on Illustrations

The illustration of this book was intended to follow the pattern set by David Lyon's previous work, predominantly reproducing original plans but with a leavening of contemporary prints and paintings – to which we have been able to add a few early photographs, a medium not available for the era of sail.

The original rationale for this was simply the absence of any alternative objective depiction of the ships of the sailing navy. Although this becomes less true as the nineteenth century progresses, we continued to favour draughts over prints and photographs because they contain more technical information and show features invisible to the external media. For this reason we have generally chosen Profile draughts – elevations of internal works, where so many of the developments in machinery, armament and even structure can be most clearly seen. However, where classes are rather similar in layout, we have included alternative features like deck plans and sketches of rig, to give the reader a glimpse of another dimension.

During the period 1815 to 1889 warships changed radically, grew immensely in size, and became far more complex. This is reflected in the development of draughting, and for those of a technical bent this can be followed in this book's selection of plans, which evolved from simple ink lines on paper to elaborate shaded and wash effects on tracing linen. The later, larger and more complicated plans are difficult to reproduce clearly, but they are original documents whose inherent interest exceeds their limitations. As ships became more complex they needed more plans per design, to the point where no one plan could give much of an impression of the finished vessel. In a few cases, therefore, we have chosen a photograph or print, types of illustration which are otherwise used to give 'as built' impressions of some typical ships throughout the period of the book.

The National Maritime Museum at Greenwich is fortunate in possessing an unrivalled collection of ship plans, but its sheer size makes it impossible to copy in its entirety. For reasons of speed and economy our choice had to be restricted to subjects that were copied already – which will explain the absence of a few 'obvious' vessels – but the result is still a representative cross-section of the little-known nineteenth-century collection. In terms of emphasis, the transitional navy of paddle and screw wooden steamers receives the greatest concentration of illustration (they are the least-known vessels, and arguably form the core of this book); for sailing ships we have avoided anything illustrated in David Lyon's previous work, and give priority to unusual variants or modifications carried out after 1815. As a small tribute to David's fondness for torpedo craft, there is also a heavy pictorial concentration in the last chapter.

Illustrating the book would have been impossible without the co-operation of Eleanor Driscoll, Head of Visual Media at the National Maritime Museum, and the work of the Picture Library and Photographic Studio; while the task of picture research was made more enjoyable by the positive attitude of Bob Todd and the staff of the Brass Foundry, the Museum's Woolwich outstation. We hope this book goes some way towards repaying their efforts by providing a selected catalogue of a largely unseen aspect of their collection. All illustrations in this book can be ordered, using the reference numbers at the end of each caption, from the National Maritime Museum, Greenwich, London SE10 9NF, UK.

Robert Gardiner
November 2003

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Sources

As with David's previous volume, these chapters are based almost exclusively upon primary source material from the archives of the British Admiralty and (pre-1832) Navy Boards. Official sources are not always to be accepted without query, as anyone who has looked at historic government documents will know. Clerical errors, both in copying and in calculation, are not infrequent. Information is sometimes as contradictory (occasionally even within the same document!) as in secondary sources; and I have extensively and gratefully referenced a number of other works, both published and unpublished, as secondary sources to corroborate and/or to clarify where doubt has arisen.

In dealing with the dimensions and tonnages of wooden vessels, for example, where there was a fixed mathematical relationship between length of keel, breadth and burthen (measurement tonnages), I have re-checked the majority of calculations to eliminate obvious errors. This has sometimes enabled me to fill in gaps, *eg* to back-calculate the keel length for vessels where the breadth and burthen are officially recorded, and in such cases (only) I have inserted the missing dimension with the prefix '*c*' (for *circa*) to indicate that the figure is derived from official documents but is not expressly stated therein.

Nevertheless, some doubt remains over certain details and there are a variety of gaps where no reliable information could be found. I accept full responsibility for any errors and shortcomings, and I would be grateful to hear from any reader who has further information or suggestions concerning the details of these vessels. I am content to echo David Lyon's remark, in the previous volume, that I 'should be very pleased to hear from those who have found primary material which amplifies, or corrects, what is set out here'; but I would repeat his stipulation that information from secondary sources – even published contemporaneously – cannot be accepted as necessarily authentic or accurate.

The dimensions and tonnages for most vessels that were designed and built to Admiralty specifications are taken directly from the draughts for those vessels, rather than lists (even official lists) of statistics. This fact, derived from David Lyon's extensive professional study of the Admiralty Collection of Ship's Draughts, has the advantage that ships built to the same plans can be grouped together even where shipbuilding idiosyncrasies have meant that they diverged (if only by an inch or so) when measured upon completion. It has the complication that designs frequently developed over a series of such draughts, sometimes altering the principal dimensions in the process, and (especially in the earlier period) it is not always possible to identify for certain whether the draughts quoted are those finally used. Mostly, the changes were minor, and I have tried to identify both the original data and that finally applicable where the divergences were significant.

Rif Winfield

The Data

The same format has been maintained as far as possible throughout the book, but as the basis on which these details were calculated altered radically between 1815 and 1889, there has inevitably had to be changes. The earliest vessels – purely sail propelled – are shown in Chapters 1 and 2 with their design dimensions and tonnage, their established complement of men and guns, and their dates of construction or acquisition, and subsequent fates.

The introduction of ***steam propulsion*** results in the need to additionally record the type and power of the steam propulsion machinery involved, together with the speed achieved on acceptance trials; this is shown from Chapter 3 onwards. As in the previous volume on the Sailing Navy, no attempt has been made to record speeds achieved in speed trials by sailing vessels, although it should be remarked that early steamers adopted screw or paddle propulsion to complement their performance under sail, and well into the latter part of the nineteenth century speeds under steam rivalled those achieved under sail in vessels which retained a full sailing rig. Where known, details of the type of steam boilers installed and of the weight of coal that could be carried are included.

While all guns mentioned in Chapters 1 to 4 were of the ***smoothbore***, ***muzzle-loading*** (MLSB) type, the adoption of various methods of ***rifling***, and the substitution of ***breech-loading*** guns for muzzle-loaders, has required greater detail for later armaments. Increasingly, the diameter of the projectile superseded its weight as the main determinant of a gun's classification; for breech-loading (BL) and rifled muzzle-loading (MLR) guns, therefore, the diameter has been shown as well as (or instead of) the weight. The weight of the gun itself rose dramatically as firepower and gunfounding capabilities increased, and these weights are shown (in parenthesis) where a clear distinction is required. In this connection, however, it should be noted that the rapid evolution of guns in the second half of the era required a re-armament of vessels more often than hitherto, and – while major re-arming is detailed in class footnotes – no complete list of all changes in armament has been attempted.

Finally, the adoption of plate ***iron armour*** (superseded at the end of our period by ***steel*** compound armour) requires for such ships the inclusion of the thickness of such armour in various parts of the ship. Consequently, by 1889 there has to be much greater details shown for each class of vessel. In view of the vast quantity of data contained herein, no attempt has been made to show metric equivalents; should any individual dimensions by sought, the reader should simply convert the dimensions (as recorded in inches) by multiplying by 2.54 to give the answer in centimetres.

Wooden hulled vessels are detailed in separate chapters from those with ***metal*** (originally iron, later steel) hulls. It may be remarked that there was a long era of transition. The adoption of iron for the battlefleet was, notwithstanding a lengthy period of evaluation before the Admiralty took the plunge, a remarkably swift process in that the decision to construct only ironclads was made

within months of the launch of the prototype *Warrior*. However, for cruising vessels the decision was more complex, and wooden hulls were still being built well into the 1880s for the smaller cruisers. A variant of this process produced the ***composite*** warship, with wooden planking fastened over an iron frame and ribs.

For vessels designed and built for the Navy, the dimensions and tonnages shown are those as ***designed***. Individual vessels built to these designs ('draughts') inevitably varied fractionally – although perhaps less so than is sometimes imagined – but no attempt has been made to show such variations except where they were significant. Design dimension are clearly impractical for vessels purchased from mercantile sources or otherwise acquired, and in all such cases the dimensions shown are those actually ***measured***.

For each category of vessel, designs (or '***classes***' as they are generally known now, although it should be remarked that the earlier usage of this term referred to a specific rating or grade of vessel rather than individual designs) appear chronologically according to the earliest order placed for a vessel to this design. Within each class, vessels appear in their chronological sequence of ordering – for ships ordered on the same date, the date on which work actually commenced (*ie* the date on which the keel was laid) has determined the order of appearance. A fully alphabetical list of all vessels appears at the end of the book to help locate any individual name.

Each individual vessel's name is followed immediately by that of the Dockyard or commercial shipyard in which it was built; in the case of several major shipbuilders, the builder's serial ('Yard') number follows in parenthesis. For steam-powered vessels, there then follows an oblique stroke ('/') and then the name of the engine builder; in many cases, the indicated horse power (ihp) and speed (in knots) achieved over the measured mile in acceptance trials then appears in square brackets – but this statistic is subsumed into the 'Machinery' line for single vessels not forming one of a class. Where no official record of the engine-builder appears in Admiralty records consulted, a series of dots follows the oblique stroke instead; but in most of these cases it can be assumed that the shipbuilder also provided the engine.

Any vessel which changed its mode of propulsion (*eg* by the installation of steam machinery in a former purely sailing vessel), or which underwent major rebuilding such as the cutting down by a complete deck of a wooden warship (a process known as 'razéeing'), is treated as a new ship upon its reappearance, and all data for the rejuvenation – including details of the yard where the work was undertaken, and the date of re-launch or undocking – are given under that second appearance in the book. As far as practical, these are the only duplications of entry allowed in the main body of the book. Other than this, minor changes, including alterations to armament (which became more common as the century progressed), are not treated as requiring a fresh entry.

The data shown throughout this book has been taken from a variety of official sources – substantially the Admiralty records at the the National Maritime Museum at Greenwich or at the Public Records Office in Kew.

Glossary

The following alphabetical list of lesser-known nautical and other specialised terminology incorporates an explanation of abbreviations used and definitions used in this book.

AO Admiralty (Board) Order (date).

BU Broken up (ship taken to pieces).

Cyl./cyls. Steam reciprocating engine cylinders, for which the diameters (of the bore) in inches and length of stroke (in feet and fractions of feet – sometimes in inches instead) are quoted.

Dates All dates are given in UK format, *ie day.month.year*. Abbreviations preceding these dates are -

Ord date ordered (to be built) by the Admiralty – note that, for vessels built by a commercial shipbuilder, this is not the same date as the date on which a contract was signed.

While until about 1863 it is possible to ascribe precise dates to the placing of an Order by the Board to build any vessel, the subsequent convoluted system which developed caused the whole process to be incremental, and precise dates are really meaningless.

App [for converted ships only] date of Admiralty approval for the conversion to be effected.

K date the keel was laid down – note that work might in some cases have already taken place off the slipway.

L date of launch (where known, this is also quoted for ships purchased or otherwise acquired after being built, or while building was taking place) or – for those few vessels built in a dry dock – of undocking.

C date of completion. These are not usually given for wooden ships, which traditionally were launched virtually complete, but required masting and fitting out. For post-1815 vessels, however, the dates on which fitting was completed are shown for all except the smallest vessels. One must note that the masting and fitting was almost invariably done in the Royal Dockyards, to which the launched hulls were moved when delivered at the commercial shipbuilders' sites; due to lack of experience in fitting out vessels at the comparatively new Pembroke Dockyard, ships launched here were similarly completed at one or other of the older Dockyards until close to the end of the sailing era.

Comm date of commission (sometimes quoted in lieu of completion date).

Decks The decks on which guns were mounted are listed with the following abbreviations -

Fc ***Forecastle*** (deck).

LD ***Lower deck***. Note this was the *lowest deck to mount guns* in a wooden warship; other decks below this (without ports) were the *orlop deck* and the *hold* itself, but they did not bear guns.

MD ***Middle deck***. On a three-decker, the intervening gun-bearing deck between the upper and lower deck, carrying the second full-length tier of guns. Note that on some three-deck screw battleships, where the flush deck arrangements resulted in the 'upperworks' (or combined QD/Fc, joined by a ***Spar***

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deck) being called the Upper deck, the deck between the Middle deck and the Upper deck was called the *Main deck*; this is not abbreviated in the book.

QD ***Quarter deck*** (usually just quarterdeck).

RH ***Roundhouse*** (deck) or poop (deck).

UD ***Upper deck***. The uppermost continuous deck of a vessel, excluding superstructure or 'upperworks'.

Note that officially the lowest continuous armed deck in any two- or three-decked warship was officially the ***Gun deck*** (in frigates, this was confusingly used for the continuous deck immediately below the Upper deck, even though no guns were mounted here). To avoid confusion, the editor has chosen not to use the term in this book.

Another difficulty arises in the use of the term ***Main deck***, particularly in three-decked warships. From the eighteenth century the open space between the forecastle and quarterdeck – the ***waist*** – had increasingly been eroded by the introduction and later widening of the gangways joining the two parts of the upperworks, and by the creation of the ***spar decks*** spanning the gangways. By the 1820s the remaining space had become totally closed in (albeit leaving wide gratings for air and lighting), forming a single complete deck *above* the upper deck. In some sources this took over the name *Upper* deck, and the deck formerly bearing that name became the *Main* deck. Nevertheless the conservatism of sea officers ensured that this was never fully adopted in the sailing Navy, and the three parts of the new deck retained their old names (forecastle, spar deck, quarterdeck). In the British Navy, other than a short-lived experiment, the spar deck did not carry guns (as happened in the USN, for example). To avoid confusion I have retained the abbreviation 'UD' and 'QD/Fc' (occasionally 'Spar deck') for the two uppermost decks, and omitted the term 'Main deck' for sailing vessels, but for steam vessels the abbreviation 'MD' is used for main deck, while 'UD' becomes the continuous deck above this.

Dimensions Throughout the book, dimensions quoted are length x breadth x depth in hold; all measurements are in imperial feet (ft) and inches, with fractions of inches (in). Two lengths are usually given, separated by a comma; the first is length on the gundeck (the lower deck in larger vessels), the second is the length of keel for tonnage (a somewhat artificial figure which is not the same as the actual length of the keel itself). When measurement tons were abandoned and finally replaced by displacement tons, the keel length ceased to be meaningful. At this time the length quoted became that between perpendiculars (herein rendered as 'pp') and that is used for all later vessels. For some ships the overall length ('oa') or waterline length ('wl') is additionally given. The breadth given is that used for tonnage, actually the breadth at the broadest part of the ship, initially measured inside the planking and later outside the planking (but still inside the wales); until the 1830s this was the breadth used in calculating tonnage, but from that time extreme breadth ('oa', including the wales) is additionally quoted. For metal-hulled ships, only extreme breadth is given. The depth in hold is – like keel length – a somewhat artificial figure, initially used in calculating a ship's measurement tonnage; it did not apply to metal ships, and the final dimension quoted for these was usually the laden draught.

Engines The steam reciprocating engine was the standard steam propulsion system used throughout the second half of the nineteenth century. Engines were initially of simple expansion type, using low pressure cylinders. The introduction of the compound expansion type, using steam at high pressure in one cylinder, and then re-using the steam in a second cylinder, considerably reduced coal consumption; note the abbreviations 'HP' (for high pressure cylinder) and 'LP' (for low pressure cylinder) have been used in the appropriate sections. Finally, towards the end of our period, the triple expansion type – using steam at three pressures – was developed.

Guns *See article and tables on ordnance below.*
Until the 1850s, all guns were smoothbore muzzle-loaders ('MLSB') of the type that had been current since the sixteenth century. These usually fired projectiles of solid shot (which may have been round shot, or less commonly chain, hammer or bar shot), although by the close of the Napoleonic period the use of shell-firing MLSB guns was beginning. Later guns were breech-loading rifled guns (here simply 'BL' as all breech-loaders were rifled) or rifled muzzle-loaders ('MLR'). An oddity was the Lancaster gun, which had a slightly oval bore, with the ellipse being twisted to impart spin to the projectile. For all guns, the projectile weight ('pdr', or weight in pounds) is quoted, except that for later guns the width of the shell (in inches) was increasingly given and finally superseded all projectile weights. For later guns, as different marks of guns were introduced, the weight (in cwt or tons) and sometimes the length (in feet and inches) of the guns themselves became more significant and these are shown as appropriate, but always in parenthesis.

Lazarette (or lazaretto) Hulk used as accommodation for seamen undergoing quarantine. The name – and the concept – came from Italy, where the practice of rigid quarantine to prevent or at least limit the spread of the plague and other infectious diseases was developed.

Lump Short, heavy lighter used in Dockyards for carrying anchors, chains and heavy stores to and from ships.

NMM National Maritime Museum, Greenwich.

Powder hulk Vessel for storing and issuing gunpowder – usually moored well away from the dockyard to which they were attached. Usually under the control of the Ordnance (which was a separate organisation to the Army or Navy, though later coming under the control of the former).

PRO Public Record Office, Kew, Richmond.

Receiving ships Hulks intended to receive men, or stores, or both. Accommodation hulks and store hulks and vessels used for both purposes. The Royal Navy did not build barracks for its seamen in home ports until the beginning of the twentieth century – before this hulks were used for accommodating men between commissions, or before they were assigned to ships (particularly pressed men who needed to be kept in some form of confinement to prevent desertion).

Sbdg 'Shipbuilding' (as found in various shipbuilding firms' titles).

Sheer hulk A vessel fitted with a pair of 'sheer legs' (two large spars forming an 'A frame') to hoist masts in and out of vessels. In effect a floating crane. Some other navies used large cranes mounted on towers for this purpose (a fine example of one of these can be seen at Copenhagen Dockyard, for example) but the Royal Navy preferred to use sheer hulks – and in fact had three purpose-built ones (two at Chatham and one at Plymouth) – the only examples of hulks built as such that David Lyon has been able to find.

Surveyor (of the Navy) At the start of the nineteenth century, the Surveyors (there were often two or three) were the Chief Designers of naval vessels for the Navy Board. A full list for 1815 onwards in to be found in Appendix A. From 1832, when William Symonds became the sole Surveyor, the postholder was directly responsible to the Admiralty Board. After 1848, when Symonds was succeeded by Sir Baldwin Wake Walker, the post became more administrative, with detailed design responsibilities left to the Surveyor's assistants. In 1860 the post was in consequence redesignated Controller of the Navy, while design responsibilities were left to the newly created post of Chief Constructor.

Tank Vessel Dockyard craft fitted with iron tanks and pumps to provide water to ships in harbour.

Tons For wooden ships, this is Builders' Measurement tonnage ('bm' throughout the book), a naval formula used in calculating the carrying capacity (*ie* volume) of the hull. Since the early eighteenth century, it was calculated using the formula (k x b x ½b ÷ 94) where k and b are the keel length and breadth as defined in 'Dimensions'; this explains why fractions of a ton are quoted in ninety-fourths. For metal ships, the tonnage quoted in displacement ('disp' throughout the book), and this was retrospectively calculated for most wooden ships from the 1830s (and is additionally quoted where known). As with dimensions, the figures given for each class are the design tonnages where known; otherwise, and for all vessels purchased or otherwise acquired after building, the 'as-built' or actually measured tonnage is given.

Torpedoes Initially launched from carriages (TCs) then tubes (TTs).

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Chronology

The significant dates of the 1815-1889 period are:

1816 The Bombardment of Algiers by a joint Anglo-Dutch force on 27 August (led by Admiral Lord Exmouth, with the three-deckers *Queen Charlotte* and *Impregnable*) resulted in the submission of the Dey of Algiers.

1824 The First (Anglo-) Burmese War led to the capture of Rangoon on 11 May by a naval contingent under Commodore Charles Grant in the 50-gun *Liffey*, with the sloops *Larne*, *Slaney* and *Sophie*. Also involved was the paddle vessel *Diana*, the first use by the RN of a steam-powered vessel in a combat role.

1827 An Anglo-Franco-Russian squadron, under Sir Edward Codrington in the 84-gun *Asia*, destroyed a combined Turkish-Egyptian fleet at Navarino Bay on 20 October to end the Greco-Turkish War.

1839 The First China War, resulting in the seizure of Hong Kong (on 23 August) and the 1841 attack on Canton to destroy installations there. The War ended with the Treaty of Nanking on 29 August 1842.

1840 The Bombardment of St Jean d'Acre by a joint Anglo-Austrian-Turkish force on 3 November (under Sir Robert Stopford in the three-decker *Princess Charlotte*) defeated the Egyptian forces of Mohamed Ali who then evacuated Syria. [Note that by this date the Egyptian Navy, rebuilt since Navarino, constituted a major naval force in the eastern Meditarranean, including eleven ships of the line, four of which mounted 100 guns.]

1852 The Second (Anglo-) Burmese War led to the capture of Rangoon on 14 April.

1854 Declaration of War by Britain (and France) against Russia on 27 March. The following two years witnessed naval warfare not only in the Black Sea but also in the Baltic and the Far East during what is erroneously styled the 'Crimean' War.

1856 The Treaty of Paris, signed on 30 March (and ratified on 27 April) brought the Russian War to a close.

On 23 April Queen Victoria reviewed at Spithead some 240 vessels – including 24 ships of the line and 19 screw frigates/corvettes (and just one sailing frigate) – most of which had recently served in the Black Sea or Baltic.

The Second China War saw the capture of Canton on 25 October by a squadron under Sir Michael Seymour in the 84-gun *Calcutta*.

1858 The Bombardment of the Taku forts at the mouth of the Peiho River on 20 May resulted in the Treaty of Tientsin on 27 June. However, the Treaty was not implemented; Britain renewed the War on 8 April 1859 but an attack on the forts was repulsed on 25 June.

1860 An assault on the Taku forts on 21 August was successful, and Peking was occupied in October; the Treaty of Peking was then ratified on 24 October to bring the war to a close.

1862 Vote in Parliament in April on a motion for an end the construction of wooden capital ships was put by William Schaw Lindsay (b.1816), shipowner (formerly serving in the merchant service) and MP for Tynemouth & North Shields 1854-59, then for Sunderland 1859-65. This marked the death knell of the wooden battlefleet.

1867 Queen Victoria's (Pearl Jubilee) Review at Spithead on 17 July witnessed the last occasion on which a wooden battleship (here the three-decker *Victoria*) officiated as the flagship.

1882 Bombardment of the forts at Alexandria by the Mediterranean Fleet on 10 July was followed by the occupation of the Suez Canal on 20 August and in September by the defeat of the Egyptians at Tel-el-Kebir.

1884 The 'Northbrook' Programme provided for the expenditure of £3.1m over a period of 5 years on new construction, comprising 2 battleships, 5 armoured cruisers, 6 torpedo cruisers and 14 torpedo boats.

1887 Queen Victoria's Golden Jubilee Review at Spithead on 23 July included 14 battleships, 4 coast defence ships and 12 large cruisers among the 131 vessels present.

1889 The Naval Defence Act (see 'Postscript' for full details) provided for the expenditure of £21.5 million over a period of 5 years to fund the construction of 70 vessels, and in effect wrote *finis* to the Victorian gunboat navy.

The annual authorised expenditure on the Navy over the period 1816 to 1889 (initially calendar years, but '1831' ran 15 months to 31.3.1832, thereafter each year commenced 1 April), and the number of personnel authorised, was as follows:

	Expenditure	*Seamen & boys*	*Marines*	*Total*	
1815	£19,032,700	70,000	20,000	90,000	(from 26.3.1815)
1816	£13,114,345	24,000	9,000	33,000	
1817	£7,645,422	13,000	6,000	19,000	
1818	£6,547,809	14,000	6,000	20,000	
1819	£6,527,781	14,000	6,000	20,000	
1820	£6,691,345	15,000	8,000	23,000	
1821	£6,391,902	14,000	8,000	22,000	
1822	£6,480,325	13,000	8,000	21,000	
1823	£5,442,540	16,000	8,700	24,700	
1824	£5,762,893	20,000	9,000	29,000	
1825	£5,983,126	20,000	9,000	29,000	
1826	£6,135,004	21,000	9,000	30,000	
1827	£6,125,850	21,000	9,000	30,000	
1828	£6,395,965	21,000	9,000	30,000	
1829	£5,878,794	21,000	9,000	30,000	
1830	£5,595,955	20,000	9,000	29,000	
1831	£7,221,797	22,000	10,000	32,000	(15 months, to 31.3.1832)
1832	£5,045,827	18,000	9,000	27,000	
1833	£4,803,647	18,000	9,000	27,000	
1834	£4,716,894	18,500	9,000	27,500	
1835	£4,434,783	17,500	9,000	26,500	
1836	£4,689,651	24,700	9,000	33,700	
1837	£4,930,736	25,165	9,000	34,165	
1838	£4,960,911	25,165	9,000	34,165	
1839	£5,532,724	25,165	9,000	34,165	
1840	£6,182,247	26,165	9,000	35,165	(until 31.5.1840)
		28,165	9,000	37,165	(until 30.12.1840)
		30,665	9,000	39,665	(from 1.1.1841)

	Expenditure	*Seamen & boys*	*Marines*	*Total*	
1841	£6,772,969	32,500	10,500	43,000	
1842	£7,000,442	32,500	10,500	43,000	
1843	£6,579,960	28,500	10,500	39,000	
1844	£6,466,019	25,500	10,500	36,000	
1845	£7,344,363	29,500	10,500	40,000	
1846	£7,920,324	29,500	10,500	40,000	
1847	£8,068,985	29,500	11,000	40,500	(until 30.9.1847)
		29,500	12,000	41,500	(from 1.10.1847)
1848	£7,955,001	29,500	12,500	42,000	(until 30.9.1848)
		29,500	13,500	43,000	(from 1.10.1848)
1849	£7,021,724	28,000	12,000	40,000	
1850	£6,672,588	28,000	11,000	39,000	
1851	£6,543,255	28,000	11,000	39,000	
1852	£6,705,746	28,000	11,000	39,000	(until 30.11.1852)
		33,000	12,500	45,500	(from 1.12.1852)
1853	£7,197,804	33,000	12,500	45,500	
1854	£5,017,591	48,000	15,500	63,500	
1855	£9,590,833	54,000	16,000	70,000	
1856	£16,568,614	60,000 [1]	16,000	76,000	
1857	£9,962,840	38,700 [2]	15,000	53,700	
1858	£9,878,859	44,380	15,000	59,380	
1859	£11,775,718	47,400	15,000	62,400	
1860	£11,836,100	66,100	18,000	84,100	
1861	£12,640,588	59,000	18,000	77,000	
1862	£11,794,305	56,850	18,000	74,850	
1863	£10,736,032	57,000	18,000	75,000	
1864	£10,708,651	53,000	18,000	71,000	
1865	£10,392,224	52,000	17,000	69,000	
1866	£10,434,735	51,450	16,400	67,850	
1867	£10,978,253	52,912	16,400	69,312	
1868	£11,157,290	52,070	14,700	66,770	
1869	£9,996,641	49,000	14,000	63,000	
1870	£9,370,530	47,000	14,000	61,000	
1871	£9,789,956	47,000	14,000	61,000	
1872	£9,532,149	47,000	14,000	61,000	
1873	£9,899,725	46,000	14,000	60,000	
1874	£10,440,105	46,000	14,000	60,000	
1875	£10,825,194	46,000	14,000	60,000	
1876	£11,288,872	46,000	14,000	60,000	
1877	£10,971,829	46,000	14,000	60,000	
1878	£12,129,901	46,000	14,000	60,000	
1879	£10,586,894	45,800	13,000	58,800	
1880	£10,566,935	45,800	13,000	58,800	
1881	£10,945,919	45,100	13,000	58,100	
1882	£10,483,901	45,100	12,400	57,500	
1883	£10,899,500	44,850	12,400	57,250	
1884	£11,185,770	44,550	12,400	56,950	
1885	£12,694,900	45,564	12,770	58,334	
1886	£13,270,100	48,500	12,900	61,400	
1887	£12,476,800	49,600	12,900	62,500	
1888	£13,082,800 [3]	49,500	12,900	62,400	
1889	£13,685,100	51,400	14,000	65,400	

Notes: [1] Reduced to 40,000 after 3 months (i.e. 1.7.1856). [2] Increased to 40,700 after 3 months (*ie* 1.7.1857). [3] Excluding £10 million special expenditure for new construction (authorised under the Naval Defence Act).

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The Administrative, Political and International Background

This book provides the most accurate and comprehensive listing possible of the ships built or projected for the Royal Navy between 1815 and 1889. It is based on a lifetime of scholarship in the premier archive of naval technical information. For some the quality of the information contained in the list will be an end in itself, and they will want to pass on to the main body of the text. However, David Lyon always intended this work to be the basis for a better understanding of naval policy, tactics, strategy and infrastructure, the determinants of procurement, along with the mechanisms, processes and methods by which the Royal Navy conceptualised, designed and built warships.

The purpose of this introduction is to establish the connection between ship design, national strategy and naval policy. In that respect it is neither a design history nor a record of policy; instead it offers a distinct approach to the reading of designs, and the consideration of policy.

The value of the information contained in this volume will depend upon the way in which it is used. Every ship design can be read and assessed against the wider demands of the Royal Navy, the context that is essential if the real worth of the ship is to be properly understood. Every ship is a compromise between ideal levels of armament, protection, speed, endurance, crew comfort and cost. The best design is the one that most nearly meets the needs of the customer, not the one with the most firepower per ton, or the highest nominal speed.

A careful examination of any ship design should reveal much of the strategy that was in place at the time it was ordered. Strategy and policy are not made on paper. The production of papers is both cheap and easy, but they were often only part of a wider process and were written for purposes which are far from obvious to the modern reader. By contrast the expenditure of money on ships, infrastructure and personnel are the acid test of strategy and policy. The ships, their deployment and operation can be read as easily as a file of papers, but they provide evidence of far greater weight. For example, this book concludes with the Naval Defence Act of 1889. The combination of ship types, and their individual characteristics, tell the careful reader that Britain was re-asserting her sea control strategy, that she expected to blockade her main enemy, France, with a fleet of ocean going battleships, capable of fighting on the high seas, supported by a large force of cruisers, for close blockade and commerce protection, with torpedo gunboats to counter the threat posed by French flotilla craft. Distant waters were catered for with a pair of second-class battleships and some modified cruisers. Using the information set out in this book it is possible to see how these ships differed from those that had preceded them, but also to place them in the continuum of British battlefleet-based sea control.

In theory British warship designs were the result of a process that began with specifications and requirements being set by the Board of Admiralty, the political/military administrative body that was responsible to Parliament and the Crown for the service. Once the basic type of ship had been decided, naval and economic issues determined the size and cost of the ship and the basic design parameters were sketched. At this stage the task was passed to professional designers, initially the Surveyors of the Navy down to 1832, then the Constructors working in the Surveyor of the Navy's Office, the post of Surveyor having been redefined, being held by a naval officer charged with long-term construction and maintenance policy. In 1860 this officer was given the more appropriate title of Controller, held by the head of the Navy Board before 1832. The designers worked in the Somerset House complex, isolated from the Admiralty in Whitehall until the late 1850s, when the pace and significance of technological change became such that it was imperative to have the Controller at the right hand of the Board. The Controller's proposed design was then submitted to the Admiralty Board for approval or modification and then ordered. The Controller was responsible to the Board for the execution for the agreed policy. In reality the process tended to be led by the Surveyor or Controller, who was also responsible for the working of the Royal Dockyards where all the wooden, and many of the iron warships were built. This officer had a long-term view of the programme needs of the fleet, which ships would need replacing, which slipways would become vacant, and which yards had the manpower or timber to build specific types of ship. He was also independent of the reconstruction of the Admiralty Board that took place at every change of ministry. Between 1852 and the late 1880s the naval members of the Board were gradually removed from the political sphere, ceasing to sit as Members of Parliament, and keeping their posts at a change of government. Even so, annual programmes were designed by the Controller/Surveyor, and approved by the Board, which had the responsibility to integrate naval requirements with economic and political issues, ranging from reduced annual estimates to mutating political or diplomatic priorities. However, the role of the Controller and designers remained subordinate to the Board. Between 1869 and 1872, and again after 1882 the Controller was a member of the Board, as the Third Naval Lord. This move reflected the growing importance of design and construction policy within the overall naval policy framework.

The primacy of political concerns was clearly established during the economic regimes of the 1870s and early 1880s, when Nathaniel Barnaby found his work constrained by artificial size and cost limits, imposed to satisfy the whims of Gladstonian finance. That politicians would have been better advised to take professional advice was clear at the time, and has been demonstrated many times since, notably with the sorry story of the Type 42 destroyers.

Down to 1832 the main design influence on naval steamships was that of Sir Robert Seppings, one of the Surveyors of the Navy, and his assistant, Oliver Lang, later Master Shipwright at Woolwich, the pioneer steam dockyard. They produced conservative, but sturdy

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and durable pioneer steamships. With the abolition of the Navy Board in 1832 the office of Surveyor was transformed from a design to a policy role, and under the new Surveyor, Captain Sir William Symonds (1832-1847) the chief designer was John Edye, although several ships were designed by Master Shipwrights, notably Lang's *Terrible,* and the *Desperate* and other units by John Fincham. Symonds' contribution was an unusual hull form, which produced controversial results when applied to heavy sailing ships, and proved less than ideal for the installation of steam machinery. However, the role of the Chief Engineer, Thomas Lloyd, became increasingly important, especially after the end of Symonds' regime in 1847. This was followed by a brief period of direction by a Committee of Reference, before Captain Sir Baldwin Walker was appointed Surveyor in 1848. Walker oversaw a reformed office, far more concerned with policy than that of his predecessor. With a core design team of Edye, Lloyd and a second constructor, Isaac Watts, Walker centralised the design process and set out long-term construction programmes using these standardised designs. Edye designed the first steam battleship in 1847, and after Edye's retirement in 1857 Watts produced the *Warrior*. In 1861 Walker left the office of Controller, being replaced by Captain Sir Robert Spencer Robinson, while Watts made way for Edward Reed in 1863. The Robinson-Reed regime oversaw the creation of an ironclad fleet, marked by a series of breakthrough designs: the battleships *Bellerophon* and *Devastation*, the cruiser *Inconstant*, and the armoured coast assault turret ship *Glatton*. Both men objected to the self-promoting turret pioneer Cowper Coles, leading to Reed's resignation. Having been placed on the Board in 1869 Robinson was aiming to reach the top of naval administration, but a clash with First Lord, Hugh Childers, led to his dismissal at the end of his second five-year term, in early 1871. This followed the *Captain* tragedy for which the First Lord had tried to blame the Controller's Office. The Controller was removed from the Board in 1872, although only until 1882, while the Government was careful to appoint less powerful figures to the post of Controller, and not to keep them in post for so long. Instead the main burden fell on the Director of Naval Construction, Nathaniel Barnaby, who designed ships for the quiet years from 1871 to 1885. In 1885 he made way for Sir William White, who designed the ships of the Naval Defence Act, and succeeding classes down to 1902. His masterpiece was the pre-Dreadnought battleship: his *Royal Sovereign*, *Majestic* and *Formidable* classes sustained British dominance into the twentieth century.

The Policy Background

By the early 1820s British naval policy had settled down after the Wars of the French Revolution and Empire (1793-1815) into a two-power standard in battleships, to counter the potential threat of France and Russia combined. It was hoped that 100 battleships would be available in the first year of a major war, with 160 frigates and other craft. These figures were based on the available manpower. The threatened combination did not come to pass until the 1890s, and even then was not primarily aimed at Britain. It was the only alliance that could challenge the basis of British power, the undisputed use of the sea, in peace and war, to carry the commerce of the world. Britain was a maritime trading empire, not a territorial power. Much of her wealth stemmed from her dominance of non-imperial territories, notably Argentina, rather than those areas under direct rule. The 'informal empire' system was based on capital investment and commercial dominance, without the cost and complexity of political control. It worked while the long arm of the British state could reach any country that attempted to default on loans, or seize British subjects or property. The Royal Navy provided the right arm of the state, and received regular and generous support from the commercial classes whenever its dominance was, or could be claimed to be, under threat. There were occasional naval scares, in the mid-1820s, the late 1830s, and a longer period of alarm between the late 1840s and the mid-1860s, and again in 1883-84 and 1888-89. These alarms were used to reinforce the fleet, although they were often groundless, or at best greatly exaggerated.

One of the key tasks of the Royal Navy was to persuade other nations to give way without fighting. War was a costly distraction from trade and investment, and after 1815 Britain had no need of more territory, or any wish to fight another major war. The vast increase in the National Debt over the previous 22 years now dominated the Budget, and orthodox financiers argued that the fiscal power of the state had to be rebuilt as a critical element in national strength. Therefore naval construction was limited, and the post-war reconstruction programme of new ships and dockyard works was spread over decades.

In this respect the occasional arms race was an effective method of warning off potential rivals without the cost of war, gaining diplomatic leverage from sudden additional naval budget. The Navy was often complicit in these scares, circumventing Treasury limits with carefully prepared alarms. John Fisher was a master of this art. Long before he became First Sea Lord he co-ordinated the provision of information that undermined the Government's position on naval spending in the mid-1880s, at the behest of Admiral Sir Geoffrey Hornby. Nor was this an isolated incident. A close study of naval policy between 1820 and 1890 throws up numerous alarms, in which real issues were quickly obscured by exaggeration and service, political or personal agendas. Sometimes the pressure came from the highest sources – naval expenditure under Lord Derby's two minority Conservative ministries of 1852 and 1858-59 was driven up by Royal concerns, which had a disastrous impact on Benjamin Disraeli's budgets, and effectively brought down the Government. Even Lord Palmerston, backed by a powerful Liberal Party between 1859 and 1865, had to wage a six-year struggle to secure adequate defence spending against the Chancellor, William Gladstone, and the Radical wing of his party. His most reliable allies were the Conservative opposition.

The strategic tasks for the Navy remained those of the eighteenth century: to secure and exploit sea power to control the major sea areas, from the English Channel and European littoral to the West Indies, the Indian Ocean and the connecting sea routes. This provided home defence, the security of overseas commerce, and possessions. It was based on battlefleet superiority, secured in battle by a close blockade of the enemy fleet, which would provide the basis for an offensive commercial blockade, coastal assault or amphibious power projection. The seizure of overseas territories to weaken rival economies, and to serve as diplomatic counters for peace negotiations, would be a useful fringe benefit. It also provided defence for oceanic shipping, on which entire economy rested. Uniquely dependent on

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sea control, Britain could not afford to, and never did, allow any other power to acquire a superior fleet. Arms races were frequently used to avoid war through the accumulation of an overwhelming naval force. This very successful policy provided the basis for strategic deterrence in times of international tension. The Navy was repeatedly used to signal British resolve to potential aggressors; France, Russia and the United States all recognised that they could not defeat Britain, and gave way.

Down to the 1850s the standard of naval power remained the wooden sailing battleship, and Britain sustained her lead in this type, as shown in *The Sailing Navy List*. Steam-powered ships were introduced into this sailing fleet as an auxiliary type, and only in 1852 was the steam-powered battleship accepted as the basic standard of naval power.

It was revealing that the first vessel owned by the Royal Navy to use a steam engine was a dredger. This may serve as a metaphor for British policy on steam power. Steam was introduced into naval service when it could improve an existing system, or provide a new method of carrying out essential business. It did not revolutionise the conduct of operations at sea overnight. Early steam engines were expensive, heavy, uneconomic and ill balanced. They were far from ideal power plants for wooden ships. Having been developed for pumping they were first used to empty docks. Successful inshore demonstrations of steam propulsion in America and later in Scotland did not impress the Admiralty. Instead they were taken by the ease with which steamers could tow large warships from Deptford and Woolwich to Gravesend, a passage often delayed by adverse winds. Rather than continue to pay the high charges of private companies, the Admiralty elected to purchase its own vessels. Their success prompted consideration of wider roles, notably assisting the bomb vessels sent to Algiers in 1824, and the establishment of an all-steam mail route from Falmouth to Corfu by 1830. This strategic mail route, and an ever-widening network of reliable timetabled steam routes, was privatised in 1837, establishing several major commercial steamship lines including Cunard, Peninsula & Orient and Royal Mail in the process.

As the Royal Navy moved out of mail transport it developed the first serious steam warships, the *Gorgon* type steam frigates. These combined paddle-wheel propulsion with heavy armament, by increasing the calibre, rather than the number, of guns. In the 1840s the Tory administration led by Sir George Cockburn attempted to build gun-deck paddle-wheel warships, notably the mighty *Terrible* of 1845. This four-funnelled monster was bigger than an old 74, carried 16 heavy guns and had the power to tow two battleships, or steam at over 12 knots. However, the type was a dead-end. It could not engage a conventional sailing line of battleship, and therefore remained an auxiliary type. The last paddle warships were smaller, and less ambitious. They were replaced by a new technology, the screw propeller.

Pioneered in the mid-1830s the screw was perfected by the Admiralty, with the assistance of Isambard Kingdom Brunel, during the construction and trials of the world's first screw warship, HMS *Rattler*. By placing the propeller below the waterline, and aft, the new system enabled the Admiralty to conceive of a warship in which the steam plant played an auxiliary role. It would provide tactical power, to enter or leave harbour, avoid a lee shore, or take up a more advantageous position for combat. At all other times the ship would rely on sail. The new system would also allow designers to sacrifice the handiness necessary in an all-sail warship, secured by a relatively short beamy hull, for higher speed using a longer hull.

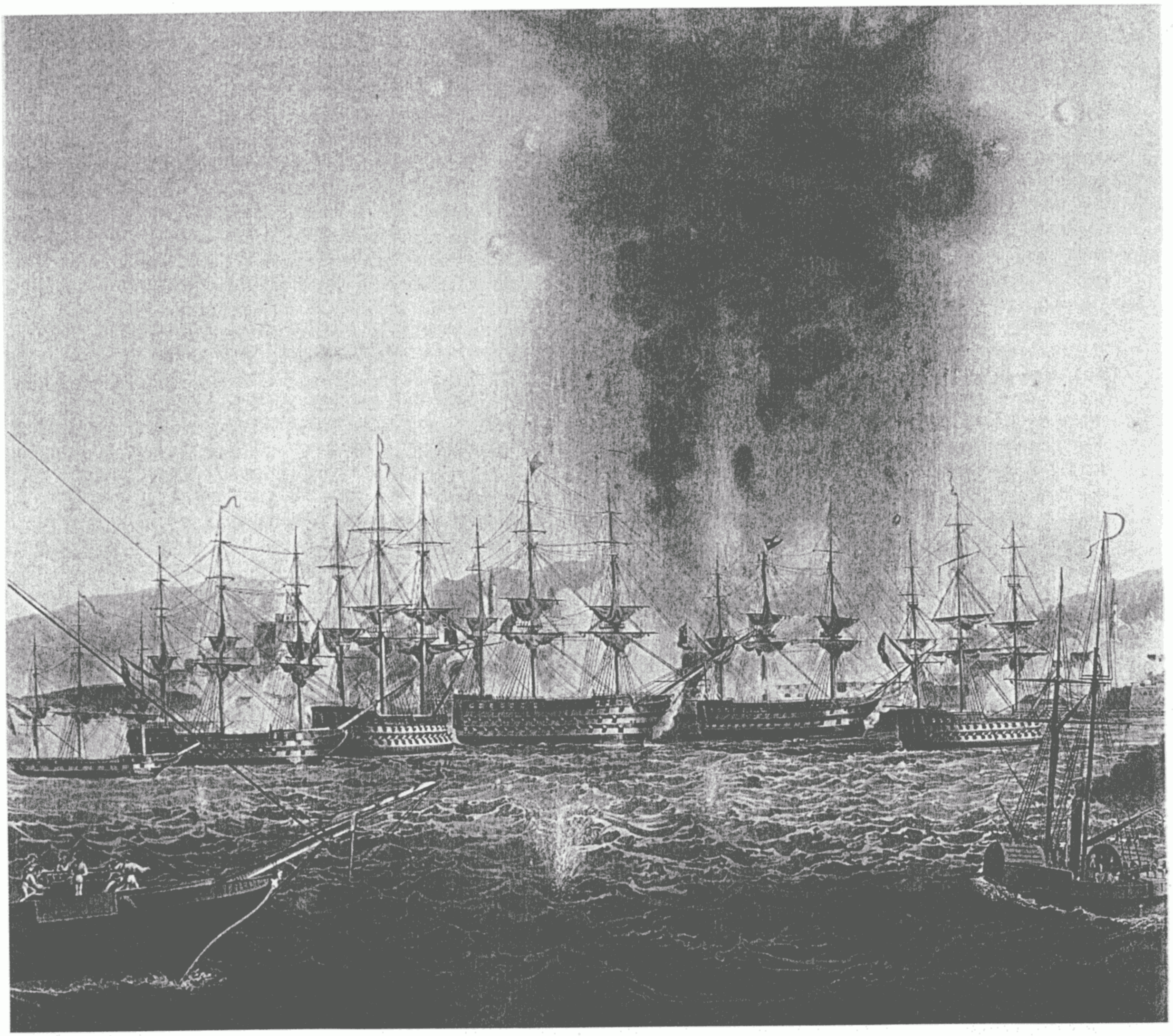
By the time the *Rattler* entered service the Admiralty was committed to a screw steam force, not for the battle-line, but for almost all other tasks. Between 1845 and 1851 a number of new types were developed, from steam battleships down to the first steam gunboats, to enhance the ability of the fleet to carry out its missions, and to taken on new tasks of the first importance. The search for a true steam warship had been a waste of time. The real answer lay in combining the best of the old and new technologies into a transitional type, the wooden screw steam warship. While the type lasted little more than a decade in front-line service, it was a vital stage in the evolution of truly modern warships in the 1860s.

The 1840s witnessed a number of vital technical developments, of which the screw and the iron ship were the most obvious. Equally important breakthroughs in iron production, boiler design, bearings, lubricants, manufacturing and control systems were essential to the development of modern warships. Many of these technologies were drawn from other engineering sectors. By 1850 steam ships were effective and reliable enough to be used globally, while fuel supplies, engineering back-up and vital docking accommodation were spreading to meet the need. Although a few key commercial routes already carried steam shipping, this was a luxury market, catering for passengers and mail, not bulk produce. Liners like the epochal *Great Britain* worked on fixed routes, whereas warships had to meet an infinitely varied set of demands. Furthermore, warships still carried very large crews, while merchant steamers quickly developed labour-saving rigs and sail handling equipment, dispensing with the majority of the deck crew, to save money and fund additional stokers. With so many men on board to fight the ship, it made sense to fit a large square rig so the ship could cruise under sail, saving the coal for tactical demands, and emergencies.

After the successful use of steam-powered ships in the Syrian Crisis of 1840 and the First China War of 1839-42, there could be no doubt that steam made a difference. Steam enabled heavy ships to take up positions far closer to the shore than had been possible while they relied on the wind, to pass through narrow river channels, and to out-flank existing systems of coast defence, built to bar the passage of heavy sailing ships. For the dominant navy this development provided the answer to an age-old tactical problem, and the key to a more ambitious sea-based strategy.

If naval forces could attack and destroy the coastal fortresses that protected major dockyards or cities, they could perfect command of the sea by destroying fleets that refused to come out to fight – the key problem between 1793 and 1815 – or attack key political and commercial centres like New York, St Petersburg, Marseilles and Algiers. However, the British did not emphasise the positive aspect of the new warfare. Instead they examined the growing French steam navy, and the underlying tension between the two countries that grew out of the humiliation of the French in 1840, to create the first invasion scare of the century. This was focused on the largely complete Napoleonic project to build a first-class deepwater arsenal and dockyard at Cherbourg. It was easy to see that a large steam force, less than 24 hours from England, could use this base to invade. While

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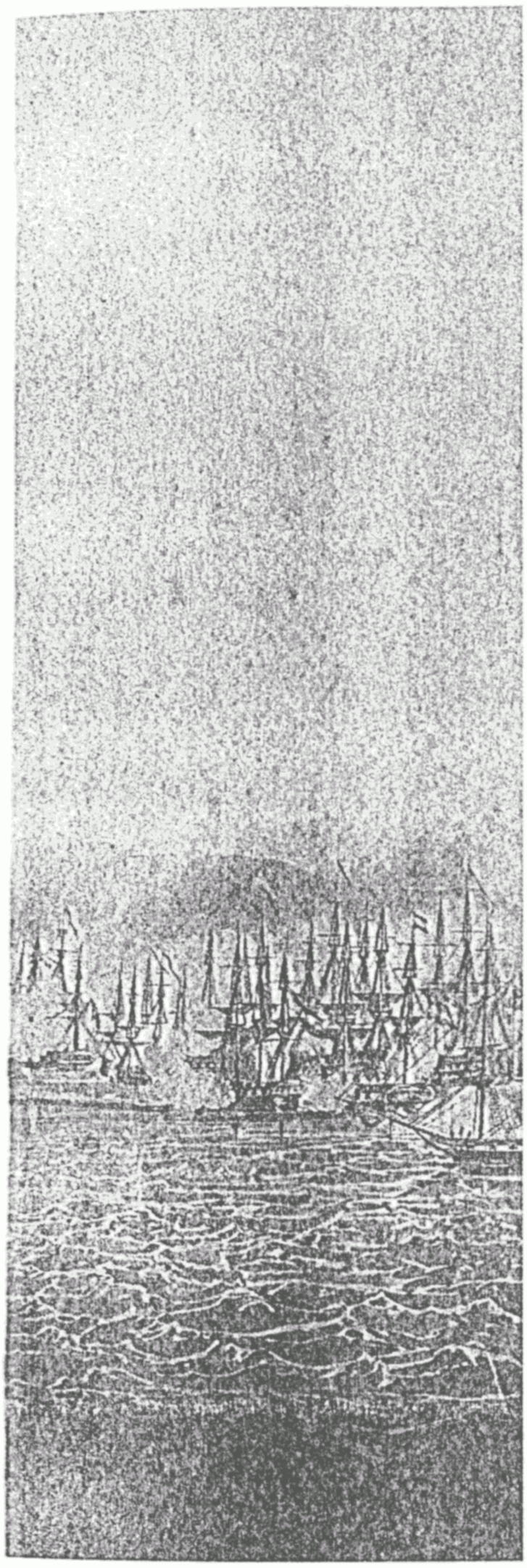


the Army argued for more defences, and some began to panic, the Navy quietly built up the assets necessary to counter and then destroy the threat.

The first requirement, a superior force of steam frigates to control the Channel, was secured by a combination of new wooden tonnage, built in the dockyards, and iron-hulled ships built in commercial yards. This latter development was inspired by the refusal of the Admiralty to purchase wooden ships from private shipbuilders, rather than technological overconfidence. Then a series of new or improved bases were constructed to support the new steam fleet, at Portland, Dover, Alderney and Harwich. These were funded as 'Harbours of Refuge for distressed merchant shipping', but were only useful as strategic bases. With improved coaling facilities the mainland bases could support the steam frigates. Alderney, only 20 miles from Cherbourg, would serve as an advance base, and the assembly point for assault craft.

The screw propeller allowed designers to create many new types of warship. The most significant were the steam gunboat, for which the Royal Yacht *Fairy* served as the mobilisation prototype, and the steam blockship. The latter were old 74s, which had the poop deck removed, a reduced rig and a 400hp engine. Initially conceived as local defence craft the concept quickly developed into an offensive type. Armed with 60 of the heaviest guns, they could cross the Channel, and lead an attack on the fixed defences of Cherbourg. This

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The first successful employment of naval steam power, in the Syrian Crisis of 1840: fittingly, this print, based on a naval eyewitness's sketch of the attack on St Jean d'Acre, gives prominence to the steamers *Gorgon*, whose big 10in bow-chaser is shown cleared for action (left foreground) and *Phoenix* (right). In the background the main British line bombarding the fortifications are, left to right: *Pique*, 36, *Bellerophon*, 80, *Thunderer*, 84, *Princess Charlotte*, 104 (Admiral Stopford's flagship), *Powerful*, 84, and *Revenge*, 76. There is also a group of frigates, including Austrian ships, to the right. *Co682*

would be the culmination of a sustained bombardment by mortars, and heavy shell-firing guns and rockets specifically developed for the role.

While much attention has been paid to the iron ships of the 1840s, which proved unsuitable for combat, the successful development of an integrated coast assault fleet was an innovative triumph that greatly enhanced the power of the British state. The 'Cherbourg strategy' provided the basic planning tools for war with Russia in 1854, for war planning against the United States in 1861, and for the 'Fashoda Crisis' as late as 1898. It was recognised, understood and responded to by all three of Britain's major rivals in the period. France, Russia and the United States all built large and costly sea-coast fortification systems, which admitted the threat posed by the Royal Navy to their vital interests, and the inability of the state to meet the challenge in any other way. These forts were a monument in stone to the success of British strategy. They reflected the impact of an offensive seapower-based deterrent. The maintenance of this deterrent capability was one key theme of naval programmes from the 1840s.

With the establishment of an all-steam navy in 1852 the basic functions of the fleet could be restated. They were, in descending order of importance:

1 Battlefleet-based command of the sea.
2 Insular defence.
3 Cruiser control of the oceanic shipping routes.
4 Offensive coastal warfare.
5 Imperial policing and security.

The first task required a modern, effective battlefleet superior to any possible combination of enemies; once secured, with adequate local bases and facilities it ensured the second function. The third required additional cruisers, although the scale of the task was greatly reduced by the abolition of privateering in 1856, and the development of the steam cruiser. The fourth task required specialist craft ranging from coast assault battleships to gunboats, while the fifth was normally conducted with obsolescent craft left over from tasks three and four.

After a brief development period the steam warship emerged as the dominant weapon system at sea with the completion of purpose built steam battleships in 1851-52. The British blockships had demonstrated that steam engines, sails and a full gun battery were compatible, even in the cramped hull of a thirty-year-old 74. Suitably inspired, the Admiralty ordered a steam battleship design in 1847, which was appropriately named *James Watt*. While the basic hull survived, the engine plant and armament layout were transformed before the first of the new class, built using timber already collected for a sailing ship, was completed as the *Agamemnon* in 1852. Where the original design had called for a battery of very heavy shell guns (the same armament fitted to paddle frigates, and reflecting a tactical appreciation of single ship or detached action), the *Agamemnon* was armed like a sailing battleship, with a single 68pdr pivot gun at the bow to distinguish her from other 90-gun two deckers. Between 1847 and 1851 the steam ship had joined the line of battle, a line that would quickly become entirely steam-powered. The new ship remained a sailing ship, although her powerful steam auxiliary plant gave impressive results. The French had made a more radical choice, with Dupuy de Lôme's innovative *Le Napoleon* of 1851. This ship combined a sharp paddle-wheel hull form with a very large, if rather fragile, steam plant and a 90-gun battery to create a short range steam battleship with auxiliary sail. Conceived to operate on the Toulon-Algiers axis the French ship was claimed to be faster, but her machinery was unreliable, suffering two major break-downs during the Crimean War, while the *Agamemnon* ran for close on three years without dockyard attention.

Having established the basic designs the British and French then settled down to a short but intense arms race in the new class of ships. Alongside the new-built units were two more types: ships converted into steamers while still on the stocks, many of which were

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lengthened or improved, and those already afloat which were fitted with steam machinery as second-rate steam battleships, generally with limited modification. While less than ideal the modified ships exploited the large stock of wooden hulls already in existence, saved scare and costly new timber, and increased the pace of completion. Desperate to secure British support for, or at the very least acquiescence in, his radical foreign policy, Napoleon III borrowed huge sums to build a fleet so powerful that the British could not afford to fight him. This rivalry ran throughout the Crimean War, when the two countries were allies against Russia, and needed very different warships. It was resumed in 1858-59 when new technology in large part inspired by the lessons of that war was adopted.

The British steam battlefleet mirrored the sailing fleet of the post-war era, with a concentration on heavy two- and three-decked ships. Seven big three-deckers were built or converted, a far higher proportion of the total fleet than the single new steam three-decker completed in France, which was reinforced by four old units left over from the Napoleonic wars. This disparity meant that Britain had a far more powerful battlefleet than mere numbers might imply, a point the Surveyor was careful to keep from his political masters. The British also built five new 101-gun two-deckers, and ten 91-gun ships, to outmatch the eight new 90-gun ships built in France. The British ships were built in series, as they had been for some time, with ships of the same rate following one another on the same slipway. Four of the five 101-gun ships were built on the same slip at Devonport.

The Crimean War (1854-56), the first major European war since 1815, was the first in which steam-powered battlefleets dominated the seas. However, as the only two steam battlefleets were on the same side there was no prospect of a significant naval battle, as the Russian fleets wisely withdrew behind fortifications in the Baltic, Black, China and White Seas. Allied strategy was developed from the British 'Cherbourg' model, featuring early strikes against naval bases at Reval and Sevastopol to end any naval challenge, and free resources for a maritime campaign of power projection. Although Reval proved empty, and Sevastopol held out for a year, the allies kept to a peripheral strategy. No allied force was ever more than 12 hours march from the sea. By drawing the Russians down to the ocean, where they were at their weakest, the allies were able to engage their numerically superior armies on favourable terms, and avoid the worst of the weather. At the same time a blockade cut off trade, and the loss of export revenues crippled the Russian economy. After the fall of Sevastopol the British developed a refined 'Cherbourg' plan for an attack on Cronstadt, the gateway to St Petersburg. This built on the experience gained at attacks on Sveaborg and Kinburn, allied to a massive force of specialist assault craft, to pose a real threat to the seat of Russian government. Rather than face this danger the Russians accepted a limited defeat.

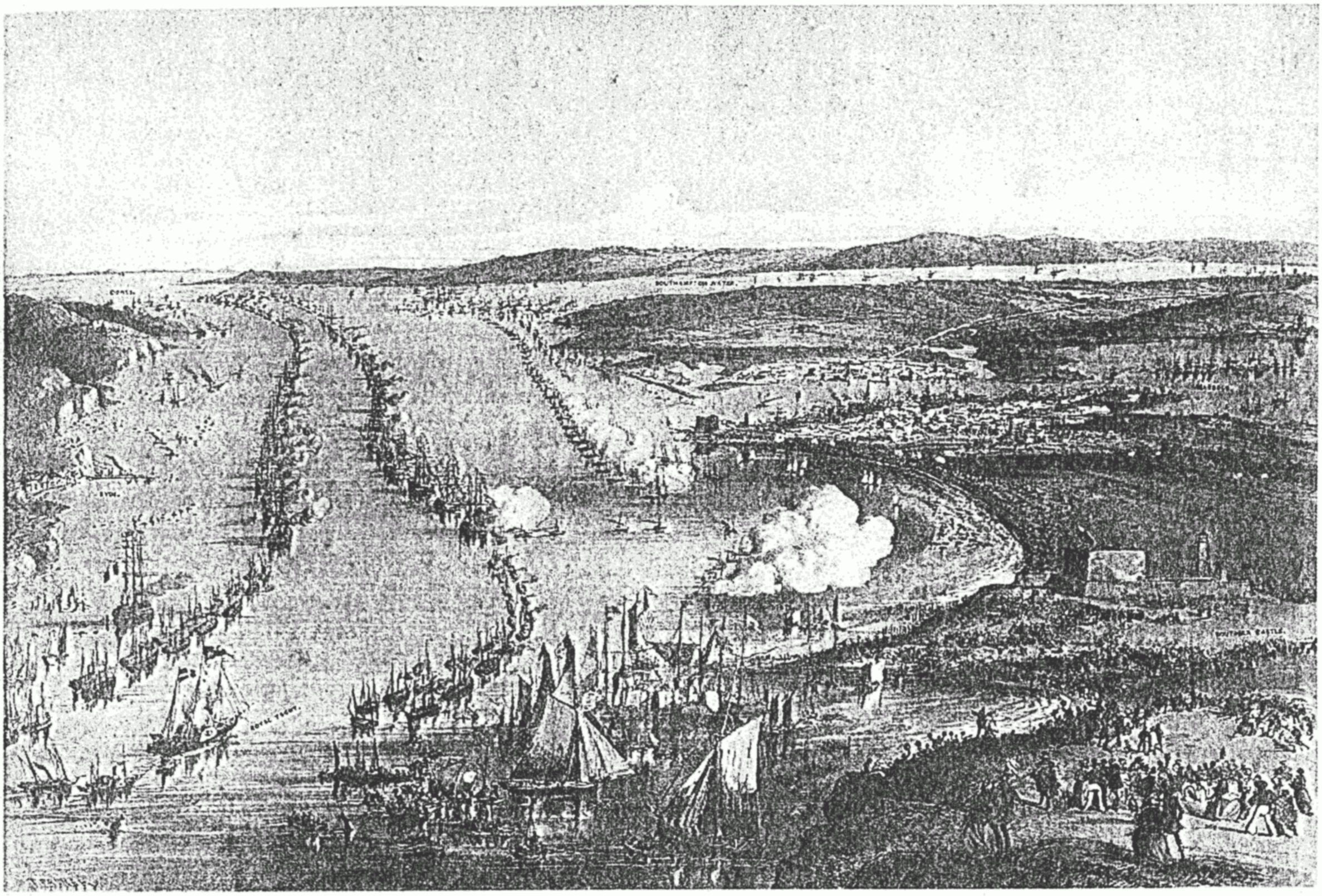
Because there were no fleet actions, the Crimean War emphasised the threat posed to wooden ships by shore-based artillery, especially shell guns and red hot shot. If ships were going to attack forts, to secure tactical or strategic advantages, then they would need more protection than could be afforded by the thickest oak plank. Inspired by the ideas of Napoleon III the British engineer Thomas Lloyd came up with 4in thick wrought iron armour in late 1854, and within 12 months both countries had built five armoured steam batteries, specifically for operations in the Baltic. However, the French elected to send their craft to the Black Sea, and three of them took part in the attack on Kinburn on 17 October 1855, when their effectively invulnerable hulls allowed them to engage a large battery with impunity. In the face of such ships the age-old supremacy of the stone battery was in doubt.

However, effective coastal operations required more than a handful of heavy batteries. The other element of the 'Cherbourg' plan had been the mass production of flotilla craft. These were initially based on the 1845 prototype, the *Arrow* class gunvessels, but these proved too large, and the classic Crimean gunboat was developed in 1854. An initial order in October 1854 produced 5 armoured batteries, 20 gunboats and the same number of mortar vessels. These were used in the Black Sea and Baltic in 1855, with remarkable effect, opening the Sea of Azov, crippling the logistics of the Russian army in the Crimea, and bombarding Kinburn, while in the Baltic they incinerated the dockyard and gunboat sheds at Sveaborg, and opened up the coastal waters of the Russian Empire. Following these successes both types were mass-produced from mid 1855, almost 300 gunboats being ready when the war ended in March 1856, along with over 100 mortar vessels and rafts, 11 armoured batteries, mortar frigates, and a host of factory, store and depot ships. This 'Great Armament' was destined for a full-scale assault on Cronstadt, using an advanced base selected in 1855, and relying on sustained firepower at long range, protected by armoured batteries, to demolish the most powerful collection of sea forts in the world. The success of such an operation remains unknown, but the threat was too much for the Russians, who were quick to make peace.

The 'Great Armament' was the first mass-mobilisation of national shipbuilding resource to be seen in the industrial age. It demonstrated the manufacturing depth at Britain's disposal, should the war be prolonged, a resource that would hardly be touched for the rest of the century. Quite simply Britain could out-build the world in warship tonnage, in quantity and quality. Engines were built by the combined resources of the London engineering works, wooden hulls by a host of shipbuilders across southern Britain, while iron hulls were procured further north. At the same time battleship and large frigate programmes went on unabated, keeping the Royal Dockyards fully engaged constructing huge ocean-going types, which would be needed for war with France, not Russia.

To ensure the rest of the world did not miss the point, the Baltic Fleet planned for the 1856 campaign was assembled at Spithead on St George's Day, 23 April 1856 for a Grand Review to mark the end of the war. No one was left in any doubt of the purpose: the flotilla craft staged a mock attack on Southsea Castle, which bravely stood in for Cronstadt, Cherbourg, or New York. Once the war was over many of the gunboats were hauled ashore onto a rail system, designed by Brunel, and stowed away at Haslar. Others were sent out to China, to force open the trade of the Celestial Empire.

France did not divert so much of her naval resource into flotilla craft, making up some ground on the British battlefleet by 1856. This prompted a second wave of alarm in 1858-59, and temporarily compromised British foreign policy for the creation of a united Italy. However, a renewed surge of construction and conversion quickly restored a healthy lead in steam battleships. The French then changed the rules, shifting the design emphasis to ironclad capital ships, led by the *Gloire*, a wooden-hulled single-decked ship similar in scale to



A birds-eye view of the mock attack by the gunboat flotilla on Southsea Castle on 23 April 1856. It was staged as a demonstration to the world of the land-attack capability of the steam-powered Royal Navy. *PY8275*

a contemporary 90-gun steam battleship. The low command of her guns, and slight rig as designed, suggest her function was not to lie in the line of battle with heavily-masted steam battleships. Like the armoured batteries her initial impulse would seem to have been coastal with the British dockyards, the basis of sea power, as the most obvious target. The British had been considering the armoured warship question since 1856, preparing a draft armoured corvette design in 1857, but elected to wait until the French moved. This proved to be wise.

The eventual British response came from an altogether different tradition. In the 1850s the steam frigate/cruiser class had diverged into three types. The standard heavy frigate, developed from the last generation of 50- and 60-gun sailing frigates was continued, along with smaller cruisers. These were perfectly adequate to face anything being built in Europe, where the same basic concept had been adopted, but in the United States the tradition of the super-frigate had been revived. In the early 1850s the Americans built six huge cruisers, five frigates and a sloop. The first of the type, the *Merrimac*, came to Portsmouth in 1856, and create a sensation. With 40 very heavy guns, including 9in Dahlgren pieces, she was more than a match for any British frigate, while some alarmist voices suggested she might be the equal of a screw 91. Dark memories of 1812 sparked a response – six monster frigates, culminating in the astonishing *Mersey* class. These were wooden ships of unprecedented length and engine power, capable of very high speed, and mounting 40 of the heaviest guns in service. While they proved expensive to operate and maintain, they out-matched the American units, especially in speed, and demonstrated a new fighting concept. These ships had the speed to select the ideal fighting range for their heavy guns.

To meet the French ironclad challenge this hull form was scaled up, built of iron and armoured to produce HMS *Warrior* of 1861. As an armoured frigate *Warrior* was not intended to lie in the line of battle. The long, sharp hull and the weight of the armour made the iron hull essential, releasing design from the limits of timber construction. Although conceived as a frigate *Warrior* was quickly integrated into the battle line, establishing parameters for battleship design. Combining high speed, armour, firepower and sea-keeping, she was superior to *Gloire* in all areas; she was also 4,000 tons bigger. After initial concern about her advanced features, she was reckoned a great success, and the next two classes developed the single-deck armoured frigate concept to its limits.

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British and French ironclad concepts took some time to settle down onto a roughly parallel course. The French went for a fleet of similar ships, of two basic designs, to operate as a unit. The individual units were wooden hulled, and unimpressive. The British built a selection of awe-inspiring monsters like *Warrior*, *Achilles* and *Minotaur*, alongside second-class types like *Defence* and *Hector*. Alongside these, seven ships of the *Caledonia* class were converted from incomplete wooden steam battleships. This was a wise redirection of effort and made good use of hulls and machinery already purchased to meet a short-term threat. The resulting ships were equal to the *Gloire* in fighting power and durability. British industrial and economic power ensured a rapid victory in the ironclad arms race, and a marked relaxation of the pace of construction by 1865.

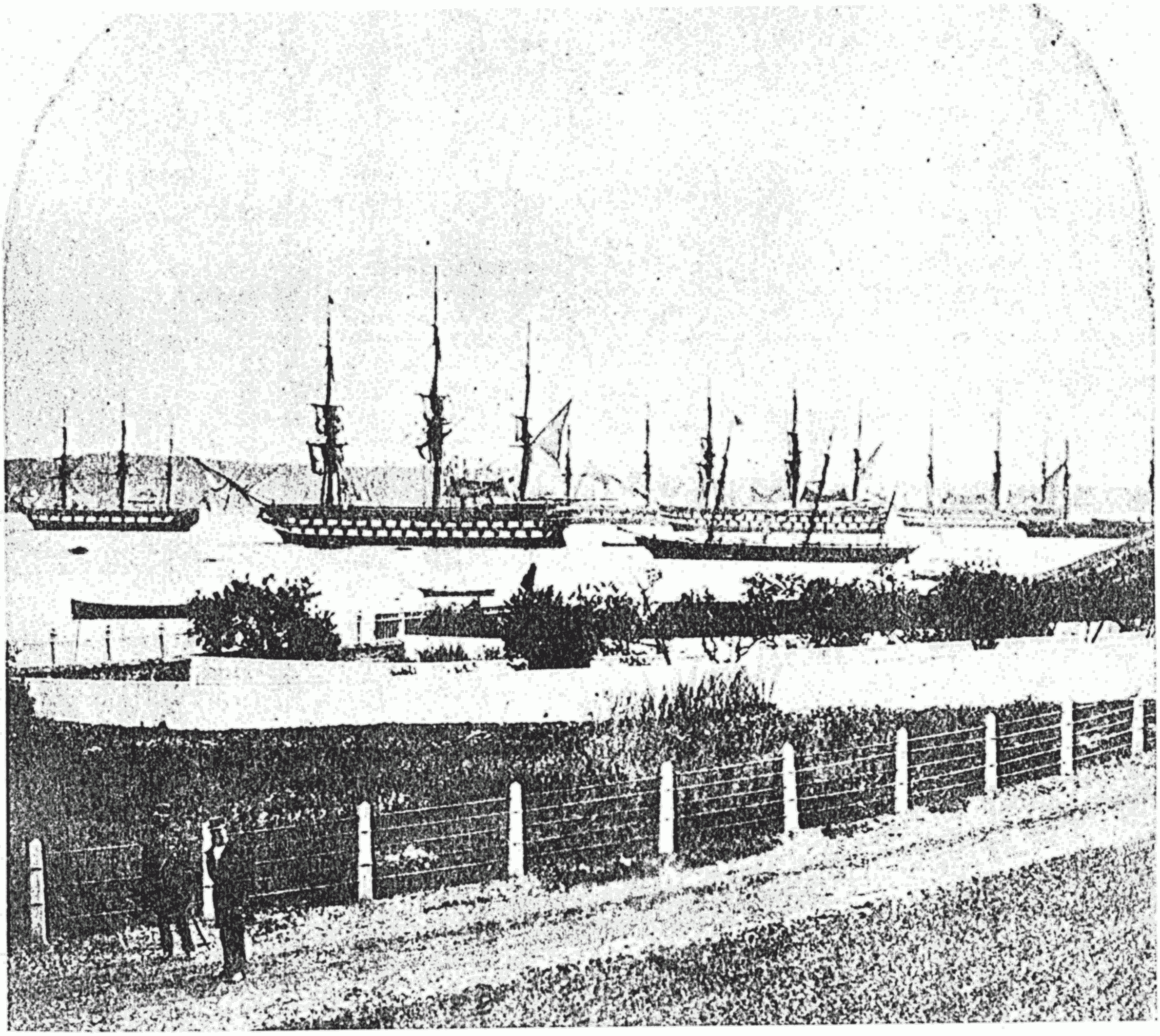
The French challenge to British battlefleet superiority had touched a raw nerve, paralysing foreign policy, frightening the Queen and even helping to unite the various strands of Liberal opinion into a workable ministry under Lord Palmerston. By increasing naval expenditure, fortifying the Dockyards and fostering national defence measures, notably the Rifle Volunteer movement, Palmerston sent a powerful signal to the French. In late 1861 the British settled on a naval policy response, electing to recover clear battlefleet superiority through a large programme of new and converted tonnage.

One key advantage the British had in this period was the range and quality of marine engineering resources. British engines, initially from Boulton & Watt, Henry Maudslay and John Penn, later reinforced by Robert Napier, were the best available. After decades of copying France was forced to procure battleship engines in Britain in the 1850s, while Russia remained dependent until the twentieth century. The Royal Dockyards were outstanding constructors of wooden warship tonnage throughout this period, and after initial teething troubles quickly adapted to iron and steel. However, the Admiralty's refusal to procure commercially-built wooden warships was not carried into the iron age: not only was *Warrior* the first ironclad, she was also the first privately built capital ship for 40 years. By 1889 the British shipbuilding and engineering industry was so powerful that only a handful of units were Dockyard-built, as a check on commercial costs and methods. Britain could out-build her rivals whenever she desired, while there were always ships in British yards being built for foreign powers. Some of these were purchased in 1878. Whatever the Admiralty wanted it was able to obtain, either from its own resources, or from the private sector. Only the supply of artillery remained in other hands, and the War Office finally gave up this role in 1888, under pressure from the redoubtable Fisher.

In 1861 a new Controller, Sir Spencer Robinson, shifted the basic design of the ironclad battleship towards a fleet unit. The first new ship of this type was the *Bellerophon*, a shorter, beamier ship with a less numerous, but individually more powerful battery of guns, behind a more restricted area of thicker armour. Robinson was conscious that the *Warrior* type required very large dry-docks, and were therefore strategically restricted to home waters. More compact capital ships would be easier to deploy outside European waters. The new type was built in smaller numbers, because the French challenge collapsed in 1865, and shifted to overseas second-class types, against which *Caledonia* class converted wooden battleships, and the *Invincible* class were perfectly adequate. The relatively small number of true sea-going first class ironclads built between 1865 and 1889 demonstrates the lack of any sustained threat to British naval dominance, a fact that enabled the Admiralty to spend more money on cruisers and specialist coast assault types, within low overall estimates.

In the 1860s cruiser design moved between small patrol types, another group of American-inspired monsters and a new Russian approach. The sloops and corvettes of the late 1860s were built in relatively large numbers to replace the obsolescent first-generation steam warships that had been left to hold the outer fringes of Empire while the Crimean War and arms races with France focused attention on other types. Conceived as economical all-rounders they were effective rather than spectacular. By contrast the threat of war with America, which had come very close in late 1861 with the '*Trent* Crisis' prompted both sides to build for conflict. The Americans designed a new commerce destroying type, a vast, sharp-hulled wooden steam cruiser, the *Wampanoag* – the first of the class was reported to have made over 17 knots. This inspired the large iron-hulled unarmoured *Inconstant*, which equalled the speed of the American ship, and greatly exceeded her durability, along with two more of her type, and smaller derivatives. Their strategic role was to limit the threat to British shipping by occupying key choke points, a policy that functioned within a strategy dominated by superior basing, coaling and information resources. In effect the British had the best resources for oceanic warfare, and could afford to be responsive. The failure of the United States to sustain their fleet after 1865 allowed the British to rely on a cruiser fleet almost entirely composed of small, slow vessels. In a vain attempt to divert British resources from Cronstadt the Russians developed a variety of oceanic warfare assets, among which the armoured cruiser (in effect a weak second-class battleship with big bunkers) was the only novelty. As Russia had no oceanic bases, and only a handful of cruisers the threat was minimal, but it was matched. However, the British armoured cruiser *Shannon* was nearly as poor a ship as her Russian inspiration the *General-Admiral*.

The most controversial subject of the 1860s proved to be the turret. The British design was developed by Captain Cowper Phipps Coles, with fundamental assistance from Brunel. After experience of coastal warfare in the Sea of Azov Coles had designed a conical armoured gun-house, to protect the gun crew. In a brief conversation Brunel suggested placing the structure on a railway turntable, and when Coles adopted the cylindrical form the classic turret had been created. The first example was built by the War Office, for use on coastal forts, but it was quickly handed over to the Admiralty, mounted on a Crimean armoured battery, and adopted as the best system of mounting heavy guns on coast service ironclads. With support from the Radical wing of the Liberal Party, which saw it as an alternative to costly coastal forts, *The Times* and the Prince Consort, who had a penchant for modern technology, the turret was quickly placed in service, on a cut-down wooden steam three-decker, the *Royal Sovereign*, and the purpose-built *Prince Albert*. While these ships were sold to reluctant Liberals as coast defence craft, their real role was to spearhead the assault on French bases, using heavier guns, thicker protection, low freeboard and reduced target area, in the forefront of an increasingly complex, layered attack. By 1870 the turret ship was synonymous with offensive warfare, with Chief Constructor Edward Reed developing his breastwork monitor concept to produce sea-going ships with minimal target area.



The North America and West Indies Squadron of Rear-Admiral Sir Alexander Milne lying in Halifax harbour in the aftermath of the 1861 '*Trent* Crisis' that threatened war with the United States. The ships are Milne's flagship *Nile*, 91 guns (foreground), two other screw 90s, a 50-gun screw frigate (left) with one of the big *Orlando* Class frigates behind the *Nile*, and a screw gunvessel in the right foreground. *A7854-4*

The type developed into two specific categories. The first were a group of coast service ships, stretching from the earliest ships though *Rupert*, *Glatton* and *Cyclops*, ships with a purely offensive role against France, or Russia in the Baltic. This role was so important that the Admiralty built expensive ships that had no peace-time role, other than harbour-bound turret drill ships. At the first threat of war these ships were mobilised. There was also a series of semi-sea-going ships, *Hotspur* and *Rupert*, that could accompany the fleet. In the late 1870s the type was revived with the *Conqueror* and had some influence on the layout of the *Victoria*. One thing should be clear: a navy that procured low-freeboard turret ships armed with two or at most four monster guns was not intending to fight sea battles.

When this approach was carried into the first-class fighting ships – the most expensive assets being built between 1870 and 1886 – then it should be obvious that British strategy was predicated on coastal offensive warfare, to destroy rival fleets and attack important political and economic centres. The second strand of development combined the turret and low freeboard with enough seaworthiness for limited battlefleet service. The first of these ships, the *Devastation* of 1871, had been developed from the coastal warfare *Cerberus/*

Scan and/or retouch by Grzechu

Cyclops design into a capital ship, the first without a sailing rig. As an overgrown breastwork monitor mounting only four heavy guns, she was probably incapable of hitting a moving target. This did not matter much, as her real opponents were large and built of stone. The more ambitious *Inflexible* was inspired by an Italian design, and only proved that combining massive guns and very thick armour on a limited displacement produces a flawed ship. Reduced versions of the same concept, the *Ajax* and *Colossus* classes, were even less effective, in part because the former class were shallow-draught units for service in the Baltic or Black Sea, to attack Russia. In the mid-1880s the *Victoria* and *Nile* classes returned to the basic turret ship concept, and were well suited to attacking first-class forts, providing they could use the deep-water channels, but were also sufficiently seaworthy and mobile to form a strategic reserve, capable of crossing the Atlantic to operate from Bermuda against New York. Their success reflected the fact that compound and later triple expansion engines greatly improved their range, while additional displacement increased freeboard.

In the late 1860s Coles had attempted to create a true sea-going turret ship, combining low freeboard with a full sailing rig. This was always going to be a mismatch, given the weight of the turret, and its conceptual basis in coastal warfare types with radically low freeboard. The Admiralty-designed *Monarch* proved a fine sea-boat, but was no better as a fighting ship that contemporary broadside designs. This was exactly what her designer Edward Reed, an opponent of Coles and turrets, would have wished. Coles' *Captain* was very different: her mighty iron tripod masts, overweight construction and poor design work combined with fundamental instability to destroy her, almost her entire crew and her inventor in September 1870. This tragedy ended an era of amateur ship design, and left the battlefleet divided into high and low freeboard types.

Reed had resigned as Chief Constructor in 1870, and was followed by Nathaniel Barnaby. While it has been the custom to blame Barnaby for the poor designs of the period 1870 to 1887, John Beeler has demonstrated that his work was essentially restricted to following Admiralty orders. In reality the worst ships of the era were not his designs. He invariably offered superior alternatives, but was overruled by his naval and political masters, often on grounds of economy. Much of the criticism is based on Reed's very partisan account of the period. For example, Barnaby introduced the barbette mounting for heavy guns, which eventually enabled battleships to carry the heaviest artillery high above the water-line, but his 'Admiral' class was too small to make full use of the concept.

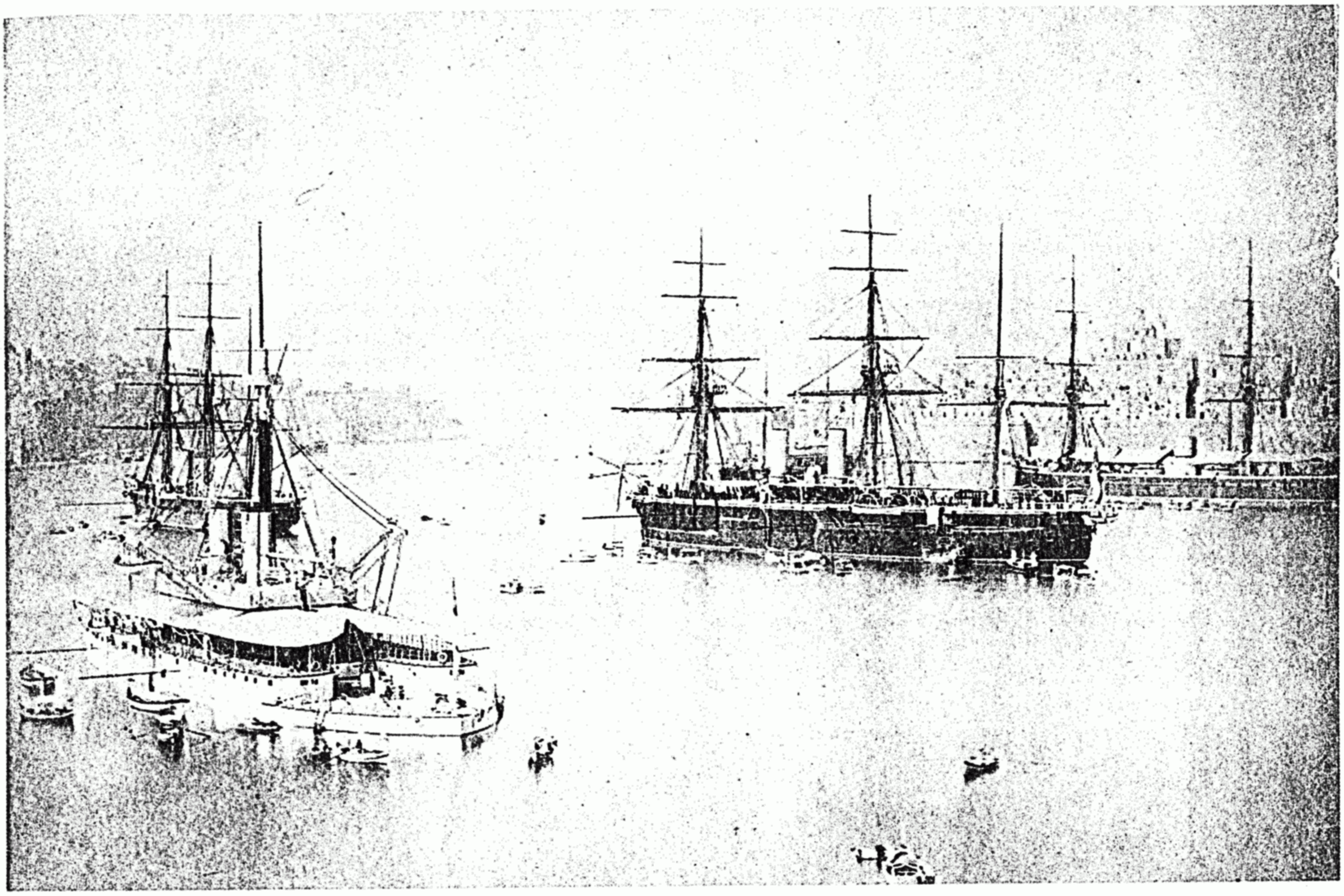
Once the designers were allowed greater latitude, especially in tonnage, the ships were markedly better. In this respect Sir William White, who took over just before the Naval Defence Act, was very fortunate, as well as very able. His new standard battleship, the *Royal Sovereign*, was 40 per cent heavier than her predecessors, yet mounted a similar armament, and little more armour. The extra weight bought much improved seaworthiness, endurance and survivability. It also re-connected the high and low freeboard types. The class effectively replaced all the old high-freeboard units built between 1865 and 1875, while the two *Centurions* provided new capital units for the China Station, where shallow draught was a pre-requisite.

After the Crimean gunboats were worn out the Admiralty built two types: the colonial police gunboat, a seaworthy craft armed with small guns, and the coast assault gunboat, based on Rendel's 'flat iron', for the coastal offensive. The latter was a mobilisation prototype, which would have been turned out in large numbers, had a major war broken out. They would have been used, like the Crimean War gun and mortar boats, to damage coastal forts and suppress their fire while the heavy ironclads closed in. So durable were these little craft that more than one survived to fight in the First World War.

Another type of flotilla craft began to develop after 1870 – the torpedo boat. It was in this area, more than any other, that David Lyon made his greatest contribution to warship design history. The British response to torpedo warfare began in 1855, when the fleet in the Baltic encountered Russian contact mines off Cronstadt. Several were swept up using grapnels, and two were inspected by the Admirals. Sir Michael Seymour set one off on his quarterdeck, killing two men, and knocking out one of his eyes. Thereafter they were treated with a little more respect, and did no more damage. Larger, and more deadly weapons were deployed during the American Civil War, as contact mines, observation mines and spar torpedoes. A sustained intelligence effort ensured the British were aware of all these methods, and the latest European work, mostly in Germany. This area occupied the attention of John Fisher, who became the naval expert on mines, torpedoes and electricity. The autonomous or Whitehead torpedo was quickly taken up, studied and developed, both to prepare defences, and to exploit its potential.

While that potential was very limited, the British designed a vessel to work with the limitations. As David Lyon demonstrated many years ago the first British torpedo boat, the *Vesuvius*, was a stealth craft, burning anthracite without a funnel to get in close enough to the enemy. This necessarily meant an enemy at anchor, and probably inside a defended anchorage. The next attempt was altogether more ambitious, a high speed, low-freeboard armoured vessel capable of getting within range in board daylight. The *Polyphemus* was the perfect response to any critic of contemporary British thinking and design. Her speed was impressive, and before the advent of quick-firing guns should have enabled her to get into range. Whether the torpedoes would have worked is another question. Never used in war, these two pioneers were largely misunderstood. They demonstrated remarkably clear thinking on the part of the Admiralty. While the performance of the weapon remained limited the ship delivering it required an edge; these two craft met that need, in very different ways. The autonomous torpedo remained a weapon of great potential, but modest actuality until after the end of our period. Only in the 1890s did they sink real warships, and only in the First World War did they possess the range and accuracy to hit moving ships, and the warhead to sink them.

Ever anxious to find a way of getting around British sea control the French took up the torpedo and the small steam torpedo boat as a coastal warfare asset, operating from numerous local bases, to keep the British fleet out to sea, and keep open French harbours. In the mid-1880s the threat of the *Jeune École*, to use these craft to sink defenceless merchant ships in cold blood, excited a certain amount of concern, but in truth revealed the poverty of French resources. Faced with a powerful German army on their frontier, and all too well aware of what had happened in 1870, the French were unlikely to try to match the British at sea. Annoyed by the British occupation



Grand Harbour, Valletta, Malta, the main base of the Mediterranean Fleet. The ships are Reed's *Invincible* (left background) of 1867 and his masted turret ship *Monarch* of 1866 (right background), Barnaby's central-battery ship *Alexandra* of 1873 (centre), and the mastless turret ship *Thunderer* of 1868 (left); the 'coast defence' ironclad *Rupert*, another Reed design of 1868, lies beyond the *Alexandra*. The sheer variety of layouts in this group of ships designed within a few years of one another demonstrates the uncertainties faced by British capital ship designers in this period. *Neg 4675C*

of Egypt in 1882 the French sought a lever, but grasped a broken reed. Their torpedo craft were too small for sea operations, the torpedo too feeble and inaccurate to be useful, and the 'swarm' of flotilla craft was rapidly outmoded by 1in calibre heavy machine cannon, and when they grew to be seaworthy craft they were negated by quick-firing 4in and even 6in guns. Once fitted with suitable secondary and tertiary batteries the modern battleship had nothing to fear from torpedo craft in daylight. The design of the torpedo gunboat, the first attempt to counter the torpedo boat with flotilla craft, was far more successful than the performance figures suggest. In one of the last conversations I had with David he sketched out his ideas for a study of these neglected craft. Their performance at sea was far superior to that of the nominally faster torpedo boats, which were rapidly brought to a standstill by heavy weather that had little effect on the high-freeboard gunboats. In 1889 they were the answer to the problem, as the inclusion of a large number in the Naval Defence Act indicated. With an escort of gunboats the close blockade could be kept up, the French could be pinned in their harbours, and the offensive was still an option.

In 1884 a naval scare developed after a series of well-informed articles in the *Pall Mall Gazette* had told 'the Truth about the Navy'. The source of the information was Captain John Fisher, working for Admiral Hornby. The Liberal ministry of Gladstone was pushed into a sudden increase in spending, the so called 'Northbrook Programme', named for the First Lord of the Admiralty, who was actually in Egypt at the time, attending to far more important government business. The panic was premature, and the ships it produced, notably the ill-fated *Victoria*, were quickly rendered obsolescent by changing technology and tactical considerations. However, the methods of navalist agitation were now in place, and it was not long before another scare was generated.

The next panic, which resulted in the Naval Defence Act programme of 1889, followed a cleverly manipulated combination of agitation by influential voices in the City of London, supported by retired Admirals, once again led by Hornby, with Lord Charles Beresford as his chief cheerleader, and the detailed background work of the new Naval Intelligence Division, which provided suitably alarming, if quite unreal, comparative fleet strengths to support public concern. The final push came from the Queen, much as it had in 1852 and 1858. Lord Salisbury's government gave way, restating the old

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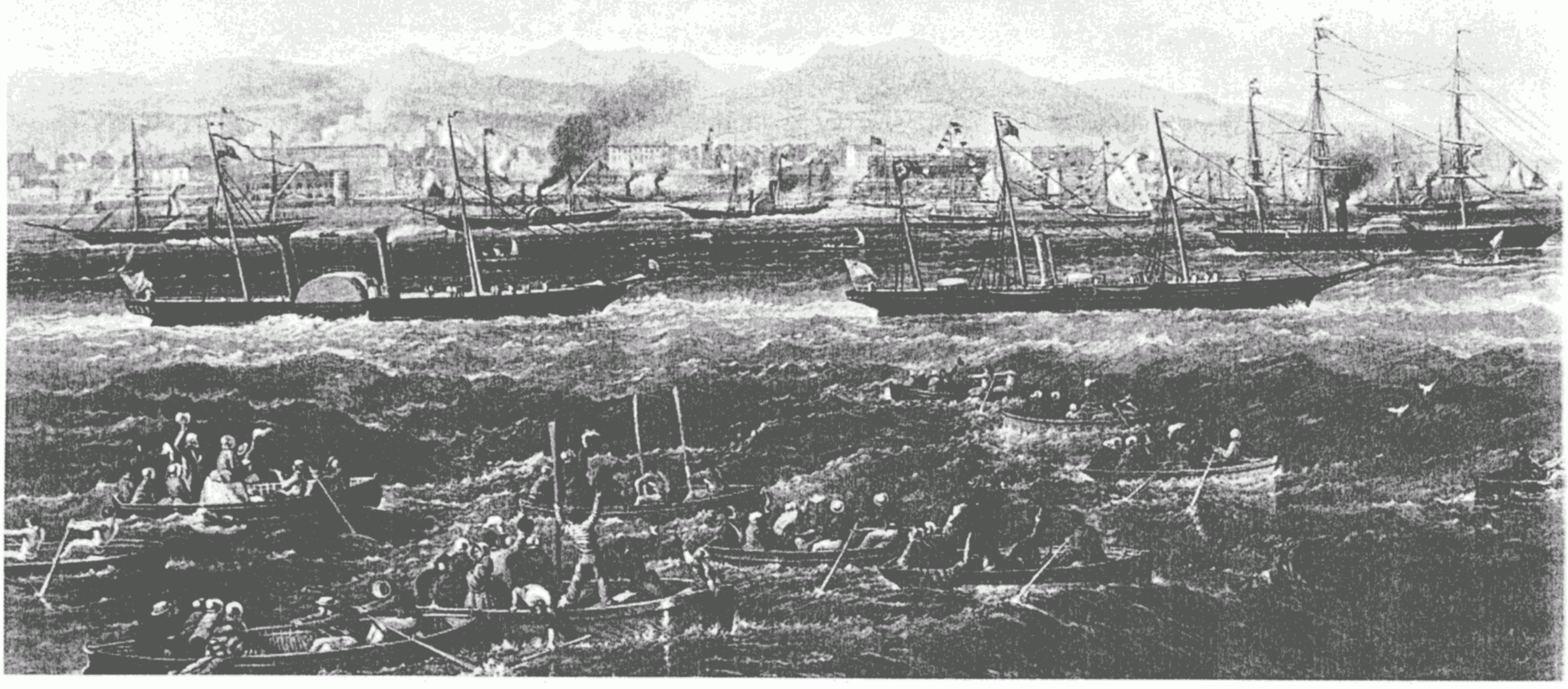
two-power standard as the basis of British strategy, and funding a timely and effective programme to replace the existing collection of over-age and obsolete ships of many types with new ocean-going fighting ships to retain control of European waters, through the imposition of effective blockades, thereby securing the oceanic trade which was at the heart of City concern. The addition of an entirely bogus invasion threat was both a useful smokescreen, and the only way of persuading some politicians that the Navy needed more funds. Those funds rose to £21.5 million, with half the sum being drawn from loans or long-term funds. They bought 10 battleships, 37 cruisers and 18 torpedo gunboats: in effect a new navy equal to the modern fighting strength of any fleet in the world. Furthermore the battleships were the largest and most powerful yet ordered. Little wonder the Admiralty hoped they had killed off any foreign competition. In the event the new programme was only just in time to keep the British ahead of the game, as a new wave of Imperialist ambition and Mahan-inspired navalism swept across the globe, leading to a major increase in naval expenditure. Alongside the new fleet the British retained their older turret ships, for coast attack. When the occasion threatened, as it did in 1898 with the Fashoda Crisis, these older ships were assembled and detailed off for just such operations.

This list is the record of the sustained economic, technical and policy-making effort required to maintain naval mastery in an age of rampant nationalism, frequent warfare, and industrial expansion. That Britain was involved in so little of this conflict demonstrated the continuing deterrent power of her strategy, based as it was on a dominant battlefleet, and sophisticated coast attack forces. This force was maintained by a careful, and generally successful, application of tight resources and novel technologies to the protection of a global empire of commerce. That Britain was able to control the trade and commerce of the globe, pick out the key strategic bases, and dominate the economic activity of so vast a spread of territory was a demonstration of the strength and reputation of the Royal Navy; it remained a first-class deterrent. Consequently while the ships on this list saw little serious combat, they were highly successful, preserving the peace for generations.

Andrew Lambert

Note: for further reading on the above issues, please see the Bibliography section of this book.

A snapshot of the early steam Navy is provided by this print celebrating a royal visit to Ireland in 1849. Leaving Kingstown is a squadron led by the first *Victoria & Albert*, a wooden paddle-driven royal yacht, followed by the *Fairy*, officially rated as a 'tender' to the royal yacht but an innovative iron-hulled screw-propelled vessel whose design formed the basis for the huge programme of 'Crimean' gunboats. The yachts are escorted by some of the latest paddle frigates and sloops (in the background), while outside the harbour one of the first screw two-deckers (rated a Steam Guard Ship) fires a salute. *C838*



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Survey of Technical Development

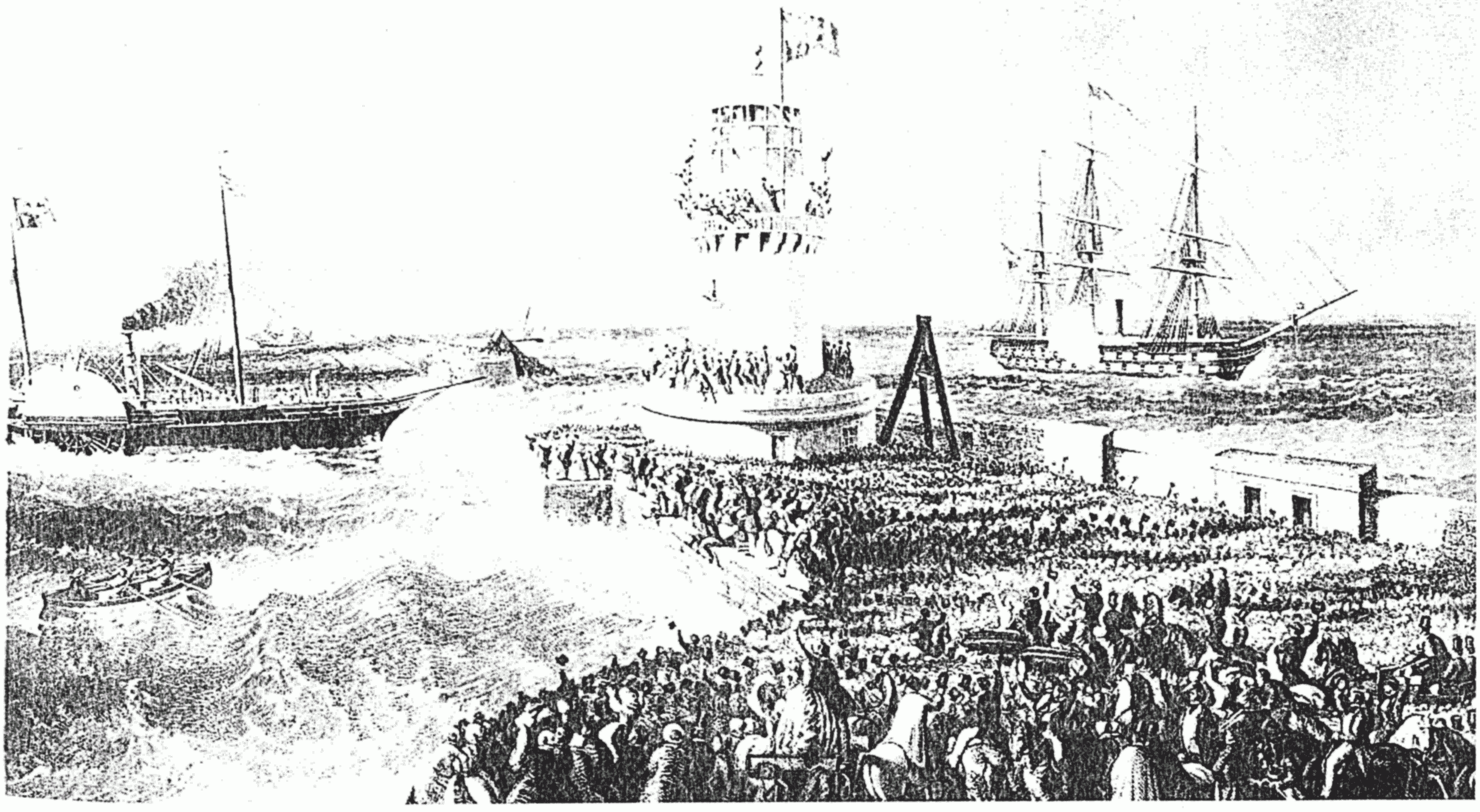
'When Victoria was crowned, the battleship was a wooden structure in frame and shell, propelled by a natural external agency, and armed solely with a large number of light hand-served weapons carried within the main hull and pointed through its sides, just as she had been since the days of the Tudors. But quite ten years before the death of Victoria the battleship had become an all-metal structure, propelled by an artificially generated internal agency and armed not only with heavy power-worked ordnance mounted outside and above the hull altogether, but also with weapons for under-water attack.

Rapidly, however, though these drastic departures from ancient usage were carried out in comparison with any previous evolution in naval design, the transformation was not completed at one step but through a series of stages; beginning in the early 'fifties as regards the change in motive power, the early 'sixties as regards the change in structural material, and the middle 'sixties as regards re-disposition of armament, it may be said to have finished in 1884 with the launch of the last square rigged ships of the Navy above sloop size, for before that year the principle of an internally mounted armament had been finally abandoned, and the last timber hulls were already about fifteen years old.'

Adm. George A. Ballard,
'The Black Battlefleet' (*The Mariner's Mirror*, Vol. 15, Part 2 (April 1929), pp. 101-102)

If there is to be a 'theme' for the book, it should perhaps be to demonstrate the veracity of Ballard's remarks. This survey deals with the complex and inter-acting revolutions in the science of sea warfare as they affected the material of the British Navy.

The century that commenced with Napoleon's abdication was unique for the Royal Navy in that development was not driven by the necessities of war, as there was limited conflict in this period. Even the Russian War of 1854-56 (usually called the Crimean War), the only war between global powers in which Britain was involved, was



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fought at a great distance from the UK so that neither government nor population perceived any danger to the home territory. Notwithstanding the myriad small colonial conflicts, this was the era of the Pax Britannica.

The remarkable developments, which transformed every aspect of naval science, were thus not conflict itself, but the social and economic pressures that sprang from the Industrial Revolution. This was the century of Britain's pre-eminence in world affairs, and it was the technological innovations which either arose from or were exploited by British entrepreneurs that underscored the changes in naval design.

This is not to imply that parallel developments did not take place in other western nations. But British particular skills in engineering, coupled with the demands of a home market that could only be satisfied by overseas trade – and that required a large and technically superior merchant fleet to transport those goods – gave an edge in those particular fields relevant to marine technologies. It was not until the 1880s that Britain's chief economic rivals – France, Germany and the United States – began to protect their home markets and to develop their own industries to a similar level.

While it was the combination of innovations in different fields which produced the new Victorian Navy, it is necessary to examine separately the innovations in materials of construction, in ordnance and in systems of propulsion to understand these changes. At the same time, it should be noted that these technological developments were not carried out in isolation. In the same period the Navy underwent considerable social changes, responding to the political, demographic and emancipatory developments within society as a whole, and the lifestyle and social organisation of both officers and ratings was transformed accordingly. Naval strategy and tactics had to continuously evolve, to take advantage of the new technologies. This book cannot deal with these issues, confined as it is to the *materiel* of the Navy, but these parallel revolutionary changes should not be ignored.

This article thus gives an overview of the technological changes in three main areas – those of propulsion, constructional materials and armaments. None of these changes were simple or even continuous processes, and each suffered setbacks or reverses which prolonged the period of change. The introduction of steam was complicated by the initial concentration on paddle propulsion – which was eventually to prove a blind alley. The introduction of metal hulls in the early 1840s was set back by the poor construction techniques of that epoch, such that iron was (with good cause) rejected for warship hull construction for more than a decade. And in gun construction, the failings of the early breech mechanisms resulted in a return to muzzle-loading weapons until the early 1880s.

From Sail to Triple Expansion – the motive revolution

Whether for paddle or screw propulsion, all the early steam engines were based on the Watt beam engine, subsequently replaced by trunk or return connecting-rod engines. Steam was first used by the Admiralty aboard dredgers, the earliest two being designed by Simon Goodrich, the Mechanist at Portsmouth Dockyard. Unnamed, the first was built at Portsmouth in 1802, and measured 100ft by 27ft (315 bm) and had a steam engine to operate the dredge; she was sold at Chatham on 13 April 1836. The second was built at Deptford in 1806. While neither used steam for propulsion, their harnessing of mechanical power enabled the Admiralty to deepen channels in the mud-clogged Upper Thames and Medway, thereby obviating the need to construct a new dockyard downstream at Northfleet, as had been intended.

The first Admiralty vessel to use steam for propulsion, the paddle tug *Comet*, was ordered in late 1819 (see Chapter 3). Initially Admiralty interest in steam was limited to auxiliary work, and the Admiralty resisted the concept of steam power for ships of war. It was not until 1827 that the first vessel planned to carry an armament – the *Dee* – was ordered. Early machinery was unreliable, and the Controller was reluctant to establish repair facilities in the Dockyards, relying on the early manufacturers – Boulton & Watt and Henry Maudslay – for repair and maintenance. But by 1830 facilities were being established, both at Woolwich and at Portsmouth, where the first boiler factory was built in 1829. The incoming Whig administration, under the direction of Sir James Graham, decided to expand development of steam power and swiftly ordered construction of four paddle sloops, whose design was a significant advance on what had gone before. Technological development of the steam engine and the marine boiler proceeded apace. Samuel Hall's development of the steam condenser in 1834 enabled the use of fresh water instead of salt water for boilers, substantially eliminating the corrosion that had plagued early boilers.

In the earliest steam engines, the driving force was transmitted to paddle wheels by side levers, but in 1837 a direct-acting engine – with the cylinder placed directly beneath the crank and connected by a short rod – was developed by John Seaward of the engineering firm Seaward & Capel at Millwall and installed in the paddle-sloop *Gorgon*. The piston-rod end was guided by a parallel-motion system, resulting in a type of engine which was known as the 'Gorgon' type from its first installation. In 1839 the Lambeth firm of Joseph Maudslay, Sons & Field patented a twin-cylinder engine known as a 'Siamese' engine with two pairs of cylinders, each pair having a common connecting-rod. A further type was the oscillating engine, which dispensed with the need for a connecting-rod, and which was introduced about 1843. The advantages of the twin-cylinder single-expansion reciprocating engine over its rivals soon resulted in its universal adoption.

The history of the rival systems of paddle and screw propulsion is too well known to bear repetition here. The two-bladed propeller, developed by Francis Pettit-Smith from the mid-1830s, was fitted into the screw sloop *Rattler* a decade later, and it was this type which eventually formed the basis of all propulsion systems.

Horizontal compound engines, of the two-cylinder type fitted with surface condensers, were first fitted (unsuccessfully) in the converted wooden frigate *Constance* in 1862 and, more effectively, in the wooden-hulled ironclad corvette *Pallas*, built in 1865. Its indifferent performance delayed future development for another decade, until the ironclad *Alexandra* was similarly fitted. Later in the same year, vertically mounted compound engines were introduced in the ironclads *Dreadnought* and (second-rate) *Shannon*. A decade further on, triple-expansion engines were tried experimentally in the prototype torpedo-gunboat *Rattlesnake*. The further economies in fuel consumption which these produced meant that for the first time

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warships could carry sufficient bunkers for long-range cruising, and thus triple-expansion engines swiftly became the standard form of propulsion in the Navy.

The first marine boilers were shaped as square boxes, with tubes conducting the heat from the furnace(s) through the water. Later designs produced short cylindrical or ellipsoidal boilers. The furnaces were usually positioned below and forward of the boiler, although some 'double-ended' boilers had a furnace at each end. In order to stimulate the combustion, and thus produce more steam more rapidly, a system of 'forced draught' ventilation was introduced later, whereby fans were employed to pump additional air into the furnaces; however, the effect was not enough to add more than a knot or two to speeds. Consequently a number of differing means of raising boiler pressures were tried; a common feature of all these later 'water-tube' types (of which the more common variants were the Belleville type and those patented by the principal steam warship contractors – Thornycroft, Yarrow and White) was that the tubes conducted water through the furnaces, rather than vice versa.

From Oak Walls to Steel Armour – the materials revolution

While wood remained the material of construction for the battlefleet until the end of the 1850s (apart from an initial enthusiasm for iron-hulled cruisers in the early 1840s, which was aborted before it could be extended to ships of the line because the early iron construction was inadequate for protection), there were significant developments in construction techniques even before the close of the Napoleonic War. Robert Seppings, who became the most significant of the joint holders of the Surveyorship in 1815, perfected a system of diagonal bracing which proved a major factor in reducing hogging (the tendency for the ends of a ship to droop because wooden constructions lacked longitudinal strength). Seppings' diagonal bracing, first using wooden riders and later iron braces and trusses, allowed the most war-weary of the battlefleet to be strengthened. The success of the system encouraged the Navy Board to decide that all future ships should be constructed to Seppings' principles.

Seppings further strengthened his designs by replacing the weak defensive areas of a warship by stronger construction. The beakhead bulkhead was already being superseded on new vessels by a built-up bow, with the cant frames being extended upwards to the forecastle and the frames themselves rearranged. This became a standard feature, but more significant was the replacement of the old multi-level stern windows by a curved extension of the sides; adopted as a 'round' stern, it allowed the positioning of guns for all-round fire as well as strengthening the structure against a following sea. From June 1817 this was adopted for all new construction.

This new construction technique permitted the development of longer hulls, and the traditional 74-gun two-decker grew to 90 and even to 100 guns. At the same time, the much heavier pieces of ordnance produced by the new gunfounding processes could be mounted. Nevertheless, Seppings secured the enmity of many influential persons, including the new King William IV, and the arrival of a reformist Whig government in 1830 soon resulted in Seppings' retirement and his replacement by William Symonds, who introduced new structural changes designed to obtain higher sailing speeds. Under Symonds, a broader but deeper V-shaped hull form was created, with the rounded stern becoming more elliptical in shape, and the use of iron diagonals further strengthened the battlefleet's hulls.

In the 1830s and 1840s, the stronger hulls also permitted the fitting of the heavy iron engines and boilers to provide steam propulsion; as machinery grew in size and power, it occupied an increasingly large part of the hull structure. While with paddle propulsion these required to be fairly high up, and thus were vulnerable to gunfire, the eventual success of the screw propeller – which unlike paddle propulsion ensured that the traditional broadside location of a ship's own ordnance was not interfered with – also meant that the heavy engine could be placed low down below the waterline, with the ship's centre of gravity being lowered correspondingly.

Nevertheless, with hulls becoming longer, the stage was being reached whereby the structural strength of timber was no longer adequate, even with the extra rigidity afforded by Seppings' new methods of construction. Iron had been introduced as early as the Napoleonic period in the form of internal supports such as knees, but in the early 1840s the Admiralty were persuaded to follow the lead of commercial shipbuilders by employing iron in the construction of vessels' structural members, and then in providing iron plating to clad these frames.

The Admiralty left the development of iron shipbuilding to the commercial sector, and during the 1830s firms such as that of John Laird at Birkenhead pioneered the design of iron vessels. These experiments were closely monitored by the Admiralty. The first iron warships built by Laird were actually for the East India Company's two Marine services (the Bombay and Bengal Marines), as shown in Chapter 4, and the Admiralty gained valuable experience by inspection of these vessels. Laird shortly afterwards built a larger iron warship on speculation, hoping the Admiralty would purchase her, but in the event they proved reluctant and the ship (Yard No.42) was finally purchased by the Mexican Navy as the *Guadeloupe*.

After procuring a few iron-hulled auxiliary vessels, the Admiralty took the plunge in early 1843 and ordered the construction of iron frigates and sloops, both at Lairds and other shipbuilders with experience of iron, but also placing orders at Deptford, which was emerging as the Admiralty's specialist yard for experiments in construction techniques and propulsion systems. In 1845 growing confidence in iron construction led to a large programme of iron warship construction, with much of the work being given to private yards. In fact, the decision to use iron for these resulted chiefly from the Admiralty's unwillingness to order large wooden vessels from commercial shipyards, given problems with the quality of construction during the Napoleonic Wars. However, this programme was judged premature when experiments appeared to prove that iron lacked the strength to withstand solid shot. The new iron frigates on order were converted to troopships, with their original engines removed, and the Admiralty continued with wooden walls for a further 14 years.

Iron-hulled floating batteries had been built during the Russian War, but it was the decision by France in March 1858 to order six ironclad warships that led to a reappraisal by Walker, who in June 1858 determined (with support from the Admiralty Board) that Britain should match them by building a half-dozen iron

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warships, two in the Royal Dockyards and the remainder in the specialist private shipbuilding yards. A design specification for a 'frigate of 36 guns cased with wrought iron plates' was issued on 22 January 1859. The vessel when ordered was to have 4½in thick plates from stem to stern, reaching from the upper deck to 5ft below the load waterline, with a wood backing equal to the topsides of a ship of the line. The *Warrior*, as she was named, was also rigged with the spars and sails of an 80-gun Second Rate.

The success of the *Warrior* quickly led to the abandonment of wooden shipbuilding for battlefleet units. The six long-hulled iron frigates, and four 'diminutive' versions were all iron in construction, while six 91-gun wooden two-deckers were completed as ironclad frigates in order to give Britain an ironclad capacity considerably greater than anything France could build.

All British armoured ships were, until about 1875, constructed with wrought-iron armour. In 1876 the *Inflexible* was launched, with its turrets composed of compound armour, where the face of the iron armour was tempered with steel for hardening, and this remained the practice until the end of our period of study.

Steel was introduced into the British Navy with the despatch vessels *Iris* and *Mercury* in 1875. The following *Comus* and *Calliope* Class frigates (later reclassed as Third Class Cruisers) reverted partly to iron hulls, but even these retained some steel in their building. Steel was first used for construction of the battlefleet in the *Conqueror* of 1881, and the larger *Collingwood*, *Colossus* and *Edinburgh* of 1882; all had steel hulls and protective decks, although their protective armour remained of the iron compound type. Thereafter, apart from the final composite sloops of the late 1880s, all British warships were to be constructed with steel hulls until the modern era.

While it falls outside our period, the subsequent evolution of steel armour in the pre-Dreadnought era deserves attention – indeed, Andrew Lambert has touched upon this in his Introduction. Several vessels of the *Royal Sovereign* class – *Ramillies*, *Repulse*, *Revenge* and *Royal Oak*, built like their sisters under the 1889 Naval Defence Act – included in their central battery protection steel with an admixture of nickel, while retaining compound armour for the belt and armour protection. The smaller *Barfleur* and *Centurion* also included some nickel-steel armour.

The Harvey process of steel-making, whereby the surface of the steel was further strengthened by a carbonisation, was first employed in the *Renown* of 1895, and the following *Magnificent* and *Canopus* classes. A few years later, the introduction of the Krupp process added still further to the impact-resistance of armour, and this was incorporated in the *Formidable* and subsequent classes.

From Muzzle-loaded Solid Shot to Breech-loaded Explosive Shell – the ordnance revolution

The ships which fought in the Napoleonic era were uniformly armed with cast-iron smoothbore cannon which fired a solid iron projectile (usually round shot) over comparatively short ranges. This type of gun was to remain the principal naval weapon right up to and including the era of the Russian War of 1854-56. Besides round shot, these also employed a variety of projectiles from solid iron types such as chain, bar to early explosive devices. The close of war in 1815 left the British Navy with a wide range of such guns of a variety of calibres (bore diameters) and lengths.

The short-barrelled carronade – mounted on a slide instead of the traditional trucked (solid-wheeled) carriage – which had proved so popular during the French Wars because of its devastating effectiveness as a close-range weapon, had somewhat fallen from favour during the conflict with the Americans, and was increasingly being removed from the battlefleet and replaced by a smaller number of longer-range (and longer-barrelled) guns. Nevertheless, the 32pdr carronade – 17cwt in weight and 4ft 0in in length – was to survive well into the 1840s, particularly as the primary armament of sloops and brigs. The Carron Company continued to develop new versions of other calibres – both the larger 68pdr (5ft 4in long, with a nominal 8in bore) and the smaller 24pdr (3ft 9in length), 18pdr (3ft 4in) and 12pdr (2ft 8in) models.

The search for other guns of less weight than the classical long gun had seen the adoption during the war of Gover's Patent 24pdrs (only 6ft 6in long and weighing 39cwt) on a number of two-deckers and frigates; coupled with 24pdr carronades, this had the added advantage of simplifying ordnance storage. Two new types of short 24pdr were developed during the closing years of war, the 40cwt model developed by General Sir Thomas Blomefield, and its 40½cwt rival conceived by Sir William Congreve – both being 7ft 6in long. Following competitive trials aboard the frigates *Cydnus* and *Eurotas* in 1813, the Blomefield type proved superior and 300 were swiftly ordered, with a 32pdr equivalent being developed in short order. New types of lighter guns were introduced after the war. From about 1830 Dixon's short (25cwt) 32pdrs were brought in to replace the 32pdr carronades on sloops and brigs, following a decision in 1826 to standardise all ordnance around 32pdr guns of various lengths and weights, with the storing of shot consequently simplified.

During the Napoleonic War, explosive projectiles had been fired from large mortars fitted in specialised bomb-vessels (see Chapter 2). These came in two calibres – 13in and 10in. The 13in mortars had a length of 5ft 3in, and were mounted on beds 7ft 10in long, 4ft 6in wide and 2ft 11in deep; the 10in mortars had a length of 4ft 8in, and were mounted on beds 7ft 0in long, 3ft 11in wide and 2ft 5in deep. However, the 10in variety did not long survive the Napoleonic period.

The next explosive projectile weapon to be introduced for the Navy was the shell gun, during the 1820s. A limited wartime development had been the spherical case shell pioneered by Lieutenant Henry Shrapnel (1761-1842), but post-war the lead was taken by France, for whom the artilleryman Colonel Henri-Joseph Paixhans (1783-1854) developed a chambered weapon. After experiments in the early 1820s, Britain followed suit with both a 10in and an 8in model, developed by Lieut.-Gen. William Millar. The smaller type could also handle sold shot, and its use spread, initially as a pivot-mounted weapon on the gundecks of ships of the line, but rapidly deployed in much greater numbers so that by the 1840s complete gundecks were fitted with the new weapon. It fired either a 51lb shell, a 56lb plugged hollow shot, or a 68lb solid shot The standard gun had an actual bore of 8.05in, a length of 9ft and a weight of 65cwt, although a shorter version (8ft) existed which weighed just 52cwt. The larger 10in type had a length of 9ft 4in ft and a weight of 85cwt, although a later model was 10ft 0in long and weighed 86cwt;

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it fired an 84lb shell and found its primary use on paddle (and subsequently screw) frigates.

In the meanwhile, the wide range of calibres used for solid shot weapons had long been a source of difficulties when it came to efficient management of projectiles. Much discussion took place throughout the 1820s on unifying ordnance with a standard 32pdr armament, while retaining different weights and lengths of guns. To effect this, many of the 18pdr and 24pdr guns in service were bored out to take 32pdr shot. By the end of the 1830s virtually every British warship was established with a 32pdr armament, and a new series of 32pdr guns, of varying weights, was in the course of being introduced to replace the bored-out weapons.

The first departure from the smooth-bore weapon took place in the early 1850s, when the Lancaster gun was tried out, and used to a limited extent during the Russian War. These had a twisted bore of elliptical cross-section (as did its special shell projectiles). They were unreliable (the shell being liable to jam and burst the gun) and were not officially adopted. A variant, devised by Whitworth, had a spiral bore of hexagonal cross-section, and used a seemingly effective armour-piercing shell, but eventually it also proved unsatisfactory in comparison with the Armstrong model.

Table 1: Muzzle-loading smoothbore (MLSB) guns

Type of gun (nominal)	*Weight of gun*	*Gun length*	*Bore diam.*	*Powder weight*	*Type*
(a) Shell guns					
10in	86 cwt	9ft 4in		12lbs	Millar's modified
	84 cwt	9ft 4in		12lbs	Millar's original
8in	65 cwt	9ft 0in	8.05in	10lbs	For large vessels
	60 cwt	8ft 10in	8.05in	10lbs	For frigates
	52 cwt	8ft 0in	8.05in	8lbs	For corvettes
	50 cwt	6ft 8½in	8.05in		Later version
(b) Solid shot guns					
68pdr	112 cwt	10ft 10in	8.12in		
	95 cwt	10ft 0in	8.12in	16lbs	Dundas, 1853
	88 cwt	9ft 6in	8.12in	14lbs	Dundas, 1853
56pdr	98 cwt	11ft 0in	7.65in	16lbs	Monk's, 1839
	87 cwt	10ft 0in	7.65in	14lbs	Monk's, 1839
42pdr	84 cwt	10ft 0in	6.97in		
	75 cwt	10ft 0in	6.97in		
	67 cwt	9ft 6in	6.97in	10.5lbs	Dundas, 1853
32pdr	58 cwt	9ft 6in	6.41in	10lbs	Dundas, 1855
	56 cwt	9ft 6in	6.41in	10lbs	Blomefield
	50 cwt	9ft 0in	6.375in	8lbs	Monk's 'A', 1839
	45 cwt	8ft 6in	6.35in	7lbs	Monk's 'B', 1839
	42 cwt	8ft 0in	6.35in	6lbs	Monk's 'C', 1839
	25 cwt	6ft 0in	6.3in	4lbs	Blomefield - bored-up from older 18pdrs

Table 2: Early breech-loading guns

Type of gun	*Weight of gun (nominal)*	*Bore length*	*Bore diam.*	*Powder weight*	*Projectile weight*	*Projectile diam.*	*Muzzle velocity**	*Muzzle energy***
7in (heavy)	82 cwt	99.5in	7.2in	11lbs	109lbs	7in	1,100	915
40pdr	35 cwt	106.3in	4.96in	5lbs	40.12lbs	4.75in	1,180	388
20pdr	16 cwt	84.0in	3.94in	2½lbs	21.81lbs	3.75in	1,130	193
12pdr	8 cwt	61.3in	3.2in	24oz	11.25lbs	3in	1,239	118
9pdr	6 cwt	52.5in	3.2in	18oz	8.5lbs	3in	1,055	66

[* In foot-seconds. ** In foot-tons.]

The rifled breech-loading gun (BL throughout this book) was introduced into the Navy about 1858. In that year the Committee on Rifled Cannon recommended the introduction of Armstrong's breech-loading gun, and within a few years a variety of lesser-calibre weapons were produced.

Larger versions of these first breech-loaders were intended, but within a few years the defects of these early weapons proved insuperable given the technology of the day. The primary cause of these defects was the weakness of the breech, and the Admiralty decided to revert to the traditional muzzle-loader while retaining the accuracy imparted by a rifled bore. The rifled muzzle-loading gun (MLR) was introduced into the Navy about 1865; the weapon selected was the Woolwich pattern; they continued until about 1879, when the Admiralty decided to return to the (rifled) breech-loader.

Table 3: Rifled muzzle-loading (MLR) guns

Type of gun	*Weight of gun (nominal)*	*Bore length#*	*Bore diam.*	*Powder weight*	*Projectile weight*	*Penetration†*	*Muzzle velocity**	*Muzzle energy***
16in Mk I	80 ton	288in (18)	16in	450lbs	1,684lbs	24.7	1,590	29,530
12.5in Mk II	38 ton	198in (16)	12.5in	210lbs	809lbs	18.4	1,575	13,930
12in Mk I	35 ton	162in (13.5)	12in	140lbs	707lbs	15.9	1,390	9,469
12in Mk II	25 ton	145in (12)	12in	85lbs	608lbs	13.5	1,292	7,046
11in Mk II	25 ton	145in (12)	11in	85lbs	543lbs	14.3	1,360	7,015
10in Mk II	18 ton	145.5in (14.5)	10in	70lbs	406lbs	12.9	1,379	5,356
9in Mk IV	12 ton	125in (14)	9in		253lbs		1,420	
9in Mk V	12 ton	125in (14)	9in	50lbs	253lbs	11.3	1,440	3,643
8in Mk III	9 ton	118in (15)	8in	35lbs	175lbs	9.6	1,384	2,323
7in Mk III	6.5 ton	126in (16)	7in		112lbs		1,325	1,400
7in Mk IV	7 ton	126in	7in	30lbs	112lbs	9.5	1,561	1,895
6.3in Mk 1	64 cwt		6.3in		64.5lbs		1,125	
6.3in Mk III	64 cwt		6.3in		64.5lbs		1,390	

[# In inches and (in parenthesis) in calibres (*ie* length/diameter). † Inches of wrought iron at muzzle. * In foot-seconds. ** In foot-tons.]

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Guns grew in size and weight. Instead of being cast as one unit and then bored out, the new technique of 'building up' by casting successive tubes shrunk around each preceding one enabled stronger guns to be manufactured to withstand the vastly greater explosive forces involved. At the same time, hydraulic mechanisms were introduced to work the new heavy guns and to lift and load their shells, all these components now being too large for human muscle power to cope.

The reintroduction of BL guns began about 1879, when the Admiralty decided to return to the (rifled) breech-loader. The structural weaknesses now associated with the earlier breech mechanisms had been overcome. From about 1881 new ships began to be completed with such weapons, although many existing vessels continued to retain MLR guns until the end of the 1880s, and several large vessels were still armed with muzzle-loaders at the close of the century.

Table 4: Breech-loading guns (from 1881)

Type of gun	*Weight of gun (nominal)*	*Bore length*	*Bore diam.*	*Powder weight*	*Projectile weight*	*Penetration†*	*Muzzle velocity**	*Muzzle energy***
16.25in Mk I	110 ton	30	16.25in	960lbs	1,800lbs	36.18	2,087	54,390
13.5in Mk II	67 ton	30	13.5in	630lbs	1,250lbs	30.0	2,000	34,675
12in Mk V	45 ton	25	12in	259lbs	714lbs	22.5	1,910	18,060
10in Mk II	29 ton	32	10in	252lbs	500lbs	23.0	2,040	14,430
9.2in Mk VII	22 ton	31.5	9.2in	166lbs	380lbs	24.4	2,035	10,910
8in Mk III	13 ton	25.6	8in	104lbs	210lbs	16.5	1,953	5,554
8in Mk VI	14 ton	29.6	8in	118lbs	210lbs	22.8	2,150	6,730
6in Mk VI	5 ton	26	6in	48lbs	100lbs	13.3	1,960	2,665
5in Mk V	2 ton	25	5in	15lbs	50lbs	9.0	1,770	1,124
4in Mk I	13 cwt	14.81	4in	3.25lbs	25lbs		1,180	241
4in Mk VI	26 cwt	27	4in	12lbs	25lbs	7.3	1,900	625
3in/12pdr	7 cwt	28	3in	4lbs	12lbs		1,710	254

[† Inches of wrought iron at muzzle. * In foot-seconds. ** In foot-tons.]

Concurrent with these developments, the new chemical industry was revolutionising the type of explosive used as propellant and warhead for shells. 'Black' (*ie* gun-) powder was replaced initially by prismatic powder, then by 'gun cotton' (nitro-cellulose) and finally by cordite. Both the length and range of guns were greatly increased. The introduction of cordite had allowed the use of much smaller charges, which could be encased in brass cartridge cases. These could be fabricated with the projectile in one unit, a 'round' which could be inserted into the gun in one motion instead of requiring separate loading of the projectile and the charge. At the same time, gun construction was improved by the addition of wire wound around the innermost tube of the barrel to improve strength.

From 1881 the Admiralty looked for these improvements to be introduced in 'quick-firing' guns, and sought tenders from manufacturers, initially for a 6pdr gun capable of firing at least 12 rounds per minute. By 1889 a variety of lesser-calibre guns were produced, chiefly by Hotchkiss and Nordenfelt, using a sliding wedge breech mechanism. The Hotchkiss 6pdr QF weighed 8cwt, and fired a projectile of 2.25in diameter with a muzzle velocity of 1,820 feet/second. Their smaller 3pdr QF weighed 4cwt, and fired a 1.85in projectile (which actually weighed 3½lbs) with a muzzle velocity of 1,873 feet/second. The Nordenfelt 6pdr QF had similar characteristics to its Hotchkiss equivalent, but the muzzle velocity was slightly higher at 1,860 feet/second.

There were several types of machine guns in use by the RN by this time, but the predominant use was of the 4-barrelled Nordenfelt Mk III variety, which fired 1in projectiles of 7¼oz weight; it weighed 447 lbs.

Larger-calibre QF guns soon followed, and a 4.7in QF gun produced by Armstrong was tested aboard the trials gunboat *Handy* at Portsmouth in 1887. This, by using a conical breech that could be hinged to swing away instead of the traditional cylindrical one, could maintain a rate of fire of 14 rounds per minute. The early QF types, in service before the end of the century, were as follows:

Table 5: Quick-firing guns

Type of gun	*Weight of gun (nominal)*	*Bore length*	*Bore diam.*	*Powder weight*	*Projectile weight*	*Penetration†*	*Muzzle velocity**	*Muzzle energy***
6in Mk II	7 ton	41	6in	13.25lbs	100lbs	15.9	2,200	3,356
6in	7.4 ton	45	6in	13.25lbs	100lbs	22.7	2,784	5,373
4.7in	47 cwt	40	4.72in	5.6lbs	45lbs	11.9	2,188	1,494
4in	25 cwt	40	4in	3.87lbs	25lbs	11.2	2,456	1,046
3in/12pdr	12 cwt	40	3in	1.62lbs	12.5lbs	8.1	2,200	423
6pdr	8 cwt#	40#	2.24in	0.49lbs	6lbs	3.7	1,820	138
3pdr	5 cwt#	40#	1.85in	0.40lbs	3.3lbs	3.1	1,875	80

[# Figures given relate to the Hotchkiss 6pdr and 3pdr guns; the Nordenfelt equivalents were 6cwt (42.3 cal) and 4cwt (45.4 cal) respectively.
† Inches of wrought iron at muzzle. * In foot-seconds. ** In foot-tons.]

Note the figures in these tables have been taken mainly from Laird Clowes's *History of the Royal Navy*, Vol.7 (see Bibliography).

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1 Ships in Service or Launched at 22 June 1815

Following his defeat at Waterloo on 18 June 1815, Napoleon abdicated for the second and final time on 22 June, bringing to a close a period of 22 years of almost continuous warfare. The Navy had in fact played little role during the 'Hundred Days', but was left with a fleet worn from decades of over-extension. The end of the wars brought not the anticipated economic recovery, but a long period of depression with attendant widespread distress. Beyond the completion of wartime construction orders, there were limited funds to modernise the fleet. This chapter gives a snapshot of the composition of the Navy at the conclusion of its era of triumph. Some weeding-out of now superfluous ships had begun even before the Hundred Days, but much more was to follow, particularly among the smaller, unrated craft.

The following includes details of all vessels afloat by 22 June 1815. Vessels ordered before that date, but not yet launched, are mentioned herein but in general their details are included in Chapter 2. By 1815 many wartime or pre-war warships had been relegated to ancillary roles, often hulked for harbour service, but their details appear under their original (combatant) classification in order to show more clearly the lines of development of the various ship types; these vessels appear again (as a cross-reference) in the sections dealing with such auxiliaries.

First Rates of 120 guns (three-deckers)

In mid-1815 the Royal Navy had four 120-gun ships, although the prototype *Caledonia* had been decommissioned during 1814, while the three new *Nelson* Class had joined her in Ordinary (*ie* reserve) upon completion. There were two new ships on order since early 1812 - the *Britannia* (building) and her sister *Prince Regent* (see Chapter 2).

***CALEDONIA* Class**. Designed by Sir William Rule, 1797. The successful prototype for all post-war First Rates.

Dimensions & tons: 205ft 0in, 170ft 11in x 53ft 6in oa (52ft 9in for tonnage) x 23ft 2in. 2,602$^{14}/_{94}$ bm.

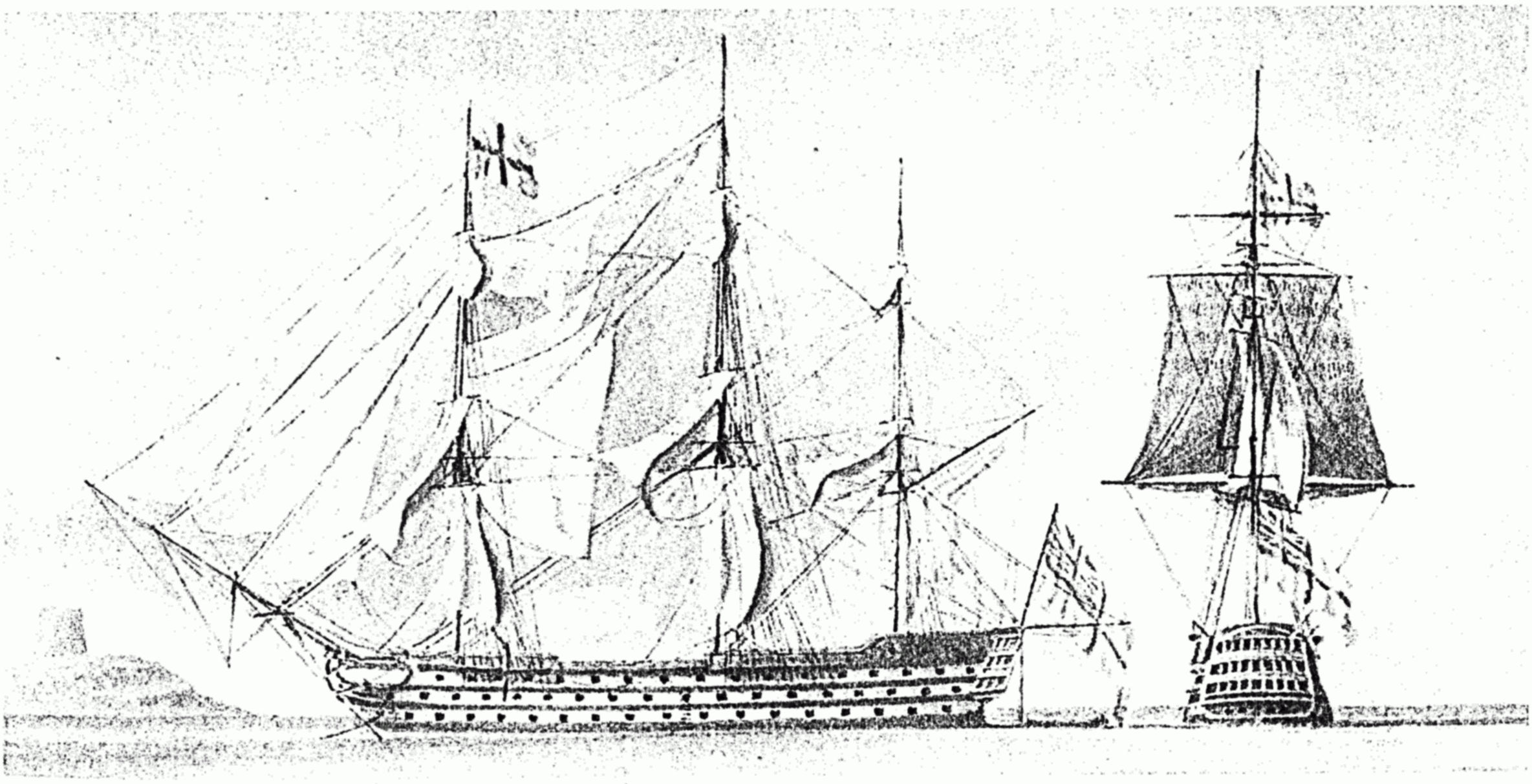
As rebuilt 1830: 205ft 5½in, 170ft 4in x 55ft 7½in oa (54ft 8½in for tonnage) x 23ft 2in. 2,711$^{70}/_{94}$ bm.

Men: 875 (900 from 4.1815). Guns: LD 32 x 32pdr; MD 34 x 24pdr; UD 34 x 18pdr; QD 6 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH (not counted in total) 2 x 18pdr carronades. In 4.1815 the UD 18pdr had been replaced by 34 x 24pdr Congreve guns. Was eventually re-armed (in 1820s) with - LD 2 x 68pdr + 30 x 32pdr; MD 2 x 68pdr + 32 x 32pdr; UD 34 x 32pdr; QD 16 x 32pdr; Fc 4 x 32pdr.

First cost: £81,507 or £103,098 (fitted for sea).

Caledonia Plymouth Dyd.

Ord: 19.1.1797. K: 1.1.1805. L: 25.6.1808. Rebuilt with circular stern at



The finest British First Rate of her day, *Caledonia* is shown as she appeared towards the end of the Napoleonic Wars in a watercolour portrait by William Innes Pocock, a serving naval officer and the son of the famous marine artist Nicholas Pocock. *PW0056*

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Plymouth 5.1826 - 4.1830. Loaned to the Greenwich Seamen's Hospital, and name changed to *Dreadnought* 21.5.1856. Returned to the RN 1870, and offered as a church ship but not accepted. To Metropolitan Asylums as a hospital ship for male convalescent smallpox patients 1871. BU at Chatham 2-3.1875.

NOTES: Two sister-ships ordered 6.1.1812 - *Britannia* and *Prince Regent* - were not launched until 1820 and 1823 respectively - see details in Chapter 2.

***NELSON* Class.** Designed by the Surveyors' Office, modified from the draught for the *Caledonia*, but proved poorer sailers, being 'very crank'. *Howe* was the first new warship to be built employing Seppings' diagonal bracing.

Dimensions & tons: 205ft 0in, 170ft 10$^{1}/_{8}$in x 53ft 6in oa (52ft 9in for tonnage) x 24ft 0in. 2,601$^{4}/_{94}$ bm. 4,672 disp (*St Vincent*).

Men: 875 (later 900). Guns: LD 32 x 32pdr; MD 34 x 24pdr; UD 34 x 18pdr; QD 6 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades: RH (not counted in total) 6 x 18pdr carronades.

First cost: *Nelson* £106,250. *Howe* £93,400. *Saint Vincent* £87,437.

Nelson Woolwich Dyd.

Ord: 23.11.1805. K: 12.1809. L: 4.7.1814. Converted to a 89-gun screw line of battle ship (see Chapter 5) between 3.1858 and 7.2.1860. Victoria (Aust.) Government schoolship 2.1867. Sold as a coaling hulk at Sydney 28.4.1898 (later at Launceston). BU in Tasmania 9.1928.

Howe Chatham Dyd.

Ord: 15.1.1806. K: 6.1808. L: 28.3.1815. BU at Sheerness 2.1854.

Saint Vincent Plymouth Dyd.

Ord: 15.1.1806. K: 5.1810. L: 11.3.1815. Hulked as Flagship at Portsmouth 10.1841. Reduced to 102 guns 1850. Troopship 1854. Became a training ship for boys at Portsmouth 1.1.1862. Sold to Castle 15.5.1906 and arrived at Falmouth for BU 23.6.1906.

NOTES: Designed armament (above) altered before completion, with RH carronades deleted and 24pdrs substituted for 18pdrs on UD.

First Rates of 110 guns (three-deckers)

Three First Rates of 110 guns remained in 1815, while another two (*London* and *Princess Charlotte*) had been on order since 1812.

***VILLE DE PARIS*.** Designed by Sir John Henslow, approved 19.6.1788 (originally to have been of 100 guns).

Dimensions & tons: 190ft 0in, 156ft 1$^{1}/_{8}$in x 53ft 0in oa x 22ft 4in. 2,332$^{24}/_{94}$ bm.

Men: 837. Guns: LD 30 x 32pdr; MD 30 x 24pdr; UD 32 x 18pdr; QD 14 x 12pdr; Fc 4 x 12pdr.

Ville de Paris Chatham Dyd.

Ord: 25.5.1788. K: 7.1789. L: 17.7.1795. Hulked as a quarantine ship at Milford Haven by AO 13.8.1825. BU 6.1845.

***HIBERNIA* Class.** Designed by Sir John Henslow, 1790 - originally ordered to the plans of the *Ville de Paris*, but lengthened by an 11ft section being inserted while building. Reclassed as a 120-gun ship in 2.1817, but never able to carry the heavy armament of the *Caledonia* and later three-deckers, and rerated as 104-gun in 1845.

Dimensions & tons: 201ft 2in, 167ft 3$^{1}/_{8}$in x 53ft 0in x 22ft 4in. 2,499$^{11}/_{94}$ bm. 4,149 disp.

As rebuilt 1829: 202ft 8¾in, 167ft 10½in x 54ft 1¾in oa (53ft 2¾in for tonnage) x 22ft 6in. 2,530 bm.

Men: 837. Guns: LD 32 x 32pdr; MD 32 x 24pdr; UD 34 x 18pdr; QD 12 x 32pdr carronades; Fc 2 x 18pdr + 4 x 32pdr carronades. From 1845 had 104 guns: LD 24 x 32pdr (56cwt) + 4 x 8in/68pdr (65cwt) shell; MD 28 x 32pdr (48cwt) + 2 x 8in/68pdr (65cwt) shell; UD 30 x 32pdr (33cwt); QD 10 x 32pdr (17cwt); Fc 6 x 32pdr (45cwt).

First cost: £73,823 (fitted for sea).

Hibernia Plymouth Dyd.

Ord: 9.12.1790. K: 11.1797. L: 17.11.1804. Rebuilt with circular stern at Portsmouth 12.1819 - 10.1829. Recommissioned 27.2.1845. Became a guard and receiving ship at Malta 1855. Sold there 14.10.1902 (for £1,010).

Ex-SPANISH PRIZE. Only one prize three-decker remained available for active service at the end of the war - the best of the Spanish vessels of this type. Actually a 114-gun vessel.

Dimensions & tons: 194ft 3in, 156ft 11¼in x 54ft 3in oa x 24ft 3½in. 2,456$^{24}/_{94}$ bm.

Men: 837. Guns: LD 32 x 32pdr; MD 32 x 24pdr; UD 32 x 12pdr; QD 12 x 8pdr; Fc 6 x 8pdr.

San Josef (Spanish *San Josef*, launched 1783 Ferrol).

Taken at Cape St. Vincent 14.2.1797. Paid off into Ordinary 30.7.1815. Gunnery training ship and Flagship at Plymouth from 1837. BU there 5.1849.

First Rates of 100/104 guns (three-deckers)

In mid-1815 there remained just a few of the classic 100-gun ships, and the first three below had all been reclassed as 98-gun Second Rates by the war's end - leaving just the *Royal George* and *Queen Charlotte* (a new 100-gun ship, the *Trafalgar*, was on order). This pair were to be reclassed as 108-gun ships in February 1817, when their ranks were swollen with the re-grading of all the remaining 98-gun Second Rates, which were added to the First Rates.

(Old) *ROYAL GEORGE* Class. Joseph Allin design of 1751, amended 1745 Establishment. Class name-ship *Royal George* foundered 1782.

Dimensions & tons: 178ft 0in, 144ft 6½in x 51ft 10in x 21ft 6in. 2,065$^{58}/_{94}$ bm.

Men: 837. Guns: LD 30 x 32pdr; MD 28 x 24pdr; UD 30 x 12pdr; QD 10 x 6pdr; Fc 2 x 6pdr. From 1803 had: QD 12 x 12pdrs (short); Fc 2 x 12pdrs + 2 x 24pdr carronades.

First cost: £41,729 (refit in 1788-90 cost £35,573).

Saint George (ex-*Princess Royal*, ex-*Britannia*) Portsmouth Dyd.

Ord: 28.3.1751. K: ... 1751. L: 19.10.1762. Laid up 1806-12. Renamed *Princess Royal* 6.1.1812, then *Saint George* 18.1.1812. Prison ship at Plymouth 12.1813; receiving ship 7.1815. Renamed *Barfleur* 2.6.1819. BU at Plymouth 2.1825.

***VICTORY* Class.** Design by Sir Thomas Slade, 1759.

Dimensions & tons: 186ft 0in, 151ft 3$^{5}/_{8}$in x 51ft 10in x 21ft 6in. 2,162$^{22}/_{94}$ bm.

Men: 837. Guns: LD 30 x 32pdr; MD 28 x 24pdr; UD 30 x 12pdr; QD 10 x 6pdr; Fc 2 x 6pdr.

First cost: £57,743.

Victory Chatham Dyd.

Ord: 13.12.1758. K: 2.7.1759. L: 7.5.1765. Not commissioned until 3.1778, when intended LD 42pdrs replaced by 32pdrs. Large repair 12.1787 to 4.1788. Reclassed as hospital ship 8.12.1797 to 1.1800, when began Great Repair. Recommissioned 9.4.1803. Decommissioned 15.1.1806 after Trafalgar, she underwent major refit 6.3-3.5.1806. Reclassed as 98-gun Second Rate 11.1807 - with 2 x 32pdrs (LD) removed and 24pdrs (MD) replaced by 18pdrs - rebuilt as 2,088

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tons; troopship 12.1810 to 4.1811; prison ship 1813. Rebuilt with round bow 3.1814 to 1.1816. Reclassed as 104-gun First Rate 2.1817. At Portsmouth as a harbour flag and receiving ship 1.1824. Dry-docked 12.1.1922 and converted during the 1920s to her appearance at the time of Trafalgar. Still in commission and open to the public today at Portsmouth.

***ROYAL SOVEREIGN* Class**. Design by Sir John Williams, 1772.
Dimensions & tons: 186ft 0in, 152ft 6in x 52ft 0in x 22ft 3in. 2,193$^{38}/_{94}$ bm.
Men: 837. Guns: LD 28 x 32pdr; MD 28 x 24pdr; UD 30 x 12pdr; QD 10 x 12pdr; Fc 4 x 12pdr.
First cost: £67,458.

Royal Sovereign Plymouth Dyd.
Ord: 3.2.1772. K: 7.1.1774. L: 11 9.1786. Reclassed as 98-gun Second Rate 1815, but then reclassed as 104-gun First Rate 2.1817. Became receiving ship at Plymouth, renamed *Captain* 17.8.1825. Hulked at Plymouth 6.1826. BU (under AO 9.7.1841) completed there 28.8.1841.

(New) *ROYAL GEORGE* Class. Design by Edward Hunt, 1782.
Dimensions & tons: 190ft 0in, 156ft 2$^{5}/_{8}$in x 52ft 5½in x 22ft 4in. 2,286$^{63}/_{94}$ bm.
Queen Charlotte as rebuilt 1831: 190ft 7in, 156ft 7¾in x 53ft 7in oa (52ft 8in for tonnage) x 22ft 1¾in. 2,311$^{16}/_{94}$ bm.
Men: 837. Guns: LD 30 x 32pdr; MD 30 x 24pdr; UD 30 x 12pdr; QD 2 x 12pdr + 12 x 32pdr carronades: Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.
First cost: *Royal George* £58,303. *Queen Charlotte* £86,913.

Royal George (ex-*Umpire*, renamed 11.9.1783) Chatham Dyd.
Ord: 25.3.1782. K: 6.1784. L: 16.9.1788. C: 14.4.1790. BU 2.1822.

Queen Charlotte Deptford Dyd.
Ord: 9.7.1801 (as replacement for first sister-ship of the same name, blown up accidentally on 17.3.1800). K: 10.1805. L: 17.5.1810. Rebuilt with circular stern at Portsmouth 10.1825 - 1.1831. Hulked at Portsmouth as the gunnery training ship *Excellent* on 31.12.1859. Sold there to J. Read to BU 12.1.1892.

Second Rates of 98 guns (three-deckers) - later First Rates

By 1815 the remaining smaller three-deckers (including three old 90-gun ships now disarmed as receiving ships) were already fairly elderly and were soon hulked. The *Saint George* (ex-*Britannia*), *Victory* and *Royal Sovereign* - see above - had all been temporarily added to their ranks. However, all ships still left were reclassed as First Rates in 2.1817.

***NEPTUNE* Class**. Design by Joseph Allin, a 1750 design modified from the lines of the 1745 Establishment.
Dimensions & tons: 171ft 0in, 143ft 3in x 48ft 6in x 20ft 6in. 1,792$^{31}/_{94}$ bm.
Men: 750. Guns: LD 26 x 32pdr; MD 26 x 18pdr; UD 26 x 12pdr; QD 10 x 6pdr; Fc 2 x 6pdr.
First cost: *Neptune* £39,692. *Sussex* £52,157.

Neptune Portsmouth Dyd.
Ord: 10.4. & 12.7.1750. K: 20.7.1750. L: 8.12.1756. Sheer hulk at Portsmouth 7.1784. Receiving ship 1802. BU at Portsmouth 10.1816.

Sussex (ex-*Union*) Chatham Dyd.
Ord: 10.4. & 12.7.1750. K: 5.6.1751. L: 25.9.1756. Hospital hulk at Chatham 1790 (under AO 7.6.1788). Became receiving ship, renamed *Sussex*, on 6.2.1802. BU at Chatham 10.1816.

NAMUR. Design by William Bateley, improving *Neptune* design by lengthening gundeck by 4ft (but shorter keel).
Dimensions & tons: 175ft 0in, 142ft 2½in x 48ft 6in x 20ft 6in. 1,779$^{30}/_{94}$ bm.
Men: 750. Guns: LD 26 x 32pdr; MD 26 x 18pdr; UD 26 x 12pdr; QD 10 x 6pdr; Fc 2 x 6pdr.
First cost: £57,285.

Namur Chatham Dyd.
Ord: 10.4. & 12.7.1750. K: 12.1750. Re-ordered to new design 23.10.1755. L: 3.3.1756. Cut down to 74-gun Third Rate 5.1805. Receiving ship at Chatham 9.1807. BU at Chatham 5.1833.

***LONDON* Class.** Sir Thomas Slade design of 1759. Sister-ship *Impregnable* was wrecked 1799, and *London* was BU in 1811.
Dimensions & tons: 177ft 6in, 146ft 6in x 49ft 0in x 21ft 0in. 1,870$^{93}/_{94}$ bm.
Men: 750. Guns: LD 28 x 32pdr; MD 30 x 18pdr; UD 30 x 12pdr; QD 8 x 12pdr; Fc 2 x 9pdr.
First cost: *Prince* £55,041.

Prince Woolwich Dyd.
Ord: 9.12.1779. K: 1.1.1782. L: 4.7.1788. Lengthened (with 17ft new section inserted) to 194ft 6in (163ft 6in keel), 2,088 tons, to 'vast improvement in her sailing qualities' by AO 2.6.1796. Hulked as a victualling vessel and as accommodation for officers (dockyard officials) by 1816. BU at Portsmouth 11.1837.

Windsor Castle Deptford Dyd.
Ord: 10.12.1782. K: 19.8.1784. L: 3.5.1790. Cut down to 74-gun Third Rate (which see) 6.1814. BU at Pembroke Dock 5.1839.

QUEEN. Design by William Bately, 1761.
Dimensions & tons: 177ft 6in, 143ft 7in x 49ft 6in x 21ft 9in. 1,871$^{33}/_{94}$ bm.
Men: 750 (738 from 1794). Guns: LD 28 x 32pdr; MD 30 x 18pdr; UD 30 x 12pdr; QD 8 x 12pdr; Fc 2 x 9pdr.
First cost: £45,661.

Queen Woolwich Dyd.
Ord: 19.10.1761. K: 1.4.1762. L: 18.9.1769. Cut down to 74-gun Third Rate (which see) 10.1811. BU at Chatham 4.1821.

***BARFLEUR* Class.** Sir Thomas Slade design of 1762, based on First Rate *Royal William*. Sister-ships *Princess Royal* and *Formidable*, both cut down to 74-gun Third Rates in 1807 and 1813 respectively, were BU in the same years.
Dimensions & tons: 177ft 6in, 144ft 0¾in x 50ft 3in x 21ft 0in. 1,934$^{87}/_{94}$ bm.
Men: 750 (738 from 1794). Guns: LD 28 x 32pdr; MD 30 x 18pdr; UD 30 x 12pdr; QD 8 x 12pdr; Fc 2 x 9pdr.
First cost: *Barfleur* £49,222. *Prince George* £53,624.

Barfleur Chatham Dyd.
Ord: 19.10.1761. K: 22.11.1762. L: 30.7.1768. BU at Chatham 9.1819.

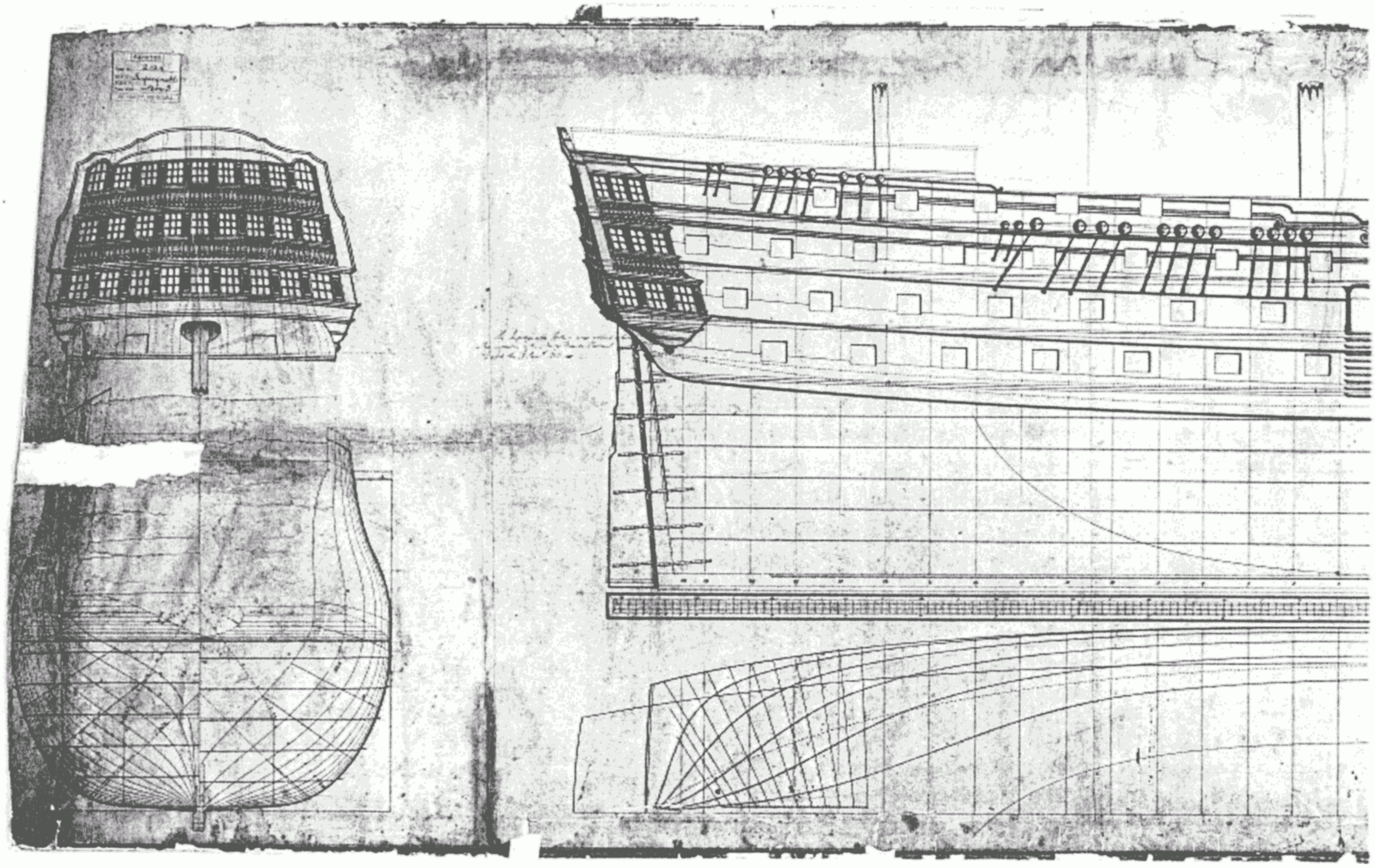
Prince George Chatham Dyd.
Ord: 11.6.1766. K: 18.5.1767. L: 31.8.1772. Became a sheer hulk at Portsmouth 11.1816. BU there 1.1839.

***DUKE* Class.** Sir John Williams design of 1771. Sister-ship *Saint George* was wrecked 1811.
Dimensions & tons: 177ft 6in, 145ft 3in x 50ft 0in x 21ft 2in. 1,931$^{45}/_{94}$ bm.
Men: 750 (738 from 1794). Guns: LD 28 x 32pdr; MD 30 x 18pdr; UD 30 x 12pdr; QD 8 x 12pdr; Fc 2 x 12pdr.

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Impregnable as designed. Draught dated 17 January 1798. *DR212A*

First cost: *Duke* £44,656 (+ fitting £12,301). *Atlas* £50,350 (fitted).

Duke Plymouth Dyd.
Ord: 18.6.1771. K: 10.1772. L: 18.10.1777. Lazarette 1798. Hospital ship 9.1799. BU at Sheerness 8.1843.

Glory Plymouth Dyd.
Ord: 16.7.1774. K: 7.4.1775. L: 5.7.1788. Prison ship at Chatham 1809; powder hulk 1814. BU completed 30.7.1825.

Atlas Chatham Dyd.
Ord: 5.8.1777. K: 1.10.1777. L: 13.2.1782. Cut down to 74-gun Third Rate in 1802. Temporary prison ship at Portsmouth 1814; powder magazine 1815. BU 5.1821.

(Old) *BOYNE* Class. Edward Hunt design of 1783. Name-ship of class *Boyne* was burnt by accident in 1795.
Dimensions & tons: 182ft 0in, 149ft 8in x 50ft 3in x 21ft 9in. $2{,}010^{18}/_{94}$ bm.
Men: 750 (738 from 1794). Guns: LD 28 x 32pdr; MD 30 x 18pdr; UD 30 x 12pdr; QD 8 x 8pdr; Fc 2 x 6pdr.
First cost: £58,483.

Prince of Wales Portsmouth Dyd.
Ord: 29.11.1783. K: 5.1784. L: 28.6.1794. BU at Portsmouth 12.1822.

***DREADNOUGHT* Class**. Sir John Henslow design, approved 20.3.1788. Proposed fourth ship *Ocean* (ordered 9.12.1790) was re-ordered to new design 1797 (see below). All three were reclassed as 12pdr class Second Rates in 1808, and as 104-gun First Rates in 2.1817.
Dimensions & tons: 185ft 0in, 152ft $6^{5}/_{8}$in x 51ft 0in (50ft 3in moulded) x 21ft 0in. $2{,}110^{53}/_{94}$ bm.
Men: 850. Guns: LD 28 x 32pdr; MD 30 x 18pdr; UD 30 x 12pdr; QD 8 x 6pdr; Fc 2 x 6pdr.
First cost: *Dreadnought* £60,484. *Neptune* £77,053. *Temeraire* £73,241.

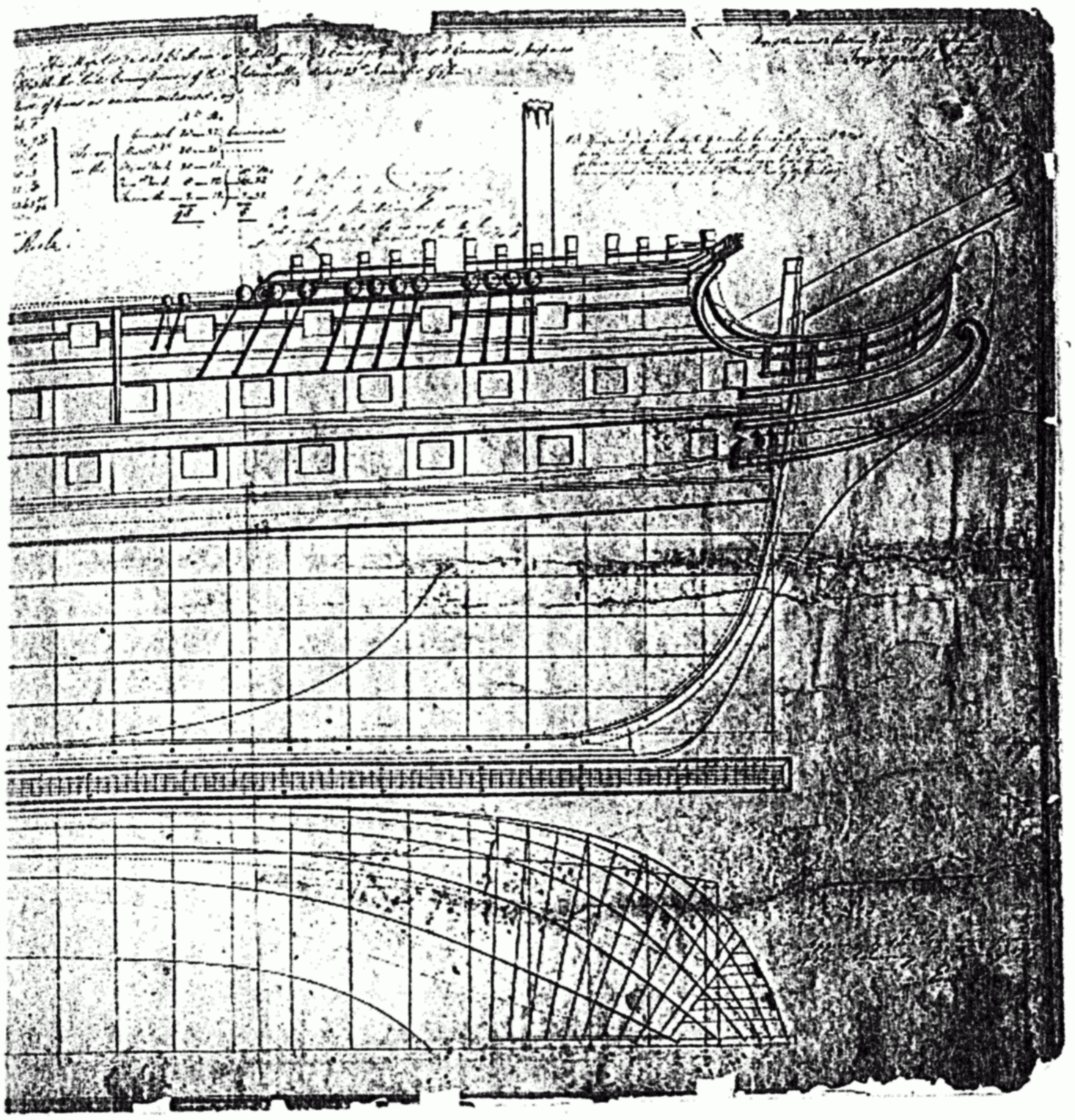
Dreadnought Portsmouth Dyd.
Ord: 17.1.1788. K: 7.1788. L: 13.6.1801. Became a lazarette at Pembroke 1825. Hospital ship 1827. To Greenwich as the seamen's hospital 1831. BU 31.3.1857.

Neptune Deptford Dyd.
Ord: 15.2.1790. K: 4.1791. L: 28.1.1797. Became a prison ship at Plymouth 1813. BU at Plymouth 10.1818.

Temeraire Chatham Dyd.
Ord: 9.12.1790. K: 7.1793. L: 11.9.1798. Became a prison ship at Plymouth 12.1813. Receiving ship 6.1820. Sold to Mr Beatson to BU 16.8.1838.

***OCEAN* Class**. Sir John Henslow design approved 21.6.1797; originally to be of *Dreadnought* Class - but design lengthened to increase her capacity (to mount 18pdrs on her UD instead of 12pdrs) and re-ordered.
Dimensions & tons: 196ft 0in, 164ft $0^{5}/_{8}$in x 51ft 0in (50ft 3in moulded) x 21ft 6in. $2{,}269^{63}/_{94}$ bm.
Men: 738 (837 as First Rate). Guns: LD 30 x 32pdr; MD 32 x 18pdr; UD 32 x 18pdr; QD 2 x 12pdr + 10 x 32pdr carronades: Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

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Dimensions & tons: 186ft 0in, 151ft $3^{5}/_{8}$in x 51ft 10in x 21ft 6in. $2{,}162^{22}/_{94}$ bm.
Men: 738 (837 as First Rate). Guns: LD 28 x 32pdr; MD 30 x 18pdr; UD 30 x 12pdr; QD 4 x 12pdr + 8 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.
First cost: *Boyne* £93,162 (fitted for sea). *Union* £85,601.

Boyne Portsmouth Dyd.
Ord: 25.6.1801 (as a 100, altered to 98 in 1806). K: 4.1806. L: 3.7.1810. Reclassed as 104-gun First Rate in 2.1817. Cut down to a 76-gun Third Rate (two-decker) by AO 10.7.1826. Became gunnery training ship at Portsmouth 3.1834, and renamed *Excellent* 1.12.1834. Renamed *Queen Charlotte* 22.11.1859. BU at Portsmouth 6.1861.

Union Plymouth Dyd.
Ord: 16.9.1801 (as a 100, altered to 98 in 1806). K: 10.1805.
L: 16.11.1811. Reclassed as 104-gun First Rate in 2.1817. Proposed to be cut down to a 80-gun Second Rate (two-decker) by AO 28.4.1827, amended to 78-gun Third Rate by AO 3.12.1832; but this was never begun, and order cancelled 1.1.1833. BU at Plymouth 3.1833.

Third Rates of 80 guns (two-deckers) - later Second Rates

Most of the really large two-deckers in RN service in 1815 were French prizes - but a few 80s had already been built or were building in Britain and this type, 84s and 90s were to provide nearly all the two-decker ships of the line built from this time on. In 2.1817, all the remaining 80-gun ships were moved from the Third Rate to the Second Rate, and classed as either 84-gun or 80-gun ships. Three new 80s were on order at the end of the war - the *Cambridge* (to be launched on the day after Napoleon's abdication), *Talavera* (to be renamed *Waterloo* in 1817) and *Formidable*; all are included in Chapter 2.

CAESAR. Edward Hunt design approved 28.11.1783, the first British two-decker 80 since the 1690s.
Dimensions & tons: 181ft 0in, 148ft $3^{1}/_{8}$in x 50ft 3in x 22ft 11in. $1{,}991^{29}/_{94}$ bm.
Men: 650/719. Guns: LD 30 x 32pdr; UD 32 x 24pdr; QD 14 x 9pdr; Fc 4 x 9pdr.
First cost: £59,786.

Caesar Plymouth Dyd.
Ord: 13.11.1783. K: 24.1.1786. L: 16.11.1793. Army clothing depot ship at Plymouth 2.1814. BU there 2.1821.

FOUDROYANT. Sir John Henslow design approved 16.5.1788.
Dimensions & tons: 184ft 0in, 151ft $5^{5}/_{8}$in x 50ft 6in x 22ft 6in. $2{,}054^{65}/_{94}$ bm.
Men: 650. Guns: LD 30 x 32pdr; UD 32 x 24pdr; QD 14 x 9pdr; Fc 4 x 9pdr.

Foudroyant (ex-*Superb*) Plymouth Dyd.
Ord: 17.1.1788. K: 5.1789. L: 31.3.1798. Guardship at Plymouth 1820. Became gunnery training ship at Plymouth 1862. Sold to J. Read 12.1.1892; later repurchased from Germany and refitted by Wheatley

First cost: £90,076.

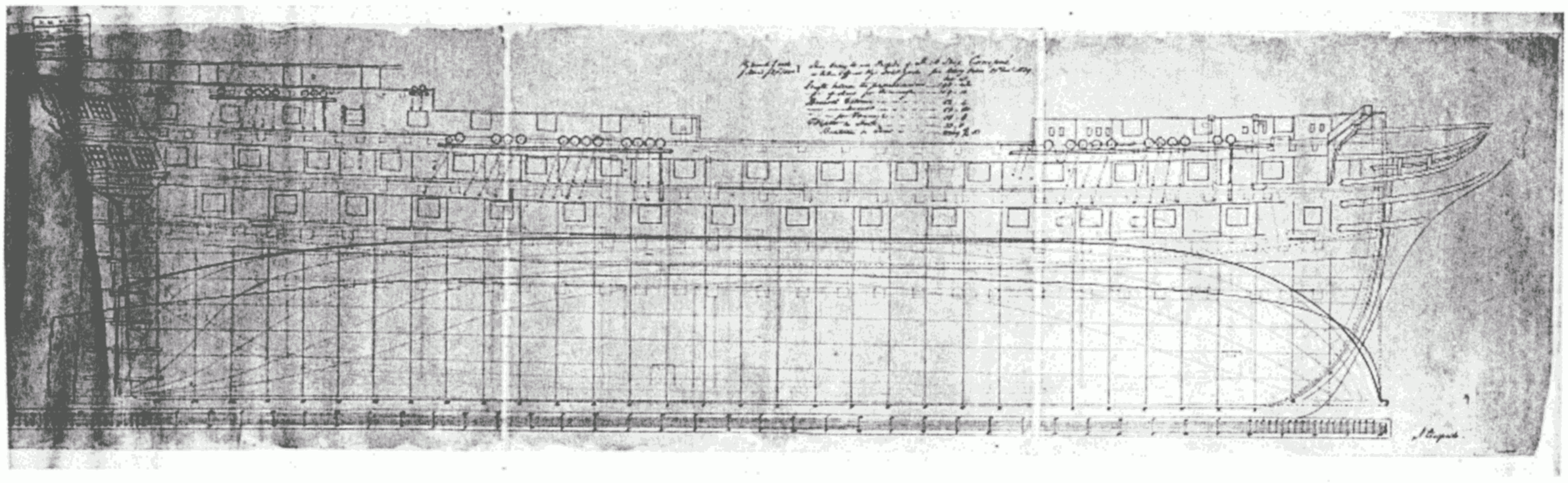
Ocean Woolwich Dyd.
Ord: 9.12.1790. K: 1.10.1792. Re-ord: 4.5.1797 to new design.
L: 24.10.1805. Reclassed as 110-gun First Rate in 2.1817. Cut down to 80-gun Third Rate (two-decker) by AO 4.10.1819. Became a lazarette at Sheerness 1831. Reverted to an 80 in 1832. Later flagship for the Captain of the Ordinary. Depot ship 1841; coal hulk 10.1852, then to Chatham. BU 12.1875.

***IMPREGNABLE* Class**. Design by Sir William Rule, 1798.
Dimensions & tons: 196ft 0in, 163ft $7^{3}/_{8}$in x 51ft 0in (50ft 3in moulded) x 22ft 0in. $2{,}263^{58}/_{94}$ bm.
As rebuilt 1826: 196ft 8in, 162ft 10¼in x 52ft 8½in x 21ft 9½in. $2{,}406^{54}/_{94}$ bm.
Men: 738 (837 as First Rate). Guns: LD 28 x 32pdr; MD 30 x 18pdr; UD 30 x 18pdr; QD 14 x 32pdr carronades: Fc 2 x 12pdr + 2 x 32pdr carronades.
First cost: £65,025.

Impregnable Chatham Dyd.
Ord: 13.1.1798. K: 2.1802. L: 1.8.1810. Reclassed as 106-gun First Rate in 2.1817. Rebuilt with circular stern at Plymouth 2.1825 - 4.1826. Harbour flagship at Plymouth 1839. Training ship 1862. Renamed *Kent* on 9.11.1888, then *Caledonia* on 22.2.1891. Sold to J. B. Garnham to BU 19.7.1906.

(New) *BOYNE* Class. Built to Sir Thomas Slade's 1759 design for *Victory*.

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The French prize *Canopus*, captured at the battle of the Nile in 1798, was deemed valuable enough to warrant a number of major refits post-war. This profile draught dated 27 April 1840 shows the ship with a built-up bow and mizzen channels moved up to the level of the poop. *DRX356*

Cobb. Wrecked on Blackpool Sands whilst on a fundraising and propaganda cruise 16.6.1897; replaced by the frigate *Trincomalee* which took her name.

ROCHFORT. 1809 design by (Chevalier) Jean-Louis Barrallier. Sister-ship (*Sandwich*, ordered 14.10.1809) cancelled 22.3.1811.

Dimensions & tons: 192ft 9½in, 160ft 6½in x 49ft 4½in x 21ft 10in. 2,081$^{77}/_{94}$ bm.

Men: 640. Guns: LD 30 x 32pdr; UD 30 x 18pdr; QD 12 x 32pdr carronades; Fc 2 x 18pdr + 6 x 32pdr carronades; RH 6 x 18pdr carronades.

Rochfort (or *Rochefort*) Pembroke Dyd.

Ord: 1.6.1809. K: 8.1809. L: 6.4.1814. BU at Chatham 20.6.1826.

Ex-DANISH PRIZES. Both Danish flagships had carried 36pdr (LD) and 24pdr (UD) in Danish service.

Waldemar (Danish *Waldemar*, K: 1794. L: 1798 Nyholm Dyd, Copenhagen; design by Ernst Stibolt).

Dimensions & tons: 185ft 6¼in, 152ft 11$^{3}/_{8}$in x 50ft 10¼in x 20ft 6in. 2,103$^{66}/_{94}$ bm.

Men: 670. Guns: LD 30 x 32pdr; UD 32 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 4 x 32pdr carronades; RH 6 x 18pdr carronades. (In Danish service, had carried 24pdr on UD not 18pdr as assigned by RN.)

Taken at Copenhagen 7.9.1807. Never refitted for service. Her intended renaming as *Yarmouth* in 1809 was cancelled. Harbour service 1807. Prison ship 1812. BU 8.1816.

Christian VII (Danish *Christian den Syvende*, K: 1800. L: 1803. C: 1805 Nyholm Dyd, Copenhagen; design by F. C. H. Hohlenberg).

Dimensions & tons: 187ft 2¼in, 154ft 10½in x 51ft 0in x 21ft 7in. 2,131$^{16}/_{94}$ bm.

Men: 670. Guns: LD 30 x 32pdr; UD 32 x 18pdr; QD 2 x 32pdr + 12 x 32pdr carronades; Fc 4 x 32pdr carronades; RH 4 x 18pdr carronades.

Taken at Copenhagen 7.9.1807. Her intended renaming as *Blenheim* in 1809 was cancelled. Lazarette at Chatham 7.1814. BU there 3.1838.

Ex-FRENCH PRIZES. All French 80s were built to a common specification and differed little (hence dimensions very similar). Of nine such vessels taken by the British, six remained in being in one form or another; mainly disarmed in ancillary or hulked role (*Juste* and *Ça Ira* had been disposed of; *Bucentaure* was never added to the RN); the original armament in British service is shown, although most were of course disarmed by 1815. All four surviving as combatants to 1817 (*Canopus*, *Tonnant*, *Malta* and *Alexandre*) were reclassed as 84-gun Second Rates.

Sans Pareil (French *Le Sans Pareil*, launched 1793 Brest; design by Groignard).

Dimensions & tons: 193ft 0in, 158ft 11¼in x 51ft 6in x 23ft 4in. 2,242$^{23}/_{94}$ bm.

Men: 738 (orig.). Guns: LD 30 x 24pdr; UD 30 x 24pdr (Gover's); QD 2 x 24pdr (Gover's) + 12 x 24pdr carronades; Fc 2 x 24pdr (Gover's) + 4 x 24pdr carronades. This was her service armament from 1806; she had been disarmed as a sheer hulk since 1810.

Taken 1.6.1794. Laid up in harbour 1802. Sheer hulk 1810. BU at Plymouth 10.1842.

Canopus (French *Le Franklin*, launched 1797 Toulon).

Dimensions & tons: 193ft 10in, 159ft 7in x 51ft 6¾in x 23ft 4½in. 2,258$^{77}/_{94}$ bm.

Men: 700. Guns: LD 32 x 32pdr; UD 32 x 18pdr; QD 2 x 18pdr + 12 x 32pdr carronades; Fc 2 x 9pdr + 4 x 32pdr carronades.

Taken at Aboukir Bay 1.8.1798. Hulked at Plymouth as a receiving ship 1862. Mooring hulk 1869. Sold 10.1887.

Tonnant (French *Le Tonnant*, launched 1789 Toulon).

Dimensions & tons: 194ft 2in, 160ft 0in x 51ft 9¼in x 23ft 3in. 2,281$^{3}/_{94}$ bm.

Men: 700. Guns: LD 32 x 32pdr; UD 32 x 18pdr; QD 2 x 18pdr + 14 x 32pdr carronades; Fc 4 x 32pdr carronades.

Taken at Aboukir Bay 1.8.1798. BU at Plymouth 3.1821.

Malta (French *Le Guillaume Tell*, launched 1795 Toulon).

Dimensions & tons: 194ft 4in, 159ft 9$^{3}/_{8}$in x 51ft 7½in x 23ft 4in. 2,265$^{9}/_{94}$ bm.

Men: 700. Guns: LD 30 x 32pdr + 2 x 68pdr carronades; UD 30 x 24pdr; QD 18 x 24pdr + 8 x 24pdr carronades; Fc 2 x 12pdr; RH 2 x 68pdr carronades + 2 x 24pdr carronades.

Taken by *Foudroyant* in the Mediterranean 30.3.1800. Hulked as an Ordinary (*ie* reserve) depot ship at Plymouth 1831. BU 8.1840.

Brave (French *Le Formidable* [ex-*Le Figuières*], launched 1795 Toulon).

Dimensions & tons: 194ft 6in, 159ft 7¾in x 51ft 5½in x 21ft 6in. 2,248$^{55}/_{94}$ bm.

Men: 690. Guns: LD 32 x 32pdr; UD 30 x 18pdr; QD 2 x 12pdr + 14 x 32pdr carronades; Fc 2 x 12pdr + 4 x 32pdr carronades.

Taken in Strachan's action 4.11.1805. Laid up at Plymouth 11.11.1805. Prison ship 1.1808. Powder hulk 10.1814. BU at Plymouth 4.1816.

Alexandre (French *L'Alexandre* [ex-*L'Indivisible*], launched 1799 Brest).

Scan and/or retouch by Grzechu

Dimensions & tons: 195ft 2in, 158ft 11³/₈in x 51ft 4½in x 23ft 2in. 2,231⁴⁹/₉₄ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.
Taken 6.2.1806. Hulked 1806. Powder hulk 1808. Sold 16.5.1822.

Ex-SPANISH PRIZE. A very elderly vessel, now employed as a hulk.
Gibraltar (Spanish *Fénix*, built 1749 Havanna).
Dimensions & tons: 178ft 10¾in, 144ft 5¾in x 53ft 3¾in x 22ft 4in. 2,184²⁵/₉₄ bm.
Men: 650. Guns: LD 30 x 24pdr; UD 32 x 24pdr; QD 4 x 12pdr + 8 x 32pdr carronades; Fc 4 x 12pdr + 2 x 32pdr carronades.
Taken 16.1.1780. Reclassed as Second Rate 1805. Became powder hulk 12.1813, lazarette 9.1824. BU at Pembroke 11.1836.

Third Rate 74-gun two-deckers cut down from 90- or 98-gun three-deckers

One way of producing a more powerful two-decker was to take an older and weaker three-decker and cut it down. This had been done a number of times during the eighteenth century and there were four such conversions still extent in 1815. All were former 90- or 98-gun Second Rates - for construction dates, dimensions, etc, see under Second Rates above.

Atlas Cut down to a Third Rate two-decker 74 in 1804. Temporary prison ship at Portsmouth 1814. Powder hulk 1815. BU 5.1821 (see *Duke* Class 98s).
Namur Cut down to a Third Rate two-decker 74 in 5.1805. Receiving ship 9.1807. BU 5.1833 (see 90s).
Queen Cut down to a Third Rate two-decker 74 in 10.1811. BU 4.1821 (see *Queen* Class 98s).
Windsor Castle Cut down to a Third Rate two-decker 74 in 6.1814. BU 5.1839 (see *London* Class 98s).

Third Rates of 74 guns (two-deckers)

The 74 had been the mainstay of the line of battle for over 50 years, but by 1815 it was being superseded by larger two-deckers (80s and 90s) and the last examples of the type were already building. For convenience, 74s were divided into a 'Large Class' (with 24pdrs on the UD) and a 'Common' or 'Small' Class (with 18pdrs on the UD). There were also a few 18pdr type described as 'Middling Class' with one extra pair of 18pdrs on the UD and (usually) one extra pair of 32pdrs on the LD; many were prizes. Note that most pre-war 74s were completed with an upperworks armament of 18 x 9pdr (4 on the Fc and 14 on the QD); the spread of carronades had replaced most of these during the war years, and the QD/Fc armament set out below for each class reflects the average position around 1815 (averaged details from RUSI/NM/64).

(A) Large Class

***TRIUMPH* Class.** Design copied from lines of French *L'Invincible* (captured 1747).
Dimensions & tons: 171ft 3in, 139ft 0in x 49ft 3in x 21ft 3in. 1,793³⁵/₉₄ bm.
Men: 650 (635 from 1794). Guns: LD 28 x 32pdr; UD 30 x 24pdr; QD 14 x 9pdr; Fc 2 x 9pdr. By 1793 both had been re-armed with 18pdrs on the UD replacing 24pdrs, and both were disarmed as lazarettes before 1815.
Triumph Woolwich Dyd.
Ord: 21.5.1757. K: 2.1.1758. L: 3.3.1764. Lazarette 10.1813. BU at Pembroke 6.1850.
Valiant Chatham Dyd.
Ord: 21.5.1757. K: 1.2.1758. L: 10.8.1759. Lazarette 11.1799. BU at Sheerness 4.1826.

***MARS* Class.** Sir John Henslow design approved (probably) 22.3.1788.
Dimensions & tons: 176ft 0in, 144ft 3in x 49ft 0in x 20ft 0in. 1,842²⁴/₉₄ bm.
Men: 640 (635 from 1794). Guns: LD 28 x 32pdr; UD 30 x 24pdr; QD 12 x 9pdr; Fc 4 x 9pdr.
Mars Deptford Dyd.
Ord: 17.1.1788. K: 10.1789. L: 25.10.1794. Receiving ship at Portsmouth 1814. BU there 10.1823.
Centaur Woolwich Dyd.
Ord: 17.1.1788. K: 11.1790. L: 14.3.1797. BU at Plymouth 11.1819.

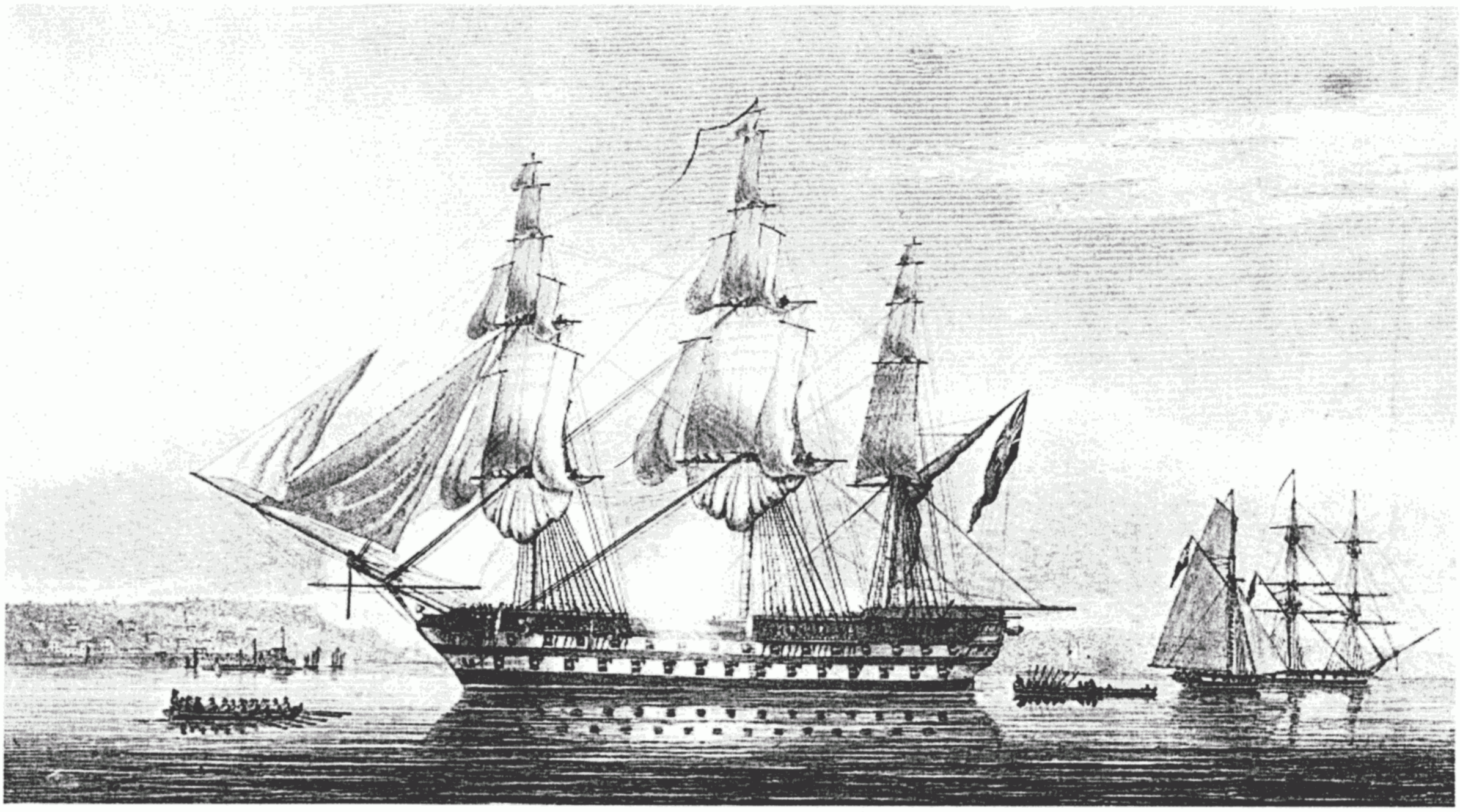
***REVENGE* Class.** Sir John Henslow design, approved 27.10.1796. Completed as a 74, later classed as a 78, then a 76.
Dimensions & tons: 182ft 0in, 150ft 3in x 49ft 0in x 20ft 9in. 1,918⁸³/₉₄ bm.
As rebuilt 1823: 183ft 2¼in, 150ft 5½in x 49ft 5in x 21ft 1in. 1,954³⁴/₉₄ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 30 x 24pdr; QD 12 x 9pdr; Fc 4 x 9pdr.
Revenge Chatham Dyd.
Ord: 26.10.1794. K: 8.1800. L: 13.4.1805. Rebuilt with a circular stern at Chatham 1818-23. Rerated 76 guns 1839. BU at Sheerness 10.1849.

***BULWARK* Class.** Sir William Rule design.
Dimensions & tons: 182ft 0in, 150ft 8in x 49ft 0in x 20ft 6in. 1,924¹⁹/₉₄ bm.
Men: 640. Guns: LD 28 x 32pdr; UD 30 x 24pdr; QD 14 x 9pdr; Fc 2 x 9pdr.
Bulwark (ex-*Scipio*, renamed 28.4.1806) Portsmouth Dyd.
Ord: 6.11.1794. K: 4.1804. L: 23.4.1807. BU at Portsmouth 9.1826.

***AJAX* Class.** Derived from draught of *L'Invincible*, a French prize of 1747, but lengthened by 11ft during construction (by AO 19.10.1796). Sister *Ajax* had been a wartime loss in 1807.
Dimensions & tons: 182ft 3in, 149ft 8⅝in x 49ft 3in x 21ft 3in. 1,931⁶²/₉₄ bm.
As rebuilt 1820: 184ft 2½in, 150ft 10½in x 50ft 0½in x 21ft 10in. 2,009⁶²/₉₄ bm.
Men: 690. Guns: LD 28 x 32pdr; UD 28 x 24pdr; QD 14 x 9pdr; Fc 4 x 9pdr.
Kent Perry, Blackwall.
Ord: 30.4.1795. K: 10.1795. L: 17.1.1798. Rebuilt with a circular stern at Plymouth 1817-20. Guardship there 2.1829. Rerated 76 guns 1839. Became a sheer hulk at Plymouth 1857 (by AO 27.10.1854). BU there 1881.

***MILFORD* Class.** Jean-Louis Barrallier design, modified from his lines for *Spencer* of 1795. Intended sister-ship (*Princess Amelia*, ordered from Chatham Dyd on the same date) was cancelled 3.1800.
Dimensions & tons: 161ft 0in, 149ft 3¼in x 49ft 0in x 21ft 0in. 1,906³⁵/₉₄ bm.

Scan and/or retouch by Grzechu



The *Warspite* returning to Spithead on 28 July 1827 after a voyage around the world. This detailed engraving by Henry Moses shows the post-war appearance and paint scheme of a typical Large Class 74-gun ship. *PU6069*

Men: 590. Guns: LD 28 x 32pdr; UD 30 x 24pdr; QD 14 x 9pdr; Fc 2 x 9pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Milford Jacobs, Milford Haven. This builder failed, so ship was completed by 'Government' (this was the beginning of the establishment of Pembroke Dyd): Milford Dyd.
Ord: 16.12.1796. K: 6.1798. L: 1.4.1809. Became a lazarette at Pembroke 6.1825. BU 7.1846.

***COLOSSUS* Class**. Sir John Henslow design, approved 13.1.1798.
Dimensions & tons: 180ft 0in, 148ft 3½in x 48ft 10in x 21ft 0in. 1,880$^{88}/_{94}$ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 30 x 24pdr; QD 4 x 24pdr + 10 x 32pdr carronades; Fc 2 x 24pdr + 2 x 24pdr carronades; RH 6 x 18pdr carronades.

Colossus Deptford Dyd.
Ord: 23.11.1797. K: 5.1799. L: 23.4.1803. Re-armed with 18pdrs on UD by 1815. BU 8.2.1826.

Warspite Chatham Dyd.
Ord: 23.11.1797. K: 3.12.1805. L: 16.11.1807. Cut down to frigate of 50 guns (Fourth Rate - which see) by AO 19.6.1837. Lent to Marine Society as a training ship 27.3.1862. Burnt by accident at Woolwich 3.1.1876 and wreck sold to McArthur & Co. to BU 2.2.1876.

CHATHAM. Design produced specifically to utilise the frames of the Franco-Dutch *Royal Hollandais*, laid down at Vlissingen (Flushing) and taken on the stocks when that port was captured on 17.8.1809. The frames were taken down, shipped to London and re-laid at Woolwich. Poor quality timber ensured she had only a brief life before being condemned.
Dimensions & tons: 177ft 7in, 146ft 7$^{7}/_{8}$in x 48ft 10in x 21ft 6½. 1,788$^{24}/_{94}$ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 28 x 24pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Chatham Woolwich Dyd (with frames captured at Flushing).
Ord: 1810. K: 6.1810. L: 14.2.1812. C: 25.4.1812. Sheer hulk 1814. Sold to J. Cristall 10.9.1817.

(B) Middling Class

Following criticism of the length of Common Class 74s (as well as other Rates), the Board directed both Surveyors in 11.1794 to produce new draughts for 74-gun ships of 186ft length. The main aim was to increase the spacing between ports, but the new designs allowed for an extra port on each gun deck. The competitive designs - one ship to each Surveyor's draught - were reduced on 6.6.1796, but still substantially exceeded the 175ft length of Common Class 74s.

***ACHILLE* Class**. Middling Class 74s. Derived from draught of *Le Pompée*, a French prize taken 1793 at Toulon.
Dimensions & tons: 182ft 2in, 149ft 9in x 49ft 0½in x 21ft 10½in. 1,915$^{70}/_{94}$ bm.
Achille as rebuilt 1822: 182ft 2¾in, 150ft 11¾in x 49ft 8in x 21ft 3in. 1,981$^{2}/_{94}$ bm.
Men: 640. Guns: LD 30 x 32pdr; UD 30 x 18pdr; QD 4 x 18pdr + 10 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Superb Thomas Pitcher, Northfleet.

Ord: 30.4.1795. K: 8.1795. L: 19.3.1798. BU 17.4.1826.

Achille William Cleverley, Gravesend (note retained French spelling of name).

Ord: 30.4.1795. K: 10.1795. L: 16.4.1798. Rebuilt with circular stern at Chatham 1817-22. Rerated 76 guns 1839. Sold to Castle & Beech to BU 1.11.1865.

***CONQUEROR* Class**. Middling Class 74. Sir John Henslow design, approved 10.6.1795.

Dimensions & tons: 176ft 0in, 144ft 3in x 49ft 0in x 20ft 9in. 1,842$^{24}/_{94}$ bm.

Men: 590. Guns: LD 28 x 32pdr; UD 30 x 18pdr; QD 4 x 18pdr + 10 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Conqueror James Graham, Harwich.

Ord: 30.4.1795. K: 10.1795. L: 23.11.1801. BU at Chatham 7.1822.

***NORTHUMBERLAND* Class**. Middling Class 74s. Derived from draught of *L'Impétueux*, a French prize taken 1794. Design approved 10.6.1795.

Dimensions & tons: 182ft 0in, 150ft 1¼in x 48ft 7½in x 21ft 7in. 1,887$^{74}/_{94}$ bm.

Men: 640. Guns: LD 30 x 32pdr; UD 30 x 24pdr; QD 4 x 18pdr + 10 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Northumberland Mrs Frances Barnard, Deptford Green.

Ord: 30.4.1795. K: 10.1795. L: 2.2.1798. Became a lazarette at Sheerness 2.1827. BU at Deptford 7.1850.

Renown (ex-*Royal Oak*, renamed 15.2.1796) John Dudman, Deptford.

Ord: 30.4.1795. K: 11.1795. L: 2.5.1798. Became a hospital ship at Plymouth 1.1814; later at Deptford. BU 5.1835.

***SPENCER* Class**. Middling Class 74. Jean-Louis Barrallier design, approved 21.9.1795.

Dimensions & tons: 181ft 0in, 148ft 10¼in x 49ft 0in x 21ft 10in. 1,901$^{5}/_{94}$ bm.

Men: 640. Guns: LD 30 x 32pdr; UD 30 x 18pdr; QD 4 x 18pdr + 10 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Spencer B. & E. Adams, Bucklers Hard.

Ord: 19.9.1795. K: 9.1795. L: 10.5.1800. BU at Plymouth 4.1822.

Ex-DANISH PRIZES. The two larger, more modern 74s taken at Copenhagen, *Danmark* and *Norge*, had both carried 36pdrs (LD) in Danish service.

Danmark (Danish *Danmark*, K: 1792. L: 1794 Nyholm Dyd, Copenhagen; design by Ernst Stibolt).

Dimensions & tons: 179ft 5in, 148ft 1$^{7}/_{8}$in x 48ft 3¼in x 19ft 6½in. 1,836$^{14}/_{94}$ bm.

Men: 590. Guns: LD 28 x 32pdr; UD 30 x 18pdr; QD 6 x 12pdr + 8 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Marathon* in 1809 was cancelled. Sold 14.12.1815.

Norge (Danish *Norge*, K: 1796. L: 1799 Nyholm Dyd, Copenhagen; design by F. C. H. Hohlenberg).

Dimensions & tons: 183ft 1½in, 151ft 5¼in x 49ft 4in x 20ft 5in. 1,960$^{39}/_{94}$ bm.

Men: 640. Guns: LD 28 x 32pdr; UD 32 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.

Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Nonsuch* in 1809 was cancelled. Sold 3.1816.

Ex-FRENCH PRIZES.

Puissant (French *Le Puissant*, launched 1782 Lorient; Groignard design).

Dimensions & tons: 178ft 9in, 146ft 5½in x 48ft 0¾in x 21ft 4in. 1,799$^{53}/_{94}$ bm.

Men: 640. Guns: not armed in RN.

Handed over by Royalists at Toulon 29.8.1793. Sheer hulk at Portsmouth 3.1794. Receiving ship 5.1796. Sold 11.7.1816.

Pompee (French *Le Pompée*, launched 1791 Toulon; Sané design).

Dimensions & tons: 182ft 2in, 148ft 7¼in x 49ft 0½in x 21ft 10½in. 1,901$^{8}/_{94}$ bm.

Men: 640. Guns: LD 30 x 32pdr; UD 30 x 18pdr; QD 12 x 32pdr carronades; Fc 4 x 32pdr carronades; RH 6 x 18pdr carronades.

Handed over by Royalists at Toulon 29.8.1793. Prison ship 1811. BU at Sheerness 1.1817.

Tigre (French *Le Tigre*, launched 1793 Brest).

Dimensions & tons: 182ft 0in, 149ft 0in x 48ft 9½in x 21ft 7$^{3}/_{8}$in. 1,886$^{72}/_{94}$ bm.

Men: 640. Guns: LD 28 x 32pdr + 2 x 68pdr carronades; UD 28 x 18pdr + 2 x 68pdr carronades; QD 4 x 18pdr + 10 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Taken off Lorient 23.6.1795. BU 6.1817.

Spartiate (French *La Spartiate*, launched 1797 Toulon).

Dimensions & tons: 182ft 7in, 150ft 4in x 49ft 4½in x 21ft 7in. 1,949$^{41}/_{94}$ bm.

Men: 640. Guns: LD 28 x 32pdr; UD 30 x 18pdr; QD 2 x 18pdr + 14 x 32pdr carronades; Fc 2 x 18pdr + 6 x 32pdr carronades.

Taken at Aboukir Bay 1.8.1798. Hulked at Plymouth as a temporary sheer hulk 1842. BU 1857.

Donegal (French *Le Hoche*, ex-*Le Pégase*, ex-*Le Barras*, launched 1794 Toulon).

Dimensions & tons: 182ft 0in, 150ft 5in x 48ft 9in x 21ft 10in. 1,901$^{43}/_{94}$ bm.

Men: 640. Guns: LD 30 x 32pdr; UD 30 x 18pdr; QD 10 x 12pdr; Fc 6 x 12pdr + 2 x 32pdr carronades; RH 6 x 32pdr carronades.

Taken off Ireland 12.10.1798. Guardship 1830. BU at Portsmouth 1845.

Genereux (French *Le Généreux*, launched 1785 Rochefort; Sané design).

Dimensions & tons: 185ft 7in, 147ft 10in x 49ft 2in x 20ft 9in. 1,925$^{43}/_{94}$ bm.

Men: 640. Guns: not armed in RN service.

Taken by *Foudroyant* in the Mediterranean 18.2.1800. Laid up from 1802 until 1805. Prison ship 1805. BU 2.1816.

Implacable (French *Le Duguay-Trouin*; launched 1800 Rochefort).

Dimensions & tons: 181ft 0$^{7}/_{8}$in, 148ft 5¼in x 48ft 9$^{7}/_{8}$in x 20ft 7in. 1,882$^{5}/_{94}$ bm.

Men: 670. Guns: LD 30 x 32pdr; UD 30 x 18pdr; QD 2 x 12pdr + 12 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.

Taken in Strachan's Action 4.11.1805. Hulked at Plymouth as a training ship 7.1855. Lent to Wheatley Cobb at Falmouth 1911. Scuttled in the Channel 2.12.1949 after a plan to preserve her at Greenwich in the dock now occupied by the *Cutty Sark* had failed - the rotten state of her timbers was supposed to have prevented her from being preserved, though there are indications that obstruction by Admiral Algernon Willis played its part (private information). However, her stern carving was preserved and has now been incorporated in a reconstruction of the stern at the National Maritime Museum.

Mont Blanc (French *Le Mont Blanc*, ex-*Le Républicain*, ex-*Le Trente-et-Un Mai*, ex-*Le Pyrrhus*, launched 1791 Rochefort).

Dimensions & tons: 183ft 2in, 149ft 7$^{3}/_{8}$in x 48ft 8¼in x 20ft 6in.

Scan and/or retouch by Grzechu

1,886$^{44}/_{94}$ bm.
Men: 670. Guns: LD 30 x 32pdr; UD 30 x 18pdr; QD 2 x 12pdr + 12 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.
Taken in Strachan's action 4.11.1805. Powder hulk 1811. Sold to Mr Sedger 8.3.1819.

Scipion (French *Le Scipion*, launched 1801 Lorient).
Dimensions & tons: 182ft 1½in, 150ft 0$^{7}/_{8}$in x 48ft 7½in x 20ft 4in. 1,887$^{39}/_{94}$ bm.
Men: 670. Guns: LD 30 x 32pdr; UD 30 x 18pdr; QD 2 x 12pdr + 12 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.
Taken in Strachan's action 4.11.1805. BU 1.1819.

Marengo (French *Le Marengo*, ex-*Le Jean Jacques Rousseau*, launched 1795 Toulon (or possibly Rochefort?; there are conflicting reports in primary sources) and renamed 8.12.1802; Sané design).
Dimensions & tons: 183ft 1$^{1}/_{8}$in, 150ft 3$^{1}/_{8}$in x 49ft 1$^{5}/_{8}$in x 21ft 3in. 1,929$^{56}/_{94}$ bm.
Men: 640. Guns: LD 30 x 32pdr; UD 30 x 18pdr; QD 8 x 12pdr + 8 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.
Taken in the Atlantic by *Foudroyant*, *London* and *Amazon* 13.3.1806. Prison ship at Portsmouth 9.1809. BU 11.1816.

Abercrombie (French *D'Hautpoult*, launched 1807 Lorient).
Dimensions & tons: 181ft 6in, 149ft 4¾in x 48ft 6¼in x 21ft 8in. 1,870$^{78}/_{94}$ bm.
Men: 670. Guns: LD 30 x 32pdr; UD 30 x 18pdr; QD 4 x 12pdr + 12 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.
Taken off Puerto Rico by *Pompée* and others 17.4.1809. Sold 30.4.1817.

Rivoli (Franco-Italian *Le Rivoli*, launched 1810 Venice).
Dimensions & tons: 176ft 5½in, 144ft 8$^{5}/_{8}$in x 48ft 5in x 21ft 3¼in. 1,804$^{41}/_{94}$ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 18pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.
Taken by *Victorious* in the Adriatic 22.2.1812. BU 1.1819.

Genoa (Franco-Italian *Le Brilliant* building at Genoa).
Dimensions & tons: 182ft 0in, 150ft 4¾in x 48ft 6¾in x 21ft 7in. 1,886$^{56}/_{94}$ bm.
Men: 600. Guns: LD 28 x 32pdr; UD 30 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 4 x 32pdr carronades.
Captured incomplete on the stocks at Genoa when that city surrendered on 16.4.1814. L: 18.4.1815 and completed for the RN. Receiving ship 1833. BU 1.1838.

Ex-SPANISH PRIZES.

San Ildefonso (Spanish *San Ildefonso*, launched 1785 Cartagena).
Dimensions & tons: 175ft 5½in, 140ft 2$^{7}/_{8}$in x 48ft 5½in x 20ft 10in. 1,752 bm.
Men: 640. Guns: LD 28 x 32pdr; UD 30 x 18pdr; QD 6 x 12pdr + 8 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.
Taken at Trafalgar 21.10.1805. Hulked as a victualler at Portsmouth 1808. Provision depot ship 1813, renamed *Ildefonso*. BU 7.1816.

San Juan (Spanish *San Juan de Nepomeceno*, launched 1766 Santander).
Dimensions & tons: 181ft 0in, 146ft 0in x 47ft 4in x 21ft 3in. 1,740 bm.
Men: 640. Guns: LD 28 x 32pdr; UD 30 x 18pdr; QD 6 x 12pdr + 2 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.
Taken at Trafalgar 21.10.1805. Hulked at Gibraltar 1805. Receiving ship 1808. Sold 8.1.1816.

(C) Small Class (usually called 'Common' Class)

***CANADA* Class**. Design by William Bately, 1760.

Dimensions & tons: 170ft 0in, 138ft 0in x 46ft 9in x 20ft 6in. 1,604$^{27}/_{94}$ bm.
Men: 550. Guns: LD 28 x 32pdr; UD 30 x 18pdr; QD 16 x 9pdr; Fc 4 x 9pdr (note 78 actual total).

Canada Woolwich Dyd.
Ord: 1.12.1759. K: 1.7.1760. L: 17.9.1765. Prison ship at Chatham 3.1810. Powder magazine 1814. Convict ship 1826. BU at Chatham 11.1834.

Modified *RAMILLIES* Class. Design by Sir Thomas Slade, a further development of his *Bellona* design. The four dockyard-built vessels to the original design had all gone by 1815, and there was a sole survivor from the five contract-built ships built to this modified design (with 2in greater breadth, 2$^{3}/_{8}$in less keel).
Dimensions & tons: 168ft 6in, 138ft 1in x 46ft 11in x 19ft 9in. 1,616$^{68}/_{94}$ bm.
Men: 550. Guns: (originally) LD 28 x 32pdr; UD 28 x 18pdr; QD 14 x 9pdr; Fc 4 x 9pdr.

Robust John Barnard & John Turner, Harwich.
Ord: 16.12.1761. K: 2.1762. L: 25.10.1764. Receiving ship at Portsmouth 7.1802. BU 1.1817.

***ROYAL OAK* Class**. Design by Sir John Williams, approved 18.12.1765. Five ships were converted to prison hulks by 1808; their sister-ship *Conqueror* had been BU in 1794.
Dimensions & tons: 168ft 6in, 138ft 2in x 46ft 9in x 20ft 0in. 1,606$^{21}/_{94}$ bm.
Men: 550. Guns: (originally) LD 28 x 32pdr; UD 28 x 18pdr; QD 14 x 9pdr; Fc 4 x 9pdr.

Assistance (ex-*Royal Oak*) Plymouth Dyd.
Ord: 16.11.1765. K: 5.1766. L: 13.11.1769. Prison ship at Portsmouth 11.1796 (renamed *Assistance* 25.10.1805). BU there 11.1815.

Bedford Woolwich Dyd.
Ord: 12.10.1768. K: 10.1769. L: 27.10.1775. Prison ship at Portsmouth 1801. BU there 10.1817.

Suffolk (ex-*Sultan*) John Barnard & John Turner, Harwich.
Ord: 14.1.1771. K: 3.1771. L: 23.12.1775. Prison ship at Portsmouth 2.1797 (renamed *Suffolk* 25.10.1805). BU there 1.1816.

Hector Henry Adams & John Barnard, Deptford.
Ord: 14.1.1771. K: 4.1771. L: 27.5.1774. Prison ship at Plymouth 1808. BU there 2.1816.

Vengeance John Randall & Co., Rotherhithe.
Ord: 14.1.1771. K: 4.1771. L: 25.6.1774. Prison ship at Portsmouth 1808. BU there 1.1816.

Modified *ALBION* Class. Original *Albion* design by Sir Thomas Slade in 1759, based on 90-gun *Neptune* of the 1719 Establishment; the prototype *Albion* had been wrecked in 1797. Four ships were produced to a modified design; of these three were hulked in the 1790s; their sister *Irresistible* was BU in 1806.
Dimensions & tons: 168ft 0in, 139ft 1in x 47ft 3in x 18ft 10in. 1,651$^{75}/_{94}$ bm.
Men: 550. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 14 x 9pdr; Fc 4 x 9pdr.

Grafton Deptford Dyd.
Ord: 22.10.1767. K: 1.7.1768. L: 26.9.1771. 32pdrs later replaced by 24pdrs. Receiving ship at Portsmouth 12.12.1791. BU there 5.1816.

Alcide Deptford Dyd.
Ord: 31.8.1774. K: 14.6.1776. L: 30.7.1779. Receiving ship at Portsmouth 12.1794. BU there 4.1817.

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Fortitude John Randall & Co., Rotherhithe.
Ord: 2.2.1778. K: 4.3.1778. L: 22.3.1780. Prison ship at Plymouth 10.1795. Powder hulk 5.1802. BU at Portsmouth 3.1820.

***ALFRED* Class**. Design by Sir John Williams. Name ship of class *Alfred* had been BU in 5.1814.
Dimensions & tons: 169ft 0in, 138ft 5¼in x 46ft 11in x 20ft 0in. 1,620$^{82}/_{94}$ bm.
Men: 550. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 14 x 9pdr; Fc 4 x 9pdr.
Warrior Portsmouth Dyd.
Ord: 13.7.1773. K: 11.1773. L: 18.10.1781. Receiving ship at Chatham 1819. Temporary quarantine ship 1831. Receiving ship at Woolwich 1832. Convict ship there 2.1840. BU 12.1857.
Alexander Deptford Dyd.
Ord: 21.7.1773. K: 6.4.1774. L: 8.10.1778. In French hands 6.11.1794 to 23.6.1795. Hulked 1798. Became a lazarette at Milford Haven by AO 25.4.1806. BU 11.1819.
Montagu Chatham Dyd.
Ord: 16.7.1774. K: 30.1.1775. L: 28.8.1779. BU 9.1818.
NOTES: Fifth ship (*Edgar*) also ordered 1774 to this design but altered to following group (which see). Two more ordered 5.2.1777 (*Caesar* from Plymouth Dyd and *Bulwark* from Portsmouth Dyd), never begun and cancelled 4.3.1783.

***ELIZABETH* Class**. Design by Sir Thomas Slade. Just two ships left by 1815 of the eight originally built to this draught; the original four Dockyard-built ships had all gone by 1815, as had the *Powerful* and the HEIC-funded *Bombay Castle*.
Dimensions & tons: 168ft 6in, 138ft 3$^{1}/_{8}$in x 46ft 10in x 19ft 9in. 1,612$^{88}/_{94}$ bm.
Men: 550. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 14 x 9pdr; Fc 4 x 9pdr.
Defiance John Randall & Brent, Rotherhithe.
Ord: 11.7.1780. K: 4.1782. L: 10.12.1783. Prison ship at Chatham 12.1813. BU there 5.1817.
Irresistable (ex-*Swiftsure*, renamed 1805) John & Wm. Wells, Rotherhithe.
Ord: 19.6.1782. K: 5.1784. L: 4.4.1787 as *Swiftsure*. Captured by French 24.6.1801, retaken at Trafalgar 21.10.1805, then renamed *Irresistible*; used for harbour purposes as prison ship. BU at Chatham 1.1816.

Modified *CANADA* Class. Revival in 1781 of the 1760 design by William Bately. Sister-ships *Orion* had been BU and *Captain* lost by fire before 1815, while *Majestic* had been cut down to a 58-gun Fourth Rate (which see).
Dimensions & tons: 170ft 0in, 140ft 5in x 46ft 7in x 20ft 6in. 1,632$^{35}/_{94}$ bm.
Men: 550. Guns: LD 28 x 32pdr; UD 30 x 18pdr; QD 6 x 9pdr + 8 x 32pdr carronades; Fc 4 x 9pdr.
Majestic William Barnard, Deptford.
Ord: 23.7.1781. K: 7.1782. L: 11.2.1785. Cut down to a 58-gun Fourth Rate 1813. BU at Pembroke after stranding 4.1816.

Modified *CULLODEN* Class. Altered from Slade's 1769 design for the *Culloden*. Again, two ships remained of the seven built to this design.
Dimensions & tons: 170ft 0in, 139ft 8in x 46ft 6in x 19ft 11in. 1,652$^{63}/_{94}$ bm.
Men: 550. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 14 x 9pdr; Fc 4 x 9pdr.
Terrible John & William Wells, Deptford.
Ord: 13.12.1781. K: 1.1783. L: 28.3.1785. Became a receiving ship at Sheerness 5.1823. Coal depot 4.1829. BU at Deptford 3.1836.
Ramillies Randall & Brent, Rotherhithe.
Ord: 19.2.1782. K: 12.1782. L: 12.7.1785. Became a lazarette at Sheerness 6.1831. BU at Deptford 2.1850.

***CARNATIC* Class**. Built to the lines of the *Courageux* (French prize, taken 1761). Sisters *Colossus* and *Minotaur* had been wartime losses.
Dimensions & tons: 172ft 3in, 140ft 5¼in x 47ft 9in x 20ft 9in. 1,703$^{21}/_{94}$ bm.
Men: 640. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 14 x 9pdr; Fc 4 x 9pdr.
Carnatic Henry Adams & William Barnard, Deptford.
Ord: 14.7.1779. K: 3.1780. L: 21.1.1783. Receiving ship at Plymouth 1805. Renamed *Captain* 14.7.1815. BU at Plymouth 9.1825.
Leviathan Chatham Dyd.
Ord: 9.12.1779. K: 5.1782. L. 9.10.1790. Became a convict ship at Portsmouth 10.1816. Target ship 10.1846. Sold to Mr Burns 7.8.1848.

Modified *ARROGANT* Class. Revived design of 1774, slightly modified from Slade's (Seven Years War) original *Arrogant* design (all ships built to that original design had gone before 1815). Of 10 ships, the *Illustrious* had been a wartime loss, and *Goliath* (cut down to a 58-gun Fourth Rate in 1812) had been BU in June 1815.
Dimensions & tons: 168ft 0in, 138ft 0in x 46ft 9in x 19ft 9in. 1,604$^{27}/_{94}$ bm.
Men: 550. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 14 x 9pdr; Fc 4 x 9pdr.
Retribution (ex-*Edgar*) Woolwich Dyd.
Ord: 25.8.1774. K: 26.8.1776. L: 30.6.1779. Hulk as prison ship at Chatham 12.1813 (renamed *Retribution* 19.8.1814). BU there 2.1835.
Vanguard Deptford Dyd.
Ord: 9.12.1779. K: 16.10.1782. L: 6.3.1787. Prison ship at Plymouth 12.1812. Powder hulk 9.1814. BU 8.1821.
Excellent James Graham, Harwich.
Ord: 9.8.1781. K: 3.1782. L: 27.11.1787. Ordered to be cut down to a frigate (58-gun Fourth Rate - which see) 6.1820, but it is uncertain if this conversion was ever completed. Receiving ship at Portsmouth 6.1825. Gunnery training hulk there 1830. BU at Deptford 10.1835.
Saturn Thomas Raymond, Northam.
Ord: 27.12.1781. K: 8.1782. L: 22.11.1786. Cut down to a frigate (58-gun Fourth Rate - which see) 12.1813. Became a lazarette at Pembroke 1825. Gunnery training ship 1830. Harbour flag and receiving ship 1845. By AO 1.7.1845 it was ordered to convert this very old vessel to a screw blockship, but this was cancelled 30.8.1845, and she remained a receiving ship. Guard ship 3.1850. BU at Pembroke 1.2.1868.
Elephant George Parsons, Bursledon.
Ord: 27.12.1781. K: 2.1783. L: 24.8.1786. Cut down to a frigate (58-gun Fourth Rate - which see) 3.1818. BU 11.1830.
Bellerophon Edward Greaves, Frindsbury.
Ord: 11.1.1782. K: 5.1782. L: 17.10.1786. Became a convict hulk at Sheerness 10.1815. Renamed *Captivity* 5.10.1824. Sold 21.1.1836.
Zealous William Barnard, Deptford Green.
Ord: 19.6.1782. K: 12.1782. L: 25.6.1785. BU 12.1816.
Audacious John Randall & Brent, Rotherhithe.
Ord: 22.10.1782. K: 8.1783. L: 23.7.1785. BU 8.1815.

***BRUNSWICK* Class**. Common Class 74. 'Admiralty' design, approved 10.1.1785.
Dimensions & tons: 176ft 0in, 145ft 2in x 48ft 8in x 19ft 6in.

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1,828$^{72}/_{94}$ bm.
Men: 650. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 14 x 9pdr; Fc 4 x 9pdr.

Brunswick Deptford Dyd.
Ord: 7.1.1785. K: 5.1786. L: 30.4.1790. Prison ship at Chatham 6.1812. Powder hulk 1814. Lazarette at Sheerness 1825. BU 8.1826.

***COURAGEUX* Class**. Common Class 74. Sir John Henslow design, approved as modified 9.9.1796. A sister-ship ordered from Portsmouth on the same date was never built or named.
Dimensions & tons: 181ft 0in, 150ft 10$^{1}/_{8}$in x 47ft 7in x 19ft 8in. 1,772$^{38}/_{94}$ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD (orig. 14 x 9pdr) 2 x 18pdr + 12 x 32pdr carronades; Fc (orig. 4 x 9pdr) 2 x 9pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Courageux Deptford Dyd.
Ord: 6.11.1794. K: 10.1797. L: 26.3.1800. Lazarette at Chatham 2.1814. BU there 10.1832.

***PLANTAGENET* Class**. Common Class 74. Sir William Rule design, approved as modified 13.8.1796 and 9.9.1796.
Dimensions & tons: 181ft 0in, 151ft 3$^{1}/_{8}$in x 47ft 0in x 19ft 11in. 1,777$^{28}/_{94}$ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD (orig. 14 x 9pdr) 2 x 18pdr + 12 x 32pdr carronades; Fc (orig. 4 x 9pdr) 2 x 18pdr + 2 x 32pdr carronades.

Plantagenet Woolwich Dyd.
Ord: 6.11.1794. K: 11.1798. L: 22.10.1801. BU at Portsmouth 5.1817.

***DRAGON* Class**. Common Class 74. Sir William Rule design, approved 10.6.1795. One of eight 74s to five varying designs, all ordered on 30.4.1795, for which designs were approved on this date.
Dimensions & tons: 178ft 0in, 146ft 9in x 48ft 0in x 20ft 6in. 1,798$^{44}/_{94}$ bm.
Men: 640. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 14 x 9pdr; Fc 4 x 9pdr.

Dragon John & William Wells, Deptford.
Ord: 30.4.1795. K: 8.1795. L. 2.4.1798. Became a lazarette at Pembroke 9.1824. Receiving ship and marine barracks 1832. Hulked and renamed *Fame* 15.7.1842. BU 8.1850.

***FAME* Class**. Common Class 74s. Sir John Henslow design, approved 13.12.1799.
Dimensions & tons: 175ft 0in, 144ft 0in x 47ft 8in x 20ft 6in. 1,740$^{27}/_{94}$ bm.
Men: 640. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 2 x 18pdr + 12 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Fame Deptford Dyd.
Ord: 15.10.1799. K: 22.1.1802. L: 8.10.1805. BU at Chatham 9.1817.

Modified *FAME* Class. Henslow modified design, approved 31.1.1800. The *Hero* of this class (sister to *Albion*) had been a wartime loss.
Dimensions & tons: 175ft 0in, 144ft 1$^{5}/_{8}$in x 47ft 6in x 20ft 6in. 1,729$^{70}/_{94}$ bm.
Men: 640. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 2 x 18pdr + 12 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Albion Perry, Wells & Green, Blackwall.
Ord: 4.2.1800. K: 6.1800. L: 17.6.1802. Became a lazarette at Portsmouth 7.1831. BU at Deptford 6.1836.

Illustrious John Randall & Brent, Rotherhithe.
Ord: 4.2.1800. K: 2.1801. L: 3.9.1803. Became an Ordinary guard ship at Portsmouth 1848. Hospital ship 1853. Gunnery ship 4.1854. Reverted to Ordinary guard ship 1859. BU at Portsmouth 4.12.1868.

Marlborough Mrs. Frances Barnard, Deptford.
Ord: 24.1.1805. K: 8.1805. L: 22.6.1807. BU at Portsmouth 7.1835.

York Samuel & Daniel Brent, Rotherhithe.
Ord: 24.1.1805. K: 8.1805. L: 7.7.1807. Became a convict ship at Portsmouth 11.1819. BU at Portsmouth 3.1854.

Sultan John Dudman & Co., Deptford.
Ord: 24.1.1805. K: 12.1805. L: 19.9.1807. Became a receiving ship at Portsmouth 1861. Target ship 1862. BU 28.1.1864.

Hannibal Henry Adams, Bucklers Hard.
Ord: 24.1.1805. K: 12.1805. L: 5.1810. Became a lazarette at Plymouth 8.1825; to Pembroke 1826. BU at Pembroke Dock 12.1833.

Royal Oak John Dudman & Co., Deptford.
Ord: 24.1.1805. K: 6.1806. L: 4.3.1809. Became a receiving ship at Bermuda 12.1825. BU at Bermuda 1850.

***REPULSE* Class**. Rule design, approved 31.1.1800. Three further ships to this design - *Belleisle*, *Thunderer* (renamed *Talavera* in 1817) and *Malabar* - were ordered in 1812-15 but not launched until 1818-19 (see Chapter 2).
Dimensions & tons: 174ft 0in, 143ft 2in x 47ft 4in x 20ft 0in. 1,706$^{8}/_{94}$ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 2 x 18pdr + 12 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Eagle Thomas Pitcher, Northfleet.
Ord: 4.2.1800. K: 8.1800. L: 27.2.1804. Cut down to frigate of 50 guns (Fourth Rate - which see) 4.1830. Training ship in Southampton Water 10.1860; from 1862 at Liverpool. Renamed *Eaglet* 1918. Burnt 1926 and wreck sold to J. Hornby to BU 4.1.1927.

Repulse William Barnard, Deptford.
Ord: 4.2.1800. K: 9.1800. L: 21.7.1803. BU at Plymouth 9.1820.

Sceptre Dudman, Deptford.
Ord: 4.2.1800. K: 12.1800. L: 11.12.1802. BU at Chatham 2.1821.

Magnificent Perry, Wells & Green, Blackwall.
Ord: 24.1.1805. K: 4.1805. L: 30.8.1806. Became a receiving ship at Jamaica 1823. Hospital ship 12.1825. Sold in Jamaica to BU 10.1.1843.

Valiant Perry, Wells & Green, Blackwall.
Ord: 24.1.1805. K: 4.1805. L: 24.1.1807. BU at Portsmouth 11.1823.

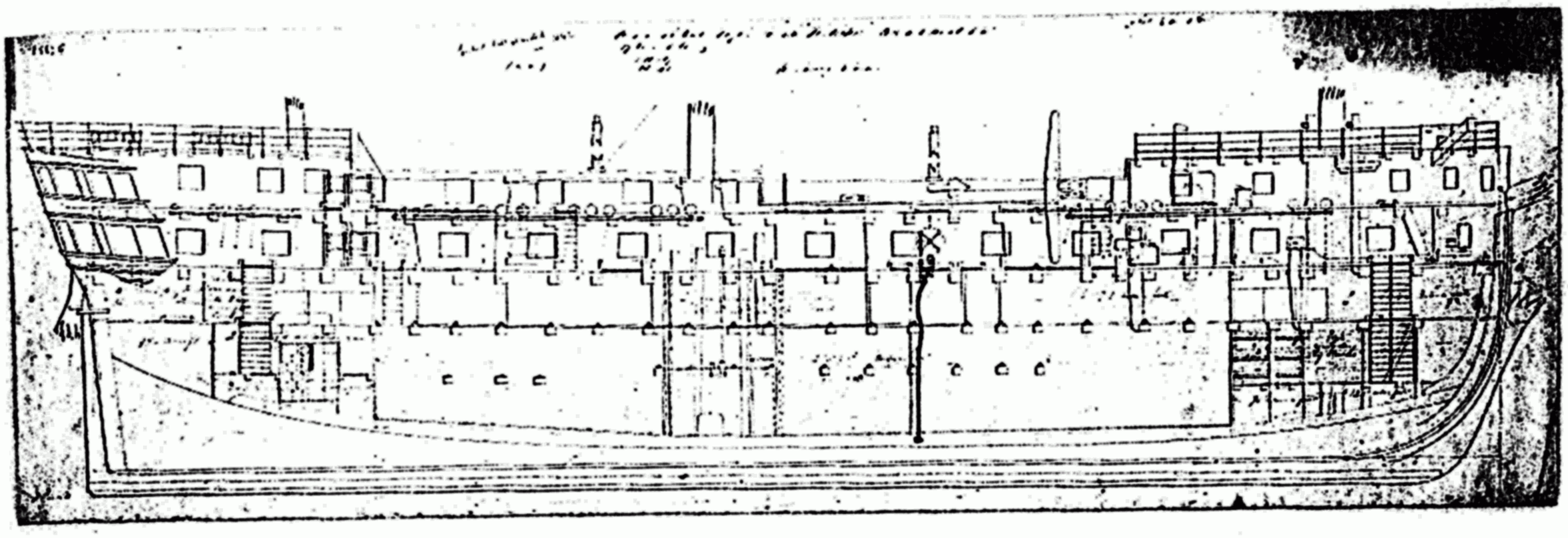
Elizabeth Perry, Blackwall.
Ord: 24.1.1805. K: 8.1805. L: 23.5.1807. BU at Chatham 8.1820.

Cumberland Thomas Pitcher, Northfleet.
Ord: 24.1.1805. K: 8.1805. L: 19.8.1807. Became a convict ship in 3.1830 and coal depot at Chatham in 1848. Renamed *Fortitude* 15.11.1833. By 1856 to Sheerness as a coal depot. Sold to Castle to BU at Charlton 2.1870.

Venerable Thomas Pitcher, Northfleet.
Ord: 24.1.1805. K: 12.1805. L: 12.4.1808. Became a church ship at Portsmouth 10.1825. BU at Plymouth 10.1838.

Modified *CARNATIC* Class. Common Class 74s. Based on *Courageux*, a French prize taken 1761, lengthened.
Dimensions & tons: 172ft 3½in, 140ft 5¼in x 47ft 9in x 20ft 9in. 1,703$^{21}/_{94}$ bm.
Men: 640. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 2 x 9pdr + 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

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Profile draught dated 17 April 1861 showing *Vindictive* as fitted to serve as a coal and bread depot at Fernando Po. Earlier cut down to a frigate, the fate of this *Armada* Class 74 was typical of the final service given by many of the older ships of the line. *DR1562A*

Aboukir Joseph & Thomas Brindley, Frindsbury.
Ord: 16.8.1800 or 24.11.1802. K: 6.1804. L: 18.11.1807. Became a receiving ship at Chatham 6.1824. Hospital ship 1831. Sold to Mr Lachlan to BU 16.6.1838.

Bombay Deptford Dyd.
Ord: 9.7.1801 or 23.7.1805. K: 10.1805. L: 28.3.1808. Renamed *Blake* 28.4.1819. Hulked as a receiving ship at Portsmouth 1823. BU 12.1855.

***SWIFTSURE* Class.** Sir John Henslow design, approved on 11.9.1800.
Dimensions & tons: 173ft 0in, 142ft 0in x 47ft 6in x 20ft 9in. $1{,}704^{17}/_{94}$ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 18pdr + 10 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Swiftsure B. & E. Adams, Bucklers Hard.
Ord: 16.8.1800. K: 8.1802. L: 23.7.1804. Became a receiving ship at Portsmouth 5.1819. BU by Barnard 18.10.1845.

Victorious B. & E. Adams, Bucklers Hard.
Ord: 30.12.1803. K: 2.1805. L: 20.10.1808. Became a receiving ship at Portsmouth 5.1826. BU at Portsmouth 1.1862.

***BLAKE* Class.** Developed from the lines of the *Courageux* (taken from the French in 1761), but lengthened by 7ft 9in on the gun deck.
Dimensions & tons: 180ft 0in, 147ft 7in x 48ft 0¾in x 20ft 10½in. $1{,}813^{37}/_{94}$ bm.
Men: 640. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 4 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Blake (ex-*Bombay*) Deptford Dyd.
Ord: 23.7.1805. K: 4.1806. L: 23.8.1808. Hulked as a temporary prison ship at Portsmouth 1.1814. Sold to BU 17.10.1816.

Saint Domingo (or *San Domingo*) Woolwich Dyd.
Ord: 23.7.1805. K: 6.1806. L: 3.3.1809. Sold to BU 18.4.1816.

***ARMADA* Class.** Designed by Peake and Rule jointly (a further development from the *Courageux*) and thus known as the 'Surveyors' Class' - or more commonly as the 'Forty Thieves' due to their alleged excessive costings. In fact, these were probably as successful a design as most, but they came into service after the period of fleet actions (*ie* post-Trafalgar) and thus never acquired many battle honours. Numerically the largest class of battleships ever built to one design by any navy. The design was approved on 1.10.1806 (*Vindictive* having already been ordered for 8½ months).
Dimensions & tons: 176ft 0in, 145ft 1in x 47ft 6in x 21ft 0in. $1{,}741^{18}/_{94}$ bm.
Gloucester as rebuilt with circular stern: 177ft 1½in, 145ft $8^{1}/_{8}$in x 48ft $1^{7}/_{8}$in x 20ft 10in. $1{,}796^{90}/_{94}$ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.

Vindictive Portsmouth Dyd.
Ord: 15.1.1806. K: 7.1808. L: 23.11.1813. Cut down to frigate of 50 guns (Fourth Rate – see Chapter 2) 10.1832. Storeship at Fernando Po 1862, where foundered 1871; wreck sold 24.11.1871.

Cressy Joseph & Thomas Brindley, Frindsbury.
Ord: 1.10.1806. K: 3.1807. L: 7.3.1810. Ordered to be cut down to a frigate of 50 guns (Fourth Rate – see Chapter 2) 24.2.1827, but conversion cancelled due to state of decay. BU at Portsmouth 12.1832.

Poictiers John King, Upnor.
Ord: 1.10.1806. K: 8.1807. L: 9.12.1809. Guardship at Chatham 8.1837. BU there 23.3.1857.

Hogue Deptford Dyd.
Ord: 1.10.1806. K: 4.1808. L: 3.10.1811. Converted to a screw blockship (see Chapter 5) from 1845 to 1849. BU at Plymouth 1865.

Vigo Charles Ross, Rochester.
Ord: 20.10.1806. K: 4.1807. L: 21.2.1810. Became a receiving ship at Plymouth 1827. BU by Marshall, Plymouth 8.1865.

Armada Isaac Blackburn, Turnchapel, Plymouth.
Ord: 20.10.1806. K: 2.1807. L: 22.3.1810. Powder hulk at Keyham Point 4.1844. Sold to Marshall, Plymouth 27.5.1863.

Vengeur James Graham, Harwich.
Ord: 20.10.1806. K: 7.1807. L: 19.6.1810. Hulked as receiving ship at Sheerness 2.1824. BU 8.1843.

Conquestador Robert Guillaume, Northam.
Ord: 20.10.1806. K: 8.1807. L: 1.8.1810. Cut down to a frigate of 50 guns (Fourth Rate - see Chapter 2) 1831.

Redoubtable Woolwich Dyd.
Ord: 29.12.1806. K: 4.1808. L: 26.1.1815. BU at Chatham 5.1841.

(*Pitt* - although ordered 17.4.1807 at Portsmouth Dyd - was delayed 6 years and appears in Chapter 2.)

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Mulgrave John King, Upnor.
Ord: 23.6.1807. K: 2.1808. L: 1.1.1812. Became a lazarette at Pembroke 9.1836. Powder ship 9.1844. BU 12.1854.

Ajax Perry & Co., Blackwall.
Ord: 1.7.1807. K: 6.1807. L: 2.5.1809. Converted to screw blockship (see Chapter 5) in 1845-48. BU 1864.

Berwick Perry & Co., Blackwall.
Ord: 1.7.1807. K: 10.1807. L: 11.9.1809. BU at Plymouth 3.1821.

Egmont Thomas Pitcher, Northfleet.
Ord: 13.7.1807. K: 10.1807. L: 7.3.1810. Became a storeship at Rio de Janeiro 12.1862. Sold 2.1.1875.

Edinburgh Samuel & Daniel Brent, Rotherhithe.
Ord: 13.7.1807. K: 11.1807. L: 26.1.1811. Converted to a screw blockship (see Chapter 5) in 1846-52. Sold 11.1865.

Clarence Isaac Blackburn, Turnchapel, Plymouth.
Ord: 13.7.1807. K: 11.1807. L: 11.4.1812. Renamed *Centurion* and ordered to be cut down to a frigate of 50 guns (Fourth Rate – see Chapter 2) 24.2.1827, but conversion cancelled due to state of decay. Instead BU at Chatham 10.1828.

Scarborough James Graham, Harwich.
Ord: 13.7.1807. K: 1.1808. L: 29.3.1812. Sold 3.9.1836.

Asia Joseph & Thomas Brindley, Frindsbury.
Ord: 13.7.1807. K: 2.1808. L: 2.12.1811. Renamed *Alfred* 1819. Cut down to a frigate of 50 guns (Fourth Rate – see Chapter 2) in 8.1828. BU 5.1865.

Rodney Mrs. Frances Barnard, Deptford.
Ord: 13.7.1807. K: 3.1808. L: 8.12.1809. Renamed *Greenwich* 1827 and cut down to frigate of 50 guns (Fourth Rate – see Chapter 2); however, the conversion probably never completed, instead she was sold 8.9.1836.

Duncan John Dudman, Deptford.
Ord: 13.7.1807. K: 8.1808. L: 2.12.1811. Became a lazarette at Portsmouth 1826; to Sheerness 1831. BU 10.1863.

Indus John Dudman, Deptford.
Ord: 31.7.1807. K: 4.1809. L: 19.12.1812. Renamed *Bellona* 3.11.1818. Became a receiving ship at Plymouth 1842. BU 27.6.1868.

Dublin Samuel & Daniel Brent, Rotherhithe.
Ord: 31.7.1807. K: 5.1809. L: 13.2.1812. Cut down to a frigate of 50 guns (Fourth Rate – see Chapter 2) 1826. Laid up 1845 until sold 7.1885.

Stirling Castle Mrs. Mary Ross, Rochester.
Ord: 12.8.1807. K: 7.1808. L: 31.12.1811. Convict ship at Plymouth 4.1839. To Portsmouth 1844. BU 6.9.1861.

Medway Thomas Pitcher, Northfleet.
Ord: 19.8.1807. K: 12.1808. L: 19.11.1812. Convict ship at Bermuda 10.1847. Sold 2.11.1865.

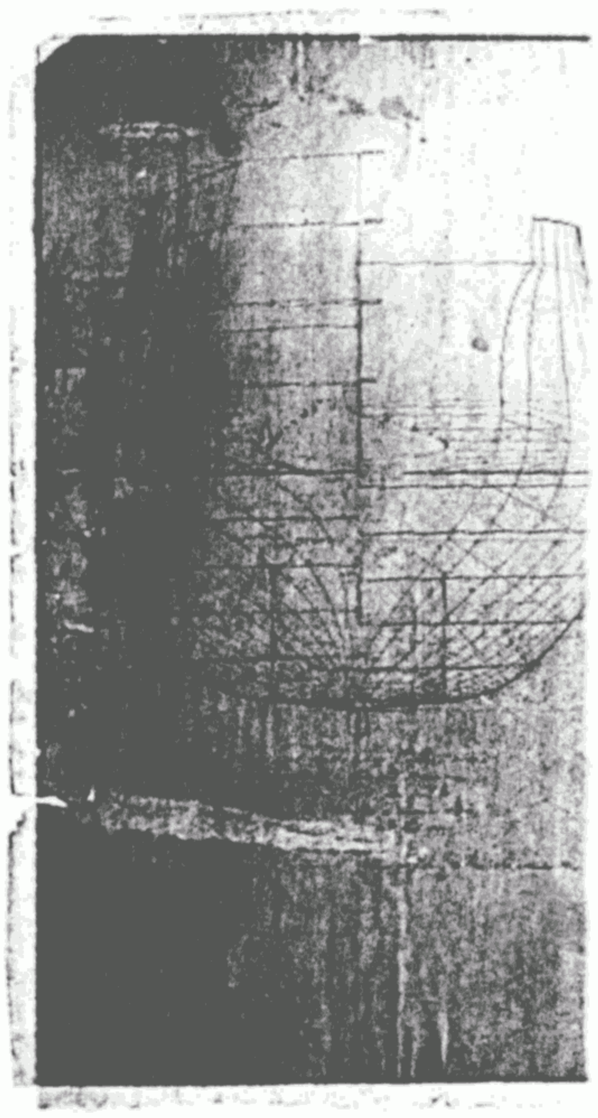
America Perry & Co., Blackwall.
Ord: 22.8.1807. K: 1.1808. L: 21.4.1810. Designated 1827 to be cut down. Cut down to a frigate of 50 guns (Fourth Rate – see Chapter 2) 1835.

Anson Steemson, Hull.
Ord: 2.11.1807. K: 3.1808. L: 1.5.1812. Became a temporary lazarette at Portsmouth 1831. By 1843 to Chatham and then to Tasmania as a convict ship 1844. BU 1851.

Barham Perry & Co., Blackwall.
Ord: 2.11.1807. K: 6.1808. L: 8.7.1811. Cut down to a frigate of 50 guns (Fourth Rate – see Chapter 2) 1826. BU 9.1840.

Rippon Blake & Scott, Bursledon.
Ord: 2.11.1807. K: 10.1808. L: 8.8.1812. BU at Plymouth 3.1821.

Blenheim Deptford Dyd.
Ord: 4.1.1808. K: 8.1808. L: 31.5.1813. Converted to screw blockship (see Chapter 5) in 1845-47. Hulked 1858 at Portsmouth. BU 1865.



The battered and much-copied design draught for the *Armada* Class 74s, dated 30 September 1806. Post-war modifications for a round stern and built-up bow are marked on the draught. *DR1245*

Pembroke Wigram, Wells & Green, Blackwall.
Ord: 17.5.1808. K: 3.1809. L: 27.6.1812. Converted to a screw blockship (see Chapter 5) in 1854-55. Became the base ship at Chatham 1873. Renamed *Forte* 1889 as a receiving hulk, then *Pembroke* again 1891. Sold 1905.

Devonshire Mrs. Frances Barnard, Deptford.
Ord: 30.5.1808. K: 2.1810. L: 23.9.1812. Lent to the Greenwich Seamen's Hospital as temporary hospital ship 1849. To Sheerness as a prison ship for Russians 1854. School ship in 'Queenborough Swale' 1860. BU at Sheerness 6.1869.

Cornwall Mrs. Frances Barnard, Deptford.
Ord: 30.5.1808. K: 3.1809. L: 16.1.1812. Cut down to a frigate of 50 guns (Fourth Rate – see Chapter 2) 1830.

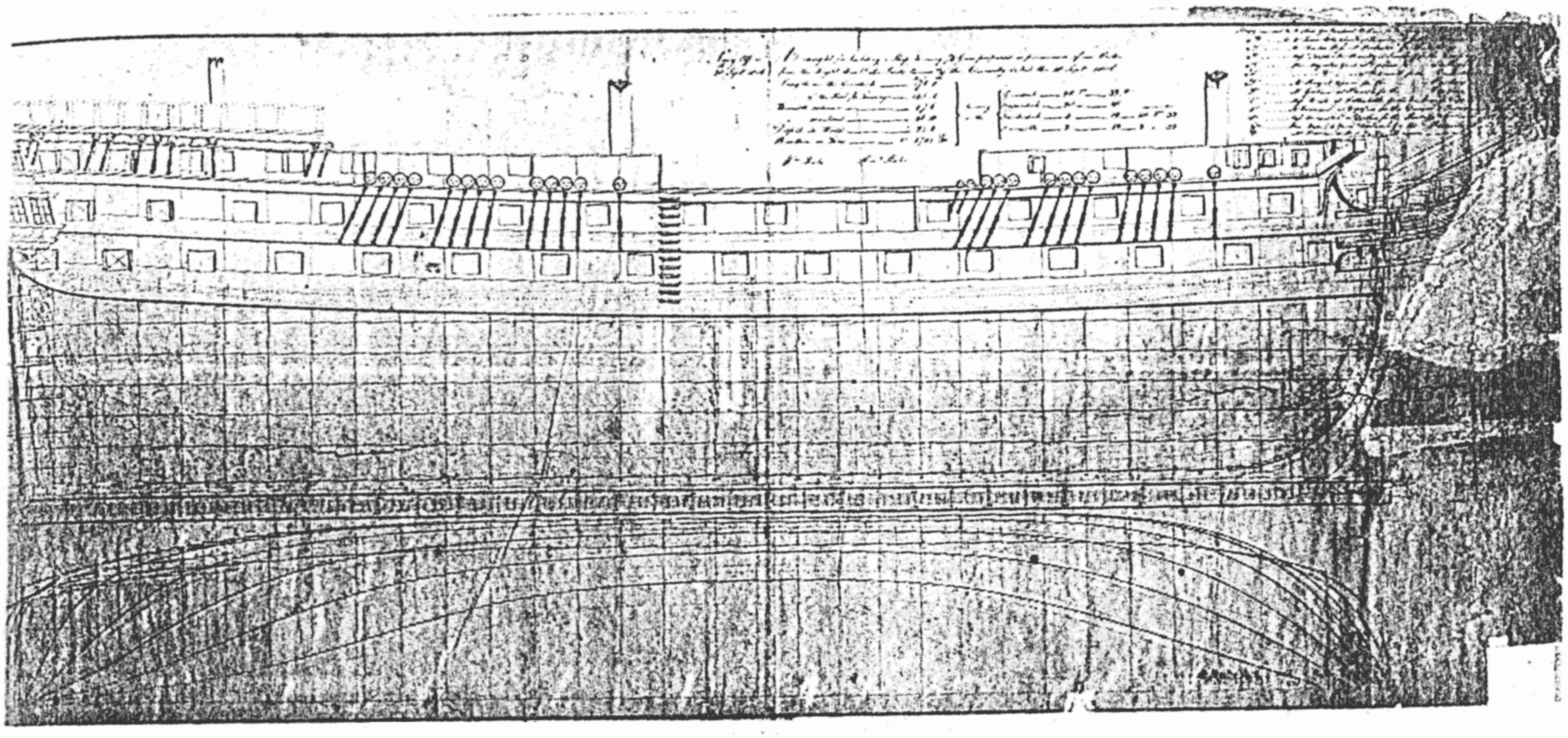
Gloucester Thomas Pitcher, Northfleet.
Ord: 11.6.1808. K: 3.1808. L: 27.2.1812. Rebuilt was circular stern at Chatham, ?1816-1822. Cut down to a frigate of 50 guns (Fourth Rate - see Chapter 2) 1832.

Benbow Daniel Brent, Rotherhithe.
Ord: 11.6.1808. K: 7.1808. L: 3.2.1813. Became a marine barracks at Sheerness 1848. Prison ship for Russians 1854. Coal hulk at Sheerness 8.1859. Sold to Castle to BU 23.11.1892.

Defence (ex-*Marathon*, renamed 3.1.1815) Chatham Dyd.
Ord: 23.3.1809. K: 5.1812. L: 25.4.1815. Became a receiving ship at Woolwich 9.1844; convict ship there 6.1848. Damaged by accidental fire 14.7.1857 and BU 1.1858.

Cornwallis Bombay Dyd. Teak-built.
Ord: 25.7.1810. K: 1811. L: 12.5.1813. Converted to screw blockship (see Chapter 5) in 1854-55. Coastguard 1857-64. Hulked as a jetty at Sheerness 1865. Renamed *Wildfire* as base ship 3.1916. BU 1957.

POST-WAR. Of the 40 ships ordered in 1806-12 which would be completed to this design, all 29 contract-built but only 6 of the 11 dockyard-built ships were launched by mid-1815; for the remaining 5 ships - *Pitt*, *Hercules*, *Agincourt*, *Hero* and *Russell* - see Chapter 2. The 41st ship (*Boscawen*), ordered 6.1.1812 but suspended 2.12.1813, had been re-ordered to a new



design (Modified *Ganges* Class) on 14.2.1814, and was again to be re-ordered as an 80-gun ship in 1817. A 42nd ship (*Carnatic*) ordered 30.9.1814 was to be re-ordered to a modified design in 1817 (see Chapter 2).

The *Wellesley* - the first of the new *Black Prince* Class 74s (based on the *Christian VII*, a Danish prize taken in 1807) - was launched in 2.1815 but not in service by the end of June. For convenience, she is included with her sisters (*Black Prince*, *Hawke* and *Melville* - all ordered before 1815) in Chapter 2.

Later *GANGES* Class. Edward Hunt design. Of the original *Ganges* Class, both *Ganges* and *Culloden* were disposed of before the end of the war, although the former - lent to the Transport Board in 12.1814 - was not BU until 3.1816.

Dimensions & tons: 169ft 6in, 138ft 11¼in x 47ft 4in x 20ft 3in. $1{,}656^{64}/_{94}$ bm.

Men: 550. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 14 x 9pdr; Fc 4 x 9pdr.

Tremendous William Barnard, Deptford Green.

Ord: 1.1.1782. K: 13.8.1782. L: 30.10.1784. Reconstructed in 1807-11 at Chatham with Seppings' diagonal frames. Cut down to 50-gun frigate (Fourth Rate) and renamed *Grampus* (see Chapter 2) 23.5.1845. Became a powder depot at Portsmouth 1856. War Department powder depot 1883. Sold to J. Read, Portsmouth to BU 10.5.1897.

Invincible Woolwich Dyd.

Ord: 9.7.1801. K: 1.1.1806. L: 15.3.1808. Became a receiving ship and coal depot at Plymouth 1857. BU 1.1861.

Minden Bombay Dyd. Teak-built.

Ord: 9.7.1801. K: 1807. L: 19.6.1810. Became a seamen's hospital at Hong Kong 1842. Sold at Hong Kong 4.7.1861.

Minotaur Chatham Dyd (to modified design - see Chapter 2).

Ord: 3.12.1811. K: 12.1812. L: 15.4.1816. Became a receiving ship at Sheerness 11.1842. Guard ship 1859. Renamed *Hermes* 27.7.1866. BU at Sheerness 1869.

Ex-DANISH PRIZES. Of the dozen 74s taken at Copenhagen, the two larger ships were armed and rated as Middling Class 74s (see above). Another nine were all older, Gerner-designed vessels of middling size - none of which were ever fitted for sea service in the RN. Among the latter, three (*Fyn*, *Kronprincen* and *Kronprincessen*) had just been sold to BU in late 1814. The twelfth and smallest 74 (*Princess Carolina*), refitted with 24pdrs on all decks, was sold 2.1815.

Princess Sophia Frederica (Danish *Prindsesse Sophia Frederica*, K: 1793. L: 1775. C: 1777 Copenhagen; design by Henrik Gerner).

Dimensions & tons: 175ft 1in, 144ft 1⅛in x 47ft 11½in x 19ft 8in. $1{,}762^{76}/_{94}$ bm.

Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Cambridge* in 1809 was cancelled. Prison ship 2.1811. Sold 9.1816.

Justitia (Danish *Justitia*, K: 1776. L:1777. C: 1780 Copenhagen; design by Henrik Gerner).

Dimensions & tons: 174ft 3in, 144ft 2½in x 47ft 10½in x 19ft 9in. $1{,}758^{11}/_{94}$ bm.

Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Orford* in 1809 was cancelled. Used for an experiment with Seppings' diagonal braces in early 1817. Sold 3.1817.

Arve Princen (ex-*Heir Apparent Frederick*) (Danish *Arveprinds Frederik*, K: 1780. L: 1782 Copenhagen; design by Henrik Gerner).

Dimensions & tons: 174ft 6¾in, 143ft 8½in x 47ft 10in x 19ft 6in. $1{,}746^{83}/_{94}$ bm.

Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Cornwall* in 1809 was cancelled. Renamed *Arve Princen* in 1813. Victualling ship 1815. Sold 3.4.1817.

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Odin (Danish *Odin*, K: 1787. L: 1788. C: 1789 Copenhagen; design by Henrik Gerner).

Dimensions & tons: 174ft 7¾in, 143ft 4¾in x 47ft 10¾in x 19ft 7in. 1,749$^{59}/_{94}$ bm.

Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Taken at the fall of Copenhagen 7.9.1807. No renaming was intended for this ship. Receiving ship 2.1811. Sold 20.7.1825.

Tre Kronen (Danish *Tre Kroner*, K: 1788. L: 1789 Copenhagen; design by Henrik Gerner).

Dimensions & tons: 175ft 5⅛in, 143ft 4in x 47ft 10¼in x 19ft 9in. 1,745$^{86}/_{94}$ bm.

Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Medway* in 1809 was cancelled. Receiving ship at Portsmouth 1809. Sold to Mr Beatson 20.7.1825.

Skiold (Danish *Skiold*, K: 1790. L: 1792 Copenhagen; design by Henrik Gerner).

Dimensions & tons: 174ft 5½in, 143ft 3⅝in x 47ft 10½in x 19ft 7in. 1,747$^{7}/_{94}$ bm.

Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Somerset* in 1809 was cancelled. Receiving ship 1811. Sold 20.7.1825.

Ex-DUTCH PRIZES. Of three Amsterdam Admiralty 74s taken in the Revolutionary War, the *Vryheid* was sold in 1811.

Camperdown (Dutch *Jupiter*, launched 1782 at Amsterdam).

Dimensions & tons: 167ft 4in, 136ft 0in x 46ft 5in x 18ft 2½in. 1,559 bm.

Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 2 x 18pdr + 10 x 32pdr carronades; Fc 2 x 18pdr + 4 x 32pdr carronades.

Taken 11.10.1797. Prison ship at Chatham 1798. Powder magazine 1802. Sold to BU 10.9.1817.

Princess of Orange (Dutch *Washington*, launched 1795 at Amsterdam).

Dimensions & tons: 168ft 5in, 138ft 0¾in x 46ft 2in x 18ft 5½in. 1,565 bm.

Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 2 x 18pdr + 10 x 32pdr carronades; Fc 2 x 18pdr + 4 x 32pdr carronades.

Taken in the Texel 30.8.1799. Hulked (as 'stationary ship') 1806. Powder magazine at Chatham 1811. Sold to BU 18.4.1822.

Ex-FRENCH PRIZE.

San Antonio (French *Saint Antoine*, launched 1785 at Cartagena as Spanish *San Antonio*).

Dimensions & tons: 174ft 10in, 139ft 8in x 47ft 10in x ... . 1,700 bm.

Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 9pdr + 10 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades.

Taken off Cadiz (shortly after transfer to France) 12.7.1801. Prison ship at Portsmouth 1809. Powder hulk 9.1814. Sold to John Small Sedger, Rotherhithe 26.3.1828 (an earlier sale on 11.7.1827 fell through).

Third Rates of 64 guns (two-deckers)

A totally obsolete type by 1815, too small for the line of battle and very little stronger and much slower than the large frigates which the Americans had made fashionable.

***EXETER* Class**. Design by William Bately, 1761. Last of four ships to this design. *Exeter* had been lost in 1784, and *Europe* (ex-*Europa*) and *Prudent* had been BU in 1814.

Dimensions & tons: 159ft 0in, 130ft 9in x 44ft 4in x 19ft 4in. 1,366$^{86}/_{94}$ bm.

Men: 500. Guns: LD 26 x 24pdr; UD 26 x 18pdr; QD 10 x 9pdr; Fc 2 x 9pdr.

Trident Plymouth Dyd.

Ord: 4.12.1762. K: 10.1763. L: 20.4.1768. Receiving ship and guardship at Malta by AO 12.8.1807. Sold there 3.7.1816.

***ARDENT* Class**. Design by Thomas Slade, 1761, based on lines of *Fougueux* (French prize, taken 1747). Two sisters (*Nassau* and *Agamemnon*) had been war losses, and three more sold or BU (*Tiger*, ex-*Ardent*, in 1784, *Stately* in 1814 and *Raisonnable* in 3.1815). *Indefatigable* had been converted (razéed) into a Fifth Rate in 1795.

Dimensions & tons: 160ft 0in, 131ft 8in x 44ft 4in x 18ft 0in. 1,376$^{47}/_{94}$ bm.

Men: 500. Guns: LD 26 x 24pdr; UD 26 x 18pdr; QD 10 x 9pdr; Fc 2 x 9pdr. *Indefatigable* as frigate - with the 26 x 24pdr on what now became her UD - QD 8 x 12pdr + 4 x 42pdr carronades; Fc 4 x 12pdr + 2 x 42pdr carronades.

Belliqueux Perry & Hankey, Blackwall.

Ord: 19.2.1778. K: 6.1778. L: 5.6.1780. Hulked as prison ship at Chatham 2.1814. BU at Chatham 3.1816.

Indefatigable Henry Adams, Bucklers Hard.

Ord: 3.8.1780. K: 5.1781. L: 7.1784. Cut down to 44-gun frigate 2.1795 (initially Pellew's command, as made famous by C. S. Forester). BU at Sheerness 8.1816.

***WORCESTER* Class**. Design by Thomas Slade, 1765. *Stirling Castle* of this class had been lost in 1780.

Dimensions & tons: 159ft 0in, 130ft 7½in x 44ft 6in x 19ft 0in. 1,373$^{73}/_{94}$ bm.

Men: 500. Guns: LD 26 x 24pdr; UD 26 x 18pdr; QD 10 x 9pdr; Fc 2 x 9pdr.

Worcester Portsmouth Dyd.

Ord: 16.11.1765. K: 6.5.1766. L: 17.10.1769. Hulked at Deptford 1.1788. BU at Deptford 12.1816.

Lion Portsmouth Dyd.

Ord: 12.10.1768. K: 5.1769. L: 3.9.1777. Hospital ship 1793. Sheer hulk at Plymouth 1814, to Sheerness 9.1816. Sold at Chatham to BU 30.11.1837.

***INTREPID* Class.** Designed by Sir John Williams. Of seven vessels gone by 1815, *Anson* and *Magnanime* had been razéed into frigates (re-armed like *Indefatigable*, see above); *Defiance* (in 1780), *Repulse* and *Anson* had been wartime wrecks, while *Nonsuch*, *America*, *Eagle* and *Magnanime* had been BU.

Dimensions & tons: 159ft 6in, 131ft 0in x 44ft 4in x 19ft 0in. 1,369$^{50}/_{94}$ bm.

Men: 500. Guns: LD 26 x 24pdr; UD 26 x 18pdr; QD 10 x 9pdr; Fc 2 x 9pdr.

Intrepid Woolwich Dyd.

Ord: 16.11.1765. K: 1.1767. L: 4.12.1770. Receiving ship at Plymouth 5.1810. Sold to Mr Beatson 26.3.1828.

Captivity (ex-*Monmouth*, renamed 1796) Plymouth Dyd.

Ord: 10.9.1767. K: 5.1768. L: 18.4.1772. Renamed *Captivity* as prison

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ship at Portsmouth 20.10.1796. BU 1.1818.

Ruby Woolwich Dyd.
Ord: 30.11.1769. K: 9.9.1772. L: 26.11.1776. Became a depot ship at Bermuda 1811. Receiving ship 1813. BU 4.1821.

Vigilant Henry & Anthony Adams, Bucklers Hard.
Ord: 14.1.1771. K: 2.1771. L: 6.10.1774. Prison ship at Portsmouth 1799. Sank in Portsmouth Harbour 1.1806, but raised 4.1806. BU 4.1816.

Polyphemus Sheerness Dyd.
Ord: 1.12.1773. K: 1.1776. L: 27.4.1782. Hulked as powder magazine at Chatham 9.1813. BU completed at Chatham 15.9.1827.

Sampson Woolwich Dyd.
Ord: 25.7.1775. K: 20.10.1777. L: 8.5.1781. Prison ship 1798. Hulked as powder magazine 8.1802. Receiving ship at Cork 10.1805. Re-armed as 64 in 3.1806. Prison hulk in Medway 6.1808. Sheer hulk at Woolwich 1814. BU by Levy, Rochester 5.1832.

Diadem Chatham Dyd.
Ord: 5.12.1777. K: 2.11.1778. L: 19.12.1782. Troopship 5.1798. Receiving ship at Plymouth 1815. BU there 9.1832.

Standard Deptford Dyd.
Ord: 5.8.1779. K: 5.1780. L: 8.10.1782. Hulked as a convalescent ship 11.1799 (-1801). Re-armed as 64 in 12.1804. BU at Sheerness 10.1816.

***INFLEXIBLE* Class**. Designed by Sir Thomas Slade, based on lines of his 74-gun *Albion*. *Sceptre* of this class was a wartime loss, and *Africa* was BU in 1814.
Dimensions & tons: 159ft 6in, 131ft 0in x 44ft 6in x 18ft 0in. 1,379$^{8}/_{94}$ bm.
Men: 500. Guns: LD 26 x 24pdr; UD 26 x 18pdr; QD 10 x 9pdr; Fc 2 x 9pdr.

Inflexible John Barnard, Harwich.
Ord: 26.2.1777. K: 4.1777. L: 7.3.1780. Storeship 12.1793. Re-armed as 64 in 6.1795. Troopship 3.1798 (-1.1805). Lazarette at Halifax, Nova Scotia 1809 (by AO 16.4.1808). BU there 1820.

Dictator Robert Batson, Limehouse.
Ord: 21.10.1778. K: 5.1780. L: 6.1.1783. Troopship 6.1798. Floating battery 5.1803 (-1805). Troopship 1813. BU 6.1817.

***CROWN* Class**. Designed by Edward Hunt. Sister *Ardent* was wartime loss, and *Scipio* was BU in 1798.
Dimensions & tons: 160ft 6in, 131ft 8½in x 44ft 6in x 19ft 5in. 1,387$^{29}/_{94}$ bm.
Men: 500. Guns: LD 26 x 24pdr; UD 26 x 18pdr; QD 10 x 9pdr; Fc 2 x 9pdr.

Crown Perry & Hankey, Blackwall.
Ord: 14.10.1778. K: 9.1779. L: 15.3.1782. Prison ship at Portsmouth 5.1798. Powder hulk 1802. Prison ship 1806. BU 3.1816.

Veteran Robert Fabian, East Cowes.
Ord: 3.8.1780. K: 7.1781. L: 14.8.1787. Prison ship at Portsmouth 1799. Re-armed as 64 in 2.1804. Prison ship at Portsmouth 8.1809. BU 6.1816.

PURCHASED. Survivors of five ships purchased on the stocks from the East India Company in early 1796 while building by Thames-side yards; of these, *York* had been lost in 1804 and *Agincourt* sold in 1814.

Ardent (East India Company *Princess Royal*, building by Thomas Pitcher, Northfleet).
Dimensions & tons: 173ft 3in, 144ft 0in x 43ft 0in x 19ft 10in. 1,416$^{24}/_{94}$ bm.
Men: 491. Guns: LD 26 x 24pdr; UD 26 x 18pdr; QD 10 x 9pdr; Fc 2 x 9pdr.
L: 9.4.1796. Troopship 1812. Prison ship at Bermuda 1813. BU 3.1824.

Monmouth (East India Company *Belmont*, building by Randall & Co., Rotherhithe).
Dimensions & tons: 173ft 1in, 144ft 1½in x 43ft 4in x 19ft 8in. 1,439$^{51}/_{94}$ bm.
Men: 491. Guns: LD 26 x 24pdr; UD 26 x 18pdr; QD 10 x 9pdr; Fc 2 x 9pdr.
L: 23.4.1796. Sheer hulk at Deptford 6.1815; at Woolwich 1828-33. BU 5.1834.

Lancaster (East India Company *Pigot*, building by Randall & Co., Rotherhithe).
Dimensions & tons: 173ft 6in, 144ft 3in x 43ft 2in x 19ft 9in. 1,429$^{69}/_{94}$ bm.
Men: 491. Guns: LD 26 x 24pdr; UD 26 x 18pdr; QD 10 x 9pdr; Fc 2 x 9pdr.
L: 29.1.1797. Receiving ship at Malta 1813, but fitted as victualler. Lent to West India Dock Co. as boys' training ship 11.3.1815. Returned to Admiralty and sold 30.5.1832.

Ex-DUTCH PRIZES. Fourteen Dutch 64s/66s/68s were added to the RN between 1796 and 1799, of which the *De Ruyter* was lost in 1804, the *Admiral de Vries* sold in 1806, and the *Gelikheid*, *Leyden* and *Utrecht* sold during 1814 and early 1815. In Dutch service, the first pair had been rated at 64 guns, the next four at 66 guns, and the last three (plus the five named in this paragraph) at 68 guns.

Overyssel (Dutch *Overyssel*, launched 1781 at Ferrol as Spanish *San Felipe Apostol* and purchased 21.5.1793 at Cadiz by the Dutch).
Dimensions & tons: 153ft 6$^{1}/_{8}$in, 124ft 8½in x 43ft 0in x 18ft 1¼in. 1,226$^{49}/_{94}$ bm.
Taken 22.10.1795. Provision receiving ship at Sheerness 1805; to Harwich 1809. Breakwater there by AO 17.6.1809. Sold 3.1.1822.

Justitia (ex-*Zealand*, renamed 19.8.1812) (Dutch *Zeeland*, launched 1784 at Vlissingen).
Dimensions & tons: 156ft 8¼in, 127ft 3$^{5}/_{8}$in x 44ft 4$^{3}/_{8}$in x 18ft 4in. 1,332$^{71}/_{94}$ bm.
Taken 19.1.1796. Guardship 1797. Troopship 6.1799. Receiving ship at Sheerness 5.1803. Convict hulk in Medway 1809. Sold 2.11.1830.

Dordrecht (Dutch *Dordrecht*, launched 1782 by Jacob Spaans, Dort).
Dimensions & tons: 159ft 6in, 130ft 0in x 45ft 0in x 17ft 0in. 1,437 bm.
Taken 17.8.1796. Troopship 1799. Receiving ship at Chatham 1800; to Sheerness 1814. Sold 21.5.1823.

Prince Frederick (Dutch *Revolutie*, originally *Prins Frederick*, launched 1777 at Zwindrecht, Rotterdam).
Dimensions & tons: 156ft 9in, 129ft 4in x 42ft 11in x 16ft 3½in. 1,267$^{7}/_{94}$ bm.
Taken 17.8.1796. Storeship 3.1797. Re-armed as 64-gun 10.1797. Convalescent ship 1800. Hospital ship 11.1803. Sold 5.6.1817.

Wassenar (Dutch *Wassenaar*, launched 1781 at Zwindrecht, Rotterdam).
Dimensions & tons: 158ft 2in, 131ft 1¼in x 42ft 8in x 20ft 2½in. 1,269$^{48}/_{94}$ bm.
Taken at Camperdown 11.10.1797. Troopship 4.1798. Powder hulk 9.1802. Sold 13.8.1818.

Delft (Dutch *Hercules*, launched 1781 by Jacob Spaans, Dort).
Dimensions & tons: 157ft 2in, 129ft 6¼in x 42ft 10½in x 16ft 11½in. 1,266$^{43}/_{94}$ bm.
Taken at Camperdown 11.10.1797. Troopship 6.1799. Powder hulk 8.1802. Sunk as breakwater at Harwich 9.1822.

Haarlem (Dutch *Haarlem*, launched 1785 at Amsterdam).

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Dimensions & tons: 156ft 7in, 127ft 1¾in x 44ft 3in x 17ft 3in. 1,324$^{24}/_{94}$ bm.
Taken at Camperdown 11.10.1797. Troopship 5.1798. Receiving ship 1.1811. Sold 2.5.1816.

Texel (Dutch *Cerbrus*, launched 1784 at Amsterdam).
Dimensions & tons: 156ft 0in, 126ft 11¼in x 44ft 2in x 17ft 1in. 1,317$^{10}/_{94}$ bm.
Taken in the Texel 30.8.1799. Troopship 3.1802. Floating battery (64 guns) 1803. Powder hulk at Chatham 1809. Sold to Mr Beatson 11.6.1818.

Guelderland (Dutch *Gelderland*, launched 1781 at Amsterdam).
Dimensions & tons: 157ft 2in, 128ft 3in x 44ft 4¼in x 16ft 7in. 1,342$^{5}/_{94}$ bm.
Taken in the Texel 30.8.1799. Receiving ship at Chatham 1800. Sold to Mr Freake 5.3.1817.

Ex-DANISH PRIZE. The older of the two 64s - the *Nassau* (ex-*Holstein*, captured in 1801) - had been sold in 1814.

Syeren (Danish *Seijeren*, K: 1793. L:1795 Copenhagen; design by Ernst Stibolt).
Dimensions & tons: 165ft 0^{1}/8in, 134ft 7¾in x 45ft 7½in x 19ft 4in. 1,490$^{82}/_{94}$ bm.
Men: 491. Guns: LD 26 x 24pdr; UD 26 x 18pdr; QD 4 x 9pdr + 6 x 24pdr carronades; Fc 2 x 9pdr + 2 x 24pdr carronades; RH 6 x 18pdr carronades.
Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Behemoth* in 1809 was cancelled. Harbour service 1809. First sold 1.9.1814 but ship was retained. Re-sold 23.11.1815.

Ex-FRENCH PRIZE. An obsolete vessel used as a hospital hulk since 1797.

Argonaut (French *Jason*, launched 1779 Toulon; design by Joseph-Marie-Blaise Coulomb).
Dimensions & tons: 166ft 0in, 136ft 8¼in x 44ft 8½in x 19ft 1in. 1,451$^{75}/_{94}$ bm.
Men: 491. Guns: LD 26 x 24pdr; UD 26 x 18pdr; QD 10 x 9pdr; Fc 2 x 9pdr.
Taken in the Mona Passage 19.4.1782. Hulked at Chatham as a hospital ship 1797. BU there 2.1831.

NOTES: The even older prize *Prothee*, built at Brest by J.-L. Ollivier in 1772 and captured on 24.2.1780, was hulked as a prison ship at Portsmouth from 1795 and was BU in 9.1815.

Fourth Rates of 52/56 guns (two-deckers)

To meet the need for small two-deckers for convoy duties during the French wars, nine ships building as East Indiamen on the Thames had been purchased in 1795 and converted to carry 56 guns. Five of these were wartime losses, and two sold in 1807 and another in 1813. Another two Indiamen were purchased and similarly armed in 1804.

GLATTON - Purchased 1795. (ex-mercantile *Glatton*, launched 1795 by Wells & Co., Blackwall), 56 guns.
Dimensions & tons: 163ft 11¼in, 133ft 4¼in x 42ft 1in x 17ft 0in. 1,256$^{21}/_{94}$ bm.
Men: 344. Guns: orig. LD 28 x 68pdr carronades; UD 28 x 42pdr carronades. Re-armed with LD 28 x 18pdr; UD 28 x 32pdr carronades.
Last of nine Indiamen purchased from East India Co. in 1795. Guardship 1801. Convict tranport 1802. Water depot 1814. Breakwater at Harwich 10.1830.

COROMANDEL*, ex-*MALABAR - Purchased 1804. (ex-mercantile *Cuvera*, launched 1798 at Calcutta), 56 guns.
Dimensions & tons: 168ft 6in, 127ft 4in x 37ft 2in x ... . 935$^{56}/_{94}$ bm.
Men: ... . Guns: LD 28 x 18pdr; UD 28 x 24pdr carronades.
Teak-built Indiaman, purchased from East India Co. in 5.1804. Became 20-gun storeship 8.1808. Renamed *Coromandel* 7.3.1815. Convict ship 1819, at Bermuda 10.1827. BU there 12.1853.

HINDUSTAN - Purchased 1804. (ex-mercantile *Admiral Rainier*, launched 1799 at Calcutta), 52 guns.
Dimensions & tons: 158ft 6in, 121ft 9in x 37ft 0in x ... . 886$^{54}/_{94}$ bm.
Men: 294. Guns: LD 26 x 18pdr; UD 26 x 24pdr carronades.
Teak-built Indiaman, purchased from East India Co. in 5.1804. Became 20-gun storeship by AO 11.11.1807. Troopship 11.1808. Storeship again 1811. Renamed *Dolphin* 22.9.1819. Hulked at Woolwich as a convict ship 3.1824. Renamed *Justitia* 1831. Sold 24.10.1855.

Fourth Rates of 50 guns (two-deckers)

Like the 64s the two-decker 50s were a fast-disappearing type by 1815; their role as flagships on distant stations and other such tasks which required a ship of force but did not justify the presence of a ship of the line was being taken over by the more powerful and faster large frigates.

(Old) *SALISBURY* Class. Sir Thomas Slade design 1766. Half-sisters *Salisbury* and *Romney* had been war losses.
Dimensions & tons: 146ft 0in, 120ft 7^{5}/8in x 40ft 4in x 17ft 4in. 1,043$^{77}/_{94}$ bm.
Men: 350. Guns: LD 22 x 24pdr; UD 22 x 12pdr; QD 4 x 6pdr; Fc 2 x 6pdr.

Centurion John Barnard & John Turner, Harwich.
Ord: 25.12.1770. K: 5.1771. L: 22.5.1774. Became a receiving ship and stores depot at Halifax, Nova Scotia 12.8.1807. Hospital ship there 1809. Sunk at moorings there 21.2.1824; raised and BU 1825.

***PORTLAND* Class**. John Williams design 1767. Survivors of 11 ships built to this design.
Dimensions & tons: 146ft 0in, 119ft 9in x 40ft 6in x 17ft 6in. 1,044$^{73}/_{94}$ bm.
Men: 350. Guns: LD 22 x 24pdr; UD 22 x 12pdr; QD 4 x 6pdr; Fc 2 x 6pdr.

Portland Sheerness Dyd.
Ord: 2.4.1766. K: 1.1767. L: 11.4.1770. Storeship 10.1800. Hulked as prison ship at Portsmouth 1.1802. Sold to D(aniel?) List to BU 19.5.1817.

Hygeia (ex-*Leander*, renamed 1813) Chatham Dyd.
Ord: 21.6.1776. K: 1.3.1777. L: 1.7.1780. Taken by the French *Généreux* 17.8.1798, retaken at Corfu by the Russians 3.3.1799 and returned to the RN. Medical depot ship 1806; renamed *Hygeia* 6.5.1813. Sold 14.4.1817.

***ANTELOPE* Class**. Sir John Henslow design 1790.
Dimensions & tons: 150ft 0in. 123ft 8½in x 41ft 0in x 17ft 8in. 1,106$^{7}/_{94}$ bm.
Men: 350. Guns: LD 22 x 24pdr; UD 22 x 12pdr; QD 4 x 6pdr; Fc 2 x 6pdr.

Antelope Sheerness Dyd.

Scan and/or retouch by Grzechu

Ord: 15.2.1790. K: 6.1790. L: 10.11.1802. Troopship 11.1814. Became a convict ship at Bermuda 1.1824. BU 7.1845.

***DIOMEDE* Class**. Sir John Henslow design approved 14.7.1791, modified from *Antelope*.

Dimensions & tons: 151ft 0in, 124ft 7½in x 41ft 0in x 17ft 8in. 1,114$^{31}/_{94}$ bm.

Men: 350. Guns: LD 22 x 24pdr; UD 22 x 12pdr; QD 4 x 6pdr; Fc 2 x 6pdr.

Diomede (ex-*Firm*, renamed 29.12.1797) Deptford Dyd.

Ord: 9.12.1790. K: 10.1792. L: 17.1.1798. Ordered to become provisions depot at Sheerness 7.7.1815, but found to be too decayed so sold to BU 8.1815.

Grampus (ex-*Tiger* renamed 4.3.1802) Portsmouth Dyd.

Ord: 9.12.1790. K: 10.1792. L: 20.3.1802. Became a hospital ship in the Thames for the Committee for Distressed Seamen 7.1820. Sold to Mr Beatson 1832.

***JUPITER* Class**. Sir William Rule design, approved 30.6.1810.

Dimensions & tons: 154ft 0in, 127ft 5$^{3}/_{8}$in x 41ft 6in x 18ft 0in. 1,167$^{49}/_{94}$ bm.

Men: 350. Guns: LD 22 x 24pdr; UD 24 x 12pdr; QD 8 x 24pdr carronades; Fc 2 x 6pdr + 2 x 24pdr carronades.

Jupiter Plymouth Dyd.

Ord: 30.6.1810. K: 8.1811. L: 22.11.1813. Troopship 11.1819. Hulked as lazarette at Plymouth 1831. Rerated 38-gun 1835. Troopship again 1836. Became a coal depot at Plymouth 4.1846. BU there 28.1.1870.

(New) *SALISBURY* Class. Sir William Rule design 1810, modified from *Jupiter*. Original sister *Isis* was completed as a frigate (see Chapter 2), and an unnamed fourth vessel (ordered 13.5.1811) was never begun.

Dimensions & tons: 154ft 0in, 127ft 3¾in x 41ft 11in x 17ft 6in. 1,189$^{76}/_{94}$ bm.

Men: 350. Guns: LD 22 x 24pdr; UD 24 x 12pdr; QD 8 x 24pdr carronades; Fc 2 x 6pdr + 2 x 24pdr carronades.

Salisbury Deptford Dyd.

Ord: 13.7.1810. K: 10.1811. L: 21.6.1814. Sold to Mr Beatson to BU 12.1.1837.

Romney John Pelham, Frindsbury.

Ord: 13.5.1811. K: 8.1811. L: 24.2.1815. Troopship 1822. Became a receiving ship for freed slaves 6.1837. Sold at Jamaica 15.12.1845.

Ex-DUTCH PRIZES. Of six Dutch two-deckers of 54 guns which had been incorporated following their capture by the RN, the *Broederschap* and (larger) *Brakel* had been disposed of during the war, and the remaining four were hulked or laid up. None retained any guns by this date (originally armed as follows).

Men: 350 (215 as troopships). Guns: LD 22 x 24pdr; UD 24 x 12pdr; QD 6 x 6pdr; Fc 2 x 6pdr.

Tromp (Dutch *Maarten Harpentzoon Tromp*, launched 1777 at Zwindrecht, Rotterdam).

Dimensions & tons: 143ft 10½in, 117ft 10in x 40ft 8¾in x 15ft 3in. 1,039$^{65}/_{94}$ bm.

Taken at Saldanha Bay 17.8.1796. Troopship 1798. Hulked as prison ship at Chatham 1799. Transport 1802 (with just 10 x 6pdrs). Guardship at Portsmouth 1803. Hospital ship at Falmouth 1.1806. Receiving ship 1810. Sold 9.8.1815.

Alkmaar (Dutch *Alkmaar*, launched 1783 at Enkhuizen).

Dimensions & tons: 142ft 4in, 117ft 10in x 40ft 9in x 15ft 6½in. 1,040$^{83}/_{94}$ bm.

Taken at Camperdown 11.10.1797. Troopship 1798. Hospital ship 1801. Storeship (at the Downs) 1805. Laid up 1807. Sold 30.11.1815.

Beschermer (Dutch *Beschermer*, launched 1784 at Enkhuizen).

Dimensions & tons: 145ft 1in, 118ft 7in x 40ft 10in x 16ft 4in. 1,051$^{67}/_{94}$ bm.

Taken in the Texel 30.8.1799. Floating battery 7.1801. Lent to East India Dock Company as a hulk at Blackwall from 4.11.1806 to 8.1838. Sold to J. Cristall to BU 9.1838.

Batavier (Dutch *Batavier*, launched 1779 at Amsterdam).

Dimensions & tons: 144ft 7in, 118ft 1$^{7}/_{8}$in x 40ft 10in x 16ft 5in. 1,047$^{87}/_{94}$ bm.

Taken in the Texel 30.8.1799. Floating battery 7.1801. Laid up 1809. Hulked as a convict ship at Sheerness 9.1817. BU 3.1823.

Fourth Rates of 44 guns (two-deckers)

A very elderly and obsolete type, of which the last survivors were in service as auxiliaries.

***ROEBUCK* Class**. Designed by Sir Thomas Slade, 1769. Eight sisters were war losses 1781-1800, and five were BU 1802-15.

Dimensions & tons: 140ft 0in, 115ft 9in x 37ft 9½in x 16ft 4in. 879$^{20}/_{94}$ bm.

Men: 300. Guns: LD 20 x 18pdr; UD 22 x 12pdr; Fc 2 x 6pdr.

Dolphin Chatham Dyd.

Ord: 8.1.1777. K: 1.5.1777. L: 10.3.1781. Hospital ship 2.1791. Troopship 4.1800. Storeship 1804. BU 7.1817.

Ulysses John Fisher, Liverpool.

Ord: 16.4.1777. K: 28.6.1777. L: 14.7.1779. Troopship 6.1790-1802. Sold 11.1.1816.

Argo Baker, Newcastle.

Ord: 26.2.1779. K: 18.8.1779. L: 7.6.1781. Troopship 1791. Sold 11.1.1816.

Gladiator Henry Adams, Bucklers Hard.

Ord: 13.7.1780. K: 4.1781. L: 20.1.1783. Guardship at Portsmouth 2.1794. Hulked as a convalescent ship there 1807. BU 8.1817.

Serapis James Martin Hillhouse, Bristol.

Ord: 13.7.1780. K: 5.1781. L: 7.11.1782. Storeship 1.1796. Floating battery 7.1801. Storeship 1803. Convalescent ship at Jamaica 1817. Sold in Jamaica 17.7.1826.

Experiment Robert Fabian, East Cowes.

Ord: 13.7.1780. K: 6.1781. L: 27.11.1784. Troopship 1793. Troopship 1794. Storeship 1795. Harbour storeship at Falmouth 1805. Lazarette at Liverpool 1815. Sold 8.9.1836.

Regulus Thomas Raymond, Northam.

Ord: 20.10.1780. K: 6.1781. L: 10.2.1785. Troopship 1793. Provisions depot 5.1808. Hospital ship 1812-14. BU 3.1816.

***ADVENTURE* Class**. Designed by Edward Hunt, 1782. Four sisters were war losses 1804-13, and *Chichester* was BU 6.1815.

Dimensions & tons: 140ft 0in, 115ft 2½in x 38ft 3in x 16ft 10in. 896$^{54}/_{94}$ bm.

Men: 300. Guns: LD 20 x 18pdr; UD 22 x 12pdr; Fc 2 x 6pdr.

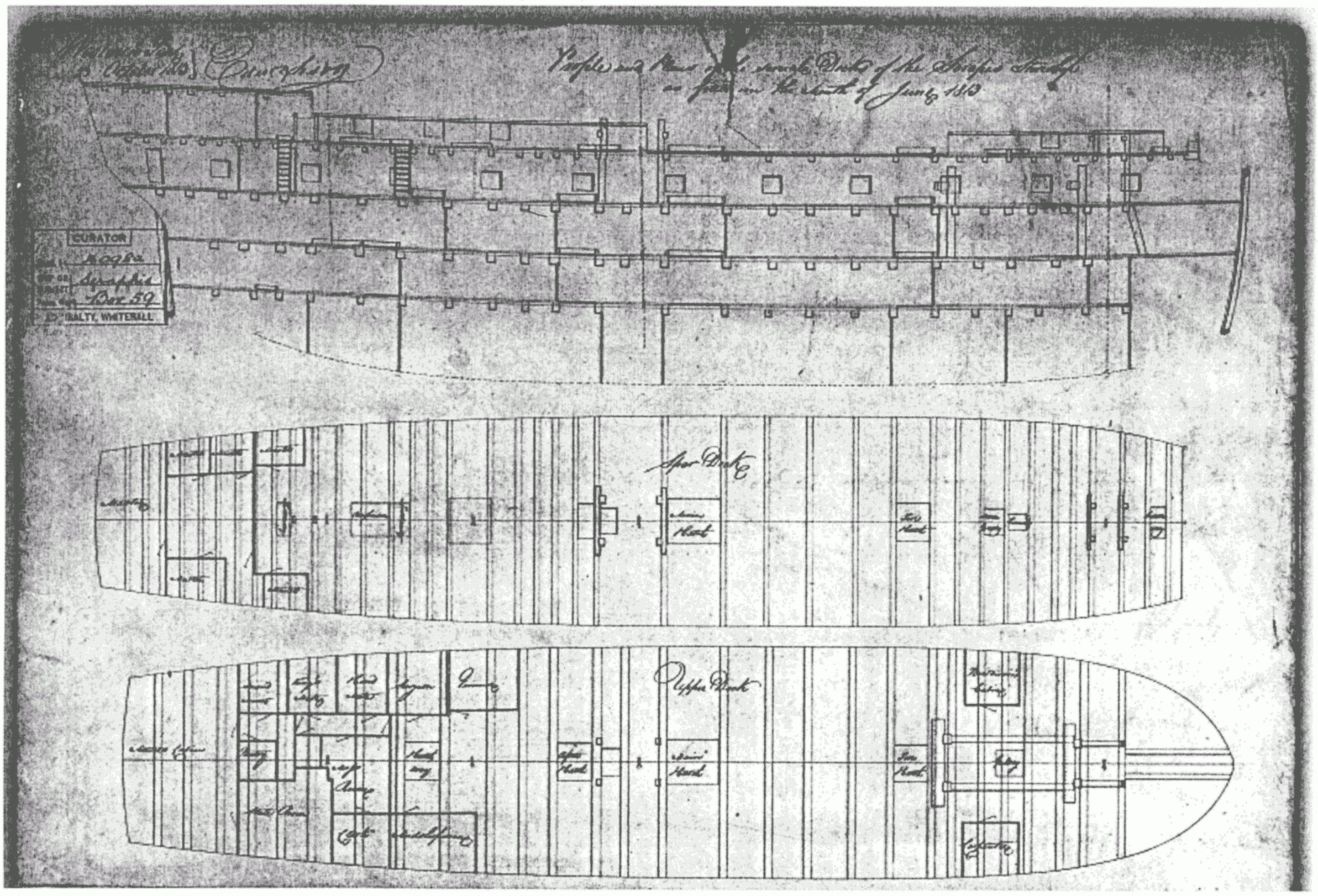
Adventure Perry & Hankey, Blackwall.

Ord: 5.6.1782. K: 10.1782. L: 19.7.1784. Troopship 7.1789. Receiving ship at Sheerness 6.1801. BU at Sheerness 9.1816.

Expedition John Randall, Rotherhithe.

Ord: 5.6.1782. K: 10.1783. L: 29.10.1784. Troopship 4.1798. Ballast ship at Chatham 1810. BU 2.1817.

Gorgon Perry & Hankey, Blackwall.



Already obsolescent by 1800, most of the remaining two-decker 44s saw out their lives in subsidiary roles. This profile and decks draught shows *Serapis* as fitted in June 1813 as a storeship. *DR4098A*

Ord: 19.6.1782. K: 12.1782. L: 27.1.1785. Troopship 1787-89. Storeship 7.1793. Floating battery 1805. BU 2.1817.

Large Frigates Converted from Line of Battle Ships

The success of the large American frigates during the War of 1812 caused the revival of the earlier concept of cutting down a smaller two-decker line of battle ship to produce a powerful frigate. However, the earlier British experiment had used three 64-gun ships (of which Pellew's *Indefatigable* was the sole survivor) cut down to the clamps of the UD, with 24pdrs on the gun deck, whilst by the end of the Napoleonic Wars the obvious ships to use were 74s, the last of which were ordered or building by then. The emphasis was shifting to larger ships of the line - and the substantial reserve of 74s would be used for the next few years to produce more heavy frigates to supplement those razéed in 1812-13.

INDEFATIGABLE - Razée, 44-gun Fifth Rate. Of other 64s converted, *Anson* had been lost in 1807 and *Magnanime* BU in 1813 (intended fourth conversion, of *Director*, was cancelled). See under 64s for dimensions, history, etc.

Men: 310. Guns: UD 26 x 24pdr; QD 10 x 12pdr + 4 x 42pdr carronades; Fc 4 x 12pdr + 2 x 42pdr carronades.

Indefatigable Converted at Portsmouth Dyd (ex-64-gun Third Rate of *Ardent* Class - which see).

Ord: 28.7.1794. Conversion begun: 11.9.1794. C: 29.11.1794. BU at Sheerness 8.1816 .

***MAJESTIC* Class** - Razées, 58-gun Fourth Rates. Their sister *Goliath* (similarly cut down in 1813) had been BU in 6.1815. See under 74s earlier for dimensions, full history, etc.

Men: 495. Guns: LD 28 x 32pdr; UD 28 x 42pdr carronades; QD/Fc 2 x 12pdr.

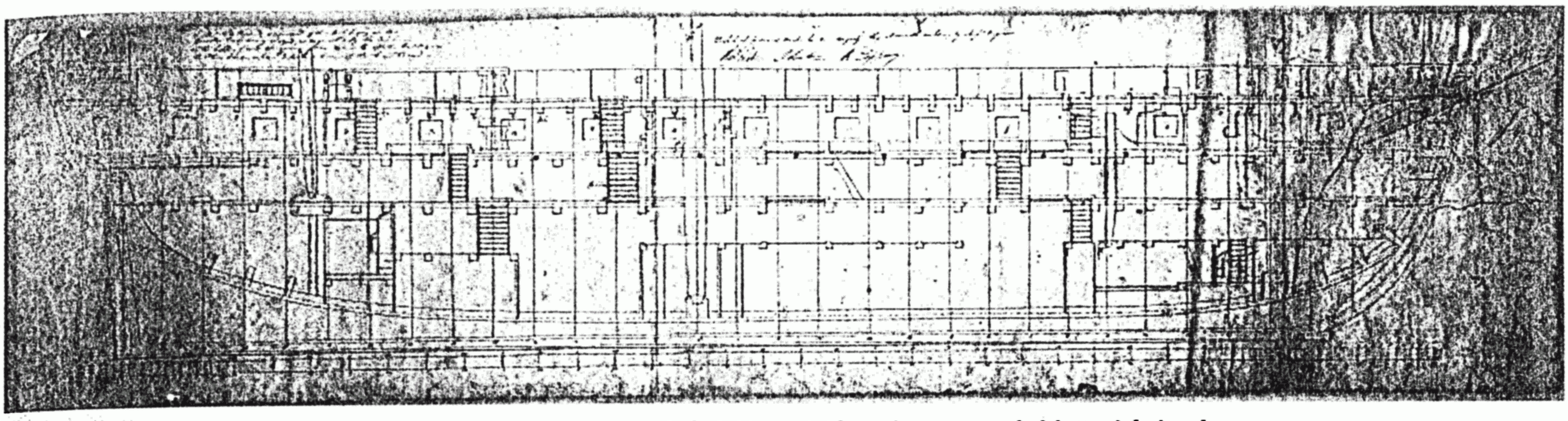
Majestic Converted at Chatham Dyd (ex-74-gun Third Rate of Modified *Canada* Class - which see).

Conversion begun: 19.1.1813. C: 2.4.1813. BU at Pembroke after stranding 4.1816.

Saturn Converted at Plymouth Dyd (ex-74-gun Third Rate of Modified *Arrogant* Class - which see).

Conversion begun: 30.3.1813. C: 28.7.1813. Hulked 1825 (see history under 74s). BU at Pembroke 1.2.1868.

NOTES: Called 'frigates', but retained two full gundecks, plus a 'flying forecastle' and rudimentary QD/poop, with a single 12pdr mounted on each, on elevating carriages along the centreline.



Design profile draught of the *Newcastle*, dated July 1813. One of two 'spar-decked' frigates (with continuous upper deck battery) designed to match American ships of the *Constitution* type, after the war she was fitted as a flagship with a cabin and second set of stern galleries built on the quarterdeck. *DR1174*

Large 24pdr Frigates, 50 guns (Fourth Rates) - reclassified as 60s in 2.1817

The need for equivalents to the big American spar-decked frigates led the Admiralty to call on 21.4.1813 for two draughts for 50-gun spar-deck frigates, designs being produced 3 days later. Notwithstanding the armament shown below, both ships carried an extra 2 x 24pdrs (*vice* 2 carronades) on the spar deck during their 1813-18 commission.

LEANDER. Designed by Sir William Rule. Built of pitch pine.
Dimensions & tons: 174ft 0in, 145ft $3^{5}/_{8}$in x 44ft $10\frac{1}{2}$in x 14ft 4in. $1{,}556^{38}/_{94}$ bm.
Men: 450. Guns: UD 30 x 24pdr; Spar Deck 26 x 42pdr carronades; Fc 4 x 24pdr.
Leander Wigram, Wells & Green, Blackwall.
Ord: 6.5.1813. K: 6.1813. L: 10.11.1813. BU 3.1830.

NEWCASTLE. Designed by Jean-Louis Barrallier. Built of pitch pine.
Dimensions & tons: 177ft 0in, 150ft $2\frac{3}{4}$in x 44ft $4\frac{1}{2}$in x 14ft 11in. $1{,}573^{45}/_{94}$ bm.
Men: 450. Guns: UD 30 x 24pdr; Spar Deck 26 x 42pdr carronades; Fc 4 x 24pdr.
Newcastle Wigram, Wells & Green, Blackwall.
Ord: 6.5.1813. K: 6.1813. L: 10.11.1813. Hulked as a lazarette at Pembroke 6.1824. To Liverpool 1827. Sold to J. Brown 12.6.1850.

Ex-AMERICAN PRIZE.
President (American *President*, launched 1.4.1800 by Doughty & Bergh, New York).
Dimensions & tons: 173ft 3in, 146ft $4\frac{3}{4}$in x 44ft 4in x 13ft 11in. $1{,}533^{7}/_{94}$ bm.
Men: 450. Guns: UD 30 x 24pdr; Spar Deck 2 x 24pdr (Fc) + 28 x 42pdr carronades.
Taken off New York 15.1.1815 by *Endymion* and others. Rerated 60 in 2.1817. BU 6.1818.

PURCHASED.
Akbar (ex-*Cornwallis*) (orig. Bombay Marine frigate *Marquis of Cornwallis*, built 1800-01 at Bombay). Teak-built.
Dimensions & tons: 164ft $4\frac{1}{2}$in, 140ft $4^{7}/_{8}$in x 43ft $1\frac{1}{4}$in x 15ft 3in. $1{,}387^{57}/_{94}$ bm.
Men: 430. Guns: (as 'frigate') UD 30 x 24pdr; Spar Deck 26 x 42pdr carronades; (as troopship) UD 22 x 32pdr carronades; QD 2 x 9pdr + 8 x 32pdr carronades; Fc 2 x 9pdr.
Purchased by Admiral Pellew from the East India Co. at Bombay 3.1805. Renamed *Akbar* 13.8.1806. Storeship 2.1813. Troopship 1817. Hulked at Pembroke as a quarantine ship 9.1824; to Liverpool as a lazarette 1827. Training ship 1852. Quarantine vessel *c*1858. Sold 1862 or 1869.

NOTES: A genuine 'double-banked' or spar-decked frigate, designed by the HEIC as a long-range convoy escort.

24pdr Frigates, 40 guns (Fifth Rates) - reclassified as 50s (Fourth Rates) in 2.1817

In 1793 the RN had no 24pdr frigates, but the capture in 1794 of the very large French frigate *La Pomone* (designed as an 18pdr frigate and built by Baron Bombelle in 1782-85 at Rochefort, but by the time of her capture re-armed with 24pdrs) provided an opportunity for the Navy Board to introduce this calibre to the ranks of frigates. The *Pomone* was reduced to carry 18pdrs in 1799 and BU following the Peace of Amiens, but her design was meanwhile copied for a prototype British 24pdr frigate, and five more to a slightly modified design were built to meet the urgent needs for 24pdr vessels produced by the American War of 1812; the latter differed by having an extra pair of gunports forward.

***ENDYMION* Class**. Copied from design of *La Pomone* (French prize taken 1794). The prototype was built of oak, but 18 years later the design was revived for five frigates built of 'fir' to meet the urgent requirement for 24pdr frigates produced by the American War of 1812; these differed by having an extra pair of guns forward. *Tagus* and *Eridanus* originally ordered 4.5.1812 as *Leda* Class 38s. All six were reclassified as 50-gun Fourth Rates in 2.1817.
Dimensions & tons: 159ft $2^{3}/_{8}$in, 132ft $4\frac{1}{4}$in x 41ft $11^{3}/_{8}$in x 12ft 4in. $1{,}238^{67}/_{94}$ bm.
Men: (orig. 300) 340. Guns: UD 28 (*Endymion* 26) x 24pdrs: QD 16 x 32pdr carronades; Fc 2 x 9pdr + 4 x 32pdr carronades.
Endymion Randall & Co., Rotherhithe.
Ord: 30.4.1795. K: 11.1795. L: 29.3.1797. Receiving ship at Devonport 1859. BU 18.6.1868.
Severn (ex-*Tagus*, renamed 7.1.1813) Wigram, Wells & Green, Blackwall.
Ord: 7.1.1813. K: 1.1813. L: 14.6.1813. Sold to John Small Sedger, Rotherhithe 20.7.1825.
Forth Wigram, Wells & Green, Blackwall.
Ord: 7.1.1813. K: 2.1813. L: 14.6.1813. BU 10.1819.
Liffey (ex-*Eridanus*, renamed 7.1.1813) Wigram, Wells & Green, Blackwall.

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Ord: 7.1.1813. K: 2.1813. L: 25.9.1813. BU 7.1827.

Glasgow Wigram, Wells & Green, Blackwall.

Ord: 26.12.1812. K: 5.1813. L: 21.2.1814. BU 29.1.1829.

Liverpool Wigram, Wells & Green, Blackwall.

Ord: 26.12.1812. K: 5.1813. L: 21.2.1814. Sold at Bombay 16.4.1822.

NOTES: *Endymion*'s fine qualities were such that she continued to be praised for nearly half a century. A new 24pdr frigate, *Java*, ordered in 1813, was not completed until after the war and thus appears in Chapter 2.

OTHER 24pdr PRIZES.

Vleiter (Dutch *Mars*, originally two-decker *Zevenwalden*, 68 - built Harlingen 1784, razéed to a frigate and renamed 1795).

Dimensions & tons: 155ft 8in, 127ft 1½in x 44ft 9½in x 16ft 9in. 1,356$^{81}/_{94}$ bm.

Men: ... Guns: UD 26 x 24pdr; QD 10 x 18pdr carronades.

Taken in the Texel 30.8.1799. Floating battery 7.1801. Powder magazine at Chatham by 1806. Sheer hulk at Sheerness 1809. BU 4.1817.

Egyptienne (French *L'Egyptienne*, launched 18.7.1799 Lorient; design by Francois Caro).

Dimensions & tons: 169ft 8in, 141ft 4¾in x 43ft 8in x 15ft 1in. 1,434$^{4}/_{94}$ bm.

Men: 330. Guns: UD 28 x 24pdr; QD 2 x 9pdr + 12 x 32pdr carronades; Fc 2 x 9pdr + 4 x 32pdr carronades.

Taken at capture of Alexandria 2.9.1801. Receiving ship at Plymouth 1806. Sold to BU 30.4.1817.

18pdr Frigates, 40 guns (Fifth Rates) - reclassified as 48s (Fifth Rates) in 2.1817

CAMBRIAN. Designed by Sir John Henslow as the prototype British-designed 24pdr frigate, to carry 28 x 24pdrs, 1795. However, she was completed with lighter (48cwt) 24pdrs and even these proved too heavy for the design. By AO 13.5.1807 she was reclassed as an 18pdr frigate.

Dimensions & tons: 154ft 0in, 128ft 5¼in x 41ft 0in x 14ft 0in. 1,148$^{39}/_{94}$ bm.

Men: 320. Guns: as designed: UD 28 x 24pdr; QD 2 x 9pdr + 6 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades. By 1807: UD 28 x 18pdr; QD 2 x 9pdr + 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Cambrian George Parsons, Bursledon.

Ord: 30.4.1795. K: 9.1795. L: 13.2.1797. Wrecked off Grabusa in the Mediterranean 31.1.1828.

ACASTA. Design by Sir William Rule, 1795.

Dimensions & tons: 154ft 0in, 129ft 0¼in x 40ft 6in x 14ft 3in. 1,127$^{22}/_{94}$ bm.

Men: 320. Guns: UD 30 x 18pdr; QD 8 x 9pdr + 4 x 32pdr carronades; Fc 2 x 9pdr + 4 x 32pdr carronades.

Acasta John Randall, Rotherhithe.

Ord: 30.4.1795. K: 9.1795. L: 14.3.1797. BU 1.1.1821.

LAVINIA. Design by Jean-Louis Barrallier, 1797.

Dimensions & tons: 158ft 0in, 132ft 8in x 40ft 8in x 14ft 0in. 1,166$^{92}/_{94}$ bm.

Men: 280. Guns: UD 30 x 18pdr; QD 10 x 9pdr + 12 x 32pdr carronades; Fc 4 x 9pdr + 4 x 32pdr carronades.

Lavinia Jacobs & Sons, Milford Haven (builder failed 1801, completed by 'Government' *in situ* at Milford).

Ord: 16.12.1796. K: 5.1798. L: 6.3.1806. Hulked as lazarette at Liverpool 7.1836. Coal depot at Plymouth 1852. Sunk in Plymouth Sound by collision with HAPAG (Hamburg Amerika) *Cimbria* 1868. Wreck sold to Mr Dockerill 31.3.1870 as it lay for salvage.

18pdr Frigates, 38 guns (Fifth Rates) - reclassed as 46s in 2.1817

The 38-gun frigate, with a battery of 28 guns on its UD, was still in 1815 the mainstay of the British frigate force with the slightly smaller 36s - both types continued to be built in numbers for some years after the end of the war. The five earliest 38s, dating from the late 1770s, saw active service throughout the Napoleonic era and two survived past 1815. In 1839 most of the survivors were reduced from 46 to 42 guns.

***LATONA* Class**. Designed by Sir John Williams, approved 24.3.1779.

Dimensions & tons: 141ft 0in, 116ft 7in x 38ft 10in x 13ft 6in. 935$^{15}/_{94}$ bm.

Men: 270 (later 315). Guns: (by 1815) UD 28 x 18pdr; QD 8 x 12pdr + 8 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.

Latona Greaves & Purnell, Limehouse.

Ord: 23.3.1779. K: 10.1779. L: 13.3.1781. Troopship 1810. Receiving ship at Leith 1813. Sold 2.5.1816.

***MINERVA* Class**. Designed by Edward Hunt. Sole survivor of class of four ships, although her sister *Arethusa* had only been BU in 5.1815.

Dimensions & tons: 141ft 0in, 117ft 0$^{3}/_{8}$in x 38ft 10in x 13ft 9in. 938$^{72}/_{94}$ bm.

Men: 280 (later 315). Guns: (by 1815) UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

First cost: £26,552 (£18,986 to builder, plus £7,566 fitting).

Phaeton Smallshaw & Co., Liverpool.

Ord: 3.3.1780. K: 6.1780. L: 12.6.1782. C (coppered & fitted at Plymouth Dyd): 29.12.1782. Sold to Freake 11.7.1827, but sale cancelled ('Mr Freake having been declared insane'); re-sold to J. Cristall to BU 26.3.1828.

The outbreak of war saw orders placed for six 38-gun frigates of Henslow's new *Artois* Class (two similar ships were ordered to be built of pitch-pine on 4.2.1795). The subsequent programme for three more 38s on 6.11.1794 (*Active* and *Amazon* below, and the *Leda*, sunk in 1808) was deferred and the orders to proceed not given until 27.4.1796. The 1795 Programme provided for eight frigates, mainly of new design (all ordered 30.4.1795). Besides the 40-gun *Endymion*, *Acasta* and *Cambrian* (see above), the Admiralty ordered two built to domestic designs (the *Naiad* below, and a last unit of the *Artois* Class) and three copies of French designs, notably all three (including a 36-gun type) of Toulon-built ships by J. M. B. Coulomb.

***ARTOIS* Class**. Design by Sir John Henslow, approved 2.3.1793. Sole survivor of class of seven ships, although her sister *Diana* was only sold to the new Dutch Navy on 7.3.1815.

Dimensions & tons: 146ft 0in, 121ft 7$^{1}/_{8}$in x 39ft 0in x 13ft 9in. 983$^{70}/_{94}$ bm.

Men: 270 (later 315). Guns: UD 28 x 18pdr; QD 2 x 9pdr + 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

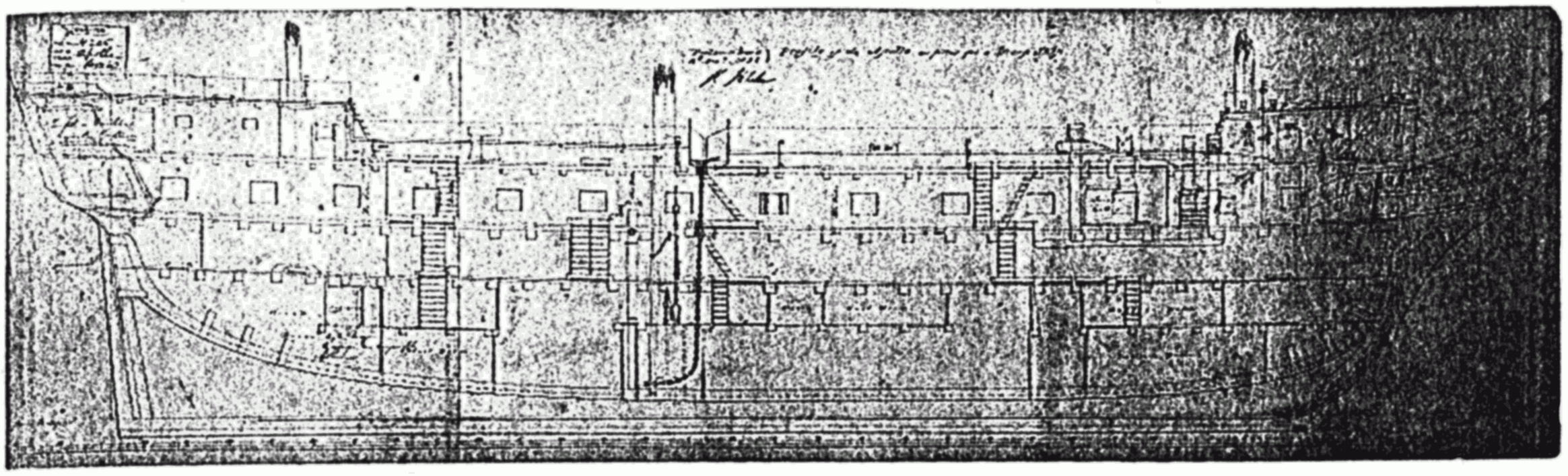
Seahorse Marmaduke Stalkartt, Rotherhithe.

Ord: 14.2.1793. K: 3.1793. L: 11.6.1794. BU 7.1819.

***AMAZON* Class**. Designed by Sir William Rule. Sister *Hussar* had been a war loss in 1804.

Dimensions & tons: 150ft 0in, 125ft 7¾in x 39ft 5in x 13ft 9in.

Scan and/or retouch by Grzechu



The *Lively* Class frigate *Apollo* fitted a troopship, draught dated 12 December 1838. The most obvious change from her front-line role is the second set of quarter galleries, but other special features include an additional galley for the troops, a baggage store, and a 'prison'. *DR4205*

1,038$^{6}/_{94}$ bm.
Men: 284 (later 300). Guns: UD 28 x 18pdr; QD 8 x 9pdr + 6 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Amazon Woolwich Dyd.
Ord: 6.11.1794. K: 4.1796. L: 18.5.1799. BU at Plymouth 5.1817.

ACTIVE. Design by Sir John Henslow.
Dimensions & tons: 150ft 0in, 125ft 2"/8in x 39ft 9in x 13ft 9in.
1,052$^{55}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 8 x 9pdr + 6 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Active Chatham Dyd.
Ord: 6.11.1794. K: 7.1798. L: 14.12.1799. Became a receiving ship at Plymouth 2.1826. Renamed *Argo* 15.11.1833. BU 10.1860.

NAIAD. Design by Sir William Rule, approved 13.8.1795.
Dimensions & tons: 147ft 0in, 122ft 8^{1}/8in x 39ft 5in x 13ft 9in.
1,013$^{90}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 2 x 9pdr + 10 x 32pdr carronades; Fc 2 x 9pdr + 4 x 32pdr carronades.

Naiad Hill & Mellish, Limehouse.
Ord: 30.4.1795. K: 9.1795. L: 27.2.1797. Coal depot at Callao, Peru 1.1847. Sold to the Pacific Steam Navigation Co. as a coal depot 2.2.1866.

BOADICEA. Design copied from *Imperieuse* (French prize taken 1793).
Dimensions & tons: 148ft 6in, 124ft 0½in x 39ft 8in x 12ft 8in.
1,038$^{10}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Boadicea B. & E. Adams, Bucklers Hard.
Ord: 30.4.1795. K: 9.1795. L: 12.4.1797. Harbour service 1854. BU 5.1858.

HYDRA. Design copied from *Melpomene* (French prize taken 1794).
Dimensions & tons: 148ft 2in, 123ft 7^{3}/8in x 39ft 4in x 12ft 8in.
1,017$^{20}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 12 x 32pdr carronades; Fc 1 x 12pdr + 4 x 32pdr carronades.

Hydra William Cleverley, Gravesend.
Ord: 30.4.1795. K: 11.1795. L: 13.3.1797. Troopship 1813. Sold 13.1.1820.

FORTE. Design copied from *Révolutionnaire* (French prize taken 1794).
Dimensions & tons: 157ft 2in, 131ft 9"/8in x 40ft 5½in x 12ft 5in.
1,147$^{68}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Forte Woolwich Dyd (originally ordered to be built at Sheerness Dyd 9.7.1801).
Re-ord: 15.9.1809. K: 3.1811. L: 21.5.1814. BU 10.1844.

***LIVELY* Class**. Designed by Sir William Rule. Of the original 16 ships, *Lively* (the 1799 prototype), *Macedonian* and *Statira* were wartime losses.
Dimensions & tons: 154ft 0in, 129ft 8in x 39ft 5in x 13ft 6in.
1,071$^{51}/_{94}$ bm.
Men: 284 (later 300). Guns: UD 28 x 18pdr; QD 2 x 9pdr + 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Resistance Charles Ross, Rochester.
Ord: 7.11.1803. K: 3.1804. L: 10.8.1805. Troopship 1842. BU completed at Chatham 17.4.1858.

Apollo George Parsons, Bursledon.
Ord: 7.11.1803. K: 4.1804. L: 27.6.1805. Scheduled 1822 to be converted to a Royal Yacht, but conversion not completed. Troopship 1838. Storeship 1853. BU 9.1856.

Hussar B. & E. Adams, Bucklers Hard.
Ord: 7.11.1803. K: 3.1806. L: 23.4.1807. Became a receiving ship at Chatham 9.1833. Target ship at Shoeburyness 6.1861, where burnt by accident.

Undaunted James Graham, Harwich.
Ord: 7.11.1803. K: ... . - the business failed and the order was transferred to Woolwich Dyd.
(Re)Ord: 6.1.1806. K: 4.1806. L: 17.10.1807. Became a target ship at Portsmouth 1856. BU completed 12.1860.

Horatio George Parsons, Bursledon.
Ord: 15.6.1805. K: 7.1805. L: 23.4.1807. Converted to a screw frigate (see Chapter 5) in 6.1850, then to steam mortar frigate 1855. Sold to Castle to BU at Charlton 1865.

Spartan Charles Ross, Rochester.
Ord: 24.8.1805. K: 10.1805. L: 16.8.1806. BU 4.1822.

Menelaus Plymouth Dyd.
Ord: 28.9.1808. K: 11.1808. L: 17.4.1810. Quarantine hulk at Chatham 1832. Became a lazarette at Sheerness 1836, then to Portsmouth 1841 as a lazarette at the Motherbank. Lent HM Customs 5.1854. Sold to J. Read, Portsmouth 10.5.1897.

Scan and/or retouch by Grzechu

Nisus Plymouth Dyd.
Ord: 28.9.1808. K: 12.1808. L: 3.4.1810. BU completed at Plymouth 24.9.1822.
Crescent Woolwich Dyd.
Ord: 28.9.1808. K: 9.1809. L: 11.12.1810. Became a hulk for freed slaves at Rio de Janeiro 1.1840. Sold 27.4.1854.
Bacchante Deptford Dyd.
Ord: 12.8.1809. K: 7.1810. L: 16.11.1811. Became a lazarette at Sheerness 2.1837. Briefly to Deptford (for Greenwich) as a cholera ship. BU completed at Deptford 20.2.1858.
Nymphe (ex-*Nereide*) George Parsons, Warsash.
Ord: 14.12.1810. K: 1.1811. L: 12.4.1812. Became a receiving ship at Sheerness 3.1836. To water police 1861. Roman Catholic chapel ship 1863. Renamed *Handy* 7.9.1871. BU completed at Chatham 3.1875.
Sirius Richard Blake & John Tyson, Bursledon.
Ord: 14.12.1810. K: 9.1811. L: 11.9.1813. Became a target ship at Portsmouth 7.1860. BU completed at Portsmouth 23.9.1862.
Laurel John Parsons & John Rubie, Warsash.
Ord: 21.3.1812. K: 7.1812. L: 31.5.1813. Became a 'lavatory' (probably a hulk used for washing and bathing) at Portsmouth 1864. Sold to Castle to BU 11.1885.

***LEDA* Class.** Designed 1794 to the lines of the *Hebe*, a French prize taken in 1782. The prototype *Leda* had been a wartime loss in 1808, as had the *Pomone* in 1811.
Dimensions & tons: 150ft 1½in, 125ft $4^{7}/_{8}$in x 39ft 11in x 12ft 9in. $1{,}062^{79}/_{94}$ bm.
Men: 284 (later 300). Guns: UD 28 x 18pdr; QD 8 x 9pdr + 6 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Shannon Joseph & Thomas Brindley, Frindsbury.
Ord: 24.10.1803. K: 8.1804. L: 5.5.1806. Became a receiving ship and temporary hulk at Sheerness 1832. Renamed *Saint Lawrence* 11.3.1844. BU at Chatham 12.11.1859.
Leonidas John Pelham, Frindsbury.
Ord: 19.7.1805. K: 11.1805. L: 4.9.1807. Became a powder hulk at Sheerness 1872. Sold to Castle, Charlton to BU 23.11.1894.
Briton Chatham Dyd.
Ord: 28.9.1808. K: 2.1810. L: 11.4.1812. Became a convict ship at Portsmouth 1841. Target ship 2.1860. BU at Portsmouth 9.1860.
Tenedos Chatham Dyd.
Ord: 28.9.1809. K: 5.1810. L: 11.4.1812. Became a convict ship at Bermuda 4.1843. Accommodation ship 1863. BU at Bermuda 20.3.1875.
Lacedemonian Portsmouth Dyd.
Ord: 28.9.1808. K: 5.1810. L: 21.12.1812. BU 11.1822.
Lively (ex-*Scamander*, re-named 7.12.1812) Chatham Dyd.
Ord: 28.9.1808. K: 7.1810. L: 14.7.1813. Became a receiving ship at Plymouth 1831. Sold to Marshall, Plymouth to BU 28.4.1863.
Surprise Milford Dyd (following failure of Jacobs's business).
Ord: 10.4.1809. K: 1.1810. L: 25.7.1812. Became a convict ship at Cork 6.1822. Sold to BU 2.10.1837.
NOTES: A further six vessels to this design (*Diamond*, *Amphitrite*, *Trincomalee*, *Thetis*, *Arethusa* and *Blanche*) were ordered between 1812 and June 1815, but none were launched before 1816 and they are thus included in Chapter 2 (as is a larger frigate - *Seringapatam* - ordered 1813 to a new design). Further orders to this design would continue.

***CYDNUS* Class**. A 'fir' (actually, red pine) -built version of the *Leda* design (which see for dimensions, guns, etc).
Cydnus Wigram, Wells & Green, Blackwall.
Ord: 16.11.1812. K: 12.1812. L: 17.4.1813. BU 2.1816.
Eurotas Wigram, Wells & Green, Blackwall.
Ord: 16.11.1812. K: 12.1812. L: 17.4.1813. BU 8.1817.
Niger Wigram, Wells & Green, Blackwall.
Ord: 16.11.1812. K: 12.1812. L: 29.5.1813. Hulked at Halifax, Nova Scotia 1818. Sold there to BU 1820.
Meander Thomas Pitcher, Northfleet.
Ord: 16.11.1812. K: 1.1813. L: 13.8.1813. BU 2.1817.
Pactolus Mrs. Frances Barnard, Deptford.
Ord: 16.11.1812. K: 1.1813. L: 14.8.1813. Sold to Mr Maund 29.1.1818.
Tiber Daniel List, Binstead, Isle of Wight.
Ord: 16.11.1812. K: 2.1813. L: 10.11.1813. Sold to Mr Durkin 1.1820.
Araxes Thomas Pitcher, Northfleet.
Ord: 7.12.1812. K: 1.1813. L: 13.9.1813. Sold to Mr Manlove 10.9.1817.
Tanais Mrs. Mary Ross, Rochester.
Ord: 7.12.1812. K: 2.1813. L: 27.10.1813. Sold 8.3.1819.

Ex-AMERICAN PRIZE.
Chesapeake (American *Chesapeake*, launched 20.6.1799 at Norfolk, Virginia).
Dimensions & tons: 151ft 0in, 127ft 5in x 40ft 11in x 13ft 9in. $1{,}134^{63}/_{94}$ bm.
Men: 315. Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken off Boston by Broke's *Shannon* 1.6.1813. Sold to J. Holmes 18.8.1819.

Ex-DANISH PRIZES. Denmark's only two 24pdr frigates, although both were re-armed in RN service with a main armament of 18pdrs.
Pearlen (Danish *Perlen*, K: 1802. L: 1804 Nyholm Dyd, Copenhagen; design by F. C. H. Hohlenberg).
Dimensions & tons: 156ft 0in, 133ft 0in x 41ft 3in x 12ft 2in. $1{,}203^{71}/_{94}$ bm.
Men: 284. Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Theban* in 1809 was cancelled. Lazarette 3.1813. Renamed *Perlin* 1836. Sold 7.1846.
Rota (Danish *Rota*, K: 1799. L: 1802 Nyholm Dyd, Copenhagen; design by F. C. H. Hohlenberg).
Dimensions & tons: 153ft 6in, 128ft 11¾in x 40ft 1in x 10ft 10in. $1{,}102^{25}/_{94}$ bm.
Men: 284. Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Sensible* in 1809 was cancelled. Sold 11.1.1816.

Ex-FRENCH PRIZES. The standard French 18pdr frigate was rated at 40 guns by the French Navy (here including its Dutch and Italian dependants), but were rerated at 38 guns when added to the British Navy. The survivors were all rerated as 46s in 1817.
Unite (ex-*Imperieuse*) (French *L'Impérieuse*, launched 1787 Toulon; design by J.-M.-B. Coulomb).
Dimensions & tons: 148ft 6in, 124ft 10in x 39ft 7in x 12ft 8in. $1{,}040^{32}/_{94}$ bm.
Men: 280 (later 315). Guns: UD 28 x 18pdr; QD 8 x 9pdr + 6 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken off La Spezia 11.10.1793. Renamed *Unite* 3.9.1803, hulked for Trinity House. Refitted as frigate 1805. Hulked 1836 as a convict hospital ship at Woolwich. BU at Chatham 1.1858.
Sybille (French *La Sybille*, launched 1791 Toulon; design by J.-N. Sané).
Dimensions & tons: 154ft 3in, 127ft 4¾in x 40ft 1½in x 12ft 4in.

Scan and/or retouch by Grzechu

1,090$^{91}/_{94}$ bm.
Men: 300 (later 315). Guns: UD 28 x 18pdr; QD 12 x 9pdr; Fc 4 x 9pdr.
Taken by *Romney* in the Mediterranean 17.6.1794. Hulked 7.1831 as a lazarette at Dundee. Sold 7.8.1833. (Note: major repairs in 1804-05 and 1815-16 help to explain her longevity.)

Melpomene (French *La Melpoméne*, launched 1789 Toulon; design by J.-M.-B. Coulomb).
Dimensions & tons: 148ft 2in, 123ft 8¼in x 39ft 3in x 13ft 6in. 1,013$^{52}/_{94}$ bm.
Men: 280 (later 315). Guns: UD 28 x 18pdr; QD 8 x 9pdr + 6 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken at Calvi 10.8.1794. Troopship 1810 (carronades removed). Sold 14.12.1815.

Revolutionaire (French *La Révolutionnaire*, launched 1794 Le Havre; design by P.-A. Forfait).
Dimensions & tons: 157ft 2in, 131ft 9$^{7}/_{8}$in x 40ft 5½in x 12ft 6in. 1,147$^{68}/_{94}$ bm.
Men: 280 (later 315). Guns: (by 1812) UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades. (Note: from 1803 to 1812 had carried 32pdr carronades on UD in lieu of 18pdrs.)
Taken by *Artois* and others off Brest 21.10.1794. BU 10.1822.

Virginie (French *La Virginie*, launched 1794 Brest; design by J.-N. Sané).
Dimensions & tons: 151ft 3¾in, 126ft 3¼in x 39ft 10in x 12ft 8in. 1,065$^{62}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by *Indefatigable* in the Atlantic 23.4.1796. Receiving ship at Plymouth 1811. Sold to Mr Freake 8.7.1826, but retained and re-sold to BU 11.7.1827.

Amelia (French *La Proserpine*, launched 1785 Brest; design by J.-N. Sané).
Dimensions & tons: 151ft 4in, 126ft 1$^{3}/_{8}$in x 39ft 8$^{7}/_{8}$in x 12ft 6½in. 1,059$^{35}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 8 x 9pdr + 4 x 24pdr carronades; Fc 2 x 9pdr + 2 x 24pdr carronades. By 9.1810 had no guns on QD and just 2 x 9pdr on Fc.
Taken by *Dryad* off Cape Clear 13.6.1796. BU 12.1816.

Loire (French *Le Loire*, launched 1795 Nantes; design by Pierre Degay).
Dimensions & tons: 153ft 8in, 128ft 2$^{5}/_{8}$in x 40ft 2in x 12ft 11¾in. 1,100$^{31}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 4 x 32pdr carronades.
Taken by *Anson* of Warren's squadron off Ireland 18.10.1798. BU 4.1818.

Niobe (French *La Diane*, launched 1796 Toulon; design by J.-N. Sané).
Dimensions & tons: 155ft 10in, 129ft 6$^{7}/_{8}$in x 40ft 8½in x 12ft 7in. 1,142$^{15}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 2 x 9pdr + 10 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken off Malta 25.8.1800. Troopship 1814. BU 11.1816.

Africaine (French *L'Africaine*, launched 1798 Rochefort; design by R.-A. Haran).
Dimensions & tons: 153ft 10in, 128ft 0$^{3}/_{8}$in x 39ft 11in x 12ft 6in. 1,085$^{9}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by *Phoebe* in the Mediterranean 19.2.1801. Retaken 13.9.1810 by French *L'Iphigénie* and *L'Astrée*, but immediately recaptured by *Boadicea*. BU 9.1816.

Clorinde (French *La Clorinde*, ex-*La Havraise*, launched 1799 Le Havre; design by P.-A. Forfait).
Dimensions & tons: 158ft 6in, 133ft 2in x 40ft 10in x 12ft 2in. 1,181$^{54}/_{94}$ bm.
Men: 330 (later 315). Guns: UD 28 x 18pdr; QD 16 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.
Taken at the surrender of San Domingo 30.11.1803. Sold to Mr Levy 6.3.1817.

Milan (French *La Ville de Milan*, ex-*L'Hermione*, launched 1803 Lorient; design by Geoffroy).
Dimensions & tons: 153ft 1in, 128ft 4$^{7}/_{8}$in x 39ft 10½in x 12ft 10in. 1,085$^{91}/_{94}$ bm.
Men: 300 (later 315). Guns: UD 28 x 18pdr; QD 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by *Leander* and *Cambridge* in the Atlantic 23.2.1805. BU 12.1815.

Volontaire (French *La Volontaire*, launched 1796 Rochefort; design by J.-N. Sané).
Dimensions & tons: 151ft 9in, 127ft 1$^{3}/_{8}$in x 40ft 0½in x 12ft 5in. 1,084$^{8}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 8 x 9pdr + 6 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken entering the roadstead at the Cape of Good Hope, unaware of its capture by the British 4.3.1806. BU 2.1816.

Belle Poule (French *La Belle Poule*, launched 1802 Nantes; design by J.-N. Sané).
Dimensions & tons: 151ft 6in, 127ft 7$^{5}/_{8}$in x 39ft 11in x 13ft 4in. 1,076$^{64}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken in the Atlantic by *Foudroyant*, *London* and *Amazon* 13.3.1806. Troopship 1814. Prison ship 1815. Sold 11.6.1816.

Rhin (French *Le Rhin*, launched 1802 Toulon; design by J.-N. Sané).
Dimensions & tons: 152ft 1in, 127ft 1½in x 39ft 11½in x 13ft 0in. 1,079$^{42}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by *Mars* off Rochefort 27.7.1806. Hulked at Sheerness as a lazarette 1838. To the Thames as a cholera ship 1871. Sold to Castle 26.5.1884.

Armide (French *L'Armide*, launched 1804 Rochefort; design by P. Rolland).
Dimensions & tons: 152ft 11½in, 128ft 1in x 40ft 3in x 12ft 3½in. 1,104$^{30}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by Hood's squadron off Rochefort 25.9.1806. BU 11.1815.

Alceste (French *La Minerve*, launched 1805 Rochefort; design by P. Rolland).
Dimensions & tons: 152ft 5in, 128ft 8$^{5}/_{8}$in x 40ft 0½in x 12ft 8in. 1,097$^{71}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by Hood's squadron off Rochefort 25.9.1806. Troopship 1814. Wrecked by striking a rock in the Straits of Gaspar 18.2.1817.

President (later *Piemontaise*) (French *La Présidente*, launched 1804 Nantes; design by P.-A. Forfait).
Dimensions & tons: 158ft 0in, 132ft 4¾in x 40ft 6¾in x 12ft 2in. 1,147$^{61}/_{94}$ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by *Canopus* and *Dispatch* in the Atlantic 27.9.1806. Incorporated as *President*, but renamed *Piemontaise* 19.8.1815.

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BU 12.1815.

Brune (French *La Thétis*, launched 1788 Brest; design by J.-A. Lamothe).

Dimensions & tons: 153ft 9½in, 126ft 8½in x 40ft 2⅝in x 12ft 8in. 1,090$^{18}/_{94}$ bm.

Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken by *Amethyst* off Lorient 10.11.1808. Troopship 1810. Hulked at Sheerness as a victualling depot 1816. To Chatham 1829. Sold 16.8.1838.

Alcmene (ex-*Jewel*) (French *La Topaze*, launched 1804 Nantes; design by P.-A. Forfait).

Dimensions & tons: 156ft 1in, 129ft 5¼in x 40ft 6½in x 13ft 0in. 1,131$^{60}/_{94}$ bm.

Men: 300 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken by *Cleopatra* and *Jason* off Guadeloupe 22.1.1809.

Incorporated as *Jewel*, but renamed *Alcmene* 25.5.1809. BU 2.1816.

Niemen (French *La Niéman*, launched 1808 Bordeaux; design by P. Rolland).

Dimensions & tons: 154ft 2½in, 129ft 1¾in x 39ft 10¾in x 12ft 5⅞in. 1,093$^{37}/_{94}$ bm.

Men: 300 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken by *Amethyst* and *Emerald* in the Bay of Biscay 5.4.1809. BU 9.1815.

Furieuse (French *La Furieuse*, launched 1797 Cherbourg; design by P.-A. Forfait).

Dimensions & tons: 157ft 2½in, 133ft 2in x 39ft 1¼in x 12ft 6in. 1,083$^{13}/_{94}$ bm.

Men: 284. Guns: UD 26 x 18pdr (when armed as frigate); QD 12 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades + 1 x 18pdr carronade + 1 x 12pdr carronade. (Note this was not a conventional frigate design, but ordered as a *frégate-bombarde*.)

Taken by *Bonne Citoyenne* whilst sailing *en flûte* in the Atlantic 6.7.1809. BU 10.1816.

Bourbonnaise (French *La Caroline*, launched 1806 Antwerp; design by J.-N. Sané).

Dimensions & tons: 151ft 6in, 127ft 4⅞in x 39ft 10⅝in x 12ft 2in. 1,078$^{10}/_{94}$ bm.

Men: 300 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken at Reunion 21.9.1809. Arrived in Britain 1810, and never again fitted for sea. BU 4.1817.

Nereide (French *La Vénus*, launched 1806 Le Havre; design by P.-A. Forfait).

Dimensions & tons: 157ft 0in, 132ft 2⅛in x 40ft 8½in x 12ft 2½in. 1,165$^{9}/_{94}$ bm.

Men: 300 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken off Reunion by *Boadicea* 18.9.1810. Never fitted for sea after arrival in Britain. BU 5.1816.

Pomone (ex-*Astree*) (Franco-Italian *L'Astrée*, launched 1808 Genoa; design by J.-N. Sané).

Dimensions & tons: 152ft 0in, 127ft 5in x 40ft 2in x 12ft 9in. 1,093$^{42}/_{94}$ bm.

Men: 300 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken at the fall of Mauritius 6.12.1810. Incorporated as *Astree*, but renamed *Pomone* 26.10.1811. BU 6.1816.

Junon (French *La Bellone*, launched 1803 Saint Malo; design by François Pestel).

Dimensions & tons: 154ft 0in, 129ft 5¼in x 40ft 3in x 12ft 5in. 1,115$^{38}/_{94}$ bm.

Men: 300 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken at the fall of Mauritius 6.12.1810. BU 2.1817.

Madagascar (French *La Néreïde*, launched 1809 Saint Malo; design by François Pestel).

Dimensions & tons: 154ft 6¼in, 128ft 11in x 40ft 3¾in x 12ft 8in. 1,114$^{35}/_{94}$ bm.

Men: 300 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken at the capture of Tamatave, Madagascar, 26.5.1811. BU 5.1819.

Weser (Franco-Batavian *La Weser*, launched 1812 Antwerp; design by J.-N. Sané).

Dimensions & tons: 152ft 6in, 127ft 2in x 39ft 11¾in x 12ft 6in. 1,081$^{13}/_{94}$ bm.

Men: 300 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken by *Scylla* and *Royalist* off Ushant 21.10.1813. Troopship 1814. Sold to BU 17.9.1817.

Trave (Franco-Batavian *La Trave*, launched 1810 Amsterdam; design by J.-N. Sané).

Dimensions & tons: 151ft 5¼in, 126ft 5⅛in x 39ft 10½in x 12ft 4in. 1,069$^{26}/_{94}$ bm.

Men: 300 (later 315). Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken by *Andromache* in the Atlantic 23.10.1813. Troopship 1814. Sold to BU 7.6.1821.

Seine (French *La Cérès*, launched 1810 Brest; design by J.-N. Sané).

Dimensions & tons: 152ft 0in, 126ft 11½in x 39ft 10½in x 12ft 8in. 1,073$^{70}/_{94}$ bm.

Men: 315. Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken by *Niger* and *Tagus* off the Cape Verde Isles 6.1.1814. BU 5.1823.

Immortalite (ex-*Dunira*) (French *L'Alcmène*, launched 1811 Cherbourg; design by P. Rolland).

Dimensions & tons: 152ft 8in, 127ft 11⅜in x 39ft 10in x 12ft 7½in. 1,079$^{78}/_{94}$ bm.

Men: 315. Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken by *Venerable* off Madeira 16.1.1814. Incorporated as *Dunira*, but renamed *Immortalite* 8.11.1814. Never fitted for sea after arrival in Britain. Hulked at Portsmouth as a receiving ship 1822. Sold 1.1837.

Gloire (ex-*Palma*) (French *L'Iphigénie*, launched 1810 Cherbourg; design by J.-N. Sané).

Dimensions & tons: 154ft 5in, 126ft 10¼in x 39ft 9in x 12ft 7½in. 1,066$^{14}/_{94}$ bm.

Men: 315. Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken by *Venerable* and *Cyane* off Madeira 20.1.1814. Incorporated as *Palma*, but renamed *Gloire* 8.11.1814. Sold 10.9.1817.

Modeste (French *La Terpsichore*, launched 1812 Antwerp; design by J.-N. Sané).

Dimensions & tons: 152ft 2in, 127ft 7½in x 39ft 10⅜in x 12ft 4in. 1,081$^{6}/_{94}$ bm.

Men: 315. Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Taken by *Majestic* in the Atlantic 3.2.1814. Never fitted for sea after arrival in Britain. BU 8.1816.

Scan and/or retouch by Grzechu

Aurora (French *La Clorinde*, launched 1808 Paimboeuf; design by J.-F. Gautier).
Dimensions & tons: 152ft 1in, 127ft 0⅛in x 40ft 0½in x 13ft 1in. 1,083¹⁴/₉₄ bm.
Men: 300. Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by *Dryad* and *Eurotas* off Ushant 26.2.1814. Hulked as a coal depot at Falmouth 1832. BU 5.1851.

Sultane (French *La Sultane*, launched 1813 Nantes; design by J.-N. Sané).
Dimensions & tons: 151ft 6in, 127ft 0¼in x 39ft 9in x 12ft 6in. 1,067⁵¹/₉₄ bm.
Men: 315. Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by *Hannibal* off Cherbourg 26.3.1814. BU by AO 3.8.1819.

Topaze (French *L'Etoile*, launched 1812 Nantes; design by J.-N. Sané).
Dimensions & tons: 151ft 5³/₈in, 126ft 8¹/₈in x 39ft 8in x 12ft 5¼in. 1,060²³/₉₄ bm.
Men: 315. Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by *Hebrus* off La Hague 27.3.1814. Hulked at Portsmouth as receiving ship 2.1823. Target 3.1850. BU at Portsmouth 12.1851.

Melpomene (French *La Melpomène*, launched 1811 Toulon; design by J.-N. Sané).
Dimensions & tons: 152ft 10½in, 127ft 0⁷/₈in x 40ft 1¼in x 12ft 6¼in. 1,087¹⁰/₉₄ bm.
Men: 300. Guns: UD 28 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by *Rivoli* off Ischia 30.4.1815 (the only warship prize of the Hundred Days). Never fitted for sea after arrival in Britain. Sold 7.6.1821.

Ex-SPANISH PRIZES.

Imperieuse (ex-*Iphigenia*) (Spanish 40-gun *Medea*, launched 1797 Ferrol), 38.
Dimensions & tons: 147ft 2in, 122ft 4¼in x 40ft 1in x 12ft 0in. 1,045⁶¹/₉₄ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 10 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken whilst part of the Plate fleet on 5.10.1804, before the declaration of war on Spain. Renamed *Imperieuse* 3.12.1805. Hulked at Sheerness as a lazarette 5.1818. Sold to John Small Sedger, Rotherhithe 10.9.1838.

Hamadryad (Spanish *Santa Matilda*, launched 1778 Havanna), 38.
Dimensions & tons: 145ft 0in, 120ft 2½in, 38ft 10½in x 11ft 10½in. 966²⁰/₉₄ bm.
Men: 284 (later 315). Guns: UD 28 x 18pdr; QD 2 x 9pdr + 10 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by *Donegal* and *Medusa* off Cadiz 23.10.1804. Sold 9.8.1815.

18pdr Frigates, 36 guns (Fifth Rates) - reclassed as 42/44 guns in 2.1817

The 36-gun ship differed from its 38-gun equivalent by having only 13 ports a side on the UD for 18pdrs, one fewer than the 38. By 1815 the 38 had become accepted as the most cost-effective frigate, and (among dockyard production) 36s were only being ordered at Deptford, where the width of the basin entrance prevented the broader 38s being feasible. Most of the remaining ships of this group were reclassed as 42-gun frigates from February 1817; the exception was the ex-French prize *Andromache*, which became a 44-gun ship.

***PERSEVERANCE* Class**. Built to Edward Hunt's design of 1783. First three were survivors of four built during American War (sister *Leda* wrecked 1796). Of later group (design revived 1801) *Shannon* and *Meleager* were wartime losses, *Lowestoffe* cancelled.
Dimensions & tons: 137ft 0in, 113ft 5½in x 38ft 0in x 13ft 5in. 871⁴³/₉₄ bm.
Men: 260 (by 1815, 264). Guns (original) UD 26 x 18pdr; QD 8 x 9pdr; Fc 2 x 9pdr. (By 1813): UD 26 x 18pdr; QD 2 x 9pdr + 10 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.

Perseverance John Randall & Co., Rotherhithe.
Ord: 3.12.1779. K: 8.1780. L: 10.4.1781. Prison hulk 7.1793. Receiving ship 1794. Sold to J. Cristall 21.5.1823.

Phoenix George Parsons, Bursledon.
Ord: 20.6.1781. K: 8.1781. L: 15.7.1783. Wrecked near Smyrna 20.2.1816.

Inconstant William Barnard, Deptford.
Ord: 8.12.1781. K: 12.1782. L: 28.10.1783. Troopship 3.1797 until 12.1805. BU 11.1817.

Tribune George Parsons, Bursledon.
Ord: 6.5.1801. K: 7.1801. L: 5.7.1803. Cut down to a 24-gun corvette (Sixth Rate) 1833. Wrecked near Tarragona on 28.11.1839.

Iphigenia Chatham Dyd.
Ord: 9.7.1801. K: 2.1806. L: 26.4.1808. In French hands 28.8.1810 to 6.12.1810. To the Marine Society as a training ship 7.1833 to 1848. BU 5.1851.

Salsette (ex-*Pitt*, renamed 19.2.1807) Bombay Dyd.
Ord: 12.5.1802. K: 19.7.1803. L: 17.1.1805. Became a lazarette at Pembroke 1831. Receiving ship at Woolwich 1835. BU at Chatham 1874.

Doris (ex-*Pitt*, renamed 26.8.1807) Bombay Dyd.
Ord: 5.6.1803. K: 25.4.1806. L. 24.3.1807. Name changed from *Pitt* after purchase by RN (just to confuse matters, she was also called *Salsette* prior to acquisition by the RN). Sold at Valparaiso because of her decayed state 4.1829.

Orlando Chatham Dyd.
Ord: 2.5.1808. K: 3.1809. L: 20.6.1811. Became a hospital ship at Trincomalee 1819. Sold 3.1824.

NOTES: Contrary to some reports, the two Bombay-built ships were not built for the East India Co. (Bombay Marine); for full report see Robert Gardiner's *Frigates of the Napoleonic Wars*, p.11, which explains the confused re-naming history. Although nominally to this Hunt design, these two vessels differed significantly in dimensions from the standard. The larger *Melampus*, a Hunt-designed 36-gun copy of his 38-gun *Minerva* Class (see above), was sold to the Netherlands Navy in 6.1815, while the *Thalia* - the last survivor of four *Flora* Class 36s to a 1778 Williams design - was BU in 7.1814.

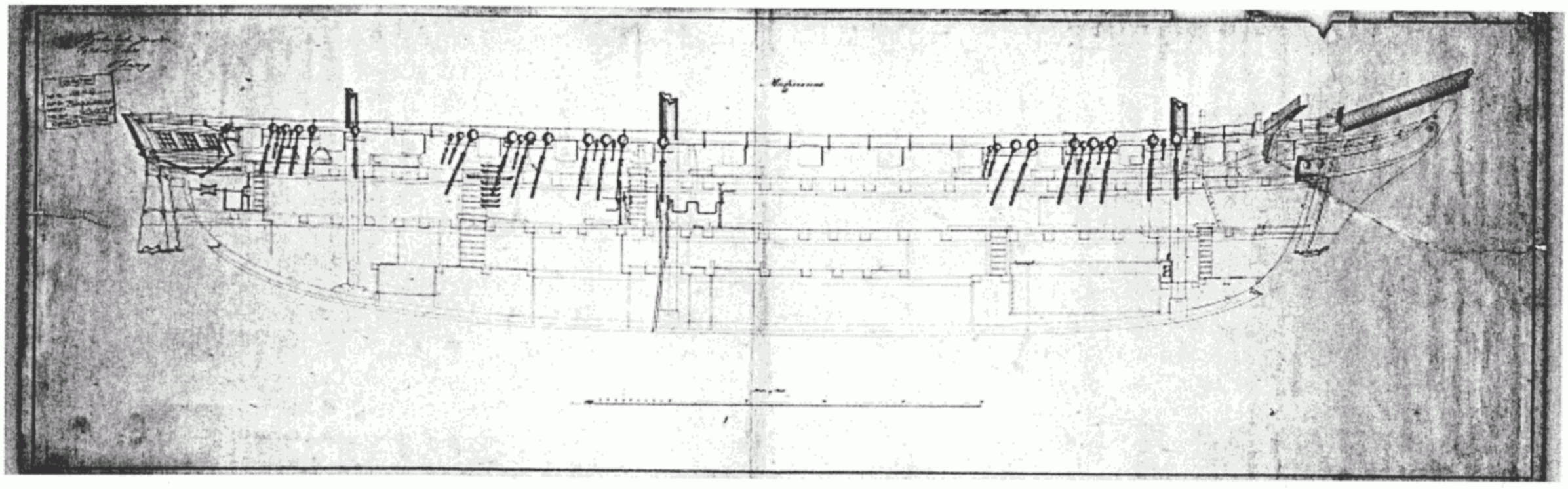
***PHOEBE* Class**. Design by Sir John Henslow, 1794. Sister *Doris* was wartime loss.
Dimensions & tons: 142ft 6in, 118ft 10½in x 38ft 0in x 13ft 5in. 913¹³/₉₄ bm.
Men: 264. Guns: UD 26 x 18pdr; QD 8 x 9pdr + 6 x 32pdr carronades; Fc 2 x 9pdr + 4 x 32pdr carronades.

Dryad William Barnard, Deptford.
Ord: 24.5.1794. K: 6.1794. L: 4.6.1795. Became a receiving ship at Portsmouth 1832. BU 2.1860.

Caroline John Randall & Co., Rotherhithe.
Ord: 24.5.1794. K: 6.1794. L: 17.6.1795. Salvage ship 1813. BU 9.1815.

Phoebe John Dudman, Deptford.
Ord: 24.5.1794. K: 6.1794. L: 24.9.1795. Became a receiving ship and slop ship at Plymouth 10.1826. Sold 27.5.1841.

Scan and/or retouch by Grzechu



Many of the war-built frigates had years of hull life remaining, but became outclassed by bigger frigates as time passed, so were cut down to make powerful corvettes. One such was the *Apollo* Class 36-gun *Magicienne* shown in this draught dated 19 December 1831. *DR1449*

Fortunee Perry & Co., Blackwall.
Ord: 28.1.1800. K: 4.1800. L: 17.11.1800. Sold 29.1.1818.

***AMAZON* Class**. Design by Sir William Rule, 1794. *Amazon* was wartime loss, *Glenmore* ('fir'-built) sold 1814 to BU.
Dimensions & tons: 143ft 0in, 119ft 8in x 38ft 2in x 13ft 6in. $925^{84}/_{94}$ bm.
Men: 264. Guns: UD 26 x 18pdr; QD 8 x 9pdr + 6 x 32pdr carronades; Fc 2 x 12pdr + 4 x 32pdr carronades.
First cost: *Emerald* £14,419 (+ fitting £9,390). *Trent* £25,915 (including fitting).

Emerald Thomas Pitcher, Northfleet.
Ord: 24.5.1794. K: 6.1794. L: 31.7.1795. C: 12.10.1795 at Woolwich. Laid up 11.1811. Became a receiving ship at Portsmouth 1822. BU 1.1836 at Portsmouth.

Trent Woolwich Dyd. 'Fir'-built.
Ord: 24.1.1795. K: 3.1795. L: 24.2.1796. C: 26.5.1795. Hospital ship at Plymouth 1803. Became a receiving ship at Cork 1815. BU at Haulbowline 2.1823.

***APOLLO* Class**. Sir William Rule design. Four ships had been wartime losses (*Apollo*, *Blanche*, *Saldanha* and *Manilla*).
Dimensions & tons: 145ft 0in, 121ft $9^{3}/_{8}$in x 38ft 2in x 13ft 3in. $943^{53}/_{94}$ bm.
(Note that *Malacca* differed considerably and only belonged nominally to this class; built of a mixture of timbers, her dimensions as built were 151ft 11in, 124ft $4^{5}/_{8}$in x 38ft 8in x 13ft 2in. 989 bm.)
Men: 264. Guns: UD 26 x 18pdr; QD 2 x 9pdr + 10 x 32pdr carronades; Fc 2 x 9pdr + 4 x 32pdr carronades.

Euryalus B. & E. Adams, Bucklers Hard.
Ord: 16.8.1800. K: 10.1801. L: 6.6.1803. Became a convict ship at Chatham 1825. Coal depot 1846. To Gibraltar as a convict ship 1847. Renamed *Africa* 1859. Sold to Mr Recano at Gibraltar 16.8.1860.

Dartmouth Benjamin Tanner, Dartmouth.
Ord: 17.3.1803. K: 7.1804 - firm failed, AO not to build 2.6.1809, then re-ordered - transferred to: Cook, Dartmouth.
Re-ord: 17.3.1803. K: 7.1804. L: 28.8.1813. To quarantine service at Chatham 7.1831, later to Leith. BU 11.1854 at Deptford.

Creole Benjamin Tanner, Dartmouth.
Ord: 17.3.1803 - firm failed, AO not to build 2.6.1809, then re-ordered - transferred to: Plymouth Dyd.
Re-ord: 17.3.1803. K: 9.1811. L: 1.5.1813. To harbour service (unspecified) at Chatham 1833. BU 8.1833.

Semiramis Deptford Dyd.
Ord: 25.3.1806. K: 4.1807. L: 25.7.1808. Cut down into a 24-gun corvette (Sixth Rate - see Chapter 2) 1827. Depot ship at Plymouth 1832. BU 11.1844.

Owen Glendower Steemson, Hull.
Ord: 1.10.1806. K: 1.1807. L: 19.11.1808. Became a convict ship at Gibraltar 10.1842. Sold 1884.

Curacoa Robert Guillaume, Northam.
Ord: 1.10.1806. K: 1.1808. L: 23.9.1809. Cut down 6.1831 into a 24-gun corvette (Sixth Rate - see Chapter 2). BU 3.1849.

Hotspur George Parsons, Warsash.
Ord: 1.10.1806. K: 8.1807. L: 13.10.1810. BU 1.1821.

Havannah Wilson, Liverpool (originally ordered from Fletcher, Naylor & Hassall?).
Ord: 1.10.1806. K: 3.1808. L: 26.3.1811. Cut down to a 22-gun corvette (Sixth Rate - see Chapter 2) 1845. Lent as training ship at Cardiff 3.1860. Sold to BU 1905.

Malacca (ex-*Penang*) 'Prince of Wales Island' (Penang, Malaya).
Ord: 19.2.1807. K: 2.1808. L: 6.3.1809. Not taken into RN until 11.8.1810. C: 28.10.1810 at Woolwich. BU 3.1816.

Orpheus Deptford Dyd.
Ord: 27.2.1808. K: 8.1808. L: 12.8.1809. BU 8.1819.

Leda Woolwich Dyd.
Ord: 23.3.1808. K: 10.1808. L: 9.11.1809. Sold 30.4.1817.

Theban George Parsons, Warsash.
Ord: 5.1808. K: 6.1808. L: 22.12.1809. BU 5.1817.

Astraea Robert Guillaume, Northam.
Ord: 26.9.1808. K: 12.1808. L: 5.1810. Became a depot ship at Falmouth 8.1823. BU 4.1851.

Belvidera Deptford Dyd.
Ord: 28.9.1808. K: 12.1808. L: 23.12.1809. Became a store depot at Portsmouth 10.1846. Receiving ship 1852. Sold 10.7.1906.

Galatea Deptford Dyd.
Ord: 12.5.1809. K: 8.1809. L: 31.8.1810. Fitted with experimental (man-powered) propelling machinery 1829. Became a receiving ship and coal depot at Jamaica 8.1836. BU there by AO 24.9.1849.

Maidstone Deptford Dyd.
Ord: 8.1.1810. K: 9.1810. L: 18.10.1811. Receiving ship 1832. Became a coal depot at Portsmouth 1839. BU completed at Cowes 16.6.1865.

Stag Deptford Dyd.
Ord: 17.10.1810. K: 1.1811. L: 26.9.1812. BU 9.1821.

Scan and/or retouch by Grzechu

Magicienne Daniel List, Binstead, Isle of Wight.
Ord: 14.12.1810. K: 4.1811. L: 8.8.1812. Cut down into a 24-gun corvette (Sixth Rate - see Chapter 2) at Woolwich Dyd 11.1831. BU at Portsmouth 3.1845.
Pallas Robert Guillaume, Northam.
Ord. 19.3.1811. K: 5.1811. On his bankruptcy, the order transferred to Portsmouth Dyd.
Ord: 1.12.1811. K: 4.1814. L: 13.4.1816. Became a coal depot at Plymouth 8.1836. Sold to Marshall 11.1.1862.
Barrosa Deptford Dyd.
Ord: 4.4.1811. K: 10.1811. L: 21.10.1812. Became a slop ship at Portsmouth 1823, later receiving ship and ordnance depot. Sold 27.5.1841.
Tartar Deptford Dyd.
Ord: 6.1.1812. K: 10.1812. L: 6.4.1814. Became a receiving ship (3.1830-1851) and hulk (1846) at Chatham. BU completed 30.9.1859.
Brilliant Deptford Dyd.
Ord: 11.12.1812. K: 11.1813. L: 28.12.1814. Cut down into a 22-gun corvette (Sixth Rate - see Chapter 2) 1844. To RNR as training ship 1859. Renamed *Briton* 8.11.1889. Sold to Forth Shipbreaking Co., Bo'ness 12.5.1908.
Blonde Deptford Dyd.
Ord: 11.12.1812. Re-ordered to new design 1816 (see Chapter 2).

AIGLE. Design by Sir John Henslow, 1798. Sister *Resistance* was lost 1803.
Dimensions & tons: 146ft 0in, 122ft 1½in x 38ft 6in x 13ft 0in. $962^{81}/_{94}$ bm.
Men: 264. Guns: UD 26 x 18pdr; QD 4 x 9pdr + 8 x 32pdr carronades; Fc 4 x 9pdr + 2 x 32pdr carronades.
Aigle B. & E. Adams, Bucklers Hard.
Ord: 15.9.1798. K: 11.1798. L: 23.9.1801. Cut down into a 24-gun corvette (Sixth Rate - see Chapter 2) at Chatham Dyd 1831. Coal hulk (and receiving ship) at Woolwich 1852; to Sheerness 1869. Torpedo target 1870. Sold to BU 24.11.1870.

ETHALION. 'Admiralty' design, approved 5.9.1799.
Dimensions & tons: 152ft 0in, 129ft 2¼in x 38ft 0in x 13ft 0in. $992^{25}/_{94}$ bm.
Men: 264. Guns: UD 26 x 18pdr; QD 14 x 32pdr carronades; Fc 2 x 9pdr + 4 x 32pdr carronades.
Ethalion Woolwich Dyd.
Ord: 7.9.1799. K: 5.1800. L: 29.7.1802. Became convict ship at Woolwich 9.1823. Temporary receiving ship 1824. Became a breakwater at Harwich 5.1835. BU 6.1877.

PYRAMUS. Design to lines of *Belle Poule* (French prize taken 1780).
Dimensions & tons: 140ft 0in, 115ft $11^{5}/_{8}$in x 38ft 2in x 11ft 11in. $898^{50}/_{94}$ bm.
Men: 264. Guns: UD 26 x 18pdr; QD 2 x 9pdr + 10 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Pyramus Greensword & Kidwell, Itchenor.
Ord: 29.6.1805. K: 4.1806. Order and frames transferred to Portsmouth Dyd.
Re-ord: 5.1808. K: 11.1808. L: 22.1.1810. Became a receiving and convict ship at Halifax, Nova Scotia 1832. Sold to BU 11.1879.

***SCAMANDER* Class**. Sir William Rule design, 'fir'-built (actually first seven built of red pine, last three of yellow pine). First seven all begun under original names, and renamed (as shown below) on 11.12.1812 or 26.1.1813.
Dimensions & tons: 143ft 0in, 120ft 0¾in x 38ft 2in x 12ft 4in. $930^{25}/_{94}$ bm.
Men: 274. Guns: UD 26 x 18pdr; QD 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Eridanus (ex-*Liffey*) Mrs Mary Ross, Rochester.
Ord: 4.5.1812. K: 8.1812. L: 1.5.1813. Sold 29.1.1818.
Orontes (ex-*Brilliant*) Joseph & Thomas Brindley, Frindsbury.
Ord: 4.5.1812. K: 8.1812. L: 29.6.1813. BU 4.1817.
Scamander (ex-*Lively*) Joseph & Thomas Brindley, Frindsbury.
Ord: 4.5.1812. K: 8.1812. L: 13.7.1813. Sold to John Small Sedger, Rotherhithe 22.7.1819.
Tagus (ex-*Severn*) Daniel List, Binstead, Isle of Wight.
Ord: 4.5.1812. K: 8.1812. L: 14.7.1813. Sold 19.4.1822.
Ister (ex-*Blonde*) Wallis, Blackwall.
Ord: 4.5.1812. K: 8.1812. L: 14.7.1813. Sold 8.3.1819.
Euphrates (ex-*Greyhound*) John King, Upnor.
Ord: 4.5.1812. K: 8.1812. L: 8.11.1813. Sold 29.1.1818.
Tigris (ex-*Forth*) John Pelham, Frindsbury.
Ord: 4.5.1812. K: 9.1812. L: 26.6.1813. Sold 11.6.1818.
Hebrus John Barton, Limehouse.
Ord: 16.11.1812. K: 1.1813. L: 13.9.1813. Sold 3.4.1817.
Granicus (possibly ex-*Iberus*? - this is doubtful) John Barton, Limehouse.
Ord: 16.11.1812. K: 1.1813. L: 25.10.1813. Sold 3.4.1817.
Alpheus Wallis, Blackwall.
Ord: 7.12.1812. K: 7.1813. L: 6.4.1814. Sold 10.9.1817.

Ex-FRENCH PRIZES. Rated as 38s in the French Navy, these were reclassed as 36s in the RN.
San Fiorenzo (French *La Minerve*, launched 1782 Toulon; J. M. B. Coulomb design).
Dimensions & tons: 148ft 8in, 124ft $4^{1}/_{8}$in x 39ft 6in x 13ft 3in. $1{,}031^{86}/_{94}$ bm.
Men: 274 (264 from 6.1796). Guns: UD 26 x 18pdr; QD 6 x 9pdr + 6 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken 19.2.1794. Troopship 5.1810. Receiving ship at Woolwich 1812. Lazarette at Sheerness 1816. BU 9.1837.
Andromache (ex-*Princess Charlotte*) (French *La Junon*, launched 1782 Toulon; J. M. B. Coulomb design).
Dimensions & tons: 148ft 10in, 124ft 9in x 39ft 4½in x 12ft 10in. $1{,}028^{73}/_{94}$ bm.
Men: 264. Guns: UD 26 x 18pdr; QD 2 x 9pdr + 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken by Lord Keith in the Mediterranean 18.6.1799. Renamed *Andromache* 6.1.1812. BU at Deptford 6.1828.
Pique (French *Le Pallas*, launched 1779 Saint Malo).
Dimensions & tons: 146ft 8in, 123ft 1½in x 39ft 7½in x 11ft 11in. $1{,}028^{29}/_{94}$ bm.
Men: 264. Guns: UD 26 x 18pdr; QD 2 x 9pdr + 10 x 32pdr carronades; Fc 4 x 9pdr + 2 x 32pdr carronades.
Taken off the French Coast 6.2.1800. Rated as a 32 until 1813. Sold to Mr Feake at Deptford 22.7.1819.
Desiree (French *La Désirée*, launched 1796 Dunkirk).
Dimensions & tons: 147ft 3in, 124ft 2¼in x 39ft 2¾in x 11ft 9in. $1{,}016^{50}/_{94}$ bm.
Men: 274. Guns: UD 26 x 18pdr; QD 2 x 9pdr + 8 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Cut out of Dunkirk Roads by *Dart* 8.7.1800. Hulked at Sheerness as a slop ship 1823. Sold at Rotherhithe 28.8.1832.

Ex-DANISH PRIZES. Two other Danish prizes (*Nyaden* and *Havfruen*) has been sold before 1815.

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Freya (Danish *Freya*, K: 1792. L: 1793 Copenhagen; design by Ernst Stibolt).
Dimensions & tons: 148ft 7in, 124ft 3in x 39ft 4½in x 10ft 8in. 1,022$^{56}/_{94}$ bm.
Men: 254. Guns: UD 26 x 18pdr; QD 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken at the fall of Copenhagen 7.9.1807. Re-armed with Gover lightweight 24pdr replacing 18pdr and 24pdr carronades replacing 32pdr type 9.1809. Intended renaming as *Hyppolitus* in 1809 was cancelled. Troopship 1810. Sold 11.1.1816.

Iris (Danish *Marie*, K: 1794. L: 1795 Copenhagen; design by Ernst Stibolt).
Dimensions & tons: 148ft 6in, 125ft 0¾in x 39ft 5in x 11ft 1in. 1,033$^{47}/_{94}$ bm.
Men: 254. Guns: UD 26 x 18pdr; QD 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Alaric* in 1809 was cancelled. Sold 31.7.1816.

Nymphen (Danish *Nymphen*, K: 1806. L: 1807 Nyholm Dyd, Copenhagen; design by F. C. H. Hohlenberg).
Dimensions & tons: 140ft 4in, 117ft 10$^{1}/_{8}$in x 38ft 0½in x 10ft 3in. 907$^{11}/_{94}$ bm.
Men: 254. Guns: UD 26 x 18pdr; QD 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken at the fall of Copenhagen 7.9.1807. Intended renaming as *Determinee* in 1809 was cancelled. Sold 11.1.1816.

Ex-AMERICAN PRIZE. In 1817 this vessel was reclassed as a 42-gun ship in the RN.

Essex (American *Essex*, launched 1799 Salem).
Dimensions & tons: 138ft 7in, 117ft 2$^{7}/_{8}$in x 37ft 3½in x 11ft 9in. 867$^{22}/_{94}$ bm.
Men: 280. Guns: UD 26 x 18pdr; QD 12 x 32pdr carronades; Fc 2 x 9pdr + 2 x 32pdr carronades.
Taken off Valparaiso by *Phoebe* and *Cherub* 28.3.1814. Never fitted for sea after arrival in Britain. Troopship 7.6.1819. Hulked at Cork as a convict ship 10.1823. Sold 8.7.1837.

18pdr Frigates, 32 guns (Fifth Rates)

Not many of these small 18pdr frigates had been built and no more were to appear.

***AMPHION* Class**. Design by Sir William Rule, approved 27.6.1796. Sister-ship *Proserpine* was wartime loss in 1809.
Dimensions & tons: 144ft 0in, 121ft 7½in x 37ft 6in x 12ft 6in. 909$^{71}/_{94}$ bm.
Men: 254. Guns: UD 26 x 18pdr; QD 8 x 32pdr carronades; Fc 2 x 6pdr + 2 x 32pdr carronades. Actual guns varied.

Amphion James Betts, Mistleythorn.
Ord: 11.6.1796. K: 7.1796. L: 19.3.1798. Troopship 1812. Became breakwater at Harwich 11.1820. Remains sold to Joliffe & Banks 9.1823.

Aeolus Mrs. Frances Barnard, Deptford.
Ord: 28.1.1800. K: 4.1800. L: 28.2.1801. Troopship by 1815. BU at Deptford 10.1817.

Medusa Thomas Pitcher, Northfleet.
Ord: 28.1.1800. K: 4.1800. L: 14.4.1801. Hulked as hospital ship at Plymouth 11.1813. BU 11.1816.

Nereus Simon Temple, South Shields.
Ord: 4.10.1805. K: 11.1806. L: 4.3.1809. BU 2.1817.

***NARCISSUS* Class**. Design by Sir John Henslow, approved 13.1.1798. Sole survivor of a class of three ships completed (*Tartar* was wartime loss; *Cornelia* was BU in 1814), with two more cancelled in 1806.
Dimensions & tons: 142ft 0in, 118ft 5in x 37ft 6in x 12ft 6in. 885$^{90}/_{94}$ bm.
Men: 254. Guns: UD 26 x 18pdr; QD 8 x 32pdr carronades; Fc 2 x 6pdr + 2 x 32pdr carronades.

Narcissus Deptford Dyd.
Ord: 23.11.1797. K: 2.1800. L: 12.5.1801. Became a temporary convict ship at Woolwich 1823. Convict hospital ship 1824. Sold 1.1837.

HYPERION. Design by Sir John Henslow, from lines of *La Magicienne* (French prize taken 1781).
Dimensions & tons: 143ft 9in, 118ft 8$^{1}/_{8}$in x 39ft 2½in x 12ft 4½in. 970$^{39}/_{94}$ bm.
Men: 254. Guns: UD 26 x 18pdr; QD 2 x 9pdr + 10 x 24pdr carronades; Fc 4 x 9pdr + 2 x 24pdr carronades.

Hyperion Gibson, Hull.
Ord: 13.6.1805. K: 2.1806. L: 3.11.1807. To the Coast Blockade 1825. BU 6.1833.

BUCEPHALUS. Design by Sir William Rule, from lines of *La Topaze* (French prize taken 1793).
Dimensions & tons: 150ft 0in, 126ft 6$^{1}/_{8}$in x 38ft 0in x 12ft 1in. 971$^{66}/_{94}$ bm.
Men: 254. Guns: UD 26 x 18pdr; QD 2 x 9pdr + 10 x 24pdr carronades; Fc 2 x 9pdr + 2 x 24pdr carronades.

Bucephalus William Rowe, Newcastle.
Ord: 19.6.1805. K: 8.1806. L: 3.11.1808. Troopship 5.1814. Receiving ship at Portsmouth 6.1822. BU 9.1834.

12pdr Frigates, 32 or 36 guns (Fifth Rates)

By 1815 this was a thoroughly obsolete, but previously numerous and popular, type of frigate with a few survivors, all near the end of their careers. This section includes several prizes with a 12pdr armament but more guns than the British vessels listed here. As all had gone by February 1817 (or were hulks), they escaped reclassification.

***VENUS* Class**. Design by Sir Thomas Slade, 1756. Sole survivor of Seven Years War era frigates.
Dimensions & tons: 128ft 4in, 106ft 2$^{5}/_{8}$in x 35ft 8in x 12ft 4in. 718$^{18}/_{94}$ bm.
Men: 240. Guns: (as 32) UD 24 x 12pdr; QD 6 x 6pdr + 4 x 18pdr carronades; Fc 2 x 6pdr + 2 x 18pdr carronades.

Heroine (ex-*Venus*) John Okill, Liverpool.
Ord: 13.7.1756. K: 16.8.1756. L: 11.3.1758 as a 36. Reclassed as a 32 in 3.1792. Renamed *Heroine* (following capture and incorporation of Danish *Venus*) 14.7.1807. Hulked 1817. Temporary convict ship at Woolwich 1824. Sold 22.9.1828.

***AMAZON* Class**. Design by Sir John Williams, 1771. Survivors of 18 vessels, first 3 built 1773-73 (all gone by 1815) and 15 built from 1778 onwards.
Dimensions & tons: 126ft 0in, 104ft 0in x 35ft 0in x 12ft 2in. 677$^{62}/_{94}$ bm.
Men: 220. Guns: UD 26 x 12pdr; QD 4 x 6pdr + 4 x 18pdr carronades; Fc 2 x 6pdr + 2 x 18pdr carronades.

Success John Sutton & Co., Liverpool.
Ord: 22.2.1779. K: 8.5.1779. L: 10.4.1781. In French hands, 13.2.1801

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to 2.9.1801. Troopship 1812. Convict ship at Halifax, Nova Scotia 1.1814. BU there 1820.

Syren James Betts, Mistleythorn.
Ord: 3.1.1781. K: 2.1781. L: 24.9.1782. Lazarette 1805. BU 9.1822.

Iris William Barnard, Deptford.
Ord: 5.10.1781. K: 1.1782. L: 2.5.1783. Lent Trinity House 10.1803. Renamed *Solebay* 18.11.1809. Receiving ship at Yarmouth 1811. BU 10.1833.

Castor James Graham, Harwich.
Ord: 30.1.1782. K: 1.1783. L: 26.5.1785. In French hands from 9.5.1794 to 29.5.1794; by 1808 carried 28 x 32pdr carronades (22 UD, 4 QD, 2 Fc), 2 x 12pdr (Fc) and 2 x 6pdr (QD). Sold 22.7.1819.

Terpsichore James Betts, Mistleythorn.
Ord: 29.7.1782. K: 11.1782. L: 17.12.1785. Receiving ship at Chatham 1818. BU 11.1830.

***ACTIVE* Class**. Design by Edward Hunt. Survivors of eight vessels dating from American War of Independence, of which *Cerberus* lost 1783, *Active* 1796 and *Astraea* 1808; *Daedalus* was BU 7.1811.
Dimensions & tons: 126ft 0in, 103ft $9^{5}/_{8}$in x 35ft 4in x 12ft 2in. $689^{25}/_{94}$ bm.
Men: 250. Guns: UD 26 x 12pdr; QD 4 x 6pdr + 4 x 24pdr carronades; Fc 2 x 6pdr + 2 x 24pdr carronades.

Mermaid Woolwich Dyd.
Ord: 27.8.1778. K: 9.1778. Order moved 21.3.1782 to: Sheerness Dyd. Re-ord: 21.3.1782. K: 29.7.1782. L: 29.11.1784. Troopship 10.1811. BU 11.1815.

Fox George Parsons, Bursledon.
Ord: 10.12.1778. K: 2.1779. L: 2.6.1780. Troopship 1812. BU 4.1816.

Ceres Fearon & Webb, Liverpool.
Ord: 7.5.1779. K: 4.9.1779. L: 19.9.1781. Troopship c1799. Receiving ship 1803. Slop ship 1804. Harbour flagship 1812. Victualling hulk 1816. BU 3.1830.

Quebec George Parsons & Stares, Bursledon.
Ord: 15.9.1779. K: 6.1780. L: 24.5.1781. Hulked 1803-05; in 1808 had 9pdr instead of 6pdr. Receiving ship 1811. BU 7.1816.

***HERMIONE* Class**. Design by Edward Hunt, 1780. Single survivor of class of six.
Dimensions & tons: 129ft 0in, 107ft 0in x 35ft 4in x 12ft 10in. $710^{48}/_{94}$ bm.
Men: 220. Guns: UD 26 x 12pdr; QD 4 x 6pdr + 4 x 18pdr carronades; Fc 2 x 6pdr + 2 x 18pdr carronades.

Aquilon Young & Woolcombe, Thames.
Ord: 23.4.1782. K: 11.1782. L: 23.11.1786. BU 9.1815.

***THAMES* Class**. Fir-built revival of design of Bately's 1750s *Richmond* Class. Of this class, *Pallas* was wartime loss, *Hebe* and *Circe* were sold 1813-14, and *Minerva* was BU 2.1815.
Dimensions & tons: 127ft 0in, 107ft 4in x 34ft 0in x 11ft 9in. $657^{88}/_{94}$ bm.
Men: 220. Guns: UD 26 x 12pdr; QD 8 x 24pdr carronades; Fc 4 x 24pdr carronades.

Thames Chatham Dyd.
Ord: 1.5.1804. K: 7.1804. L: 24.10.1805. Troopship 1814. BU 10.1816.

Alexandria Portsmouth Dyd.
Ord: 1.5.1804. K: 10.1804. L: 18.2.1806. Became a receiving ship at Sheerness 1817. BU 7.1818.

Jason Woolwich Dyd.
Ord: 12.7.1804. K: 8.1804. L: 21.11.1804. BU 7.1815.

PURCHASED VESSEL.

Ceylon (ex-*Bombay*) (East India Company's *Bombay*, built 1793 at Bombay), 32-gun frigate.
Dimensions & tons: 130ft 0in, 104ft $10^{1}/_{4}$in x 35ft $1^{1}/_{2}$in x 11ft 8in. 672 bm.
Men: 215. Guns: UD 26 x 12pdr; QD 12 x 24pdr carronades; Fc 2 x 6pdr + 2 x 24pdr carronades. Later re-armed with UD 18 x 32pdr carronades; QD 2 x 9pdr + 6 x 32pdr carronades; Fc 2 x 9pdr.
Purchased by Admiral Pellew in India from the East India Co. 4.1805. Renamed *Ceylon* 1.7.1808. Taken three times during 1810 by the French (whilst serving as a troopship) then finally retaken 6.12.1810. Troopship 1814. Laid up 1816, until hulked at Malta as a receiving ship 1832. Sold there 4.7.1857.

A further vessel which might have survived through 1815 was the *Triton*, a one-off fir-built 32 to an experimental 1796 design by James Gambier. Never successful, she was hulked by 1803 and was reported sold in 1814. However, other sources relate her remaining in dockyard service until hulked in 1817, and finally BU in Newfoundland in 1820.

Ex-DUTCH PRIZES.

Eurus (Dutch *Zefir*, launched 1786 at Amsterdam), 32 guns.
Dimensions & tons: 126ft $7^{1}/_{2}$in, 107ft 8in x 35ft 0in x 12ft $6^{1}/_{2}$in. $701^{51}/_{94}$ bm.
Men: 215 (58 as storeship). Guns: UD 26 x 12pdr; QD 4 x 6pdr; Fc 2 x 6pdr. As storeship: UD 20 x 24pdr carronades; QD 2 x 24pdr carronades.
Taken in port in the Forth 6.3.1796. Troopship 1799. Storeship 1803. Hulked as a storeship at Haulbowline 1806. BU 1834.

Braave (Dutch *Braave*, ex-*Prinses Frederika Louisa Wilhelmina*, renamed 1795, launched 1789 by P. Glavimans at Rotterdam), 36 guns.
Dimensions & tons: unknown.
Men: ... . Guns: UD 26 x 12pdr; QD/Fc probably as *Eurus*.
Taken at Saldanha Bay 17.8.1796. Hulked on arrival in Britain 1803 and laid up. Receiving ship at Portsmouth 1811. Sold 20.7.1825.

Amsterdam (Dutch *Proserpine*, launched 1801 at Amsterdam), 32 guns.
Dimensions & tons: 140ft 8in, 113ft 6in x 37ft 6in x 11ft 11in. 849 bm.
Men: 85 (as storeship). Guns: (as storeship) UD 20 x 24pdr carronades; QD 2 x 24pdr carronades.
Taken at Surinam 4.5.1804. Hulked as a storeship at Cork 1806. To Plymouth as receiving ship 1811. Sold 9.8.1815.

Helder (Dutch *Gelderland*, ex-*Orpheus*, renamed 1806, launched 1803 at Amsterdam), 32 guns.
Dimensions & tons: 134ft $11^{1}/_{2}$in, 111ft $8^{1}/_{8}$in x 37ft $10^{1}/_{2}$in x 12ft 2in. $852^{6}/_{94}$ bm.
Men: 215. Guns: UD 26 x 12pdr; QD 10 x 32pdr carronades; Fc 2 x 6pdr + 2 x 32pdr carronades.
Taken by *Virginie* 19.5.1808. Hulked as a receiving ship at Woolwich 1813. For distressed seamen 1816. BU 1817.

Ex-FRENCH PRIZES.

Oiseau (French *La Cléopâtre*, launched 1781 St Malo; Sané design), 36 guns.
Dimensions & tons: 145ft $7^{3}/_{4}$in, 120ft $8^{7}/_{8}$in x 37ft $8^{1}/_{2}$in x 11ft $11^{3}/_{4}$in. $913^{16}/_{94}$ bm.
Men: 254. Guns: UD 26 x 12pdr; QD 8 x 24pdr carronades; Fc 2 x 6pdr + 2 x 24pdr carronades.
Taken by *Nymphe* in the Channel 18.6.1793. Prison ship at Plymouth 6.1806. Sold 18.9.1816.

Prevoyante (French *La Prévoyante*, launched 1773 Bayonne as a *flûte*), 36 guns.

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Dimensions & tons: 143ft 0in, 121ft 11½in x 35ft 2½in x 13ft 4in. 804$^{15}/_{94}$ bm.
Men: 284 (90 as storeship). Guns: UD 30 x 12pdr; QD 4 x 9pdr + 8 x 18pdr carronades; Fc 2 x 9pdr + 2 x 18pdr carronades. As storeship (18 guns): UD 14 x 6pdr; QD 4 x 4pdr.
Taken by *Thetis* and *Hussar* in Chesapeake Bay 17.5.1795. Storeship 1801. Sold to Beech & Co. to BU 22.7.1819.

Nereide (French *La Nereide*, launched 1779 St Malo; Sané design), 36 guns.
Dimensions & tons: 142ft 5in, 118ft 10$^{5}/_{8}$in x 37ft 6¾in x 11ft 9½in. 892$^{22}/_{94}$ bm.
Men: 254. Guns: UD 26 x 12pdr; QD 12 x 24pdr carronades; Fc 4 x 24pdr carronades.
Taken by *Phoebe* off the Scillies 20.12.1797. Back in French hands at Mauritius 28.6.1810 to 6.12.1810; then laid up. Sold there 1.3.1816.

Dedaigneuse (French *La Dédaigneuse*, launched 1797 Bayonne; Haran design), 36 guns.
Dimensions & tons: 143ft 10½in, 119ft 9½in x 37ft 6¼in x 11ft 9in. 897$^{3}/_{94}$ bm.
Men: 215. Guns: UD 26 x 12pdr; QD 2 x 6 + 10 x 24pdr carronades; Fc 2 x 6 + 2 x 24pdr carronades.
Taken by *Oiseau* off Portugal 29.1.1801. Receiving ship at Deptford 1810. Sold 21.5.1823.

Franchise (French *La Franchise*, launched 1798 Bayonne; Haran design), 36 guns.
Dimensions & tons: 143ft 8in, 119ft 8¼in x 37ft 6¾in x 11ft 8in. 898$^{16}/_{94}$ bm.
Men: 215. Guns: UD 26 x 12pdr; QD 2 x 12 + 10 x 24pdr carronades; Fc 2 x 12 + 2 x 18pdr carronades.
Taken by *Minotaur*, *Albion* and *Thunderer* in the Channel 28.5.1803. BU 11.1815.

Ex-SPANISH PRIZES.

Santa Margarita (Spanish *Santa Margarita*, launched 1774 Ferrol), 36 guns.
Dimensions & tons: 145ft 6in, 123ft 6$^{1}/_{8}$in x 38ft 10½in x 11ft 8½in. 992$^{78}/_{94}$ bm.
Men: 254 (by 1814). Guns: UD 26 x 12pdr; QD 8 x 24pdr carronades; Fc 2 x 24pdr carronades.
Taken by *Topaze* off Portugal 11.11.1779. Hulked as a lazarette 1814 at Pembroke. Quarantine ship 1817. Sold 8.9.1836.

Cuba (Spanish *Pomona*, launched 1794 Ferrol), 36 guns.
Dimensions & tons: 142ft 4in, 116ft 2in x 37ft 7in x 11ft 0in. 873 bm.
Men: 254. Guns: UD 26 x 12pdr; QD 6 x 24pdr carronades; Fc 2 x 6pdr + 2 x 24pdr carronades.
Taken by *Arethusa* off Havanna 23.8.1806. Hulked at Portsmouth 1811. Sold 3.4.1817.

9pdr Frigate, 32 guns (Fifth Rate)

DOVER (Franco-Italian *Bellona*, launched 1806 Venice), ex-Fifth Rate 32-gun 9pdr frigate.
Dimensions & tons: 131ft 6in, 110ft 4$^{1}/_{8}$in x 34ft 4in x 8ft 11in. 692 bm.
Men: 215 (115 as troopship). Guns: (as troopship) UD 12 x 9pdr; QD 4 x 18pdr carronades; Fc 2 x 6pdr.
Taken by Hoste at Lissa 13.3.1811. Troopship 1812. Guardship 1819. Hulked at Deptford as a receiving ship 2.1825. Quarantine service 1831. Sold 21.1.1836.

Sixth Rates (with Quarterdecks), classed as 24-gun Post Ships

Another obsolescent type with only a few elderly examples left.

***PORCUPINE* Class**. John Williams design of 1776. Six ships of this class were lost and two BU by 1805.
Dimensions & tons: 114ft 3in, 94ft 3½in x 32ft 0in x 10ft 3in. 513$^{55}/_{94}$ bm.
Men: 160. Guns: UD 22 x 9pdr; QD 2 x 6pdr. By 1815 *Eurydice* had UD 14 x 9pdr + 8 x 18pdr carronades; QD 2 x 6pdr, 140 men. *Champion* had 22 x 32pdr carronades; Fc 2 x 6pdr, 115 men.
First cost: *Eurydice* £12,391. *Champion* £10,521.

Eurydice Portsmouth Dyd.
Ord: 24.7.1776. K: 8.1776. L: 26.3.1781. C: 3.6.1781. Laid up at Deptford 12.1819. Became a receiving ship at Woolwich 1824. BU at Deptford 3.1834.

Champion John Barnard, Harwich.
Ord: 11.2.1778. K: 4.1778. L: 17.5.1779. C: 14.8.1779 at Sheerness. Became a receiving ship at Sheerness 12.1809. Sold 28.8.1816.

***SQUIRREL* Class**. Edward Hunt design, approved 14.12.1782 (only one ship built).
Dimensions & tons: 119ft 0in, 99ft 0in x 32ft 5in x 10ft 3in. 553$^{34}/_{94}$ bm.
Men: 200. Guns: UD 22 x 9pdr; QD 2 x 6pdr. By 1812 had UD 22 x 32pdr carronades; QD 2 x 6pdr; Fc 2 x 6pdr, 155 men.
First cost: £7,411 (+ fitting £3,438).

Squirrel John Barton, Liverpool.
Ord: 27.11.1782. K: 3.1783. L: 9.5.1785. C: 8.1785 at Plymouth. Became receiving ship at Portsmouth 1812. Sold to J. Cristall to BU 6.3.1817.

PURCHASED VESSEL.

Hyaena (ex-mercantile *Hope*, launched 1800 in India), rated 24 guns, teak-built.
Dimensions & tons: 122ft 4in, 102ft 1$^{1}/_{8}$in x 30ft 1in x ... . 519 bm.
Men: 165. Guns: UD 20 x 9pdr; QD 12 x 18pdr carronades; Fc 2 x 9pdr.
Purchased 6.1804. Storeship at Plymouth 1809 (retaining just QD and Fc guns). Sold to Job Cockshott 18.4.1822.

Sixth Rates (with Quarterdecks), classed as 22-gun Post Ships

In effect, these were wartime replacements for the old 24-gun ships. As usual, the Navy Board commissioned competitive draughts from the two Surveyors, and split the orders between the two designs. Although initially rated as 22s, they actually carried 24 carriage guns including two chase 6pdr on the forecastle, identical to the *Porcupine* and *Squirrel* Classes above (plus eight carronades), and the survivors - all by 1815 carrying 32pdr carronades on the UD - were rerated 32-gun frigates in February 1817.

***BANTERER* Class**. William Rule design, approved 28.3.1805. *Banterer* and *Cyane* had been wartime losses.
Dimensions & tons: 118ft 0in, 98ft 7$^{1}/_{8}$in x 32ft 0in x 10ft 6in. 537$^{2}/_{94}$ bm.
Men: 155. Guns: Designed UD 22 x 9pdr; QD 6 x 24pdr carronades; Fc 2 x 6pdr (chase) + 2 x 24pdr carronades. But all completed or were by

1815 re-armed with UD 22 x 32pdr carronades; QD 2 x 6pdrs + 4 x 18pdr carronades; Fc 2 x 6pdrs + 2 x 18pdr carronades.

Crocodile Simon Temple, South Shields.
Ord: 30.1.1805. K: 6.1805. L: 19.4.1806. C: 10.8.1806 at Chatham. BU 10.1816 at Portsmouth.

Daphne Robert Davy, Topsham.
Ord: 30.1.1805. K: 7.1805. L: 2.7.1806. C: 4.10.1806 at Plymouth. Sold 15.2.1816 (for £2,300).

Cossack (ex-*Pandour*, renamed 1806) Simon Temple, South Shields.
Ord: 30.1.1805. K: 7.1805. L: 24.12.1806. C: 2.7.1807 at Chatham. BU 6.1816 at Portsmouth.

Porcupine Thomas Owen, Topsham.
Ord: 30.1.1805. K: 9.1805. L: 26.1.1807. C: 22.6.1807 at Plymouth. Sold 18.4.1816 (for £1,600).

***LAUREL* Class**. John Henslow design, approved 28.3.1805. *Boreas* and *Laurestinus* (originally *Laurel*) of this class had been wartime losses.
Dimensions & tons: 118ft 0in, 98ft 7¼in x 31ft 6in x 10ft 3in. $526^{39}/_{94}$ bm.
Men: 155. Guns: Designed UD 22 x 9pdr; QD 6 x 24pdr carronades; Fc 2 x 6pdr (chase) + 2 x 24pdr carronades. But last three were completed, and *Comus* re-armed, with 22 x 32pdr carronades on the UD, and 18pdr (*vice* 24pdr) carronades on the QD/Fc.

Comus Custance & Co., Gt. Yarmouth.
Ord: 30.1.1805. K: 8.1805. L. 28.8.1806. C: 19.11.1806 at Chatham. Wrecked at Saint Shots, Newfoundland 24.10.1816.

Garland Richard Chapman, Bideford.
Ord: 30.1.1805. K: 8.1805. L: 25.4.1807. C: 8.9.1807 at Plymouth. Sold to Mr Hill (for £1,550) to BU 9.5.1817.

Perseus Sutton & Co., Ringmore.
Ord: 30.1.1805. K: 11.1805. L: 30.11.1812. C: 22.3.1813 at Plymouth. Became the receiving ship for distressed seamen at Deptford in 1816. To the Tower of London for the same purpose 3.1818 (to 1835). BU at Deptford 9.1850.

Volage Richard Chapman, Bideford.
Ord: 30.1.1805. K: 1.1806. L: 23.3.1807. C: 8.9.1807 at Plymouth. Sold to Mr Lackland (for £1,600) for mercantile use, renamed *Rochester* 29.1.1818.

Ex-FRENCH Prize (quarterdeck type).

Ganymede (French corvette *L'Hébé*, built 1808).
Dimensions & tons: 126ft 7in, 105ft 5⁷/₈in x 32ft 8⁷/₈in x 10ft 4in. $601^{17}/_{94}$ bm.
Men: 175. Guns: UD 20 x 9pdr; QD 2 x 6pdr; Fc 2 x 6pdr + 2 x 18pdr carronades.
Had been taken by *Loire* in the Atlantic 5.1.1809. Hulked at Portsmouth as a convict ship 1819. Capsized at Woolwich 1838, raised and BU 1840.

Ex-AMERICAN Prizes (flush-deck type).

Andromeda (American *Hannibal*, built 1810 Baltimore, Maryland), 24 guns.
Dimensions & tons: 135ft 6in, 108ft 6¼in x 37ft 5½in x 10ft 11in. $809^{1}/_{94}$ bm.
Men: 195. Guns: 2 x 12pdr + 22 x 32pdr carronades.
Taken 31.1.1812. Sold 18.4.1816.

Florida (American *Frolic*, launched 11.9.1813 by Josiah Barker at Charlestown, Massachussetts), 20 guns.
Dimensions & tons: 119ft 5½in, 98ft 11¾in x 32ft 0in x 14ft 2in. $539^{11}/_{94}$ bm.
Men: 135. Guns: 2 x 9pdr + 18 x 32pdr carronades.
Taken off Cuba by *Orpheus* and *Shelburne* 20.4.1814. Rerated 22-gun sloop from 2.1817. BU at Chatham 5.1819.

Ex-DUTCH Prize (quarterdeck type).
There was also the former Dutch *Sirene*, taken 17.8.1796 in Saldanha Bay by Elphinstone's Squadron. Originally named *Daphne* in the RN, and renamed *Laurel* in 1798, she was a convict ship at Portsmouth from 1798 (sold 7.6.1821).

Ship Sloops with Quarterdeck and Forecastle

The majority remaining in 2.1817 were reclassed, and those built after that date classed, as Sixth Rates. This includes a number of vessels built as fireships (*Tisiphone* and *Thais* classes) which were built with the intention of using them as sloops for most of the time - and which were all reclassed as sloops in 1808 when the fireship category was in effect deleted.

SWAN Class. 16 guns (originally 14). Design by John Williams, 1766. Last three survivors of the 'standard' ship sloop of the American Revolutionary War, to which design 25 vessels were built. Of 22 sisters, the prototype *Swan* had only been sold in 9.1814.
Dimensions & tons: 96ft 7in, 78ft 10in x 26ft 9in x 12ft 10in. $300^{4}/_{94}$ bm.
Men: 121. Guns: 16 x 6pdrs.

Savage John Barnard, Ispwich.
Ord: 12.3.1777. K: 1.6.1777. L: 28.4.1778. Sold 31.8.1815.

Thorn James Betts, Mistleythorn.
Ord: 30.9.1777. K: 12.1777. L: 17.2.1779. Taken 25.8.1779 by 2 American frigates; re-taken from the French by *Arethusa* 20.8.1782. Lent to the Marine Society as a training ship 1799. Returned and sold 28.8.1816 to BU.

Shark Walton, Hull.
Ord: 20.11.1778. K: 26.12.1778. L: 23.11.1779. Hulked as receiving ship at Jamaica 1803. Foundered 13.1.1818 in Port Royal harbour - remains sold by AO 10.4.1818.

***TISIPHONE* Class**. 14 guns (as sloops). Based on the French *Amazon* type of 1745 (and thus antecedents of the succeeding *Cormorant* Class sloops). Built for the American War of Independence, the continued existence of these former fireships at the close of the Napoleonic Wars indicates how solidly built they were. Of the original nine ships of this type, four had been wartime losses (*Conflagration*, *Vulcan* and *Comet* expended as fireships, and *Incendiary* captured by the French), and *Alecto* sold in 1802.
Dimensions & tons: 108ft 9in, 90ft 7in x 29ft 7in x 9ft 0in. $421^{63}/_{94}$ bm.
Men: 121 (55 as fireships). Guns: 14 x 18pdr carronades (originally had 12 long guns).

Tisiphone Henry Ladd, Dover.
Ord: 4.11.1779. K: 3.1780. L: 9.5.1781. Became floating battery (16 guns) 7.1803. Sold to BU 11.1.1816.

Spitfire Stephen Teague, Ipswich.
Ord: 28.11.1780. K: 12.1780. L: 19.3.1782. Sold to BU 30.7.1825.

Pluto Joshua Stewart, Sandgate
Ord: 4.12.1780. K: 1.1781. L: 1.2.1782. Receiving ship 1809. Sold to BU 19.7.1817.

Megaera Stephen Teague, Ipswich.
Ord: 16.2.1782. K: 5.1782. L: 5.1783. Sold 3.4.1817.

***ZEBRA* Class**. Elderly survivor of three vessels built to Edward Hunt design, the *Bulldog* was converted into a bomb in 1798 and hulked in 1801. Her sisters *Ariel* (unconverted) and *Zebra* had been sold in 1802 and 1812.

Scan and/or retouch by Grzechu

Dimensions and tons: 98ft 0in, 80ft 1¼in x 27ft 2in x 13ft 4in. $314^{42}/_{94}$ bm.

Men: 125 (as sloop). Guns: 16 x 6pdr + 12 x ½pdr swivels (as sloop).

Bulldog Henry Ladd, Dover.

Ord: 23.6.1781. K: 10.1781. L: 10.11.1782. Bomb vessel 1798. Powder hulk at Portsmouth 1801. BU 12.1829.

***PYLADES* Class**. Last survivor of six vessels built to Sir John Henslow design, the *Peterel* had been hulked in 1811.

Dimensions and tons: 105ft 0in, 86ft 7½in x 28ft 0in x 13ft 6in. $361^{14}/_{94}$ bm.

Men: 125. Guns: 16 x 6pdr + 4 x ½pdr swivels.

Peterel John Wilson, Frindsbury.

Ord: 18.2.1793. K: 5.1793. L: 4.3.1794. Receiving ship at Plymouth 1811. Sold 11.7.1827.

***CORMORANT* Class**. 18 guns. Designed by Henslow and Rule, based on French *Amazon* type of 1745. Of six ships ordered 1793 (plus *Stork* in 1794), *Cormorant* and *Lark* had been wartime losses, and *Lynx* sold in 1813. Of a second batch of 16 more ships ordered 1805-06, *Anacreon* and *Tweed* were wartime losses, and *Serpent* was cancelled in 1810.

Dimensions & tons: 108ft 4in, 90ft $9^{5}/_{8}$in x 29ft 7in x 9ft 0in. $422^{61}/_{94}$ bm.

First Batch

Men: 125. Guns: UD 16 x 6pdr; QD 6 x 12pdr carronades; Fc 2 x 6pdr + 2 x 12pdr carronades.

Goree (ex-*Favourite*) Randall & Brent, Rotherhithe.

Ord: 18.2.1793. K: 4.1793. L: 1.2.1794. Taken off the Cape Verde Islands by a French squadron 6.1.1806, retaken by *Jason* off Guinea Coast 27.1.1807, then renamed *Goree* 1807. Prison ship 1814. BU at Bermuda 1817.

Hornet Marmaduke Stalkartt, Rotherhithe.

Ord: 18.2.1793. K: 4.1793. L: 3.2.1794. Hulked at Plymouth for the military medical staff 1805. Sold 30.10.1817.

Hazard Joseph & Thomas Brindley, Frindsbury.

Ord: 18.2.1793. K: 5.1793. L: 3.3.1794. Sold to Mr Spratley 30.10.1817.

Stork Deptford Dyd.

Ord: 6.11.1794. K: 12.1795. L: 29.11.1796. Sold 30.5.1816.

Second Batch

These were rerated as either 24- or 26-gun (as shown) in 2.1817.

Men: 121. Guns: UD 16 x 32pdr carronades; QD 6 x 18pdr carronades; Fc 2 x 6pdrs + 2 x 18pdr carronades.

Hyacinth John Preston, Gt. Yarmouth (later 24).

Ord: 12.7.1805. K: 11.1805. L: 30.8.1806. BU 12.1820.

Sabrina Robert Adams, Chapel, Southampton (later 24).

Ord: 12.7.1805. K: 12.1805. L: 1.9.1806. Sold 18.4.1816.

Herald Carver & Corney, Littlehampton. (later 24).

Ord: 12.7.1805. K: 12.1805. L: 27.12.1806. BU 9.1817.

Cherub Thomas King, Dover (later 26).

Ord: 19.11.1805. K: 1.1806. L: 27.12.1806. Sold 13.1.1820.

Minstrel Bools & Goode, Bridport (later 24).

Ord: 19.11.1805. K: 1.1806. L: 25.3.1807. Sold 6.3.1817.

Wanderer James Betts, Mistleythorn (later 24).

Ord: 19.11.1805. K: 2.1806. L: 29.9.1806. Sold 6.3.1817.

Sapphire Brindley, King's Lynn (later 26).

Ord: 19.11.1805. K: 2.1806. L: 11.11.1806. Sold to Mr Manlove 18.4.1822.

Blossom Robert Guillaume, Northam (later 24).

Ord: 19.11.1805. K: 2.1806. L: 10.12.1806. Exploration ship 1825. Survey ship 1829. Became a lazarette at Sheerness 1.1833. BU 8.1848.

Partridge Avery, Dartmouth (later 26).

Ord: 19.11.1805. K: 3.1806. L: 15.7.1809. BU 9.1816.

Egeria Bools & Goode, Bridport (later 26).

Ord: 19.11.1805. K: 6.1806. L: 31.10.1807. Became a receiving ship at Plymouth 1826. Lent to the breakwater department there 1843, becoming an accommodation hulk 12.1845. Police accommodation ship 4.1860. BU 1865.

Favourite Bailey, Ipswich (later 26).

Ord: 30.11.1805. K: 2.1806. L: 13.9.1806. BU 2.1821.

Jalouse Plymouth Dyd (later 26).

Ord: 15.1.1806. K: 7.1808. L: 13.7.1809. Sold to G. T. Young 8.3.1819.

Dauntless Deptford Dyd (later 26).

Ord: 25.3.1806. K: 11.1807. L: 20.12.1808. Sold to Thomas M. Smith 27.1.1825.

NOTES: *Ranger*, a similar ship built to a lengthened version of this design, was BU in 1814.

***TERMAGANT* Class**. 18 guns. Henslow design, enlarged from the 1793 *Pylades* Class, and approved (?29.1.)1795. *Cyane* of this class was sold in 1809.

Dimensions & tons: 110ft 0in, 90ft $8^{3}/_{8}$in x 29ft 6in x 8ft 6in. $419^{76}/_{94}$ bm.

Men: 121. Guns: UD 18 x 6pdr (later 18 x 32pdr carronades); QD 6 x 12pdr carronades; Fc 2 x 12pdr carronades (plus, later, 2 x 6pdr added).

Plover James Betts, Mistleythorn.

Ord: 2.1.1795. K: 5.1795. L: 23.4.1796. Loaned to the Committee for Distressed Seamen at Deptford in 1816. Returned to the RN in 1818. Sold to Young, Limehouse 8.3.1819.

Termagant John Dudman, Deptford.

Ord: 2.1.1795. K: 5.1795. L: 23.4.1796. Sold to James Graham, Harwich 3.2.1819.

Bittern B. & E. Adams, Bucklers Hard.

Ord: 2.1.1795. K: 6.1795. L: 7.4.1796. Tender 1812. Sold to Tibbett & Spence 30.8.1833.

Brazen Portsmouth Dyd.

Ord: 6.11.1794. Cancelled 1799 but later reinstated. K: 15.6.1807. L: 26.5.1808. Became a floating church at Deptford 1827. BU 7.1848.

***MERLIN* Class**. 16 guns (later 18 guns). Sir William Rule design, approved 29.1.1795. Two ships were ordered in 1795 (of which *Merlin* was BU in 1803); a fresh batch of 14 ships was ordered in 1802, of which four were wartime losses (*Fly*, *Martin*, *Wolf* and *Cygnet*) and two were disposed of in 1814 (*Halifax* and *Helena*).

Dimensions & tons: 106ft 0in, 87ft 7in x 28ft 0in x 13ft 9in. $365^{32}/_{94}$ bm.

Men: 121. Guns: *Pheasant* UD 16 x 6pdr; QD 4 x 12pdr carronades; Fc 2 x 12pdr carronades. 1802 batch - UD 2 x 6pdrs + 16 x 32pdr carronades.

First cost: *Pheasant* £8,087.

Pheasant Edwards, Shoreham.

Ord: 2.1.1795. K: 10.1795. L: 17.4.1798. C: 8.8.1798 at Portsmouth. Became a temporary receiving ship at Woolwich 1.1824. Sold 11.7.1827 at Deptford to John Small Sedger, Rotherhithe to BU.

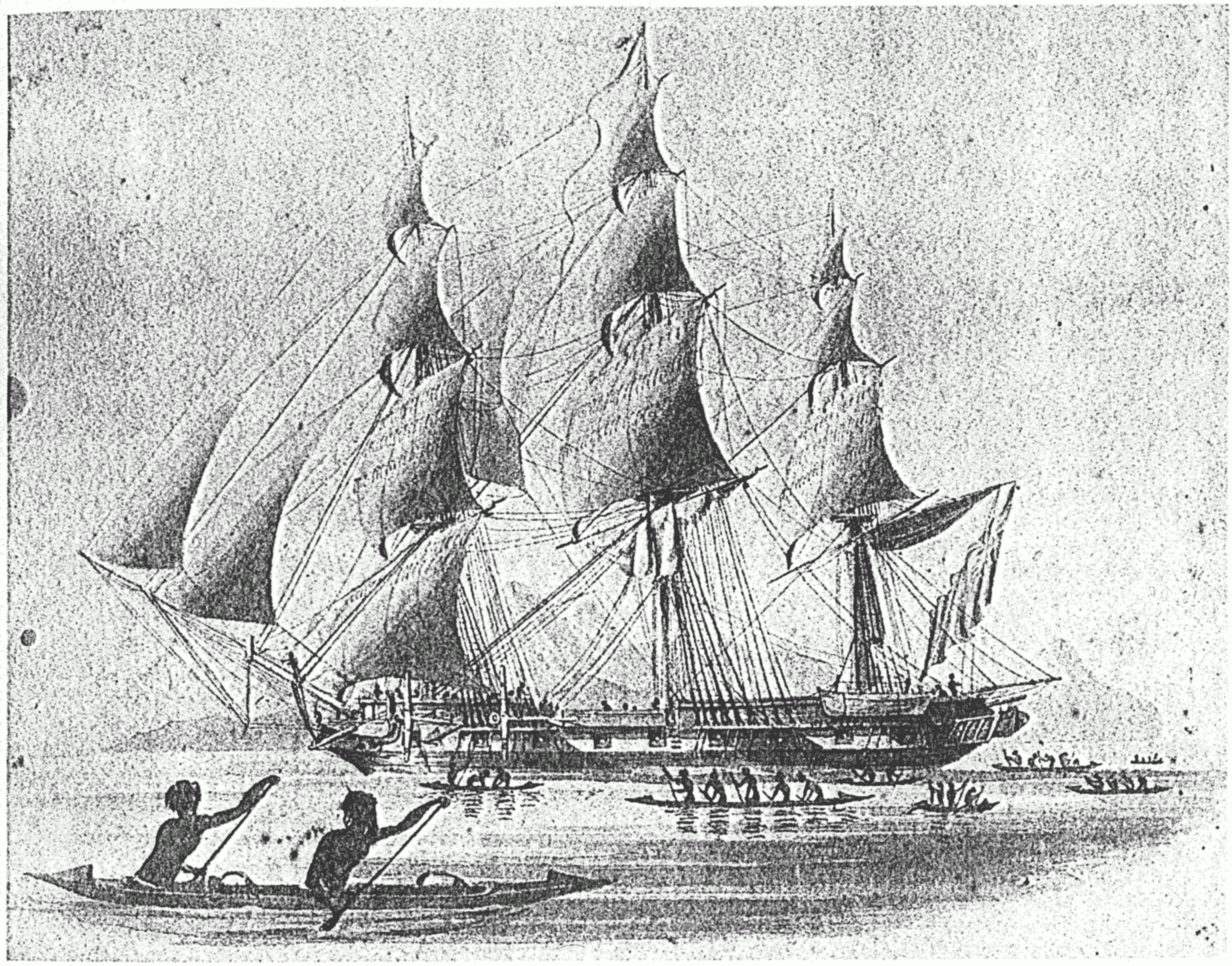
Ariel Palmer, Yarmouth - completed by 'Government' after Palmer failed.

Ord: 27.11.1802. K: 2.1803. L: 19.4.1806. C: 16.6.1806 at Chatham. Sold at Deptford 12.7.1816.

Kingfisher Thomas King, Dover.

Ord: 27.11.1802. K: 3.1803. L: 10.3.1804. C: 3.5.1804 at Sheerness. BU at Portsmouth 10.1816.

Scan and/or retouch by Grzechu



Quarterdecked ship sloops were often criticised for their poor sailing qualities, but the covered weather deck made them relatively comfortable long-range cruisers, and post-war a number found second careers as survey or exploration ships. This watercolour by William Smyth shows the *Cormorant* Class sloop *Blossom* in the Sandwich Islands during the 1825-28 voyage under F W Beechey that charted large areas of the Pacific and explored the north-west coast of the American continent. PW5964

Albacore James Hillhouse, Bristol.
Ord: 27.11.1802. K: 3.1803. L: 10.5.1804. C: 27.8.1804 at Plymouth. Sold 14.12.1815.

Otter Peter Atkinson & Co., Hull.
Ord: 27.11.1802. K: 7.1803. L: 2.3.1805. C: 19.5.1805 at Sheerness. Hulked as lazarette at Pembroke 4.1814. Sold to J. Holmes 6.3.1828.

Kangaroo Brindley, King's Lynn.
Ord: 27.11.1802. K: 8.1803. L: 12.9.1805. C: 22.2.1806 at Chatham. Sold 14.12.1815.

Rose Hamilton & Breeds, Hastings.
Ord: 27.11.1802. K: 10.1803. L: 18.5.1805. C: 3.8.1805 at Portsmouth. Sold to Thomas Pitman to BU 30.10.1817.

Brisk Benjamin Tanner, Dartmouth.
Ord: 27.11.1802. K: 3.1804. L: 4.1805. C: 6.8.1805 at Plymouth. Sold 15.2.1816.

Star Benjamin Tanner, Dartmouth.
Ord: 27.11.1802. K: 7.1804. L: 26.7.1805. C: 3.11.1805 at Plymouth. Renamed *Meteor* as bomb-ship 1812. Sold 16.10.1816.

***THAIS* Class**. 18 guns. Henslow design of 1805. Ordered and classified as fireships but actually employed as sloops, these vessels were almost identical with the *Cormorant* Class, but completed with spar deck. Rerated as sloops in 3.1808, the survivors were reclassed as 24-gun Sixth Rates in 2.1817.

Dimensions & tons: 108ft 9in, 90ft 7in x 29ft 7in x 9ft 0in. $421^{63}/_{94}$ bm.
Men: 121. Guns: UD 16 x 32pdr carronades; QD 6 x 18pdr carronades; Fc 2 x 9pdr + 2 x 18pdr carronades. By 1815 survivors typically had UD 14 x 18pdr carronades, Fc 2 x 9pdr.

Thais Benjamin Tanner, Dartmouth.
Ord: 1.10.1805. K: 10.1805. L: 19.8.1806. Cut down (spar deck removed) to 16-gun 1814. Sold 13.8.1818.

Scan and/or retouch by Grzechu

Tartarus Robert Davy, Topsham.
Ord: 1.10.1805. K: 11.1805. L: 10.1806. Sold 15.2.1816.
Prometheus Ralph Thompson, Southampton (completed by Hoar & Hawkins, Southampton?).
Ord: 1.10.1805. K: 12.1805. L: 27.3.1807. Cut down (spar deck removed) to 16-gun 1815. Became a lazarette at Portsmouth 5.1819; receiving ship there 1828. Renamed *Veteran* 2.5.1839. BU 8.1852.
Lightning O. Ayles, Topsham.
Ord: 1.10.1805. K: 1.1806. L: 14.10.1806. Sold 28.8.1816.
Erebus Thomas Owen, Topsham.
Ord: 1.10.1805. K: 1.1806. L. 20.8.1807. Congreve rocket ship 1814. Sold to Mr Manlove to BU 22.7.1819.
Comet William Taylor, Bideford.
Ord: 1.10.1805. K: 2.1806. L: 25.4.1807. Sold for mercantile use 12.10.1815, renamed *Alexander*.

***ROSAMOND* Class**. 18 guns. Survivors rerated as either 24- or 26-gun (as shown) in 2.1817. There is doubt whether this should be listed as a separate class, or as modified versions of the *Cormorant* Class, whose dimensions and hull forms were identical.
Dimensions & tons: 108ft 4in, 90ft $9^{5}/_{8}$in x 29ft 7in x 9ft 0in. $422^{61}/_{94}$ bm.
Men: 121. Guns: UD 16 x 32pdr carronades; QD 6 x 18pdr carronades; Fc 2 x 6pdr + 2 x 18pdr carronades.
Rosamond Simon Temple, South Shields. (mounted 24pdr instead of 32pdr carronades)
Ord: 4.10.1805. K: 12.1805. L: 27.1.1807. Sold 14.12.1815.
Fawn Thomas Owen, Topsham (later 26).
Ord: 19.10.1805. K: 3.1806. L: 22.4.1807. Sold 20.8.1818.
Acorn George Crocker, Bideford (later 26).
Ord: 19.10.1805. K: 3.1806. L: 30.10.1807. BU 5.1819.
Racoon John Preston, Gt. Yarmouth (later 26).
Ord: 19.10.1805. K: 3.1806. L: 30.3.1808. Became a convict hospital ship at Portsmouth 1819. Sold 16.8.1838.
North Star Benjamin Tanner, Dartmouth (later 26)
Ord: 19.10.1805. K: 5.1806. L: 21.4.1810. Sold to T. Pitman to BU 6.3.1817.
Myrtle Richard Chapman, Bideford (later 24).
Ord: 19.10.1805. K: 6.1806. L: 2.10.1807. BU 6.1818.
Hesper Benjamin Tanner, Dartmouth (later 26).
Ord: 19.10.1805. K: 6.1806. L: 3.7.1809. Sold 8.7.1817.

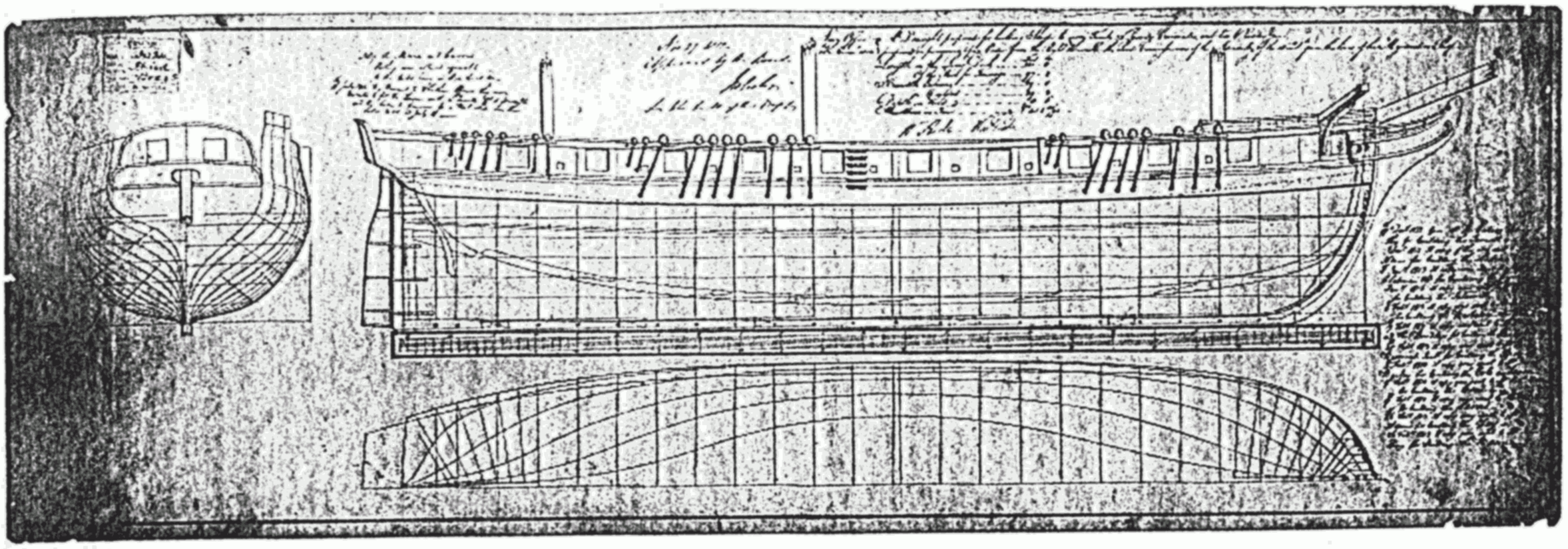
***TALBOT* Class**. Enlarged versions of the *Cormorant* Class (*ie* another *Amazon* of 1745 derivative). Built as 18-gun sloops. The survivor *Coquette* was rerated as a 28-gun Sixth Rate in 2.1817.
Dimensions & tons: 113ft 3in, 94ft 2in x 31ft 0in x 9ft 4in. $481^{33}/_{94}$ bm.
Men: 121. Guns: UD 18 x 32pdr carronades (originally planned to carry 18 x 6pdrs); QD 6 x 12pdr carronades; Fc 2 x 6pdr + 2 x 12pdr carronades. Also mounted 1 x 12pdr on centreline.
Coquette (ex-*Queen Mab*) Simon Temple, North Shields.
Ord: 4.10.1805. K: 2.1806. L: 25.4.1807. Sold 30.4.1817.
Talbot Heath & Son, East Teignmouth.
Ord: 4.10.1805. K: 3.1806. L: 22.7.1807. Sold for mercantile use 23.11.1815, renamed *George*.

***CONWAY* Class**. 20 guns. Designed by Sir William Rule. Class of 10 vessels, the last of which (*Tees*) was delayed and not launched until after 1815, but is included here for convenience. Built as 20-gun Post Ships, rerated as 28-gun Sixth Rates in February 1817, then 26-gun later in 1817 when Fc carronades removed.
Dimensions & tons: 108ft 0in, 89ft $9^{5}/_{8}$in x 30ft 6in x 9ft 0in. $444^{33}/_{94}$ bm.
Men 150. Guns: UD 18 x 32pdr carronades; QD 8 x 12pdr carronades; Fc 2 x 6pdr + 2 x 12pdr carronades.
Mersey Courtney, Chester.
Ord: 18.1.1813. K: 3.1813. L: 3.1814. Receiving ship at Portsmouth 1831. BU 7.1852.
Eden Courtney, Chester.
Ord: 18.1.1813. K: 3.1813. L: 19.5.1814. BU at Portsmouth 5.1833.
Conway John Pelham, Frindsbury.
Ord: 18.1.1813. K: 5.1813. L: 10.3.1814. Sold 13.10.1825.
Tamar Joseph & Thomas Brindley, Frindsbury.
Ord: 18.1.1813. K: 5.1813. L: 23.3.1814. Coal hulk at Plymouth 3.1831. Sold 3.1837.
Dee Bailey, Ipswich.
Ord: 18.1.1813. K: 5.1813. L: 5.5.1814. Sold 22.7.1819.
Towey Balthazar Adams, Bucklers Hard.
Ord: 18.1.1813. K: 5.1813. L: 6.5.1814. BU 11.1832.
Menai Joseph & Thomas Brindley, Frindsbury.
Ord: 18.1.1813. K: 6.1813. L: 5.4.1814. Receiving ship at Portsmouth 1829. Target ship 1852. BU 4.1853.
Tyne Robert Davy, Topsham.
Ord: 18.1.1813. K: 8.1813. L: 20.5.1814. Sold 27.1.1825.
Wye Hobbs & Hellyer, Redbridge.
Ord: 18.1.1813. K: 9.1813. L: 17.8.1814. Convict hospital ship and floating breakwater at Sheerness 9.1825. To Chatham 4.1834; by 1850 convict hospital ship there. BU at Deptford 10.1852.
Tees William Taylor, Bideford.
Ord: 18.1.1813. K: 10.1813. L: 17.5.1817. Lent to the Church Society at Liverpool as a church ship 10.1826. Sold 28.6.1872.
NOTES: *Eden* was deliberately scuttled in the Hamoaze on 9.11.1816 and raised 12.3.1817 as an experiment in wood preservation.

Flush-decked Ship Sloops (and later Sixth Rates and Corvettes)

***SNAKE* Class**. 18 guns. Designed by Sir William Rule. Apart from their rig, this class was identical with the *Cruizer* Class brigs, and *Snake*'s conversion in 1809 made her fully identical. Sister *Victor* sold 1808.
Dimensions & tons: 100ft 0in, 77ft 3½in x 30ft 6in x 12ft 9in. $382^{41}/_{94}$ bm.
Men: 121. Guns: 16 x 32pdr carronades; 2 x 6pdr.
Snake B. & E. Adams, Bucklers Hard.
Ord: 19.12.1796. K: 1.1797. L. 18.12.1797. Converted to a brig 1809. Sold at Sheerness 18.4.1816.

***DASHER* Class**. 18 guns. Built of Bermudan cedar. Designed and started as brigs, but completed as ship sloops. Possible designer was Goodrich (of Goodrich & Co.), who certainly acted as contractor for these vessels.
Dimensions & tons: 107ft 0in, 86ft 10in x 29ft 6in x 9ft 9in. $401^{83}/_{94}$ bm.
Men: 80. Guns: 2 x 9pdr + 16 x 24pdr carronades.
Dasher Outerbridge & McCallan, Bermuda.
Ord: 18.1.1796. K: ... . L: 1797. Lent to the Committee for Distressed Seamen 1818. In 1820 was to be fitted for the Army in the West Indies, but not sent. Laid up at Deptford 1822. Convict ship 1826 at Deptford. BU there 3.1838.
Driver Tynes, Bermuda.
Ord: 18.1.1796. K: ... . L: 1797. Became coal depot at Deptford 1824. Convict ship at Deptford 1825. BU completed there 24. 7.1834.



This design draught for the *Cyrus* Class dated 26 November 1812 describes them as sloops, but they were later upgraded to Post Ships. A note on the draught dated 15 July 1818 directs Chatham Dockyard to fit the *Leven* with a quarterdeck and forecastle and the cabin and gunroom for a Post Ship. She was then deployed for seven years on survey work off Africa. *DR3034*

***BERMUDA* Class**. 18 guns. Built of Bermudan cedar. Modified version of *Dasher* Class of 1797. *Bermuda*, *Atalante* and *Sylph* of this class were wrecked during the war.

Dimensions & tons: 107ft 0in, 83ft $10^{5}/_{8}$in x 29ft 11in x 14ft 8in. $399^{31}/_{94}$ bm.

Men: 121. Guns: 16 x 24pdr carronades + 2 x 9pdr (*Indian* 2 x 6pdrs).

Indian Shedden, Bermuda.

Ord: 9.6.1803. K: ... . L: 10.1805. Sold 24.4.1817.

Martin David McCallan, Bermuda.

Ord: 26.4.1806. K: ... . L. 5.1809. Wrecked in Kilkee Bay, Ireland 8.12.1817.

Morgiana Robert Hill, Bermuda.

Ord: 29.12.1808. K: 1811. L: 12.1811. Sold 27.1.1825.

***COMBATANT* Class**. 20/22 guns. Designed by John Stainforth, M.P. *Dauntless* of this class was a wartime loss.

Dimensions & tons: 120ft 0in, 99ft 6in x 28ft 0in x 11ft 3in. $416^{40}/_{94}$bm.

Men: 121. Guns: 20 (or 22) x 24pdr carronades (but rated 18-gun).

Combatant James Betts, Mistleythorn.

Ord: 29.5.1804. K: ... . L: 31.11.1804. Hulked 1808. Sold 17.10.1816.

Valorous Blunt, Hull.

Ord: 29.5.1804. K: ... . L: 11.1804. Army depot ship 1810. Sold 7.5.1817.

***HERMES* Class** - built as Post Ships (Sixth Rates), reclassified in 2.1817 as 20-gun sloops. Design 'similar to *Bonne Citoyenne*' (French prize taken 1796 - see below). *Hermes* of this class was burnt in action 1814.

Dimensions & tons: 119ft 0in, 99ft $10^{5}/_{8}$in x 30ft 11in x 8ft 7in. $507^{76}/_{94}$ bm.

Men: 135. Guns: 2 x 9pdr + 18 x 32pdr carronades.

Myrmidon Milford Dyd.

Ord: 2.6.1811. K: 7.1812: L. 18.6.1813. BU at Portsmouth 1.1823.

Ariadne Pater Dyd (Pembroke Dyd).

Ord. 28.11.1812. K: 3.1815. L: 10.2.1816. Became a coal depot at Alexandria 1837. Sold 23.7.1841.

Valorous Pater Dyd (Pembroke Dyd).

Ord. 28.11.1812. K: 3.1815. L: 10.2.1816. BU completed 13.8.1829 at Chatham.

NOTES: *Myrmidon* (and *Hermes*) were built at Milford (the former Jacobs site) on the north coast of the Haven; the other pair were built at Pater on the south coast (which later became Pembroke Dyd). *Ariadne* (in 1820) and *Valorous* (in 1821) had quarterdecks (with 6 x 18pdr carronades) and forecastles added and became rerated as 26-gun Sixth Rates.

***CYRUS* Class** - built as Post Ships (Sixth Rates), reclassified in 2.1817 as 20-gun sloops. Designed by Rule, based on slightly reduced lines of *Myrmidon* (*Hermes* Class) of 1810.

Dimensions & tons: 115ft 6in, 97ft 2in x 29ft 8in x 8ft 6in. $454^{80}/_{94}$ bm.

Men: 135. Guns: UD 20 x 32pdr carronades and 2 x 6pdr (chase).

Medina Edward Adams, Bucklers Hard.

Ord: 18.11.1812. K: 1.1813. L: 13.8.1813. Sold to Sedger, Rotherhithe 4.1.1832.

Cyrus Courtney, Chester.

Ord: 18.11.1812. K: 1.1813. L: 26.8.1813. Sold to Bennet & Son 23.5.1823.

Levant Courtney, Chester.

Ord: 18.11.1812. K: 1.1813. L: 8.12.1813. Taken by the USS *Constitution* in the Atlantic 20.2.1815: recaptured by HMS *Acasta* at Porto Praya (Cape Verde Is.) 11.3.1815. BU 10.1820.

Esk Bailey, Ipswich.

Ord: 18.11.1812. K: 3.1813. L: 11.10.1813. Sold 8.1.1829.

Carron Edward Adams, Bucklers Hard.

Ord: 18.11.1812. K: 3.1813. L: 9.11.1813. Wrecked near Puri, India 6.7.1820.

Tay Balthazar Adams, Bucklers Hard.

Ord: 18.11.1812. K: 4.1813. L: 26.11.1813. Wrecked on the Alacreanes Islands, Gulf of Mexico 11.11.1816.

Slaney Joseph & Thomas Brindley, Frindsbury.

Ord: 18.11.1812. K: 4.1813. L: 9.12.1813. Hulked as defective at Bermuda 18.12.1830. Receiving ship 1832. BU there 1838.

Erne Newman, Dartmouth.

Ord: 18.11.1812. K: 3.1813. L: 18.12.1813. Wrecked in the Cape Verde Islands 1.6.1819.

Leven Bailey, Ipswich.

Ord: 18.11.1812. K: 3.1813. L: 23.12.1813. In 1818 was given a small quarterdeck, 'to be converted into a Post Ship' of 24 guns. Survey ship

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1818; convict ship 1833; hulked 1841. BU 7.1848.

Falmouth Richard Chapman, Bideford.
Ord: 18.11.1812. K: 4.1813. L: 8.1.1814. Sold to T. Hutchinson for mercantile use 27.1.1825, renamed *Protector*.

Spey James Warwick, Eling (Southampton).
Ord: 18.11.1812. K: 5.1813. L: 8.1.1814. Sold 18.4.1822.

Lee Joseph & Thomas Brindley, Frindsbury.
Ord: 18.11.1812. K: 5.1813. L: 24.1.1814. BU 5.1822.

Hind (ex-*Barbadoes*, renamed 1813) Robert Davy, Topsham.
Ord: 18.11.1812. K: 5.1813. L: 8.3.1814. Sold at Bombay 6.4.1829.

Larne Bottomley, Kings Lynn.
Ord: 18.11.1812. K: 7.1813. L: 8.3.1814. Sold to Castle to BU at Charlton 26.3.1828.

Cyrene Richard Chapman, Bideford.
Ord: 18.11.1812. K: 4.1813. L: 4.6.1814. Sold at Bombay 4.1828.

Bann Thomas King, Dover.
Ord: 18.11.1812. K: 5.1813. L: 8.6.1814. Sold to H. Cropman 8.1.1829.

PRIZE, TAKEN FROM THE FRENCH.

Bonne Citoyenne (ex-French *La Bonne Citoyenne*, built 1794), 20 guns.
Dimensions & tons: 120ft 1in, 100ft 6¼in x 30ft 11in x 8ft 7in. 511⁴/₉₄ bm.
Men: 125. Guns: 2 x 9pdr + 18 x 32pdr carronades.
Taken by *Phaeton* off Cape Finisterre 10.3.1796. Sold to J. Cristall 3.2.1819.

PURCHASED, survivors of some 28 commercial ship-rigged vessels, taken up from mercantile use between 1801 and 1806 and rated ship sloops; employed chiefly as convoy escorts.

Alonzo (ex-mercantile *Alonzo*, built ?Portsmouth), 16 guns.
Dimensions & tons: 102ft 3in, 81ft 1in x 29ft 10in x ... . 384 bm.
Men: 100. Guns: 2 x 18pdr carronades + 14 x 24pdr carronades.
Purchased from Dudman 8.2.1801. Hulked as convict hospital ship at Woolwich 1813. Convict ship at Portsmouth 1828. Lent to Leith Seamen's Society as a chapel 1835. Scuttled outside Leith harbour 2.1842.

Falcon (ex-mercantile *Diadem*, built 1801 Whitby), 16 guns.
Dimensions & tons: 102ft 10in, 80ft 8in x 29ft 3½in x ... . 368 bm.
Men: 75. Guns: 2 x 18pdr carronades + 14 x 24pdr carronades.
Purchased from Hill 28.2.1801 (renamed in 1802). Hulked as a military depot and hospital ship at Sheerness 1810. Sold 31.7.1816.

Scourge (ex-mercantile *Herald*, built 1801 Whitby), 16 guns.
Dimensions & tons: 107ft 0in, 84ft 3in x 27ft 6in x 12ft 9in. 339 bm.
Men: 100. Guns: 2 x 6pdr + 14 x 32pdr carronades.
Purchased 6.1803. Laid up 1804 until sold 18.4.1816.

Merlin (ex-mercantile *Hercules*, built 1801 South Shields), 16 guns.
Dimensions & tons: 104ft 0in, 79ft 10in x 30ft 6in x 12ft 10in. 395 bm.
Men: 100. Guns: UD 10 x 32pdr carronades; Spar Deck 2 x 6pdr + 4 x 24pdr carronades.
Purchased 7.1803. Hulked as receiving ship at Portsmouth 1810. Sold 21.1.1836.

Speedy (ex-mercantile *George Hibbert*, built 1803 Newcastle), 16 guns.
Dimensions & tons: 101ft 5in, 82ft 6in x 29ft 4½in x 12ft 10in. 378⁸²/₉₄ bm.
Men: 100. Guns: 2 x 6pdr + 14 x 24pdr carronades.
Purchased 7.1803. Hulked as receiving ship at Portsmouth 1811. Sold 19.7.1817.

Cormorant (ex-mercantile *Blenheim*, built 1801 Howden Pans, Newcastle), 16 guns.
Dimensions & tons: 100ft 9in, 81ft 0in x 27ft 7in x 12ft 0in. 327⁷⁶/₉₄ bm.
Men: 70. Guns: 2 x 9pdr + 14 x 18pdr carronades.
Purchased 6.1804. Storeship 1809. Sold 4.12.1817.

Heron (ex-mercantile *Jason*, built 1803 Newcastle), 16 guns.
Dimensions & tons: 97ft 6in, 75ft 9in x 29ft 0in x ... . 339 bm.
Men: 70. Guns: 2 x 9pdr + 14 x 18pdr carronades.
Purchased 6.1804. Bomb vessel 5.1811, renamed *Volcano* (see below). Sold 28.8.1816.

Thrush (ex-revenue brig *Prince of Wales*, built 1794 by Scotts, Greenock), 18 guns.
Dimensions & tons: 96ft 4in, 78ft 10½in x 27ft 0⁵/₈in x 13ft 3½in. 307³/₉₄ bm.
Men: 121. Guns: 18 x 6pdr.
Purchased early 1806; renamed 12.9.1806. Powder hulk at Port Royal, Jamaica 10.1809. Foundered at anchor 7.1815.

Brig Sloops and Brigs

A type of warship which, first appearing late in the War of American Independence, had steadily grown in numbers, taking over many of the functions of the sloop. By the end of the Napoleonic Wars the vast majority of the smaller fighting ships of the Navy were brig-rigged, and the proportion of brigs in service would continue to increase during the remaining years of the sailing navy. Due to the large numbers, those built for the RN are divided according to their gun-rating, while prizes and purchased vessels are collected at the end of this section.

Brig Sloops (rated as 18 guns)

***DILIGENCE* Class**. Sir John Henslow design 1795. Sole survivor of a class of eight vessels ordered in 1795.
Dimensions & tons: 95ft 0in, 75ft 2½in x 28ft 0in x 12ft 0in. 313⁵⁹/₉₄ bm.
Men: 121. Guns: 16 x 32pdr carronades; 2 x 6pdr.

Harpy Thomas King, Dover
Ord: 4.3.1795. K: 5.1795. L: 2.1796. Sold to Mr Kilsby to BU 10.9.1817.

***CRUIZER* Class**. The prototype was designed in 1796 by Sir William Rule, with a hull identical to the ship-rigged *Snake* ordered on the same date. 105 more were ordered to this design between 1802 and 1813, of which 21 had been wartime losses (*Raven* in 1805, *Leveret* in 1807, original *Carnation* in 1808, *Magnet*, *Primrose*, original Harrier and *Foxhound* in 1809, *Alacrity*, original *Pandora* and original *Grasshopper* in 1811, original *Emulous* and original *Belette* in 1812, *Pelican*, *Peacock* and *Ferret* in 1813, *Epervier*, *Halcyon*, *Reindeer*, *Avon* and *Crane* in 1814, *Penguin* in early 1815) and seven had been BU in 1811 to 3.1815 (original *Despatch*, original *Saracen*, original *Elk*, *Frolic*, *Minorca*, *Beagle* and *Barracouta*). Names of vessels lost were frequently re-assigned to new vessels of this same Class. The six ordered in 1804 had been built of 'fir' (actually, pitch pine), but these had all gone by 1815. One further vessel (ordered in 9.1815) is included as she was eventually (1820) cancelled.
Dimensions & tons: 100ft 0in, 77ft 3½in x 30ft 6in x 12ft 9in. 382⁴¹/₉₄ bm.
Men: 121. Guns: 16 x 32pdr carronades; 2 x 6pdr.
First cost: *Trinculo* £5,192 (+ £5,524 fitting).

Cruizer Stephen Teague, Ipswich.
Ord: 19.12.1796. K: 2.1798. L: 20.12.1797 . Sold to Mr Cockshot to BU 3.2.1819.

Scorpion Thomas King, Dover.
Ord: 27.11.1802. K: 1.1803. L: 17.10.1803. Sold to G. Young to

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BU 3.2.1819.

Scout Peter Atkinson & Co., Hull.
Ord: 27.11.1802. K: 5.1803. L: 7.8.1804. Sold to John Small Sedger, Rotherhithe to BU 11.7.1827.

Musquito John Preston, Gt. Yarmouth.
Ord: 27.11.1802. K: 5.1803. L: 4.9.1804. Sold to T. King to BU 7.5.1822.

Swallow Benjamin Tanner, Dartmouth.
Ord: 27.11.1802. K: 5.1804. L: 24.12.1805. BU 11.1815.

Amaranthe John Dudman, Deptford.
Ord: 15.10.1803. K: 12.1803. L: 20.11.1804. Sold to BU 12.10.1815.

Calypso John Dudman, Deptford.
Ord: 15.10.1803. K: 3.1804. L: 2.2.1805. BU 3.1821.

Espoir Thomas King, Dover.
Ord: 7.11.1803. K: 2.1804. L: 22.9.1804. BU 4.1821.

Moselle Thomas King, Dover.
Ord: 7.11.1803. K: 3.1804. L: 10.1804. Sold to BU 14.12.1815.

Wolverene Thomas Owen, Topsham.
Ord: 7.11.1803. K: 2.1804. L: 1.3.1805. Sold to BU 15.2.1816.

Weazle Thomas Owen, Topsham.
Ord: 7.11.1803. K: 5.1804. L: 2.3.1805. Sold to BU 23.11.1815.

Surinam O. Ayles, Topsham.
Ord: 7.11.1803. K: 2.1804. L: Jan.1805. Sold to John Small Sedger, Rotherhithe to BU 20.7.1825.

Racehorse Hamilton & Breeds, Hastings.
Ord: 7.11.1803. K: 6.1804. L: 17.2.1806. Wrecked on the Isle of Man 14.12.1822 - wreck recently located by divers.

Rover Todd, Berwick.
Ord: 9.12.1803. K: 6.1804. L: 13.2.1808. Sold to Adam Gordon to BU 26.3.1828.

Forester Thomas King, Dover.
Ord: 16.7.1805. K: 3.1806. L: 3.8.1806. Harbour service 1816. Sold to BU 8.3.1819.

Mutine Richard Chapman, Bideford.
Ord: 22.7.1805. K: 9.1805. L: 15.8.1806. Sold to G. Young for mercantile use 3.2.1819, renamed *Anthony Sterry*.

Columbine B & E Adams, Bucklers Hard.
Ord: 12.11.1805. K: 1.1806. L:16.7.1806. Wrecked off Sapienza Island 25.1.1824.

Raleigh Francis Hurry, Newcastle.
Ord: 16.1.1806. K: 3.1806. L: 24.12.1806. Converted to a ship sloop 1826. Target ship 8.1839. Sold to BU 27.5.1841.

Cephalus Custance & Stone, Yarmouth.
Ord: 22.1.1806. K: 4.1806. L: 10.1.1807. BU 17.3.1830.

Procris Custance & Stone, Yarmouth.
Ord: 22.1.1806. K: 5.1806. L: 27.12.1806. Sold to BU 23.11.1815.

Redwing Warren, Brightlingsea.
Ord: 24.1.1806. K: 3.1806. L: 30.8.1806. Converted to a ship sloop 1824. Missing, presumed foundered with all (125) hands off West Africa 6.1827

Recruit Andrew Hills, Sandwich.
Ord: 27.1.1806. K: 4.1806. L: 31.8.1806. Sold to R. Forbes to BU 7.8.1822.

Ringdove Warren, Brightlingsea.
Ord: 27.1.1806. K: 4.1806. L: 16.10.1806. Converted to ship sloop 8.1821. Sold at Halifax (Nova Scotia) to BU 11.6.1829.

Sappho Bailey, Ipswich.
Ord: 27.1.1806. K: 4.1806. L: 15.12.1806. Laid up as defective 1825. BU at Halifax (Nova Scotia) 1830.

Royalist Andrew Hills, Sandwich.
Ord: 27.1.1806. K: 5.1806. L: 10.1.1807. Sold to W. Harper to BU 3.2.1819.

Clio James Betts, Mistleythorn.
Ord: 29.1.1806. K: 5.1806. L: 10.1.1807. Converted to a ship sloop 1830. Reconverted to a brig sloop (16 guns) 1833. BU at Portsmouth 3.1845.

Philomel Bools & Co., Bridport.
Ord: 4. 2.1806. K: 4.1806. L: 11.9.1806. Sold to Mr Manlove to BU 30.4.1817.

Derwent Isaac Blackburn, Turnchapel, Plymouth.
Ord: 1.10.1806. K: 12.1806. L: 23.5.1807. Sold to BU 7.3.1817.

Eclair (ex-*Pelican*) Warren, Brightlingsea.
Ord: 1.10.1806. K: 12.1806. L: 8.7.1807. Converted to a ship sloop 1823. BU 3.1831.

Eclipse Thomas King, Dover.
Ord: 1.10.1806. K: 12.1806. L: 4.8.1807. Sold to BU 31.8.1817.

Nautilus James Betts, Mistleythorn.
Ord: 1.10.1806. K: 1.1807. L: 5.8.1807. BU 10.1823.

Pilot Robert Guillaume, Northam.
Ord: 1.10.1806. K: 1.1807. L: 6.8.1807. Sold to Adam Gordon to BU 26.3.1828.

Sparrowhawk Warren, Brightlingsea.
Ord: 1.10.1806. K: 1.1807. L: 20.8.1807. Converted to a ship sloop 1824. Reconverted to a brig sloop (16 guns) 1834. Sold to BU 27.5.1841.

Zenobia Brindley, King's Lynn.
Ord: 1.10.1806. K: 3.1807. L: 7.10.1807. Sold to BU 8.1835.

Peruvian George & John Parsons, Warsash.
Ord: 1.10.1806. K: 4.1807. L: 26.4.1808. BU 2.1830.

Pelorus Robert Guillaume, Northam.
Ord: ?1807. K: 1.1808. L: 25.6.1808. Converted to a ship sloop 1826. Reconverted to a brig sloop 1831. Sold at Singapore to BU 10.1841.

Dotterel Blake & Scott, Bursledon.
Ord: 17.12.1807. K: 4.1808. L: 6.10.1808. Became a receiving and accommodation ship at Bermuda 4.1827. Sold at Bermuda to BU 9.1848.

Arachne Andrew Hills, Sandwich.
Ord: 4.8.1808. K: 9.1808. L: 18.2.1809. Converted to a ship sloop 1824, but reverted to brig 6.1831. Sold to John Small Sedger, Rotherhithe to BU 12.1.1837.

Castillian Andrew Hills, Sandwich.
Ord: 4.8.1808. K: 10.1808. L: 29.5.1809. BU 10.1829.

Charybdis Richards & Davidson, Hythe.
Ord: 5.9.1808. K: 10.1808. L: 28.8.1809. Sold to T. Pitman to BU 3.2.1819.

Scylla Robert Davy, Topsham.
Ord: 5.9.1808. K: 12.1808. L: 29.6.1809. Converted to a ship sloop 1824. BU 1.1846.

Echo John Pelham, Frindsbury.
Ord: 21.11.1808. K: 12.1808. L: 1.7.1809. BU 5.1817.

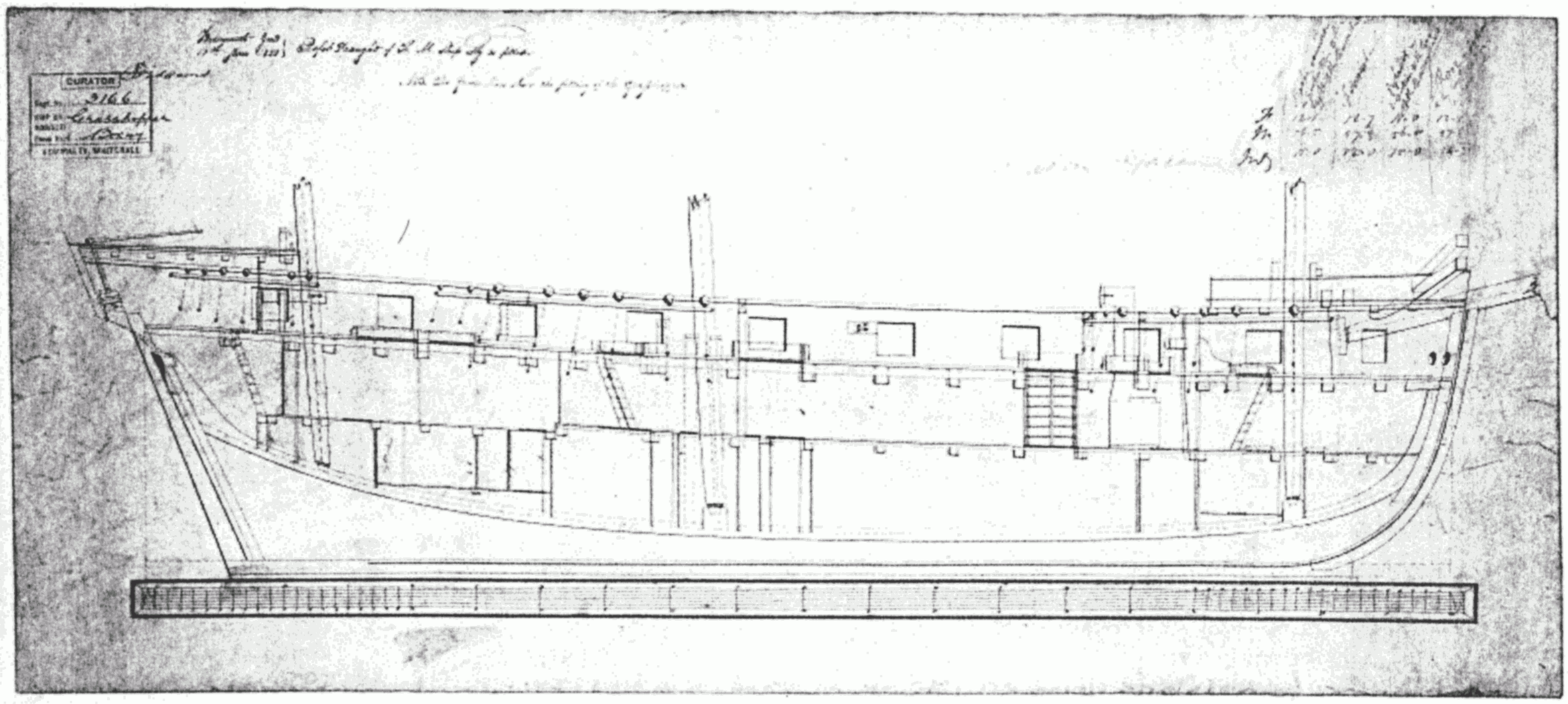
Sophie John Pelham, Frindsbury.
Ord: 21.11.1808. K: 12.1808. L: 8.9.1809. Sold in the East Indies 15.8.1825.

Thracian Joseph & Thomas Brindley, Frindsbury.
Ord: 30.9.1808. K: 12.1808. L: 15.7.1809. Converted to a ship sloop 1822. BU 6.6.1829.

Trinculo Blake & Tyson, Bursledon.
Ord: 5.11.1808. K: 10.1808. L: 15.7.1809. Converted to a ship sloop 1828. Reconverted to a brig sloop 1832. BU 7.1841.

Hecate John King, Upnor.
Ord: 5.11.1808. K: 12.1808. L: 30.5.1809. Sold to Mr Parker 30.10.1817; subsequently re-sold and became the Chilean Navy's

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Post-war some of the *Cruizer* Class brigs were rerigged as ships and, as shown in this June 1822 profile for *Fly*, also fitted with a small poop platform and topgallant forecastle designed to render the vessels a little more habitable for peacetime purposes. With modifications the draught was also used for the *Grasshopper*. *DR3166*

Galvarino.

Rifleman John King, Upnor.
Ord: 5.11.1808. K: 1.1809. L: 12.8.1809. Sold to BU 21.1.1836.

Childers Portsmouth Dyd.
Ord: 19.1.1811. K: 8.1811. L: 8.7.1812. BU 3.1822.

Curlew Good & Co., Bridport.
Ord: 30.8.1811. K: 10.1811. L: 27.5.1812. Sold at Bombay for commercial use 28.12.1822, renamed *Jenica*.

Fairy William Taylor, Bideford.
Ord: 30.8.1811. K: 10.1811. L: 11.6.1812. BU 1.1821.

Wasp Robert Davy, Topsham.
Ord: 30.8.1811. K: 10.1811. L: 9.7.1812. Converted to a ship sloop 1828. Reconverted to a 16-gun brig 1833. BU 9.1847.

Pelican Robert Davy, Topsham.
Ord: 30.8.1811. K: 1.1811. L: 8.1812. To the Coastguard after 1845, and became *CGWV.29* at Rye Harbour. Sold 7.6.1865.

Bacchus Chatham Dyd.
Ord: 30.8.1811. K: 1.1812. L: 17.4.1813. Became a coal depot at Deptford 1826. Became a breakwater 13.8.1829.

Pandora (3rd) Deptford Dyd.
Ord: 30.8.1811. K: 9.1812. L: 12.8.1813. Converted to a ship sloop 1825. Sold 13.4.1831.

Nimrod Bailey, Ipswich.
Ord: 26.9.1811. K: 11.1811. L: 25.5.1812. Foundered in Holyhead Bay 14.1.1827, salvaged and sold.

Saracen (2nd) Bools & Good, Bridport.
Ord: 26.9.1811. K: 11.1811. L: 25.7.1812. Sold to Mr Wilkinson to BU 18.8.1819.

Satellite Daniel List, Fishbourne.
Ord: 5.10.1811. K: 3.1812. L: 9.10.1812. Sold 3.1824.

Arab John Pelham, Frindsbury.
Ord: 24.10.1811. K: 11.1811. L: 22.8.1812. Wrecked with all (100) hands off Belmullet, west coast of Ireland 18.12.1823.

Espiegle Bailey, Ipswich.
Ord: 2.11.1811. K: 1.1812. L: 10.8.1812. Converted to a ship sloop 1826. Sold to Thomas Ward 11.1832.

Heron (ex-*Rattlesnake*) John King, Upnor.
Ord: 14.11.1811. K: 2.1812. L: 22.10.1812. Converted to a ship sloop 1825. BU 3.1831.

Despatch (2nd) John King, Upnor.
Ord: 14.11.1811. K: 2.1812. L: 7.12.1812. Converted to a ship sloop 1825. Reconverted to a 16-gun brig 1832. Sold 5.1836.

Grasshopper Portsmouth Dyd.
Ord: 6.1.1812. K: 8.1812. L: 17.5.1813. Converted to a ship sloop 1822. Sold to Thomas Ward 30.5.1832.

Fly Bailey, Ipswich
Ord: 23.4.1812. K: 6.1812. L: 16.2.1813. Converted to a ship sloop 1822. Sold at Bombay 10.5.1828.

Jaseur Bailey, Ipswich.
Ord: 6.5.1812. K: 8.1812. L: 2.2.1813. Converted to a ship sloop 1824. Reconverted to a 16-gun brig 1834. Sold 2.1845.

Argus Andrew Hills, Sandwich.
Ord: 8.6.1812. K: 9.1812. L: 11.9.1813. Roofed over (as hulk) 3.1821. Sold to Mr Freake 11.7.1827, but retained and re-sold to John Small Sedger, Rotherhithe 26.3.1828.

Challenger Hobbs & Hellyer, Redbridge.
Ord: 29.7.1812. K: 8.1812. L: 15.5.1813. Hulked at Trincomalee to receive rice 1819. Mooring tender at Trincomalee 1820. Sold 3.1824.

Lynx (ex-*Pandora*, renamed 24.9.1812) Woolwich Dyd.
Ord: 7.9.1812. K: ... . Cancelled 1818.

Victor Bombay Dyd (teak-built).
Ord: 2.10.1812. K: 1.1814: L: 29.10.1814. Converted to a ship sloop 1823. Reconverted to a brig 1831. Sailed from Vera Cruz, Mexico on 31.8.1842 for Halifax, and presumed foundered with all (130) hands.

Zebra Bombay Dyd (teak-built).
Ord: 2.10.1812. K: 12.1814: L: 18.12.1815. Wrecked off Mount Carmel on Levant coast 2.12.1840.

Carnation Wm. & James Durkin, Northam, Southampton.

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Ord: 8.10.1812. K: 11.1812. L: 29.7.1813. Hulked at Plymouth for the Breakwater Department 1826. Sold 21.1.1836.

Elk Hobbs & Hillyer, Redbridge.
Ord: 2.12.1812. K: 12.1812. L: 28.8.1813. Sold 21.1.1836.

Confiance Mrs. Mary Ross, Rochester.
Ord: 2.12.1812. K: 12.1812. L: 30.8.1813. Wrecked with all (100) hands at Crookhaven, Ireland 21.4.1822.

Alert Thomas Pitcher, Northfleet.
Ord: 2.12.1812. K: 1.1813. L: 14.7.1813. Converted to a ship sloop 1827. Sold to J. Cristall, Rotherhithe 11.1832.

Harlequin Bailey, Ipswich.
Ord: 2.12.1812. K: 2.1813. L: 15.7.1813. Converted to a ship sloop 1825. Sold in Jamaica 4.9.1829.

Harrier Bailey, Ipswich.
Ord: 2.12.1812. K: 2.1813. L: 28.7.1813. Converted to a ship sloop 1823. Sold to Tibbetts & Co. 8.1.1829.

Ontario (ex-*Mohawk*, renamed 9.4.1813) Richard Chapman, Bideford.
Ord: 2.12.1812. K: 2.1813. L: 26.10.1813. Converted to a ship sloop 1825. Sold for mercantile use 11.1832, renamed *Louisa*.

Belette Larking & Spring, King's Lynn.
Ord: 14.8.1813. K: 10.1813. L: 18.6.1814. Sold to Adam Gordon 26.3.1828.

Gannet Larking & Spring, King's Lynn.
Ord: 14.8.1813. K: 12.1813. L: 13.11.1814. Converted to a ship sloop 1831. Sold to Mr Soames 16.8.1838.

Samarang Portsmouth Dyd.
Ord: 6.9.1815. K: ... . Cancelled 30.9.1820 (unstarted).

***PRIMROSE* Class**. Design by Sir Henry Peake, 1809.
Dimensions & tons: 108ft 0in, 87ft 0in x 28ft 9in x 13ft 6in. $382^{47}/_{94}$ bm.
Men: 121. Guns: 2 x 6pdr + 16 x 32pdr carronades.

Primrose Portsmouth Dyd.
Ord: 3.5.1809. K: 5.1809. L: 22.1.1810. Converted to a ship sloop 1824. BU 8.1832.

Brigs (rated as 16 guns)

***SEAGULL* Class**. Designed in 1804 by Sir William Rule. Eight survivors of 13 vessels ordered in 1804 and 1805, of which five had been wartime losses (*Delight*, *Electra*, *Seagull*, *Satellite* and *Skylark*).
Dimensions & tons: 93ft 0in, 76ft $0^{5}/_{8}$in x 26ft 5in x 12ft 0in. $282^{76}/_{94}$ bm.
Men: 95. Guns: 14 x 24pdr carronades; 2 x 6pdr.

Oberon Shepherd, Hull.
Ord: 12.12.1804. K: 3.1805. L: 13.8.1805. BU 5.1816.

Imogen Bailey, Ipswich.
Ord: 12.12.1804. K: 4.1805. L: 11.7.1805. Sold to Mr Ismay to BU 3.4.1817.

Nightingale Thomas King, Dover.
Ord: 12.12.1804. K: 4.1805. L: 29.7.1805. Sold to BU 23.11.1815.

Savage Robert Adams, Chapel (Southampton).
Ord: 12.12.1804. K: 4.1805. L: 30.7.1805. Sold to J. Tibbut to BU 3.2.1819.

Paulina Robert Guillaume, Northam.
Ord: 11.7.1805. K: 8.1805. L: 7.12.1805. Sold to BU 30.5.1816.

Orestes Bailey, Ipswich.
Ord: 16.7.1805. K: 8.1805. L: 23.10.1805. Sold to Thomas Pitman to BU 6.3.1817.

Julia Bailey, Ipswich.
Ord: 30.7.1805. K: 10.1805. L: 4.2.1806. Wrecked on Tristan da Cunha 2.10.1817 (55 drowned).

Sheldrake Mark Richards, Hythe.
Ord: 30.8.1805. K: 10.1805. L: 20.3.1806. Sold to BU 6.3.1817.

***FLY* Class**. Designed in 1805 by Sir John Henslow. Four survivors of seven vessels ordered in 1805, of which three had been wartime losses (*Challenger*, *Fly* and *Goshawk*). *Kite* and *Raven* were built of 'fir' (actually, pitch pine).
Dimensions & tons: 96ft 0in, 79ft 5in x 25ft 10in x 11ft 6in. $281^{85}/_{94}$ bm.
Men: 94. Guns: 14 x 24pdr carronades; 2 x 6pdr. An extra pair of carronades was added later, and they were rerated 18 guns.

Kite Warren, Brightlingsea.
Ord: 4.1.1805. K: 3.1805. L: 13.7.1805. Sold to BU 14.12.1815.

Sparrow John Preston, Gt. Yarmouth.
Ord: 4.1.1805. K: 3.1805. L: 29.7.1805. Sold to BU 17.10.1816.

Raven Warren, Brightlingsea.
Ord: 4.1.1805. K: 4.1805. L: 12.8.1805. Sold to BU 18.9.1816.

Wizard Sutton, Ringmore.
Ord: 4.1.1805. K: 4.1805. L: 11.1805. Sold to BU 17.10.1816.

Brigs (rated as 14 guns)

***CROCUS* Class**. Designed in 1807 by Sir William Rule. Ten vessels ordered from the Royal Dockyards between 1807 and 1810, all of which survived the war.
Dimensions & tons: 92ft 0in, 72ft $8^{1}/_{8}$in x 25ft 6in x 12ft 8in. $251^{41}/_{94}$ bm.
Men: 85. Guns: 12 x 24pdr carronades; 2 x 6pdr.

Podargus Portsmouth Dyd.
Ord: 30.3.1807. K: 11.1807. L: 26.5.1808. Sold to John Small Sedger, Rotherhithe to BU 7.8.1833.

Crocus Plymouth Dyd.
Ord: 30.3.1807. K: 11.1807. L: 10.6.1808. Sold at Sheerness to BU 31.8.1815.

Merope Chatham Dyd.
Ord: 30.3.1807. K: 11.1807. L: 25.6.1808. Sold to BU 23.11.1815.

Apelles Woolwich Dyd.
Ord: 30.3.1807. K: 2.1808. L: 10.8.1808. Sold to BU 15.2.1816.

Portia Deptford Dyd.
Ord: 30.3.1807. K: 12.1809. L: 30.8.1810. Sold to BU 6.3.1817.

Prospero Woolwich Dyd.
Ord. 23.3.1808. K: 8.1808. L: 9.11.1809. Sold to BU 30.5.1816.

Muros Chatham Dyd.
Ord: 3.5.1808. K: 6.1808. L: 23.10.1809. Sold to Thomas Pitman to BU 18.4.1822.

Zephyr Portsmouth Dyd.
Ord: 9.6.1808. K: 10.1808. L: 29.4.1809. Sold to Thomas Pitman to BU 29.1.1818.

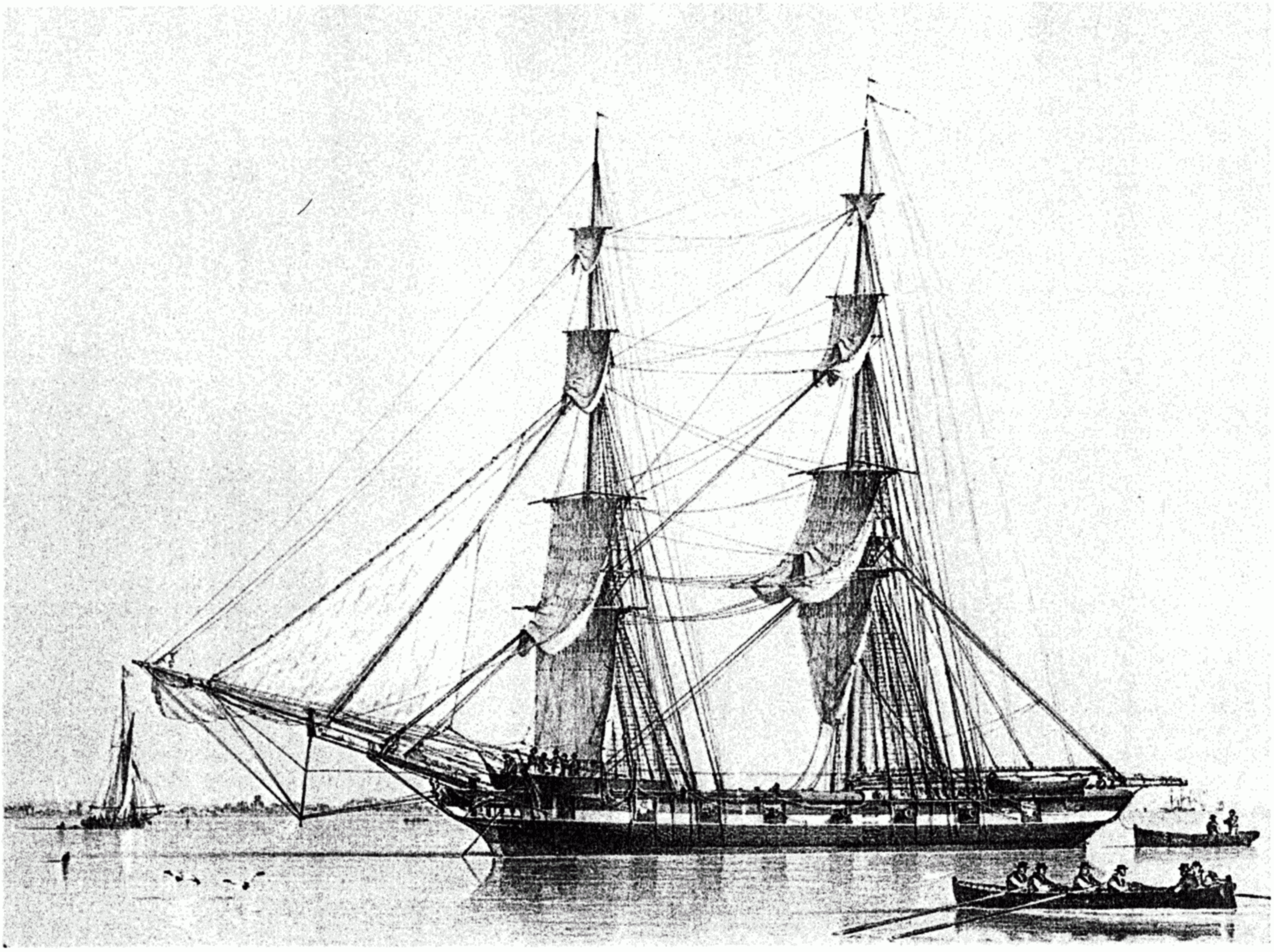
Banterer Woolwich Dyd.
Ord: 19.9.1808. K: 12.1809. L: 2.6.1810. Sold to Gordon & Co. to BU 6.3.1817.

Wolf Woolwich Dyd.
Ord: 8.8.1810. K: 8.1812. L: 16.9.1814. Sold to T. S. Benson to BU 27.1.1825.

Brigs (rated as 10 guns)

***CHEROKEE* Class**. The smallest type of brig, which had been designed in 1807 by Henry Peake, and the first of 34 vessels ordered in 1807 and 1808; of these *Prince Arthur* was sold to Morocco in 12.1808 and five more

Scan and/or retouch by Grzechu



The *Cherokee* Class were the smallest brigs classed as sloops. Although they initially acquired a nasty reputation as 'coffin brigs', they were good performers under sail, and economic to both build and run. The design was revived post-war and this fine lithograph by John Ward depicts the *Nautilus*, one of the later members of the class, with the peacetime additions of a topgallant forecastle, a short poop, and quarter boats. *PW5029*

(*Achates*, *Wild Boar*, *Ephira*, *Sarpedon* and *Rhodian*) were lost in 1810-13. A further pair (built of teak) were ordered at Bombay Dyd in 1812, of which *Sphynx* was actually launched in early 1815, so should be included in Chapter 1, but is included for convenience in Chapter 2 with the rest of the dockyard-built batches (wartime 34 were all contract-built) while *Cameleon* (see Chapter 2) was not launched until 1816; 78 further sisters were to be ordered from the Royal Dockyards in Britain post-war.

Dimensions & tons: 90ft 0in, 73ft $7^{5}/_{8}$in x 24ft 6in x 11ft 0in. $235^{9}/_{94}$bm. 297 disp.

Men: 75. Guns: 2 x 6pdr + 8 x 18pdr carronades.

Rolla Thomas Pitcher, Northfleet.

Ord: 30.3.1807. K: 12.1807. L: 13.2.1808. Sold to Thomas Pitman to BU 18.4.1822.

Cherokee Perry, Wells & Green, Blackwall.

Ord: 30.3.1807. K: 12.1807. L: L. 24.2.1808. Sold to J. Crystall to BU 2.3.1828.

Cadmus John Dudman, Deptford.

Ord: 30.3.1807. K: 12.1807. L: 26.2.1808. Transferred to the Coastguard at Whitstable 2.1835, renamed *CGWV.24* on 25.5.1863. Sold to W. Lethbridge to BU 12.3.1864.

Leveret Perry, Wells & Green, Blackwall.

Ord: 30.3.1807. K: 12.1807. L: 27.2.1808. Sold to Thomas Pitman to BU 18.4.1822.

Parthian Mrs. Frances Barnard, Deptford .

Ord: 26.11.1807. K: 12.1807. L: 13.2.1808. Wrecked near Alexandria, Egypt 15.5.1828.

Badger Joseph & Thomas Brindley, Frindsbury.

Ord: 31.12.1807. K: 2.1808. L: 23.7.1808. Became a receiving ship at the Cape of Good Hope 1834. Beached at the Cape 22.3.1860 and BU 1864.

Briseis John King, Upnor.

Ord: 31.12.1807. K: 2.1808. L: 19.5.1808. Wrecked on Point Pedras, Cuba 5.11.1816.

Cordelia John King, Upnor.

Ord: 31.12.1807. K: 5.1808. L: 26.7.1808. Sold to BU 12.12.1833.

Helicon John King, Upnor.

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Ord: 31.12.1807. K: 5.1808. L: 5.8.1808. BU at Sheerness 7.1829.

Jasper Bailey, Ipswich.
Ord: 31.12.1807. K: 2.1808. L: 27.5.1808. Wrecked under Mount Batten, Plymouth Sound 20.1.1817.

Onyx Bailey, Ipswich.
Ord: 31.12.1807. K: 2.1808. L: 8.7.1808. Sold to Thomas Pitman to BU 3.2.1819.

Hope Bailey, Ipswich.
Ord: 31.12.1807. K: 4.1808. L: 22.7.1808. Sold to Thomas Pitman to BU 3.2.1819.

Opossum Muddle, Gillingham.
Ord: 31.12.1807. K: 3.1808. L: 9.7.1808. Sold to G. Bailey to BU 3.2.1819.

Chanticleer Daniel List, East Cowes.
Ord: 31.12.1807. K: 3.1808. L: 26.7.1808. Survey ship 4.1828. Coastguard Watch vessel 2.1830, renamed *CGWV.5* on 25.5.1863. BU at Sheerness 6.1871.

Rinaldo John Dudman, Deptford.
Ord: 31.12.1807. K: 3.1808. L: 13.7.1808. Converted to a packet 2.1824. Sold to BU 6.8.1835.

Britomart John Dudman, Deptford.
Ord: 31.12.1807. K: 4.1808. L: 28.7.1808. Sold to G. Bailey to BU 3.2.1819.

Calliope John Dudman, Deptford.
Ord: 31.12.1807. K: 4.1808. L: 28.7.1808. Tender 1822. BU at Portsmouth 13.8.1829.

Lyra John Dudman, Deptford.
Ord: 31.12.1807. K: 5.1808. L: 22.8.1808. Sold to Thomas Pitman to BU 11.7.1818.

Redpole Robert Guillaume, Northam.
Ord: 31.12.1807. K: 5.1808. L: 29.7.1808. Converted to a packet 1825. Sunk with all (32) hands in action with pirate vessel *Congress* off Cape Frio, Brazil in 8.1828.

Goldfinch John Warwick, Eling (Southampton).
Ord: 31.12.1807. K: 3.1808. L: 8.8.1808. Converted to a packet 1824. Sold to R. Willis to BU 8.11.1838.

Woodlark William Rowe, Newcastle.
Ord: 31.12.1807. K: 3.1808. L: 17.11.1808. Sold to BU 29.1.1818.

Shearwater William Rowe, Newcastle.
Ord: 31.12.1807. K: 3.1808. L: 21.11.1808. Sold to Beaton to BU 11.1832.

Beaver Bailey, Ipswich.
Ord: 4.1808. K: 10.1808. L: 16.2.1809. Sold to J. Crystall to BU 24.6.1829.

Drake Bailey, Ipswich.
Ord: 27.6.1808. K: 8.1808. L: 3.11.1808. Wrecked off Cape Race, Newfoundland 22.6.1822.

Rosario Bailey, Ipswich.
Ord: 27.6.1808. K: 8.1808. L: 7.12.1808. Sold to John Levy, Rochester to BU 11.1832.

Renard John King, Upnor.
Ord: 9.7.1808. K: 8.1808. L: 15.12.1808. Sold to Thomas Pitman to BU 29.1.1818.

Bermuda John Pelham, Frindsbury.
Ord: 18.7.1808. K: 8.1808. L: 20.12.1808. Wrecked off Tampico Bar 16.11.1816.

Tyrian Robert Guillaume, Northam.
Ord: 18.7.1807. K: 8.1808. L: 16.12.1808. Sold to BU 22.7.1819.

ICARUS. 10 guns. Designed and built by the superior class of shipwright apprentices at Portsmouth.
Dimensions & tons: 90ft 0in, 71ft 5¾in x 25ft 0in 0a (24ft 10in for tonnage) x 11ft 0in. 234$^{44}/_{94}$ bm.
Men: 55. Guns: 2 x 6pdr + 8 x 18pdr carronades.

Icarus (ex-*Ephira*, renamed 4.12.1812) Portsmouth Dyd.
Ord: 5.9.1812. K: 3.1813. L: 18.8.1814. C: 3.1.1815. Packet from 10.1831. Transferred to the Coastguard at Lymington 9.1838. Sold to Mr Ransome to BU 4.4.1861.

Prize and purchased brig sloops

Ex-AMERICAN Prizes.

Emulous (American *Nautilus*), 14 guns.
Dimensions & tons: 87ft 6in, ... x 23ft 8in x 9ft 10in (American measurements). 213 bm.
Men: ... . Guns: 2 x 6pdr + 12 x 12pdr carronades.
Had been purchased by USN as a schooner (12) in 1803, and re-rigged as a brig in 1809. Taken by *Shannon*, *Africa* and *Aeolus* off New York 16.7.1812. Sold 8.1817.

Columbia (American privateer *Curlew*, built 1812), 16 guns.
Dimensions & tons: 94ft 4in, 80ft 3in x 26ft 3in x 13ft 0in. 294 bm.
Men: ... . Guns: 2 x 6pdr + 16 x 18pdr carronades.
Taken by *Acasta* off Cape Sable 24.7.1812, and registered in RN 15.12.1813. Sold 13.1.1820.

Ferret (American privateer *Rapid*), 14 guns.
Dimensions & tons: 84ft 0in, 66ft 3in x 24ft 8in x 10ft 4in. 214 bm.
Men: 75. Guns: 2 x 6pdr + 12 x 12pdr carronades.
Taken by *Maidstone* off North America 17.10.1812. Briefly named *Nova Scotia* on entering RN service in 1812, then renamed 12.6.1813. Sold 13.1.1820.

Barbadoes (American *Herald*, built 1811), 16 guns.
Dimensions & tons: 102ft 0in, 84ft 6$^{5}/_{8}$in x 26ft 2in x 13ft 0in. 308 bm.
Taken 25.12.1812, and registered in RN 10.1813. Hulked at Jamaica as a powder ship until sold 1817.

Anaconda (American privateer *Anaconda*, built 1812 at New York), 18 guns.
Dimensions & tons: 102ft 6in, 85ft 10in x 29ft 0in x 10ft 2in. 384 bm.
Men: ... . Guns: 18 x 9pdr.
Taken 11.7.1814. Sold 5.7.1815.

Ex-DANISH PRIZE.

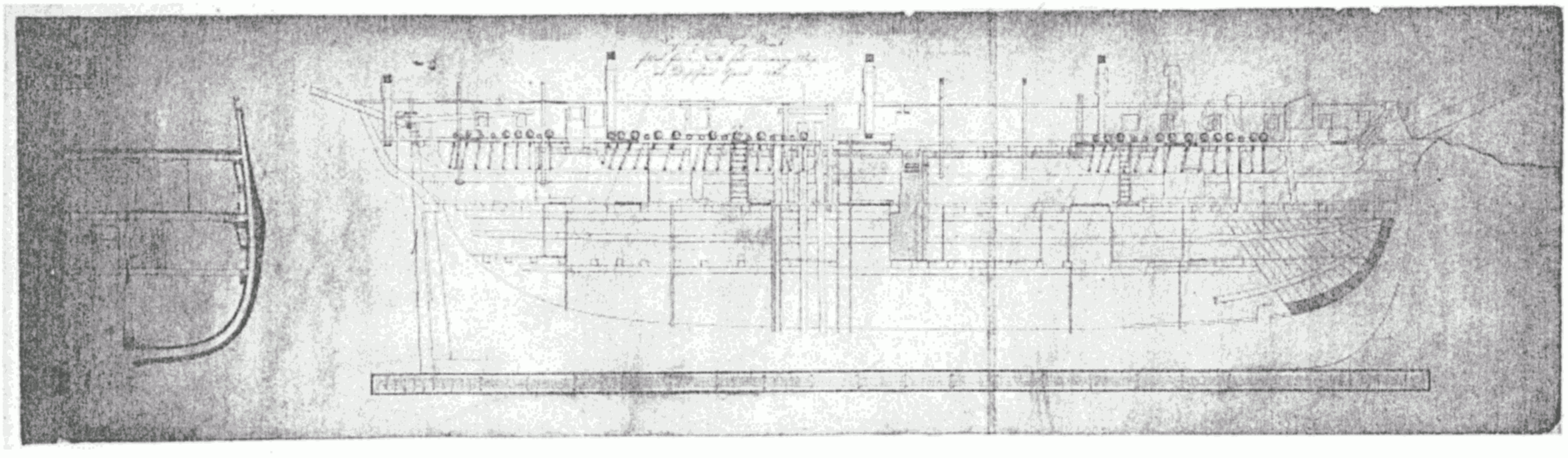
Mercurius (Danish *Mercurius*, L: 1806. L: 1807 Copenhagen; design by Ernst Stibolt), brig sloop, 18 guns.
Dimensions & tons: 94ft 3in, 77ft 4¾in x 27ft 4in x 10ft 3in. 308 bm.
Men: 100. Guns: 2 x 6in + 16 x 24pdr carronades.
Only survivor of six *Lougen* Class brigs taken at the fall of Copenhagen 7.9.1807. Proposed renaming as *Transfer* in 1809 was cancelled. Sold 23.11.1815.

Ex-FRENCH PRIZES.

Insolent (French *L'Arrogante*, ex-*L'Insolent*, ex-*La Brave* 1794), gunbrig/brig sloop, 14 guns.
Dimensions & tons: 91ft 9in, 72ft 1in x 25ft 11$^{3}/_{8}$in x 11ft 2in. 258$^{14}/_{94}$ bm.
Men: 85. Guns: 2 x 6pdr + 12 x 24pdr carronades.
Taken by *Jason* off Brest 19.4.1798. Initially retained name *Arrogante*, but renamed 31.8.1798. Sold to J. Cristall 11.6.1818.

Acteon (French *L'Actéon*, launched 1804 Bayonne; Rolland design), brig, 16 guns.
Dimensions & tons: 94ft 0in, 73ft 6$^{5}/_{8}$in x 29ft 3in x 8ft 1in. 335 bm.
Men: 121. Guns: 2 x 6pdr + 14 x 24pdr carronades.

Scan and/or retouch by Grzechu



Profile draught of the bomb vessel *Fury* as fitted 'for a North pole discovery Ship', Deptford 1821. The furnace for the rudimentary heating system can be seen in the section, with the run of the conduits shown in the profile. The ship was fitted out for William Edward Parry's second voyage of discovery, to the north of Hudson's Bay in 1821-23. *DR7588*

Taken by *Egyptienne* off Rochefort 27.9.1805. BU 10.1816.

Tuscan (Franco-Italian *Le Ronco*, launched 1807 Venice), brig sloop, 16 guns.
Dimensions & tons: 97ft 6in, 76ft 5in x 28ft 8in x 18ft 3in. 334 bm.
Men: ?100. Guns: 2 x 9pdr + 14 x 24pdr carronades.
Taken in the Gulf of Venice by *Unite* 2.5.1808. Sold to Thomas Pitman to BU 29.1.1818.

Griffon (French *Le Griffon*, launched 1806 Rochefort; Pestel design), brig sloop, 16 guns.
Dimensions & tons: 92ft 6in, 80ft 10in x 29ft 4in x 8ft 2in. 368 bm.
Men: 100. Guns: 2 x 6pdr + 14 x 24pdr carronades.
Taken by *Bacchante* near Cape Saint Antony 12.5.1808. Sold to Hill & Co. 11.3.1819.

Sabine (French *Le Requin*, launched 1806 Rochefort; Rolland design), brig sloop, 16 guns.
Dimensions & tons: 96ft 0in, 77ft $0^{7}/_{8}$in x 28ft 5½in x 13ft 1in. $332^{1}/_{94}$ bm.
Men: 100. Guns: 2 x 6pdr + 16 x 32pdr carronades.
Taken by *Volage* in the Mediterranean 28.7.1808. Sold to Thomas Pitman to BU 29.1.1818.

Electra (French *L'Espiègle*, launched 1804 Saint Malo; Pestel design), brig sloop, 16 guns.
Dimensions & tons: 93ft 3in, 76ft $6^{5}/_{8}$in x 28ft $2^{1}/_{8}$in x 12ft 9in. 315 bm.
Men: 95. Guns: 2 x 6pdr + 14 x 24pdr carronades.
Taken by *Sybille* in the Atlantic 16.8.1808. Sold 11.7.1816.

Achates (French *Le Milan*, launched 1807 Saint Malo; Pestel design), brig, 16 guns.
Dimensions & tons: 97ft 4½in, 76ft 10¾in x 28ft 3½in x 13ft 2in. $327^{39}/_{94}$ bm.
Men: 95. Guns: 2 x 6pdr + 14 x 24pdr carronades.
Taken by *Surveillante* and *Seine* 30.10.1809. Sold to Sedger, Rotherhithe 11.6.1818.

Foxhound (French *Le Basque*, launched 1808 Bayonne; Sané design), brig sloop, 16 guns.
Dimensions & tons: 95ft 6in, 78ft 0¾in x 28ft 11¼in x 8ft 1in. 348 bm.
Men: 106. Guns: 2 x 9pdr + 14 x 24pdr carronades.
Taken by *Druid* in the Atlantic 13.11.1809. Sold 15.2.1816.

Papillon (French *Le Papillon*, launched 1807 Le Havre; Sané design), brig sloop, 18 guns.
Dimensions & tons: 95ft $7^{5}/_{8}$in, 76ft 9¼in x 28ft $11^{7}/_{8}$in x 13ft 6¾in. 343 bm.
Men: 121. Guns: 2 x 6pdr + 16 x 32pdr carronades.
Taken by *Rosamund* off Guadeloupe 19.12.1809. Sold 12.10.1815.

Ex-SPANISH Prize.

Port Mahon (Spanish ..., building at Port Mahon, Minorca), 16 guns.
Dimensions & tons: 91ft 5½in, 82ft 1in x 25ft 2in x 12ft 8in. $276^{50}/_{94}$ bm.
Men: 121. Guns: 18 x 6pdr.
Taken at the capture of Port Mahon while building on the stocks 15.11.1798. L: 1799. Hulked as receiving ship at Gravesend 5.1815. To Thames Police 29.1.1817. Sold at Woolwich 8.1837.

PURCHASED VESSEL.

Bustard (ex-revenue cutter *Royal George*, built 1803 by John Gely, Cowes), brig sloop, 16 guns.
Dimensions & tons: 82ft 11½in, 68ft 11½in x 27ft $1^{3}/_{8}$in x 11ft 6in. $269^{63}/_{94}$ bm.
Men: 90. Guns: 2 x 6pdr + 14 x 18pdr carronades.
Built for Scottish Excise. Purchased for Navy early 1806. Sold 12.10.1815.

Bomb Vessels

The ship-rigged bomb vessels coming into service at the end of the war were a new design and the first purpose-built bomb vessels produced since the War of American Independence. They were also the last to be built for the RN, as the Russian War mortar vessels were much smaller, simpler and less powerful. The stout framing of the bomb vessels, intended to resist the effect of the recoil of their mortars, suited them for polar exploration where strength to resist the crushing effect of the ice was a major requirement.

***VESUVIUS* Class**. Designed by Henry Peake.
Dimensions & tons: 102ft 0in, 83ft 10in x 27ft 0in x 12ft 6in. $325^{7}/_{94}$ bm.
Men: 67. Guns: 8 x 24pdr carronades (GD) and 2 x 6pdr. Mortars: 1 x 13in + 1 x 10in.

Vesuvius Robert Davy, Topsham.
Ord: 30.3.1812. K: 7.1812. L: 1.5.1813. Sold 22.7.1819.

Terror Robert Davy, Topsham.
Ord: 30.3.1812. K: 9.1812. L: 26.6.1813. Converted to Arctic discovery vessel 5.1836. Fitted with auxiliary steam screw engine 1845.

Scan and/or retouch by Grzechu

Abandoned in the Arctic ice during the final and fatal Franklin expedition to find the North West Passage 22.4.1848 - wreck believed to have been located recently.

Beelzebub William Taylor, Bideford.
Ord: 30.3.1812. K: 11.1812. L: 30.7.1813. BU 23.9.1820.

NOTES: Two further sisters, *Fury* and *Thunder*, had been ordered 30.3.1812 but were cancelled 3.12.1813.

***FURY* Class**. Designed by Henry Peake, modified while building from *Vesuvius* Class.
Dimensions & tons: 105ft 0in, 86ft 1¼in x 28ft 6in x 13ft 10in. 372$^{1}/_{94}$ bm.
Men: 67. Guns: 10 x 24pdr carronades (GD) and 2 x 6pdr. Mortars: 1 x 13in + 1 x 10in.

Fury Mrs. Mary Ross, Rochester.
Ord: 5.6.1813. K: 9.1813. L: 4.4.1814. Converted to Arctic discovery vessel 1821. Bilged in Prince Regent Inlet, and abandoned in Arctic 25.8.1825.

Hecla Barkworth & Hawkes, North Barton (Hull).
Ord: 5.6.1813. K: 7.1813. L: 22.7.1815. Arctic discovery vessel 1819 to 1827. Survey ship 12.1827. Sold 13.4.1831.

Infernal Barkworth & Hawkes, North Barton (Hull).
Ord: 5.6.1813. K: 7.1813. L: 26.7.1815. Sold 13.4.1831.

NOTES: *Hecla* and *Infernal* completed after June 1815, but included here for convenience. Another nine vessels of this type ordered from 1819 onward, see Chapter 2.

PURCHASED.

Sulphur (ex-mercantile *Severn*, building details unknown), 8 guns.
Dimensions & tons: 96ft 10¼in, 79ft 3½in x 29ft 0in x 13ft 0in. 354$^{61}/_{94}$ bm.
Men: 67. Guns: UD 4 x 68pdr carronades; QD 4 x 18pdr carronades; Fc 2 x 18pdr carronades. Mortars: 2 x 10in.
Purchased 4.1797. Receiving ship at Deptford 1805. Sold 10.6.1816.

Etna (ex-mercantile *Success*, building details unknown), 8 guns.
Dimensions & tons: 102ft 0in, 81ft 0in x 29ft 2½in x 12ft 6in. 368 bm.
Men: 67. Guns: UD 8 x 24pdr carronades. Mortars: 1 x 13in + 1 x 10in.
Purchased 10.1803. Sold 11.1.1816.

Devastation (ex-mercantile *Intrepid*, built 1789 by Simon Temple, South Shields), 8 guns.
Dimensions & tons: 104ft 2in, 84ft 3in x 31ft 6½in x ... . 446 bm.
Men: 67. Guns: UD 6 x 9pdr + 2 x 24pdr carronades. Mortars: 1 x 13in + 1 x 10in.
Purchased 10.1804. Sold 30.5.1816.

CONVERTED FROM SHIP SLOOPS (which see under for dimensions).

Bulldog (ex-sloop, built by Henry Ladd, Dover).
Men: 67. Guns: 2 x 6pdr + 8 x 24pdr carronades. Mortars: 1 x 13in + 1 x 10in.
Ord: 23.6.1781. K: 10.1781. L: 10.11.1782. Bomb vessel 1798. Powder hulk at Portsmouth 1801. BU 12.1829.

Meteor (ex-sloop *Star*, built by Benjamin Tanner, Dartmouth).
Men: 67. Guns: 2 x 6pdr + 8 x 24pdr carronades. Mortars: 1 x 13in + 1 x 10in.
Ord: 27.11.1802. K: 7.1802. L: 26.7.1805. Converted to bomb vessel 1812 and renamed. Sold 16.10.1816.

Volcano (ex-sloop *Heron* 1804, ex-mercantile *Jason*, built 1803 at Newcastle).
Men: 67. Guns: 6 x 6pdr + 4 x 24pdr carronades. Mortars: 1 x 13in + 1 x 10in.
Purchased 5.1804. Renamed *Volcano* when became bomb vessel 1811. Sold 28.8.1816.

NOTES: In addition to the above, the former exploration vessel *Discovery* (Vancouver's exploration ship of 1789) had been converted to a bomb vessel in 1798, and was still rated as such, although used as a convict hulk at Sheerness since 1808.

Fireships

These ships had been reclassed as ship sloops in 1808 - and are listed in the appropriate section.

Gunboats, Gunbrigs

Anti-invasion craft used for Channel patrol, the earlier gunboats were shallow draft vessels whose design would be recreated for the 'Crimean Gunboats' of the Russian war - modified for steam and for fewer, heavier guns. The later gunbrigs had, however, developed from this beginning into smaller versions of the brig sloops with increased draft and seaworthiness, but less suited for inshore warfare. Five of these vessels (*Indignant* and *Rebuff* of the *Conquest* Class; and *Desperate*, *Charger* and *Safeguard* of the *Archer* Class) had been fitted at Deptford Dyd in 1809 with an 8in brass mortar of 14cwt; but all five had gone by 1815.

***CONQUEST* Class**. Henslow design. Sole survivor by 1815 of 12 gun vessels ordered 6.3.1794 to this design 'to row with 18 oars' as well as sail (schooner or brigantine rig initially, later rigged as brigs and rerated 'gun brigs').
Dimensions & tons: 75ft 0in, 62ft 3$^{1}/_{8}$in x 21ft 0in x 7ft 0in. 146$^{41}/_{94}$ bm.
Men: 50. Guns: 10 x 18pdr carronades + 2 x 24pdr (bow) chase guns + 2 x 4pdr (stern) chase guns.

Conquest Joseph & Thomas Brindley, Frindsbury.
Ord: 6.3.1794. K: 3.1794. L: July 1794. Fitting with Schank sliding keels (daggerboards) 1796. Sold 30.4.1817.

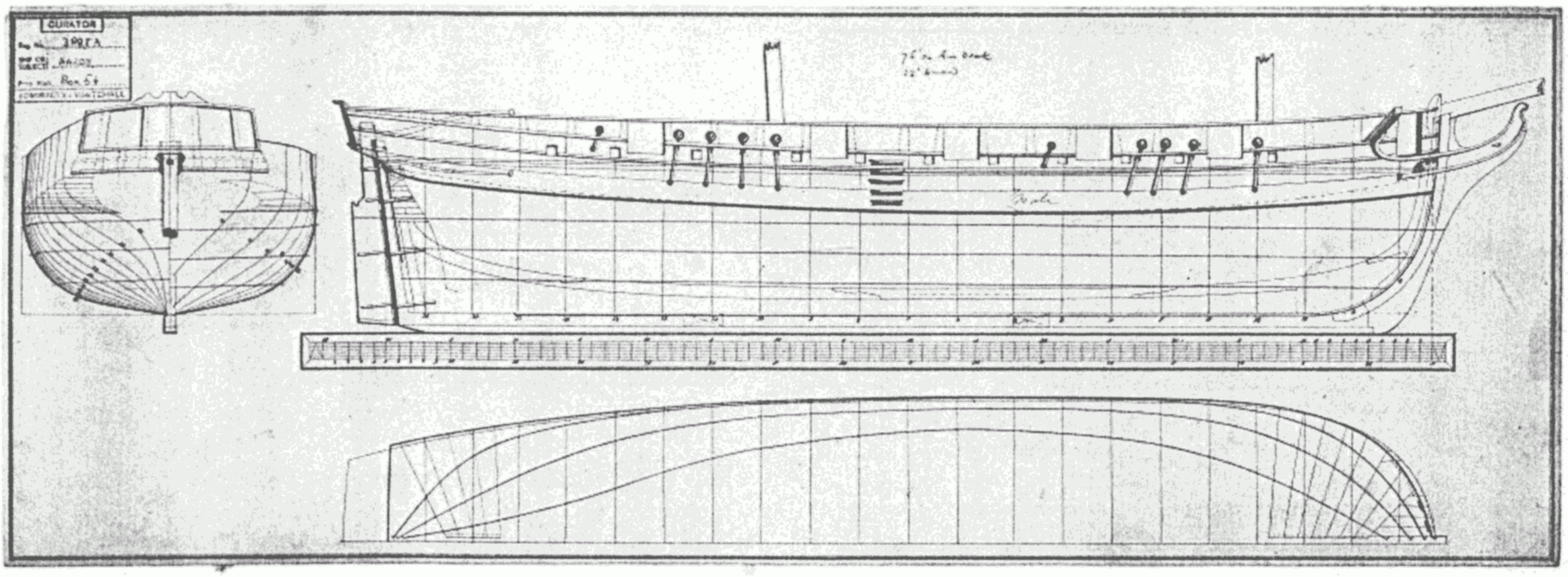
***ACUTE* Class**. Henslow design. Two survivors by 1815 of 15 gun vessels ordered 7.2.1797 to this design; another 15 were ordered same day to an equivalent Rule design, forming the *Courser* Class, but these - with a 16th unit ordered a month later - had all gone by 1810. All 31 were fitted with Schank drop ('sliding') keels and were brig rigged.
Dimensions & tons: 75ft 0in, 61ft 7$^{5}/_{8}$in x 22ft 0in x 7ft 11in. 158$^{63}/_{94}$ bm.
Men: 50. Guns: 12 x 18pdr carronades, + 2 x 24pdr (bow) chase guns.

Assault (ex-*GB No. 4*, named 7.8.1797) John Randall, Rotherhithe.
Ord: 7.2.1797. K: 2.1797. L: 10.4.1797. Became a lighter at Portsmouth, probably in 1817, though there is a note of her conversion to a lighter in 1825 in the Progress Books. Sold 6.6.1827.

Spiteful (ex-*GB No. 18*, named 7.8.1797) Mrs. Frances Barnard, Deptford.
Ord: 7.2.1797. K: 2.1797. L: 24.4.1797. Convict hulk 1818. BU 7.1823.

***ARCHER* Class**. Sir William Rule design 1800. Comprising three survivors from a batch of 10 vessels, all ordered 30.12.1800 (three war losses, *Bold* BU 1811, and three sold 1814); plus 17 survivors from a second batch of 48 vessels, ordered 1804 (20 war losses, two BU 1812, *Piercer* to Hanover 1814, and eight sold by mid-1815).
Dimensions & tons: 80ft 0in, 65ft 10¼in x 22ft 6in x 9ft 5in. 177$^{31}/_{94}$ bm.

Scan and/or retouch by Grzechu



The design draught of the *Archer* Class. Few of the earlier gunbrigs survived long into the peace. *DR3821A*

Men: 50. Guns: 10 x 18pdr carronades + 2 x 18pdr or 32pdr carronades (bow and stern chase guns) on traversing mounts.

Aggressor Perry & Co., Blackwall.
Ord: 30.12.1800. K: 1.1801. L: 1.4.1801. Sold to BU 23.11.1815.

Archer Perry & Co., Blackwall.
Ord: 30.12.1800. K: 1.1801. L: 2.4.1801. Sold to BU 14.12.1815.

Constant John Dudman, Deptford.
Ord: 30.12.1800. K: 1.1801. L: 28.4.1801. Sold to BU 15.2.1816.

Haughty John Dudman, Deptford.
Ord: 9.1.1804. K: 2.1804. L: 7.5.1804. Sold to BU 11.1.1816.

Flamer Joseph & Thomas Brindley, Frindsbury.
Ord: 9.1.1804. K: 2.1804. L: 8.5.1804. To Gravesend Aliens Service 5.1815. To Coastguard 1841. Sold to Castle, Charlton to BU 16.9.1858.

Wrangler John Dudman, Deptford.
Ord: 9.1.1804. K: 4.1804. L: 28.5.1804. Sold to BU 14.12.1815.

Cracker Thomas Pitcher, Northfleet.
Ord: 9.1.1804. K: 4.1804. L: 30.6.1804. Sold to BU 23.11.1815.

Acute William Rowe, Newcastle.
Ord: 9.1.1804. K: 4.1804. L: 21.7.1804. Hulked as quarantine ship at Sheerness 5.1813; later to Coastguard. Sold 1831.

Pincher James Graham, Harwich.
Ord: 9.1.1804. K: 4.1804. L: 28.8.1804. Sold to BU 17.5.1816.

Teazer John Dudman, Deptford.
Ord: 22.3.1804. K: 5.1804. L: 16.7.1804. In French hands 16.7.1805 to 15.8.1811. Sold to BU 3.8.1815.

Hardy Roxby, Wearmouth.
Ord: 22.3.1804. K: 5.1804. L: 7.8.1804. Became storeship 1817. Hospital ship 11.1821. Sold to Levy, Rochester to BU 6.8.1835.

Gallant Roxby, Wearmouth.
Ord: 22.3.1804. K: 5.1804. L: 20.9.1804. Sold to BU 14.12.1815.

Urgent Bass, Lympstone.
Ord: 6.1804. K: 7.1804. L. 2.11.180. Sold to BU 31.7.1816.

Forward Todd, Berwick.
Ord: 6.1804. K: 7.1804. L: 4.1.1805. Sold to BU 14.12.1815.

Fervent B. & E. Adams, Bucklers Hard.
Ord: 6.1804. K: 8.1804. L: 15.12.1804. Became a mooring lighter at Portsmouth 8.1816. By 1864 mooring lighter No. 3 - later *YC 7*. BU 1879.

Earnest Menzies, Leith.
Ord: 6.1804. K: 8.1804. L: 1.1805. Sold to BU 2.5.1816.

Protector Warren, Brightlingsea.
Ord: 6.1804. K: 8.1804. L: 1.2.1805. Survey ship 4.1817, which see. Sold to W. Woolcombe to BU 30.8.1833.

Sharpshooter Warren, Brightlingsea.
Ord: 6.1804. K: 8.1804. L: 2.2.1805. Sold to BU 17.5.1816.

Dexterous B. & E. Adams, Bucklers Hard. (Progress Books record Eling, near Southampton, as place of building - but this is almost certainly a clerical error.)
Ord: 6.1804. K: 8.1804. L: 2.2.1805. Sold to BU 17.10.1816.

Redbreast John Preston, Gt. Yarmouth.
Ord: 6.1804. K: 9.1804. L: 27.4.1805. To Customs as a hulk 7.1815. Sold at Liverpool 4.6.1850.

***BLOODHOUND* Class**. Sir John Henslow design, 1801. Comprising five survivors from a batch of 10 vessels, all ordered 7.1.1801 (four had been war losses, and *Vixen* sold 3.1815).

Dimensions & tons: 80ft 0in, 65ft 6½in x 23ft 0in x 8ft 6in. $184^{39}/_{94}$ bm.

Men: 50. Guns: 10 x 18pdr carronades + 2 x 18pdr or 32pdr carronades (bow and stern chase guns) on traversing mounts.

Escort Perry & Co., Blackwall.
Ord: 7.1.1801. K: 1.1801. L: 1.4.1801. To Customs as a hulk 8.1815.

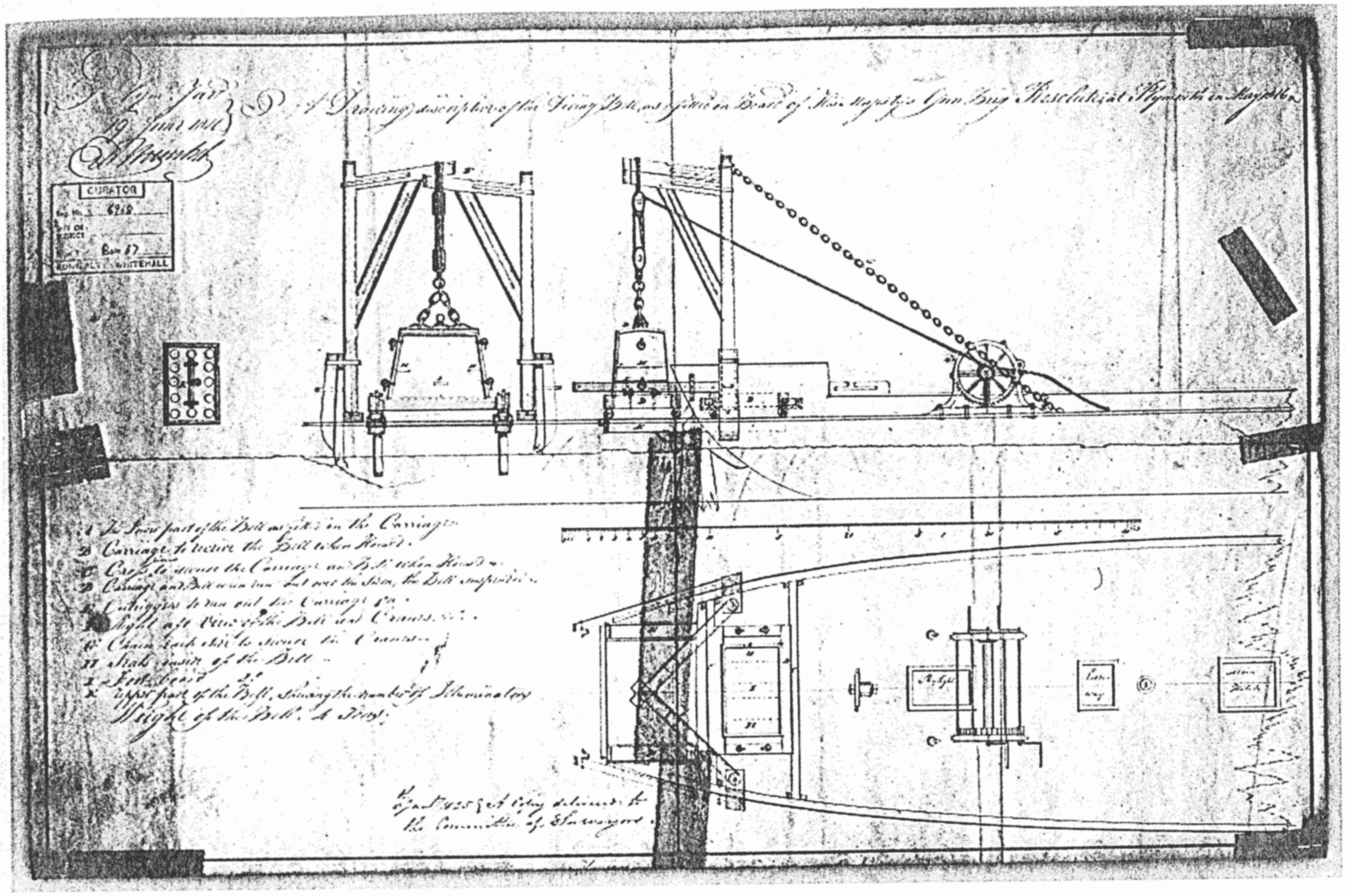
Basilisk John Randall, Rotherhithe.
Ord: 7.1.1801. K: 1.1801. L: 2.4.1801. Tender 1814. Sold to BU 14.12.1815.

Bloodhound John Randall, Rotherhithe.
Ord: 7.1.1801. K: 1.1801. L: 2.4.1801. Sold to BU 18.9.1816.

Censor John Randall, Rotherhithe.
Ord: 7.1.1801. K: 1.1801. L: 2.4.1801. Sold to BU 11.1.1816.

Snipe B. & E. Adams, Bucklers Hard.
Ord: 7.1.1801. K: 1.1801. L: 2.5.1801. Became Mooring Lighter *No.13* (later *No.9*) at Chatham 2.1816. BU 5.1846.

***CONFOUNDER* Class**. Sir William Rule design 1804. Six survivors of group of 20 ordered 20.11.1804 (one more, *Richmond*, was ordered 23.8.1805); eight were wartime losses (*Adder*, *Inveterate*, *Turbulent*, *Bustler*, *Conflict*, *Fancy*, *Exertion* and *Encounter*), while one was BU in 1811 (*Indignant*) and six were sold in 1814 (*Confounder*, *Strenuous*,



The stern of the gunbrig *Resolute* as converted at Plymouth in May 1816 to handle a diving bell, perhaps to facilitate work on the Breakwater project. *DR6968*

Dapper, *Starling*, *Richmond* and *Rebuff*). A second group of 18 to a somewhat modified design (sometimes called the *Bold* Class) were ordered in 1811 and 1812, of which two were wartime losses in 1813 (*Boxer* and *Bold*).

Dimensions & tons: 84ft 0in, 69ft 8¾in x 22ft 0in x 11ft 0in. $179^{48}/_{94}$ bm. Men: 50. Guns: (first batch) 10 x 18pdr carronades + 2 x 12pdr (bow and stern - second batch had 6pdr replacing 12pdrs).

Hearty Bailey, Ipswich.
Ord: 20.11.1804. K: 1.1805. L: 12.4.1805. Sold 11.7.1816.

Martial Charles Ross, Rochester.
Ord: 20.11.1804. K: 1.1805. L: 17.4.1805. Fishery protection vessel 6.1816. Hulked 4.1831. Sold 21.1.1836.

Resolute Thomas King, Dover.
Ord: 20.11.1804. K: 1.1805. L: 17.4.1805. Tender 3.1814. Became a diving bell ship at Plymouth 6.1816. To Bermuda 1826, where she combined the function of diving bell ship and receiving ship. Convict hulk 1844. BU 1852.

Intelligent Bools & Good, Bridport.
Ord: 20.11.1804. K: 1.1805. L: 26.8.1805. Became a lighter at Portsmouth 8.1816. By 1864 *Mooring Lighter No.4* - fate uncertain.

Virago Benjamin Tanner, Dartmouth.
Ord: 20.11.1804. K: 2.1805. L: 23.9.1805. Sold 30.5.1816.

Havock Stone, Gt. Yarmouth.
Ord: 20.11.1804. K: 2.1805. L: 25.7.1805. Storeship (bullock vessel) 1818. Light vessel 9.1821. Watch vessel 3.1843. BU 7.1859.

Second Batch

Manly Andrew Hills, Sandwich.
Ord: 16.11.1811. K: 2.1812. L: 13.7.1812. Sold 12.12.1833.

Snap Russell & Son, Lyme Regis.
Ord: 16.11.1811. K: 2.1812. L: 25.7.1812. Survey ship 4.1823, which see. Powder hulk 9.1827. Sold to John Levy, Rochester 4.1.1832.

Conflict Good, Bridport.
Ord: 16.11.1811. K: 2.1812. L: 26.9.1812. Became a receiving ship at Sierra Leone 1832. Sold there 30.12.1840.

Contest Good, Bridport.
Ord: 16.11.1811. K: 2.1812. L: 24.10.1812. Lost, presumed foundered off Halifax 14.4.1828.

Thistle Mrs Mary Ross, Rochester.
Ord: 16.11.1811. K: 3.1812. L: 13.7.1812. BU 7.1823.

Borer Tyson & Blake, Bursledon.
Ord: 16.11.1811. K: 3.1812. L: 27.7.1812. Sold to BU 12.10.1815.

Shamrock Larking, King's Lynn.
Ord: 16.11.1811. K: 3.1812. L: 8.8.1812. Survey ship 1817, which see. Became a quarantine service vessel at Woolwich 11.1831. To the Coastguard at Rochester 1833; renamed *CGWV.18* on 25.5.1863. Sold 24.1.1867.

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Hasty Andrew Hills, Sandwich.
Ord: 16.11.1811. K: 4.1812. L: 26.8.1812. Survey ship 7.1819, which see. Became a mud-engine at Mauritius 1.1827.
Plumper Good, Bridport.
Ord: 16.11.1811. K: 4.1812. L: 9.10.1813. Sold 12.12.1833.
Swinger Good, Bridport.
Ord: 16.11.1811. K: 4.1812. L: 15.5.1813. Became a mooring lighter at Portsmouth 3.1829. BU 3.1877.
Adder Robert Davy, Topsham.
Ord: 2.11.1812. K: 12.1812. L: 28.6.1813. Became a watch vessel on the Sussex Coast 1.1826. Wrecked near Newhaven 12.1831.
Griper Mark Richards & Co., Hythe.
Ord: 2.11.1812. K: 1.1813. L: 14.7.1813. Arctic exploration ship 1819-25. To the Coastguard at Blackwall 1825, later to Sussex. Target for gunnery experiments at Portsmouth 1856; armour plate experiments 1862. BU completed at Portsmouth 11.11.1868.
Clinker Robert Davy, Topsham.
Ord: 2.11.1812. K: 1.1813. L: 15.7.1813. To the Coastguard at Yantlet Creek 11.1831, renamed *CGWV.12* in 5.1863. Sold 24.1.1867.
Pelter Henry Tucker, Bideford.
Ord: 2.11.1812. K: 1.1813. L: 27.8.1813. To the Coast Blockade at Folkestone 1826. Sold 8.8.1862.
Mastiff William Taylor, Bideford.
Ord: 2.11.1812. K: 1.1813. L: 25.9.1813. Survey ship 8.1825, which see. BU 5.1851.
Snapper Hobbs & Hellyer, Redbridge (Southampton).
Ord: 2.11.1812. K: 4.1813. L: 27.9.1813. To the Coast Blockade 5.1824. Sold to Castle 1865 by AO 3.7.1861.

Ex-DANISH PRIZE.
Brev Drageren (Danish *Brev Drageren*, built 1801 Nyholm Dyd, Copenhagen; design by F. C. H. Hohlenberg), gunbrig, 12 guns.
Dimensions & tons: 82ft 8½in, 66ft 0$^{1}/_{8}$in x 22ft 9in x 10ft 3½in. 181$^{68}/_{94}$ bm.
Men: 50/60. Guns: 2 x 6pdr + 10 x 18pdr carronades.
'Light brig' taken at the fall of Copenhagen 7.9.1807. Proposed renaming as *Cockatrice* in 1809 was cancelled. Hulked as a tender 1815. Prison ship 7.1818. Army depot ship 1820. Sold to J. Cristall 13.10.1825.

PURCHASED Vessel.
Enchantress (ex-mercantile, built 1802), gunbrig, 4 guns.
Dimensions & tons: 79ft 8in, 61ft 4¼in x 23ft 2¼in x 16ft 4in. 175$^{44}/_{94}$ bm.
Men: 30. Guns: 4 x 6pdr.
Purchased 1804. Hulked as receiving ship at Bristol 6.1813. Quarantine vessel at Milford 1816. Transferred to the Revenue Service on the Blackwater 1817. Sold 8.1818.

Cutters and Schooners

Large numbers of fore-and-aft rigged vessels had been employed throughout the Napoleonic Wars, including a large number of ex-American merchant and privateer schooners seized during the War of 1812. These small craft had been among the first to be deleted from the post-war surplus of vessels.

HART cutter (built at Deptford?).
Acquired 1793. No further details. Sold to J. Edgar 30.10.1817.
LIBERTY (building history unknown), clinker-built cutter, 14 guns.
Dimensions & tons: 74ft 3in, 53ft 9in x 25ft 6¼in x 10ft 6½in. 187 bm.
Men: 55. Guns: 14 x 4pdr + 10 swivels.
Purchased 1779. Rigged as gunbrig 1790 (but still classed as cutter), later re-rigged as cutter. Sold in Barbados 2.1816.

NIMBLE (building history unknown), cutter, 10 guns.
Dimensions & tons: 68ft 5in, 50ft 11$^{5}/_{8}$in x 23ft 3½in x 10ft 2in. 147 bm.
Men: 50. Guns: 12 x 12pdr carronades.
Purchased 5.3.1813. Sold to Mr Nixon 18.4.1816.

PICKLE (French *Eclair*, built 1808), 3-masted schooner, 12 guns.
Dimensions & tons: 69ft 3in, *c*50ft 6in x 22ft 6in x 9ft 9in. 136 bm.
Men: 50. Guns: 12 x 12pdr carronades.
Taken 1808, and registered 2.5.1809. Sold to Mr Durkin 11.6.1818.

TICKLER (Mercantile *Lord Duncan*, built 1798 at Dover), cutter, 10 guns.
Dimensions & tons: 62ft 6in, 44ft 5in x 21ft 11½in x ... . 114 bm.
Men: 30. Guns: 8 x 12pdr carronades.
Purchased 14.10.1808. Sold 25 or 28.8.1816.

WOLF (also Revenue. Built by White, Cowes 1801), cutter tender.
Dimensions & tons: 54ft 9in, *c*39ft 9in x 19ft 7in x 8ft 11in. 81 bm.
BU at Portsmouth 1829.

***ADONIS* Class**. 10-gun schooners, design copied from draught of Bermudan sloop *Lady Hammond*. Two survivors of class of 12, all originally ordered 2.4.1804 as cutters, but completed as schooners; seven were wartime losses, and three sold 1814 to 2.1815.
Dimensions & tons: 68ft 2in, 50ft 5$^{5}/_{8}$in x 20ft 4in x 10ft 3in. 110$^{93}/_{94}$ bm.
Men: 40. Guns: 10 x 18pdr carronades.
Sylvia Bermuda.
Ord: 2.4.1804. K: ... L: 1806. Sold 30.5.1816.
Vesta Bermuda.
Ord: 2.4.1804. K: ... L: 1806. Sold 11.1.1816.

***ARROW* Class**. 14-gun schooner, design by John Peake 1805.
Dimensions & tons: 91ft 0in, 79ft 3½in x 19ft 0in x 9ft 0in. 152 bm.
Arrow Deptford Dyd.
Ord: 3.7.1804. K: 1.1805. L: 7.9.1805. Yard craft at Plymouth 5.1814 (for the Breakwater Dept). BU at Plymouth 5.1828.

***BALLAHOO* (or 'Fish') Class.** 4-gun schooners, Bermudan design. Last survivor of class of 18, originally ordered 23.6.1803 (12) and 11.12.1805 (6); the other 17 were wartime losses. Built of cedar.
Dimensions & tons: 55ft 2in, 40ft 10½in x 18ft 0in x 9ft 0in. 70$^{41}/_{94}$ bm.
Men: 20. Guns: 4 x 12pdr carronades.
Bream Bermuda.
Ord: 11.12.1805. K: 1806. L: 5.1807. BU 1816.

***CUCKOO* (or 'Bird') Class**. 4-gun schooners, design copied from draught of Bermudan 'Fish' Class. Three survivors of class of 12, all originally ordered 11.12.1805; the other nine were wartime losses or disposals.
Dimensions & tons: 56ft 2in, 42ft 4$^{1}/_{8}$in x 18ft 3in x 8ft 6in. 75$^{1}/_{94}$ bm.

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Men: 20. Guns: 4 x 12pdr carronades.

Jackdaw William Rowe, Newcastle.
Ord: 11.12.1805. K: 1.1806. L: 19.5.1806. In Spanish hands from 16.2.1807 to 17.2.1807. Tender 1810. Sold 11.1816.

Landrail Sutton, Ringmore.
Ord: 11.12.1805. K: 1.1806. L: 18.6.1806. Taken off Ushant by American privateer *Syren* 12.7.1814, but retaken 9.1814. Sold 1816.

Quail Custance, Yarmouth.
Ord: 11.12.1805. K: 2.1806. L: 26.4.1806. Sold 1.1816.

***CHEERFUL* Class**. 12-gun cutters, design by Henslow 1806.
Dimensions & tons: 63ft 0in, 46ft 9$^{3}/_{8}$in x 23ft 6in x 10ft 0in. 137$^{39}/_{94}$ bm.
Men: 50. Guns: 2 x 4pdr + 10 x 12pdr carronades.

Cheerful Johnson, Dover.
Ord: 29.3.1806. K: 6.1806. L: 11.1806. Sold 31.7.1816.

Surly Johnson, Dover.
Ord: 29.3.1806. K: 7.1806. L: 15.11.1806. Became a lighter at Chatham 2.1833. Sold 1.1837.

***SHAMROCK* Class**. 10-gun schooners, built of Bermudan cedar; design based on *Flying Fish* (American prize *Revenge*, taken 1808). Of original class of six, three were wartime losses and *Juniper* was sold 1814.
Dimensions & tons: 78ft 8in, 60ft 8$^{1}/_{8}$in x 21ft 7in x 7ft 10in. 150$^{32}/_{94}$ bm.
Men: 50. Guns: 10 x 9pdr.

Bramble Dell, Bermuda.
Ord: 2.1808. K: 1808. L: 1808. Sold 14.12.1815.

Mistletoe Hill, Bermuda.
Ord: 2.1808. K: 1808. L: 1809. Foundered with all hands off the Isle of Wight on 14.12.1816.

***PIGMY* Class**. 10-gun schooners, design by Peake. *Algerine* was wartime loss (1813). *Pioneer* built as cutter.
Dimensions & tons: 82ft 6in, 70ft 6in x 22ft 8in x 10ft 6in. 192$^{62}/_{94}$ bm.
Men: 60. Guns: 10 x 12pdr carronades.

Pigmy John King, Upnor.
Ord: 2.10.1809. K: 11.1809. L: 24.2.1810. Converted to cutter 1819. Sold 21.5.1823.

Pioneer John King, Upnor.
Ord: 2.10.1809. K: 12.1809. L: 10.3.1810. Converted to schooner 1813. Re-converted to cutter 1819. To the Coastguard 4.1824. Sold 4.9.1849.

***DECOY* Class**. 10-gun cutters, design by Rule. *Decoy* and *Racer* were wartime losses.
Dimensions & tons: 74ft 4in, 55ft 10$^{5}/_{8}$in x 26ft 0in x 11ft 0in. 200$^{88}/_{94}$ bm.
Men: 60. Guns: 10 x 18pdr carronades.

Dwarf Lawes, Sandgate.
Ord: 2.10.1809. K: 11.1809. L: 24.4.1810. Wrecked on the pier at Kingstown, Dublin 3.3.1824.

***NIMBLE* Class**. 10-gun cutters. *Nimble* was wartime loss in 1812.
Dimensions & tons: 63ft 0in, 49ft 1¼in x 22ft 9in x 10ft 6in. 140$^{16}/_{94}$ bm.
Men: 50. Guns: 10 x 12pdr carronades.

Swan Thomas Gely, Cowes.
Ord: 21.1.1811. K: 1811. L: 1.11.1811. Fishery protection vessel 1831. To the Seamen's Home Society as a church ship on the Thames 1837. BU 7.12.1874.

Ex-AMERICAN PRIZES.

Sealark (American *Fly*, launched 1811 ...), schooner, 10 guns.
Dimensions & tons: 79ft 6in, 68ft 0$^{7}/_{8}$in x 22ft 8in x 9ft 10in. 178 bm.
Men: 50. Guns: 10 x 12pdr carronades.
Taken by *Scylla* 29.12.1811, and purchased 1.5.1812. Sold 13.1.1820.

Whiting (American *Arrow*, launched 1812 Baltimore), schooner, 12 gun.
Dimensions & tons: 98ft 0in, 75ft 8$^{7}/_{8}$in x 23ft 7$^{5}/_{8}$in x 9ft 10in. 225$^{5}/_{94}$ bm.
Men: 50. Guns: 2 x 6pdr + 10 x 12pdr carronades.
Taken 1812, and registered in RN 12.10.1812. Wrecked on the Dunbar Sand, Padstow 15.9.1816; wreck sold.

Bermuda (American *Delaware* pilot boat, building details unknown), schooner/yacht.
Dimensions & tons: 46ft 2in, *c*36ft x 15ft 0in x 5ft 6in. 43 bm.
Presented by her captors 1813, and registered in RN 28.4.1813. BU at Bermuda 9.1841.

Variable (American *Edward*, built 1812 ...), schooner, 14 guns.
Dimensions & tons: 104ft 6in, 82ft 2in x 27ft 3in x 13ft 0in. 324 bm.
Men: 95. Guns: 2 x 6pdr + 12 x 24pdr carronades.
Taken and purchased 31.10.1814. BU 2.1817.

Telegraph (American privateer *Vengeance*, built 1812 New York), schooner/gunbrig, 12 guns.
Dimensions & guns: 83ft 7in, 66ft 5¾in x 22ft 6½in x 10ft 6in. 180 bm.
Men: 60. Guns: 12 x 12pdr carronades.
Taken at the end of 1812 or 1.1813. Wrecked under Mount Batten, Plymouth Sound 20.1.1817.

Canso (American privateer *Lottery*, built 1811 Maryland), schooner, 16 guns.
Dimensions & tons: 93ft 0in, 75ft 9in x 23ft 8in x 10ft 2in. 225 bm.
Men: ... . Guns: ... .
Taken in the Chesapeake 8.2.1813. Sold 30.5.1816.

Alban (American *William Bayard*, built 1812 by Bergh, New York), schooner, 14 guns.
Dimensions & tons: 94ft 4½in, 78ft 6½in x 24ft 7$^{1}/_{8}$in x 10ft 6in. 252$^{75}/_{94}$ bm.
Men: 60. Guns: 2 x 6pdr + 12 x 12pdr carronades.
Taken by the *Warspite* 12.3.1813. BU 18.2.1822.

Musquedobet (American privateer *Lynx*, built 1812 Baltimore), schooner, 10 guns.
Dimensions & tons: 94ft 7in, 73ft 1¼in x 24ft 0in x 10ft 3in. 224 bm.
Men: 50. Guns: 2 x 6pdr + 8 x 18pdr carronades.
Taken in the Chesapeake 16.3.1813. Sold to Mr Rundle 13.1.1820.

Shelburne (American privateer *Racer*, built 1811 Maryland), schooner, 12 guns.
Dimensions & tons: 93ft 8in, 72ft 8in x 23ft 11in x 10ft 8in. 221 bm.
Men: ?50. Guns: 2 x 6pdr + 10 x 12pdr carronades.
Taken in the Chesapeake 16.3.1813. Sold 10.1817.

Cockchafer (American *Spencer*, building details unknown), schooner, 8 guns (5 as tender).
Dimensions & tons: 69ft 4in, 55ft 6in x 18ft 10in x 8ft 0in. 104 bm.
Men: ... . Guns: 1 x 12pdr + 4 x 12pdr carronades.
Taken 1813. Sold late 1815.

Pike (American *Dart*, built 1813 New Orleans), schooner, 14 guns.
Dimensions & tons: 93ft 0in, 78ft 7in x 24ft 8in x 10ft 6in. 251 bm.
Men: 60. Guns: 2 x 6pdr + 12 x 12pdr carronades.
Taken by *Niger* 13.11.1813 and purchased (registered) 11.2.1814.
Wrecked on Bare Bush Key, Jamaica 5.2.1836, and wreck sold.

Grecian (American privateer *Grecian*, built 1813 by Kemp, Baltimore), schooner, 10 guns.
Dimensions & tons: 95ft 1in, 74ft 3in x 23ft 10in x 10ft 5in.

Scan and/or retouch by Grzechu

224$^{32}/_{94}$ bm.
Taken by *Jaseur* 2.5.1814 (not purchased until 3.11.1815). Sold to J. Cristall 18.4.1822.

Express (American *Anna Maria*, built 1809 at New York as *Achilles* and renamed 1813), schooner/advice boat, 4 guns.
Dimensions & tons: 64ft 6½in, 53ft 6$^{5}/_{8}$in x 18ft 0in x 7ft 1in. 92$^{27}/_{94}$ bm.
Men: 26. Guns: 4 x 12pdr carronades.
Purchased 5.1815. Tender 1816. Sold at Malta 26.7.1827.

Ex-FRENCH Prizes.

Algerine (French *Pierre Cézar*, built 1805 Baltimore), cutter, 14 guns.
Dimensions & tons: 92ft 9in, 72ft 9¾in x 24ft 4in x 10ft 9in. 229$^{31}/_{94}$ bm.
Men: 50. Guns: 14 x 12pdr carronades.
Taken 29.6.1808 and purchased as *Tigress*. Renamed *Algerine* 21.4.1814. Sold 29.1.1818.

Pictou (French privateer, built 1812 as American *Zebra* at New York), schooner, 14 guns.
Dimensions & tons: 83ft 0in, 65ft 2in x 24ft 8in x 10ft 6in. 211 bm. (Note the above line may relate instead to a previous *Pictou*, the former prize *Bonne Foi* [perhaps built as ?American *Leyson* or *Syren*, the details are confused], first taken 1813 and captured by USS *Constitution* 14.2.1814.)
Men: ... . Guns: 6 x 6pdr + 10 x 12pdr carronades.
Taken 12.4.1814. Sold to Mr Hughes 13.8.1818.

Ex-SPANISH Prize.

Paz (Spanish ..., building details unknown), schooner, 12 guns.
Dimensions & tons: ... . 141 bm.
Men: 40. Guns: 2 x 6pdr + 10 x 12pdr carronades.
Taken at the fall of Montevideo 3.2.1807. Sold 1816.

Troopships

All the following were former frigates; their details including dimensions, full histories, etc, will be found under original class; this list is to serve as a cross-reference to troopships as at June 1815. It is noticeable how many of the older or weaker frigates were used for trooping. The layout of frigates with a main deck below the waterline not used for guns was particularly suited for carrying passengers, whilst retaining much or all of their original armament and with soldiers aboard they were, even with reduced crews, formidable opponents well able to look after themselves.

Alceste (French *La Minerve*), ex-38-gun 18pdr frigate (which see). Troopship 1814-17 when wrecked.
Antelope, ex-50-gun Fourth Rate (which see). Troopship 1814-24 when became a convict ship.
Belle Poule (French *La Belle Poule*), ex-38-gun 18pdr frigate (which see). Troopship 1814-16 when sold.
Brune (French *La Thétis*), ex-38-gun 18pdr frigate (which see). Troopship 1810-16 when hulked.
Bucephalus, ex-32-gun 18pdr frigate (which see). Troopship 1814-22 when became a receiving ship.
Ceylon, ex-*Bombay* (East India Company's *Bombay* 1793), ex-32 gun frigate (which see). Troopship 1814-16, when laid up.
Dover (Franco-Italian *Bellona*), ex-32-gun 9pdr frigate (which see). Troopship 1812-19 when became a guard ship.
Freya (Danish *Freya*), ex-36-gun 18pdr frigate (which see). Troopship 1810-16 when sold.
Hydra, ex-38-gun 18pdr frigate (which see). Troopship 1813-20 when sold.
Niobe (French *La Diane*), ex-38-gun 18pdr frigate (which see). Troopship 1814-16 when BU.
Thames, ex-32-gun 12pdr frigate (which see). Troopship 1814-16 when BU.
Trave (Franco-Dutch *La Trave*), ex-38-gun 18pdr frigate (which see). Troopship 1814-21 when sold.
Weser (Franco-Dutch *La Weser*), ex-38-gun 18pdr frigate (which see). Troopship 1814-17 when sold.

Storeships, etc

Purpose-built

***AID* Class**. Design by the Surveyors (Tucker, Seppings & Peake), 1808. Also designated as troopships, but mostly used as yard craft.
Dimensions & tons: 104ft 0in, 87ft 2$^{1}/_{8}$in x 26ft 0in x 17ft 6in. 313$^{47}/_{94}$ bm. 567 disp.
Men: 39 (*Aid* as survey ship, 10). Guns: nil (*Aid*, 10 x 12pdr carronades).

Aid Brindley, King's Lynn.
Ord: 1808. K: 7.1808. L: 4.4.1809. Survey ship 3.1817. Renamed *Adventure* 24.5.1821. Sloop 1830. Transport 1839. Sold 19.3.1853.

Assistance John Dudman, Deptford.
Ord: 1808. K: 9.1808. L: 7.3.1809. Sold 1821.

Chatham Joseph & Thomas Brindley, Frindsbury.
Ord: 1810. K: 10.1810. L: 22.6.1811. Became *YC.2*. Sunk as a breakwater at Plymouth 9.1825.

Portsmouth (possibly ex-*Woolwich*?) Milford Dyd.
Ord: 1810. K: 10.1810. L: 28.9.1811. Became a coal depot at Woolwich 3.1818; to Deptford *c*1828. BU 8.1834.

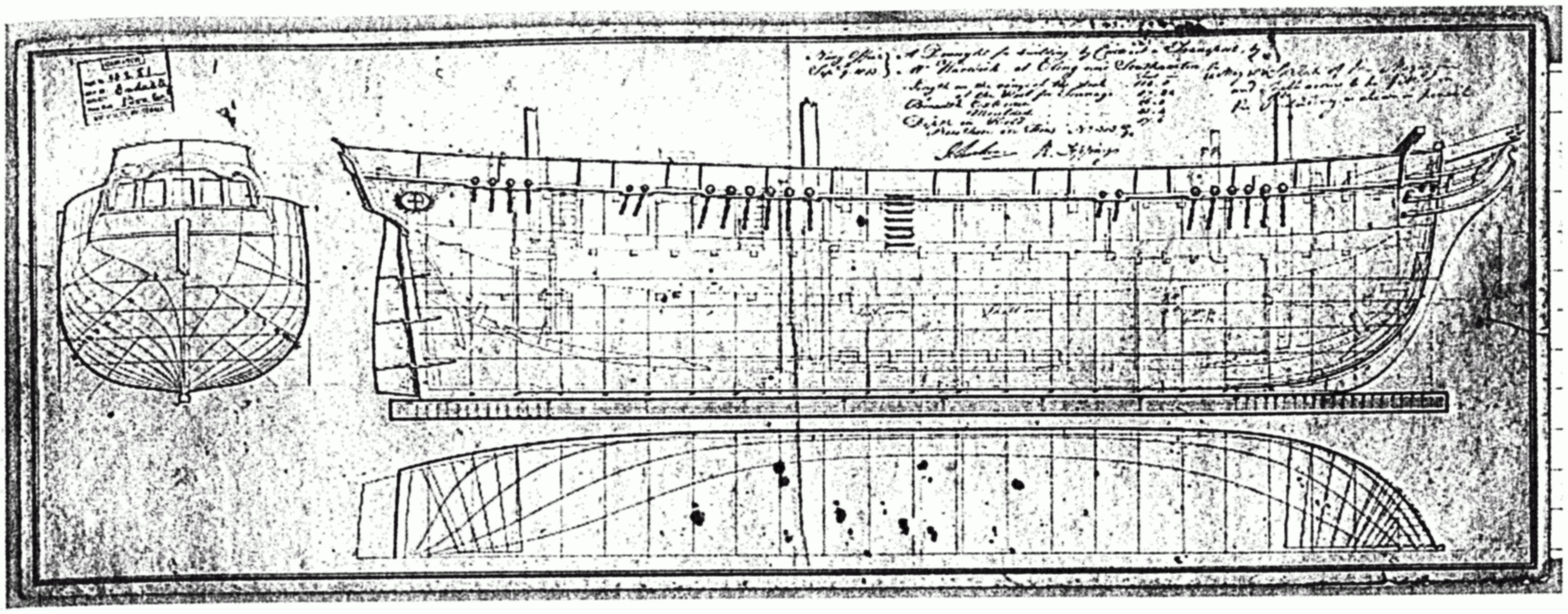
Diligence Bailey, Ipswich.
Ord: 1813. K: 10.1813. L: 30.9.1814. Became a coal depot at Plymouth 8.1861; later to Portsmouth? Renamed *C.74*. Sold there 5.7.1904.

Industry James Warwick, Eling (Southampton).
Ord: 1813. K: 1.1814. L: 13.10.1814. Hulked 1820. Became a church ship at the Isle of Man 1835. BU 1846.

Former warships

Details including dimensions, full histories, etc, will be found under original class; this list is to serve as a cross-reference:

Akbar, ex-*Cornwallis* (Bombay Marine frigate *Marquis of Cornwallis*, built 1800-01 at Bombay), ex-50-gun Fourth Rate (which see). Storeship 1813-17 when became troopship.
Cormorant (ex-mercantile *Blenheim*, built 1803 at Howden Pans, Tyne). ex-16-gun ship sloop (which see). Storeship 1809-17 when sold.
Coromandel ex-*Malabar* (East Indiaman *Cuvera*, built 1798 at Calcutta), ex-56-gun Fourth Rate (which see). Storeship 1808-19 when became convict ship (renamed *Coromandel* 1815).
Hindustan (East Indiaman *Admiral Rainier*), ex-54-gun Fourth Rate (which see). Storeship 1811-30 when became convict ship (renamed *Dolphin* 1819).
Hyaena (ex-mercantile *Hope*, built 1800 in India), ex-20-gun Sixth Rate (which see), teak-built. Storeship 1809-22 when sold.
Prevoyante (French *La Prévoyante*), ex-36-gun 12pdr frigate (which see). Storeship 1801-19 when sold.
Serapis (James Martin Hillhouse, Bristol, 1782), ex-44-gun Fourth Rate (which see). Storeship 1803-17 when became convalescent ship.



The purpose-built transport *Industry*. *DR4251*

Former mercantile

Notably including several Indian-built vessels, retained due to their very durable teak hulls.

Dispatch (ex-mercantile *Cornwallis*, built 1798), brig transport, 6 guns.
Dimensions & tons: 76ft 8in, 61ft 1½in x 23ft 0in x 16ft 2in. 172 bm.
Registered on Navy List 13.11.1798. Transferred from the Transport Office c1816. Hulked as a receiving and slop ship at Bermuda 1820; sheer hulk 1826. Foundered at her moorings at Bermuda 23.12.1846; remains ordered to be BU 24.2.1847.

Abundance (building by B. & E. Adams, Bucklers Hard), storeship, 16 guns.
Dimensions & tons: 142ft 4in, 119ft 2¼in x 32ft 7in x 14ft 10in. 673$^{7}/_{94}$ bm.
Men: 80. Guns: 16 x 24pdr carronades.
Purchased on stocks 6.1799 and L: 30.9.1799. Troopship 1799-1802, then storeship. Hulked for the Committee for Distressed Seamen as an accommodation ship 1816. Storeship for Saint Helena 1819 (never sent?). Laid up at Deptford 1821. Sold 22.5.1823.

Dromedary, ex-*Howe* (ex-East Indiaman *Shah Kaikusroo*, built 1799 at Bombay), storeship, 24 guns - teak-built.
Dimensions & tons: 150ft 0in, 124ft 3$^{7}/_{8}$in x 39ft 9¾in x 16ft 11¾in. 1,048$^{16}/_{94}$ bm.
Men: 100. Guns: UD 20 x 9pdr; QD 4 x 6pdr.
Purchased (for use as a frigate) by Admiral Pellew at Bombay 4.1805. Renamed *Dromedary* 6.8.1806. Hulked as a convict ship at Deptford 1819. Convict ship for Bermuda 1824. Sold there 8.1864.

Camel (ex-East Indiaman *Severn*, built 1812 at Calcutta), storeship, 18 guns - teak-built.
Dimensions & tons: 115ft 6in, 94ft 5¼in x 33ft 8in x 15ft 1in. 569$^{34}/_{94}$ bm.
Men: 55. Guns: 2 x 9pdr (short) + 16 x 24pdr carronades.
Purchased 1813. Hulked at St. Helena 1819. Sold in UK 21.4.1831.

Buffalo (ex-East Indiaman *Hindostan*, built 1813 at Calcutta), storeship, 18 guns - teak-built.
Dimensions & tons: 120ft 0in, 98ft 8$^{7}/_{8}$in x 33ft 6in x 15ft 8in. 589$^{39}/_{94}$ bm.
Men: 55. Guns: 2 x 9pdr (short) + 16 x 24pdr carronades.
Purchased 1.11.1813. Fitted to bring spars from New Zealand 1833. Emigrant transport 1835. Storeship again 1837. Wrecked off Whitianga, New Zealand 28.7.1841.
NOTES: An earlier *Buffalo*, ex-mercantile *Fremantle*, still existed as a prison hulk at Cowes until 1817.

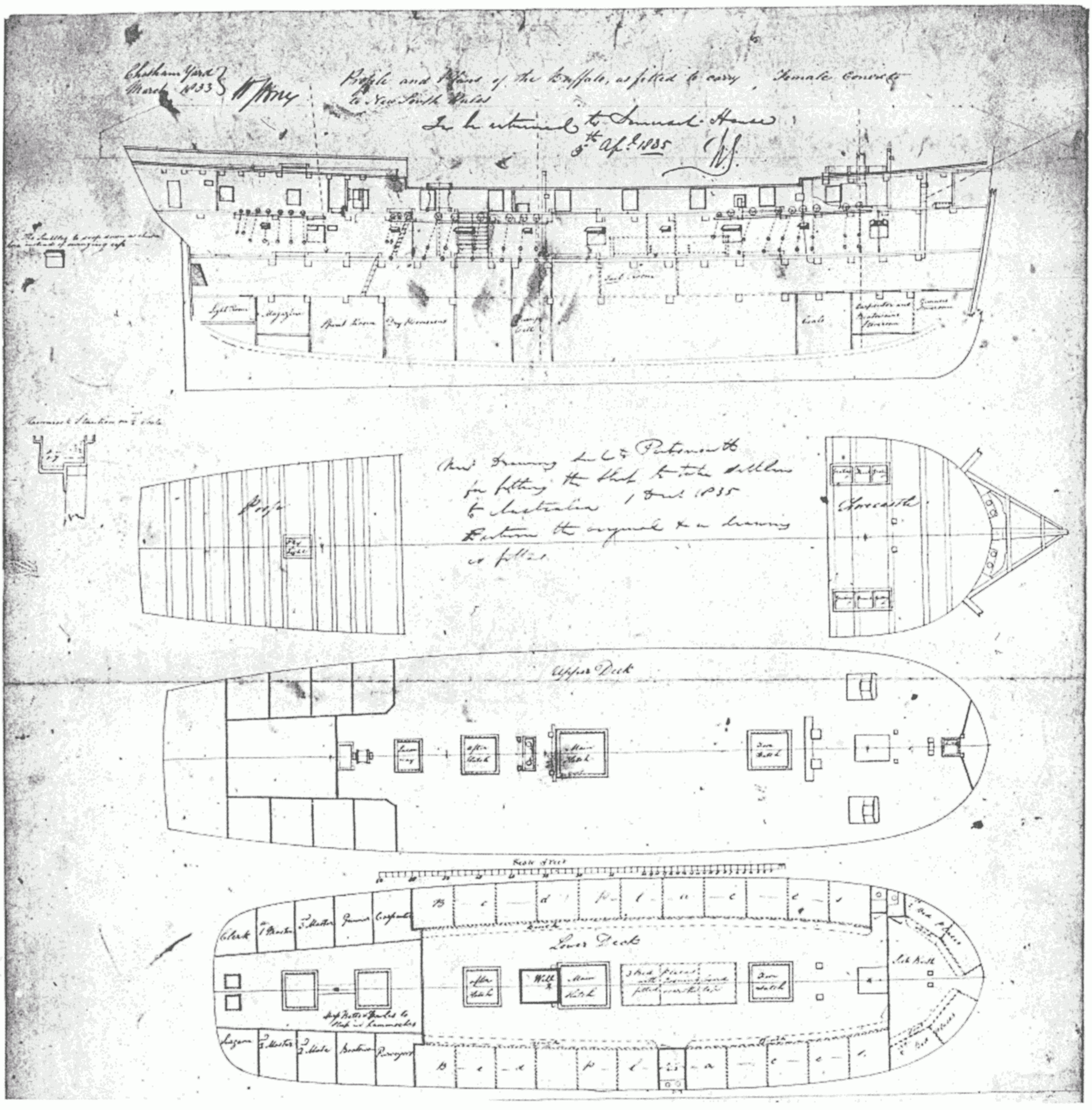
Sir Francis Drake (ex-East Indiaman *Asia*, built 1797 at Bombay), storeship, ex-38-gun Fifth Rate - teak-built.
Dimensions & tons: 132ft 3½in, 112ft 4$^{1}/_{8}$in x 35ft 5½in x 14ft 0½in. 751$^{30}/_{94}$ bm.
Purchased in India 1805. Storeship 1813. Sold 13.10.1825.

Tortoise (ex-East Indiaman *Sir Edward Hughes*, built 1787 Bombay) storeship, ex-38-gun Fifth Rate - teak built.
Dimensions & tons: 147ft 2in, 118ft 4$^{7}/_{8}$in x 39ft 1in x 19ft 4½in. 962$^{5}/_{94}$ bm.
Purchased in Madras 9.1807. Renamed *Tortoise* 23.12.1807. Storeship 1808. Hulked at Pembroke as a coal depot 11.1824; to Sheerness 1841. To Ascension as a receiving ship 1844. BU there 18.10.1863.

Weymouth (ex-East Indiaman *Wellesley*, built 1797 Calcutta), storeship, ex-44-gun Fifth Rate - teak-built.
Dimensions & tons: 136ft 0in, 121ft 0in x 37ft 0in x 12ft 4in. 826 bm.
Men: 264 (121 as storeship). Guns: (as Fifth Rate) LD 26 x 18pdr; UD 18 x 24pdr carronades; (as storeship) LD 10 x 24pdr carronades; QD 6 x 24pdr carronades; Fc 2 x 9pdr.
Purchased 1804. Storeship (18) 1807. Hulked at Bermuda as a receiving and convict ship 10.1828. Sold there 10.3.1865.
NOTES: The keel length quoted is incorrect; it appears the correct figure should be c113ft 5in.

Survey vessels

Chatham (ex-mercantile brig, just built by King, Dover), survey brig/ tender, 4 guns.
Dimensions & tons: ... ., 53ft 1¾in x 21ft 6¾in x 10ft 1in. 131$^{40}/_{94}$ bm.
Men: 12/45. Guns: 4 x 3pdr + 6 ½pdr swivels.
Purchased from King for use as a tender 12.2.1788. Fitted for 'remote service' (Vancouver's expedition) 1790. 1830 sold at Jamaica (not certain this is still the same vessel).



One of the more specialised conversions, this draught of March 1835 shows the *Buffalo* 'as fitted to carry Female Convicts to New South Wales'. A later note of October 1835 describes the ship's intended passengers, more generally, as 'settlers to Australia'. *DR7573*

Lady Nelson Deptford. Survey brig, designed by Captain John Schank, with sliding keels.

Dimensions & tons: 52ft 6in x 17ft 6in. 60 bm. Guns: 6.

Built 1799. Purchased 1800. Destroyed by Malay pirates off Babar Island, in South Moluccas 2.1825 (this wreck has been dived on recently).

Investigator Deptford Dyd. Survey brig of Henry Peake design, approved 22.11.1810.

Dimensions & tons: 75ft $0^{3}/_{8}$in, 62ft $10^{7}/_{8}$in x 19ft 2in x 10ft $10^{5}/_{8}$in. $122^{86}/_{94}$ bm.

Men: 20. Guns: 5 x 12pdr carronades.

Ord: 26.5.1810. K: 1.1811. L: 23.4.1811. Storeship 1837. To the Thames

Scan and/or retouch by Grzechu

River Police as a tender off Somerset House 3.1837. BU 10.1857.

Scrub (mercantile ...), tender/survey schooner, 2 guns.
80 tons bm. Purchased in Newfoundland 1815. Sold in Newfoundland 19.5.1828.

Sydney (mercantile *Sydney*, built ... Yarmouth), survey vessel, 6 guns.
Dimensions & tons: 71ft 10in, 56ft 5⅛in x 21ft 1½in x 12ft 1¾in. 139 bm (?miscalculation for 133 bm).
Men: 26. Guns: UD 6 x 12pdr carronades?
Purchased 1813. Hulked at Woolwich as convict ship 1823. Sold to J. Sheldrick 27.1.1825.

Prison Ships

Antigua (ex-French 36-gun privateer *L'Egyptienne*, ex-*La Railleuse*), prison ship.
Dimensions & tons: 145ft 0in x 37ft 0in x ... . 857 bm.
Taken by *Hippomenes* 27.3.1804. BU 1816.

Attentive (ex-American brig *Magnet* ...), prison ship, 14 guns.
Dimensions & tons: 96ft 6in x 28ft 4in x 13ft 6in. 359 bm.
Taken 1812 (or acquired as a schooner in the Leeward Islands in 1810), and registered in RN 31.10.1812. Sold to BU at Portsmouth 1.1817.

Royal and Dockyard Yachts

Mary Deptford Dyd. Rebuilt by Stacey, probably to Acworth design, from yacht of 1677.
Dimensions & tons: 76ft 6in, 61ft 6in x 22ft 4in x 9ft 8in. 163$^{72}/_{94}$ bm.
Men: 40. Guns: 8 x 3pdrs, 10 x ½pdr swivels.
L: 16.3.1728. Ketch-rigged 1736. Great Repair 1761. Ship-rigged 1783. BU 4.1816.

Royal Charlotte (ex-*Royal Caroline*, renamed 1761) Deptford Dyd (Allin design).
Dimensions & tons: 90ft 1in, 72ft 2½in x 24ft 7in x 12ft 2in. 232$^{11}/_{94}$ bm.
Men: ... . Guns: 10 x 3pdrs, 8 x ½pdr swivels.
L: 29.1.1750. BU 7.1820.

Princess Augusta Deptford Dyd.
Dimensions & tons: 80ft 6in, 65ft 2½in x 23ft 1¼in x 10ft 10in. 185$^{10}/_{94}$ bm.
Men: 40. Guns: 8 x 3pdr.
L: 1771. Sold 13.8.1818.

Medina (ex-*Portsmouth*, renamed 8.1772) Portsmouth Dyd.
Dimensions & tons: 52ft 10in, 42ft 10in x 17ft 0in x 8ft 6½in. 66 bm.
Men: 15. Guns: 6 x 2pdr.
Rebuilt (technically, Great Repair) 1772 from yacht of 1703. BU 1832.

Chatham Chatham Dyd. Cutter-rigged.
Dimensions & tons: 59ft 6½in, 48ft 5¼in x 19ft 0in x 9ft 8in. 93$^{10}/_{94}$ bm.
Men: 10. Guns: 6 x 2pdr.
Rebuilt 1793 from yacht of 1741. Dockyard yacht at Chatham. Rebuilt again 1842 (see Chapter 2).

Portsmouth Portsmouth Dyd. Cutter-rigged.
Dimensions & tons: 70ft 4in, 53ft 9in x 18ft 11in x 11ft 8in. 102$^{29}/_{94}$ bm.
Men: ... . Guns: 6 x 2pdr.
Rebuilt 1794 (ord: 1793) from yacht of 1742. Dockyard yacht at Portsmouth. BU completed at Portsmouth 4.9.1869.

Plymouth Deptford Dyd (Henslow design). Cutter-rigged.
Dimensions & tons: 64ft 0½in, 52ft 7¼in x 18ft 6in x 11ft 8in. 95$^{72}/_{94}$ bm.
Men: ... . Guns: 6 x 2pdr.
Ord: 26.8.1793. L: 2.11.1796. Dockyard yacht at Plymouth. BU 7.1830.

Royal Sovereign Deptford Dyd (Henslow design). Ship-rigged.
Dimensions & tons: 96ft 0in, 80ft 5in x 25ft 8in x 10ft 6in. 278 bm.
Men: ... . Guns: 8 x ½pdr swivels.
Ord: 1800. K: 11.1801. L: 12.5.1804. BU at Pembroke 11.1849.

William and Mary Deptford Dyd (Henslow design). Ship-rigged.
Dimensions & tons: 85ft 0½in, 70ft 3½in x 23ft 2½in x 11ft 1in. 199 bm.
Men: ... . Guns: 8 x 3pdr.
Ord: 1800. L: 14.11.1807. BU 4.1849.

Admiralty Woolwich Dyd (Peake design). Dockyard yacht at Plymouth.
Dimensions & tons: 68ft 7in, 54ft 5⅝in x 20ft 1in x 12ft 8in. 115 bm.
Men: 6. Guns: nil.
L: 21.5.1814. Renamed *Plymouth* 7.1830. Renamed *YC.1* in 1866. Sold 10.5.1870.

Tenders (all 'unregistered')

Clyde (ex-mercantile cutter *Atlanta*? ...), 4-gun tender to the *Clyde* (frigate).
Purchased 1805. Sold at Milford 1826.

Harlequin (ex-gunboat), tender.
Purchased in the West Indies 1815. At Bermuda 1816. Deleted 1816.

Mercury (ex-mercantile 'longboat', built 1807 at Rotherhithe), tender.
Dimensions & tons: 44ft 3in x 16ft 1in x 7ft 10in. 50 bm.
Purchased 1807. BU 10.1835.

Sailing Vessels on the Canadian Great Lakes

The major construction of this period took place as a result of the Anglo-American war from 18 June 1812 to 24 December 1814. The status and final disposition of many of these vessels is uncertain, and this section is limited to the larger vessels (all built at Kingston Dyd for service on Lake Ontario) which continued after 1815. All here listed under their original names, although most were renamed during 1814 as shown.
A full list of war-built vessels on the Great Lakes and their history will be found in Robert Malcomson's book (see Bibliography).

***SAINT LAWRENCE* Class** - 112-gun three-decker. Designed by William Bell, 1814. Like most of the Great Lakes vessels, the only three-decker on Lake Ontario was considerably smaller and of much shallower draught than her ocean-going equivalents of similar armament.
Dimensions & tons: 191ft 2in, 157ft 2⅝in x 52ft 6in x 18ft 6in. 2,304$^{90}/_{94}$ bm.
Men: 700. Guns: LD 28 x 32pdr + 4 x 24pdr + 4 x 32pdr carronades; MD 36 x 24pdr; UD 32 x 32pdr carronades + 2 x 68pdr carronades.

Saint Lawrence Kingston Dyd.
Ord: 3.1814. K: 12.4.1814. L: 10.9.1814. Laid up 1815. Sold 1.1832 and sank at Kingston; raised and used as firewood hulk.

***CANADA* Class** - 112-gun three-deckers, similar to *Saint Lawrence*.
Dimensions & tons: 191ft 3in, 157ft 7⅝in x 50ft 8in x 18ft 4in. 2,152$^{45}/_{94}$ bm.
Men: 700. Guns: LD 28 x 32pdr + 4 x 24pdr + 4 x 32pdr carronades; MD 36 x 24pdr; UD 32 x 32pdr carronades + 2 x 68pdr carronades.

Canada Kingston Dyd.

Scan and/or retouch by Grzechu

K: 12.1814. Building in 1815. Construction abandoned at end of War of 1812. Frame dismantled in 1832.

Wolfe Kingston Dyd.

K: 12.1814. Building in 1815. Construction abandoned at end of War of 1812. Frame destroyed in storm 31.7.1831.

***PRINCE REGENT* Class** - 56-gun two-decker (Fourth Rate).

Dimensions & tons: 155ft 10in, 131ft 1in x 43ft 1in x 9ft 2in. 1,293$^{50}/_{94}$ bm.

Men: 280. Guns: LD 28 x 24pdr; UD 4 x 68pdr carronades + 24 x 32pdr carronades.

Prince Regent Kingston Dyd.

L: 15.4.1814. Renamed *Kingston* 9.12.1814. Sold 1.1832.

***PSYCHE* Class** - 56-gun two-decker (Fourth Rate). Designed by Strickland, the Master Shipwright at Kingston.

Dimensions & tons: 130ft 0in, 108ft 0½in x 36ft 7in x 10ft 3in. 769$^{1}/_{94}$ bm.

Men: 280. Guns: LD 28 x 24pdr; UD 28 x 32pdr carronades.

Psyche Kingston Dyd.

K: 31.10.1814. L: 25.12.1814. Never completed, and sold 1837.

***PRINCESS CHARLOTTE* Class** - 42-gun frigate (Fifth Rate).

Dimensions & tons: 121ft 0in, 100ft 0$^{3}/_{8}$in x 37ft 8in x 8ft 8½in. 755$^{90}/_{94}$ bm.

Men: 280. Guns: UD 26 x 24pdr; QD/Fc 2 x 68pdr carronades + 14 x 32pdr carronades.

Princess Charlotte (ex-*Vittoria*, renamed 1814) Kingston Dyd.

L: 15.4.1814. Renamed *Burlington* 9.12.1814. In Ordinary by 5.1816. Sold 1.1833.

ROYAL GEORGE - 20-gun sloop ('corvette'). Design by John Dennis.

Dimensions & tons: 96ft 9in, 81ft 11¼in x 27ft 7in x 11ft 0in. 330$^{20}/_{94}$ bm.

Men: 95 (175 in 1830). Guns: 8 x 24pdr (Congreve) + 2 x 12pdr + 10 x 24pdr carronades.

Royal George Kingston Dyd.

L: 7.1809. Renamed *Niagara* 22.1.1814. Employed as transport post-war. Sold 1837.

WOLFE - 22-gun sloop. Design by Thomas Plunkett.

Dimensions & tons: 101ft 9in, 86ft 1$^{1}/_{8}$in x 30ft 6in x 4ft 6in. 426$^{23}/_{94}$ bm.

Men: 135. Guns: 8 x 24pdr (Congreve) + 2 x 12pdr + 10 x 24pdr carronades.

Wolfe Kingston Dyd.

L: 5.5.1813. Renamed *Montreal* 22.1.1814. Sold 1.1832.

EARL OF MOIRA - 16-gun brig sloop (ex-schooner). Design by Alexander Munn.

Dimensions & tons: 70ft 6in, 56ft 3$^{5}/_{8}$in x 23ft 8in x 7ft 0in. 168$^{59}/_{94}$ bm.

Men: 86 (in 1830). Guns: (by 1813) 2 x 9pdr + 14 x 24pdr carronades; in 1814 the 9pdrs and 2 carronades were replaced by 1 x 18pdr.

Earl of Moira (or *Moira*) Kingston Dyd.

L: 28.5.1805. Re-rigged as brig 1813. Renamed *Charwell* 22.1.1814. Powder hulk 1816. Accommodation vessel 1827. Sold 1837.

MELVILLE - 14-gun brig sloop. Design by George Record.

Dimensions & tons: 71ft 7in, 56ft 9½in x 24ft 8in x 8ft 0in. 186$^{46}/_{94}$ bm.

Men: 98 (80 in 1830). Guns: 4 x 18pdr (Congreve) + 2 x 9pdr + 8 x 24pdr carronades. By 1830 all 14 guns were 32pdr carronades.

Melville (or *Lord Melville*) Kingston Dyd.

L: 22.7.1813. Renamed *Star* 22.1.1814. Only fit for transport by 1815. Sold 1837.

Scan and/or retouch by Grzechu

PART I: 1815 to 1863

(the eras of Seppings, Symonds, Walker & Watts)

The period of nearly half a century between the close of the Napoleonic Wars and the creation of the ironclad fleet can be easily divided into three phases of almost equal length.

The first 15½ years saw the culmination of the sailing warship; it was overseen by the post-war Tory coalition, and in design terms by Sir Robert Seppings, the last Master Shipwright to be Surveyor of the Navy. Its end was marked by the election of 1830, bringing in the Whigs with a new Admiralty Board under Sir James Graham, which abolished the subordinate Navy Board and replaced Seppings by a naval officer, the amateur designer William Symonds. This second period witnessed not only major changes in hull forms and ordnance, but also the first major introduction of steam propulsion, first with paddle warships and subsequently with screws.

The third phase, during which the post of Surveyor was held by Sir Baldwin Wake Walker, was initiated by the acceptance of the screw as an essential element of the future battlefleet. Unlike his predecessors, Walker was appointed more for his managerial skills (his post was redesignated Controller of the Navy in 1860, the historic title of Surveyor being abolished), with design responsibilities passing to his deputies – John Edye and Isaac Watts. The period witnessed not only the rapid expansion due to the Crimean War, but the final disappearance of sail as a major factor in warship operations. Following the War, the construction of the first ironclad frigates, while contemporary with the last of the 'wooden-walls', foreshadowed the evolution of the modern warship over the next quarter-century.

A new scale of rating warships was introduced by Admiralty Order in Council on 25 November 1816, which came into effect from February 1817. Its main effect was to include the carronade armament on the upperworks (QD and Fc) in each vessel's gun rating. Previously carronades had only been included in the formal gun rating if they replaced long guns – sometimes simply theoretical long guns – in a ship's broadside. Under the new scheme all three-deckers – which now had a minimum of 100 guns (and 800 men) – became First Rates. The Second Rate now included all two-deckers with a minimum of 80 guns (and 650 men), while the Third Rate started at 70 guns (and 600 men). Among the frigates, the Fourth Rate had a minimum of 50 guns (with 350 men) and the Fifth Rate 36 guns (with 280 men). The smallest frigates – soon to be redesignated corvettes – started at 24 guns (and 125 men), while among unrated vessels there were four grades of sloop, with established crews ranging from 75 up to 135 men, while even smaller vessels (brigs, schooners, cutters and bomb vessels) had either 50 or 60 men depending on size.

There was a slight alteration in rating, according to the size of the establishment, made under an Order in Council on 2 February 1842; but a completely new scale, graded according to the complement alone (instead of combining the number of guns with the number of men), was introduced by an Order in Council 1 January 1856. The new scale differed for sailing and for steam warships.

	Steam Vessels	*Sailing Vessels*
First Rate	over 1,050 men	over 970 men
Second Rate	over 750 men	over 720 men
Third Rate	over 600 men	over 600 men
Fourth Rate	over 475 men	over 440 men
Fifth Rate	over 300 men	over 300 men
Sixth Rate	over 180 men	over 185 men
Sloops	over 100 men	over 80 men
Smaller	36 to 90 men	50 to 65 men

Scan and/or retouch by Grzechu

2 Sailing Ships added to the Royal Navy after 22 June 1815

This chapter includes all sail-powered vessels ordered but unlaunched by mid-1815 (apart from exceptions mentioned herein), as well as all ordered after that date, plus those purchased or otherwise acquired in this period. Within each category, the vessels are listed in chronological order of ordering, then of laying down, within each Class.

First Rates 110-120 guns (large three-deckers)

***CALEDONIA* Class** - 120-gun ships, continuation of Sir William Rule's 1794 design. This highly successful design became the post-war standard for three-deckers.

Dimensions & tons: 205ft 0in, 170ft 11in x 53ft 6in x 23ft 2in. 2,602$^{14}/_{94}$ bm.

Men: 900 (820 peacetime). Guns: LD 32 x 32pdr (56cwt); MD 34 x 24pdr (49cwt); UD 34 x 24pdr Congreve (instead of 18pdr first planned); QD 10 x 32pdr (17cwt) carronades + 6 x 12pdr; Fc 2 x 32pdr (17cwt) + 2 x 12pdr.

First cost: *Britannia* £103,768 (£111,630 fitted). *Prince Regent* £97,715 (£119,283 fitted). *Royal George* £87,320.

Britannia Plymouth Dyd.

Ord: 6.1.1812. K: 12.1813. L: 20.10.1820. C: 20.12.1820 (for Ordinary). Hulked as hospital ship at Portsmouth 7.1855. Became a cadet training ship there 2.1859; moved to Portland 2.1862 then Dartmouth 9.1863. BU completed at Devonport 20.11.1869.

Prince Regent Chatham Dyd.

Ord: 6.1.1812. K: 17.7.1815. L: 12.4.1823. C: 3.9.1823 (as Guard ship). Cut down to a 92-gun Second Rate (two-decker) 6.3.1841-30.9.1847. Converted to a screw battleship (see Chapter 5) in 1860-61. BU 1873.

Royal George (ex-*Neptune*, renamed 12.2.1823) Chatham Dyd.

Ord: 2.6.1819. K: 6.1823. Doubled with fir while building, to make her breadth (and guns) similar to the following ships. L: 22.9.1827. C: 3.12.1827 (for Ordinary). Converted to a screw battleship (see Chapter 5) in 1852-53. Sold to Castle 23.1.1875 to BU at Charlton.

NOTES: All later re-armed similarly to following 'Broadened' group.

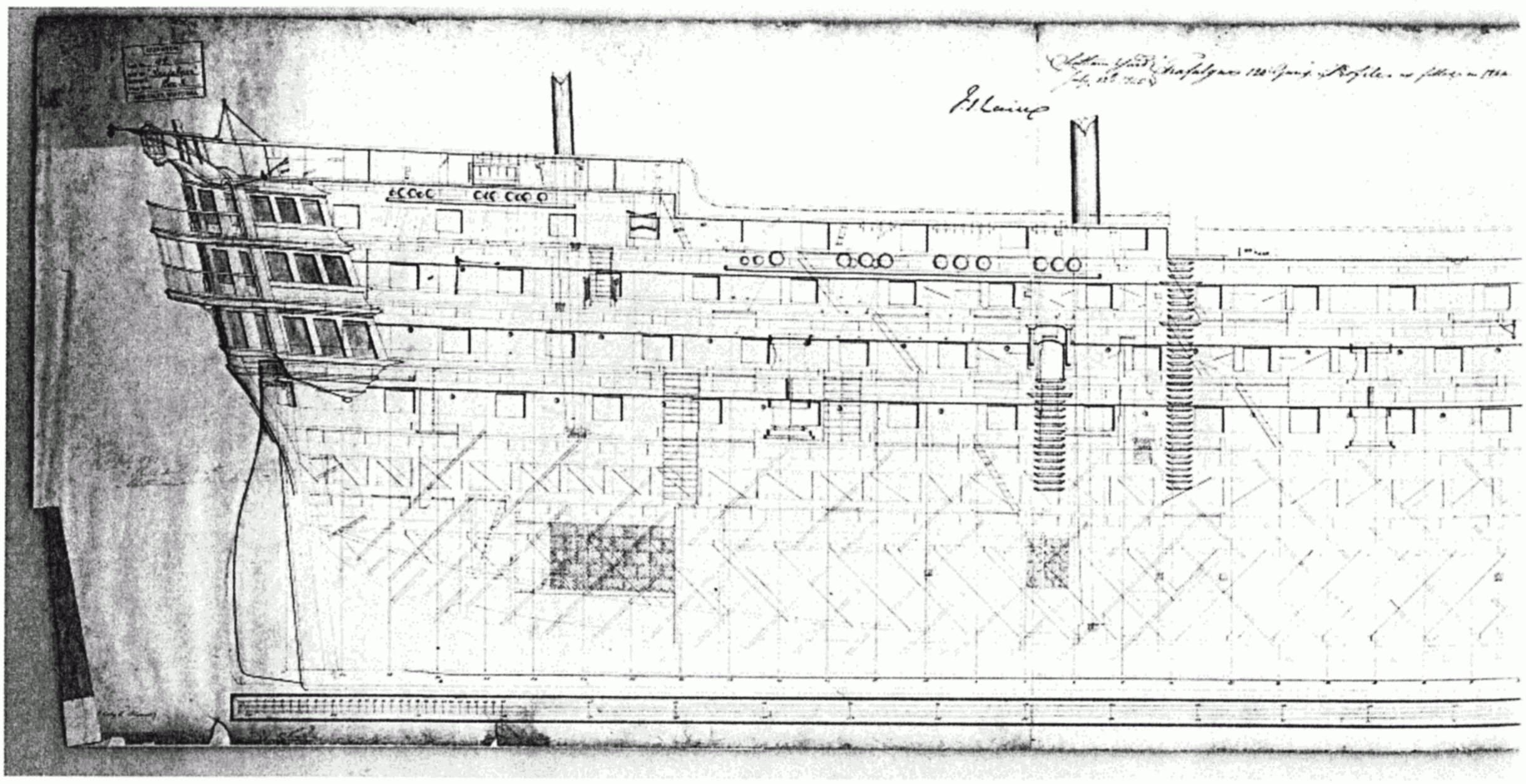
Broadened *CALEDONIA* Class - 120-gun ships. Broadened 1819 version of the *Caledonia* Class, to carry increased weight of guns.

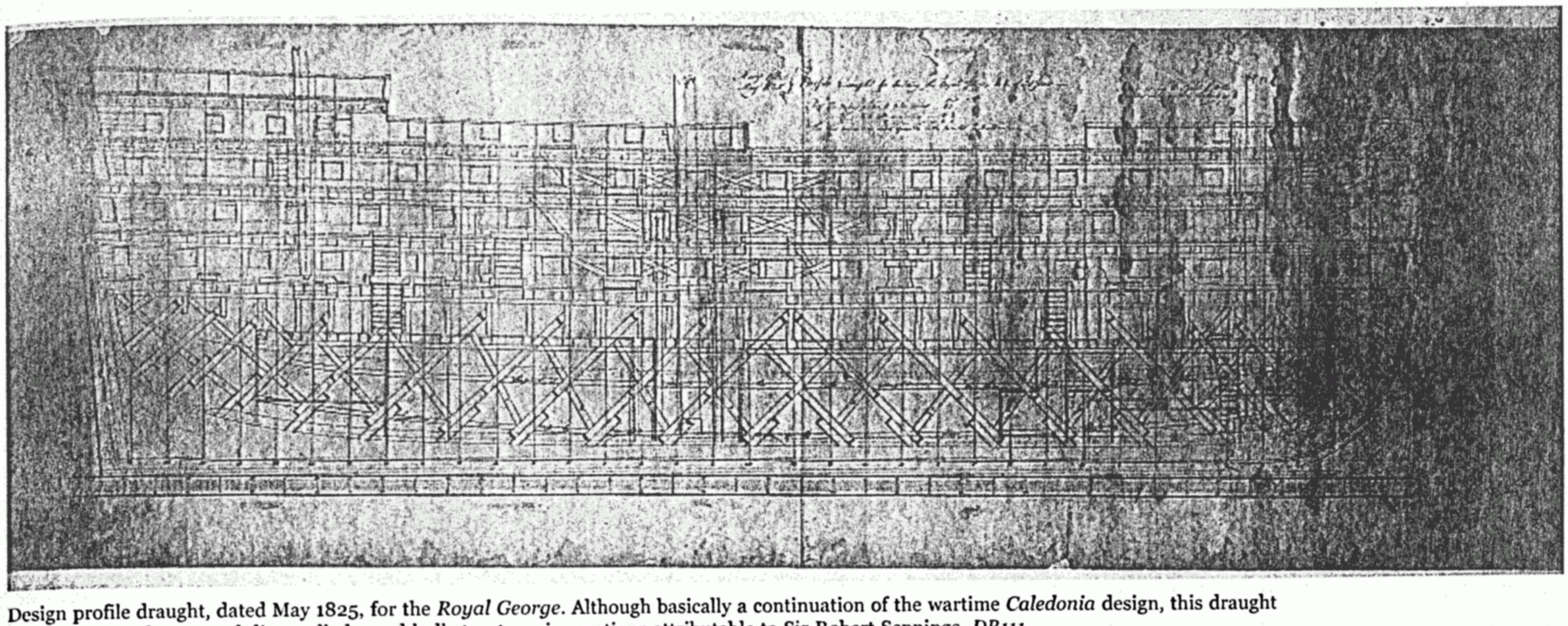
Dimensions & tons: 205ft 5½in, 170ft 6in x 54ft 6in x 23ft 2in. 2,693$^{71}/_{94}$ bm.

Men: 900 (820 peacetime). Guns: LD 30 x 32pdr (56cwt) + 2 x 8in/51pdr (65cwt) shell; MD 32 x 32pdr (55cwt) + 2 x 8in/51pdr (65cwt) shell; UD 34 x 32pdr; QD/Fc 6 x 32pdr + 14 x short 32pdr.

First cost: *Saint George* £79,112 (fitted £102,405). *Neptune* £73,595. *Royal William* £81,255. *Waterloo* £70,553 (fitted £99,898). *Trafalgar* £75,814.

As fitted profile draught for the 120-gun *Trafalgar* dated 12 July 1845 showing the ship's initial appearance as a sailing ship. *DR97*

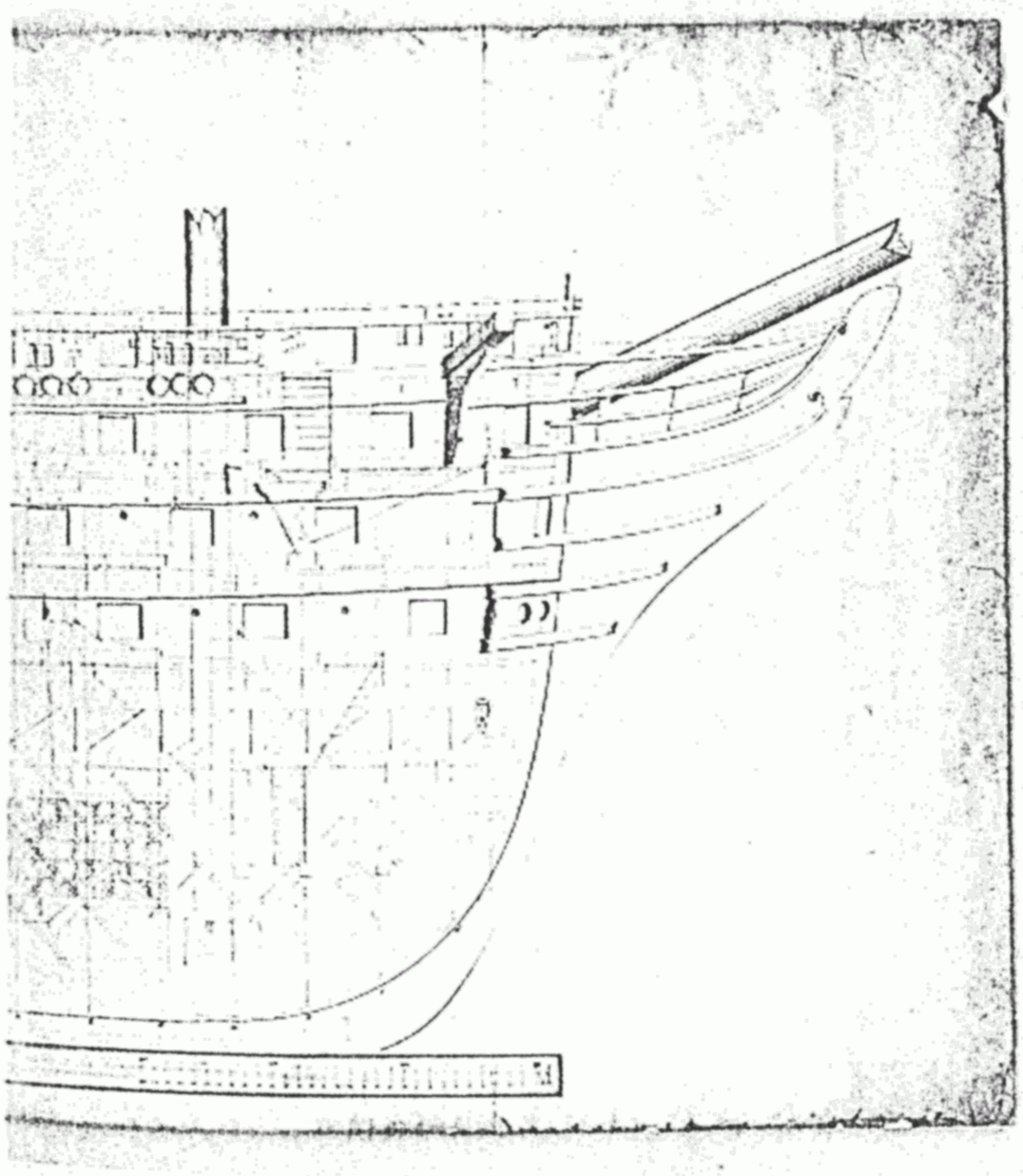




Design profile draught, dated May 1825, for the *Royal George*. Although basically a continuation of the wartime *Caledonia* design, this draught displays a round stern and diagonally braced hull structure, innovations attributable to Sir Robert Seppings. *DR111*

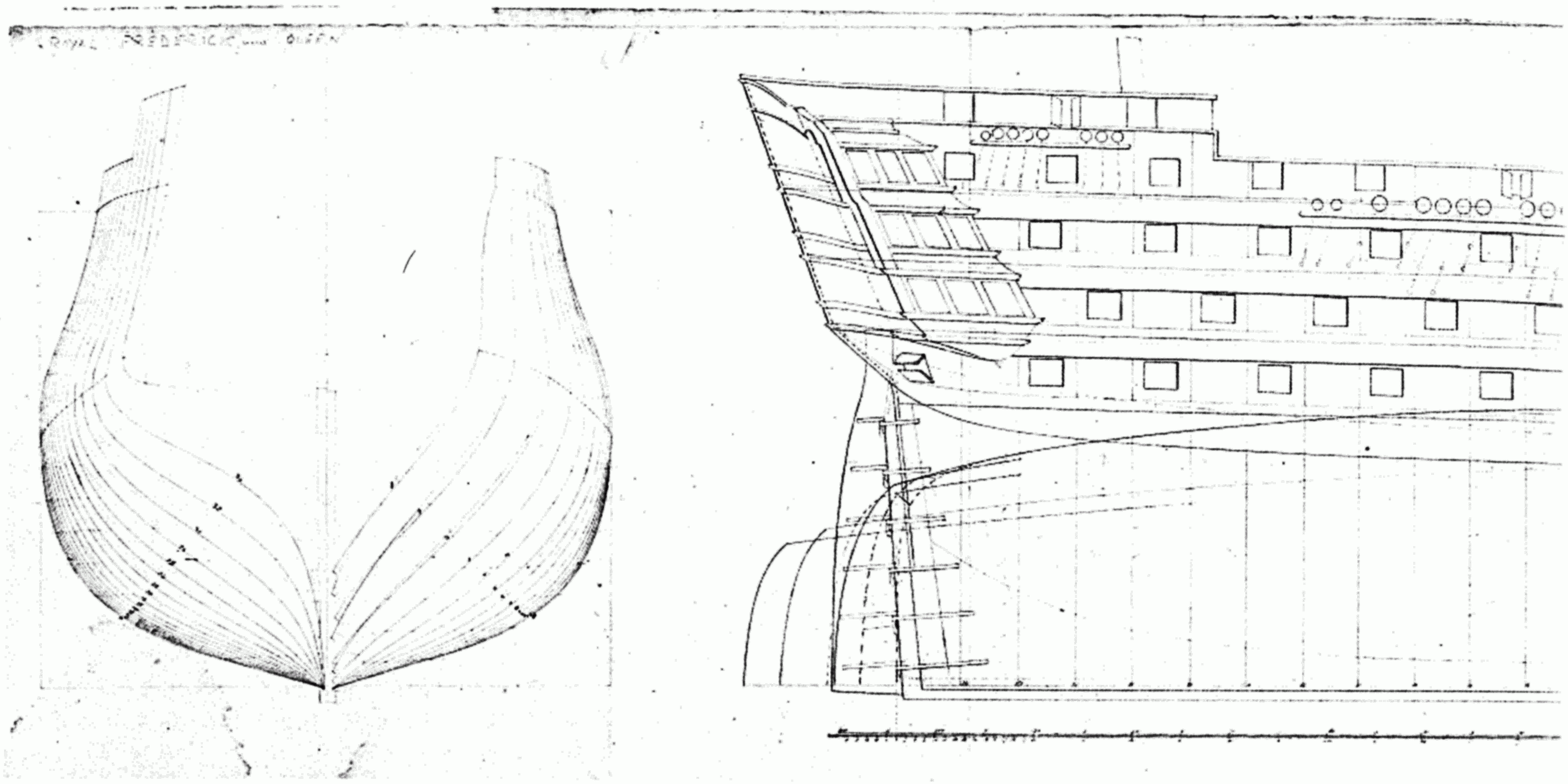
Saint George Plymouth Dyd.
Ord: 2.6.1819. K: 5.1827. L: 27.8.1840. C: 7.1850 (as Guardship). Converted to 89-gun screw battleship 1858-59 (see Chapter 5).
Neptune Portsmouth Dyd.
Ord: 12.2.1823. K: 1.1827. L: 27.9.1832. C: 12.1832 (for Ordinary). Converted to 89-gun screw battleship 1858-59 (see Chapter 5).
Royal William Pembroke Dyd.
Ord: 30.12.1823. K: 10.1825. L: 2.4.1833. C: 1834 at Plymouth (for Ordinary). Converted to 89-gun screw battleship 1859-60 (see Chapter 5).
Waterloo Chatham Dyd.
Ord: 5.10.1824. K: 3.1827. L: 10.6.1833. C: 12.1851 at Sheerness (as flagship). Converted to 89-gun screw battleship 1859 (see Chapter 5).
Trafalgar Woolwich Dyd.
Ord: 22.2.1825. K: 11.1829. L: 21.6.1841. C: 5.1845 at Sheerness. Converted to 89-gun screw battleship 1858-59 (see Chapter 5).

NOTES: All five of the above vessels were eventually converted to screw battleships in 1858-60, a process which involved them being cut down to two-deckers. A further ship - *Royal Frederick* - was ordered 29.10.1827 to this design, but on 3.9.1833 she was re-ordered to the following *Queen* Class design.



***QUEEN* Class** - 110 guns. William Symonds design.
Dimensions & tons: 204ft 0in, 166ft 5¼in x 60ft 0in oa (59ft 2in for tonnage) x 23ft 9in. 3,099$^{16}/_{94}$ bm.
Men: 950. Guns: LD 28 x 32pdr (55cwt) + 2 x 8in/68pdr (60cwt) shell; MD 28 x 32pdr (55cwt) + 2 x 8in/68pdr (60cwt) shell; UD 32 x 32pdr (49cwt); QD 10 x short 32pdr (40cwt); Fc 2 x short 32pdr (40cwt) + 2 x 68pdr (36cwt) carronades; RH 4 x 18pdr (10cwt) carronades.
First cost: *Queen* £70,474 (fitted £77,729).
Queen (ex-*Royal Frederick*, renamed 12.4.1839) Portsmouth Dyd.
Ord: 3.9.1833. K: 11.1833. L: 15.5.1839. C: 3.4.1840. Cut down to two-decker 86-gun screw battleship 1858 (see Chapter 5).
Royal Frederick (ex-*Royal Sovereign*, renamed 12.4.1839) Portsmouth Dyd.
Ord: 12.9.1833. Suspended 7.5.1834. K: 1.7.1841. Re-ordered to modified design 29.6.1848 (see below).
Algiers Pembroke Dyd.
Ord: 3.10.1833. K:... . Re-ordered 26.12.1840 as a 90-gun two-decker (see below).
Victoria Pembroke Dyd.
Ord: 3.10.1833. K: 5.1844. Re-ordered to modified design 29.6.1848 (see below).

NOTES: On 10.12.1834 the orders for *Algiers* and *Victoria* were re-designated as 74-gun two-deckers (while retaining the hull form and dimensions of the original design), but *Victoria* was re-designated as 110-gun in 1837 and *Algiers* likewise on 5.2.1839. Four further 110-gun ships were subsequently ordered to this design - the *Prince of Wales* (Portsmouth Dyd) on 14.3.1842, the *Windsor Castle* (Pembroke Dyd) and a new *Royal Sovereign* (Portsmouth Dyd) both on 19.2.1844, and the *Marlborough*



The design draught of the 110-gun *Royal Frederick* before the ship was renamed *Queen* in 1839. *DR113A*

(Portsmouth Dyd) on 20.3.1844; however, all were - like the *Royal Frederick* and *Victoria* above - re-ordered to the Modified design below on 29.6.1848.

ROYAL ALBERT - 120 guns. Oliver Lang design of 1831, effectively an expanded version of the last pre-Symondite three-decker, the *Trafalgar*. The largest pure sailing battleship ever designed for the RN.

Dimensions & tons: 220ft 0in, 177ft 2¾in x 60ft 10in oa (60ft 0in for tonnage) x 25ft 0in. 3,393$^{70}/_{94}$ bm.
Design enlarged to 3,463 tons on 24.3.1851.
Men: 1,000. Guns: LD 28 x 32pdr (56cwt) + 4 x 8in/68pdr (60cwt) shell; MD 32 x 32pdr (56cwt) + 2 x 8in/68pdr (60cwt) shell; UD 34 x 32pdr (49cwt); QD/Fc 6 x 32pdr (42cwt) + 14 x short 32pdr (25cwt).

Royal Albert Woolwich Dyd.
Ord: 26.3.1842. K: 8.1844. L:... . Re-ordered as screw battleship 31.1.1852 (see Chapter 5).

Modified *QUEEN* Class. The development of the *Queen* design was complex and changed several times. Eventually all the following vessels were re-ordered as steam/screw battleships and launched as such; the following reflects their intermediate stage when still projected as sailing ships.

Group 1 - 3,083-ton design (110 guns).
Dimensions & tons: 204ft 0in, 165ft 11in x 60ft 0in oa (59ft 1¼in for tonnage) x 23ft 9in. 3,082$^{90}/_{94}$ bm.
Men: 950. Guns: LD 28 x 32pdr (55cwt) + 2 x 8in/68pdr (60cwt) shell; MD 28 x 32pdr (55cwt) + 2 x 8in/68pdr (60cwt) shell; UD 32 x 32pdr (49cwt); QD 10 x short 32pdr (40cwt) guns; Fc 2 x short 32pdr (40cwt) guns + 2 x 68pdr (36cwt) carronades; RH 4 x 18pdr (10cwt) carronades.

Royal Frederick (ex-*Royal Sovereign*, renamed 12.4.1839) Portsmouth Dyd.
Ord: 29.6.1848. K: 7.1841 (see above). Re-ordered to complete as a screw battleship 28.2.1857 (see Chapter 5).

Victoria Pembroke Dyd.
Ord: 29.6.1848. K: 5.1844 (see above). Renamed *Windsor Castle* 6.1.1855 (the ship commenced as *Windsor Castle* below having been renamed in 1852). Re-ordered to complete as a screw battleship 28.2.1857 (see Chapter 5).

Marlborough Portsmouth Dyd.
Ord: 29.6.1848. Re-ordered to Group 2 design 31.3.1849. K: 1.9.1850. Suspended 1.12.1851. Re-ordered to complete as a screw battleship 30.10.1852 (see Chapter 5).

Group 2 - 3,186-ton design by Edye & Watts (120 guns), approved 28.7.1848.
Dimensions & tons: 210ft 0in, 171ft 1in x 60ft 0in oa (59ft 2in for tonnage) x 24ft 8in. 3,185$^{65}/_{94}$ bm.
Men: 970. Guns: LD 30 x 8in/68pdr (68cwt) shell; MD 30 x 32pdr (56cwt); UD 32 x 32pdr (42cwt); QD + Fc 8 x 32pdr (42cwt) + 14 x short 32pdr (25cwt); RH 4 x 18pdr (10cwt) carronades.

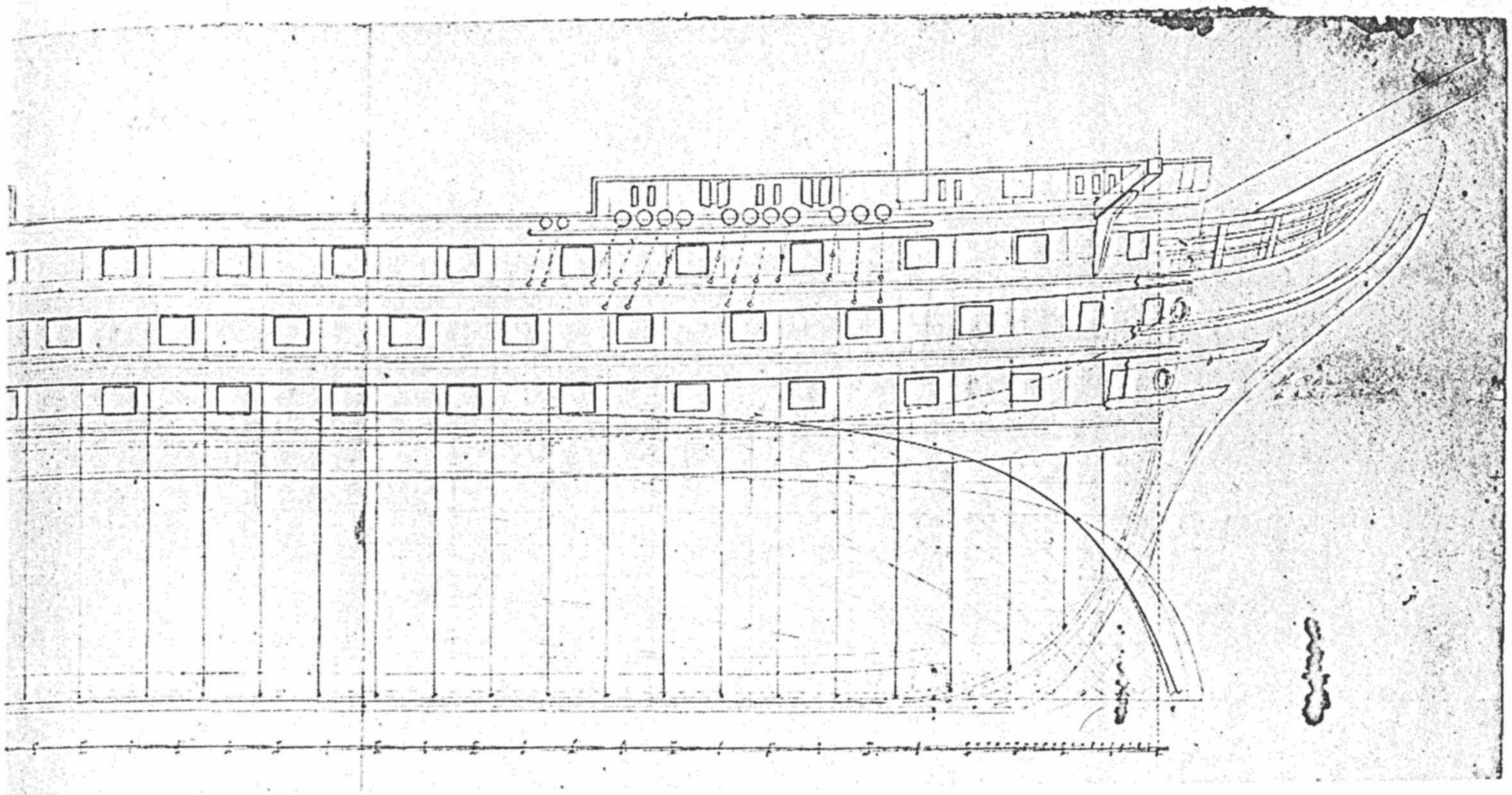
Prince of Wales Portsmouth Dyd.
Ord: 29.6.1848. K: 10.6.1848. L: ... . Re-ordered to complete as a screw battleship 9.4.1856 (see Chapter 5).

Royal Sovereign Portsmouth Dyd.
Ord: 29.6.1848. K: 17.12.1848. L: ... . Re-ordered to complete as a screw battleship 23.6.1854 (see Chapter 5).

Windsor Castle Pembroke Dyd.
Ord: 29.6.1848. K: 5.1849. L: ... . Re-ordered to complete as a screw battleship 19.1.1852 (see Chapter 5). Renamed *Duke of Wellington* 1.10.1852.

NOTES: *Royal Sovereign* and *Marlborough* were finally amended in 1850 to provide for a LD battery entirely of 68pdrs.

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First/Second Rates 100-110 guns (small three-deckers)

This category included ships ordered as Second Rates prior to 2.1817, all of which were rerated as First Rates when the new rating system came into operation in 2.1817; these smaller three-deckers (including the war-launched *Queen Charlotte* and *Impregnable* - see Chapter 1) were given Congreve 24pdrs on the UD in 1817. They subsequently were reclassed as Second Rates again, leaving the First Rate to comprise just the 120-gun (*Caledonia* group) and 110-gun (*Queen* group) ships.

TRAFALGAR - 106-gun ship (prior to 1817, rated as 98 guns). Sir William Rule design, approved 11.6.1807, modified from *Impregnable*. In 1813 the design breadth was increased by 1½ft (from 51ft) for better stability.

Dimensions & tons: 196ft 0in, 162ft 9in x 52ft 6in x 22ft 8in. 2,386$^{5}/_{94}$ bm. 4,140 disp.

Men: 738. Guns: LD 28 x 32pdr (56cwt); MD 30 x 24pdr (49cwt); UD 30 x 24pdr Congreve; QD 6 x 12pdr + 8 x 32pdr (17cwt) carronades; Fc 2 x 12pdr + 2 x 32pdr (17cwt) carronades; RH 6 x 18pdr carronades.

First cost: £85,082.

Trafalgar Chatham Dyd (originally ordered 15.1.1806 from Plymouth Dyd).

Ord: 17.8.1806. K: 5.1813. L: 26.7.1820. C: 7.9.1820 (for Ordinary). Renamed *Camperdown* 22.2.1825. Guardship and receiving ship at Portsmouth 11.1853. Coal depot there 1860. Renamed *Pitt* 29.8.1882. Sold to Castle to BU at Charlton 15.5.1906.

NOTES: Rerated 104-gun in 1835. Never commissioned for sea service.

***PRINCESS CHARLOTTE* Class** - 110-gun ships (prior to 1817, rated as 98 guns). An enlarged 1812 version of the design of the 1801 *Boyne* Class, thereby a development of Slade's *Victory*. Design amended 19.6.1813 to provide a round bow and circular stern. Broadened by 17in during construction to carry additional weight of armament; an extra (11ft 7in) section added amidships to gain extra length and 'additional breadth (was) to be obtained by cross framing' (and doubling).

Dimensions & tons: 197ft 7in, 163ft 4in x 52ft 9in x 22ft 6in. 2,417$^{44}/_{94}$ bm. 4,122 disp.

Men: 738. Guns: LD 26 x 32pdr (56cwt) + 2 x 8in/68pdr (65cwt) shell; MD 28 x 32pdr (48cwt) + 2 x 8in/68pdr (65cwt) shell; UD 30 x 32pdr (32cwt); QD 12 x 32pdr (17cwt) carronades + 2 x 12pdr; Fc 2 x 32pdr (17cwt) carronades.

First cost: *Princess Charlotte* £89,126 (fitted £110,486). *Royal Adelaide* £98,796 (fitted £119,233).

Princess Charlotte Portsmouth Dyd.

Ord. 6.1.1812. K: 11.1818. L: 14.9.1825. C: 5.1837. After the Syrian campaign in 1840 she (and other small three-deckers) saw no further active service. Floating barracks at Hong Kong 1857; receiving ship there 1860. Sold at Hong Kong 1875.

Royal Adelaide (ex-*London*, renamed 10.5.1827) Plymouth Dyd.

Ord. 6.1.1812. K: 5.1819. L: 28.7.1828. C: 7.1835. Became the flag/guard ship at Plymouth 5.1859; Receiving ship 7.1860; to Chatham as receiving ship 9.1891. Sold to Laidler, Sutherland 4.4.1905 and BU at Dunkirk.

NOTES: Rerated 104-gun in 1835, but limited firepower (vis-á-vis large three-deckers) meant limited employment.

Second Rates of 90 guns (two-deckers)

The additional structural strength provided by Seppings' diagonal framing meant that two-deckers could now be built with as great a length as previous three-deckers. A design for a 100-gun flush-deck two-decker was produced by the simple expedient of razéeing the design of the 120-gun

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three-decked *Caledonia*, but this was reduced to a 92-gun ship before completion by deleting the waist guns. From this time the Admiralty (unlike their French and American rivals) took the decision not to arm the waist on either three- or two-decker ships.

***RODNEY* Class** - 92 guns (originally planned as 100 guns). Sir Robert Seppings design of 17.11.1826.

Dimensions & tons: 205ft 6in, 170ft 4in x 54ft 5in oa (53ft 6in for tonnage) x 23ft 0in. 2,598$^{1}/_{94}$ bm.

Men: 820 (720 in peacetime). Guns: LD 32 x 32pdr (63cwt) + 2 x 8in/68pdr (50cwt) shell; UD 32 x 32pdr (55cwt) + 2 x 8in/68pdr (50cwt) shell; QD/Fc 24 x 32pdr (42cwt). Later re-armed with LD 26 x 32pdr (56cwt) + 6 x 8in/68pdr shell; UD 30 x 32pdr (56cwt) + 4 x 8in/68pdr shell; QD/Fc 26 x 32pdr (42cwt).

First cost: *Rodney* £64,712 (+ fitting £23,438). *Nile* £44,532 (+ fitting £28,973). *London* £74,647 (including fitting).

Rodney Pembroke Dyd.

Ord: 11.1826. K: 7.1827. L: 18.6.1833. C: 7.12.1835 at Plymouth.

Converted to screw battleship 3.1859 to 1.1860 (see Chapter 5).

Nile Plymouth Dyd.

Ord: 11.1826. K: 10.1827. L: 28.6.1839. C: 12.8.1839 (for Ordinary).

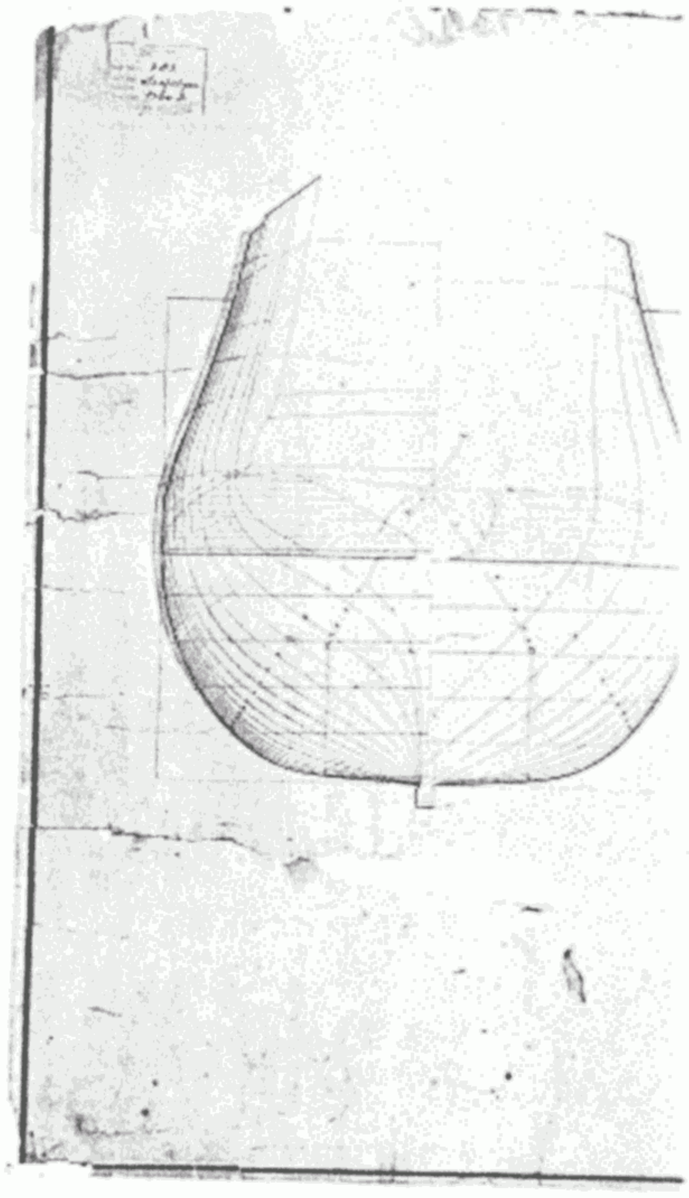
Converted to screw battleship 12.1852 to 1.1854 (see Chapter 5).

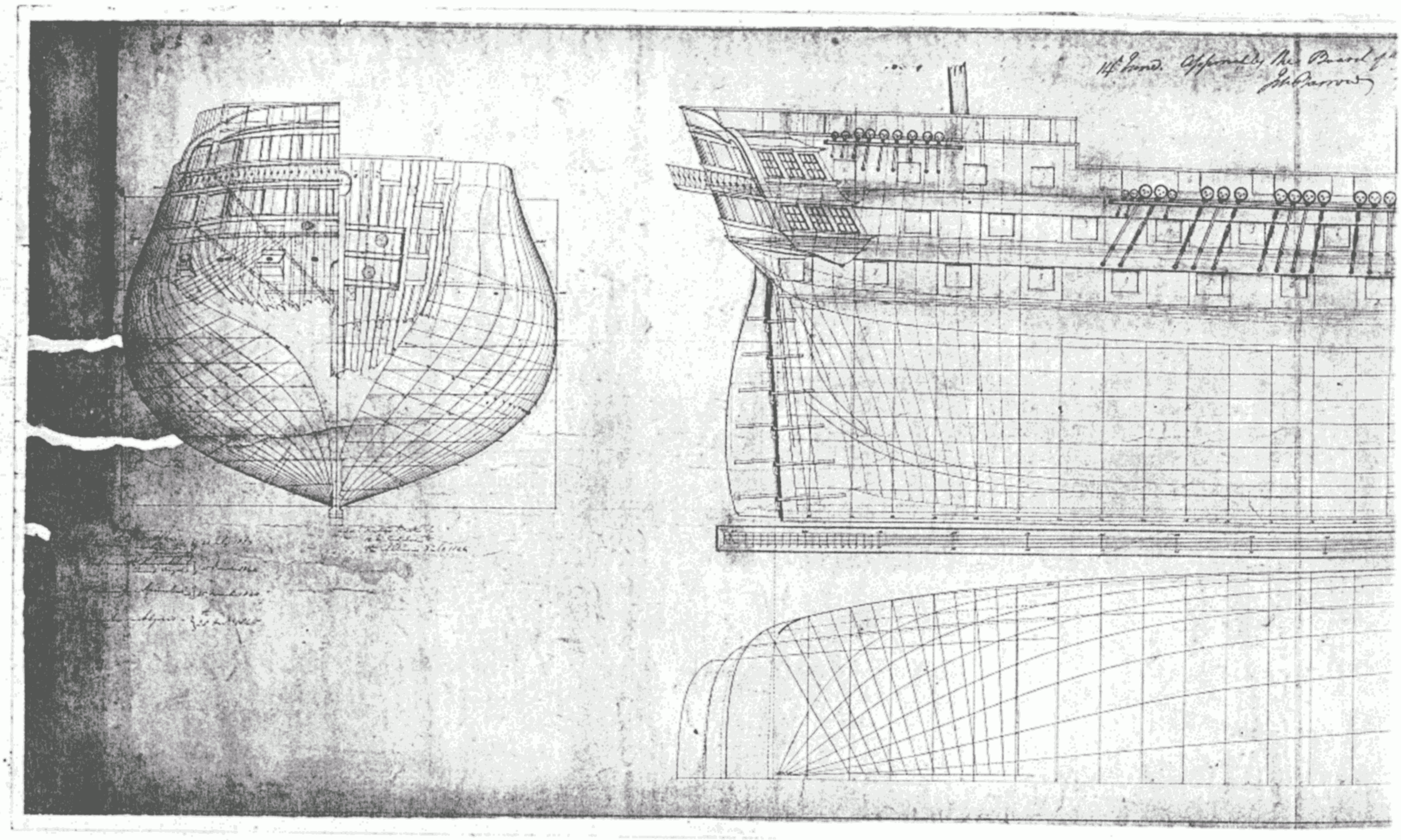
London Chatham Dyd.

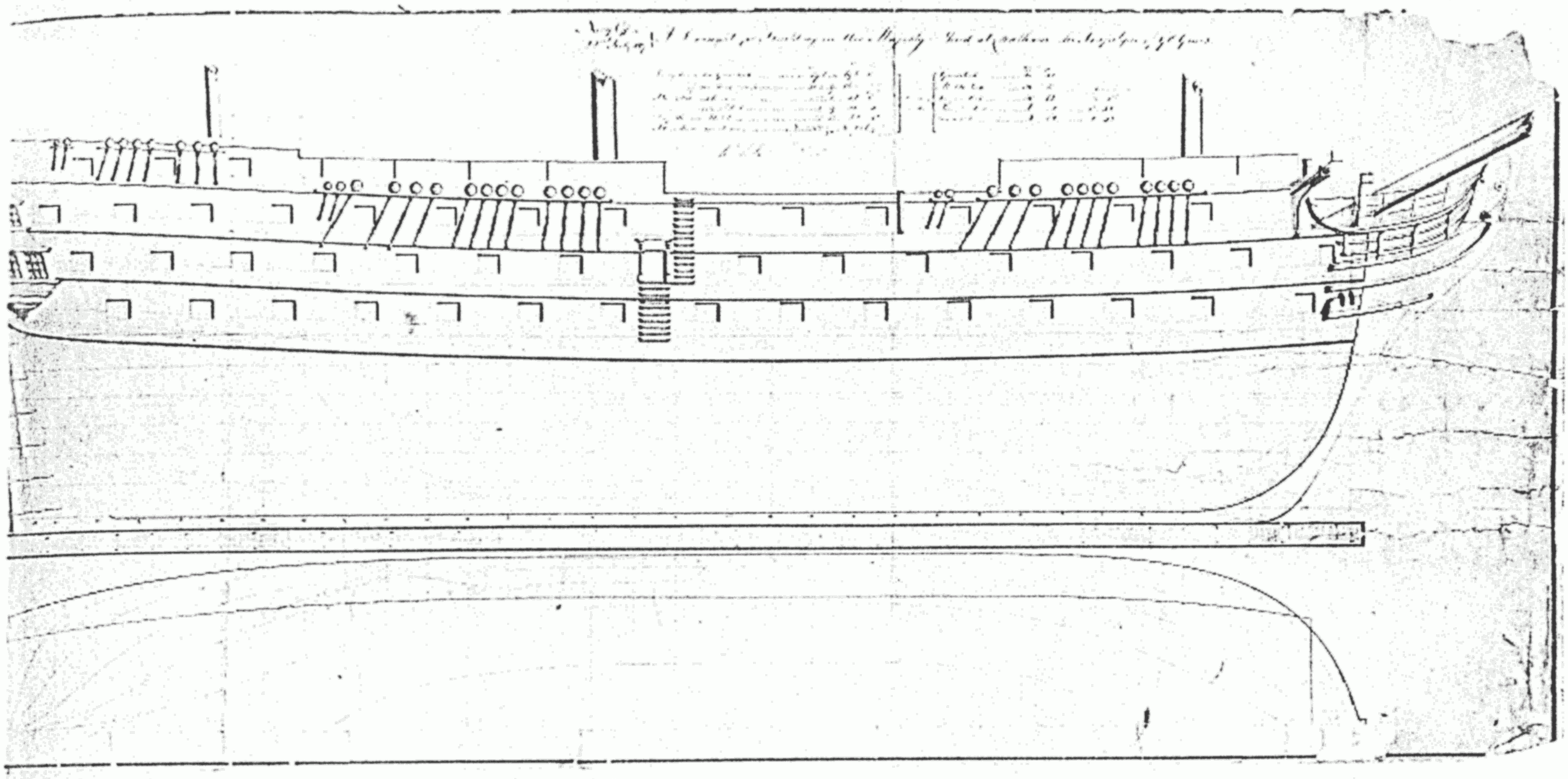
Ord: 11.1826. K: 10.1827. L: 28.9.1840. C: 25.2.1841. Converted to screw battleship 1.1857 to 5.1858 (see Chapter 5).

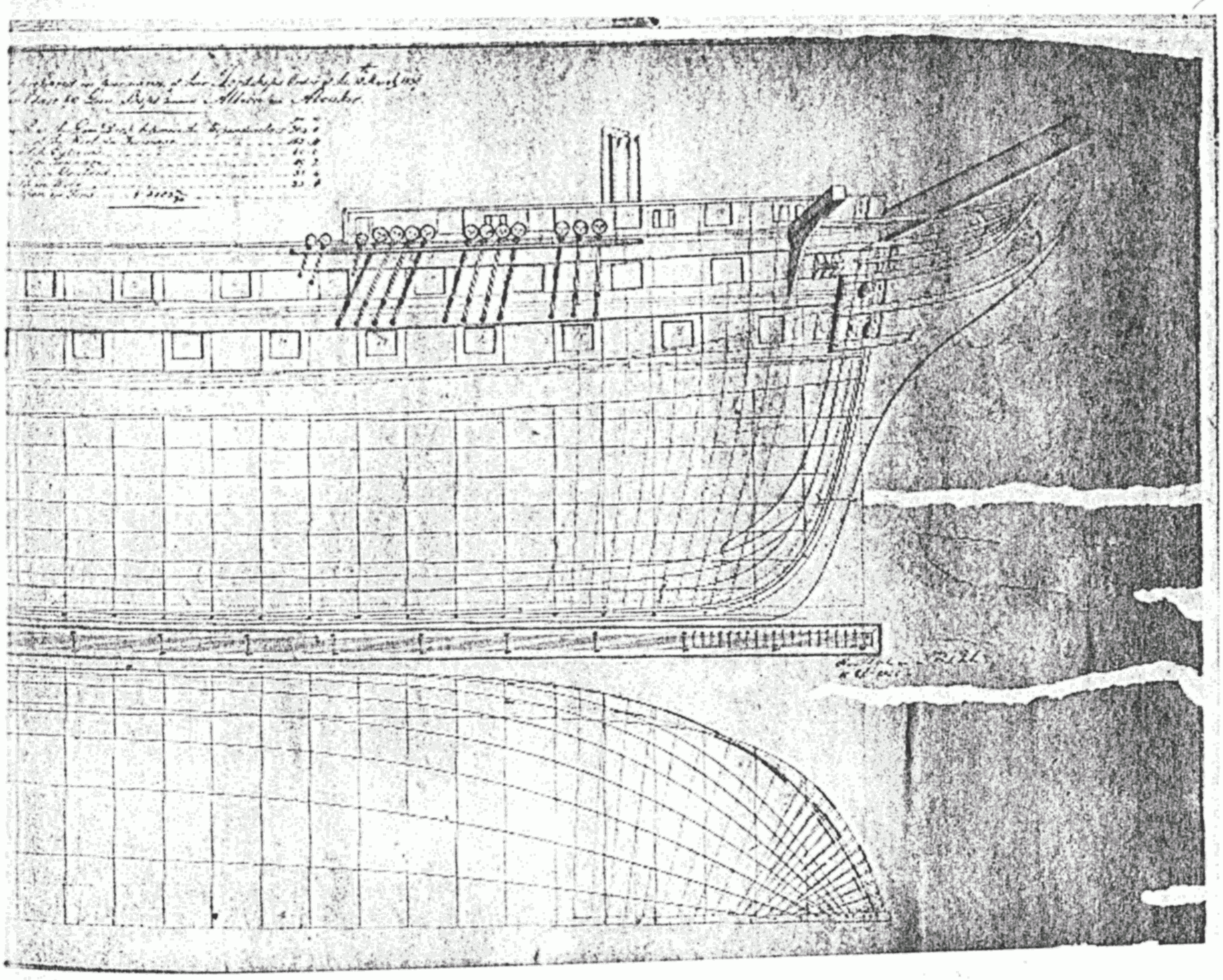
NOTES: Conceived as a response to the huge American *Ohio* Class and the French *Royal Charles*, two-deckers with a fully-armed spar deck (*ie* like

The original design draught of the *Trafalgar* dated 22 July 1807 when the ship was still rated as 98 guns. Alterations show the post-war built-up bow. *DR251*



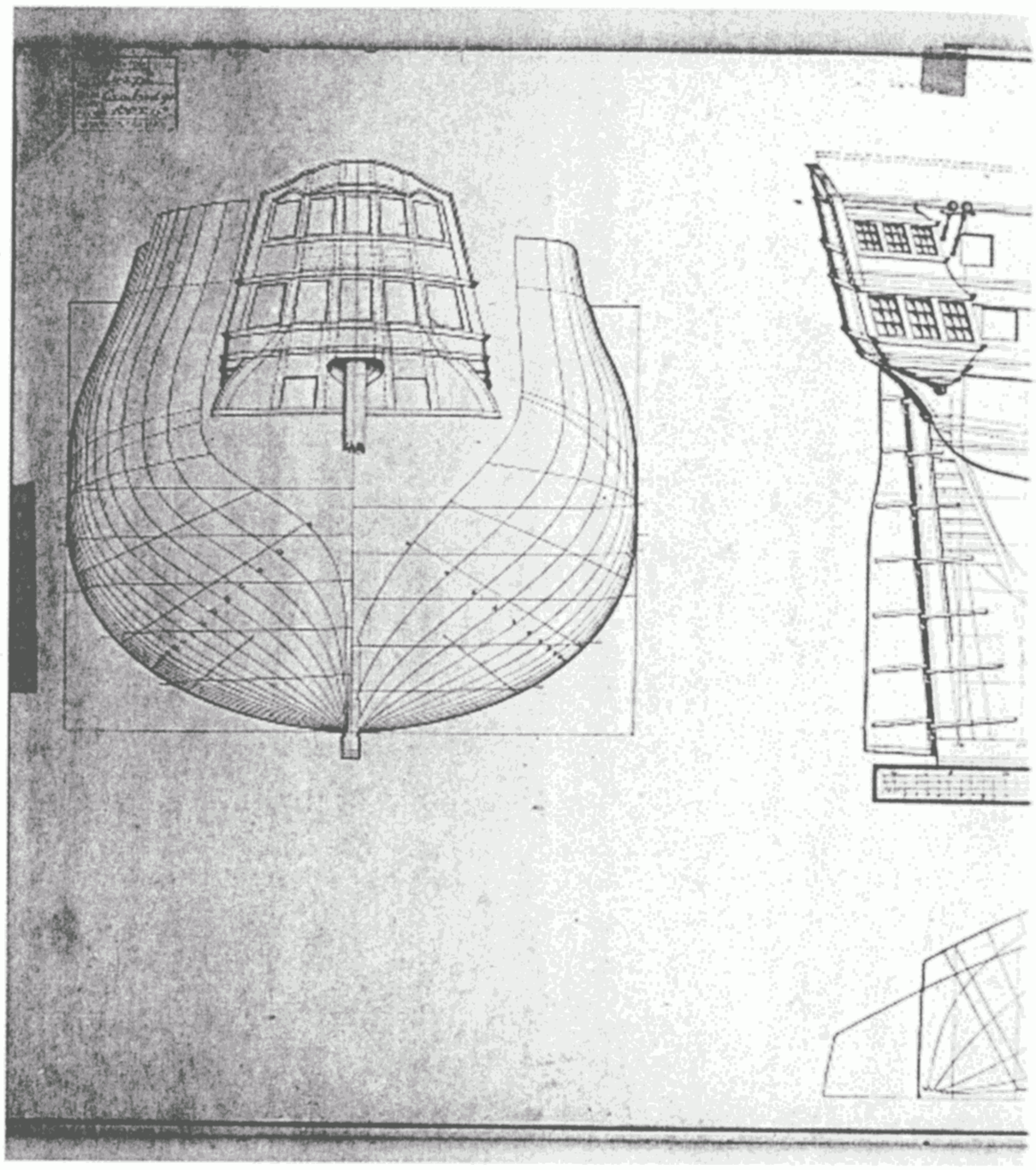






Design sheer draught, dated 13 June 1839, for 'the New Class 90 Gun Ships' *Albion* and *Aboukir*, showing the typically sharp Symonds midship section and raked 'elliptical' stern. *DR7383*

Scan and/or retouch by Grzechu



Design draught for the *Cambridge* of 80 guns, dated 15 August 1810. The narrow stern is inspired by the design's model, the captured Danish ship *Christian VII*, although the latter ship's 'Hohlenberg stern' had no conventional stern windows. *DR427A*

three-deckers without QD or Fc). The decision to delete the guns mounted on the spar deck (and at the same time to mount 4 x 12pdr carronades on the poop/RH) reduced the ordnance by eight guns. In 1856 *Rodney* and *London* were fitted as depot ships for the mortar vessels/floats, retaining lower masts but otherwise rigged as Second Class frigates.

***ALBION* Class** - 90 guns. Sir William Symonds design of 6.1839.

Dimensions & tons: 204ft 0in, 165ft 11in x 60ft 0in oa (59ft 1¼in for tonnage) x 23ft 8in. 3,083$^{12}/_{94}$ bm.

Amended to 204ft 0in, 166ft 0in x 60ft 2¼in oa (59ft 3in for tonnage) x 23ft 8in. 3,099$^{70}/_{94}$ bm.

Men: 750 (peace)/820 (war). Guns: LD 4 x 68pdr (112cwt) + 28 x 32pdr (56cwt); UD 26 x 32pdr (56cwt) + 6 x 8in/68pdr shell (65cwt); QD 16 x 32pdr (42cwt) + 2 x 8in/68pdr shell (52cwt); Fc 8 x 32pdr (42cwt).

First cost: *Albion* £77,167 (+ fitting £20,689). *Aboukir* (while building as sailing 90) £80,472.

Albion Plymouth Dyd.

Ord: 18.3.1839. K: 13.8.1839. L: 6.9.1842. C: 23.1.1844. Converted to screw battleship (see Chapter 5) 4.1860 to 5.1861, but never completed for sea. Sold to Castle & Sons to BU 8.1884.

Aboukir Plymouth Dyd.

Ord: 18.3.1839. K: 8.1840. L: 4.4.1848. Uncompleted as sailing ship (remained in Ordinary). Converted to screw battleship 9.1856 to 1.1858 (see Chapter 5). Sold to G. Lyon in Jamaica to BU 1878.

Exmouth Plymouth Dyd.

Ord: 12.3.1840. K: 13.9.1841. Converted to screw battleship on stocks (see Chapter 5). L: 12.7.1854.

Princess Royal (ex-*Prince Albert*, renamed 26.3.1842) Portsmouth Dyd.

Ord: 12.3.1840. K: 2.1841. Re-ordered to new design 1847 (see below).

Hannibal Woolwich Dyd.

Ord: 12.3.1840. K: ... . Re-ordered to new design 1847 (see below).

Algiers Plymouth Dyd.

(Re)Ord: 26.12.1840. K: 10.7.1843. Re-ordered to new design 1847 (see below).

St Jean d'Acre Plymouth Dyd (see Notes).

Ord: 19.2.1844. K: ... . Suspended (with her sisters, above) 18.12.1844 and later re-designed (see below).

NOTES: The first pair were originally ordered as *Vanguard* Class 80s (which see); names were allocated 20.5.1839 on this basis, but they were reclassed as 90-gun on 21.6.1839. Next three were named 14.5.1840. *Algiers*, first ordered 1833 as a First Rate (see above), was re-ordered as a 90-gun Second Rate in 1840. *Marlborough* (at Devonport) and *St Jean d'Acre* (at Portsmouth) were first ordered 19.2.1844 to this design, but three weeks later *Marlborough* was amended to a 110-gun First Rate (see above) and the two yards interchanged. Construction of this class (excluding the already-completed *Albion*) was suspended 18.12.1844, but most re-commenced 26.3.1846.

***PRINCESS ROYAL* Class** - 90 guns. John Edye design of 1847, with breadth reduced from *Albion* design.

Dimensions & tons: 204ft 0in, 166ft 7$^{3}/_{8}$in x 58ft 0in oa (57ft 2in for tonnage) x 24ft 0in. 2,896$^{25}/_{94}$ bm.

Men: 750 (peace)/820 (war). Guns: LD 4 x 68pdr (112cwt) + 28 x 32pdr (56cwt); UD 26 x 32pdr (56cwt) + 6 x 8in/68pdr shell (65cwt); QD 16 x 32pdr (42cwt) + 2 x 8in/68pdr shell (52cwt); Fc 8 x 32pdr (42cwt).

Princess Royal (ex-*Prince Albert*, renamed 26.3.1842) Portsmouth Dyd.

(Re)Ord: 15.4.1847. (K: 2.1841.) Re-ordered as screw battleship (see Chapter 5) 23.9.1852 and converted on stocks. L: 23.6.1853.

***ALGIERS* Class** - 90 guns. (Samuel) Read, (Henry) Chatfield and (Augustin) Creuze design of 1847, lengthened by 6ft from the *Queen* design. The *Caesar* was originally ordered 24.6.1847 to this design, but subsequently re-specified as shown below.

Dimensions & tons: 210ft 0in, 170ft 0in x 60ft 0in oa (59ft 2in for tonnage) x 24ft 5in. 3,165$^{42}/_{94}$ bm.

Men: 750 (peace)/820 (war). Guns: LD 32 x 68pdr (65cwt); UD 32 x 32pdr (56cwt); QD 16 x 32pdr (42cwt) + 2 x 8in/68pdr shell (52cwt); Fc 8 x 32pdr (42cwt).

Algiers Devonport Dyd.

(Re)Ord: 25.4.1847. (K: 10.7.1843.) Converted to screw battleship on stocks (see Chapter 5). L: 26.1.1854.

***CAESAR* Class** - 90 guns. Committee of Reference design 1847, modified from *Rodney* design; approved 13.8.1847.

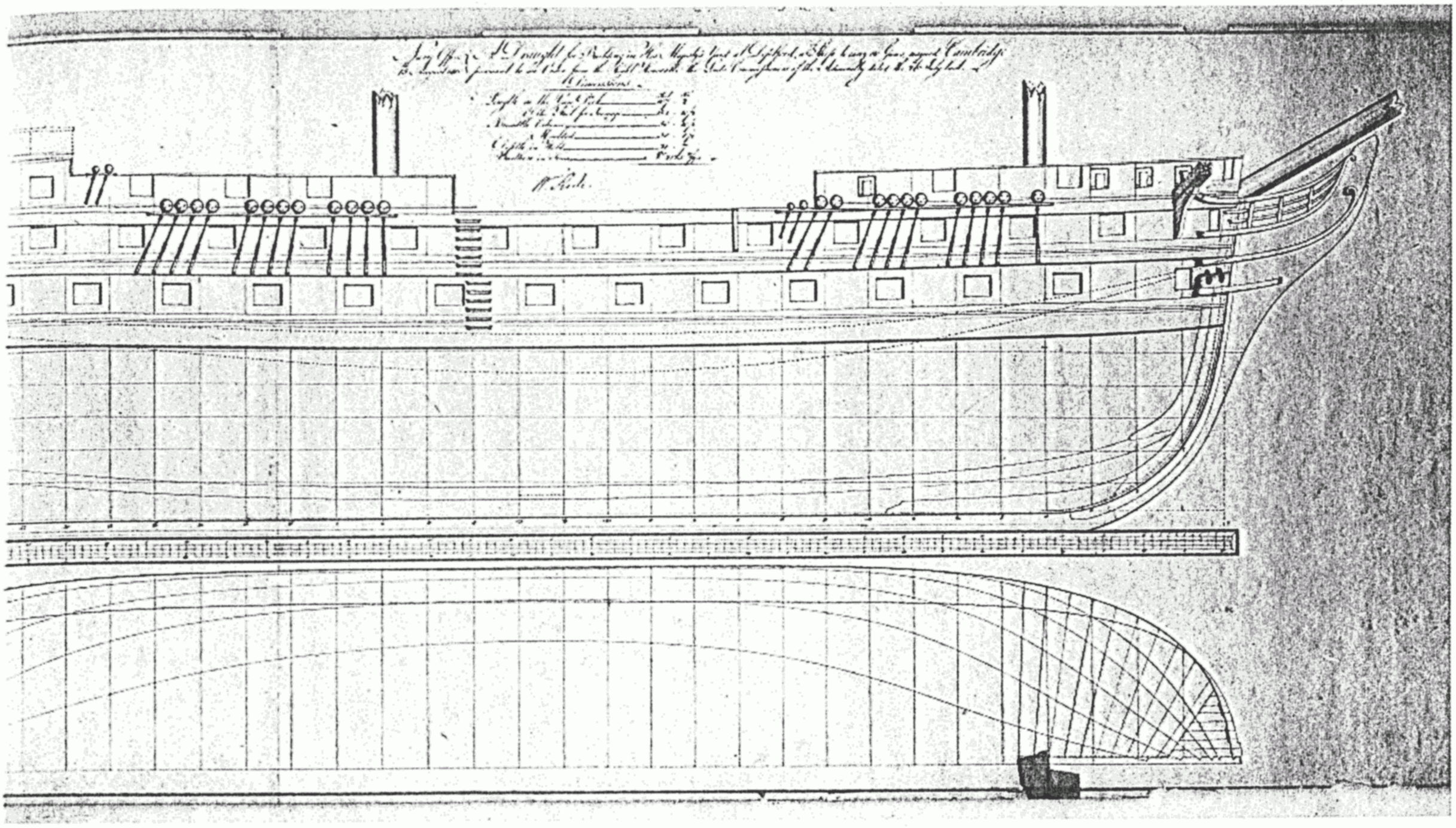
Dimensions & tons: 207ft 4in, 170ft 7$^{3}/_{8}$in x 56ft 0in oa (55ft 2in for tonnage) x 23ft 4in. 2,761$^{24}/_{94}$ bm.

St Jean d'Acre Devonport Dyd.

(Re)Ord: 25.4.1847. K: ... . Finally begun as screw battleship (see Chapter 5). L: 23.3.1853.

Caesar Pembroke Dyd (originally 28.6.1847 from Portsmouth Dyd).

(Re)Ord: 13.8.1847. K: 8.1848. Re-ordered as screw battleship 30.10.1852 and converted on stocks (see Chapter 5). L: 8.8.1853.



***HANNIBAL* Class** - 90 guns. John Edye second design of 1847, lengthened from *Princess Royal* design.

Dimensions & tons: 208ft 0in, 170ft 7⅜in x 58ft 0in oa (57ft 2in for tonnage) x 24ft 0in. 2,965$^{75}/_{94}$ bm.

Hannibal Woolwich Dyd.

(Re)Ord: 19.6.1847. K: 12.1848. Re-ordered as screw battleship 23.9.1852 and converted on stocks (see Chapter 5). L: 31.1.1854.

Second Rates of 80 (later 84) guns (two-deckers)

Two 80s were building and another (*Formidable*) had just been ordered at the close of the Hundred Days.

WATERLOO - 80 guns. Henry Peake design 1809.

Dimensions & tons: 192ft 0in, 159ft 10in x 49ft 0in x 21ft 0in. 2,041$^{26}/_{94}$ bm (as completed 2,056 bm). 3,307 disp.

Men: 650. Guns: LD 30 x 32pdr; UD 32 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.

First cost: £72,217 (fitted £85,473).

Waterloo (ex-*Talavera*, renamed 23.7.1817) Portsmouth Dyd.

Ord: 29.8.1809. K: 11.1813. L: 16.10.1818. C: 28.10.1818 (for Ordinary). Renamed *Bellerophon* by AO 5.10.1824. Finally fitted for sea 7.1836. Receiving ship at Portsmouth 10.1856. Sold to J. Read to BU 12.1.1892.

CAMBRIDGE - 80 guns. 1810 design, based on Danish *Christian VII*, a prize of 1807. Later reclassed as 82 guns.

Dimensions & tons: 187ft 2in, 154ft 10½in x 50ft 9½in x 21ft 7in. 2,125$^{27}/_{94}$ bm.

Men: 700 (630 peacetime). Guns: LD 30 x 32pdr; UD 32 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.

First cost: £82,556 (+ fitting £27,389).

Cambridge Deptford Dyd.

Ord: 16.7.1810. K: 12.1811. L: 23.6.1815. C: 12.1823 at Chatham (as Guardship). Became a gunnery training ship at Plymouth 8.1856. BU completed at Plymouth 22.3.1869.

NOTES: 2 LD and 2 UD guns replaced later by 4 x 68pdr carronades, and other 18pdrs & 12pdrs each replaced by a 24pdr.

***GANGES* (or *FORMIDABLE*) Class** - 84 guns (prior to 1817, rated at 80 guns). Design copied from *Canopus* (French prize *Le Franklin*, taken 1798). This class went through a series of design modifications after the first vessel (*Ganges*) was built.

Dimensions & tons: (original) 193ft 10in, 160ft 2⅝in x 51ft 5¼in x 22ft 6in. 2,254$^{69}/_{94}$ bm.

(As modified) 195ft 4½in, 162ft 2½in x 52ft 4½in x 22ft 6in (Bombay ships were 196ft 1½in GD). 2,279$^{29}/_{94}$ bm.

Men: 700. Guns: LD 32 x 32pdr; UD 32 x 24pdr; QD 4 x 24pdr + 14 x 32pdr carronades; Fc 2 x 24pdr + 2 x 32pdr carronades.

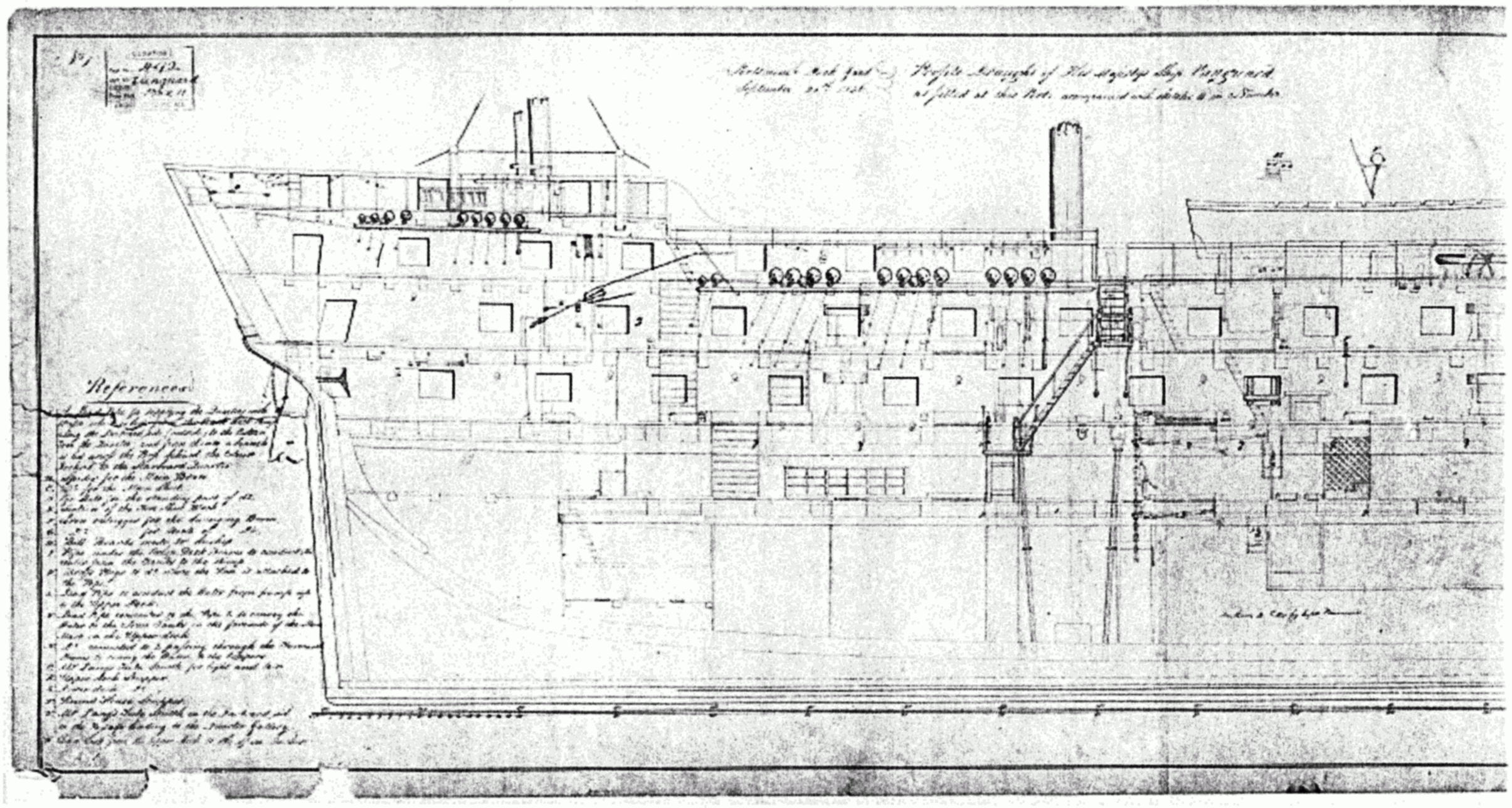
First cost: *Formidable* £64,273. *Ganges* £74,498 (+ fitting £30,323). *Powerful* £65,926. *Vengeance* £60,878. *Monarch* £62,591. *Thunderer* £72,292. *Asia* £78,541. *Bombay* £51,176 (+ fitting £17,741). *Clarence* £64,384 (+ fitting £10,705).

Formidable Chatham Dyd.

Ord: 8.5.1815. K: 10.1819. L: 19.5.1825. C: 5.8.1825 (for Ordinary). Lent as training ship 16.7.1869. Sold to J.B.Garnham & Son to BU 10.7.1906.

Ganges East India Co., Bombay. Teak-built.

Ord: 4.6.1816. K: 5.1819. L: 10.11.1821. C: 7.1.1823 at Portsmouth.



This profile draught of *Vanguard* as fitted, dated 28 September 1836, shows the more detailed information that was required as warship fittings became more complex and less standardized. Even so, according to a note on the draught, it was accompanied by 11 sketches. *DR492*

Training ship 5.1865. Renamed *Tenedos II* on 21.6.1906, then *Indus V* on 13.8.1910, and finally *Impregnable III* on 12.10.1922. Sold to BU 31.8.1929.

Powerful Chatham Dyd.
Ord: 23.1.1817. K: 8.1820. L: 21.6.1826. C: 4.10.1826 (for Ordinary). Ordered to be converted to screw battleship 17.1.1860, but substituted by her sister *Bombay* in 5.1860 when hull found decayed, and instead became target ship 1860. BU completed at Chatham 29.8.1864.

Vengeance Pembroke Dyd.
Ord: 24.1.1817. K: 7.1819. L: 27.7.1824. C: 1825 at Chatham (for Ordinary). Receiving ship at Plymouth 1861. Hulk 1864. Sheer hulk 1879. Sold to Mr Scawn 10.5.1897 to BU.

Monarch Deptford Dyd.
Ord: 18.7.1817. Order transferred to Chatham Dyd on 22.2.1825. K: 8.1825. L: 8.12.1832. C: 10.6.1833 at Sheerness (for Ordinary). Target ship 1862. BU completed by White, Cowes 3.10.1866.

Thunderer Woolwich Dyd.
Ord: 23.7.1817. K: 4.1823. L: 22.9.1831. C: 8.3.1833 (for Ordinary). Target ship 5.1863. Renamed *Comet* on 21.4.1869, then *Nettle* on 9.3.1870. Sold 25.11.1901.

Asia East India Co., Bombay. Teak-built.
Ord: 6 & 22.4.1819. K: 1.1822. L: 19.1.1824. C: 1.1827 at Portsmouth. Guardship 1858. Sold to Adrien Merveille, Dunkirk to BU on 7.4.1908.

Bombay East India Co., Bombay. Teak built.
Ord: 28.4.1819. K: 5.1826. L: 17.3.1828. C: 26.5.1828. Converted to screw battleship 5.1860 - 6.1861 (see Chapter 5). Burnt by accident off Montevideo 14.12.1864.

Clarence (ex-*Goliath*, renamed 26.5.1827) Pembroke Dyd.
Ord: 27.5.1819. K: 8.1824. L: 25.7.1827. C: ?1827 at Plymouth. Lent to Liverpool R.C. Reformatory Society 1.1864. Converted to training ship 1872. Burnt by accident in the Mersey 17.1.1884.

NOTES: *Formidable* built from timber captured on the stocks at Genoa 18.4.1814 (this timber being the French *Le Brave* building there). Unlike the 74s, the Bombay-built 84s did not, as sometimes erroneously recorded, bring home duplicate frames for the ships building in the UK.

***BOSCAWEN* Class** - 80 guns. Seppings design 1817, to 'enlarged lines of the old *Minotaur*', with the addition of a circular stern.

Dimensions & tons: 187ft 4½in, 153ft 8in x 50ft 0in x 21ft 6in. 2,043$^{41}/_{94}$ bm.

Men: 650. Guns: LD 28 x 32pdr + 2 x 68pdr carronades; UD 32 x 24pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.

Boscawen Woolwich Dyd.
Ord: 20.11.1817. K: 1.1826. Cancelled 29.11.1831 ('the timbers to be used for *Indefatigable*').

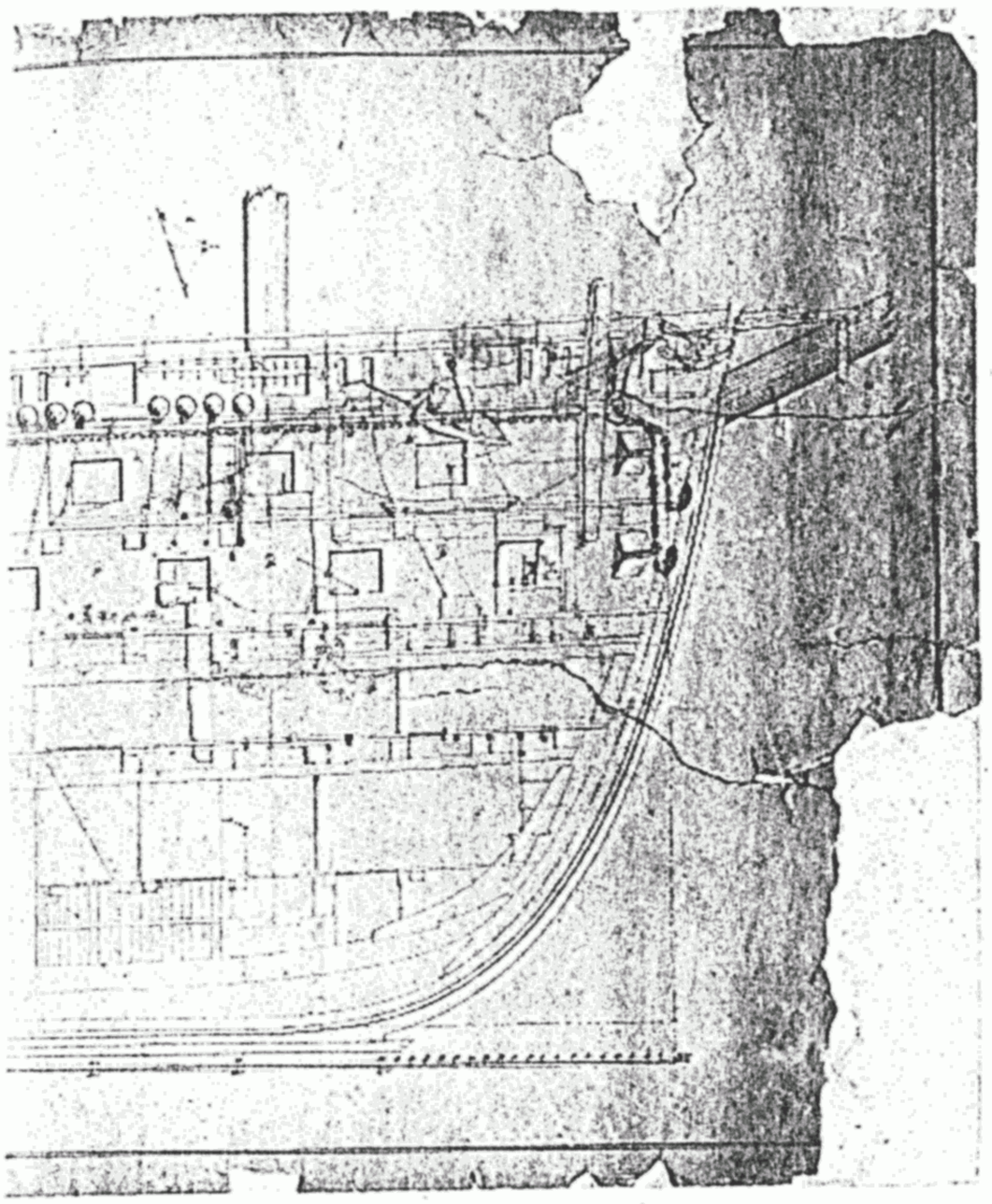
NOTES: A second re-order of the 74-gun ship ordered in 1.1812 (see Chapter 1). After cancellation in 1831, her frames were in ordered to be re-used firstly (1832) for a 50-gun frigate and then (1834) for a new 70-gun ship of this name (see Third Rates below).

HINDOSTAN - 80 guns**.** Design enlarged from *Repulse* of 1803 (a Rule design of 1800), with circular stern.

Dimensions & tons: 185ft 8in, 153ft 3¼in x 50ft 8in oa (50ft 0in for tonnage) x 21ft 0in. 2,035$^{37}/_{94}$ bm.

Men: 700. Guns: LD 28 x 32pdr + 2 x 68pdr carronades; UD 32 x 24pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.

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First cost: £56,717 (including fitting).

Hindostan Plymouth Dyd.

Ord: 24.9.1819. K: 8.1829. L: 2.8.1841. C: 9.1841 (for Ordinary). Training ship 1868. Cadet training ship at Dartmouth 1884; training ship for boy artificers at Portsmouth, renamed *Fisgard III* on 12.10.1905, again renamed *Hindostan* 8.1820. Sold to J. B. Garnham & Sons 10.5.1921.

NOTES: Built using the teak frames brought from Bombay aboard the *Malabar*, with material added from 1833 onwards from the cancelled frigate *Tigris*.

INDUS - 80 guns. Design to enlarged lines of the ex-Danish *Christian VII* (taken 1807), probably an enlargement of the 74-gun *Black Prince* Class design, with the addition of a circular stern.

Dimensions & tons: 188ft 0in, 155ft 0in x 50ft 5in x 22ft 6in. $2{,}095^{62}/_{94}$ bm.

Men: 700. Guns: LD 28 x 32pdr + 2 x 68pdr carronades; UD 32 x 24pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.

First cost: £41,482 (including fitting).

Indus Portsmouth Dyd.

Ord: 18.5.1820. K: 7.1824. L: 16.3.1839. C: 4.8.1841. Guardship and harbour flagship at Plymouth 7.1860. Sold to BU 11.11.1898.

NOTES: A re-order of the 74-gun ship ordered in 1817, using the teak frames brought from Bombay aboard the *Melville*, with material added from 1833 on.

Modified *GANGES* Class - 84 guns. 1827 modification by Seppings with greater length of floor and waterlines filled out fore and aft, to carry a uniform 32pdr armament.

Dimensions & tons: 196ft 0in, 162ft 4½in x 52ft 6in oa (51ft 6in for tonnage) x 22ft 6in. $2{,}290^{62}/_{94}$ bm.

Men: 700. Guns: LD 32 x 32pdr; UD 32 x 32pdr; QD 16 x 32pdr; Fc 4 x 32pdr.

First cost: £72,225.

Calcutta East India Co., Bombay. Teak-built.

Ord: 5.4.1827. K: 3.1828. (Suspended 3.12.1828, but restarted 17.9.1829). L: 14.3.1831 (actually floated out). C: 10.1840 at Plymouth. Gunnery training ship at Portsmouth 9.1863. Sold to Castle, Plymouth to BU 12.5.1908.

***VANGUARD* Class** - 80 guns (originally ordered as 78 guns). William Symonds design, approved 27.11.1832.

Dimensions & tons: 190ft 0in, 155ft 3in x 56ft 9in oa (56ft 0in for tonnage) x 23ft 4in. $2{,}589^{81}/_{94}$ bm (the first draught was shorter on the keel – 154ft 4in - giving $2{,}574^{38}/_{94}$ bm).

Men: 720 (630 peacetime). Guns: LD 30 x 32pdr (56cwt); UD 28 x 32pdr (50cwt); QD 16 x 32pdr (42cwt); Fc 6 x 32pdr (42cwt). But completed with 2 LD and 2 UD guns replaced by 4 x 68pdr carronades, and 2 of the QD guns moved to the Fc.

First cost: *Vanguard* £56,983 (+ fitting £20,756). *Collingwood* £55,910 (+ fitting £18,728). *Goliath* £56,755. *Superb* £54,979 (+ fitting £25,313). *Centurion* £57,386. *Colossus* £59,119. *Mars* £57,826. *Lion* £59,105. *Meeanee* £87,878.

Vanguard Pembroke Dyd.

Ord: 29.6.1832. K: 5.1833. L: 25.8.1835. C: 5.7.1836 at Portsmouth. Renamed *Ajax* 20.10.1867. BU at Chatham 6.1875.

Collingwood Pembroke Dyd.

Ord: 29.6.1832. K: 9.1835. L: 17.8.1841. C: 20.7.1844 at Portsmouth. Converted to screw battleship 3.1860 to 7.1861 (see Chapter 5).

Goliath Chatham Dyd.

Ord: 9.10.1833. K: 2.1834. L: 25.7.1842. C: 7.10.1842 (for Ordinary). Converted to screw battleship 10.1856 to 11.1857 (see Chapter 5).

Superb Pembroke Dyd.

Ord: 15.6.1838. K: 11.1838. L: 6.9.1842. C: 26.4.1845 at Plymouth. BU completed at Portsmouth 18.2.1869.

Centurion Pembroke Dyd.

Ord: 18.3.1839. K: 7.1839. L: 2.5.1844. C: 10.6.1844 (for Ordinary). Converted to screw battleship 9.1854 to 11.1855 (see Chapter 5).

Colossus Pembroke Dyd.

Ord: 18.3.1839. K: 6.1843. L: 1.6.1848. C: 3.7.1848 (for Ordinary). Converted to screw battleship 1.1854 to 6.1855 (see Chapter 5).

Mars Chatham Dyd.

Ord: 18.3.1839. K: 12.1839. L: 1.7.1848. C: 30.8.1848 (for Ordinary). Converted to screw battleship 3.1855 to 6.1856 (see Chapter 5).

Majestic Chatham Dyd.

Ord: 18.3.1839. K: 2.1841. L: ... . Re-ordered to complete as a screw battleship 24.11.1852 (see Chapter 5).

Irresistible Chatham Dyd.

Ord: 12.3.1840. K: 1.1849. L: ... . Re-ordered to complete as a screw battleship 23.6.1854 (see Chapter 5).

Lion Pembroke Dyd.

Ord: 12.3.1840. K: 7.1840. L: 29.7.1847. C: 26.9.1847 (for Ordinary). Converted to screw battleship 2.1858 to 5.1859 (see Chapter 5).

Meeanee (ex-*Madras*, renamed 19.1.1846) East India Co., Bombay.

Ord: 16.9.1841. K: 4.1842. L: 11.11.1848. C: 4.4.1849. Converted to screw battleship 12.1856 to 10.1857 (see Chapter 5).

NOTES: Two further ships - *Brunswick* and *Cressy* - were initially ordered to this design on 19.2.1844, but were re-ordered to new designs in 1847 (see below).

Scan and/or retouch by Grzechu

AGAMEMNON - 80 guns. Captain John Hayes design, 1841.

Dimensions & tons: 195ft 0in, 161ft 0in x 54ft 8in (54ft 0in for tonnage) x 23ft 9in. 2,497$^{20}/_{94}$ bm.

Men: 750. Guns: LD 8 x 8in/68pdr (65cwt) + 20 x 32pdr (56cwt); UD 4 x 8in/68pdr (65cwt) + 24 x 32pdr (50cwt); QD/Fc 24 x 32pdr (41cwt).

Agamemnon Woolwich Dyd.

Ord: 27.2.1841. K: ... . Suspended 18.12.1844. Re-ordered as a 91-gun screw battleship 20.6.1849 (see Chapter 5).

***SANS PAREIL* Class** - 80 guns. Design of 1843, to lines of former *Sans Pareil* (French prize taken 1794).

Dimensions & tons: 193ft 0in, 158ft 11½in x 52ft 1in (51ft 6in for tonnage) x 22ft 8in. 2,242$^{50}/_{94}$ bm.

Men: 750. Guns: LD 8 x 8in/68pdr (65cwt) + 20 x 32pdr (56cwt); UD 4 x 8in/68pdr (65cwt) + 24 x 32pdr (50cwt); QD/Fc 24 x 32pdr (41cwt).

Sans Pareil Devonport Dyd.

Ord: 27.2.1843. K: 1.9.1845. Suspended 2.10.1848. Re-ordered as 70-gun screw battleship 18.5.1849 (see Chapter 5) and converted on stocks. L: 18.3.1851.

***CRESSY* Class** - 84 guns. Read, Chatfield & Creuze design, 1847.

Dimensions & tons: 198ft 5in, 162ft 1$^{3}/_{8}$in x 55ft 0in (54ft 3in for tonnage) x 21ft 8¼in. 2,537$^{80}/_{94}$ bm.

Men: 750. Guns: LD 6 x 8in + 24 x 32pdr; UD 2 x 8in + 30 x 32pdr; QD/Fc 22 x 32pdr (6 long, 16 short).

Cressy Chatham Dyd.

Ord: 19.2.1844. K: 4.1846. Re-ordered as a 91-gun screw battleship 24.11.1852 (see Chapter 5) and converted on stocks. L: 21.7.1853.

James Watt (ex-*Audacious*, renamed 18.11.1847) Pembroke Dyd.

Ord: 25.4.1847. K: ... . Re-ordered as a 91-gun screw battleship 14.6.1849 (see Chapter 5). L: 23.4.1853.

NOTES: The extra length provided room for additional LD/UD gunports.

BRUNSWICK - 80 guns. Modification (with 1ft reduced beam) of *Vanguard* (Symonds) design, approved 14.10.1847.

Dimensions & tons: 190ft 0in, 154ft 4¾in x 55ft 9in (55ft 0in for tonnage) x 23ft 4in. 2,484$^{27}/_{94}$ bm.

Men: 750. Guns: LD 8 x 8in + 20 x 32pdr; UD 4 x 8in + 24 x 32pdr; QD/Fc 24 x 32pdr.

Brunswick Pembroke Dyd.

Re-ord: 14.10.1847. K: 8.1847. Re-ordered as 80-gun screw battleship 23.6.1854 (see Chapter 5) and converted on stocks. L: 1.6.1855.

***HOOD* Class** - 80 guns. Edye & Watts design, approved 14.10.1848. The last sailing battleships to be laid down for the RN.

Dimensions & tons: 198ft 0in, 161ft 0¾in x 55ft 9in (55ft 1in for tonnage) x 23ft 4in. 2,600$^{1}/_{94}$ bm.

Men: 720. Guns: LD 8 x 8in/68pdr (65cwt) + 20 x 32pdr (56cwt); UD 4 x 8in/68pdr (65cwt) + 24 x 32pdr (50cwt); QD/Fc 24 x 32pdr (41cwt).

Hood (ex-*Edgar*, renamed 29.6.1848) Chatham Dyd.

Ord: 30.3.1848. K: 13.8.1849. Re-ordered as 91-gun screw battleship 9.4.1856 (see Chapter 5) and converted on stocks. L: 4.5.1859.

Orion Chatham Dyd.

Ord: 30.3.1848. K: 1.2.1850. Re-ordered as 91-gun screw battleship 30.10.1852 (see Chapter 5) and converted on stocks. L: 6.11.1854.

Edgar Pembroke Dyd.

Ord: 31.3.1849. K: ... . Re-ordered at Woolwich Dyd as 91-gun screw battleship 4.4.1851 (see Chapter 5) before any work done at Pembroke.

Third Rates, 74 to 76 guns (two-deckers)

There were fifteen 74s to wartime designs still under construction or on order at the close of the Hundred Days, of which six were to the numerous wartime *Armada* (or 'Surveyors') Class, four of the *Black Prince* Class (including the already-launched *Wellesley*), three of Rule's *Repulse* Class, and two to the Modified *Ganges* Class (these last five with the new diagonal framing scheme as devised by Seppings). Under the re-classification of Rates brought in during 2.1817, many 74s were reclassed as 76-gun ships.

It was realised by this date that, notwithstanding their sterling wartime service, the basic 74-gun concept (now 60 years old) was no longer large enough to carry the most modern armament, and virtually no further vessels of this type were ordered post-war. Surviving vessels were reduced to 72 guns in 1839.

***ARMADA* (or 'Surveyors') Class** - 74 guns. Continuation of wartime class - for details see Chapter 1. The following ships of this numerous class, although all begun during the war, were launched after 6.1815. Rerated 72-gun in 1839.

First cost: *Pitt* £78,787. *Hercules* £67,841. *Agincourt* £72,850 (total incl. fitting £85,720). *Hero/Wellington* £69,767. *Russell* £70,437 (+ fitting £12,787 at Sheerness).

Pitt Portsmouth Dyd.

Ord: 17.4.1807 (but construction delayed 6 years). K: 5.1813. L: 13.4.1816. Became a coal depot and receiving ship at Portsmouth 5.1853. To Portland 1860, later back to Portsmouth. BU completed at Portsmouth 17.3.1877.

Hercules Chatham Dyd.

Ord: 16.5.1809 and 6.12.1811. K: 8.1812. L: 5.9.1815. C: 17.11.1815 (for Ordinary). Troopship 1838. Receiving ship at Malta 8.1851. Emigrant ship 1852; hulked as Army depot ship at Plymouth 1853. To Hong Kong as depot and receiving ship 1854. Sold there to BU 22.8.1865.

Agincourt Plymouth Dyd.

Ord: 6.1.1812. K: 5.1813. L: 19.3.1817. C: 4.1817 (for Ordinary). Training ship at Plymouth 3.1848; renamed *Vigo* 4.1865. Cholera hospital ship 1866. Receiving ship at Plymouth 1870. Sold to Castle for BU at Charlton 10.1884.

Hero Deptford Dyd.

Ord: 6.1.1812. K: 7.1813. L: 21.9.1816. Renamed *Wellington* 4.12.1816. C: 6.12.1816 at Woolwich (for Ordinary). Ordered to be converted to screw blockship 13.8.1845, but this was cancelled 17 days later. Hulked as receiving and depot ship at Sheerness 6.1848. To Coastguard at Sheerness 1857, then guardship 1858. Lent to Liverpool Juvenile Reformatory Association as a training ship 10.5.1862, renamed *Akbar*. Sold to Ward, Morecambe to BU 8.4.1908.

Russell Deptford Dyd.

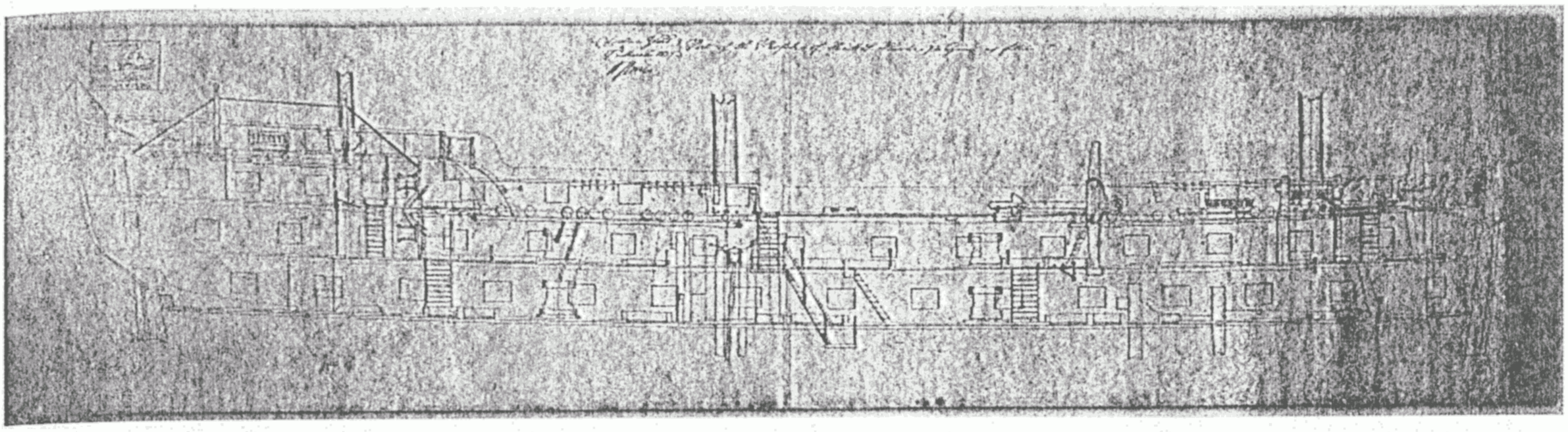
Ord: 6.1.1812. K: 8.1814. L: 22.5.1822. C: 7.1835 at Sheerness. Converted to screw blockship 1854-55 (see Chapter 5). Coastguard guard ship at Sheerness 1858. BU 1865.

NOTES: All survivors of this class were rerated as 72-gun ships in 1839. *Russell* was delayed at close of war and housed over from 9.1815 to 4.1834. A further ship - the *Carnatic* – had been ordered on 30.9.1814 to this design at Portsmouth Dyd; but she was re-ordered 1817 to a new design (see below).

***BLACK PRINCE* Class** - 74 guns. 1810 design to reduced lines of the Danish prize *Christian VII* (taken 1807). Built on Seppings' principles of diagonal framing.

Dimensions & tons: 176ft 0in, 144ft 9$^{7}/_{8}$in x 47ft 6in x 21ft 0in. 1,738$^{6}/_{94}$ bm.

Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x



As fitted profile for the 74-gun *Hawke*, Chatham Dockyard 17 March 1837. This partial draught is intended to show only specific features and is again indicative of the way increasing complexity required special representation, leading to more, and more complicated, draughts for each design. *DR752*

32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.
First cost: *Black Prince* £78,386 (+ fitting £2,296). *Wellesley* £55,147 (+ fitting £26,597). *Hawke* £72,924. *Melville* £40,529 (+ fitting £16,974).

Black Prince Woolwich Dyd.
Ord: 6.8.1810. K: 7.1814. L: 30.3.1816. C: 29.8.1816 (for Ordinary). Prison ship in 1848. BU at Portsmouth 10.2.1855.

Wellesley East India Co., Bombay. Teak-built.
Ord: 6.1.1812. K: 5.1813. L: 24.2.1815. C: 2.1825 at Portsmouth (as Guardship). Harbour flagship and receiving ship at Chatham 1862. To Purfleet for the London School Ship Society as a reformatory, renamed *Cornwall* 18.6.1868. Sunk by the Luftwaffe in the Thames 24.9.1940.

Hawke Woolwich Dyd.
Ord: 6.1.1812. K: 4.1815. L: 16.3.1820. C: 25.5.1820 (for Ordinary). Converted to screw blockship 1854-55 (see Chapter 5). BU 1865.

Melville East India Co., Bombay. Teak-built.
Ord: 6.9.1813. K: 7.1815. L: 17.2.1817. C: 12.1826 at Portsmouth. Hospital ship for Hong Kong 3.1857. Sold there 20.10.1873.

NOTES: The *Wellesley* had been launched but not placed in service by the end of the war, so for convenience is included here rather than in Chapter 1. All this class were rerated as 72-gun ships in 1839.

Modified *GANGES* Class - 74 guns. Revival of 1778 Edward Hunt design.
Dimensions & tons: 172ft 1½in, 140ft 2in x 48ft 0in x 20ft 0in. 1,712$^{51}/_{94}$ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 2 x 18pdr + 12 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.
First cost: £63,667.

Minotaur Chatham Dyd.
Ord: 3.12.1811. K: 12.1812. L: 15.4.1816. C: 14.10.1816. Hulked as receiving ship at Sheerness 11.1842. Guard ship 1859. Lazarette 11.1861. Renamed *Hermes* 27.7.1866. BU completed at Sheerness 20.2.1869.

NOTES: As with the wartime-rebuilt *Tremendous*, this vessel, although to Hunt's design, was constructed with diagonal framing along Seppings' lines. Rerated as 72-gun ship in 1839. A further vessel (*Boscawen*) was re-ordered to this design on 14.2.1814, but was finally built as a 70-gun ship (which see).

***REPULSE* Class** - 74 guns. Revival of 1800 William Rule design.
Dimensions & tons: 174ft 0in, 143ft 2in x 47ft 4in x 20ft 0in. 1,706$^{8}/_{94}$ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 2 x 18pdr + 12 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.
First cost: *Belleisle* £50,731 (+ fitting £10,795). *Talavera* £68,409 (fitted). *Malabar* £56,385 (+ fitting £13,624).

Belleisle Pembroke Dyd.
Ord: 18.12.1812. K: 2.1816. L: 26.4.1819. C: 21.6.1819 at Plymouth (for Ordinary). Troopship 1841. Became a hospital ship at Sheerness 5.1854. Lent to the Seamen's Hospital at Greenwich 1866-68. BU completed at Chatham 12.10.1872.

Talavera (ex-*Thunderer*, renamed 23.7.1817) Woolwich Dyd.
Ord: 28.1.1814. K: 7.1814. L: 15.10.1818. C: 7.9.1819 at Chatham (for Ordinary). Burnt by accident at Plymouth 27.9.1840, then BU.

Malabar East India Co., Bombay. Teak-built.
Ord: 7.3.1815. K: 4.1817. L: 28.12.1818. C: 11.1832 at Portsmouth. Hulked as coal depot at Portsmouth 10.1848. Renamed *Myrtle* 30.10.1883. Sold at Portsmouth 17.7.1905.

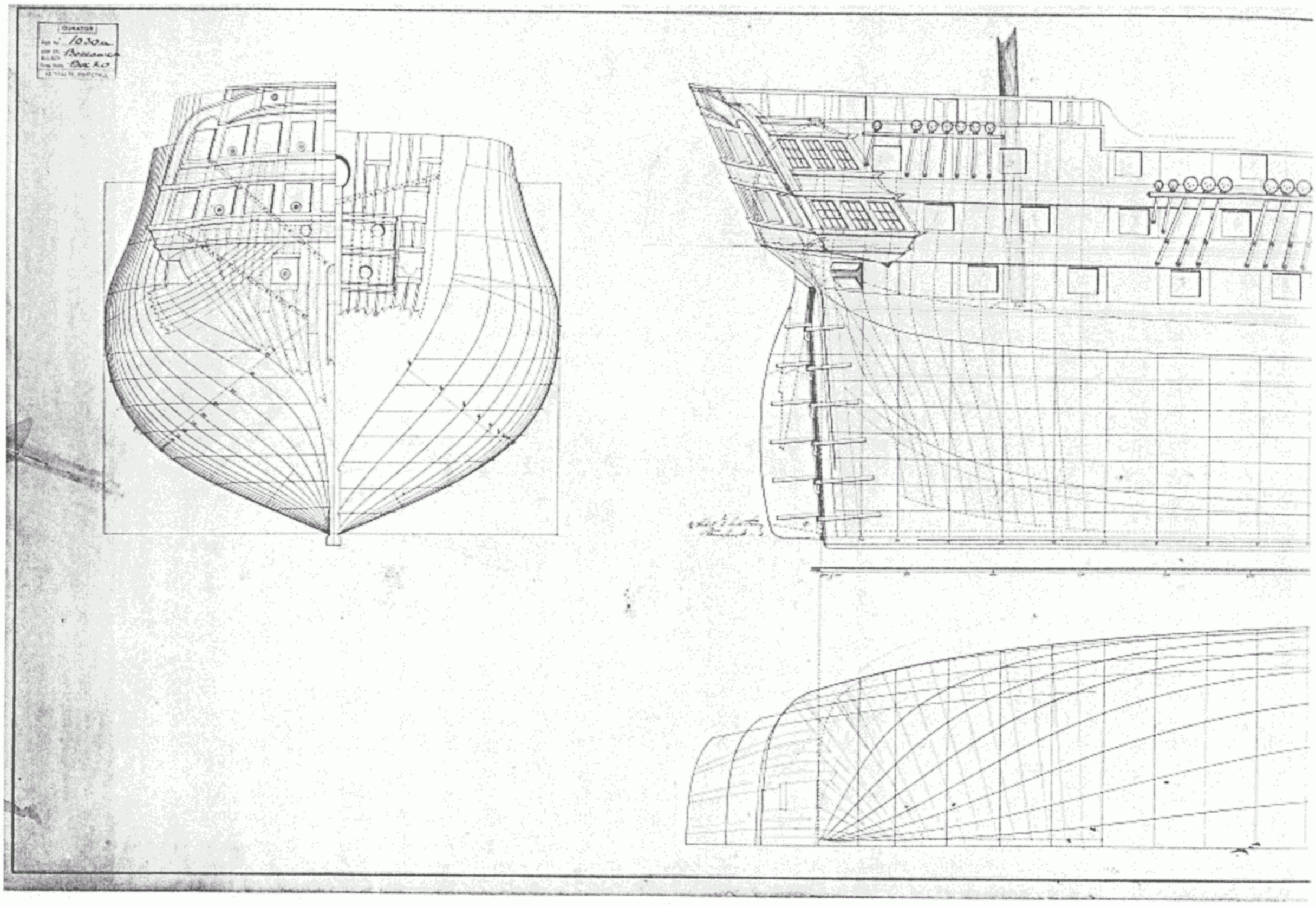
NOTES: Construction using Seppings' system of diagonal framing.

***CARNATIC* Class** - 74 guns. Modified version of *Armada* Class design.
Dimensions & tons: 177ft 1in, 145ft 11in x 48ft 0in x 21ft 1¾in. 1,788$^{24}/_{94}$ bm.
Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades; RH 6 x 18pdr carronades.
First cost: £64,519.

Carnatic (ex-*Sandwich*?) Portsmouth Dyd.
Re-ord: 10.11.1817. K: 1.1818. L: 21.10.1823. C: 19.11.1823 (for Ordinary). Never commissioned. Hulked as coal depot at Portsmouth 1.1860. Lent as floating magazine for the War Office 8.1886; returned to Admiralty 10.1891. Sold 19.2.1914 and BU in Germany.

NOTES: The first post-war development of the *Armada* Class, with a round stern. Originally (30.9.1814) ordered to *Armada* Class design. Built using teak frames brought from Bombay aboard the *Cornwallis*. A second ship (*Indus*) was ordered on 11.11.1817, initially to a similar design, but was re-ordered 1820 as an 80-gun ship (see above).

HASTINGS - 74 guns.
Dimensions & tons: 176ft 10½in, 145ft 4in x 48ft 6in oa (47ft 9in for tonnage) x 21ft 0in. 1,762^{56}/94 bm.



The design draught of the *Boscawen* as a Symondite 70-gun ship, dated May 1835. *DR1030A*

Men: 600. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.
Built as a speculation by the East India Co., Calcutta, and purchased from them by the Royal Navy (for £32 per ton = £56,320) on arrival in UK 22.6.1819. Converted to screw blockship 1854-55 (see Chapter 5). Sold 9.1885.

Modified *BULWARK* Class - 76 guns. Ordered in 1825 using the hull form and dimensions of this 1795 Rule design, but with some variations in layout.

Dimensions & tons: 182ft 0in, 150ft 9in x 49ft 0in x 20ft 10in. 1,925$^{12}/_{94}$ bm.
Men: 640. Guns: LD 28 x 32pdr; UD 30 x 24pdr; QD 4 x 12pdr + 10 x 32pdr carronades; Fc 2 x 12pdr + 2 x 32pdr carronades.

Valiant Plymouth Dyd.
Ord: 9.6.1825. K: ... . Cancelled 2.1831 (unstarted).

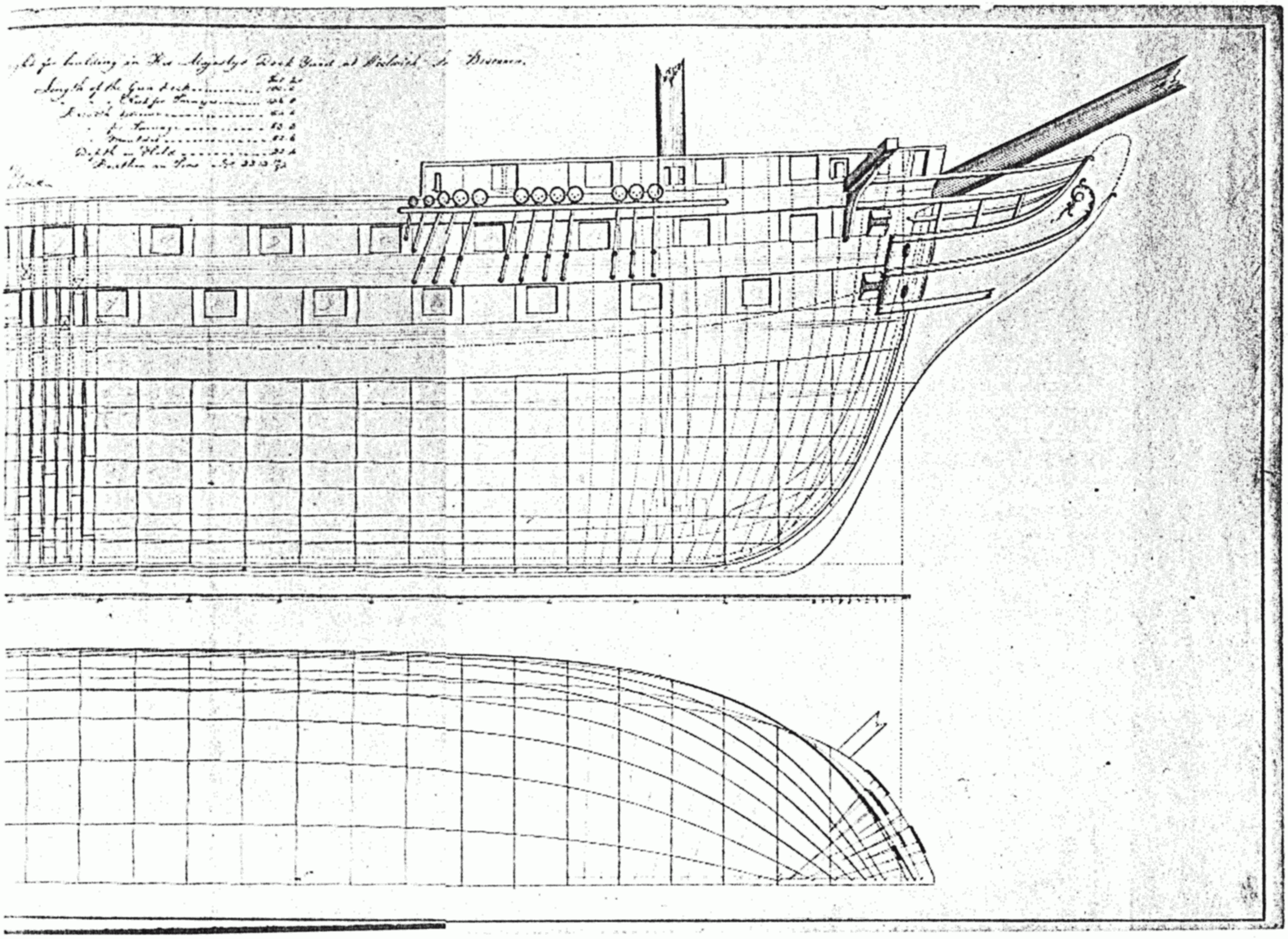
***CUMBERLAND* Class** - 70 guns. William Symonds design 1833.

Dimensions & tons: 180ft 0in, 146ft 8in x 54ft 0in oa (53ft 6in for tonnage) x 22ft 4in. 2,212$^{12}/_{94}$ bm.
Men: 620. Guns: LD 22 x 32pdr (56cwt) + 4 x 8in/68pdr (65cwt) shell; UD 26 x 32pdr (50cwt) + 2 x 8in/68pdr (65cwt) shell; QD 8 x 32pdr (42cwt); Fc 4 x 32pdr (42cwt); RH 4 x 18pdr - later replaced by extra 4 x 32pdr (42cwt).
First cost: *Cumberland* £46,193 (fitted). *Boscawen* £56,065 (+ fitting £4,231).

Cumberland Chatham Dyd.
Ord: 9.10.1833. K: 4.1836. L: 21.10.1842. C: 7.12.1842 (for Ordinary). Sheer hulk at Sheerness 1863. Training ship in the Clyde for the Clyde Industrial Training Ship Foundation 1869; burnt by accident there 17.2.1889. Wreck BU in Rosneath Bay 1889.

Boscawen Woolwich Dyd.
(Re)Ord: 3.3.1834. K: 1.1826 (to previous design as an 80).
L: 3.4.1844. C: 26.9.1848 at Sheerness (for Ordinary). Hulked as boys' training ship at Southampton 2.1862; to Portland 10.1866. To the Tyne as a hulk, renamed *Wellesley* 21.3.1874; burnt by accident there 3.1914. Wreck BU at Blyth.

NOTES: *Boscawen* had originally been ordered as a 74 (of the *Armada* Class) on 6.1.1812, then re-ordered as an 80 on 20.11.1817 (and began building as such in 1826), but cancelled 29.11.1831 and briefly re-ordered as a 50-gun frigate in 1832 (renamed *Indefatigable*) before being finally re-ordered as a 70 (with her original name restored) on the date shown above; her frames were then taken down and the material converted to a Symondite 'V' hull form instead of the old 'U' form.



1834 Proposed replacement of 110-gun First Rates by 74-gun Third Rates in the Building Programme.

On 11.12.1834 the 1833-ordered (but unstarted) Symondite 110-gun First Rates *Victoria* and *Algiers* (see above) were reclassed as 'special' 74s, intended to carry 68pdrs on the lower deck, but with no changes in hull designs. In the 1835 Programme *Algiers* was reinstated as a 110; in 1836 *Victoria* remained as a 74 while *Algiers* was again listed as a 110; the two ships' designations were reversed in 1837; and on 5.2.1839 the *Algiers* was likewise restored to a 110-gun ship.

Dimensions & tons: 204ft 0in, 166ft 5¼in x 60ft 0in oa (59ft 2in for tonnage) x 23ft 9in. 3,099$^{16}/_{94}$ bm.

Men: ... . Guns: LD 28 x 68pdr (65cwt); UD 28 x 32pdr (56cwt); QD 16 x 32pdr (48cwt); Fc 2 x 32pdr (56cwt).

IMAUM - 74 guns (ex-Muscat & Oman *Liverpool*, launched 10.11.1826 by Bombay Dyd).

Dimensions & tons: 177ft 0in, 145ft 5¾in x 48ft 4in oa (47ft 11in for tonnage) x 21ft 0in. 1,776 bm. 2,948 disp.

Men: 590. Guns: LD 28 x 32pdr; UD 28 x 18pdr; QD 2 x 18pdr + 12 x 32pdr carronades; Fc 2 x 18pdr + 2 x 32pdr carronades.

Built of teak for the Imaum of Muscat, and presented to King William IV by him 9.3.1836. Fitted at Portsmouth as receiving ship for Jamaica 8.1840 - 7.1842. BU there 1863.

Large Frigates 50/58 guns (Fourth Rates) - conversions from 74-gun two-deckers

As an interim response to the appearance of the large 24pdr US frigates, three elderly 74s had been cut down in 1812-13 to produce flush-decked 58-gun two-deckers (see Chapter 1), and two further vessels followed in the immediate post-war period, although neither recommissioned in this rôle.

Dimensions & tons: see Chapter 1 for details

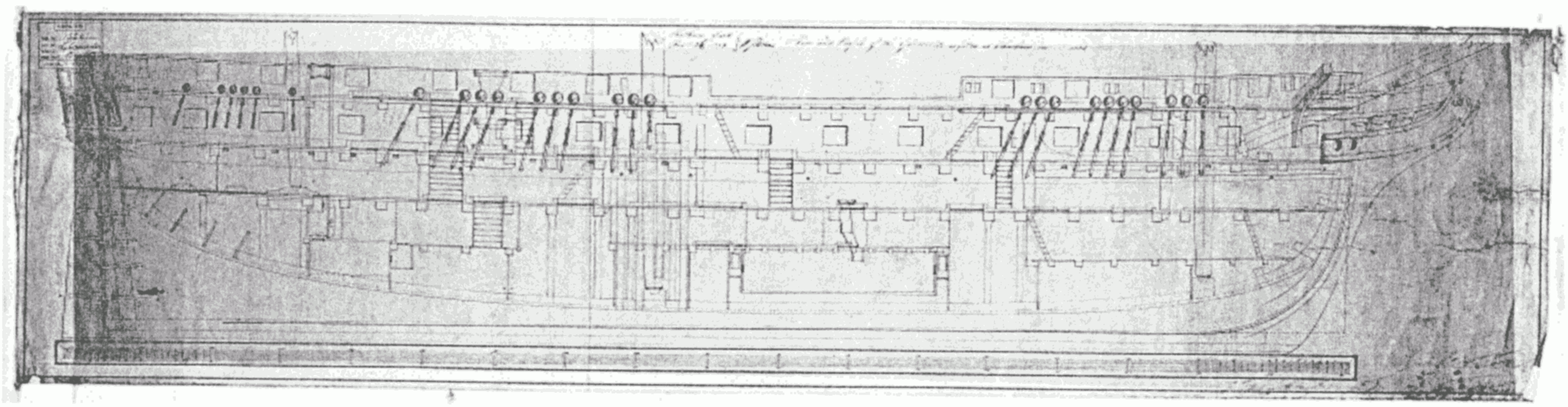
Men: ... . Guns: UD (the former LD) 28 x 32pdr (56cwt); QD/Fc 2 x 12pdr + 28 x 42pdr carronades.

Elephant (ex-74 of 1786). Cut down at Portsmouth 2.1817 - 3.1818. BU at Portsmouth 11.1830.

Excellent (ex-74 of 1787). Cut down at Portsmouth began 12.1825 (?never completed). Gunnery training ship 1830. BU at Deptford 10.1835.

A further twelve 74s of more recent build were cut down (razéed) between 1826 and 1845 to produce 50-gun frigates.

Dimensions & tons: see Chapter 1 for details, except that depth in hold was reduced to about 13ft 10in. (Note that the beam used for



Sheer and profile of the *Gloucester* as fitted at Chatham, dated 26 February 1833. Like many old 74s this *Armada* Class ship of 1812 became a razée frigate (in 1832). Note the round stern. *DR1521*

calculating tonnage is that measured from the outside of the planking but inside the wales; extreme or overall breadth ('oa') was 7in more in the *Armada* Class conversions (*Alfred* and razéed *Warspite* 6in, *Grampus* 9in).)

Men: 475. Guns: UD (the former LD) 28 x 32pdr (56cwt/9½ft); QD 16 x 32pdr (45cwt/8½ft); Fc 6 x 32pdr (45cwt/8½ft). 6 x 8in (65cwt/9ft) shell guns later replaced the same number of 32pdr on the UD.

Barham Woolwich Dyd (ex-74 of 1811).
Ord: 31.5.1826. (Re)L: 18.9.1826. BU at Deptford 9.1840.

Dublin Plymouth Dyd (ex-74 of 1812).
Ord: 31.5.1826. (Re)L: 29.12.1826. Laid up at Devonport 1845. Receiving ship 1860. Fitting hulk 1871. Sold to H.Castle & Sons 16.7.1884 and BU at Charlton 7.1885.

Alfred Chatham Dyd (ex-*Asia*, 74 of 1811 - renamed 1819).
Ord: 31.5.1826. (Re)L: 26.8.1828. Became a gunnery trials ship at Portsmouth 1858. BU at Portsmouth 5.1865.

Cornwall Sheerness Dyd (ex-74 of 1812).
Ord: 23.2.1827. (Re)L: 29.5.1830. Lent to the London School Ship Society as a reformatory school 1859. Sent to the Tyne as training hulk 1868. Renamed *Wellesley* on 18.6.1869 and *Wellesley II* on 21.5.1874. BU completed at Sheerness 18.1.1875.

America Plymouth Dyd (ex-74 of 1810).
Ord: 19.3.1827. (Re)L: 26.8.1828. Became a target ship at Portsmouth 3.1864. BU 10.1867.

Conquestador Sheerness Dyd (ex-74 of 1810).
Ord: 19.3.1827. (Re)L: 30.4.1831. Lent as a powder depot to the War Office at Purfleet 1856. Powder depot at Plymouth 1863. Sold to H. Scawn, Plymouth to BU 10.5.1897.

Greenwich Portsmouth Dyd (ex-*Rodney*, 74 of 1809 - renamed 17.3.1827).
Ord: 19.3.1827. (Re)L: 29.5.1830. Conversion probably never completed, instead sold 8.9.1836.

Centurion Portsmouth Dyd (ex-*Clarence*, 74 of 1812 - renamed 1826).
Ord: 19.3.1827. (Re)L: ... . Conversion cancelled and BU 10.1828.

Cressy Portsmouth Dyd (ex-74 of 1810).
Ord: 19.3.1827. (Re)L: ... . Conversion cancelled and BU 12.1832.

Vindictive Portsmouth Dyd (ex-74 of 1813).
Ord: 5.7.1828. (Re)L: 5.10.1832. Became a depot ship at Fernando Po 1862. Foundered there and wreck sold 24.11.1871.

Eagle Chatham Dyd (ex-74 of 1804).
Ord: 26.4.1830. (Re)L: 1.3.1831. Hulked at Falmouth for the Coastguard 1857. Training ship in Southampton Water 10.1860. To Liverpool 1862. To Mersey Division RNVR 1910. Renamed *Eaglet* 1918. Burnt by accident 1926; wreck sold to J. Hornby for BU 4.1.1927.

Gloucester Chatham Dyd (ex-74 of 1812).
Ord: 28.2.1831. (Re)L: 24.12.1831. Became a receiving ship at Chatham 1861. Sold 3.1884.

Warspite Portsmouth Dyd (ex-74 of 1807).
Ord: 19.6.1837. (Re)L: 24.8.1840. Lent to the Marine Society as a training ship 27.5.1862. Burnt by accident at Woolwich 3.1.1876; wreck sold to McArthur & Co. 2.2.1876.

Grampus Woolwich Dyd (ex-*Tremendous*, 74 of 1784 - renamed 23.5.1845).
Ord: 17.7.1844. (Re)L: ...1845. Became a powder depot at Portsmouth 1856. To War Department as powder depot 12.1883. Sold to J. Read, Portsmouth to BU 10.5.1897.

NOTES: Dockyard, order dates and (re)launch dates above refer to conversions - not original building data for which see Chapter 1. All were former *Armada* Class vessels except *Eagle* (of 1800 *Repulse* Class), *Warspite* (of *Colossus* Class) and *Grampus* (of *Ganges* Class). All but the first (*Barham*) were given 'rounded' sterns on conversion.



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Frigates (Fourth Rates)

While the flush-deck frigates ordered during the war were intended to carry 60 or 58 guns, following the onset of peace the Navy Board decreed in 1823 that for structural reasons the eight guns mounted on the gangways should be deleted, reducing the type to 52 or 50 guns. Subsequently no British 'spar-deck' frigates mounted guns in the waist.

JAVA - 24pdr frigate of 60 guns, but completed with 52 guns only. Design jointly by the three Surveyors, approved 9.7.1813. Although ordered in 1813 she was never intended for the Napoleonic conflict, and was not finally completed until 1826.

Dimensions & tons: 172ft 0in, 145ft 1¼in x 43ft 4in x 14ft 3in. 1,449$^{30}/_{94}$ bm.

Men: 450. Guns: UD 30 x 24pdr; QD/Fc (including spar deck) 28 x 42pdr carronades + 2 x 24pdr; amended 3.6.1823 to complete as 52-gun with unarmed spar deck, QD/Fc 16 x 42pdr carronades + 6 x 24pdr.

First cost: £56,729 (+ fitting £13,871).

Java Plymouth Dyd.

Ord: 7.6.1813. K: 3.1814. L: 16.11.1815. C: 2.7.1826. Reduced to 50 guns in 1839. Became a target at Portsmouth 11.1861. BU completed at Portsmouth 22.11.1862.

ISIS - 24pdr frigate of 58 guns. Begun as a 50-gun two-decker of the *Salisbury* or Modified *Jupiter* Class (see Chapter 1), but redesigned while building with 11ft lengthening and cut down to a spar-deck frigate.

Dimensions & tons: 164ft 0in, 138ft 4in x 41ft 11in x 13ft 3in. 1,292$^{88}/_{94}$ bm.

Men: 350. Guns: UD 28 x 24pdr; QD/Fc (including spar deck) 28 x 42pdr carronades + 2 x 24pdr; amended 3.6.1823 to complete as 50-gun with unarmed spar deck.

First cost: £50,523 (+ fitting £18,150).

Isis Woolwich Dyd.

Ord. 10.9.1811 (as a two-decker 50). K: 2.1816. L: 5.10.1819. C: 4.9.1823 at Chatham. Reduced to 44-gun in 1839 (UD 26 x 32pdr; QD 12 x 32pdr; Fc 4 x 32pdr + 2 x 8in shell). Became a coal depot at Sierra Leone 3.1861. Sold there to C. Heddle 12.3.1867.

***SOUTHAMPTON* Class** - 24pdr frigates of 60 guns (reclassed from 50s in 2.1817), but completed with 52 guns only. Surveyors' design, approved 1816 (modified from *Java*).

Dimensions & tons: 172ft 0in, 144ft 9in x 44ft 3¼ oa (43ft 8in for tonnage) x 14ft 6in. 1,468$^{11}/_{94}$ bm (last pair would have been 1,487 bm).

Men: 450. Guns: as completed UD 30 x 24pdr; QD/Fc 16 x 42pdr carronades + 6 x 24pdr; later all re-armed with UD 26 x 32pdr; QD/Fc 20 x 32pdr + 4 x 8in shell guns. *Worcester* completed with 30 x 32pdrs, 16 x 32pdr carronades, 4 x 8in, 2 x 12pdr. Last pair intended to carry 32 x 24pdrs, 26 x 42pdr carronades and 36 x 24pdrs, 16 x 42pdr carronades respectively.

First cost: *Southampton* £49,664. *Portland* £51,025 (+ fitting £12,006). *Lancaster* £47,243. *Winchester* £40,619. *Chichester* £35,035. *Worcester* £42,267.

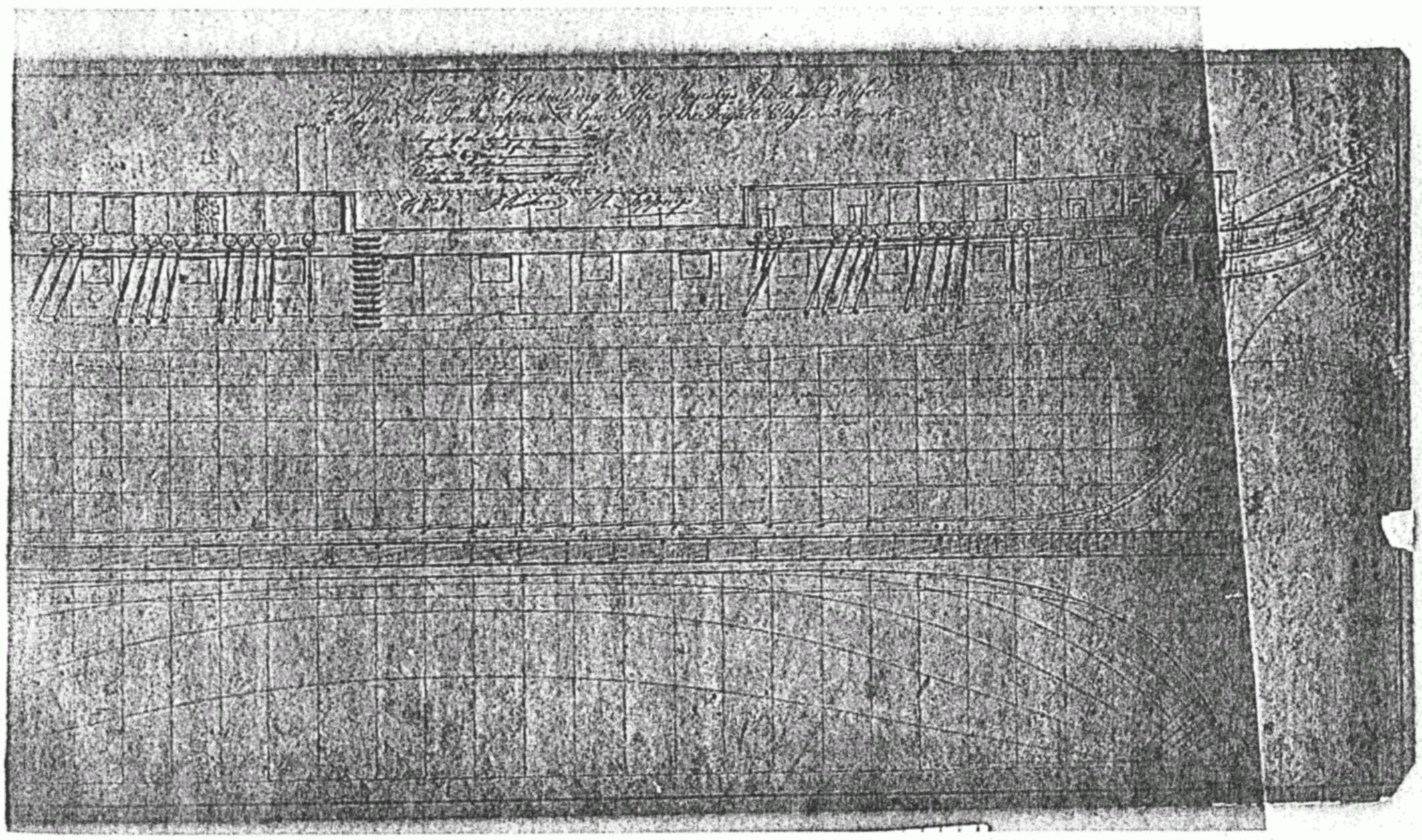
Southampton Deptford Dyd.

Ord: 23.5.1816. K: 3.1817. L: 7.11.1820. C: 11.5.1821 (for Ordinary). To the Coastguard as a Coastguard guard ship at Sheerness 1857. Lent to Hull Committee on the Humber as a training ship 18.6.1867. Sold to Hughes Bolckow, Blyth for BU 26.6.1912.

Portland (ex-*Kingston*) Plymouth Dyd.

Ord: 23.5.1816. K: 8.1817. L: 8.5.1822. C: 20.8.1833 (for sea service). Became a provision depot at Plymouth 1846-1850. Fitted as a frigate again in 1850? Sold to Castle for BU at Charlton 19.5.1862.

Lancaster Plymouth Dyd.



Design draught, dated 30 May 1816, for the *Southampton*, a 50-gun (later corrected to 60-gun) 'ship of the frigate class'. This last phrase was important because during the recently concluded War of 1812 with the USA, British propaganda had denied frigate status to the American 'double-banked' 44-gun ships; it is noteworthy that the original intention to fill up the waist with a complete tier of ports (shown crossed through on the sheer draught) was modified to the traditional frigate form before the ships were completed. The draught was also used for the *Worcester*. *DR1419*

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Ord: 23.5.1816. K: 18.7.1818. L: 23.8.1823. C: 8.10.1823 (for Ordinary). Never commissioned. Became a fever hospital ship for Liverpool (fitted at Plymouth 6.1847), but never utilised there; returned to reserve 8.1847. Sold to Marshall, Plymouth to BU 17.2.1864.

Winchester Woolwich Dyd.

Ord: 23.5.1816. K: 11.1818. L: 21.6.1822. C: 16.9.1822 (for Ordinary). Became training ship at Liverpool 11.1861, renamed *Conway*. Renamed *Mount Edgcumbe* for the Devon & Cornwall Training Ship Society 1.9.1876. Sold 8.4.1921.

Chichester Woolwich Dyd.

Ord: 23.7.1817. K: 7.1827. L: 12.7.1843. C: 23.2.1844 (for Ordinary). Lent as training ship to the National Refuge Society at Greenhithe 1866. Sold to Castle for BU 5.1889.

Worcester Deptford Dyd.

Ord: 21.7.1818. K: 12.1820. L: 10.10.1843. C: 11.1843 at Sheerness (for Ordinary). Became training ship (name unchanged) at Greenhithe 1862. Sold to Castle for BU at Charlton 8.1885.

Liverpool Plymouth Dyd.

Ord: 9.6.1825. K: ... . Cancelled 5.3.1829 (unstarted).

Jamaica Plymouth Dyd.

Ord: 1.7.1825. K: ... . Cancelled 5.3.1829 (unstarted).

***PRESIDENT* Class** - 24pdr frigate of 60 guns, but completed with 52 guns only. 1818 design to lines of prize USS *President*, taken 1813.

Dimensions & tons: 174ft 10in, 143ft 6in x 44ft 6in x 13ft 4in. 1,511$^{49}/_{94}$ bm (1,537 as completed).

Men: 450. Guns: UD 30 x 24pdr; QD/Fc 6 x 24pdr + 16 x 24pdr carronades; later re-armed with 32 x 32pdr + 20 x 32pdr carronades.

First cost: £44,781 (+ fitting £12,254).

President Portsmouth Dyd.

Ord: 25.5.1818. K: 6.1824. L: 20.4.1829. C: 26.5.1834. Became RNR training ship in London 4.1862. Renamed *Old President* 25.3.1903, but sold 7.7.1903.

***VERNON* Class** - 32pdr frigates of 50 guns. William Symonds design 1831, based on lines of 80-gun *Gibraltar*. Armament and rigging specification was copied from razée 50-gun *Barham*.

Dimensions & tons: 176ft 0in, 144ft 6$^{7}/_{8}$in x 52ft 8½in oa (52ft 0¼in for tonnage) x 17ft 1in. 2,082$^{16}/_{94}$ bm. 2,388 disp (*Vernon*).

Men: 450 (later 500). Guns: UD 28 x 32pdr (56cwt); QD 14 x 32pdr (45cwt); Fc 8 x 32pdr (45cwt); 6 x 32pdr (UD) later replaced by 6 x 8in/68pdr (65cwt) shell guns.

First cost: *Vernon* £48,485 (fitted £64,161).

Vernon Woolwich Dyd.

Ord: 24.8.1831. K: 10.1831. L: 1.5.1832. C: 29.7.1832. Hulked as an accommodation ship 3.1863. Floating jetty at Portland 9.1867. Training ship 1876. Renamed *Actaeon* on 14.1.1886 and *Actaeon I* in 1906. Sold 14.9.1923.

Indefatigable Woolwich Dyd.

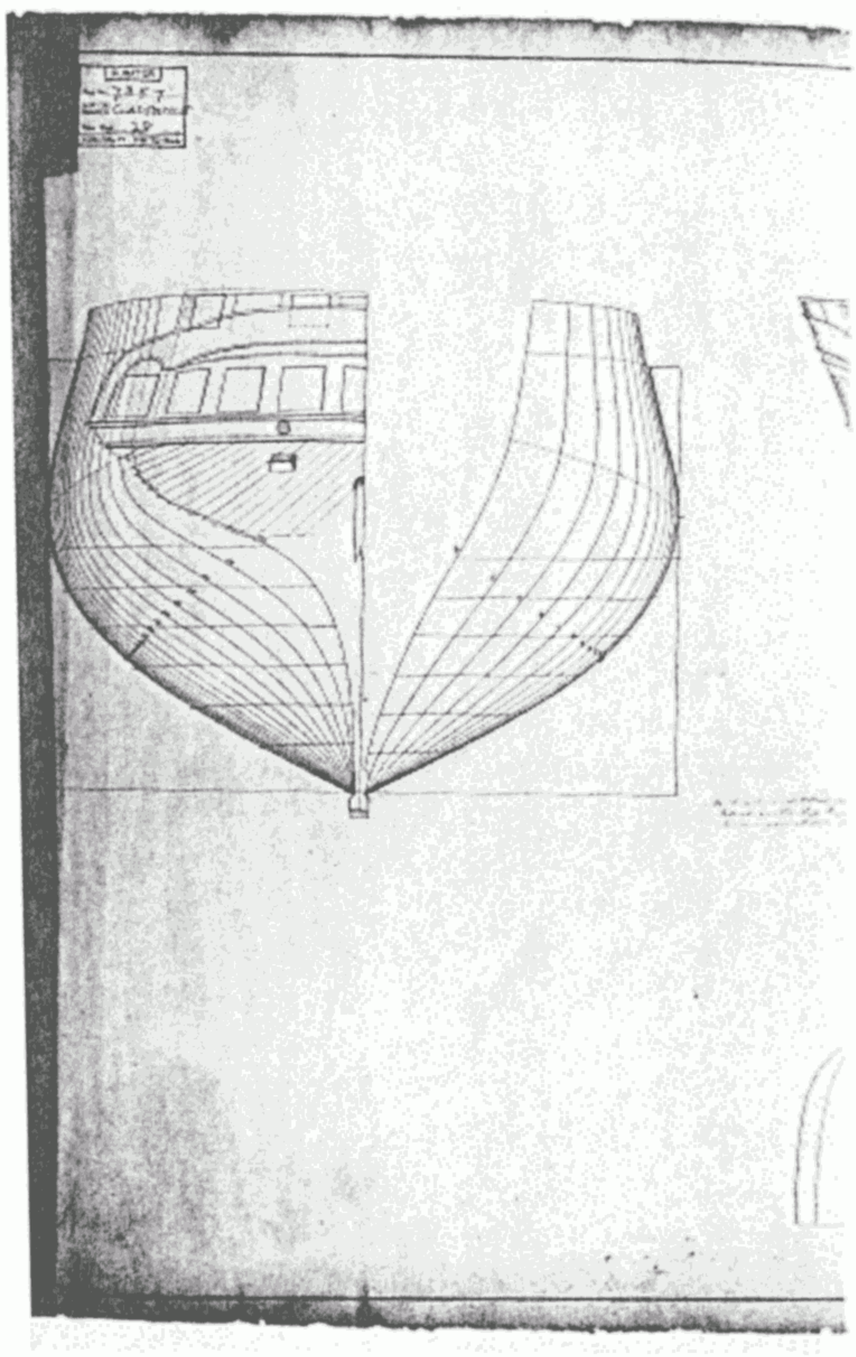
Ord: 29.11.1832. K: ... . Cancelled 3.3.1834 (unstarted).

NOTES: Due to urgency of construction, *Vernon* developed serious dry rot. *Indefatigable* was intended to use timbers of incomplete 80-gun *Boscawen*, but the latter was instead re-ordered as a 70-gun ship.

***RALEIGH* Class** - 32pdr frigates of 50 guns. John Fincham design, approved 14.9.1842.

Dimensions & tons: 180ft 0in, 149ft 0in x 50ft 0in (49ft 6¼in for tonnage) x 16ft 8in. 1,943$^{69}/_{94}$ bm.

Men: 500. Guns: UD 28 x 32pdr (56cwt); QD 14 x 32pdr (45cwt); Fc 8 x 32pdr (45cwt). 6 x 8in/68pdr (65cwt) shell guns later replaced 8 x 32pdr (UD) in *Raleigh*.



Finally approved draught, dated 5 May 1843, for the 50-gun *Constance*. Note the altered positions for the masts: sailing qualities were of paramount importance to Symonds and his ships were fine-tuned in terms of rigging and stowage to get the best possible performance from them. *DR7357*

First cost: *Raleigh* £35,944 (fitted £59,715).

Raleigh Chatham Dyd.

Ord: 26.3.1842. K: 8.1842. L: 8.5.1845. C: 25.4.1846. Wrecked on a rock off Hong Kong 14.4.1857, and beached off Macao.

Severn Chatham Dyd.

Ord: 19.2.1844. K: 13.8.1849. L: 24.1.1856. Not completed as sailing frigate; re-ordered to complete as screw frigate 4.3.1859 (see Chapter 5). Undocked after conversion 8.2.1860. BU 1876.

NOTES: *Severn* was the last purely sailing warship to be launched for the RN (apart from training vessels).

***CONSTANCE* Class** - 32pdr frigates of 50 guns. Sir William Symonds design 1843.

Dimensions & tons: 180ft 0in, 146ft 10¼in x 52ft 8in (52ft 2in for tonnage) x 16ft 3in. 2,125$^{75}/_{94}$ bm.

Men: 500. Guns: UD 28 x 32pdr (56cwt); QD 14 x 32pdr (45cwt); Fc 8 x 32pdr (45cwt). 10 x 8in/68pdr (65cwt) shell guns later replaced 10 x 32pdr (UD) in each.

First cost: *Constance* £41,071 (+ fitting £16,173). *Arethusa* £43,152 (+ fitting £19,384). *Octavia* £41,645.

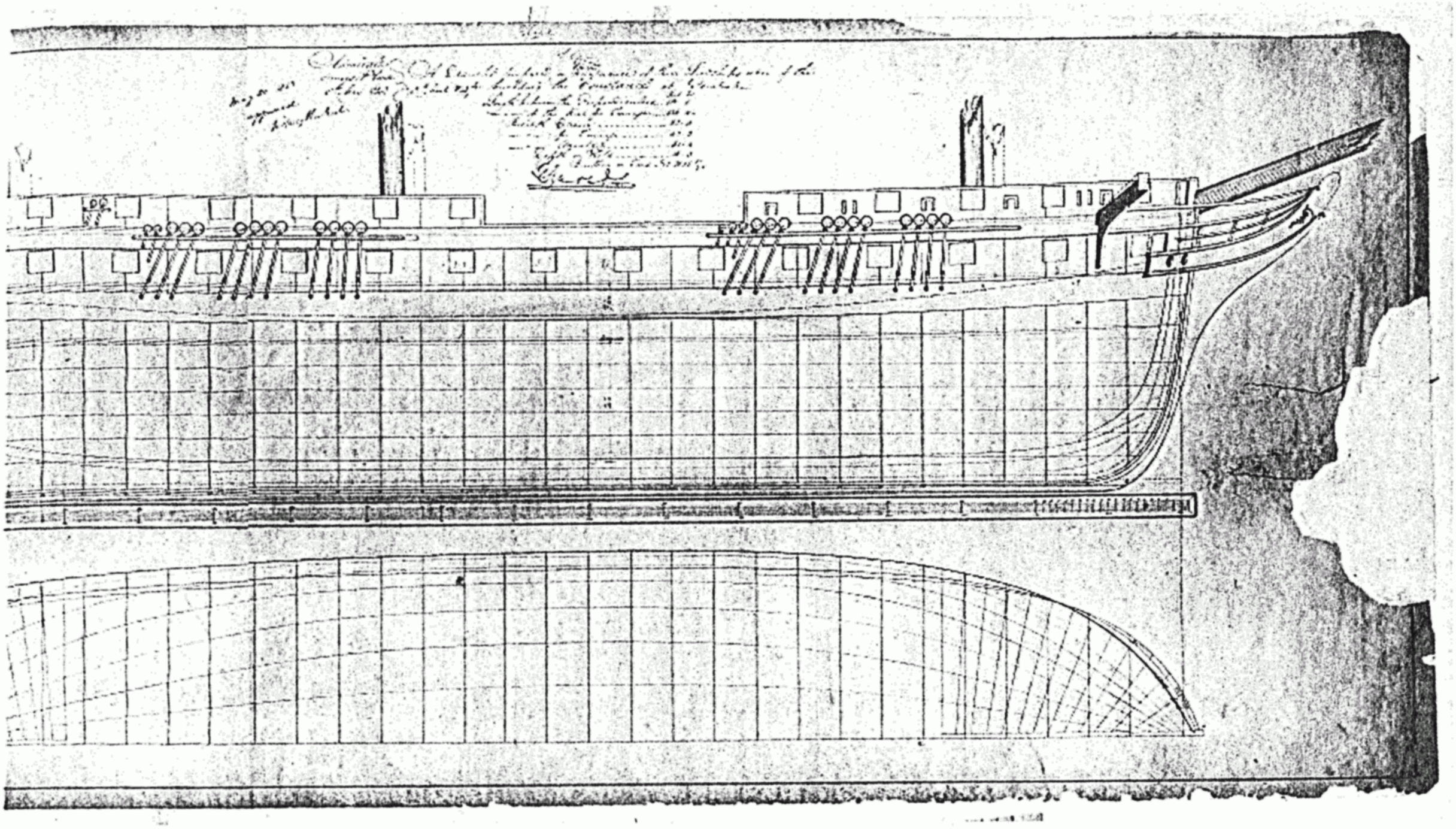
Constance Pembroke Dyd.

Ord: 31.3.1843. K: 10.1843. L: 12. 3.1846. C: 28.6.1846 at Plymouth. Converted to screw frigate 1860-62 (see Chapter 5). BU 1875.

Arethusa Pembroke Dyd.

Ord: 19.2.1844. K: 30.3.1846. L: 20.6.1849. C: 20.3.1850 at Plymouth. Converted to screw frigate 1860-61 (see Chapter 5). Training ship 1874. BU 1933.

Liffey Devonport Dyd.



Ord: 19.2.1844. K: ... . Not begun as sailing frigate. Re-ordered as screw frigate 4.4.1851 (see Chapter 5).

Octavia Pembroke Dyd.

Ord: 26.3.1846. K: 9.1846. L: 18.8.1849. In Ordinary at Plymouth from 17.10.1849. Converted to screw frigate 1859-61 (see Chapter 5). BU 8.1876.

Sutlej Pembroke Dyd.

Ord: 26.3.1846. K: 8.1847. L: 17. 4.1855. In Ordinary at Portsmouth from 1855. Converted to screw frigate 1859-60 (see Chapter 5). BU 1869.

NOTES: The largest sailing frigates ever built for the RN. *Constance* originally ordered 12.9.1833 as 36-gun Fifth Rate at Portsmouth; amended 16.2.1843 to be a 44 at Pembroke, finally re-ordered as above. *Sutlej* final design modified 14.10.1847 by Admiralty to 180ft 0in, 148ft 4⅛in x 51ft 8in oa (51ft 2in for tonnage) x 16ft 3in (2,065$^{79}/_{94}$ tons); armed with 28 x 8in and 22 x 32pdr. Four launched as sailing frigates; all undocked 1859-61 after conversion to screw frigates.

***LEANDER* Class** - 32pdr frigates of 50 guns. Richard Blake design 1843.

Dimensions & tons: 181ft 4in, 149ft 0¾in x 50ft 4in oa (49ft 10in for tonnage) x 15ft 8in. 1,969 bm.

Men: 500. Guns: UD 22 x 32pdr (56cwt) + 6 x 8in/68pdr (65cwt) shell; QD 14 x 32pdr (45cwt) + 2 x 8in/68pdr (65cwt) shell; Fc 4 x 32pdr (45cwt) + 2 x 8in/68pdr (65cwt) shell.

First cost: *Leander* £39,585 (+ fitting £16,773).

Leander Portsmouth Dyd.

Ord: 8.7.1843. K: 2.1845. L: 8.3.1848. C: 17.11.1849. Converted to screw frigate 1860-61 (see Chapter 5). Sold 1867.

Shannon Portsmouth Dyd.

Ord: 19.2.1844. K: 8.1849. Re-ordered as screw frigate 4.4.1851 (see Chapter 5).

NOTES: The designer was Master Shipwright at Portsmouth (1830-35).

PHAETON - 32pdr frigate of 50 guns. White design approved 24.2.1845.

Dimensions & tons: Designed 184ft 11in, 151ft 11⅛in x 49ft 4in oa (48ft 9in for tonnage) x 15ft 10½in. 1,920 $^{89}/_{94}$ bm (initial design 9.1.1845 gave 177ft, 1,805 bm). As built 184ft 11in, 152ft 8½in x 49ft 5¾in oa (48ft 10¾in for tonnage) x 15ft 10½in. 1,942 bm.

Men: 500. Guns: UD 22 x 32pdr (56cwt) + 6 x 8in/68pdr (65cwt) shell; QD 14 x 32pdr (45cwt) + 2 x 8in/68pdr (65cwt) shell; Fc 4 x 32pdr (45cwt) + 2 x 8in/68pdr (65cwt) shell.

First cost: £44,146 (+ fitting £20,231).

Phaeton Deptford Dyd.

Ord: 22.2.1845. K: 1.9.1845. L: 25.11.1848. C: 18.2.1850 at Sheerness. Converted to screw frigate from 4.1859 to 12.1859 (see Chapter 5). BU 1875.

NOTES: Originally to be named *Arrogant*, but renamed 1.3.1845.

***INDEFATIGABLE* Class** - 32pdr frigates of 50 guns. William Edye design 1846.

Dimensions & tons: 180ft 0in, 147ft 8½in x 51ft 6in (51ft 0in for tonnage) x 16ft 3in. 2,043$^{52}/_{94}$ bm.

Men: 500. Guns: UD 22 x 32pdr (56cwt) + 6 x 8in/68pdr (65cwt) shell; QD 14 x 32pdr (45cwt) + 2 x 8in/68pdr (65cwt) shell; Fc 4 x 32pdr (45cwt) + 2 x 8in/68pdr (65cwt) shell.

First cost: *Indefatigable* £47,532 (+ fitting £18,196). *Phoebe* £40,471 (+ fitting £1,587).

Indefatigable Devonport Dyd.

Scan and/or retouch by Grzechu

Ord: 17.12.1845. K: 22.8.1846. L: 27.7.1848. C: 23.1.1850. Lent as training ship to the Committee of the Liverpool Training Ship 3.1.1865. Sold 26.3.1914.

Phoebe Devonport Dyd.

Ord: 27.2.1847. K: 7.8.1848. L: 12.4.1854. C: 12.5.1854 (for Ordinary). Converted to screw frigate 1859-60 (see Chapter 5). BU 1875.

NOTES: *Indefatigable* not converted to screw. The designer was the Master Shipwright at Devonport (1843-59), not the Assistant Constructor, John Edye.

NANKIN - 32pdr frigate of 50 guns. Oliver W. Lang design 1845.

Dimensions & tons: 185ft 0in, 149ft 10$^{1}/_{8}$in x 50ft 10in (50ft 1½in for tonnage) x 17ft 2in. 2,002$^{54}/_{94}$ bm.

Men: 500. Guns: UD 22 x 32pdr (56cwt) + 6 x 8in/68pdr (65cwt) shell; QD 14 x 32pdr (45cwt) + 2 x 8in/68pdr (65cwt) shell; Fc 4 x 32pdr (45cwt) + 2 x 8in/68pdr (65cwt) shell.

First cost: £37,304 (+ fitting £23,357).

Nankin Chatham Dyd.

Ord: 26.1.1846. Order transferred to Woolwich Dyd (the ship's prepared frames were transferred to the new yard):

Ord: 22.2.1846. K: 6.1846. L: 16.3.1850. C: 3.2.1855. Receiving ship at Pembroke 7.1867. Sold at Pembroke 28.2.1895, and BU *c*1905.

NOTES: *Nankin* not converted to screw.

Eight more 32pdr sailing frigates were ordered in 1848, and a final (unnamed) pair in 1850; nine were replaced by orders for screw-driven frigates either before or shortly after work commenced on them, and the final one cancelled.

***EMERALD* Class** - 32pdr frigates of 60 guns. Edye and Watts design 1848.

Dimensions & tons: 185ft 0in, 152ft 2in x 52ft 0in oa (51ft 6in for tonnage) x 15ft 8in. 2,146$^{81}/_{94}$ bm.

Men: 550. Guns: UD 30 x 8in/68pdr (65cwt) shell; QD/Fc 22 x 32pdr (45cwt) + 8 x 8in/68pdr (65cwt) shell (waist).

Emerald Deptford Dyd.

Ord: 30.3.1848. K: 4.6.1849. L: ... . Re-ordered as screw frigate 24.5.1854 (see Chapter 5).

Melpomene Pembroke Dyd.

Ord: 30.3.1848. K: 9.1849. L: ... . Re-ordered as screw frigate 9.4.1856 (see Chapter 5).

Immortalite Pembroke Dyd.

Ord: 30.3.1848. K: 11.1849. L: ... . Re-ordered as screw frigate 9.4.1856 (see Chapter 5).

Imperieuse Deptford Dyd.

Ord: 30.3.1848. K: ... . Re-ordered as screw frigate 14.6.1850 (see Chapter 5).

NOTES: *Melpomene* and *Immortalite* were originally ordered to a design by Read, Chatfield and Creuze but in 5.1849 this was altered to build to same design as other pair. All re-ordered as screw ships on above dates; converted on stocks and launched as screw frigates.

***SAN FIORENZO* Class** - 32pdr frigates of 50 guns. Read, Chatfield & Creuze design, approved 31.1.1849.

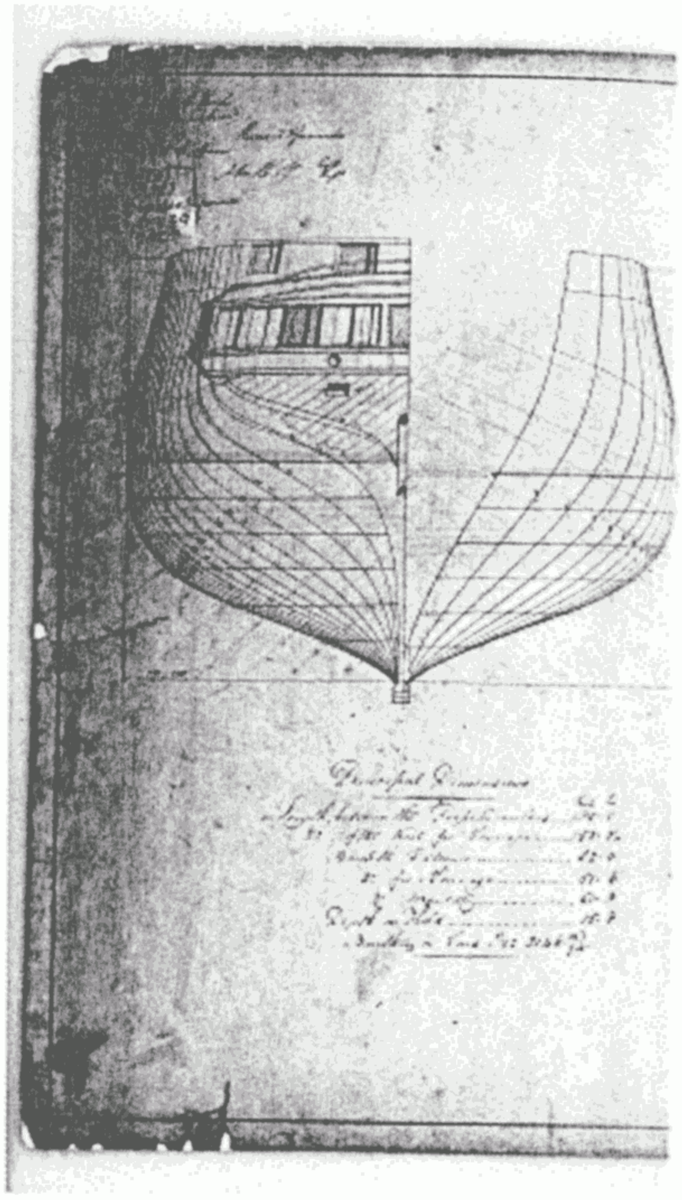
Dimensions & tons: 187ft 4in, 155ft 4in x 50ft 6in oa (50ft 0in for tonnage) x 15ft 6½in. 2,065$^{56}/_{94}$ bm.

Men: 500. Guns: UD 28 x 8in/68pdr (65cwt) shell; QD/Fc 22 x 32pdr (45cwt). Originally to have been 10 x 8in and 40 x 32pdr.

San Fiorenzo Woolwich Dyd.

Ord: 22.6.1848. K: 6.1850. L: ... . Suspended 1.12.1851 and cancelled 4.1856.

The original design draught for the *Emerald* and *Imperieuse* as 60-gun sailing frigates, dated 2 December 1848. *DR1513*



Bacchante Portsmouth Dyd.

Ord: 22.6.1848. K: 6.9.1856. L: ... . Re-ordered as screw frigate 4.4.1851 (see Chapter 5).

***NARCISSUS* Class** - 32pdr frigates of 50 guns. Edye and Watts design, approved 30.3.1848.

Dimensions & tons: 180ft 0in, 148ft 1$^{7}/_{8}$in x 50ft 10in oa (50ft 4in for tonnage) x 15ft 10in. 1,996$^{49}/_{94}$ bm.

Men: 500. Guns: UD 22 x 32pdr (56cwt) + 6 x 8in/68pdr (65cwt) shell; QD/Fc 18 x 32pdr (45cwt) + 4 x 8in/68pdr (65cwt) shell.

Narcissus Devonport Dyd.

Ord: 30.3.1848. K: 11.1849. L: ... . Re-ordered as screw frigate 23.3.1857 (see Chapter 5).

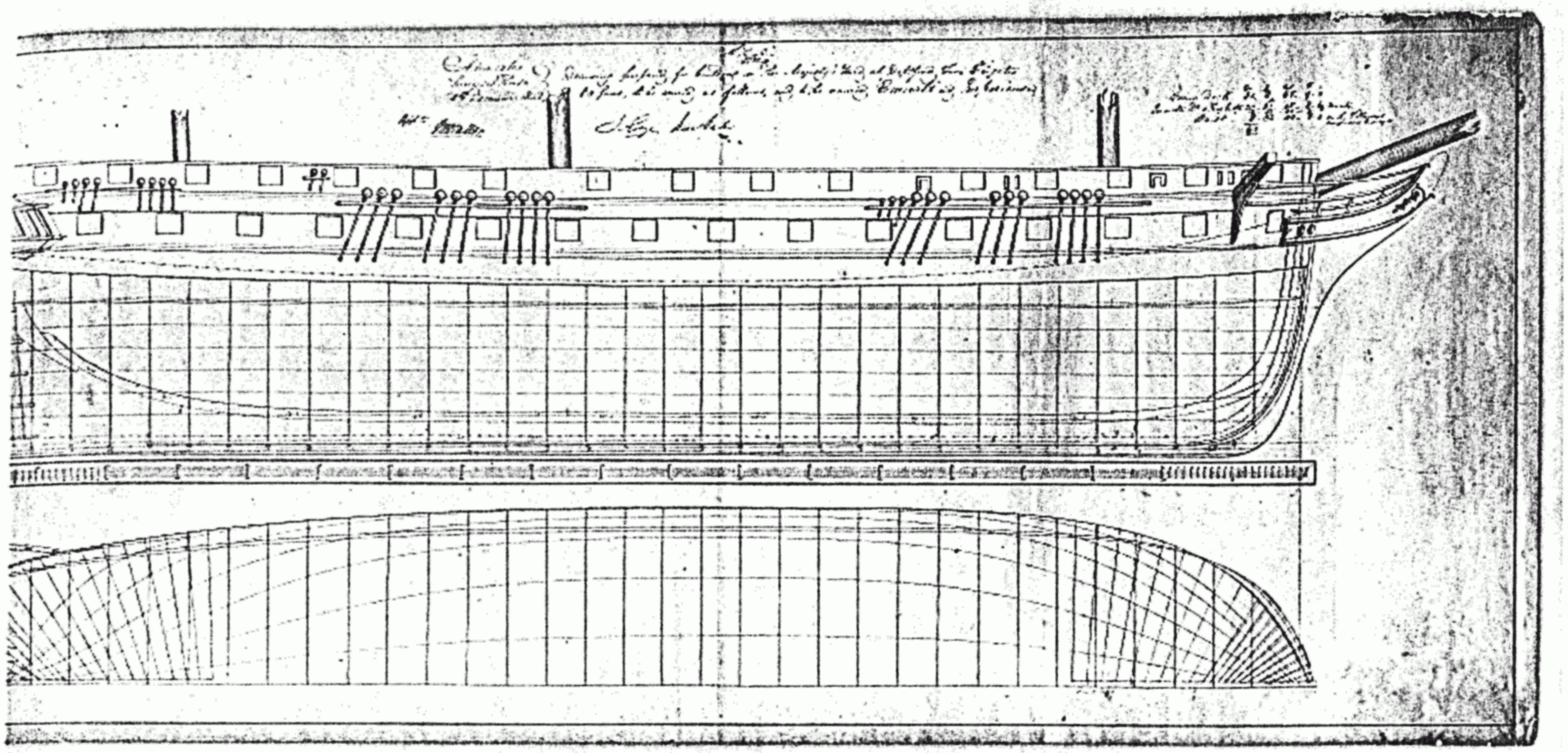
Euryalus Chatham Dyd.

Ord: 30.3.1848. K: ... . Re-ordered as screw frigate 15.3.1851 (see Chapter 5).

NOTES: *Narcissus*, originally ordered 1846 as an 18-gun ship sloop (see below) was amended 25.4.1847 to be built as a 50-gun frigate, approved to this design on date shown above. Two further ships (re-orders of the *Liffey* and *Shannon*) were placed with Plymouth Dyd and Portsmouth Dyd on 25.3.1850 but were not laid down. All were cancelled as sailing frigates (the last two above on 4.4.1851) and re-ordered as screw frigates.

Frigates (Fifth Rates)

By 1815 the 38-gun frigate had become the standard British frigate. In February 1817 the recalculation of armament meant that these became rerated as 46-gun ships, and construction of this type continued until the start of the 1830s, when the decision to adopt a uniform 32pdr main armament for all new frigates (and larger warships) resulted in a quantitative reduction to 36 guns. In 1839 the remaining older 46-gun frigates (*Leda* Class) were rerated as 42s.



***LEDA* Class** - 18pdr frigates of 46 guns (reclassed from 38s in 2.1817). Sir John Henslow design, 1794. Continuation of wartime production class (see Chapter 1).

Dimensions & tons: 150ft 1½in, 125ft 4⅞in x 39ft 11in x 12ft 9in. 1,062$^{79}/_{94}$ bm.

Men: 315. Guns: UD 28 x 18pdr (38cwt); QD 14 x 32pdr (17cwt) carronades; Fc 2 x 9pdr (26cwt) + 2 x 32pdr (17cwt) carronades.

First cost: *Amphitrite* £21,549. *Trincomalee* £23,643. *Thetis* £27,435 (+ fitting £20,658). *Arethusa* £25,923. *Blanche* £33,250 (+ fitting £14,285). *Fisgard* £23,493.

Diamond Chatham Dyd.

Ord: 30.6.1812. K: 8.1813. L: 16.1.1816. C: 24.7.1824. Accidentally burnt at Portsmouth 18.2.1827, remains then BU.

Amphitrite East India Co., Bombay. Teak-built.

Ord: 21.10.1812. K: 8.1814. L (floated out): 14.4.1816. Laid up on arrival Portsmouth 22.12.1816. Cut down to a 26-gun corvette 1845-46 (Sixth Rate - which see).

Trincomalee East India Co., Bombay. Teak-built.

Ord: 30.10.1812. K: 25.4.1816. L: 12.10.1817. Laid up on arrival Portsmouth 3.4.1819. Cut down to a 26-gun corvette 1845-47 (Sixth Rate - which see).

Thetis Pembroke Dyd.

Ord: 18.12.1812. K: 12.1814. L: 1.2.1817. C: 20.8.1823 at Plymouth. Wrecked off Cape Frio, Brazil 5.12.1830 - the cargo of bullion was recovered at the time in a brilliant feat of improvised salvage. The Belgian diver Robert Sténuit worked on the site in the late 1980s.

Arethusa Pembroke Dyd.

Ord: 22.11.1814. K: 2.1815. L: 29.7.1817. C: 27.9.1817 at Plymouth (for Ordinary). Hulked at Liverpool as a lazarette 1836. Renamed *Bacchus* 12.3.1844. To Plymouth as a lazarette 1850. Coal depot 1852. Sold to H. Castle & Sons to BU 14.8.1883.

Blanche Chatham Dyd.

Ord: 29.5.1815. K: 2.1816. L: 26.5.1819. C: 5.1824 (for sea service). Became a receiving ship and temporary hulk at Portsmouth 1833. Sold to BU 10.1865.

Fisgard Pembroke Dyd.

Ord: 24.8.1815. K: 2.1817. L: 8.7.1819. C: 27.8.1819 at Plymouth (for Ordinary). Became a harbour flagship (fitted for a Commodore) at Woolwich 10.1847. BU completed at Chatham 8.10.1879.

NOTES: There is a question over the sequence of the first two orders at Pembroke Dyd; I have taken the view that the first frigate ordered there (1812) was the first laid down (*ie Thetis*), but some sources reverse *Arethusa/Thetis* orders.

Modified *LEDA* Class - 18pdr frigates of 46 guns (reclassed from 38s in 2.1817). John Henslow design, modified to incorporate Seppings' circular stern and 'small-timber' system of construction. All rerated as 42s in 1839.

Dimensions & tons: 151ft 9in, 125ft 0in x 40ft 3in x 12ft 9in. 1,077$^{16}/_{94}$ bm.

Men: 315. Guns: UD 28 x 18pdr (38cwt); QD 14 x 32pdr (17cwt) carronades; Fc 2 x 9pdr (26cwt) + 2 x 32pdr (17cwt) carronades.

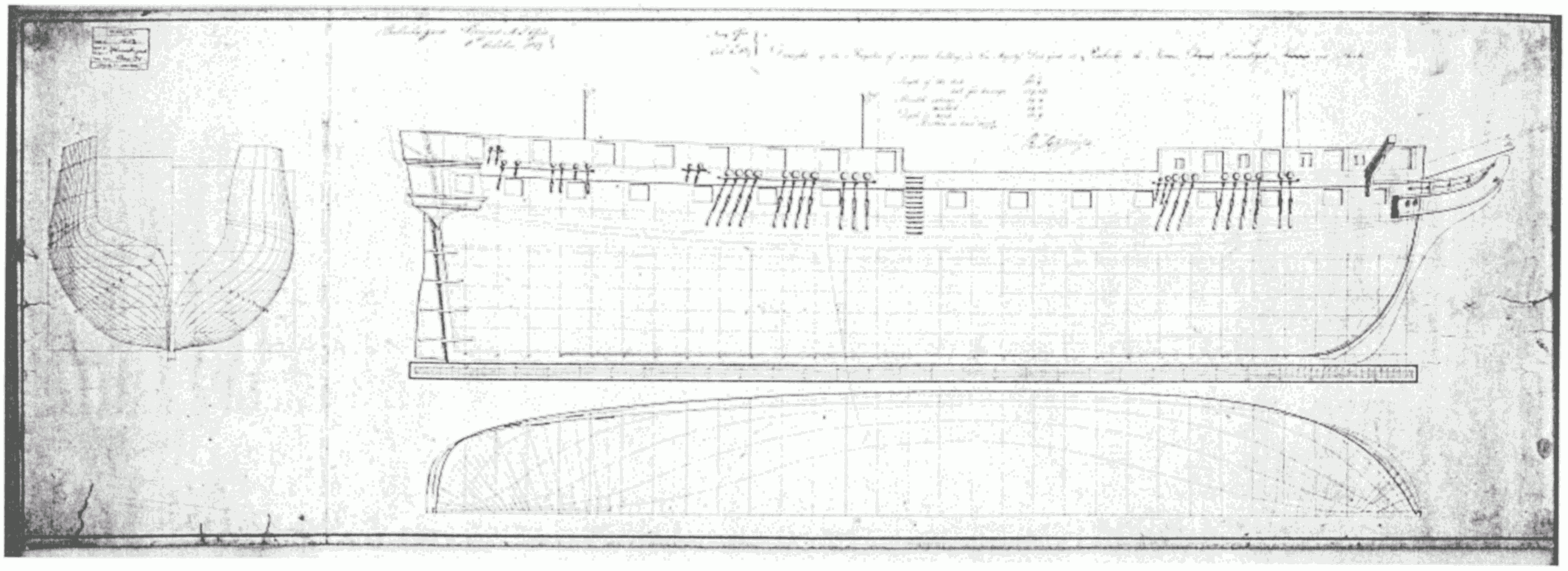
First cost (including fitting where done): *Venus* £37,185. *Melampus* £30,079. *Minerva* £36,080. *Latona* £29,923 (not fitted). *Diana* £30,159. *Hebe* £29,987. *Nereus* £27,125. *Hamadryad* £24,683. *Amazon* £34,887. *Aeolus* £30,119. *Thisbe* £26,336 (not fitted). *Cerberus* £31,614. *Circe* £31,805 (+ fitting £1,170). *Clyde* £32,074. *Thames* £26,401. *Fox* £35,215 (not fitted). *Unicorn* £26,461. *Daedalus* £27,579. *Proserpine* £34,342. *Mermaid* £27,134. *Mercury* £27,673. *Penelope* £31,476. *Thalia* £29,476.

Venus Deptford Dyd.

Ord: 1.5.1816. K: 3.1817. L: 10.8.1820. C: 27.4.1821 (for Ordinary). Lent to the Marine Society as training ship 1848 until 1863. Sold to Castle & Beech 7.10.1864 and BU completed at Charlton 24.2.1865.

Melampus Pembroke Dyd.

Ord: 1.5.1816. K: 8.1817. L: 10.8.1820. C: 23.9.1820 at Plymouth (for Ordinary). Fitted at Plymouth as a receiving and stores ship for



The post-war appearance of the *Leda* Class derivatives is shown in this sheer draught intended for those ships to be built in Pembroke Dockyard, listed on this sheer draught dated 4 October 1819 as *Nereus*, *Druid*, *Hamadryad*, *Nemesis* and *Thisbe* (*Druid* and *Nemesis* were later crossed through when the names were transferred to other designs). *DR1602*

Constantinople 1855, though it is uncertain whether she was ever sent there. To the Coastguard at Southampton 1857. Returned to the RN 8.1886 at Portsmouth then to the War Office there as an ordnance store until returned to the Admiralty 10.1891. Sold to Harris, Bristol to BU 3.4.1906.

Minerva Portsmouth Dyd.
Ord: 1.5.1816. K: 10.1817. L: 13.6.1820. C: 26.6.1820 (for Ordinary). Floating workshop at Portsmouth 1.1859. Hulked for harbour service 1861. Sold at Portsmouth 28.2.1895.

Latona Chatham Dyd.
Ord: 1.5.1816. K: 10.1818. L: 16.6.1821. Not completed. Became a mooring vessel at Sheerness 1868. To Portsmouth as a powder depot 1872. Intended to become a training ship 1874 but this was not put into effect, and instead BU was completed at Chatham 20.3.1875.

Diana Chatham Dyd.
Ord: 1.5.1816. K: 2.1819. L: 8.1.1822. C: 22.2.1822 (for Ordinary). Became a receiving ship at Sheerness 10.1868. BU completed at Chatham 9.2.1874.

Hebe Woolwich Dyd.
Ord: 1.5.1816. K: 5.1820. L: 14.12.1826. C: 5.1827 (for Ordinary). Became a convict ship at Woolwich 1839. To Sheerness as receiving ship 1871. BU completed at Chatham 31.3.1873.

Nereus Pembroke Dyd.
Ord: 25.4.1817. K: 1.1819. L: 30.7.1821. C: 12.9.1821 at Plymouth (for Ordinary). Became a coal depot at Valparaiso, Chile 1843. Sold to J. L. Page, Coquimbo as hulk 22.1.1879.

Hamadryad Pembroke Dyd.
Ord: 25.4.1817. K: 9.1819. L: 25.7.1823. C: 23.8.1823 at Plymouth (for Ordinary). Became a hospital ship for sick seamen at Cardiff 4.1866. Sold 11.7.1905.

Amazon Deptford Dyd.
Ord: 23.6.1817. K: 10.1817. L: 15.8.1821. C: 8.12.1821 (for Ordinary). Cut down to a 26-gun corvette (Sixth Rate) 12.1844. Sold to W.Lethbridge 9.1863.

Aeolus (*Eolus*) Deptford Dyd.
Ord: 23.7.1817. K: 10.1818. L: 17.6.1825. C: 5.8.1825 (for Ordinary). Became a store depot at Sheerness 1846. To Portsmouth as an accommodation ship 1855. Lazarette 1861. Sold to Castle to BU at Charlton 3.1886.

Thisbe Pembroke Dyd.
Ord: 23.7.1817. K: 8.1820. L: 9.9.1824. Not completed. Depot ship at Plymouth 1850. Became a floating church at Cardiff 13.8.1863. Sold to W. H. Caple 11.8.1892.

Cerberus Plymouth Dyd.
Ord: 23.7.1817. K: 11.1820. L: 30.3.1827. C: 11.4.1827 (for Ordinary). Never commissioned. BU completed by J. & E. Marshall at Plymouth 10.1.1866.

Circe Plymouth Dyd.
Ord: 23.7.1817. K: 11.1820. L: 22.9.1827. C: 23.10.1827 (for Ordinary). Became an accommodation hulk at Plymouth 1.4.1866, as tender to *Indefatigable*. Swimming bath late 1885. Renamed *Impregnable IV* 10.1915. Sold to S. Castle, Plymouth for BU 7.1922.

Clyde Woolwich Dyd.
Ord. 23.7.1817. K: 1.1821. L: 9.10.1828. C: 2.1829 (for Ordinary). Became an RNR training ship at Aberdeen 8.1870. Sold at Portsmouth 5.7.1904.

Thames Chatham Dyd.
Ord: 23.7.1817. K: 6.1821. L: 21.8.1823. C: 3.10.1823. Became a convict ship at Deptford 1841. To Bermuda as convict ship 1844. Sunk at moorings there 6.6.1863 and wreck sold to J. Murphy for BU.

Fox Portsmouth Dyd.
Ord: 23.7.1817. K: 6.1821. L: 17.8.1829. Not completed as sailing frigate. Converted to a screw frigate from 9.1855 to 3.1856 (see Chapter 5). Screw storeship 3.1862. BU at Devonport 3.1882.

Unicorn Chatham Dyd.
Ord: 23.7.1817. K: 2.1822. L: 30.3.1824. C: 14.5.1824 (for Ordinary). Never fitted for sea. Powder hulk at Chatham 1860. Lent to the War Office as a powder hulk 1868. To Dundee as RNR training ship 11.1873. Renamed *Unicorn II* in 2.1939, then *Cressy* 20.11.1941, resumed *Unicorn* 14.7.1959. Since 29.9.1968 belongs to the Unicorn Preservation Society who are fitting her out as a museum ship in Dundee Harbour. She is still afloat, but it is planned to preserve the ship in a dry dock, complete with the original housing built over the hull when she first went into Ordinary in 1824.

Daedalus Sheerness Dyd (originally to have been built at Deptford - changed by AO 14.8.1821).

Scan and/or retouch by Grzechu

Ord: 23.7.1817. K: 10.1822. L (floated out): 22.5.1826. Not completed as a frigate. Cut down to a 19-gun corvette (Sixth Rate - which see) 1844. To RNR as a drill ship 1862. Sold to J. B. Garnham to BU 14.9.1911.

Proserpine Plymouth Dyd.
Ord: 23.7.1817. K: 11.1822. L (floated out): 1.12.1830. Never completed or commissioned in RN. Sold to J. Ridley to BU 21.1.1864.

Mermaid Chatham Dyd.
Ord: 23.7.1817. K: 9.1823. L: 30.7.1825. C: 30.8.1825 (for Ordinary). Became an Army powder ship at Purfleet 1858. Returned to the RN 8.5.1863 and to Dublin as a powder depot. BU completed at Dublin 6.1875.

Mercury Chatham Dyd.
Ord: 23.7.1817. K: 4.1824. L: 16.11.1826. C: 15.12.1826 (for Ordinary). Became a coal depot at Woolwich 1862. By 1873 to Sheerness as a coal depot. Sold to Harris, Bristol to BU 3.4.1906.

Penelope Portsmouth Dyd.
Ord: 23.7.1817. K: not begun? Transferred to: Chatham Dyd.
Re-ord: 26.5.1827. K: 11.1827. L: 13.8.1829. C: 1.1830 (for Ordinary). Converted to a paddle frigate 1843 (see Chapter 3). Sold 15.7.1864.

Thalia Portsmouth Dyd.
Ord: 23.7.1817. K: not begun? Transferred to: Chatham Dyd.
Re-ord: 26.5.1827: K: 2.1828. L: 12.1.1830. C: 10.2.1830 (for Ordinary). Became a Roman Catholic chapel ship at Portsmouth 1855. BU by White at Cowes 11.1867.

Pegasus Deptford Dyd.
Ord: 23.7.1817: K: not begun? Transferred to: Sheerness Dyd.
Re-ord: 17.2.1825. K: 3.1828. Cancelled 10.1.1831 (her frame was used for 28-gun *Calliope* - see below).

Nemesis Pembroke Dyd.
Ord: 23.7.1817. K: ... . Re-ordered to *Seringapatam* design (see below) 26.10.1820.

Statira Plymouth Dyd.
Ord: 23.7.1817. K: ... . Re-ordered to *Seringapatam* design (see below) 26.10.1820.

Jason Woolwich Dyd.
Ord: 23.7.1817. K: ... . Re-ordered to *Seringapatam* design (see below) 26.10.1820.

Druid Pembroke Dyd.
Ord: 23.7.1817. K: ... . Re-ordered to modified *Seringapatam* design (see below).

Medusa Woolwich Dyd.
Ord: 23.7.1817. K: ... . Cancelled 22.4.1831.

BLONDE - 18pdr frigate of 46 guns (rated 38 until 2.1817). Modified from lines of 36-gun *Apollo* Class.
Dimensions & tons: 155ft 0in, 143ft 2in x 39ft 8in x 13ft 6in. 1,103 bm.
(Note the above recorded keel figure is clearly miscalculated and wrongly quoted, and should be around 131ft 9in.)
Men: 315. Guns: UD 28 x 18pdr (38cwt); QD 14 x 32pdr (17cwt) carronades; Fc 2 x 9pdr (26cwt) + 2 x 32pdr (17cwt) carronades.
First cost: £38,266 (+ fitting £15,241).

Blonde Deptford Dyd.
Ord: 11.12.1812. K: 3.1816. L: 12.1.1819. In Ordinary (reserve) at Greenhithe 4.1819 until 1924 when completed and fitted at Woolwich. Became a receiving ship at Portsmouth 11.1850. Renamed *Calypso* 9.3.1870. Sold at Portsmouth 28.2.1895.

***SERINGAPATAM* Class** - 18pdr frigates of 46 guns (rated 38-gun until 2.1817). Development of *President* (French prize of 1806).
Dimensions & tons: 157ft 6in, 132ft 1½in x 40ft 5in x 13ft 6in. 1,148 bm.
Men: 315. Guns: UD 28 x 18pdr (38cwt); QD 14 x 32pdr (17cwt) carronades; Fc 2 x 9pdr (26cwt) + 2 x 32pdr (17cwt) carronades; subsequently re-armed with UD 26 x 32pdr + 2 x 8in/68pdr shell guns; QD 10 x 32pdr; Fc 4 x 32pdr.
First cost: £36,749 (+ fitting £11,626).

Seringapatam East India Co., Bombay. Teak-built.
Ord: 21.8.1813. K: 11.1817. L: 5.9.1819. C: 10.4.1821 at Plymouth. Became a receiving ship at the Cape of Good Hope 7.1847, then a coal hulk 1852. BU there between 6.1873 and 1883 (by AO 20.12.1872), and remains sold.

NOTES: Six more ships were ordered to this design - the *Madagascar* and *Manilla* in 4.1819 and the *Tigris*, *Jason*, *Nemesis* and *Statira* in 10.1820 (the last three had originally been ordered in 1817 to Modified *Leda* design); in 1822 the *Madagascar*, *Nemesis* and *Jason* were re-ordered as *Druid* Class; and in 1826 the *Manilla*, *Tigris* and *Statira* were re-ordered as *Andromeda* Class; the last four were never in fact completed.

***DRUID* Class** - 18pdr frigates of 46 guns. Modification of *Seringapatam* Class design (and hence of French *President*), with addition of circular sterns.
Dimensions & tons: 159ft 0in, 133ft $9^{3}/_{8}$in x 40ft 5in x 12ft 9in. $1{,}162^{38}/_{94}$ bm.
Men: 315. Guns: UD 28 x 18pdr (38cwt); QD 14 x 32pdr (17cwt) carronades; Fc 2 x 9pdr (26cwt) + 2 x 32pdr (17cwt) carronades. Subsequently re-armed with UD 26 x 32pdr + 2 x 8in/68pdr shell guns; QD 10 x 32pdr; Fc 4 x 32pdr.
First cost: *Druid* £31,980 (+ fitting £13,054). *Madagascar* £38,355 (+ fitting £19,187). *Nemesis* £26,614. *Leda* £30,356. *Hotspur* £30,433. *Africaine* £29,934. *Eurotas* £29,683.

Druid Pembroke Dyd.
Ord: 23.7.1817. K: 8.1821. L: 1.7.1825. C: 21.12.1825 at Plymouth. Became a lazarette at Liverpool 6.1846. Sold to Marshall to BU 4.1863.

Madagascar East India Co., Bombay. Teak-built.
Ord: 5.4.1819. K: 10.1821. L: 15.11.1822. C: 1.1829 at Portsmouth. Became a provision depot at Plymouth 1846. To Rio de Janeiro as a receiving ship 1853, then provisions ship. Sold there 5.5.1863.

Nemesis Pembroke Dyd.
Ord. 23.7.1817. K: 8.1823. L: 19.8.1826. Laid up incomplete at Plymouth 4.9.1826. BU by J. & B. Marshall at Plymouth 4.7.1866.

Leda Pembroke Dyd.
Ord: 15.5.1821. K: 10.1824. L: 15.4.1828. Laid up incomplete at Plymouth 3.5.1828. Became a water police ship at Plymouth 1865. Sold to Mr Harris 15.5.1906.

Hotspur Pembroke Dyd.
Ord: 15.5.1821. K: 7.1825. L: 9.10.1828. Laid up incomplete at Plymouth 4.1829. Became a Roman Catholic chapel ship at Plymouth 1859. Renamed *Monmouth* 1868. Sold 1902.

Africaine Chatham Dyd.
Ord: 8.1.1822. K: 9.1825. L: 20.12.1827. C: 3.3.1828 (for Ordinary). Sold to Trinity House 9.5.1867.

Eurotas Chatham Dyd.
Ord: 13.9.1824. K: 2.1827. L: 19.2.1829. C: 20.3.1829 (for Ordinary). Ordered converted to a screw frigate 2.9.1845 - effected 12.1845 to 2.1848 (see Chapter 5); undocked as screw mortar frigate 13.2.1856. Sold to Castle & Beech to BU 1.11.1865.

***ANDROMEDA* Class** - 18pdr frigates of 46 guns. Further modification of

Seringapatam Class design (and hence of French *President*).
Dimensions & tons: 159ft 0in, 133ft 2¼in x 41ft 5in x 13ft 6in. 1,215$^{16}/_{94}$ bm.
Men: 315. Guns: UD 28 x 18pdr (38cwt); QD 14 x 32pdr (17cwt) carronades; Fc 2 x 9pdr (26cwt) + 2 x 32pdr (17cwt) carronades. Subsequently re-armed with UD 26 x 32pdr + 2 x 8in/68pdr shell guns; QD 10 x 32pdr; Fc 4 x 32pdr.
First cost: *Andromeda* £38,887. *Seahorse* £29,272 (not fitted). *Stag* £31,770 (+ fitting £16,454). *Maeander* £45,457 (fitted). *Forth* £28,542 (not fitted).

Pique Plymouth Dyd.
Ord: 25.10.1820. K: 6.1822. Cancelled 16.6.1832.

Andromeda East India Co., Bombay. Teak-built.
Ord: 5.4.1827. K: 8.1827. L: 3.1829 (or 6.1.1829?). Laid up incomplete at Plymouth 23.10.1829. Provision hulk 11.1846. Sold to Bennett & Wake 24.12.1863.

Seahorse Pembroke Dyd.
Ord: 9.1.1823. K: 11.1826. L: 22.7.1830. Laid up incomplete at Plymouth 8.1830. Ordered converted to a screw frigate 2.9.1845 – effected 11.1845 to 7.1847 (see Chapter 5); undocked as screw mortar frigate 3.1856. Became a coal hulk at Plymouth, renamed *Lavinia* 5.5.1870. Sold 1902.

Stag Pembroke Dyd.
Ord: 9.1.1823. K: 4.1828. L: 2.10.1830. C: 9.7.1831 at Plymouth. BU completed by Marshall, Plymouth 8.8.1866.

Euphrates Portsmouth Dyd (teak frames from Bombay).
Ord. 22.10.1822. K: 30.6.1828? Cancelled 7.2.1831.

Maeander Chatham Dyd.
Ord: 13.9.1824. K: 2.1829. L: 5.5.1840. C: 17.1.1848. Hulked for the Coastguard 1857. To Ascension Island as a coal and store ship 11.1859. Ordered to be BU there, the hull was partly stripped 10.1865, but she then foundered in a gale there 7.1870. In 1985 this wreck was investigated by RAF divers.

Forth Pembroke Dyd.
Ord: 9.6.1825. K: 11.1828. L: 1.8.1833. Laid up incomplete at Plymouth 2.9.1833. Ordered converted to a screw frigate 6.9.1845 – effected 10.1845 to 7.1847 (see Chapter 5); undocked as screw mortar frigate 21.1.1856. Hulked as the coal hulk *Jupiter* 12.1869. Sold to Castle, Charlton to BU 4.8.1883.

Inconstant Sheerness Dyd.
Ord: 9.6.1825. K: ... . Cancelled 9.3.1832.

Orpheus Chatham Dyd.
Ord: 9.6.1825. K: ... . Cancelled 7.2.1831.

Severn Plymouth Dyd.
Ord: 9.6.1825. K: ... . Cancelled 7.2.1831.

Tiber Portsmouth Dyd.
Ord: 9.6.1825. K: ... . Cancelled 7.2.1831.

Manilla East India Co., Bombay. Teak-built.
Ord. 5.4.1819. K: ... . Cancelled 7.2.1831.

Spartan Portsmouth Dyd.
Ord: 13.9.1824. K: ... . Cancelled 7.2.1831.

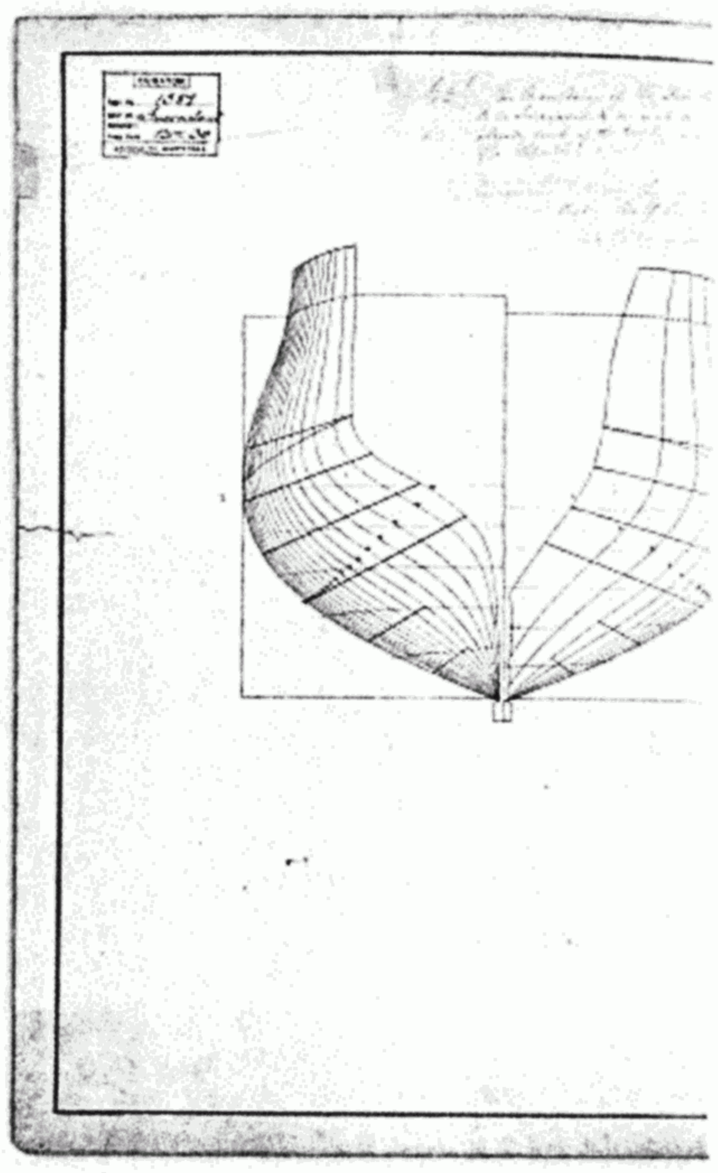
Theban Portsmouth Dyd.
Ord: 13.9.1824. K: ... . Cancelled 7.2.1831.

Jason Woolwich Dyd.
Ord: 23.7.1817. K: ... . Cancelled 7.2.1831.

Statira Plymouth Dyd.
Ord: 23.7.1817. K: 12.1823. Cancelled 31.8.1832 (frame BU 10.1832 and material used to repair *Melampus*).

Tigris Plymouth Dyd. (from teak frames at Bombay Dyd).
Ord: 25.10.1820. K: 6.1822. Cancelled 31.8.1832 (frame BU 5.1833 and used to complete the 80-gun *Hindostan*).

The final modification of the *Seringapatam* Class 46-gun frigates is represented by this design draught of the *Inconstant*, dated 2 June 1829. In the event this particular ship was cancelled. *DR1587*



***CASTOR* Class** - 32pdr frigates of 36 guns. Sir Robert Seppings design 1828, derived from *Stag* Class (18pdr type) with further 13in of beam to mount the heavier ordnance.
Dimensions & tons: 159ft 0in, 133ft 7$^{3}/_{8}$in x 42ft 6in x 13ft 6in. 1,283$^{68}/_{94}$ bm. 1,808 disp.
Men: 275. Guns: UD 22 x 32pdr (55cwt); QD 10 x 18pdr; Fc 4 x 18pdr. Later had UD 18 x 32pdr (55cwt) + 4 x 8in/68pdr (52cwt) shell; QD 10 x 32pdr gunnades (25cwt); Fc 4 x 32pdr gunnades (25cwt).
First cost: *Castor* £38,292 (fitted for sea).

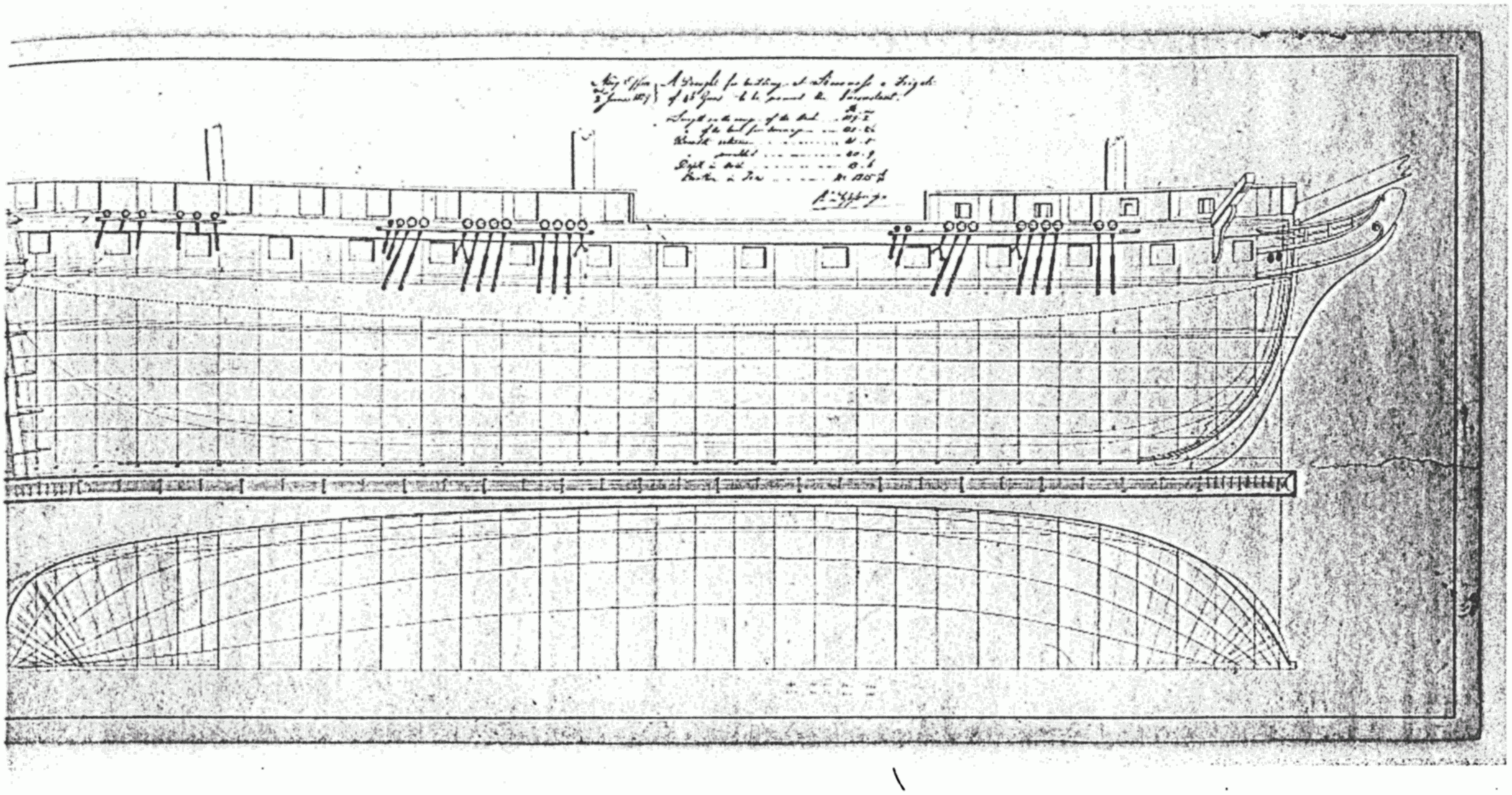
Castor Chatham Dyd.
Ord: 13.5.1828. K: 1.1830. L: 2.5.1832. C: 6.1832. Training ship 1.1860. RNR training ship (22-gun) at North Shields 4.1862. Sold at Sheerness 25.8.1902.

Amphion (ex-*Ambuscade*, renamed 31.3.1831) Woolwich Dyd.
Ord: 13.5.1828. K: 15.4.1840. Re-ordered as screw frigate 18.6.1844.

***PIQUE* Class** - 32pdr frigates of 36 guns. William Symonds design 1832.
Dimensions & tons: 160ft 0in, 131ft 0in x 48ft 8in oa (48ft 3in for tonnage) x 14ft 6in. 1,622$^{20}/_{94}$ bm.
Men: 275. Guns: UD 18 x 32pdr (56cwt) + 4 x 8in/68pdr (65cwt) shell; QD 10 x 32pdr (25cwt); Fc 4 x 32pdr (25cwt). All rerated 40-gun in 1846-48, with UD 18 x 32pdr (56cwt) + 6 x 8in/68pdr (60cwt); QD 16 x 32pdr (42cwt).
First cost: *Pique* £42,885 (fitted for sea). *Flora* £34,709. *Active* £34,190. *Sybille* £36,021 (+ fitting £14,410). *Cambrian* £31,153 (+ fitting £12,882).

Pique Plymouth Dyd.
Ord: 14.1.1833. K: 7.1833. L: 21.7.1834. C: 2.2.1835. Hulked at Devonport 11.1862. Hospital ship 3.1871. Loaned to town council 30.3.1892. Sold to Cox, Falmouth 12.7.1910.

Flora Plymouth Dyd.
Ord: 11.3.1833. K: 12.1834. L: 11.9.1844. C: 27.9.1844 (for Ordinary). Hulked as stores depot at Ascension Island 10.1865. To Simonstown



12.1871. Sold there 9.1.1891.

Constance Portsmouth Dyd.
Ord: 12.9.1833. K: ... . Never begun; replaced by order for 50-gun ship in 1843 (*qv*).

Active Chatham Dyd (originally ordered at Pembroke).
Ord: 9.10.1833. K: 8.1836. L: 19.7.1845. C: 18.8.1845 (for Ordinary). Reserve training ship at Sunderland 6.1863. Renamed *Tyne* 30.7.1867, then *Durham* 18.11.1867. To Leith *c*1870. Sold 12.5.1908 and BU at Bo'ness.

Sybille Pembroke Dyd.
Ord: 28.10.1833. K: 12.1835. L: 15.4.1847. C: 23.8.1853 at Plymouth. BU by Marshall at Plymouth 4.1866.

Cambrian Pembroke Dyd.
Ord: 28.10.1833. K: 8.1837. L: 5.7.1841. C: 8.11.1841 at Plymouth. Mooring hulk at Devonport 5.1869. Floating factory 1880. Sold to J. Read, Portsmouth 12.1.1892.

Chesapeake Chatham Dyd.
Ord: 10.12.1834. K: ... . Never begun; replaced by order for screw frigate 27.3.1852 (see Chapter 5).

***INCONSTANT* Class** - 32pdr frigate of 36 guns. Captain John Hayes design, 1833.
Dimensions & tons: 160ft 1in, 133ft 5$^{3}/_{8}$in x 45ft 5in oa (44ft 9in for tonnage) x 13ft 7in. 1,421$^{5}/_{94}$ bm.
Men: 275. Guns: UD 18 x 32pdr (55cwt) + 4 x 8in/68pdr (65cwt) shell; QD 10 x 32pdr (25cwt); Fc 4 x 32pdr (25cwt).
First cost: £30,919 (41,260 fitted for sea, including making good her defects).

Inconstant Portsmouth Dyd.
Ord: 12.9.1833. K: 8.1834. L: 16.6.1836. C: 14.10.1836. Hospital hulk for emigration at Plymouth 9.1854. Receiving ship at Cork 1.1861. Sold at Cork by AO 8.12.1862 to S. Scott & Co., and BU completed by Castle & Beech at Charlton 14.2.1867.

NOTES: Much lighter than Symonds' design, with frames 37in apart (vice 27in for the *Pique* design), she proved vastly superior, but the Surveyor's opposition meant that no more were built to this draught.

***THETIS* Class** - 32pdr frigate of 36 guns. Design by Read, Chatfield & Creuze (for SNA), approved 16.3.1843.
Dimensions & tons: 164ft 7¼in, 135ft 10in x 46ft 8¾in oa (46ft 0¾in for tonnage) x 13ft 6½in. Light draught 13ft 10in (fwd), 15ft 5in (aft). 1,533$^{17}/_{94}$ bm. 1,894 disp.
Men: 330. Guns: UD 18 x 32pdr (56cwt) + 4 x 8in/68pdr (65cwt) shell; QD 10 x 32pdr (25cwt); Fc 4 x 32pdr (25cwt).
First cost: £40,605 (£51,926 fitted for sea).

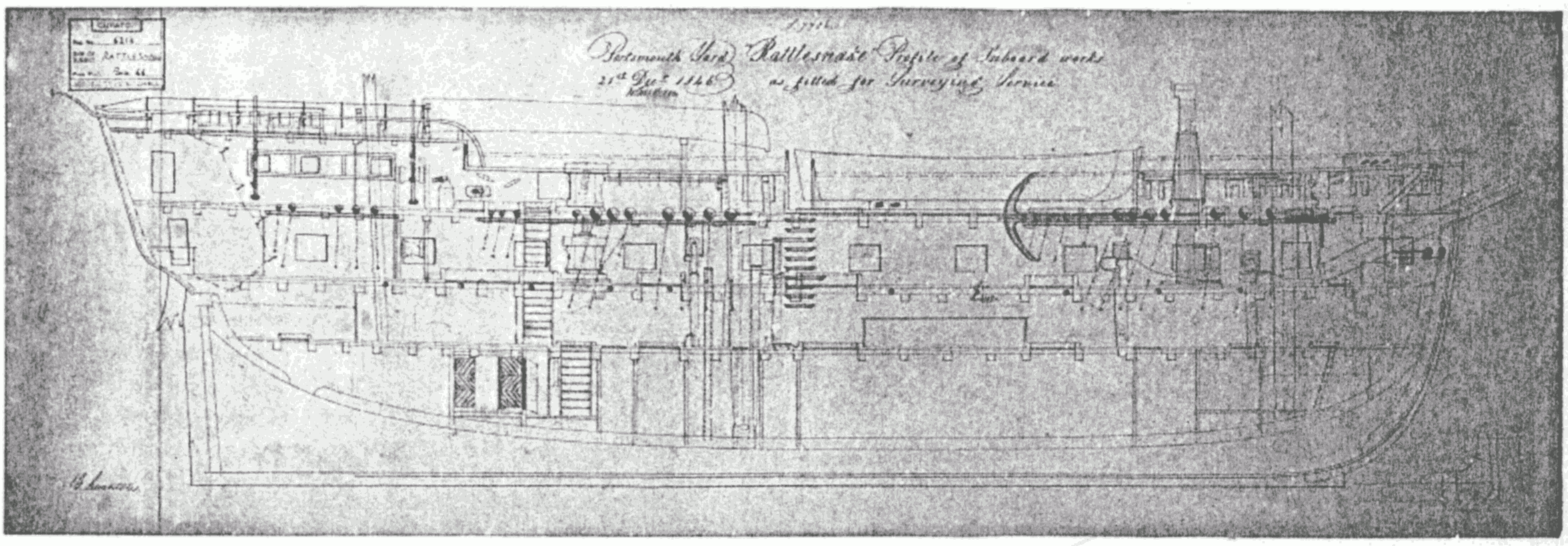
Thetis Devonport Dyd.
Ord: 23.4.1842 & 16.2.1843. K: 2.12.1844. L: 21.8.1846. C: 30.12.1846. Disarmed and given to Prussian Government in exchange for two steam gunboats 12.1.1855; sailed from Plymouth 25.3.1855.

Frigates (Sixth Rates), Later Corvettes

Under the re-classing which took effect in 2.1817, the smallest rated ships - the Sixth Rate - comprised vessels with 24 guns and above but less than 36 guns. Typically, the post-war Sixth Rates were built as 28-gun ships; however, most were reduced to 26 guns in 1839. During the 1820s, a variety of designs from different sources were experimentally tried, with differing hull forms being evaluated to try and achieve a fast cruising performance. The French term 'corvette' came to be used for these vessels, which were also referred to (disparagingly) as 'donkey frigates'.

***ATHOLL* Class** - 28 guns. Design by the Surveyors of the Navy, approved 20.5.1817.
Dimensions & tons: 113ft 8in, 94ft 8¾in x 31ft 6in x 8ft 9in. 499$^{91}/_{94}$ bm.

Building draught for the 36-gun frigates of the *Pique* Class. Sketched in is a proposed extension of the stern to take a screw propeller, so the ships were evidently considered for conversion to steam even though the scheme was never carried through. *DR2036*

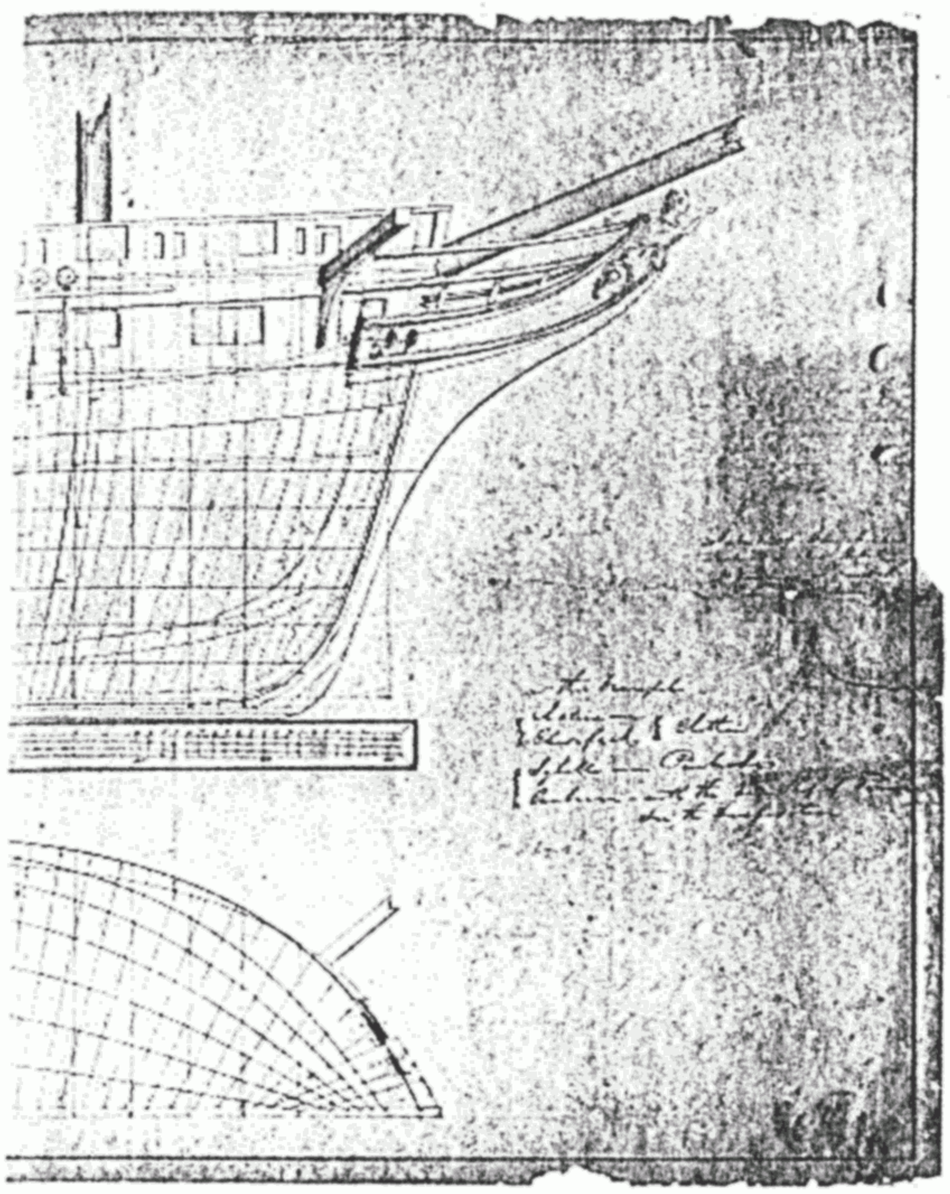


Profile of inboard works, dated 21 December 1846, for the *Rattlesnake* (an *Atholl* Class 28) as fitted for the survey service. Note the extra boats, so important in chartmaking. *DR6214*

Men: 175. Guns: UD 20 x 32pdr carronades (25cwt); QD 6 x 18pdr carronades; Fc 2 x 9pdr.
First cost: *Atholl* £14,589 (with fitting, £18,239). *Ranger* £20,303 (with fitting, £26,738). *Niemen* £14,622. *Rattlesnake* £15,825 (+ fitting £8,257). *North Star* £17,156 (+ fitting £8,426). *Tweed* £15,942 (fitted £22,183). *Talbot* £14,415 (+ fitting £9,101). *Rainbow* £14,294 (+ fitting £7,493). *Alligator* £14,850 (+ fitting £8,955). *Termagant* £10,999 (fitted £21,610). *Samarang* £10,999 (fitted £19,587). *Success* £14,310 (+ fitting £9,594). *Crocodile* £15,151 (+ fitting £7,805). *Nimrod* £16,254 (fitted £22,297).

Atholl Woolwich Dyd. Built of larch.
Ord: 27.10.1816. K:11.1818. L: 23.11.1820. C: 9.2.1821. Troopship 7.1832. Hulked as storeship at Sheerness 1.1851. Depot ship at Greenock 11.1854. Reserve at Plymouth 9.1861. BU there 4.1863.

Ranger Portsmouth Dyd.
Ord: 30.4.1818. K: 1.1819. L: 7.12.1820. C: 12.6.1822. Ordered to reduce to corvette 23.5.1832, but found to be decayed. Sold to J. Jackson to BU 11.1832.



Niemen Woolwich Dyd. Built of Baltic fir.
Ord: 30.4.1818. K: 7.1819. L: 23.11.1820. C: 2.1821. BU completed at Portsmouth 1.1828.
Rattlesnake Chatham Dyd.
Ord: 30.4.1818. K: 8.1819. L: 26.3.1822. C: 8.5.1824. Troopship 1839. Survey vessel 1845. BU at Chatham 1.1860.
North Star Woolwich Dyd.
Ord: 30.4.1818. K: 4.1820. L: 7.2.1824. C: 26.5.1826. Storeship for Arctic service 1849. BU completed at Chatham 15.3.1860.
Tweed Portsmouth Dyd.
Ord: 30.4.1818. K: 12.1820. L: 14.4.1823. C: 12.4.1824. Cut down to 20-gun sloop 1831. Sold to Willson & Co. to BU 1852.
Talbot Pembroke Dyd.
Ord: 30.4.1818. K: 3.1821. L: 9.10.1824. C: 21.12.1825 at Plymouth. Storeship 5.1854. Ordnance (powder) depot ship at Woolwich 2.1855. Sold to C. P. Ogilvie to BU 5.3.1896.
Rainbow Chatham Dyd.
Ord: 30.4.1818. K: 4.1822. L: 20.11.1823. C: 6.11.1825. Sold to Buck 8.11.1838.
Alligator East India Co., Cochin. Teak-built.
Ord: 5.6.1819. K: 11.1819. L: 29.3.1821. C: 3.9.1822 at Woolwich. Depot ship at Trincomalee 6.1841. Troopship 7.1842. Hulked as seamen's hospital at Hong Kong 12.1846. Sold there 30.10.1865.
Termagant East India Co., Cochin. Teak-built.
Ord: 5.6.1819. K: 3.1820. L: 15.11.1822. Renamed *Herald* 15.5.1824. C: 16.7.1824 at Portsmouth. Survey vessel 6.1845. Chapel ship at Shoreham 1861. Sold to Castle for BU at Charlton 28.4.1862.
Samarang East India Co., Cochin. Teak-built.
Ord: 5.6.1819. K: 3.1821. L: 1.1.1822. C: 7.6.1824 at Portsmouth. Hulked as guard ship at Gibraltar 5.1847. Sold there 10.1883.
Andromeda Deptford Dyd. Built of African timber.
Ord: 5.6.1819. K: 10.1821. Re-ordered as 20-gun sloop 9.3.1826 (see below under *Nimrod*).

Success Pembroke Dyd.
Ord: 5.6.1819. K: 7.1823. L: 30.8.1825. C: 3.6.1825 at Plymouth. Receiving ship at Portsmouth 1833. BU there 6.1849.
Crocodile Chatham Dyd.
Ord: 5.6.1819. K: 12.1823. L: 28.10.1825. C: 27.8.1828. Troopship 5.1842. Hulked as receiving ship at Tower of London 8.1850. Sold to Castle for BU at Charlton 22.11.1861.
Alarm Pembroke Dyd.
Ord: 5.6.1819. K: ... . Re-ordered as *Tyne* Class 1825, then as *Conway* Class 1828 (see below).
Daphne Plymouth Dyd.
Ord: 5.6.1819. K: ... . Re-ordered as 20-gun sloop 9.3.1826, but cancelled 1.11.1832 (unstarted).
Porcupine Plymouth Dyd.
Ord: 5.6.1819. K: ... . Re-ordered as 20-gun sloop 9.3.1826, but cancelled 1.11.1832 (unstarted).
Nimrod (ex-*Andromeda*, renamed 10.5.1827) Deptford Dyd. Built of African timber.
Ord: 9.3.1826. K: 10.1821. Razéed while building and completed as 20-gun sloop. L: 26.8.1828. C: 11.12.1828. Coal hulk 2.1853. Renamed *C.1* then *C.76*. Sold to Hamley & Son 9.7.1907.

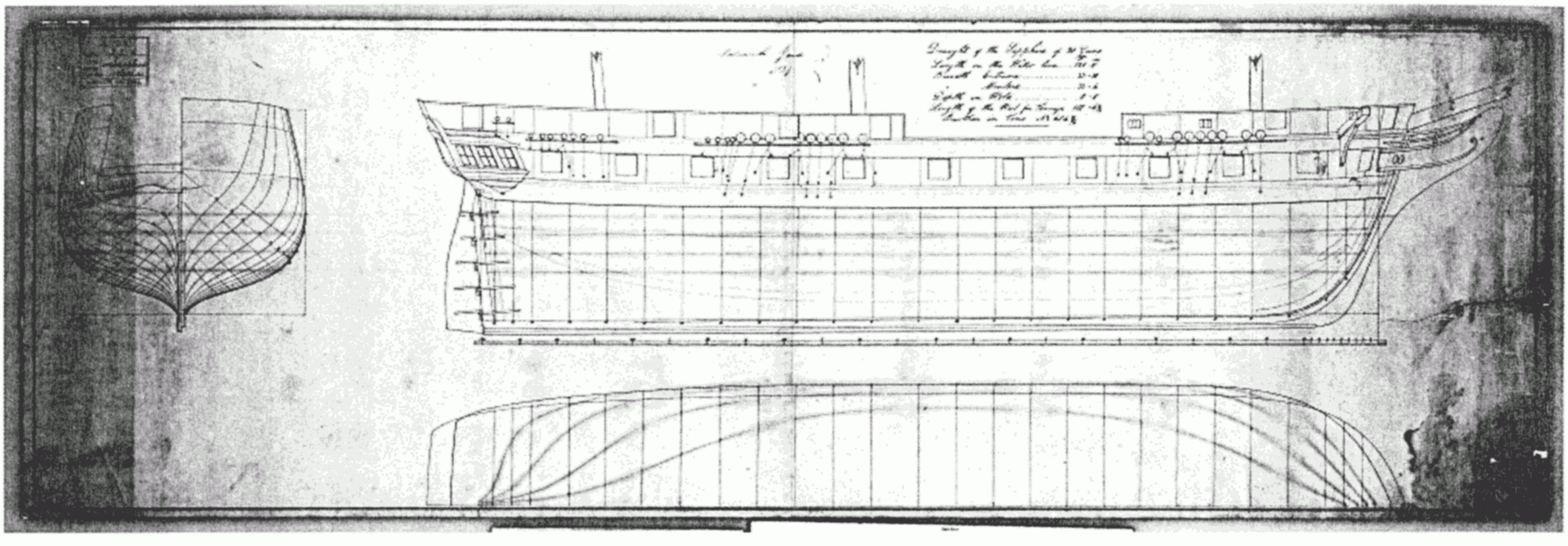
NOTES: Originally ordered 1819 as Sixth Rates - see above - but later reclassed as corvettes. A variety of woods were used to compare, the short lives of *Ranger* and *Niemen* indicating some results of the experiment. *Nimrod* and *Tweed* as sloops had 130 men and 18 x 32pdr carronades (25cwt) + 2 x 9pdrs.

VOLAGE - 28 guns. Designed and built by the 'superior class of Portsmouth shipwright apprentices'.
Dimensions & tons: 113ft 10in, 96ft 8½in x 31ft 10in x 8ft 9in. $521^{26}/_{94}$ bm (516 as completed).
Men: 175. Guns: UD 20 x 32pdr carronades; QD 6 x 18pdr carronades; Fc 2 x 9pdr.
First cost: £18,909 (£24,794 including fitting).
Volage Portsmouth Dyd.
Ord: 16.6.1819. K: 8.1819. L: 20.2.1825. C: 26.1.1826. Survey ship (disarmed) 4.1847. Fitted at Sheerness as powder depot 1855, thence to Baltic as storeship (on loan to War Dept); to Chatham 1860. BU completed at Chatham 12.12.1874.

***TYNE* Class** - 28 guns. Sir Robert Seppings design 1825.
Dimensions & tons: 125ft 0in, 106ft 6in x 32ft 6in x 9ft 6in. $598^{17}/_{94}$ bm.
Men: 175. Guns: UD 20 x 32pdr carronades; QD 6 x 18pdr carronades; Fc 2 x 9pdr.
First cost: £19,663 (£26,128 including fitting).
Tyne Woolwich Dyd.
Ord: 9.6.1825. K: 11.1825. L: 30.11.1826. C: 5.3.1827. Provision depot ship at Plymouth 3.1847. Store ship 12.1850. Sold to Castle & Beech for BU 17.2.1862.

***CONWAY* Class** - 28 guns. Sir Robert Seppings design 1828, increased by 1ft in breadth from *Tyne* Class design.
Dimensions & tons: original design 125ft 0in, 106ft 0in x 33ft 6in x 9ft 6in. $632^{71}/_{94}$ bm.
As amended 125ft 0in, 106ft 0in x 34ft 5in (34ft 0in for tonnage) x 10ft 0in. $651^{74}/_{94}$ bm.
Men: 175. Guns: UD 20 x 32pdr carronades; QD 6 x 18pdr carronades; Fc 2 x 9pdr.
First cost: *Imogene* £17,813. *Alarm* £3,895 before cancellation.
Imogene (ex-*Pearl*, renamed 23.2.1826) Pembroke Dyd.

Scan and/or retouch by Grzechu



Sheer draught of the *Sapphire*; it is dated 1839 but appears to be as designed. The 28-gun class were the largest type to be consistently subjected to experimental designs, this one being the work of the 'superior class of shipwright apprentices at Portsmouth' (the School of Naval Architecture) - surely no apprentice in any other trade would be allowed a 'master-piece' on such a scale. *DR2574*

Ord: 9.6.1825. K: 11.1829. L: 24.6.1831. C: 1.10.1831 at Portsmouth. Burnt by accident at Plymouth 27.9.1840.

Conway Chatham Dyd.
Ord: 9.6.1825. K: 12.1829. L: 2.2.1832. C: 11.5.1832. Lent as training ship to Mercantile Marine Association of Liverpool 2.1859. To Aberdeen RNR 28.8.1861, renamed *Winchester*. BU completed at Sheerness 3.6.1871.

Alarm Deptford Dyd.
Ord: 1825 (see above). K: 11.1826. Then transferred to Pembroke Dyd. K: 1.1832. L: ... . Suspended 19.6.1832. Cancelled 14.9.1832 and BU from 10.1832 (frame had been complete except for stern timbers).

NOTES: *Alarm* originally (1819) ordered to *Atholl* design, then 1825 to *Tyne* design; re-ordered 1828 to *Conway* design.

CHALLENGER - 28 guns. Captain John Hayes design 1825.
Dimensions & tons: 125ft 7½in, 105ft 11½in x 32ft 8½in x 9ft 3¼in. $602^{91}/_{94}$ bm.
Men: 175. Guns: UD 20 x 32pdr carronades; QD 6 x 18pdr carronades; Fc 2 x 9pdr.
First cost: £26,341.

Challenger Pembroke Dyd.
Ord: 9.6.1825. then transferred to Portsmouth Dyd.
Re-ord: 27.6.1825. K: 11.1825. L: 14.11.1826. C: 9.3.1827. Wrecked off Mocha on the coast of Chile 19.5.1835.

SAPPHIRE - 28 guns. Designed 1825 by Professor Inman and built by the 'superior class of shipwright apprentices at Portsmouth'.
Dimensions & tons: 120ft 0in, 100ft 6¾in x 33ft 10in x 8ft 0in. $604^{30}/_{94}$ bm.
Men: 175. Guns: UD 20 x 32pdr carronades; QD 6 x 18pdr carronades; Fc 2 x 9pdr.
First cost: £19,044 (fitted £25,577).

Sapphire Portsmouth Dyd.
Ord: 11.8.1825. K: 11.1825. L: 31.1.1827. C: 26.3.1827. Troopship 11.1839 (rerated to 22 guns in 1842). Receiving ship at Trincomalee 1847. Sold there 5.11.1864.

ACTAEON - 26 guns. Designed 1827 by the School of Naval Architecture.
Dimensions & tons: 121ft 6in, 100ft 4in x 34ft 1in x 9ft 7in. 620 bm.
Men: 175. Guns: UD 20 x 32pdr gunnades; QD 4 x 32pdr carronades; Fc 2 x 9pdr (or 2 x 32pdr carronades).
First cost: £24,319 (fitted).

Actaeon Portsmouth Dyd.
Ord: 23.10.1827. K: 9.1828. L: 31.1.1831. C: 16.4.1831. Survey ship 1856. Hospital ship at Portsmouth 1866. Lent as hulk to Cork Harbour Board 2.1870. Used for torpedo experiments, attached to HMS *Vernon* 1874. Sold to J. Read at Portsmouth to BU 2.1889.

***ANDROMACHE* Class** - 28 guns (26 guns from 1839). Sir Robert Seppings design, 1830.
Dimensions & tons: 130ft 0in, 108ft 10in x 35ft 5in (35ft 0in for tonnage) x 10ft 6in. $709^{16}/_{94}$ bm.
Men: 175. Guns: UD 20 x 32pdr; QD 6 x 32pdr; Fc 2 x 32pdr (all Dixon's 32pdr gunnades of 25cwt).
First cost: *Calliope* £6,741 – see Notes (+ fitting £12,141). *Andromache* £14,845 (+ fitting £7,759).

Calliope Sheerness Dyd.
Ord: 29.10.1830. K: 1.1831. L: 5.10.1837. C: 18.2.1838. Floating chapel at Plymouth 1855, then factory ship (workshop) 1865. BU there 11.1883.

Andromache Pembroke Dyd.
Ord: 29.10.1830. K: 8.1831. L: 27.8.1832. C: 7.2.1834 at Plymouth. Provision hulk at Plymouth 1846, then powder depot 1854. BU completed there 3.3.1875.

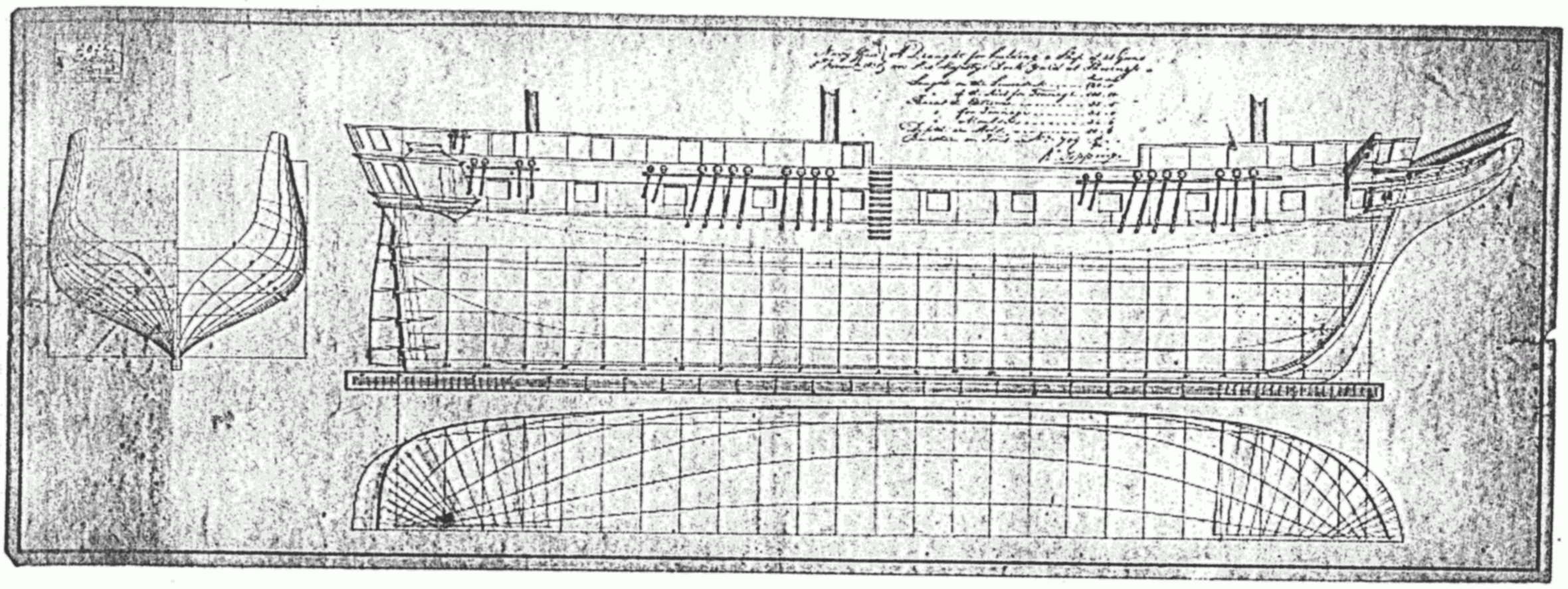
Vestal Chatham Dyd.
Ord: 29.10.1830. K: ... . Cancelled 8.12.1831 (unstarted).

Cleopatra Pembroke Dyd.
Ord: 28.3.1831. (named 4.7.1831) K: ... . Re-ordered to following 26-gun design 28.3.1832.

Carysfort Pembroke Dyd.
Ord: 29.6.1831. (named 4.7.1831) K: ... . Re-ordered to following 26-gun design 24.6.1832.

NOTES: *Calliope* was built using material from cancelled Fifth Rate *Pegasus*, so building costs exclude pre-1831 material.

***VESTAL* Class** - 26 guns. William Symonds design, 1831, replacing the Seppings design for those *Andromache* Class Sixth Rates not yet begun.
Dimensions & tons: 130ft 0in, 104ft 6in x 40ft 6in x 10ft 6in. $911^{75}/_{94}$ bm.



Design sheer draught for the *Calliope*, 28 guns, dated 5 November 1830. *DR2522*

Men: 240. Guns: UD 18 x 32pdrs; QD 6 x 32pdr (25cwt) gunnades; Fc 2 x 32pdr (25cwt) gunnades.
First cost: *Vestal* £19,173 (£27,508 fitted). *Cleopatra* £19,060 (+ fitting £6,077). *Carysfort* £19,703 (+ fitting £6,401).

Vestal Sheerness Dyd.
Ord: 9.11.1831. (Named 8.12.1831) K: 5.1832. L: 6.4.1833. C: 15.7.1833. Sold to Castle & Beech to BU by AO of 17.2.1862.

Cleopatra Pembroke Dyd.
(Re)Ord: 28.3.1832. K: 6.1832. L: 28.4.1835. C: 13.9.1835 at Sheerness. Accommodation ship at Blackwall 1857-58. Sold to Castle & Beech to BU by AO of 17.2.1862.

Carysfort Pembroke Dyd.
(Re)Ord: 24.6.1832. K: 9.1832. L: 12.8.1836. C: 18.2.1837 at Sheerness. Laid up at Pembroke 1841. Sold to Ritherdon & Thompson for BU by AO of 22.11.1861.

NOTES: 2 of the 32pdrs were subsequently replaced by 2 x 8in (56cwt) shell guns.

***SPARTAN* Class** - 26 guns. Sir William Symonds design 1837, modified from *Vestal* design.
Dimensions & tons: 131ft 0in, 106ft 1in x 40ft 6¼in oa (40ft 2¼in for tonnage) x 10ft 9in. 911$^{33}/_{94}$ bm. *Juno*, *Creole* and *Amethyst* modified and measured 107ft 0in keel x 40ft 3¼in for tonnage 923$^{1}/_{94}$ bm (958 disp).
Men: 240. Guns: UD 18 x 32pdrs (42cwt); QD 6 x 32pdrs (25cwt) gunnades; Fc 2 x 32pdr (25cwt) gunnades.
First cost: *Spartan* £19,993. *Iris* £17,233. *Juno* £17,579. *Creole* £20,544. *Amethyst* £22,882 (+ fitting £424). *Alarm* £28,259.

Spartan Plymouth Dyd.
Ord: 20.2.1837. K: 6.1838. L: 16.8.1841. C: 28.11.1841. Paid off 1.11.1857. Sold to H. Castle & Sons to BU 19.5.1862.

Iris Pembroke Dyd.
Ord: 20.2.1837. K: 9.1838. L: 14.7.1840. C: 11.1.1841 at Chatham. Lent to Atlantic Telegraph Co. 1864, then to Pitcher to assist in the recovery of the *Foyle* 1866, then to Telegraph Construction & Maintenance Co. as a cable ship 1867, and sold to the latter 16.10.1869.

Juno Pembroke Dyd.
Ord: 20.2.1837. K: 4.1842. L: 1.7.1844. C: 30.10.1845 at Sheerness. Water police ship at Portsmouth 1862; renamed *Mariner* 10.1.1878 but returned to RN as seagoing training ship, renamed *Atalanta* 22.1.1878. Lost, after sailing from Bermuda 1.2.1880, presumed foundered in the Atlantic with all (280) hands 12/16.2.1880.

Creole Plymouth Dyd.
Ord: 20.2.1837. K: 4.1842. L: 1.10.1845. C: 14.10.1845. Lent to Cork Industrial Training Ship Organisation 10.2.1870. BU completed at Devonport 1.3.1875.

Amethyst Plymouth Dyd.
Ord: 16.8.1839. K: 4.1843. L: 7.12.1844. C: 2.2.1845. Lent to Atlantic Telegraph Co. 1864, then to Pitcher to assist in the recovery of the *Foyle* 1866, then to Telegraph Construction & Maintenance Co. as a cable ship 24.7.1869, and sold to the latter 16.10.1869.

Niobe Plymouth Dyd.
Ord: 16.8.1839. K: ... . Re-ordered to *Diamond* Class design 28.3.1846 (see below).

Malacca East India Co., Bombay. Teak-built.
Ord: 26.5.1841. K: ... . Suspended 14.10.1841. Named 7.7.1843. Ordered 11.10.1848 to be build as a screw ship (at Moulmeim) - see Chapter 5.

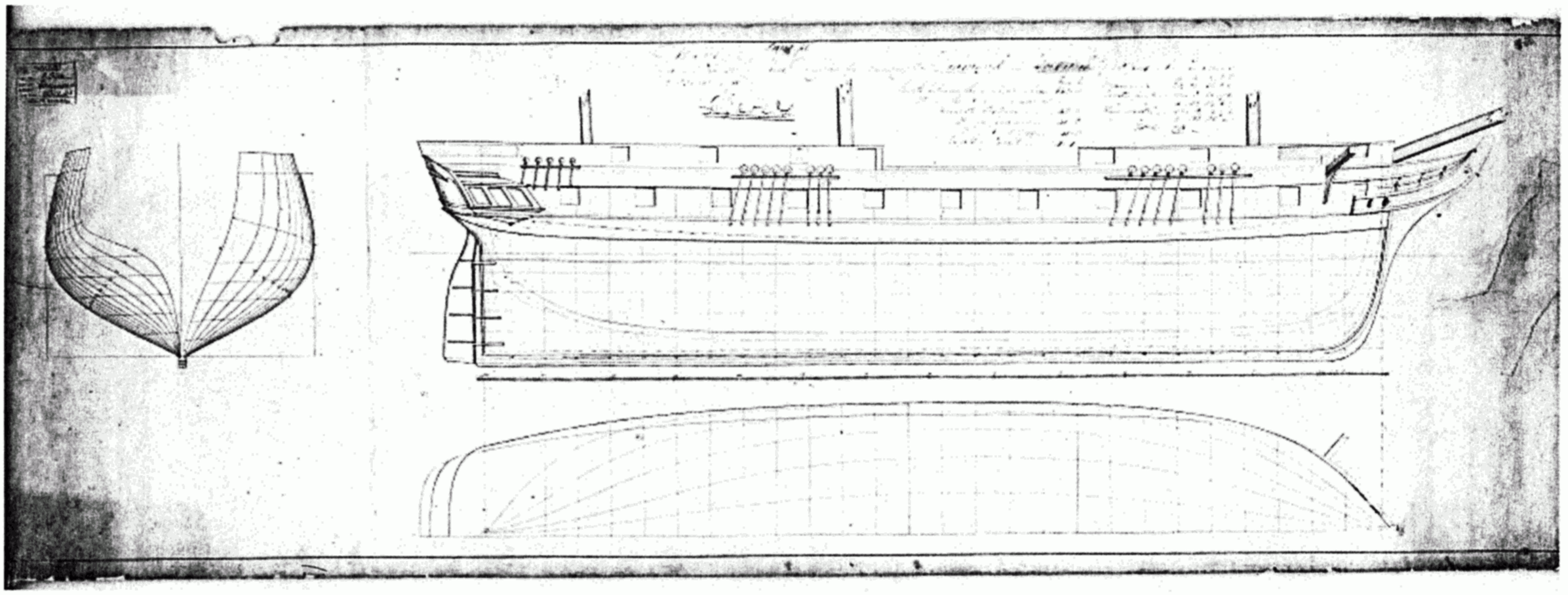
Alarm Sheerness Dyd.
Ord: 20.2.1843. K: 9.1843. L: 22.4.1845. C: 4.12.1845. Coal depot at Plymouth 1861. To Queenstown. 1877. Landing stage at Berehaven 1900. Sold 7.7.1904.

NOTES: 2 of the 32pdrs were subsequently replaced by 2 x 8in (56cwt) shell guns.

EURYDICE - 26 guns. Design by Admiral George Elliot, approved 31.8.1841, originally to be armed as *Andromache* Class but later altered with armament, scantlings and fittings similar to *Vestal* Class.
Dimensions & tons: 141ft 2in, 117ft 9¾in x 38ft 10in oa (38ft 1½in for tonnage) x 8ft 9in. 910$^{81}/_{94}$ bm.
Men: 190. Guns: UD 18 x 32pdr (long, 45cwt/8½ft); QD 6 x 32pdr (short, 25cwt/6ft); Fc 2 x 32pdr (long).
First cost: £16,137 (+ fitting £9,312).

Eurydice Portsmouth Dyd.
Ord: 27.8.1841. K: 4.1842. L: 16.5.1843. C: 1.9.1843. Harbour training ship 6.1861. Seagoing training ship 1877. Foundered in a squall off the Isle of Wight 24.3.1878 (only five survivors of 368 men aboard); wreck salvaged and BU.

Scan and/or retouch by Grzechu



Design sheer draught for the *Diamond*, 28 guns, dated 30 March 1846. The sharp Symonds hull form contrasts with Seppings' more conventional *Calliope*. *DR2594*

***DIAMOND* Class** - 28 guns. Sir William Symonds design, approved 28.3.1845.

Dimensions & tons: 140ft 0in, 113ft 9¾in x 42ft 0in oa (41ft 8in for tonnage) x 11ft 1in. 1,051$^{1}/_{94}$ bm.

Men: 240. Guns: UD 20 x 32pdr (long, 45cwt/8½ft); QD 1 x 8in/68pdr (56cwt) shell gun + 4 x 32pdr (short, 25cwt/6ft); Fc 1 x 8in/68pdr (56cwt) shell gun + 2 x 32pdr (short, 25cwt/6ft).

First cost: *Diamond* £22,752 (+ fitting £8,438).

Niobe £22,754.

Diamond Sheerness Dyd.

Ord: 4.12.1845. K: 7.1846. L: 29.8.1848. C: 16.10.1848. Lent to Seamen's Mission on the Tyne as training ship 4.1866; renamed *Joseph Straker* 13.1.1868. Sold to Castle to BU 9.1885.

Tribune Sheerness Dyd.

Ord: 26.3.1846. K: ... . Re-ordered as screw frigate 1.11.1850 (see Chapter 5).

Niobe Devonport Dyd.

(Re)Ord: 28.3.1846. K: 5.1847. L: 18.9.1849. C: 5.10.1849. Never commissioned in British Navy. Sold to Prussian Navy as a training ship (for £15,892) by AO 9.7.1862 (served there under original name until BU in 1890).

NOTES: Originally to have had 26 guns, and to have been built as *Spartan* Class units.

Corvettes Cut Down From Frigates

A 42-gun frigate was razéed (cut down) to become a 24-gun Sixth Rate in 1827, and three more followed in 1831, with a further one in 1833. During the 1840s, another two *Apollo* Class 42-gun frigates and four *Leda* Class 42-gun (originally 46-gun) frigates were cut down and rerated as corvettes (Sixth Rates); the early histories and dimensions of the older seven ships are recorded in Part 1, and of the ex-46-gun (*Leda* Class) in Part 2. The 26-gun conversions, designed by John Fincham, replaced the 18pdrs by a smaller number of more powerful guns, significantly increasing firepower while reducing manning as shown below:

Men: 210. Guns: UD 12 x 32pdr (50cwt) + 6 x 8in/68pdr (65cwt); QD & Fc 2 x 56pdr (85cwt) + 6 x 32pdr (25cwt).

Semiramis (L: 1808) Cut down 1827 into a 24-gun corvette. Depot ship at Plymouth 1832. BU 11.1844.

Aigle (L: 1801) Cut down 1831 into a 26-gun corvette (24-gun in 1839). Coal hulk (and receiving ship) at Woolwich 1852; to Sheerness 1869. Torpedo target 1870. Sold to BU 24.11.1870.

Curacoa (L: 1809) Cut down into a 28-gun corvette 6.1831 (24-gun in 1837). BU 3.1849.

Magicienne (L: 1812) Cut down into a 24-gun corvette 11.1831. BU at Portsmouth 3.1845.

Tribune (L: 1803) Cut down 1833 into a 24-gun corvette. Wrecked near Tarragona 28.11.1839.

Brilliant (L: 1814) Cut down into a 22-gun corvette 1844 (20-gun in 1848). Became training ship (20-gun) for the RNR at London in 1859, then (as 16-gun) at Dundee in 1863, then (as 8-gun) at Inverness in 1876. Renamed *Briton* 8.11.1889. Sold to Forth Shipbreaking Co. to BU at Bo'ness 19.5.1908.

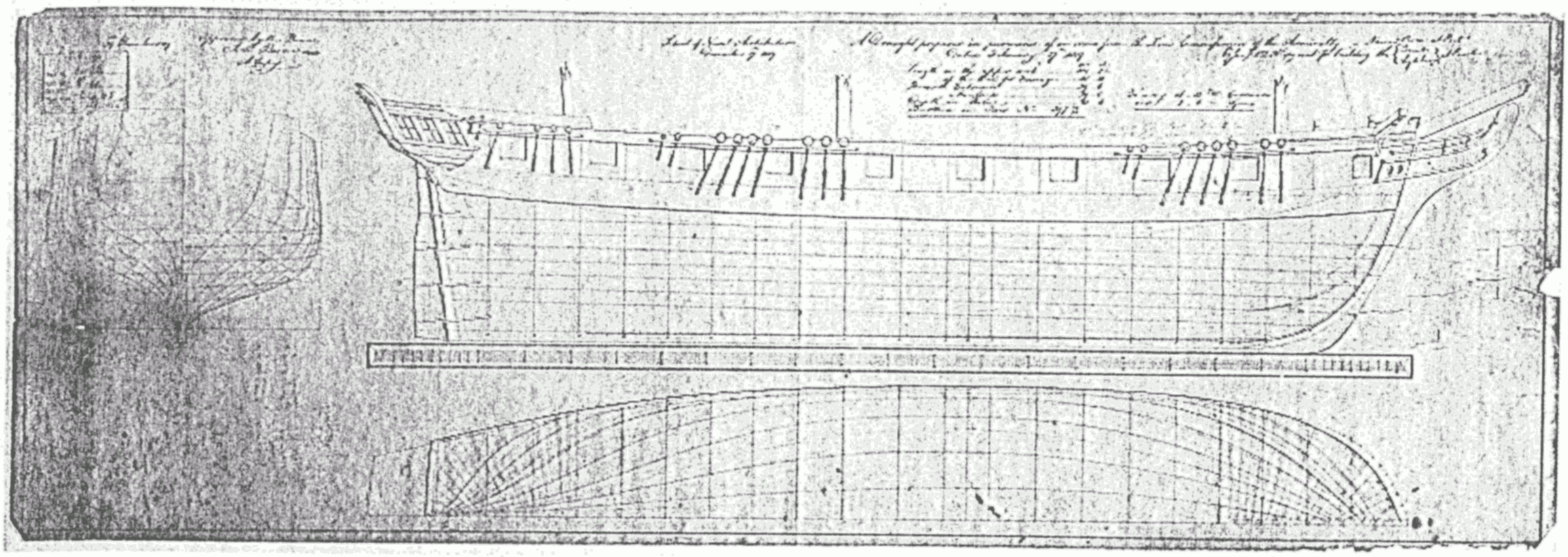
Havannah (L: 1811) Cut down into a 22-gun corvette 1845 (19-gun in 1848). Lent as a training ship at Cardiff 19.3.1860. Sold 1905 to BU.

Daedalus (L: 1826) Cut down into a 20-gun corvette at Woolwich 3.1844 – 11.1844 (19-gun in 1848). Became training ship (16-gun) for the RNR at Bristol in 1861. Sold to J. B. Garnham for BU 14.9.1911.

Amazon (L: 1821) Cut down into a 26-gun corvette at Sheerness 3.1844 – 1.1845 (19-gun in 1848). Lent to Liberia 1848 to 1852. Sold to W. Lethbridge to BU by AO of 11.9.1863.

Amphitrite (L: 1816) Cut down into a 26-gun corvette at Portsmouth 4.1845 – 2.1846. To the Coastguard 1857. Lent by the Coastguard to the War Office contractor for the forts at Portsmouth 14.7.1862. BU completed at Devonport 30.1.1875.

Trincomalee (L: 1817) Cut down into a 26-gun corvette at Portsmouth from 3.1845 to 11.1845. Became training ship (16-gun) for the RNR at Sunderland 1.1861. Sold to J. Read 19.5.1897; resold to Wheatley Cobb as a training ship at Falmouth where renamed *Foudroyant* 9.1903. Later to Portsmouth Harbour where she remained afloat as a youth training ship. In 7.1987 was loaded aboard a barge and towed up to West Hartlepool, where she underwent restoration to her original state from 1.1990 to 4.2001. (See Andrew Lambert, *Trincomalee*: *The Last of Nelson's Frigates* (London 2002).)



Design draught for the *Rose* of 18 guns produced by the School of Naval Architecture, dated 17 December 1819. It was designed in response to an Admiralty instruction of 27 February that year, which gives an indication of how long the task took Professor Inman and his students. According to an annotation on the draught, copies were originally ordered on 29 January 1822 to be used for the *Comet* and *Lightning*, later built to a modified draught. *DR3494*

Flush-Decked Ship Sloops

With the re-rating of 1817, the remaining quarterdeck sloops had all become Sixth Rates. Henceforth the sloop category was comprised of flush-deck vessels. From 1819, a new series of experimental sloops were built to varying designs, to compare different hull forms in an effort to produce fast-sailing small cruisers. Initially all carried 18 or 20 guns, but – as ordnance weight rose – the survivors were reduced to fewer guns by 1848 (see individual vessels below). From 1834 a series of larger 18-gun cruisers were produced, but these were rated as 'corvettes' rather than sloops.

***ROSE* Class** - 18 guns. Designed (approved 29.12.1819) by Professor Inman and built by the superior class of shipwright apprentices at Portsmouth. Inman, however, criticised the weight of armament as being too heavy for her size.

Dimensions & tons: 104ft 2½in, 85ft 10in x 29ft 10in oa (29ft 6in for tonnage) x 13ft 4in. $397^{28}/_{94}$ bm.
Men: 125. Guns: 2 x 6pdr (bow, later 9pdr) + 16 x 32pdr carronades (17cwt). Reduced to 16 guns between 1839 and 1842, and to 14 guns in 1848.
First cost: £11,791 (£16,955 including fitting).

Rose Portsmouth Dyd.
Ord: 27.2.1819. K: 3.4.1820. L: 1.6.1821. C: 16.8.1821. BU at Chatham 5.1851.

NOTES: The Navy Board authorised four repeats to be built to this design, but the requirement was amended instead to design these to Professor Inman's preferred dimensions.

***MARTIN* Class** - 20 guns. Designed by the Surveyors of the Navy (*ie* Seppings), approved 25.2.1819.

Dimensions & tons: 108ft 5in, 90ft 7¼in x 28ft 10½in x 7ft 9in. $401^{77}/_{94}$ bm.
Men: 125. Guns: 2 x 6pdr (bow) + 18 x 32pdr carronades.
First cost: £17,690 (including fitting).

Martin Portsmouth Dyd.
Ord: 27.2.1819. K: 7.1820. L: 18.5.1821. C: 16.8.1821. Lost, presumed foundered off the Cape with all (150) hands 2.1826.

***COMET* Class** - 18 guns. Longer 1823 design by Professor Inman (of School of Naval Architecture). *Electra* was originally ordered as one of the *Fly* Class (see below).

Dimensions & tons: 113ft 3in, 92ft $10^{1}/_{8}$in x 30ft 10in oa (30ft 6in for tonnage) x 8ft 0in. $459^{37}/_{94}$ bm.
Men: 125. Guns: 2 x 6pdr (bow, later 9pdrs in *Comet* and 18pdrs in *Electra*) + 16 x 32pdr carronades.
First cost: *Comet* £10,587 (+ fitting £6,927). *Lightning* £11,178 (+ fitting £7,291). *Electra* £12,394 (including fitting).

Comet Pembroke Dyd.
Ord: 15.5.1821. K: 10.1826. L: 14.8.1828. C: 28.2.1829. Renamed *Comus* 31.10.1832. Completed BU at Chatham 10.5.1862.

Lightning (ex-*Orestes*, renamed 30.1.1822) Pembroke Dyd.
Ord: 15.5.1821. K: 7.1828. L: 2.6.1829. C: 16.9.1829 at Plymouth. Renamed *Larne* 12.9.1832. BU completed by Castle & Beech at Charlton 28.3.1866.

Electra Portsmouth Dyd.
Ord: 1.2.1828. K: 2.1830. L: 28.9.1837. C: 17.2.1838. Sold to W.W. Foord to BU 17.2.1862.

NOTES: First pair renamed 1832 to avoid confusion with the steam vessels added to the Navy List (see Chapter 3). *Electra* reduced to 14 guns in 1846, and the earlier pair followed suit in 1848.

***ORESTES* Class** - 18 guns. Shorter 1823 design by Professor Inman (of School of Naval Architecture).

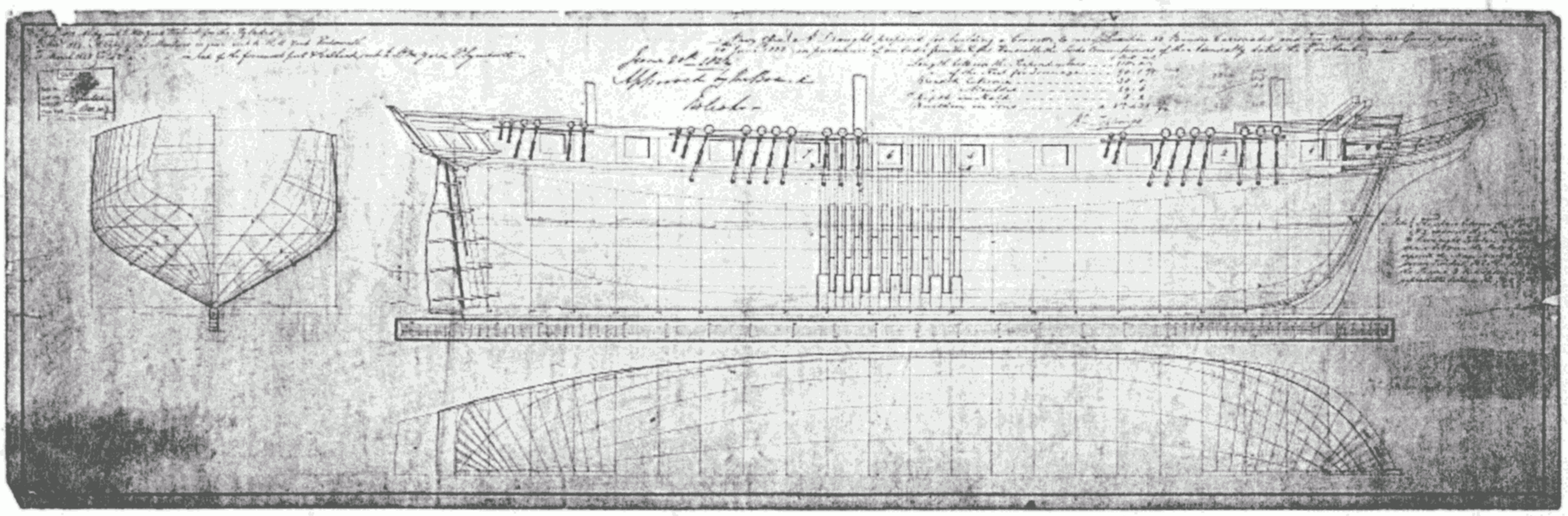
Dimensions & tons: 110ft 0in, 92ft $10^{1}/_{8}$in x 30ft 10in oa (30ft 6in for tonnage) x 7ft 6in. $459^{37}/_{94}$ bm.
Men: 125. Guns: 2 x 6pdr (bow) + 16 x 32pdr carronades. Reduced to 14 guns in 1848, with 9pdrs having replaced 6pdrs.
First cost: £12,527 (£17,741 including fitting).

Orestes Portsmouth Dyd.
Ord: 22.5.1821. K: 4.1823. L: 31.5.1824. C: 16.9.1824. Coal depot at Portsmouth 11.1852; later yard craft *C.28*. To Plymouth by 1890. Sold 1907 for commercial use, renamed *Mack* in c1911.

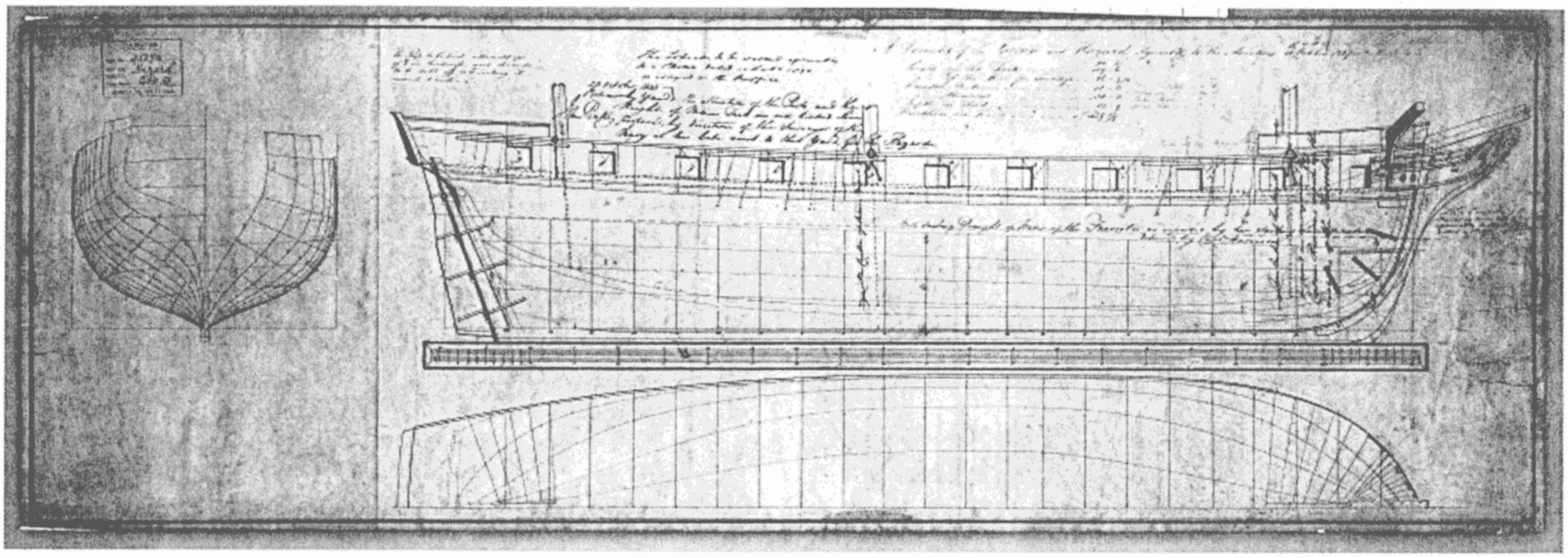
***PYLADES* Class** - 18 guns. Design by Robert Seppings, approved 20.6.1823.

Dimensions & tons: 110ft 0in, 90ft $1^{3}/_{8}$in x 30ft 4in oa (30ft 0in for

Scan and/or retouch by Grzechu



This design sheer draught of the *Pylades*, dated 20 June 1822, describes the ship as a corvette, and displays a very sharp hull form not usually associated with Seppings. *DR3188*



Design sheer draught for the *Favorite* (the spelling changed to *Favourite* about 1863) and *Hazard*, as altered by orders of 11 and 25 October 1827. The sailing qualities of the *Favorite* obviously left something to be desired - in particular, her optimum sailing draught was deeper than expected - and the alterations to deck height, gunport positions, rake of masts etc as marked on the sheer reflected the changes for the *Hazard* as instructed by the Surveyor during his visit to Portsmouth Dockyard on 28 October 1833. *DR3527A*

tonnage) x 8ft 2in. 431$^{37}/_{94}$ bm.
Men: 125. Guns: 2 x 9pdr (bow) + 16 x 32pdr carronades.
First cost: £15,889 including fitting.

Pylades Woolwich Dyd.
Ord: 22.5.1821. K: 3.1823. L: 29.6.1824. C: 4.9.1824. BU at Chatham 5.1845.

***SNAKE* Class** - 18 guns. Revival of Sir William Rule's 1796 design (see Chapter 1).
Dimensions & tons: 100ft 0in, 77ft 3½in x 31ft 0in oa (30ft 6in for tonnage) x 12ft 9in. 382$^{41}/_{94}$ bm.
Men: 125. Guns: 2 x 6pdr (bow) + 16 x 32pdr carronades. Reduced to 16 guns in 1833, and to 12 guns in 1848.
First cost: *Childers* £9,757. *Cruiser* £9,496 (+ fitting £6,732).

Childers Chatham Dyd.
Ord: 10.6.1823. K: 11.1823. L: 23.8.1827. C: ?10.1827. Converted to brig rig 1834, but ship again in 1835. Sold to Holloway 19.8.1865.

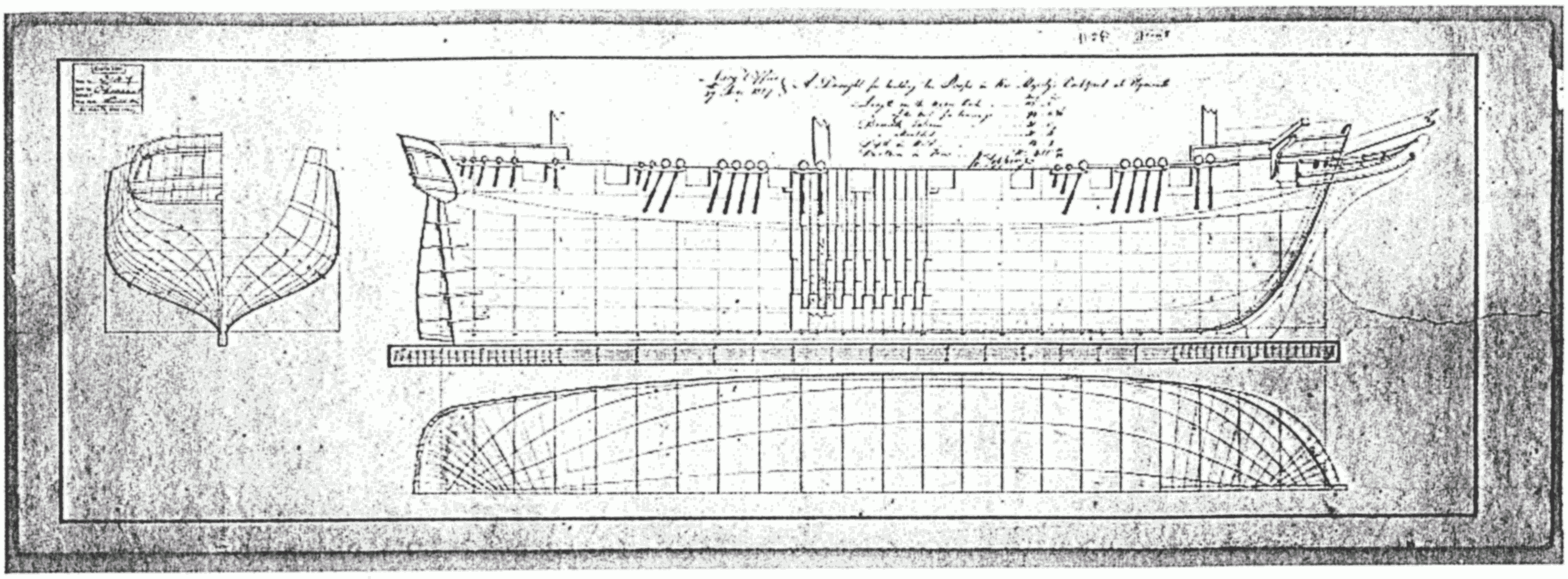
Cruiser Chatham Dyd.
Ord: 10.6.1823. K: 1.1826. L: 19.1.1828. C: 6.3.1828. Converted to brig rig 8.1831, but ship again in 1840. Sold at Bombay 3.1849.

***FAVORITE* Class** - 18 guns. Lengthened version of Rule's 1796 *Cruiser/Snake* Class design. The lengthening was done by inserting an extra 9ft 6in-long midships section into the design.
Dimensions & tons: 109ft 6in, 86ft 9½in x 30ft 9in oa (30ft 6in for tonnage) x 12ft 9in. 429$^{40}/_{94}$ bm.
Men: 125. Guns: 2 x 9pdr (bow) + 16 x 32pdr carronades. Reduced to 14 guns in 1848 (1846 for *Favorite*).
First cost: *Favorite* £10,226 (£17,083 including fitting); *Hyacinth* £11,872 (£17,361 including fitting); *Racehorse* £11,140 (£16,807 including fitting); *Hazard* £10,500.

Favorite Portsmouth Dyd.
Ord: 10.6.1823. K: 3.1825. L: 21.4.1829. C: 29.7.1829. Coal depot at Plymouth 8.1859; yard craft *C.3* c1890, later *C.77*. Sold at Plymouth 17.5.1905.

Hyacinth Plymouth Dyd.

Scan and/or retouch by Grzechu



Design lines and partial framing draught for building two sloops at Plymouth Dockyard (*Pheasant* and *Redwing*), dated 27 June 1829. *DR3147*

Ord: 10.6.1823. K: 3.1826. L: 6.5.1829. C: 12.1.1830. Coal hulk at Portland 10.1860. BU completed at Portsmouth 27.11.1871.

Racehorse Plymouth Dyd.
Ord: 10.6.1823. K: 5.1829. L: 24.5.1830. C: 11.1830. Coal depot at Plymouth 1.1860. Sold at Plymouth 11.5.1901.

Hazard Portsmouth Dyd.
Ord: 10.6.1823. K: 5.1829. L: 21.4.1837. C: 5.7.1837. BU completed by J.White, Cowes 12.2.1866.

***CHAMPION* Class** - 18 guns. Designed 1823 by Captain John Hayes.
Dimensions & tons: 109ft 6in, 91ft 10$^{1}/_{8}$in x 30ft 10½in oa (30ft 6½in for tonnage) x 7ft 8¾in. 455$^{65}/_{94}$ bm.
Men: 125. Guns: 2 x 9pdr (bow) + 16 x 32pdr carronades. Reduced to 14 guns in 1848.
First cost: £18,089.

Champion Portsmouth Dyd.
Ord: 20.6.1823. K: 11.1823. L: 31.5.1824. C: 16.9.1824. Police vessel at Portsmouth 1859. Lent to Committee on Floating Obstructions 1864, and used for explosive experiments. BU at Portsmouth 10.1867.

***PEARL* Class** - 20 guns. Philip Sainty design 1825. On 14.3.1825 the Admiralty ordered that she was 'to be built on such lines and principles as Mr Sainty may think proper'.
Dimensions & tons: 118ft 9in, 94ft 9¼in x 33ft 7$^{3}/_{8}$in oa (33ft 3$^{3}/_{8}$in for tonnage) x 9ft 6in. 558$^{34}/_{94}$ bm.
Men: 125. Guns: 2 x 9pdr (bow) + 18 x 32pdr carronades. Reduced to 18 guns in 1848.
First cost: £13,392 (+ fitting £8,171).

Pearl (ex-*Nautilus*, renamed 19.3.1825) Philip Sainty, Wivenhoe.
Ord: 14.3.1825. Cancelled 11.7.1825 but re-ordered 23.2.1826.
K: 7.1826. L: 17.3.1828. C: 29.6.1828 at Woolwich. BU at Chatham 6.1851.

***WOLF* Class** - 18 guns. Design by Captain John Hayes, 1825.
Dimensions & tons: 113ft 4½in, 91ft 8¼in x 30ft 10¼in oa (30ft 6¼in for tonnage) x 7ft 8¾in. 454$^{71}/_{94}$ bm.
Men: 125. Guns: 2 x 6pdr (bow) + 16 x 32pdr carronades. Reduced to 14 guns in 1848.
First cost: £13,276 (£19,816 including fitting).

Wolf Portsmouth Dyd.
Ord: 9.6.1825. K: 11.1825. L: 1.12.1826. C: 24.3.1827. Stranded on the Isle of Wight 10.3.1830, but salved. Coal hulk at Kingstown, Ireland 5.1848. Lent to Board of Works at Dublin 1851. Coal depot again 1860. BU completed at Devonport 5.8.1878.

***SATELLITE* Class** - 18 guns. Design by Robert Seppings 1825.
Dimensions & tons: 112ft 0in, 91ft 1$^{3}/_{8}$in x 31ft 0in oa (30ft 8in for tonnage) x 13ft 10in. 455$^{74}/_{94}$ bm.
Men: 125. Guns: 2 x 6pdr (bow) + 16 x 32pdr carronades. *Satellite* reduced to 14 guns in 1848.
First cost: *Satellite* £15,791 (including £5,434 fitting); *Acorn* £16,656.

Satellite Pembroke Dyd.
Ord: 9.6.1825. K: 6.1826. L: 3.10.1826. C: 14.2.1827 at Plymouth. BU at Sheerness 2.1849.

Acorn (1st) Chatham Dyd.
Ord: 9.6.1825. K: 6.1826. L: 16.11.1826. C: 10.5.1827. Lost, presumed foundered with all (115) hands off Halifax 14.4.1828.

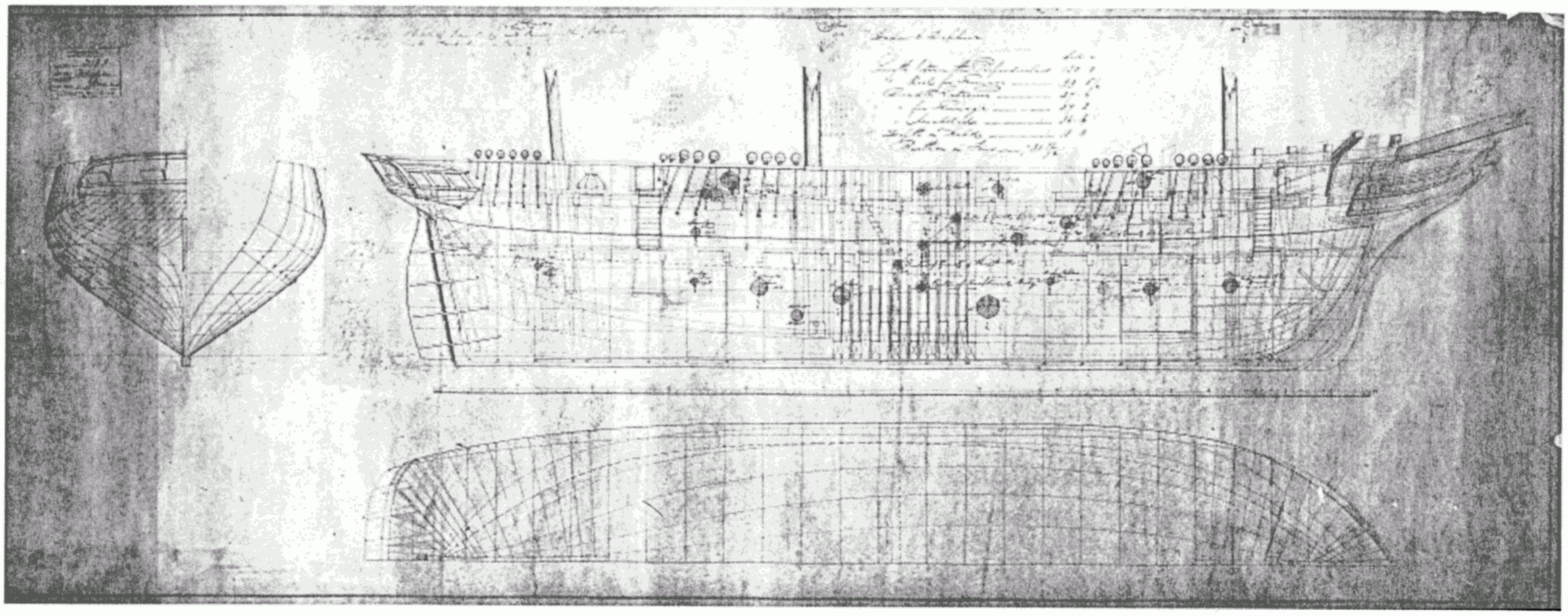
***SCOUT* Class** - 18 guns. Design by Robert Seppings 1829, 'as *Satellite*' but larger. *Rover* was originally to have been built to this design.
Dimensions & tons: 115ft 0in, 94ft 0$^{3}/_{8}$in x 31ft 4in oa (31ft 0in for tonnage) x 14ft 3in. 480$^{81}/_{94}$ bm.
Men: 120/125. Guns: 2 x 9pdr (bow) + 16 x 32pdr carronades. *Scout* reduced to 14 guns in 1846.

Scout Chatham Dyd.
Ord: 30.1.1829. K: 10.1831. L: 15.6.1832. C: 26.10.1832. BU at Plymouth 10.1852.

Pheasant Plymouth Dyd.
Ord: 30.1.1829. K: ... . Cancelled 1.11.1831 (unstarted).

Redwing Plymouth Dyd.
Ord: 30.1.1829. K: ... . Cancelled 1.11.1831 (unstarted).

***ROVER* Class** - 18 guns. Originally ordered as one of the *Scout* Class (see above), but amended to new design by William Symonds, approved 10 or 11.12.1831.
Dimensions & tons: 113ft 0in, 89ft 9½in x 35ft 4in oa (35ft 0in for tonnage) x 16ft 9in. 585$^{12}/_{94}$ bm.
Men: 120. Guns: 2 x 32pdr (long, bow) + 16 x 32pdr (short).



Undated sheer, profile and partial framing draught for the corvettes *Dido* and *Daphne*. The circles denote calculations of various centres of gravity, etc. *DR3138*

Rover Chatham Dyd.
Ord: 30.1.1829. K: 2.1832. L: 17.7.1832. C: 26.10.1832. BU at Chatham 9.1845.

***FLY* Class** - 18 guns. Development of Professor Inman's (School of Naval Architecture) *Orestes* Class design. *Electra* was originally to have been built to this design.
Dimensions & tons: 114ft 4in, 93ft 8in x 31ft 4½in oa (31ft 0½in for tonnage) x 14ft 5in. $479^{79}/_{94}$ bm. As built (first pair) 114ft 4in, 93ft $6^{1}/_{8}$in x 31ft 7in oa (31ft 3in for tonnage) x 8ft 2½in. $485^{69}/_{94}$ bm.
Men: 120. Guns: 2 x 9pdr (bow) + 16 x 32pdr carronades. *Fly* reduced to 16 guns in 1848.
First cost: *Fly* £11,761 (+ fitting £4,648). *Harrier* £12.194 (+ fitting £5,387).
Fly Pembroke Dyd.
Ord: 30.1.1829. K: 11.1829. L: 25.8.1831. C: 27.1.1832 at Plymouth. Survey ship 10.1841 to 1847. Coal depot at Plymouth 1854; later yard craft *C.2*. BU at Devonport 1903.
Harrier Pembroke Dyd.
Ord: 30.1.1829. K: 11.1830. L: 8.11.1831. C: 25.3.1832 at Plymouth. BU at Portsmouth 3.1840.
Argus Portsmouth Dyd.
Ord: 30.1.1829. K: 3.1831. Cancelled 27.4.1831 (frames taken up 6.1831).
Acorn (2nd) Portsmouth Dyd.
Ord: 30.1.1829. K: ... . Cancelled 27.4.1831 (unstarted).

***DAPHNE* Class** - 18 guns (corvettes, open battery). William Symonds design 1834.
Dimensions & tons: 120ft 0in, 99ft 5½in x 37ft 6in oa (37ft 2in for tonnage) x 18ft 0in. $730^{71}/_{94}$ bm.
Men: 145 (later 175). Guns: 18 x 32pdr (40cwt).
First cost: *Dido* £13,404 (with fitting, £20,024). *Daphne* £13,515 (with fitting, £19,641). *Calypso* £19,050 (with fitting, £24,669).
Dido Pembroke Dyd.
Ord: 26.2.1834. K: 9.1834. L: 13.6.1836. C: 26.1.1837 at Sheerness. Coal hulk at Sheerness 1860. Sold there 3.3.1903.
Daphne Pembroke Dyd.
Ord: 26.2.1834. K: 12.1835. L: 6.8.1838. C: 2.2.1839 at Portsmouth. Sold to Castle & Beech 7.10.1864 and BU at Charlton 12.1865.
Calypso Chatham Dyd.
Ord: 27.3.1834. K: 12.1837. L: 8.5.1845. C: 19.2.1846. BU completed by Castle & Beech at Charlton 29.1.1866.
Coquette Chatham Dyd.
Ord: 27.3.1834. K: ... . Suspended 30.11.1836. Cancelled 1851 (unstarted).
NOTES: These large and beamier vessels were classed as Sixth Rates (corvettes), whereas all earlier 18-gun vessels were rated as sloops. The second (Chatham) pair were suspended 30.11.1836; new designs approved 20.2.1837, altering them to 20-gun corvettes with covered battery (20 x 32pdr), to which they were ordered to be laid down on 6.4.1837.

***MODESTE* Class** - 18 guns (corvette). Design by Admiral George Elliot 1837.
Dimensions & tons: 120ft 0in, 98ft 7in x 33ft 1in oa (32ft 9in for tonnage) x 14ft 2in. $562^{30}/_{94}$ bm.
Men: 120 (later 150). Guns: 2 x 32pdr (26cwt/9ft) + 16 x 32pdr (17cwt) carronades.
First cost: £11,095 (£15,042 including fitting).
Modeste Woolwich Dyd.
Ord: 6.2.1837. K: 5.1837. L: 31.10.1837. C: 10.3.1838. Sold to Castle & Beech to BU at Charlton 3.1866.

***CHALLENGER* Class** - 18 guns (corvette). Designed 1844 by the Earl of Dundonald (Thomas Cochrane, the great frigate captain).
Dimensions & tons: 134ft 0in, 110ft 4¾in x 37ft 6in oa (37ft 2in for tonnage) x 17ft 6in. $810^{84}/_{94}$ bm.
Men: 145 (later 175 intended). Guns: probably to have carried 2 x 32pdr (long, 7½ft) + 16 x 32pdr (short, 6ft).
Challenger Chatham Dyd.
Ord: 8.8.1844. K: ... . Suspended 30.8.1845. Cancelled 22.5.1849 (unstarted).
NOTES: Cochrane's first draft, a 600 bm vessel, was ordered 19.2.1843; but was altered to a brig 8.7.1844 (*Camilla*) and this larger vessel ordered.

***ARACHNE* Class** - 18 guns (corvettes). Sir William Symonds design,

Scan and/or retouch by Grzechu

approved 1.2.1845.

Dimensions & tons: 115ft 0in, 90ft 11in x 35ft 5in oa (35ft 3in for tonnage) x 16ft 10in. 600$^{84}/_{94}$ bm.

Men: 150. Guns: 2 x 32pdr (long, 40cwt/7½ft) + 16 x 32pdr (short, 25cwt/6ft).

First cost: *Arachne* £15,419 (+ £1,034 fitting). *Terpsichore* £13,484.

Arachne Devonport Dyd.

Ord: 7.2.1845. K: 10.1845. L: 30.3.1847. C: 8.4.1847 (for Ordinary). Paid off 17.3.1860. Sold to J. & B. Marshall, Plymouth and BU completed 12.2.1866.

Terpsichore Money Wigram & Sons, Blackwall.

Ord: 15.12.1845. K: 1.1846. L: 18.3.1847. Never commissioned, but remained in Ordinary at Chatham. Coal hulk at Chatham from 1850; used for mining experiments, sunk 4.10.1865 and raised. BU by Castle & Beech at Charlton 6.12.1865 – 9.1.1866.

Narcissus Deptford Dyd.

Ord: 23.1.1846. K: ... Order transferred to Devonport Dyd 11.3.1846. Re-ordered as 50-gun frigate (see above) 25.4.1847.

Flush-Decked Brigs

***CHEROKEE* Class** - 10 guns. Post-war revival of the 1807 Peake design, including *Sphinx* which was actually launched in early 1815 (so technically belonging to Chapter 1) and *Cameleon* still building at the war's close.

Dimensions & tons: 90ft 0in, 73ft 7$^{5}/_{8}$in x 24ft 6in x 11ft 0in. 235$^{9}/_{94}$ bm. 297 disp.

Later vessels were built to an amended draught of 72ft 3in x 24ft 8in (231 tons bm), and 'as built' dimensions are given for these.

Men: 52 in peacetime (33 as packet brigs and 50 as brigantines). Guns: 2 x 6pdr + 8 x 18pdr carronades.

First cost: *Sphinx* £5,854. *Cameleon* £3,968 to builder (+ £2,104 RN supplies in Bombay), + £4,472 at Portsmouth. *Brisk* £9,371. *Cygnet* £10,451. *Ariel* £6,879. *Eclipse* £7,647. *Beagle* £7,473. *Emulous* £7,434. *Hope* £6,029. *Tyrian* £8,026 (fitted for sea). *Lapwing* £5,872. *Sheldrake* £5,362. *Espoir* £5,939. *Reindeer* £8,470 (fitted for sea). *Rolla* £6,859. *Savage* £7,654 (fitted for sea). *Saracen* £7,037. *Scorpion* £5,952. *Nautilus* £7,173 (fitted for sea). *Griffon* £4,951. *Partridge* £5,790. *Wizard* £6,035. *Charybdis* £3,302. *Buzzard* £3,411 (+ fitting £4,782).

Sphinx (ex-*Rapid*) East India Co., Bombay. Teak-built.

Ord: 2.10.1812. K: 5.1814. L: 25.1.1815. C: 3.4.1815. Converted to a packet (with 33 men, and 4 x 12pdr carronades) at Chatham 2.1825. Sold at Plymouth to BU 6.8.1835.

Cameleon East India Co., Bombay. Teak-built.

Ord: 2.10.1812. K: 1814. L: 16.1.1816. C: 1.1819 at Portsmouth. To Ordinary at Sheerness 4.1845. BU at Deptford 4.1849.

Alacrity Deptford Dyd.

Ord: 13.6.1817. K: 10.1817. L: 29.12.1818. C: 8.8.1820. Paid off 12.1829. Sold at Portsmouth 28.8.1835.

Bustard Chatham Dyd.

Ord: 13.6.1817. K: 11.1817. L: 12.12.1818. C: 1.1819. Sold to Thomas ?Surflen 24.6.1829.

Brisk Chatham Dyd.

Ord: 13.6.1817. K: 11.1817. L: 10.2.1819. C: 16.6.1819. Brigantine (3 guns) 1830. Sold to John Levy, Rochester 7.11.1843.

Delight (1st) Portsmouth Dyd.

Ord: 13.6.1817. K: 11.1817. L: 10.5.1819. C: 31.8.1822. Foundered with all (75) hands off Mauritius 23.2.1824.

Cygnet Portsmouth Dyd.

Ord: 13.6.1817. K: 11.1817. L: 11.5.1819. C: 10.9.1819. Converted at Portsmouth to a packet brig 12.1823 - 3.1824. Sold 6.8.1835.

Ariel Deptford Dyd.

Ord: 13.6.1817. K: 2.1819. L: 28.7.1820. C: 7.1821. Converted to a packet brig 5.1827 – 3.1828 (6 guns). Lost, presumed foundered with all (32) hands in North Atlantic 8.12.1828.

Eclipse Plymouth Dyd.

Ord: 13.6.1817. K: 3.1818. L: 23.7.1819. C: 19.8.1819. Converted to a packet brig 9.1823. To Coastguard at Woolwich 12.1836, renamed *CGWV.21* on 25.5.1863. Sold to Castle to BU at Charlton 10.11.1865.

Falcon Pembroke Dyd.

Ord: 13.6.1817. K: 5.1818. L: 10. 6.1820. C: 3.8.1820 at Plymouth. Converted to steam sloop by AO 6.3.1832, but result unsuccessful and engine removed 1834 (see Chapter 3). Sold for mercantile use 16.8.1838, renamed *Waterwitch*.

Beagle Woolwich Dyd.

Ord: 13.6.1817. K: 6.1818. L: 11.5.1820. C: by 19.7.1820 (for Coronation of King George IV). Converted to a survey ship 1823 (this was Fitzroy and Darwin's vessel). To Coastguard 1845. Renamed *CGWV.5* on 5.5.1863. Sold to Murray & Trainer to BU 13.5.1870.

Barracouta Woolwich Dyd.

Ord: 13.6.1817. K: 6.1818. L: 13.5.1820. C: 11.1.1822. Converted to a packet brig at Woolwich 7.1829. Sold 21.1.1836.

Emulous Plymouth Dyd.

Ord: 13.6.1817. K: 6.1818. L: 16.12.1819. C: 14.12.1823 as a packet brig. To Coastguard at Haven Hole 8.1834, renamed *CGWV.13* on 25.5.1863. Sold to Mr T. R. Sargent, Northfleet 7.6.1865.

Frolic Pembroke Dyd.

Ord: 13.6.1817. K: 8.1818. L: 10. 6.1820. C: 3.8.1820 at Plymouth. Converted to a packet brig 2.1823. Sold to Dowson 16.8.1838.

Lyra (2nd) Plymouth Dyd.

Ord: 2.11.1818. K: 3.1819. L: 1.6.1821. C: ?8.1821. Tender 6.1823. Packet brig 7.1829. Sold to Hull Dock Co. 3.6.1845.

Jasper (2nd) Portsmouth Dyd.

Ord: 2.11.1818. K: 5.1819. L: 26.7.1820. C: 8.8.1820. Wrecked off Levkas 11.10.1828. Wreck sold 1.1831.

Britomart (2nd) Portsmouth Dyd.

Ord: 2.11.1818. K: 6.1819. L: 24.8.1820. C: 5.9.1820. Sold at Singapore 1843.

Partridge (1st) Plymouth Dyd.

Ord: 2.11.1818. K: 12.1819. L: 22.3.1822. C: 30.8.1823. Wrecked by stranding in the Texel 28.11.1824. Wreck sold 30.8.1825.

Reynard (2nd) Pembroke Dyd.

Ord: 2.11.1818. K: 5.1820. L: 26.10.1821. C: 9.1823 at Plymouth. Converted to a packet brig 6.1829. Mooring vessel 1.1841. BU at Chatham 8.1857.

Weazle Chatham Dyd.

Ord: 2.11.1818. K: 5.1820. L: 26.3.1822. C: 10.11.1823. Sold to W. Beech to BU 30.4.1844.

Kingfisher Woolwich Dyd.

Ord: 2.11.1818. K: 12.1820. L: 11.3.1823. C: 6.3.1824 as a packet brig. Sold to Mr Knowland 16.8.1838.

Procris Chatham Dyd.

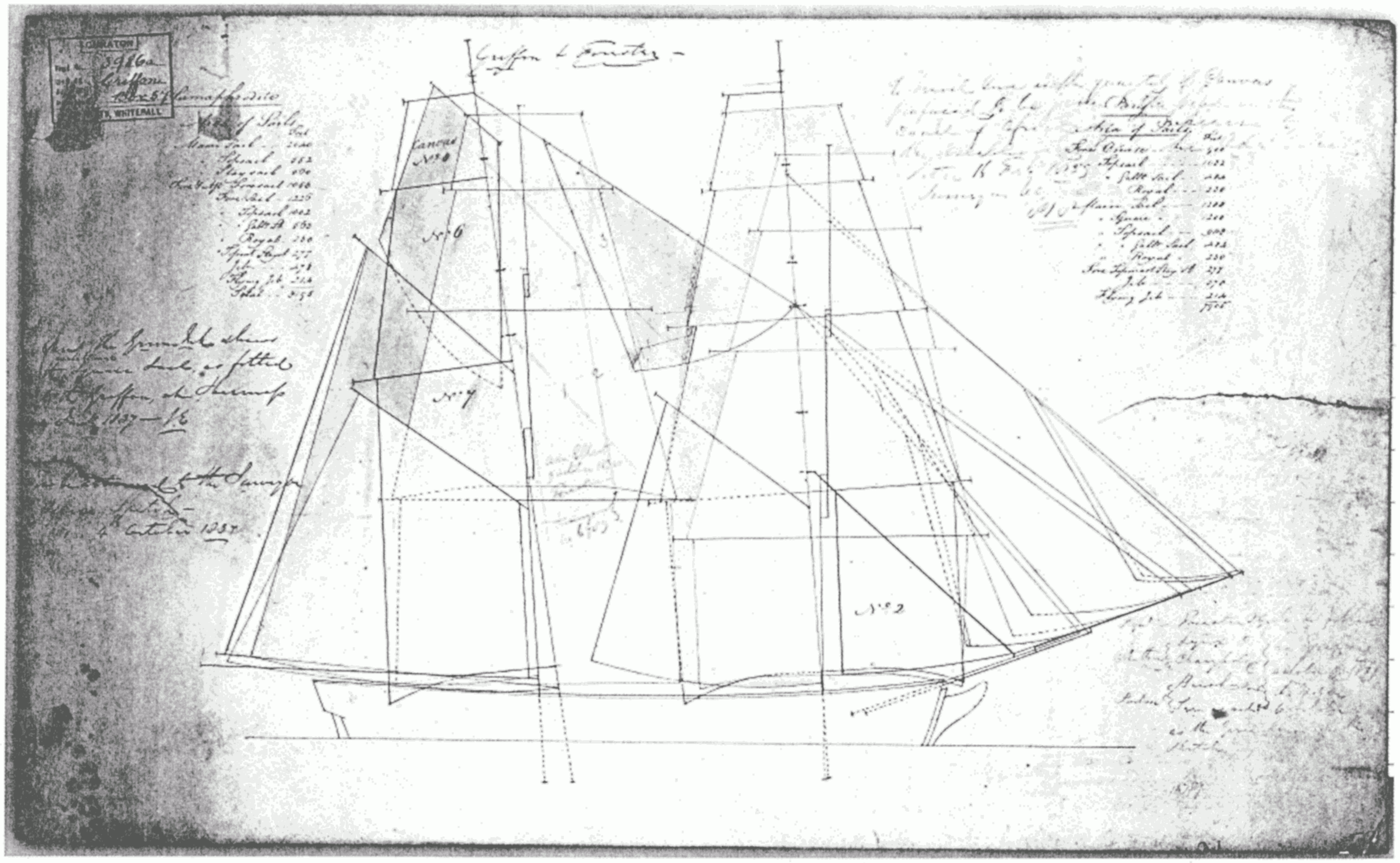
Ord: 2.11.1818. K: 3.1821. L: 21.6.1822. C: 9.3.1826. Sold to W.Greenwood, Plymouth 1.1837.

Algerine (1st) Deptford Dyd.

Ord: 2.11.1818. K: 4.1821. L: 10.6.1823. C: 27.5.1824 at Woolwich. Lost, presumed foundered with all (75) hands in the Mediterranean 9.1.1826.

Magnet Woolwich Dyd.

Ord: 2.11.1818. K: 6.1821. L: 13.3.1823. C: 14.12.1823 as a packet brig (3 guns) 1823. Sold by AO of 27.7.1847.



The sail plan for those *Cherokee* Class completed as brigantines (the draught names *Griffon* and *Forester*) showing the old and the new spars. Originally termed 'hermaphrodite', the brigantine rig involved far greater rake and taller masts. *DR3986A*

Zephyr Pembroke Dyd.
Ord: 2.11.1818. K: 11.1821. L: 1.11.1823. C: 23.6.1824 at Plymouth as a packet brig (6 guns). Sold 8.9.1836.

Halcyon Woolwich Dyd.
Ord: 2.11.1818. K: ... . Cancelled 21.2.1831.

Opossum (2nd) Sheerness Dyd.
Ord: 8.12.1818. K: 11.1819. L: 11.12.1821. C: 3.5.1829 at Chatham as a packet brig. Sold to John Levy, Rochester 27.5.1841.

Onyx (2nd) Sheerness Dyd.
Ord: 8.12.1818. K: 11.1819. L: 24.1.1822. C: 29.9.1827 as tender to yacht *Royal George*. Sold to Joshua Cristall 1.1837 to BU.

Plover Portsmouth Dyd.
Ord: 23.5.1820. K: 8.1820. L: 30.6.1821. C: 18.7.1821. Converted to a packet brig 3.1824. Lazarette at Sheerness 10.1836. Lent to Marc Brunel as an accommodation hulk for the Thames tunnel 3.1838. Sold to Joshua Cristall 27.5.1841.

Ferret Portsmouth Dyd.
Ord: 23.5.1820. K: 8.1820. L: 12.10.1821. C: 27.12.1821. Sold to H. Bailey 1.1837.

Hope (2nd) Plymouth Dyd.
Ord: 23.5.1820. K: 3.1822. L: 8.12.1824. C: 1.6.1825 as a packet brig (4 guns). Lazarette at Pembroke 8.1846. BU completed at Pembroke 13.10.1882.

Mutine Plymouth Dyd.
Ord: 23.5.1820. K: 4.1822. L: 19.5.1825. C: 21.10.1826 as a packet brig (4 guns). Sold to Tibbett, Stoneman & Spence for mercantile use 27.5.1841, renamed *Aladdin*.

Forester (1st) Deptford Dyd.
Ord: 23.5.1820. K: ... . Re-ordered at Chatham 23.5.1826.

Griffon (1st) Deptford Dyd.
Ord: 23.5.1820. K: ... . Re-ordered at Chatham 23.5.1826.

Tyrian (2nd) Woolwich Dyd.
Ord: 6.1.1821. K: 4.1823. L: 16.9.1826. C: 16.11.1826 as a packet brig. Quarantine hulk at the Motherbank (off Portsmouth) 4.1845. Coastguard depot ship 1866. Sold to John Wort 11.8.1892.

Philomel Portsmouth Dyd.
Ord: 19.4.1821. K: 6.1821. L: 28.4.1823. C: 23.5.1823. Sold to Capt. Templar 12.12.1833.

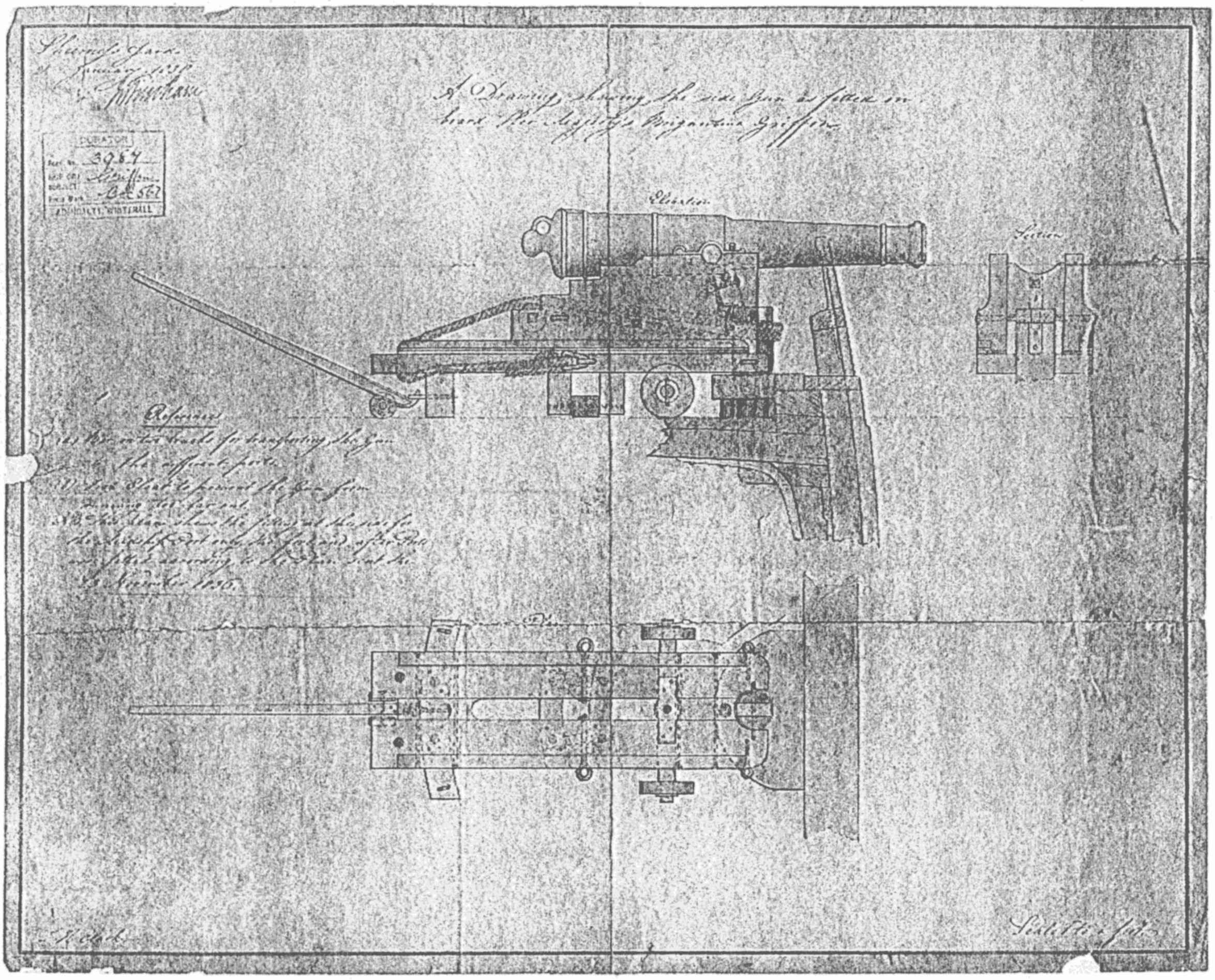
Royalist Portsmouth Dyd.
Ord: 19.4.1821. K: 8.1821. L: 12.5.1823. C: 23.5.1823. Tender 5.1826. Sold to Mr Lindon 8.11.1838.

Batch 3: 1823-26 Orders

(44 vessels, of which 4 were cancelled and 6 more replaced by orders for paddle vessels).

Those completed as brigantines had 50 men each and carried 1 x 18pdr (38cwt) and 2 x 18pdrs (22cwt) or 1 x 24pdr and 2 x 24pdr carronades.

Leveret (2nd) Portsmouth Dyd.
Dimensions & tons: 90ft 0in, 72ft $2^{1}/_{8}$in x 24ft $8^{3}/_{4}$in x 11ft 0in. 232 bm.
First cost: £6,591 + £3,335.
Ord: 25.3.1823. K: 5.1823. L: 19.2.1825. C: 27.3.1825. Tender 5.1826.



Although originally armed with small carronades, post-1815 some of the *Cherokee* Class carried non-standard armament. This plan of a shifting long gun for the brigantine *Griffon* is dated 25 January 1838. *DR3987*

Sold at Plymouth 7.11.1843.

Musquito Portsmouth Dyd.
Dimensions & tons: 90ft 0in, 72ft 2⅜in x 24ft 8½in x 11ft 0in. 231 bm.
First cost: £6,381 + £3,792.
Ord: 25.3.1823. K: 5.1823. L: 19.2.1825. C: 28.7.1827. Sold to Greenwood & Clarke at Plymouth 7.11.1843.

Hearty Chatham Dyd.
Dimensions & tons: 90ft 1¼in, 71ft 0¼in x 24ft 6½in x 11ft 0in. 228 bm.
First cost: £5,864 (incl.).
Ord: 25.3.1823. K: 7.1823. L: 22.10.1824. C: 26.7.1827 as packet brig (10 guns). Lost, presumed foundered with all (32) hands in North Atlantic 9.1827.

Myrtle Portsmouth Dyd.
Dimensions & tons: 90ft 0in, 72ft 1⅞in x 24ft 9in x 11ft 0in. 231 bm.
First cost: £6,409.
Ord: 25.3.1823. K: 7.1823. L: 14.9.1825. C: 27.10.1827 as packet brig (6 guns). Wrecked off Nova Scotia 3.4.1829.

Lapwing Chatham Dyd.
Dimensions & tons: 90ft 9¾in, 71ft 1½in x 24ft 8⅝in x 11ft 0in. 228 bm.
First cost: £5,878 + £4,737.
Ord: 25.3.1823. K: 9.1823. L: 20.2.1825. C: 6.1.1829 as packet brig (6 guns). Devonport Dyd lighter 6.1854, then breakwater at Keyham. Sold to Marshall, Plymouth 22.11.1861.

Sheldrake Pembroke Dyd.
Dimensions & tons: 90ft 0in, 71ft 0½in x 24ft 8½in x 11ft 0in. 228 bm.
First cost: £5,362 + £4,441.
Ord: 25.3.1823. K: 11.1823. L: 19.5.1825. C: 21.10.1826 at Plymouth as packet brig (4 guns). Sold 1855 by AO of 19.3.1853.

Harpy Chatham Dyd.

Scan and/or retouch by Grzechu

Dimensions & tons: 90ft 2in, 77?ft 3½in x 24ft 9in x 11ft 0in. 232 bm.
First cost: £5,854 + £4,065.
Ord: 25.3.1823. K: 3.1824. L: 16.7.1825. C: 13.5.1828. Sold to Greenwood & Clarke at Plymouth 27.5.1841.

Alban Deptford Dyd.
Ord: 25.3.1823. Re-ordered as paddle steamer 5.1824 (see Chapter 3).

Carron Deptford Dyd.
Ord: 25.3.1823. Re-ordered as paddle steamer 5.1824 (see Chapter 3).

Columbia Woolwich Dyd.
Ord: 25.3.1823. Re-ordered as paddle steamer 5.1824 (see Chapter 3).

Confiance Woolwich Dyd.
Ord: 25.3.1823. Re-ordered as paddle steamer 5.1824 (see Chapter 3).

Dee Woolwich Dyd.
Ord: 25.3.1823. Re-ordered as paddle steamer 5.1824 (see Chapter 3).

Echo Woolwich Dyd.
Ord: 25.3.1823. Re-ordered as paddle steamer 5.1824 (see Chapter 3).

Fairy Chatham Dyd.
Dimensions & tons: 90ft 2in, 72ft 5½in x 24ft 9in x 10ft 11½in. 233 bm.
First cost: £5,545 + £4,212.
Ord: 25.3.1823. K: 7.1824. L: 25.4.1826. C: 17.7.1827. Survey vessel 4.1832. Wrecked off Suffolk with all (63) hands 13.11.1840.

Skylark Pembroke Dyd.
Dimensions & tons: 90ft 0in, 72ft 3in x 24ft 8½in x 11ft 0in. 235 bm.
First cost: £5,151 + £3,544.
Ord: 25.3.1823. K: 5.1825. K: 6.5.1826. C: 22.2.1827 at Plymouth as packet brig (4 guns). Wrecked off Isle of Wight 25.4.1845.

Espoir Chatham Dyd.
Dimensions & tons: 90ft 4in, 72ft 5½in x 24ft 8½in x 11ft 0¼in. 233 bm.
First cost: £5,941 + £4,202.
Ord: 25.3.1823. K: 1.1825. L: 9.5.1826. C: 14.8.1827. Sold ?1857 by AO of 19.3.1853.

Calypso (2nd)(ex *Hyaena*) Chatham Dyd.
Dimensions & tons: 90ft 3in, 72ft 6in x 24ft 9in x 12ft 2in. 233 bm.
First cost: £11,049 (incl.).
Ord: 25.3.1823. K: 3.1825. L: 19.8.1826. C: 29.10.1826 as 2-gun yacht for Governor of Malta, returned to Navy 5.1829. Packet brig (6 guns) in 10.1829. Lost, presumed foundered with all (30) hands off Halifax, Nova Scotia 1.2.1833.

Spey Pembroke Dyd.
Dimensions & tons: 90ft 0in, 72ft 3in x 24ft 8in x 11ft 0in. 231 bm.
First cost: £5,494 + £3,354.
Ord: 25.3.1823. K: 7.1825. L: 6.10.1827. C: 17.11.1828 at Plymouth as packet brig (4 guns). Wrecked on Racoon Cay in the Bahamas 28.11.1840.

Variable (*Pigeon*) Pembroke Dyd.
Dimensions & tons: 90ft 0in, 72ft 3in x 24ft 8in x 11ft 0in. 231 bm.
First cost: £5,560 + £3,772.
Ord: 25.3.1823. K: 5.1826. L: 6.10.1827. Renamed *Pigeon* 2.2.1829. C: 23.2.1829 at Plymouth as packet brig (4 guns). Sold by AO 27.7.1847.

Briseis (2nd) Deptford Dyd.
Dimensions & tons: 90ft 0¼in, 72ft 2¼in x 24ft 8in x 11ft 0in. 231 bm.
Ord: 25.3.1823. K: 8.1827. L: 3.7.1829. C: 2.11.1829 at Woolwich as packet brig (6 guns). Lost, presumed foundered with all (33) hands in North Atlantic 1.1838.

Rapid Portsmouth Dyd.
Dimensions & tons: 90ft 1in, 72ft 3in x 24ft 8½in x 11ft 0in. 231 bm.
First cost: £10,288 (incl.).
Ord: 25.3.1823. K: 1.1824. L: 17.8.1829. C: 23.11.1829. Wrecked off Tunisia 12.4.1838.

Recruit Portsmouth Dyd.
Dimensions & tons: 90ft 1in, 72ft 2¾in x 24ft 8½in x 11ft 0in. 231 bm.
Ord: 25.3.1823. K: 2.1825. L: 17.8.1829. C: 18.8.1831 as tender to *Asia*. Lost, presumed foundered with all (52) hands in Atlantic 6.1832.

Reindeer Plymouth Dyd.
Dimensions & tons: 90ft 0in, 72ft 1in x 24ft 8¼in x 11ft 0in. 231 bm.
First cost: £11,414 (incl.).
Ord: 25.3.1823. K: 12.1824. L: 29.9.1829. C: 2.3.1830 as packet brig (4 guns) 1.1830. Harbour service (guardship) 5.1841 at Gibraltar. Sold there before 17.1.1857.

Thais Pembroke Dyd.
Dimensions & tons: 90ft 0in, 72ft 3in x 24ft 8in x 11ft 0in. 231 bm.
Ord: 25.3.1823. K: 7.1828. L: 12.10.1829. C: 6.1832 at Plymouth as packet brig (6 guns). Lost, presumed foundered with all (35) hands off Galway 12.1833.

Rolla (2nd) Plymouth Dyd.
Dimensions & tons: 90ft 0in, 72ft 1¼in x 24ft 8¼in x 11ft 0in. 231 bm.
First cost: £7,321 + £2,358.
Ord: 25.3.1823. K: 6.1825. L: 10.12.1829. C: 4.1.1834. Training brig 2.1848. Tender to *Victory* 1854. BU completed at Portsmouth 15.9.1868.

Savage Plymouth Dyd.
Dimensions & tons: 90ft 7in, 71ft 2⅜in x 24ft 7in (24ft 5in) x 11ft 0in. 227 bm.
First cost: £10,359 (incl.).
Ord: 25.3.1823. K: 10.1829. L: 29.12.1830. C: 19.3.1831. Hulked at Plymouth 6.1848. Mooring lighter at Malta 7.1853. Sold there 10.9.1862 and BU 1866.

Saracen Plymouth Dyd.
Dimensions & tons: 90ft 8¾in, 71ft 1¾in x 24ft 7¼in (24ft 6¼in) x 11ft 0in. 228 bm.
First cost: £7,617 + £2,857.
Ord: 25.3.1823. K: 12.1829. L: 30.1.1831. C: 30.1.1834. Survey vessel 2.1854. Sold at Singapore late 1862 (a sailing vessel, *Young Queen*, being purchased in her place and taking her name on 29.12.1862).

Scorpion Plymouth Dyd.
Dimensions & tons: 90ft 7⅛in, 71ft 1⅝in x 24ft 7½in (24ft 6½in) x 11ft 0in. 228 bm.
First cost: £6,219 + £2,868.
Ord: 25.3.1823. K: 6.1830. L: 28.7.1832. C: 22.2.1834. Survey vessel 5.1849 (rigged as schooner). Police accommodation hulk at Blackwall 3.1858. BU completed at Chatham 17.10.1874.

Sealark Plymouth Dyd.
Ord: 25.3.1823. K: 11.1830. L: ... . Cancelled 10.1.1831 (frame BU 2.1831).

Hyaena (ex-*Calypso* (1st)) Deptford Dyd.
Ord: 25.3.1823. K: ... . Cancelled 21.2.1831.

Termagant Portsmouth Dyd.
Dimensions & tons: 90ft 10in, 72ft 7⅜in x 24ft 8in (24ft 6in) x 12ft 0in. 232 bm.
First cost: £5,447.
Ord: 23.11.1824. K: 10.1829. L: 26.3.1838. C: 9.6.1838 as brigantine (3 guns). Sold to Mr ?Dink 3.1845.

Lynx Portsmouth Dyd.
Dimensions & tons: 90ft 11in, 72ft 5⅜in x 24ft 8½in (24ft 6½in) x 11ft 10¼in. 232 bm.
First cost: £5,703 + £2,551.
Ord: 23.11.1824. K: 2.1830. L: 2.9.1833. C: 13.12.1833 as brigantine (3 guns). BU completed at Plymouth 3.12.1845.

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Nautilus Woolwich Dyd.
Dimensions & tons: 90ft 1½in, 72ft 4¾in x 24ft 9½in (24ft 7½in) x 11ft 0in. 233bm.
First cost: £9,801 (incl.).
Ord: 7.12.1824. K: 4.1829. L: 11.3.1830. C: 28.6.1830. Tender to flagship at Plymouth 1852. Hulk 1872. BU completed at Devonport 17.10.1878.

Curlew Woolwich Dyd.
Dimensions & tons: 90ft 1in, 72ft 4⅜in x 24ft 9¼in (24ft 7¼in) x 11ft 0in. 233 bm.
First cost: £10,485 (incl.).
Ord: 7.12.1824. K: 11.1829. L: 25.2.1830. C: 28.6.1830. BU at Portsmouth 8.1849.

Delight (2nd) Chatham Dyd.
Dimensions & tons: 90ft 2in, 72ft 6¼in x 24ft 9in x 11ft 0in. 233 bm.
First cost: £? + £2,917.
Ord: 23.5.1826. K: 8.1827. L: 27.11.1829. C: 25.1.1830 as packet brig (4 guns). Sold to Greenwood & Clarke at Plymouth 30.4.1844.

Algerine (2nd) Chatham Dyd.
Dimensions & tons: 90ft 1in, 72ft 5in x 24ft 8½in x 11ft 0in. 231 bm.
First cost: £9,993 (fitted).
Ord: 23.5.1826. K: 10.1827. L: 1.8.1829. C: 5.10.1829. Sold to John Small Sedger, Rotherhithe 30.4.1844.

Griffon (2nd) Chatham Dyd.
Dimensions & tons: 90ft 4½in, 72ft 3¾in x 24ft 7¾in (24ft 5¾in) x 11ft 0½in. 230 bm.
First cost: £4,951 + £3,208.
Ord: 23.5.1826. K: 7.1830. L: 11.9.1832. C: 2.1.1833 as brigantine (3 guns). Harbour service 1854. Coal hulk at Portsmouth 1857. BU completed at Portsmouth 27.2.1869.

Forester (2nd) Chatham Dyd.
Dimensions & tons: 90ft 4in, 72ft 3⅜in x 24ft 7½in (24ft 5½in) x 11ft 0¼in. 230 bm.
First cost: £5,098 + £3,161.
Ord: 23.5.1826. K: 9.1830. L: 28.8.1832. C: 2.1.1833 as brigantine (3 guns). Sold to Brabin, Baker & Collins 27.11.1843.

Partridge (2nd) Pembroke Dyd.
Dimensions & tons: 90ft 0in, 72ft 3in x 24ft 8in (24ft 6in) x 11ft 0in. 231 bm.
First cost: £5,791 + £3,019.
Ord: 28.10.1826. K: 8.1828. L: 12.10.1829. C: 24.4.1836 at Plymouth as a tender. To Coastguard at Southampton 7.1843, renamed *CGWV.32* on 25.5.1863. Sold to J.Ransome, Southampton 2.2.1864.

Wizard Pembroke Dyd.
Dimensions & tons: 90ft 0in, 72ft 3in x 24ft 8¼in (24ft 6¼in) x 11ft 0in. 231 bm.
First cost: £6,035 + £641.
Ord: 28.10.1826. K: 10.1829. L: 24.5.1830. C: 15.6.1837 at Plymouth. Wrecked at Berehaven in Bantry Bay 8.2.1859.

Charybdis Portsmouth Dyd.
Dimensions & tons: 90ft 3in, 72ft 6in x 24ft 7¼in (24ft 6½in) x 11ft 0in. 232 bm.
First cost: ££3,302.
Ord: 28.10.1826. K: 12.1829. L: 27.2.1831. C: 11.7.1831 as brigantine (3 guns). Sold to Beatson, Rotherhithe 7.11.1843.

Buzzard Portsmouth Dyd.
Dimensions & tons: 90ft 10½in, 75ft 1½in x 24ft 8in (24ft 6in) x 11ft 10in. 233 bm.
First cost: £3,411 + £4,782.
Ord: 28.10.1826. K: 12.1829. L: 23.3.1834. C: 27.8.1834 as brigantine (3 guns). Sold to Greenwood & Clarke at Plymouth 7.11.1843.

Foxhound Plymouth Dyd.
Ord: 28.10.1826. K: ... . Cancelled 21.2.1831 (unstarted).

Helena Plymouth Dyd.
Ord: 28.10.1826. K: ... . Cancelled 21.2.1831 (unstarted).

NOTES: Part of group of 114 begun between 1807 and 1830; two vessels ordered in 1812, and 78 others ordered between 1817 and 1826. *Sphinx* was actually launched in early 1815 (so strictly should be included in Chapter 1) but is included here with rest of dockyard-built batches (wartime 34 were all contract-built). None of the six vessels built as paddlers were laid down as sailing vessels; all were re-ordered as paddlers and built as such *ab initio*. *Calypso* (1st) and *Hyaena* exchanged names in 1826.

***COLUMBINE* Class** - Second Class Brig, 18 guns. William Symonds design 1825. On 12.3.1825 the Honourable George Vernon was called upon to give a bond of £20,000 'for the fulfilment of a promised engagement to purchase this vessel (from the Navy) if she did not answer'. She did 'answer', but this gesture of support helps to explain why Symonds named a frigate *Vernon* after his patron (and not, as might have been expected, after Admiral Edward Vernon) after becoming Surveyor of the Navy.
Dimensions & tons: 105ft 0½in, 84ft 0⅛in x 33ft 6¼in oa (33ft 2¼in for tonnage) x 7ft 11in. $492^{17}/_{94}$ bm.
Men: 125 (110 as 12-gun). Guns: 2 x 6pdr + 16 x 32pdr carronades; later 2 x 18pdrs + 10 x 32pdr carronades..
First cost: £19,743.

Columbine Portsmouth Dyd.
Ord: 9.6.1825. K: 1.1826. L: 1.12.1826. C: 9.3.1827. Rerated 12-gun brig from 1849. Coal hulk at Sheerness 4.1854. Sold to H. Castle & Sons to BU at Charlton 12.1.1892.

***SNAKE* Class** - Second Class Brigs, 16 guns (12 guns from 1846). Thomas Ditchburn design, 1831.
Dimensions & tons: 100ft 0in, 79ft 9½in x 32ft 0in oa (31ft 4¾in for tonnage) x 14ft 10in. $418^{24}/_{94}$ bm.
Men: 110. Guns: 2 x 9pdr (or 18pdrs) + 14 x 32pdr carronades.
First cost: *Snake* £5,345 to build, + £4,889 fitting. *Serpent* £5,326 to build, + £6,052 fitting.

Snake Fletcher & Fearnall, Limehouse.
Ord: 13.10.1831. K: 12.1831. L: 3.5.1832. C: 4.8.1832 at Woolwich Dyd. Wrecked in the Mozambique Channel 29.8.1847.

Serpent Fletcher & Fearnall, Limehouse.
Ord: 13.10.1831. K: 2.1832. L: 14.7.1832. C: 6.12.1832 at Woolwich Dyd. Tender 12.1857. BU completed 26.7.1861 at Portsmouth.

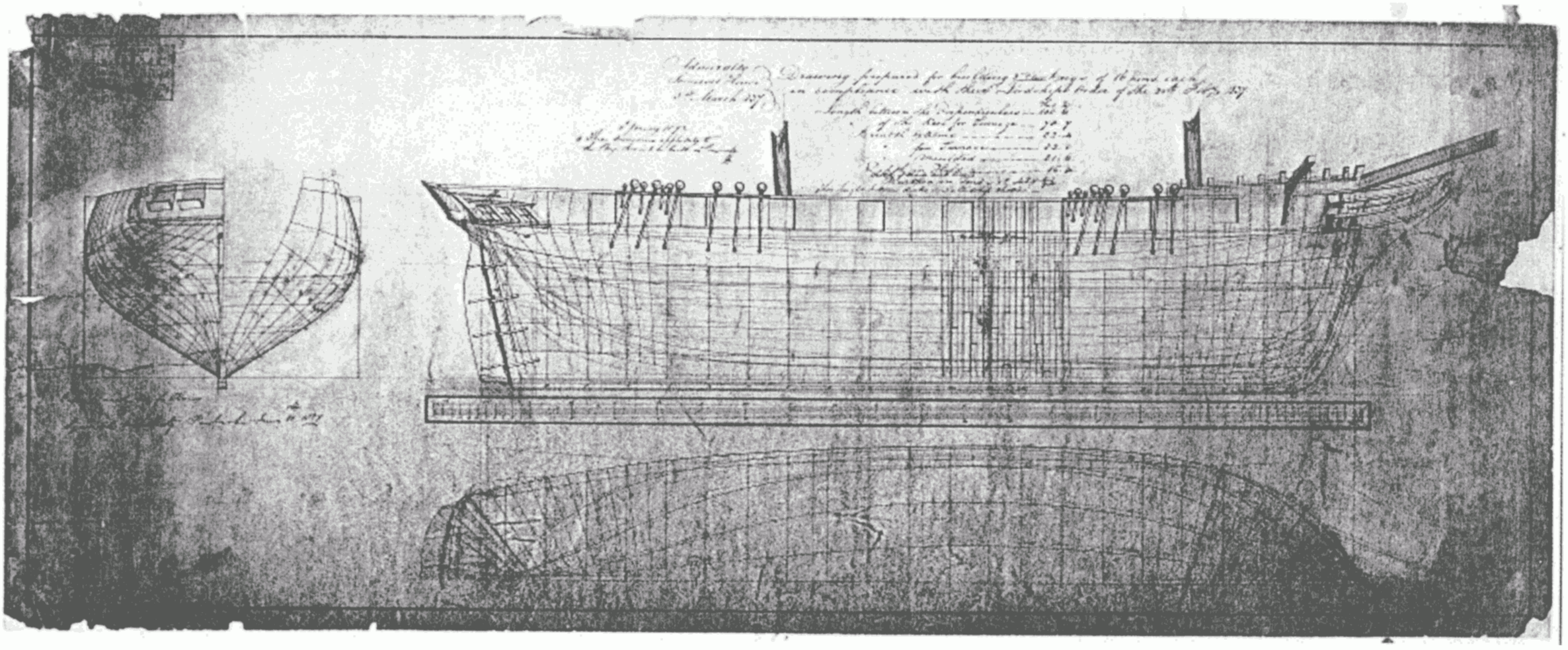
NOTES: Apart from *Pearl*, the largest warships to be built in a commercial yard since 1815. At this date, Ditchburn was Fletcher's yard manager.

PANTALOON - 10 guns. William Symonds design, 1831.
Dimensions & tons: 90ft 0in, 71ft 4¼in x 29ft 4¼in oa (29ft 2¼in for tonnage) x 12ft 8in. 323 bm.
Men: 68. Guns: 8 x 18pdr carronades + 2 x 6pdr.
First cost: £8,904 (including masts, rigging, etc.)

Pantaloon Troon Shipyard (owned by Duke of Portland).
L: 5.1831. Reduced to 8 guns in 1848. BU 8.1852 at Portsmouth.

NOTES: Designed as yacht for Duke of Portland by Symonds, built 1831 and bought on 1.10.1831 (effective 5.12.1831), then fitted at Portsmouth (to 26.7.1832).

***PANDORA* Class** - 8 guns. William Symonds design, 1832.
Dimensions & tons: 90ft 0in, 71ft 3in x 29ft 3in (29ft 0in for tonnage) x 13ft 10in (varied - see notes). $318^{68}/_{94}$ bm.
Men: 50/60 (33 as packets). Guns: *Rapid* and *Sealark* carried 8 x 18pdr carronades; others 1 x 32pdr + 2 x 32pdr carronades as packets.



Design draught of the Second Class brigs *Squirrel* and *Liberty*, dated 3 March 1837. *DR3358*

First cost: *Pandora* £5,397 (£7,821 fitted). *Bonetta* £5,605 (£8,689 fitted). *Dolphin* £6,952 (£9,192 fitted). *Spy* £6,411 (£8,387 fitted). *Rapid* £5,693 (£9,081 fitted). *Sealark* £5,860 (£9,654 fitted). *Dart* £7,294 (£9,737 fitted).

Pandora Woolwich Dyd.
Ord: 11.12.1831. K: 8.1832. L: 4.7.1833. C: 10.8.1833 at Chatham. Packet brig. Surveying vessel 1845. CGWV on 29.7.1857. Sold to Marshall to BU 11.1.1862.

Bonetta Sheerness Dyd.
Ord: 3.3.1834. K: 10.1834. L: 5.4.1836. C: 1.6.1836. Packet brig. BU completed at Deptford 23.4.1861.

Dolphin Sheerness Dyd.
Ord: 3.3.1834. K: 10.1834. L: 14.6.1836. C: 28.9.1836. Packet brig. CGWV on 19.3.1861. Sold to BU 11.5.1894.

Spy Sheerness Dyd.
Ord: 20.2.1837. K: 9.1838. L: 24.3.1841. C: 23.10.1841. Sold at Montevideo 20.1.1862.

Rapid Portsmouth Dyd.
Ord: 20.2.1837. K: 9.1839. L: 3.6.1840. C: 17.3.1841. Sold at Singapore 19.1.1856.

Sealark Portsmouth Dyd.
Ord: 20.2.1837. K: 5.1840. L: 27.7.1843. C: 9.12.1843. Training brig and tender 9.1853. Sold to private buyer 11.11.1898.

Dart Sheerness Dyd.
Ord: 20.2.1837. K: 4.1846. L: 17.3.1847. C: 7.6.1847. Tender 1850. To Coastguard 12.1857. Coastguard Watch vessel *CGWV.26* in 5.1863. Completed BU at Chatham 9.1.1875.

Daring Sheerness Dyd.
Ord: 14.5.1840. K: – . Cancelled 4.9.1843 (new *Daring* ordered to new design 10.7.1843 - see below).

NOTES: Coastguard Watch vessels as shown. Depth in hold varied; prototype 13ft 10in; Sheerness vessels 14ft 8in (first pair), 14ft 4in (next pair); Portsmouth vessels 13ft 5in only.

***RACER* Class** - 16 guns. Sir William Symonds design, 1832, dockyard-built version of *Snake* Class with slightly modified lines. Second Class Brigs.
Dimensions & tons: 100ft 6in, 78ft 7in x 32ft 4in oa (32ft 0in for tonnage) x 15ft 4in (14ft 10in in *Racer* and *Wanderer*). $428^{2}/_{94}$ bm.
Men: 110. Guns: 2 x 9pdr (or 18pdrs) + 14 x 32pdr carronades.
First cost: *Harlequin* £8,231 (fitted £12,299). *Racer* £8,313 (fitted £12,152). *Ringdove* £9,661 (fitted £12,782). *Wanderer* £10,233 (fitted £13,817). *Wolverene* £10,085 (fitted £13,307). *Sappho* £9,081 (fitted £13,531). *Lily* £8,563 (fitted £12,591). *Liberty* £8,768 (unfitted). *Squirrel* £9,202 (unfitted).

Harlequin Pembroke Dyd.
Ord: 28.3.1832. K: 11.1832. L: 18.3.1836. C: 25.10.1836 at Sheerness. Coal depot 1859. Sold to Marshall, Plymouth to BU 8.1889.

Racer Portsmouth Dyd.
Ord: 10.7.1832. K: 9.1832. L: 18.7.1833. C: 5.9.1833. Sold to Willson & Co. 17.9.1852.

Ringdove Plymouth Dyd.
Ord: 10.7.1832. K: 10.1832. L: 18.6.1833. C: 7.2.1834. BU at Plymouth 8.1850.

Wanderer Chatham Dyd.
Ord: 10.7.1832. K: 2.1833. L: 10.7.1835. C: 22.8.1835. BU at Chatham 4.3.1850.

Wolverene Chatham Dyd.
Ord: 10.7.1832. K: 2.1833. L: 13.10.1836. C: 1.12.1836. Wrecked off Greytown, Mosquito Coast 11.8.1855.

Sappho Plymouth Dyd.
Ord: 10.7.1832. K: 12.1834. L: 3.2.1837. C: 10.5.1837. Lost off S. Australia, presumed foundered with all (147) hands 2.1858.

Lily Pembroke Dyd.
Ord: 10.7.1832. K: 12.1835. L: 28.9.1837. C: 12.3.1838 at Plymouth. Coal depot at Portsmouth 1860, renamed *C.29*; to Chatham as *C.15* in 1871. Sold to Castle to BU at Charlton 7.4.1908.

Liberty (ex-*Hearty*, renamed 1837) Pembroke Dyd.
Ord: 20.2.1837. K: 9.1848. L:11.6.1850. C: 7.1861 at Plymouth as a sail training ship. Sold at Portsmouth 11.7.1905.

Squirrel Pembroke Dyd.
Ord: 20.2.1837. K: 9.1850. L: 8.8.1853. C: 5.1862 at Plymouth as a sail training ship. BU completed at Devonport 11.2.1879.

***ALERT* Class** - 6/8 guns. William Symonds design 1834. All were fitted as

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packet brigs.

Dimensions & tons: 95ft 0in, 74ft 10in x 30ft 3in oa (30ft 0in for tonnage) x 14ft 8in (first 8)/14ft 10in (*Crane*)/13ft 6in (rest).358$^{18}/_{94}$ bm. Men: 80 (44 as packet brigs). Guns: 6 x 32pdr; later 8 x 18pdr (guns varied).

First cost: *Star* £10,747 (including fitting). *Ranger* £5,656 (+ fitting £3,225). *Linnet* £5,025 (+ fitting £3,797). *Alert* £5,639 (+ fitting £3,618). *Express* £5,113 (+fitting £3,885). *Swift* £5,114 (+ fitting £3,561). *Penguin* £7,755 (+ fitting £2,641). *Peterel* £7,545 (+ fitting £2,635). *Crane* £10,394. *Ferret* £8,332 (+ fitting £3,342). *Cygnet* £11,179. *Philomel* £7,697 (+ fitting £4,286). *Heroine* £7,663 (+ fitting £3,810). *Hound* £7,497 (+ fitting £3,842).

Star Woolwich Dyd.
Ord: 29.7.1834. K: 9.1834. L: 29.4.1835. C: 18.6.1835. Coastguard Watch vessel in Gravesend 9.1857, renamed CGWV.11 on 25.5.1863. BU 1899.

Ranger Bottomley, Bermondsey.
Ord: 29.7.1834. K: 9.1834. L: 25.7.1835. C: 7.12.1835 at Sheerness. Hulked as church ship at Dublin 1860. Sold to John Good at Dublin 1867.

Linnet Joseph White, Cowes.
Ord: 29.7.1834. K: 9.1834. L: 27.7.1835. C: 5.11.1835 at Portsmouth. Coastguard Watch vessel in 9.1857, renamed *CGWV.36* on 25.5.1863. Sold to Marshall to BU at Plymouth 30.10.1866.

Alert Bottomley, Bermondsey.
Ord: 29.7.1834. K: 9.1834. L: 24.9.1835. C: 20.1.1836 at Chatham. Rated as packet brig. BU at Plymouth 5.1851.

Express Colson, Deptford.
Ord: 29.7.1834. K: 9.1834. L: 8.10.1835. C: 9.3.1836 at Woolwich & Sheerness. Sold to Marshall to BU at Plymouth 11.1.1862.

Swift Colson, Deptford.
Ord: 29.7.1834. K: 9.1834. L: 21.11.1835. C: 26.4.1836 at Woolwich. Mooring vessel at Cape of Good Hope 8.1860, renamed *YC.3* in 1861. Sold 1866.

Penguin Pembroke Dyd.
Ord: 14.4.1836. K: 11.1836. L: 10.4.1838. C: 21.9.1838 at Plymouth. Rated as packet brig. Coastguard Watch vessel in 9.1857, renamed *CGWV.31* on 25.5.1863. Sold 5.6.1871.

Peterel Pembroke Dyd.
Ord: 14.4.1836. K: 4.1837. L: 23.5.1838. C: 3.10.1838 at Plymouth. Rated as packet brig. Floating workshop at Devonport 1850. Sold to Marshall to BU 11.1.1862.

Crane Woolwich Dyd.
Ord: 20.2.1837. K: 1.1838. L: 28.5.1839. C: 6.10.1839. Rated as packet brig. Sold to Marshall to BU at Plymouth 11.1.1862.

Ferret Plymouth Dyd.
Ord: 20.2.1837. K: 4.1838. L: 1.6.1840. C: 24.11.1840. Wrecked off Dover in a gale 29.3.1869.

Cygnet Woolwich Dyd.
Ord: 20.2.1837. K: 5.1838. L: 6.4.1840. C: 4.9.1840. Coastguard Watch vessel in 9.1857, renamed *CGWV.30* on 25.5.1863. BU completed at Portsmouth 3.1.1877.

Dispatch Chatham Dyd.
Ord: 20.2.1837. K: ... . Re-ordered as *Acorn* Class brig 24.5.1839 (see below).

Dove Chatham Dyd.
Ord: 20.2.1837. K: ... . Re-ordered as *Acorn* Class brig 24.5.1839 (see below).

Philomel Plymouth Dyd.
Ord: 24.5.1839. K: 4.1840. L: 28.3.1842. C: 16.7.1842 as surveying vessel. Coastguard Watch vessel in 9.1857, renamed *CGWV.23* on 25.5.1863. Foundered in the Swale 1869; wreck sold to Hayhurst & Clasper to salve and BU 26.2.1870.

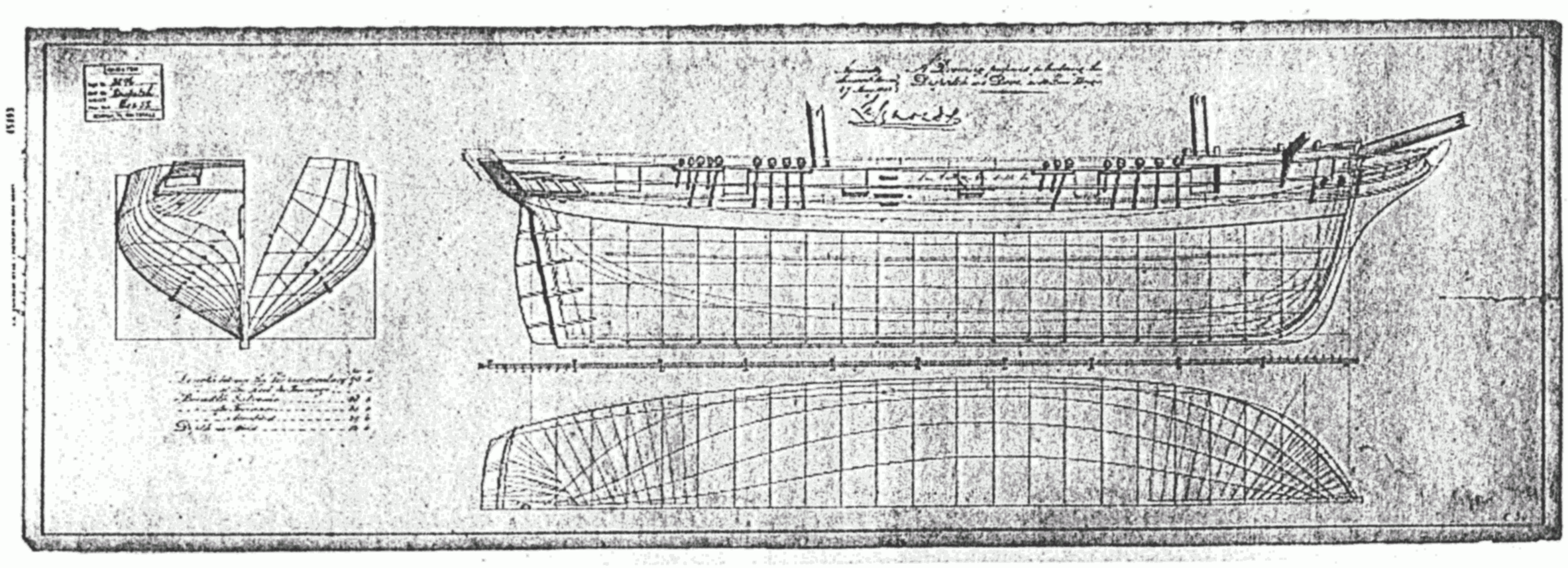
Heroine Woolwich Dyd.
Ord: 20.8.1838. K: 5.1840. L: 16.8.1841. C: 11.12.1841. Rated as packet brig. Hulked as blacksmith's shop at Devonport 1865. BU at completed at Plymouth 31.12.1878.

Hound Woolwich Dyd.
Ord: 20.8.1838. K: ... . Order moved to Deptford Dyd.
(Re)Ord: 22.6.1844. K: 2.7.1845. L: 23.5.1846. C: 27.8.1846 at Sheerness. Breakwater at Devonport 1871. Sold to Castle to BU at Charlton 11.1887.

Mariner Pembroke Dyd.
Ord: 20.8.1838. K: ... . Re-ordered as *Acorn* Class brig 24.5.1839 (see below).

Martin Pembroke Dyd.
Ord: 20.8.1838. K: ... . Re-ordered as *Acorn* Class brig 24.5.1839 (see below).

WATERWITCH - 10 guns. Design by Joseph White, developed from yacht



'A Drawing prepared for building the *Dispatch* and *Dove* as 10 Gun Brigs: Admiralty, Somerset House 27 May 1839.' *DR3896*

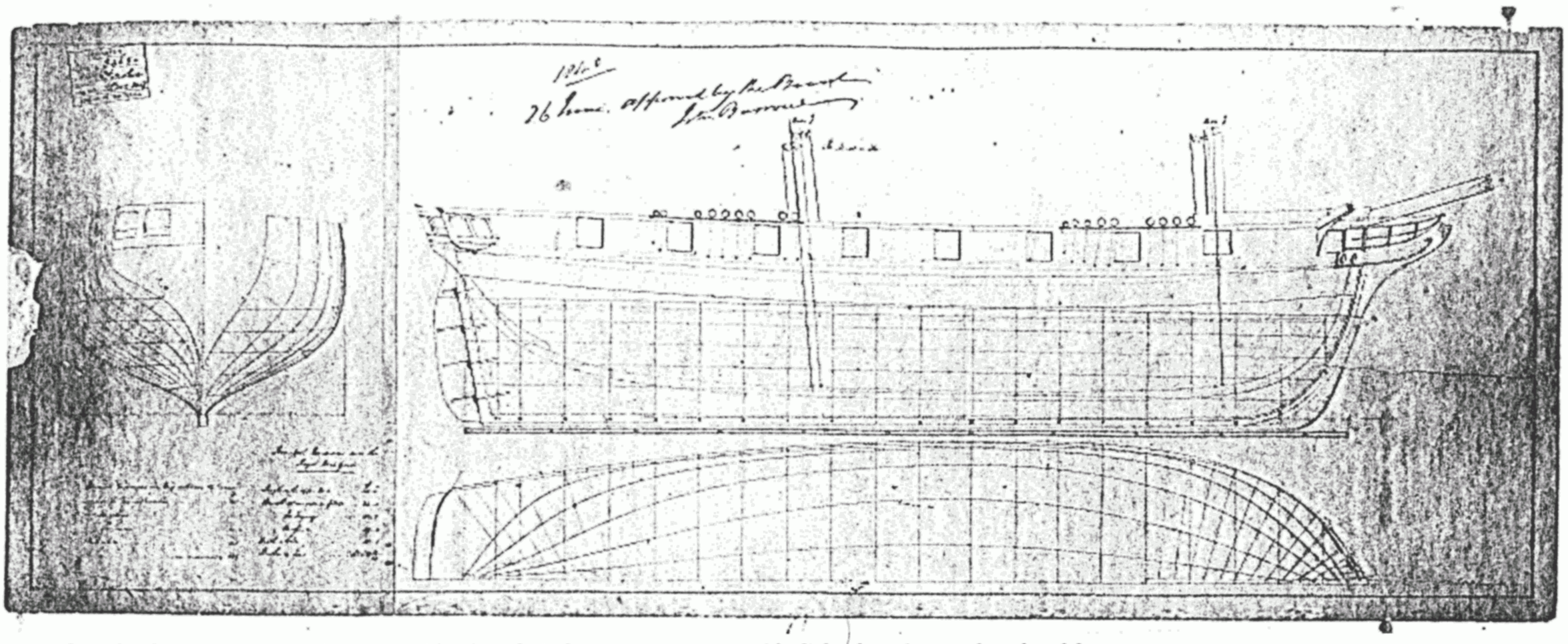
Scan and/or retouch by Grzechu

Louisa of 1828.
Dimensions & tons: 90ft 6in, 71ft 7in x 29ft 4in (29ft 2in for tonnage) x 12ft 8in. 323$^{85}/_{94}$ bm.
Men: 60. Guns: 8 x 18pdr carronades and 2 x 6pdr.
Waterwitch Joseph White, East Cowes.
L: 15.11.1834. C: 25.3.1835 at Portsmouth. Sold to Castle & Sons to BU 22.11.1861.
NOTES: Ordered as yacht for Duke of Belfast; purchased on stocks 10.1834 for £3,947 and launched on above date.

***ACORN* Class** - 16 guns. Designed by Symonds 1836.
Dimensions & tons: 105ft 0in, 82ft 2¾in x 33ft 6in oa (33ft 2in for tonnage) x 14ft 10in (15ft 0in in later ships). 481$^{11}/_{94}$ bm.
Men: 110/130. Guns: 4 x 32pdr + 12 x 32pdr carronades.
First cost: *Grecian* £9,468 (+ fitting £4,057). *Fantome* £10,338 (£13,702 fitted for sea). *Pilot* £10,589 (£14,601 fitted). *Acorn* £14,317 (fitted). *Arab* £10,147 (+ fitting £5,539). *Persian* £9,069 (+ fitting £4,444). *Bittern* £13,008 (fitted). *Albatross* £8,649 (+ fitting £6,451). *Elk* £9,874 (+ fitting £6,045). *Heron* £9,319. *Mariner* £9,824 (£14,376 fitted). *Despatch* £9,267. *Martin* £9,200. *Kangaroo* £7,806.
Grecian Pembroke Dyd (16 x 32pdr carronades only).
Ord: 31.12.1835. K: 7.1836. L: 24.4.1838. C: 10.12.1838 at Plymouth. Sold to Marshall, Plymouth 1865. BU completed 1.11.1865.
Fantome Chatham Dyd.
Ord: 31.12.1835. K: 5.1837. L: 30.5.1839. C: 30.5.1839. Sold to Castle to BU 7.10.1864.
Pilot Plymouth Dyd.
Ord: 31.12.1835. K: 8.1837. L: 9.6.1838. C: 21.10.1838. Sold to Marshall, Plymouth 11.1.1862.
Acorn Plymouth Dyd (12 x 32pdr carronades only).
Ord: 31.12.1835. K: 11.1837. L: 15.11.1838. C: 21.3.1839. Coal hulk at Shanghai 1861. Hospital hulk 1867. Sold to Wilkins & Robinson at Yokohama 15.2.1869.
Arab Chatham Dyd.
Ord: 31.12.1835. K: 2.1838. L: 31.3.1847. C: 6.10.1847. Coastguard Watch vessel at Queenborough (Swale) 24.5.1863, re-named *CGWV.18* in 1867. BU completed at Chatham 1.6.1879.
Persian Pembroke Dyd.
Ord: 31.12.1835. K: 5.1838. L: 7.10.1839. C: 28.4.1840 at Plymouth. Sold to Castle to BU 3.1866.
Bittern Portsmouth Dyd.
Ord: 20.2.1837. K: 3.1838. L: 18.4.1840. C: 17.8.1841. Sold at Hong Kong 20.2.1860.
Albatross Portsmouth Dyd (16 x 32pdr carronades only).
Ord: 20.2.1837. K: 7.1838. L: 28.3.1842. C: 14.7.1842. BU completed at Chatham 19.5.1860.
Elk Chatham Dyd.
Ord: 20.2.1837. K: 11.1846. L (undocked): 27.9.1847. C: 6.1856. Coastguard Watch vessel 25.5.1863, re-named *CGWV.28*. Sold to W.Taylor 30.5.1893.
Heron Chatham Dyd.
Ord: 20.2.1837. K: 11.1846. L: 27.9.1847. C: 23.11.1857. Foundered in tornado off West Africa 9.5.1859 (65 drowned).
Mariner Pembroke Dyd.
Ord: 24.5.1839. K: 5.1845. L: 19.10.1846. C: 15.3.1847 at Plymouth. Sold at Chatham to Capt. H.F. McKillop by AO of 12.6.1865.
Despatch Chatham Dyd (12 x 32pdr carronades only).
Ord: 24.5.1839. K: 12.1846. L: 25.11.1851. C: 24.12.1851 (for Ordinary). Coastguard Watch vessel 25.5.1863, re-named *CGWV.24* (or *Cadmus*). Sold at Sheerness 13.5.1901.
Martin Pembroke Dyd.
Ord: 24.5.1839. K: 9.1848. L: 19.9.1850. C: 3.10.1850 (for Ordinary). Re-named *Kingfisher* 2.5.1890, as training brig. Sold to Collins, Dartmouth 2.10.1907.
Kangaroo (ex-*Dove*, renamed 27.2.1843) Chatham Dyd (4 x 32pdr + 8 x 32pdr carronades).
Ord: 24.5.1839. K: 1.4.1850. L: 31.8.1852. C: 28.2.1853 (for Ordinary). Coastguard Watch vessel 25.5.1863, re-named *CGWV.20*. Sold to M. Hayhurst 10.5.1897.
NOTES: Last six to modified design; final four originally ordered as *Alert* Class brigs 1837-38 (see above). Four further vessels (of which the last three were to this design) were launched after 1863, all at Pembroke Dyd, as training brigs:
Seaflower
Dimensions & tons: 100ft 6in x 32ft 4in x 15ft 4in. 425 bm. 454 disp.
L: 25.2.1873. Tender to *Boscawen* at Portland from 6.1873. Workshop 1.1904. Sold to Castle to BU at Charlton 7.4.1908.
Nautilus L: 20.5.1879. Tender to *Impregnable*. Sold to Cox, Falmouth 11.7.1905.
Pilot (ii) L: 12.11.1879. Sold to Adrien Merveille, Dunkirk to BU 2.10.1907.
Martin (ii) (ex-*Mayflower*, renamed 4.1888) L: 20.1.1890. Coal hulk *C.23* from 15.11.1907.

***HELENA* Class** - First Class Brigs, 16 guns. Sir William Symonds design, 1839 (last five to modified design).
Dimensions & tons: 110ft 0in, 86ft 9in x 34ft 10in oa (34ft 6in for tonnage) x 14ft 10in (15ft 0in in last 5). 549$^{21}/_{94}$ bm.
Men: 140. Guns: 16 x 32pdr carronades.
First cost: *Siren* £9,975 (fitted £14,820). *Helena* £9,541 (fitted £15,625). *Jumna* £16,589. *Atalanta* £9,771. *Camilla* £9,715. *Musquito* £9,945. *Rover* £9,662.
Siren Woolwich Dyd.
Ord: 18.3.1839. K: 6.1839. L: 23.4.1841. C: 30.10.1841. Target ship 1862. BU completed at Portsmouth 14.12.1868.
Helena Pembroke Dyd.
Ord: 18.3.1839. K: 9.1839. L: 11.7.1843. C: 23.12.1843 at Portsmouth. Coal hulk 1861. Police hulk 11.1863. Chapel hulk 12.1868. Depot ship 1880. Police accommodation ship 1884. Sold to J.B. Garnham to BU 6.1.1921.
Jumna (ex-*Zebra*, renamed 19.1.1846) Bombay Dyd. Teak-built.
Ord: 15.6.1843. K: 12.1843. L: 7.3.1848. C: 12.4.1848. Sold 25.6.1862.
Atalanta Pembroke Dyd.
Ord: 19.2.1844. K: 10.1846. L: 9.10.1847. C: 20.12.1847 (for Ordinary). BU completed at Devonport 12.12.1868.
Camilla Pembroke Dyd.
Ord: 8.7.1844. K: 10.1846. L: 8.9.1847. C: 20.12.1847 (for Ordinary). Lost off Japan, presumed foundered with all (121) hands 9.9.1860.
Musquito Pembroke Dyd.
Ord: 17.2 & 25.4.1847. K: 5.1849. L: 29.7.1851. C: 25.8.1851 (for Ordinary). Sold to Prussian Navy 9.7.1862 (for £11,829).
Rover Pembroke Dyd.
Ord: 17.2 & 25.4.1847. K: 9.1850. L: 21.6.1853. C: 2.7.1853 (for Ordinary). Sold to Prussian Navy 9.7.1862 (for £11,764).

ROYALIST - purchased 1839.
Dimensions & tons: 87ft 4in, *c*72ft 0in x 25ft 6in x 6ft 8in. 249 bm.
Men: 60. Guns: UD: 4 x 12pdr; QD 2 x 6pdr; Fc 2 x 6pdr.
Royalist Bombay.
Ex-mercantile *Mary Gordon*, built of teak, and L: 13.7.1839.
Purchased in China (for £7,200) for use as survey ship in the Far East 9.7.1841. Police hulk on Thames 7.1856. Sold 14.2.1895.



Design sheer for the 16-gun brig *Frolic* approved by the Admiralty on 26 June 1840 with slight alterations to the rake of the masts. Another of the many small craft designed outside the Surveyor's Office during this period, *Frolic* was the work of a naval officer, Captain William Hendry. *DR3365A*

FROLIC - First Class Brig, 16 guns. Designed by Captain William Hendry, 1840.

Dimensions & tons: 108ft 3in, 84ft 3$^{1}/_{8}$in x 34ft 1in oa (33ft 9in for tonnage) x 15ft 6in. 510$^{69}/_{94}$ bm.
Men: 140. Guns: 16 x 32pdr carronades (17cwt).
First cost: £8,634 (+ fitting £6,212).

Frolic Portsmouth Dyd.

Ord: 1.6.1840. K: 2.1841. L: 23.8.1842. C: 11.2.1843. Paid off 23.7.1857. Sold to Castle & Beech 7.10.1864, and BU at Charlton 11 – 12.1865.

NERBUDDA - Second Class Brig, 16 guns (12 guns as completed). Sir William Symonds design, approved 26.6.1843, slightly modified from lines of the *Racer* Class.

Dimensions & tons: 100ft, 77ft 0$^{7}/_{8}$in x 32ft 4in oa (32ft 0in for tonnage) x 13ft 6in. 419$^{52}/_{94}$ bm.
Men: 110. Guns: 2 x 32pdr (39cwt) + 14 (10 as built) x 32pdr (25cwt).
First cost: £12,817 (+ £229 fitting) at Bombay, + £4,001 fitting at Chatham.

Nerbudda (ex-*Goshawk*, renamed 19.1.1846) Bombay Dyd. Teak-built.

Ord: 10.7.1843. K: 1.11.1843. L: 5.2.1848. C: 6.1853 at Chatham. Lost, presumed foundered with all (126) hands off Algoa Bay 6.1855.

From late 1843 a group of experimental brigs were built. The next six vessels listed below were all ordered nominally under the designation '*Goshawk* Class' (see *Nerbudda* above), and named on 4.9.1843 (first three) or 18.9.1843 (last three). Five of them formed (with *Cruizer* of 1828 and *Pantaloon* of 1831) an Experimental Squadron to conduct research into improved hull and sailing forms; *Espiegle* was usually the fastest with a wind abeam, *Cruizer* when before the wind.

DARING - Third Class Brig, 12 guns. Joseph White design, approved 23.8.1843.

Dimensions & tons: 104ft 0in, 83ft 0½in x 31ft 4½in oa (31ft 0½in for tonnage) x 15ft 5½in. 425$^{59}/_{94}$ bm.
Men: 130. Guns: 2 x 32pdr (39cwt) + 10 x 32pdr (25cwt).
First cost: £8,036 (+ fitting £4,992).

Daring Portsmouth Dyd (not built at Cowes as sometimes mis-stated).

Ord: 10.7.1843. K: 10.1843. L (undocked): 2.4.1844. C: 22.10.1844. Paid off 17.10.1856. Sold to Castle & Beech 7.10.1864 and BU at Charlton 3.1865.

NOTES: *Osprey* was originally to have been built to the same design.

MUTINE - Third Class Brig, 12 guns. John Fincham design, approved ?9.1843.

Dimensions & tons: 102ft 0in, 81ft 2¼in x 31ft 10in oa (31ft 6in for tonnage) x 13ft 7in. 428$^{38}/_{94}$ bm.
Men: 130. Guns: 2 x 32pdr (39cwt) + 10 x 32pdr (25cwt).
First cost: £12,983 (including fitting).

Mutine Chatham Dyd.

Ord: 10.7.1843. K: 30.10.1843. L: 20.4.1844. C: 21.9.1844. Wrecked at Chioggia, near Venice 21.12.1848.

NOTES: *Espiegle* was originally to have been built to the same design.

***FLYING FISH* Class** - Third Class Brigs, 12 guns. William Symonds design, approved 4.9.1843.

Dimensions & tons: 103ft 0in, 81ft 8in x 32ft 4in oa (32ft 0in for tonnage) x 14ft 8in. 444$^{76}/_{94}$ bm.
Men: 130. Guns: 2 x 32pdr (39cwt) + 10 x 32pdr (25cwt).
First cost: *Flying Fish* £9,055 (+ fitting £4,248). *Kingfisher* £8,704 (+ fitting £4,203).

Flying Fish Pembroke Dyd.

Ord: 10.7.1843. K: 10.1843. L: 3.4.1844. C: 22.10.1844 at Portsmouth. Paid off 12.1851. BU at Portsmouth 8.1852.

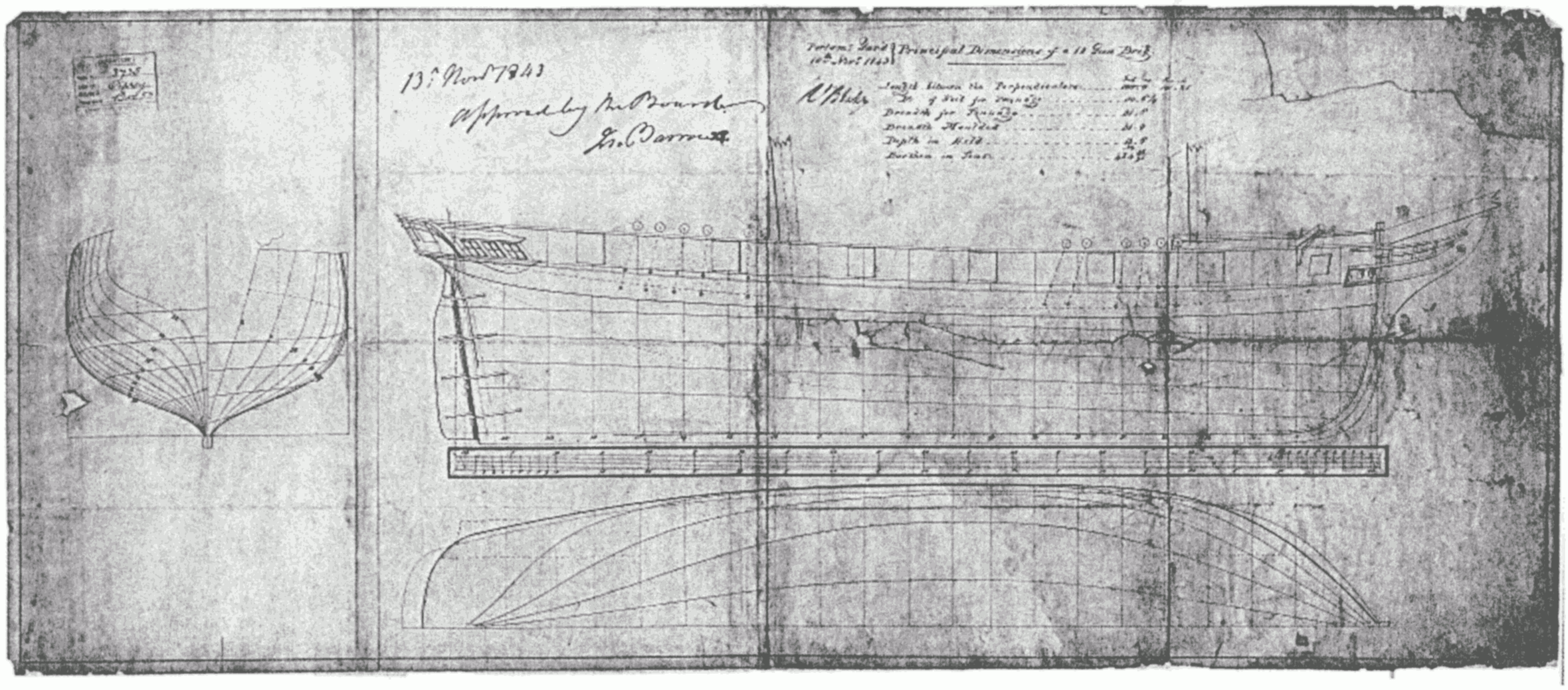
Kingfisher Pembroke Dyd.

Ord: 10.7.1843. K: 4.1844. L: 8.4.1845. C: 25.10.1845 at Portsmouth. Paid off 26.2.1851. Used as tender at Plymouth 1875. Sold to W. Taylor 26.4.1890.

OSPREY - Third Class Brig, 12 guns. Richard Blake design, approved 13.11.1843.

Dimensions & tons: 101ft 5in, 80ft 6¼in x 31ft 10in oa (31ft 6in for

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Third Class brig *Osprey*, lines plan dated 13 November 1843. DR3735

tonnage) x 13ft 6in. $424^{91}/_{94}$ bm.
Men: 130. Guns: 2 x 32pdr (39cwt) + 10 x 32pdr (25cwt).
First cost: £7,676 (+ fitting £4,822).

Osprey Portsmouth Dyd.
Ord: 10.7.1843. K: 11.1843. L: 2.4.1844. C: 22.10.1844. Wrecked off Hokianga, New Zealand 11.3.1846.

ESPIEGLE - Third Class Brig, 12 guns. Reed, Chatfield and Creuze design, approved 23.11.1843.
Dimensions & tons: 104ft 8in, 82ft 8in x 31ft 8in oa (31ft 4in for tonnage) x 13ft 1¼in. $431^{86}/_{94}$ bm.
Men: 130. Guns: 2 x 32pdr (39cwt) + 10 x 32pdr (25cwt).
First cost: £9,722 (+ fitting £3,406).

Espiegle Chatham Dyd.
Ord: 25.10.1843. K: 1.1844. L: 20.4.1844. C: 21.9.1844. Paid off 10.1856. Sold to Castle & Beech to BU 22.11.1861.

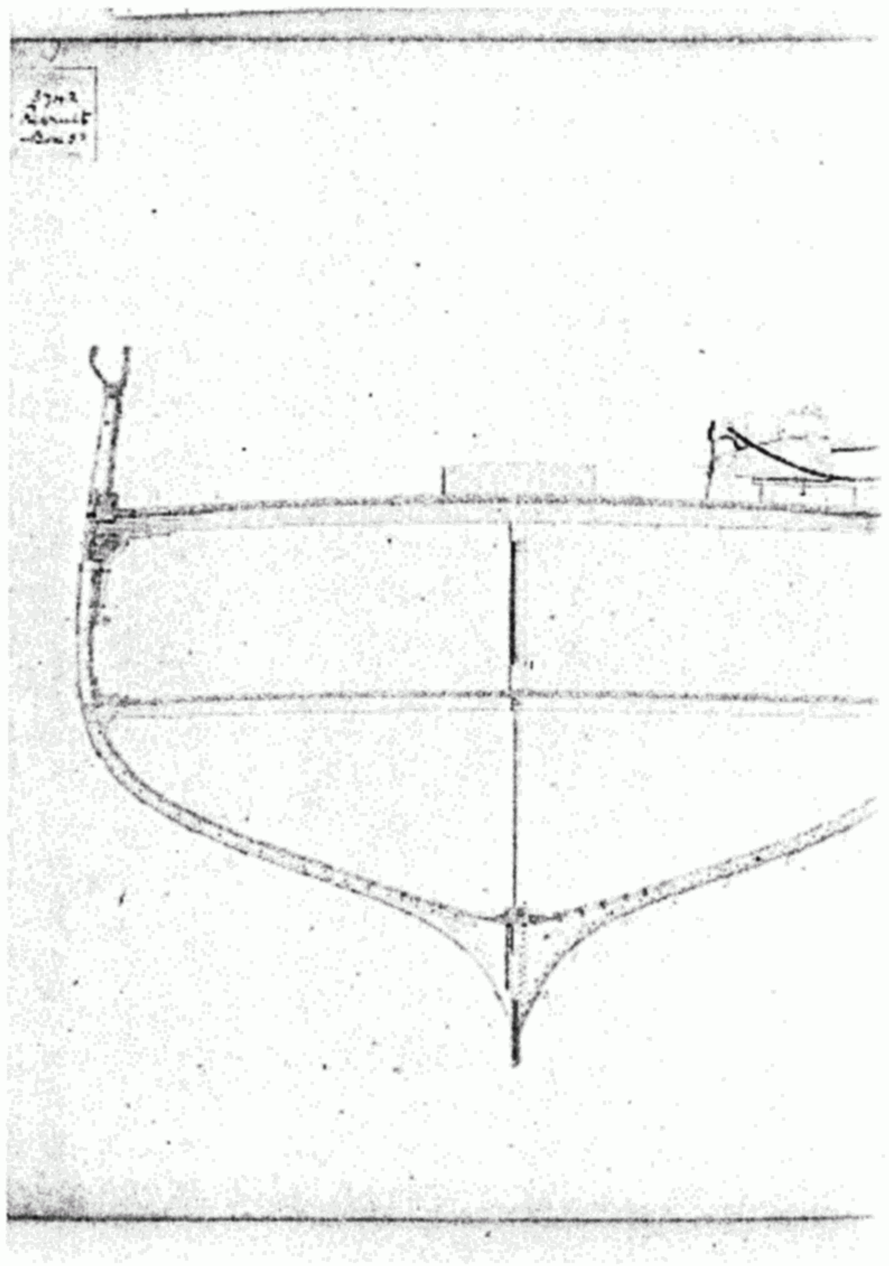
***BRITOMART* Class** - Third Class Brig, 8 guns. Design by Sir William Symonds, approved 4.9.1843.
Dimensions & tons: 93ft 0in, 73ft $5^{1}/_{8}$in x 29ft 3in oa (29ft 0in for tonnage) x 13ft 5in. $328^{46}/_{94}$ bm.
Men: 80. Guns: 2 x 18pdr + 6 x 18pdr carronades (10cwt).
First cost: £7,219 (+ fitting 3,219).

Britomart Pembroke Dyd.
Ord: 4.9.1843. K: 5.1846. L: 12.6.1847. C: 24.8.1847 at Plymouth. Paid off 25.10.1855. Coastguard 21.10.1857, renamed *CGWV.25* on 26.5.1863. BU completed at Chatham 25.7.1874.

NOTES: A further six ships to this design were ordered 18.6.1844, but they were suspended six days later and never proceeded with.

RECRUIT - Third Class iron brig, 12 guns. Design by Thomas Ditchburn, approved 6.5.1844.
Dimensions & tons: 113ft 0in, 94ft 11in x 30ft 6in x 14ft 0in. $469^{67}/_{94}$ bm. As built: 114ft $5^{1}/_{8}$in, 92ft 5in x 30ft 8½in oa (30ft 7¾in for tonnage) x 13ft 10in. $461^{63}/_{94}$ bm. Draught 7ft 11in (fwd) 12ft 3in (aft).
Men: 130. Guns: 2 x 18pdr + 10 x 32pdr.
First cost: £10,127 (+ fitting £5,306).

Recruit Ditchburn & Mare, Blackwall.
Ord: 6.5.1844 (named 20.7.1844). K: ... . L: 10.6.1846. C (fitted at Sheerness): 17.6.1846 to 29.8.1846. Sold back to builders 28.8.1849 for £4,500 (by AO 6.7.1849); subsequently fitted as screw ship and re-sold to become mercantile *Harbinger* in 1850.



As befits the Royal Navy's only iron sailing ship, the brig *Recruit* was the subject of elaborate structural drawings detailing the novel technology. Noticeably different from Admiralty drawing conventions, this draught was presumably produced by the builders. *DR3742*

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NOTES: The RN's only iron-hulled sea-going sailing vessel, for which the tender was accepted on 22.6.1844.

CONTEST - Third Class Brig, 12 guns. Design by Joseph White, approved 29.4.1845.

Dimensions & tons: 109ft 0in, 88ft 8in x 31ft 4in oa (30ft 9in for tonnage) x 15ft 2in. 446$^{11}/_{94}$ bm. As built: 109ft 0in, 88ft 8$^{3}/_{8}$in x 31ft 6½in oa (31ft 2½in for tonnage) x 15ft 2in. 459 bm.

Men: 130. Guns: 2 x 18pdr + 10 x 32pdr carronades.

First cost: £8,301 (+ fitting £4,401).

Contest Joseph White, Cowes.

Ord: 29.4.1845. K: 6.1845. L: 11.4.1846. C: 14.8.1846 at Portsmouth. Paid off 3.9.1853. BU completed at Portsmouth 9.9.1868.

NOTES: Design was a development of White's *Daring* design.

Bomb Vessels

In mid-1815 the RN had on order a further two of the *Fury* Class – included for convenience in Chapter 1. Nine more of the same type were ordered in 1819-23, but only five of the nine were built. The new type were developed from the wartime *Terror* Class, but were squarer in cross-section, with shallow floors and flat sides. On 10.1.1831 the Admiralty directed that 'no further bomb vessels (were) to be built, the type being now obsolete and the best of the existing vessels having already been converted into exploration and survey ships'.

***FURY* Class** - 10/12 guns. Henry Peake design 1813.

Dimensions & tons: 105ft 0in, 86ft 1¼in x 28ft 6in x 13ft 10in. 372$^{1}/_{94}$ bm.

Men: 67. Guns: 2 x 6pdr + 8/10 x 24pdr carronades. Mortars: 1 x 13in + 1 x 10in.

First cost: *Meteor* £14,194. *Aetna* £20,433. *Sulphur* £14,738. *Thunder* £14,919. *Erebus* £14,603 (+ fitting £9,339).

Meteor Pembroke Dyd.

Ord: 18.5.1819. K: 5.1820. L: 25.6.1823. C: 26.7.1823 at Plymouth. Survey ship, renamed *Beacon* 6.1832. Sold 17.8.1846.

Aetna Chatham Dyd.

Ord: 18.5.1819. K: 9.1821. L: 14.5.1824. C: 6.1824. Survey ship 1826. Receiving ship at Portsmouth 1839. Sold 20.2.1846.

Sulphur Chatham Dyd.

Ord: 18.5.1819. K: 5.1824. L: 26.1.1826. C: 21.2.1826. The last bomb-ship in RN service. Survey ship 12.1835. Receiving ship at Woolwich 5.1843. BU 20.11.1857.

Thunder Deptford Dyd.

Ord: 18.5.1819. K: 11.1826. L: 4.8.1829. C: 26.10.1829. Survey ship 6.1.1833. BU 5.1851.

Vesuvius Deptford Dyd.

Ord: 18.5.1819. K: ... . Order transferred to Chatham Dyd.
Re-ord: 30.8.1828.K: 8.1830. L: ... . Cancelled 10.1.1831.

Devastation Plymouth Dyd.

Ord: 18.5.1819. K: 1820. L: ... . Suspended 10.1.1831. Cancelled 11.7.1833.

Volcano Plymouth Dyd.

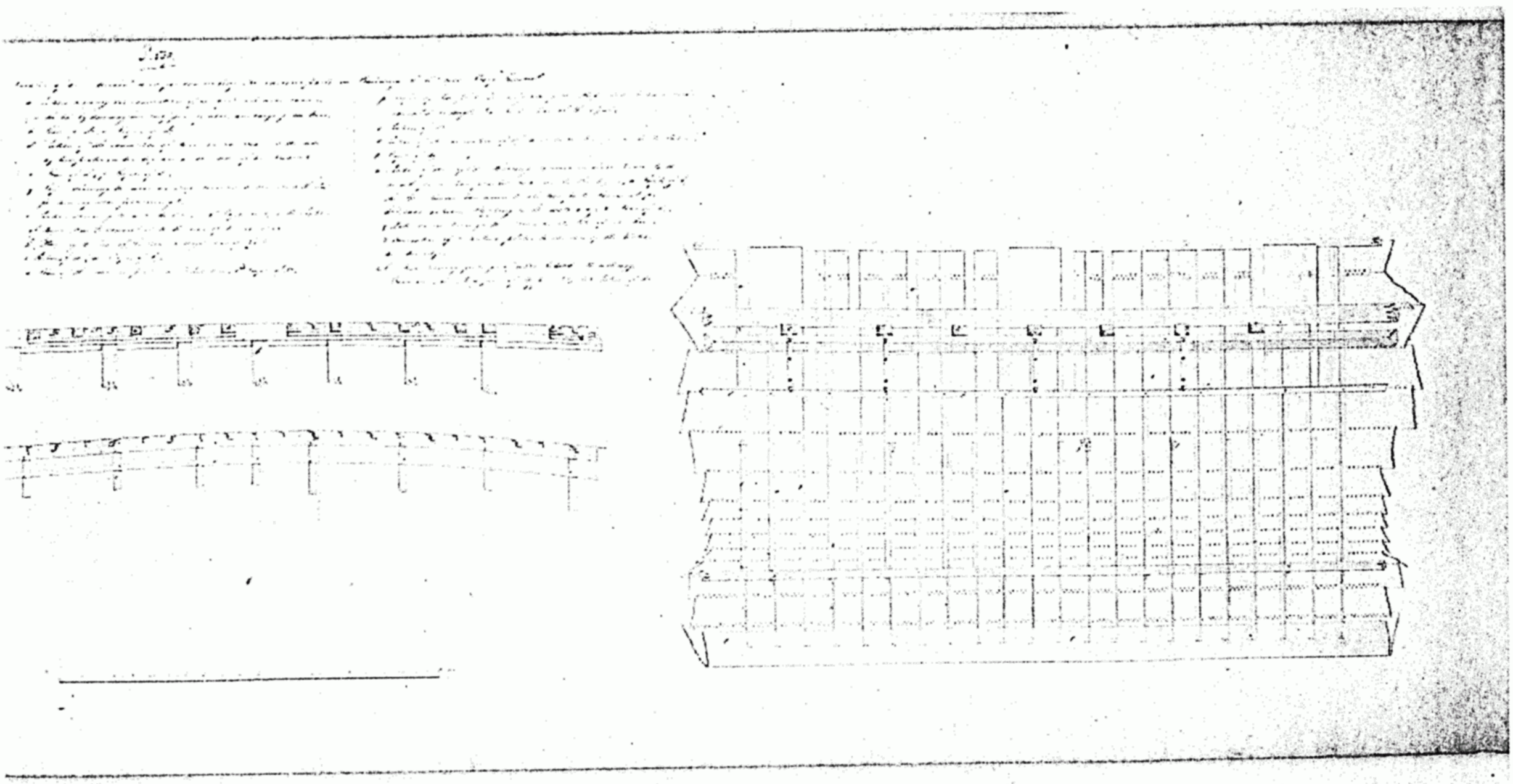
Ord: 18.5.1819. K: 1821. L: ... . Suspended 10.1.1831. Cancelled 11.7.1833.

Belzebub Plymouth Dyd.

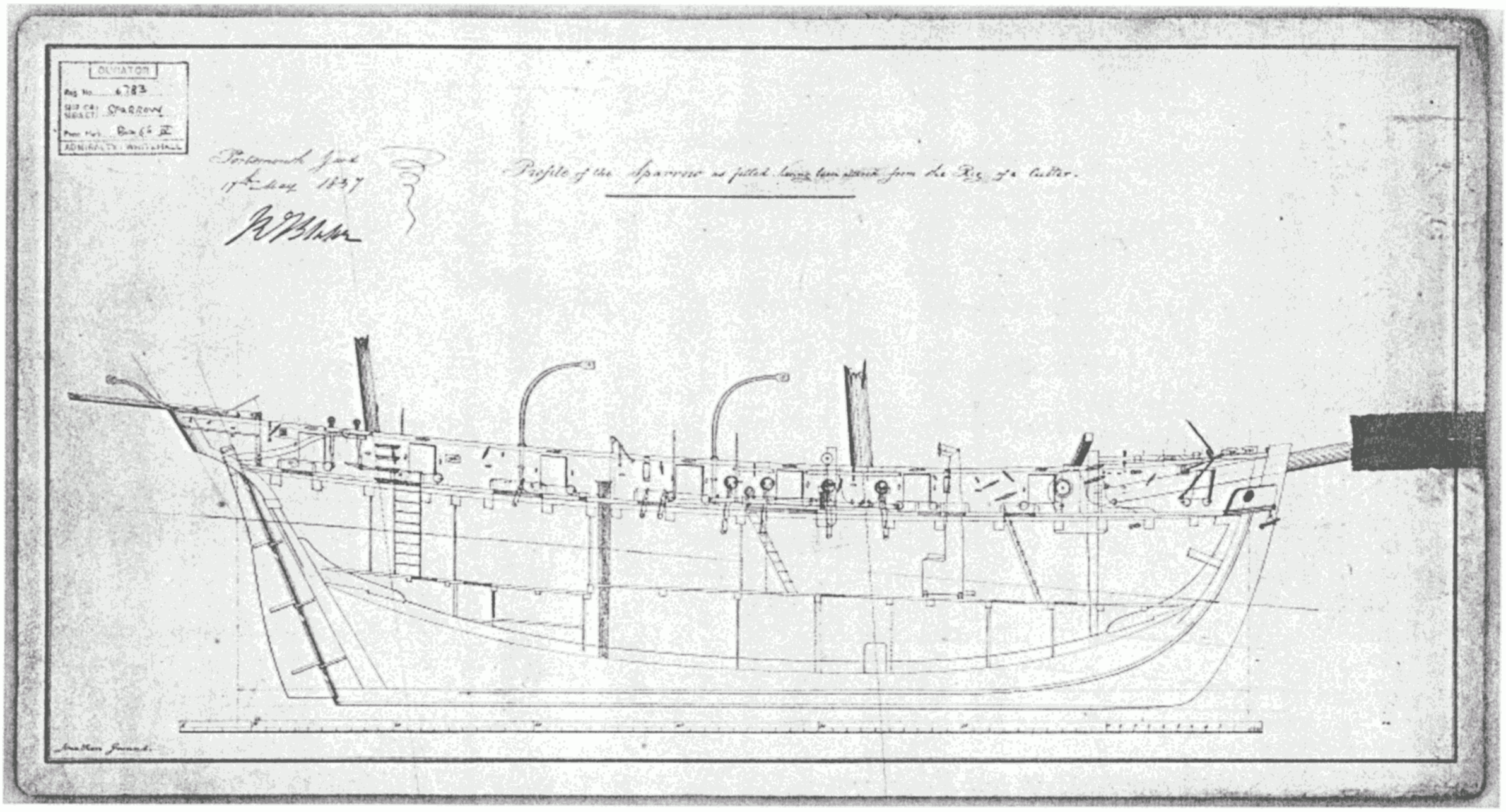
Ord: 31.10.1820. K: ... . Suspended 10.1.1831. Cancelled 11.7.1833 (unstarted).

Erebus Pembroke Dyd.

Ord: 9.1.1823. K: 10.1824. L: 7.6.1826. C: 2.1828 at Plymouth. Arctic discovery vessel 1839, fitted with auxiliary steam screw propulsion at Woolwich Dyd 1845; abandoned in Arctic 22.4.1848 along with earlier conversion *Terror*. Both were retained on Navy List until 1854.



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Profile of *Sparrow*, 17 May 1837, 'as fitted, having been altered from the Rig of a Cutter'. This form of ketch rig was sometimes called a 'dandy'. *DR6783*

NOTES: Designed with continuous main deck, full square stern with quarter galleries, traditional prow with figurehead. No swivel guns or sweep ports. The name-ship of the class was launched in 1814 and is thus included in Chapter 1, together with two sisterships ordered at the same time (even though the latter were not launched until 7.1815).

Cutters and Schooners

In April 1816 the Admiralty took over responsibility for Revenue Service cruisers; there is accordingly some confusion between naval and revenue cutters for much of this period.

Ex-AMERICAN Prizes

Note that *Grecian* (ex-privateer) was not purchased for the British Navy until after 6.1815, but was captured earlier and so appears in Chapter 1.

SPEEDWELL - schooner tender.

Dimensions & tons: 80ft 0in, 61ft 2in x 25ft 0in x 11ft 3½in. $203^{32}/_{94}$ bm.

Ex-mercantile *Royal George*, purchased 8.1815. Sold at Jamaica 1.1834.

***QUAIL* Class** - schooner tenders, 4 guns. Built of fir, to the 'draught of the *Watchful* revenue cutter, but of increased dimensions'. Design approved 15.6.1816.

Dimensions & tons: 55ft 6in, 44ft 5in x 18ft 7in x 7ft 6in. 80 bm.

Men: 30. Guns: 4 x 12pdr (also 2 x ½pdr in first four).

Quail Deptford Dyd.

Ord: 23.5.1816. K: 8.1816. L: 3.1.1817. BU completed 8.4.1829.

Linnet Deptford Dyd.

Ord: 23.5.1816. K: 8.1816. L: 3.1.1817. Cutter 1830. Survey vessel 1833. Sold to John Small Sedger, Rotherhithe to BU 7.8.1833.

Swift Woolwich Dyd.

Ord: 23.5.1816. K: 11.1816. L: 15.2.1817. Sold 8.1821.

Redbreast Woolwich Dyd.

Ord: 23.5.1816. K: 11.1816. L: 18.2.1817. Tender at Sheerness in 1830s. To Plymouth as a lazarette in 1840s. Sold to J. Brown 1850.

Woodlark Deptford Dyd.

Ord: 23.5.1816. K: 9.1820. L: 2.7.1821. Survey ship 1829. Sold 23.9.1863.

Highflyer Woolwich Dyd.

Ord: 23.5.1816. K: 1.1821. L: 11.6.1822. Sold to John Small Sedger to BU 7.8.1833.

NOTES: *Quail* proposed 31.1.1822 to be renamed *Providence*, but this AO was rescinded 11.4.1822. Sister *Hart* completed as yacht *Navy Board*.

STARLING - cutter, 10 guns. Built to the 'draught of the *Griper* (revenue) cutter'.

Dimensions & tons: 71ft 9in, 60ft 8in x 21ft $7^{7}/_{8}$in x 9ft 3in. 151 bm.

Men: 45. Guns: 2 x 6pdr (brass) + 8 x 6pdr carronades.

Starling Chatham Dyd.

Ord: 1816. K: 9.1816. L: 3.5.1817. BU at Portsmouth 11.8.1828.

COCHIN - schooner/tender for Trincomalee. Design by John Edye.

Dimensions & tons: 53ft 6in, 43ft 2in x 15ft 6in x 7ft 10in. $53^{92}/_{94}$ bm.

First cost: £550.

Cochin

K: 11.1819. L: 23.4.1820. Hulked 1840. Sold at Trincomalee 9.4.1850.

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EMERALD - cutter tender.

Dimensions & tons: 57ft 3in, 45ft 8¾in x 18ft 9½in oa (18ft 5½in for tonnage) x 9ft 1in. 85$^{81}/_{94}$ bm.

Emerald Philip Sainty, Wivenhoe.

Purchased at Portsmouth from the Marquis of Anglesea 14.9.1820. Initially (1821) tender to flagship at Portsmouth; 12.1837 tender to yacht *Royal George*. BU at Portsmouth 12.1847.

GOSSAMER - cutter tender, unarmed.

Dimensions & tons: 46ft 4in, 35ft 4$^{7}/_{8}$in x 16ft 0$^{7}/_{8}$in x 7ft 11in. 48 bm.

Gossamer Gosport.

Purchased for £404 on stocks 7.1821, as tender to flagship at Sheerness. Sold to John Levy, Rochester 22.11.1861 for £230.

***VIGILANT* Class** - cutters, 6 guns. Built to the 'lines of the *Lapwing* revenue cutter, enlarged'.

Dimensions & tons: 67ft 3in, 51ft 4in x 24ft 3in x 10ft 7in. 160$^{51}/_{94}$ bm.

Men: 38 (later 31). Guns: 2 x 6pdr + 8 (later 2) x 6pdr carronades.

Skylark Pembroke Dyd.

Ord: 3.9.1819. K: 8.1820. L: 17.2.1821. Fate unknown.

Swift Pembroke Dyd.

Ord: ?3.9.1819. K: ?8.1820. L: 17.2.1821. Fate unknown (still in service 1846).

Vigilant Deptford Dyd.

Ord: 3.9.1819. K: 8.1820. L: 18.4.1821. C: 18.5.1822. Re-rigged as ketch 5.1826. Sold 11.1832.

Basilisk Chatham Dyd.

Ord: 1819. K: 2.1821. L: 7.5.1822. C: 3.1824. Sold 1.1846.

NOTES: Cutters, ordered 1819 to lines of revenue cutter *Lapwing* of 1764 enlarged. Last two later ketch-rigged. *Basilisk* measured 67ft 5½in, 51ft 6$^{5}/_{8}$in x 24ft 3in x 10ft 7in.

***BRAMBLE* Class** - cutters, 10 guns. Design 'as the *Diligence* revenue cutter' (built 1799).

Dimensions & tons: 70ft 9in, 52ft 4in x 24ft 2½in x 11ft 0$^{3}/_{8}$in. 163$^{13}/_{94}$ bm.

Men: 50. Guns: 2 x 6pdr + 8 x 12pdr carronades.

First cost: *Bramble* £6,217 (+ fitting £3,550). *Sparrow* £3,779

Cheerful Plymouth Dyd.

Ord: 1818 (for Revenue Service). K: 8.1818. L: 21.8.1819. C: 17.3.1820. Fate unknown.

Bramble Plymouth Dyd.

Ord: 20.3.1819. K: 8.1820. L: 8.4.1822. C: 7.8.1824. Survey ship with schooner rig 4.1842 (31 men). Lent to New South Wales government as diving vessel 31.5.1853. Sold as a lightship 23.12.1876.

Sparrow Pembroke Dyd.

Ord: 20.3.1819. K: 10.1827. L: 28.6.1828. Ketch rig 1837 (40 men). Survey ship 1844. BU at Devonport 8.1860.

FLYING FISH - schooner tender (ex-mercantile *Lady Augusta*, built at Leith).

Dimensions & tons: 62ft 0in, ... x 17ft 6in x 8ft 0in. 78 bm.

Purchased 1817. Sold 31.3.1821 at Antigua.

***NIGHTINGALE* Class** - cutter tenders, 6 guns. 1822 design 'similar to the *Dove* revenue cutter'. Actually built as revenue cutters; to RN on completion.

Dimensions & tons: 63ft 9in, 46ft 11½in (first four) 46ft 10in (last three) x 22ft 2in x 9ft 6in. 122 bm. (*Speedy*, 22ft 6in beam, 123 bm)

Men: 34. Guns: 2 x 6pdr (brass) + 4 x 6pdr carronades.

First cost: *Dove* £3,876. *Snipe* £3,314. *Speedy* £3,329.

Fancy Plymouth Dyd.

Ord: 6.1817 (for Revenue Service). K: 9.1817. L: 7.5.1818. C: 26.1.1819. Fate unknown.

Kite Plymouth Dyd.

Ord: 6.1817 (for Revenue Service). K: 9.1817. L: 7.5.1818. C: 14.7.1818. Fate unknown (still in service 1838).

Racer Pembroke Dyd.

Ord: 1817. K: 8.1817. L: 4.4.1818. C: 31.1.1819 at Plymouth. Coastguard 1822. Sold at Malta 4.5.1830.

Sprightly Pembroke Dyd.

Ord: 1817. K:10.1817. L: 3.6.1818. C: 18.1.1820 at Plymouth (for Revenue Service). Wrecked off Portland 8.1.1821.

Dove Plymouth Dyd.

Ord: 1818 (for Revenue Service). K: 5.1818. L: 29.12.1818. C: 5.8.1819. *CGWV.6* 1860. Sold to Castle. 12.8.1865 to BU.

Netley Plymouth Dyd.

Ord: 1821 (for Revenue Service). K: 6.1821. L: 13.3.1823. Commissioned in RN as tender 23.1.1826. Tender to Flagship at Plymouth 1829; subsequently receiving ship. Foundered at Spithead 10.1848 but raised, became buoy boat at Halifax 1850. To Bermuda 1850, then Jamaica 1851-1852. Sold at St John's, Newfoundland 29.8.1859.

Nightingale Plymouth Dyd.

Ord: 1822 (for Revenue Service). K: 4.1822. L: 19.4.1825. C: 1.6.1825. Schooner rig 2.1828. Wrecked on the Shingles 7.2.1829.

Snipe Pembroke Dyd.

Ord: 1822. K: 10.1827. L: 28.6.1828. C: 6.9.1828 at Plymouth (as tender). Rigged as schooner 1835. BU at Devonport 11.1860.

Speedy Pembroke Dyd.

Ord: 1822. K: 11.1827. L: 28.6.1828. C: 2.11.1828 at Plymouth (as tender). Mooring lighter 8.1853. To Sheerness 1865, renamed *YC.11* in 1866. BU 1876.

NOTES: Most of these were built for and served in the Revenue Service, not Navy but under Admiralty control (included to complete class list).

SYLPH *Class* - cutter tender.

Dimensions & tons: 61ft 7in, *c*47ft 10in x 21ft 2in x 10ft 0in. 114 bm.

Sylph Woolwich Dyd.

Ord: 1820. K: 10.1820. L: 15.6.1821.Lent to Customs 15.9.1862 as watch vessel. Sold 7.1888. [Note this may not be the same vessel.]

GRECIAN (ex-Revenue cutter *Dolphin*, built 1799 at Cowes)

Dimensions & tons: 68ft 9¼in, 50ft 9in x 23ft 2$^{5}/_{8}$in x 9ft 6½in. 145 bm.

Men: 50. Guns: 2 x 6pdr + 8 x 6pdr carronades.

Purchased 20.11.1821. Sold 11.7.1827 to Mr Freake but sale cancelled due to latter's lunacy; resold to Samuel Phillips for £300.

***ARROW* Class** - cutter, 10 guns. Design by Captain John Hayes.

Dimensions & tons: 64ft 0in, 48ft 8$^{5}/_{8}$in x 24ft 9in x 9ft 2½in. 157 bm.

Men: 50. Guns: 2 x 6pdr (brass) + 8 x 6pdr carronades.

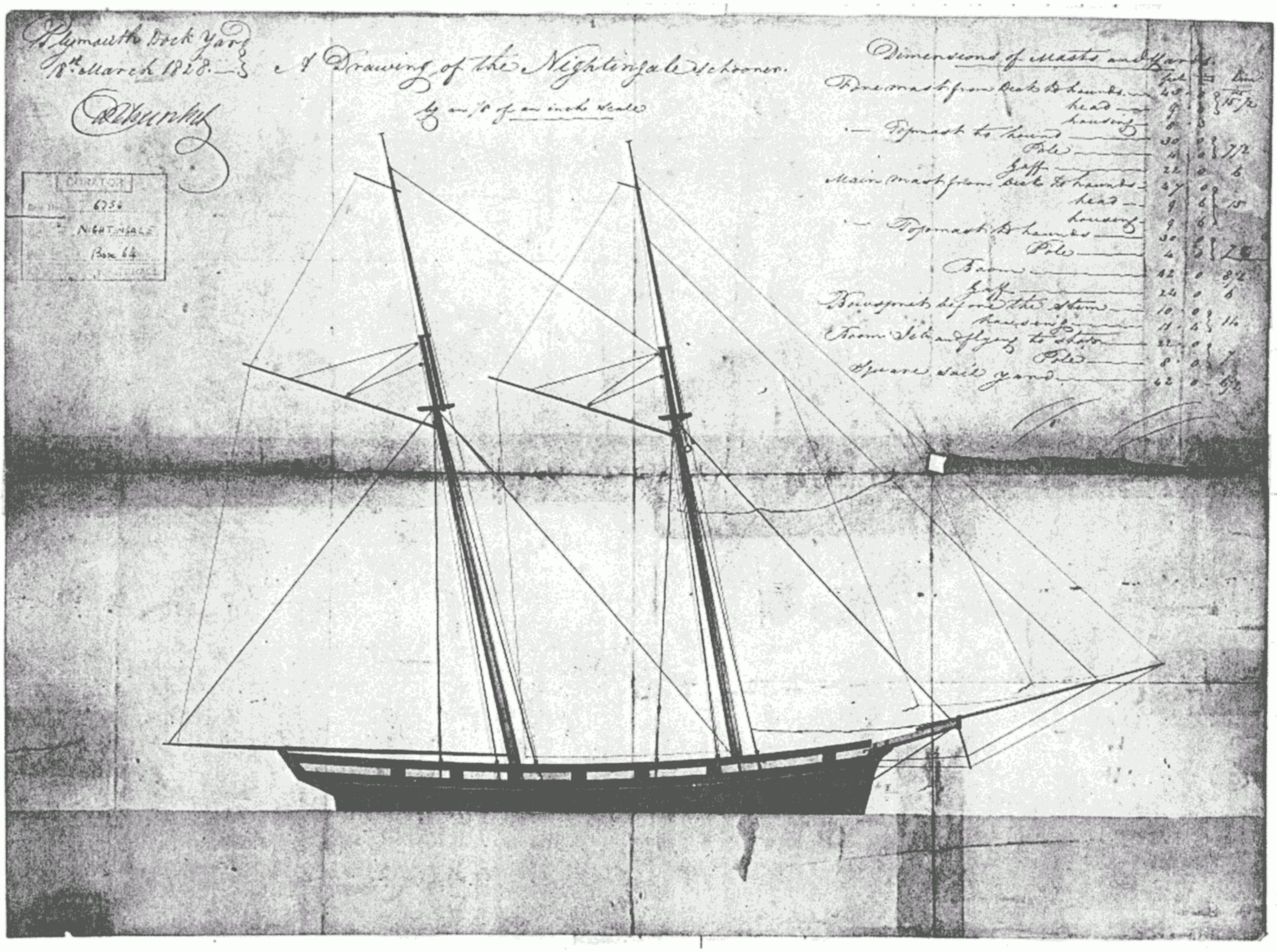
First cost: £3,916.

Arrow Portsmouth Dyd.

Ord: 11.5.1822. K: 9.1822. L: 14.3.1823. Customs cutter 1831. Ketch rig 1838. BU 1.1852. (Originally ordered 23.5.1816 as *Quail* Class.)

ASSIDUOUS (ex-pirate vessel *Jackal*, built *c*1820), schooner/tender, 2 guns.

54 bm schooner, captured 1823. Carried 1 x 12pdr + 1 x 32pdr carronade. Sold 5.5.1825.



An unusual pictorial spar plan for the *Nightingale*, dated Plymouth Dockyard 18 March 1828. Originally a cutter, the vessel is shown as converted to schooner rig, with the dimensions of the masts and yards listed. *DR6756*

LION (ex-pirate, built 1821 in America).
Dimensions & tons: 61ft 8in, ... x 19ft 4in x 5ft 9in. 88 bm.
Men: ... . Guns: 1 x 12pdr.
Captured 1823. Sold 15.5.1826.

RENEGADE (ex-pirate slaver *Zaragozana*, built 1820 in America).
Dimensions & tons: 76ft 3in, ... x 19ft 2in x 7ft 4in. 115 bm.
Men: ... . Guns: 2 x 12pdr + 2 x 32pdr carronades.
Captured 1823 and purchased 7.1823. Sold 8.1.1826.

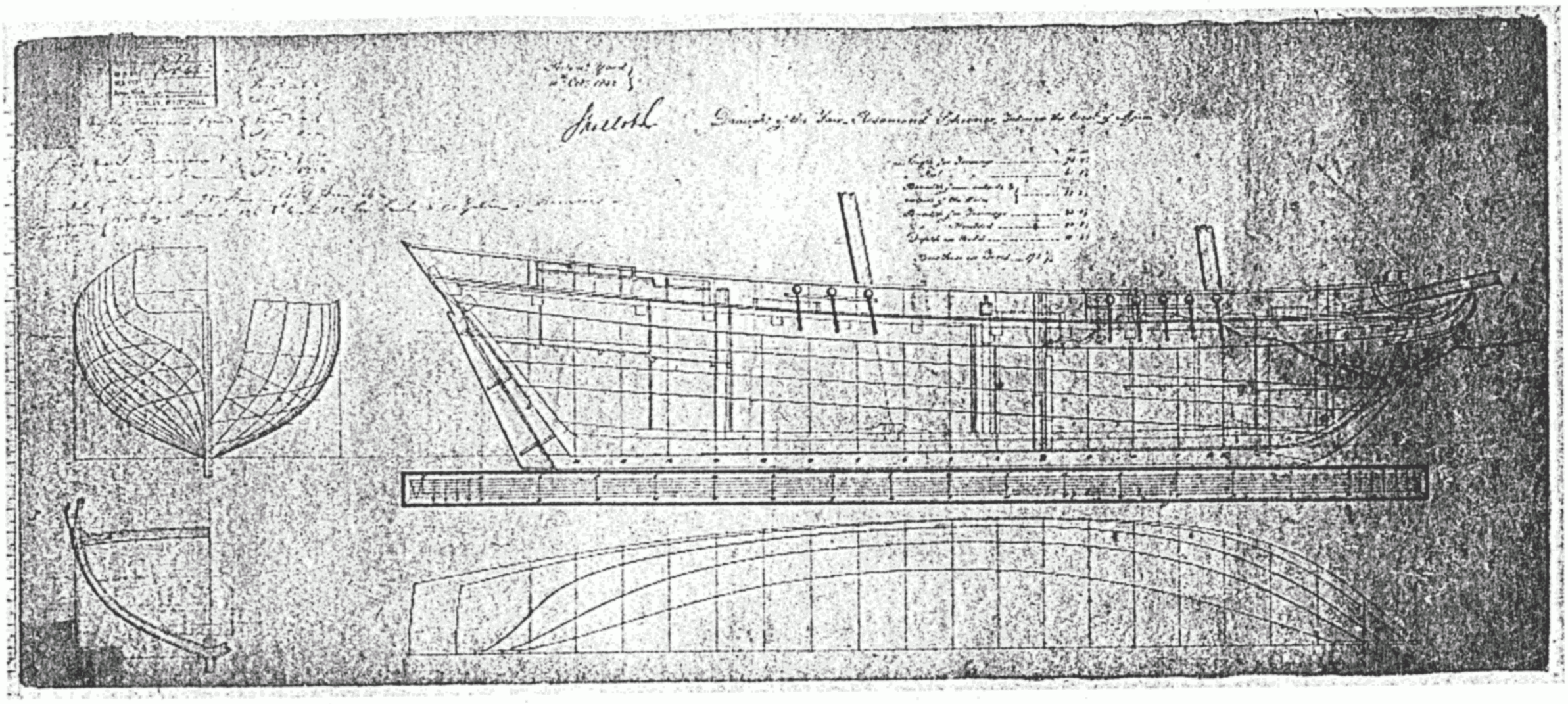
UNION (ex-mercantile *City of Kingston*, built 1821 at Kingston, Jamaica).
Dimensions & tons: 59ft 9in, ... x 18ft 4in x 6ft 10in. 84 bm.
Purchased 1823. Wrecked on a reef in the West Indies 17.5.1828.

***MAGPIE* Class** - schooners, 4 guns. 1825 design 'similar to the *Assiduous* tender'.
Dimensions & tons: 53ft 3in, 40ft 8½in x 18ft 0in x 7ft 3in. 70 bm.
Men: 35. Guns: (*Magpie*) 2 x 9pdr + 2 x 18pdr carronades. (*Monkey*) 2 x 12pdr + 1 x 5½in howitzer.
Magpie McLean, Jamaica.
Ord: 16.7.1825 K: ... . L: 6.1826. Capsized in a squall off western Cuba 27.8.1826 (33 died).
Monkey McLean, Jamaica.
Ord: 16.7.1825 K: ... . L: 6.1826. Wrecked 13.5.1831 off Tampico; remains sold 24.5.1831.
Nimble McLean, Jamaica.
Ord: 16.7.1825 K: ... . L: 5.1826. Found to be unsatisfactory on delivery and not accepted by RN.

ASP (purchased on the stocks, building by Tucker, Gosport), fishery tender.
Dimensions & tons: 52ft 4in, ... x 15ft 0in x 6ft 2in. 49 bm.
Men: ... . Guns: 2 x 12pdr.
Purchased 1826. Sold 2.1829.

NIMBLE - schooner, 5 guns.
Dimensions & tons: 83ft 7in, 64ft 7⁵/₈in x 22ft 2in x 9ft 5in. 168 bm.
Men: 41. Guns: 4 x 18pdr carronades + 1 x 18pdr.
Nimble Jamaica.
Built 1822 as *Bolivar*. Purchased 1826 and renamed as a replacement

Scan and/or retouch by Grzechu



A classic 'Baltimore clipper' schooner, the *Fair Rosamond* was captured off the coast of Africa while operating as the Spanish slaver *Dos Amigos*. Draught taken off at Portsmouth, dated 10 October 1832. *DR4577*

when the smaller (70 bm) schooner *Nimble* (see previous entry) was found to be unsatisfactory and not accepted, being returned to that builder 5.1826. Wrecked on Key Verde in the Bahamas Channel 4.12.1834.

***ASP* Class** - cutter tenders, 2 guns. Design by Joseph Tucker. Very unsatisfactory, these craft 'failed to answer the purpose intended' and never saw active service.

Dimensions & tons: 50ft 2in, 37ft 3in x 16ft 5in x 7ft 11½in. ?53$^{37}/_{94}$ bm (by calculation).
Men: 16. Guns: 2 x 12pdr carronades.

Asp White, Cowes.
Ord: 12.6.1826. K: ... . L: 1826. Sold 2.1829.

Cracker White, Cowes.
Ord: 12.6.1826. K: ... . L: 1826. Dockyard training hulk for artificers 11.1832. Later pitch boat at Pembroke. Sold 11.1842.

Dwarf White, Cowes.
Ord: 12.6.1826. K: ... . L: 1826. Dockyard lighter 1827. Coastguard brig 1855. Sold to Messrs Hood at Rye 1862.

NOTES: Cutter tenders, also reported as 52ft 4in (41ft 10in keel) x 15ft 0in x 6ft 1½in (50$^{6}/_{94}$ tons). Symonds' autobiography reported that *Cracker* was found so poor on delivery that she was immediately replaced by another vessel purchased at Gosport, which took her name; this indicates that post-1826 history (and perhaps second set of dimensions) relate to the replacement.

SYLVIA - cutter, 1 gun. Design by William Symonds for oyster fishery service at Jersey, as a replacement for the unsuccessful *Asp* Class.

Dimensions & tons: 52ft 7in, 40ft 8½in x 18ft 1in x 8ft 6in. 70 bm.
Men: 25. Guns: 1 x 3pdr (brass).
First cost: £2,351.

Sylvia Portsmouth Dyd.
Ord: 9.9.1826. K: 1.1827. L: 24.3.1827. Yard craft at Portsmouth 1833. Survey vessel 3.1842. Sold at Londonderry 9.1859.

FANNY - tender, unarmed.

Dimensions & tons: 34ft 0in x 11ft 6in. 20 bm.

Fanny Deptford Dyd.
L: 5.1827. BU 8.1835.

***PICKLE* Class** - schooners, 3 guns. Designed 'by a draught prepared in Jamaica'.

Dimensions & tons: 62ft 8in, 54ft 0in x 21ft 2in x 9ft 9in. 118 bm.
Men: 36. Guns: 2 x 18pdr carronades + 1 x 18pdr.

Pickle Bermuda.
Ord: 16.7.1825. L: 8.1827. BU 1847.

Pincher Bermuda.
Ord: 16.7.1825. L: 8.1827. Capsized and lost with all (40) hands off Cowes 6.3.1838 but raised 6.1838. Sold 31.8.1838.

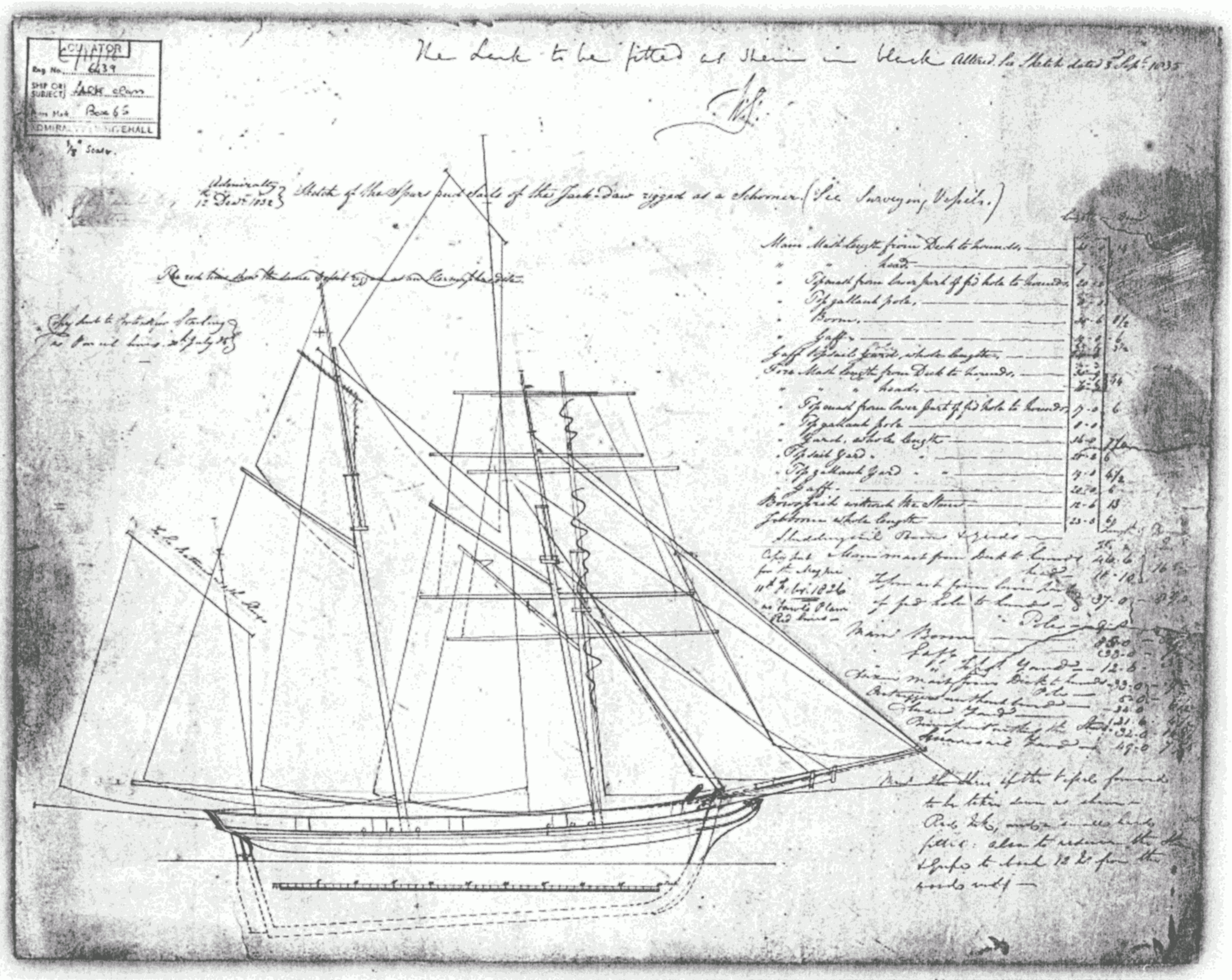
Skipjack (ex-*Skylark*) Bermuda.
Ord: 16.7.1825. L: 8.1827. Wrecked on Caymans 1.6.1841; wreck sold.

ADELAIDE (ex-slaver *Bella Josephina*, built ?1823 in Sardinia).
Dimensions & tons: 66ft 8in x 18ft 5in x ... . 95 bm.
Slaver captured 1827 and used as tender. Sold 1833 at Rio de Janeiro.

BLACK JOKE (ex-slaver *Henriquetta*, built ... at Baltimore).
Dimensions & tons: 90ft 10in x 26ft 5in x 12ft 3in. 260 bm.
Men: 55. Guns: 1 x 18pdr (on pivot).
Slaver brig captured by *Sybille* 6.9.1827. Coal depot at the Cape 1832, then scuttled.

FAIR ROSAMOND (ex-Spanish slaver *Dos Amigos*, built ... at Baltimore).
Dimensions & tons: 74ft 11½in, 64ft 1½in x 23ft 2¼in oa (22ft 8¼in) x 10ft 4½in. 172 bm.
Men: 40. Guns: 1 x 18pdr carronade + 1 x 18pdr ('bored up').
Slaver schooner captured, then purchased 22.2.1831 and used as tender. BU 20.11.1845.

FAWN (ex-slaver *Caroline*, built 1835 in ?Brazil).



The much-modified sketch of spars and sails for the *Lark* Class, originally dated 12 December 1832 and relating to the *Jackdaw* rigged as a schooner for survey duties. Annotations also mention *Lark* 'as shewn in black', 3 September 1835; a vessel 'rigged as an Hermaphrodite [brigantine]' in red lines; *Starling* altered as pencil lines, 20 July 1835; and *Magpie* as a yawl (which can be picked out by the very schematic outline of masts and sails), 11 February 1836. This gives a flavour of the many variations of rig these small 'cutters' were subject to. *DR6439A*

Dimensions & tons: 75ft 0in, 60ft 0in x 22ft 10in x 7ft 9in. 169 bm.
Men: 40. Guns: 6.
Slaver brigantine captured (?4.11.1839), then purchased 27.5.1840. Tank vessel at Cape of Good Hope 12.1842. Sold to Natal Colonial Government 5.1847.

***PROMPT* (i)** (ex-Portuguese slaver *Josephine*, built ... ?Portugal).
61 bm slaver captured 10.1840, and purchased 22.1.1842. Sold 1845.

***PROMPT* (ii)** ?Slaver captured early 1845, and purchased 17.7.1845. Sold c1847.

***LARK* Class** - cutter/tenders, 4 guns. Designed by Sir Robert Seppings, 1828.
Dimensions & tons: 60ft 9in, 49ft 5in x 20ft 3in x 9ft 0in. $107^{73}/_{94}$ bm.
Men: 35. Guns: 2 x 6pdr + 2 x 6pdr carronades.
First cost: *Raven* £2,804.

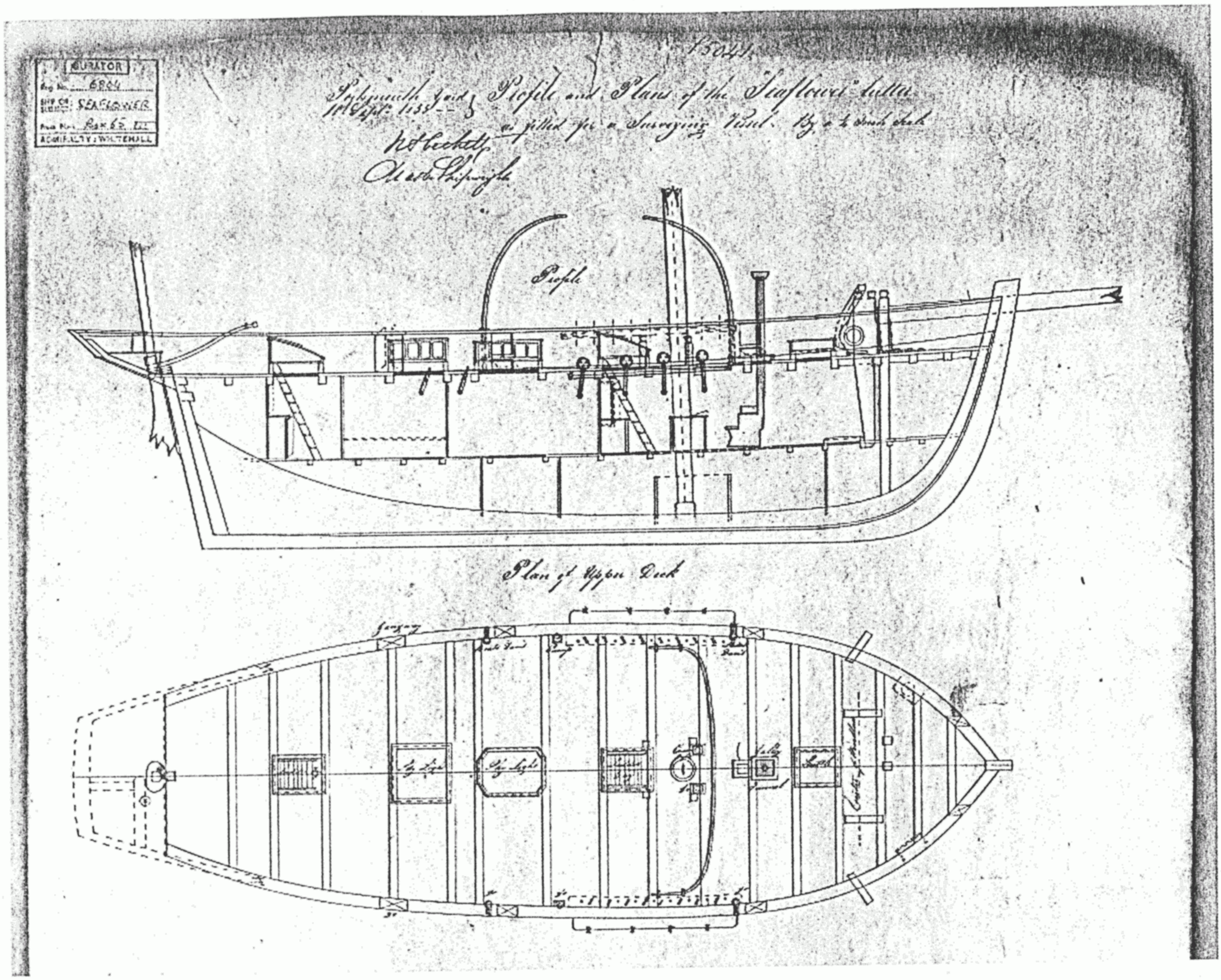
Raven Pembroke Dyd.
Ord: 8.11.1828. K: 6.1829. L: 21.10.1829. Survey cutter (yawl rig) 1835. Quarantine ship 1.1848. Coastguard service on Humber 1850. Sold 28.10.1859.

Starling Pembroke Dyd.
Ord: 8.11.1828. K: 6.1829. L: 31.10.1829. Schooner; survey vessel 1834. Sold 2.1844.

Lark Chatham Dyd.
Ord: 8.11.1828. K: 6.1829. L: 23.6.1830. Became schooner 1835. Survey cutter with 2 guns, 21ft 6in beam; loaned to Liberia 1849-58. BU 6.1860.

Jackdaw Chatham Dyd.
Ord: 8.11.1828. K: 8.1829. L: 4.8.1830. Became schooner 3.1833.

Scan and/or retouch by Grzechu



Profile and plan of the *Seaflower* cutter as fitted for surveying, 18 September 1855. *DR6804*

Wrecked off Honduras 11.3.1835.

Magpie Sheerness Dyd.
Ord: 8.11.1828. K: 12.1829. L: 30.9.1830. Survey ship 1836. Harbour water tank 1845. Sold c1908.

Quail Sheerness Dyd.
Ord: 8.11.1828. K: 12.1829. L: 30.9.1830. Harbour lighter 1838. Given to Liberia 2.1859.

***MINX* Class** - schooners, 3 guns. Designed to lines of schooner *Union* of 1820.
Dimensions & tons: 59ft 9in, 44ft 6½in x 18ft 3½in x 6ft 10in. 84 bm.
Men: 32. Guns: 2 x 12pdr carronades and 1 x 5½in howitzer.

Firefly Bermuda.
Ord: 10.1.1828. K: ... . L: 1829. Wrecked off the coast of British Honduras 27.2.1835.

Minx Bermuda.
Ord: 10.1.1828. K: ... . L: 23.12.1829. Sold at Jamaica 6.1833.

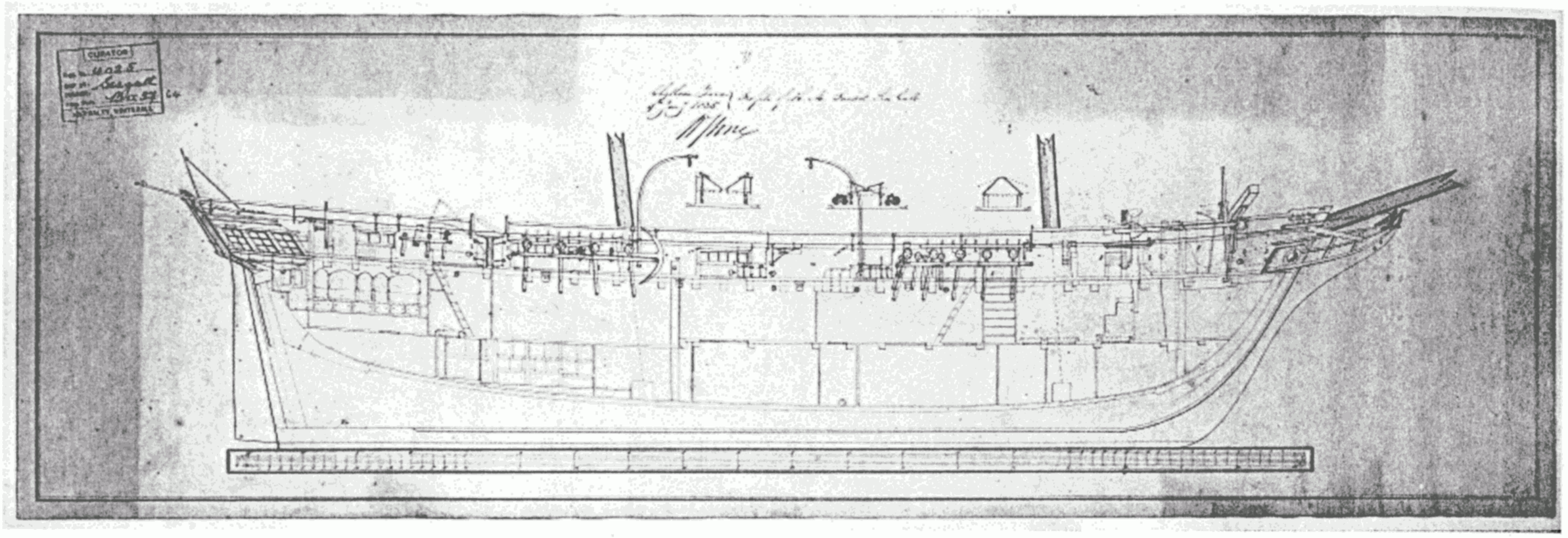
SEAFLOWER - cutter, 4 guns. Design by Captain John Hayes.
Dimensions & tons: 60ft 0in, 46ft 10³/₈in x 21ft 8½in x 10ft 6in. 116 bm.
Men: 35. Guns: 2 x 6pdr (brass) + 2 x 6pdr carronades.
First cost: £2,907.

Seaflower Portsmouth Dyd.
Ord: 5.12.1829. K: 2.1830. L: 20.5.1830. Survey ship 1855. BU 8.10.1866.

CERUS - cutter tender, ?unarmed.
Dimensions & tons: 38ft 5½in, ... x 12ft 8½in x 7ft 8in. 25 bm.
Purchased 8.9.1830 for £430. Used as buoy tender at Portsmouth.
Renamed *Ceres* 5.6.1833, then *YC.3* in 3.1860. Sold at Greenock 26.7.1877.

FANNY - cutter yacht. Designed by Captain John Hayes.
Dimensions & tons: 68ft 6in, 55ft 3in x 21ft 8½in x 10ft 4in. 136 bm.
First cost: £3,842 (fitted for sea).

Scan and/or retouch by Grzechu



Profile, dated 9 January 1835, of *Seagull* as a brigantine-rigged packet. *DR4025*

Fanny Portsmouth Dyd.
Ord: 1830. L: 28.2.1831. See under 'Royal Yachts' (p140).

***COCKATRICE* Class** - schooners, 6 guns. Design by Sir Robert Seppings, approved 11.9.1828.
Dimensions & tons: 80ft 0in, 64ft 5½in x 23ft 0in x 9ft 10in. $182^{89}/_{94}$ bm.
Men: ... . Guns: 2 x 6pdr + 4 x 12pdr carronades.
First cost: *Cockatrice* £3,893 (+ fitting £2,365).
Hornet Chatham Dyd.
Ord: 11.9.1828. K: 12.1829. L: 24.8.1831. Completed as packet (brigantine). BU 7.1845.
Spider Chatham Dyd.
Ord: 11.9.1828. K: 3.1830. L: 23.9.1835. Packet 10.1847. Sold 22.11.1861.
Viper Pembroke Dyd.
Ord: 11.9.1828. K: 6.1830. L: 12.5.1831. BU 5.1851.
Cockatrice Pembroke Dyd.
Ord: 11.9.1828. K: 7.1831. L: 14.5.1832. Completed as packet (brigantine). Victualling transport 1846. Storeship 1847. Sold 9.1858.

MONKEY - schooner/tender, 6 guns.
Dimensions & tons: 56ft 0in x 17ft 10in x 9ft 4in. 68 bm.
Men: 35. Guns: 2 x 12pdr + 1 x 5½in howitzer.
Monkey 25.10.1831 Bermuda. Sold at Jamaica 8.8.1833.
NOTES: Schooner/tender, ex-mercantile *Courier* built 1827 and purchased on above date.

***SEAGULL* Class** - three-masted schooners, 6 guns. Designed by Seppings.
Dimensions & tons: 95ft 0in, 77ft 9¾in x 26ft 3in x 11ft 2in. $279^{74}/_{94}$ bm.
Men: 29. Guns: 2 x 6pdr + 4 x 12pdr carronades (*Seagull* later 2 x 6pdr + 6 x 18pdr carronades).
Seagull Chatham Dyd.
Ord: 18.7.1829. K: 8.1830. L: 21.11.1831. Employed as a packet 1834-42 and 1850-51. BU 10.1852.
Peterel Woolwich Dyd.
Ord: 18.7.1829. K: ... . Cancelled 1.1831.
NOTES: *Seagull* re-rigged as a brigantine in 1834, but schooner again in 1837.

LOUISA - cutter, no guns.
Purchased 1835 for use at Canton. Wrecked on an island between Hong Kong and Macau 21.7.1841.

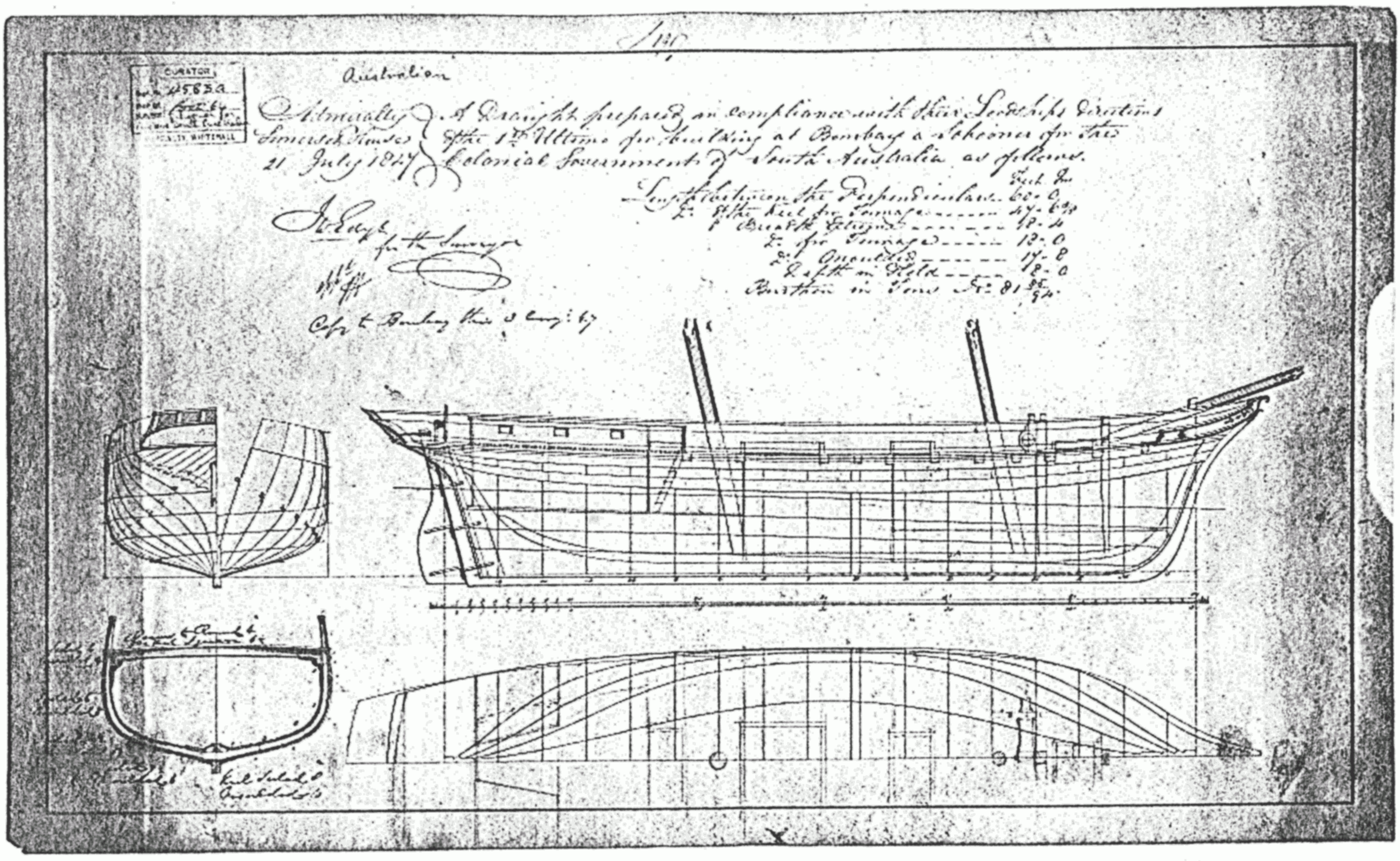
***GIPSY* Class** - cutter/tenders, 2 guns. Designed by Sir William Symonds.
Dimensions & tons: 54ft 0in, 41ft $7^{1}/_{8}$in x 18ft 0in x 8ft 7in. 70 bm.
Men: 6. Guns: 2 x 3pdr.
First cost: *Gipsy* £1,647 (fitted for sea). *Mercury* £1,724 (fitted for sea).
Gipsy Sheerness Dyd.
Ord: 18.4.1836. K: 4.1836. L: 27.10.1836. Sold 12.8.1892.
Mercury Chatham Dyd.
Ord: 18.4.1836. K: 5.1836. L: 7.2.1837. Renamed *YC.6* as yard craft at Plymouth 1866. Renamed *Plymouth* 8.2.1876. Sold 17.5.1904.

BERMUDA - schooner, 3 guns. Designed by Sir William Symonds.
Dimensions & tons: 80ft 0in, 60ft $1^{3}/_{8}$in x 23ft 3in x 11ft 0in. $180^{38}/_{94}$ bm.
Men: 35 (later 52). Guns: 1 x 32pdr and 2 x 12pdr carronades.
First cost: £6,187.
Bermuda Outerbridge & Hollis, Bermuda.
Ord: 24.12.1845. K: ... . L: 3.1848. Wrecked on Caicos Reef, near Turks Island 20.1.1855.

ADELAIDE - cutter/tender.
Captured as slaver on 3.5.1848, and purchased same month. 140 bm (no other details). Wrecked on Banana Island, West Africa 9.10.1850.

AUSTRALIAN - schooner. Teak-built, designed by John Edye for the South Australian Government. Note the name is not certain, and may be a description instead.
Dimensions & tons: 60ft 0in, 47ft $6^{3}/_{8}$in x 18ft 4in x 8ft. 82 bm.
Australian Bombay Dyd.
Ord: 1.6.1847. L: 1849. Fate unknown (may have been transferred to RIM).

***AZOV* Class** - schooner-rigged gunboats, 2 guns. Ordered (and possibly designed) by Rear-Admiral Montagu Stopford, the Superintendent at Malta.
Dimensions & tons: 64ft 0in, 52ft $7^{5}/_{8}$in x 18ft 8in x 6ft 11in. $93^{56}/_{94}$ bm.



Design draught, dated Admiralty, Somerset House 21 July 1847, 'for building at Bombay a Schooner for the Colonial Government of South Australia'. It is annotated in a different hand 'Australian', the only reference to a possible name. *DR4583A*

Men: ... . Guns: 2 x 32pdr (pivot).
First cost: *Azov* £591.

Azov Guman, Malta.
Ord: 1855. K: 4.1855. L: 14.7.1855. Used as Superintendent's yacht at Malta. Powder hoy 1871. Sold at Malta 9.6.1899.

Kerch Guman, Malta.
Ord: 1855. K: 4.1855. L: 10.7.1855. Water tank at Gibraltar 10.1860, renamed *YC.1*. Deleted about 1875.

JERSEY - cutter/tender.
Dimensions & tons: 55ft 10in x 17ft 0in x 9ft 0in. 70 bm.

Jersey White, Cowes.
L: 22.3.1860. Sold to E.A.S. Mignon 8.1873.

Storeships, etc

Dove (ex-mercantile *Manchester*, built 1805 at Falmouth), brig packet, 6 guns.
Dimensions & tons: ... . 187 bm.
Purchased 1823. Sold to Joshua Cristall 31.1.1829.

Swallow (ex-Post Office packet *Marquis of Salisbury*, built 1820 at Falmouth), brig sloop, 10 guns.
Dimensions & tons: ... , 68ft 7in x 25ft 1in x ... 236 bm.
Purchased 7.1824. Sold 8.9.1836.

Marchioness of Queensbury (ex-Post Office packet of same name).
Purchased 1829. To police service at Gibraltar 1830. Fate and other details unknown.

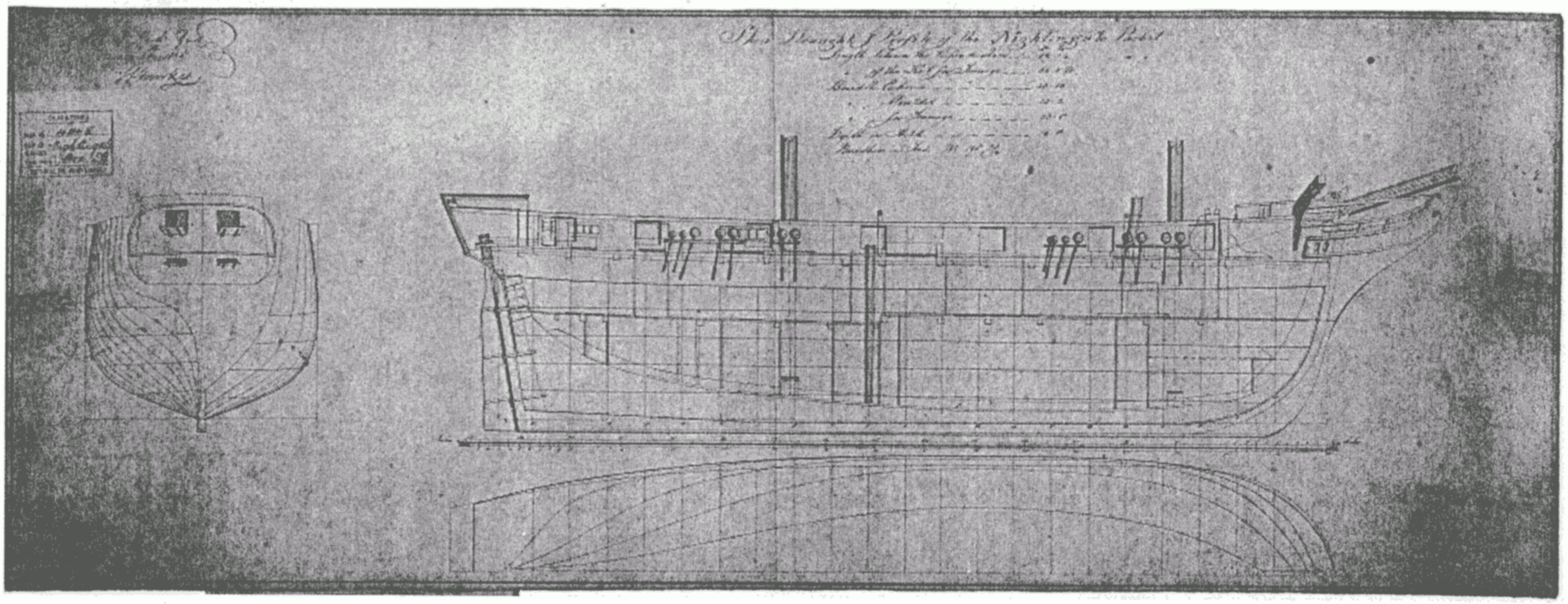
Cynthia (ex-mercantile *Prince Regent*, built 1821 at Falmouth), brig packet, 6 guns.
Dimensions & tons: 87ft 2in x 25ft 0in x ... . 232 bm.
Men: ... . Guns: 2 x 9pdr + 4 x 9pdr carronades.
Purchased 1826. Wrecked near Barbados 6.6.1827.

Nightingale (ex-Post Office packet *Marchioness of Salisbury*), brig sloop, 6 guns.
Dimensions & tons: 82ft 1½in, 66ft $5^{5}/_{8}$in x 23ft 10in x 14ft 11in. $198^{2}/_{94}$ bm.
Men: ... . Guns: 2 x 6pdr + 4 x 12pdr carronades.
Purchased 28.7.1829, and commissioned 15.3.1830. Packet 1830-38. Hulked as depot at Plymouth 1839. Sold to Greenwood & Clarke 24.11.1842.

Kestrel (ex-private yacht *Kestrel*, built 1837 by White, Cowes), packet.
Dimensions & tons: ... , 62ft 6in x 23ft 7in x 11ft 3in. 202 bm.
Purchased from Lord Yarborough as brigantine 5.12.1846. Re-rigged as schooner 1851. BU at Plymouth 11.1852.

Royal and Other Yachts

ROYAL GEORGE - ship-rigged Royal Yacht. Design by Henry Peake.
Dimensions & tons: 103ft 0in, 88ft 4¼in x 26ft 8in x 11ft 6in. 330 bm.



Sheer and profile of the *Nightingale* packet, 29 August 1838. *DR4148*

First cost: £20,108.

Royal George Deptford Dyd.
Ord: 1813. K: 5.1814. L: 17.7.1817. Registered as a Third Rate 1821. Receiving ship at Deptford 1843. BU there 9.1905.

PRINCE REGENT - Royal Yacht. Design by Portsmouth Academy apprentices.
Dimensions & tons: 96ft 0½in, 81ft 3in x 25ft 8¼in x 10ft 0¾in. 282 bm.

Prince Regent Portsmouth Dyd.
Ord: 1815. K: 9.1815 (temporarily housed over on stocks). L: 12.6.1820. C: 23.8.1820. Intended as a present to the Imam of Muscat 1836, but apparently not sent, and instead BU 1847.

NAVY BOARD - cutter-rigged Navy Board yacht.
Dimensions & tons: 53ft 6in, 44ft 5in x 18ft 8in x 7ft 6½in. 83 bm.

Navy Board (ex-*Hart*) Woolwich Dyd.
Ord: 23.5.1816 (as cutter *Hart* of the *Quail* Class for Revenue Service). K: 1821. L: 12.6.1822. C: 30.7.1822. Became yard craft at Sheerness 1825. Reclassed as tender and reverted to name *Hart* in 1833. Renamed *YC.1* there 1864, then *Drake* 17.11.1870. Dockyard Superintendent's yacht 1872. BU at Chatham 6.3.1875.

ROYAL CHARLOTTE - ship-rigged Royal Yacht. Design by Robert Seppings.
Dimensions & tons: 85ft 8in, 72ft 8$^{3}/_{8}$in x 23ft 0½in x 8ft 2in. 202 bm.
Men: 15. Guns: 6 x 1pdr swivels.

Royal Charlotte Woolwich Dyd.
Ord: 1819. K: 4.1820. L: 22.11.1824. BU 10.1832.

FANNY - cutter-rigged Admiralty yacht.
Dimensions & tons: 68ft 6in, 55ft 3in x 21ft 8½in x 10ft 4in. 136 bm. as lengthened 1857: 75ft 6in, 62ft 1$^{3}/_{8}$in x 21ft 8¼in x 10ft 4in. 153 bm.

Fanny (ex-*Admiralty*) Portsmouth Dyd.
Ord: 1830. K: 8.1830. L: 28.2.1831. Renamed *Fanny* 2.4.1832. Used as C-in-C's yacht after completion. Tender at Portsmouth 1834. Lengthened by Portsmouth Dyd 1857. To Coastguard service at Kingstown 5.1862. Sunk in collision with SS *Helvetia* off the Tuscar Rock 31.10.1878.

ROYAL ADELAIDE - ship-rigged Royal Yacht. Miniature copy of frigate HMS *Pique*, complete with coppered bottom.
Dimensions & tons: 50ft 0in, 42ft 8½in x 15ft 0in x 8ft 0in. 50 bm.
Men: ... . Guns: 22 x 1pdr brass.
First cost: £2,300.

Royal Adelaide Sheerness Dyd.
Ord: 1833. K: 9.1833. L: 12.1833. After completion, was taken to pieces, transported to Virginia Water where she was re-assembled and launched on the lake for the amusement of the Royal Family 13.5.1834. BU 1877.

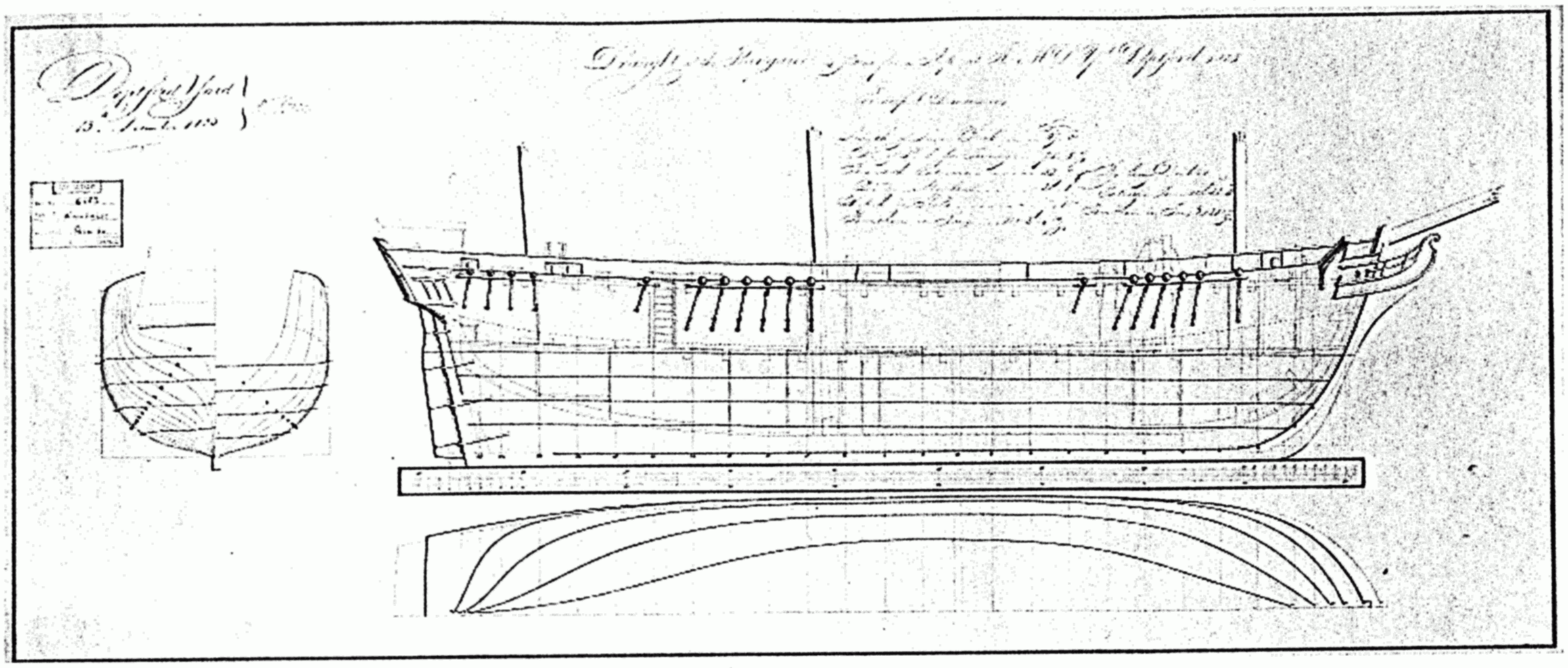
NOTE: An even smaller miniature, the *Prince of Wales*, was built at Chatham Dyd in 1850 as a miniature version of a 22-gun corvette, and was probably also for Virginia Water; however, neither of these vessels can be considered naval.

Surveying and Exploration Ships, etc

A number of specialised vessels were commissioned by the Royal Navy for Arctic exploration around mid-century. The key event was the ill-fated 1845-48 expedition led by Sir John Franklin in search of the North West Passage, aboard the adapted bomb ships *Terror* and *Erebus* (for which see under bomb vessels in Chapters 1 and 2 respectively). Much subsequent activity over the next decade originated in attempts to learn of Franklin's fate. In addition to the vessels below, acquired for the purposes of exploration and surveying, a considerable number of redundant warships were converted for the purpose, details of which appear earlier in this or the previous chapter; these included the former gunbrigs *Shamrock* and *Protector* (in 1817), *Hasty* (1819), *Snap* (1823) and *Mastiff* (1825).

Mermaid (ex-mercantile, built 1816), survey cutter.
Dimensions & tons: ... . 84 bm.
Purchased 1817. Sold 1823.

Kangaroo (origin unknown), survey brig.



Draught of the *Kangaroo* as doubled and fitted at Deptford, 13 December 1823. *DR6583*

Dimensions & tons: 87ft 0in, 75ft 5⁷/₈in x 22ft 7in x 7ft 10in. 204⁷⁴/₉₄ bm. 'Doubled' in 1823 to 22ft 11in breadth (other dimensions unchanged); 210⁸⁰/₉₄ bm.
Purchased in West Indies 11.1.1819, registered 11.1.1819. Hull doubled and re-rigged as a ship at Deptford Dyd 1823. Wrecked off Cuba 18.12.1828.

Wasp (ex-mercantile, built 1801 by Thomas White, Cowes), survey vessel.
Dimensions & tons: ... . 81 bm.
Purchased 1822. BU 1829.

Bathurst (ex-mercantile, built at Port Jackson, Australia), survey brig.
170 bm vessel, purchased for survey use 7.7.1821. To Coastguard 2.1824. Sold to Castle to BU 11.4.1858.

Albatross (ex-mercantile, built in Scotland 1826), survey schooner.
Dimensions & tons: 58ft 5in x 16ft 11in. 64 bm.
Purchased 1828. Sold to Sedger, Rotherhithe 30.8.1833.

Violet (Dutch fishing boat, building at Scheveninge), survey tender.
Dimensions & tons: 40ft 2in, 29ft 8½in x 17ft 2in x 6ft 5¹/₈in. 46⁵³/₉₄ bm.
Purchased on stocks as tender to HMS *Fairy* 20.6.1835. Sold 24.11.1842.

Speedwell (ex-mercantile *Speedwell*, built Hull), survey cutter.
Dimensions & tons: 55ft 11½in, 45ft 6¹/₈in x 17ft 7½in x 8ft 3in. 73 bm.
Purchased 12.7.1841 (for £900). Sold 5.1855 in Canada.

Plover (ex-mercantile Lady *William Bentinck*, building details unknown), teak-built Arctic survey cutter.
Dimensions & tons: 82ft 2in, 64ft 0½in x 25ft 0in x 14ft 7½in. 213 bm.
Purchased 2.1842 for £5,950 including masts, rigging, etc (vessel hired from 1841) and fitted for Arctic service. Receiving ship 1846. Depot ship 1848. Sold at San Francisco 24.11.1854.

Young Hebe (ex-mercantile), survey schooner, no guns.
Dimensions & tons: 42ft 0in, 27ft 9in x 12ft 0in x 5ft 0in. 22 bm.
Purchased for surveying duties on China station 1843. 16 men. Sold at Hong Kong 7.1.1847.

Research (ex-mercantile *Research*), survey tender.
Purchased at Malta as tender to HMS *Beacon* 12.3.1846. 40 bm (dimensions unknown). BU 6.1859 at Malta.

Castlereagh (ex-mercantile, origins unknown), survey schooner.
Dimensions & tons: ... . 93 bm. Men: 50. Guns: 4 x 18pdr carronades.
Purchased at Sydney 3.4.1846. Sold there 1848.

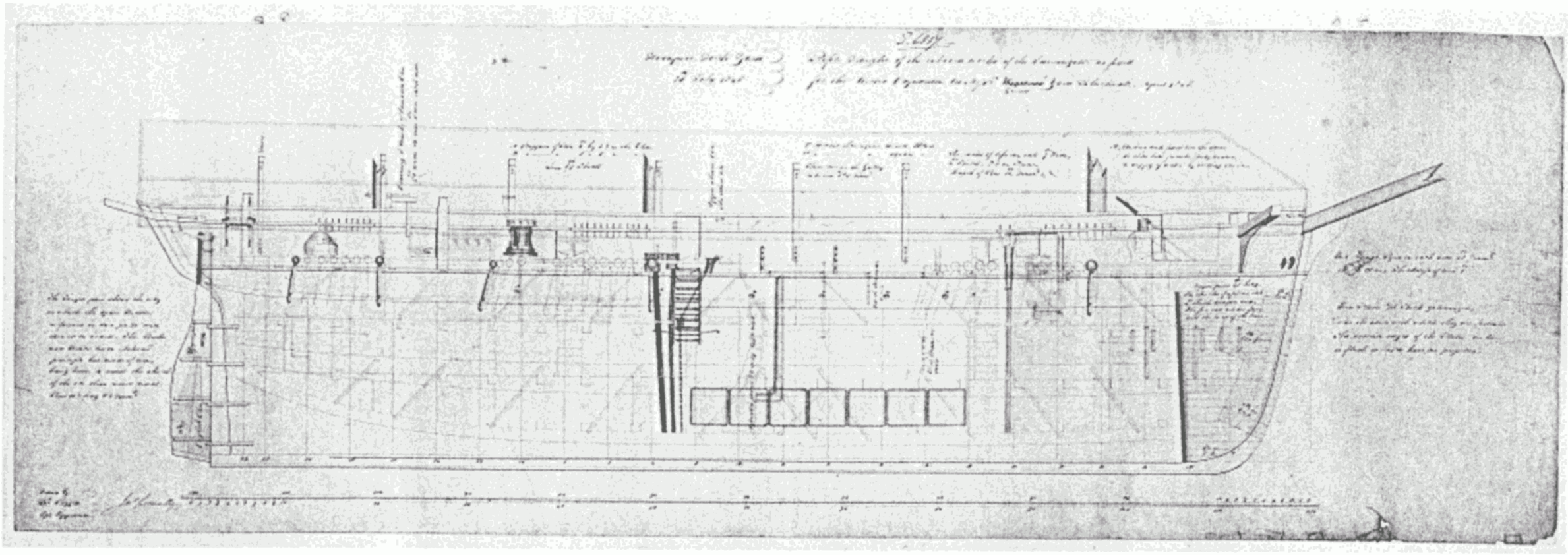
Enterprise (ex-mercantile, building by Money Wigram & Sons, Blackwall), Arctic discovery ship.
Dimensions & tons: 125ft 7½in, 108ft 6in x 28ft 8½in x 20ft 0in. 471 bm.
Purchased 2.1848 on stocks. L: 5.4.1848. Fitted for Arctic expedition. Total first cost £24,545 including masts, rigging, etc. Coal depot 1860, lent to Board of Trade. Sold 15.9.1903.

Investigator (ex-mercantile, built by Scott's, Greenock), Arctic discovery ship.
Dimensions & tons: 118ft 0in, 101ft 2½in x 28ft 3in x 18ft 11in. 422 bm.
Purchased 2.1848 and fitted for Arctic service by Green's, Blackwall. Total first cost £25,337 including masts, rigging, etc. Abandoned in ice off Banks Island 3.6.1853.

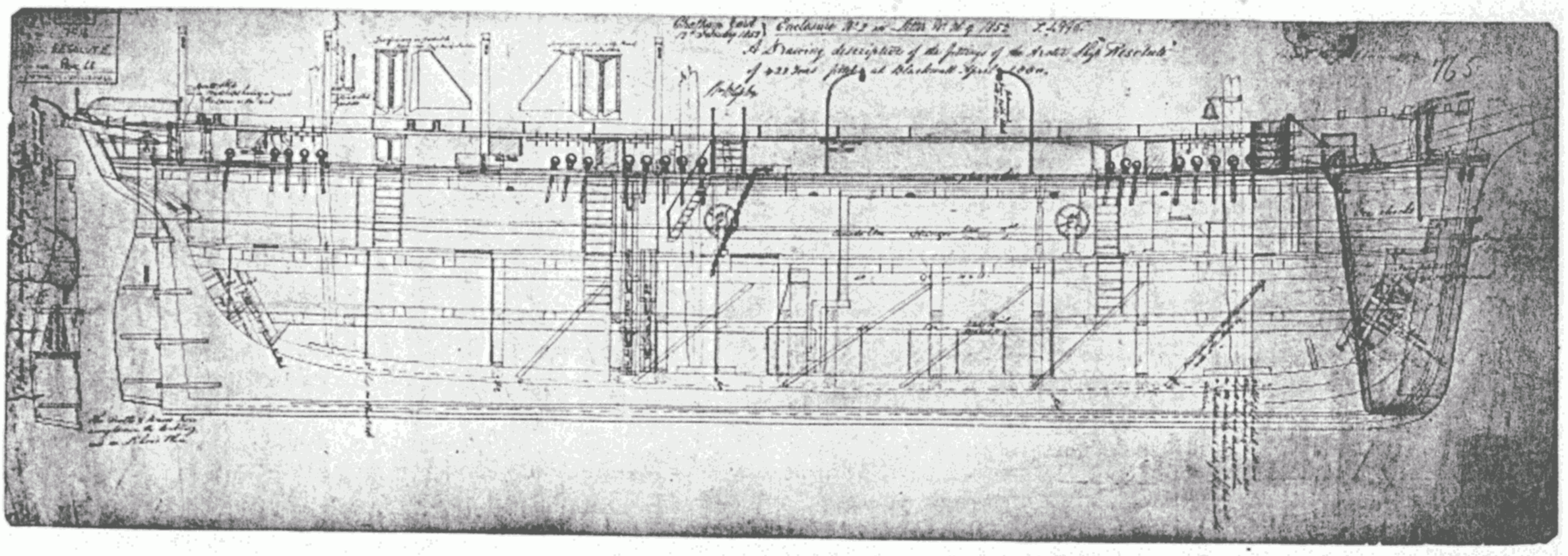
Resolute (ex-mercantile *Ptarmigan*, built 1848 by T. & Wm. Smith, North Shields), Arctic discovery barque.
Dimensions & tons: 115ft 0in, *c*99ft 0in x 28ft 4in x 11ft 6in. 424 bm.
Purchased 21.2.1850 from builders (for £10,777) and named *Refuge*, but renamed *Resolute* 7.3.1850. Fitted for Arctic service by R. & H. Green, Blackwall (cost £8,045). Abandoned in ice off Bathurst Island 15.6.1854 (along with steam tender *Intrepid*). Floated free and recovered by American whaler ?10.9.1855. Purchased by US Government and presented to Queen Victoria by President Buchanan 12.12.1856. Recommissioned as discovery ship 1857-65. BU at Chatham 30.6. - 16.8.1879 (by AO 11.6.1879).

Assistance (ex-mercantile *Baboo*, built 1835 at Howrah, Calcutta), teak-built Arctic discovery barque.
Dimensions & tons: 117ft 4in, ?98ft 6in x 28ft 5in x 13ft 7in. 423 bm. Men: 58. Guns: 2.
Purchased from Mr Kincade 3.1850. Fitted for Arctic service by Wigram, Blackwall (cost £8,520). Abandoned in the ice off Bathurst Island 25.8.1854 (along with steam tender *Pioneer*).

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Profile of *Investigator* as fitted for Arctic exploration at Green's Blackwall yard in April 1848, drawn at Devonport and dated 26 July 1848. With *Enterprise*, commanded by Sir James Clark Ross, the vessel took part in the first attempt to locate Sir John Franklin's lost expedition, which had sailed in search of the North West Passage in 1845. *DR6377*



Profile of the Arctic ship *Resolute* as fitted at Blackwall in April 1850, drawn at Chatham 12 February 1852. She was one of the ships in Horatio Austin's expedition to Baffin Bay, another attempt to find Franklin and his men. *DR7516*

Sophie (ex-mercantile *Sophie*, built 1850 at Dundee), survey vessel.
Dimensions & tons: 83ft 0in, ... x 20ft 0in x 11ft 9in. 150 bm.
Purchased 11.5.1850. Sold 5.5.1853.

Rose (ex-mercantile *Lord Star*, built 1846 at Cowes), survey cutter.
Dimensions & tons: 70ft 2in, ... x 20ft 10in x ... . '37 bm' (probably 137 bm).
Purchased 20.5.1857. Stranded 20.7.1864. Wreck sold 9.8.1864.

Amphibious Warfare Vessels: Mortar Vessels and Mortar Floats

A large programme of specialised vessels was developed for the Russian War of 1854-56, which - apart from the famous Crimean gunboats (see Chapter 5) - are usually unreported in naval tabulations. The conflict faced the Navy with an urgent need for large numbers of vessels capable of coastal bombardment. They reverted to a type long considered obsolete - the bomb vessel - but in miniature form. The mortar vessels carried about 17/18 men (a mate to command, a dozen seamen and four/five marines). They carried no guns, but simply a single 13in mortar, capable of projecting a 196lb bomb or an incendiary 'carcass' far inland. Fixed in its 4½ft deep octagonal well, the 5½-ton mortar was fired at a fixed 45° elevation, the range being varied simply by altering the size of the charge.

Charge	*Range*	*Time of flight*	*Fuse length*
2lb	690 yds	13 secs.	2.7in
8lb	2,575 yds	24¾ secs.	5.09in
12lb	3,500 yds	29 secs.	6.02in
20lb	4,200 yds	31 secs.	6.44in

The open vessels resembled shortened Thames sailing barges, complete with lee-boards, and stepped a single mast, located forward to improve the angle of fire of the mortar, with a light mizzen in a tabernacle, well aft, and carried a rudimentary rig. They saw service not only in the Black Sea and

Scan and/or retouch by Grzechu

Sea of Azov, but as far afield as the Baltic. There were also a larger screw mortar frigate, the *Horatio*, and four similar conversions ordered but never completed and armed (see under 'screw frigates' in Chapter 5).

Mortar Vessels

The first pair of these vessels were converted in 10.1854 from existing harbour tank vessels/lighters built in 1834 (see below for original details). They were followed by 54 new-built vessels; originally launched with names, the first two batches (each of 10 vessels) were given numbers *MV.3* - *MV.22* instead on 19.10.1855; the last 34 never received names; most of the withdrawn names were then re-issued to screw gunboats.

60-FOOT TYPE

Dimensions & tons: 60ft 1in, *c*47ft 7in x 20ft 9in x 9ft 0in. Draught 5ft. 109 bm.

Drake Portsmouth Dyd.
K: 5.1833. L: 25.3.1834. C: 5.1834. Converted by AO 6.10.1854 at Portsmouth Dyd. Renamed *MV.1* on 19.10.1855. Lighter again by AO 28.6.1856, renamed *Sheppey* on 7.7.1856. Harbour service (*YC.1*) at Pembroke Dyd in 1.1866. Sold 1884.

Sinbad Pembroke Dyd.
K: 11.1832. L: 27.2.1834. C: 30.6.1834. Converted by AO 5.10.1854 at Woolwich (or Deptford) Dyd. Renamed *MV.2* on 19.10.1855, then reverted to lighter 26.6.1856 at Woolwich. Renamed *YC.3* at Woolwich on 3.7.1856. BU completed at Woolwich 10.11.1866.

65-FOOT TYPE (designed by Capt. Roberts)

Dimensions & tons: 65ft 0in, 52ft 5¼in x 20ft 10in x 7ft 6in. $117^{23}/_{94}$ bm.

First cost (contractor paid + Admiralty supplies/fitting costs): *Flamer* £2,360 + 280/937. *Firm* £2,360 + 280/302. *Havock* £2,360 + 280/874. *Hardy* £2,359 + 280/835. *Growler* £2,360 + 280/843. *Surly* £2,360 + 280/825. *Blazer* £2,206 + 139/962. *Mastiff* £2,206 + 139/937. *Manly* £1,481 + 448/1,095. *Porpoise* £1,497 + 448/... .

Flamer Money Wigram & Son, Blackwall.
Ord: 6.10.1854. K: 9.10.1854. L: 1.3.1855. Renamed *MV.10* on 19.10.1855. Malta yard craft (mooring lighter) *YC.5* in 1858. For disposal *c*1901.

Firm Money Wigram & Son, Blackwall.
Ord: 6.10.1854. K: 9.10.1854. L: 1.3.1855. Renamed *MV.11* on 19.10.1855. Sold at Malta 1858.

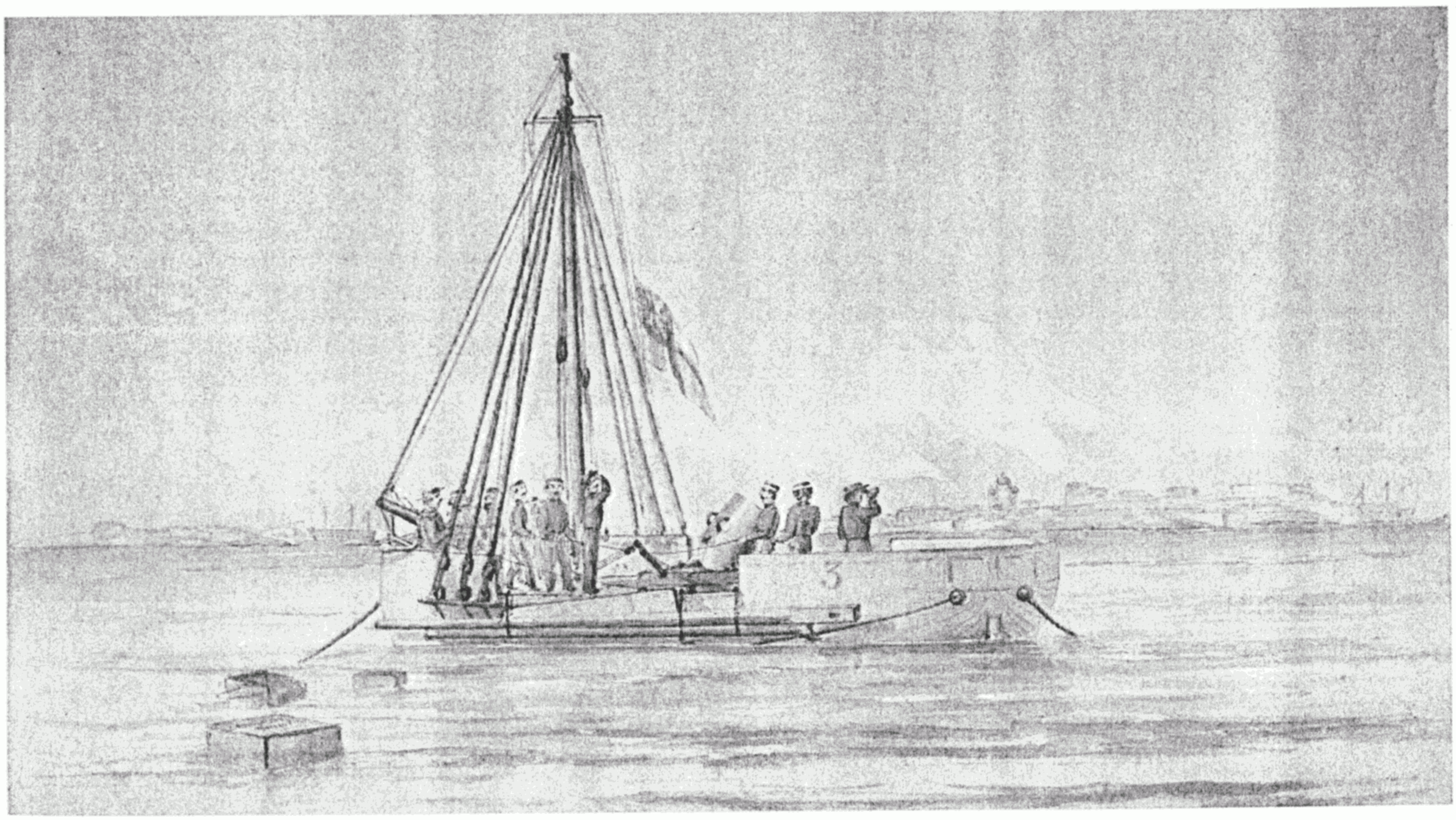
Havock C. J. Mare & Co., Blackwall.
Ord: 6.10.1854. K: 9.10.1854. L: 14.3.1855. Renamed *MV.5* on 19.10.1855. Became Coastguard Watch vessel *CGWV.27*. BU at Chatham 7.1874.

Hardy Money Wigram & Son, Blackwall.
Ord: 6.10.1854. K: 9.10.1854. L: 14.3.1855. Renamed *MV.12* on 19.10.1855. Sold at Malta 21.4.1858.

Growler Money Wigram & Son, Blackwall.
Ord: 6.10.1854. K: 9.10.1854. L: 31.3.1855. Renamed *MV.4* on 19.10.1855. Completed as landing stage at Chatham 16.12.1863.

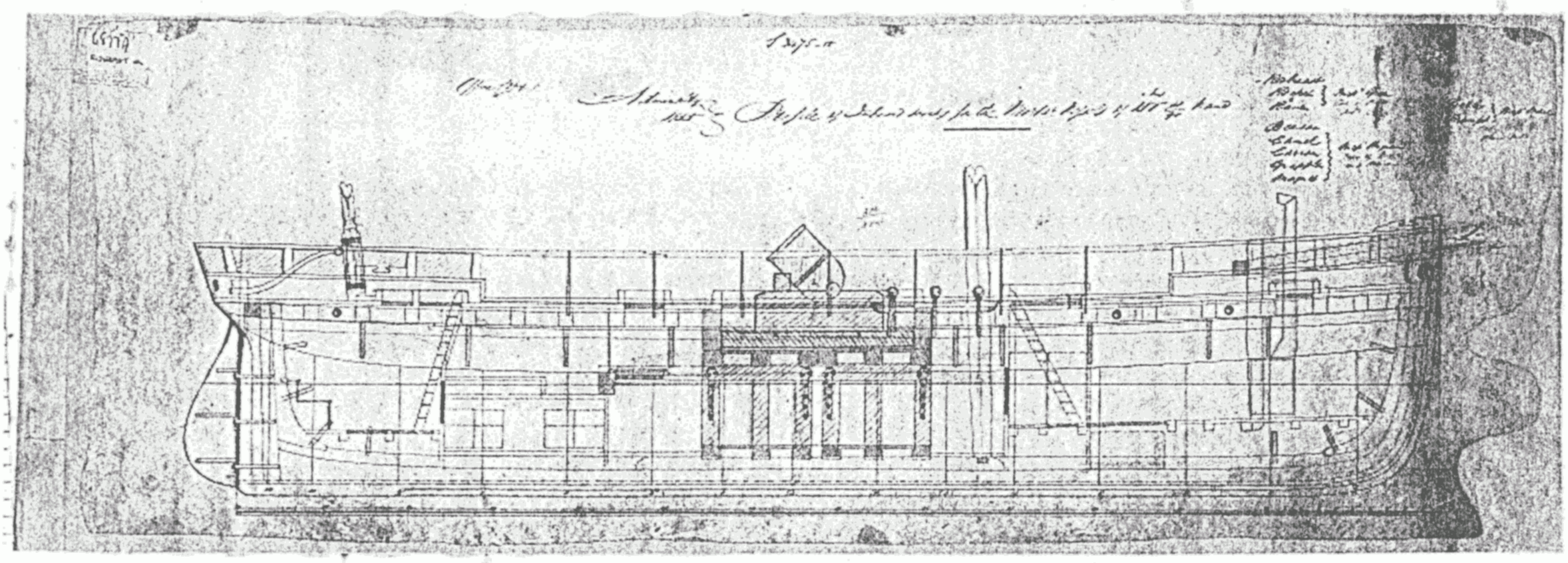
Surly Money Wigram & Son, Blackwall.
Ord: 6.10.1854. K: 9.10.1854. L: 31.3.1855. Renamed *MV.9* on 19.10.1855. BU 11.1863.

Blazer C. J. Mare & Co., Blackwall.
Ord: 6.10.1854. K: 14.10.1854. L: 5.5.1855. Renamed *MV.3* on 19.10.1855. Became yard craft *YC.12* at Chatham. Transferred to



A contemporary watercolour by Colonel Durnford showing the *MV.3* (ex-*Blazer*) in action. Note the hinged bulwarks amidships folded down for firing. *PU9635*

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Office copy, dated Admiralty 1855, of profile of inboard works for the mortar vessels of 156 tons. The draught lists the names of the three built by Green and the five built by Wigram. *DR6877A*

Thames Conservancy Board 10.1867.

Mastiff C. J. Mare & Co., Blackwall.
Ord: 6.10.1854. K: 14.10.1854. L: 5.5.1855. Renamed *MV.7* on 19.10.1855. Became Coastguard Watch vessel *CGWV.37* in 11.1864. BU at Chatham 9.1875.

Manly John Jenkins Thompson, Rotherhithe.
Ord: 6.10.1854. K: 14.10.1854. L: 16.5.1855. Renamed *MV.6* on 19.10.1855. Hulked 7.1866.

Porpoise John Jenkins Thompson, Millwall.
Ord: 6.10.1854. K: 14.10.1854. L: 26.5.1855. Renamed *MV.8* on 19.10.1855. Hulked as a bathing place 7.1866. Sold to Castle 25.6.1885.

70-FOOT TYPE

Dimensions & tons: 70ft 0in, 55ft 7½in x 23ft 4in x 9ft 4in. Draught 8ft 6in. $156^{48}/_{94}$ bm.
First cost (contractor paid + Admiralty supplies/fitting costs): *Raven* £3,053 + 273/1,178. *Camel* £3,125 + 280/1,051. *Magnet* £3,125 + 280/1,781. *Beacon* £3,125 + 280/1,008. *Carron* £3,125 + 280/837. *Grappler* £3,125 + 280/969. *Redbreast* £3,054 + 273/1,109. *Rocket* £3,054 + 841/1,026. *Prompt* £3,148 + 139/1,164. *Pickle* £3,148 + 139/1,025.

Raven R. & H. Green, Blackwall (No.316).
Ord: 22.12.1854. K: 24.12.1854. L: 19.4.1855. Renamed *MV.13* on 19.10.1855. Ordered to be sold at Constantinople 11.7.1856.

Rocket R. & H. Green, Blackwall (No.317).
Ord: 22.12.1854. K: 24.12.1854. L: 5.5.1855. Renamed *MV.20* on 19.10.1855. BU completed by Marshall at Plymouth 27.9.1865.

Redbreast R. & H. Green, Blackwall (No.318).
Ord: 22.12.1854. K: 24.12.1854. L: 5.5.1855. Renamed *MV.19* on 19.10.1855. BU completed by Marshall at Plymouth 27.9.1865.

Prompt C. J. Mare & Co., Blackwall.
Ord: 22.12.1854. K: 24.12.1854. L: 23.5.1855. Renamed *MV.21* on 19.10.1855. BU completed by Marshall at Plymouth 27.9.1865.

Pickle C. J. Mare & Co., Blackwall.
Ord: 22.12.1854. K: 24.12.1854. L: 23.5.1855. Renamed *MV.22* on 19.10.1855. BU completed by Marshall at Plymouth 20.10.1865.

Magnet Money Wigram & Co., Northam.
Ord: 22.12.1854. K: 27.12.1854. L: 2.5.1855. Renamed *MV.15* on 19.10.1855. Dockyard craft at Malta 2.1857. BU 6.1867.

Camel Money Wigram & Son, Blackwall.
Ord: 22.12.1854. K: 1.1855. L: 21.4.1855. Renamed *MV.14* on 19.10.1855. Became a crane lighter *YC.6* at Malta in 1871. For disposal 1901.

Beacon Money Wigram & Son, Blackwall.
Ord: 22.12.1854. K: 1.1855. L: 21.4.1855. Renamed *MV.16* on 19.10.1855. Became a dockyard lighter 5.1862.

Carron Money Wigram & Son, Blackwall.
Ord: 22.12.1854. K: 1.1855. L: 28.4.1855. Renamed *MV.17* on 19.10.1855. Hulked 7.1866. BU at Devonport 11.1884.

Grappler Money Wigram & Son, Blackwall.
Ord: 22.12.1854. K: 1.1855. L: 1.5.1855. Renamed *MV.18* on 19.10.1855. Hulked 7.1866. Sold 24.4.1896.

75-FOOT TYPE

This final batch received numbers only, and are listed in order of that number rather than chronologically.

Dimensions & tons: 75ft 0in, 59ft 2in x 23ft 4in x 9ft 4in. Draught ?8ft 6in. $166^{45}/_{94}$ bm.
First cost (contractor paid + Admiralty supplies/fitting costs): *MV.23* £3,547 = 489/... . *MV.24* £3,547 + 489/291. *MV.25* £3,539 + 497/308. *MV.26* £3,539 + 497/... . *MV.27* £3,245 + 501/12. *MV.28* £3,155 + 591/... . *MV.29* £3,110 + 552/382. *MV.30* £3,129 + 533/... . *MV.31* £3,130 + 532/... . *MV.32* £3,131 + 531/... . *MV.33* £2,684 + 978/... . *MV.34* £2,684 + 978/... . *MV.35* £3,700 + 128/1,194. *MV.36* £3,753 + 75/1,013. *MV.37* £3,310 + 477/994. *MV.38* £4,267 + 19/508. *MV.39* £4,267 + 19/269. *MV.40* £4,267 + 19/132. *MV.41* £4,267 + 19/... . *MV.42* £3,976 + 19/... . *MV.43* £3,976 + 19/... . *MV.44* £3,709 + 120/914. *MV.45* £3,849 + 187/961. *MV.46* £3,897 + 139/641. *MV.47* £3,832 + 204/1,087. *MV.48* £3,839 + 197/165. *MV.49* £4,082 + 71/700. *MV.50* £4,120 + 28/... . *MV.51* £4,028 + 60/... . *MV.52* £3,801 + 57/... . *MV.53* £4,295 + 67/1,300. *MV.54* £4,306 + 50/1,242. *MV.55* £3,378 + 456/... . *MV.56* £3,534 + 300/... .

MV.23 Charles Lungley, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 24.4.1856. Became mooring lighter (Luggage Lighter No.4) at Sheerness 3.1865, later renamed *YC.15*.

MV.24 Charles Lungley, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 24.4.1856. Lent to HM Customs as a

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revenue vessel 12.3.1861, renamed *Harpy*. BU at Chatham 12.10.1872.

MV.25 Charles Lungley, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 22.4.1856. Became mooring lighter (No.11) at Chatham 1862, later renamed *YC.9*. BU c1901.

MV.26 Charles Lungley, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 22.4.1856. Became mooring lighter 10.1862. BU 1.1866.

MV.27 Charles Lungley, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 22.5.1856. Became mooring lighter (No.9) at Chatham 11.1857, later renamed *YC.8*. BU c1901.

MV.28 Charles Lungley, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 22.5.1856. Became Coastguard *CGWV.38* in 1864. Sold 18.10.1878. BU at Poole.
Note that at least one of the vessels attributed to Lungley was built at Northam, apparently subcontracted to Wigram.

MV.29 John Jenkins Thompson, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 3.5.1856. Became Coastguard *CGWV.21* on 25.5.1863. Sold to BU 12.1905.

MV.30 John Jenkins Thompson, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 19.7.1856. Became coal pontoon at Portland in 4.1868. To Portsmouth as *YC.44* in 7.1879. BU 1880.

MV.31 John Jenkins Thompson, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 6.10.1856. Became Coastguard *CGWV.9* in 1864. To War Dept for torpedo experiments 6.1870. Sold to BU 1887.

MV.32 John Jenkins Thompson, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 3.9.1856. BU at Chatham 16.5.1860.

MV.33 John Jenkins Thompson, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 15.11.1856. Became harbour craft *YC.9* at Woolwich in 11.1856. To Sheerness as *YC.27* in 1872. BU c1901.

MV.34 John Jenkins Thompson, Rotherhithe.
Ord: 2.10.1855. K: 9.10.1855. L: 1.11.1856. Became harbour craft *YC.10* at Woolwich in 11.1856. To Sheerness as *YC.28* in 1872. BU at Sheerness 3.1873.

MV.35 Hoad Brothers, Rye.
Ord: 2.10.1855. K: 15.10.1855. L: 25.2.1856. BU 10.1865.

MV.36 Hoad Brothers, Rye.
Ord: 2.10.1855. K: 15.10.1855. L: 25.3.1856. BU 9.1865.

MV.37 George Inman, Lymington.
Ord: 2.10.1855. K: 15.10.1855. L: 22.3.1856. Became harbour craft *YC.24* at Devonport in 1864. BU 1876.

MV.38 Scott & Long, Greenock.
Ord: 3.10.1855. K: 16.10.1855. L: 23.2.1856. Became Coastguard *CGWV.4* on 28.5.1864. BU 1901.

MV.39 Scott & Long, Greenock.
Ord: 3.10.1855. K: 16.10.1855. L: 8.3.1856. Became Coastguard *CGWV.8* in 1866. Sold to BU 23.6.1897.

MV.40 Scott & Long, Greenock.
Ord: 3.10.1855. K: 29.10.1855. L: 8.4.1856. BU at Haslar Creek, Portsmouth 7.1867.

MV.41 Scott & Long, Greenock.
Ord: 3.10.1855. K: 8.11.1855. L: 22.4.1856. Became Coastguard *CGWV.32* in 7.1863, but reverted to *MF.41* in 1871. Sold 19.2.1881.

MV.42 Scott & Long, Greenock.
Ord: 3.10.1855. K: 3.12.1855. L: 16.6.1856. Became Coastguard *CGWV.14* on 6.6.1867, but reverted to *MF.42* in 1870. Sold to BU at Southampton 12.1877.

MV.43 Scott & Long, Greenock.
Ord: 3.10.1855. K: 7.12.1855. L: 23.6.1856. Became Coastguard *CGWV.12* on 6.2.1864. Sold 11.1898.

MV.44 Hassall & Holmes, Rye.
Ord: 2.10.1855. K: 15.10.1855. L: 11.3.1856. Became Coastguard *CGWV.21* in 1866. Later fate unknown.

MV.45 Thomas Harvey, Ipswich.
Ord: 9.10.1855. K: 12.10.1855. L: 21.3.1856. Became Coastguard *CGWV.22* in 1866. Later fate unknown.

MV.46 Thomas Harvey, Ipswich.
Ord: 9.10.1855. K: 12.10.1855. L: 22.4.1856. Became Coastguard *CGWV.10* on 25.5.1863, renamed *CGWV.31* in 1865. Sold to BU 30.5.1893.

MV.47 Thomas Harvey, Wivenhoe.
Ord: 9.10.1855. K: 12.10.1855. L: 7.4.1856. Became bathing 'place' for *Boscawen* in 7.1866. Sold 21.12.1892.

MV.48 Thomas Harvey, Wivenhoe.
Ord: 9.10.1855. K: 12.10.1855. L: 28.5.1856. Became mooring lighter (No.10) in 10.1862. Became harbour craft *YC.11* at Chatham (beached as accommodation) 1864. BU 1868.

MV.49 William Patterson & Son, Bristol.
Ord: 11.10.1855. K: 15.10.1855. L: 28.2.1856. Became Coastguard *CGWV.19* in 1864, renamed *CGWV.22* in 5.1867. Sold 11.11.1898.

MV.50 William Patterson & Son, Bristol.
Ord: 11.10.1855. K: 15.10.1855. L: 5.4.1856. To Coastguard 1864; renamed *CGWV.17* in 1866. Sold to BU 12.1887.

MV.51 William Patterson & Son, Bristol.
Ord: 11.10.1855. K: 15.10.1855. L: 18.6.1856. Became Coastguard *CGWV.13* in 1864. Sold to BU 4.8.1883.

MV.52 William Patterson & Son, Bristol.
Ord: 11.10.1855. K: 8.11.1855. L: 14.7.1856. Became Coastguard *CGWV.16* on 6.2.1864. Lent to HM Customs in 10.1871. BU 5.1894.

MV.53 Briggs & Co., Sunderland.
Ord: 14.12.1855. K: 1.1856. L: 24.3.1856. BU 8.1865.

MV.54 Briggs & Co., Sunderland.
Ord: 14.12.1855. K: 1.1856. L: 24.3.1856. Became harbour craft *YC.12* at Devonport 1866. BU 1893.

MV.55 J. & R. White, East Cowes.
Ord: 14.12.1855. K: 15.12.1855. L: 15.6.1856. Became Coastguard *CGWV.6* on 9.10.1865. Sold 18.6.1881.

MV.56 J. & R. White, East Cowes.
Ord: 14.12.1855. K: 15.12.1855. L: 21.6.1856. Became Coastguard *CGWV.22* on 8.10.1864, renamed *CGWV.19* in 1868. BU at Sheerness 31.8.1874.

Mortar Floats

These vessels find a curious position among a chapter on 'sailing vessels', as they were all dumb, *ie* they had no independent means of propulsion and required to be towed into position; however, as armed vessels with a combat role, they are included here with the larger (and sail-propelled) mortar vessels rather than with harbour craft (where all other unpowered vessels appear), although most were relegated to harbour duties in the 1860s. Unlike the wooden-hulled mortar vessels, the mortar floats were built of iron (and, as Stuart Rankin has observed, must have rung like a cathedral bell whenever the mortar was fired!). Fifty were ordered in 1855 and (except the earliest three) launched in 1856. The only one to receive a name in RN service was *MF.103*, which was named *Cupid* (until 1865); otherwise all bore numbers only, and appear in order of that number rather than chronologically.

60-FOOT TYPE

MF.101 Samuda Brothers, Poplar.
Dimensions & tons: 60ft 3in x 20ft 3in x 5ft 11in. 102 bm.
K: 10.1855. L: 24.11.1855. Became a coal pontoon at Queenstown 1871.

Scan and/or retouch by Grzechu

MF.102 J. Scott Russell, Millwall.
Dimensions & tons: 60ft 0in x 20ft 1in x 6ft 7in. 102 bm.
K: 10.1855. L: 24.11.1855. Became a dredger at Chatham 29.9.1865, renamed *YC.53*.

MF.103 Laird Brothers, Birkenhead.
Dimensions & tons: 59ft 10in x 20ft 1in x 6ft 7in. 102 bm.
K: 10.1855. L: 13.11.1855. Became harbour vessel *YC.3* at Haulbowline in 1865.

For the remaining 47 vessels, *MF.104* to *MF.123* were built by C. J. Mare & Co., Blackwall; *MF.124* to *MF.135* were built by John Scott Russell, Millwall; and *MF.136* to *MF.150* were built by Laird Brothers, Birkenhead. Note that Mare became bankrupt on 30.7.1856, and some of these MFs may have been delivered by the shipyard's new owners (Thames Iron Sbdg Co.); most of Laird's MFs were built across the Mersey at their yard at Dingle, Liverpool. The ultimate fate of many harbour craft is unknown where not stated.

Dimensions & tons: 60ft 0in, 47ft 2¼in x 20ft 0in x 6ft 6in. Draught 5ft 7in. $100^{43}/_{94}$ bm.

First cost (contractor paid + Admiralty supplies/fitting costs): *MF.104* £2,311 + 4/424. *MF.105* £2,311 + 4/437. *MF.106* £2,311 + 4/372. *MF.107* £2,311 + 4/395. *MF.108* £2,311 + 4/426. *MF.109* £2,311 + 4/438. *MF.110* £2,311 + 4/449. *MF.111* £2,311 + 4/475. *MF.112* £2,311 + 4/501. *MF.113* £2,311 + 4/457. *MF.114* £2,311 + 4/221. *MF.115* £2,311 + 4/220. *MF.116* £2,311 + 4/159. *MF.117* £2,311 + 4/162. *MF.118* £2,311 + 4/69. *MF.119* £2,311 + 4/65. *MF.120* £2,311 + 4/90. *MF.121* £2,311 + 4/... . *MF.122* £2,311 + 4/... . *MF.123* £2,311 + 4/... . *MF.124* £2,599 + 1/37. *MF.125* £2,599 + 1/... (next 10 the same). *MF.136* £2,396 + 4/255. *MF.137* £2,397 + 3/276. *MF.138* £2,397 + 3/252. *MF.139* £2,395 + 5/247. *MF.140* £2,396 + 4/243. *MF.141* £2,397 + 3/194. *MF.142* £2,393 + 7/... (next 3 the same). *MF.146* £2,389 + 11/... . *MF.147* £2,387 + 13/... . *MF.148* £2,388 + 12/... . *MF.149* £2,389 + 11/... . *MF.150* £2,389 + 11/... .

MF.104 K: 1.1.1856. L: 23.2.1856. Became harbour vessel *YC.1* at Deptford in 1865, renamed *Steady* in 9.1865 as store carrier. Later became harbour vessel *YC.1* for Victualling Yard at Deptford. BU *c*1873.

MF.105 K: 1.1.1856. L: 23.2.1856. Coast defence 1864? BU *c*1893.

MF.106 K: 1.1856. L: 23.2.1856. Became mooring lighter *YC.6* at Woolwich in 1.1866. To Sheerness as *YC.23* in 1872. BU *c*1901.

MF.107 K: 1.1.1856. L: 23.2.1856. Became Coastguard *CGWV.42* in 1876, later renamed *CGWV.7*. Sold 5.1.1891.

MF.108 K: 1.1.1856. L: 20.3.1856. Became mooring lighter *YC.7* at Woolwich in 6.1866. To Sheerness as *YC.24* in 1872.

MF.109 K: 1.1.1856. L: 20.3.1856. Became pontoon to *Thunderbolt* at Chatham.

MF.110 K: 1.1.1856. L: 20.3.1856. Became harbour vessel *YC.4* at Deptford in 1865, renamed *Trusty* as store carrier in 1866. BU *c*1874.

MF.111 K: 1.1.1856. L: 5.4.1856. Became harbour vessel *YC.7* for Victualling Yard at Deptford in 1863. Later to Pembroke as *YC.18*. Wrecked 1892.

MF.112 K: 1.1.1856. L: 5.4.1856. Became harbour vessel *YC.17* at Pembroke in 1867. Became pontoon to police hulk at Chatham in 1880. BU *c*1901.

MF.113 K: 1.1.1856. L: 5.4.1856. Became a lighter in 1856; renamed *Iron Lighter No.1* in 1867, then *YC.24* at Chatham in 1872. BU *c*1901.

MF.114 K: 1.1.1856. L: 19.4.1856. Became a barge at Chatham in 5.1872.

MF.115 K: 1.1.1856. L: 19.4.1856. Became torpedo lighter (No.2) on 19.7.1876.

MF.116 K: 1.1.1856. L: 24.4.1856. Lent to War Dept for torpedo (*ie* mine) experiments 1872. Towed (by *Discovery*) to Devonport by AO 26.2.1889 to replace *Torpedo Lighter No.5*.

MF.117 K: 1.1.1856. L: 24.4.1856. Became a coal pontoon at Queenstown 5.1872 (by AO 11.11.1871).

MF.118 K: 1.1.1856. L: 8.5.1856. Became pontoon to *Thunderbolt* at Chatham by 1875.

MF.119 K: 1.1.1856. L: 8.5.1856. Became a lighter 7.1856, renamed *Iron Luggage Lighter No.1*. Later to Sheerness as *YC.12*. BU *c*1901.

MF.120 K: 2.1.1856. L: 17.5.1856. Became a lighter 7.1856, renamed *Iron Luggage Lighter No.2*. Later to Sheerness as *YC.13*. BU *c*1901.

MF.121 K: 2.1.1856. L: 17.5.1856. Became water tank vessel in 7.1856. To Woolwich as *YC.11* in 1866. To Sheerness as *YC.25* in 1872. BU *c*1901.

MF.122 K: 2.1.1856. L: 21.5.1856. Became a lighter 7.1856. Dummy pier at Gillingham in 8.1872. BU 1876.

MF.123 K: 2.1.1856. L: 4.6.1856. Became iron luggage lighter *YC.8* at Woolwich in 1866; hulked in Chatham basin by 1879. To Pembroke as *YC.2* in 1886. Sold 1894.

MF.124 K: 2.1.1856. L: 8.5.1856. To War Dept on 15.7.1871.

MF.125 K: 2.1.1856. L: 5.7.1856. Became torpedo lighter (*No.1*) on 19.7.1876.

MF.126 K: 3.1.1856. L: 14.6.1856. Became coal pontoon at Portland 7.1869. To Portsmouth as *YC.47* in 7.1879. BU *c*1901.

MF.127 K: 3.1.1856. L: 14.6.1856. To Chatham as *YC.53* in 5.1875. BU *c*1901.

MF.128 K: 3.1.1856. L: 4.6.1856. Became pontoon to police hulk at Chatham. BU *c*1870.

MF.129 K: 3.1.1856. L: 30.8.1856. Became coal pontoon at Portland in 1869.

MF.130 K: 3.1.1856. L: 5.7.1856. Became a lighter, renamed *Iron Lighter No.2* (date unknown). Later to Chatham as *YC.25*. BU *c*1901.

MF.131 K: 3.1.1856. L: 5.7.1856. Became coal pontoon at Portland in 7.1869. To Portsmouth as *YC.49* in 7.1879. BU *c*1901.

MF.132 K: 6.1.1856. L: 5.7.1856. Became pontoon at Chatham in 2.1868. BU *c*1898.

MF.133 K: 6.1.1856. L: 5.9.1856. Became a lighter, renamed *Iron Lighter No.3* (date unknown). Later to Chatham as *YC.26*. BU *c*1901.

MF.134 K: 6.1.1856. L: 5.9.1856. Became coal pontoon at Portland in 7.1869. To Portsmouth as *YC.50* in 7.1879. BU *c*1901.

MF.135 K: 6.1.1856. L: 10.9.1856. Became a lighter, renamed *Iron Lighter No.4* (date unknown). Later to Chatham as *YC.27*. BU *c*1901.

MF.136 K: 1.1.1856. L: 6.3.1856. Became tank vessel *YC.49* at Chatham in 5.1872. Later to Devonport as *YC.37*. BU *c*1901.

MF.137 K: 1.1.1856. L: 6.3.1856. Became harbour vessel *YC.12* at Woolwich in 8.1866. To Sheerness as *YC.26* in 1872.

MF.138 K: 1.1.1856. L: 11.3.1856. Became a lighter, renamed *Iron Lighter No.5* in 12.1856. Later to Chatham as *YC.28*. Became torpedo lighter (*No.3*) on 19.7.1876. To War Dept in 1.1886.

MF.139 K: 1.1.1856. L: 11.3.1856. Became pontoon to *Thunderbolt* at Chatham in 1870. To War Dept for torpedo experiments in 8.1871.

MF.140 K: 1.1.1856. L: 25.3.1856. Became coal pontoon at Portland in 12.1869. To Portsmouth as *YC.43* in 7.1879.

MF.141 K: 1.1.1856. L: 25.3.1856. Became harbour vessel *YC.34* at Malta in 10.1867. To Portsmouth as a barge *YC.42* in 10.1867.

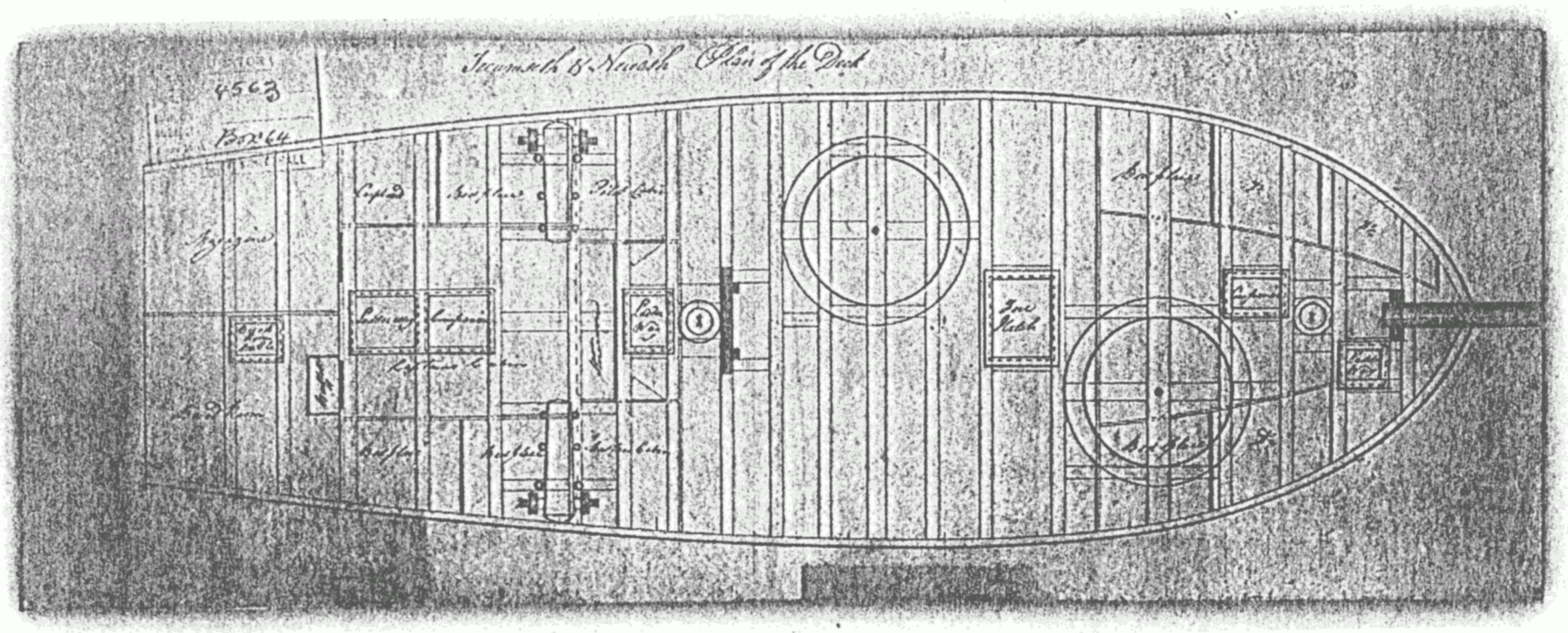
MF.142 K: 1.1.1856. L: 26.3.1856. Became a lighter, renamed *YC.29* at Portsmouth on 4.2.1867.

MF.143 K: 1.1.1856. L: 26.3.1856. Became a lighter, renamed *YC.23* at Portsmouth on 4.2.1867.

MF.144 K: 1.1.1856. L: 5.4.1856. Became mooring lighter *YC.4* at Malta in 9.1867.

MF.145 K: 12.2.1856. L: 9.4.1856. Became a yard craft in 1864. Coastal defence in 1866. To Portsmouth as *YC.34* in 1866.

MF.146 K: 12.2.1856. L: 9.4.1856. Became coal pontoon at Portland in



Deck plan for the Lake Huron schooners *Tecumseth* and *Newash*. When armed they carried a pair of 24pdr carronades (the broadside mountings are shown) with two long 24pdr pivot guns, for which the tracks or racers are depicted on the plan. *DR4563*

4.1868. To Portsmouth as *YC.44* in 7.1879.

MF.147 K: 12.2.1856. L: 14.4.1856. Became a gunnery tender to HMS *Excellent* in 9.1866. BU c1896.

MF.148 K: 12.2.1856. L: 17.4.1856. Became a hopper barge 12.1861. To Portsmouth as *YC.13*.

MF.149 K: 12.2.1856. L: 17.4.1856. Became coal pontoon at Portland in 4.1868 (by AO 14.9.1867). To Portsmouth as *YC.45* by AO 9.7.1879.

MF.150 K: 12.2.1856. L: 17.4.1856. Became coal pontoon at Portland in 4.1868 (by AO 14.9.1867). To Portsmouth as *YC.46* by AO 9.7.1879.

NOTES: *MF.141* to *150* were all hauled up on slipway at Haslar in 1858, pending disposal, but were subsequently used as harbour craft.

Sailing Vessels on the Canadian Great Lakes

Under the Rush-Bagot Agreement of April 1817, both Britain and the USA agreed to limit each navy's strength on the Great Lakes to a single gunboat on Lake Ontario (to be under 100 tons, with 1 x 18pdr), a similar vessel on Lake Champlain, and two such craft on the Upper Lakes. Most of the existing vessels were thus withdrawn or never commissioned, but were allowed to decay. In 1831 the Admiralty decided to dispose of all remaining craft, and in March 1834 the remaining RN facilities on the lakes were closed down.

***TECUMSETH* Class** - schooners on Lake Huron, 4 guns. Design by William Bell.

Dimensions & tons: 70ft 6in, 52ft 4¾in x 24ft 5in x 9ft 0in. 166 bm.

Men: 37 (48 as brig). Guns: 2 x 24pdr + 2 x 24pdr carronades.

Tecumseth Street's Creek, Chippewa.

K: 12.1814. Suspended 2.1815. L: 7.8.1815. Re-rigged as brigantine by 1830. Ordered to be BU 1831, and to be sold 3.1832, but instead rotted and sank at moorings at Penetanguishene, Georgian Bay. Raised 1953.

Newash Street's Creek, Chippewa.

K: 12.1814. Suspended 2.1815. L: 7.8.1815. Ordered to be BU 1831, and to be sold 3.1832, but instead rotted and sank at moorings at Penetanguishene, Georgian Bay.

BECKWITH - brig transport on Lake Ontario, 14 guns. Design by Thomas Strickland.

Dimensions & tons: 107ft 5in, 85ft 8in x 30ft 0in x 12ft 6in. 437 bm.

Men: 80. Guns: 14 x 32pdr carronades.

Beckwith Kingston Dyd.

L: 8.7.1816. Renamed *Charwell*. Sold c1837.

BROCK - schooner on Lake Ontario, 2 guns.

Dimensions & tons: 69ft 6in, 55ft 9⁷/₈in x 22ft 3in x 10ft 0in. 141 bm.

Men: ... . Guns: ... .

Brock Kingston Dyd (Master Shipwright Robert Moore).

L: 4.1817. Rebuilt in 1820s. Sold 1837.

CONFIANCE - schooner on Lake Erie, 2 guns.

Dimensions & tons: 67ft 2½in, 56ft 6¾in x 17ft 10in x 5ft 2½in. 95 bm.

Men: ... . Guns: 2 x 24pdr.

Built c1818. Deleted 1831. (no other details)

COCKBURN - schooner on ?Lake Champlain, 1 gun. 70 bm.

Men: 40. Guns: 1 x 18pdr (pivot).

Built 1827. Sold 1837.

MONTREAL - schooner on ?Lake Champlain, 1 gun.

Dimensions & tons: 82ft 0in, 76ft 0in x 20ft 6in x 9ft 0in. 145 bm.

Men: 35. Guns: 1 x 18pdr (pivot).

Purchased 18.10.1839 (built 1836?). Sold ?1848 (deleted by end of 1847).

RADCLIFFE - schooner on Lake Ontario, 2 guns.

Dimensions & tons: 54ft 0in, 43ft 3in x 15ft 8in x 3ft 3in. 56 bm.

Radcliffe Kingston Dyd (Master Shipwright Robert Moore).

L: 1817. Fate unknown (decayed in Ordinary).

Scan and/or retouch by Grzechu

3 Paddle Steamers (Wooden)

By 1815 Britain already had an estimated total of 210,000 hp of steam engine capacity (according to the French observer Barton Dupin), but attempts to install steam power afloat were limited, and the few early steamships were quite small. Following Admiralty experiments in 1794 with the prototype *Kent Ambi-navigator*, little further was attempted until 1815 when a beam engine was ordered for installation in the river exploration gunboat *Congo*, but this proved abortive. In 1821 the Admiralty ordered the first purpose-built steam vessel – the *Comet* – and by the end of 1836 the Navy had procured 24 steam paddle vessels. In 1837 the number was more than doubled when the Admiralty took over 26 steam paddle vessels previously operated by the Post Office. Forty-nine of these fifty vessels had side lever engines (a modification of Watt's beam engine); the exception – the ex-PO tender *Redwing* – had a steeple engine built by David Napier.

Early Paddle Vessels

***CONGO* Class** - Design by 'Sir Robert Seppings, the form and dimensions having been furnished', 1815.

Dimensions & tons: 70ft 0in, 60ft 8in x 16ft 0in x 8ft 10in. Draught 4¼ft. 82$^{57}/_{94}$ bm.

Men: ... . Guns: 1 x 12pdr carronade + 12 x ½pdr swivels.

Machinery: Beam engine (removed 1816). 20 nhp. 5kts.

Congo Deptford Dyd/Boulton, Watt & Co.

Ord: 13.4.1815. K: 10.1815. L: 11.1.1816. C: 6.2.1816. Engine removed after trials. Survey ship 1817. Fitted as hulk to lie in the Swale 1819. Sold at Rye to J. Harvey 15.3.1826 (for £146).

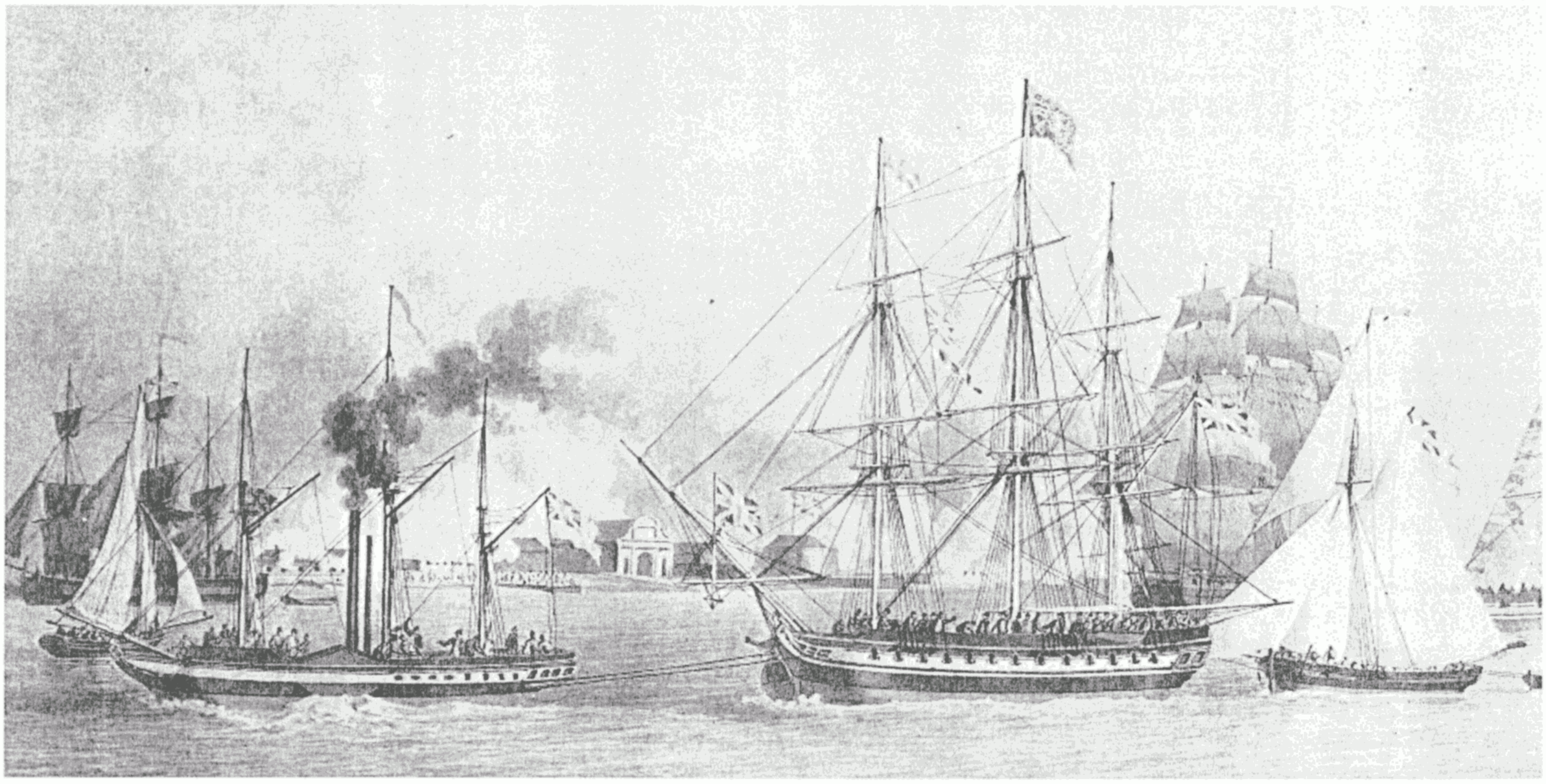
NOTES: The first steam-propelled vessel ordered for the RN, but she never served as such. 'To be built for the purpose of exploring the interior of Africa by the River Congo'. Housed over whilst building. On trials under steam in the Thames, found to be too weak to carry the steam engine which was intended for her, so the engine and paddle wheels were removed and she was fitted out as a sailing vessel (three-masted schooner).

***COMET* Class** - Oliver Lang design, 1821.

Dimensions & tons: 115ft 0in, 101ft 2in x 21ft 3in x 11ft 11in. Draught 7¼ft (design), 9¼ft (actual). 238 bm. 239 disp.

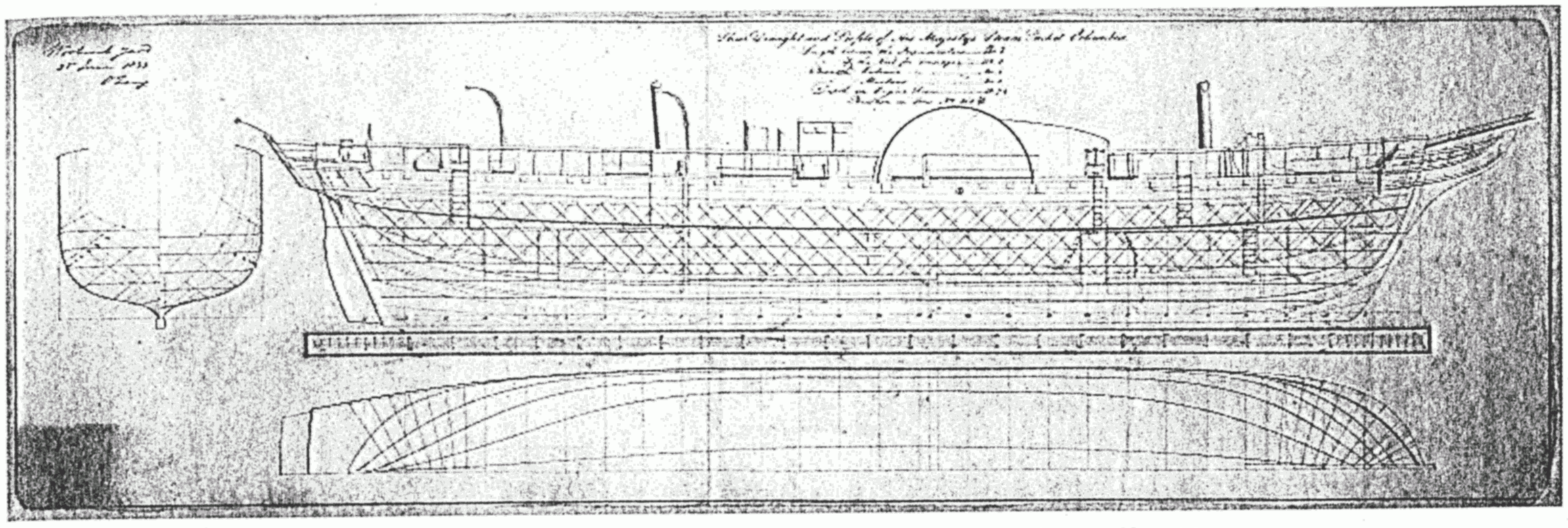
Men: 16 (1827). Guns: (orig) 2 x 6pdr (6cwt) brass; (later) 3 x 9pdr (13½cwt).

Machinery: 2-cyl. side lever engine (operating at 4lbs/sq in). 80 nhp. 7.6kts.



Although often criticised for lack of appreciation of the steam engine's potential, the Admiralty was actually quick to adopt the new technology where its utility was already proven. The first seagoing employment of steam was for towage, an early high-profile example being George IV's visit to Scotland in 1822, where the royal yacht *Royal George* was towed down the Thames by the Navy's first steamer, the *Comet*. For the return passage the task was turned over to the very similar mercantile paddler *James Watt*, as shown here in a Serres watercolour of the scene off Gravesend on 1 September 1822. *B9248*

Scan and/or retouch by Grzechu



Sheer and profile of the 'Steam Packet' *Columbia*, Woolwich Dockyard 25 June 1833. The Seppings diagonal bracing is very evident. *DR7971*

First cost: Hull £8,052, fitting (masts & yards, stores) £1,313, machinery £5,050.

Comet Deptford Dyd/Boulton, Watt & Co.
Ord: 10.11.1819. K: 21.11.1821. L: 23.5.1822. C: 13.7.1822. Surveying vessel 1842. Tug 1854. Sold to BU at Portsmouth 1869.

NOTES: The first effective steamer built for the RN, intended to be employed in towing HM Ships in the Thames and Medway (although in practice her towing duties took her much farther afield). Carried a two-masted schooner rig. Not on the Navy List until 1828. From 1837 classed as a Fifth Class steam vessel, rated tender from 1844.

***LIGHTNING* Class** - Oliver Lang design, 1822.
Dimensions & tons: 126ft 0in, 111ft 9in x 22ft 8in (22ft 4in for tonnage) x 13ft 8in. Draught 9ft (fwd), 9½ft (aft). 296 bm. 349 disp.
Men: 20 (16 from 1827). Guns: 2 (later 3) x 6pdr (6cwt) brass.
Machinery: 2-cyl. side lever. 100 nhp (2 engines of 50 nhp each). 11kts.
First cost: *Lightning* £15,744 (including £5,350 for machinery). *Meteor* hull & fitting £10,427, machinery £5,500.

Lightning Deptford Dyd/Maudslay, Sons & Field.
Ord: 26.12.1821. K: 2.1823. L: 19.9.1823. C: 18.12.1823. BU at Devonport 1872.

Meteor Deptford Dyd/Boulton, Watt & Co.
Ord: 26.12.1821. K: 2.1823. L: 17.2.1824. C: 10.6.1824. Re-engined 1837. Tug 1841. BU at Sheerness 8.1849.

NOTES: Ordered to meet Admiralty need for steam tugs for Plymouth and Portsmouth respectively. *Lightning* was used as a surveying vessel during the Crimean War, and by the 1860s was classed as a Second Class paddle gunvessel. In 1830 *Meteor* began the steam mail service to Malta and Corfu. Her re-engining was with *Tartarus*'s engine.

***ALBAN* Group** 1824: Initially rated 'Steam Vessels' (SV Class 5 from 1837), from 1844 rated tenders.
Dimensions & tons: 109ft 8in, 91ft 11in x 24ft 10in oa (24ft 6in for tonnage) x 13ft 6in. Draught 11ft 2in (fwd) 12ft 4in (aft). 294 bm. 487 disp.
(*Echo* & *Confiance* lengthened design: 111ft 8in, 92ft 4in x 24ft 10in oa [24ft 6in for tonnage] x 13ft 6in. $294^{75}/_{94}$ bm.)
(*Alban* lengthened and re-engined 1831: 145ft 0in, 127ft 6in x 24ft 10in oa [24ft 6in for tonnage] x 13ft 6in. $407^{8}/_{94}$ bm.)
Men: 16 (1827). Guns: (orig) 2 x 6pdr (6cwt) brass; (later) 4 x 18pdr (10cwt) + 4 x 18pdr carronades.
Machinery: 2-cyl. side lever. 100 nhp. 7.6kts.

Alban Deptford Dyd/Boulton, Watt & Co.
Ord: 5.1824. K: 7.1824. L: 27.12.1826. C: 1831. Rebuilt at Chatham Dyd as 407 bm in 1831. Transport 1844-48. BU 5.1860.

Carron Deptford Dyd/Boulton, Watt & Co.
Ord: 5.1824. K: 7.1824. L: 9.1.1827. C: 1828. Lent as coal hulk 1846. Breakwater 1848. Deleted 6.1877. BU at Devonport 1.1885.

African (ex-*Dee*, renamed 5.1825) Woolwich Dyd/Boulton, Watt & Co.
Ord: 5.1824. K: 9.1824. L: 30.8.1825. C: 1825. Later tug (90 nhp). BU 12.1862.

Echo Woolwich Dyd/Boulton, Watt & Co.
Ord: 5.1824. K: 12.1824. L: 28.5.1827. C: 1827. Tug 1840. Sold 6.1885.

Confiance Woolwich Dyd/Maudslay, Sons & Field.
Ord: 5.1824. K: 2.1825. L: 28.3.1827. C: 1827. Tug 1842. BU at Devonport 6.1873.

NOTES: All six (including *Columbia* below) originally ordered 25.3.1823 as *Cherokee* Class sailing brigs (see Chapter 2), re-ordered as paddle steamers on above date and so completed, but with several variations in basic design as noted.

COLUMBIA - Initially rated 'Steam Vessel' (SV Class 4 from 1837).
Dimensions & tons: 130ft 6in, 111ft 3½in x 24ft 9in x 13ft 7in. Draught 10ft 5in (fwd) 11ft 7in (aft). 361 bm. 504 disp.
Men: ... . Guns: 4 x 18pdr, 4 x 18pdr carronades.
Machinery: 2-cyl. side lever. 140 nhp. 8kts.

Columbia Woolwich Dyd/Maudslay, Sons & Field.
Ord: 5.1824. K: 3.1827. L: 1.7.1829. C: 1829. Re-engined with Boulton, Watt & Co. 100 nhp engine 1832. Survey vessel 1842. Coal hulk 1857. Sold at Halifax, Nova Scotia 29.10.1859.

NOTES: Originally ordered as *Alban* Class vessel, but lengthened during construction.

DEE - Built as new (not converted on stocks from sailing vessel, as sometimes reported). Design by Seppings, modified by Oliver Lang. Initially rated 'Steam Vessel' (SV2 from 1837).
Dimensions & tons: 166ft 7in, 146ft 6in x 30ft 4½in (30ft 0½in for tonnage) x 16ft 4in. Draught 11ft 6in (fwd & aft). 704 bm. 907 disp.
Men: ... . Guns: 2 x 18pdr (22cwt); later 6 x 32pdr (4 x 63cwt; 2 x 56cwt), all pivot-mounted. The 2 x 56cwt guns were later replaced by 1 x 10in (86cwt) gun.
Machinery: 2-cyl. side lever. 200 nhp. 272 ihp = 8kts (new 220 nhp engine in 1866).

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Dee Woolwich Dyd/Maudslay, Sons & Field.
Ord: 4.4.1827. L: 5.5.1832. C: 1832. Troopship 5.1842. Second Class sloop 1846. Storeship 1868. BU at Sheerness 1871.

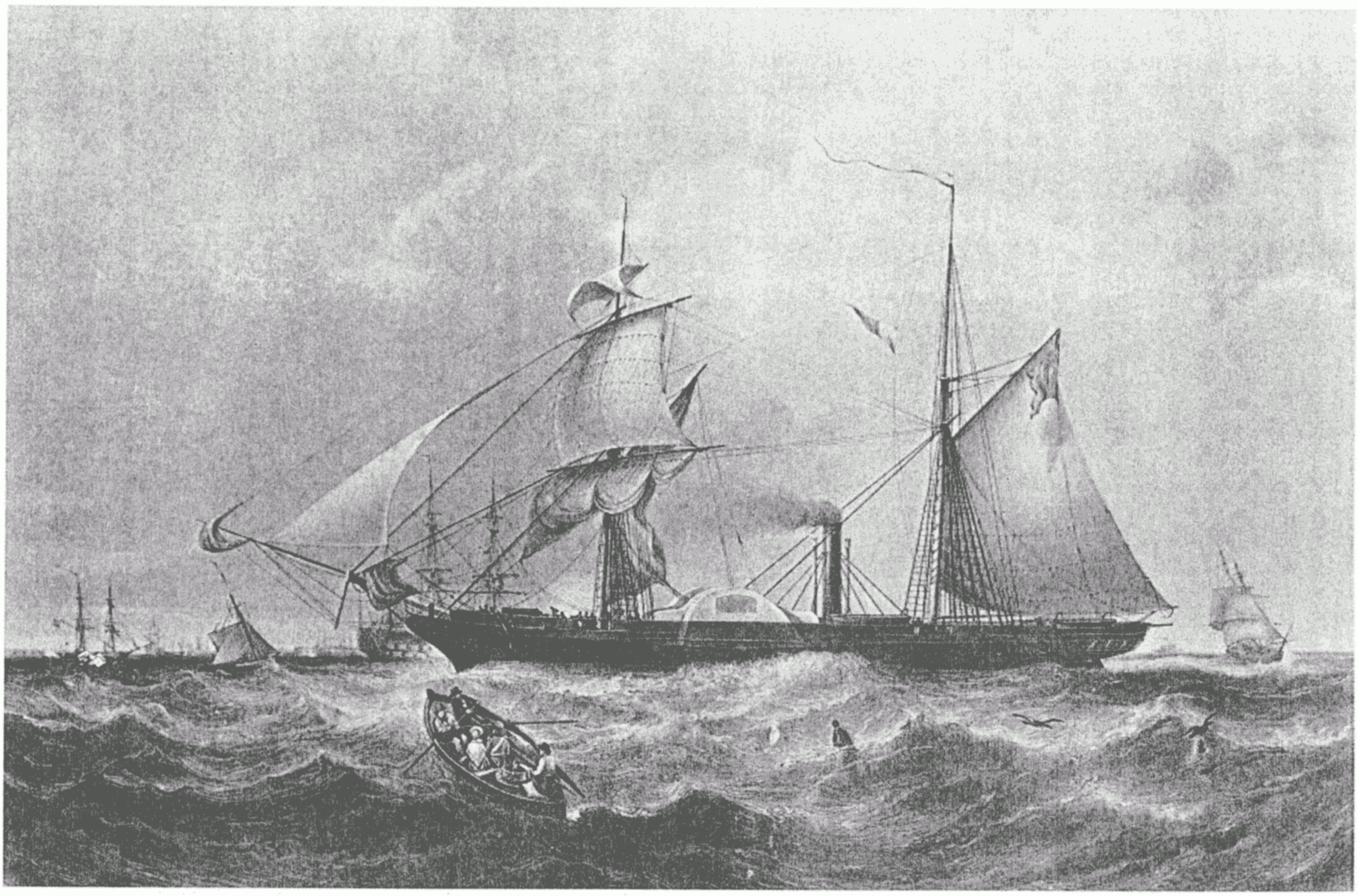
Until the end of 1827 none of the steam vessels were commissioned into the Navy. The Admiralty issued instructions that the above vessels be registered on the Navy List and commissioned on 6 December 1827 (*Lightning*, *Meteor* and *Echo*) and 9 October 1828 (*Comet*, *Alban*, *Carron*, *Confiance*, *Columbia* and *Dee*). *African* was not registered until 28 January 1831.

VICTORY - purchased vessel.
Dimensions & tons: ... . 85 bm. 150 disp.
Paddle packet, purchased 1828. Abandoned 1832.

***MESSENGER* Class** - Purchased vessels.
Dimensions & tons: 155ft 6in, 133ft 4in x 32ft 9in oa (32ft 3in for tonnage) x 12ft 0in. Draught 10ft 3in (fwd), 10ft 9in (aft). 733$^{44}/_{94}$ bm. 912 disp.
Men: ... . Guns: nil.
Machinery: 2-cyl., side lever. 80 nhp (1831 Maudslay 200 nhp).
Messenger (mercantile *Duke of York*, built by Benjamin Wallis at Blackwall, 1824).
Authorised (to purchase): 21.5.1830. Purchased 20.8.1830. Became sloop 1831; lengthened and re-engined 1831. Coal depot (engine removed) at Woolwich 27.7.1840. Sold to Castle to BU at Charlton 22.11.1861.
Hermes (mercantile *George IV*, built by Benjamin Wallis at Blackwall, 1824).
Authorised (to purchase): 24.6.1830. Purchased 20.8.1830. Became sloop 1831. Renamed *Charger* as coal hulk 22.1.1834. BU 6.1854.
NOTES: Originally built for General Steam Navigation Co. Purchased from Jollife & Banks as wooden paddle packets for Corfu route, but quickly rerated sloops. *Messenger* was lengthened to 159ft 0in, 137ft 3¼in (759$^{33}/_{94}$ bm) and re-engined in 1831.

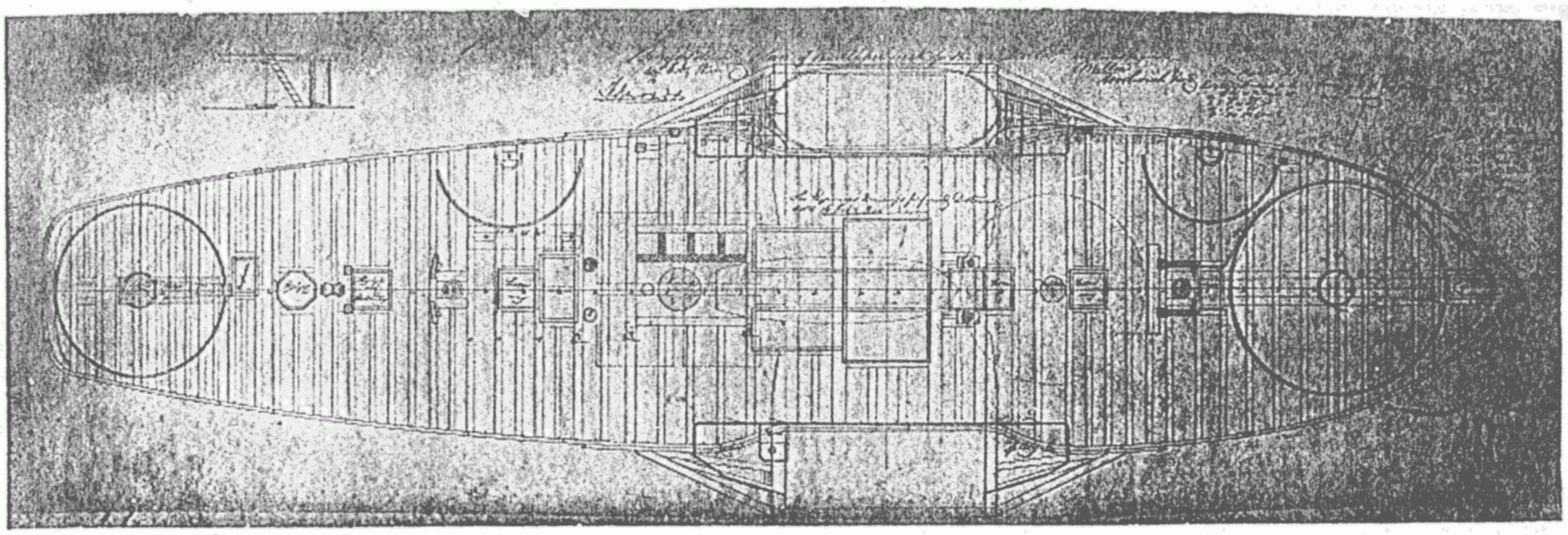
Paddle Frigates

Initially classed as First Class Steam Vessels (SV1), the category of 'steam frigate' was introduced on 31 May 1844, with all existing SV1 vessels except one being classed as either First Class or Second Class steam frigates; the exception among the SV1 group was the *Gorgon*, which was classed as a First Class Sloop (and never as a frigate); she is thus listed with the sloops in the following section. There was little difference between the *Gorgon* and the *Cyclops*, and it is unclear why the different classification of 'frigate' was chosen for the latter. First Class frigates, with guns on both MD and UD, had a complement of 200 men. Second Class frigates, with guns on UD only, had a complement of 175 men.



A fine contemporary engraving of the steam frigate *Cyclops*, published in March 1840. At the time *Cyclops* could claim to be the largest steam warship in the world. *X628*

Scan and/or retouch by Grzechu



Upper deck plan for the *Gladiator*, 6 February 1844, listing the armament as two 8in (112cwt) and four 8in (65cwt) guns and two 24pdr carronades (the plan also mentions other Second Class frigates with this establishment: *Centaur*, *Dragon*, *Gladiator*, *Firebrand*, *Vulture*, *Cyclops* and *Vulcan* (which became the iron troopship *Birkenhead*). Steam frigates could only carry a small number of guns so these tended to be of the largest calibre, and to be mounted on pivots to give them the widest arcs of fire (their sweeps, or racers, can be clearly seen on the plan). Tactically, paddlers were intended to manoeuvre and fight at long range, since they could not stand up to the broadside weight of fire from a sailing warship. *DR7580*

***CYCLOPS* Class** - Steam Vessel (SV1), later Second Class frigate, 6 guns. Sir William Symonds design, 1838.

Dimensions & tons: 190ft 3in, 163ft 6in x 37ft 6in (37ft 0in for tonnage) x 23ft 0in. 1,190$^{55}/_{94}$ bm. 1,862 disp.

Men: 175. Guns: UD only 2 x 10in/98pdr (112cwt) on pivots at bow and stern; 4 x 8in/68pdr (95cwt) on broadside trucks.

Machinery: 2-cyl. (64in diam., 66in stroke) vertical direct-acting ('*Gorgon*' type). 4 flue boilers. 320 nhp. 1,100 ihp = 9.5kts. 420 tons coal.

First cost: £53,931 (including machinery £22,103).

Cyclops Pembroke Dyd/Seaward & Capel.

Ord: 25.6.1836. K: 8.1838. L: 10.7.1839. C: 4.2.1840. Tug 1851. Sold to Castle (for £5,000) to BU at Charlton 26.1.1864.

NOTES: Originally ordered as sister to *Gorgon* (see 'Paddle Sloops'), the design was extended on 14.7.1838 by an additional 12¼ft midsection. It was first intended to arm her with 22 guns comprising 16 x 32pdrs on the MD and 4 x 48pdrs on the UD as well as the 98pdrs at bow and stern - possibly the cause of her designation as 'frigate'; but the MD guns were deleted at an early stage of the design, and 68pdrs substituted for the 48pdrs. The original engine (ordered 4.9.1837) was diverted to the *Gorgon* on 17.10.1837, and a replacement ordered from Seaward on 20.10.1838. The 98pdr guns were replaced by 84cwt guns in 1845, and the 68pdrs by 65cwt guns; in 1856 she was again re-armed, with 2 x 68pdrs (95cwt) on the pivots and 4 x 10in (84cwt) on the broadside trucks. *Cyclops* was fitted 1856/57 to assist with the laying of the Atlantic cable.

In March 1841 the Navy Board approved the construction of six 'First Class Steamers', based on the prototype *Cyclops*. Tenders were called for on 20 October 1841, but the last three were to be delayed, resulting in the six ships forming three distinct classes. During the 1850s, all six - plus the *Cyclops* - were to be reclassed as corvettes.

Later *CYCLOPS* Class - Steam Vessels (SV1), later Second Class frigates, 6 guns. Sir William Symonds design, 1841.

Dimensions & tons: 190ft 0½in, 163ft 6in x 37ft 6in (37ft 0in for tonnage) x 23ft 0in. 1,190$^{55}/_{94}$ bm. 1,960 disp.

Men: 175. Guns: UD only 2 x 68pdr (95cwt) on pivots, 4 x 8in (65cwt).

Machinery: 2-cyl. vertical direct-acting. 4 tubular boilers. See below for nhp.

First cost: *Vulture* hull £24,323, machinery £21,429, fitting £11,139. *Firebrand* hull £23,310, machinery £18,747, fitting £13,034. *Gladiator* hull £21,535, machinery £23,579, fitting £12,659.

Vulture Pembroke Dyd/William Fairbairn (470 nhp).

Ord: 18.3.1841. K: 9.1841. L: 21.9.1843. C: 7.6.1845. Sold to Castle to BU at Charlton 1866 (or in October 1863?).

Firebrand Portsmouth Dyd/Seaward & Capel (410 nhp).

Ord: 18.3.1841. K: 12.1841. L: 5.9.1842. C: 22.10.1844. Sold to Castle to BU at Charlton 7.10.1864.

Gladiator Woolwich Dyd/Miller, Ravenhill & Co. (430 nhp/943 ihp).

Ord: 18.3.1841. K: 2.1842. L: 15.10.1844. C: 25.4.1846. BU 3.1879 (by AO 25.1.1877).

NOTES: *Firebrand* was originally to be called *Beelzebub* but the name was changed by AO of 5.2.1842.

***SAMPSON* Class** - Steam Vessel (SV1), later Second Class frigate, 6 guns. Sir William Symonds design, approved 4.4.1843.

Dimensions & tons: 203ft 6in, 178ft 1¼in x 37ft 6in (37ft 0in for tonnage) x 23ft 0in. 1,296$^{85}/_{94}$ bm.

Men: 175. Guns: UD only 2 x 68pdr (95cwt) on pivots, 4 x 8in (65cwt). Also (temp.) 2 x 24pdr (13cwt) carronades. Later 2 x 8in (112cwt), 2 x 10in (85cwt), 2 x 32pdr (56cwt), 2 x 24pdr (17cwt) carronades.

Machinery: 2-cyl. (81in diam., 68in stroke) vertical direct-acting. 467 nhp. 9.5kts.

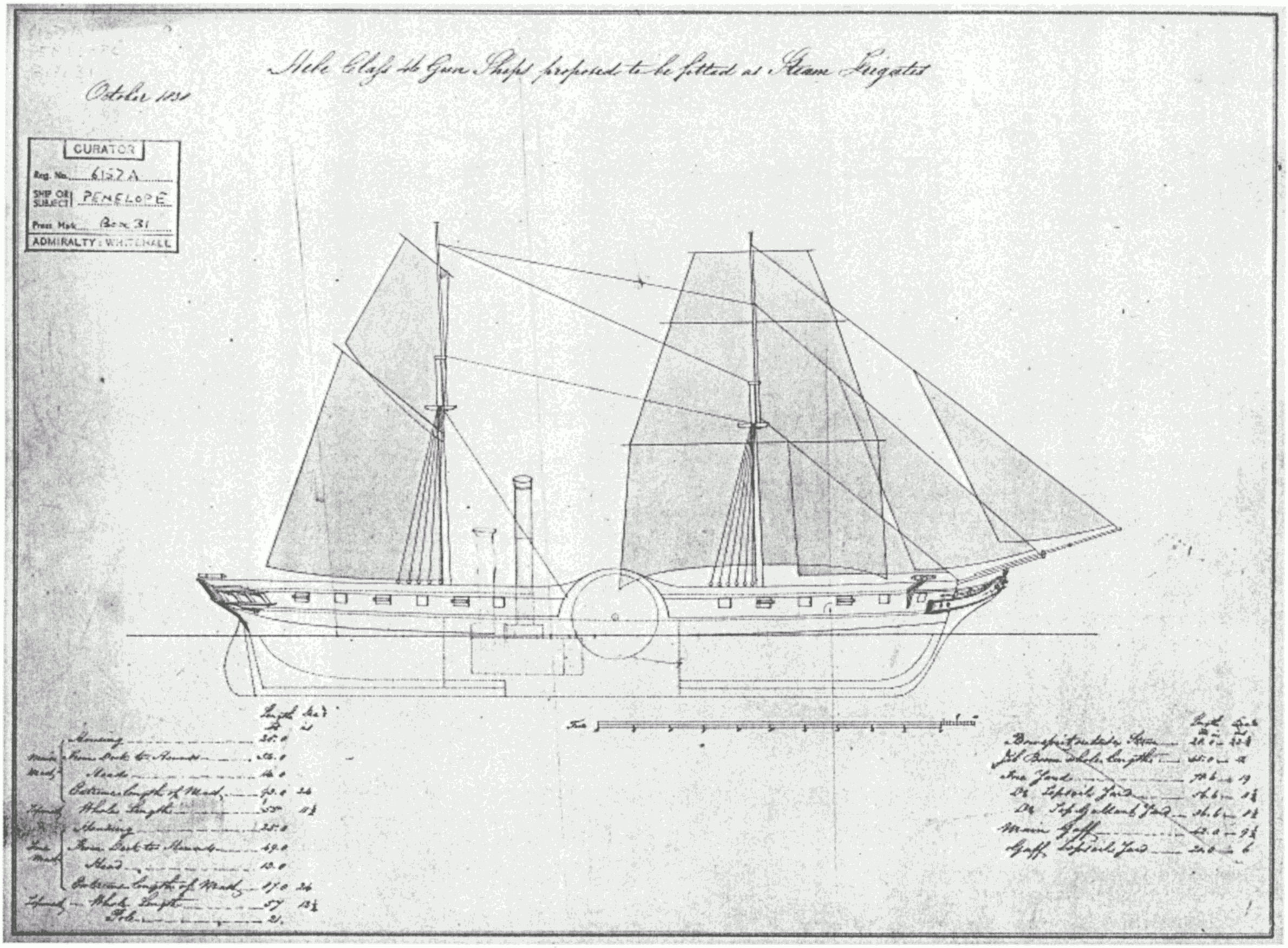
First cost: Hull £23,931, machinery £21,043, fitting £11,790.

Sampson Woolwich Dyd/J. & G. Rennie.

Ord: 18.3.1841. K: 11.1843. L: 1.10.1844. C: 5.2.1846. Sold to Castle & Beech to BU at Charlton 15.7.1864.

NOTES: Lengthened by 13½ft from the *Cyclops* design, with much less rise of floor. Barque-rigged, with 2 funnels.

***CENTAUR/DRAGON* Class** - Steam Vessels (SV1), later Second Class frigates, 6 guns (but rerated sloops 1859). Sir William Symonds design,



Sail plan, dated October 1838, for '*Hebe* Class 46 Gun ships proposed to be fitted as Steam Frigates'. In the event only *Penelope* was converted and she was rigged as a barque, but this spar plan is typical of many of the smaller paddlers. *DR6157A*

approved 12.2.1844.

Dimensions & tons: 200ft 0in, 174ft 4¼in x 37ft 6in (37ft 0in for tonnage) x 23ft 0in. 1,269$^{59}/_{94}$ bm.

Men: 175. Guns: UD only 2 x 68pdr (95cwt), 4 x 68pdr (65cwt); 2 x 32pdr (17cwt) carronades or 2 x 8in (112cwt), 4 x 8in (65cwt), 2 x 24pdr carronades (*Dragon*).

Machinery: 2-cyl vertical direct-acting. 4 tubular boilers. *Centaur* 540 nhp, 10.5kts. *Dragon* 560 nhp, 11.5kts. 430 tons coal.

First cost: *Centaur* hull £27,080, machinery £26,050, fitting £10,977. *Dragon* hull £26,401, machinery £25,005, fitting £16,024.

Centaur Portsmouth Dyd/Boulton, Watt & Co.

Ord: 18.3.1841. K: 12.1844. L: 6.10.1845. C: 3.2.1849. BU 9.1864.

Dragon (ex-*Janus*) Pembroke Dyd/William Fairbairn.

Ord: 18.3.1841. K: 1.1844. L: 17.7.1845. C: 7.1847. Sold to Castle to BU at Charlton 7.10.1864.

NOTES: Ordered to *Firebrand* design, amended to lengthen by 10ft . *Dragon* name altered from *Janus* on 31.7.1843. Both vessels towed to East India Dock for installation of machinery in 11.1846 and 4.1846 respectively. *Centaur* had cylinders of 85½in diam., 6ft stroke; *Dragon* of 88in diam., 5¾ft stroke. Brig-rigged on completion (mizzens added later).

PENELOPE - Converted from sailing frigate to Steam Vessel (SV1), later First Class paddle frigate, 22 guns. Conversion designed by John Edye (nominally Symonds), approved 5.1842.

Dimensions & tons: 215ft 2in, 184ft 4in x 40ft 9in x 26ft 8in. Draught 19¼ft (fwd) 20¼ft (aft). 1,616 bm. 2,766 disp.

Men: ... . Guns: MD 8 x 8in/68pdr (65cwt), 2 x 8in/68pdr (36cwt); UD 2 x 42pdr (84cwt) on pivots, 10 x 42pdr (23cwt) carronades.

Machinery: 2-cyl. (91½in diam., 80in stroke) vertical direct-acting. 4 tubular boilers (8lbs/sq.in). 650 nhp. c11kts. 500 tons coal.

Penelope Chatham Dyd/Seaward & Capel.

Conversion ord: 26.3.1842. Conversion begun (docked): 11.6.1842. L: (undocked) 1.4.1843. C (unpowered): 6.1843. Towed to Limehouse 7.1843 to fit machinery. Sold to Castle & Beech to BU 15.7.1864.

NOTES: Originally launched 1829 as sailing frigate (see Chapter 2). Lengthened by 63ft 4in midsection and rebuilt as paddle vessel 1842-43. Barque-rigged with wire rigging. Edye proposed at least 15 similar conversions to follow, but the Admiralty decided that converting frigates to screw propulsion was more effective and probably easier.

Scan and/or retouch by Grzechu

***RETRIBUTION* Class** - Steam Vessel (SV1), later First Class frigate, 22 guns (28 guns from 1856). John Edye design, approved 13.7.1842.

Dimensions & tons: 220ft 0in, 192ft 10¼in x 40ft 6in oa (40ft 0in for tonnage) x 26ft 4in. 1,641$^{10}/_{94}$ bm.
Men: 200. Guns: (1849) MD 12 (later 18) x 32pdr (50cwt); UD 1 x 8in/68pdr (112cwt) on pivot, 9 x 8in/68pdr (65cwt/9ft).
Machinery: 4-cyl. (72in diam., 8ft stroke) direct-acting 'Siamese' type. 4 boilers. 800 nhp. c10kts. 530 tons coal.
First cost: Hull £34,456, machinery £43.210, fitting £13,874.

Retribution (ex-*Watt*, ex-*Dragon*) Chatham Dyd/Maudslay, Sons & Field.
Ord: 26.3.1842. K: 8.1842. L: 2.7.1844. C: 23.12.1845. Sold to Castle & Beech to BU at Charlton 15.7.1864.

NOTES: Name changed from *Dragon* to *Watt* by AO 1.8.1842 and from *Watt* to *Retribution* by AO 26.4.1844. Originally no MD guns carried. Re-engined in 1849 with Penn 2-cyl. (72in diam., 7ft stroke) 400 nhp oscillating engines.

***TERRIBLE* Class** - Steam Vessel (SV1), later First Class frigate, 19 guns. Oliver Lang design, approved 28.10.1842.

Dimensions & tons: 226ft 2in, 196ft 10¼in x 42ft 6in oa (42ft 0in for tonnage) x 27ft. 1,847 $^{7}/_{94}$ bm. 3,189 disp.
Men: 200. Guns: MD 4 x 68pdr (95cwt), 4 x 56pdr (98cwt), 3 x 12pdr (6cwt); UD 4 x 68pdr (95cwt), 4 x 56pdr (98cwt).
Machinery: 4-cyl. (72in diam., 8ft stroke) direct-acting 'Siamese' type. 4 tubular boilers. 800 nhp. 2,059 ihp = 10.9kts.
First cost: Hull £38,346, machinery £41,820, fitting £21,676.

Terrible (ex-*Simoom*) Woolwich Dyd/Maudslay, Sons & Field.
Ord: 22.7.1842. On 24.2.1843 the order was shifted to Deptford Dyd.
K: 11.1843. L: 6.2.1845. C: 25.3.1846. Sold to BU 7.7.1879.

NOTES: Name changed from *Simoom* to *Terrible* on 23.12.1842. The first RN ship with four funnels, and the largest paddle warship ever built for the RN. When built the most powerful steam warship of her day. Assisted *Great Eastern* in laying the Atlantic cable 1865. Assisted *Black Prince* and *Warrior* towing the floating dock to Bermuda 1869.

***AVENGER* Class** - First (from 31.7.1846, Second) Class frigate, 10 guns. Sir William Symonds design, approved 25.3.1844.

Dimensions & tons: 210ft 0in, 183ft 2$^{3}/_{8}$in x 39ft 0in oa (38ft 6in for tonnage) x 25ft 8in. 1,444$^{36}/_{94}$ bm.
Men: 200 (later 250). Guns: 2 x 8in (112cwt) pivot, 4 x 8in (65cwt) pivot, 4 x 32pdr (25cwt) gunnades.
Machinery: 2-cyl. direct-acting. 650 nhp. 9.5kts.
First cost: Hull £44,777, machinery: £32,740, fitting: £11,630.

Avenger Devonport Dyd/Seaward & Capel.
Ord: 19.2.1844. K: 27.8.1844. L: 5.8.1845. C: 21.6.1846. Wrecked whilst on passage for Malta from Gibraltar on the Sorelli Rocks off the North African coast 20.12.1847 (246 of 250 aboard drowned).

NOTES: Originally ordered from Deptford, order moved 22.6.1844. On launch, ship sailed (jury-rigged) to Deptford where machinery fitted and completed.

In the 1844 Programme of Work, besides the one-off *Avenger* (see above), five frigates 'similar to the *Sampson*' were ordered on 19 February 1844 - two to be built at Woolwich (*Niger* and *Odin*), two at Pembroke (*Conflict* and *Desperate*) and one at Portsmouth (*Dauntless*). Later that year the *Odin* was transferred to Deptford and re-ordered to a new design by Fincham, and the other four were subsequently ordered to be built as screw vessels (see Chapter 5).

***ODIN* Class** - First Class frigate, 16 guns. John Fincham design, approved 12.2.1845.

Dimensions & tons: 208ft 0in, 183ft 8½in x 37ft 0in (36ft 6in for tonnage) x 24ft 2in. 1,301$^{73}/_{94}$ bm.
Men: 175. Guns: MD 10 x 32pdr (56cwt); UD 2 x 68pdr (112cwt) + 4 x 10in (84cwt).
Machinery: 2-cyl. (88½in diam., 5¾ft stroke) vertical direct-acting. 4 tubular boilers. 560 nhp. 10kts. 500 tons coal.
First cost: Hull £35,056, machinery £25,810, fitting (?) £15,795.

Odin Deptford Dyd/William Fairbairn.
Ord: 19.2.1844. K: 2.1845. L: 24.7.1846. C: 12.8.1847. Sold to Castle & Beech to BU at Charlton 1865.

NOTES: Initially intended to carry 16 guns with 8 x 32pdr carronades on the middle deck, but this idea was later discarded and these guns never fitted. 1850-51 fitted for an Ambassador.

***SIDON* Class** - First Class frigate, 22 guns. Design by Sir Charles Napier, approved 30.5.1845.

Dimensions & tons: 210ft 8in, 185ft 3in x 37ft 0½in (36ft 6½in for tonnage) x 27ft 0in. 1,315$^{63}/_{94}$ bm.
Men: 270. Guns: MD 2 x 68pdr (88cwt) on pivots (fwd and aft) + 14 x 8in (60cwt); QD 4 x 8in (52cwt) on slides; Fc 2 x 8in (52cwt) on slides.
Machinery: 2-cyl. (86½in diam., 6ft stroke) vertical direct-acting. 4 tubular boilers. 560 nhp. 10kts. 650 tons coal.
First cost: £81,290 (including machinery £25,178).

Sidon Deptford Dyd/Seaward & Capel.
Ord: 7.4.1845 & 26.5.1845. K: 26.5.1845. L: 26.5.1846. C: 26.11.1846. Sold to Castle & Beech to BU at Charlton 15.7.1864.

NOTES: Design based on *Odin* with increased depth in hold and to carry 400 additional tons of coal as suggested by Napier. Fitted for the Governor General of India in 1847. Re-fitted to carry troops 1851.

***LEOPARD* Class** - Second Class frigate, 18 guns. Committee of Reference (John Fincham) design, approved 11.2.1847.

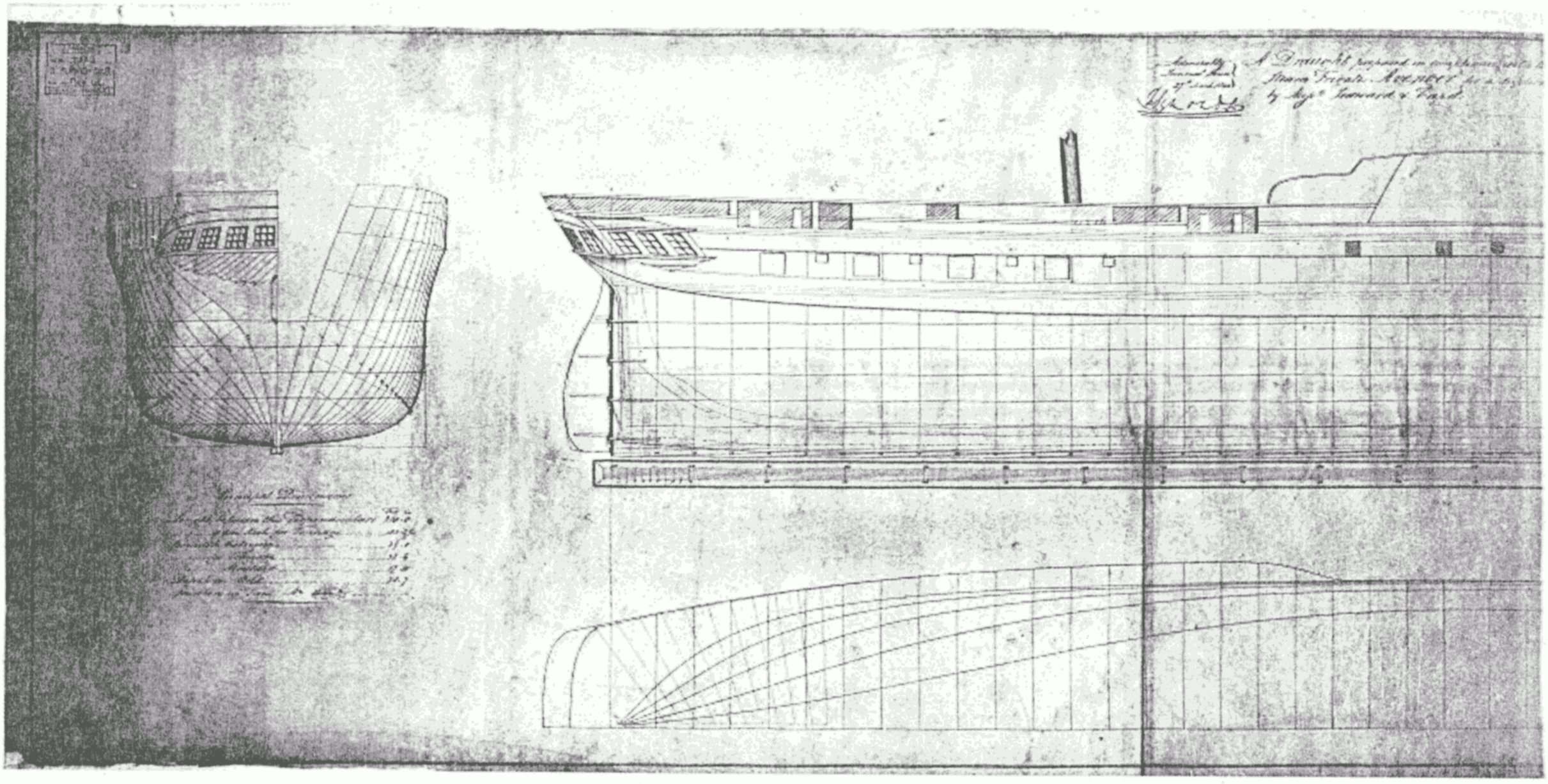
Dimensions & tons: 218ft 0in, 194ft 0in x 37ft 6in oa (37ft 0in for tonnage) x 25ft 2in. 1,412$^{65}/_{94}$ bm.
Men: 200. Guns: MD 12 x 32pdr (56cwt); UD 4 x 10in (85cwt) + 2 x 68pdr (95cwt).
Machinery: 2-cyl. (91½in diam., 80in stroke) vertical direct-acting. 4 tubular boilers. 560 nhp. 11.2kts.
First cost: £82,250.

Leopard Deptford Dyd/Seaward & Capel.
Ord: 26.3.1846. K: 8.1846 (but suspended 9.9.1846 to 2.1848). L: 5.11.1850. C: 3.1853. Sold to Marshall to BU at Plymouth 8.4.1867.

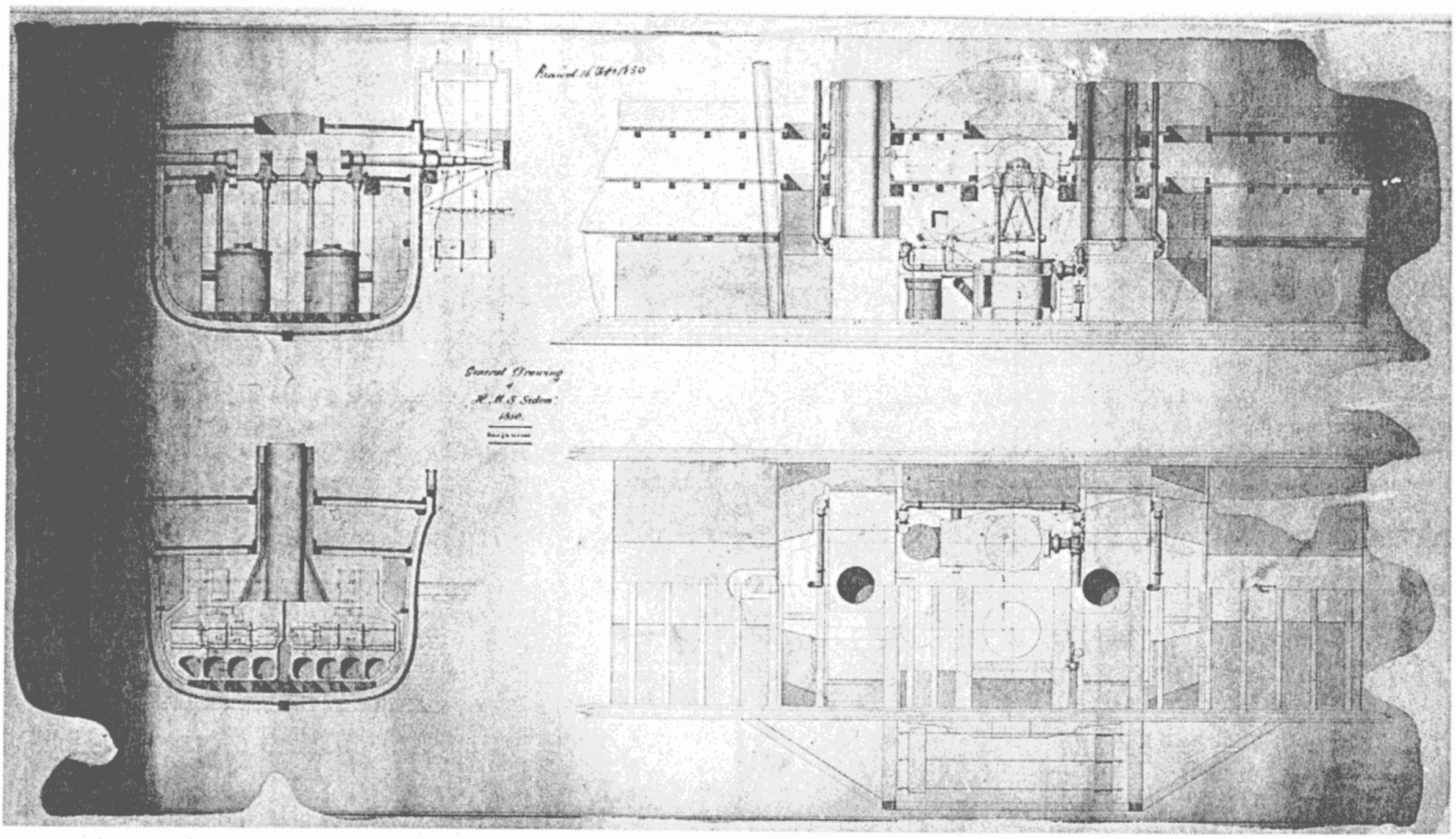
NOTES: Originally ordered to *Odin* design, but in 2.1848 altered plan approved to lengthen by 10ft. Re-armed 1862 with - MD 8 x 32pdr (56cwt) + 4 x 40pdr (32cwt); UD (Armstrong BLs) 5 x 100pdr (82cwt) + 1 x 68pdr (95cwt).

Under the 1847 Programme of Works, five First Class sloops of the *Sphinx* Class, with engines of 400 nhp, were submitted for construction, and orders placed with the Dockyards on 25 April 1847; one was cancelled in 1850 (*Resolute*), but the other four were all re-graded to Second Class (paddle) frigates in August 1847 (first two) and 1852 (last two), prior to their completion in 1852 and 1853. When finished, they constituted the last group of paddle warships for the RN.

Scan and/or retouch by Grzechu

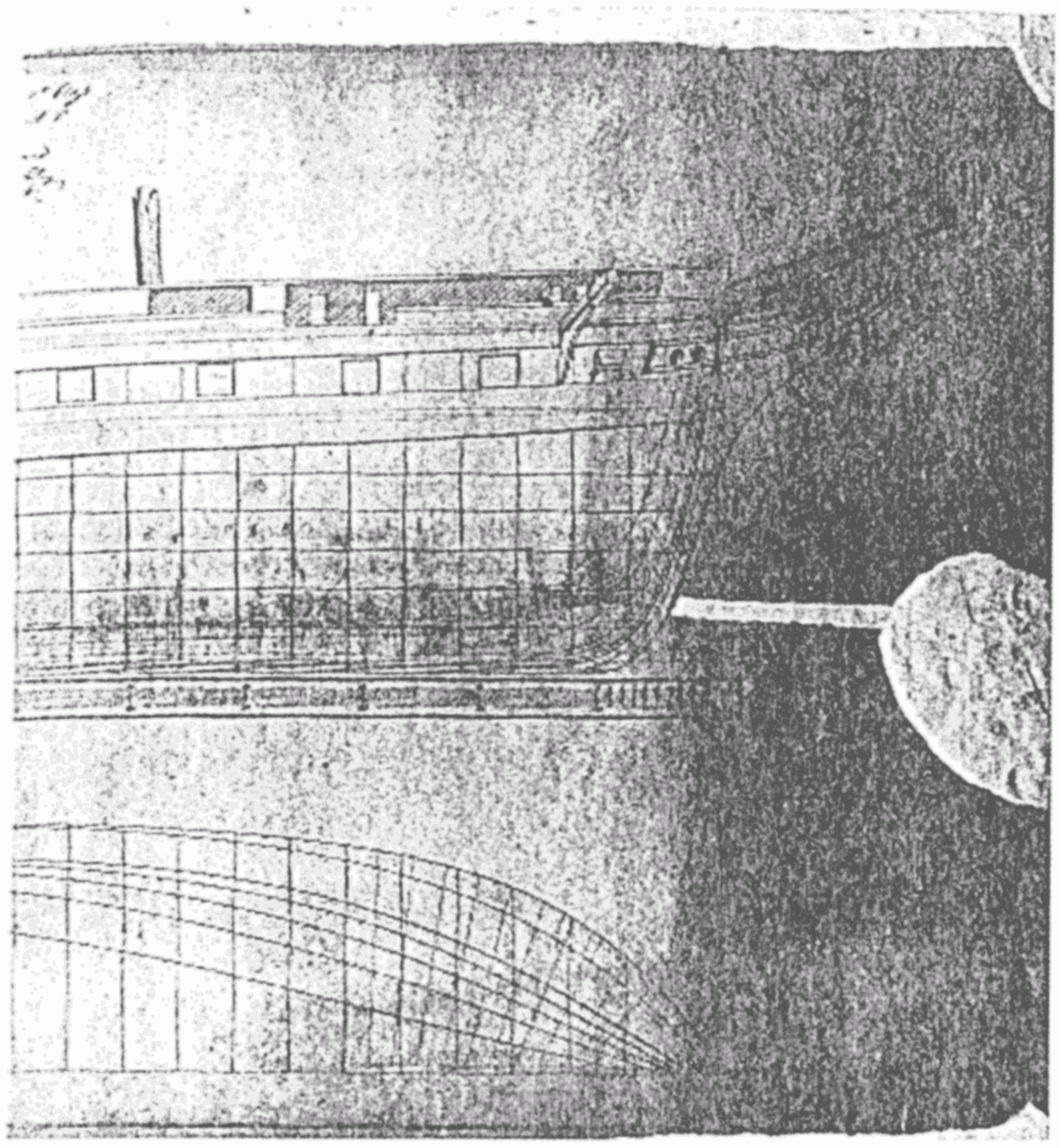


Design draught for the *Avenger*, dated 27 March 1844. It specifies that the ship is to have the same design of 650hp engines by Seaward & Capel as fitted in *Penelope*. *DR7332*



General arrangements of the machinery of *Sidon*, 'Received 16 February 1850' (presumably from the manufacturers Seaward & Capel). *DR7945*

Scan and/or retouch by Grzechu



***MAGICIENNE* Class** - Second Class frigates, 16 (later 14) guns. John Edye design, approved 12.8.1847.

Dimensions & tons: 210ft 0in, 185ft 6¼in x 36ft 0in (35ft 8in for tonnage) x 24ft 6in. 1,255$^{31}/_{94}$ bm. 2,300 disp.

Men: 175. Guns: MD 8 (later 6) x 32pdr (50cwt) aft + 2 x 32pdr (50cwt) fwd; UD 1 x 68pdr (95cwt) + 1 x 10in (85cwt) + 4 x 32pdr (56cwt).

Machinery: 2-cyl. (72in diam., 7ft stroke) oscillating. 400 nhp. 1,300 ihp. 9-10kts.

First cost: *Valorous* £69,064 (including machinery £24,329).

Magicienne Pembroke Dyd/John Penn & Sons.

Ord: 25.4.1847. K: 9.1847. L: 7.3.1849. C: 20.2.1853. BU by Marshall, Plymouth 9.1866.

Valorous Pembroke Dyd/Miller & Ravenhill.

Ord: 25.4.1847. K: 3.1849. L: 30.4.1851. C: 7.7.1853. Sold to E. Marshall to BU 27.2.1891.

NOTES: Originally ordered 25.4.1847 as First Class sloops, but on 5.8.1847 they were re-ordered as 210ft vessels.

***TIGER* Class** - Second Class frigate, 16 guns. John Edye design, approved 29.7.1847.

Dimensions & tons: 205ft 0in, 180ft 6¼in x 35ft 11$^{7}/_{8}$in (35ft 8in for tonnage) x 24ft 6in. Draught 17ft (mean). 1,221$^{49}/_{94}$ bm.

Men: 175. Guns: Designed for MD 4 x 32pdr (56cwt); UD 1 x 68pdr (95cwt) + 1 x 10in (84cwt) + 4 x 32pdr (42cwt). Completed with MD 10 x 32pdr (50cwt); UD 2 x 10in (84cwt) + 4 x 32pdr (50cwt).

Machinery: 2-cyl. (72in diam.) oscillating. 400 nhp. 1,300 ihp. 9-10kts.

First cost: £64,900.

Tiger Chatham Dyd/John Penn & Sons.

Ord: 25.4.1847. K: 11.1847. L: 1.12.1849. C: 21.8.1852. Grounded off Odessa 12.5.1854 and set on fire by Russian bombardment, then blew up after bombardment by British ships. Some sources suggest she was later salved by the Russians and commissioned by them as the *Tigr* but this is impossible in the circumstances, and is due to a misreading of Russian navy lists; in fact, her engines were salvaged and installed in the Russian royal yacht *Tigr*.

NOTES: Originally to be a sloop of the *Sphinx* type, but classed as a frigate in 1852.

***FURIOUS* Class** - Second Class frigates, 16 guns. John Fincham design, 1848.

Dimensions & tons: 206ft 0in, 181ft 7in x 37ft 0in oa (36ft 6in for tonnage) x 23ft 3in. 1,287 bm.

Men: 175. Guns: MD 10 x 32pdr (50cwt); UD 2 x 10in (84cwt) on pivots, 4 x 32pdr (50cwt);

Machinery: 2-cyl. oscillating. 400 nhp.

First cost: £64,794 (including machinery £24,577).

Furious Portsmouth Dyd/Miller & Ravenhill.

Ord: 25.4.1847. K: 6.1848. L: 26.8.1850. C: 18.2.1853. Became a coal hulk at Portsmouth 3.1867. Sold to Castle to BU at Charlton 1884.

Resolute Portsmouth Dyd/John Penn & Sons.

Ord: 25.4.1847. K: - Order moved to Sheerness Dyd 8.1.1849. Cancelled 23.3.1850.

NOTES: Originally ordered as sloops of the *Sphinx* type. Designed ordnance 14 guns: MD 8 x 32pdr (56cwt); UD 1 x 68pdr (95cwt) on pivot, 1 x 10in (84cwt), 4 x 32pdr (42cwt).

Further paddle frigate designs were considered as late as 1852 - when a design of 2,540 bm tons and 260ft length (with 1,000 nhp engines) was considered, to have carried 36 x 68pdr (two of 113cwt and 34 of 95cwt) - but none were ordered.

Paddle Sloops

On 10 January 1831, within two months of taking office, the new First Lord Sir James Graham gave orders for four paddle vessels to be built in the dockyards to competitive designs, one (*Phoenix*) by the Surveyor and the others by different Master Shipwrights. Among the largest and most powerful steamers of that date, all four were to have Maudslay engines of 220 H.P., carry a schooner rig (later changed to barque or barquentine) and mount a 10in shell gun of 80cwt (in fact, 84cwt was the model fitted). They were named on 22 March 1831. All were rerated Second Class Sloops by AO of 31 May 1844 except *Rhadamanthus* and *Dee*, which became transports until 1846 when they likewise became Second Class Sloops.

SALAMANDER - Steam Vessel, later Second Class Sloop. Joseph Seaton design, approved 1831.

Dimensions & tons: 175ft 5in, 151ft 8in x 32ft 2in oa (31ft 10in for tonnage) x 17ft 0in. Draught 12½ft (fwd), 13½ft (aft). 818 bm. 1,014 disp.

Men: 135. Guns: 2 x 10in (84cwt) on pivots, 2 (later 4) x 32pdr (25cwt).

Machinery: 2-cyl. side lever. 220 nhp. 506 ihp = 7.2kts.

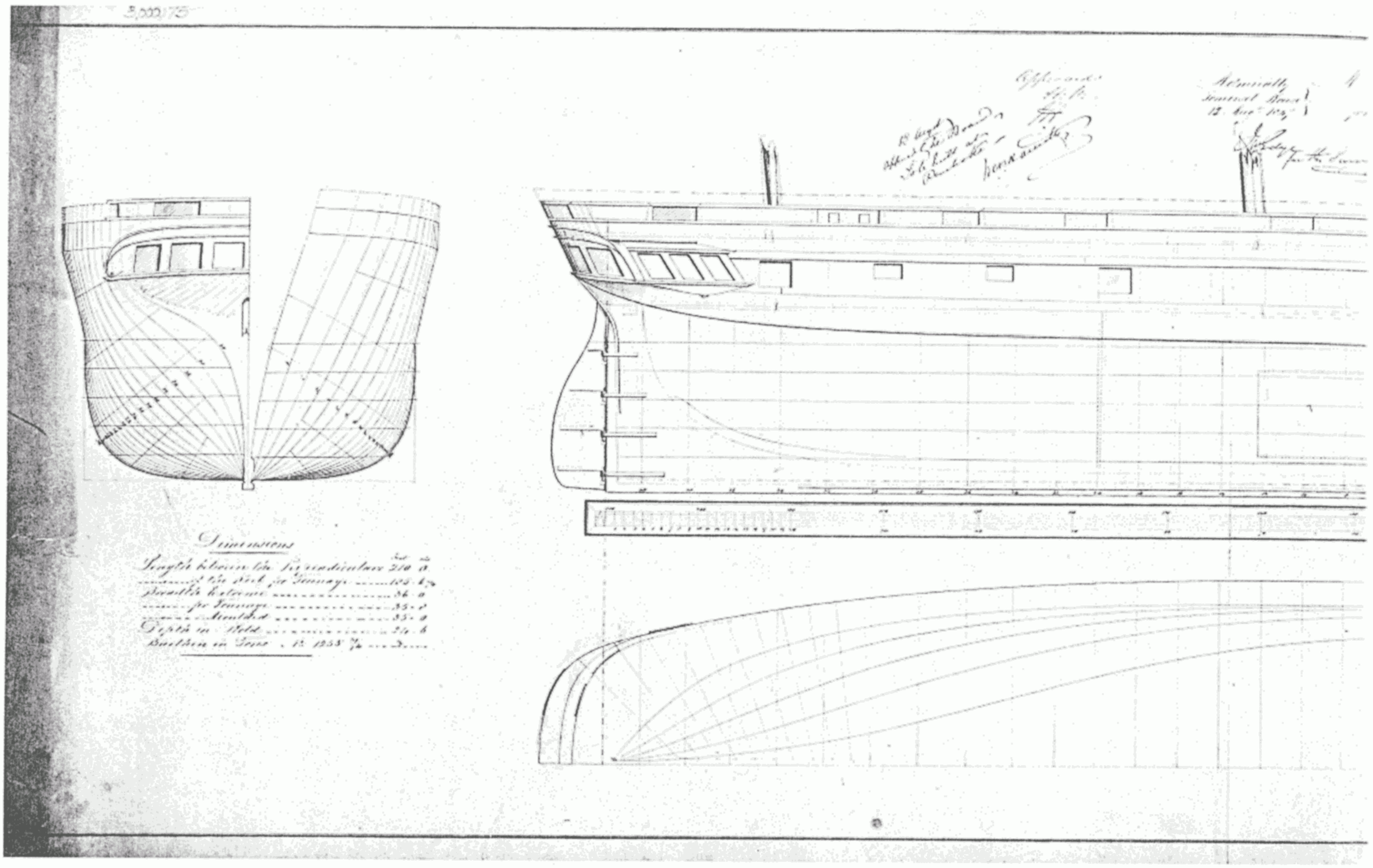
First cost: Built for £20,429, machinery £11,201, fitting £2,704.

Salamander Sheerness Dyd/Maudslay, Sons & Field.

Ord: 12.1.1831. K: 4.1831. L: 14.5.1832. C.12.2.1833. Sold to Castle to BU 10.1883.

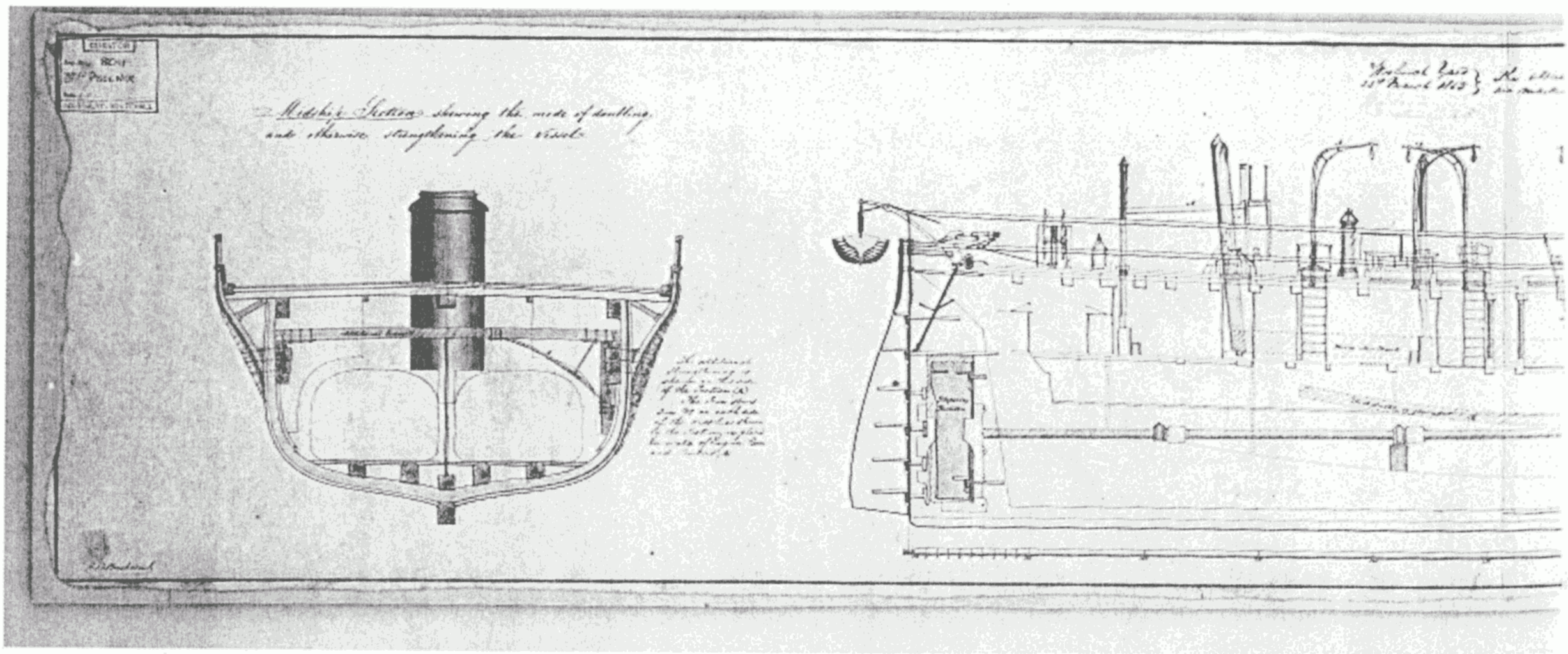
NOTES: Originally to have been built at Portsmouth (Seaton was Master Shipwright at Sheerness 1826-30).

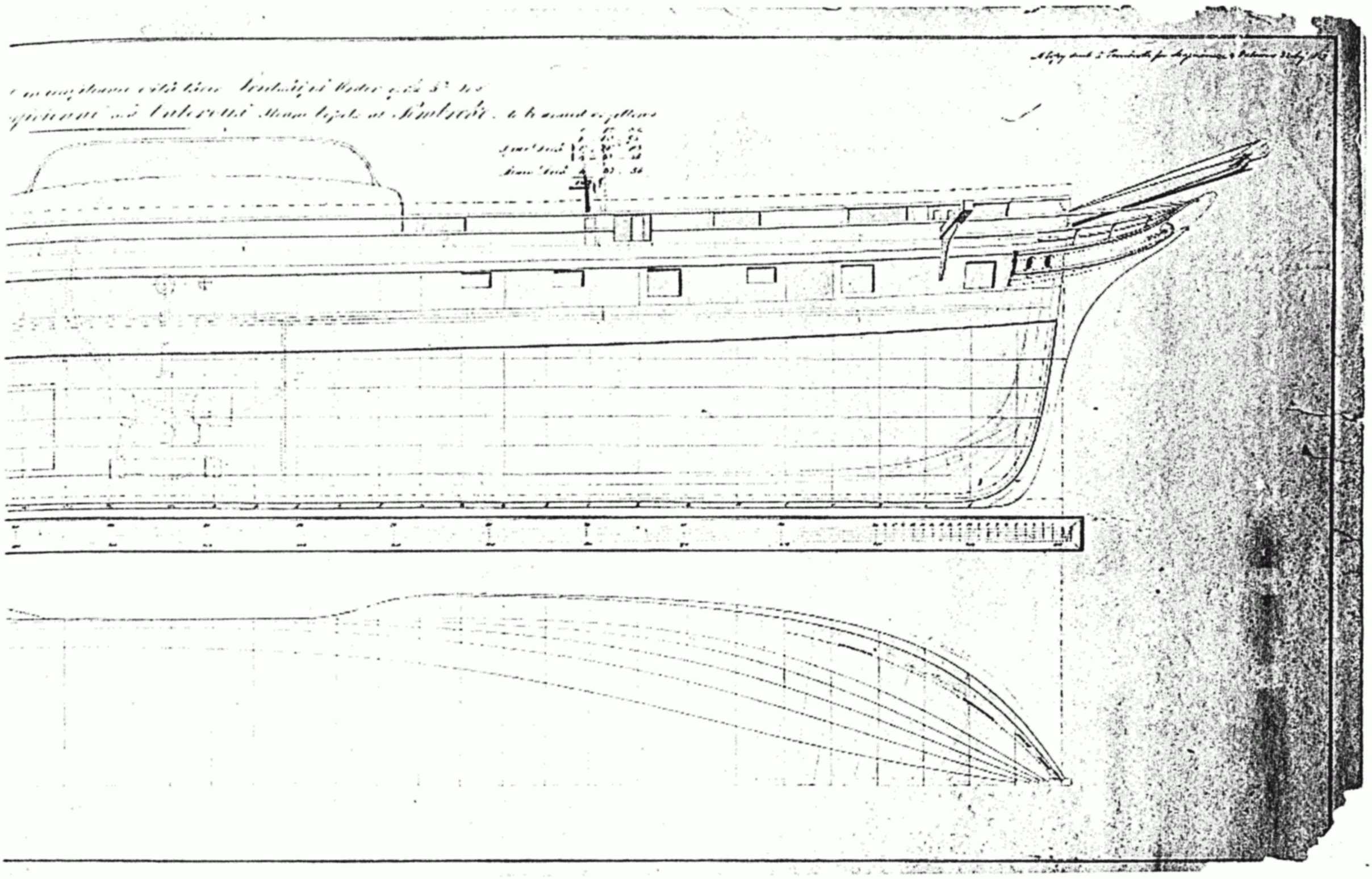
PHOENIX - Steam Vessel, later Second Class Sloop. Robert Seppings design, approved 1831. Later converted to screw sloop, by 1860s a corvette.

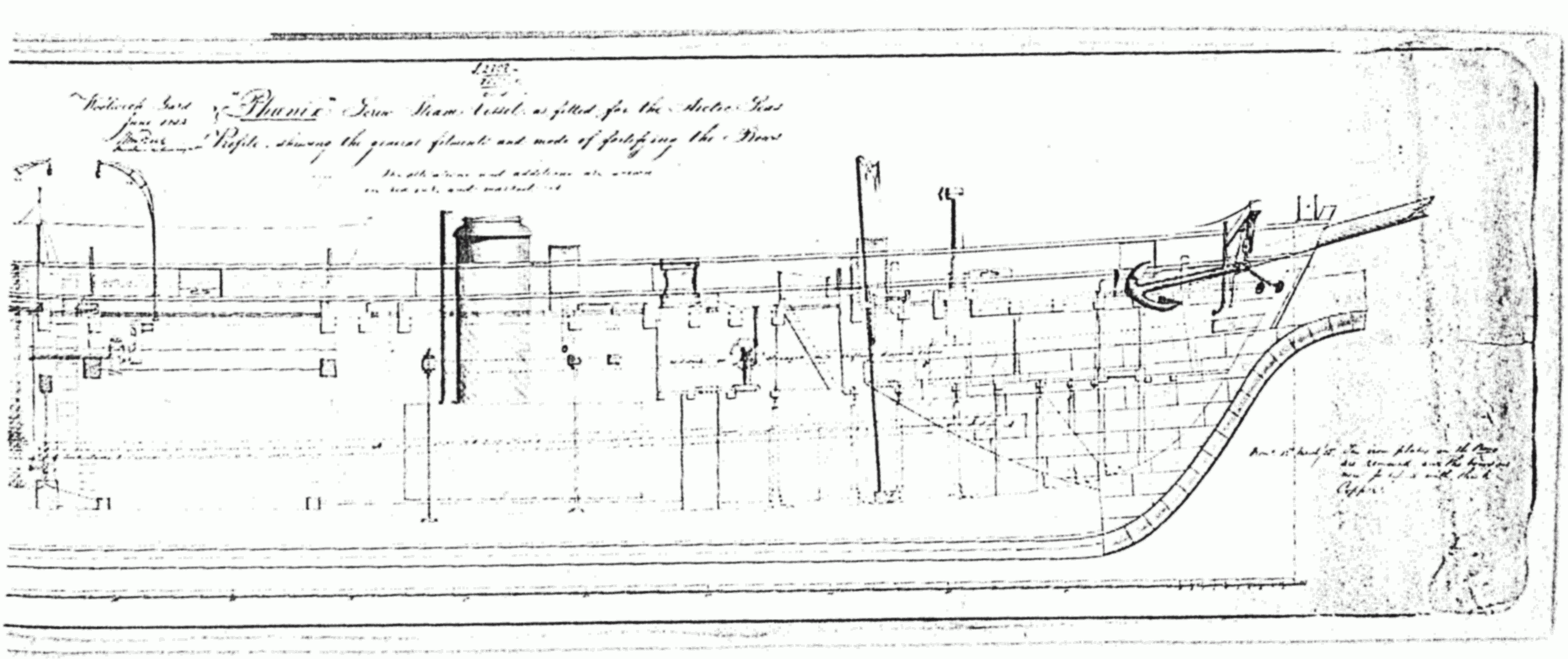


Design draught for the *Magicienne* and *Valorous*, dated 12 August 1847. *DR3000*

Profile of the *Phoenix* as converted to screw. The draught, dated Woolwich June 1853, notes 'as fitted for the Arctic Seas', the midship section 'shewing the mode of doubling and otherwise strengthening the vessel'; later modifications, dated April 1854 and 23 March 1855, include replacing the iron reinforcement of the bow for icebreaking with thick copper. The ship was intended to attack Russian positions in the White Sea. *DR8011*







Scan and/or retouch by Grzechu

Dimensions & tons: 174ft 7in, 153ft 10³/₈in x 31ft 10in oa (31ft 6in for tonnage) x 16ft 9in. Draught 12ft (fwd), 12½ft (aft). 812 bm. 1,024 disp.
Men: 135. Guns: 1 x 10in (84cwt) on pivot, 1 x 8in (52cwt) on pivot, 4 x 32pdr (17cwt) carronades.
Machinery: 2-cyl. side lever. 220 nhp.
First cost: Building £14,714, machinery £10,781, fitting £7,968; total £33,463.

Phoenix Chatham Dyd/Maudslay, Sons & Field.
Ord: 12.1.1831. K: 5.1831. L (undocked): 25.9.1832. C: 7.1.1834. Altered to screw sloop 4.1844-2.1845 (see Chapter 5). Fitted as Arctic storeship 1851-53. Sold to Castle to BU at Charlton 26.1.1864.

NOTES: Projected name altered to *Charon* 22.3.1831, but restored as *Phoenix* 8.4.1831 (before being laid down). Built in dry dock. The conversion to screw at Deptford cost £18,663 (the new engine cost £13,576) her old engine and boilers were fitted to *Firefly*. In 1855 she was fitted for service in the White Sea (against the Russian Arctic coast).

RHADAMANTHUS - Steam Vessel, later Second Class Sloop. Thomas Roberts design, approved 1831.
Dimensions & tons: 164ft 7in, 143ft 2in x 32ft 10in oa (32ft 8in for tonnage) x 17ft 10in. Draught 11ft (fwd) 13ft (aft). 813 bm. 1,086 disp.
Men: 135. Guns: 1 x 10in (84cwt) on pivot, 2 x 32pdr (25cwt), 2 x 6pdr (6cwt) brass.
Machinery: 2-cyl. side lever. 220 nhp. 385 ihp = 10kts.
First cost: Building £18,534, fitting £2,197, machinery £11,188.

Rhadamanthus Plymouth Dyd/Maudslay, Sons & Field.
Ord: 12.1.1831. K: 9.1831. L.16.4.1832. C: 2.11.1832. Transport 1841. Troopship 1851. By 1860s transport again. BU completed at Sheerness 8.2.1864.

NOTES: Roberts was Master Shipwright at Plymouth 1813-15 and 1830-37. On launch, ship sailed (jury-rigged) to Woolwich where machinery fitted and completed. The first RN steamer to cross the Atlantic. Poop removed 1836.

MEDEA - Steam Vessel, later Second Class Sloop. Oliver Lang design, approved 1831.
Dimensions & tons: 179ft 4½in, 157ft 4½in x 31ft 11in oa (31ft 7in for tonnage) x 20ft 0in. Draught 13ft 10in (fwd) 14½ft (aft). 835 bm. 1,142 disp.
Men: 135. Guns: 2 x 10in (84cwt) on pivots, 2 x 32pdr (25cwt).
Machinery: 2-cyl. side lever. 350 nhp.
First cost: £35,961 (including machinery £13,080).

Medea Woolwich Dyd/John Penn & Sons.
Ord: 12.1.1831. K: 4.1832. L: 2.9.1833. C: 3.4.1834. Sold 1867.

NOTES: Lang was Master Shipwright at Woolwich 1826-32. Re-engined 1846 with Maudslay 4-cyl. 'Siamese' engine of 220 nhp (900 ihp = 10.6kts).

On 6 March 1832 an AO was issued to convert the brig sloop *Falcon* (of 1820 - see Chapter 2) to steam power. This was effected at Sheerness Dyd, using a Mills (?) high pressure engine; however, the conversion was deemed a failure, and the engine was removed in 1834.

In December 1834 the various paddle vessels were divided into three groups (as listed in ADM 222/5) of which the smallest comprised what would later be classed as gunvessels, and the other two groups comprised the sloops:

S.V. 145ft length, 100 HP - *Tartarus*, *Blazer*, *Alban*, *African*, *Confiance*, *Carron*, *Meteor*, *Colombia* (130ft 6in).
S.V. 155ft length, 140 HP - *Spitfire*, *Firefly*, *Flamer*, *Hermes* (150ft).
S.V. 220 HP - *Phoenix*, *Salamander*, *Rhadamanthus*, *Medea*, *Dee*.

On 21 January 1837, as mentioned under 'Paddle Frigates' earlier, the former single category of steam vessels was split into five classes, in accord with an Admiralty Committee report of 8 October 1836, in order to establish dimensions of masts and yards, and to provide rigging warrants and sea store establishments of boatswains', carpenters' and engineers' stores. The first category (SV1) covered the two new-building vessels *Gorgon* (see below) and *Cyclops* (the first steam frigate), while the last two categories (SV4 and SV5) covered the smaller ships (later defined as steam gunvessels). The sloops were divided as follows:

SV2 - *Phoenix*, *Salamander*, *Rhadamanthus*, *Medea*, *Dee*, *Messenger*.
(the three *Merlin* Class packets were added to this class in 1838-40: *Merlin*, *Medusa* and *Medina*.)
SV3 - *Hermes*, *Volcano*, *Megaera*, *Spitfire*, *Firefly*, *Firebrand*, *Flamer*.

***HERMES* Class** - Steam Vessels (SV3), later Second Class sloops. Symonds specification but John Edye design, approved 1834.
Dimensions & tons: 150ft 0in, 128ft 0in x 32ft 9in (32ft 5in for tonnage) x 18ft 2in. Draught 11½ft (fwd), 12ft (aft). 715⁴³/₉₄ bm. 1,006 disp. *Hermes* (as lengthened 1842): 170ft 0in, 148ft 1¼in x 32ft 10in (32ft 5in for tonnage) x 18ft 2in. 827⁸⁸/₉₄ bm.
Men: 135. Guns: 2 x 9pdr (13½cwt) brass; from 1842-43 1 x 8in (52cwt) on pivot, 2 x 32pdr (17cwt) carronades.
Machinery: 2-cyl. side lever. 140 nhp (*Acheron* 160 nhp).
First cost (£) of each vessel:

Vessel	*Total*	*Hull*	*Machinery*	*Fitting*
Hermes	24,452	...	...	...
Volcano	27,884	17,011	8,875	1,867
Megaera	27,778	15,161	8,983	3,634
Acheron	25,509	16,819	8,690	–

Hermes Portsmouth Dyd/Butterley Co.
Ord: 22.1.1834. K: 4.1834. L: 25.6.1835. C: 25.11.1835. Lengthened 1840-42. Re-engined 1843. Sold to Castle & Beech to BU at Charlton 10.1864.

Volcano Portsmouth Dyd/Seaward & Capel.
Ord: 19.11.1834. K: 7.1835. L: 30.6.1836. C: 17.1.1837. Depot ship (Engineer's Workshop) 1854. BU at Portsmouth 11.1894.

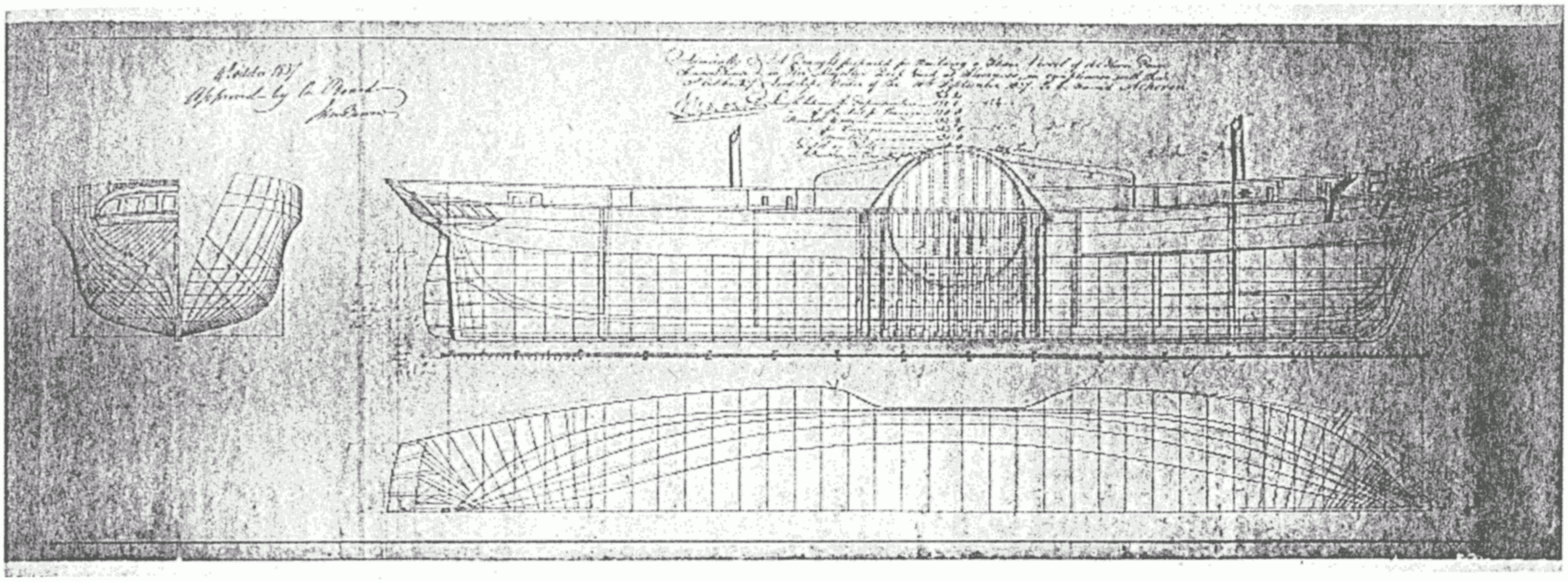
Megaera Sheerness Dyd/Seaward & Capel.
Ord: 19.11.1834. K: 8.1836. L: 17.8.1837. C: 30.3.1838. Wrecked on Bare Bush Key (Cay), Jamaica, on 4.3.1843.

Acheron Sheerness Dyd/Seaward & Capel.
Ord: 15.9.1837 (named 27.9.1837). K: 10.1837. L: 23.8.1838. C: 8.1.1839. Survey ship 1847. Sold at Sydney by Captain Fremantle 23.4.1855 for £2,067.16s.

NOTES: *Hermes* initially referred to as a packet, and fitted with Morgan's paddle wheels ('as previous *Hermes*' ex-*Courier*) - new cycloidal wheels fitted 1838. *Hermes*' original machinery was removed at Woolwich 1840, but she was lengthened at Chatham 1841-42, and re-engined 1843 with Maudslay 220 nhp machinery of 'Siamese' type (8.5kts). *Acheron* ordered first at Chatham, moved 18.9.1837 to Sheerness (since moulds were there).

***GORGON* Class** - Steam Vessel (SV1), later First Class sloop. Symonds and Eyde design, approved 29.4.1836.
Dimensions & tons: 178ft 0in, 152ft 3in x 37ft 6in oa (37ft 0in for tonnage) x 23ft 0in. 1,108 ⁶⁷/₉₄ bm. 1,610 disp.
Men: 160. Guns: 2 x 10in (84cwt) on pivots; 2 x 68pdr (64cwt) + 2 x 42pdr (22cwt) carronades on broadside trucks.
Machinery: 2-cyl. (64in diam., 66in stroke) direct-acting ('*Gorgon*' type). 4 flue boilers (5 lbs/sq.in). 320 nhp. 800 ihp = 9.5kts. 380 tons coal.
First cost: £54,306 (including machinery £22,662).

Scan and/or retouch by Grzechu



Design draught for the Second Class sloop *Acheron*, dated 3 October 1837. The framing detail in the paddle-box area emphasises how strongly built these wooden vessels need to be in order to stand up to the vibration of the machinery. *DR6929*

Gorgon Pembroke Dyd/Seaward & Capel.
Ord: 10.7.1834. K: July 1836. L: 31.8.1837. C:30.8.1838. Sold to Castle to BU at Charlton 17.10.1864.

NOTES: Initially schooner rig (later brig-rigged). Teak frames (cut in Bombay and first intended for *Tigris* - see Chapter 2) and oak beams. The original design for *Gorgon* was to carry 16 x 32pdrs (10 on the MD and 6 on the UD), with a 220 nhp engine. However, the MD guns were deleted and the above six larger guns substituted for those on the UD, while the intended engines for both *Gorgon* and its original sister *Cyclops* were re-cast as 300 nhp (increased again before the engines were ordered from John Seaward). As troopship, *Gorgon* could carry 1,600 troops with field guns and their limbers. By 1856 the fwd pivot gun had been replaced by a 68pdr (95cwt), while the broadside guns were now 32pdrs (42cwt). In April 1858 completed fitting to assist *Agamemnon* lay the Atlantic cable.

***HYDRA* Class** - Steam Vessels (SV2), later Second Class sloops. Sir William Symonds design, approved 3.11.1837.
Dimensions & tons: 165ft 0in, 143ft 7¼in x 32ft 10in (32ft 8in for tonnage) x 20ft 4in. Draught 12ft 1in (fwd), 13ft (aft). $814^{91}/_{94}$ bm. 1,096 disp.
Men: 135. Guns: 2 x 8in (65cwt) on pivots fwd & aft, 2 x 32pdr (50cwt).
Machinery: 2-cyl. side lever. 220 nhp (Boulton, Watt & Co) or 240 nhp (Scott & Sinclair). c9kts.
First cost: *Hydra* £37,239 (including £18,289 for machinery). *Hecla* £31,404 (including £10,888 for machinery). *Hecate* £27,742 (including £11,113 for machinery).

Hydra Chatham Dyd/Boulton, Watt & Co.
Ord: 18.9.1837. K: 1.1838. L: July 1838. C: 11.7.1838. Sold for BU to Castle, Charlton on 13.5.1870.

Hecla Chatham Dyd/Scott & Sinclair.
Ord: 12.3.1838. K: 6.1838. L: 14.1.1839. C: 28.8.1839. Re-engined 1848-49. Sold to Williams & Co (for £2,550) 15.6.1863 for commercial service, renamed *Typhoon*.

Hecate Chatham Dyd/Scott & Sinclair
Ord: 12.3.1838. K: 6.1838. L: 30.3.1839. C: 7.12.1839. Survey ship 1860. Sold to Castle, Charlton for BU 1865.

NOTES: *Hecla* had engines removed and replaced in a refit of 1848-49.

***STROMBOLI* Class** - Steam Vessels (SV2), later First Class sloops. Sir William Symonds design, approved 29.8.1838.
Dimensions & tons: 180ft 0in, 157ft 0¾in x 34ft 4in (34ft 0in for tonnage) x 21ft. Draught 13ft (fwd), 13½ft (aft). $965^{79}/_{94}$ bm. 1,283 disp.
Men: 149 (later 160). Guns: 2 x 10in (84cwt) on pivot, 2 x 68pdr (64cwt), 2 x 42pdr (22cwt) carronades. 1 x 68pdr (95cwt) replaced 1 x 10in in 1856, and the 4 x 32pdr (42cwt) replaced the 4 smaller guns. A 110pdr BL later replaced the 68pdr.
Machinery: 2-cyl side lever. 280 nhp. c9kts.
First cost: *Stromboli* £41,240 (including machinery £13,280). *Vesuvius* £39,405 (including machinery £13,309).

Stromboli Portsmouth Dyd/Robert Napier & Son.
Ord: 12.3.1838. K: 9.1838. L: 27.8.1839. C: 6.9.1840. Sold 8.1866. BU by White, Cowes 1867.

Vesuvius Sheerness Dyd/Robert Napier & Son.
Ord: 12.3.1838. K: 9.1838. L: 11.7.1839. C: 20.4.1840. Fitted with Armstrong guns 1862. Sold to BU 6.1865.

NOTES: Originally to be of *Medea* design, altered to new draught derived from *Gorgon*.

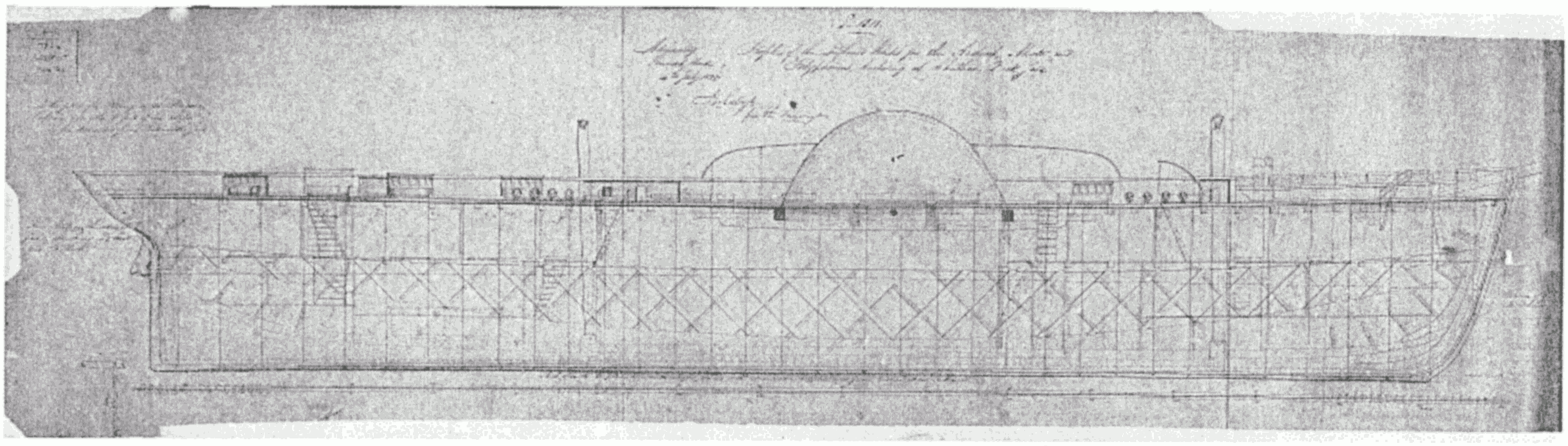
***ALECTO* Class** - Steam Vessels (SV3), later Third Class sloops. Sir William Symonds design, approved 12.4.1839.
Dimensions & tons: 164ft 0in, 142ft 6in x 32ft 8in (32ft 8in for tonnage) x 18ft 7in. 800 bm. 878 disp.
Men: ... . Guns: 2 x 32pdr (45cwt) on pivots, 2 x 32pdr (25cwt).
Machinery: 2-cyl. direct acting. 200 nhp. 370 ihp = 8.5-9.5kts.
First cost: *Alecto* £27,268 (including machinery £10,700). *Polyphemus* hull cost £13,198, machinery £10,700, fitting £14,398 (?). *Prometheus* £29,433 (including machinery £10,700). *Ardent* £28,593 (including machinery £10,700).

Alecto Chatham Dyd/Seaward & Capel.
Ord: 25.2.1839. K: 7.1839. L: 7.9.1839. C: 12.12.1839. BU by Castle, Charlton 11.1865.

Prometheus Sheerness Dyd/Seaward & Capel.
Ord: 25.2.1839. K: 7.1839. L: 21.9.1839. C: 20.2.1840. Sold to Castle to BU at Charlton 1863.

Polyphemus Chatham Dyd/Seaward & Capel.
Ord: 25.2.1839. K: 2.1840. L: 28.9.1840. C: 24.4.1841. Wrecked on a

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Design profile for the Chatham-built sloops of the *Alecto* Class, *Ardent*, *Polyphemus* and the name ship herself, dated 4 July 1839. The hull is strengthened by iron diagonal straps. *DR7344*

steep sandy beach 7 miles from Hansholme on the Baltic coast of Jutland on 29.1.1856 - proceeds of the wreck sold for £467.

Ardent Chatham Dyd/Seaward & Capel.
Ord: 25.2.1839. K: 2.1840. L: 12.2.1841. C: 16.9.1842. Sold to Castle to BU, arrived Charlton 2.3.1865.

Rattler Sheerness Dyd/... .
Ord: 18.3.1841. K: ... . Re-ordered as a screw sloop on 24.2.1842.

NOTES: *Rattler* was re-ordered as a screw sloop (see Chapter 5); she was the first true warship fitted with a screw in the RN and took part in a famous tug-of-war with her original sister *Alecto* 3.1845. A sixth vessel - *Argus* - was ordered 25.4.1847 from Portsmouth Dyd to the *Alecto* design, but on 18.8.1847 a new design was requested for her (see below).

***DRIVER* Class** - Steam Vessels (SV2), later First Class sloops. Sir William Symonds design, 1840.

Dimensions & tons: 180ft 0in, 156ft 0¾in x 36ft 0in (35ft 8in for tonnage) x 21ft 0in. 1,055$^{62}/_{94}$ bm. 1,590 disp.

Men: 149 (later 160). Guns: 2 x 10in (84cwt) on pivot, 2 x 68pdr (64cwt), 2 x 42pdr (22cwt) carronades. 1 x 68pdr (95cwt) replaced 1 x 10in in 1856, and the 4 x 32pdr (42cwt) replaced the 4 smaller guns. A 110pdr BL later replaced the 68pdr.

Machinery: 2-cyl direct-acting (side lever in *Spiteful*). 280 nhp (300 nhp in *Thunderbolt* and *Virago*). *Devastation* and *Sphinx* were differently engined (see below).

First cost (£) of each vessel:

Vessel	*Total*	*Hull*	*Machinery*	*Fitting*
Driver	39,707	19,433	13,866	6,408
Styx	39,805	20,521	13,866	5,418
Vixen	39,098	18,206	13,866	7,026
Devastation	45,744	...	?14,300	...
Geyser	39,855	17,298	13,633	8,922
Growler	39,461	19,559	13,693	5,804
Thunderbolt	42,567	24,454	13,000	5,113
Cormorant	44,898	22,695	14,976	7,227
Spiteful	40,367	18,580	13,094	8,693
Eclair	42,661	18,225	14,770	7,357
Virago	42,713	19,650	15,864	7,199
Sphinx	54,843	16,802	25,578	12,463

Driver Portsmouth Dyd/Seaward & Capel.
Ord: 12.3.1840. K: 6.1840. L: 24.12.1840. C: 5.11.1841. Wrecked on Mayaguana Island in the West Indies 3.8.1861.

Styx Sheerness Dyd/Seaward & Capel.
Ord: 12.3.1840. K: 22.6.40. L: 26.1.1841. C: 4.10.1841. BU 4.1866.

Vixen Pembroke Dyd/Seaward & Capel.
Ord: 12.3.1840. K: 6.1840. L: 4.2.1841. C: 28.12.1841. Sold to Castle & Son to BU at Charlton 12.11.1862.

Devastation Woolwich Dyd/Maudslay, Sons & Field.
Ord: 12.3.1840. K: 27.7.40. L: 3.7.1841. C: 30.11.1841. BU by Castle at Charlton 9.1866.

Geyser Pembroke Dyd/Seaward & Capel.
Ord: 12.3.1840. K: 8.1840. L: 6.4.1841. C: 8.3.1842. BU 1866.

Growler Chatham Dyd/Seaward & Capel.
Ord: 12.3.1840. K: 1.1841. L: 20.7.1841. C: 9.3.1842. BU completed at Portsmouth by 17.1.1854.

Thunderbolt Portsmouth Dyd/Robert Napier & Sons.
Ord: 18.3.1841. K: 4.1841. L: 13.1.1842. C: 8.2.1843. Wrecked on Cape Recife, Algoa Bay, S. Africa on 3.2.1847.

Cormorant Sheerness Dyd/William Fairbairn.
Ord: 18.3.1841. K: 17.5.1841. L: 29.3.1842. C: 28.6.1843. BU completed at Deptford 17.8.1853.

Spiteful Pembroke Dyd/Scott & Sinclair.
Ord: 18.3.1841. K: 8.1841. L: 24.3.1842. C: 24.3.1843. Sold to Castle 9.1883.

Eclair (ex-*Infernal*, renamed 26.8.1844) Woolwich Dyd/Miller, Ravenhill & Salkeld.
Ord: 18.3.1841. K: 8.1841. L: 31.5.1843. C: 9.9.1844. Renamed *Rosamund* 14.10.1846. Floating factory 1863. BU 1865.

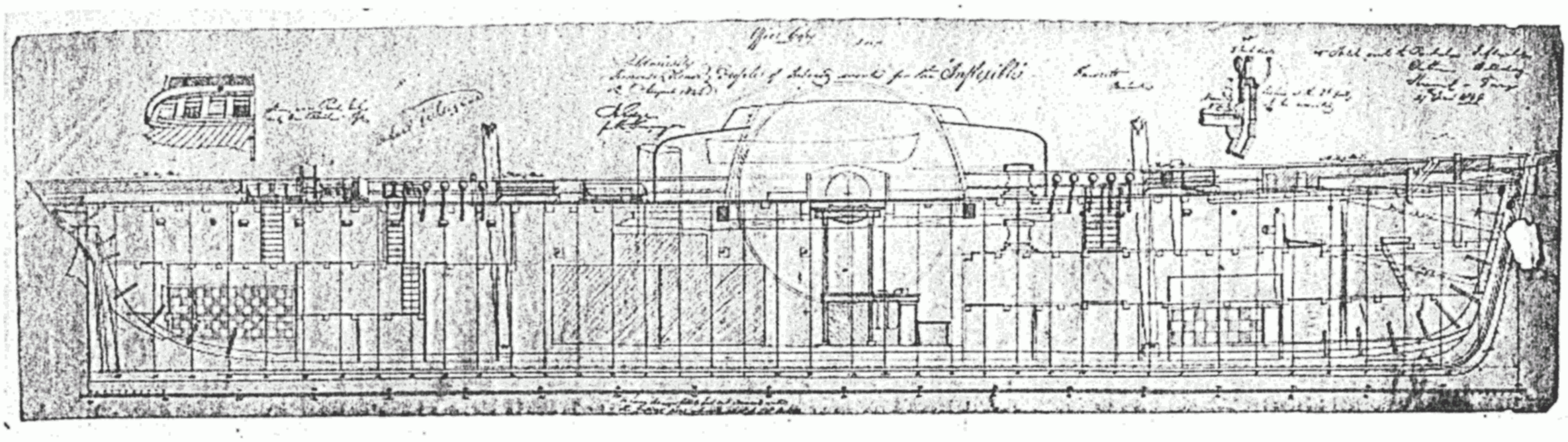
Virago Chatham Dyd/Boulton, Watt & Co.
Ord: 18.3.1841. K: 15.11.1841. L: 25.7.1842. C: 29.7.1843. BU at Chatham 11.1876.

Sphinx Woolwich Dyd/John Penn & Sons.
Ord: 18.3.1841. K: 5.1844. L: 17.2.1846. C: 3.11.1846. BU at Devonport 9.1881.

NOTES: First six ordered 12.3.1840 and named 14.5.1840. Ten more were ordered 18.3.1841, but only six of the latter were built to this plan; *Rattler* was initially amended to the *Alecto* Class design, and was then swiftly re-ordered as a screw sloop; for *Bulldog*, *Inflexible* and *Scourge*, the design was lengthened (bow) to provide the basis for the *Bulldog* Class (see below). A further five (*Furious*, *Magicienne*, *Resolute*, *Tiger* and *Valorous*) were included in the 1847 Programme, ordered 25.4.1847, but four of these were then re-ordered as paddle frigates (which see) - *Resolute* being cancelled. The Maudslay-engined *Devastation* had a 4-cyl. 'Siamese' engine (400 nhp; 785 ihp = 10kts) and the Penn-engined *Sphinx* had a 2-cyl. oscillating engine (500 nhp; 1,169 ihp = 12kts).

***BULLDOG* Class** - Steam Vessels (SV2), later First Class sloops. Symonds

Scan and/or retouch by Grzechu



Profile of inboard works for the sloop *Inflexible*, 23 August 1844. The chequered areas fore and aft indicate the magazines with their pigeon-hole stowage for filled cartridges. *DR6290*

design, 1844.

Dimensions & tons: 190ft 0in, 186ft 0¾in x 36ft 0in oa (35ft 8in for tonnage) x 21ft 0in. 1,123$^{62}/_{94}$ bm.

Men: 160. Guns: (*Scourge*) 2 x 42pdr (84cwt/10ft), 2 x 68pdr (64cwt/9ft), 2 x 42pdr (22cwt) carronades.

Machinery: 2-cyl. direct-acting. Individual nhp/speed as given below.

First cost (£) of each vessel:

Vessel	*Total*	*Hull*	*Machinery*	*Fitting*
Bulldog	56,572	23,342	24,892	8,338
Inflexible	50,114	22,338	18,458	9,418
Scourge	54,002	21,328	20,390	13,284
Fury	51,688	24,764	22,142	4,782

Inflexible Pembroke Dyd/Fawcett, Preston & Co (378 nhp. 680 ihp = 9.5kts).

Ord: 18.3.1841. K: 1.1844. L: 22.5.1845. C: 9.8.1846. Sold to Castle & Beech to BU at Charlton 7.1864.

Scourge Portsmouth Dyd/Maudslay, Sons & Field (420 nhp).

Ord: 18.3.1841. K: 2.1844. L: 9.11.1844. C: 13.5.1846. BU 1865.

Bulldog Chatham Dyd/J. & G. Rennie (500 nhp = 10.2kts).

Ord: 18.3.1841. K: 7.7.1844. L: 2.10.1845. C: 7.9.1846. Fitted with Armstrong guns in 1861. Sunk in action 23.10.1865.

Fury Sheerness Dyd/Rigby (515 nhp = 10.5kts).

Ord: 19.2.1844. K: 6.1845. L: 31.12.1845. C: 6.7.1847. Sold to Castle & Beech to BU at Charlton 7.1864.

NOTES: Developed from the *Driver* Class, with the bow re-designed and lengthened by 10ft (mainly to provide a lengthened engine-room). *Bulldog* was deliberately blown up after running aground in action with Haitian ships and forts at Cape Haytien during which she sank the Haitian *Valorogne* and a schooner.

***JANUS* Class** - Steam Vessel (SV2), later First Class sloop. Thomas Cochrane, Lord Dundonald double-ended design, 1843.

Dimensions & tons: 180ft 0in, 159ft 5in x 30ft 6in oa (30ft 0in for tonnage) x 19ft 1in. 763 bm.

Men: ... . Guns: 2 x 10in (84cwt) on pivots. Re-armed 1855 with 1 x 68pdr (95cwt) replacing 1 x 10in; 4 x 32pdr (17cwt) carronades were added.

Machinery: Rotary engine, with watertube boilers of Cochrane's own design. c6kts only.

First cost: £37,133 (including machinery £10,948).

Janus Chatham Dyd/... .

Ord: 31.7.1843. K: 6.9.1843. L: 6.2.1844. C: 1.1846. Tug at Gibraltar 1849. Gunvessel 1854. Sold 1856.

NOTES: An unsatisfactory experimental design by a distinguished naval officer. In 1849 fitted at Woolwich for £14,397 as a tug (for Gibraltar?). In 4.1854 completed fitting as a gunvessel at Woolwich for £7,378. Re-engined 1855 with the 2-cyl. 220nhp side lever engine ex-*Sydenham*. In April (?) 1856 she was sold to Castle for £3,300 including her engines to be broken up at Charlton (the AO authorising this is given as being dated 8.9.1856).

***BASILISK* Class** - First Class sloop. Oliver Lang design, 1846 (similar lines to the screw sloop *Niger*).

Dimensions & tons: 190ft 0in, 166ft 1in x 34ft 0in oa (33ft 8in for tonnage) x 21ft 6in. 1,001$^{25}/_{94}$ bm. 1,710 disp.

Men: 145. Guns: 1 x 68pdr (95cwt) on pivot, 1 x 10in (84cwt), 4 x 32pdr (42cwt).

Machinery: 2-cyl. oscillating. 400 nhp. 1,033 ihp.

First cost: £54,745.

Basilisk Woolwich Dyd/Miller, Ravenhill & Salkeld.

Ord: 26.3.1846. K: 11.1846. L: 22.8.1848. C: 7.1852. BU at Chatham 1882.

NOTES: When built, measured 5in beamier than design (at 1,031 bm). Featured in a tug-of-war trial with her screw-powered near-sister *Niger*.

***BUZZARD* Class** - Second Class sloop. John Edye design, approved 29.7.1847.

Dimensions & tons: 185ft 0in, 162ft 2in x 34ft 0in oa (33ft 8in for tonnage) x 20ft 0in. 977$^{61}/_{94}$ bm. 1,530 disp.

Men: 100. Guns: 2 x 10in (84cwt) on pivots, 4 x 32pdr (25cwt).

Machinery: 2-cyl. oscillating. 300 nhp. 853 ihp = 10kts.

First cost: £45,699.

Buzzard Pembroke Dyd/Miller, Ravenhill & Salkeld.

Ord: 25.4.1847. K: 10.1847. L: 24.3.1849. C: 8.11.1850. BU at Devonport 9.1883 (by AO 17.6.1881).

NOTES: Not actually fitted for sea until sailed from Deptford 23.6.1852 (an extra £2,311).

***ARGUS* Class** - Second Class sloop. John Fincham design, approved 19.8.1849.

Dimensions & tons: 190ft 2½in, 168ft 4in x 33ft 6in oa (33ft 0in for tonnage) x 20ft 11in. 975$^{3}/_{94}$ bm. 1,630 disp.

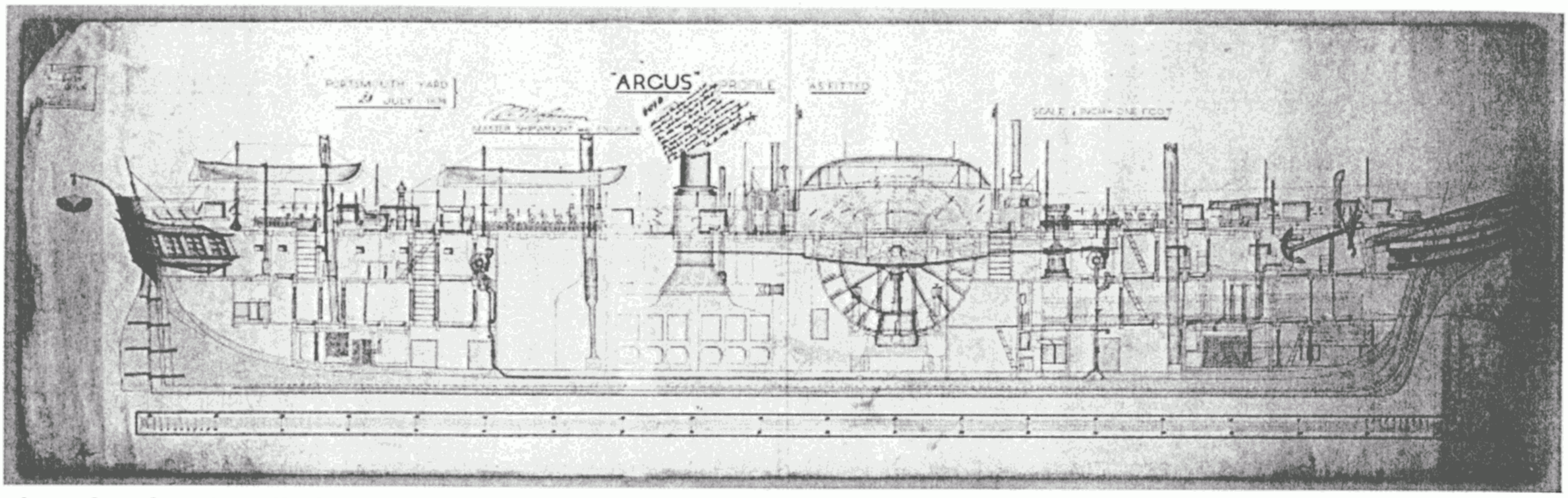
Men: 100. Guns: 2 x 10in (84cwt) on pivots, 4 x 32pdr (25cwt).

Machinery: 2-cyl. oscillating 300 nhp. 764 ihp = 10kts.

First cost: £49,188 (including machinery £18,419).

Argus Portsmouth Dyd/John Penn & Sons.

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A late, and very decorative profile of *Argus* as fitted, 23 July 1874. The note relates to the vessel's employment as a troopship. *DR6090*

Ord: 25.4.1847. K: 6.1848. L: 15.12.1849. C: 2.5.1853. BU at Chatham 10.1881.

NOTES: Originally planned as an *Alecto* Class, but design lengthened by 6ft during 1847. Barque-rigged.

***BARRACOUTA* Class** - Second Class sloop. Committee of Reference design, approved 14.1.1848.

Dimensions & tons: 190ft 2in, 166ft 4½in x 35ft 0in oa (34ft 5in for tonnage) x 20ft 5in. 1,048$^{40}/_{94}$ bm. 1,676 disp.
Men: 100. Guns: 2 x 10in (84cwt) on pivots, 4 x 32pdr (25cwt).
Machinery: 2-cyl. direct-acting. 300 nhp. 881 ihp = 10.5kts.
First cost: £50,042 (including machinery £18,228).

Barracouta Pembroke Dyd/Miller, Ravenhill & Salkeld.

Ord: 25.4.1847. K: 5.1849. L: 31.3.1851. C: 30.7.1853. BU at Chatham 12.1881.

NOTES: In 1856 a 68pdr (95cwt) pivot-mounted gun replaced 1 x 10in, and the 25cwt guns were replaced by 42cwt; in 1862 the 68pdr was replaced by a 110pdr (82cwt) BLR pivot-mounted gun.

Paddle Gunvessels

On 21 January 1837, as mentioned under 'Paddle Frigates', the former single category of steam vessels was split into five classes - the first three categories covering the steam frigates and sloops (see above). The last two categories (SV4 and SV5) covered the smaller ships which were later to be defined as steam gunvessels. These were divided as follows:

SV4 - *Tartarus*, *Blazer*; *Columbia*, *Pluto*.
SV5 - *Lightning*, *Meteor*, *Confiance*, *Echo*, *Alban*, *Carron*; *African*, *Comet*.
During 1839-41, the following former packets were added to these classes:
to SV4 - *Kite*, *Avon* (both on 6.5.1839); *Gleaner* (20.11.1839); *Lucifer* (21.3.1840); *Shearwater* (7.8.1840).
to SV5 - *Boxer*, *Fearless* (early 1839); *Monkey* (21.4.1841).

The category of 'steam gunvessel' (SGV) was introduced on 31 May 1844, with most existing SV4 vessels classed as First Class SGVs (the *Columbia* had become a survey vessel in 1842). In theory, existing SV5 vessels became Second Class SGVs, but most of the early ships in the SV5 category were, however, instead reclassed as tenders at this time - the *Comet*, *Meteor*, *Alban* (becoming a transport), *Carron*, *Echo*, *African* and *Confiance*; as also did the *Fearless*, *Monkey* and *Dwarf*. First Class SGVs had a complement of 80 men, and hypothetically would carry 1 x 32pdr (26cwt) and 2 x 32pdr (17cwt) carronades; Second Class SGVs had a complement of 60 men, and were to carry 1 x 18pdr (22cwt) and 2 x 18pdr (15cwt) carronades.

***PLUTO* Class** - Steam Vessel (from 1837 rated SV4 and rerated as a First Class gunvessel in 1844). Oliver Lang design, approved 1.2.1831.

Dimensions & tons: 135ft 0½in, 118ft 8in x 24ft 3in x 11ft 10in.
Draught 6½ft. 365 bm. 386 disp.
Men: 80. Guns: 2 x 18pdr (22cwt); later 1 x 32pdr (42cwt) pivot-mounted + 1 x 18pdr (22cwt).
Machinery: 2-cyl. side lever. 100 nhp. 7.5kts.
First cost: £17,432 (including £5,465 for the machinery).

Pluto Woolwich Dyd/Boulton, Watt & Co.

Ord: 9.11.1830. K: 2.1831. L: 28.4.1831. C: 9.9.1831. BU completed at Sheerness 26.3.1861.

NOTES: Shallow-draught vessel intended to combat piracy in the Caribbean, but served chiefly in West African anti-slavery duties.

***FIREBRAND* Class** - Steam Vessels (SV3 from 1837), reclassed 1844 as First Class SGVs. Thomas Ditchburn design (for *Flamer*, presumably used also for *Firebrand*).

Dimensions & tons: 155ft 3in, *c*136ft 9in x 26ft 5in x 14ft 10in.
Draught 9¾ft. 495 bm. 510 disp.
Men: 80. Guns: Initially 6 x 9pdr (13½cwt); later 1 x 32pdr (25cwt) on pivot, 2 x 32pdr (17cwt) carronades.
Machinery: 2-cyl. side lever. *Firebrand* 140 nhp, *Flamer* 120 nhp
First cost: *Firebrand* £19,964 (builder paid £7,474, machinery £7,543?). *Flamer* £22,865 (builder paid £7,489, original machinery £2,293, Boulton, Watt & Co machinery cost £6,145).

Firebrand Curling, Young & Co., Limehouse./Butterley Co.

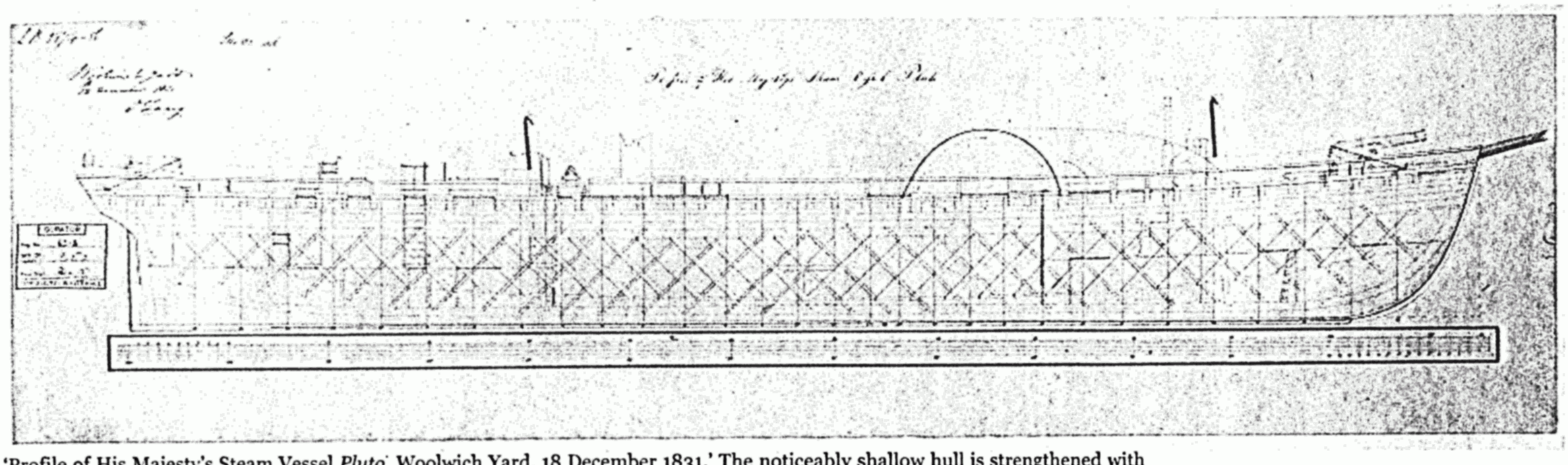
Ord: 28.1.1831. K: 4.1831. L: 11.7.1831. C: 11.7.1831. Re-engined 1833. Renamed *Black Eagle* 5.2.1842. Lengthened 1843, rerated paddle yacht, completing service as Admiralty yacht until 1857; then tender. BU at Portsmouth 3.1876.

Flamer Fletcher & Fearnall, Limehouse./Boulton, Watt & Co.

Ord: 28.1.1831. K: 4.1831. L: 11.8.1831. C: 27.10.1832. Refitted 'for the Holyhead Station' 1848-49. Lost on the Coast of West Africa, 12 miles to the east of Monrovia (Liberia) on 22.11.1850.

NOTES: First steamers built for the RN by private builders instead of the Royal Dockyards. *Firebrand* had her Butterly engine removed in 12.1832 (fitted in *Spitfire* instead) and replaced by a Maudslay 120 nhp engine in 7.1833 (cost £2,606) with Morgan's paddle wheels (£1,375). In 1840 engine nhp was raised to 132 during a refit at Woolwich. In 1843 she was

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'Profile of His Majesty's Steam Vessel *Pluto*. Woolwich Yard, 18 December 1831.' The noticeably shallow hull is strengthened with diagonal iron straps. Apart from the pivot guns fore and aft the draught also shows a small carriage-mounted carronade on the broadside just forward of the after mast. *DR6313*

lengthened forward by 13ft (becoming 540 bm) and a new 260 nhp Penn engine with 'tubulous boilers' was fitted (machinery cost £14,200 - entire cost of this rebuild was £22,587). The order for her scrapping was issued in 1873. *Flamer* was originally fitted with Morgan's experimental 140 nhp high pressure engine and paddle wheels, but the former 'did not answer' and was replaced in 7.1832 before completion by a Boulton, Watt & Co. 120 nhp engine. In 1840 'cycloidal' paddle wheels were fitted.

***FIREFLY* Class** - Steam Vessels (SV3 from 1837), reclassed 1844 as First Class SGVs. Oliver Lang design, approved 28.3.1832.

Dimensions & tons: 155ft, 136ft 8in x 27ft 6in x 16ft 7in. 550 bm.
Men: 80. Guns: 1 x 32pdr (50cwt) on pivot; plus 2 x 32pdr (17cwt) in *Firefly* or 4 x 32pdr (25cwt) in *Spitfire*.
Machinery: 2-cyl. side lever. *Firefly* 220 nhp; *Spitfire* 140 nhp/380 ihp.
First cost: *Firefly* £16,057 + machinery £5,369.

Firefly Woolwich Dyd/Maudslay, Sons & Field.
Ord: 28.3.1832. K: 5.1832. L: 29.9.1832. C: 31.1.1833. Re-engined 1844, then survey ship. BU at Malta 1866.

Spitfire Woolwich Dyd/Butterley Co.
Ord: 29.11.1832. K: 12.1832. L: 26.3.1834. C: 23.7.1834. Wrecked whilst trooping on Half Moon Cay lighthouse reef, Belize 10.9.1842.

NOTES: *Firefly* fitted with 'cycloidal' paddle wheels in 1839. Re-engining in 1844 was done with the engine and boilers from *Phoenix*. *Spitfire* was fitted with the engine taken from *Firebrand* and Morgan's paddle wheels - at one stage she was classed as a packet.

***TARTARUS* Class** - Steam Vessels (SV4 from 1837), reclassed 1844 as First Class SGVs. Oliver Lang design, 1833.

Dimensions & tons: 145ft 0in, 125ft 6in x 28ft 4in (28ft 0in for tonnage) x 14ft 9in. Draught 10½ft. $523^{24}/_{94}$ bm. 560 disp.
Men: 80. Guns: Initially 2 x 9pdr (13½cwt); later 1 x 32pdr (25cwt) on pivot, 2 x 32pdr (17cwt) carronades.
Machinery: 2-cyl. side lever 100 nhp (*Blazer* 120 nhp).
First cost: *Tartarus* £22,012 (including machinery £7,644). *Blazer* £19,994.

Tartarus Pembroke Dyd/Boulton, Watt & Co.
Ord: 2.7.1833. K: 9.1833. L: 23.6.1834. C: 3.10.1834. Re-engined 1837-38. BU completed at Malta 6.11.1860.

Blazer Chatham Dyd/Boulton, Watt & Co.
Ord: 2.10.1833. K: 11.1833. L: 5.1834. C: 12.2.1835. Survey ship 1.1843. BU completed at Portsmouth 8.1853.

NOTES: Originally Boulton, Watt & Co. machinery from store was fitted to *Tartarus*. She was re-engined 1837-38 (by AO 4.5.1837) with Miller & Ravenhill engines of 136 nhp which cost £7,897. *Blazer* was fitted with the engine and boiler removed from *Echo* (?). In 1851 she was fitted 'to take telegraph to Dover'.

***LIZARD* Class** - Steam Vessels (SV5), reclassed 1844 as Second Class SGVs. Symonds design, approved 22.5.1839.

Dimensions & tons: 120ft, 104ft 10¾in x 22ft 8in (22ft 6in for tonnage) x 13ft. $282^{49}/_{94}$ bm.
Men: 60. Guns: 1 x 18pdr (22cwt) on pivot, 2 x 18pdr (15cwt) amidships.
Machinery: 2-cyl. side lever. 100 nhp. 157 ihp (*Locust*).
First cost: *Lizard* £15,085 (including machinery £6,453). *Locust* £15,244 (including machinery £6,424)

Lizard Woolwich Dyd/Maudslay, Sons & Field.
Ord: 18.3.1839. K: 7.1839. L: 7.1.1840. C: 26.1.1841. Initially fitted for surveying. Lost in collision with French armed steamer *Veloce* between Gibraltar and Cadiz on 26.7.1843.

Locust Woolwich Dyd/Maudslay, Sons & Field.
Ord: 18.3.1839. K: 7.1839. L: 18.4.1840. C: 30.11.1840. Tug 1869. Sold at Sheerness 1895.

***PORCUPINE* Class** - Steam Vessel (SV5), reclassed 1844 as First Class SGVs. 'Admiralty' design, approved 11.11.1843.

Dimensions & tons: 141ft 0in, 124ft 7½in x 24ft 1½in (24ft 0in for tonnage) x 13ft 0in. $381^{68}/_{94}$ bm.
Men: 80. Guns: 1 x 32pdr (26cwt) on pivot, 2 x 32pdr (17cwt) carronades.
Machinery: 2-cyl. side lever. 132 nhp. 285 ihp.
First cost: Hull £7,997, fitting £7,050 (including machinery £4,557 ?).

Porcupine Deptford Dyd/Maudslay, Sons & Field.
Ord: 11.11.1843. K: 1.1844. L: 17.6.1844. C: 19.8.1844. Survey ship 1862. Sold 1883.

NOTES: The engine was ex-*Black Eagle*, fitted with new tubular boilers.

***SPITFIRE* Class** - Steam Vessel (SV5), reclassed 1844 as First Class SGV. 'Admiralty' design, approved 11.11.1843.

Dimensions & tons: 147ft 2in, 130ft 0in x 25ft 1in (25ft 0in for tonnage) x 14ft 6in. $432^{17}/_{94}$ bm.
Men: 80. Guns: 1 x 32pdr (26cwt) on pivot, 2 x 32pdr (17cwt) carronades.
Machinery: 2-cyl. side lever. 140 nhp.
First cost: Hull £7,963, fitting & machinery £9,320.

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Spitfire Deptford Dyd/Butterley Co.
Ord: 11.11.1843. K: 6.1844. L: 26.3.1845. C: 30.6.1845. Survey ship 1851. Tug 1861. BU at Bermuda 1888.
NOTES: Fitted with the engine that had come from *Hermes*, with new boilers.

Paddle Packets

While the paddle vessels *Messenger* and *Courier* were purchased in 1830 for the Corfu service, they were quickly reclassed as sloops and appear earlier in this chapter. However, when in 1837 the Admiralty took over responsibility for the packet service from the Post Office as part of a policy of rationalising services, the following 26 paddle steamers were all transferred by the Post Office to the Admiralty's jurisdiction. Note that two other Post Office paddle packets which would undoubtedly have been part of this transfer arrangement - the 1821-built *Meteor* and *Dasher* - had been wrecked on 23 February 1830 and 19 December 1830 respectively; details of these two vessels are included below to complete the PO paddle packet list, although control of them was never in Admiralty hands. The Admiralty Board formed a new Packet Department on 16 January 1837, and a new Steam Department on 19 April 1837, both to be administered jointly by Sir William Parry.

LARGE TYPE - built for the prestige Liverpool-Kingstown service. Four vessels were contracted for on 1.11.1824 (*Thetis* and *Dolphin*) and 23.11.1824 (*Etna* and *Comet*), all with 140 nhp engines. *Thetis* (in 1835) and *Comet* (in 1836) were lengthened by Humble & Hurry, Liverpool and fitted with new engine cylinders (new power of 170 nhp and 190 nhp respectively). With these must be included the Liverpool-based tender *Richmond*, which had been purchased in 1834 to replace an earlier smaller tender *Jonathan Hulls* (which had been disposed of in 3.1834). In 1839-40 all four of the large packets were replaced on the Liverpool service by the new *Merlin* Class packets (see below) and were reclassed as paddle gunvessels (SV4).

AVON 1837-63 (ex-PO *Thetis*, built 1825 by George Graham, Harwich).
Dimensions & tons: 143ft 11¼in, ... x 23ft 0in x 14ft 7in. 361 bm.
Men: 22. Guns: 2 x 6pdr carronades.
Machinery: Boulton, Watt & Co. side lever. 160 nhp.
Originally of 301 bm tons, with 140 nhp engine; lengthened and re-engined 1835.
Transferred to Admiralty 1837. Fitted as a transport (?or hospital) ship 5.1839, rated Second Class paddle gunvessel 6.5.1839. Refitted at Woolwich as survey ship 8.1843. Tender to Flagship at Devonport 1849. Sold to Marshall to BU at Plymouth 19.1.1863.

SHEARWATER 1837-57 (ex-PO *Dolphin*, built 1826 by George Graham, Harwich).
Dimensions & tons: 136ft 10¾in, ... x 22ft 10½in x 14ft 9in. 343 bm.
Men: 12. Guns: 2 x 6pdr carronades.
Machinery: Boulton, Watt & Co. side lever. 160 nhp.
Transferred to Admiralty 1837. Based at Liverpool. Fitted for the West Indies 1840. Survey ship 3.1841 to 8.1851, then to Malta as Second Class paddle gunvessel. Sold at Malta for £1,025 2.7.1857.

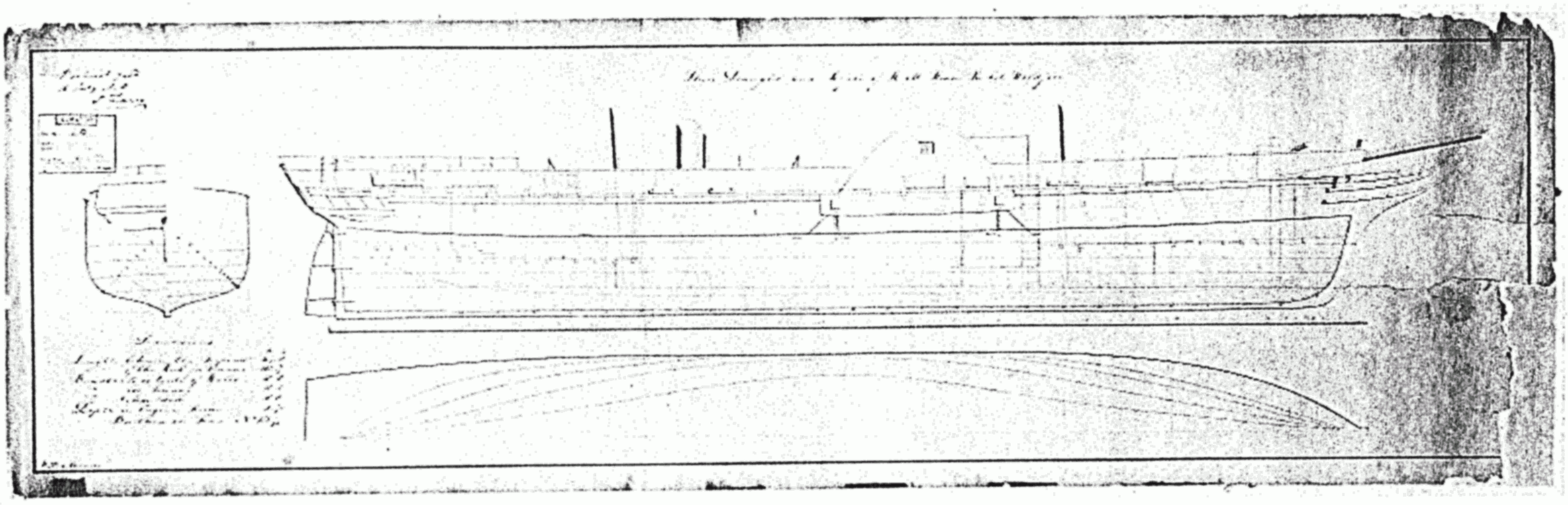
KITE 1837-65 (ex-PO *Etna*, built 1825 by Humble & Hurry, Liverpool).
Dimensions & tons: 124ft 11in, ... x 22ft 8in x 14ft 5in. 300 bm.
Men: 12. Guns: 2 x 6pdr brass.
Machinery: Fawcett, Preston & Co. side lever. 170 nhp.
Transferred to Admiralty 7.1837. Originally based at Liverpool, from 1839 based at Holyhead, Plymouth & Liverpool. Rerated Steam Vessel (SV4) 6.5.1839. Tug for Bermuda 1848. Sold to T. Sargent 1864 and BU at Charlton 1865.

LUCIFER 1837-75 (ex-PO *Comet*, built 1825 by Humble & Hurry, Liverpool).
Dimensions & tons: 155ft 3in, ... x 22ft 9½in x 14ft 1in. 387 bm.
Men: 12. Guns: 2 x 6pdr carronades.
Machinery: Fawcett, Preston & Co. side lever. 170 nhp.
Orig. of 300 bm tons, with 140 nhp Maudslay engine; lengthened in 1831 by Fawcett, Preston & Co. and re-engined 1836 with larger cylinders.
Transferred to Admiralty 1837. Based at Liverpool & Pembroke. Later First Class paddle gunvessel. Engines removed 1875 and transferred to Coastguard (became *CGWV.41*). Sold 1893.

REDWING 1837-48 (ex-PO *Richmond*, built 1834 by Hunter & Dow, Glasgow).
Dimensions & tons: 144ft 5in, ... x 16ft 0in x 10ft 8in. 139 bm.
Men: 11. Guns: 2 x 6pdr carronades.
Machinery: David Napier & Co steeple engine (the only ex-PO packet not fitted with a side lever engine). 60 nhp.
Tender for packet service (rather than packet). Based at Liverpool.
Sold to Messrs. Sutherland (for £650) 17.1.1848.
NOTES: Although hull was built by Hunter & Dow, this was a speculative venture by David Napier, and was bought by the PO following trials.

MEDIUM TYPE - built for the Holyhead-Howth, Milford-Dunmore and Weymouth-Channel Islands services. The first vessel, *Lightning*, was contracted for on 17.7.1820 and the second, *Meteor* (wrecked 1830), on 23.8.1820; their construction was supervised by Oliver Lang on behalf of the Admiralty. The *Ivanhoe* was purchased in 1821 and the *Vixen* ordered from Deptford Dyd in 5.1822. Ten further packets were contracted for on 26.2.1823 (*Aladdin*), 15.4.1823 (*Harlequin* and *Cinderella*), 1.7.1824 (*Crocodile*), 22.3.1825 (*Watersprite*, *Escape* and *Wizard*), 10.3.1827 (*Sibyl*), 17.3.1827 (*Dragon*) and 8.1830 (*Flamer*); a final ship, *Gulnare*, was ordered from Chatham Dyd in 3.1833.

MONKEY 1837-87 (ex-PO *Royal Sovereign*, ex-*Lightning*, built 1821 by William Evans, Rotherhithe).
Dimensions & tons: 106ft 6in, 92ft 0¼in x 21ft 0in x 11ft 2in. 212 bm.
Men: 12. Guns: 1 x 12pdr carronade, travelling carriage.
Machinery: Boulton, Watt & Co. 2-cyl. side lever. 80 nhp. 373 ihp.
Ord: (for the Holyhead-Howth route) 17.7.1820. L: 18.1.1821 and arrived 18.5.1821 at Holyhead. Transferred to Admiralty 3.1837. Based at Pembroke. Became a paddle gunvessel in 1841, then a tug at Chatham 1844. By 1853 new machinery of 130 nhp was fitted at Chatham. Sold 9.1887.
NOTES: This is the vessel on which was based the tenacious legend that 'Their Lordships of the Admiralty so despised steam that they named the first steamer they built *Monkey*, which was a tug'. As will seen above, the vessel in question was built as *Lightning*, changed in 8.1821 at the wish of George IV to *Royal Sovereign King George the Fourth* (on the occasion of his visit to Ireland in 1821) which was quickly shortened to *Royal Sovereign*; she was not built for the Admiralty but for another Government department, she was not named *Monkey* until 1837, and was not a tug until 1844. The legend presumably comes from some publicist looking at a navy list and seeing that the oldest steamer there was called *Monkey*. The legend was already being propagated in Fincham's *History of Naval Architecture* of 1852, by an author who, as a Master Shipwright and candidate to become Surveyor, should have known better.



Sheer and profile of HM Steam Packet *Wildfire* as taken off at Woolwich, 16 July 1838. *DR6307*

PO *Meteor*, built 1821 by William Evans, Rotherhithe.
Dimensions & tons: as built: 104ft 6in oa, 103ft 9in pp x 20ft 0in for tonnage x 11ft 6in. 189 bm.
Machinery: Boulton, Watt & Co side lever. 60 nhp.
Ord: (for the Holyhead-Howth route) 23.8.1820. L: 17.3.1821 and arrived 18.5.1821 at Holyhead. Transferred to Weymouth-Channel Islands service 4.1828 and wrecked off Portland 23.2.1830.

BOXER 1837-41 (ex-PO *Ivanhoe*, built 1819 by Scott & Co, Greenock for the City of Dublin Steam Packet Co., purchased by the PO in 12.1821).
Dimensions & tons: 101ft 2in, 87ft 11in x 18ft 7in x 10ft 11in. 157 bm.
Men: ... . Guns: ... .
Machinery: Originally David Napier side lever, replaced by Maudslay side lever 1826. 60 nhp.
Originally launched 17.2.1820 and purchased 1821 by the PO for the Holyhead Station, later to the Weymouth Station. Transferred to Admiralty 1.4.1837, then used for surveying the Thames Estuary. Sold to Mr Levy to BU 27.5.1841.

ADVICE 1837-70 (ex-PO *Vixen*, built 1827 at Deptford Dyd. Oliver Lang design of 6.5.1822).
Dimensions & tons: 107ft 8in, 93ft 11in x 20ft 0in oa (19ft 10in for tonnage) x 11ft 11in. 197 bm.
Men: 12. Guns: 1 x 12pdr carronade, travelling carriage.
Machinery: Boulton, Watt & Co. side lever. 80 nhp.
Transferred to Admiralty 4.1837. New cylinders installed 1837. Based at Holyhead & Pembroke. Packet 1844-48, later used as a tug. New 100 nhp engine fitted 1851. Tender to Flagship at Queenstown (Cobh) in later 1850s/1860s. Paid off for conversion to a dredger in 10.1868 (not done). Sold to J. J. Stark 12.5.1870.

JASPER 1837-54 (ex-PO *Aladdin*, built 1824 by Richard Symonds, Falmouth for Simmonds - later purchased by PO).
Dimensions & tons: 112ft 6in, *c*95ft 0in x 21ft 4in x 12ft 5in. 223 bm.
Men: 12. Guns: 1 x 12pdr carronade, travelling carriage.
Machinery: Fawcett, Preston & Co. side lever. 100 nhp.
Based at Pembroke & Holyhead. Transferred to Admiralty in 1837. Refitted at Woolwich as survey ship 1849. Converted to gunboat 1854 (for Baltic service). Caught fire, exploded and sank off Beachy Head 15.5.1854.

SPRIGHTLY 1837-89 (ex-PO *Harlequin*, built 1823 by Wigram & Green, Blackwall. (No.186)).
Dimensions & tons: 119ft 9in, 104ft 2in x 21ft 1in x 12ft 8in. 234 bm.
Men: ... . Guns: 1 x 6pdr (long).
Machinery: Boulton, Watt & Co. 2-cyl. (39½in diam., 42in stroke) side lever. 100 nhp (orig. Maudslay 80 nhp, re-engined 1831).
Based at Holyhead from 6.1824 to 8.1848. Transferred to Admiralty 1837. Tender to *Victory* at Portsmouth 1848. Sold 1889.

CUCKOO 1837-64 (ex-PO *Cinderella*, built 1822 by Wigram & Green, Blackwall. (No.187)).
Dimensions & tons: 120ft 6in, 100ft 0in x 20ft 0in x 12ft 6in. 234 bm.
Men: 12. Guns: 1 x 6pdr (4cwt) brass.
Machinery: Boulton, Watt & Co. side lever. 100 nhp.
Based at Holyhead from 6.1824. Transferred to Admiralty 1837. At Weymouth from 1839. Fitted for the protection of the Channel fisheries 1848. Fitted as a gunvessel for Baltic service 1854. Fitted for a tug for Gibraltar 1861. Sold at Devonport 10.1864.

ADDER 1837-70 (ex-PO *Crocodile*, built 1826 by George Graham, Harwich).
Dimensions & tons: 116ft 4in, 102ft 10in x 21ft 2in x 12ft 6in. 241 bm. 272 disp.
Men: 12. Guns: 1 x 12pdr carronade, travelling carriage.
Machinery: Boulton, Watt & Co. side lever. 100 nhp.
Transferred to Admiralty 5.1837. Based at Milford (to 1836) and later Pembroke. Dockyard tender from 8.1848. Sold to Wilson McLay & Co. 13.5.1870.

WILDFIRE 1837-56 (ex-PO *Watersprite*, built 1826 by George Graham, Harwich).
Dimensions & tons: 114ft 0in, 102ft 7in x 18ft 8in x 11ft 7½in. $185^{5}/_{94}$ bm.
Men: 12. Guns: 1 x 6pdr (4cwt) brass.
Machinery: Boulton, Watt & Co. side lever. 75 nhp. 198 ihp.
Originally of 162 bm tons, with 60 nhp engine; lengthened by White, Gosport and re-engined 1836.
Transferred to Admiralty 5.1837. Packet, based at Weymouth 7.1827-4.1845. Tender at Sheerness 1865. Sold to W. Walker to BU 12.1888.

DOTEREL 1837-50 (ex-PO *Escape*, built 1826 by George Graham, Harwich).
Dimensions & tons: 118ft 7in, 101ft 9in x 20ft 9in x 12ft 7in. 237 bm.

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Men: ... . Guns: 1 x 6pdr (long)
Machinery: Boulton, Watt & Co. side lever. 100 nhp.
Transferred to Admiralty 1837. Based at Holyhead from 11.1826 (replaced by *Caradoc*). Sold to H. H. Hall 30.11.1850.

OTTER 1837-78 (ex-PO *Wizard*, built 1827 by George Graham, Harwich).
Dimensions & tons: 120ft 0in, 102ft 0in x 20ft 9in x 12ft 8in. 237 bm.
Men: ... . Guns: 1 x 6pdr (long)
Machinery: Boulton, Watt & Co. side lever. 120 nhp.
Based at Holyhead until 8.1849. Transferred to Admiralty 1837. Refitted as gunboat for Baltic service 1854. Tug 1860. Coal 'haulabout' at Chatham 1878, then coal hulk at Sheerness 1884. Sold 1893.

PIGMY 1837-79 (ex-PO *Sibyl*, built 1827 by Humble & Hurry, Liverpool).
Dimensions & tons: 114ft 6in, 101ft 6in x 20ft 7in x 13ft 2in. 227 bm.
Men: 12. Guns: 1 x 12pdr carronade, travelling carriage.
Machinery: Fawcett, Preston & Co. 2-cyl. side lever. 86 nhp.
Transferred to Admiralty 4.1837. Based at Pembroke & Holyhead. BU at Portsmouth 1879. Gunboat for Baltic 1854. Tender 1856.

ZEPHYR 1837-65 (ex-PO *Dragon*, built 1827 by George Graham, Harwich).
Dimensions & tons: 116ft 0in, 103ft 0in x 20ft 8in x 12ft 3in. 237 bm. 272 disp.
Men: 12. Guns: 1 x 6pdr (long).
Machinery: Boulton, Watt & Co. side lever. 100 nhp (orig. 80 nhp, re-engined 1830).
Transferred to Admiralty 1.4.1837. Based at Holyhead. Sold to Marshall to BU at Plymouth 6.1865.

FEARLESS 1837-75 (ex-PO *Flamer*, built 1831 by Fletcher & Fearnall, Limehouse).
Dimensions & tons: 112ft 6in, 96ft 0in x 18ft 5in x 11ft 1in. 165 bm.
Men: 12. Guns: 1 x 6pdr (4cwt) brass.
Machinery: Boulton, Watt & Co. side lever. 76 nhp.
Transferred to Admiralty 8.1837. From 1838 based at Weymouth. Surveying vessel 1841. By 1860s tender at Chatham and Sheerness. BU at Chatham 1875.

GLEANER 1837-49 (ex-PO *Gulnare*, built 1833 at Chatham Dyd.).
Dimensions & tons: 120ft 0in, 106ft 10in x 23ft 3in x 13ft 0in. $300^{57}/_{94}$ bm.
Lengthened 1839: 138ft 0in, 124ft 10in x 23ft 3in x 13ft 0in. $351^{21}/_{94}$ bm.
Men: ... . Guns: 1 x 6pdr (long).
Machinery: Boulton, Watt & Co. side lever. 100 nhp. (1838, increased to 130 nhp.)
Design approved 20.5.1833. Based at Holyhead from 1834 (replacing *Aladdin*). Transferred to Admiralty 29.6.1837. Machinery replaced by Boulton, Watt & Co. at Woolwich 1838. Lengthened by 18ft at Chatham 1839 (plans submitted 6.7.1839). BU at Deptford 8.1849 (her engines being transferred to *Monkey*).

SMALL TYPE - built for and employed on the shortest routes - Dover-Calais, Margate-Ostend (until 1830) and Portpatrick-Donaghadee services. Eight vessels contracted for in 6.1821 (*Arrow* and *Dasher*), 4.1823 (*Fury* and *Spitfire*), 5.1826 (*Crusader* and *Salamander*), and 8.1830 (*Ferret* and *Firefly*). Of these *Dasher* had been wrecked 19.12.1830. Several were lengthened during the 1830s - all at Fletcher & Fearnall, Limehouse (*Arrow* in 1833, *Ferret* in 1835, *Crusader* in 1836, *Beaver* ex-*Salamander* in 1837, and *Myrtle* ex-*Firefly* after transfer from the Post Office) - and their engine capacity raised.

ARIEL 1837-50 (ex-PO *Arrow*, built 1822 by William Evans, Rotherhithe).
Dimensions & tons: as built: 94ft 6in oa , 92ft 2in pp. 130 bm.
as lengthened: 107ft 11½in, 95ft $10^{1}/_{8}$in x 17ft 5in (17ft 3in for tonnage) x 10ft 3in. $151^{65}/_{94}$ bm.
Men: 12. Guns: 1 x 4pdr carronade.
Machinery: Boulton, Watt & Co. side lever. 60 nhp.
Originally of 130 bm tons, with 2 x 20 nhp engines. Ord: (for the Dover-Calais route) 9.6.1821. L: 13.9.1821 and arrived 25.1.1822 at Dover. Transferred to Portpatrick-Donaghadee service 5.1825. Returned to Dover (for service to Ostend) 1833, for which she was lengthened by Fletcher & Fearnall, Limehouse and re-engined 9.1833. Transferred to Admiralty 1.2.1837, remaining based at Dover. Laid up 1.1846. Sold to T. Marston 17.5.1850 for commercial service.

PO *Dasher*, built 1821 by William Patterson, Rotherhithe.
Dimensions & tons: as built: 88ft 0in oa, 86ft 6in pp x 18ft 6in for tonnage x 10ft 6in. 130 bm.
Machinery: Boulton, Watt & Co. side lever. 40 nhp.
Ord: (for the Dover-Calais route) 10.6.1821. L: 13.9.1821 and arrived 17.10.1821 at Dover (but returned to Rotherhithe where Wm. Evans undertook modifications - being back at Dover by 19.3.1822).
Transferred to Portpatrick-Donaghadee service 4.1825 and wrecked off Portpatrick 19.12.1830.

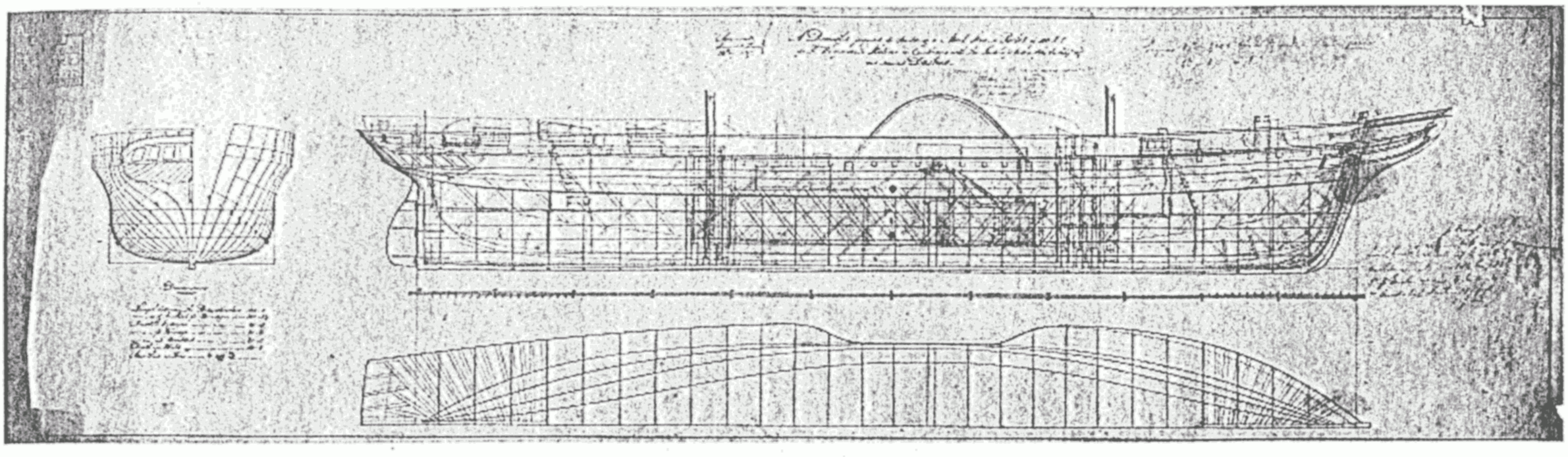
PIKE 1837-68 (ex-PO *Spitfire*, built 1824 by George Graham, Harwich).
Dimensions & tons: 89ft 0in, 79ft 3in x 16ft 3in x 8ft 10½in. 111 bm.
Men: ... . Guns: 1 x 6pdr (long).
Machinery: Boulton, Watt & Co. side lever. 50 nhp.
Transferred to Admiralty 1837. Based at Portpatrick and Holyhead. Tender 1851. BU at Devonport 7.1868.

ASP 1837-69 (ex-PO *Fury*, built 1825 by George Graham, Harwich).
Dimensions & tons: 89ft 7in, 79ft 10in x 16ft 3in x 8ft 11in. 112 bm.
Men: ... Guns: 1 x 6pdr (long).
Machinery: Boulton, Watt & Co. side lever. 50 nhp.
Transferred to Admiralty 1837. Based at Portpatrick and Holyhead, later at Pembroke. Tender to *Saturn* at Devonport 1865. Replaced *Widgeon* at Deptford 1868. Transferred to the Director of Works 1869 for use in the extension of Chatham Dyd. BU at Chatham 7.1881.

BEAVER 1837-50 (ex-PO *Salamander*, built 1827 by George Graham, Harwich).
Dimensions & tons: 102ft 2in, *c*92ft 0in x 16ft 2in x 8ft 8in. 128 bm.
Men: 12. Guns: 1 x 4pdr carronade.
Machinery: Maudslay, Sons & Field side lever. 62 nhp.
Originally of 110 bm tons, with 50 nhp engine; lengthened by Fletcher & Fearnall, Limehouse and re-engined 1836-37. Transferred to Admiralty 1837. Based at Dover. Engine removed as tender 1844. Hulked (as 'lump' at Woolwich Dyd) 1850. BU at Woolwich 1858.

CHARON 1837-49 (ex-PO *Crusader*, built 1827 by George Graham, Harwich).
Dimensions & tons: 100ft 4in, *c*90ft 0in x 16ft 2in x 9ft 11in. 125 bm.
Men: 12. Guns: 1 x 4pdr carronade.
Machinery: Maudslay, Sons & Field side lever. 60 nhp.
Originally of 110 bm tons, with 50 nhp engine; lengthened by Fletcher & Fearnall, Limehouse and re-engined 1836.

Scan and/or retouch by Grzechu



Design draught of the *Dasher*, 'a Mail Steam Packet of 100 H.P. for the Weymouth Station', dated 26 September 1837. The draught is unsigned by any Surveyor. *DR6299*

Transferred to Admiralty 1.4.1837. Stationed at Dover, to Harwich 1839, then to Dover 1840. Tender at Woolwich 1847. Sold to the Corporation of Trinity House 18.7.1849.

MYRTLE 1837-68 (ex-PO *Firefly*, built 1831 by Fletcher & Fearnall, Limehouse).
Dimensions & tons: 96ft 3in, 84ft 0in x 16ft 1in x 9ft 7½in. 116 bm.
Men: 12. Guns: 1 x 4pdr carronade.
Machinery: Boulton, Watt & Co. side lever. 50 nhp.
Transferred to Admiralty 9.1837. Based at Dover. Gunvessel 1848. Tug 1861 at Portsmouth. BU at Sheerness 5.1868.

SWALLOW 1837-48 (ex-PO *Ferret*, built 1831 by Wm. & H. Pitcher, Northfleet, as replacement for *Dasher*).
Dimensions & tons: 107ft 6in, c98ft 8in x 15ft 11in x 9ft 9in. 133 bm.
Men: 12. Guns: 1 x 4pdr carronade.
Machinery: Boulton, Watt & Co. side lever. 70 nhp (orig. 50 nhp, new engine fitted 1838).
Lengthened by Fletcher & Fearnall, Limehouse 1835. Transferred to Admiralty 1.4.1837. Based at Dover. New 70 nhp engine fitted 1838. Tender at Sheerness 1846. BU at Portsmouth 3.1848.

Further purchases and new construction directly by the Admiralty from 1837 onwards follow:

***WIDGEON* Class** 1837: Symonds design, approved 22.6.1837.
Dimensions & tons: 108ft 0in, 98ft 1in x 18ft 1in x 10ft 7in. 164 bm. 200 disp.
Men: ... Guns: 1 x 6pdr.
Machinery: 90 nhp. 191 ihp.
First cost: £10,121 (including machinery £5,065).
Widgeon Chatham Dyd/Seaward & Capel.
Ord: 24.5.1837. K: 6.1837. L: 12.9.1837. C: 26.10.1837. Based at Dover. Packet 1844-49. Tender 1850. Tug 1865. Lent to the Royal Victoria Victualling Yard 1866 (replacing *Asp*). Sold to Castle & Sons to BU at Charlton 3.1884.

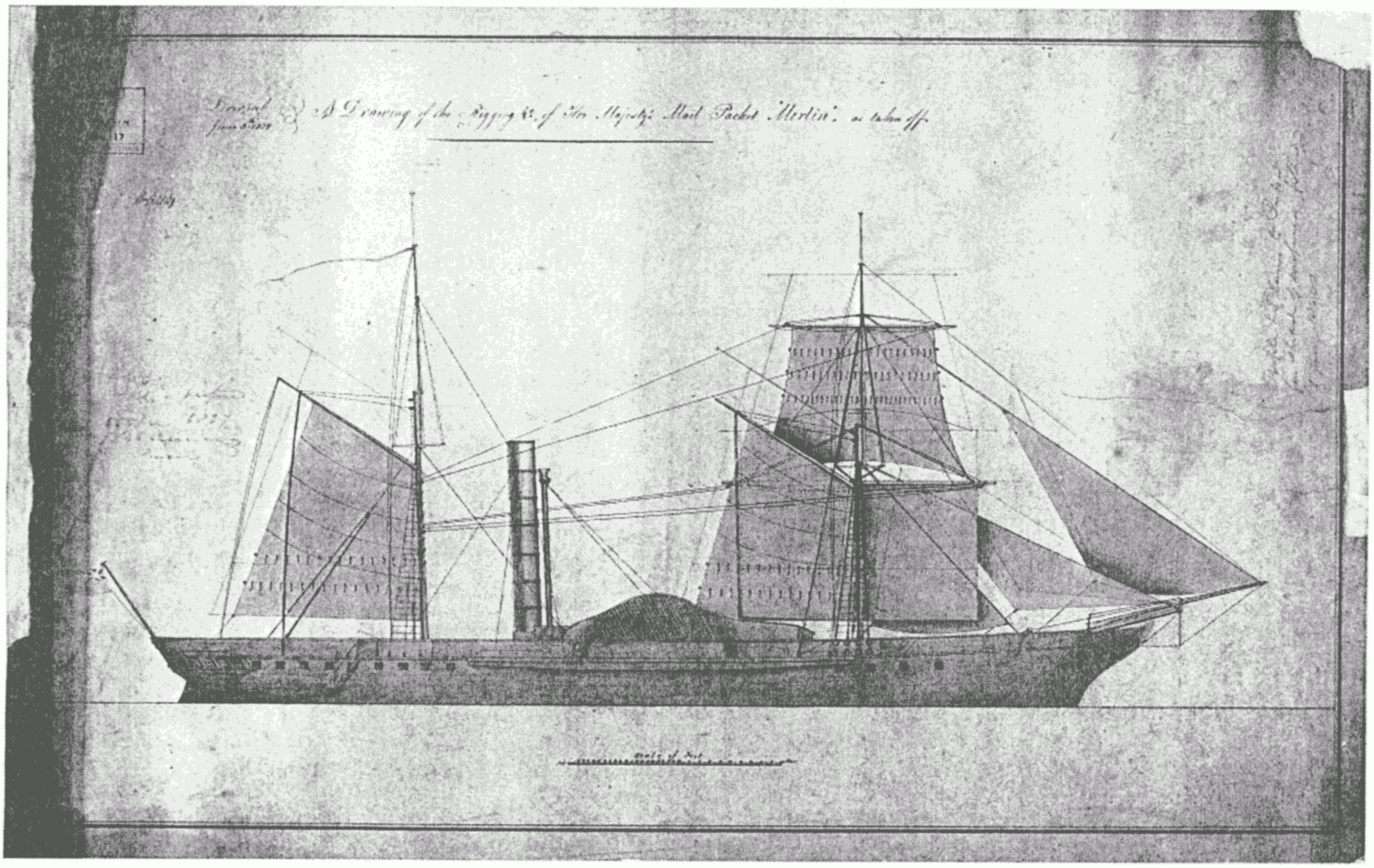
URGENT - purchased 1837 (ex-mercantile *Collonsay*, construction details unknown).
Dimensions & tons: 173ft 3in, 155ft 0in x 26ft 1in (for tonnage) x 17ft 8½in. $560^{84}/_{94}$ bm.
Men: 12. Guns: 2 x 6pdr carronades.
Machinery: ... . 280 nhp.
Purchased 26.7.1837 for £26,000. Based at Liverpool and Holyhead. Re-engined 1842-43, then based at Liverpool. Sold to Mr Hall for £7,261 by AO 14.12.1850.

PROSPERO - purchased 1837 (ex-mercantile *Belfast*, built 1829 by Coates & Young, Glasgow).
Dimensions & tons: 129ft 6in, 116ft 8in x 20ft 4in oa (19ft 10in for tonnage) x 11ft 5in. $243^{83}/_{94}$ bm.
Men: 12. Guns: 1 x 12pdr carronade, travelling carriage.
Machinery: ... . 144 nhp.
Purchased for £11,000 4.8.1837. Based at Pembroke. Tender 1853. BU by Marshall, Plymouth 10.1866.

DASHER Class 1837: Edye or Symonds (?) design, approved 26.9.1837.
Dimensions & tons: 120ft 2in, 105ft 8¾in x 21ft 8in oa (21ft 6in for tonnage) x 13ft 0in. $259^{93}/_{94}$ bm. 357 disp.
Men: ... . Guns: 1 x 12pdr.
Machinery: 100 nhp. 234 ihp.
First cost: £12,519 (including machinery £5,276).
Dasher Chatham Dyd/Seaward & Capel.
Ord: 5.9.1837. K: 10.1837. L: 5.12.1837. C: 8.4.1838. Based at Weymouth. Survey ship 1845. Sold to Castle & Sons to BU at Charlton 23.3.1885.

***MERLIN* Class** 1838: Sir William Symonds design, approved 2.4.1838.
Dimensions & tons: 175ft 0in, 153ft 6in x 33ft 2in oa (33ft 0in for tonnage) x 16ft 5in. $889^{14}/_{94}$ bm.
Men: ... . Guns: 2 x 6pdr carronades.
Machinery: 312 nhp.
First cost: *Merlin* £34,285 (including machinery £14,510). *Medusa* £33,822 (including machinery £14,510). *Medina* hull £16,411, fitting £21,311 (including machinery £14,767).
Merlin Pembroke Dyd/Fawcett, Preston & Co.
Ord: 10.3.1838. K: 4.1838. L: 18.9.1838. C: 4.1839 (commission). Survey ship 1854. Gunvessel 1856. Sold to Williams & Co. 18.5.1863.
Medusa Pembroke Dyd/Fawcett, Preston & Co.
Ord: 10.3.1838. K: 5.1838. L: 31.10.1838. C: 12.8.1839. Tug 1861/2. Sold to Castle to BU at Charlton 17.2.1872.
Medina Pembroke Dyd/Fawcett, Preston & Co.
Ord: 30.3.1839. K: 6.1839. L: 18.3.1840. C: 4.1840 (commission). BU 3.1864.

NOTES: All built as steam mail packets for the Liverpool Station, but were fitted as Mediterranean packets in 1848.



The rig of HM Mail Packet *Merlin*, as taken off in Liverpool (which may account for the unusual non-Admiralty pictorial style), dated 5 June 1839. An enlarged sail plan is sketched in, possibly associated with their later transfer to the Mediterranean station.
DR7354

***GARLAND* Class** - Oliver Lang design, approved 8.8.1845.
Dimensions & tons: 141ft 5¼in, 126ft 11¼in x 21ft 3in x 10ft 8in. 303 bm.
Men: ... . Guns: ... .
Machinery: 120 nhp.
First cost: Hull £5,312, machinery £6,710.

Garland Fletcher & Fearnall, Limehouse./John Penn & Sons.
Ord: 13.9.1845. K: 10.1845. L: 26.2.1846. C: 18.5.1846. Sold to Johnson & Churchward 1.2.1856.

NOTES: Fitted out by builders. Based at Dover. Sold for £4,800 ('which has been deducted from Bills to them for the Packet Service').

***VIVID* Class** 1847: Oliver Lang design, approved 6.5.1847.
Dimensions & tons: 150ft 0in, 136ft 9½in x 22ft 0in x 11ft 4in. 352$^{17}/_{94}$ bm. 350 disp.
Men: ... . Guns: 2.
Machinery: 2-cyl. (49½in diam., 48in stroke) oscill. 160 nhp. 832 ihp.
First cost: Hull £7,685, machinery £10,400, fitting £1,352.

Vivid Chatham Dyd/John Penn & Sons.
Ord: 4.2.1847 (named 13.2.1847). K: 5.1.1847. L: 7.2.1848. C: 7.4.1848. Based at Dover. Tender to *Fisguard* at Woolwich 1854-71. Port Admiral's yacht at Devonport 1872. Sold to G. Cowen & Sons 5.1894.

NOTES: Improved version of *Garland*. Based at Dover.

Paddle Despatch Vessels

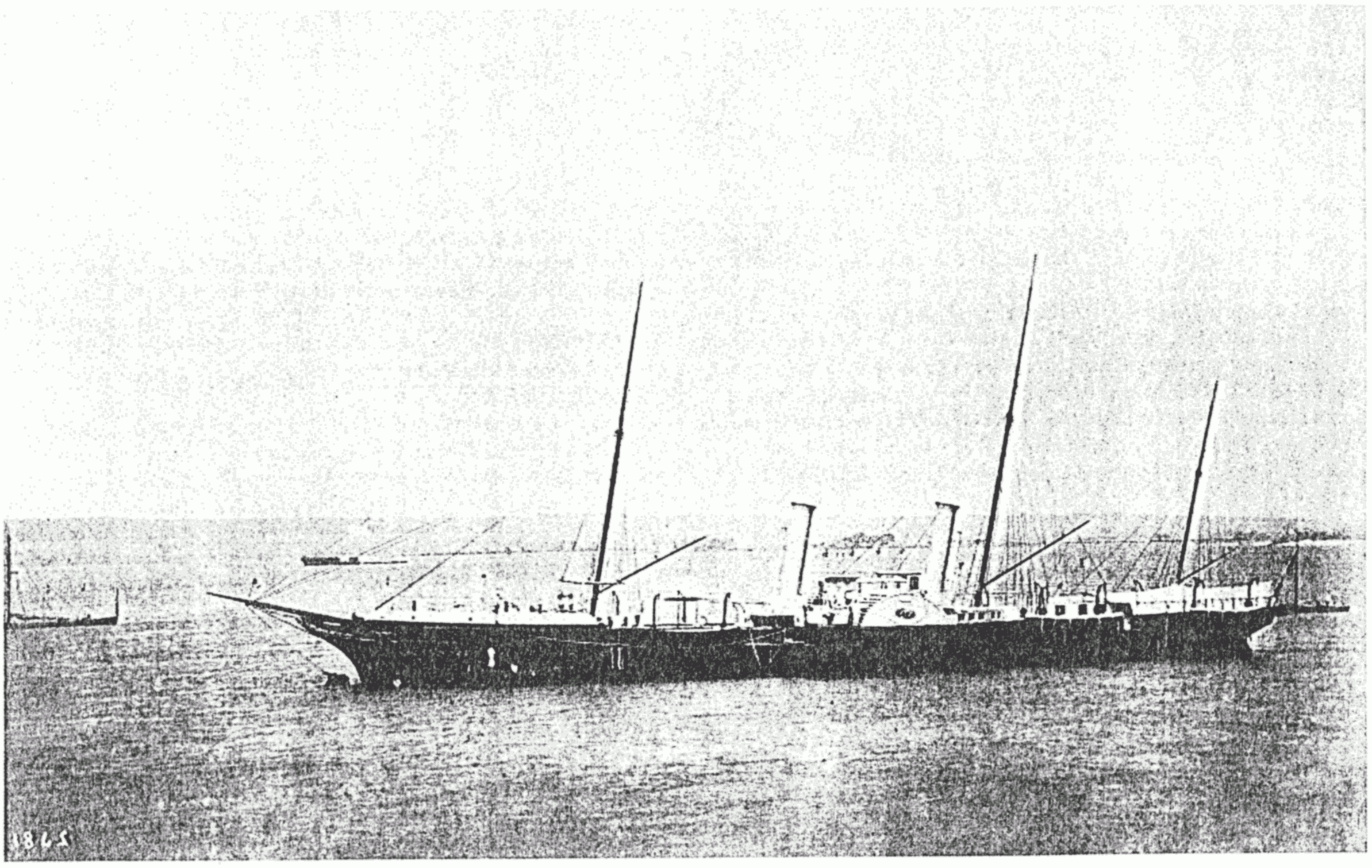
COROMANDEL - purchased 1855 (ex-mercantile *Tartar*, built 1853 by Thomas & John White, West Cowes).
Dimensions & tons: 172ft 9in x 22ft 5in x 11ft 4in. 303 bm.
Men: ... . Guns: ... .
Machinery: Maudslay, Sons & Field. 150 nhp. 550 ihp.
Purchased from the Peninsular & Oriental Steam Nav. Co. for £26,000 by AO of 8.1.1855. Sold to Mr Bonnel, Hong Kong 17.8.1866. Became the Japanese *Naruto*. BU 1876.

***PSYCHE* Class** - Isaac Watts design, 1860.
Dimensions & tons: 220ft, *c*200ft 0in x 28ft 2in x 14ft 6in. 835 bm. 985 disp.
Men: ... . Guns: 2 x 20pdr.
Machinery: 2-cyl. (62in diam., 4½ft stroke in *Lively*) oscillating engine. 250 nhp. See individual ships for ihp and speed.
First cost: av *c*£43,000.

Psyche Pembroke Dyd/John Penn & Sons. (1,440 ihp).
Ord: 1861. K: 8.1.1861. L: 29.3.1862. C: 1862. Wrecked near Catania 15.12.1870. Wreck blown up in 2.1871.

Enchantress Pembroke Dyd/John Penn & Sons. (1,318 ihp = 14kts).
Ord: 1861. K: 8.2.1861. L: 2.8.1862. C: 1863. Sold to Read, Portsmouth to BU 1889.

Helicon Portsmouth Dyd/Miller, Ravenhill & Salkeld. (1,610 ihp = 14.5kts).



Enchantress, one of the elegant paddle despatch vessels of the *Psyche* Class. They were among the last sea-going paddle vessels designed for the Royal Navy. *C5855*

Ord: 1861. K: 30.5.1861. L: 31.1.1865. C: 1886. Renamed *Enchantress* 1.4.1888. Sold to Laidler, Sunderland 11.7.1905.

Salamis Chatham Dyd/Miller, Ravenhill & Salkeld. (1,440 ihp = 13.25kts).
Ord: 1861. K: 10.8.1861. L: 19.5.1863. C: 1865. BU at Sheerness 1883.

Lively Sheerness Dyd/John Penn & Sons. (1,750 ihp).
Ord: ... . K: 1870. L: 10.12.1870. C: 1871. Wrecked near Stornoway 7.6.1883. Wreck sold 7.1910.

Vigilant Devonport Dyd/James Watt & Co. (1,815 ihp = 13.2kts).
Ord: ... . K: 11.4.1870. L: 17.2.1871. C: 1873. Sold at Hong Kong 7.10.1886.

Paddle Royal Yachts

***VICTORIA & ALBERT* (i)** - Sir William Symonds design, 1842.
Dimensions & tons: 200ft 1in, 178ft 6in x 33ft 0in x 22ft 1in. 1,034 bm.
As lengthened 1853: 260ft 0in, 238ft 6in x 33ft 0in x 22ft 1in. 1,381 $^{48}/_{94}$ bm.
Machinery: 430 nhp. 15kts. As lengthened 1853: 600 nhp.
First cost: Hull & machinery + initial fitting £32,265, completion of fitting £13,391.

Victoria & Albert Pembroke Dyd/Maudslay, Sons & Field.
Ord: 31.10.1842. K: 9.11.1842. L: 26.4.1843. C: 23.8.1843. Renamed *Osborne* by AO 22.12.1854. Fitted as Admiralty yacht 1856. BU at Portsmouth 7.1868.

NOTES: Initially known simply as *Royal Yacht*, the name *Victoria & Albert* was assigned 21.12.1842. Fitted at Chatham and Deptford, using internal fittings from old yacht *Royal George* of 1817. Engine used was that intended for *Firebrand*.

ELFIN - 'steam dispatch boat'. Oliver Lang design, approved 24.8.1848.
Dimensions & tons: 103ft 6in, 93ft 11in x 14ft 0in x 7ft 3in. 98 bm. 93 disp.
Machinery: 40 nhp. 181 ihp.
First cost: £5,510 (including machinery £2,358).

Elfin Chatham Dyd/George & John Rennie.
Ord: 13.7.1848. K: 7.8.1848. L: 8.2.1849. C: 30.4.1849 (fitted for sea at Chatham). Reboilered 1873. BU 1901.

NOTES: Built of Spanish mahogany. Very high speed. Unarmed, but 'to carry 1 x32pdr (25cwt) if needed'.

***VICTORIA & ALBERT* (ii)** - Surveyor's Department design, approved 12.1.1854.
Dimensions & tons: 300ft 1in, 275ft 3in x 40ft 3¼in x 24ft 6in. 2,342$^{52}/_{94}$ bm. 2,470 disp.
Machinery: 600 nhp. 2,980 ihp. 18kts.
First cost: £137,656 (including hull £52,579, machinery £35,493).

Victoria & Albert (ex-*Windsor Castle*) Pembroke Dyd/John Penn & Sons.
Ord: 20.10.1855. K: 2.1854. L: 16.1.1855. C: 2.7.1855. BU and burnt at

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Portsmouth 1904.
NOTES: Name changed from *Windsor Castle* to *Victoria & Albert* by AO 22.12.1854.

Exploration Vessels

PIONEER - Controller's Department design, 1860.
Dimensions & tons: 115ft 0in, ... x 16ft 0in x 7ft 3in. 142 bm.
Men: ... . Guns: 1 x 20pdr, 1 x howitzer.
Machinery: 34 nhp. 171 ihp.
Pioneer John Jenkins Thompson, Rotherhithe./John Penn & Sons.
Ord: 18.4.1860. K: 30.4.1860. L: 4.8.1860. C: 1.9.1860. Tender to Flagship of West Africa squadron from 1866. Sold at Fernando Po (by AO 14.2.1873) for £500 in 8.1873.
NOTES: A 'vessel for Zambesi River' - presumably built by the Admiralty for the Colonial Office - if so, transferred by the latter to the Admiralty in 1864. Not to be confused with the Australian-built paddler of 1863!

INVESTIGATOR - Controller's Department design, 1861.
Dimensions & tons: 121ft 0in, 110ft 1¼in x 16ft 0in x 7ft 5¼in. 149 bm.
Men: ... . Guns: 2?
Machinery: 34 nhp.
Investigator Deptford Dyd/... .
Ord: ... . K: 15.6.1861. L: 16.11.1861. C: 1864. Sold to the local authorities at Lagos 1869.
NOTES: Built in dry dock as 'exploring vessel for Gabon River'.

Paddle Tugs/Tenders

FURY 1834-42 (mercantile ... ...) gunboat?
Dimensions & tons: 90ft 0in, 78ft 0in x 20ft 0in x 10ft 0in. 166 bm.
Men: ... . Guns: 2 x 9pdr.
Machinery: ... nhp.
Purchased at Bermuda for £530 2.5.1834. BU there 8.1843.

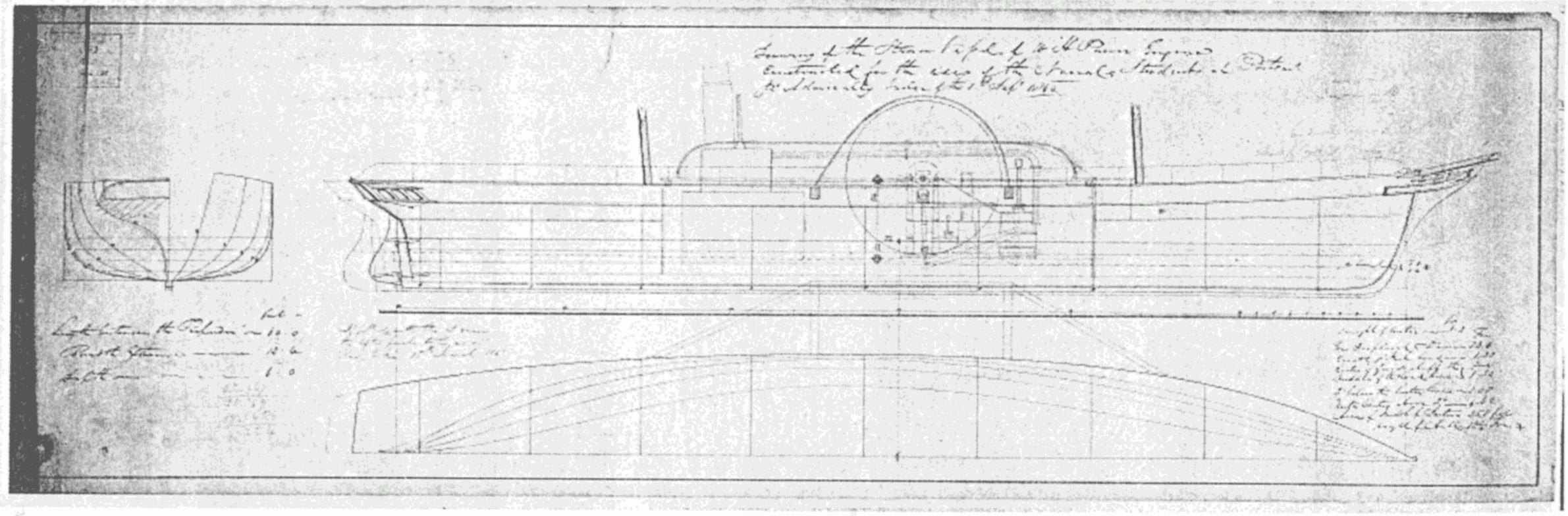
BEE - Symonds design, 1840. Combined paddle/screw tender.
Dimensions & tons: as built: 60ft 0in, 52ft 5¾in x 12ft 4in x 6ft 0in. 42 bm.
Lengthened 1844: 63ft 0in, 55ft 8¼in x 12ft 2in x 6ft 0in. $43^{80}/_{94}$ bm.
Machinery: 10 nhp.
First cost: Hull £737, machinery £990.
Bee Chatham Dyd/Maudslay, Sons & Field.
Ord: 1.9.1840. K: 14.6.1841. L: 28.2.1842. C: 3.1843? Screw fitted 1844. BU at Sheerness 9.1874.
NOTES: Tender for the 'Royal Academy, Portsmouth' for the use of the students. Intended to be fitted for both paddle and screw propulsion. Began life as a paddle steamer, but screw fitted in 1844 (and replaced in 1846). As such she was the first screw steamer built for the RN.

ADELAIDE - Built for the Colonial Government of South Australia, presumably under Admiralty supervision, 1848.
Dimensions & tons: 140 bm.
Men: ... . Machinery: ... .
First cost: ... .
Adelaide C. J. Mare & Co., Blackwall./... .
Ord: ... K: 9.1847. L: 26.2.1848. C: 4.1848. Commissioned at Woolwich Dyd for passage to South Australia 3.7.1848. Handed over to colonial government at Port Adelaide 7.3.1849.

No further sea-going paddle tugs/tenders were built for the Navy, but from the outbreak of the Crimean War a number of vessels were purchased by the Navy. Some of these known to have iron hulls are to be found in the following chapter, but it should be noted that of the following the *Steady* may possibly also be of iron.

CIRCASSIAN - purchased 1854 (ex-mercantile *Swan*, built 1852 by T. D. Marshall at South Shields).
Dimensions & tons: 115ft 0in x 19ft 0in x ... . 170 bm.
NOTES: Wooden paddle tender of 90 nhp, purchased by Admiral Dundas at Constantinople for £4,800 21.7.1854. Sold to Dr. Glascote for £1,037 28.7.1856.

CRESCENT - purchased 1854 (ex-mercantile, origins unknown).
Dimensions & tons: 80ft 0in, ... x 16ft 0in x ... . 90 bm.
NOTES: Wooden paddle tender of 50 nhp, purchased by Admiral Dundas at Constantinople for £3,000 21.7.1854. Sold for £1,700 to Mr Wood at Constantinople 7.7.1856.



Sheer draught of the *Bee*, described as a 'Steam Vessel of 10 H. Power engine constructed for the use of the Naval Students at Portsmouth'. Modifications to the stern lines are shown, along with a note 'If fitted with a Screw the after part to be as in Red Ink 15 March 1841'. *DR6753*

DANUBE - purchased 1854 (ex-mercantile *Tuna*, built 2.1854 by Money Wigram & Sons at Blackwall).

Dimensions & tons: 138ft 0in x 18ft 3in x 9ft 0in. 110 bm. 170 disp.

NOTES: Wooden paddle tug of 90 nhp, purchased 13.8.1854 for £13,000 at Constantinople. Sold 23.7.1856 at Constantinople to Aali Hilmi for £4,013.

***PIGEON* (or *PIDGEON*)** - purchased 1854 (ex-mercantile *Brothers* ... ...).

Dimensions & tons: 92ft 0in, ... x 16ft 0in x 9ft 7in. 33 bm.

NOTES: Wooden paddle tug of 53 nhp, purchased at Constantinople for £4,420 15.8.1854. Sold to Hamilton & Hodge at Constantinople for £2,005 14.7.1856, becoming mercantile *Shark*.

MALTA - purchased 1854 (ex-mercantile *Britannia*, building details unknown).

Dimensions & tons: 97ft 0in, ... x 17ft 5in x 10ft 5in. 42 bm.

NOTES: Wooden paddle tug of 53 nhp, purchased at Constantinople 22.8.1854 (?). Sold at Constantinople for £1,500 to Mr Benzolos (?) 14.7.1856.

HELEN FAWCIT - purchased 1855 (ex-mercantile *Helen Fawcit*, built Middlesborough 1849).

Dimensions & tons: ... . 45 bm.

NOTES: Wooden paddle tug of 70 nhp, purchased at Constantinople by Admiral Grey from Pisani & Co. for £7,200 3.2.1855. Sold 1856.

MULLET - purchased 1855 (ex-mercantile *Express*, built North Shields 1846).

Dimensions & tons: ... . 99 bm.

NOTES: Wooden paddle tug of 100 nhp, purchased at Constantinople by Admiral Grey for £7,500 from Whitall (?) 9.3.1855. Fitted by Admiral Lyons off Sebastopol as a gunboat with 1 x 32pdr (42cwt) gun. Sold to C. Jacob for £1,400 at Constantinople 21.7.1856.

STEADY - purchased 1855 (ex-mercantile *Powerful*, building details unknown) iron or wood paddle tug.

Dimensions & tons: 108ft 0in, ... x 18ft 0in x 10ft 0in. 146 bm.

NOTES: Wooden (?) paddle tug of 75 nhp, purchased for Constantinople from T. D. Marshall at Cork for £6,000 by AO 26.3.1855. Sold at Constantinople to Glavanay, Sons & Co. for £1,850 21.7.1856.

BUSTLER - purchased 1855 (ex-mercantile *Merry Andrew*, built 1852 by T. & W. Smith at North Shields).

Dimensions & tons: 111ft 6in, ... x 20ft 6in x 10ft 6in. 217 bm.

NOTES: Wooden paddle tug of 100 nhp, purchased by AO from builders for £5,500 or £5,800 28.3.1855. Employed at Chatham. Sold 1894.

HEARTY - purchased 1855 (ex-mercantile *Merry Monarch*, built 1854 by T. & W. Smith, North Shields).

Dimensions & tons: 112ft 0in, ... x 20ft 6in x 10ft 6in. 221 bm. 346 disp.

NOTES: Wooden paddle tug of 100 nhp (379 ihp), purchased by AO from builders for £7,500 28.3.1855. BU at Malta 1876.

LANDRAIL - purchased 1855 (ex-mercantile *Gipsy Queen*, built North Shields 1854).

Dimensions & tons: ... . 36 bm.

NOTES: Wooden paddle tug of 50 nhp, purchased at Constantinople by Admiral Fred. Grey for £7,500 from Mr Ward (or Wood?) 24.5.1855. Sold at Constantinople by Admiral Grey to J. Parry for £2,400 21.7.1856.

REDPOLE - purchased 1855 (ex-mercantile *Racehorse*, launched 9.5.1853 by Wm. Cowley Miller at Liverpool).

Dimensions & tons: 142ft 0in, ... x 23ft 0in x 12ft 0in. 360 bm.

NOTES: Wooden paddle tug of 160 nhp, purchased from W. Jack for £11,000 or £12,078 by AO 2.3.1855. BU 27.1.1872.

SULTANA - purchased 1855 (ex-mercantile ... , built 1855 North Shields).

Dimensions & tons: ... . 98 bm. (61.84 register)

NOTES: Wooden paddle tug of 50 nhp, purchased from Octavius Swan at Constantinople for service at Balaclava for £6,250. Sold at Pera to H. Riddley for £2,700 22.9.1856.

TIVERE - purchased 1855 (ex-mercantile *Tivere*, building details unknown).

NOTES: Wooden (coppered) paddle tug of 60 nhp, purchased at Constantinople for £5,100 on 13.11.1855. Wrecked 3.12.1855, remains sold to Arajgi Vasil.

HONG KONG - purchased 1856 (previous history unknown).

NOTES: Paddle tender of unknown details. Sold 1858.

DRAGON - purchased 1860 (ex-mercantile *Dragon*, built 1855 at Newcastle).

Dimensions & tons: 85ft 0in, 74ft 10¾in x 16ft 10in x 8ft 7in. 113 bm.

NOTES: Wooden paddle tug of 40 nhp, purchased at Malta for £1,200 for towing mud barges 11.7.1860. Sold 1867.

COWPER - purchased 1860 (ex-mercantile *Hei Sean*, building details unknown).

Dimensions & tons: 175ft 0in, ... x 27ft 0in x ... . 342 bm.

NOTES: Wooden paddle tender of 130 nhp, purchased at Hong Kong by Admiral Sir Henry Hope from Lyall, Still & Co. of Hong Kong for 120,000 Mexican pesos (= £25,000) as she lay in harbour with everything aboard 17.4.1860 (AO of 20.10.1860 confirmed purchase). Sold at Hong Kong to become mercantile *Fei Seen* 1861.

WATERMAN - purchased 1861 (ex-mercantile *Sir Charles Forbes*, launched 3.2.1846 at Bombay).

Dimensions & tons: 130ft 1in, ... x 18ft 5in x 10ft 2in. 141 bm.

NOTES: Wooden paddle tender of 60 nhp, purchased at Hong Kong by Admiral Sir Henry Hope for £9,375 10.1.1861. Teak-built. Employed as distilling vessel. Sold to become mercantile *Nagasaki Maru* 1862.

WARDS - purchased 1861 (ex-mercantile *Wards*, built 1861).

Dimensions & tons: 73ft 3in, 64ft 3¼in x 14ft 11in x 7ft 6in. 76 bm.

NOTES: Wooden paddle tug of 27 nhp, purchased by the Director of Works Department for use at Gibraltar 1860 for £3,765 (hull £2,280 + machinery £1,485). BU 1889.

Paddle Vessels on the Canadian Great Lakes

The Royal Navy acquired nine small paddle vessels (eight wooden-hulled, and the iron-hulled *Mohawk* - the latter is detailed in Chapter 4) during the 1830s and 1840s for patrol duties on the Canadian Great Lakes, to prevent gunrunning from the United States into Canada. A further vessel (*Montreal*) is included although it is not certain that she had an engine.

TORONTO - purchased 1838 (ex-mercantile *Sir Charles Adam*, built 1834 in USA), paddle gunboat.

Dimensions & tons: 147ft 1in, 136ft 0in x 27ft 4in x 7ft 10in. 342 bm.

Men: 40. Guns: 4 x 18pdr carronades.

Machinery: Gibson & Co., Black Rock? 100 nhp.
Purchased 7.7.1838. Sold 1843.

EXPERIMENT - purchased 1838 (ex-mercantile ... , built 1838 by Niagara Dock Co.), paddle gunboat.
Dimensions & tons: 96ft 6in, 86ft 0in x 14ft 6in x 7ft 2½in. 220 bm.
Men: 40? Guns: 1 x 6pdr brass on pivot + 1 x 12pdr carronade.
Machinery: Builders? 25 nhp.
Former sailing ship, purchased 21.7.1838 and converted to paddle vessel. Sold 1847 or 1848.

TRAVELLER - purchased 1839 (ex-mercantile ... , built 1838 by Niagara Dock Co.), paddle gunboat.
Dimension & tons: 138ft 0in, 132ft 0in x 23ft 9in x 10ft 5in. 335 bm.
Men: 42. Guns: 1 x 12pdr carronade.
Machinery: Ward & Co., Montreal 90 nhp.
Purchased at Niagara 30.4.1839. Sold for mercantile use 1844.

MONTREAL - purchased 1839 (ex-mercantile, built 1836 in Canada).
Dimensions & tons: 82ft 0in x 20ft 6in x 9ft 0in. 145 bm.
Men: 35. Guns: 1 x 18pdr MLSB.
Machinery: ?
Two-masted schooner, purchased for use on Lake Erie 18.10.1839. Sold 1848.

***MINOS* Class** 1840: Symonds design. Wooden paddle gunboat.
Dimensions & tons: Original design: 136ft 0in, 121ft 9½in x 24ft 2in x 13ft 0in. 363 bm.
As built: 152ft 8in, 132ft 7½in x 24ft 2in x 13ft 0in. 406 bm.
Men: 52. Guns: 1 x 12pdr on the forecastle.
Machinery: Ward & Co., Montreal 90 nhp.
Minos Chippawa.
Ord: ... . K: ... . L: 6.1840? C: ... . Sold to Mr Weston for '£1,200 Halifax currency equal to £986/6/0 Sterling' 3.1852.

SYDENHAM - purchased 1841 (ex-mercantile, built 1841 at Montreal), First Class paddle gunvessel.
Dimensions & tons: 170ft 0in, 153ft 10in x 27ft 2in x 16ft 9in. 596 bm.
Men: 80. Guns: 1 x 32pdr (26cwt) + 2 x 32pdr (17cwt); later 2 x 68pdr.
Machinery: ... , Montreal. 220 nhp.
Purchased while building at Montreal per AO 27.11.1841 for £26,940 (hull & rigging - machinery appears to have been £13,200 extra). Later to Mediterranean for packet service. Refitted and reboilered at Woolwich for £17,380 1843-44. Sold at Malta 11.7.1846 (for £1,060).

***CHEROKEE* Class** - Symonds design, 1841. Wooden paddle gunvessel.
Dimensions & tons: 170ft 0in, 150ft 1¾in x 30ft 10in x 16ft 3in. 750 bm.
Men: 36. Guns: 1 x 8in, 1 x 32pdr.
Machinery: Maudslay, Sons & Field 200 nhp.
Cherokee Kingston Navy Yard, Ontario.
Ord: ... . K: 1842. L: 22.9.1842. C: ... . Sold to Messrs. Campbell, Forsyth, Yarwood & Gaskin (for £3,287-13-5d) by AO 30.10.1851.
NOTES: Ex brig-sloop.

MAGNET - paddle steamer built at Hamilton, Canada, about 1846. Built to carry up to 1,000 troops with arms and accoutrements 'for the Inland Navy'. The British Government advanced £6,112 towards the estimated value when completed (which was a total of £15,260), retaining the right to assume possession of the vessel on payment of the remaining portion of the value Right relinquished by AO 12.8.1864 (or 1866?).

CANADA - purchased 1847 - paddle gunvessel (possibly stern-wheeler).
Dimensions & tons: 198ft 0in x 29ft 0in x 10ft 0in.
Men: ... . Guns: 2 x 68pdr.
Machinery: 120 nhp.

Paddle Vessels on Indian Service

DIANA – ex-mercantile purchased vessel, 1824.
Dimensions & tons: 100ft 0in, 90ft 0in x 16ft 8in x ... . 133 bm.
Machinery: 64 nhp.
L: 12.7.1823 by Kyds, Kidderpore (Calcutta). Purchased 1824 at the suggestion of Commander Frederick Marryat (the subsequent author) and used for riverine service in the First Anglo-Burmese War - the RN's first use of steam power in combat. Transferred to Burmese Government 1826 (following the end of that war). BU 1836.

The following vessels were built for and operated by the Indian Navy (from 1830 the successor to the Bombay Marine arm of the East India Company) and by the Bengal Marine (which remained organisationally distinct). The Indian Navy was re-established as the Bombay Marine on 30.4.1863.

ATALANTA (built 1836 by Green, Wigram & Green, Blackwall), sloop.
Tons: 617 bm. Guns: 1 x 68pdr, 4 x 32pdr.
Machinery: 210 nhp.
BU *c*1850.
BERENICE (built 1836 by David Napier and engined by Robert Napier, Govan), sloop.
Dimensions & tons: *c*170ft 0in x 28ft 8in. 664$^{74}/_{94}$ bm.
Guns: 1 x 68pdr, 2 x 32pdr.
Machinery: 220 nhp.
Burnt by accident in the Persian Gulf 13.10.1866.
SEMIRAMIS (built 1837 on the River Thames), sloop.
Tons: 720 bm.
Machinery: 300 nhp.
Foundered at Plymouth 13.2.1839; later raised and renamed *Charger* 1841 - became coal hulk at Aden.
ZENOBIA (built 1837 by White, Waterford), sloop.
Tons: 684 bm.
Ex-*Kilkenny*, purchased 1839. Hulked *c*1850. Transport 1863.
CLEOPATRA (built 1839 by W. & H. Pitcher, Northfleet), sloop.
Dimensions & tons: 178ft 5in (GD) x 31ft 0in x 19ft 0in. 14$^{1}/_{2}$ft draught. 770 bm. 1,317 disp.
Machinery: 220 nhp.
Lost, presumed foundered in storm, in the Indian Ocean 14.4.1847.
QUEEN (built 1839 by W. & H. Pitcher, Northfleet), sloop.
Dimensions & tons: 177ft 10in (GD) x 31ft 0in x 19ft 0in. 14$^{3}/_{4}$ft draught. 760 bm. 1,249 disp.
Machinery: 220 nhp.
Listed to 1860.
SESOSTRIS (built 1839 by W. & H. Pitcher, Northfleet), sloop.
Dimensions & tons: 184ft 9in (GD) x 32ft 6in x 19ft 6in. 14$^{1}/_{2}$ft draught. 876 bm. 1,361 disp.
Machinery: 220 nhp.
Transferred to the Bengal Presidency Government 1853.
AKBAR (built 1841 and engined by Robert Napier, Govan), frigate, 6 guns.
Dimensions & tons: 206ft 5in (GD) x 34ft 0in x 21ft 6in. 14$^{1}/_{2}$ft draught. 1,143 bm.

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Machinery: 350 nhp.
Sold 2.1859.

MEMNON (built 1841 by Fletcher & Fearnall, Limehouse), frigate, 6 guns.
Dimensions & tons: as *Akbar*. 1,140 bm.
Guns: 2 x 64pdr + 4 x 32pdr.
Machinery: Maudslay, Sons & Field. 400 nhp.
Wrecked near Cape Guardafui 4.8.1843.

AJDAHA (built 1846 by R. & H. Green, Blackwall (No.270)), frigate, 6 guns.
Dimensions & tons: 220ft 0in (GD) x 37ft 0in x 23ft 0in. 16ft draught. 1,440 bm.
Machinery: 500 nhp.
Sold 30.4.1863.

MOOZUFFER (built 1846 by Fletcher & Fearnall, Limehouse), frigate, 6 guns.
Dimensions: as *Ajdaha*.
Machinery: 500 nhp.
Wrecked off Rangoon River 17.7.1863.

There were additionally a number of further paddle vessels built by the East India Company at Bombay and elsewhere in India. Of these the most significant were the following Bombay-built (with one exception) and teak-hulled vessels:

HUGH LINDSAY - sloop, 4 guns.
Dimensions & tons: 124ft 0in (keel) x 24ft 10in x 11ft 6in. 411 bm.
Machinery: 160 nhp.
L: 14.10.1829. Sold *c*1864.

VICTORIA - sloop.
Dimensions & tons: 179ft 0in x 28ft 0in x 10ft 0in. 714 bm.
Machinery: 230 nhp.
L: 10.1839. Sold *c*1864.

AUCKLAND - frigate, 6 guns.
Tons: 946 bm. Guns: 6 x 8in.
Machinery: 220 nhp.
L: 9.1.1840. Harbour service (as floating battery) 1863. Sold *c*1874.

TENASSERIM - sloop, 4 guns.
Tons: 760 bm.
Machinery: 220 nhp.
L: 1841 at Moulmein. Deleted *c*1853.

FEROOZ - frigate, 8 guns.
Dimensions & tons: 221ft 0in x 37ft 0in x 23ft 0in. 1,447 bm.
Machinery: 500 nhp.
K: 29.10.1845. L: 18.5.1848. Converted to yacht 1863.

ZENOBIA (ii) - frigate, 6 guns.
Dimensions & tons: 192ft 8in pp x 33ft 0in x 21ft 3in. 1,003 bm.
Machinery: 270 nhp.
K: 27.12.1848. L: 1.5.1851.

ASSAYE - frigate, 10 guns.
Dimensions & tons: 250ft 0in pp x 39ft 6in x 25ft 0in. 1,800 bm.
Machinery: 650 nhp.
K: 3.5.1852. L: 15.3.1854. Sold to J. Willis 1863; re-sold and wrecked off the Irish coast 1865.

PUNJAUB - frigate, 10 guns.
Dimensions: as *Assaye*. 1,800 bm.
Machinery: 700 nhp.
K: 8.3.1852 as *Plassey*. L: 21.11.1854. Sold to J. Willis 1863 and fitted as barque, renamed *Tweed*.

LADY CANNING - sloop, 4 guns.
Dimensions & tons: 175ft 0in x 24ft 8in x 14ft 0in. 8½ft draught. 527 bm.
Machinery: 160 nhp (receiving the engine out of the *Hugh Lindsay*).
K: 24.11.1855. L: 24.3.1857. Fate unknown.

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4 Paddle Steamers (Iron)

While sea-going iron-hulled vessels entered mercantile use during the 1820s, their first naval employment fell to the paddle gunboats *Ariadne*, *Medusa*, *Phlegethon* and *Nemesis*, built in 1839-40 for the Bombay Marine and Bengal Marine (naval arms of the East India Co.), while in the same year the Admiralty ordered the packet vessel *Dover* for the Channel service; all these vessels were built by John Laird. Three iron gunboats to explore the Niger River followed in 1840, and two smaller gunboats (*Rocket* and *Ruby*) in 1841. From 1843 a number of iron-hull paddle warships were built, but in 1845 the Admiralty became dubious as to the qualities of iron hulls, and no further paddle warships were built of this material for the navy, although four vessels built by Scott Russell were later acquired and various auxiliaries bought in.

Iron Paddle Frigate

***BIRKENHEAD* Class** - Second Class frigate, later troopship. Builders design, approved 23.8.1843.

Dimensions & tons: 210ft 0in, 187ft 9in x 37ft 6in (50ft 6in over paddle boxes) x 22ft 11in. 1,405 bm. 1,918 disp.

Men: 250 (as frigate), 100 (as troopship). Guns: as frigate, UD 2 x 10in (84cwt) on pivots, 4 x 68pdr (64cwt); as troopship, re-armed with 4 x 32pdr (25cwt), 2 x 68pdr (95cwt).

Machinery: 4-cyl. (52in diam., 36in stroke) horizontal. Tubular boilers. 536 nhp. 12-13kts. 500 tons coal.

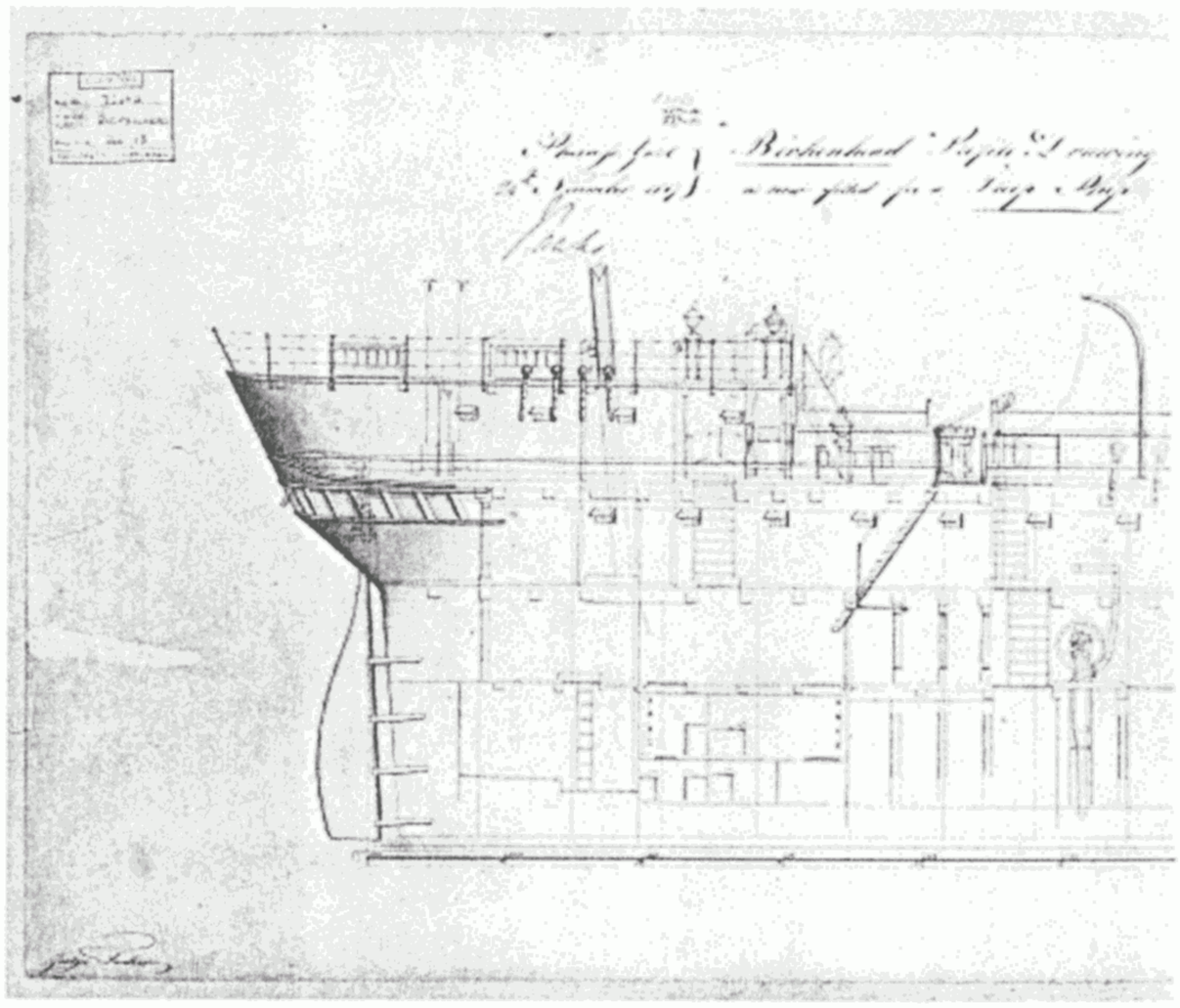
First cost: Hull £30,685, machinery £57,678, fitting £10,481.

Birkenhead (ex-*Vulcan*, renamed 26.2.1845) John Laird, Sons & Co., Birkenhead. (No.51)/Boulton, Watt & Co.

Ord: 13.4.1843. K: 9.1843. L: 30.12.1845. C: 17.1.1847. Troopship 1850-51. Wrecked off Point Danger, South Africa, 27.2.1852.

NOTES: Name, first approved as *Vulcan* on 12.6.1843, changed to *Birkenhead* by AO 1.2.1845. Rated Second Class frigate 26.2.1845. Her original brig rig was rapidly altered to barquentine. Approved 14.10.1846 to be fitted as troopship as a result of official unease about iron as a material for fighting ships. Placed in reserve in 1848. Fitted for troopship 1850-51 at Portsmouth for £6,756. She was lost off South Africa whilst carrying troops, who behaved most gallantly in standing in formation whilst the ship sank and the women and children were saved (438 men died). Portions of the hull and masts were later salved and sold at the Cape for £164.13.6. Attempts at salvage continue to the present day.

Profile draught, dated Sheerness 24 November 1847, of the iron paddler *Birkenhead* as fitted as a troopship. Her tragic loss provided one of the great inspirational stories of Victorian military heroism. *DR7360A*



Iron Paddle Sloops

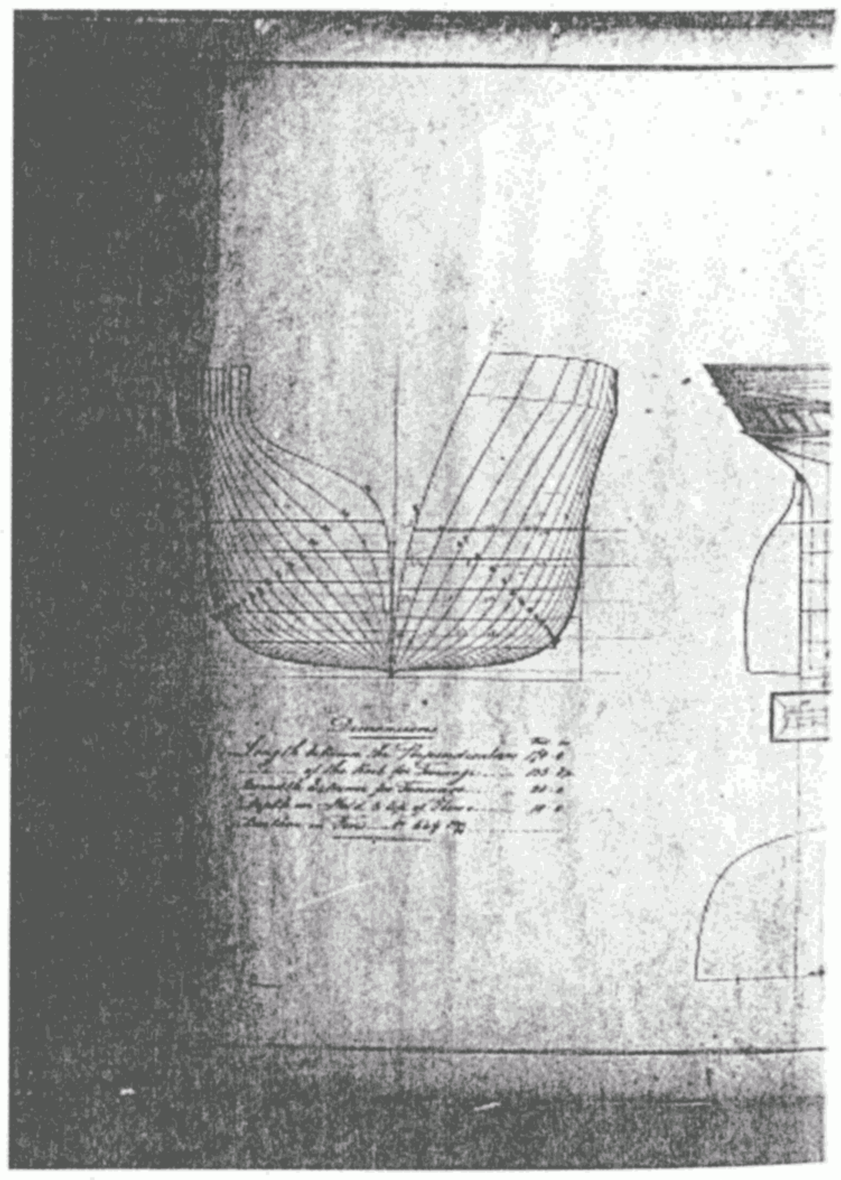
***TRIDENT* Class** - Third Class sloop. Builder's design, approved 22.8.1843.

Dimensions & tons: 180ft 0in, 161ft 1in x 31ft 6in x 17ft 3in. Draught 10¾ft (mean). 850$^{26}/_{94}$ bm. 903 disp.

Men: 135. Guns: 2 x 10in (85cwt), 2 (later 4) x 32pdr (25cwt/6ft) gunnades.

Machinery: Boulton, Watt & Co 2-cyl. (70¾in diam., 5ft stroke)

Lines plan, dated 29 September 1845, for '3 Iron Steam Packets for the Service of the Ionian Islands'. The draught is annotated with the names *Oberon*, *Triton* and *Antelope*. *DR4527*



oscillating. 350 nhp. 9.5kts.

First cost: Hull £17,000, machinery £17,502, fitting £6,864?

Trident Ditchburn & Mare, Blackwall./Boulton, Watt & Co.

Ord: 13.4.1843. K: 1845. L: 16.12.1845. C: 8.8.1846. BU by Castle at Charlton 1.1866.

NOTES: Design commissioned 2.8.1842 for a steam yacht to replace *Black Eagle* (ex-*Firebrand*), rated Steam Vessel (SV3); rerated Second Class sloop 31.5.1844. Originally intended to be fitted with Maudslay 200 nhp side lever engine.

***ANTELOPE* Class** - Third Class sloops, also listed as packets. Thomas Ditchburn design, approved 30.9.1845.

Dimensions & tons: 170ft 0in, 155ft 8¼in x 28ft 0in x 18ft 0in.

Draught c10½ft (mean). 649$^{29}/_{94}$ bm. 1,055 disp.

Men: 100. Guns: 1 x 68pdr (95cwt) on pivot, 3 x 32pdr (17cwt).

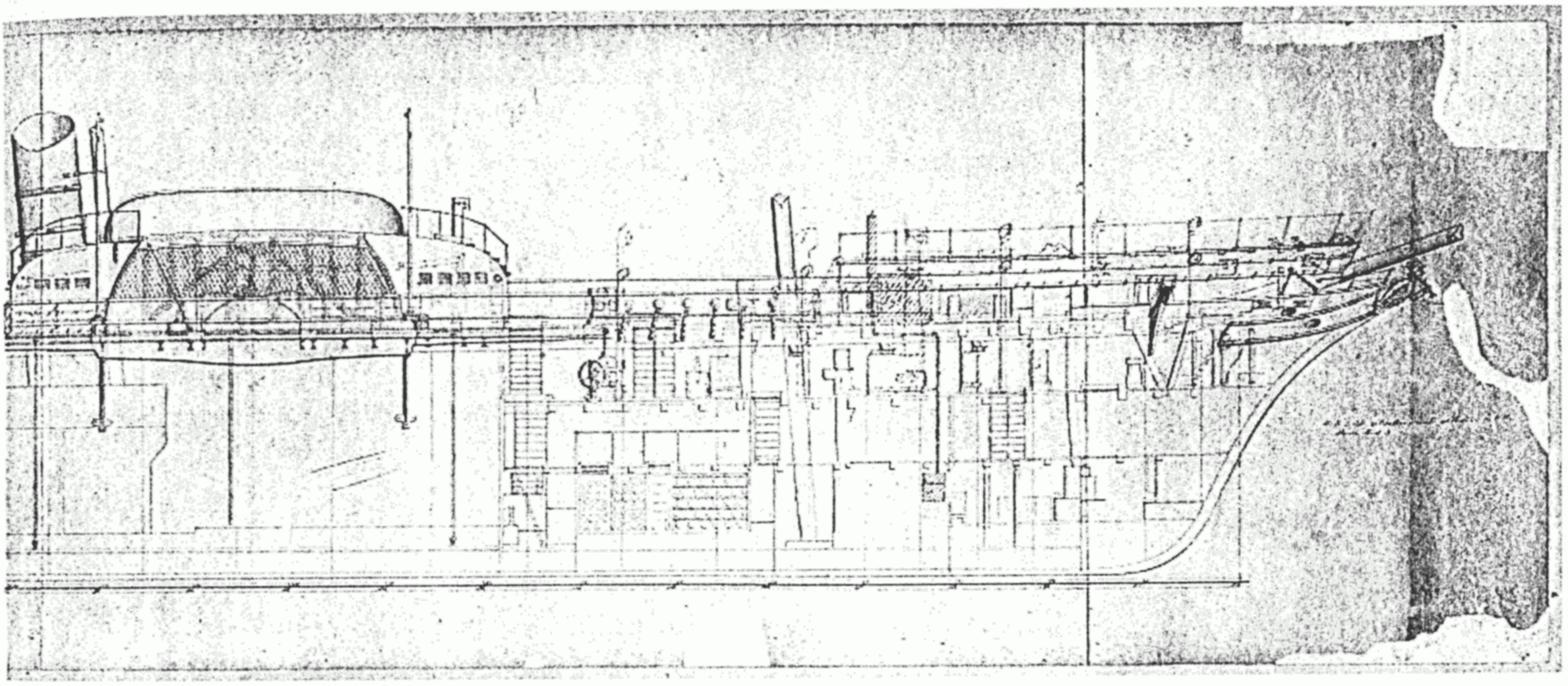
By 1856 - 1 x 32pdr (45cwt) on pivot + 2 x 32pdr (25cwt).

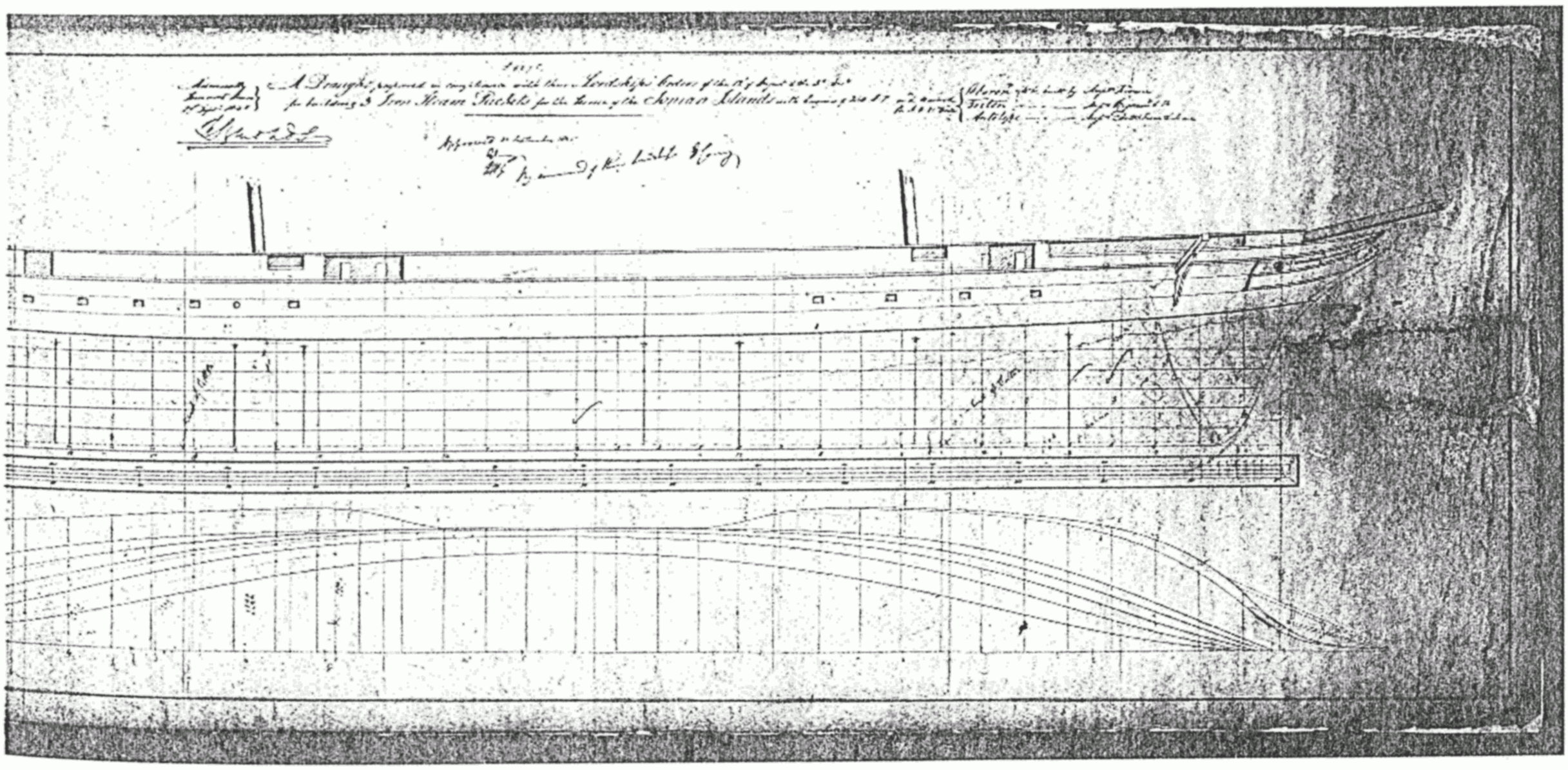
Machinery: 2-cyl. oscillating, 260 nhp. 10½-11kts.

First cost: *Antelope* hull £15,037, machinery £14,705, fitting £6,459. *Oberon* hull £14,669, machinery £4,177, fitting £7,442? *Triton* hull £15,328, machinery £14,525, fitting £5,818.

Antelope Ditchburn & Mare, Blackwall./John Penn & Sons.

Ord: 12.8. & 5.9.1845. K: 10.12.1845. L: 20.7.1846. C: 4.9.1847. Fitted





Scan and/or retouch by Grzechu

for the service of the Ambassador at Constantinople 1870-71. Sold at Malta 20.9.1883.

Oberon Ditchburn & Mare, Blackwall./George & John Rennie.
Ord: 12.8. & 5.9.1845. K: 7.1.1846. L: 2.1.1847. C: 13.11.1847. Harbour service at Portsmouth 1866-68. Used by the War Office for torpedo experiments from 1870; sunk by Whitehead torpedo 1874, but raised 1875. Sold to Isaacs 11.1880.

Triton Ditchburn & Mare, Blackwall./Ravenhill & Miller.
Ord: 12.8. & 5.9.1845. K: 3.12.1845. L: 24.10.1846. C: 13.4.1848. Sold to Isaacs (for £2,525) 17.2.1872.

NOTES: For the mail service between the Ionian Islands, Malta and Greece. Later reclassed as gunvessels. The original order (on 12.8.1845) for two wooden packets of 600 bm and 200 nhp (armed with 1 x 40cwt & 2 x 17cwt 32pdrs) was replaced on 5.9.1845 by the above order (a third ship was added 20.9.1845). Rennie appears on some records as contractor for *Oberon* (built 'at Deptford'), but they did not own a shipyard until 1858, and Ditchburn & Mare appear to have constructed all three hulls. With Thomas Ditchburn retiring in 1847, *Triton* was delivered by the 'successor' firm of C. J. Mare & Co.

Iron Paddle Gunvessels

On 16 January 1844, the Admiralty accepted tenders from Robert Napier and from Ditchburn & Mare to each build three iron steam vessels 'of the *Locust* class'; the plans were approved on 29 January. The two builders were each informed on the following day that they could proceed with construction of one of the three hull on their own plans, and the six names were assigned on 13 February 1844. Ordered as Steam Vessels (SV5) but rerated as gunvessels 31 May 1844.

***JACKALL* Class** - Second Class gunvessels. Symonds design, approved 17.4.1844.
Dimensions & tons: 142ft 7¼in, 126ft 10½in x 22ft 6in x 12ft 9½in. 340 bm. 492 disp.
Men: 60. Guns: 1 x 18pdr (22cwt) on pivot, 2 x 24pdr (13cwt) carronades.
Machinery: 2-cyl. side lever. 150 nhp. 455 ihp.
First cost: *Jackall* hull £5,680, machinery £6,000, fitting £2,985. *Lizard* £5,680, machinery £6,000, fitting £2,658.

Jackall Robert Napier & Sons, Govan. (No.8)/Robert Napier & Sons.
Ord: 16.1.1844. K: 1844. L: 28.10.1844. C: 22.9.1845. Sold to BU 11.1887.

Lizard Robert Napier & Sons, Govan. (No.9)/Robert Napier & Sons.
Ord: 16.1.1844. K: 1844. L: 28.11.1844. C: 27.11.1845. BU at Chatham 4.1869.

***TORCH* Class** - Second Class gunvessels. Symonds design, approved 17.4.1844.
Dimensions & tons: (*Torch*) 140ft 10in, 127ft 4in x 22ft 6in x 13ft 6in. 343 bm. 505 disp.
Men: 60. Guns: 1 x 18pdr (22cwt) on pivot, 2 x 24pdr (13cwt) carronades.
Machinery: *Torch* 2-cyl. side lever. 150 nhp. *Harpy* 2-cyl. (55in diam., 4ft stroke) 200 nhp (520 ihp = 9kts).
First cost: *Torch* hull £5,305, machinery £7,620, fitting £2,558. *Harpy* hull £5,148, machinery £9,636, fitting £2,665.

Torch Ditchburn & Mare, Blackwall./ Seaward & Capel.
Ord: 16.1.1844. K: 1844. L: 25.2.1845. C: 28.5.1846. Sold at Sydney 15.5.1856.

Harpy Ditchburn & Mare, Blackwall./John Penn & Sons.
Ord: 16.1.1844. K: 1844. L: 4.3.1845. C: 1.2.1846. To War Office as target 26.10.1892. Wreck sold for £20 1909.

NOTES: *Torch* fitted as a tender for *Herald* at Woolwich for £5,244 in 1852. Sold at Sydney (per AO 6.12.1854) for £2,400 15.5.1856. *Harpy* repaired for £13,843 1876-77. She was sold to the War Office for use at Milford Haven for experiments with a pneumatic gun.

***BLOODHOUND* Class** - Second Class gunvessel. Builder's design, approved 26.4.1844.
Dimensions & tons: 146ft 0in, 134ft 4½in x 23ft 0in x 13ft 6in. $378^{10}/_{94}$ bm.
Men: 60. Guns: 1 x 18pdr (22cwt) on pivot, 2 x 24pdr (13cwt) carronades.
Machinery: 2-cyl. side lever. 150 nhp.
First cost: Hull £5,992, machinery £6,000, fitting £2,992.

Bloodhound Robert Napier & Sons, Govan. (No.10)/Robert Napier & Sons.
Ord: 16.1.1844. K: 1844. L: 9.1.1845. C: 26.9.1845. BU 1866.

NOTES: *Bloodhound* fitted as a tender to *Sampson* at Portsmouth 1849-51.

***MYRMIDON* Class** - Second Class gunvessel. Builder's design, approved 1.6.1844.
Dimensions & tons: 151ft 0in, 137ft 6in x 22ft 6in x 13ft 8in. $370^{24}/_{94}$ bm.
Men: 60. Guns: 1 x 18pdr (22cwt) on pivot, 2 x 24pdr (13cwt) carronades.
Machinery: 2-cyl. (48in diam., 4ft stroke) side lever. 150 nhp. 10kts.
First cost: Hull £5,148, machinery £6,910, fitting £2,323.

Myrmidon Ditchburn & Mare, Blackwall./Boulton, Watt & Co.
Ord: 16.1.1844. K: 1844. L: 2.1.1845. C: 16.3.1846. Sold at Fernando Po (for £120) 1.12.1858.

***GRAPPLER* Class** - First Class gunvessel. Builder's design.
Dimensions & tons: 165ft 0in, 149ft 1in x 26ft 6in x 16ft 7in. $556^{88}/_{94}$ bm.
Men: 80. Guns: 2 x 32pdr (26cwt/6ft) on pivots + 2 x 32pdr (17cwt/4ft) carronades.
Machinery: 4-cyl. 'Siamese' engine. 220 nhp.
First cost: Hull £13,863, machinery £16,830, fitting £4,468.

Grappler William Fairbairn & Co., Millwall./Maudslay, Sons & Field.
Ord: 27.7 & 15.10.1844. K: 1844. L: 30.12.1845. C: 26.11.1846. Sold to W. P. Beach to BU (for £560) 2.2.1850.

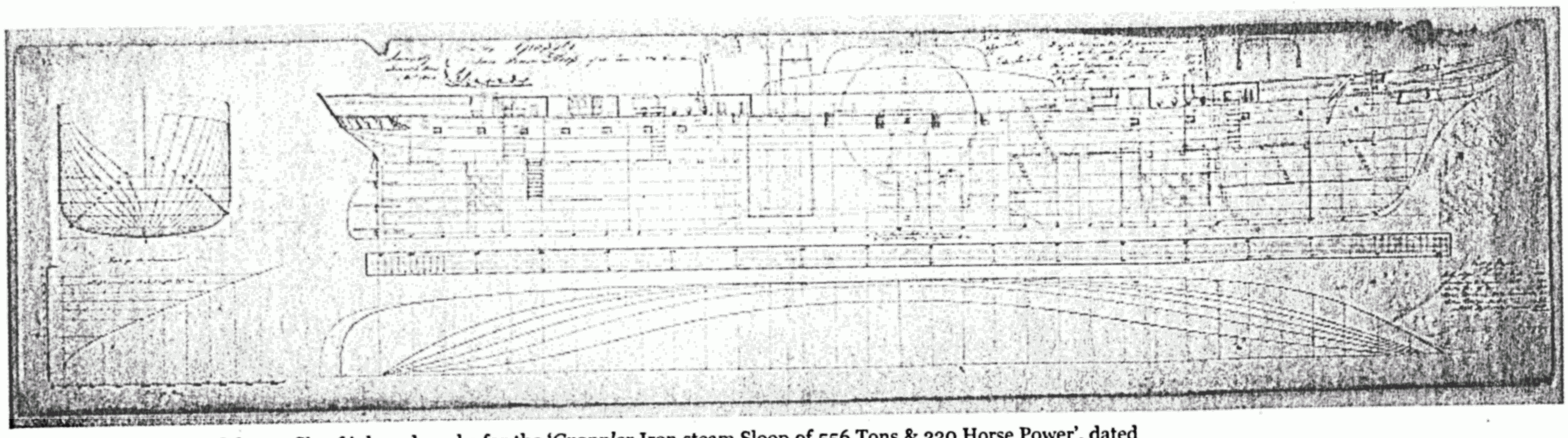
NOTES: Design commissioned 11.5.1844, rated as Steam Vessel (SV3) but rerated as gunvessel 31.5.1833. Built to receive the 220 nhp engine originally intended for *Trident* (which see). Hull beset with severe early corrosion and thus early disposal.

***RECRUIT* Class** - First Class gunvessels. Builder's design.
Dimensions & tons: 181ft 0in, 178ft wl, 162ft $9^{7}/_{8}$in x 26ft 1½in x 11ft 0in. 591 bm.
Men: 74-80. Guns: 4 x 8in (65cwt) shell, 2 x 32pdr (25cwt); later 4 x 32pdr (56cwt), 2 x 12pdr (10cwt) howitzers.
Machinery: 2-cyl. (48in diam., 4½ft stroke) oscillating direct-acting. 4 boilers. 160 nhp. 754 ihp = 11.5kts. 2,500 miles radius @ 10kts.
First cost (of refitting for sea): *Recruit* £1,553. *Weser* £1,948.

Recruit (ex-Prussian *Salamander*) J. Scott Russell & Robinson, Millwall.
L: 1850. C: 1.7.1851 (for Prussia). Sold to E. Bates 23.9.1869.

Weser (ex-Prussian *Nix*) J. Scott Russell & Robinson, Millwall.
L: 1850. C: 29.7.1851 (for Prussia). Harbour service 1866. Sold at Malta for £1,500 29.10.1873.

NOTES: Ordered 1849 by the Prussian Navy (with a third sister-ship which was subsequently retained by Prussia) and commissioned by them in



Admiralty Office copy of the profile of inboard works for the '*Grappler* Iron steam Sloop of 556 Tons & 220 Horse Power', dated October 1844. The draught includes a weight breakdown, and a scale of displacement, showing the loaded displacement at 10ft draught to be 660 tons. *DR8213*

7.1851, these two double-ended gunboats (with rudders both forward and aft) were handed over to the RN on the outbreak of the Crimean War. Both arrived at Devonport to be exchanged 21.12.1854, were renamed the following day, and were handed over to the RN 12.1.1855 (by agreement, the sailing frigate *Thetis* was given to Prussia in exchange on the same date). The exchange was considered complete 5.2.1855, and both ships then completed refitting for sea 4.4.1855. Iron-hulled with 8in. teak backing, but were considered 'sad failures'.

Iron Paddle Packets

***DOVER* Class** - Builder's design, 1839.

Dimensions & tons: 110ft 5in, 95ft 8in x 21ft 0in x 10ft 6in. Draught 5ft 2½in. 224$^{43}/_{94}$ bm.

Machinery: 90 nhp.

First cost: £10,153 (including machinery £5,300).

Dover John Laird, Sons & Co., Birkenhead. (No.31)/Fawcett, Preston & Co.

Ord: 4.2.1839 (named 30.3.1839) K: 1839. L: 1840. C: ... . Sold 1866.

NOTES: The first iron ship ordered and built for the RN. Based at Dover until 1847. Re-fitted for the River Gambia 1847/48, and stationed there from 1849. Re-fitted and loaned to the Colonial Office for use on the Gambia 1852/53.

PRINCESS ALICE - purchased 1844 (designed by Thomas Ditchburn and built by Ditchburn & Mare, Blackwall 1843).

Dimensions & tons: 140ft 4in, 126ft 4in x 20ft 4in x 10ft 10¾in. 270 bm.

Machinery: Maudslay 120 nhp. 431 ihp.

Purchased from Maudslay by AO 23.1.1844. Based at Dover. Lent to Mr Chads for the Dover packet service 1857. BU completed at Devonport 16.7.1878.

***ONYX* Class** - 1845. Thomas Ditchburn design, approved 14.4.1845.

Dimensions & tons: 137ft 0in, 124ft 2$^{2}/_{3}$in x 21ft 0in x 10ft 8in. 291$^{37}/_{94}$ bm.

Machinery: Penn 120 nhp.

First cost: *Onyx* hull £6,673, fitting £6,673 (including machinery £6,376). *Violet* hull £5,409, machinery £6,360, fitting ... .

Onyx Ditchburn & Mare, Blackwall./John Penn & Son.

Ord: 14.4.1845. K: ... . L: 11.1845. C: 1.1846. Sold to Jenkins & Churchward by AO 16.2.1854.

Violet Ditchburn & Mare, Blackwall./ John Penn & Son.

Ord: 9.7.1845. K: ... . L: 1.12.1845. C: 3.1846. Sold to Jenkins & Churchward by AO 16.2.1854 (lost on the Goodwin Sands in 1.1857).

NOTES: Original design was 130ft length, 275 tons as approved. Lengthened by 7ft by AO 9.7.1845. Both actually measured 139ft in length, and 298 bm as built. Both based at Dover, where they replaced *Ariel* (ex-PO *Arrow*) and *Swallow* (ex PO *Ferret*) respectively.

On 29 September 1846 the Admiralty ordered a design competition to be held for four new paddle packets of 350 nhp for the Holyhead service, to compare with Surveyor's plans by Lang. As a result, they ordered the following four iron-hulled vessels. The packet service (with two of the four new ships) was sold to a commercial user soon after they came into service, and *Banshee* and *Caradoc* were fitted for the Mediterranean and commissioned as gunboats in 1850-51.

***BANSHEE* Class** - Oliver Lang design, approved 7.11.1846 and 6.1.1847.

Dimensions & tons: 189ft 0in, 172ft 9¼in x 27ft 2in oa (27ft 0in for tonnage) x 14ft 4in. 670$^{5}/_{94}$ bm.

Men: ... . Guns: ... .

Machinery: 2-cyl. oscillating. 350 nhp. 1,400 ihp.

First cost: Hull £15,034, machinery £21,350, fitting £1,596.

Banshee John Jenkins Thompson, Rotherhithe./John Penn & Sons.

Ord: 9.11.1846. K: 12.1846. L: 13.10.1847. C: 28.2.1848.

BU 1864.

NOTES: Designed for the Holyhead Station. Based at Liverpool, then Holyhead. Fitted for a packet for the Mediterranean 1850/51.

***SAINT COLUMBA* Class** - Builders' design, 1846.

Dimensions & tons: 198ft 6½in, *c*184ft 3in x 27ft 3in x 15ft 5in. 719 bm.

Men: ... . Guns: ... .

Machinery: 350 nhp.

First cost: £34,997 (including machinery £19,705).

Saint Columba John Laird, Sons & Co., Birkenhead. (No.65)/George Forrester & Co.

Ord: 9.11.1846. K: 11.1846. L: 5.7.1847. C: 1847. Sold to the City of Dublin Steam Packet Company 1850 (by AO 14.6.1850).

NOTES: Originally to be named *Kathleen*, then *Columba*, finally *Saint Columba* on 13.2.1847. Based at Liverpool, then Holyhead.

***CARADOC* Class** 1846. Sir William Symonds design, approved 6.11.1846.

Dimensions & tons: 190ft 0in, 174ft 0in x 26ft 9in x 14ft 0in. 662$^{25}/_{94}$ bm.

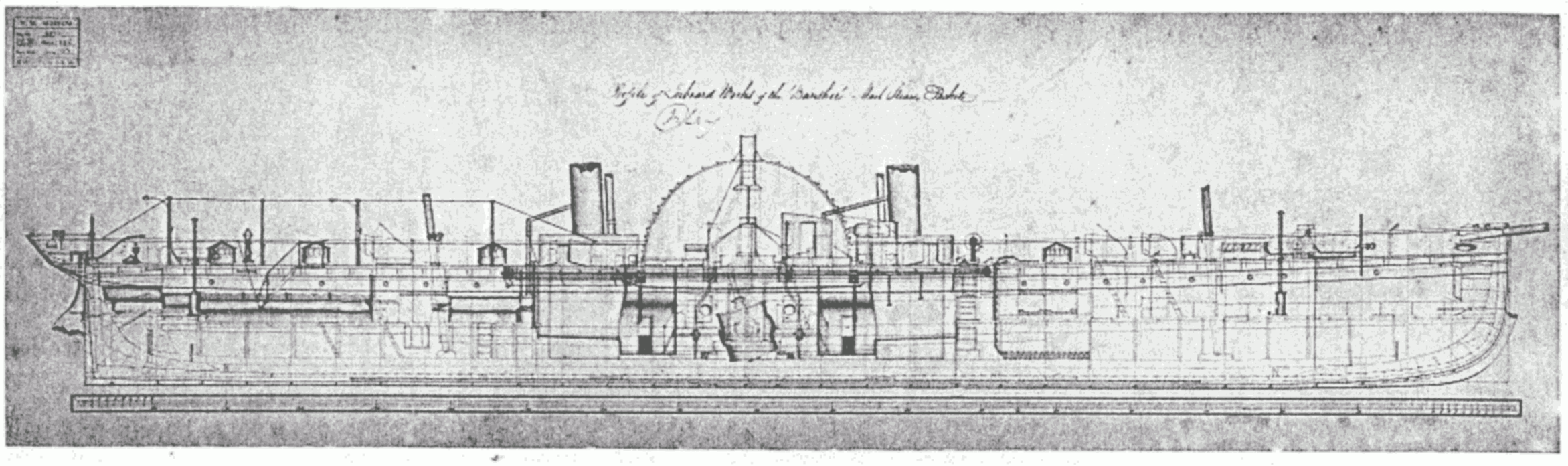
Men: ... . Guns: (from 1850) 3 x 18pdr.

Machinery: 350 nhp.

First cost: Hull £16,041, machinery £18,322, fitting £1,496.

Caradoc Ditchburn & Mare, Blackwall./ Seaward & Capel.

Scan and/or retouch by Grzechu



Profile of inboard works for the *Banshee*, 'Mail Steam Packet'. It is signed by Oliver Lang, but undated. *DR6510*

Ord: 9.11.1846. K: 12.1846. L: 3.7.1847. C: 6.6.1848. Sold to E. Bates 12.5.1870.

NOTES: For the Holyhead-Kingston service. Based at Liverpool, then Holyhead.

***LLEWELLYN* Class** - Builders' design, 1846.

Dimensions & tons: 190ft 6in, *c*173ft 0in x 27ft 0in x 14ft 0in. 671 bm.
Men: ... . Guns: ... .
Machinery: 2-cyl. oscillating. 350 nhp.
First cost: Hull £16,355, machinery £21,200, fitting £1,407.

Llewellyn Miller & Ravenhill, Blackwall./Miller & Ravenhill.

Ord: 9.11.1846. K: 4.1847. L: 22.1.1848. C: 15.5.1848. Sold to the City of Dublin SP Co. by AO 14.6.1850 as *St. Patrick*.

NOTES: Based at Liverpool, then Holyhead.

UNDINE - purchased 1847 (ex-mercantile *Ondine*, built 1845 by Ditchburn & Mare, Blackwall).

Dimensions & tons: 145ft 0in, *c*133ft 6in x 20ft 0in x 9ft 10in. 284 bm.
Machinery: Miller, Ravenhill & Co. 2-cyl. (34in diam., 3ft stroke) oscillating. 110 nhp.
Purchased from Edward Baldwin for £10,936 13.2.1847. Temporary packet at Dover 1848. Sold to Jenkins & Churchward by AO 16.2.1854.

FIREQUEEN - purchased 1847 (yacht *Fire Queen* built 1844 by Robert Napier & Sons, Govan).

Dimensions & tons: 163ft 9in, 147ft 1½in x 20ft x 9ft 8in. Draught 4¾ft-5ft. 313²/₉₄ bm. 251 disp.
Machinery: Robert Napier. 120 nhp. 466 ihp.
Purchased from Mr Assheton Smith 23.7.1847 (by AO 10.7.1847). Based on Holyhead Station 1850. Port Admiral's yacht at Portsmouth 1874(?). Sold to Castle for BU at Charlton 4.8.1883.

Iron Paddle Despatch Vessels/Gunboats

***BANN* Class** - Builder's design, 1855. Diminutive versions of ex-Prussian iron paddle gunboats acquired earlier 1855.

Dimensions & tons: 140ft 0in, 122ft 10in x 20ft 2in x 8ft 6in. Draught 4ft. 267 bm. 291 disp.
Men: ... . Guns: 2 x 8in (65cwt) shell, 2 x 32pdr (25cwt).
Machinery: 2-cyl. (40in diam., 3½ft stroke) oscillating. 2 boilers. 80 nhp. *Bann* 341 ihp. *Brune* 364 ihp. 10.5kts.

Bann J. Scott Russell, Millwall./ Russell.

Ord: 11.1855. K: 2.1.1856. L: 5.7.1856. C: 9.1856 & purchased for £10,495. Sold to BU 18.2.1873.

Brune J. Scott Russell, Millwall./ Russell.

Ord: 11.1855. K: 2.1.1856. L: 30.8.1856. Purchased for £10,495 30.8.1856(?). C: 7.5.1857 (completed for sea at Woolwich). Sold at Lagos 19.5.1863.

Iron Paddle Exploration Ships

The Royal Navy played a key role in the exploration of the River Niger during the early years of Victoria's reign. Following the journey of Commander Hugh Clapperton from Tripoli to Kano in 1827, two expeditions were led by Lieutenant William Allen in 1832 and by Lieutenant William Bullock some years later. A third naval expedition under Captain Henry Dundas Trotter was despatched in 1841, and for this expedition three iron-hulled paddle vessels were specially built by Lairds. Not ordered by the RN, but they were registered in the Royal Navy on 19 August 1840 while already under construction.

***SOUDAN* Class** - Builder's design, 1840.

Dimensions & tons: 110ft 0in, 96ft 10in x 22ft 0in x 8ft 6in. Draught 4½ft. 249 bm. 253 disp.
Men: ... . Guns: 1 x 12pdr howitzer.
Machinery: 35 nhp.

Soudan John Laird, Sons & Co., Birkenhead. (No.34) ... .

K: 1840. L: 8.6.1840. C: 10.1840. Wrecked on the Nigerian coast 1844. By AO 22.11.1844 the engines were to be removed from the wreck and the stores to be sold locally.

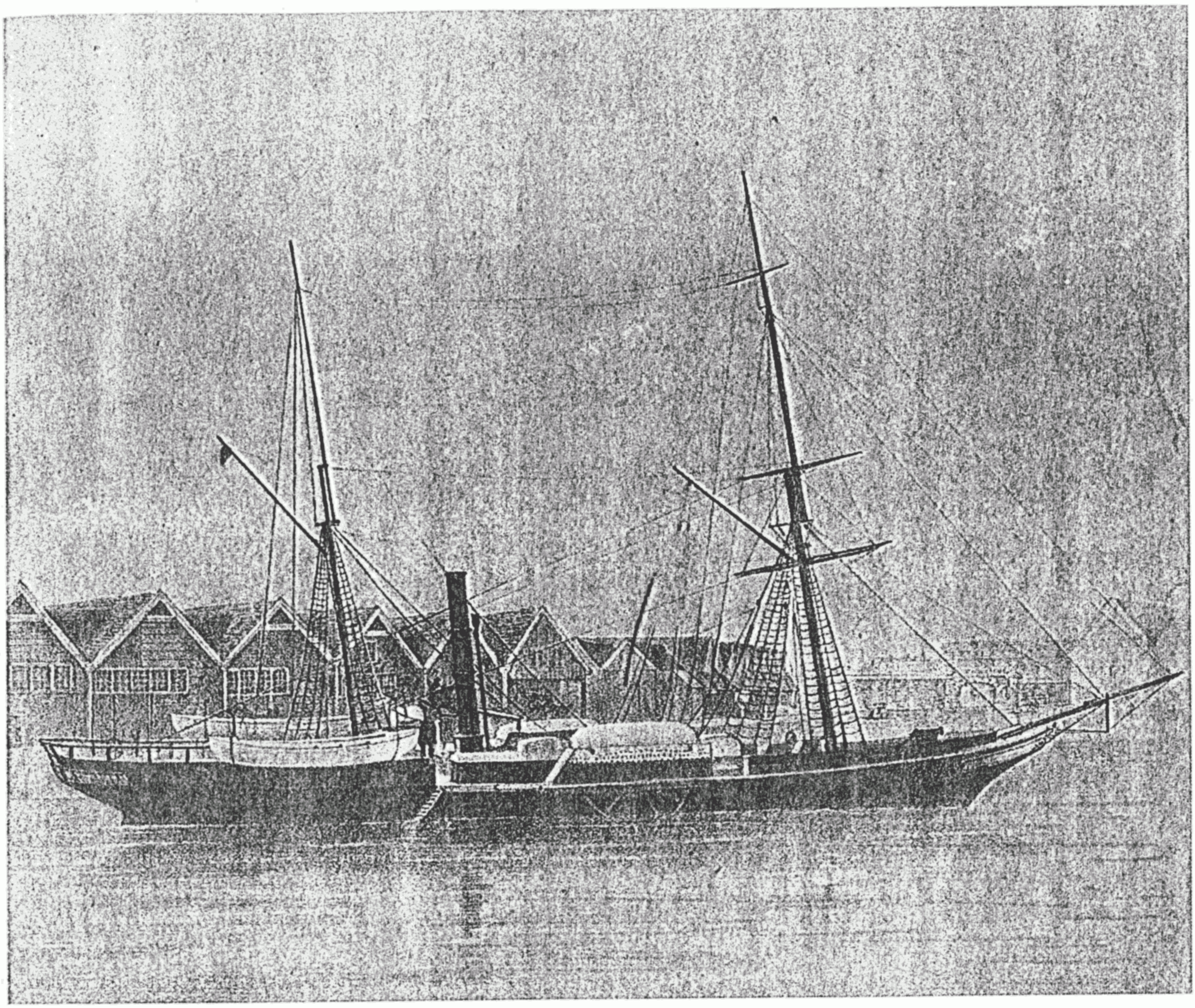
***ALBERT* Class** - Builder's design, 1840.

Dimensions & tons: 134ft 0in, 117ft 8in x 27ft 0in x 10ft 6in. Draught 6ft. 459 bm. 340 disp.
Men: ... . Guns: 3 x 12pdr, 4 x 1pdr.
Machinery: 70 nhp.

Albert John Laird, Sons & Co., Birkenhead. (No.35)/Fawcett, Preston & Co.

K: 8.1840. L: 29.8.1840. C: 10.1840. Wrecked on 13.7.1843 but then salved. Transferred to the Colonial Government of Gambia (in lieu of *Wilberforce*) by AO 1.3.1845. BU 1850.

Wilberforce John Laird, Sons & Co., Birkenhead. (No.36)/George Forrester & Co.



A lithograph after an early daguerreotype of the iron exploration vessel *Albert*, as seen at Deptford before setting off for the Niger expedition. The caption notes that the vessel is fitted with Captain G Smith's paddle-box safety boats and Dr Reid's ventilating apparatus. *Neg 2971*

K: 8.1840. L: 10.10.1840. C: 10.1840. BU in Gambia 6.1850.

NOTES: In 1842-43 *Wilberforce* was refitted and given *Carron*'s engine. By AO 4.3.1845 she was to be removed from the List of the Navy, with a note to the effect that she had been transferred to the Colonial Office, but this hardly squares with the contemporary order for her sister. A letter of 13.6.1850 from the Governor of Bathurst (the Gambia) states that she had been BU and the materials sold for £59.8.4 (perhaps a confusion with her sister?).

Iron Paddle Tenders/Tugs

***RUBY* Class** - Builder's design, 1841, approved 17.9.1841. Tender.

Dimensions & tons: 93ft 0in, *c*84ft 0in x 12ft 9½in x 7ft 1in. 73 bm.
Men: ... . Guns: nil.
Machinery: 2-cyl. 20 nhp.

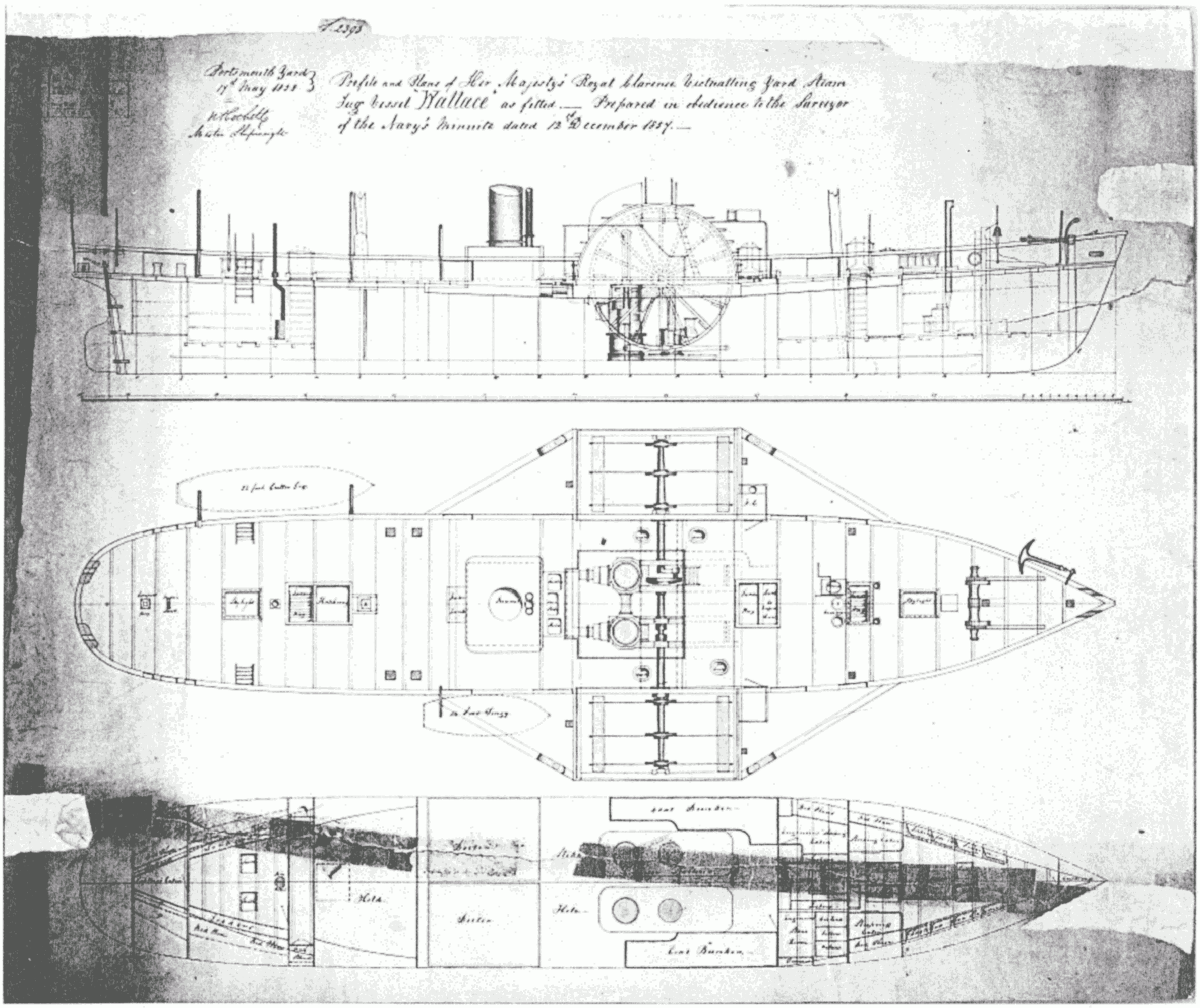
Ruby Acramans, Morgan & Co., Bristol./... .

Ord: 1.9.1841. K: 1841. L: 7.1842. C: 25.9.1842 (arrived at Devonport). Used in gunnery trials 1846. Her remains were sold to Mr Barnard (for £20) 2.11.1846.

***ROCKET* Class** - Builder's design, 1841, approved 15.11.1841. Tender.

Dimensions & tons: 90ft 0in, *c*82ft 0in x 12ft 8in x 7ft 4in. $70^{31}/_{94}$ bm.
Men: ... . Guns: nil.
Machinery: 2-cyl. 20 nhp.
First cost: Fitting £481.

Rocket William Fairbairn & Co., Limehouse./William Fairbairn.



As fitted profile and plans for the steam tug *Wallace* for the Royal Clarence Victualling Yard, 17 May 1858. *DR7460*

Ord: 1.9.1841. K: 1841. L: 7.1842. C: 27.2.1843. BU completed at Woolwich 6.1850.

NOTES: Initially described as 'steam packet'.

MINNA - purchased 1854 (ex-mercantile *Pomona* ...).

Dimensions & tons: ?180ft x 23ft x 9ft. ?170 bm.

Iron paddle tug of 120 nhp, purchased at Constantinople for £9,500 19.8.1854. Sold for £2,600 at Constantinople to Swan Brothers 8.7.1856. There seems to be some confusion as to whether this vessel was also known as *Sulina*, or whether *Sulina* was a separate vessel purchased and sold at the same times.

MOSLEM - purchased 1854 (ex-mercantile *Towk Beira* ...).

Dimensions & tons: ?180ft x 23ft x 9ft. ?170 bm.

Iron paddle tug of 120 nhp, purchased at Constantinople for £9,500. Sold (as *Brenda*) to H. Henchfield for £2,100 at Constantinople 8.1856. There is some confusion as to whether this vessel was also known as *Brenda* (which seems likely) or whether *Brenda* was a separate vessel with a similar history.

BOURNABAT - purchased 1854 (ex-mercantile *Bournabat*, building details unknown).

Dimensions & tons: 79ft 0in x 13ft 0in x 7ft 0in.

Iron paddle tug, purchased by AO at Constantinople for £2,200 9.9.1854. Ran ashore and lost at Scutari 29.3.1866. Wreck sold for £150.

NIMBLE - purchased 1855 (ex-mercantile *Morecambe's Queen*, built 1853 by Alexander Denny, Dumbarton (No.27)).

Dimensions & tons: ... . 91 bm.

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Machinery: Tulloch & Denny 90 nhp.
Iron paddle tug, purchased from Jas. Ward at Constantinople for £9,600 by Admiral Grey 1.5.1855. Sold to the Turkish Government at Constantinople for £4,050 22.7.1856.

WALLACE - purchased 1855 (ex-mercantile *Lyons*, built 1854 by J. Scott Russell, Millwall).
Dimensions & tons: 112ft 3in, 99ft 3in x 19ft 10½in x 10ft 0in. 209$^{7}/_{94}$ bm.
Iron paddle tug of 100 nhp, purchased (at Malta?) for £9,500 by Admiral Lyons 7.1855. To Portsmouth 1857 and attached to the Royal Clarence Victualling Yard (Gosport). Sold 1869.

***THAIS* Class** - Builders design, 1856. Double ended tug/ferry.
Dimensions & tons: 125ft 0in (or less likely 118ft), 108ft x 22ft x 9ft 6in. 278 $^{4}/_{94}$ bm.
Also reported as: 134ft 0in, c117ft 0in x 22ft 0in x 8ft 11in. 302 bm.
Men: ... .
Machinery: Laird. 80 nhp.
First cost: £10,250.

Thais John Laird, Sons & Co., Birkenhead. (No.129)/Laird.
Ord: 16.1.1856. K: ... . L: 2.1856. C: 22.2.1856. Turned over to the Royal William Victualling Yard (at Stonehouse, Plymouth) by AO 16.3.1857. Sold to Mr Bates 2.12.1869.

NOTES: To be built for use at Constantinople. Alternative dimensions reported may indicate possible lengthening.

Paddle Vessel on the Canadian Great Lakes

***MOHAWK* Class** - Iron paddle gunboat. Symonds design, 1841.
Dimensions & tons: As built: 99ft 1½in, c87ft 0in x 19ft 6in x 9ft 10in. 176 bm.
In 1846 lengthened to: 124ft 3in, 112ft 6in. 225 bm.
Men: 20. Guns: 1.
Machinery: ... . 60 nhp.
First cost: (in pieces) £1,446 (hull?).

Mohawk William Fairbairn & Co., Limehouse./William Fairbairn.
Ord: 6.1841. K: 1841. Delivered in pieces for shipment to Canada 11.1841. L: 21.2.1843 after assembly at Kingston Yard, Lake Ontario. Served on Lake Ontario, later on Lake Huron. Lengthened by 25ft at Millwall 1846 (?). Sold for £1,643 to J. F. Parke 21.6.1852.

NOTES: For patrol service on Lake Ontario, later on Lake Huron. Lengthened in 1846 with additional 25ft 1½in section constructed at Millwall (probably shipped out to Canada and section inserted at Kingston Yard).

Paddle Vessels on Indian Service

The following four iron-hulled vessels were, as mentioned at the onset of this chapter, built by John Laird, Sons & Co., Birkenhead, for the East India Company's marine service, and subsequently registered in the Indian Navy in 1840. The *Nemesis* was known (not quite accurately) as the world's first iron warship. The *Ariadne* and *Medusa* were constructed in sections, shipped out to Bombay and assembled there in 1840 (like the gunboats below).

ARIADNE (built by Lairds (Yard No. 25)), sloop.
Dimensions & tons: 139ft 0in x 26ft 0in. 432 bm.
Machinery: 70 nhp.
L: 12.1839. Foundered off Chusan (China) 23.6.1842.

MEDUSA (built by Lairds (Yard No. 26)), sloop.
Dimensions & tons: 139ft 0in x 26ft 0in. 432 bm.
Machinery: 70 nhp.
L: 12.1839. Wrecked on the coast of Bengal 9.12.1853.

PHLEGETHON (built by Lairds (Yard No. 27)), sloop.
Dimensions & tons: ... , 156ft 2in x 25ft 3in. 530 bm.
Machinery: 90 nhp.
L: 30.4.1840. Listed to 1853.

NEMESIS (built by Lairds (Yard No.28)), sloop.
Dimensions & tons: 184ft 0in oa, 165ft 0in x 29ft 0in. 660 bm.
Men: 60-90. Guns: 2 x 32pdr, 4 (later 5) x 6pdr.
Machinery: George Forrester 2-cyl. (44in diam., 48in stroke) engine. 120 nhp.
L: 23.11.1839. For sale in 1852.

The above were joined by a Bombay-built iron paddle frigate:

SEMIRAMIS(ii) - frigate, 6 guns.
Dimensions & tons: 189ft 0in x 34ft 0in x 21ft 0in. 1,031 bm.
Machinery: 350 nhp.
L: 26.2.1842. Hulked in 1863.

In addition, in 1839 Lairds built four smaller iron paddle gunboats for the same customer - the *Comet* (Yard No.18) of 205 bm and 40 nhp, and the *Nimrod*, *Nitrocris* and *Assyria* (Yard Nos. 21, 22 & 23), measuring 103ft 0in x 18ft 0in x 6ft 7in, of 153 bm and 40 nhp, and carrying 2 x 9pdrs (on swivel mountings) each - the last sent out in sections to the Persian Gulf for assembly and subsequent patrol duties there (later transferred to the River Indus Flotilla). Two larger gunboats were built in London in 1840 - the *Proserpine* of 400 bm, 90 nhp and 2 guns (18pdrs); and the *Pluto* of 450 bm, 100 nhp and 1 gun (a 32pdr).

Lairds had earlier (1835) built two small iron paddle gunboats - the *Euphrates* (Yard No. 4) of 179 bm was launched 12.1834 and the *Tigris* (Yard No. 5) of 109 bm was launched 1.1835 - for Major Chesney's famous Euphrates expedition to the joint order of the British government and the East India Co.

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5 Screw Steamers (Wooden) to 1863

Steam Screw Ships of the Line

Although steam propulsion came much later to the battle fleet than to cruising ships, the origins of Britain's first steam battleships are inevitably complex. The conversion of four *Armada* Class 74s into 60-gun steam-powered blockships, commencing in 1845, led the Admiralty into something like a blind alley. Symonds's resignation from the office of Surveyor in June 1847 left that post under the temporary administration of his Assistant Surveyor, John Edye. In fact, the Committee of Reference on Shipbuilding, under the chairmanship of Captain Lord John Hay, the Third Naval Lord, assumed responsibility for construction policy and took an active role in advancing the cause of steam power for ships of the line. Nevertheless, little active work in developing this policy was completed before the appointment of a new Surveyor, Captain Sir Baldwin Wake Walker, on 5 February 1848. At the same time, a second Assistant Surveyor, Isaac Watts, was appointed to share the detailed design work with John Edye.

Screw three-deckers

The new Surveyor was determined to complete a three-decker steam battleship at an early date, and in December 1851 his assistants, Isaac Watts and John Abethell, inspected the suspended 120-gun ship *Windsor Castle* at Pembroke Dock, and recommended her completion as a steamship. In 1852, two sailing First Rates of the Modified *Queen* Class, and the larger *Royal Albert*, all then building (see Chapter 2), were ordered to be completed as screw warships, and similar orders were issued for the other four of the Modified *Queen* Class in 1854 to 1857, although one of these - the *Royal Frederick* (renamed the *Frederick William*) - was instead cut down to become a screw two-decker. One older First Rate - the *Royal George* launched in 1827 - was also converted to a screw three-decker, but the result was so crank that she too was quickly cut down to a two-decker. Several other older First Rates were cut down to two-deckers when their engines and screws were fitted. Just two new three-deckers - the *Howe* and *Victoria* - were designed and built from the start as screw ships before the development of the ironclad frigate made the concept of wooden-walled battleships obsolete.

***DUKE OF WELLINGTON* Class** - conversions of 120-gun sailing First Rates (incomplete on stocks) to 131-gun screw ships.

Dimensions & tons: 240ft 7in, 201ft 11½in x 60ft 1in (59ft 3in for tonnage) x 24ft 8in. 3,771$^{19}/_{94}$ bm. 6,071 disp.
Men: 1,100. Guns: LD 10 x 8in (65cwt/9ft) + 26 x 32pdr (56cwt/9½ft); MD 6 x 8in (65cwt/9ft) + 30 x 32pdr (56cwt/9½ft); UD 38 x 32pdr (42cwt/8ft); QD/Fc 20 x 32pdr (25cwt/6ft) + 1 x 68pdr (95cwt/10ft) on pivot.
Machinery: 2-cyl. horizontal single expansion (geared in *Duke of Wellington*). Single screw. *Duke of Wellington* 780 nhp. 1,979 ihp = 10.15kts. *Royal Sovereign* 800 nhp. 2,796 ihp = 12.25kts.
First cost: *Duke of Wellington* £176,918 (including machinery £40,862), plus fitting (at Portsmouth Dyd) £40,716. *Royal Sovereign* hull £113,165, machinery £49,300, fitting £16,079.

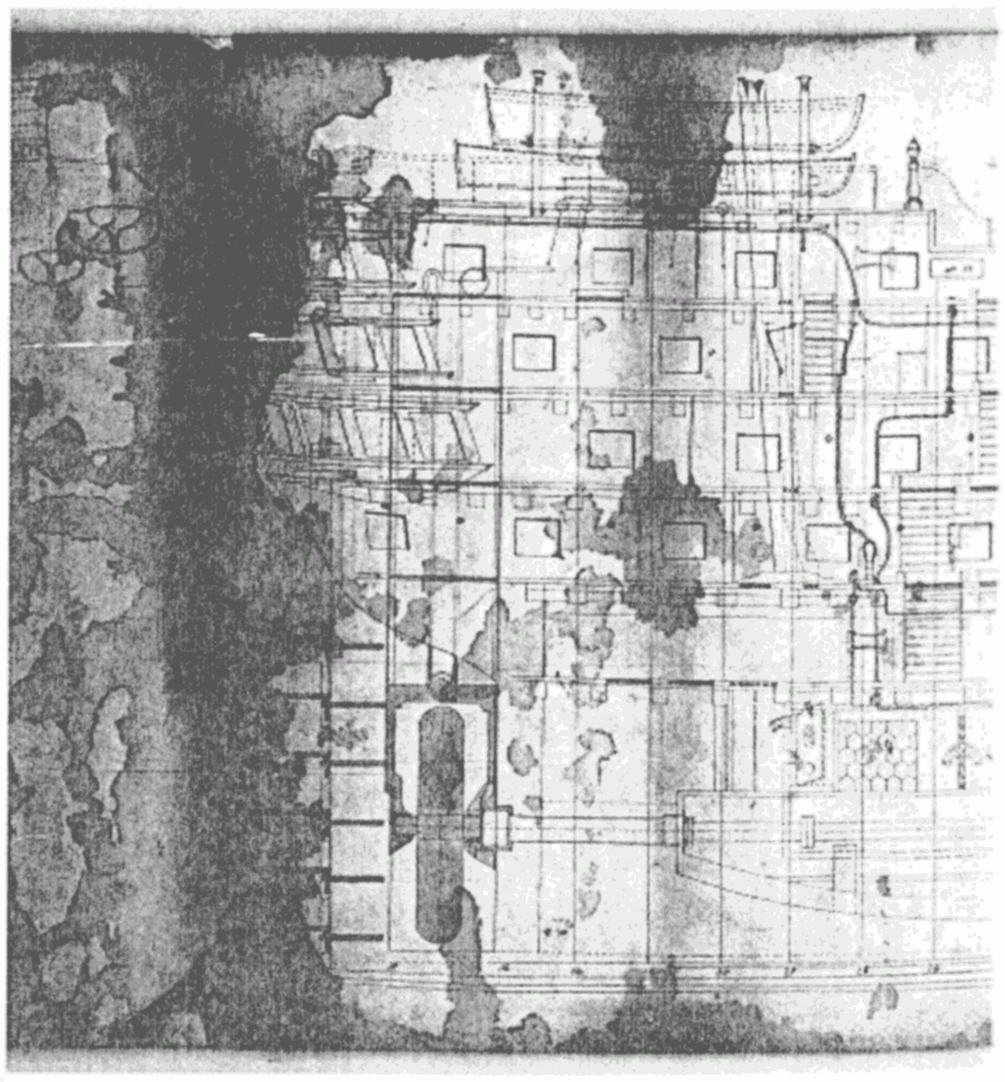
Duke of Wellington (ex-*Windsor Castle*, renamed 1.10.1852) Pembroke Dyd/Robert Napier & Sons.
Conversion ord: 19.1.1852. Begun: 19.1.1852. L: 14.9.1852. To Portsmouth Dyd to complete 11.10.1852. C: 27.11.1853. Receiving ship at Portsmouth 5.1863. Sold to Castle 12.4.1904 to BU at Charlton.

Royal Sovereign Portsmouth Dyd/Maudslay, Sons & Field.
Conversion ord: 23.6.1854. Begun: 25.1.1855. L: 25.4.1857. C: 7.1857 (fitted for reserve only). Converted to ironclad turret ship 4.1862 to 8.1864 (see Chapter 6).

NOTES: Lengthened during conversion with extra 23ft amidships and 8ft in the run. After sections launched for lengthening ships on 7.2.1852 and 30.6.1855 respectively. Sisters *Marlborough* and *Prince of Wales* were originally planned to be converted to same plans, but they were further lengthened during construction (see below). The *Duke of Wellington* received the 780 nhp engine (with cylinders 93$^{7}/_{8}$in diam., 4½ft stroke) from the iron screw frigate *Simoon*, hence her brief subsequent career. *Royal Sovereign*'s cylinders identical to *Marlborough*'s (below).

MARLBOROUGH - conversion of 120-gun sailing First Rate (incomplete on stocks) to 131-gun screw ship.

Dimensions & tons: 245ft 6in, 206ft 11$^{1}/_{8}$in x 60ft 0in (59ft 2in for tonnage) x 25ft 2in. 3,853$^{12}/_{94}$ bm. 6,065 disp.
Men: 1,100. Guns: LD 10 x 8in (65cwt/9ft) + 26 x 32pdr (56cwt/9½ft); MD 6 x 8in (65cwt/9ft) + 30 x 32pdr (56cwt/9½ft); UD 38 x 32pdr (42cwt/8ft); QD/Fc 20 x 32pdr (25cwt/6ft) + 1 x 68pdr



As fitted profile, dated Portsmouth 27 September 1861, for the *Marlborough* of 131 guns when completed as a screw ship. The original draught is heavily water-stained. *DR6934*

Scan and/or retouch by Grzechu

(95cwt/10ft) on pivot.
Machinery: 2-cyl. (82in diam., 4ft stroke) horizontal single expansion. Single screw. 800 nhp. 2,684 ihp = 11.866kts.
First cost: £203,554 (including hull £107,731, machinery £51,120 and fitting for sea £28,333).

Marlborough Portsmouth Dyd/Maudslay, Sons & Field.
Conversion ord: 30.10.1852. Begun: 9.6.1853. L: 1.8.1855 (launch actually completed over a week later, as she stuck on the ways).
C: 1858. Receiving ship at Portsmouth 1864. Engineers' training ship at Portsmouth 12.1878. Renamed *Vernon II* in 3.1904. Sold to A. Butcher 10.1924 to BU, but capsized off Brighton in tow to shipbreakers 28.11.1924.

NOTES: Unlike the above pair, this vessel was given an extra 5ft at the bow during her conversion. As built, she was broader and actually measured at 206ft 3⅝in x 61ft 2½in oa (60ft 4½in for tonnage) x 25ft 10in (4,000⁷/₉₄ bm).

PRINCE OF WALES - conversion of 120-gun sailing First Rate (incomplete on stocks) to 121-gun screw ship.
Dimensions & tons: 252ft 0in, 213ft 0in x 60ft 0in (59ft 2in for tonnage) x 25ft 2in. 3,966²⁰/₉₄ bm. 6,201 disp.
Men: 1,100. Guns: LD 32 x 8in (65cwt/9ft); MD 30 x 8in (65cwt/9ft); UD 32 x 32pdr (58cwt/9½ft); QD/Fc 26 x 32pdr (42cwt/8ft) + 1 x 68pdr (95cwt/10ft) on pivot.
Machinery: 2-cyl. (82in diam., 4ft stroke) horizontal single expansion trunk. Single screw. 800 nhp. 3,352 ihp = 12.569kts.

Prince of Wales Portsmouth Dyd/John Penn & Son.
Conversion ord: 9.4.1856. Begun: 27.10.1856. L: 25.1.1860. Engines removed in 1867 into ironclad *Repulse* (see Chapter 6). Renamed *Britannia* as boys' training ship at Dartmouth 3.3.1869. Hulked 9.1909. Sold to Garnham 13.9.1914; resold to Hughes Bolckow and arrived at Blyth to BU 7.1916.

NOTES: As built, she actually measured at 60ft 2in beam (3,994 bm).

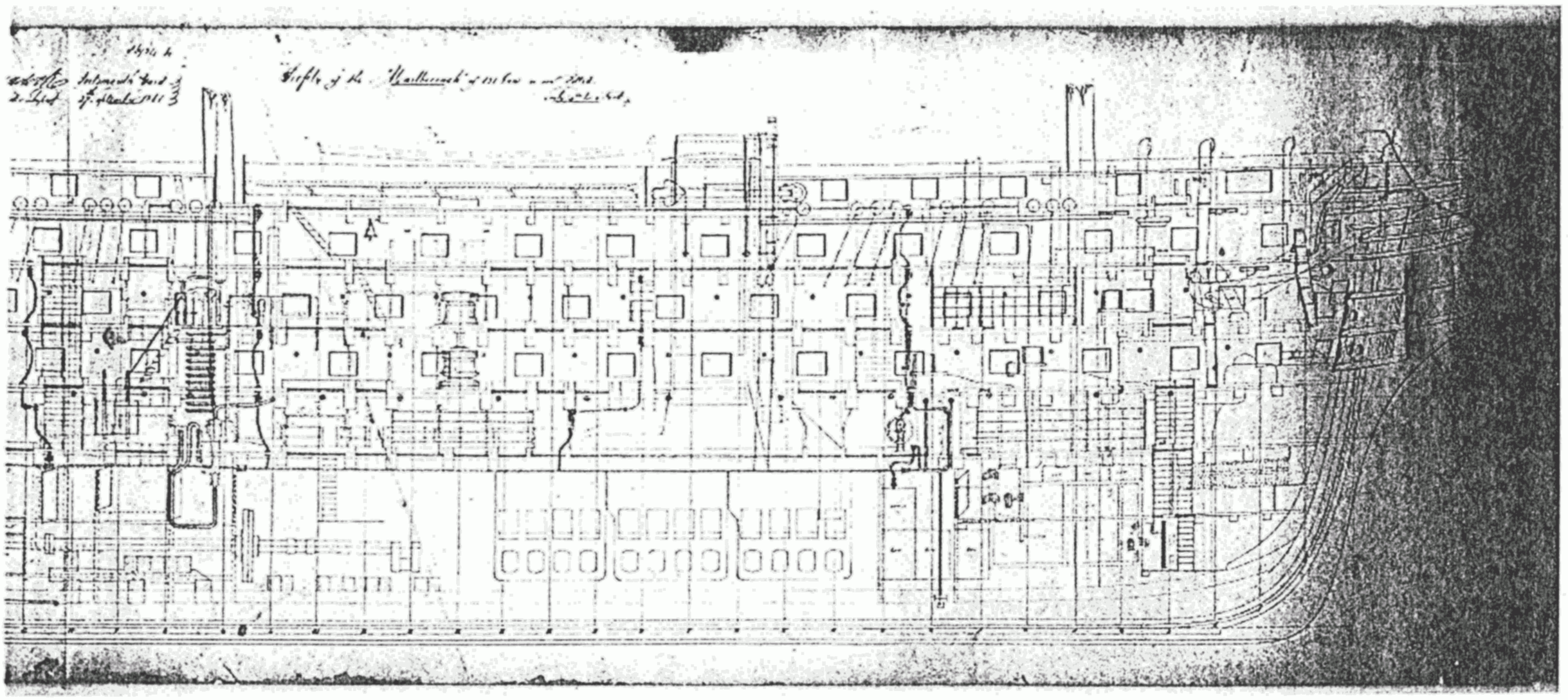
ROYAL ALBERT - conversion of 120-gun sailing First Rate (incomplete on stocks) to 121-gun screw ship, 1852.
Dimensions & tons: 232ft 9in, 193ft 6¹/₈in x 61ft 0in (60ft 2in for tonnage) x 24ft 2in. 3,726²⁶/₉₄ bm. 5,571 disp.
Men: 1,050. Guns: LD 32 x 8in (65cwt/9ft); MD 32 x 32pdr (56cwt/9½ft); UD 32 x 32pdr (42cwt/8ft); QD/Fc 24 x 32pdr (42cwt/8ft) + 1 x 68pdr (95cwt/10ft).
Machinery: 2-cyl. (64½in diam., 40in stroke) horizontal single expansion trunk. Single screw. 500 nhp. 1,801 ihp = 10kts.
First cost: £174,345 (including hull £111,865, machinery £31,983).

Royal Albert Woolwich Dyd/John Penn & Son.
Conversion ord: 31.1.1852. Begun: 25.10.1852. L: 13.5.1854. C: (at Portsmouth Dyd) 19.11.1854, fitted for troops. Paid off as 'unfit for further service' in 1861. Sold to Castle 9.1884 to BU at Charlton.

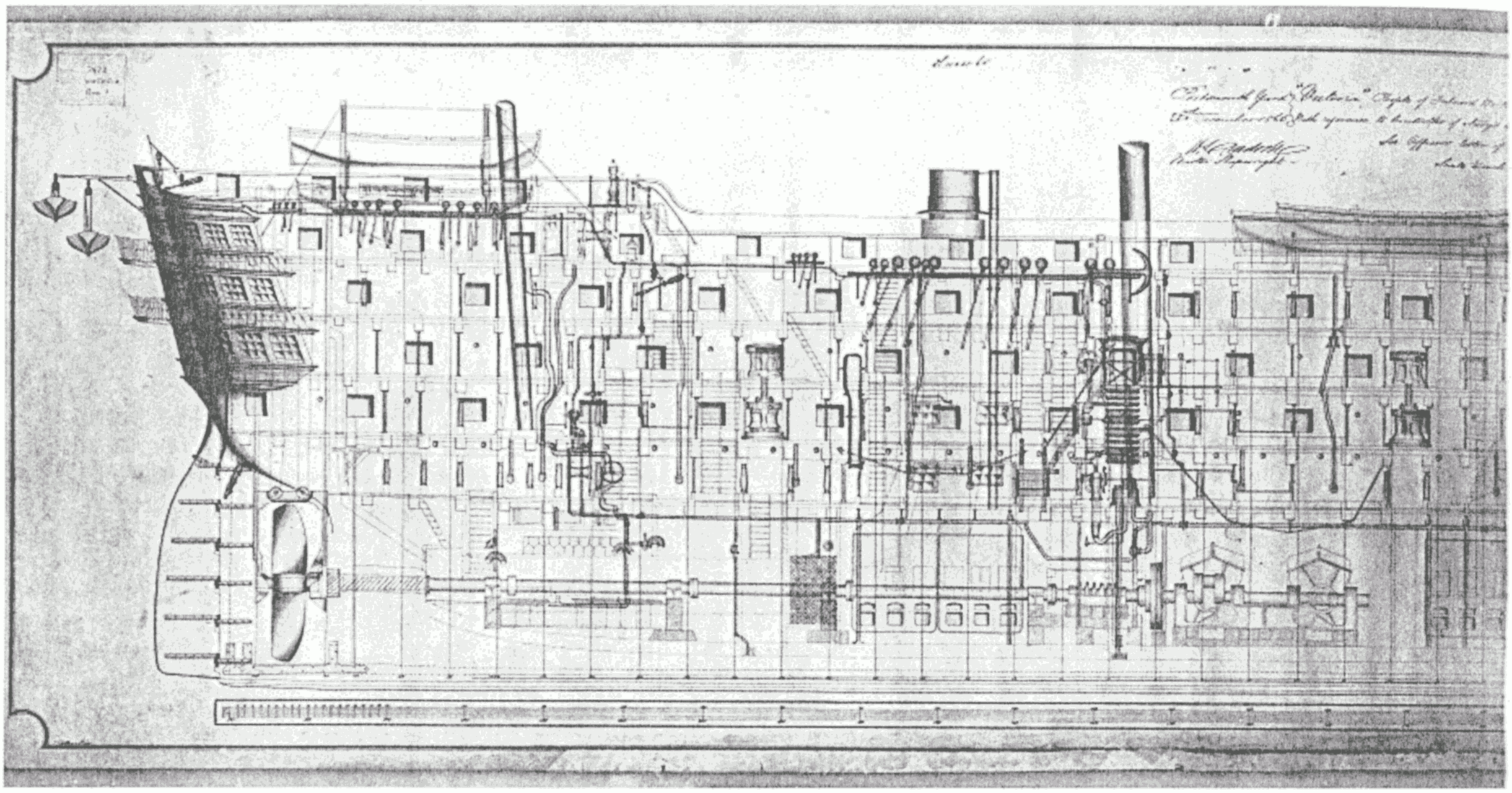
NOTES: In 1852 the conversion of the unlaunched *Royal Albert* (on the stocks since 1844) to a screw 120-gun ship was approved, to have engines of 620 nhp 'originally built for *Euphrates*'. A committee of shipwrights and engineers was summoned on 23.9.1852, and a month later concluded that the stern needed to be modified (plans approved 5.5.1853) and that a 400 nhp engine should be substituted for that of 620 nhp. On 9.1.1854 a revised tender from Penn for 500 nhp engines was accepted.

ROYAL GEORGE - conversion of 120-gun sailing First Rate (launched 1827) to a 120-gun screw ship, design of 19.4.1852.
Dimensions & tons: 205ft 7½in, 171ft 0in x 54ft 6½in (53ft 7½in for tonnage) x 23ft 2in. 2,615³⁷/₉₄ bm. 4,205 disp.
Men: ?950. Guns: LD 8 x 8in (65cwt/9ft) + 24 x 32pdr (56cwt/9½ft); MD 4 x 8in (65cwt/9ft) + 30 x 32pdr (50cwt/8ft); UD 34 x 32pdr (42cwt/8ft); QD/Fc 6 x 32pdr (45cwt/8½ft) + 14 x 32pdr (17cwt/4ft) carronades.
Machinery: 2-cyl. (58½in diam., 3¼ft stroke) horizontal single expansion trunk. Single screw. 400 nhp. 1,417 ihp = 8.65kts.
First cost: £64,236.

Royal George Chatham Dyd/John Penn & Son.
Conversion ord: 30.10.1852. Begun 1.11.1852. L: (undocked) 22.6.1853. C: 18.12.1853 (at Sheerness Dyd), 3.1854 (at Plymouth Dyd). Cut down to two-decker (which see) in 1860. Sold to Castle 23.1.1875 to BU at Charlton.



Scan and/or retouch by Grzechu



As fitted profile draught of the *Victoria*, dated Portsmouth 22 December 1865. One of the best preserved and most detailed draughts of a screw line of battle ship. Note the unusual two-funnel machinery arrangement. *DR7472*

NOTES: *Caledonia* Class First Rate converted without major structural alterations. The conversion of 1852-53 left her extremely crank, and her poop and forecastle were removed in 12.1854.

***WINDSOR CASTLE* Class** - conversions of 120-gun sailing First Rates (incomplete on stocks) to 116-gun First Rates, 1857.

Dimensions & tons: 204ft 0in, 166ft 5¼in x 60ft 0in (59ft 2in for tonnage) x 23ft 9in. 3,099$^{16}/_{94}$ bm. 4,971 disp.

Men: 930. Guns: LD 30 x 8in (65cwt/9ft); MD 30 x 32pdr (56cwt/9½ft); UD 30 x 32pdr (42cwt/8ft); QD/Fc 10 x 32pdr (42cwt/8ft) + 2 x 68pdr (95cwt/10ft).

Machinery: 2-cyl. (64½in diam., 40in stroke) horizontal single expansion, trunk. Single screw. 500 nhp. 2,052 ihp = 11kts.

First cost: *Windsor Castle* £117,030 (including hull as sailing vessel £84,555, conversion £14,878).

Windsor Castle (ex-*Victoria*, renamed 6.1.1855) Pembroke Dyd/John Penn & Son.

Conversion ord: 28.2.1857. Begun: 3.10.1857. L: 26.8.1858. C: (fitted at Devonport) 2.2.1859. Renamed *Cambridge* as gunnery training ship at Devonport 1869. Sold to Cox, Falmouth 24.6.1908 to BU.

Royal Frederick Portsmouth Dyd/Maudslay, Sons & Field.

Conversion ord: 28.2.1857. Re-ordered again as a screw two-decker (which see) on 30.4.1859.

NOTES: Originally begun as *Queen* Class 110-gun sailing ships, but work was suspended and they remained on the stocks - see Chapter 2. Both ships were approved in 1857 for conversion to screw three-deckers of 120 guns (without lengthening). But *Windsor Castle*'s poor seakeeping qualities became apparent on trials. This resulted in her seeing no sea service, and in the conversion of *Royal Frederick* being amended by cutting the latter down into a two-decker. *Windsor Castle*'s guns were reduced from 120 to 116, then to 102 (as above, on completion), and by 1862 to 97 guns comprising 1 x 110pdr (on pivot), 30 x 8in, 4 x 70pdr, 6 x 40pdr and 56 x 32pdr.

***VICTORIA* Class**. New 121-gun three-deckers. Design by Isaac Watts, drawn 11.1854 and approved 1.1855.

Dimensions & tons: 260ft 0in, 221ft 0¾in x 60ft 0in 0a (59ft 2in for tonnage) x 25ft 10in. Draught 23ft 7in (fwd) 25ft 9in (aft). 4,116$^{31}/_{94}$ bm. Design was lengthened during construction (by AO 6.3.1858) with an extra 15ft added at bow – *Howe* also broadened by *c*10in (4,236 bm).

Men: 1,000. Guns: LD 32 x 8in (65cwt); MD 30 x 8in (65cwt); UD 32 x 32pdr (58cwt); QD/Fc 26 x 32pdr (42cwt) + 1 x 68pdr (95cwt) pivot-mounted.

Machinery: 2-cyl. (92in diam., 4ft stroke) horizontal single expansion (trunk in *Howe*). 8 boilers (4 fwd and 4 aft of engines). Single screw. 1,000 nhp. *Howe* 4,564 ihp = 13.565kts. *Victoria* 4,403 ihp = 11.797kts.

First cost: *Victoria* total £150,578 (hull £120,593). *Howe* total £147,465 (machinery £62,500).

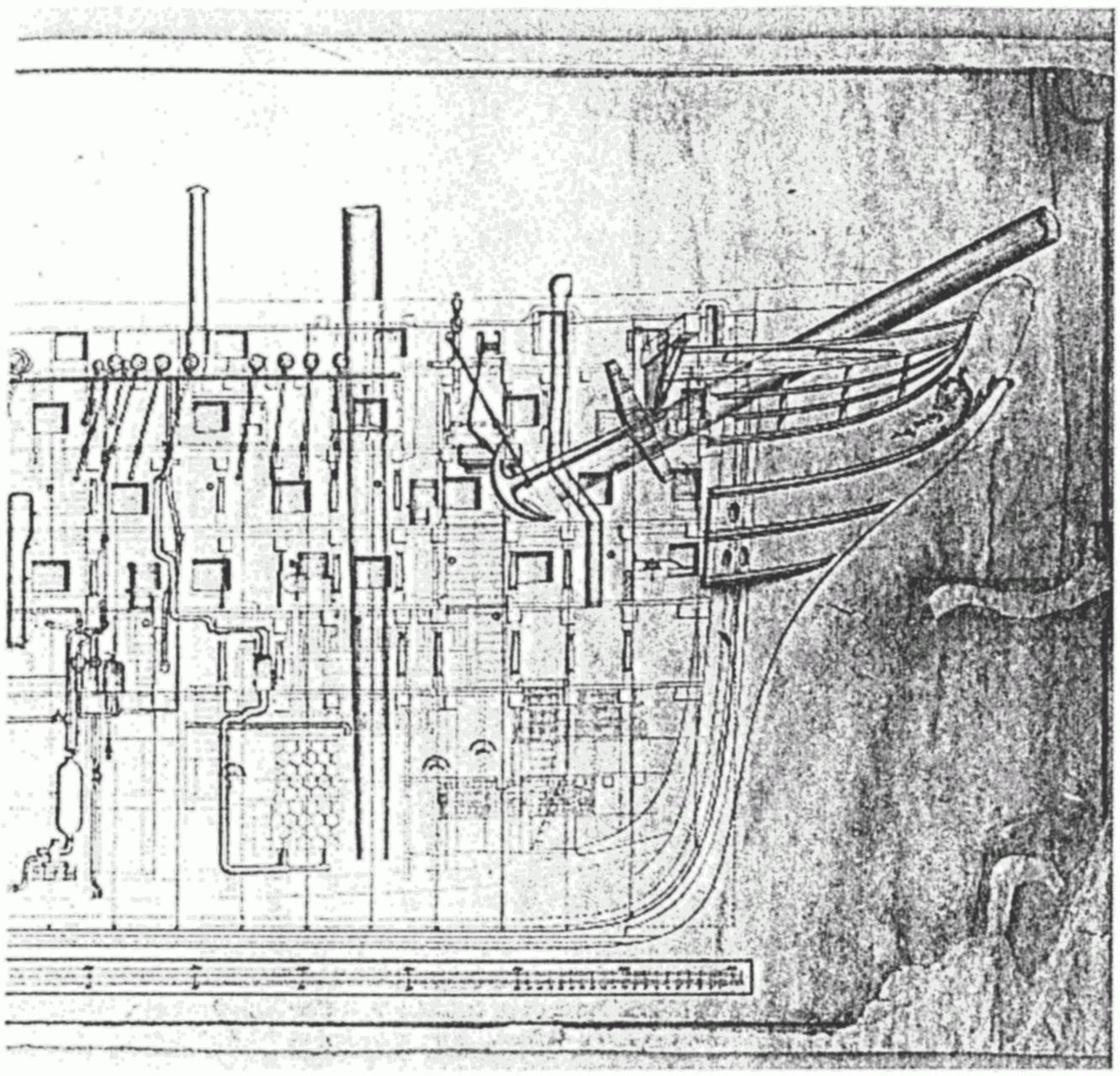
Howe Pembroke Dyd/John Penn & Son. As completed: 4,245 bm. 6,557 disp.

Ord: 3.4.1854. (named 5.1.1855) K: 10.3.1856. L: 7.3.1860.

C: 16.8.1860? Never saw sea service, placed in reserve at Plymouth. Renamed *Bulwark*, boys' training ship 3.12.1885. Renamed *Impregnable* 27.9.1886, but reverted to *Bulwark* 12.1919. Sold to Garnham 18.2.1921 to BU.

Victoria Portsmouth Dyd/Maudslay, Sons & Field. As completed: 4,127 bm. 6,959 disp.

Ord: 3.4.1854. (named 6.1.1855) K: 1.4.1856. L: 12.11.1859.



C: 20.4.1860. Paid off 1867. Sold 31.5.1893 to BU.

NOTES: The only two-funnelled, wooden-hulled screw battleships in the RN (having one funnel either side of the mainmast) and, apart from the French *Le Bretagne* and the later Russian *Imperator Nicolai I*, *Sinop* and *Tsesarevitch*, the only screw three-deckers to be designed and built as such. Original design lengthened forward by 15ft by AO 12.1857 while building.

Screw two-deckers

The first two-deckers scheduled for conversion to screw - other than the blockships converted from old 74s - were the 90-gun *Nile* and *London*, and the 84-gun *Powerful*. On 5 January 1848 all three were ordered to have installed the engines from the iron frigates *Simoom*, *Vulcan* and *Megaera* respectively. However, the intended work on the *Nile* was aborted just eight days later, and that on *London* was cancelled on 4 March 1848. No formal decision about *Powerful* was taken, but on 1 November 1852 *Megaera*'s engine, intended for *Powerful*, was re-scheduled to be fitted to the 90-gun *Algiers*.

New screw Second Rates were ordered from 1849 on, of which five 101-gun and ten 91-gun were completed. Another 13 sailing vessels, still on the stocks, were completed as screw two-deckers, and 21 previously-launched were converted to screw two-deckers (excluding the *Royal George*, originally converted as a three-decker). These figures exclude vessels never completed (see below) and the nine elderly two-deckers converted to screw blockships.

***AGAMEMNON* Class**. New 91-gun ships. Surveyor's Department (John Edye) design, approved 14.6.1849; modified final design (credited to Isaac Watts) approved 14.6.1850.

Dimensions & tons: 230ft 0in, 194ft 7¼in x 55ft 4in oa (54ft 6in for tonnage) x 24ft 6in. 3,074$^{45}/_{94}$ bm.

Men: 860. Guns: Planned LD 36 x 8in (65cwt); UD 34 x 32pdr (56cwt) + 2 x 8in (95cwt); QD/Fc 2 x 8in (95cwt) + 8 x 10in (85cwt). As completed LD 36 x 8in (65cwt/9ft); UD 34 x 32pdr (56cwt/9½ft); QD/Fc 20 x 32pdr (45cwt/8½ft) + 1 x 68pdr (95cwt/10ft).

Machinery: 2-cyl. horizontal single expansion (trunk in *Agamemnon*, 4-cyl. oscillating in *James Watt*). Single screw. 600 nhp. See below for ihp/speed.

First cost: *Agamemnon* total £141,299 (hull £74,331, machinery £32,890). *James Watt* total £149,455 (machinery £43,875). *Victor Emmanuel* total £158,086 (hull £87,597, machinery £35,588).*Edgar* total £159,284 (hull £93,846, machinery £36,540).

Agamemnon Woolwich Dyd/John Penn & Son. (2,268 ihp = 11.243kts.)

(Re-)Ord: 20.6.1849. K: 11.1849. L: 22.5.1852. C: 9.2.1853. Sold to W. H. Moore 12.5.1870 to BU.

James Watt (ex-*Audacious*) Pembroke Dyd/Boulton & Watt. (1,548 ihp = 9.361kts.)

(Re-)Ord: 14.6.1849. K: 9.1850. L: 23.4.1853. C: 27.3.1854. Sold to Castle 1.1875 to BU at Charlton.

Victor Emmanuel (ex-*Repulse*) Pembroke Dyd/Maudslay, Sons & Field. (2,424 ihp = 10.674kts.)

Ord: 4.4.1851. K: 16.5.1853. L: 27.2.1855. C: 9.9.1858. Became a hospital and receiving ship at Hong Kong from 1873 and was sold in 1899.

Edgar Woolwich Dyd/Maudslay, Sons & Field. (2,475 ihp = 11.371kts.)

Ord: 4.4.1851. K: 4.7.1853. L: 22.10.1858. C: 19.7.1859. Lent to the Customs as a as a quarantine ship on the Motherbank, Spithead 12.12.1870. Sold to Castle 12.4.1904 to BU at Charlton.

NOTES: First two originally to have been 80-gun sailing two-deckers but not laid down as such (although materials collected), re-ordered as screw ships 1849; three more ordered to same 80-gun design. Reclassified as 91-gun 26.3.1851 (first two), 15.11.1852 (next two) and 2.4.1853 (*Hero*). *Agamemnon*'s cylinders were 70¾in diam., 3½ft stroke; *James Watt*'s were 52¼in diam., 3ft stroke; *Victor Emmanuel*'s and *Edgar*'s were 76¼in diam., 3½ft stroke. *Agamemnon* was the first purpose-built screw ship of the line in the RN. Fitted 1856/7 to carry the (first) Atlantic Telegraph cable for £12,699, she accomplished the task of laying it in company with the American steam frigate *Niagara*. *James Watt* renamed from *Audacious* 18.11.1847, well before laying down. By 1856 alterations to her unsatisfactory 4-cyl. machinery (second-hand, from the iron frigate *Vulcan*) had cost £5,706. *Victor Emmanuel* renamed from *Repulse* on 7.12.1855. *Hero* (see below) was begun as one of this class.

SANS PAREIL - conversion of 80-gun Second Rate (suspended incomplete on stocks) to 70-gun screw ship. Design approved 18.5.1849 (work already started).

Dimensions & tons: 200ft 0in, 165ft 3in x 52ft 3in oa (51ft 7in for tonnage) x 22ft 8in. Draught 22ft 8in (fwd), 25ft 8in (aft). 2,339 bm. 3,800 disp.

Men: 626. Guns: LD 30 x 32pdr (56cwt); UD 24 x 32pdr (45cwt) + 6 x 8in (52cwt); QD/Fc 2 x 32pdr (56cwt) + 8 x 32pdr (25cwt/10ft).

Machinery: 4-cyl. (43½in diam., 3ft stroke) horizontal single expansion, oscillating. 500 nhp. Single screw.

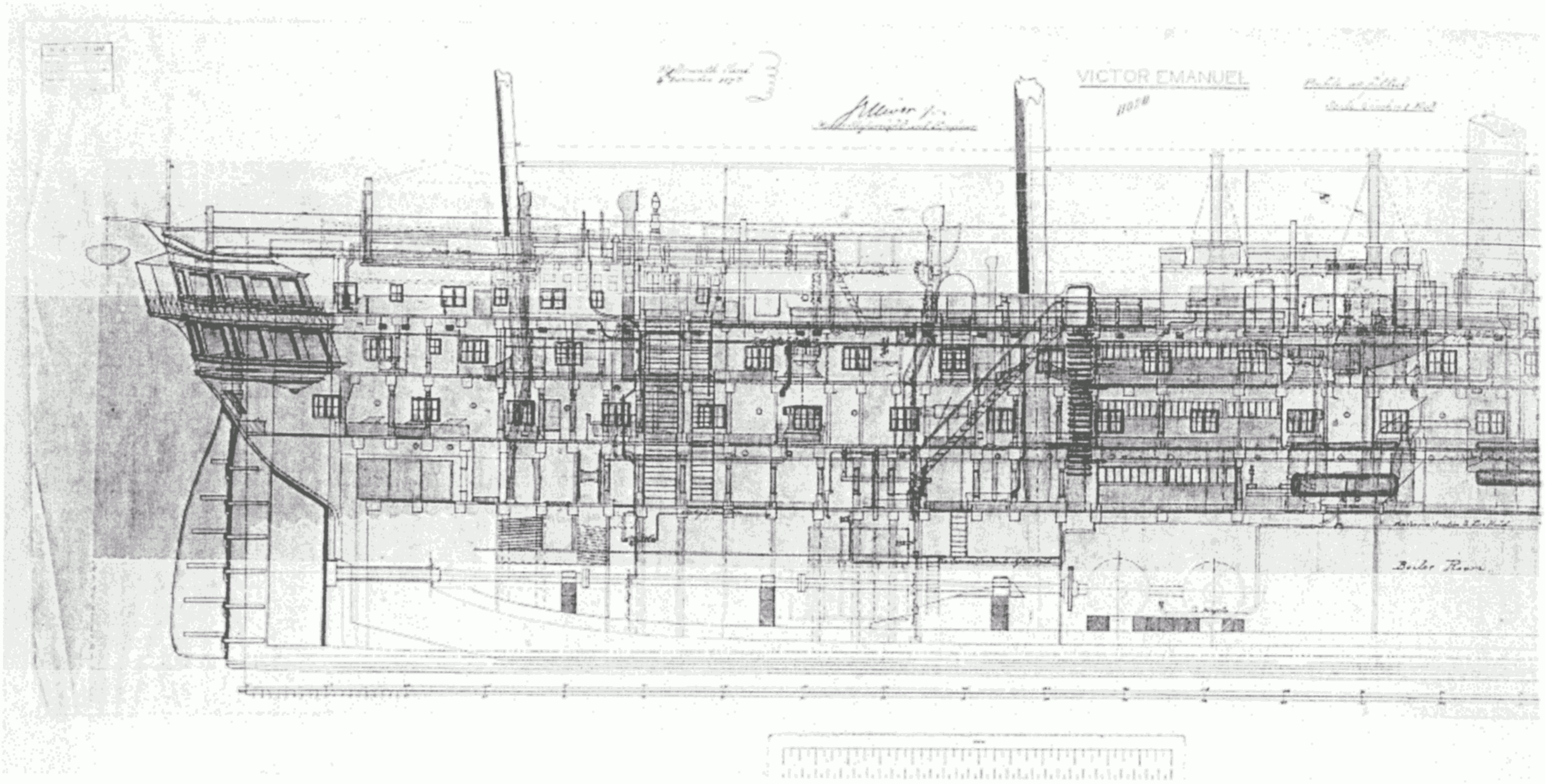
First cost: Total £126,432 (machinery £30,888).

Sans Pareil Devonport Dyd/Boulton & Watt. (622 ihp = 7.05kts.)

Conversion ord: 15.11.1849. Begun: 15.11.1848. L: 18.3.1851.

C: 12.11.1852. Sold to Marshall 3.1867 to BU at Plymouth.

NOTES: Converted to screw and lengthened by 7ft at the stern. Initially fitted with engine intended for screw frigate (blockship) *Horatio*; the excess weight necessitated reduction from 80 to 70 guns. Re-engined in



Profile draught for the *Victor Emmanuel*, dated Portsmouth 4 December 1873, as fitted for a base ship at Hong Kong. The *Agamemnon* Class were the Royal Navy's first purpose-designed screw line of battle ships. *DRX1567*

early 1855 with James Watt & Co. 2-cyl. (66in diam., 3ft stroke) horizontal single expansion engine of 400 nhp (1,471 ihp = 9.3kts.). Reduced to 66-gun in 1866.

***SAINT JEAN D'ACRE* Class**. New two-decker 101-gun ship. Surveyor's Department design, approved 15.2.1851.

Dimensions & tons: 238ft 0in, 202ft 5in x 55ft 4in oa (55ft 0in for tonnage) x 24ft 5in. 3,258$^{32}/_{94}$ bm. 5,499 disp.
Men: 900. Guns: LD 36 x 8in (65cwt/9ft); UD 36 x 32pdr (56cwt/9½ft); QD/Fc 28 x 32pdr (45cwt/8½ft) + 1 x 68pdr (95cwt/10ft).
Machinery: 2-cyl. (70¾in diam., 3½ft stroke) horizontal single expansion, trunk. Single (hoisting) screw. 600 nhp. 2,136 ihp = 11.2kts.
First cost: Total £143,708 (hull £81,277, machinery £35,770?).

Saint Jean D'Acre Devonport Dyd/John Penn & Son.
Ord: 15.2.1851. K: 6.1851. L: 23.3.1853. C: 20.9.1853. Sold to Castle 1.1875. BU at Charlton 10.1875.

NOTES: Stretched version of 91-gun *Agamemnon* Class, the order for this screw ship replaced that issued in 1844 for a 90-gun sailing Second Rate but not begun as such (see Chapter 2). Reclassed as 99-gun by 1862 and 81-gun in 1863.

Modified *AGAMEMNON* Class. New two-decker, 91-gun ship.

Dimensions & tons: 234ft 3in, 199ft 1¾in x 55ft 4in oa (54ft 4in for tonnage) x 24ft 6in. Draught 24ft (fwd), 24½ft (aft). 3,127$^{8}/_{94}$ bm. 4,765 disp.
Men: 860. Guns: LD 34 x 8in (65cwt/9ft); UD 34 x 32pdr (56cwt/9½ft); QD/Fc 22 x 32pdr (45cwt/8½ft) + 1 x 68pdr (95cwt/10ft).
Machinery: 2-cyl. (76in diam., 3½ft stroke) horizontal single expansion. Single screw. 600 nhp. 2,662 ihp = 11.85kts.
First cost: Total £142,199 (hull £73,470, machinery £38,156).

Hero Chatham Dyd/Maudslay, Sons & Field.
Ord: 27.3.1852. K: 8.6.1854. L: 15.4.1858. C: 10.5.1859. Paid off 1862. Sold to Castle 20.6.1871 to BU at Charlton.

NOTES: A development of the *Agamemnon* design, with a finer bow, and keel lengthened by 4ft. Further development of this design produced the *Renown* Class. Fitted to carry the Prince of Wales to Canada in 1860.

ALGIERS - conversion of 90-gun Second Rate (incomplete on stocks) to 91-gun screw ship, 1852 design.

Dimensions & tons: (255ft 6in oa) 218ft 7in, 179ft 9in x 60ft 0in oa (59ft 2in for tonnage) x 24ft 5in. Draught 24ft 6in (fwd), 25ft 7in (aft). 3,347 bm. 4,730 disp.
Men: 850 (860 after re-engining). Guns: LD 32 x 8in (65cwt); UD 32 x 32pdr (56cwt); QD/Fc 26 x 32pdr (42cwt) + 1 x 68pdr (95cwt).
Machinery: 4-cyl. (61in diam., 3¼ft stroke) horizontal single expansion, geared. Single screw. 450 nhp. 1,117 ihp = 9kts.
First cost: Total £145,504 (including hull as sailing vessel £79,428, machinery £21,025 (engine) + £5,505 (boilers)).

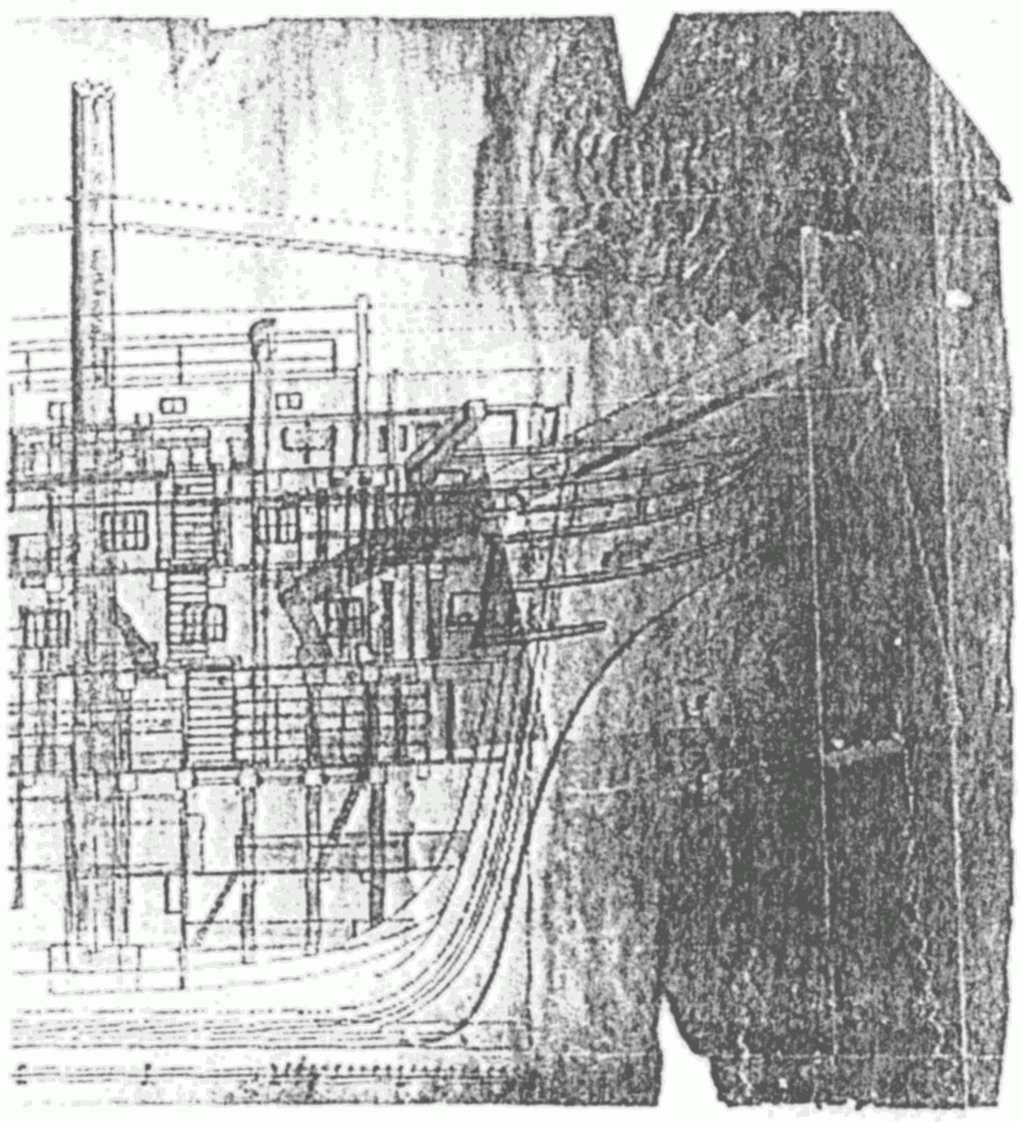
Algiers Devonport Dyd/William Fairbairn & Sons.
Ord: 3.8.1852. Conversion begun: 27.9.1852. L: 26.1.1854. C: 30.6.1854. Sold to Mr D Cooper Scott on 26.2.1870 to BU.

NOTES: Ordered 1847 as a 90-gun sailing Second Rate (see Chapter 2), taking over frames of a ship laid down 10.7.1843. Ordered in 1852 to complete as a screw ship. Her first engine (which was second-hand, from the iron frigate *Megaera*) proved unreliable, and she was re-engined from 1.1857 to 3.1859 (for £52,653) with a 2-cyl. 600 nhp engine by Maudslay, Sons & Field (2,518 ihp = 12.19kts.).

***PRINCESS ROYAL* Class** - conversions of 90-gun Second Rates (incomplete on stocks) to 91-gun screw ships, 1852 design.

Dimensions & tons: 217ft 0in, 179ft 1¾in x 58ft 0in oa (57ft 2in for

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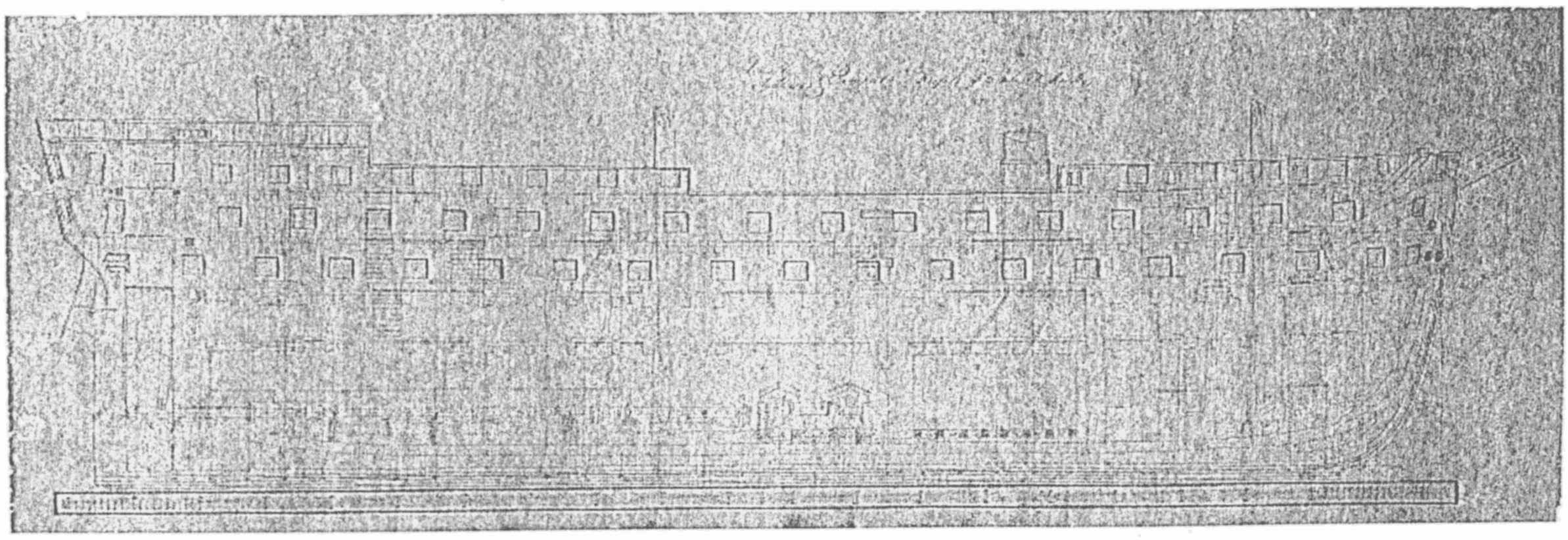


tonnage) x 24ft 0in. Draught 23ft 6in (fwd), 26ft 6in (aft). 3,114 bm. 4,540 disp.
Men: 850. Guns: LD 32 x 8in (65cwt); UD 34 x 32pdr (56cwt); QD/Fc 24 x 32pdr (42cwt) + 1 x 68pdr (95cwt).
Machinery: 2-cyl. (64⅛in diam., 3ft stroke in *Princess Royal*) horizontal single expansion (geared in *Hannibal*). Single screw. *Hannibal* 450 nhp. 1,071 ihp = 8.6kts. *Princess Royal* 400 nhp. 1,492 ihp = 11.031kts.
First cost: *Hannibal* total £128,715 (including hull as a sailing ship £52,729). *Princess Royal* total £143,407 (machinery £24,352).

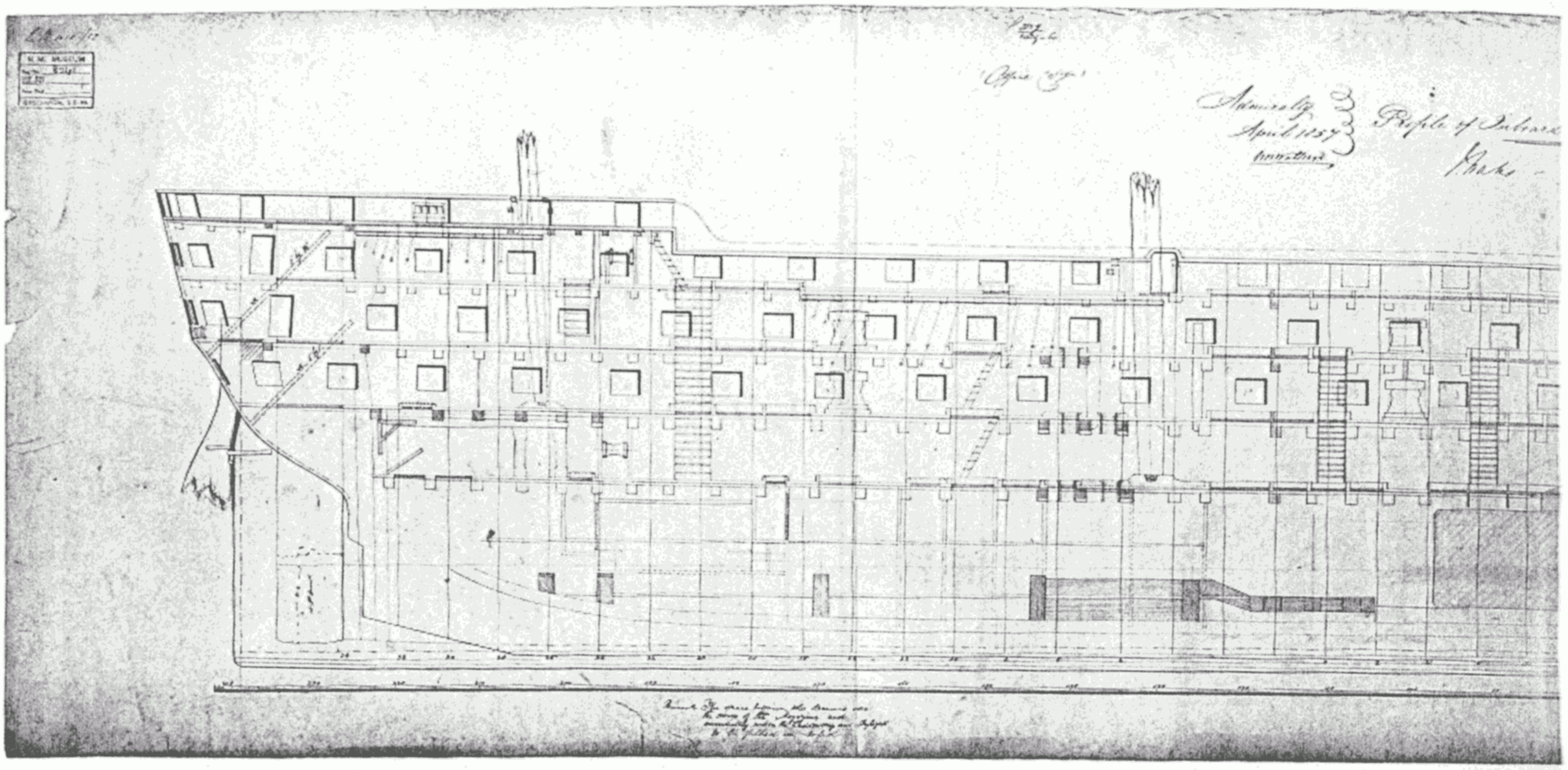
Hannibal Deptford Dyd/Scott, Sinclair & Co.
Dimensions & tons: 217ft 6in, 179ft 6⅝in x 58ft 1¼in oa (c57ft 3¼in for tonnage) x 23ft 11½in. 3,136 bm.
Conversion ord: 23.9.1852. Begun: 23.9.1852. L: 31.1.1854. C: 22.6.1854. Paid off 1862. Hulked 1884. Sold to Castle 12.4.1904 to BU at Charlton.
Princess Royal (ex-*Prince Albert*, renamed 26.3.1842) Portsmouth Dyd/Maudslay, Sons & Field.
Dimensions & tons: 217ft 0in, 179ft 3½in x 58ft 1½in oa (c57ft 3½in for tonnage) x 24ft 0in. 3,130 bm.
Conversion ord: 30.10.1852. Begun: 15.11.1852. L: 23.6.1853. C: 11.3.1854. Paid off 1867. Sold to Castle 1872 to BU at Charlton.
NOTES: Ordered 1840 as *Albion* Class 90-gun ships (see Chapter 2), both lengthened with new midsection inserted and converted to screw while on stocks. *Hannibal* engine (cylinders 71in diam., 4ft stroke) was second-hand, taken from *Greenock* (iron frigate) and fitted at Woolwich; she was then fitted for sea at Chatham.

***ALBION* Class** - conversions to 91-gun ships, 1853 design.
Dimensions & tons: (243ft 0in oa) 204ft 0in, 166ft 0in x 60ft 2¼in x 23ft 8in. 3,083 bm. 4,382 disp.
Men: 830. Guns: LD 32 x 8in (65cwt); UD 32 x 32pdr (56cwt); QD/Fc 26 x 32pdr (42cwt) + 1 x 68pdr (95cwt).
Machinery: 2-cyl. horizontal single expansion (trunk in *Aboukir*). Single screw. 400 nhp. See below for individual ihp/speed.
First cost: *Exmouth* total £146,067 (including hull as sailing ship £76,379, machinery £24,620). *Aboukir* (?machinery) £24,400.
Exmouth Devonport Dyd/Maudslay, Sons & Field. (1,252 ihp = 9.1kts).
Dimensions & tons: (243ft 0in oa) 204ft 0in, 165ft 6½in x 60ft 3in oa (c59ft 5in for tonnage) x 23ft 8in. 3,109 bm.
Ord: 30.10.1852. Conversion begun: 20.6.1853. L: 12.7.1854. C: 15.3.1855. Lent to Metropolitan Asylums Board as training ship 1877. Sold to George Cohen 4.4.1905. BU at Penarth.
Aboukir Devonport Dyd/John Penn & Son. (1,533 ihp = 9.55kts).
Dimensions & tons: (243ft 0in oa) 204ft 0in, 165ft 4¾in x 60ft 1¼in oa (c59ft 3¼in for tonnage) x 23ft 8½in. 3,091 bm.
Ord: 20.8.1856. Conversion begun: 8.10.1856. L: (undocked, completed) 1.1.1858. Became depot ship/floating battery at Jamaica 1862. Receiving ship there 1867. Sold in Jamaica 23.11.1877.
Albion Devonport Dyd/Humphrys & Tennant. (1,835 ihp = 10.986kts).

Design profile, dated Admiralty April 1853, for the *Exmouth*, an *Albion* Class screw conversion carried out while the ship was on the stocks but almost ready for launch as a sailing ship. *DR8063*



Scan and/or retouch by Grzechu



Profile of inboard works for the *Hood* of 90 guns, as modified for steam, dated April 1857. *DR8261*

Dimensions & tons: (243ft 0in oa) 204ft 0in, 168ft 0in x 60ft 2in oa (*c*59ft 0in for tonnage) x 23ft 8in. 3,111 bm.
Ord: 3.2.1860. Conversion begun: 4.4.1860. L: (undocked, completed) 21.5.1861. Never commissioned for sea. Reduced to 86 guns in 1862 and to 76 guns in 1863. Sold to Castle 8.1884 and BU at Charlton.

NOTES: Former 90-gun sailing Second Rates. *Exmouth* (originally begun 1841) was suspended 18.12.1844 (3/16 built), but resumed 1847 and was substantially complete when ordered in 1852 to have screw fitted. *Aboukir* (begun 1840) was also suspended 18.12.1844 (3/8 built), resumed 1847 and launched 1848, but was not commissioned and was retained 'in Ordinary'; she was ordered in 1856 to complete with screw. *Albion* had been launched in 1842 as a sailing Second Rate, and commissioned as such in 11.1843; her conversion to screw was not ordered until 1860. *Exmouth* had cylinders of 64in diam., 3ft stroke; *Aboukir* of 58 1/8in diam., 3¼ft stroke; *Albion* of 64 3/16in diam, 44in stroke.

CAESAR - 91 guns. Conversion of 90-gun Second Rate (incomplete on stocks) to a 91-gun screw ship, 1852 design.

Dimensions & tons: 207ft 4in, 170ft 6 5/8in x 56ft 0¾in oa (*c*55ft 2½in for tonnage) x 23ft 4in. Draught 19ft 5in (fwd), 22ft 8in (aft). 2,767 bm. 3,250 disp.
Men: 860. Guns: LD 32 x 8in (65cwt); UD 32 x 32pdr (56cwt); QD/Fc 26 x 32pdr (42cwt) + 1 x 68pdr (95cwt).
Machinery: 2-cyl. (58 1/8in diam., 3¼ft stroke) horizontal single expansion, trunk. Single screw. 400 nhp. 1,420 ihp = 10.274kts.
First cost: Total £125,245 (including hull as sailing ship £66,913).

Caesar Pembroke Dyd/John Penn & Son.

Ord: 30.10.1852. Conversion begun: 22.11.1852. L: 7.8.1853.
C: 26.3.1854. Paid off 1862. Sold to C. J. Mare 19.4.1870.

NOTES: Ordered 1847 as a Modified *Algiers* Class 90-gun ship (see Chapter 2), but converted to screw while on stocks. The first attempt to launch her on 21.7.1853 failed, as she stuck on the ways. Fitted out at Portsmouth.

***HOOD* Class** - 91 guns. Conversion of 80-gun Second Rates (incomplete on stocks) to 91-gun screw ships. Surveyor's Department (Edye & Watts) design, 1852.

Dimensions & tons: 238ft 0in, 200ft 10¾in x 55ft 9in (54ft 9in for tonnage) x 24ft 0in. 3,202 45/94 bm.
Men: 720. Guns: LD 8 x 8in + 20 x 32pdr; UD 4 x 8in + 24 x 32pdr; QD/Fc 24 x 32pdr.
Machinery: 2-cyl. (70¾in diam., 3½ft stroke) horizontal single expansion trunk. Single screw. 600 nhp. 2,329 ihp = 11.45kts (*Orion*); 2,385 ihp = 11.76kts (*Hood*).
First cost: *Orion* total £145,102 (machinery £37,242). *Hood* hull as sailing ship £37,200, conversion £61,174.

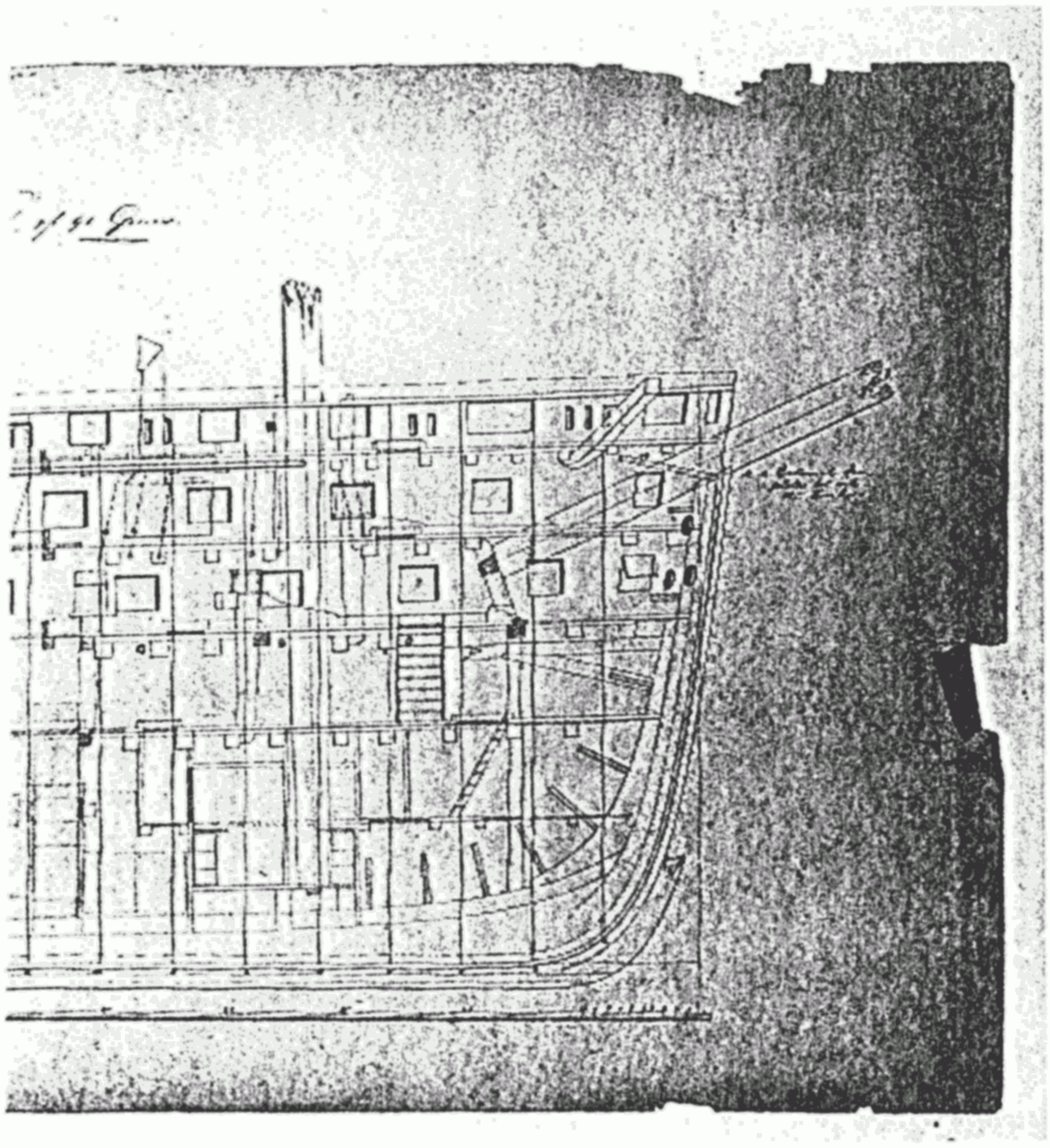
Orion Chatham Dyd/John Penn & Son.

Dimensions & tons: 238ft 2in, 202ft 9in x 55ft 10in (*c*55ft 2in for tonnage) x 24ft 0in. 3,281 bm.
Conversion ord: 30.10.1852. (K: 1.2.1850.) Begun: 24.12.1852.
L: 6.11.1854. C: 29.3.1855. Paid off 1861. Sold to Castle 1867 to BU at Charlton.

Hood Chatham Dyd/John Penn & Son.

Dimensions & tons: 238ft 0in, 206ft 0in x 55ft 10½in (*c*55ft 3½in for tonnage) x 23ft 11½in. 3,350 bm.
Conversion ord: 9.4.1856. (K: 13.8.1849.) Begun: 5.5.1856.
L: 4.5.1859. C: 15.6.1859. Torpedo company barracks hulk at Woolwich 1872. Sold 1888.

NOTES: Originally ordered 1848 as sailing 80-gun ships and begun as such; after part of *Hood* was launched for lengthening on 21.10.1856. Third of original class (*Edgar* from Pembroke Dyd) was re-ordered 1851 at Woolwich Dyd before any work done at Pembroke (see *James Watt* Class above).



RODNEY Class - conversions of (1833-40 launched) 90-gun Second Rates to 91-gun screw ships. 4,375 (disp).

Men: 850. Guns: LD 18 x 8in (65cwt) + 14 x 32pdr (56cwt); UD 6 x 8in (65cwt) + 28 x 32pdr (56cwt); QD/Fc 24 x 32pdr (42cwt) + 1 x 68pdr (95cwt/10ft).

Machinery: 2-cyl. horizontal single expansion. Single screw. 500 nhp.

First cost: *Nile* total £41,073 plus machinery £38,565. *London* total £88,498 (machinery £30,396, fitting for sea £39,030).

Nile Devonport Dyd/Seaward & Capel. (928 ihp = 6.854kts.)

Dimensions & tons: 205ft 6in, 170ft 4in x 54ft 5in oa (53ft 6in for tonnage) x 23ft 2in. 2,598$^{1}/_{94}$ bm.

Conversion ord: 24.11.1852. Begun: 14.12.1852. L: (undocked) 30.1.1854. C: 3.1854. Renamed *Conway* 24.7.1876 as training ship, on loan. Stranded in the Menai Straight 14.5.1953. Wreck burnt 31.10.1956.

London Devonport Dyd/Ravenhill, Selkeld & Co.

Dimensions & tons: 213ft 3in, 178ft 0in x 54ft 3½in oa (c53ft 5½in for tonnage) x 22ft 7in. 2,687 bm.

Conversion ord: 11.12.1856. Begun: 14.1.1857. L: (undocked) 13.5.1858. C: (fitted for sea) 21.1.1859. Harbour storeship at Zanzibar 4.1874. Sold at Zanzibar 1884 to BU.

Rodney Portsmouth Dyd/Maudslay, Sons & Field. (2,246 ihp = 11.479kts.)

Dimensions & tons: 214ft 4in, 181ft 11in x 54ft 0in oa (53ft 2in for tonnage) x 23ft 0in. 2,736 bm.

Conversion ord: 5.2.1859. Begun: 16.3.1859. L: (undocked, completed) 11.1.1860. Moved to Chatham to complete. C: 6.1860 (fitted for reserve). BU 2.1884.

NOTES: *Nile* converted without being lengthened, fitted with second-hand engines (from the iron frigate *Euphrates*); as built measured 170ft 4¾in x 54ft 3½in oa (53ft 9½in for tonnage) = 2,622 bm; re-boilered and re-piped by 1855 to produce 1,247 ihp = 8.2kts. The other pair were instead lengthened and fitted with new engines. *Nile* had cylinders of 62¼in diam., 3½ft stroke; *London* of 70$^{7}/_{8}$in diam., 3ft stroke; *Rodney* of 66in diam., 3½ft stroke.

CONQUEROR **Class**. New two-decker, 101-gun ships. Surveyor's Department design, 1852.

Dimensions & tons: 240ft 0in, 204ft 1¼in x 55ft 4in oa (54ft 6in for tonnage) x 24ft 5in. 3,224$^{8}/_{94}$ bm.

Men: 930. Guns: LD 36 x 8in (65cwt/9ft); UD 36 x 32pdr (56cwt/9½ft); QD/Fc 28 x 32pdr (42cwt/8ft) + 1 x 68pdr (95cwt/10ft).

Machinery: 2-cyl. (82in diam., 4ft stroke) horizontal single expansion, trunk. Single screw. 800 nhp.

First cost: *Conqueror* total £171,116 (hull £91,244, machinery £50,919). *Donegal* total £175,337 (hull £85,783, machinery £49,600).

Conqueror Devonport Dyd/John Penn & Son. (2,812 ihp = 10.806kts.)

Ord: 16.11.1852. K: 25.7.1853. L: 2.5.1855. C: 9.4.1856. Wrecked on Rum Cay in the Bahamas 29.12.1861.

Donegal Devonport Dyd/John Penn & Son. (3,103 ihp = 11.77kts.)

Ord: 27.12.1854. K: 27.9.1855. L: 23.9.1858. C: 27.8.1859. Became torpedo & mining school ship *Vernon* 14.1.1886. Sold to Pounds, Portsmouth 18.5.1925.

CRESSY - conversion of 80-gun Second Rate (incomplete on stocks) to 80-gun screw ship, 1852.

Dimensions & tons: 198ft 5in, 162ft 1$^{3}/_{8}$in x 55ft 0in (54ft 3in for tonnage) x 21ft 8¼in. 2,537$^{80}/_{94}$ bm. 3,707 disp.

Men: 750. Guns: LD 10 x 8in (65cwt) + 18 x 32pdr (56cwt); UD 4 x 8in (65cwt) + 24 x 32pdr (50cwt); QD/Fc 24 x 32pdr (42cwt).

Machinery: 2-cyl. (64in diam., 3ft stroke) horizontal single expansion. Single screw. 400 nhp. 1,076 ihp = 7.2kts.

First cost: Total £114,693 (machinery £24,449).

Cressy Chatham Dyd/Maudslay, Sons & Field.

Conversion ord: 24.11.1852. Begun: 29.11.1852. L: 21.7.1853. C: 9.3.1854 (fitted at Sheerness). Paid off 1861. Sold to Castle & Beech 1867 to BU at Charlton.

NOTES: Ordered 1844 as a *Vanguard* Class 80-gun ship (see Chapter 2), but converted to screw while on stocks.

MAJESTIC Class - conversion of 80-gun Third Rates, 1852.

Dimensions & tons: 190ft 0in, 155ft 3in x 56ft 9in (56ft 0in for tonnage) x 23ft 4in. 2,589$^{61}/_{94}$ bm. 3,482 disp.

Men: 750. Guns: LD 10 x 8in (65cwt) + 18 x 32pdr (56cwt); UD 4 x 8in (65cwt) + 24 x 32pdr (50cwt); QD/Fc 24 x 32pdr (42cwt).

Machinery: 2-cyl. horizontal single expansion (trunk in Penn-engined ships). Single screw. 400 nhp.

First cost: *Majestic* total £118,474 (machinery £25,310). *Colossus* total £66,209 (machinery £25,031). *Irresistible* hull as sailing ship £35,145, conversion £37,746. *Centurion* £35,276 (?). *Mars* hull £17,875 + machinery £25,830 + fitting for sea £16,648. *Goliath* £47,400 (not including machinery). *Meeanee* £20,119. *Lion* £24,200.

Majestic Chatham Dyd/Maudslay, Sons & Field. (1,192 ihp = 8.783kts.)

Conversion ord: 24.11.1852. Begun: 29.11.1852. L: 1.12.1853. C: 22.4.1854 (fitted at Sheerness for sea). Paid off 1857. Coastguard base at Liverpool 2.1860 to 8.1864. Sold to Marshall 1867 and BU at Plymouth 1868.

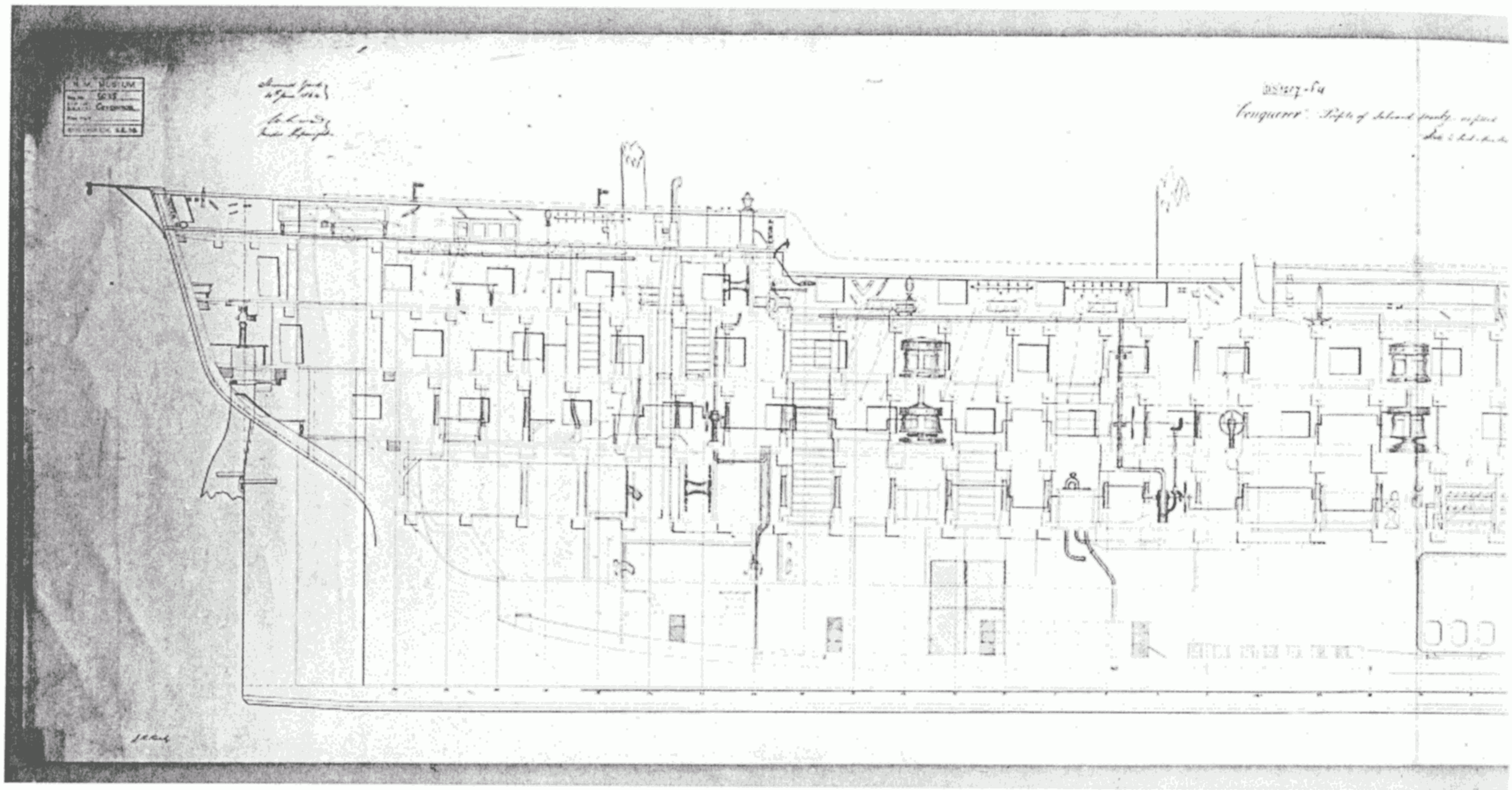
Colossus Portsmouth Dyd/John Penn & Sons. (1,458 ihp = 9.312kts.)

Conversion ord: 9.1.1854. Begun: 26.1.1854. L: (undocked) 11.6.1854. C: 27.6.1855. Paid off 1856. Coastguard base at Portland 10.1860 to 6.1864. Sold to Castle & Beech 3.1867 to BU at Charlton.

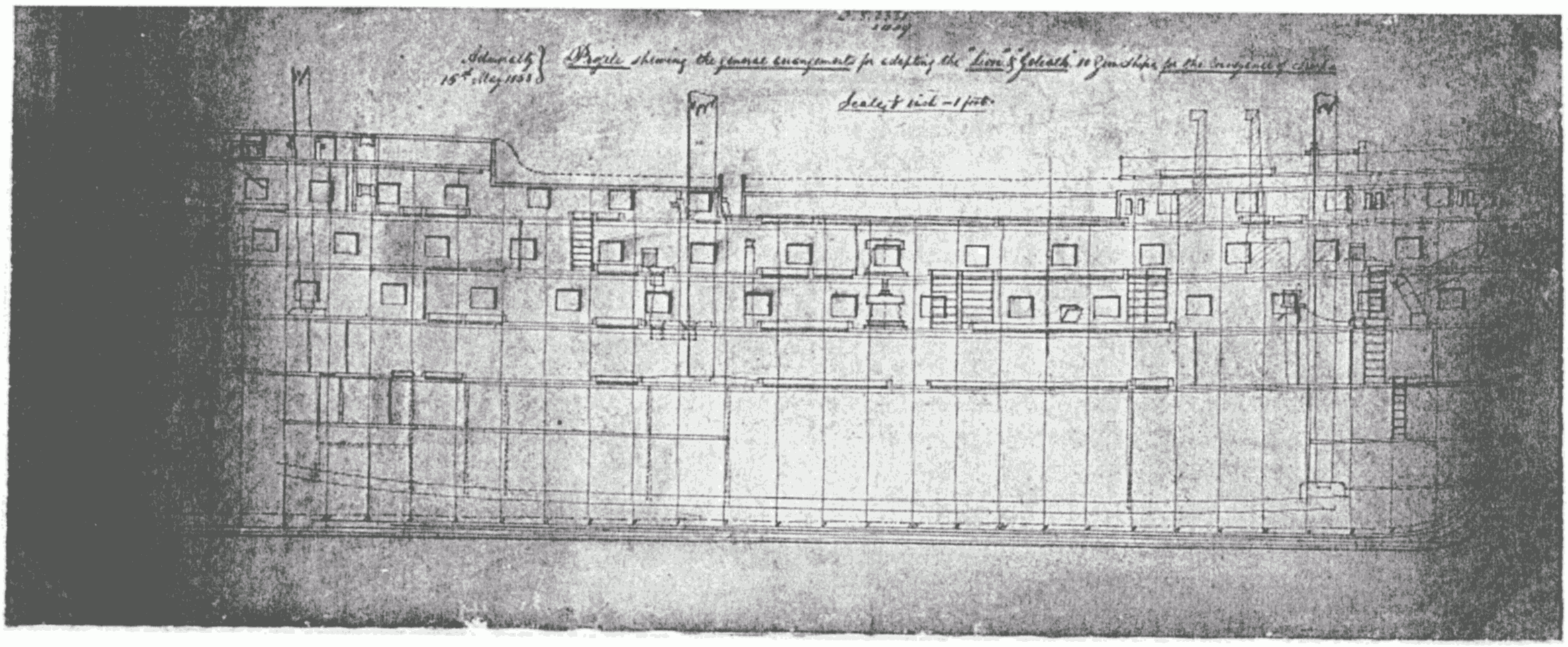
Irresistible Chatham Dyd/John Penn & Sons. (1,461 ihp = 8.622kts).

Conversion ord: 23.6.1854. Begun: 1.5.1855. L: 27.10.1859. C: 1.1860

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As fitted profile, dated Sheerness 30 June 1864, of inboard works for *Conqueror*, a new two-decker 101-gun design. *DR5035*



Profile draught, dated Admiralty 16 May 1863, showing the general arrangements for adapting the *Lion* and *Goliath*, 80-gun ships, for the conveyance of troops. Unlike full troopship conversions, the changes to these ships were minimal so they were probably intended to be of short duration. *DR8028*

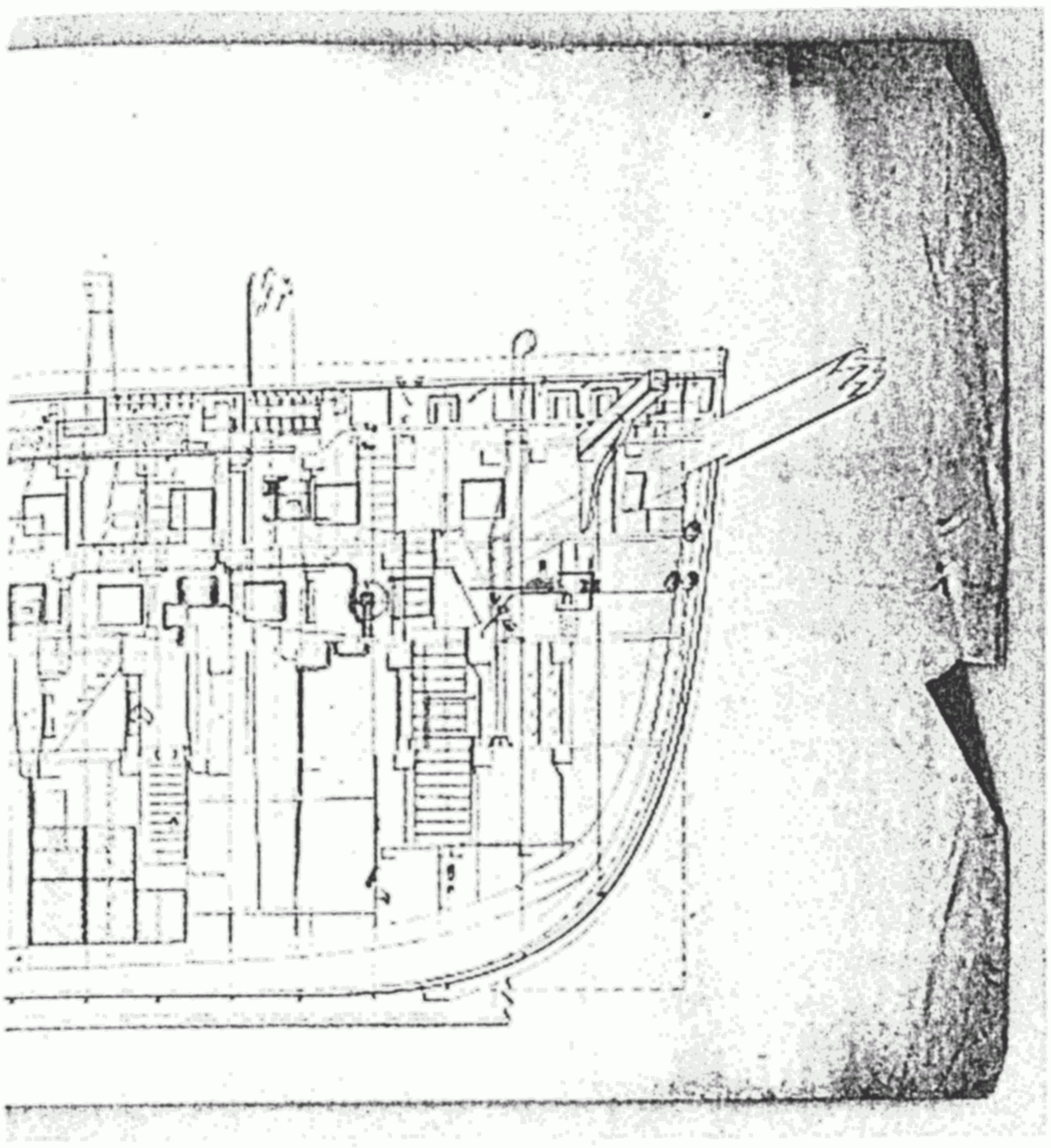
(fitted at Sheerness for sea). Coastguard base at Newhaven 4.1864 (?then 1865 at Southampton) to 4.1868. Depot ship at Bermuda 9.1868. Sold there 1894.

Centurion Devonport Dyd/Miller, Ravenhill & Co. (1,255 ihp = 8.5kts.) Conversion ord: 10.8.1854. Begun: 28.9.1854. L: (undocked, completed) 12.11.1855. Sold to W. Lethbridge 19.3.1870 to BU.

Mars Chatham Dyd/Maudslay, Sons & Field. (never tried for speed). Conversion ord: 10.8.1854. Begun: 7.3.1855. L: (undocked) 23.11.1855. C: 20.6.1856 (at Chatham), 9.1859 (at Sheerness, fitted for sea). Paid off 1863. Lent as training ship on the river Tay 13.5.1869. Sold to Ward 10.6.1929 to BU.

Goliath Chatham Dyd/John Penn & Sons. (1,438 ihp = 9.16kts.)

Scan and/or retouch by Grzechu



Conversion ord: 20.8.1856. Begun: 16.10.1856. L: (undocked) 30.11.1857. C: 30.4.1858 (fitted at Sheerness). Lent to Forest Gate School Ships Committee at Grays as training ship 1870. Burnt by accident at Grays 22.12.1875.

Meeanee Chatham Dyd/John Penn & Sons. (1,456 ihp = 9.701kts.)
Conversion ord: 20.8.1856. Order moved to Sheerness Dyd/John Penn & Sons.
Re-ord: 26.11.1856. Begun: 6.12.1856. L: (undocked) 31.10.1857. C: 9.1858. Paid off 1865. Lent to War Dept as hospital ship at Hong Kong 5.3.1867. Sold 1906 to BU.

Lion Devonport Dyd/John Penn & Sons. (1,665 ihp = 10.337kts.)
Conversion ord: 20.8.1856. Begun: 1.2.1858. L: (undocked, completed) 17.5.1859. Coastguard base on the Clyde 7.1864 to 8.1868. Training ship at Devonport 1871. Sold at Portsmouth 11.7.1905.

Collingwood Chatham Dyd/J. & G. Rennie. (1,424 ihp = 10.46kts.)
Conversion ord: 9.7.1859. Begun: 23.3.1860. L: (undocked) 13.7.1861. Never completed for sea; machinery fitted later. Sold to Castle 3.1867 to BU at Charlton.

Vanguard Sheerness Dyd/... .
Conversion ord: 9.7.1859. Conversion cancelled during 1860 (unconverted ship was renamed *Ajax* 20.10.1867 and BU at Chatham 6.1875).

NOTES: Ordered to convert these *Vanguard* Class 80-gun two-deckers to screw ships on above dates. *Meeanee* built of teak. *Majestic* and *Irresistible* were incomplete ships, still on stocks. *Vanguard* conversion was cancelled and *Superb* (only other member of original class) never selected for conversion. *Majestic* had cylinders of 64in diam., 3ft stroke; *Centurion* same (*Mars* unrecorded but probably same); *Collingwood* 63½in diam., 3ft stroke; and all Penn-engined ships 58in diam., 3¼ft stroke (*Colossus* fitted with engine from *Royal Albert*).

***REVENGE* Class**. New 91-gun ships. Surveyor's design, 1856 (lengthened 4ft by the bow and 10ft 6in amidships).
Dimensions & tons: 244ft 9in, 210ft 0in x 55ft 4½in oa (54ft 6in for tonnage) x 24ft 6in. 3,317$^{78}/_{94}$ bm.
Men: 860. Guns: LD 34 x 8in (65cwt/9ft); UD 36 x 32pdr (56cwt/9½ft); QD/Fc 20 x 32pdr (45cwt/8½ft) + 1 x 68pdr (95cwt/10ft).
Machinery: 2-cyl. (82in diam., 4ft stroke) horizontal single expansion (trunk in *Renown*). Single screw. 800 nhp. See below for ihp/speed.
First cost: *Renown* total £165,447 (hull £82,624, machinery £49,307). *Revenge* total £178,576 (hull £98,583, machinery £50,800).

Revenge Pembroke Dyd/Maudslay, Sons & Field. (3,028 ihp = 11.53kts.)
Ord: 2.4.1853. K: 22.1.1854. L: 16.4.1859. Fitted for reserve 12.1859 (total cost given above is to this date only). C: 8.6.1861. Coastguard base at Pembroke Dock 9.1865 to 1869; then base ship at Queenstown, Ireland in 8.1872. Renamed *Empress* as a training ship 3.1890. Sold 31.12.1923 and BU at Appledore.

Renown Chatham Dyd/John Penn & Son. (3,751 ihp = 11.43kts.)
Ord: 2.4.1853. K: 20.12.1854. L: 28.3.1857. C: 20.2.1858. Sold to the North German Confederation (Prussian) Navy and became a German training ship 1870.

Atlas Chatham Dyd/Maudslay, Sons & Field. (3,732 ihp = 13.022kts, unmasted, no stores.)
Ord: 31.3.1855. K: 23.2.1858. L: 21.7.1860. Never fitted for sea. Lent to the Metropolitan Asylums Board 11.1884. BU 1904.

Anson Woolwich Dyd/Maudslay, Sons & Field. (3,583 ihp = 12.984kts.)
Ord: 31.3.1855. K: 1.10.1858. L: 15.9.1860. Never fitted for sea. Renamed *Algiers* 11.1.1883. BU by Castle 4.1904 at Charlton.

BRUNSWICK - conversion of 80-gun Second Rate (incomplete on stocks) to 80-gun screw ship, 1854.
Dimensions & tons: 190ft 0in, 154ft 4¾in x 55ft 9in (55ft 0in for tonnage) x 23ft 4in. 2,484$^{27}/_{94}$ bm (2,492 as built). 3,632 disp.
Men: 750. Guns: LD 10 x 8in (65cwt) + 18 x 32pdr (56cwt); UD 4 x 8in (65cwt) + 24 x 32pdr (50cwt); QD/Fc 24 x 32pdr (42cwt).
Machinery: 2-cyl. (64in diam., 3ft stroke) horizontal single expansion. Single screw. 400 nhp. 1,438 ihp = 7.742kts.
First cost: £122,100 (including hull as sailing ship £65,687, machinery £22,791).

Brunswick Pembroke Dyd/Miller, Ravenhill & Co.
Conversion ord: 23.6.1854. Begun: 7.8.1854. L: 1.6.1855. C: 27.6.1855 (at Pembroke), 2.4.1856 (at Devonport where fitted for sea). Paid off 1860. Sold to Marshall, Plymouth 3.1867 to BU.

NOTES: Modified *Vanguard* Class ship, originally ordered 1847 and still incomplete on stocks. As built measured 154ft 2in x 55ft 10½in oa (55ft 1½in for tonnage). Reduced to 68 guns in 1863, and to 60 guns in 1866.

***DEFIANCE* Class**. New 91-gun ship. Design modified 8.10.1858 from that of *Revenge*.
Dimensions & tons: 254ft 9in, 219ft 11¼in x 55ft 4in oa (54ft 6in for tonnage) x 24ft 6in. 3,475$^{31}/_{94}$ bm. 3,958 disp.
Men: 860. Guns: LD 34 x 8in (65cwt/9ft); UD 36 x 32pdr (56cwt/9½ft); QD/Fc 20 x 32pdr (45cwt/8½ft) + 1 x 68pdr (95cwt/10ft).
Machinery: 2-cyl. horizontal single expansion. Single screw. 800 nhp. 3,550 ihp = 11.834kts.
First cost: £119,442.

Defiance Pembroke Dyd/Maudslay, Sons & Field.
Ord: 31.3.1855. K: 20.9.1858. L: 27.3.1861. C: 27.6.1861. Became the torpedo & mining school ship at Plymouth 26.11.1884 (which thereafter bore her name). Sold to S. Castle, Plymouth, 26.6.1931 for BU.

NOTES: The last wooden battleship to be launched in Britain. Originally to have been of *Revenge* Class, but the design was modified to lengthen the vessel and modify the bow.

Scan and/or retouch by Grzechu

Representative of the final generation of wooden steam two-deckers, the 91-gun *Renown* is seen at Malta in this early photograph taken in the 1860s. *Neg 3838*

Scan and/or retouch by Grzechu

***DUNCAN* Class**. New 101-gun ships (later 81-gun). Surveyor's Department design, dated 6.1.1857.

Dimensions & tons: 252ft 0in, 213ft 9¼in x 58ft 0in oa (57ft 2in for tonnage) x 25ft 6in. 3,715$^{62}/_{94}$ bm. 5,724 (designed) 5,950 (load) disp.
Men: 930. Guns: LD 36 x 8in (65cwt/9ft); UD 36 x 32pdr (56cwt/9½ft); QD/Fc 28 x 32pdr (42cwt/8ft) + 1 x 68pdr (95cwt/10ft).
Machinery: 2-cyl. (82in diam., 4ft stroke) horizontal single expansion (trunk in *Duncan*). Single screw. 800 nhp. See below for ihp/speed.
First cost: *Duncan*: £132,697 (hull £100,251). *Gibraltar* £130,235.

Gibraltar Devonport Dyd/Maudslay, Sons & Field. (3,448 ihp = 10.898kts.)

Ord: 31.3.1855. K: 10.1858. L: 16.8.1860. C: 28.8.1860. Lent as a training ship at Belfast 1872. Renamed *Grampian* 1889. Sold to Castle 7.1899 and BU at Charlton.

Duncan Portsmouth Dyd/John Penn & Son. (3,428 ihp = 13.238kts.)

Ord: 23.12.1856. K: 2.5.1857. L: 13.2.1859. C: 5.1.1860. Coastguard base at Queensferry 6.1867 to 3.1870; harbour flagship at Sheerness 4.1873; barrack ship from 1882, renamed *Pembroke* 1890. Receiving ship at Chatham 1895. Renamed *Tenedos II* 9.1905. Sold 11.10.1910 and BU in London.

Robust Devonport Dyd/Maudslay, Sons & Field.

Ord: 1.4.1857. Re-ordered as 90-gun 1858.

NOTES: Longer and broader version of the *Conqueror* Class, with same armament. Both reclassed as 99-gun in 1861; further reduced to 85-gun in 1862 (with 36 x 8in; 4 x 70pdrs + 32 x 32pdrs; and 1 x 110pdr BL); 81-gun in 1863 (70pdrs removed). *Duncan* fitted with an iron propeller in 1861 as an experiment. In 1.1867 there was a design proposed by Reed to fit her as a breastwork turret ironclad, but this was cancelled for financial reasons.

***BULWARK* Class**. New 91-gun ships. Surveyor's Department design, dated 29.7.1858 and approved 12.8.1858. Of this class seven were completed as ironclads, while the rest were cancelled.

Dimensions & tons: 252ft 0in, 213ft 9¼in x 58ft 0in oa (57ft 2in for tonnage) x 25ft 6in. 3,715$^{62}/_{94}$ bm. 5,706 (designed) disp.
Men: 860. Guns: LD 34 x 8in (65cwt/9ft); UD 36 x 32pdr (58cwt/9½ft); QD/Fc 20 x 32pdr (45cwt/8½ft) + 1 x 68pdr (95cwt/10ft).
Machinery: 2-cyl. horizontal single expansion. Single screw. 800 nhp.

Bulwark Chatham Dyd/... .

Ord: 9.4.1856. K: 8.3.1859. Suspended 7.3.1861. Cancelled 22.8.1872? BU 18.3.1873.

Repulse Woolwich Dyd/... .

Ord: 1.4.1857. K: 29.4.1859 - Converted to ironclad (see Chapter 6).

Zealous Pembroke Dyd/... .

Ord: 1.4.1857. K: 26.10.1859 - Converted to ironclad (see Chapter 6).

Robust Devonport Dyd/Maudslay, Sons & Field.

Ord: 1.4.1857. K: 31.10.1859. Suspended 12.3.1861. Cancelled 22.8.1872. BU completed 18.3.1873.

Royal Alfred Portsmouth Dyd/... .

Ord: 8.4.1859. K: 1.12.1859. Began conversion to ironclad (see Chapter 6) 22.6.1861.

Royal Oak Chatham Dyd/... .

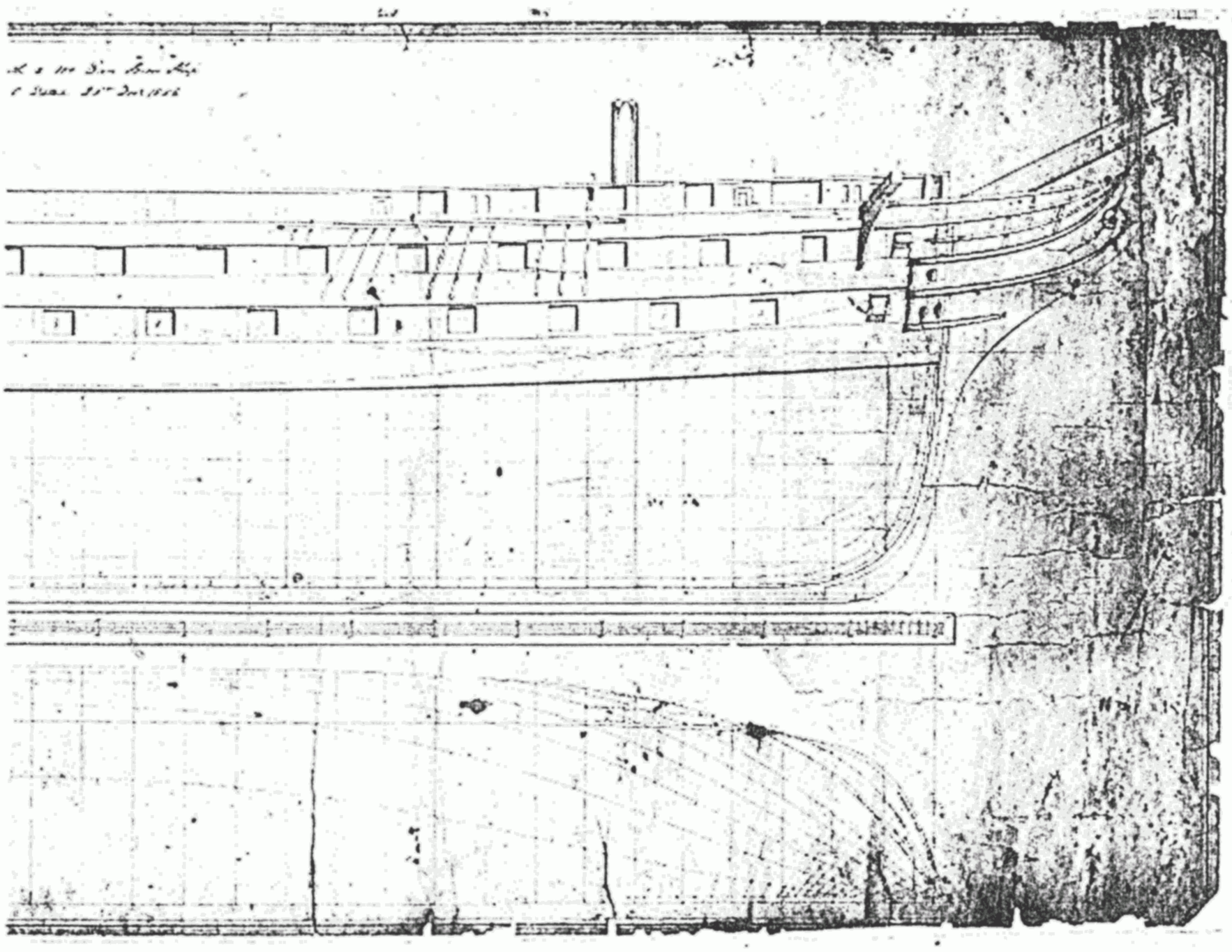
Ord: 8.4.1859. K: 1.5.1860. Began conversion to ironclad (see Chapter 6) 3.6.1861.

Triumph Pembroke Dyd/... .

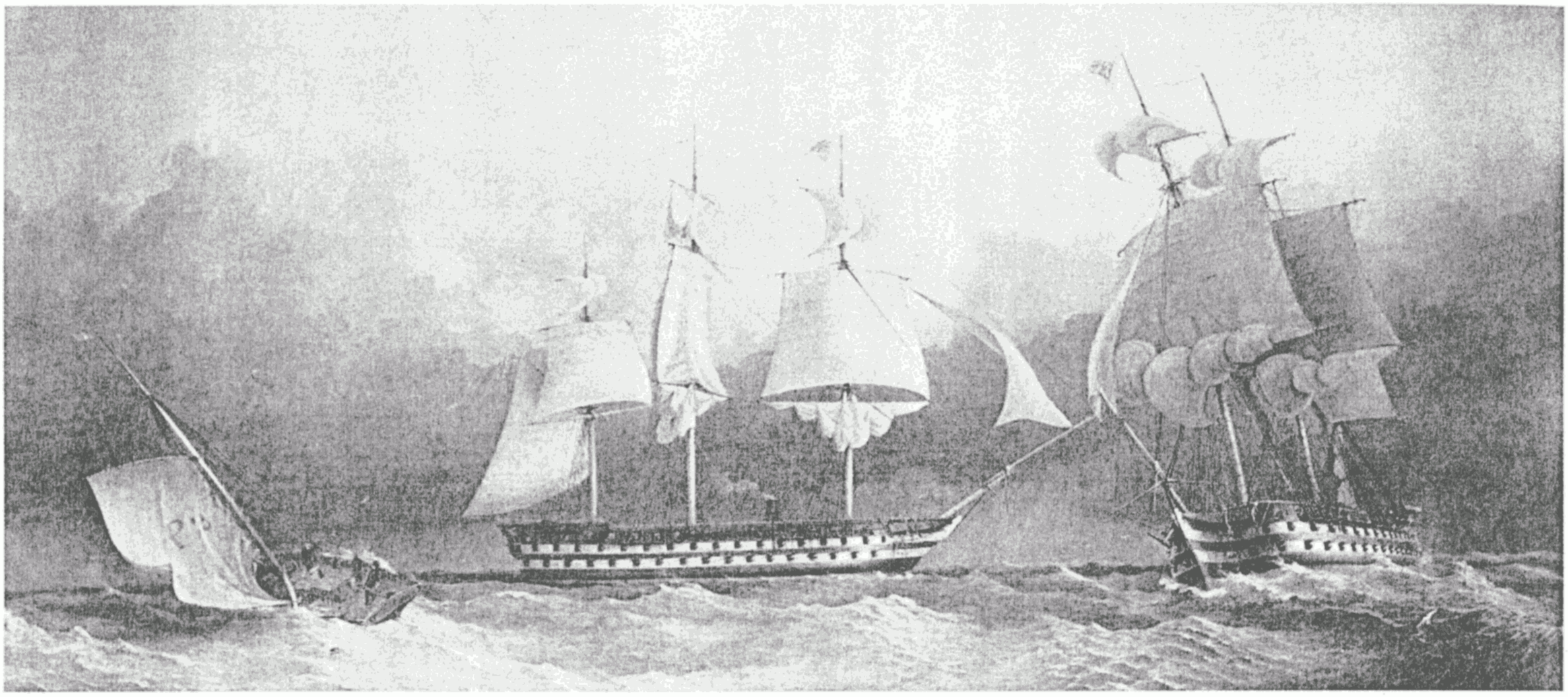
Ord: 8.4.1859. K: 13.8.1860. Began conversion to ironclad (see Chapter 6) 6.6.1861.

Kent Portsmouth Dyd/... .

Ord: 5.3.1860. K: 13.6.1860. Cancelled 12.12.1863 and BU on stocks.



The original design draught for the *Duncan* as a 100-gun screw ship, dated 6 January 1857. The initial intention to mount guns on the gangways is lightly sketched in, making the ship a flush three-decker, but in the event these guns were omitted. *DR7384*



A contrast in steam liner conversions, the 86-gun *Queen* cut down from a three-decker (under steam and sail), and the more recent *Princess Royal*, in an oil painting by Admiral Sir Edward Inglefield. *BHC3569*

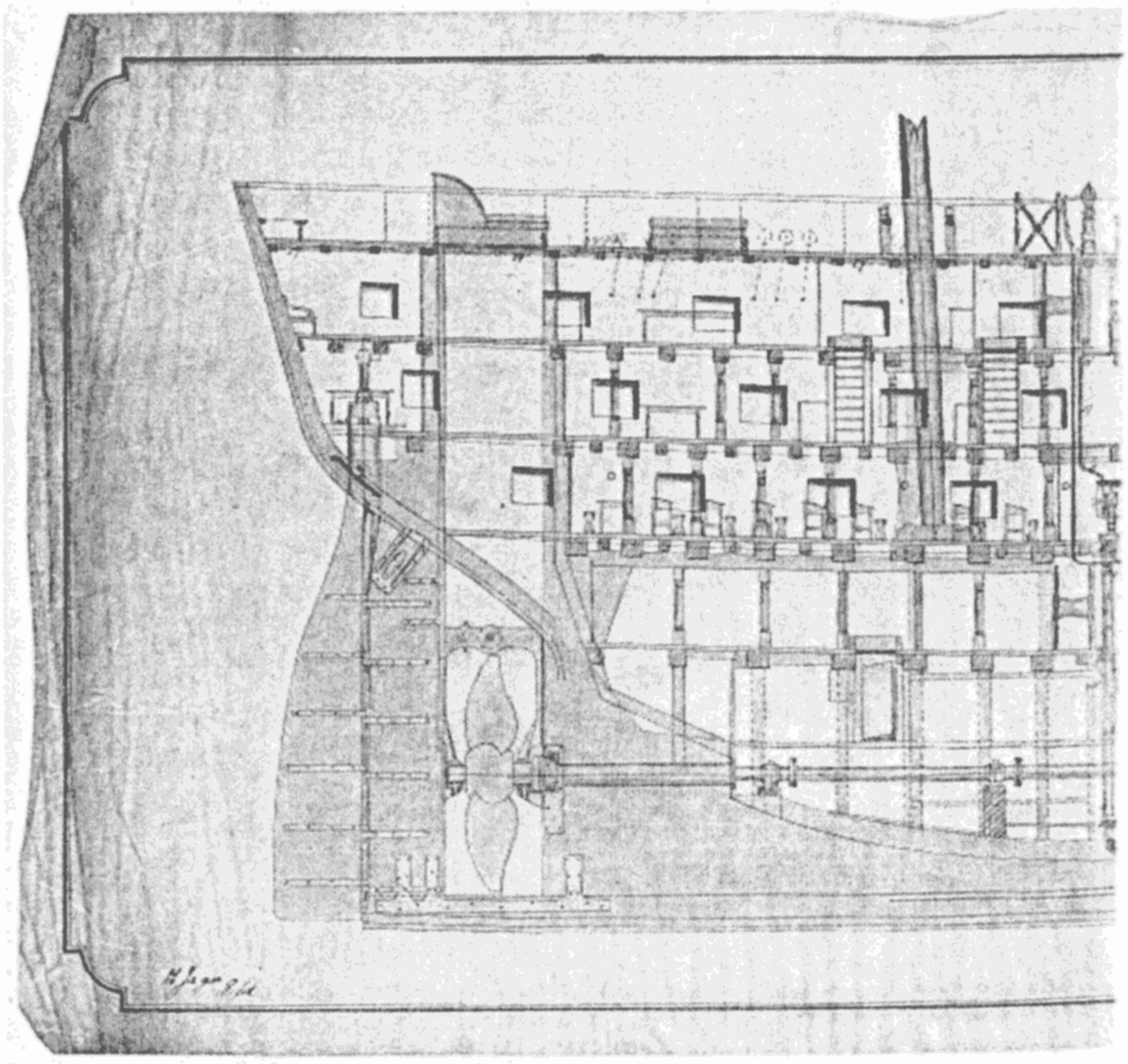
Ocean Devonport Dyd/... . ('to duplicate *Robust*').
Ord: 5.3.1860. K: 23.8.1860. Began conversion to ironclad (see Chapter 6) 3.6.1861.
Caledonia Woolwich Dyd/... ('to duplicate *Repulse*').
Ord: 5.3.1860. K: 1.10.1860. Began conversion to ironclad (see Chapter 6) 6.6.1861.
Blake Pembroke Dyd/... .
Ord: 5.3.1860. K: ... . Suspended 13.2.1862. Cancelled 12.12.1863 (unstarted).
Pitt Chatham Dyd/... .
Ord: 5.3.1860. K: ... . Suspended 13.2.1862. Cancelled 12.12.1863 (unstarted).

NOTES: Developed from 101-gun *Duncan* Class, with a new timbering plan. Armament as *Defiance*, except that 58cwt guns replaced 56cwt guns on MD. *Robust* originally ordered as a 100-gun ship (as *Gibraltar*), then altered to 90-gun during 1858. In 1866 there was a proposal by John Henwood to fit the still-incomplete *Bulwark* as an ironclad turret ship with two turrets, but this was not put into effect.

FREDERICK WILLIAM - conversion of 110-gun three-decker (suspended incomplete on stocks) to 86-gun ship, 1859 design.
Dimensions & tons: 214ft 0in, 174ft 0½in x 60ft 0in oa (59ft 2in for tonnage) x 23ft 9in. 3,241 bm. 4,502 disp.
Men: 830. Guns: LD 30 x 8in (65cwt); UD 32 x 32pdr (56cwt); QD/Fc 22 x 32pdr (42cwt) + 2 x 68pdr (95cwt).
Machinery: 2-cyl. (66in diam., 3½ft stroke) horizontal single expansion. Single screw. 500 nhp. 2,276 ihp = 11.777kts.
First cost: Hull as sailing vessel £84,948.
Frederick William (ex-*Royal Frederick*, renamed 28.1.1860) Portsmouth Dyd/Maudslay, Sons & Field.
Ord: 28.2.1857. Conversion begun: 28.5.1859. L: 24.3.1860. C: 6.1860?
Renamed *Worcester* 19.10.1876 as training ship at Greenhithe. Sold 7.1948. Foundered in the Thames 30.8.1948; raised 5.1953 and BU by Tennant & Horne, Grays.

NOTES: Simply converted and cut down from 116-gun First Rate.

QUEEN - conversion of (1839-launched) three-decker to 86-gun ship, 1858 design.
Dimensions & tons: 216ft 7½in, 174ft 1¾in x 60ft 0¾in oa (*c*59ft 2¾in for tonnage) x 24ft 6in. 3,249 bm. 3,930 disp.
Men: 830. Guns: LD 30 x 8in (65cwt); UD 32 x 32pdr (56cwt); QD/Fc 22 x 32pdr (42cwt) + 2 x 68pdr (95cwt).
Machinery: 2-cyl. (66in diam., 3½ft stroke) horizontal single expansion. Single screw. 500 nhp. 2,283 ihp = 10.578kts.
Queen Sheerness Dyd/Maudslay, Sons & Field.



Scan and/or retouch by Grzechu

Conversion ord: 10.8.1858. Begun: 23.8.1858. L: (undocked) 5.4.1859. C: 30.10.1859. Paid off 1864. Sold to Castle 1871 and BU at Rotherhithe.

NOTES: Simply converted and cut down from 116-gun three-decker.

Broadened *CALEDONIA* Class - conversion of three-deckers (launched 1832-41) to 89-gun ships, 1858 design. All 4,579 (load) disp. as converted.

Men: 830. Guns: LD 32 x 8in (65cwt/9ft); UD 34 x 32pdr (56cwt/9½ft); QD/Fc 22 x 32pdr (42cwt/8ft) + 1 x 68pdr (95cwt/10ft).

Machinery: 2-cyl. (71in diam., 3½ft stroke – except as in Notes below) horizontal single expansion. Single screw. 500 nhp. See below for individual ihp/speeds.

Neptune Portsmouth Dyd/Ravenhill, Salkeld & Co. (1,910 ihp = 11.242kts.)

Dimensions & tons: 216ft 6in, 179ft 1¼in x 55ft 5in oa (54ft 6in for tonnage) x 23ft 2in. 2,830 bm.

Conversion Ord: 10.8.1858. Begun: 10.8.1858. L: (undocked) 7.3.1859. C: 6.8.1859 (fitted for sea). Sold to Castle 23.1.1875 to BU at Charlton.

Trafalgar Chatham Dyd/Maudslay, Sons & Field. (2,275 ihp = 10.906kts.)

Dimensions & tons: 216ft 0in, 183ft 3½in x 55ft 5½in oa (*c*54ft 6½in for tonnage) x 23ft 2in. 2,900 bm.

Conversion Ord: 10.8.1858. Begun: 16.8.1858. L: (undocked) 21.3.1859. C (at Sheerness): 14.8.1859. Coastguard base at Leith 3.1864 to 6.1867. Coastguard at Lough Swilly 11.1868 to 1869. Training ship at Portland 1870, renamed *Boscawen* 1.1873. Sold to Castle 10.7.1906 to BU at Charlton.

Saint George Devonport Dyd/Ravenhill, Salkeld & Co. (1,730 ihp = 10.933kts.)

Dimensions & tons: 216ft 6in, 178ft 10½in x 55ft 4½in oa (*c*54ft 10½in for tonnage) x 23ft 9in. 2,864 bm.

Conversion Ord: 10.8.1858. Begun: 21.8.1858. L: (undocked) 19.3.1859. C: 12.7.1859. Sold to Castle and BU at Charlton 11.1883.

Waterloo Sheerness Dyd/Ravenhill, Salkeld & Co. (1,890 ihp = 11.329kts.)

Dimensions & tons: 218ft 2¹/₈in, 178ft 11¹/₈in x 55ft 4in oa (54ft 8in for tonnage) x 23ft 4½in. 2,845 bm. 3,440 disp.

Conversion Ord: 5.2.1859. Begun: 1.4.1859. L: (undocked) 12.11.1859. C: 4.1860. Renamed *Conqueror* 27.2.1862, then *Warspite* 11.8.1876 as training ship for Marine Society. Burnt in the Thames 20.1.1918.

Royal William Devonport Dyd/Robert Napier & Sons. (1,763ihp = 10.581kts.)

Dimensions & tons: 216ft 9in, *c*177ft x 55ft 7in oa (*c*55ft for tonnage). 2,849 bm. 3,520 disp.

Conversion ord: 5.2.1859. Begun: 21.3.1859. L: (undocked, completed) 9.2.1860. Became training ship, renamed *Clarence* 1885. Burnt by accident in the Mersey 26.7.1899.

NOTES: Originally 120-gun First Rates of 'Broadened *Caledonia*' design, these five ships were cut down from three to two decks while under conversion to steam ships of the line, as stopgap conversions until new construction provided. *Trafalgar* had cylinders of 66in diam., 3½ft stroke; *Royal William* cylinders of 65in diam., 3ft stroke.

***NELSON* Class** - conversion of elderly (1814-launched) three-decker to 89-gun ship, 1859 design.

Dimensions & tons: 216ft 3in, 178ft 7¹/₈in x 54ft 6in oa (53ft 8in for tonnage) x 24ft 3in. Draught 17ft 6in (fwd), 21ft 10in (aft). 2,736 bm. 4,096 disp (as two-decked ship).

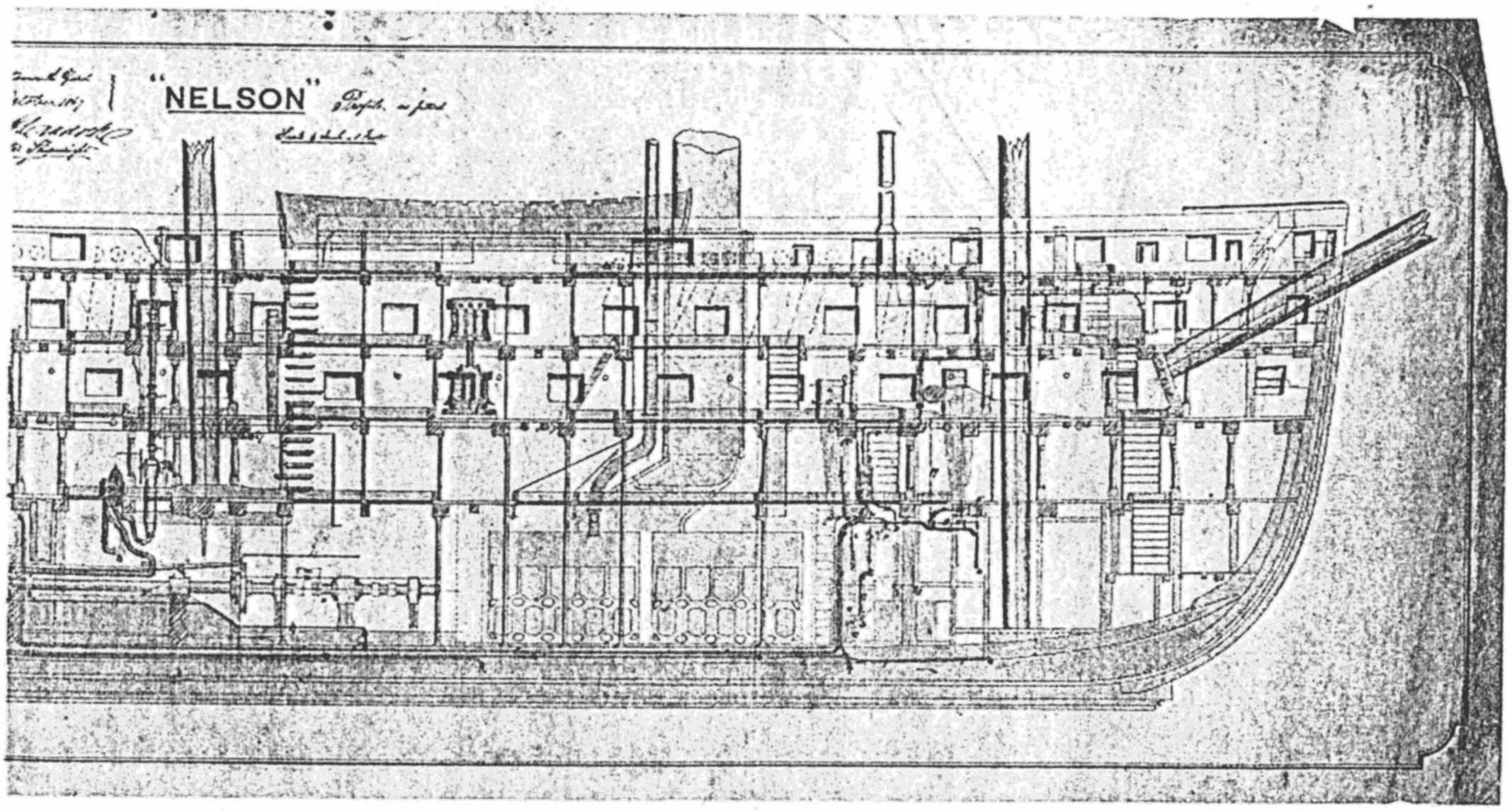
Men: 850. Guns: LD 32 x 8in (65cwt); UD 34 x 32pdr (56cwt); QD/Fc 22 x 32pdr (42cwt) + 1 x 68pdr (95cwt).

Machinery: 2-cyl. (71in diam., 3ft stroke) horizontal single expansion. Single screw. 500 nhp. 2,102 ihp = 11.533kts.

Nelson Portsmouth Dyd/Ravenhill, Salkeld & Co.

Conversion ord: 5.2.1859. Begun: 10.3.1859. L: (undocked) 7.2.1860. C: 1.9.1860. To Victoria State government as training ship (also reported as for shore defence) 2.1867. Razéed to frigate 1878. Sold as store hulk 28.4.1898, later coal hulk. BU at Launceston, Tasmania 9.1928.

NOTES: Former 120-gun First Rate, cut down and lengthened along the lines of the *London*. See Chapter 1 for original details. As training ship mounted 42 guns - 20 x 64pdr (58cwt) MLR, 20 x 32pdr (43cwt) MLSB + 2 x 7in/110pdr (96cwt) MLR; as frigate only 31 guns - 19 x 64pdr MLR, 10 x 32pdr MLSB + 2 x 7in/110pdr MLR (by 1884 32 guns - one 64pdr replaced by 2 x 32pdr).



Profile of *Nelson* as cut down and converted to an 89-gun screw ship; as fitted, dated Portsmouth 8 October 1867. *DR8101*

Scan and/or retouch by Grzechu

***POWERFUL* Class** - conversion of (1828-launched) Second Rate to 80-gun ship. Design (for conversion) of 4.1.1860.

Dimensions & tons: 233ft 9in, 197ft 9¼in x 52ft 4½in oa (51ft 5in for tonnage) x 23ft 1in. 2,783$^{29}/_{94}$ bm.

Men: 750. Guns: LD 10 x 8in (65cwt) + 24 x 32pdr (56cwt); UD 4 x 8in (65cwt) + 30 x 32pdr (50cwt); QD/Fc 12 x 32pdr (42cwt) + 1 x 68pdr (95cwt).

Machinery: 2-cyl. (64$^{3}/_{16}$in diam., 32in stroke) horizontal single expansion. Single screw. 400 nhp. 1,688 ihp = 10.157kts.

Bombay Chatham Dyd/Humphrys & Tennant.

Conversion ord: 3.5.1860. Begun: 23.5.1860. C: 25.6.1861. Burnt by accident off Montevideo 14.12.1864, with the loss of 94 lives.

NOTES: Conversion and 40ft extension of elderly 80-gun ship ('Modified *Canopus*' design); see Chapter 2 for pre-conversion details. Her sister-ship *Powerful* was initially selected for conversion, which was ordered to be done at Chatham on 17.1.1860; however, the hull was found to be defective (rotten) and she was replaced by the *Bombay*.

PRINCE REGENT - conversion of (1823-launched) three-decker to 89-gun ship, 1860 design.

Dimensions & tons: 217ft 10in, 180ft 4½in x 54ft 7in oa (53ft 8in for tonnage) x 23ft 3in. 2,762 bm.

Men: 830. Guns: LD 32 x 8in (65cwt); UD 34 x 32pdr (56cwt); QD/Fc 22 x 32pdr (42cwt) + 1 x 68pdr (95cwt).

Machinery: 2-cyl. horizontal single expansion. Single screw. 500 nhp (never tried for ihp/speed).

Prince Regent Portsmouth Dyd/James Watt & Co.

Conversion ord: 3.2.1860. Begun: 8.2.1860. L: (undocked, completed) 27.5.1861. Never commissioned as a screw ship. BU completed 28.7.1873.

NOTES: Originally cut down to sailing two-decker in 1845-46. Ordered to convert to 90-gun two-decker.

ROYAL GEORGE - conversion of (1827-launched) three-decker to 89-gun ship, design dated 12.4.1860.

Dimensions & tons: see under screw three-deckers above.

Men: 830. Guns: LD 32 x 8in (65cwt); UD 34 x 32pdr (56cwt); QD/Fc 22 x 32pdr (42cwt) + 1 x 68pdr (95cwt).

Machinery: 2-cyl. (58¼in diam., 39in stroke) horizontal single expansion, trunk. Single screw. 400 nhp. 1,417 ihp = 8.65kts.

NOTES: See under screw three-deckers for dates. Never lengthened like the other *Caledonia* Class, she saw little service after being cut down to a two-decker. Reduced to 86-gun in 1861, then 78-gun in 1863. To Coastguard in 1864 (reduced again to 72-gun in 1866) before being sold 23.1.1875 to BU.

Screw Blockships

The blockships constituted the earliest attempt by the Royal Navy to apply screw propulsion to major warships. The first vessel selected was the very elderly *Saturn*, a 74 of 1786 which in 1813 had been razéed to a 58-gun Fourth Rate (see Chapter 1 for details). On 1 July 1845 her conversion at Pembroke was ordered, and her defects instructed to be made good (23 July) with a 330 nhp engine and screw fitted. The 74-gun *Wellington* (ex-*Hero*) was selected as the second conversion on 13 August 1845. However, it was reported very quickly that *Saturn* was too defective to be used, and instead of the *Wellington* a programme was adopted on 30 August 1845 to modify four other *Armada* Class 74-gun ships for the defence of the Channel and Home Ports. The resultant conversions were to be labelled Steam Guard Ships instead of the earlier term 'blockships'; however, it was the earlier name which prevailed. On the outbreak of the Crimean War, a further five vessels were similarly converted.

***BLENHEIM* 'Class'** - blockships (converted from elderly 74s), 60 guns.

Men: 600. Guns: GD 28 x 32pdr (56cwt); UD 26 x 8in/68pdr (52cwt) shell; QD/Fc 4 x 10in (67cwt) + 2 x 68pdr (95cwt).

Machinery: 4-cyl. horizontal single expansion. 4 boilers. Single screw. 450 nhp. See below for individual ihp/speeds.

First cost: *Blenheim* £31,857 paid to Wigram, plus machinery £25,412 + £1,511 for its fitting, and fitting for sea £5,526. *Ajax* £15,908 paid to Whites, plus £55,975 fitted for sea. *Hogue* total £81,525 (including £36,611 paid to Green), including fitting for sea. *Edinburgh* £65,618.

Blenheim Sheerness Dyd (orig.).

On 20.10.1845 the order shifted to Money Wigram & Sons, Blackwall./Seaward & Capel. (938 ihp = 5.816kts.)

Dimensions & tons: 181ft 2$^{5}/_{8}$in, 149ft 9½in x 48ft 6in oa (c47ft 10in for tonnage) x 21ft 3in. 1,822 bm. 2,790 disp.

Conversion ord: 2.9.1845. Begun: 12.11.1845. L: (undocked) 3.1847. C: 27.10.1847. BU 1865.

Ajax Portsmouth Dyd (orig.).

On 23.10.1845 the order shifted to T. & J. White, Cowes./Maudslay, Sons & Field. (846 ihp = 7.147kts.)

Dimensions & tons: 176ft 0in, 144ft 11½in x 48ft 6½in oa (47ft 9½in for tonnage) x 21ft 0in. 1,761 bm. 2,828 disp.

Conversion ord: 2.9.1845. Begun: 17.11.1845. L: (undocked) 1846. C: 28.9.1848. BU 1864.

Hogue Chatham Dyd (orig.).

On 20.10.1845 the order shifted to R. & H. Green, Blackwall./Seaward & Capel. (793 ihp = 7.809kts.)

Dimensions & tons: 184ft 0in, 153ft 0¼in x 48ft 4¼in oa (c47ft 7¼in for tonnage) x 21ft 0½in. 1,846 bm. 3,054 disp.

Conversion ord: 2.9.1845. Begun: 1.12.1845. L: (undocked) 1848. C: 28.7.1849. BU 1865 at Devonport.

Edinburgh Portsmouth Dyd.

On 25.10.1845 the order was confirmed to remain here./Maudslay, Sons & Field. (963 ihp = 8.873kts.)

Dimensions & tons: 176ft 6in, 145ft 4¼in x 48ft 7½in oa (47ft 10½in for tonnage) x 21ft 0½in. 1,772 bm. 2,598 disp.

Conversion ord: 2.9.1845. Begun: 11.8.1846. L: (undocked) 31.12.1846. C: 19.8.1852. Sold to Castle & Beech 11.1865 to BU at Charlton.

NOTES: Elderly 74-gun Third Rates of the *Armada* Class, launched 1809-13 (see Chapter 1 for original data). The two to be converted at Portsmouth Dyd had twin funnels and sterns unmodified; the other pair had one funnel, with sterns modified and lengthened as shown above. *Blenheim* and *Hogue* had cylinders of 51½in diam., 36in stroke; *Ajax* and *Edinburgh* had cylinders of 55in diam., 30in stroke.

***CORNWALLIS* 'Class'** - blockships (converted from elderly 74s), 60 guns.

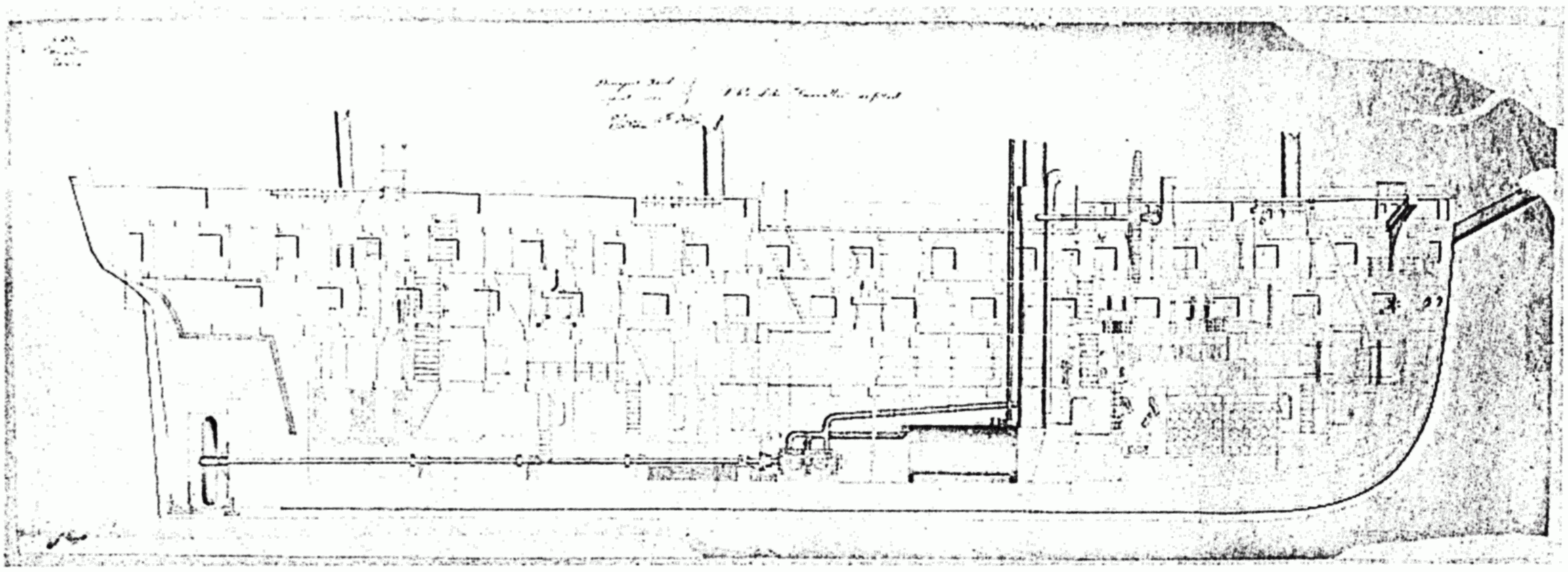
Men: 600. Guns: GD 24 x 32pdr (56cwt) + 4 x 8in/68pdr (65cwt) shell guns; UD 26 x 32pdr (50cwt); QD/Fc 4 x 10in (85cwt) + 2 x 68pdr (95cwt).

Machinery: 2-cyl. horizontal single expansion (trunk in Penn-engined ships). Single screw. 200 nhp. See below for ihp.

First cost: *Russell* £23,935 (including machinery £11,903). *Hawke* fitting £23,365 plus machinery £12,212. *Pembroke* £22,751 plus (machinery?) 11,605. *Hastings* £11,646 plus (machinery?) £29,192 (?the two figures may be reversed).

Russell Sheerness Dyd/John Penn & Son. (578 ihp = 6.68kts.)

Dimensions & tons: 176ft 6in, 145ft 6in x 48ft 3¾in oa (47ft 6¾in for tonnage) x 21ft 0in. 1,751 bm. 2,903 disp.



Profile of *Cornwallis* as fitted as a steam blockship, Devonport April 1855. *DRX683*

Conversion ord: 1854. Begun: 7.10.1854. L: (undocked) 2.2.1855. C: 6.6.1855. Coastguard depot at Falmouth 2.1858 to 3.1864. BU 1865.

Cornwallis Devonport Dyd/John Penn & Son. (787 ihp = 7.188kts.)
Dimensions & tons: 177ft 1in, 145ft 7¼in x 49ft 1in oa (48ft 4in for tonnage) x 21ft 1¾in. 1,809 bm. 2,678 disp.
Conversion ord: 1854. Begun: 9.10.1854. L: (undocked) 8.2.1855. C: 25.4.1855. Coastguard depot at Hull 4.1864 to 1865. Made a jetty at Sheerness 1865. Renamed *Wildfire* as base ship 1.4.1916. BU at Sheerness 1957.

Hawke Chatham Dyd/John Penn & Son. (500 ihp = 6.525kts.)
Dimensions & tons: 176ft 1in, 144ft 10½in x 48ft 5½in oa (47ft 8½in for tonnage) x 21ft 1½in. 1,754 bm. 2,808 disp.
Conversion ord: 1854. Begun: 10.10.1854. L: (undocked) 5.1855. C: 20.5.1855. Coastguard depot at Queenstown 1.1857 to 3.1865. BU 1865.

Pembroke Portsmouth Dyd/Maudslay, Sons & Field. (572 ihp = 7.602kts.)
Dimensions & tons: 176ft 0in, 144ft 11¼in x 48ft 6in oa (47ft 9in for tonnage) x 21ft 1in. 1,758 bm. 2,842 disp.
Conversion ord: 1854. Begun: 10.10.1854. L: (undocked) 3.2.1855. C: 24.5.1855. Coastguard depot at Leith 12.1856 to 3.1858; coastguard at Harwich 3.1858 to 6.1869. Flagship at Sheerness 6.1869 to 4.1873. Barracks at Chatham from 4.1873. Receiving ship 1890, renamed *Forte*. Sold 1905.

Hastings Portsmouth Dyd/Maudslay, Sons & Field. (597 ihp = 6.702kts.)
Dimensions & tons: 176ft 10½in, 145ft 4in x 48ft 6in oa (47ft 9in for tonnage) x 21ft 0in. 1,763 bm. 2,948 disp.
Conversion ord: 1854. Begun: 11.11.1854. L: (undocked) 5.2.1855. C: 12.5.1855. Coastguard at Liverpool 4.1857 to 4.1873. Coal hulk 1870. Sold 9.1885.

NOTES: Elderly 74-gun Third Rates, launched 1812-22 (see Chapters 1 and 2 for original data), used as stopgap conversions during the Crimean War, intended for use as floating batteries to attack Russian forts in the Baltic. Mainly re-fitted with second-hand materials. Cylinders in first three were 30¼in diam., 30in stroke; in last pair 30in diam., 30in stroke.

Screw Frigates

Altogether 30 new wooden screw frigates were completed between 1849 and 1865 (including several ordered as sailing frigates and converted on the stocks), while 14 were converted to screw propulsion from existing sailing frigates. Most of those completed or converted as 51-gun screw frigates below had their number of guns progressively reduced during the 1860s, with those surviving in 1871 having only 23 or 28 guns.

AMPHION - prototype screw frigate conversion, 36 guns. White design, 1844.
Dimensions & tons: 177ft 0in, 152ft $5^{3}/_{8}$in x 43ft 2in oa (42ft $7^{5}/_{8}$in for tonnage) x 13ft 5in. Draught 19ft 1½in (mean). 1,474 bm. 2,049½ disp.
Men: 320. Guns: MD 6 x 8in (65cwt) shell + 14 x 32pdr (56cwt); UD 2 x 68pdr (95cwt) + 14 x 32pdr (42cwt). Reduced to 30-gun in 1848, but reverted to 36-gun in 1856.
Machinery: 2-cyl. (48in diam., 48in stroke) horizontal single expansion, direct acting. Single screw. 300 nhp. 592 ihp = 6.75kts.
First cost (of conversion): Hull £36,115 including hull as sailing ship £6,594, machinery and its fitting £16,673, completion for sea £22,794.

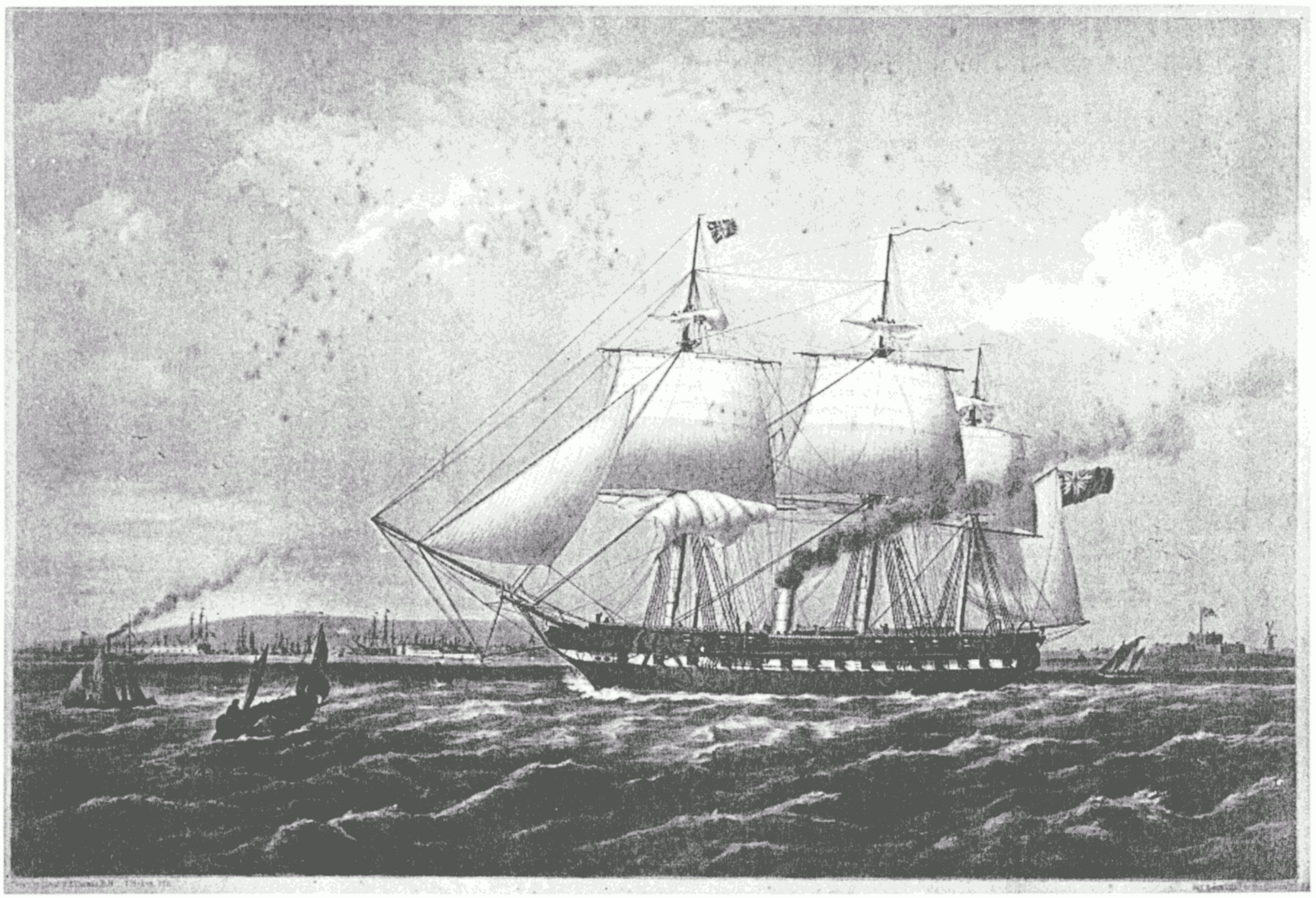
Amphion Woolwich Dyd/Miller, Ravenhill & Co. (engines to design of John Ericsson).
Conversion ord: 18.6.1844. K: (15.4.1840). L: 14.1.1846. C: 13.5.1847. Machinery fitted in East India Docks, fitted for sea at Sheerness. Sold to Williams 12.10.1863 to BU.

NOTES: Originally ordered 1828 as a sailing Fifth Rate (as *Ambuscade*, renamed 31.3.1831), and begun 1840 as such (see Chapter 2). Rated Steam Vessel (SV1) on re-ordering 1844; then rerated First Class frigate 9.5.1845. The size of machinery restricted the amount of space left for stowing provisions and munitions.

ARROGANT - First Class frigate, 46 guns. John Fincham design, dated 3.8.1844.
Dimensions & tons: 200ft 0in, 172ft 9in x 45ft 8¾in oa (45ft 1¾in for tonnage) x 15ft 1in. Draught 20ft (mean). $1{,}872^{21}/_{94}$ bm. 2,690 disp.
Men: 450. Guns: MD 12 x 8in (65cwt) shell + 16 x 32pdr (56 cwt); UD 2 x 68pdr (95cwt) + 16 x 32pdr (42cwt).
Machinery: 2-cyl. (55in diam., 36in stroke) horizontal single expansion, trunk. Single screw. 360 nhp. 774 ihp = 8.645kts.
First cost: £83,183.

Arrogant Portsmouth Dyd/John Penn & Son (possibly originally intended to have had Boulton engine).

Scan and/or retouch by Grzechu



A fine lithographic portrait of the steam frigate *Arrogant*, one of the first screw-propelled major warships. Based on an original drawing by Lieutenant R S Thomas, RN, the print's accuracy of detail can be taken for granted. *A8115*

Ord: 11.2.1845 (named 4.3.1845). K: 9.1845. L: 5.4.1848. C: 8.1.1849. Rerated 47-gun in 1856. Fitted for the Coastguard at Portsmouth 1857-58 for £21,763. Coastguard at Newhaven 3.1858 - 8.1859, but then refitted for sea in 1859. Sold to Castle & Beech 3.1867 to BU at Charlton.

NOTES: Ordered as sailing Fourth Rate, but reclassed as First Class frigate 11.2.1845.

***DAUNTLESS* Class** – Second Class (from 31.7.1846, First Class) frigates, 24 guns. John Fincham design, dated 6.12.1844.

Dimensions & tons: As built: 210ft 0in, 182ft 7¾in x 39ft 9in oa (39ft 3in for tonnage) x 26ft 0in. 1,496$^{64}/_{94}$ bm. 2,242 disp.

As lengthened 1850: 219ft 6in, 192ft 1¾in x 39ft 9in (39ft 3in for tonnage) x 26ft 0in. Draught 17ft (mean). 1,574$^{80}/_{94}$ bm. 2,457 disp

Men: ... . Guns: MD 18 x 32pdrs (56cwt) MLSB; UD 4 x 10in (85cwt/9ft 4in) shell, 2 x 8in/68pdrs (95cwt) MLSB.

Machinery: 2-cyl. (84in diam., 48in stroke) horizontal single expansion, geared. Single hoisting screw. 580 nhp. 1,388 ihp = 10.3kts.

First cost: £96,441 (including hull £42,365, machinery £41,032).

Dauntless Portsmouth Dyd/Robert Napier & Sons.

Ord: 12.2.1845. K: 9.1845. L: 5.1.1847. C: 16.10.1850. Coastguard base at Newhaven 8.1859 to 3.1864, then Coastguard at Hull 4.1864 to 12.1869. Sold 1.5.1885.

Vigilant Portsmouth Dyd/... .

Ord: 26.3.1846. K: ... . Suspended 9.9.1846. Cancelled 22.5.1849.

NOTES: *Dauntless* originally ordered 19.2.1844 as a paddle vessel (SV1) 'similar to *Sampson*', but on 13.8.1844 the Surveyor was asked to prepare two draughts, one for paddle wheels and the other as a screw vessel, and on 15.11.1844 she was ordered to be fitted for screw (order switched to Deptford). Her stern lines proved too bluff to utilise her more powerful engine. Lengthened by 9½ft section at Portsmouth Dyd in 1850, but this did not improve her performance. Re-armed as 33-gun in 1854.

***TERMAGANT* Class** - Second Class (from 31.7.1846, First Class) frigates, 24/25 guns. White design, dated 6.12.1844.

Dimensions & tons: 210ft 1in, *c*181ft 9in x 40ft 6in (40ft 0in for tonnage) x 26ft 4in. Draught 16ft 7½in (mean). 1,547 bm. 2,312 disp.

Men: ... . Guns: MD 12 x 42pdr (84cwt) + 8 x 32pdrs (56cwt); UD 2 x 8in (112cwt) shell + 6 x 10in (84cwt) as designed, but completed with 4 fewer. In 1856 became 25-gun ship - 1 x 10in (85cwt/9ft 4in) on pivot added?

Machinery: 4-cyl. (62in diam., 42in stroke) horizontal single expansion, geared. Single screw. 620 nhp. 1,351 ihp = 9.51kts.

First cost: Hull £34,264, machinery £35,314, fitting £36,905.

Termagant Deptford Dyd/Seaward & Capel.

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Ord: 19.2.1845. K: 4.1845. L: 25.9.1847. C: 12.10.1854. Re-engined at Portsmouth 1854. Fitted for reserve at Portsmouth 1858. Sold to Castle & Beech 3.1867 to BU at Charlton.

Euphrates Deptford Dyd/Seaward & Capel.

Ord: 23.1.& 26.3.1846. K: ... . Suspended 9.9.1846. Cancelled 22.5.1849.

NOTES: Originally to have been 208ft (1,527 bm) but *Termagant*'s bow was extended by White to improve speed 6.1846. *Euphrates* design lengthened to 215ft 7in (c1,585 bm, 2,402 disp.) before cancellation. Main fitting out completed 25.8.1848. In 1854, engine replaced at Portsmouth Dyd with 2-cyl. (62½in x 36in) horizontal: 400 nhp, 1,206 ihp = 10.66kts.

FERVENT - First Class frigate, 21 guns. Oliver Lang design, 1845.

Dimensions & tons: 210ft 0in, ... x 40ft 0in x ... . 1,453 bm. 1,847 disp.

Men: ... . Guns: ... .

Machinery: ... . 800 nhp.

Fervent (ex-*Watt*, renamed 22.3.1845) Woolwich Dyd/....

Ord: 20.2.1845. K: ... . Suspended 7.4.1845. Cancelled 22.5.1849.

NOTES: Ordered to be built as a screw steam frigate as close to the *Terrible* (see Chapter 3) 'as may be consistent with the difference between the screw and paddle wheels'. Probably intended to be similar to *Dauntless* (which originally was also listed as 1,453 bm). Named *Watt* on 4.3.1845, but renamed *Fervent* on 22.8.1845.

***EUROTAS* Group** - conversions from elderly sailing frigates to screw frigates (initially 'frigate blockships'), 1845.

Horatio Chatham Dyd/Seaward & Capel.

Dimensions & tons: 154ft 3in, 129ft 11¼in x 40ft 2½in oa (39ft 8½in for tonnage) x 13ft 7in. Draught 19ft 1½in (mean). 1,090 bm. 1,707 disp.

Guns: As screw blockship had LD 12 x 8in + 8 x 32pdrs (from 1853, 18 x 8in only); UD 4 x 10in. As mortar frigate, carried 2 x 13in mortars (also LD 8 x 32pdrs, UD 2 x 68pdrs).

Machinery: 2-cyl. (54in diam., 36in stroke) horizontal single expansion, geared. 13lbs/sq.in. Single screw. 250 nhp. 553 ihp = 8.855kts.

First cost: £42,804 (including machinery £19,793).

Begun: 11.1845. Completed at Chatham as screw frigate blockship 12.1849, then engine fitted in East India Docks to 6.1850. Fitted as screw mortar frigate (for £7,188) at Sheerness 1855. Sold to Castle 1865 to BU at Charlton.

Eurotas Chatham Dyd/John Penn & Son.

Dimensions & tons: 166ft 2in, 137ft 8½in x 40ft 10in oa (c40ft 6in for tonnage) x 12ft 9in. 1,201 bm. 1,293 (light) disp.

Machinery: 2-cyl. horizontal single expansion, trunk (high pressure). Single screw. 200 nhp. 562 ihp = 7.58kts.

First cost: As frigate blockship £8,379 for hull, plus £12,192 for machinery. As mortar frigate £25,471.

Conversion ord: 2.9.1845. Begun: 12.1845. Partly completed as frigate blockship 2.1848; finally (without engine) 4.1851. Completed at Sheerness Dyd as screw mortar frigate 7.1855 to (undocked 13.2.1856) 10.4.1856. Sold to Castle & Beech 1.11.1865 to BU at Charlton.

Seahorse Devonport Dyd/John Penn & Son.

Dimensions & tons: 164ft 0in, 136ft 7½in x 42ft 2in oa (c41ft 7in for tonnage) x 19ft 10in. 1,257 bm. 1,799 disp.

Machinery: 2-cyl. horizontal, trunk (high pressure). Single screw. 200 nhp. 832 ihp = 9.3kts.

First cost: As frigate blockship £7,292 for hull, plus £12,241 for machinery. As mortar frigate £30,260.

Conversion ord: 2.9.1845. Begun: 11.1845. Completed as frigate blockship 7.1847. Completed as screw mortar frigate (undocked) 3.1856. Became coal hulk, renamed *Lavinia* 5.5.1870. Sold 1902.

Forth Devonport Dyd/John Penn & Son.

Dimensions & tons: 164ft 0in, 136ft 7½in x 42ft 2in oa (c41ft 7in for tonnage) x 19ft 10in. 1,258 bm. 1,793 disp.

Machinery: 2-cyl. horizontal, trunk (high pressure). Single screw. 200 nhp. 834 ihp = 9.38kts.

First cost: As frigate blockship £8,340 for hull, plus £12,232 for machinery. As mortar frigate £26,006.

Conversion ord: 6.9.1845. Begun: 10.1845. Completed as frigate blockship 7.1847. Completed as screw mortar frigate (undocked) 21.1.1856. Became coal hulk, renamed *Jupiter* 12.1869. Sold to Castle 4.8.1883 to BU at Charlton.

NOTES: Conversion of these ships (initially including *Stag*, replaced 4 days later by *Forth*) to 44-gun screw frigate/blockships (350 nhp) was approved 2.9.1845. *Horatio* fitted with 250 nhp engine 12.1849, and was re-armed, becoming a screw mortar frigate during the Crimean War. The other three were not fitted (indeed, on 31.12.1852 they were ordered to be re-registered as sail frigates) until 29.6.1855, when it was approved that they be lengthened and fitted as screw mortar vessels with 200 nhp engines and two mortars each (*Eurotas* at Sheerness, *Forth* and *Seahorse* at Devonport); however, it appears that the three, although fitted with engines (cylinders 30¼in diam., 30in stroke; high pressure boilers of 60 lbs/sq.in), were never re-armed.

On 5.1.1848 it was ordered that the 50-gun sailing frigate *Worcester* (see Chapter 2) be fitted as a screw frigate, using the 350 nhp Boulton, Watt & Co. engine originally scheduled for the *Horatio* (see above). It was intended to convert the *Worcester* at Chatham Dyd, but on 8.4.1848 this conversion was cancelled.

***TRIBUNE* Class** - Second Class frigates, 31 guns. Surveyor's Department design, approved 1.11.1850.

Dimensions & tons: 192ft 0in, 163ft 4in x 43ft 0in oa (42ft 6in for tonnage) x 12ft 11in. 1,569$^{24}/_{94}$ bm. *Tribune* 2,220 disp.

Men: 300. Guns: MD 20 x 32pdr (56cwt/9ft 6in); UD 10 x 32pdr (42cwt/8ft 0in) + 1 x 10in (85cwt/9ft 4in) on pivot.

Machinery: 2-cyl. horizontal single expansion. Single screw. *Tribune* 300 nhp. 1,068 ihp = 10.416kts. *Curacoa* 350 nhp. 1,354 ihp = 10.75kts.

First cost: *Tribune* total £68,304 (hull £34,636, machinery £18,396). *Curacoa* total ?£70,608 (hull £34,759, machinery £21,583).

Tribune Sheerness Dyd/Maudslay, Sons & Field.

Ord: 1.11.1850. K: 4.1851. L: 21.1.1853. C: 3.8.1853. Sold to Marshall, Plymouth 8.1866.

Curacoa Pembroke Dyd/Maudslay, Sons & Field.

Ord: 4.4. & 18.7.1851 (named 20.9.1851). K: 1.1852. L: 13.4.1854. C: 14.11.1854. BU completed 17.7.1869.

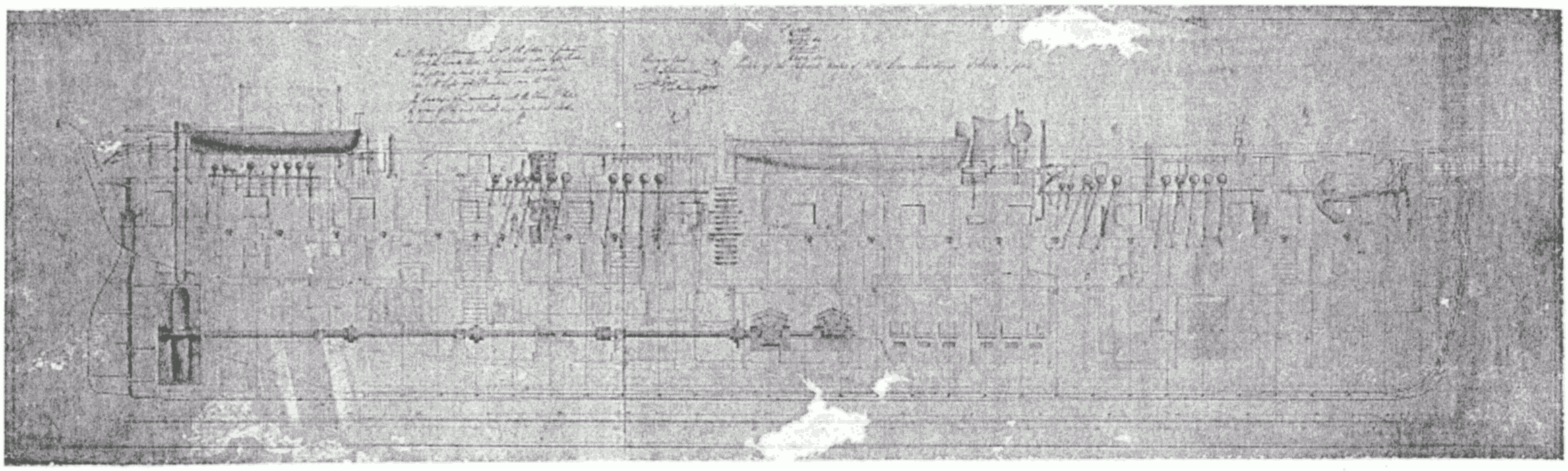
NOTES: 'Auxiliary power screw frigate(s)', design approved 31.10.1850. *Tribune*, first ordered in 1846 as a 28-gun sailing frigate and re-ordered in 1850 as a screw ship, but still utilising the frames originally provided for her when ordered as a sailing frigate of the *Diamond* Class; *Curacoa* utilised the frames prepared for (cancelled) 36-gun sailing frigates. *Tribune*'s cylinders were 55in diam., 30in stroke; *Curacoa*'s were 57$^{1}/_{8}$in diam., 33in stroke. Both reduced to 23-gun in 1863.

***FORTE* (or *IMPERIEUSE*) Class** - 51 guns. Surveyor's Department design, approved 14.6.1850.

Dimensions & tons: 212ft 0in, 180ft 8½in x 50ft 2in oa (49ft 6in for tonnage) x 16ft 9in. 2,355$^{45}/_{94}$ bm.

Aurora (lengthened 15ft from design) 227ft 0in, 195ft 8½in x 50ft 2in oa (49ft 6in for tonnage) x 16ft 9in. 2,550$^{55}/_{94}$ bm.

Scan and/or retouch by Grzechu



As fitted profile for the Second Class screw frigate *Tribune*, dated Sheerness 30 September 1853. *DR8023*

Men: 515. Guns: MD 30 x 8in (65cwt) shell; UD 20 x 32pdr (56cwt) + 1 x 68pdr (95cwt) on pivot.
Machinery: 2-cyl. horizontal single expansion (trunk in first pair). Single screw. *Imperieuse* 360 nhp, others 400 nhp. See below for ihp/speed.
First cost: *Imperieuse* total £91,833 (hull £41,915, machinery £21,458). *Euryalus* total £91,357 (hull £40,001, machinery £25,545). *Forte* total £90,446 (hull & fitting £65,040, machinery £25,406). *Chesapeake* total £100,920 (hull £56,354, machinery £25,684).

Imperieuse Deptford Dyd/John Penn & Sons. (1,296 ihp = 9.85kts.)
Draught & tons: 21ft 2in, 22ft 3in. 2,358 bm. 3,345 disp.
Ord: 14.6.1850. K: 11.1850. L: 15.9.1852. C: 30.3.1853. Sold to Castle & Beech 3.1867 to BU at Charlton.

Euryalus Chatham Dyd/John Penn & Sons. (1,162 ihp = 9.47kts.)
Draught & tons: 20ft 7in, 22ft 11in. 2,371 bm. 3,356 disp.
Ord: 15.3.1851. K: 10.1851. L: 5.10.1853. C: 5.3.1854. Sold to Castle & Beech 3.1867 to BU at Charlton.

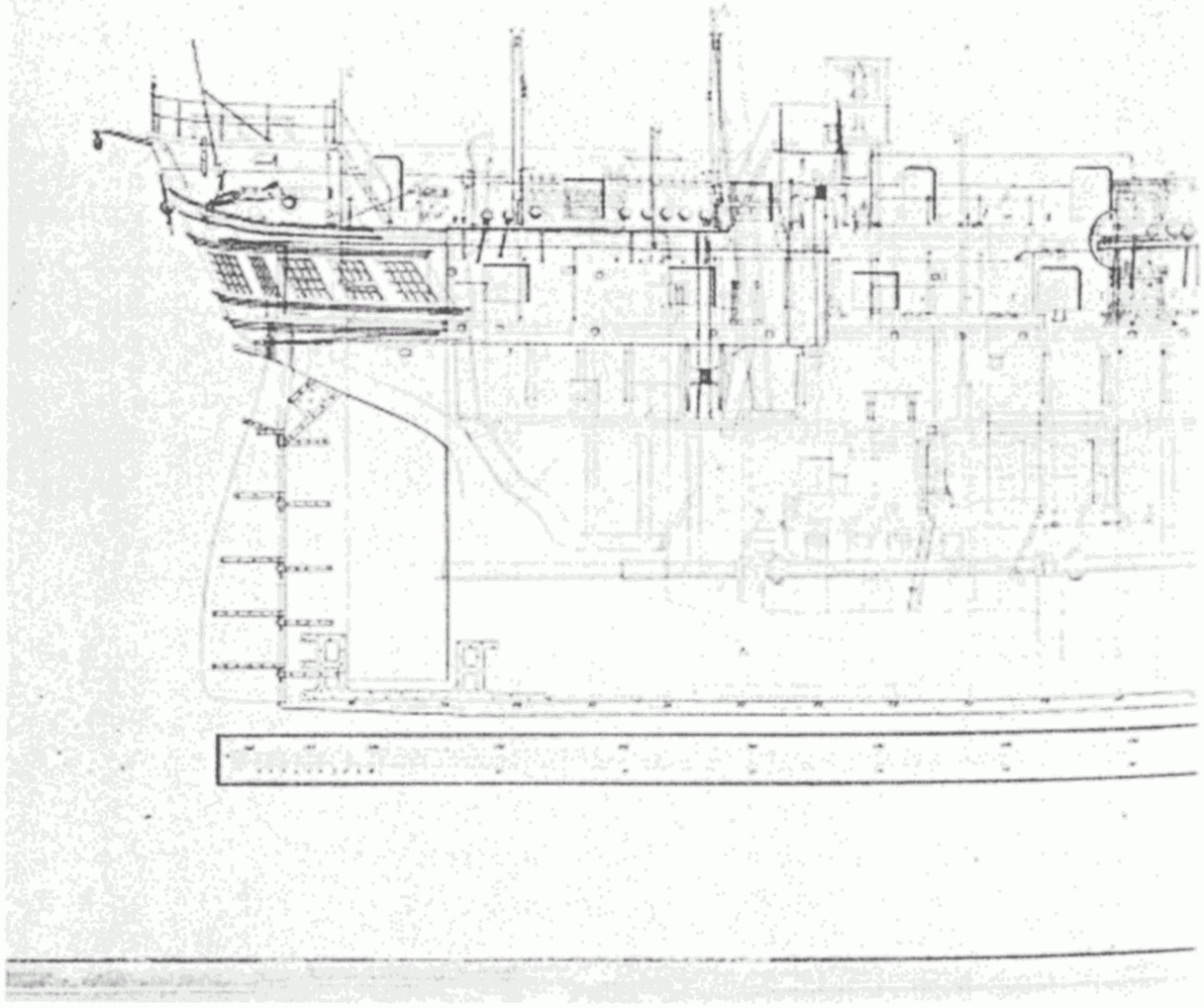
Aurora Pembroke Dyd/Maudslay, Sons & Field. (1,576 ihp = 10.21kts.)
Draught & tons: 21ft 7in, 22ft 7in. 2,558 bm. 3,498 disp.
Ord: 4.4.1851 (named 8.6.1853). K: 5.9.1854. L: 22.6.1861. C: 11.1863. BU at Devonport 12.1881.

Forte Deptford Dyd/Maudslay, Sons & Field. (1,539 ihp = 11.435kts.)
Draught and tons: 16ft 11in,18ft 7in. 2,364 bm. 2,370 (light).
Ord: 27.3.1852 (named 8.6.1853). K: 5.5.1854. L: 29.5.1858. C: 7.4.1860. Became receiving ship 1880. Coal hulk 1894. Burnt by accident at Sheerness on 23.11.1905.

Chesapeake Chatham Dyd/Maudslay, Sons & Field. (1,159 ihp = 9.658kts.)
Draught and tons: 20ft 6in,22ft 10in. 2,377 bm. 3,334 disp.
Ord: 27.3.1852 (named 4.11.1853). K: 30.5.1854. L: 27.9.1855. C: 28.8.1857. Sold to Castle & Beech 1867 to BU at Charlton.

NOTES: *Imperieuse*, originally ordered in 3.1848 as a 60-gun sailing frigate, was re-ordered in 1850 as a screw ship; her dimensions were slightly different at 212ft 0in, 180ft 7¾in x 50ft 0½in oa (49ft 6½in for tonnage) x 16ft 8¾in = 2,358 bm; her cylinders were 55in diam., 36in stroke. *Euryalus*, originally ordered in 3.1848 as a 50-gun sailing frigate, was re-ordered in 1851 as a screw ship; her cylinders were 58 1/16in diam., 39in stroke. Last three ships had cylinders of 63in diam., 36in stroke. Intended sisters *Bacchante*, *Liffey* and *Shannon* (all re-ordered 4.4.1851 to this design), and *Topaze* (ordered to this design on 27.3.1852), were later completed to a modified design, as were *Mersey* and *Tweed* (ordered 31.3.1855) - see below. *Aurora* was given a lengthened bow in 2.1860 before launching, but seems never to have been completed for sea. *Euryalus* and *Chesapeake* were built in dry dock.

***LIFFEY* Class** 1854. Surveyor's Department design. 51 guns.
Dimensions & tons: (285ft oa) 235ft 1in, 203ft 10in x 50ft 1½in oa (49ft 7½in for tonnage) x 18ft 4½in. 2,651 bm (2,667 as completed). 3,915 disp.
Men: 560. Guns: MD 30 x 8in (65cwt) shell; UD 20 x 32pdr (56cwt) + 1 x 68pdr (95cwt) on pivot.
Machinery: 2-cyl. horizontal single expansion (trunk in *Liffey* & *Shannon*). Single screw. 600 nhp. 11.8kts (designed).
First cost: *Liffey* total £135,774 (hull £65,717, machinery £37,730). *Shannon* total £127,163 (hull £62,759, machinery £37,325, fitting £27,079). *Bacchante* hull £71,914, machinery £36,000. *Topaze* hull £64,623, machinery £37,050.



Scan and/or retouch by Grzechu

Liffey Devonport Dyd/John Penn & Sons. (1,905 ihp = 11.097kts.)
Ord: 4.4.1851. K: 12.7.1854. L: 6.5.1856. C: 11.1.1859. Store hulk at Coquimbo 1877. Sold there 4.1903.

Shannon Portsmouth Dyd/John Penn & Sons. (2,125 ihp = 11.499kts.)
Ord: 4.4.1851. K: 1.1854. L: 24.11.1855. C: 29.12.1856. Sold to Castle 31.5.1871 to BU at Charlton.

Topaze Devonport Dyd/Maudslay, Sons & Field. (2,538 ihp = 11.122kts.)
Ord: 27.3.1852. K: 4.1856. L: 12.5.1858. C: 23.7.1859. Sold to Castle 14.2.1884 to BU at Charlton.

Bacchante Portsmouth Dyd/Maudslay, Sons & Field. (2,490 ihp = 12.074kts.)
Ord: 4.4.1851. K: 9.1856. L: 31.7.1859. C: 29.6.1860. BU at Portsmouth 1869.

Liverpool Devonport Dyd/Humphrys & Tennant. (1.935 ihp = 10.811kts.)
Ord: 31.3.1855. K: 14.11.1859. L: 30.10.1860. C: 11.12.1860. Sold to Castle 26.6.1875 to BU at Charlton.

NOTES: *Bacchante* (in 1848), *Liffey* and *Shannon* (both in 1844) were originally ordered as sailing frigates. *Liffey* and *Shannon* had cylinders of 70¾in diam., 3½ft stroke; others of 76in diam., 3½ft stroke. *Glasgow* and *Newcastle*, originally ordered 31.3.1855 to this design, were completed to modified designs (see below).

The big 'Walker frigates' conceived during the Crimean War commenced their existence through orders issued on 3 April 1854 for three 'special type frigate-corvettes' of 2,479 bm and 800 nhp to be built - the *Diadem* and *Doris* at Pembroke and *Ariadne* at Deptford. On 31 March 1855 a fourth unit was ordered to this design - the *Orlando* at Pembroke. While the first pair went ahead as planned (as 32-gun ships), revised plans were approved on 2 July 1856 for the *Ariadne* (plus the *Galatea*, ordered at Woolwich as a *Jason* Class corvette on 9 April 1856) to be re-designed as corvettes with a covered deck and carrying 26 guns, with the *Orlando* (plus the *Mersey*, ordered at Chatham as a *Forte* Class frigate on 31 March 1855) to be re-designed as larger frigates carrying 36 guns.

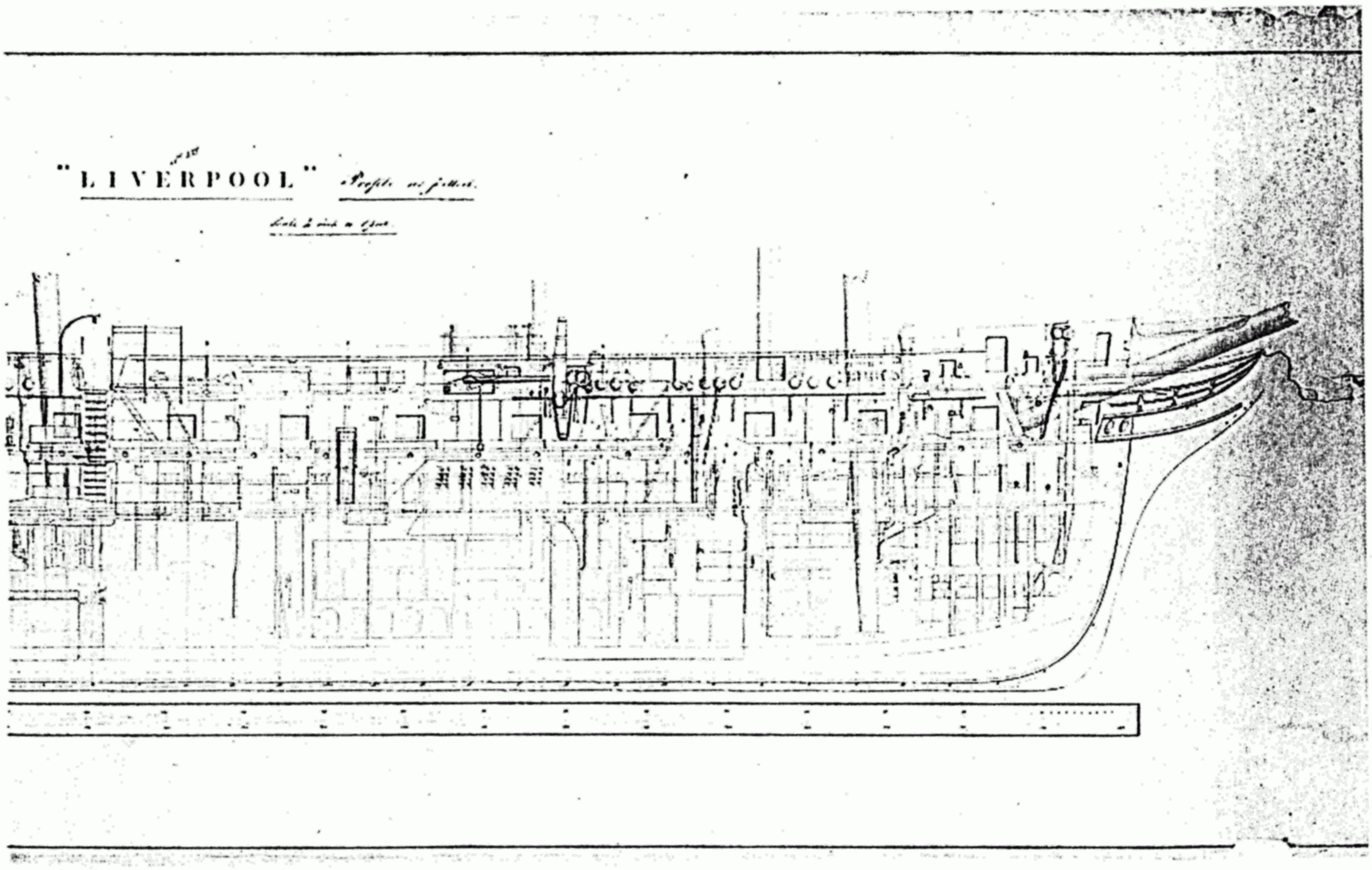
***DIADEM* Class** - screw frigates (originally corvettes), 32 guns. Surveyor's Department (?Isaac Watts) design, approved 24.1.1855.
Dimensions & tons: 240ft 0in, 208ft 0¾in x 48ft 0in oa (47ft 4in for tonnage) x 16ft 7in. 2,479$^{42}/_{94}$ bm. 3,714 disp.
Men: 475. Guns: MD 20 x 10in (85cwt) shell guns (broadside); UD 10 x 32pdr (56cwt) MLSB + 2 x 68pdr MLSB (pivot-mounted).
Machinery: 2-cyl. (82in diam., 48in stroke) horizontal single expansion (trunk in *Doris*). Rectangular boilers (20lbs/sq.in). Single screw. 800 nhp. 2,979 ihp = 12kts (*Diadem*); 3,087 ihp = 12.865kts (*Doris*).
First cost: *Diadem* £137,479 (hull £59,140, machinery £47,252). *Doris* £140,084 (hull £60,033, machinery £51,756).

Diadem Pembroke Dyd/Maudslay, Sons & Field.
Ord: 3.4.1854. K: 6.1855. L: 14.10.1856. C: 3.1.1858. Sold to Castle 23.1.1875 for BU at Charlton.

Doris Pembroke Dyd/John Penn & Sons.
Ord: 3.4.1854. K: 6.1856. L: 25.3.1857. C: 30.3.1859. Sold to BU 1885.

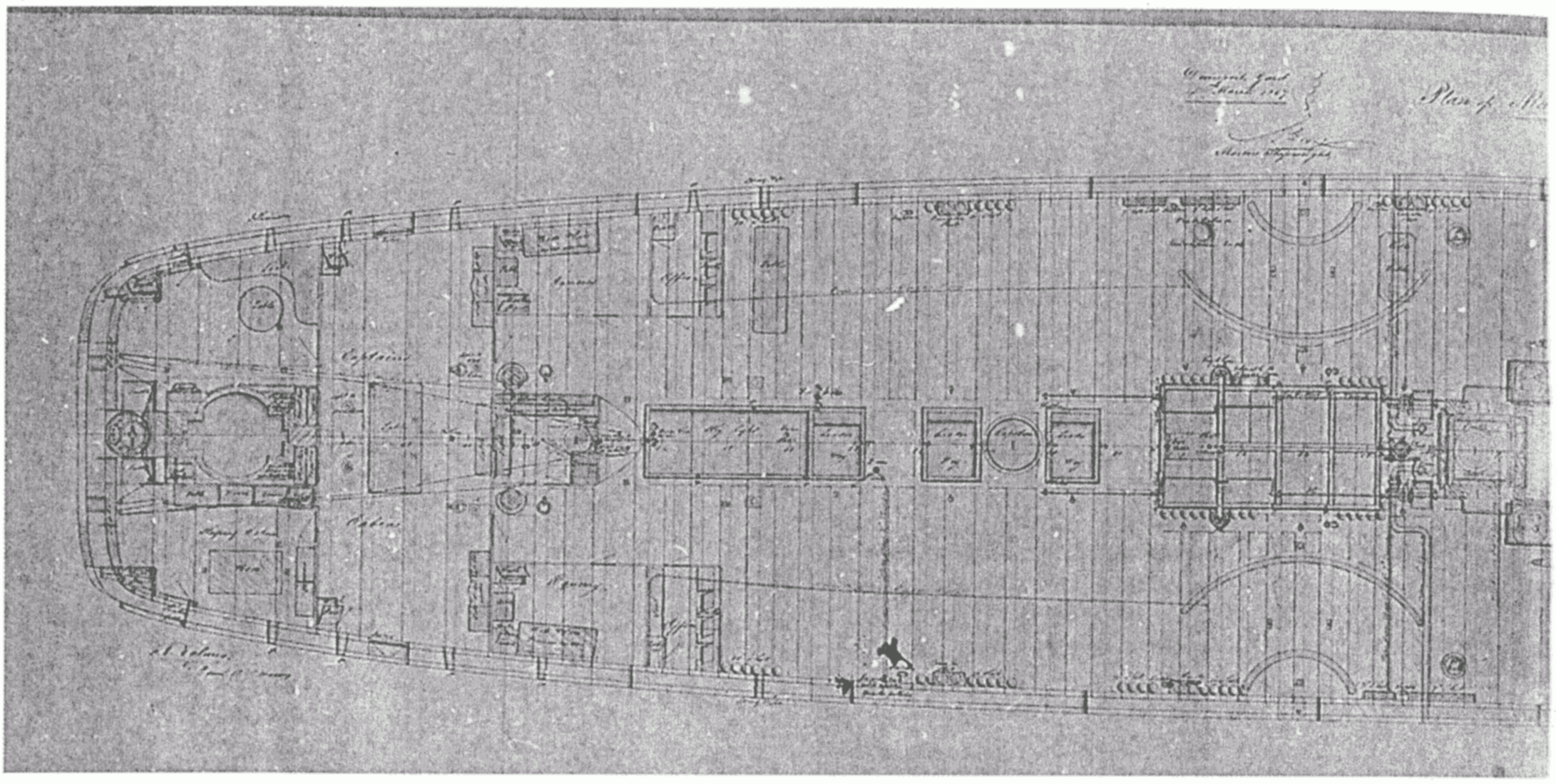
NOTES: The first pair of 'Walker's Big Frigates'. Originally ordered (with *Ariadne*) 1854 as 'special type (frigate-) corvettes' of 30 guns, although rated First Class frigates; *Orlando* ordered 1855 was originally to same design.

***ARIADNE* Class** - screw frigates (originally corvettes), 26 guns. Surveyor's Department (?Isaac Watts) design, approved 2.7.1856.
Dimensions & tons: 280ft 0in, 245ft 8in x 50ft 0in oa (49ft 6in for tonnage) x 19ft 4in. 3,201$^{78}/_{94}$ bm. 4,426 disp.



Profile as fitted of the 51-gun *Liverpool*, dated Keyham 3 July 1869. Increasing complexity in the fitting of steam ships required more elaborate draughts, particularly those like this one indicating inboard works. *DR6666*

Scan and/or retouch by Grzechu



Plan of the main deck of the 26-gun screw frigate *Galatea*, dated Devonport 4 March 1867. Two of the midships guns on each broadside were fitted on traversing mounts; the sweeps or racers for these guns are clearly visible. *DR8007B*

Men: 450. Guns: MD 24 x 10in (85cwt) MLSB shell guns (broadside); UD 2 x 68pdr (65cwt) MLSB (pivot-mounted, soon replaced by slide-mounted 110pdr Armstrong BLs).
Machinery: 2-cyl. (82$^{1}/_{16}$in diam., 44in stroke) horizontal single expansion (trunk in *Galatea*). Rectangular boilers. Single screw. 800 nhp. *Ariadne* 3,350 ihp = 13.087kts. *Galatea* 3,061 ihp = 11.796kts.
First cost: *Ariadne* total £147,496 (hull £75,980, machinery £48,600). *Galatea* hull £81,991, machinery £48,000. *Acasta* £1,406 before cancellation.

Ariadne Deptford Dyd/Maudslay, Sons & Field. 3,214 bm/4,583 disp as built.
Ord: 3.4.1854. K: 1.8.1856. L: 4.6.1859. C: 16.12.1859. Fitted to carry Prince of Wales' suite to Canada in 1860. Part of *Vernon* training establishment 1880. Training ship, naval cadets 1884. Renamed *Actaeon* 6.6.1905. Sold 11.12.1922.

Galatea Woolwich Dyd/John Penn & Son. 3,227 bm/4,686 disp as built.
Ord: 9.4.1856. K: 2.2.1857. L: 14.9.1859. C: 2.1862. BU by Castle at Charlton 6.1883.

Acasta Deptford Dyd/... .
Ord: 3.2.1861 (named 21.3.1861). K: 16.4.1861. Cancelled 12.12.1863.

Hyperion Woolwich Dyd/... .
Ord: 3.2.1861 (named 21.3.1861). K: ... . Cancelled 12.12.1863.

FOX - screw frigate, conversion from (1829-launched) sailing frigate.
Dimensions & tons: 159ft 4in, *c*133ft 6in x 40ft 4in oa (39ft 11in for tonnage) x 12ft 9in. 1,131 bm. 1,780 disp.
Men: ... . Guns: (never completed as screw frigate).
Machinery: 2-cyl. (45in diam., 24in stroke) horizontal single expansion. Single screw. 200 nhp. 741 ihp = 9.3kts.
First cost: £7,621 for hull conversion, plus £12,103 machinery.

Fox Portsmouth Dyd/Miller, Ravenhill & Salkeld.
Conversion ord: ?1854. Begun: 9.1855. L: (undocked as screw transport) 18.3.1856. C: 3.1862 as screw storeship. BU at Devonport 3.1882.

NOTES: Former 46-gun sailing frigate, launched 1829 at Portsmouth Dyd (see Chapter 2 for details) but not completed. Converted to screw 1855-56, but incomplete when work stopped; finally finished and employed as transport/storeship.

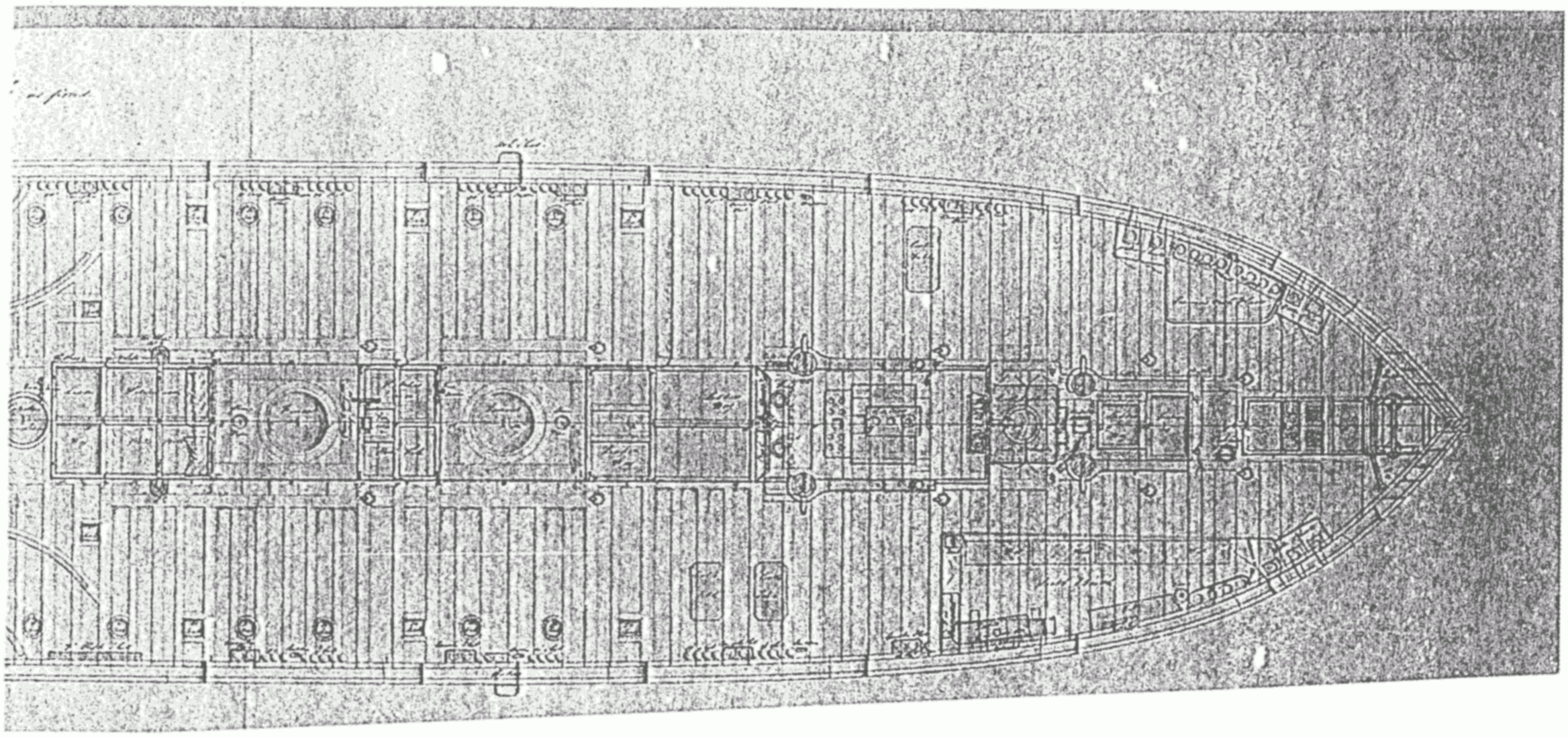
***EMERALD* Class** - screw frigates, converted on stocks from sailing frigates, 51 guns.
Dimensions & tons: (design) 237ft 0in, 202ft 2in x 52ft 0in (51ft 6in for tonnage) x 16ft 8in. 2,852$^{10}/_{94}$ bm. (see below for tons as built).
Men: 550-600. Guns: MD 30 x 8in (65cwt) shell; UD 20 x 32pdr (56cwt) + 1 x 68pdr (95cwt) on pivot.
Machinery: 2-cyl. horizontal single expansion (trunk in *Melpomene*). Single (hoisting) screw. 600 nhp. See below for individual ihp/speed.
First cost: *Emerald* £127,933 including hull £69,722, machinery £33,860. *Melpomene* £136,213 including hull £43,835 as sailing ship plus £31,535 for conversion, machinery £?37,617. *Immortalite* hull £4,468 as sailing ship plus £39,357 for conversion, machinery £36,000.

Emerald Deptford Dyd/Miller, Ravenhill & Salkeld. (2,323 ihp = 12kts.)
Dimensions & tonnage: 237ft 0in, 202ft 3¼in x 52ft 6½in oa (52ft 0½in for tonnage) x 16ft 8in. 2,913$^{86}/_{94}$ bm. 3,503 disp.
Conversion ord: 24.5.1854. K: (4.6.1849). Begun: 29.5.1854. L: 19.7.1856. C: 1.6.1859. Sold to Castle 2.12.1869 to BU at Charlton.

Melpomene Pembroke Dyd/John Penn & Son. (2,171 ihp = 12.4kts.)
Dimensions & tonnage: 237ft 0in, 202ft 1½in x 52ft 1in oa (51ft 7in for tonnage) x 16ft 8in. 2,860$^{71}/_{94}$ bm. 3,829 disp.
Conversion ord: 9.4.1856. K: (9.1849). Begun: 30.6.1856. L: 8.8.1857. C: 18.6.1859. Sold to Castle 23.1.1875 to BU at Charlton.

Immortalite Pembroke Dyd/Maudslay, Sons & Field. (2,366 ihp = 12.3kts.)
Dimensions & tonnage: 251ft 0in, 216ft 1½in x 52ft 1in oa (51ft 7in for tonnage) x 16ft 8in. 3,058$^{85}/_{94}$ bm. 3,984 disp.
Conversion ord: 9.4.1856. K: (11.1849). Begun: 14.7.1856. L: 25.10.1859. C: 7.2.1861. Sold to BU 1883.

NOTES: Originally ordered 1848 as 60-gun sailing frigates and laid down in 1849 (see Chapter 2); original fourth of class (*Imperieuse*) was begun as a screw frigate in 1850 to a different design (see above). The remaining three were re-ordered in 1854-56 to the above 2,852 bm design, being lengthened by 52ft. *Emerald* emerged 5½in broader. *Immortalite* was further



lengthened during construction by about another 14ft (by AO 22.2.1858) which increased her from 2,852 to 3,050 bm in design (actual as above); she was allegedly the fastest wooden warship under sail (making over 12kts). The after parts of *Melpomene* and *Immortalite* were launched for lengthening on 9.8.1856 and 28.8.1856 respectively. All three ships reduced to 35-gun in 1862-63 and then to 28-gun in 1869. Cylinders in each were 76in diam. (except *Melpomene*, 70¾in diam.), 42in stroke.

***MERSEY* Class** - frigates, 40 guns. Surveyor's Department (?Isaac Watts) design, approved 2.7.1856.

Dimensions & tons: 300ft 0in, 264ft 2in x 52ft 0in 0a (51ft 6in for tonnage) x 19ft 10in. 3,726$^{70}/_{94}$ bm. 5,493 and 5,385 disp respectively.
Men: 600. Guns: MD 28 x 10in (85cwt) MLSB shell guns (broadside); UD 12 x 68pdr (95cwt) MLSB (pivot-mounted).
Machinery: 2-cyl. (92in diam., 48in stroke) horizontal single expansion (trunk in *Orlando*). Rectangular boilers. Single screw. 1,000 nhp. *Mersey* 3,691 ihp = 12.6kts. *Orlando* 3,617 ihp = 13kts.
First cost: *Mersey* total £173,898 (including hull £72,922, machinery £65,642). *Orlando* total £187,042 (hull £86,447, machinery £65,234, fitting £35,361).

Orlando Pembroke Dyd/John Penn & Son.
Ord: 31.3.1855. K: 11.1856. L: 12.6.1858. C: 13.11.1860. Sold 15.6.1871 to C. Marshall for BU.

Mersey Chatham Dyd/Maudslay, Sons & Field.
Ord: 31.3.1855. K: 26.12.1856. L: 13.8.1858. C: 21.4.1859. Sold 23.1.1875 to Castle for BU at Charlton.

NOTES: *Orlando* first sailed from Devonport when fitted in search of *Hero* with the Prince of Wales on board returning from his visit to Canada.

NARCISSUS - frigate, 51 guns. Modification of Eyde & Watts design, 1857.

Dimensions & tons: (261ft 0in 0a) 228ft 0in, 194ft 6in x 51ft 3in 0a (50ft 9in for tonnage) x 18ft 2in. Draught 20ft 0in (fwd), 23ft 9in (aft). 2,635 bm as designed. 2,664$^{57}/_{94}$ bm actual. 3,548 disp.
Men: 540. Guns: MD 8 x 8in (65cwt) shell + 22 x 32pdr (58cwt) MLSB; UD 2 x 8in (65cwt) shell + 18 x 32pdr (56cwt) MLSB + 1 x 68pdr (95cwt) MLSB on pivot.
Machinery: 2-cyl. (64in diam., 36in stroke) horizontal single expansion. Single screw. 400 nhp. 1,731 ihp = 10.6kts.
First cost: Hull £26,924 as sailing ship.

Narcissus Devonport Dyd/Ravenhill, Salkeld & Co.
Conversion ord: 23.3.1857. K: (11.1849). Begun: 4.1857. L: 26.10.1859. C: 23.2.1861. From 1870 flagship of Detached Squadron (unit of six frigates established for rapid deployment to any area as needs arose). Coastguard at Greenock 20.7.1877. Sold to Castle 17.2.1883 to BU at Charlton.

NOTES: First ordered as an 18-gun sailing corvette in 1846, re-ordered as a sailing frigate in 1848, and laid down 11.1849 (see Chapter 2). Re-ordered and re-laid as a screw frigate in 1857.

Post-Crimean War frigate plans were extremely confused and intentions were changed several times. Theory and experience having shown that ships designed for high speed need fine lines, Walker advanced plans on 18 December 1857 for lengthening of frigate (and other warship) designs, applying them also to ships then building that were not too far advanced. Two variants of 51-gun frigate designs were approved, and most *Bristol* Class were considered for either size at one time or another.

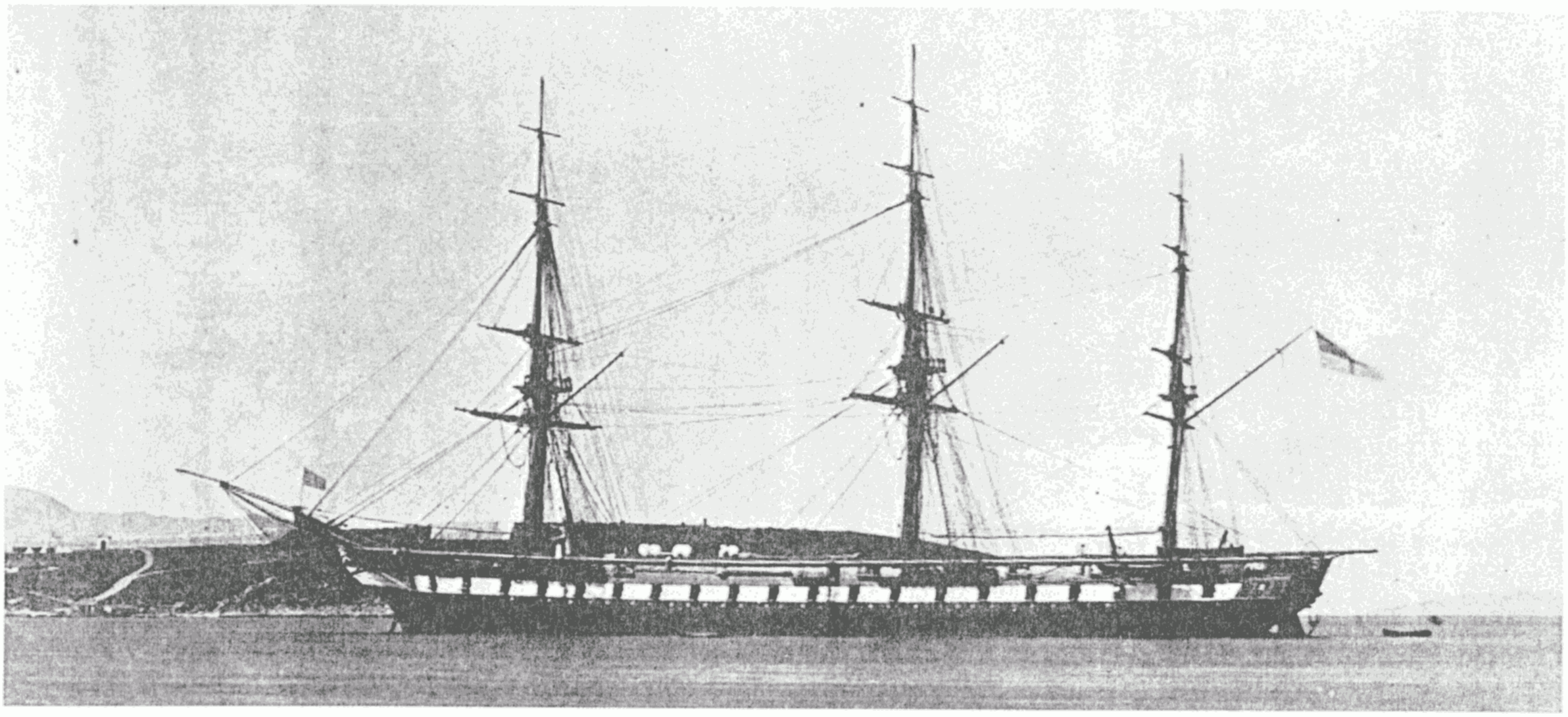
***BRISTOL* Class** - frigates, 51 guns. Design approved 12.8.1858.

Dimensions & tons: 250ft 0in, 214ft 7¼in x 52ft 0in 0a (51ft 6in for tonnage) x 19ft 2in. 3,027$^{40}/_{94}$ bm. 3,600 (design) 4,020 (load) disp.
Men: 550. Guns: MD 30 x 8in (65cwt) MLSB shell; UD 20 x 32pdr (56cwt) MLSB + 1 x 68pdr (95cwt) MLSB on pivot.
Machinery: 2-cyl. horizontal single expansion. Single (hoisting) screw. 600 nhp. See below for individual ihp/speed.
First cost: *Tweed* £19,392 before cancellation. *Dryad* £15,339 before cancellation. *Belvidera* £18,945 before cancellation.

Newcastle Deptford Dyd/Ravenhill, Salkeld & Co. (2,354 ihp = 12.416kts.)
Ord: 31.3.1855. K: 6.12.1858. L: 16.10.1860. C: 21.9.1874 at Sheerness. Became a powder hulk at Devonport 1889. Sold 1929.

Glasgow Portsmouth Dyd/Ravenhill, Salkeld & Co. (2,020 ihp = 11.548kts.)
Ord: 31.3.1855. K: 12.9.1859. L: 28.3.1861. C: 24.5.1871. Sold 12.1884 to BU.

Scan and/or retouch by Grzechu



The steam frigate *Orlando*, which with her sister *Mersey* were the longest wooden ships built for the Royal Navy. The length is emphasised by 20 gunports a side, compared with 15 for the largest frigates of the 1815 era. *Neg 9077*

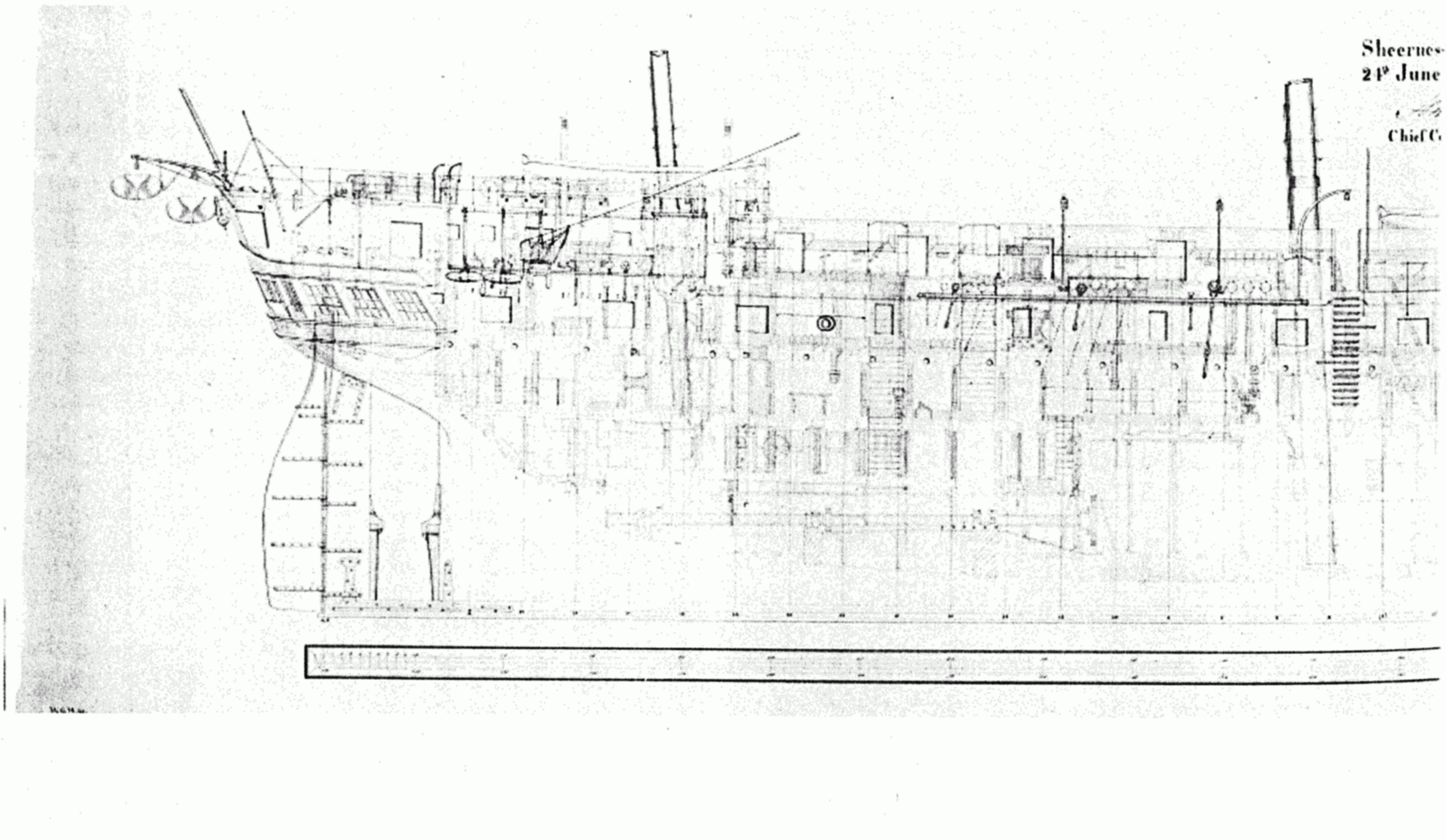
Tweed Pembroke Dyd/... .
Ord: 31.3.1855. K: 3.7.1860. L: ... . Cancelled 16.12.1864.

Bristol Woolwich Dyd/Robert Napier & Sons. (2,088 ihp = 11.271kts.)
Ord: 9.4.1856. K: 16.9.1859. L: 12.2.1861. C: 10.1865. Sold to Castle 7.1883 to BU.

Undaunted Chatham Dyd/Ravenhill, Salkeld & Co. (2,261 ihp = 11.837kts.)
Ord: 27.3.1858. K: 28.5.1859. L: 1.1.1861. C: 16.7.1861. Initially fitted for reserve. Sold to Castle 7.11.1882 to BU at Charlton.

Dryad Portsmouth Dyd/Robert Napier & Sons.
Ord: 27.3.1858. K: 2.1.1860. L: ... . Cancelled 16.12.1864 (completed

An as fitted profile of the *Bristol* Class 51-gun frigate *Undaunted*. Dated Sheerness 24 June 1875, it depicts the ship as she appeared about the middle of her career and is particularly detailed, even by the high standards of the time. *DR7026*



taking down frames on 11.3.1865).

Belvidera Chatham Dyd/... .
Ord: 8.4.1859. K: 30.4.1860. L: ... . Cancelled 16.12.1864.

Pomone Chatham Dyd/... .
Ord: 5.3.1860. K: 10.9.1860. L: ... . Cancelled 12.12.1863.

Raleigh Portsmouth Dyd/... .
Ord: 5.3.1860. K: ... . Cancelled 12.12.1863 (unstarted).

Briton Portsmouth Dyd/... .
Ord: 5.3.1860. K: ... . Cancelled 12.12.1863 (unstarted).

Barham Portsmouth Dyd/... .
Ord: 5.3.1860. K: ... . Cancelled 12.12.1863 (unstarted).

Boadicea Chatham Dyd/... .
Ord 2.1861. K: ... . Cancelled 12.12.1863 (unstarted).

Bucephalus Portsmouth Dyd/... .
Ord 2.1861. K: ... . Cancelled 12.12.1863 (unstarted).

Dextrous Pembroke Dyd/... .
Ord 2.1861. K: ... . Cancelled 12.12.1863 (unstarted).

NOTES: *Mersey* (see above) was originally ordered to this design in 1855. *Tweed* was proposed to be fitted as an ironclad before her final cancellation; her frames were to be taken down by AO of 16.12.1864, which also applied to *Dryad* and *Belvidera*. Cylinders were each 76in diam. (except 72¼in in *Bristol*), 42in stroke. All had only 28 guns by 1870s.

Modified *BRISTOL* Class - frigates, 51 guns. Stretched design of 3,353 bm (lengthened to 270ft); approved 12.8.1858.
The 1858 orders were initially to be built to this longer design of 3,353 tons (and the earlier vessels retrospectively altered), but were reinstated at 3,027 bm in 1859. There are some indications that the 1861 orders were also to the larger design.

***ISTER* Class** - frigates, 36 guns. ?Isaac Watts design, approved 23.2.1860.
Dimensions & tons: 240ft 0in, 207ft 11¼in x 47ft 10in oa (47ft 4in for tonnage) x 17ft 3in. 2,478$^{30}/_{94}$ bm. 3,197 disp.
Men: 450. Guns: 8 x 6.3in/64pdr MLR, 22 x 32pdr MLSB.
Machinery: 2-cyl. (65½in diam., 36in stroke) horizontal single expansion. Single screw. 500 nhp. *Endymion* 1,620 ihp = 11.25kts.
First cost: *Ister* £14,603 before cancellation. *Blonde* £3,600 before cancellation. *Astrea* £250 before cancellation. *Dartmouth* £10,524 before cancellation.

Ister Devonport Dyd/Robert Napier & Sons.
Ord: 1.4.1857. K: 8.11.1860. L: ... . Cancelled 16.12.1864 (completed taking down frames 29.4.1865).

Endymion Deptford Dyd/Robert Napier & Sons.
Ord: 5.3.1860. K: 26.10.1860. (Suspended 1862-63) L: 18.11.1865. C: 9.1866. Sold as a hulk in 1885 and BU 1905.

Blonde Woolwich Dyd/... .
Ord: 5.3.1860. K: 10.9.1860. L: ... . Cancelled 12.12.1863.

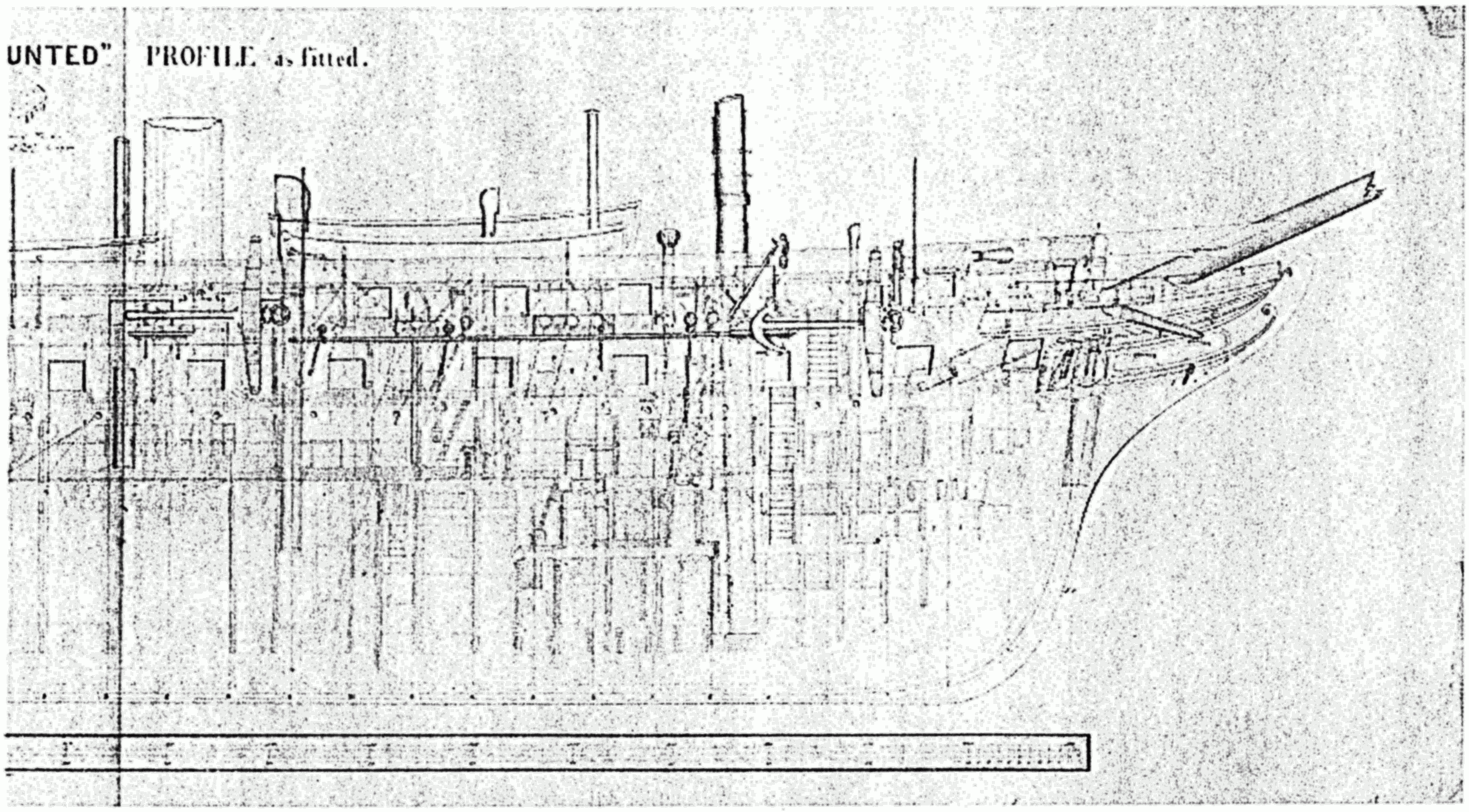
Astrea Devonport Dyd/... .
Ord: 5.3.1860. K: 21.10.1861. L: ... . Cancelled 12.12.1863.

Dartmouth Woolwich Dyd/... .
Ord: 5.3.1860. K: 6.11.1860. L: ... . Cancelled 16.12.1864 (frame completed dismantling 28.2.1865).

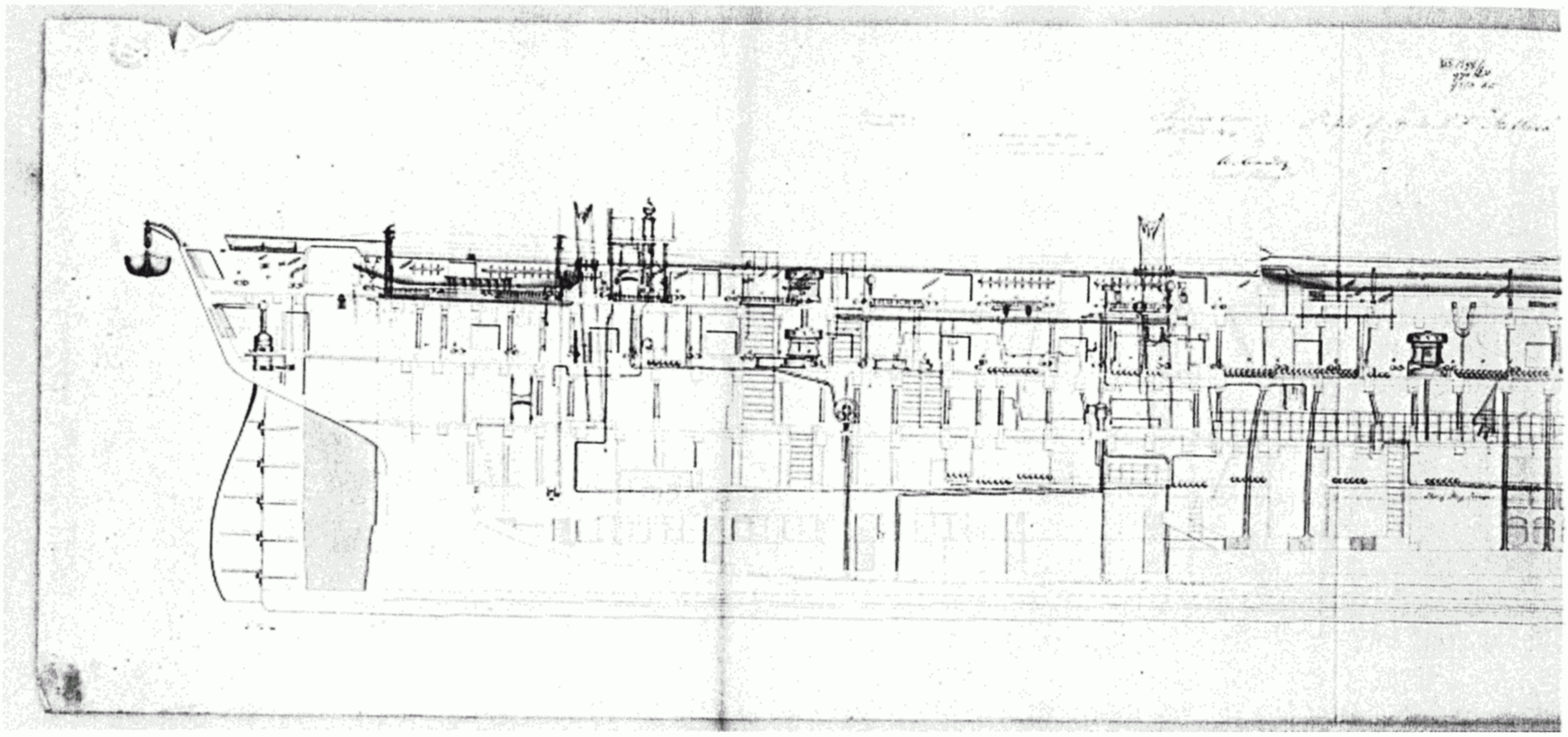
NOTES: *Ister* and *Dartmouth* cancelled by AO 16.12.1864; *Blonde* and *Astrea* cancelled by AO 12.12.1863. *Ister*'s engine was retained and supplied to the corvette *Thalia* in 1869. *Endymion* was reduced to 21 guns on completion.

Converted Group (8 ships) - screw frigates, all converted from existing sailing frigates, 51 guns.
Men: 525?. Guns: MD 30 x 8in (65cwt) shell; UD 20 x 32pdr (56cwt) + 1 x 68pdr (95cwt) on pivot.
Machinery: 2-cyl. horizontal single expansion (except *Constance* - see below). Single screw. 400 or 500 nhp (see below). See below for individual ihp/speed.

Phaeton Sheerness Dyd/James Watt & Co.
Dimensions & tons: 220ft 3⅝in, 185ft 8⅝in x 49ft 10in oa (49ft 3in for tonnage) x 16ft 8½in. Draught 18ft 9in (fwd), 21ft 0in (aft).



Scan and/or retouch by Grzechu



One of a group of sailing frigates converted to screw propulsion, *Arethusa* is illustrated here by the profile showing the ship as lengthened and fitted, Sheerness 18 April 1864. Despite the Establishment, the bow-chase gun appears to be a breech-loader. *DR8240*

2,396$^{12}/_{94}$ bm. 3,099 disp.
Machinery: Cylinders 64in diam., 36in stroke. 400 nhp. 1,566 ihp = 10.466kts.
Conversion ord: 4.3.1859. Begun: 15.4.1859. After section launched 26.5.1859 to lengthen the ship. L: (undocked) 12.12.1859. BU at Chatham 1875.

Severn Chatham Dyd/Maudslay, Sons & Field (after a plan by Lang).
Dimensions & tons: 240ft 6in, 212ft 3¼in x 50ft 1in oa (49ft 6in for tonnage) x 17ft 6in. Draught 21ft 0in (fwd), 22ft 9in (aft). 2,767 bm. 3,536 disp.
Machinery: Cylinders 66in diam., 42in stroke. 500 nhp. 2,092 ihp = 11.696kts.
Conversion ord: 4.3.1859. Begun: 5.3.1859. L: (undocked) 8.2.1860. Completed fitting machinery at Sheerness Dyd 21.8.1860 and put straight into reserve. BU completed 8.4.1876.

Sutlej Portsmouth Dyd/Maudslay, Sons & Field.
Dimensions & tons: 254ft 6in, 220ft 2$^{1}/_{8}$in x 51ft 8in oa (c51ft 2in for tonnage) x 17ft 2in. Draught 21ft 3in (fwd), 23ft 5in (aft). 3065 bm. 3,826 disp.
Machinery: Cylinders 66in diam., 42in stroke. 500 nhp. 2,270 ihp = 11.807kts.
Conversion ord: 4.3.1859. L: (undocked) 26.3.1860. BU at Portsmouth 1869.

Phoebe Devonport Dyd/Robert Napier & Sons.
Dimensions & tons: 240ft 6in, 206ft 11¼in x 51ft 9½in oa (51ft 3½in for tonnage) x 17ft 2in. Draught 16ft 7in (fwd), 19ft 4in (aft). 2,895$^{79}/_{94}$ bm. 3,584 disp.
Machinery: Cylinders 65¼in diam., 36in stroke. 500 nhp. 1,780 ihp = 11.925kts.
Conversion ord: 4.3.1859. Begun: 19.5.1859. After section launched 7.6.1859 to lengthen the ship. L: (undocked) 10.4.1860. C: 3.1861. Sold to Castle 6.4.1876 to BU.

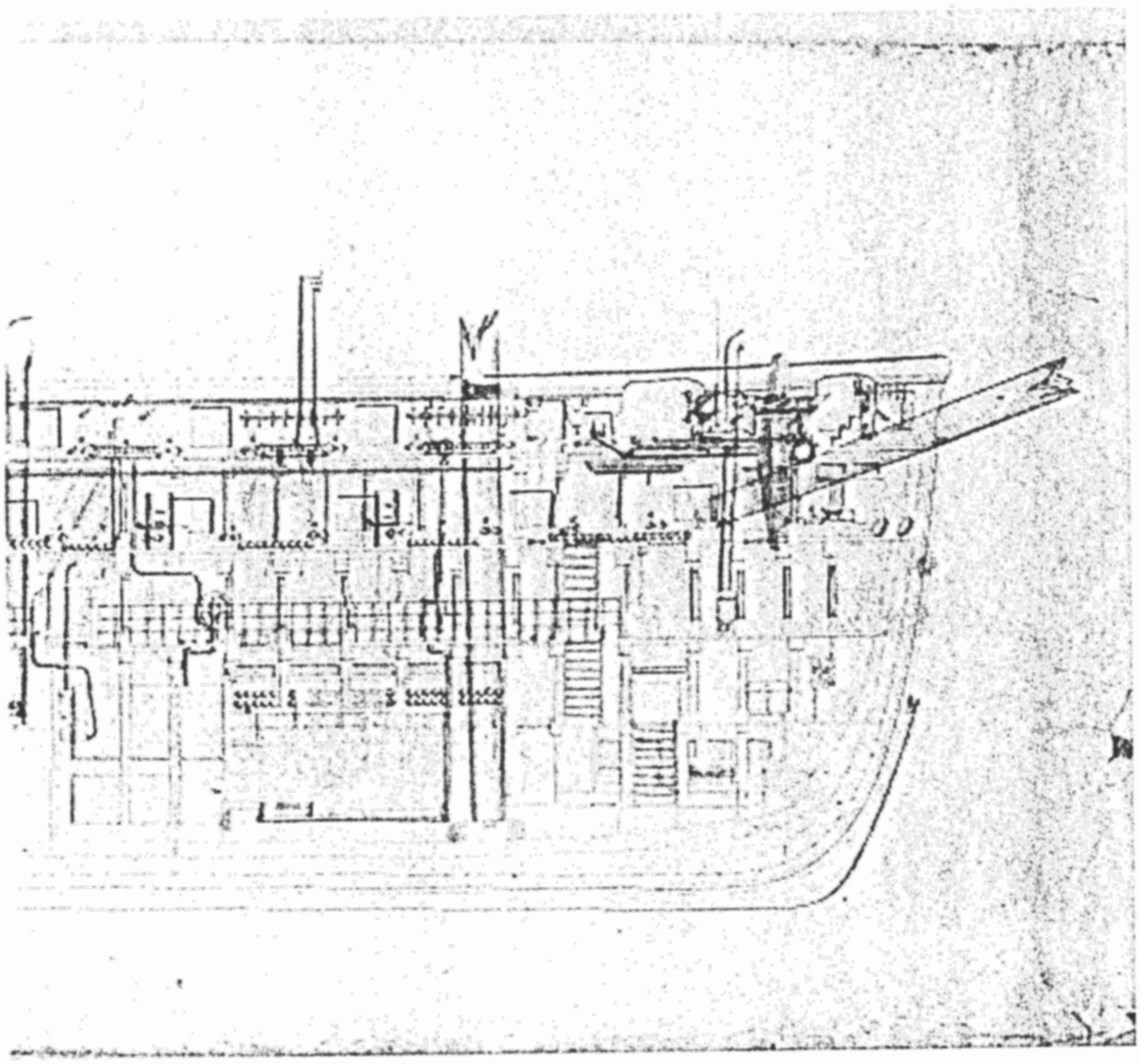
Octavia Portsmouth Dyd/Maudslay, Sons & Field.
Dimensions & tons: 252ft 6in, 217ft 0¼in x 52ft 10in oa (52ft 4in for tonnage) x 17ft 1in. Draught 20ft 10in (fwd), 23ft 10in (aft). 3,161$^{51}/_{94}$ bm. 3,832 disp.
Machinery: Cylinders 66in diam., 42in stroke. 500 nhp. 2,415 ihp = 11.538kts.
Conversion ord: 9.7.1859. Begun: 26.3.1860. After section launched 3.5.1860 to lengthen the ship. L: (undocked) 11.4.1861. BU by AO of 17.2.1876 at Chatham, completed 8.1876.

Leander Sheerness Dyd/James Watt & Co.
Dimensions & tons: 241ft 0in, 205ft 7$^{5}/_{8}$in x 50ft 10¾in oa (50ft 2¾in for tonnage) x 16ft 0in. Draught 18ft 0in (fwd), 23ft 4in (aft). 2,759$^{60}/_{94}$ bm. 3,539 disp.
Machinery: Cylinders 64in diam., 36in stroke. 400 nhp. 1,568 ihp = 9.703kts.
Conversion ord: 4.1.1860. Begun: 1.1860. L: (undocked) 16.2.1861. Sold to Castle & Beech 1867 to BU at Charlton.

Arethusa Chatham Dyd/John Penn & Son.
Dimensions & tonnage: 252ft 4in, 217ft 1in x 52ft 8in oa (52ft 2in for tonnage) x 17ft 1in. Draught 20ft 8in (fwd), 23ft 6in (aft). 3,142$^{33}/_{94}$ bm. 3,708 disp.
Machinery: Trunked engine, with surface condensers. Cylinders 80in diam., 42in stroke. 500 nhp. 3,165 ihp = 11.704kts.
Conversion ord: 4.1.1860. Begun: 23.4.1860. After section launched 2.6.1860 to lengthen the ship. L: (undocked) 9.8.1861. Lent to Shaftesbury Homes as training ship for destitute boys at Greenhithe 1874 (engines removed). Sold to Castle 2.8.1933 and BU at Charlton 1934.

Constance Devonport Dyd/Randolph, Elder & Co.
Dimensions & tons: 253ft 11in, 219ft 2in x 53ft 0in oa (c52ft 6in for tonnage) x 17ft 1in. Draught 21ft 1in (fwd), 23ft 7in (aft). 3,212 bm. 3,786 disp.
Machinery: 6-cyl. trunked compound engine, with surface condensers (see Notes). 500 nhp. 2,301 ihp = 10.779kts.
Conversion ord: 4.1.1860. Begun: 5.5.1860. After section launched 12.7.1860 to lengthen the ship. L: (undocked) 15.4.1862. Sold to Castle

Scan and/or retouch by Grzechu



23.1.1875 to BU at Charlton.

NOTES: All these 32pdr/51-gun frigates were taken in hand in 1859 and 1860. See Chapter 2 for original details. Each one (original designs varied) was formerly about 180ft in overall (GD) length, and they were each 'drawn asunder' in dock to lengthen them by about 60-70ft to accommodate boilers, engines and bunkerage. *Constance* was the first RN vessel driven by a compound engine (Woolf's principle), with six cylinders in triplets with a high-pressure cylinder (60in diam., 60lbs/sq.in pressure) sited between two low-pressure ones (78in diam., 32½lbs/sq.in); 39in stroke. Actual armament following conversion varied (*eg Octavia* had MD 8 x 8in + 22 x 32pdr; UD 2 x 8in + 18 x 32pdr + 1 x 68pdr); all subsequently reduced to 35 guns by mid 1860s and then to 23 or 28 guns by 1871.

Screw Corvettes (see also under early sloops)

The category of screw corvette did not formally exist in the Royal Navy until the start of 1854. At this date the existing *Highflyer*, and the still-building *Esk* and *Pylades* (plus the three newly-ordered *Pearl* Class) were reclassified from frigates. The two vessels building for Russia and sequestered in April 1854 (*Cossack* and *Tartar*) were added to this category.

The Programme of Works for 1850 had included fresh orders for four small screw 'frigates' of 1,500 bm, placed on 23 March 1850 with Woolwich, Chatham, Sheerness (replacing the paddle sloop *Resolute*, cancelled on this date) and Pembroke Dyds. (one ship each). While these were never built to this design, the Woolwich and Chatham orders were to materialise as the first *Pearl* Class corvettes (the Sheerness order became the *Pylades*, and the Pembroke order the frigate *Aurora*). The orders were amended to 1,161 bm ('as *Highflyer*') in 1852 and to a new 1,390 bm design in 1853. Corvette designs were rapidly enlarged over the 1860s, as the corvette began to take over the traditional frigate role of policing the high seas. To this end they were all built as steam auxiliaries, designed to cruise under sail.

***HIGHFLYER* Class** - First Class corvette, 21 guns. Surveyor's Department design, approved 30.11.1849.

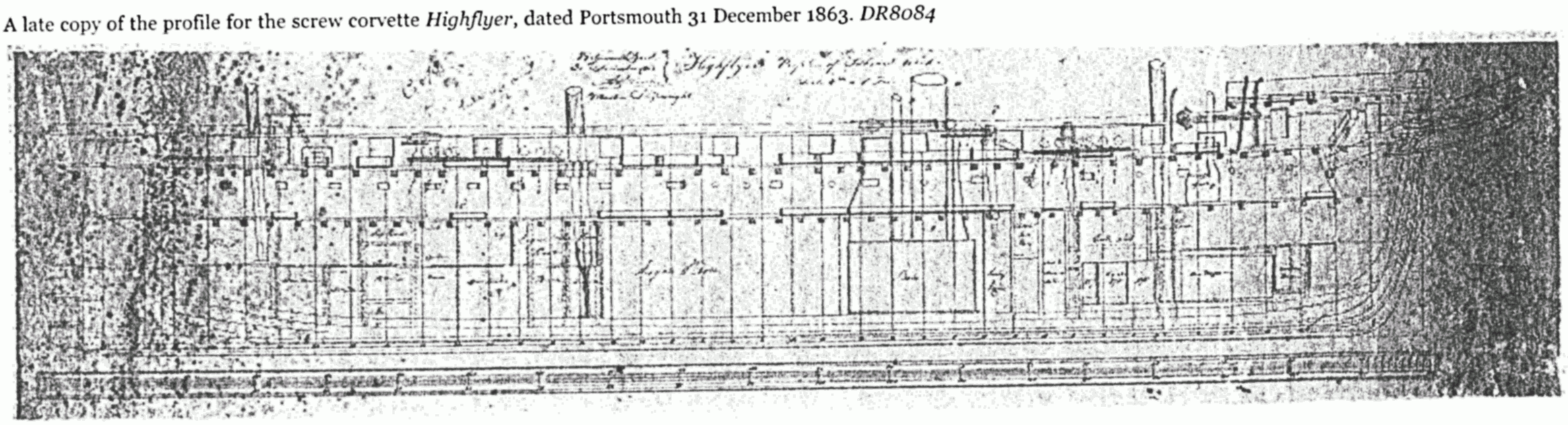
Dimensions & tons: original design 192ft 0in, 168ft 5in x 36ft 4in oa (36ft 0in for tonnage) x 22ft 8in. 1,161 bm.
Final design 192ft 0in, 167ft 3¾in x 36ft 4in oa (36ft 0in for tonnage) x 22ft 8in. Draught 15¾ft (mean). 1,153$^{39}/_{94}$ bm. 1,737½ disp.
Men: ... . Guns: 20 x 32pdr (42cwt/8ft) - broadside (later altered to 18 x 8in); 1 x 10in/84pdr (85cwt/9ft 4in) on pivot.
Machinery: 2-cyl. (55$^{3}/_{16}$in diam., 2½ft stroke) horizontal single expansion, geared (*Highflyer*). 2-cyl. (50in diam., 2¾ft stroke) inclined single expansion, oscillating (*Esk*). Single screw. 250 nhp. *Highflyer* 702 ihp = 9.399kts. *Esk* 657 ihp = 9.439kts.
First cost: *Highflyer* hull £27,105, machinery £17,431, fitting £11,539. *Esk* built in exchange for *Greenock*.

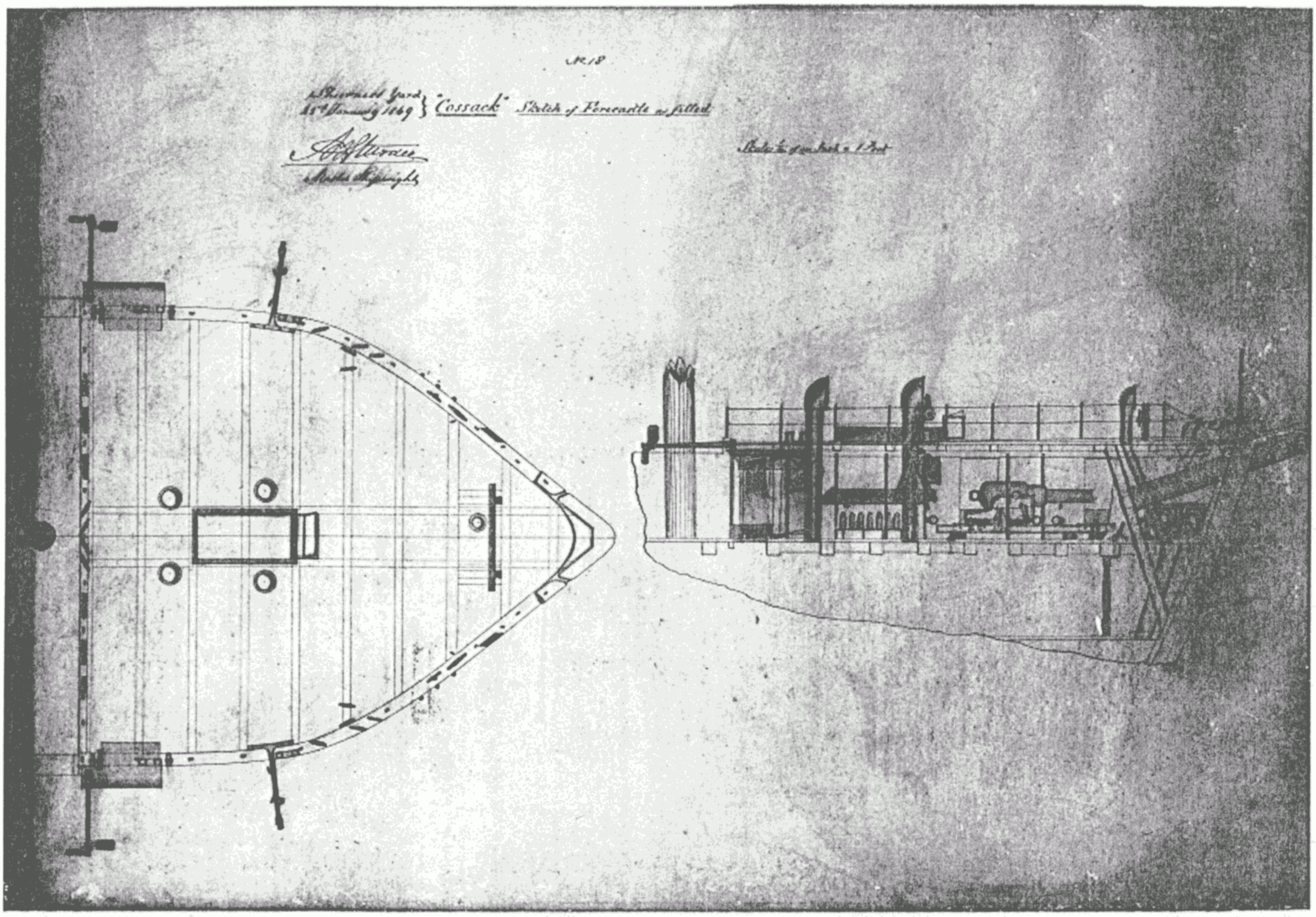
Highflyer C. J. Mare & Co., Blackwall./Maudslay, Sons & Field.
Ord: 25.4.1847. K: 1.1850. L: 13.8.1851. C: 10.4.1852. BU at Portsmouth 5.1871.

Esk J. Scott Russell & Co., Millwall (No. 335)./J. Scott Russell & Co.
Ord: 18.8.1852. K: 4.1853. L: 12.6.1854. C: 21.12.1854. BU at Portsmouth 1870.

NOTES: *Highflyer* was originally ordered 25.4.1847 at Woolwich Dyd (from 31.3.1849, Chatham Dyd) as Third Class screw sloop ('as *Rattler*, enlarged' - *ie Brisk* Class), and went through several changes before final design was approved on 30.11.1849, when building was switched to contract with Mare; she was redesignated a frigate (Fifth Rate) on 3.3.1852. A sister-ship was ordered on 23.3.1850 from Deptford Dyd; but on 27.3.1852 this was replaced by an order for the sloop *Fawn*. *Esk* built in exchange for the iron frigate *Greenock* by Scott Russell acting on behalf of the Australian Royal Mail Co. - the agreement with Scott Russell was approved on 18.8.1852 and dated 16.9.1852.

A late copy of the profile for the screw corvette *Highflyer*, dated Portsmouth 31 December 1863. *DR8084*





A detail view of a later modification to the forecastle of the ex-Russian corvette *Cossack*, dated Sheerness 23 January 1869. It shows the fitting of a large muzzle-loading shell gun on a pivot. *DR7557*

***PYLADES* Class** - First Class corvette, 21 guns. Surveyor's Department design of 1852.

Dimensions & tons: 192ft 9in, 165ft 0½in x 38ft 4in oa (38ft 0in for tonnage) x 23ft 11in. Draught 19ft 7in. 1,267$^{72}/_{94}$ bm. 1,956 disp.

Men: ... . Guns: 20 x 8in (42cwt) MLSB on broadside trucks; 1 x 10in/ 68pdr (95cwt) MLSB pivot-mounted at bow.

Machinery: 2-cyl. (55in diam., 3ft stroke) horizontal single expansion, trunk. Single screw. 350 nhp. 1,106 ihp = 10.119kts.

First cost: £68,333 (machinery £21,684).

Pylades Sheerness Dyd/John Penn & Son.

Tonnage as completed: 1,278 bm. Draught 16ft 0in (fwd), 19ft 0in (aft).

Ord: 24.12.1852. K: 9.5.1853. L: 23.11.1854. C: 29.3.1855. Sold to Castle to BU at Charlton 23.1.1875.

NOTES: Originally ordered to the lines of the *Highflyer*, but fresh plans were drawn, developed from lines of *Highflyer* but with extra 2ft beam. The 1852 order replaced one given to Sheerness on 23.3.1850 for a 1,500-ton frigate. *Pylades* was named on 8.6.1853 (along with *Esk* and *Pearl*). Reduced to 17 guns in 1868.

***COSSACK* Class** - First Class corvettes, 20 guns. Building for Russia when seized for RN.

Dimensions & tons: 195ft 0in, 172ft 1¾in x 38ft 6in oa (38ft 0in for tonnage) x 22ft 4in. Draught 17ft 7in (fwd), 17ft 8in (aft). 1,322$^{60}/_{94}$ bm. 1,965 disp.

Men: ... . Guns: 20 x 8in (42cwt) MLSB on broadside trucks.

Machinery: 2-cyl. horizontal single expansion. Single screw. 250 nhp. (See below for individual ihp/speeds.)

Cossack (ex-Russian *Witjas*) W. & H. Pitcher, Northfleet./Maudslay, Sons & Field. (870 ihp = 9.055kts.)

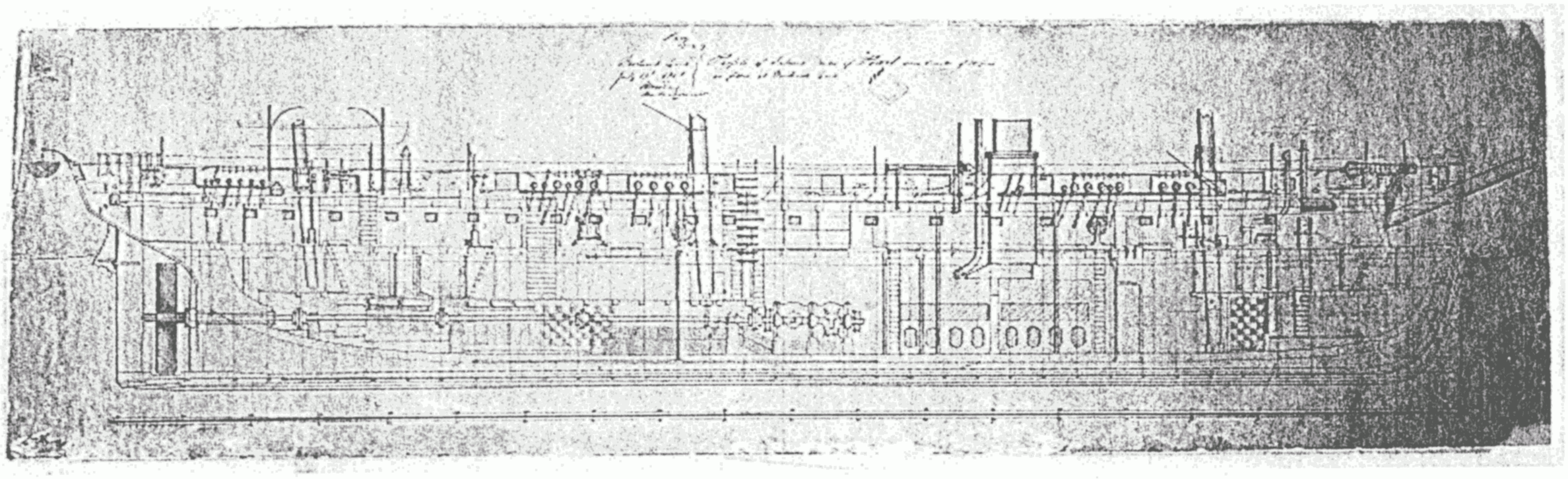
Seized 5.4.1854. L: 15.5.1854. Completed for sea 10.10.1854 (at Chatham). Sold to Castle for BU 19.5.1875.

Tartar (ex-Russian *Wojn*) W. & H. Pitcher, Northfleet./Maudslay, Sons & Field. (731 ihp = 9.4kts.)

Seized 5.4.1854. L: 17.5.1854. Completed for sea 26.1.1855 (at Chatham). BU by Castle, Charlton 2.1866.

NOTES: Seized whilst building. Original contract price to the Russians was £46,198. For *Cossack*, the Admiralty paid £9,591 to the contractors to complete this sum plus £715 for tonnage in excess of specification and £2,206 for modifications for HM service; for *Tartar*, they paid £16,607 plus £715 for excess tonnage and £1,883 for alterations. Note the Russian transliterations depend on 'continental style' pronunciation, *ie* with the 'W' and 'J' being pronounced as 'V' and 'I' (or 'Y'), which render the names as '*Vityaz*' and '*Voyn*'.

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Inboard profile as fitted for the screw corvette *Pearl*, Woolwich 10 July 1858. The 10in pivot-mounted bow gun is included on the draught. *DR5200*

***PEARL* Class** - First Class corvettes, 21 guns. Surveyor's Department design, approved 18.11.1853.

Dimensions & tons: (225ft 3in oa) 200ft 0in, 171ft 9¾in x 40ft 4in oa (40ft 0in for tonnage) x 23ft 11in. 1,462$^{22}/_{94}$ bm. 2,187 disp.

Men: ... . Guns: 20 x 8in (42cwt) MLSB on broadside trucks; 1 x 10in/ 68pdr (95cwt) MLSB pivot-mounted at bow.

Machinery: 2-cyl. horizontal single expansion (trunk in Penn-engined ships). Single screw. 400 nhp.

First cost: *Pearl* total £75,054 (hull £39,185, machinery £25,354). *Satellite* total £74,185 (hull £32,535, machinery, £26,329). *Cadmus* total £70,171 (hull £33,409, machinery £26,777). *Scout* total £74,642 (hull £37,001, machinery £24,373). *Scylla* total £76,023 (hull £41,301, machinery £24,585). *Charybdis* hull £43,912. *Pelorus* total £74,434 (hull £32,664, machinery £24,272). *Challenger* total ?£76,272 (hull £40,069, machinery £24,264). *Clio* total £81,651 (hull £42,972, machinery £24,268). *Racoon* total £69,586 (hull £29,524 machinery £24,281).

Pearl Woolwich Dyd/John Penn & Son. (1,324 ihp = 11.313kts.)

Tonnage as completed: 1,469 bm. 2,115 disp. Draught 16ft 2in (fwd), 19ft 9in (aft).

Ord: 2.4.1853 (named 8.6.1853). K: 1.1854. L: 13.2.1855. C: 25.1.1856. Sold to Castle to BU at Charlton 8.1884.

Satellite Devonport Dyd/John Penn & Son. (1,214 ihp = 10.55kts.)

Tonnage as completed: 1,462 bm. 2,138 disp. Draught 16ft 8in (fwd), 19ft 6in (aft).

Ord: 2.4.1853. (named 18.11.1853) K: 8.7.1854. L: 26.9.1855. C: 23.12.1856. BU completed at Devonport 25.12.1879.

Cadmus Chatham Dyd/John Penn & Son. (1,526 ihp = 11.825kts.)

Tonnage as completed: 1,461 bm. 2,216 disp. Draught 16ft 11in (fwd), 20ft 1in (aft).

Ord: 2.4.1853. (named 3.4.1854) K: 10.5.1855. L: 20.5.1856. C: 4.6.1859. BU at Deptford 9.1879.

Scout Woolwich Dyd/John Penn & Son. (1,327 ihp = 10.875kts.)

Tonnage as completed: 1,462 bm. 2,272 disp. Draught 17ft 9in (fwd), 19ft 10in (aft).

Ord: 3.4.1854. K: 10.1854. L: 31.12.1856. C: 9.7.1859. BU completed at Chatham 6.3.1877.

Scylla Sheerness Dyd/John Penn & Son. (1,376 ihp = 10.838kts.)

Tonnage as completed: 1,467 bm. 2,199 disp. Draught 17ft 8in (fwd), 19ft 2in (aft).

Ord: 3.4.1854. K: 4.1.1855. L: 19.6.1856. C: 15.8.1859. Sold to Castle to BU at Charlton 7.11.1882.

Charybdis Chatham Dyd/Miller, Ravenhill & Salkeld. (1,363 ihp = 10.081kts.)

Tonnage as completed: 1,462 bm. 2,231 disp. Draught 17ft 4in (fwd), 19ft 10in (aft).

Ord: 3.4.1854. K: 29.3.1856. L: 1.6.1859. C: 19.11.1860. Lent to Canadian Govt 10.1880. Sold at Halifax 1884.

Pelorus Devonport Dyd/Miller, Ravenhill & Salkeld. (1,408 ihp = 10.912kts.)

Tonnage as completed: 1,464 bm. 2,290 disp. Draught 17ft 3in (fwd), 20ft 6in (aft).

Ord: 31.3.1855. K: 25.3.1856. L: 5.2.1857. C: 10.9.1857. BU completed at Devonport 3.2.1869.

Challenger Woolwich Dyd/John Penn & Son. (1,450 ihp = 10.721kts.)

Tonnage as completed: 1,465 bm. 2,137 disp. Draught 17ft 4in (fwd), 18ft 10in (aft).

Ord: 31.3.1855. K: 3.10.1855. L: 13.2.1858. C: 28.5.1861. Survey ship 1872. Hulked as training ship 1880, then as a receiving ship; from 1910 an accommodation ship at Chatham. Sold to J. B. Garnham to BU 6.1.1921.

Racoon Chatham Dyd/Miller, Ravenhill & Salkeld. (1,651 ihp = 11.416kts.)

Tonnage as completed: 1,467 bm. 2,192 disp. Draught 17ft 3in (fwd), 19ft 6in (aft).

Ord: 31.3.1855. K: 21.4.1856. L: 25.4.1857. C: 8.2.1858. BU completed at Devonport 28.8.1877.

Clio Sheerness Dyd/Miller, Ravenhill & Salkeld. (1,540 ihp = 11.202kts.)

Tonnage as completed: 1,458 bm. 2,153 disp. Draught 17ft 6in (fwd), 18ft 10in (aft).

Ord: 31.3.1855. K: 25.6.1856. L: 26.8.1858. C: 18.9.1859. Training ship 1876. Sold on 3.10.1919 and BU at Bangor.

NOTES: First three were ordered (under the designation 'frigates') to a design of 1,390 tons, enlarged to 1,462 tons by 11.1853. The order for *Cadmus* replaced a 1834 order at Chatham for sailing corvette *Coquette* (which was never formally cancelled). Penn cylinders were 58$^{1}/_{8}$in diam., 3¼ft stroke; Ravenhill cylinders were 64in diam., 3ft stroke. *Charybdis* was lent to the Canadian Government from 10.1880 to 8.1882 as a training ship. *Challenger* was the vessel used for the pioneer oceanographic world voyage of 1872-76. On 10.2.1858 the three last ships above were redesignated as a separate class.

***JASON* Class** - open battery corvettes, 21 guns. Surveyor's Department design, approved 10.2.1858.

Dimensions & tons: Original design: 225ft 0in, 187ft 7in x 40ft 8in oa

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(40ft 4in for tonnage) x 24ft 2in. 1,623$^{14}/_{94}$ bm.
Final design: 225ft 0in, 196ft 8½in x 40ft 8in oa (40ft 4in for tonnage) x 24ft 2in. 1,702$^{17}/_{94}$ bm. 2,431 disp.
Men: 240. Guns: 20 x 8in/68pdr (65cwt) MLSB on broadside trucks, 1 x 7in/110pdr (82cwt) Armstrong BL on pivot at bow.
Machinery: 2-cyl. (64in diam. except *Orestes* 60¾in; 3ft stroke, except *Orpheus* 32in) horizontal single expansion (return connecting-rods in *Wolverene*). Single (hoisting) screw. 400 nhp. See below for individual ihp/speed.
First cost: *Jason* hull £41,442. *Barrosa* hull £42,444.

Jason Devonport Dyd/Ravenhill, Salkeld & Co. (1,516 ihp = 12.04kts.)
Tonnage as completed: 1,711 bm. 2,468 disp. Draught 18ft 6in (fwd), 20ft 3in (aft).
Ord: 9.4.1856. (named 1.4.1857) K: 3.6.1858. L: 10.11.1859. C: 8.4.1861. BU completed at Devonport 26.9.1877.

Barrosa Woolwich Dyd/James Watt & Co. (1,616 ihp = 11.514kts.)
Tonnage as completed: 1,702 bm. 2,302 disp. Draught 16ft 10in (fwd), 20ft 3in (aft).
Ord: 9.4.1856. (named 1.4.1857) K: 2.8.1858. L: 10.3.1860. C: 15.2.1861. BU completed at Chatham 20.1.1877.

Galatea Woolwich Dyd/John Penn & Sons.
Ord: 9.4.1856. K: ... . Re-ordered on 2.7.1856 as - and completed as - wooden screw frigate (which see).

Orpheus Chatham Dyd/Humphrys & Tennant. (1,333 ihp = 11.155kts.)
Tonnage as completed: 1,706 bm. 2,365 disp. Draught 18ft 0in (fwd), 19ft 9in (aft).
Ord: 1.4.1857. K: 12.5.1858. L: 23.6.1860. C: 24.10.1861. Wrecked on bar in Manukau estuary, New Zealand 7.2.1863.

Orestes Sheerness Dyd/Robert Napier & Sons. (1,522 ihp = 12.265kts.)
Tonnage as completed: 1,702 bm. Draught (light) 14ft 7in (fwd), 16ft 5in (aft).
Ord: 1.4.1857. K: 26.8.1858. L: 18.8.1860. C: 2.9.1861. BU completed at Portsmouth 11.1866.

Rattlesnake Chatham Dyd/Ravenhill, Salkeld & Co. (1,628 ihp = 11.664kts.)
Tonnage as completed: 1,705 bm. 2,450 disp. Draught 18ft 7in (fwd), 20ft 0in (aft).
Ord: 27.3.1858. K: 9.3.1859. L: 9.7.1861. C: 8.1862. BU at Devonport 3.1882.

Wolverene Woolwich Dyd/Ravenhill, Salkeld & Co. (1,329 ihp = 11.256kts.)
Tonnage as completed: 1,703 bm. 2,416 disp. Draught 17ft 11in (fwd), 20ft 4in (aft).
Ord: 27.3.1858. K: 10.4.1859. Suspended 1862, but resumed 1863. L: 29.8.1863. C: 4.1864. To NSW colonial government as a training ship in 1881, a sheer hulk from 2.1893 and sold as such on 24.8.1923.

NOTES: The first three were ordered in 1856 as units of the preceding *Pearl* Class; the design was lengthened on 10.2.1858 (before any vessel was laid down). Referred to as 'troop frigates', all were ship-rigged, with telescopic funnels. The Armstrong BL guns were removed in 1864 following a series of accidents. *North Star* and *Favourite* (see below) were originally to have been to this design. *Wolverene*'s original engine was never satisfactory, and Ravenhill replaced it with a new type (also 400 nhp) in 1876; now displacing 2,568 tons, she reached 11.314kts with 1,493 ihp.

***NORTH STAR* Class** - covered battery corvettes, 21 or 22 guns.
Surveyor's Department design, approved 23.1.1860.
Dimensions & tons: 1860 design: 225ft, 194ft 9¼in x 42ft 10in oa (42ft 4in for tonnage) x 24ft 1in. 1,856$^{82}/_{94}$ bm.
1865 modification (*North Star* only): 200ft, 169ft 10in x 42ft 10in oa (42ft 4in for tonnage) x 24ft 1in. 1,619 bm.
Men: ... . Guns: (presumably intended to be armed as previous class, but some documents show them as intended for 22 guns).
Machinery: 2-cyl. horizontal simple expansion. Single (hoisting) screw. 400 nhp.
First cost: *North Star* before cancellation £15,575. *Ontario* before cancellation: £2,926. *Alligator* before cancellation: £4,969. *Menai* before cancellation £8,756. *Dido* before cancellation £4,304.

North Star Sheerness Dyd/Humphrys & Tennant.
Ord: 27.3.1858. K: 13.7.1860. Cancelled 22.5.1865; frames taken down by AO same date, completed 31.3.1866.

Favourite Deptford Dyd/... .
Ord: 8.4.1859 (named 1.10.1859). K: 23.8.1860. Re-ordered as ironclad corvette (which see) 1862.

Ontario Woolwich Dyd/... .
Ord: 5.3.1860. K: 10.9.1860. Suspended 5.2.1862 and cancelled 12.12.1863.

Weymouth Sheerness Dyd/... .
Ord: 5.3.1860 (named 4.10.1860). K: 18.10.1860. Cancelled 12.12.1863.

Alligator Woolwich Dyd/... .
Ord: 5.3.1860. K: 1.11.1860. Suspended 5.2.1862 and cancelled 12.12.1863.

Menai Chatham Dyd/... .
Ord: 5.3.1860. K: 5.1.1861. Cancelled 16.12.1864; frames taken down by AO same date, completed 19.8.1865.

Dido Deptford Dyd/... .
Ord: 5.3.1860. K: 14.1.1861. Cancelled 12.12.1863 .

Falmouth Chatham Dyd/... .
Ord: 5.3.1860 (named 4.10.1860). K: – . Cancelled 12.12.1863 (not laid down).

Nereide Woolwich Dyd/... .
Ord: 3.1861 (named 21.3.1861). K: – . Cancelled 12.12.1863 (unstarted).

Ganymede Chatham Dyd/... .
Ord: 3.1861 (named 21.3.1861). K: – . Cancelled 12.12.1863 (unstarted).

NOTES: Developed from *Jason* Class. *Dido* (and later units?) possibly to have been to a different design.

Until 1860, all corvettes had been built as 20- or 21-gun ships. However, in 1862 the older sloops commanded by Captains (*Archer*, *Brisk*, *Encounter*, *Malacca*, *Miranda* and *Niger*) were reclassed as corvettes - while others of similar age under Commanders (*Conflict*, *Desperate*, *Phoenix* and *Wasp*) remained sloops. When corvette-building resumed in the 1860s, they would cover vessels with a much smaller establishment of guns.

Screw Sloops

During the first decade of the screw-propeller era (from the *Rattler*/*Alecto* trials of 1845 to the outbreak of the Crimean War), no type of vessel was more affected by rapidly-evolving changes in design and designation than the fluctuating corvette/sloop/gunvessel categories. While the detail given below reflects the chief stages for every vessel ordered, some intermediate changes have been omitted to simplify the picture.

RATTLER - sloop, 9 guns. Sir William Symonds design, 1844 (with Brunel acting as consulting engineer), based on *Alecto* Class paddle sloops but modified for screw.
Dimensions & tons: 195ft 0in oa, 176ft 6in, 154ft 3½in x 32ft 8in (32ft 6in for tonnage) x 18ft 7½in. Draught 11ft 5½in (mean).
866$^{80}/_{94}$ bm. 894 disp.
Men: ... . Guns: 1 x 8in (60cwt) on pivot + 8 x 32pdr (25cwt).

Machinery: 4-cyl. (40¼in diam., 4ft stroke) vertical single expansion, double cylinders, driving propeller through straps rather than gearing. Single screw. 200 nhp. 437 ihp = 9.639kts.
First cost: Machinery £9,400, fitting £17,413.

Rattler Sheerness Dyd/Maudslay, Sons & Field.
Ord: 24.2.1842. K: 4.1842. L: 13.4.1843. C: 30.1.1845. BU at Woolwich 22.7.1856 - 26.11.1856 (contract by Mr Fulcher).

NOTES: Ordered as a new vessel (not, as sometimes stated, a conversion while building) using 'such parts of the frame of the original *Rattler* as was feasible'. Towed to Maudslay's yard on completion, to fit engine, then coppered at Woolwich Dyd. While full 'completion' was as stated above, *Rattler* first put to sea for propeller trials on 30.10.1843. *Rattler* had her famous tug of war with her paddle-powered sister *Alecto* on 3.4.1845.

PHOENIX - sloop (conversion from 1832 paddle sloop, which see), 10 guns. Oliver Lang design, 1843.
Dimensions & tons (as converted): 174ft 7in, 153ft 5in x 31ft 10in oa (31ft 6in for tonnage) x 16ft 9in. Draught 12¼ft (mean). 809 bm. 1,024 disp.
Men: ... . Guns: 1 x 10in (84cwt) on pivot + 1 x 8in (52cwt) on pivot + 8 x 32pdr (17cwt).
Machinery: 2-cyl. (62in diam., 4½ft stroke) vertical single expansion, oscillating, geared. Mr Steinman's screw propeller. 260 nhp. 489 ihp = 8.74kts.

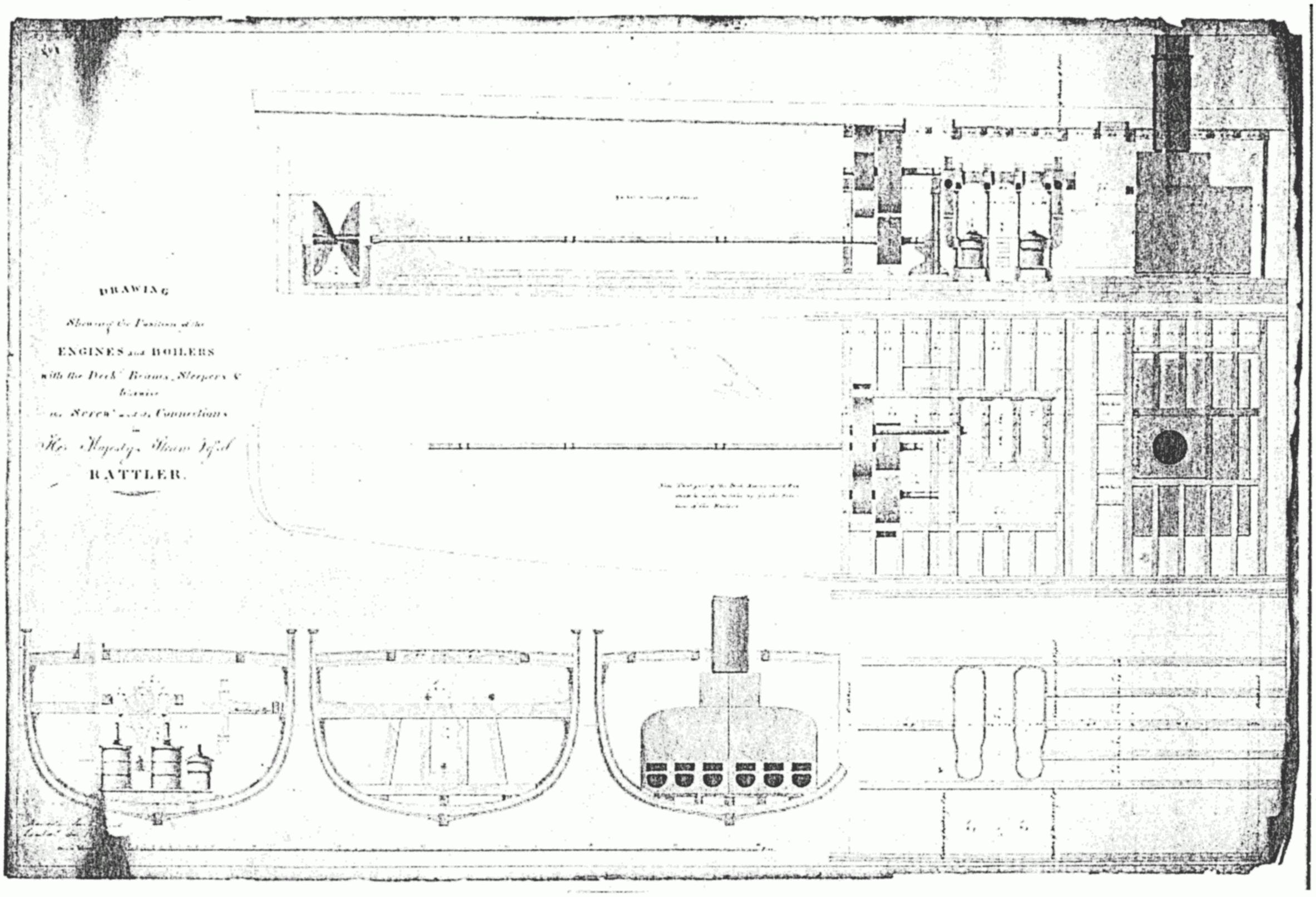
Phoenix (conversion by) Curling & Young's, Limehouse./John Penn & Son.
Ord: 25.5.1843. Began conversion: 4.1844. L (undocked): 2.1845. Arctic exploration (store) ship 1855-60. Sold to Castle to BU 26.1.1864.

NOTES: Docked at Deptford Dyd to fit 'Mr Steinman's' screw by AO 1.4.1844.

***ENCOUNTER* Class** - sloop (reclassed as corvette 1862), 8 (later 14) guns. John Fincham design, 1844.
Dimensions & tons: original design 180ft 0in, 157ft 7in x 33ft 2in oa (32ft 8in for tonnage) x 20ft 10in. 894$^{40}/_{94}$ bm.
As lengthened 1848: 190ft 0in, 167ft 10in x 33ft 2in oa (32ft 8in for tonnage) x 20ft 10in. Draught 13ft 11in (mean). 953 bm. 1,482 disp.
Men: ... . Guns: 1 x 56pdr (87cwt), 1 x 10in (85cwt), 4 x 8in/68pdr (65cwt), 2 x 32pdr (17cwt) OR 2 x 56pdr (85cwt), 4 x 8in/68pdr (65cwt), 2 x 32pdr (25cwt). Re-armed 1850 with 12 guns, increased 1856 to 14 guns (probably all 32pdr MLSB).
Machinery: 2-cyl. (55in diam., 3ft stroke) horizontal single expansion, trunk. Single screw. 360 nhp. 673 ihp = 10.254kts.
First cost: Hull £19,734, fitting & machinery £20,192.

Encounter Pembroke Dyd/John Penn & Co.

Machinery drawing for the Royal Navy's first screw warship, the sloop *Rattler*. It shows the boiler, engines and transmission system to the propeller shaft, and was prepared by the engine-builders, Maudslay, Sons & Field, the draught being dated 'Lambeth [where Maudslay's factory was located] 13 October 1842'. *DR6173A*



Scan and/or retouch by Grzechu

Ord: 5.2.1845. K: 6.1845. L: 5.9.1846. C: 12.10.1849. BU at Devonport 5.1866.

Harrier Pembroke Dyd/... .

Ord: 26.3.1846. K: ... 1846. Suspended 9.9.1846. Cancelled 4.4.1851.

NOTES: *Encounter* 'altered abaft' and lengthened at Deptford Dyd 1848 before completion.

***NIGER* Class** - sloop (reclassed as corvette 1862), 8 (later 14) guns. Oliver Lang design, hull similar to paddler *Basilisk*.

Dimensions & tons: original design 185ft 0in, *c*162ft (est.) x 32ft 8in x 21ft 6in. 911 bm.

As lengthened 1848: 194ft 4in, 170ft 11¾in x 34ft 8in oa (34ft 4in for tonnage) x 21ft 5½in. Draught 15½ft (mean). 1,072$^{6}/_{94}$ bm. 1,454 disp.

Men: 160 (from 1850). Guns: 1 x 56pdr (87cwt), 1 x 10in (85cwt), 4 x 8in/68pdr (65cwt), 2 x 32pdr (17cwt) OR 2 x 56pdr (85cwt), 4 x 8in/68pdr. (65cwt), 2 x 32pdr (25cwt). Re-armed 1850 with 14 guns (probably all 32pdr MLSB); 1 x 68pdr added 1856.

Machinery: 4-cyl. (47$^{5}/_{8}$in diam., 22in stroke) horizontal single expansion. Single screw (12½ft diam.). 400 nhp. 1,002 ihp. 10.25kts.

First cost: £57,597 (hull £14,830, machinery £21,057).

Niger Woolwich Dyd/Maudslay, Sons & Field.

Ord: 20.2.1845. K: 5.1845. L: 18.11.1846. Lengthened at Deptford Dyd before completion. C: 16.8.1850. Sold to Castle for BU at Charlton 2.12.1869.

Florentia Woolwich Dyd/... .

Ord: 26.3.1846. K: 1846. Suspended 6.10.1846. Cancelled 22.5.1849.

NOTES: Took part in three series of trials (including a noted tug of war) with her paddle-powered sister *Basilisk* over the summer of 1849 which, while less well-known than the earlier *Rattler/Alecto* trial of 1845, effectively sealed the fate of paddle propulsion. Re-engined 1864 with 350 nhp 2-cyl. (55in diam., 2½ft stroke) engine by Miller, Ravenhill & Salkeld (rating 1,243 ihp = 10.403kts).

***CONFLICT* Class** - First Class sloops (not reclassed as corvettes), 8 guns. Sir William Symonds design, approved 9.5.1845.

Dimensions & tons: original design 185ft 0in, 164ft 6¾in x 34ft 4in (33ft 8in for tonnage) x 22ft 8½in. 992$^{13}/_{94}$ bm.

As lengthened 1848: 192ft 6½in, 172ft 3½in x 34ft 4in (33ft 8in for tonnage) x 22ft 8½in. Draught 15¾ft (mean). 1,038$^{69}/_{94}$ bm. 1,628 disp.

Men: 175 (*Desperate* 170). Guns: 2 x 56pdr (85cwt), 6 x 8in (65cwt), 2 x 32pdr (25cwt). 1857: 1 x 68pdr (95cwt), 1 x 10in (85cwt), 6 x 8in (65cwt).

Machinery: 4-cyl. horizontal single expansion (geared in *Desperate*). Single screw. 400 nhp.

First cost: *Conflict* hull £20,496, machinery £21,514, lengthening £5,410, fitting £11,088. *Desperate* total £57,740 (including machinery £21,007).

Conflict Pembroke Dyd/Seaward & Capel. (772 ihp = 9.378kts.)

Ord: 5.2.1845. K: 7.1845. L: 5.8.1846. C: 20.11.1849. Sold 1863.

Desperate Pembroke Dyd/Maudslay, Sons & Field. (699 ihp = 9.432kts.)

Ord: 5.2.1845. K: 10.1845. L: 23.5.1849. C: 9.5.1853. BU at Devonport Dyd 8.1865.

Enchantress Pembroke Dyd/... .

Ord: 26.3.1846. K: ...1846. Suspended 18.9.1846. Cancelled 4.4.1851.

Falcon Pembroke Dyd/... .

Ord: 26.3.1846. K: ... 1846. Suspended 9.9.1846. Cancelled 4.4.1851.

NOTES: First pair ordered as Steam Vessels (SV1), rerated 19.4.1845. *Conflict*'s cylinders were 46¼in diam., 2ft stroke; *Desperate*'s were 55in diam., 2½ft stroke. *Conflict* lengthened (by altering the stern) at Wigram's Yard, Blackwall in early 1848, *Desperate* also lengthened before completion under AO of 13.7.1848.

***ARCHER* Class** - sloops (*Archer* reclassed as a corvette 1862, *Wasp* remaining a sloop), 12 guns. John Edye design, approved 25.8.1847.

Dimensions & tons: 186ft 4in, 162ft 6¾in x 33ft 10in oa (33ft 6in for tonnage) x 19ft 0in. Draught 14¾ft (mean). 970$^{40}/_{94}$ bm. 1,337 disp.

Men: 170. Guns: 2 x 68pdr (87cwt), 10 x 32pdr (42cwt).

Machinery: 2-cyl. (*Archer* horizontal, geared - 202 nhp; *Wasp* vertical, oscillating - 100 nhp). Single screw.

First cost: *Archer* total £41,404 (hull £20,785). Wasp total £33,521 (hull £21,326).

Archer Deptford Dyd/Miller, Ravenhill & Co. (347 ihp = 7.818kts.)

Ord: 26.3.1846. K: 10.1847. L: 27.3.1849. C: 9.3.1850. To Castle at Charlton to BU on 15.3.1866.

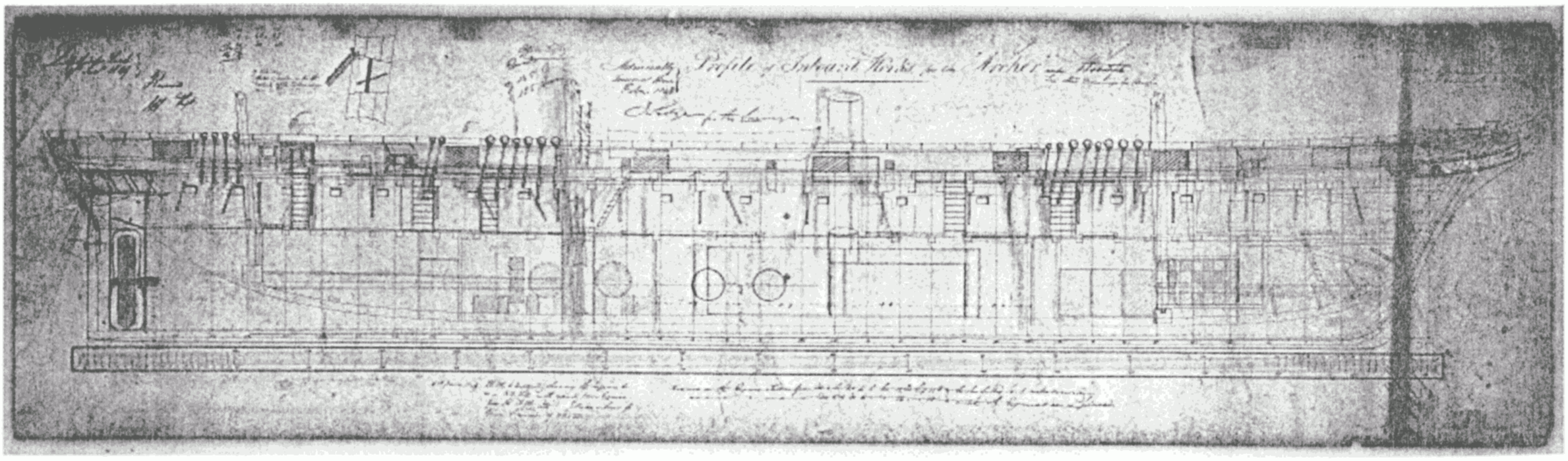
Wasp (ex-*Parthian*, renamed 25.8.1847) Deptford Dyd/Miller, Ravenhill & Co. (280 ihp = 8.178kts.)

Ord: 26.3.1846. K: 10.1847? L: 28.5.1850. C: 26.10.1850. Sold to Marshall on 2.12.1869.

NOTES: Originally ordered as gunvessels (*Rifleman* Class), but orders for both suspended 9.9.1846 and re-ordered as sloops on 25.4.1847. *Archer*'s cylinders were 46$^{1}/_{8}$in diam., 3ft stroke; *Wasp*'s were 34in diam., 2¾ft stroke. *Wasp* sheathed with Muntz metal.

1847 Programme. On 17 February 1847 five screw sloops were ordered to the original *Rattler* design - *Brisk* and *Highflyer* from Woolwich Dyd,

A much modified profile, initially dated Admiralty February 1848, for the sloops *Archer* and *Wasp*, although the latter's name is crossed through, with the notation 'See other drawings for *Wasp*'. DR66666



Scan and/or retouch by Grzechu

Archer and *Parthian* (previously on order as gunvessels) from Deptford Dyd, and *Grinder* from Sheerness Dyd. On 25 April 1846 they were re-ordered to an enlarged design, to carry a heavier armament. *Highflyer* was eventually built to a larger design, and rated as a corvette (which see); the other four were built to three different designs.

Four 'steam gun schooners' of new design were ordered on 25 April 1847 'in lieu of sailing brigs originally planned' - *Cracker* and *Plumper* at Deptford, and *Pincher* and *Hornet* at Woolwich. They were re-designated as 'gunvessels' in 1849, and as sloops in 1850. Four further screw schooners of this type were in programme proposed 23 March 1848, ordered 30 March 1848 from Deptford Dyd (two) and Chatham Dyd (two) but were not named or proceeded with under this description.

MIRANDA - sloop (reclassed as a corvette 1862), 14 (later 15) guns. Lord John Hay design, 'Improved *Rattler* Class', 1847.

Dimensions & tons: 196ft 0½in, 169ft 0in x 34ft 0in (for tonnage) x 20ft 9in. Draught 13½ft (mean). 1,039$^{16}/_{94}$ bm. 1,523 disp.
Men: ... . Guns: 14 x 32pdr (42cwt); 1 x 68pdr (87cwt) added 1856.
Machinery: 2-cyl. (56$^{3}/_{8}$in diam., 3¾ft stroke) horizontal single expansion, geared. Single screw. 250 nhp. 613 ihp = 10.75kts.
First cost: Total £48,393 (hull £24,232, machinery £14,235).

Miranda (ex-*Grinder*, renamed 3.11.1847) Sheerness Dyd/Robert Napier & Sons.

Ord: 25.4.1847. Re-ord: 3.11.1847. K: 9.1848. L: 18.3.1851.
C: 9.3.1854. Sold to C. Lewis for BU 2.12.1869.

BRISK - sloop (reclassed as a corvette 1862), 14 guns. Committee of Reference design, 1847. Enlarged *Rattler* Class.

Dimensions & tons: 193ft 7¼in, 169ft 9¼in x 35ft 0in oa (34ft 6in for tonnage) x 20ft 5½in. Draught 13¾ft (mean). 1,074$^{81}/_{94}$ bm (1,087 as completed). 1,474 disp.
Men: ... . Guns: 2 x 68pdr (87cwt), 12 x 32pdr (42cwt).
Machinery: 2-cyl. (52in diam., 3½ft strong) horizontal single expansion. Single screw. 250 nhp. 505 ihp = 7.35kts.
First cost: Total £47,482 (hull £20,677).

Brisk Woolwich Dyd/Scott, Sinclair & Co.

Ord: 25.4.1847. K: 1.1849. L: 2.6.1851. C: 24.8.1853. Sold to mercantile owners 31.1.1870.

NOTES: *Brisk* completed fitting to carry the Governor to Port Royal (Jamaica). Re-engined 1864 by Miller, Ravenhill & Salkeld with new 2-cyl. (45in diam., 2ft stroke) 200 nhp engine (837 ihp = 9.989kts.)

***CRACKER* Class** 1847. No details confirmed prior to cancellation.

Cracker Deptford Dyd/George & John Rennie.

Ord: 25.4.1847. Suspended 12.8.1847, replaced by new sloop design 1.11.1850 (see *Cruizer* below).

Hornet Woolwich Dyd/Maudslay, Sons & Field.

Ord: 25.4.1847. Suspended 12.8.1847, replaced by new sloop design 1.11.1850 (see below).

NOTES: Originated as four 'steam gun schooners' of new design ordered on 25.4.1847 'in lieu of sailing brigs originally planned'. Re-designated as 'gunvessels' in 1849, and as sloops in 1850. Four further screw schooners were in programme proposed 23.3.1848, ordered 30.3.1848 from Deptford Dyd (two) and Chatham Dyd (two) but not proceeded with under this description.

PLUMPER - sloop, 8 guns. Design by John Fincham, 1847.

Dimensions & tons: 140ft 0in, 121ft 10½in x 27ft 10in oa (27ft 6in for tonnage) x 14ft 6in. Draught 11ft 4½in (mean). 490$^{24}/_{94}$ bm. 577 disp.
Men: 100. Guns: 2 x 32pdr (56cwt), 6 x 32pdr (25cwt).
Machinery: 2-cyl. (27in diam., 2ft stroke) vertical single expansion, oscillating, geared. Single screw. 60 nhp. 148 ihp = 7.4kts.
First cost: £20,446.

Plumper Portsmouth Dyd/Miller, Ravenhill & Co.

Ord: 25.4.1847. Re-ord: 12.8.1847. K: 10.1847. L: 5.4.1848. C: 17.12.1848. Survey vessel by 1860. Sold to White, Cowes to BU 2.6.1865.

NOTES: Originally ordered 25.4.1847 from Woolwich Dyd as a steam schooner under the name of *Pincher* (to have been engined by Rennie), she was re-ordered to a new design in 8.1847.

REYNARD - sloop, 8 guns. Design by John Edye, 1847.

Dimensions & tons: 147ft 0in, 128ft 4½in x 27ft 10in oa (27ft 6in for tonnage) x 14ft 6in. Draught 11ft 6in (mean). 516$^{37}/_{94}$ bm. 656 disp.
Men: 100. Guns: 2 x 32pdr (56cwt), 6 x 32pdr (25cwt).
Machinery: 2-cyl. (28in diam., 2ft stroke) horizontal single expansion. Single screw. 60 nhp. 165 ihp = 8.238kts.
First cost: Hull £10,262, machinery & fitting £8,625.

Reynard Deptford Dyd/George & John Rennie.

Ord: 25.4.1847. Re-ord: 12.8.1847. K: 8.1847. L: 21.3.1848. C: 1.8.1848. Wrecked on the Pratas Shoal on the China Station 31.5.1851.

NOTES: Originally ordered 25.4.1847 as a steam schooner under the name of *Plumper* (to have been engined by Maudslay), she was re-ordered to a new design in 8.1847.

MALACCA - sloop (reclassed as a corvette 1862), 17 guns. Surveyor's Department design, approved 7.12.1848 - similar to *Conflict*.

Dimensions & tons: 192ft 0in, 168ft 2½in x 34ft 4in oa (34ft 0in for tonnage) x 22ft 8in. 1,034$^{28}/_{94}$ bm.
Men: ... . Guns: 1 x 10in (85cwt), 18 x 32pdr (32cwt) OR 1 x 8in (65cwt), 16 x 32pdr (32cwt).
Machinery: 2-cyl. (28$^{3}/_{8}$in diam., 2½ft stroke) inclined single expansion, trunk, high pressure. Single screw. 200 nhp. 692 ihp = 9.2kts.
First cost: Total £49,980 (hull £23,857, machinery £11,516).

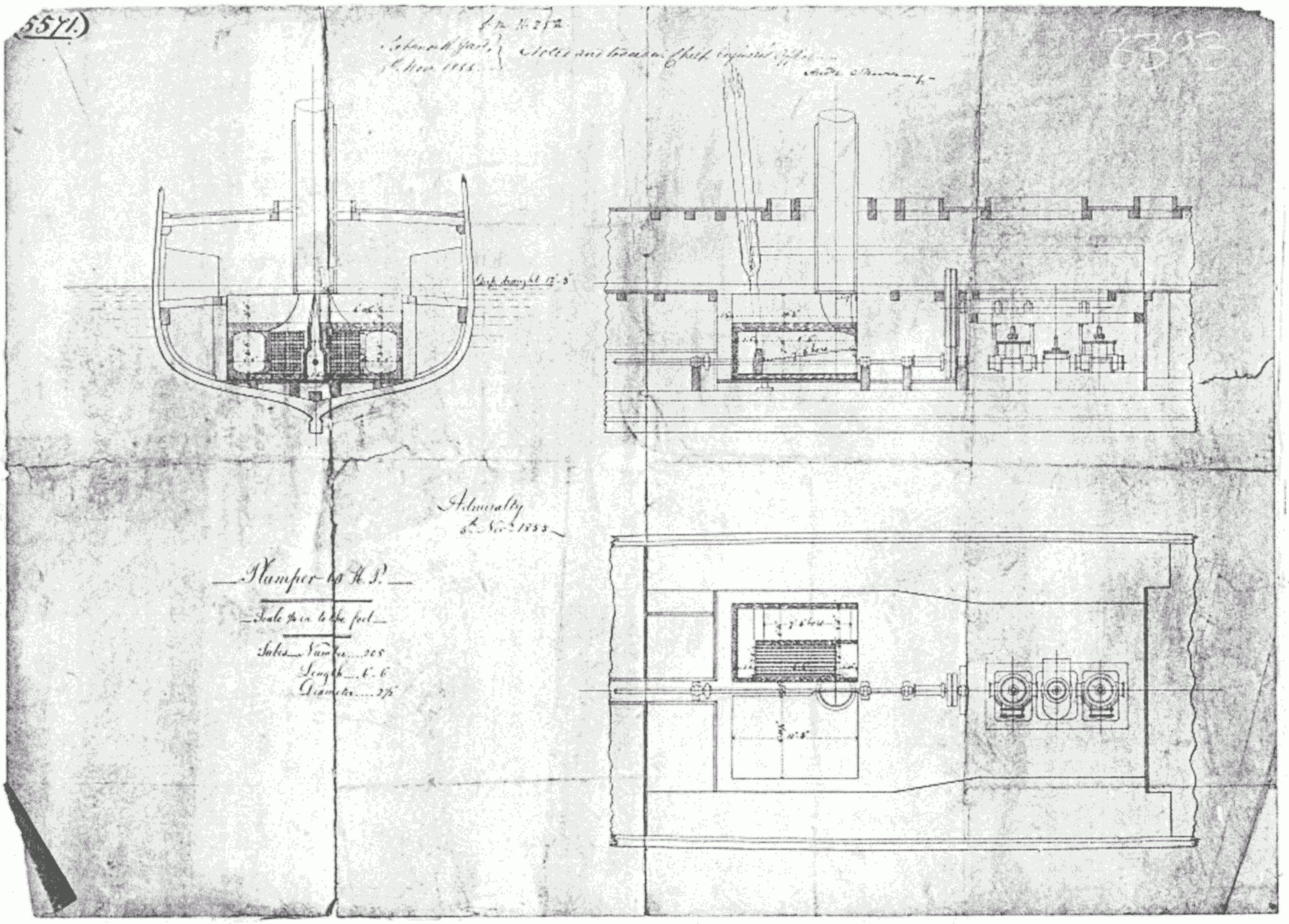
Malacca Moulmein, Burma - begun by Mr Mould (whose business failed), completed by Mr Ladd, the Government Inspector./John Penn & Son.

Ord: 9.11.1847. K: 29.5.1849. L: 9.4.1853. C: 17.8.1854 at Chatham.
Re-engined 1862. Sold to E. Bates 6.1869.

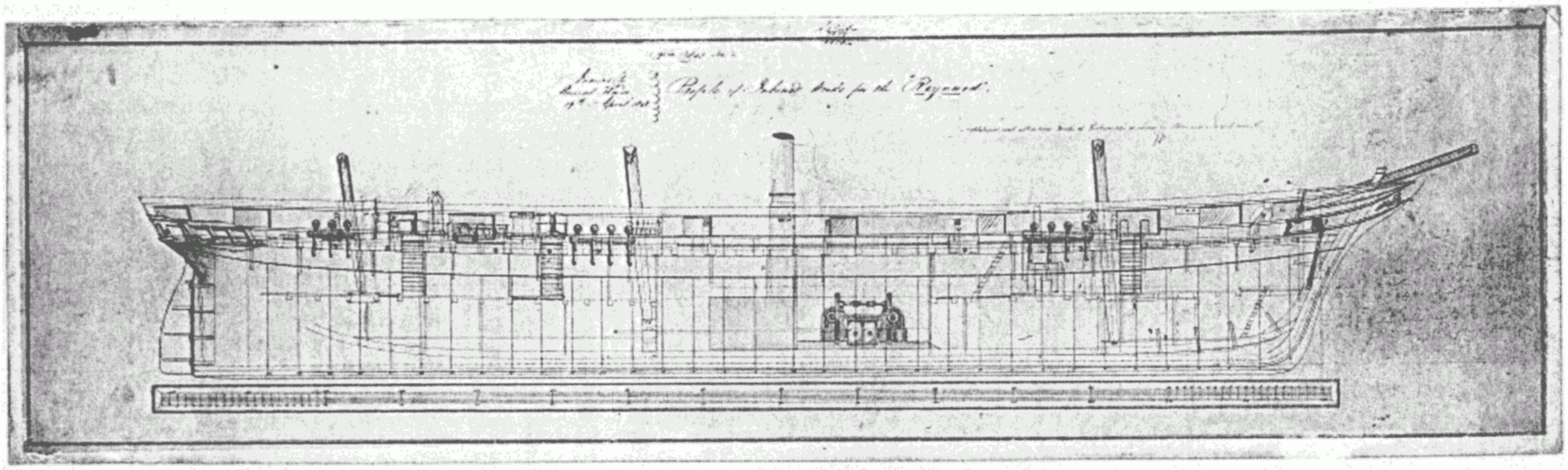
NOTES: Screw aperture not opened until fitted with engine in England. Sailed for Britain 16.5.1853 and arrived at Chatham Dyd 16.9.1853 where she was engined and fitted from 31.1.1854 (order) to 8.8.1854 (undocked). Re-engined 1862 (when reclassed as a corvette?) with Humphrys & Tennant 2-cyl. (42¼in diam., 26in stroke) horizontal single expansion engine (trials 707 ihp = 9.519kts). Sold 6.1869 to E. Bates who, later the same year, sold her to the Japanese Navy as *Tsukuba*. In Japanese service armed with 6 x 4.5in BL guns + 2 x 30pdr + 2 x 24pdr. From 1892 re-armed with 4 x 6in QF guns. Stationary training ship *c*1900. BU 1906.

***CRUIZER* Class** - sloops, 17 guns. *Cruizer* to Lord John Hay design; others by Walker (Surveyor), 1850.

Dimensions & tons: 160ft 0in, 140ft 1¾in x 31ft 10in oa (31ft 8in for tonnage) x 17ft 5in. 747$^{51}/_{94}$ bm. 1,045 disp.
Men: ... . Guns: 1 x 32pdr (56cwt/9ft 6in) on pivot, 16 x 32pdr (32cwt/6ft 0in).
Machinery: 2-cyl. horizontal single expansion (geared in *Cruizer*). Single screw. 60 nhp (*Cruizer*) 100 nhp (others). See below for individual ihp/speed.
First cost: *Cruizer* total £25,213 (hull £15,239, machinery £2,805). *Hornet* total £29,142 (hull £15,889, machinery £5,450). *Harrier* total £32,705 (machinery £5,616). *Fawn* total £32,798 (hull £18,207,



Drawings of the 60 hp machinery from the sloop *Plumper*, 'noted and traced in the Chief Engineer's Office', Portsmouth 8 November 1855. *DR8393*

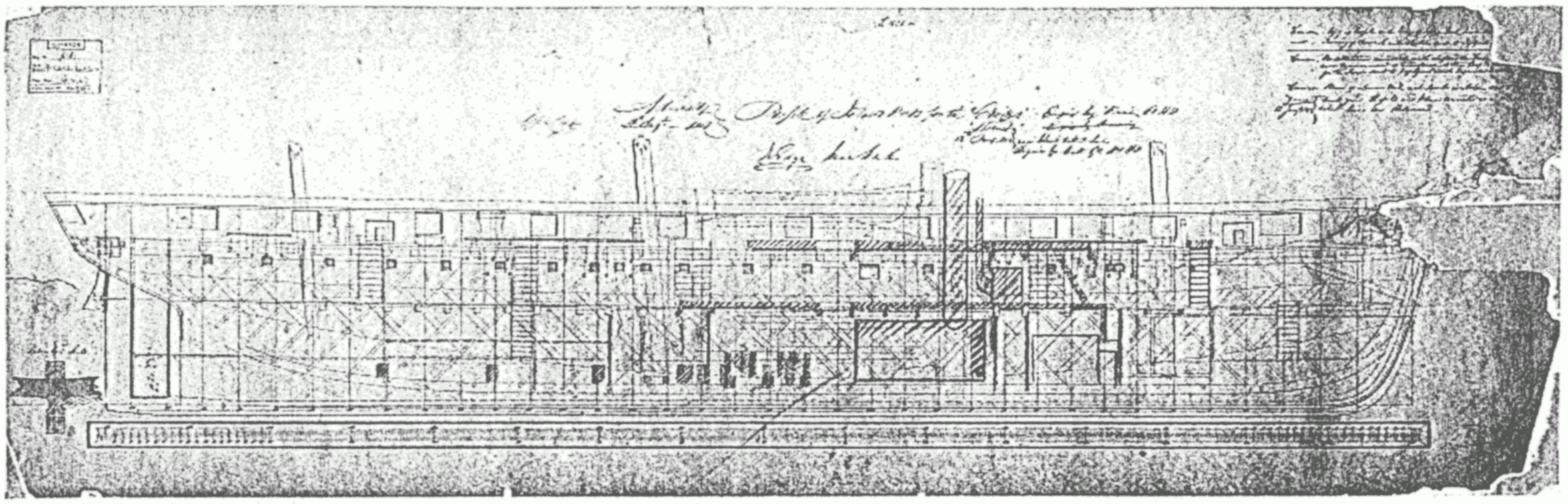


Design profile for the sloop *Reynard*, Admiralty 19 April 1848. *DR6279A*

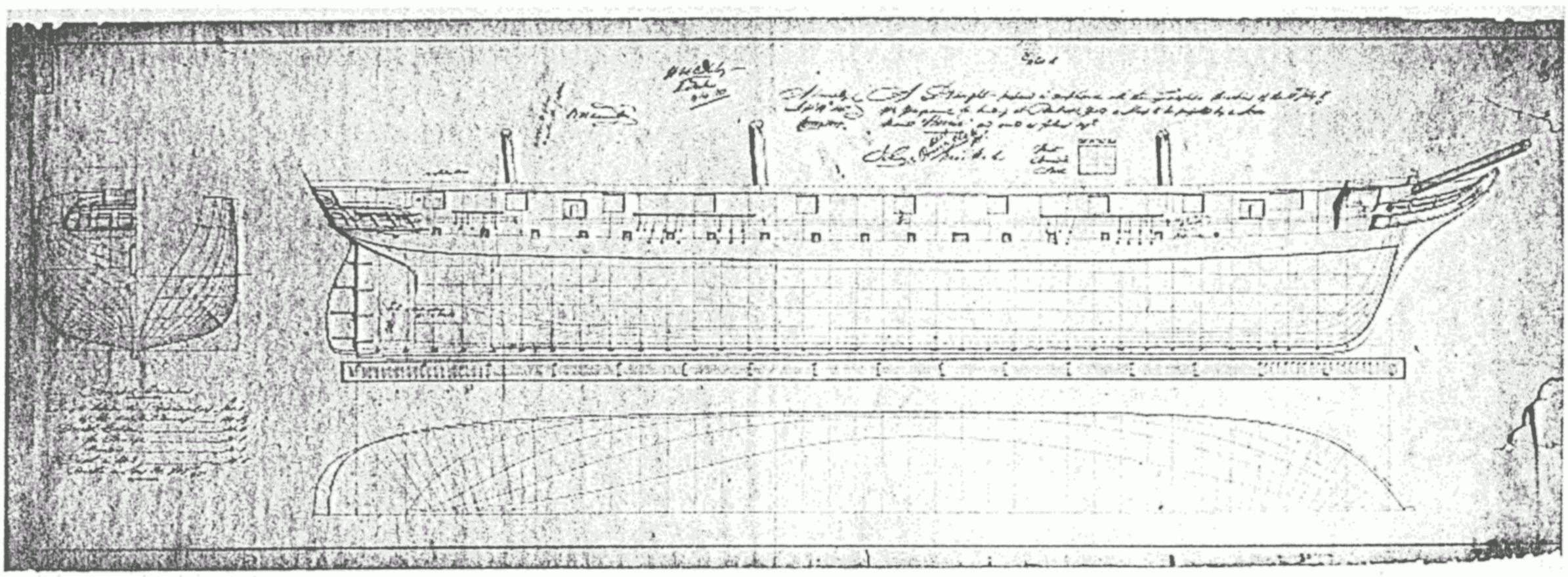
machinery £6,317). *Falcon* total £34,423 (hull £19,059, machinery £6,200). *Alert* total £36,743 (hull £18,893, machinery £6,052).

Cruizer (later *Cruiser*) Deptford Dyd/George & John Rennie. (132 ihp = 6.608kts.)

Ord: 1.11.1850. K: 4.1851. L: 19.6.1852. C: 3.2.1853. Renamed *Lark* as a training ship in 5.1893. Sold at Malta 1912.



Design profile for the screw sloop *Cruizer*, dated Admiralty 13 August 1851; a note of 12 January 1854 relates to the fitting of 100 nhp engines by James Watt & Co instead of Maudslay machinery in the *Hornet*, as indicated in ticked lines. *DR6261*



Design sheer draught for the *Cruizer* Class sloop *Harrier*, Admiralty 19 September 1851. *DR7278*

Hornet Deptford Dyd/James Watt & Co. (233 ihp = 7.75kts.)
Ord: 1.11.1850. K: 6.1851. L: 13.4.1854. C: 14.7.1854. BU by White, Cowes 1868.

Harrier Pembroke Dyd/Humphrys, Tennant & Dykes. (360 ihp = 8.32kts.)
Ord: 18.7.1851. K: 11.1851. L: 13.5.1854. C: 3.11.1854. BU completed at Portsmouth 12.1866.

Fawn Deptford Dyd/Miller, Ravenhill & Salkeld. (434 ihp = 8.77kts.)
Ord: 27.3.1852. K: 4.5.1854. L: 30.9.1856. C: 26.11.1859. Survey ship 1876. Sold 1884.

Falcon Pembroke Dyd/Miller, Ravenhill & Salkeld. (312 ihp = 7.87kts.)
Ord: 2.4.1853. K: 11.1853. L: 10.8.1854. C: 30.3.1855. Sold to Marshall to BU at Plymouth 27.9.1869.

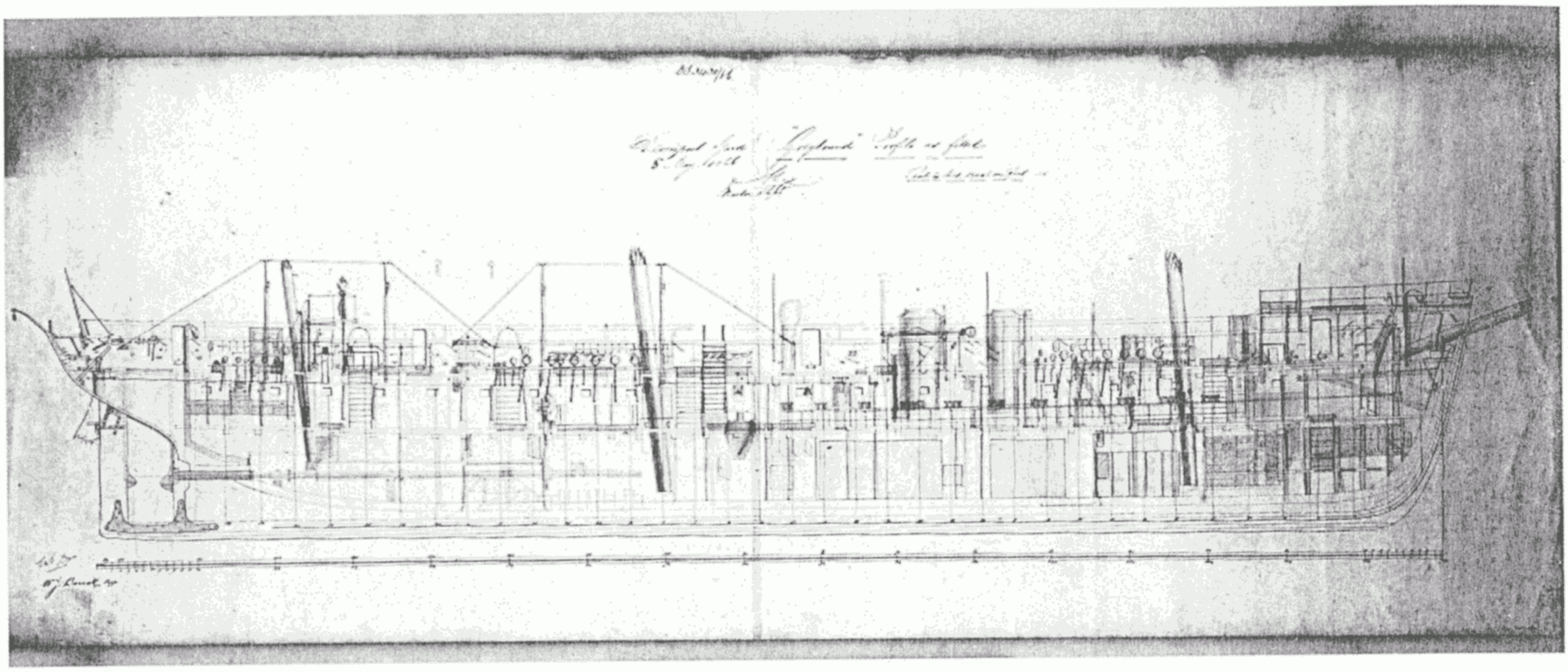
Alert Pembroke Dyd/Miller, Ravenhill & Salkeld. (383 ihp = 8.786kts.)
Ord: 2.4.1853. K: 1.1855. L: 20.5.1856. C: 24.1.1858. Survey ship 1878. Donated to the American Research Society 1884.

NOTES: First pair originally ordered 1847 as screw schooners (later gunvessels) *Cracker* and *Hornet*; taken here to be new vessels. *Cruizer*'s displacement was 960 tons only. *Mutine* (see below) was originally to have been of this design. *Cruizer*'s cylinders were of 28in diam., 2ft stroke; *Hornet*'s of 38$^{1}/_{16}$in diam., 2ft stroke; *Harrier*'s of 34in diam., 21in stroke; and others of 32in diam., 2ft stroke. *Alert* re-engined 1875 with R. & W. Hawthorn 2-cyl. (high pressure 25in diam., low pressure 48in diam., 18in stroke) compound expansion engine of 60 nhp (trials 312 ihp = 7.684kts.); strengthened for ice navigation (becoming 1,240 disp.) and employed for the 1875-76 Arctic expedition led by Captain George Nares (in company with ex-whaler *Discovery* - see Chapter 9).

***SWALLOW* Class** - sloops (ordered as gunvessels), 9 guns. 1852 design.
Dimensions & tons: 139ft 0in, 120ft 6in x 27ft 10in oa (27ft 6in for tonnage) x 13ft 5in. 484$^{68}/_{94}$ bm. 625 disp.
Men: ... . Guns: 1 x 32pdr (56cwt/9ft 6in) on pivot forward, 8 x 32pdr (25cwt/5ft 4in) broadsides. (In 1854, the 5ft 4in guns were ordered to be replaced by 6ft weapons of same weight.)
Machinery: 2-cyl. horizontal single expansion. Single screw. 60 nhp.
First cost: *Curlew* total £21,003 (hull £10,430, machinery £4,193). *Swallow* total >£22,000 (hull £12,735, machinery £3,860). *Lyra* total £21,917 (hull £13,024, machinery £3,583).

Curlew Deptford Dyd/Maudslay, Sons & Field. (ihp/speed unknown.)
Ord: 5.7.1852. (named same day). K: 19.10.1852. L: 31.5.1854. C: 18.10.1854. Sold to Marshall, Plymouth to BU 29.8.1865.

Scan and/or retouch by Grzechu



As fitted profile for the screw sloop *Greyhound*, dated Devonport 5 May 1866. The design featured a raised forecastle to give some protection to the bow-chase gun from wind and water. *DR8258*

Swallow Pembroke Dyd/Miller, Ravenhill & Salkeld. (182 ihp = 6.585kts.)
Ord: 5.7.1852 (named same day). K: 30.8.1853. L: 12.6.1854.
C: 23.10.1854. Survey ship 1861. Sold to BU 12.1866.

Ariel Pembroke Dyd/Miller, Ravenhill & Salkeld. (193 ihp = 6.823kts.)
Ord: 2.4.1853 (named 8.6.1853). K: 11.1853. L: 11.7.1854.
C: 12.4.1855. Sold to Shaw & Thompson to BU 23.5.1865.

Lyra Deptford Dyd/Miller, Ravenhill & Salkeld. (224 ihp = 7.48kts.)
Ord: 3.4.1854. K: 8.7.1854. L: 26.3.1857. C: 11.12.1857. BU 1876 at Portsmouth Dyd.

NOTES: Built in response to an Admiralty requirement for 'a type of screw vessel below the *Cruizer* (design)', they were ordered as 'gunvessels, class 1', but while still on the stocks the first three were reclassed as sloops under the reclassifications of early 1854. *Curlew*'s engines were those taken out of the *Hornet*; her cylinders were 32½in diam., 16in stroke; those in other three were 25½in diam., 21in stroke. *Icarus* (as ordered 2.4.1853 - and named 3.4.1854), *Cordelia* and *Gannet* (see below) were originally to have been of this design, but were built as units of the succeeding *Racer* Class.

***RACER* Class** 1855. Lengthened version of *Swallow* design, to obtain higher speed.
Dimensions & tons: 151ft 0in, 131ft 3¾in x 29ft 1in (28ft 9in for tonnage) x 15ft 10in. $577^{30}/_{94}$ bm. 861 disp.
Men: ... . Guns: 11 x 32pdr MLSB.
Machinery: 2-cyl. horizontal single expansion. Single screw. 150 nhp.
First cost: *Cordelia* total £33,428 (hull £15,592, machinery £9,014). *Racer* total £31,167 (hull £17,082, machinery £9,142). *Gannet* total £33,359 (hull £15,934, machinery £9,138). *Icarus* total £31,928 (hull £17,452, machinery £8,633).

Cordelia Pembroke Dyd/James Watt & Co. (461 ihp = 9.912kts.)
Ord. 3.4.1854. K: 10.1855. L: 3.7.1856. C: 1856. Sold to Marshall, Plymouth on 12.5.1870.

Racer Deptford Dyd/Humphrys, Tennant & Dykes. (522 ihp = 9.519kts.)
Ord: 3.4.1854. (named 31.3.1855). K: 1.10.1856. L: 4.11.1857.
C: 22.7.1858. BU at Portsmouth 1876.

Gannet Pembroke Dyd/Miller, Ravenhill & Salkeld. (617 ihp = 10.817kts.)
Ord: 3.4.1854. (named 31.3.1855). K: 12.1856. L: 29.12.1857.
C: 9.3.1859. BU at Devonport 2.1877.

Icarus Deptford Dyd/George Rennie & Sons. (608 ihp = 10.145kts.)
Ord: 3.2.1855. K: 7.4.1857. L: 22.10.1858. C: 28.12.1859. Sold to Castle to BU at Charlton 23.1.1875.

Pantaloon Devonport Dyd/Greenock Foundry Co. (484 ihp = 8.934kts.)
Ord: 1.4.1857. K: 2.11.1857. L: 26.9.1860. C: 17.9.1861. Sold to Marshall, Plymouth 18.9.1867 (for £1,610).

NOTES: *Pantaloon* was probably of *Racer* Class (details coincide), but this is unconfirmed. Engines varied; *Cordelia* and *Pantaloon* had cylinders of 38in diam., 2ft stroke; *Racer* of 40in diam., 20in stroke; *Gannet* of 39in diam., 2ft stroke; and *Icarus* (trunk) of $38^{7}/_{8}$in diam., 22in stroke.

***GREYHOUND* Class** 1855. ... design, *Cruizer* class adapted to 200 nhp engines. Later reclassed as corvettes.
Dimensions & tons: 172ft 6in, 151ft 6in x 33ft 2in oa (33ft 0in for tonnage) x 17ft 5in. $877^{53}/_{94}$ bm. 1,260 disp.
Men: 160. Guns: 5 x 40pdr BL, 12 x 32pdr MLSB.
Machinery: 2-cyl. (45in diam., 2ft stroke) horizontal single expansion. Single screw. 200 nhp. (see below for individual ihp/speed.)
First cost: *Greyhound* total £41,394 (hull £23,630, machinery ?£12,475). *Mutine* total £30,874 (hull £23,632, machinery £5,900).

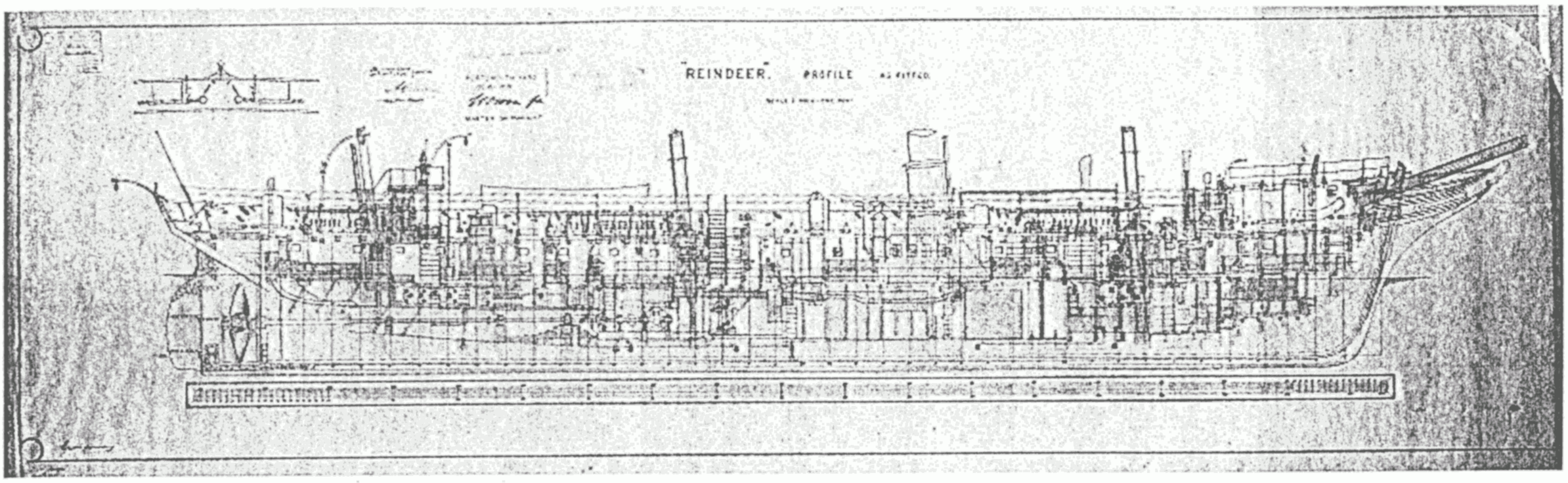
Greyhound Pembroke Dyd/Miller, Ravenhill & Salkeld. (743 ihp = 9.77kts.)
Ord: 3.4.1854. K: 12.1856. L: 15.6.1859. C: 6.2.1860. To harbour service in 9.1869. Sold on 3.4.1906.

Mutine Deptford Dyd/Maudslay, Sons & Field. (786 ihp = 10.25kts.)
Ord: 27.3.1852. K: 1.6.1857. L: 30.7.1859. C: 26.11.1859. Sold 26.2.1870 for commercial use, renamed *Chieftain*.

NOTES: Design to be made by AO 3.2.1855. *Mutine* originally ordered as *Cruizer* Class, changed 1856.

***CAMELION* Class** - Second Class sloops (later reclassed as corvettes), 17 guns. Isaac Watts design, approved 22.2.1858. Lengthened version of *Cruizer* design, to obtain higher speed.
Dimensions & tons: 185ft 0in, 164ft 0¼in x 33ft 2in oa (33ft 0in for tonnage) x 17ft 5in. $950^{8}/_{94}$ bm. 1,365 disp.
Men: 180. Guns: 5 x 40pdr BL, 12 x 32pdr MLSB.

Scan and/or retouch by Grzechu



The *Camelion* Class Second Class sloop *Reindeer*, as fitted profile, Portsmouth 17 November 1871. The construction of this ship was suspended and then restarted. *DR8052*

Machinery: 2-cyl. horizontal single expansion (single trunk in *Perseus* & *Reindeer*). Single screw. 200 nhp. (See below for individual ihp/speed.)

First cost: *Camelion* hull £23,328, machinery £12,000. *Pelican* machinery £12,000. *Rinaldo* hull £23,369. *Harlequin* £5,123 before cancellation. *Sappho* £2,921 before cancellation.

Camelion Deptford Dyd/Maudslay, Sons & Field. (678 ihp = 10.004kts.)
Ord: 3.4.1854. K: 8.11.1858. L: 23.2.1860. C: 30.7.1861. Sold 1883.

Pelican Pembroke Dyd/Miller, Ravenhill & Salkeld. (671 ihp = 10.045kts.)
Ord: 3.4.1854. K: 16.6.1859. L: 19.7.1860. C: 25.9.1861. Sold to Arthur & Co. 2.1867, renamed *Hawk* then resold to the Portuguese Navy and renamed *Infanta Dom Henrique*.

Rinaldo Portsmouth Dyd/Humphrys & Tennant. (752 ihp = 10.588kts.)
Ord: 1.4.1857. K: 1.3.1858. L: 26.3.1860. C: 8.6.1861. Sold 4.1884.

Zebra Deptford Dyd/Humphrys & Tennant. (772 ihp = 9.874kts.)
Ord: 1.4.1857. K: 4.7.1859. L: 13.11.1860. C: 23.5.1861 (completed for reserve). Sold in the Far East 20.8.1873.

Perseus Pembroke Dyd/George Rennie & Sons. (614 ihp = 10.148kts.)
Ord: 1.4.1857. K: 20.7.1860. L: 21.8.1861. C: 9.1862. Training ship at Devonport 1886, renamed *Defiance II* in 3.1904. Sold 26.6.1931.

Chanticleer Portsmouth Dyd/A. & J. Inglis. (694 ihp = 10.132kts.)
Ord: 27.3.1858. K: 2.2.1860. L: 9.2.1861. C: 12.1861. Sold to Castle to BU at Charlton 23.1.1875.

Reindeer Chatham Dyd/George & John Rennie. (722 ihp = 10.002kts.)
Ord: 27.3.1858. K: 1.5.1860. (Suspended 1862, but resumed 5.1863) L: 29.3.66. C: 10.1866. BU completed at Chatham 22.12.1876.

Rattler Deptford Dyd/Maudslay, Sons & Field. (843 ihp = 10.006kts.)
Ord: 27.3.1858. K: 28.8.1860. L: 18.3.1862. C: 7.1862. Wrecked in the La Perouse Straits, Japan on 24.9.1868.

Harlequin Portsmouth Dyd/... .
Ord: 5.3.1860. K. 13.2.1861. L: ... . Cancelled 16.12.1864 (completed taking to pieces 2.2.1865).

Tees Chatham Dyd ('converted frame only')/... .
Ord: 5.3.1860. K: 2.1861. L: ... . Cancelled 12.12.1863 (cost £1,135)

Sappho Deptford Dyd/... .
Ord: 5.3.1860. K: 1.5.1861. L: ... . Cancelled 12.12.1863.

Trent Pembroke Dyd/... .
Ord: 5.3.1860. K: 3.9.1861. Completed as ironclad *Research* (which see).

Circassian Deptford Dyd/... .
Ord: 25.3.1861. K: 5.5.1862. Completed as ironclad *Enterprise* (which see).

Diligence Chatham Dyd/... .
Ord: 25.3.1861. K: 1862. L: ... . Cancelled 12.12.1863.

Imogene Portsmouth Dyd/... .
Ord: 25.3.1861. K: ... . Cancelled 12.12.1863 (unstarted).

Success Pembroke Dyd/... .
Ord: 25.3.1861. K: ... . Cancelled 12.12.1863 (unstarted).

NOTES: Lengthened version of *Greyhound* (8ft by bow and 4ft 6in by stern). *Camelion* herself (and *Pelican*) cryptically referred to as '*Camelion* Class altered' and the frame was altered by contract. *Zebra* and *Rattler* also had their frames converted by contract. *Rinaldo* built in dry dock. *Reindeer* completed (after suspension) with 1 x 110pdr + 5 x 64pdrs. Cylinders were 45in diam., 24in stroke - except *Perseus* and *Reindeer* 41$^{1}/_{3}$in diam., *Rinaldo* and *Zebra* 42½in diam., 26in stroke.

VICTORIA - sloop, 8 guns (as designed), for the naval service of Victoria, Australia.

Dimensions & tons: 167ft 0in, c146ft 10in x 27ft 5in oa (?27ft 3in for tonnage) x 12ft 0in. 580 bm. 880 disp.

Men: 95. Guns: 1 x 32pdr (56cwt) pivot, 6 x 32pdr (25cwt) broadside.

Machinery: Single screw. 150 nhp = 9.5kts.

First cost: £38,000.

Victoria Young, Magnay & Co., Limehouse./George Rennie & Sons.
Ord: 1854. K: 1.1855. L: 30.6.1855. C: 22.11.1855. Transferred to the Customs Dept (of Victoria) 1880, sold to mercantile interests 1882, BU 1895.

NOTES: Reached 12kts under sail alone. First Australian steam warship.

***ROSARIO* Class** - Third Class sloops, 11 guns. Isaac Watts design, approved 12.8.1858.

Dimensions & tons: 160ft 0in, 139ft 8½in x 30ft 4in oa (30ft 0in for tonnage) x 18ft 11in. 15ft 10in draught. 668$^{76}/_{94}$ bm. 913 disp.

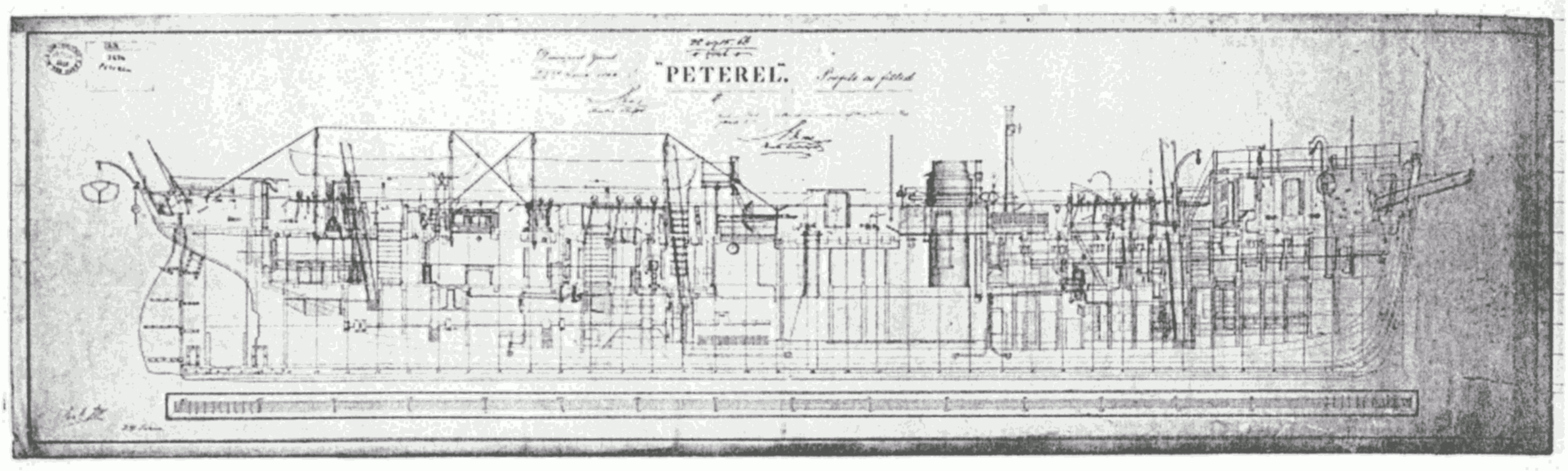
Men: 130-150. Guns: 1 x 40pdr (58cwt/9½ft) Armstrong BL (slide-mounted), 6 x 32pdr (30cwt/6ft 4in) MLSB (truck-mounted), 4 x 20pdr Armstrong BL (pivot-mounted). By 1869 the first six all had 3 guns (1 x 7in ML + 2 x 40pdrs).

Machinery: 2-cyl. horizontal single expansion. Single screw. 150 nhp (see below for individual ihp/speed.)

Rosario Deptford Dyd/Greenock Foundry Co. (436 ihp = 9.236kts.)
Ord: 1.4.1857. K: 13.6.1859. L: 17.10.1860. C: 7.1862. To Govt. of South Australia 1874, as hulk for young criminals. Sold to Castle to BU 31.1.1884.

Peterel Devonport Dyd/Greenock Foundry Co. (478 ihp = 8.982kts.)
Ord: 1.4.1857. K: 5.12.1859. L: 10.11.1860. C: 3.1862. Light vessel

Scan and/or retouch by Grzechu



The *Rosario* Class sloop *Peterel*, profile as fitted, Devonport 22 June 1866. *DR3674*

12.1877. Coal hulk 12.1885. Sold 10.1901.

Rapid Deptford Dyd/Greenock Foundry Co. (460 ihp = 9.117kts.)
Ord: 27.3.1858. K: 18.8.1859. L: 29.11.1860. C: 6.1862. BU at Malta 9.1881.

Shearwater Pembroke Dyd/R. & W. Hawthorn. (532 ihp = 8.957kts.)
Ord: 27.3.1858. K: 2.4.1860. L: 17.10.1861. C: 12.1862. BU completed at Sheerness 8.2.1877.

Royalist Devonport Dyd/Greenock Foundry Co. (627 ihp = 9.269kts.)
Ord: 27.3.1858. K: 20.10.1860. L: 14.12.1861. C: 10.1863. BU at Chatham 9.1875.

Columbine Deptford Dyd/Greenock Foundry Co. (598 ihp = 9.504kts.)
Ord: 8.4.1859. K: 16.5.1860. L: 2.4.1862. C: 5.1863. BU at Chatham 6.1875.

Africa Devonport Dyd/Greenock Foundry Co. (530 ihp = 9.5kts.)
Ord: 5.3.1860. K: 22.12.1860. L: 14.2.1862. C: 13.8.1862. Sold to Chinese Imperial Customs 13.8.1862, renamed *China* and sailed 4.1863 (to join Sherard Osborn's 'Vampire Fleet'). Resold to the Egyptian Government 30.12.1865.

Circassian (ex-*Enterprise* - name changed by AO 22.7.1862) Deptford Dyd/... .
Ord: 5.3.1860. K: 1.5.1861. Cancelled 12.12.1863 (cost £3,112).

Acheron Deptford Dyd/... .
Ord: 5.3.1860. K: 14.10.1861. Cancelled 12.12.1863 (cost £1,947)

Bittern Devonport Dyd/... :
Ord: 5.3.1860. K: 17.12.1861. Cancelled 12.12.1863. Completed BU 11.2.1865 (total cost before cancellation £2,607).

Fame Deptford Dyd/... .
Ord: 25.3.1861. K: 2.12.1861. Suspended 5.2.1863. Cancelled 12.12.1863.

Cynthia Devonport Dyd/... .
Ord: 25.3.1861. K: 2.12.1861. Cancelled 12.12.1863 (cost £3,677).

Sabrina Pembroke Dyd/... .
Ord: 25.3.1861. K: 28.5.1861. Cancelled 12.12.1863.

NOTES: Greenock cylinders each 38in diam., 2ft stroke - while *Shearwater* had 40in diam., 22in stroke. Later vessels (from *Acheron* on) would probably have been of 162ft length.

Screw Gunvessels

On 16 May 1845, the Admiralty instructed the Surveyor to report on designs for a screw version of the First Class steam gunvessel, and on 22 May made a similar request for a Second Class gunvessel design. Two versions of each Class were ordered, with one of each pair being built of wood, and the other of that pair contracted to have an iron hull. The lines of these hulls differed around the stern to examine experimentally the two wooden vessels (below) having full lines around the stern, and the two iron hulls (see Chapter 6) being drawn much finer. After trials in 1847 had demonstrated the significantly higher speeds with the finer stern lines, the two wooden vessels were modified with similar fine lines. Another six wood-hulled gunvessels were ordered in March 1846 to these designs, but none were completed as such.

The outbreak of the Russian War demonstrated the need for numerous manoeuvrable, shallow-draught vessels for coastal and inshore operations in the Baltic and Black Seas. Six small screw steamers of the *Arrow* Class were approved in early 1854 to be built by contract in the Thames (eight builders tendered by 6 April 1854), initially classed as despatch vessels. Twenty further vessels, to two designs rated as First Class (the six *Intrepid* Class) and Second Class (the 14 *Vigilant* Class) were ordered in 1855. A further Second Class design (the *Philomel* Class, of which 20 were completed) was ordered from 1857, derived from the wartime gunboat designs but with dimensions enlarged. The next design (the *Cormorant* Class, of which nine were completed) were enlarged again, but their draught as built considerably exceeded the planned 8ft, and further units were cancelled. All these vessels were barque-rigged.

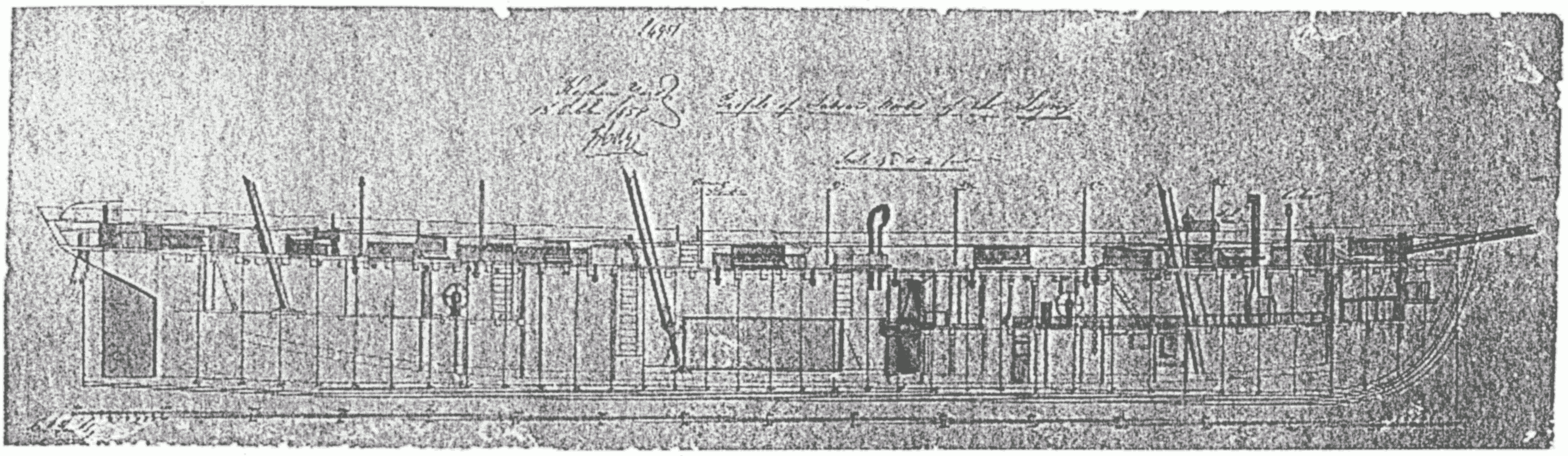
***RIFLEMAN* Class** - First Class gunvessel. John Fincham design, approved 22.5.1845.
Dimensions & tons: 150ft 0in, 132ft 7in x 26ft 6in oa (26ft 2in for tonnage) x 15ft 6in. 482$^{81}/_{94}$ bm. 624 disp.
Men: ?80. Guns: 2 x 10in (85cwt), 4 x 32pdr (25cwt/6ft).
Machinery: 2-cyl. (46in diam., 3ft stroke) horizontal single expansion, geared. 202 nhp. 7lbs/sq.in. 367 ihp = 9.499kts.
First cost: Hull £11,776, machinery £6,301, fitting £3,460.

Rifleman Portsmouth Dyd/Miller, Ravenhill & Co.
Ord: 22.5.1845. K: 7.1845. L: 10.8.1846. C: 1.7.1848. Survey ship 1862. Sold at Hong Kong 18.11.1869.

Sepoy Portsmouth Dyd/... .
Ord: 26.3.1846. Suspended 9.9.1846. Cancelled 22.5.1849.

Cossack Portsmouth Dyd/... .
Ord: 26.3.1846. Suspended 9.9.1846. Cancelled 22.5.1849.

NOTES: Similar to iron-hulled *Sharpshooter*, but with fuller stern section. Built in a dry dock. Rebuilt in 1848 with finer stern lines and re-engined with Miller, Ravenhill & Co. 2-cyl. (34in diam., 2¾ft stroke) vertical,



Profile for the Second Class gunvessel *Lynx*, dated Keyham Yard [Devonport] 13 October 1858. A member of the *Arrow* Class, these vessels were the first of many small craft designed in response to the inshore requirements of the Crimean War. Note the propeller stowed amidships. *DR7444*

oscillating, geared engine of 100 nhp. 10lbs/sq.in. (trials, 188 ihp = 8.011kts). Rerated as Third Class sloop 1854. *Archer* and *Parthian* (see Sloops, above) were originally ordered 26.3.1846 to be also to this design.

***TEAZER* Class** - Second Class gunvessels. Sir William Symonds design, approved 31.5.1845.

Dimensions & tons: 130ft 0in, 118ft 10¾in x 22ft 0in oa (21ft 10in for tonnage) x 9ft 2in. 301$^{44}/_{94}$ bm. 192 disp.

Men: ?60. Guns: 1 x 10in (86cwt).

Machinery: 2-cyl. (34in diam., 2¾ft stroke) horizontal single expansion, oscillating. 100 nhp. 10 lbs./sq.in. 175 ihp = 6.315kts.

First cost: Hull £5,974, machinery £5,259.

Teazer Chatham Dyd/Miller, Ravenhill & Co.

Ord: 31.5.1845. K: 6.8.1845. L: 25.6.1846. C: 21.12.1848. Sold to Castle & Son by AO 20.6.1862 for BU at Charlton.

Boxer Chatham Dyd/... .

Ord: 26.3.1846. K: ... . Suspended 6.10.1846 (taken down 6.1847). Cancelled 22.5.1849.

Biter Chatham Dyd/... .

Ord: 26.3.1846. K: ... . Suspended 6.10.1846. Cancelled 22.5.1849.

NOTES: Similar to iron-hulled *Minx*, but with fuller stern section. In 2.1848 the original machinery was removed from *Teazer*, new machinery (John Penn & Sons - vertical, oscillating, 2-cyl. of 27in diam., 2½ft stroke, 40 nhp) installed and the stern section rebuilt by 21.12.1848; new machinery recorded 128 ihp = 7.685kts; cost £2,530.

***ARROW* Class** - despatch vessels, reclassed as Second Class gunvessels 1856. Surveyor's Department design 1854.

Dimensions & tons: 160ft 0in, 143ft 4¾in x 25ft 4in oa (25ft 0in for tonnage) x 13ft 3in. Draught 10ft 0in (fwd), 11ft 8in (aft). 476$^{68}/_{94}$ bm. 586 disp.

Men: 65. Guns: 2 x 68pdr (95cwt) Lancaster MLR on pivots, 4 x 32pdr (25cwt).

Machinery: 2-cyl. (49$^{1}/_{2}$in diam., 21in stroke) horizontal single expansion. Single screw. 160 nhp. (See below for individual ihp/speed.)

First cost: *Arrow* total £21,234 (hull £8,307, machinery £9,724). *Beagle* total £23,091 (hull £8,302, machinery £9,725). *Lynx* total £23,443 (hull £8,364, machinery £10,745). *Snake* total £24,075 (hull £8,459, machinery £10,747). *Viper* total £23,927 (hull £9,091, machinery £10,070). *Wrangler* total £24,860 (hull £8,610, hull £9,920).

Arrow C. J. Mare & Co., Blackwall./Humphrys, Tennant & Dykes. (594 ihp = 11.0kts.)

Ord: 10.4.1854. K: 15.4.1854. L: 26.6.1854. C: 17.8.1854. Hull sold to Marshall for £482 per AO 19.5.1862, machinery returned to store.

Beagle C. J. Mare & Co., Blackwall./Humphrys, Tennant & Dykes. (ihp/speed not tried when built.)

Ord: 10.4.1854. K: 15.4.1854. L: 20.7.1854. C: 3.9.1854. Sold at Hong Kong by AO 16.7.1863, became the Japanese *Kanko* (mercantile?). BU 1889.

Lynx C. J. Mare & Co., Blackwall./John Penn & Son. (ihp/speed not tried when built.)

Ord: 10.4.1854. K: 15.4.1854. L: 22.7.1854. C: 14.9.1854. Sold to Marshall for £482 per AO 19.5.1862 to BU at Plymouth; in 1862 the engine was installed in (iron-hulled) *Sharpshooter*.

Snake C. J. Mare & Co., Blackwall./John Penn & Son. (460 ihp = 10.302kts.)

Ord: 10.4.1854. K: 9.5.1854. L: 6.9.1854. C: 4.11.1854. Sold to Marshall, Plymouth 1864.

Viper R. & H. Green, Blackwall. (No.310)/Maudslay, Sons & Field. (673 ihp = 11.86kts.)

Ord: 10.4.1854. K: 12.4.1854. L: 23.7.1854. C: 25.9.1854. Sold to Marshall for £482 per AO 19.5.1862 to BU at Plymouth.

Wrangler R. & H. Green, Blackwall. (No.309)/Maudslay, Sons & Field. (551 ihp = 10.101kts.)

Ord: 10.4.1854. K: 19.4.1854. L: 19.6.1854. C: 2.9.1854. BU by Castle at Charlton 5.1866.

NOTES: Authorised 28.3.1854, all were ordered either 10.4 or 11.4.1854, and named 2.5.1854. On completion, *Wrangler* posted to the Baltic, and the other five to the Black Sea. Due to problems with the Lancaster guns, most were quickly disarmed and used as despatch vessels. Most reduced to 80 nhp by 1860.

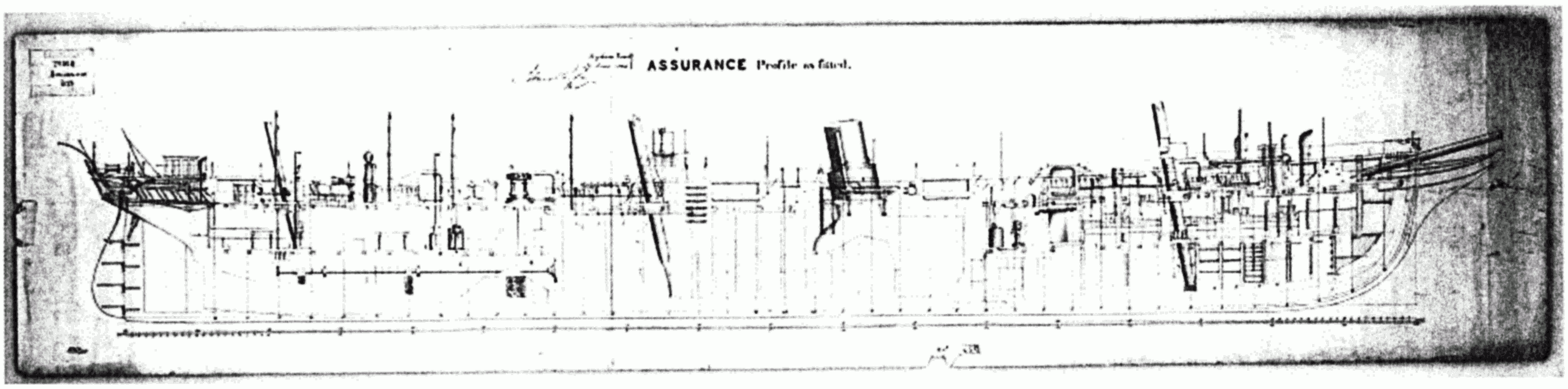
***VIGILANT* Class** - Second Class despatch/gunvessels. ... design, approved 18.4.1855.

Dimensions & tons: 180ft 0in, 160ft 7½in x 28ft 4in oa (28ft 0in for tonnage) x 14ft 0in. 669$^{79}/_{94}$ bm. 860 disp.

Men: 80. Guns: As designed 2 x 68pdr (95cwt) Lancaster MLR on pivots, 2 x 12pdr howitzers. As completed 1 x 7in/110pdr BL, 1 x 68pdr MLR, 2 x 20pdr BL.

Machinery: 2-cyl. (45in diam., 24in stroke) horizontal single expansion. Single screw. 200 nhp. (See below for individual ihp/speed.)

Scan and/or retouch by Grzechu



The as fitted profile of the *Vigilant* Class gunvessel *Assurance*, dated Keyham 29 June 1864. These Second Class vessels were another Crimean War design for inshore warfare duties. *DR7988A*

First cost: *Coquette* total £31,460 (hull £13,205, machinery £18,999). *Wanderer* total £32,108 (hull £13,192, machinery £12,529). *Alacrity* total £31,220 (hull £12,689, machinery £12,049). *Vigilant* total £32,514 (hull £13,043, machinery £12,533). *Lapwing* total £31,744 (hull £13,285, machinery £12,180). *Ringdove* total £31,748 (hull £13,313, machinery £12,161). *Surprise* total £33,356 (hull £14,656, machinery £12,096). *Renard* total £33,906 (hull £13,717, machinery £12,000). *Foxhound* total £27,437 (hull £13,643, machinery £11,999). *Mohawk* total £33,095 (hull £14,304, machinery £11, 996). *Sparrowhawk* total £33,167 (hull £14,464, machinery £11,984). *Osprey* total £31,633 (hull £12,570, machinery £12,400). *Cormorant* total £33,095 (hull £12,728, machinery £12,728). *Assurance* total £32,517 (hull £14,711, machinery £12,042).

Coquette R. & H. Green, Blackwall. (No.322)/Miller, Ravenhill & Co. (690 ihp = 10.853kts.)

Ord: 15.5.1855. K: 18.5.1855. L: 25.10.1855. C: 8.3.1856. BU by White at Cowes 1868.

Wanderer R. & H. Green, Blackwall. (No.323)/Maudslay, Sons & Field. (707 ihp = 10.733kts.)

Ord: 15.5.1855. K: 18.5.1855. L: 22.11.1855. C: 19.3.1856. BU by Castle at Charlton 31.8.1866 (arrival date).

Alacrity C. J. Mare & Co., Blackwall./Miller, Ravenhill & Co. (724 ihp = 1.87kts.)

Ord: 15.5.1855. K: 21.5.1855. L: 20.3.1856. C: 20.4.1856. Sold to Castle to BU at Charlton 7.10.1864.

Vigilant C. J. Mare & Co., Blackwall./Maudslay, Sons & Field. (630 ihp = 9.763kts.)

Ord: 15.5.1855. K: 21.5.1855. L: 20.3.1856. C: 20.8.1856. Ordered to be sold at Bombay 25.2.1869.

Lapwing J. & R. White, West Cowes./Miller, Ravenhill & Co. (689 ihp = 11.021kts.)

Ord: 26.7.1855. K: 30.7.1855. L: 26.1.1856. C: 31.5.1856. Sold to Marshall, Plymouth 1864 (BU 1865).

Ringdove J. & R. White, West Cowes./Miller, Ravenhill & Co. (677 ihp = 10.824kts.)

Ord: 26.7.1855. K: 30.7.1855. L: 22.2.1856. C: 31.5.1856. Sold 2.6.1865 and BU by White at Cowes 11.1866.

Surprise Money Wigram & Son, Blackwall./Miller, Ravenhill & Salkeld. (778 ihp = 11.148kts.)

Ord: 26.7.1855. K: 30.7.1855. L: 6.3.1856. C: 12.4.1856. BU by Marshall, Plymouth 11.1866.

Renard C. J. Mare & Co., Blackwall./?George Rennie & Sons. (No data.)

Ord: 26.7.1855. K: 1.8.1855. L: 24.4.1856. C: 12.10.1859. BU by Castle at Charlton 3.1866.

Foxhound C. J. Mare & Co., Blackwall./Humphrys, Tennant & Dykes. (600 ihp = 11.6kts.)

Ord: 26.7.1855. K: 1.8.1855. L: 16.8.1856. C: 6.10.1860. BU by Castle at Charlton 8.1866.

Mohawk Young, Magnay & Co., Limehouse./Humphrys, Tennant & Dykes. (642 ihp = 10.721kts.)

Ord: 26.7.1855. K: 6.8.1855. L: 11.1.1856. C: 23.3.1856. Sold to the Chinese Imperial Customs 20.9.1862, renamed *Peking* and sailed 4.1863 (to join Sherard Osborn's 'Vampire Fleet'). Resold to Egyptian Government 30.12.1865.

Sparrowhawk Young, Magnay & Co., Limehouse./Humphrys, Tennant & Dykes. (726 ihp = 11.065kts.)

Ord: 26.7.1855. K: 6.8.1855. L: 9.2.1856. C: 7.4.1856. Sold at Esquimault 1872.

Osprey Fletcher & Fearnall, Limehouse./Maudslay, Sons & Field. (593 ihp = 10.15kts.)

Ord: 26.7.1855. K: 2.8.1855. L: 22.3.1856. C: 30.7.1856. Wrecked on the SE African coast near Klippen Point on 30.5.1867.

Cormorant Fletcher & Fearnall, Limehouse./Maudslay, Sons & Field. (727 ihp = 11.155kts.)

Ord: 26.7.1855. K: 9.8.1855. L: 19.5.1856. C: 20.6.1856. Sunk in action with the Taku forts in the Peiho River, China, on 28.6.1859.

Assurance R. & H. Green, Blackwall. (No.327)/Miller, Ravenhill & Co. (745 ihp = 11.142kts.)

Ord: 26.7.1855. K: 26.8.1855. L: 13.3.1856. C: 16.4.1856. Sold to Marshall, Plymouth, on 8.3.1870.

NOTES: Enlarged *Arrow* Class. First four named 30.5.1855, last ten on 21.8.1855. Another four ordered 9.4.1856 (two from Deptford Dyd and two from Portsmouth Dyd) were not built (cancellation date unrecorded). Most were rerated as sloops in 1859 or 1860, but all these reverted to gunvessels in 1862.

***INTREPID* Class** - First Class despatch/gunvessels. ... design, approved 27.1.1855.

Dimensions & tons: 200ft 0in, 179ft 5¼in x 30ft 4in oa (30ft 2in for tonnage) x 14ft 6in. 868$^{49}/_{94}$ bm.

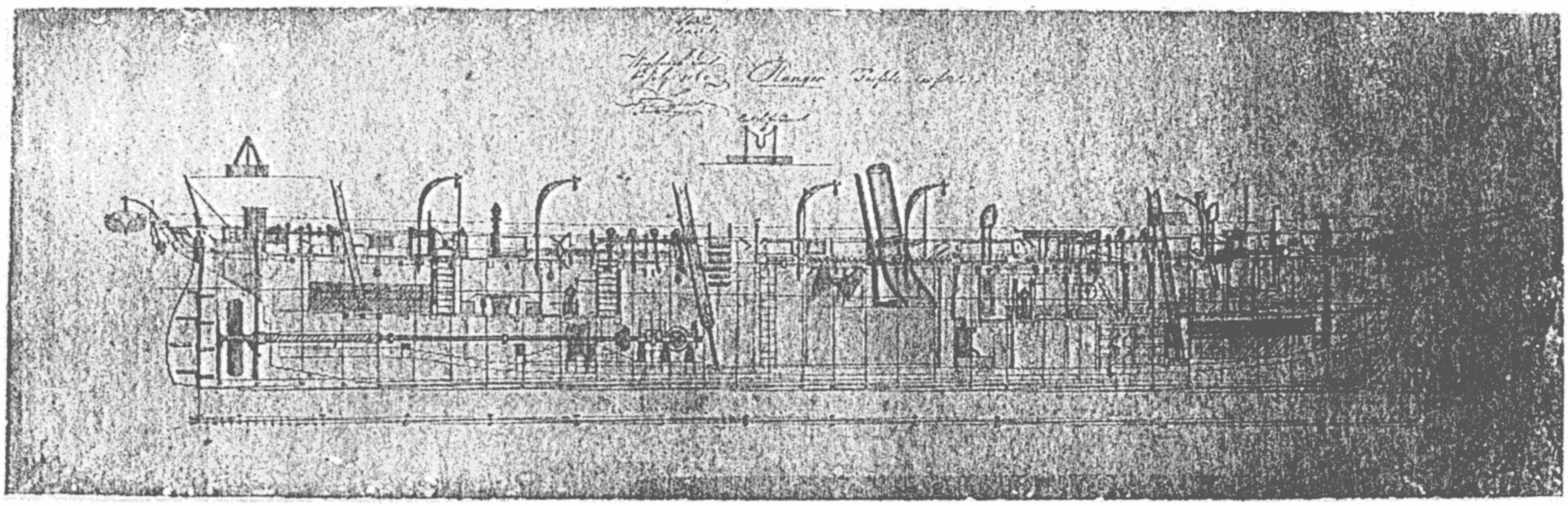
Men: 100. Guns: 1 x 68pdr (95cwt) MLR, 4 x 32pdr (25cwt). Later replaced by 1 x 7in/110pdr BL, 1 x 40pdr BL, 4 x 20pdr BL.

Machinery: 2-cyl. horizontal single expansion. Single screw. 350 nhp. (See individual vessels below for ihp/speed.)

First cost (£) of each vessel:

Vessel	*Total*	*Hull*	*Machinery*
Flying Fish	54,901	20,373	22,660
Victor	45,450	16,265	20,960
Roebuck	48,993	10,101	20,977
ditto (Dyd Exp.)		+ 7,772	

Scan and/or retouch by Grzechu



Ranger, a Second Class gunvessel; profile as fitted, Woolwich Yard July 1860. The funnel was hinged, and one sketch shows the crutch which supported it when folded down. *DR7998*

Vessel	*Total*	*Hull*	*Machinery*
Intrepid	46,114	16,382	24,339
Pioneer	48,966	20,407	21,350
Nimrod	47,544	11,811?	
ditto (Dyd Exp.)		+ 5,982	

Flying Fish Pembroke Dyd/Maudslay, Sons & Field. (1,302 ihp = 11.585kts.)

Ord: 18.4.1855. K: 6.1855. L: 20.12.1855. C: 29.1.1856. BU by Castle, Charlton 8.1866 (arrival date).

Pioneer Pembroke Dyd/Miller, Ravenhill & Salkeld. (1,150 ihp = 11.332kts.)

Ord: 18.4.1855. K: 7.1855. L: 19.1.1856. C: 31.5.1856. Sold to Marshall 10.1864 to BU at Plymouth 1865.

Victor Money Wigram & Son, Blackwall./Miller, Ravenhill & Co. (1,166 ihp = 11.583kts.)

Ord: 15.5.1855. K: 24.5.1855. L: 2.11.1855. C: 1.4.1856. Sold as *Scylla* to R. Gordon Coleman & Co. 11.1863, who resold her later the same month to the Confederacy as the raider CSS *Rappahannock*. She was interned by the French at Cherbourg and never served the Confederacy at sea.

Intrepid Money Wigram & Son, Blackwall./Maudslay, Sons & Field. (930 ihp = 10.35kts.)

Ord: 15.5.1855. K: 24.5.1855. L: 13.11.1855. C: 4.4.1856. Sold to Marshall 7.10.1864 to BU at Plymouth 1865.

Roebuck J. Scott Russell, Millwall./Miller, Ravenhill & Salkeld. (1,099 ihp = 11.377kts.)

Ord: 25.7.1855. K: 1.8.1855. L: 22.3.1856. C: 25.8.1857. Sold to Castle, Charlton to BU 1864.

Nimrod J. Scott Russell, Millwall./Maudslay, Sons & Field. (?363 ihp = 8.812kts.)

Ord: 25.7.1855. K: 1.8.1855. L: 21.4.1856. C: 23.2.1857. Sold to White, Cowes to BU 2.6.1865.

NOTES: First four named 30.5.1855, last two on 21.8.1855. *Flying Fish* and *Pioneer* 'built on the diagonal principle'. Building of *Roebuck* and *Nimrod* completed by workmen from Deptford Dyd (by AO 18.2.1856), maybe because Scott Russell's experience had been with iron ships (?); the second figure under hull costs is Dockyard expenses, the first that which was paid the builder. Maudslay cylinders were $58^{1}/_{16}$in diam., 27in stroke; Ravenhill were 55in diam., 30in stroke. Two more, ordered from Pembroke Dyd on 9.4.1856, were not built (cancellation date unrecorded). All except *Victor* were rerated as sloops in 1859 (*Pioneer* in 1860), but reverted to gunvessels in 1862.

***PHILOMEL* (or *RANGER*) Class** - Second Class gunvessels, 5 guns. Design derived not from the wartime gunvessels, but an enlargement of the *Algerine* Class gunboats.

Dimensions & tons: 145ft 0in, 127ft 10¼in x 25ft 4in oa (25ft 0in for tonnage) x 13ft 0in. $425^{14}/_{94}$ bm. 570 disp.

Men: 60. Guns: 1 x 68pdr MLSB (later replaced by 1 x 7in/110pdr BL), 2 x 24pdr howitzers, 2 x 20pdr BL.

Machinery: 2-cyl. horizontal single expansion (single trunk in *Ranger*). Single screw. 80 nhp (originally to have been 60 nhp). (See individual vessels below for ihp/speed.)

First cost: *Ranger* hull £12,537. *Espoir* hull £12,067. *Alban* before cancellation £951. *Undine* before cancellation £868. *Humber* before cancellation £1,149. *Rye* before cancellation £1,293.

Ranger Deptford Dyd/George Rennie & Sons. (284 ihp = 9.006kts.)

Ord: 1.4.1857. K: 16.11.1857. L: 26.11.1859. C: 10.5.1860. Sold to Messrs. Isaacs on 3.11.1869.

Espoir Pembroke Dyd/A. & J. Inglis. (286 ihp = 9.658kts.)

Ord: 1.4.1857. K: 25.4.1859. L: 7.1.1860. C: 27.9.1860. Became dredger *YC 19* in 1869, later to Bermuda where BU in 6.1881.

Landrail Deptford Dyd/Humphrys & Tennant. (253 ihp = 8.432kts.)

Ord: 27.3.1858. K: 3.8.1859. L: 27.3.1860. C: 27.9.1860. Sold for mercantile use 9.1869, renamed *Walrus*.

Nimble Pembroke Dyd/A. & J. Inglis. (334 ihp = 9.933kts.)

Ord: 27.3.1858. K: 30.10.1859. L: 15.9.1860. C: 8.4.1861. Harbour service 1879. RNR training ship at Hull 1885. Sold to W. R. James on 10.7.1906.

Speedwell Deptford Dyd/C. A. Day & Co. (322 ihp = 8.883kts.)

Ord: 27.3.1858. K: 2.4.1860. L: 12.2.1861. C: 19.10.1861. BU at Chatham 7.1876.

Pandora Pembroke Dyd/C. A. Day & Co. (346 ihp = 9.387kts.)

Ord: 8.4.1859. K: 30.3.1860. L: 7.2.1861. C: 9.1861. Sold as private yacht 13.1.1875, renamed *Jeanette* in 1881. Wrecked 13.6.1881.

Lee Money Wigram & Son, Blackwall./Robert Napier & Sons. (352 ihp = 9.691kts.)

Ord: 14.6.1859. K: 20.6.1859. L: 25.1.1860. C: 24.4.1862. BU completed at Sheerness 20.3.1875.

Dart C. J. Mare & Co., Millwall./Robert Napier & Sons. (281 ihp = 8.708kts.)

Ord: 14.6.1859. K: 27.6.1859. L: 10.3.1860. C: 8.3.1862. Renamed *Kangaroo* 1.4.1882. BU 12.1884.

Snipe J. Scott Russell, Millwall./Robert Napier & Sons. (363 ihp = 10.32kts.)

Scan and/or retouch by Grzechu

Ord: 14.6.1859. K: 27.6.1859. L: 5.5.1860. C: 6.8.1863. BU at Sheerness 5.1868.

Sparrow J. Scott Russell, Millwall./Robert Napier & Sons. (392 ihp = 10.872kts.)

Ord: 14.6.1859. K: 27.6.1859. L: 7.7.1860. C: 16.3.1863. BU by Marshall at Plymouth 1868.

Torch R. & H. Green, Blackwall. (No.353)./Robert Napier & Sons. (281 ihp = 8.843kts.)

Ord: 14.6.1859. K: 29.6.1859. L: 24.12.1859. C: 14.7.1860. BU at Malta 9.1881.

Plover R. & H. Green, Blackwall. (No.354)./Robert Napier & Sons. (341 ihp = 10.507kts.)

Ord: 14.6.1859. K: 29.6.1859. L: 19.1.1860. C: 5.9.1861. Sold for mercantile use 12.9.1865, renamed *Hawk*. Wrecked 1876.

Penguin Wm. Cowley Miller, Toxteth Dock, Liverpool./Robert Napier & Sons. (365 ihp = 11.078kts.)

Ord: 14.6.1859. K: 29.6.1859. L: 8.2.1860. C: 13.3.1861. Sold to Lethbridge & Drew to BU 26.2.1870.

Steady Wm. Cowley Miller, Toxteth Dock, Liverpool./Robert Napier & Sons. (360 ihp = 11.053kts.)

Ord: 14.6.1859. K: 29.6.1859. L: 8.2.1860. C: 12.6.1861. Sold to W. & T. Jolliffe 12.5.1870.

Cygnet Money Wigram & Co., Northam./Robert Napier & Sons. (354 ihp = 11.233kts.)

Ord: 14.6.1859. K: 28.7.1859. L: 6.6.1860. C: 13.6.1861. BU at Portsmouth 8.1868.

Griffon William Pitcher, Northfleet./Robert Napier & Sons. (326 ihp = 10.119kts.)

Ord: 14.6.1859. K: 28.6.1859. L: 25.2.1860. C: 28.7.1861. Collided with *Pandora* off Little Popo in West Africa 2.10.1866 and stranded.

Mullet Charles Lungley, Rotherhithe./Robert Napier & Sons. (355 ihp = 10.067kts.)

Ord: 14.6.1859. K: 29.6.1859. L: 3.2.1860. C: 30.4.1862. Sold at Hong Kong 25.4.1872, became sailing barque *Formosa*.

Philomel J. & R. White, Cowes./Robert Napier & Sons. (327 ihp = 10.85kts.)

Ord: 14.6.1859. K: 9.7.1859. L: 10.3.1860. C: 11.2.1861. Sold back to White, Cowes, to BU 2.6.1865.

Newport Pembroke Dyd/Laird Brothers. (325 ihp = 9.25kts.)

Ord: 5.3.1860. K: 17.9.1860. Suspended 1862/63. L: 20.7.1867. C: 4.1868 as survey ship. Sold for mercantile use 5.1881, renamed *Blencathra*; subsequently wrecked 11.6.1881 but salved. Renamed *Pandora* 1899.

Alban Deptford Dyd/... .

Ord: 5.3.1860. K: 1.10.1860. Suspended 1862/63. L: ... . Cancelled 12.12.1863

Jaseur Deptford Dyd/... .

Ord: 5.3.1860. K: 7.1.1861. L: 15.5.1862. C: 6.4.1863. Sold to the Commissioners of the Irish Lighthouses in 12.1874.

Humber Pembroke Dyd/... .

Ord: 5.3.1860. K: 8.2.1861. L: ... . Cancelled 12.12.1863.

Undine Deptford Dyd/... .

Ord: 5.3.1860. K: 31.12.1861. L: ... . Cancelled 12.12.1863.

Rye Pembroke Dyd/... .

Ord: 5.3.1860. K: ... . Cancelled 12.12.1863 (not laid down).

Portia Deptford Dyd/... .

Ord: 3.1861. K: ... . Cancelled 12.12.1863 (unstarted).

Discovery Deptford Dyd/... .

Ord: 3.1861. K: ... . Cancelled 12.12.1863 (unstarted).

NOTES: First six ordered as 'new type steam schooners', reclassed as gunvessels 8.6.1859. *Ranger*'s cylinders were 30$^{1}/_{8}$in in diam., 18in stroke; *Espoir*'s and *Nimble*'s 30in diam., 20in stroke; *Landrail*'s 32in diam., 16in stroke; *Speedwell*'s and *Pandora*'s 32in diam., 18in stroke. Next 12 ordered to be contract built, with fitting out at Dockyards - Deptford (*Lee* and *Dart*), Woolwich (*Snipe* and *Sparrow*), Chatham (*Torch* and *Plover*), Devonport (*Penguin* and *Steady*), Portsmouth (*Cygnet* and *Philomel*) and Sheerness (*Griffon*), to which was added *Mullet* (Deptford); all had Napier cylinders of 32in diam., 18in stroke. Final eight vessels were ordered from Dockyards; Laird cyliners of 30in diam., 18in stroke. First 18 all named 24.9.1859, next six 4.10.1860, last pair 21.3.1861. *Griffon*, *Mullet* and *Philomel* were ordered as follow-on *Algerine* Class gunboats, 'reintegrated with gunvessels' 1860. *Sparrow* fitted for Armstrongs in 1861 and then for service on the west coast of Africa (65 men).

***CORMORANT* (or *ECLIPSE*) Class** - First Class gunvessels.

Dimensions & tons: 185ft 0in, 165ft 7¼in x 28ft 4in oa (28ft 1in for tonnage) x 14ft 0in. Draught 11ft-12ft. 694$^{66}/_{94}$ bm. 877 disp.
Men: 90. Guns: 1 x 7in/110pdr BL, 1 x 68pdr MLSB, 2 x 20pdr BL.
Machinery: 2-cyl. horizontal single expansion. Single screw. 200 nhp. (See individual vessels below for ihp/speed.)
First cost: *Tartarus* £6,268 before cancellation.

Cormorant Money Wigram & Son, Blackwall./Robert Napier & Sons. (727 ihp = 11.155kts.)

Ord: 14.6.1859. K: 20.6.1859. L: 9.2.1860. C: 3.1862. Sold 7.6.1870 at Hong Kong.

Racehorse Money Wigram & Son, Blackwall./Robert Napier & Sons. (732 ihp = 10.937kts.)

Ord: 14.6.1859. K: 20.6.1859. L: 19.3.1860. C: 1863. Wrecked near Chefoo, China, on 4.11.1864.

Serpent C. J. Mare & Co., Millwall./Robert Napier & Sons. (774 ihp = 10.042kts.)

Ord: 14.6.1859. K: 27.6.1859. L: 23.6.1860. C: 4.1865. Sold to Castle to BU at Charlton 13.4.1875.

Star C. J. Mare & Co., Millwall./Robert Napier & Sons. (892 ihp = 11.1kts.)

Ord: 14.6.1859. K: 27.6.1859. L: 15.12.1860. C: 5.1865. Completed BU at Plymouth 14.3.1877.

Eclipse J. Scott Russell, Millwall./Robert Napier & Sons. (838 ihp = 11.0kts.)

Ord: 14.6.1859. K: 8.8.1859. L: 18.9.1860. C: ... . BU at Sheerness 7.1867.

Lily J. Scott Russell, Millwall./Robert Napier & Sons. (799 ihp = 11.48kts.)

Ord: 14.6.1859. K: 8.8.1859. L: 27.2.1861. C: 12.1863. BU at Sheerness 10.1867.

Sylvia Woolwich Dyd/Humphrys & Tennant. (689 ihp = 10.343kts.)

Ord: 5.3.1860. K: 7.5.1860. L: 20.3.1866. C: 10.1866 (as survey ship). Sold to George Cohen to BU 8.1889.

Nassau Pembroke Dyd/Humphrys & Tennant. (735 ihp = 10.585kts.)

Ord: 5.3.1860. K: 20.6.1860. L: 20.2.1866. C: 7.1866 (as survey ship). BU at Sheerness 4.1880.

Myrmidon Chatham Dyd/Humphrys & Tennant. (782 ihp = 10.838kts.)

Ord: 5.3.1860. K: 24.7.1860. L: 5.6.1867. C: 10.1867. Survey ship 1884. Sold at Hong Kong 4.1889.

Tartarus Pembroke Dyd/... .

Ord: 5.3.1860. K: 25.10.1860. L: ... . Cancelled 16.12.1864. BU 4.11.1865.

Pegasus Woolwich Dyd/... .

Ord: 25.3.1861. K: 13.1.1862. L: ... . Cancelled 12.12.1863 (cost £339).

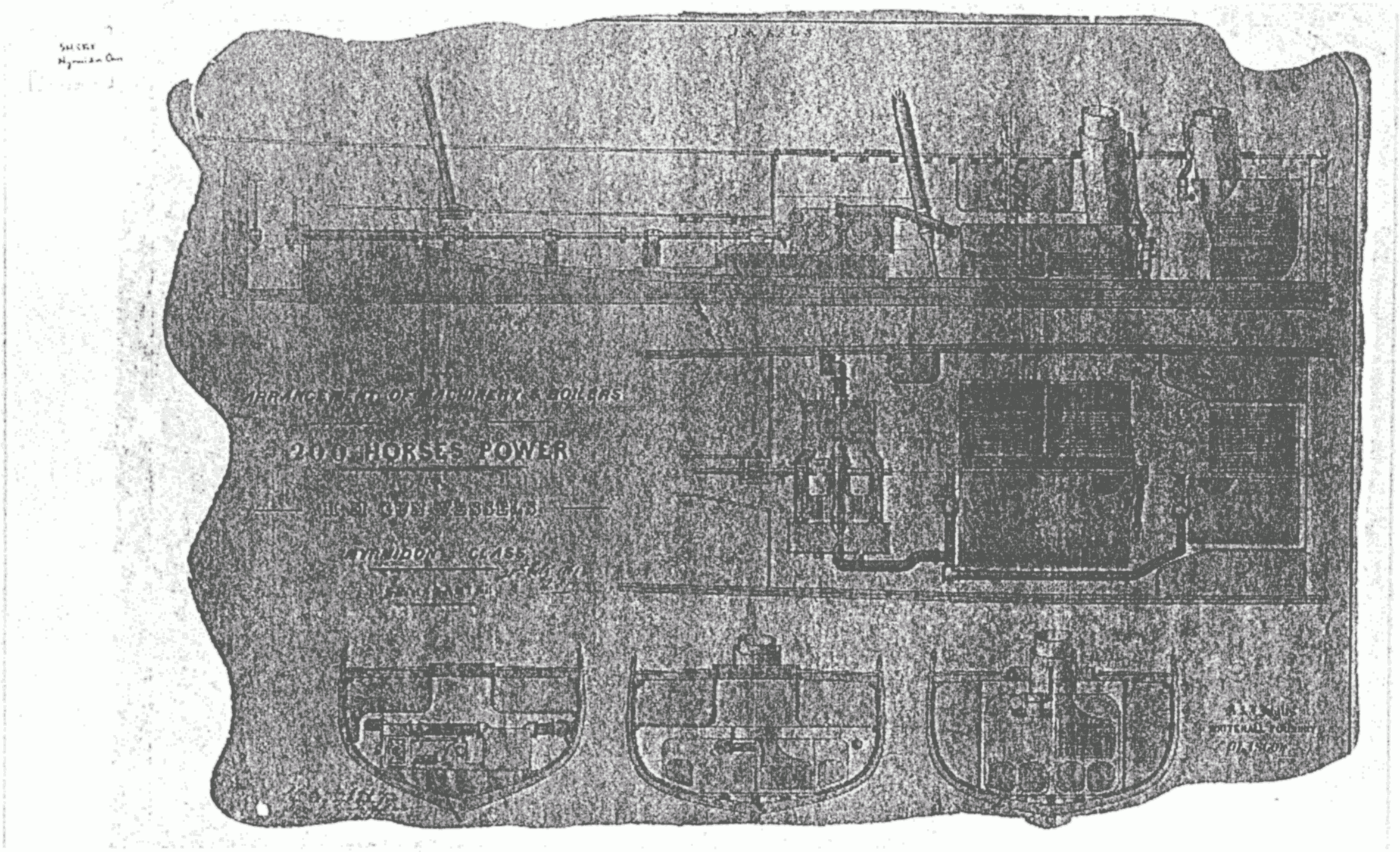
Albatross Chatham Dyd/... .

Ord: 25.3.1861. K: 1862. Cancelled 12.12.1863.

Guernsey Pembroke Dyd/... .

Ord: 25.3.1861. K: ... . Cancelled 12.12.1863 (not laid down).

NOTES: First six ordered to be contract built, with fitting out at Dockyards -



'Arrangement of machinery & boilers of 200 Horses [*sic*] Power for H.M. Gun Vessels of the *Myrmidon* Class', produced by A & J Inglis, Whitehall Foundry, Glasgow, and endorsed 28 February 1861. *DR5868*

Chatham (*Cormorant* and *Racehorse*) and Woolwich (*Serpent*, *Star*, *Eclipse* and *Lily*). These six all named 24.9.1859, next four 4.10.1860, last three 21.3.1861. Initially planned to carry 2 x 68pdr MLSB and 2 x 32pdr MLSB, they were completed with above armament, but subsequently re-armed with 1 x 7in (6½-ton) MLR and 2 x 64pdr MLR. Napier cylinders in first six were 45in diam., 24in stroke. Construction of *Sylvia*, *Nassau* and *Myrmidon* was suspended 1862/63, but later resumed; 150 nhp Humphrys engines (with cylinders of 42in diam., 26in stroke) fitted to *Sylvia* and *Nassau* for service as survey ships, while *Myrmidon* 200 nhp engines had similar-sized cylinders.

Screw Gunboats

The numerous wooden-hulled small gunboats that were mass-produced during the Russian War of 1854-58 resulted from the difficulties encountered by the Royal Navy during their initial 1854 campaigns in the Baltic and Black Seas. As the Russian Navy declined to leave the security of its ports, the British Admiralty - in response to public pressure - required a massive increase in its coastal bombardment forces. Besides the floating batteries detailed in the following chapter, the Admiralty ordered a large flotilla of small craft, designed to operate in very shallow waters. Collectively called the 'Great Armament', this programme was to build 156 new screw gunboats (as well as 56 sail-powered mortar vessels and 50 non-self-propelled mortar floats - for details see Chapter 2) by 1 March 1856. As even the Navy's gunvessels drew too much water, the new gunboats were flat-bottomed, and designed to draw only 6½ft. Slab-sided, with an almost square cross-section, they carried gaff sails with their masts stepped in tabernacles on the upper deck.

This massive programme brought several small firms without previous experience of naval work to warship building. These contractors built only the bare hulls, with the propulsion machinery being installed by the engine-builders. The boats were then taken to a naval dockyard to be coppered, rigged, armed and stored. To aid the process, a new specialist Gunboat Yard was built at Haslar Creek, Gosport (opposite Portsmouth), where many contract-built gunboats were fitted out (and a number of later gunboats built). Note comprehensive trials data is deficient for most Crimean era gunboats (unlike all larger vessels); individual trials ihp, but not speeds, are shown in parenthesis below where known. Most Crimean gunboats were quickly built using green or unseasoned timber, resulting in the short careers of many; even so, many were finished too late to take part in the war.

Following on these 156 vessels (comprising five classes with little variation in design), the lessons learnt were incorporated into six new *Algerine* Class gunboats, considerably larger and more seaworthy than their predecessors. After the war's end, 20 improved versions of the Crimean type were built with hoisting screws and a barquentine rig.

***GLEANER* (or *PELTER*) Class** - wooden 'Crimean' gunboats. W. H. Walker design, 1854.

Dimensions & tons: 100ft 0in, 86ft 4in x 22ft 0in oa (21ft 8in for tonnage) x 7ft 10in. $215^{53}/_{94}$ bm. 290 disp.

Men: 36. Guns: 1 x 68pdr (95 cwt) MLSB on slide pivot aft, 1 x 32pdr MLSB also on slide pivot, fwd, 2 x 24pdr howitzers on trucks.

Scan and/or retouch by Grzechu

Machinery: 2-cyl. (21in diam., 12in stroke) horizontal single expansion, trunk. 2 cylindrical boilers. Single (non-hoisting screw) 60 nhp. 270 ihp (designed) = 7.5kts. 25 tons coal.
First cost (£) of each vessel:

Vessel	*Total*	*Hull*	*Machinery*
Pelter	8,720	2,738	3,390
Pincher	8,730	3,397	3,481
Badger	7,526	2,761	3,363
Snapper	8,462	3,304	3,481
Gleaner	10,285	5,328	3,481
Wrangler	9,840	5,679	3,277

Pelter W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 16.6.1854. K: 29.6.1854. L: 28.8.1854. C: 20.10.1854. Sold for BU 1.1864, BU completed by Tolpult 1.2.1864.

Pincher W. & H. Pitcher, Northfleet/John Penn & Sons. (215 ihp.)
Ord: 16.6.1854. K: 29.6.1854. L: 5.9.1854. C: 28.3.1855. BU completed 17.2.1864.

Badger (ex-*Ranger*, renamed before launching) W. & H. Pitcher, Northfleet./John Penn & Sons. (215 ihp.)
Ord: 16.6.1854. K: 6.1854. L: 23.9.1854. C: 26.3.1855. BU at Portsmouth 6.1864.

Snapper W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 16.6.1854. K: 6.1854. L: 4.10.1854. C: 27.3.1855. Became a coal hulk in 1865, sold 1906.

Gleaner Deptford Dyd/John Penn & Sons.
Ord: 16.6.1854. K: 29.6.1854. L: 7.10.1854. C: 28.3.1855. Sold at Montevideo 4.1868.

Ruby Deptford Dyd/John Penn & Sons.
Ord: 16.6.1854. K: 29.6.1854. L: 7.10.1854. C: 8.3.1855. BU 10.1868.

NOTES: All named 24.6.1854. An armament of 2 x 68pdr was planned at outset, but the forward gun was substituted by a 32pdr. Carried a light schooner rig, with a sail area of 2,426 sq.ft.

***DAPPER* Class** - wooden 'Crimean' gunboats. W. H. Walker design, 1854.
Dimensions & tons: 106ft, 93ft 2½in x 22ft oin oa (21ft 8in for tonnage) x 8ft oin. 6¾ft draught. $232^{68}/_{94}$ bm. 284 disp.
Men: 36. Guns: 1 x 68pdr (95 cwt) MLSB on pivot aft, 1 x 32pdr MLSB fwd, replacing planned second 68pdr, 2 x 24pdr howitzers on broadside trucks.
Machinery: 2-cyl. horizontal single expansion, direct-acting (trunk in Penn-engined vessels). 3 cylindrical boilers (2 in Penn vessels). Single (non-hoisting) screw. 60 nhp. 270 ihp (designed) = 7.5kts. 25 tons coal.
First cost (£) of each vessel:

Vessel	*Total*	*Hull*	*Machinery*
Lark	10,497	6,334	3,450
Magpie	10,300	6,245	3,450
Dapper	9,990	4,179	3,567
Fancy	10,617	4,679	3,887
Grinder	10,624	4,084	3,567
Jasper	10,326	3,963	3,440
Hind	10,324	4,471	3,475
Jackdaw	10,016	4,189	3,475
Thistle	?9,136	4,264	3,065
Starling	9,820	4,264	3,575
Snap	9,926	4,264	3,569
Redwing	10,046	4,264	3,497
Weazel	10,267	4,264	3,568
Clinker	9,217	4,264	3,575
Cracker	10,159	4,264	3,628
Boxer	9,423	4,264	3,575
Stork	9,709	4,264	3,497
Skylark	9,925	4,264	3,497
Biter	9,882	4,264	3,561
Swinger	10,104	4,264	3,497

Lark Deptford Dyd/Maudslay, Sons & Field. (210 ihp.)
Ord: 6.10.1854. K: 5.10.1854. L: 15.3.1855. C: 3.4.1855. Sold to Marshall to BU at Plymouth 18.7.1878.

Magpie Deptford Dyd/Maudslay, Sons & Field. (210 ihp.)
Ord: 6.10.1854. K: 5.10.1854. L: 15.3.1855. C: 3.4.1855. Wrecked in Galway Bay 8.4.1864.

Dapper R. & H. Green, Blackwall (No.312)/John Penn & Sons. (272 ihp.)
Ord: 6.10.1854. K: 10.1854. L: 31.3.1855. C: 19.4.1855. Training hulk 1885. Cooking depot 1897. Renamed *YC.37* in 1909. Sold to Perry 10.5.1922.

Fancy R. & H. Green, Blackwall (No.313)/John Penn & Sons. (262 ihp.).
Ord: 6.10.1854. K: 10.1854. L: 31.3.1855. C: 16.4.1855. Hulked as part of the *St. Vincent* training establishment 1876, being used as a laundry/drying room. Sold at Portsmouth 11.7.1905.

Grinder J. & R. White, West Cowes/Maudslay, Sons & Field.
Ord: 6.10.1854. K: 13.10.1854. L: 7.3.1855. C: 17.5.1855. BU at Haslar 15.7.1864.

Jasper J. & R. White, West Cowes/Maudslay, Sons & Field. (205 ihp.)
Ord: 6.10.1854. K: 13.10.1854. L: 2.4.1855. C: 7.5.1855. Grounded in action at Taganrog, Sea of Azov 23.7.1855.

Hind John Jenkins Thompson, Rotherhithe/Maudslay, Sons & Field. (216 ihp.)
Ord: 6.10.1854. K: 18.10.1854. L: 3.5.1855. C: 4.6.1855. BU at Devonport 10.1872.

Jackdaw John Jenkins Thompson, Rotherhithe/Maudslay, Sons & Field. (207 ihp.)
Ord: 6.10.1854. K: 18.10.1854. L: 18.5.1855. C: 7.6.1855. Became a cooking depot in 1868. Sold to C. Wort 11.1888.

Thistle W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 6.10.1854. K: 25.10.1854. L: 3.2.1855. C: 7.4.1855. Completed BU at Deptford 11.11.1863.

Starling W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 6.10.1854. K: 28.10.1854. L: 1.2.1855. C: 7.4.1855. Sold at Hong Kong 1.12.1871.

Snap W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 6.10.1854. K: 3.11.1854. L: 3.2.1855. C: 7.4.1855. Sold at Hong Kong 1868 and then resold to the Japanese as the warship *Kaku-ten-shan* (presumably for one of the rebellious clans, as no such vessel appears in the main lists of the Imperial Navy), then became *Snap* 1872 again as a merchantman.

Redwing W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (210 ihp.)
Ord: 6.10.1854. K: 3.11.1854. L: 19.3.1855. C: 11.4.1855. Became tender to the *Cambridge* training ship at Devonport 1857. Sold 2.12.1878.

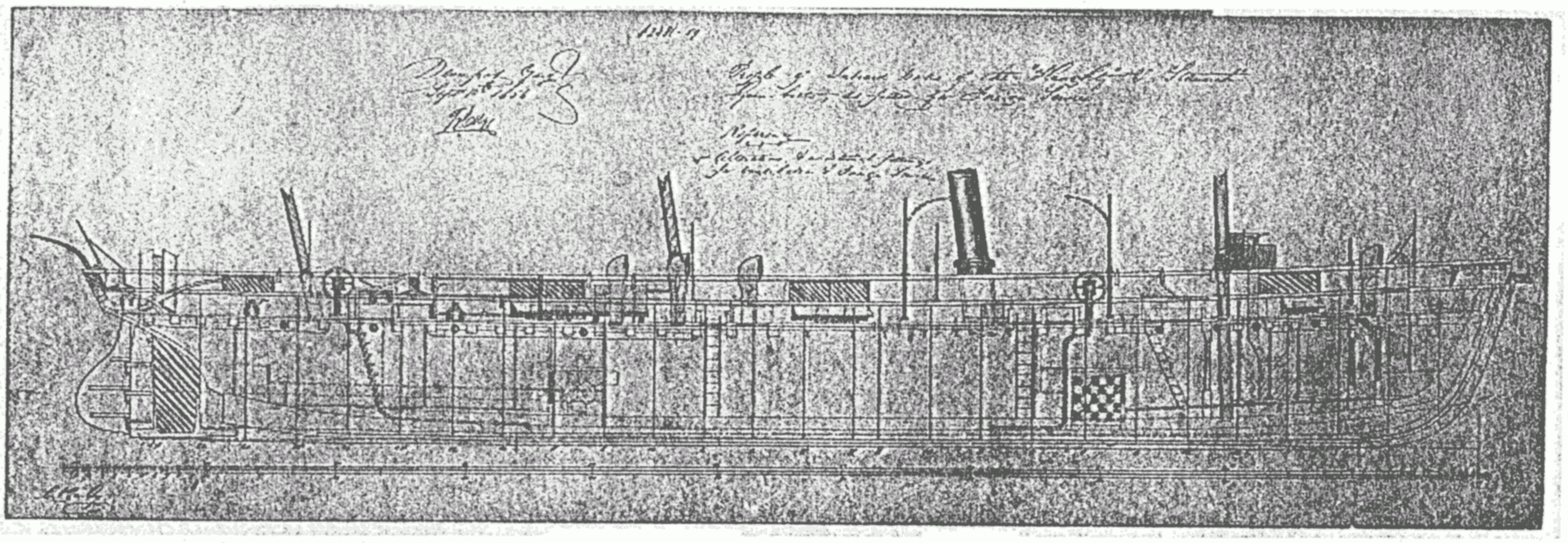
Weazel W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 6.10.1854. K: 3.11.1854. L: 19.3.1855. C: 14.4.1855. Sold at Hong Kong 18.11.1869.

Clinker W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 6.10.1854. K: 4.12.1854. L: 2.4.1855. C: 21.4.1855. Sold to Castle for BU at Charlton 6.6.1871.

Cracker W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (207 ihp.)
Ord: 6.10.1854. K: 16.12.1854. L: 2.4.1855. C: 21.4.1855. BU 4.1864.

Boxer W. & H. Pitcher, Northfleet./John Penn & Sons.
Ord: 6.10.1854. K: 5.1.1855. L: 7.4.1855. C: 27.4.1855. BU at Malta 10.1865.

Stork W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (233 ihp.)
Ord: 6.10.1854. K: 19.1.1855. L: 7.4.1855. C: 20.5.1855. Coal hulk 1874. Sold to BU 4.1884.



Profile of inboard works for the gunboats *Haughty* and *Staunch* of the *Albacore* Class, Devonport 10 September 1856. A note on the draught refers to alterations and additions to ventilation and fittings for foreign service. *DR7485*

Skylark W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 6.10.1854. K: 19.1.1855. L: 3.5.1855. C: 25.5.1855. Gunnery tender 1884. Sold to Garnham for BU 10.7.1906.

Biter W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 6.10.1854. K: 5.2.1855. L: 5.5.1855. C: 25.5.1855. Became a coal hulk 21.4.1865, later renamed *C.16*. Sold to Castle, Woolwich to BU 12.4.1904.

Swinger W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (217 ihp.)
Ord: 6.10.1854. K: 5.2.1855. L: 10.5.1855. C: 7.6.1855. BU 6.9.1864.

NOTES: All named 14.10.1854. Half (10 vessels) engined by Maudslay, Sons & Field; and half by John Penn & Sons. W. & H. Pitcher went into receivership in 1855, and 6 of the above 12 *Dapper* Class vessels built by them (plus all 34 *Albacore* Class, 4 *Clown* Class and 4 *Algerine* Class subsequently built at Northfleet) were under the Receiver-appointed management of C. J. Mare & Co.

***ALBACORE* Class** - wooden 'Crimean' gunboats. W. H. Walker design, 1855.
Dimensions & tons: 106ft 0in, 93ft 2½in x 22ft 0in oa (21ft 8in for tonnage) x 8ft 0in. 6½ft draught. 232$^{68}/_{94}$ bm. 284 disp.
Men: 36-40. Guns: 1 x 68pdr (95 cwt) MLSB on pivot aft, 1 x 32pdr MLSB fwd, replacing planned second 68pdr, 2 x 24pdr howitzers on broadside trucks.
Machinery: 2 cyl. horizontal single expansion, direct-acting (trunk in Penn-engined vessels). 3 cylindrical boilers (2 in Penn vessels). Single (non-hoisting) screw. 60 nhp. 203-233 ihp = 7.5kts. 25 tons coal.
First cost (£) of each vessel:

Vessel	*Total*	*Hull*	*Machinery*
Beaver	10,629	4,159	3,611
Whiting	9,538	4,140	3,611
Nightingale	10,521	4,310	3,537
Violet	10,374	4,236	3,537
Seagull	10,454	4,369	3,573
Skipjack	10,382	4,396	3,516
Sandfly	10,327	4,492	3,507
Sheldrake	10,378	4,527	3,566
Plover	10,106	4,500	3,587
Tickler	10,394	4,533	3,566
Banterer	10,469	4,789	3,534
Bullfrog	10,648	4,800	3,408
Bustard	10,485	4,796	3,224
Carnation	10,398	4,802	3,408
Charger	?9,315	4,808	3,334
Cockchafer	10,552	4,804	3,408
Dove	10,709	4,797	3,334
Forward	10,554	4,798	3,408
Grasshopper	10,397	4,802	3,374
Hasty	10,120	4,805	3,408
Herring	10,369	4,791	3,334
Insolent	10,610	4,805	3,408
Mayflower	10,372	4,746	3,334
Staunch	10,722	4,783	3,410
Goldfinch	10,552	4,639	3,283
Goshawk	10,459	4,620	3,318
Julia	9,901	3,910	3,019
Louisa	9,868	3,920	3,528
Bouncer	...	3,524	*3,524
Hyena	10,929	5,207	3,504
Savage	9,100	4,840	3,450
Wolf	9,192	4,879	3,285
Griper	10,363	4,851	3,283
Fervent	10,551	4,942	3,283
Forester	10,327	4,894	3,283
Spanker	10,302	4,625	3,270
Traveller	0,389	4,810	3,270
Thrasher	10,281	4,708	3,260
Opossum	11,376	4,954	3,297
Partridge	10,904	4,946	3,303
Charon	10,566	4,790	3,560
Haughty	10,810	4,805	3,560
Leveret	10,363	4,797	3,560
Mackerel	10,437	4,799	3,560
Procris	10,311	4,806	3,315
Shamrock	10,770	4,774	3,560
Spey	10,399	4,792	3,560
Tilbury	10,448	4,779	3,569
Peacock	10,779	4,910	3,308
Pheasant	9,288	4,904	3,327
Primrose	9,205	4,924	3,327
Pickle	8,809	4,500	...

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Vessel	*Total*	*Hull*	*Machinery*
Prompt	8,840	4,519	3,327
Porpoise	8,632	4,505	3,027
Firm	10,627	4,626	4,052
Flamer	12,299	4,623	3,512
Fly	9,844	4,629	3,525
Sepoy	10,725	5,667	3,298
Erne	10,743	5,668	3,298
Spider	10,385	5,669	3,298
Lively	10,660	5,666	3,298
Surly	9,867	5,656	3,298
Swan	9,848	5,667	3,298
Delight	10,559	5,233	3,312
Grappler	10,559	5,238	3,283
Growler	11,067	5,256	3,314
Parthian	9,592	5,250	3,314
Quail	11,812	4,858	3,311
Ripple	8,950	4,866	3,011
Cochin	...	5,437	3,524
Cherokee	9,636	5,468	3,512
Camel	...	5,477	3,506
Caroline	9,612	5,484	3,512
Confounder	...	5,477	3,517
Crocus	8,846	5,069	3,511
Beacon	10,233	5,660	3,593
Brave	...	5,657	3,593
Bullfinch	11,899	* ...	* ...
Redbreast	10,376	5,656	3,593
Rose	9,975	5,450	3,592
Blazer	11,159	5,658	3,586
Rainbow	11,130	5,658	3,591
Brazen	10,953	* ...	* ...
Raven	10,116	5,659	3,591
Rocket	9,275	5,651	3,592
Hardy	12,424	5,660	3,327
Havock	12,306	5,675	3,321
Highlander	8,999	5,630	3,325
Albacore	8,978	4,808	3,284
Amelia	8,627	4,675	3,291
Foam	...	5,053	3,602
Wave	9,130	4,682	3,602
Magnet	11,324	5,600	3,638
Manly	11,389	5,583	3,638
Mastiff	11,228	5,575	3,638
Mistletoe	11,314	5,569	3,638
Earnest	...	5,592	3,212
Escort	8,511	5,179	3,310

(* *Bouncer* fitting £4,631. *Brazen* and *Bullfinch* each cost £9,275 for combined hull and machinery.)

Beaver Money Wigram & Son, Northam/John Penn & Sons.
Ord: 18.4.1855. K: 28.5.1855. L: 28.11.1855. C: 31.5.1856. BU at Portsmouth 1864.

Whiting Money Wigram & Son, Northam/John Penn & Sons. (183 ihp.)
Ord: 18.4.1855. K: 28.5.1855. L: 9.1.1856. C: 8.2.1856. BU 12.1881.

Nightingale C. J. Mare & Co., Blackwall./Maudslay, Sons & Field. (200 ihp.)
Ord: 18.4.1855. K: 1.6.1855. L: 22.12.1855. C: 11.3.1856. Sold to W. Lethbridge to BU 16.7.1867.

Violet C. J. Mare & Co., Blackwall/Maudslay, Sons & Field. (206 ihp.)
Ord: 18.4.1855. K: 1.6.1855. L: 9.1.1856. C: 18.3.1856. Sold to Marshall to BU at Plymouth 7.10.1864.

Seagull W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (212 ihp.)
Ord: 2.5.1855. K: 1.5.1855. L: 4.6.1855. C: 22.12.1855. Sold to Marshall to BU at Plymouth 7.10.1864.

Skipjack W. & H. Pitcher, Northfleet/John Penn & Sons. (265 ihp.)
Ord: 2.5.1855. K: 8.5.1855. L: 4.8.1855. C: 10.12.1855. Boilers removed in 1862, became a cooking depot in 1874 (with engines removed). BU at Devonport completed 4.2.1879.

Sandfly W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (205 ihp.)
Ord: 2.5.1855. K: 16.5.1855. L: 1.9.1855. C: 4.1.1856. Sold to W. Lethbridge to BU 5.11.1867.

Sheldrake W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 2.5.1855. K: 18.5.1855. L: 1.9.1855. C: 16.12.1855. Sold at Montevideo 30.6.1865.

Plover W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (214 ihp.)
Ord: 2.5.1855. K: 16.6.1855. L: 8.9.1855. C: 3.1.1856. Sunk in action with the Taku forts in the Peiho River 26.6.1859.

Tickler W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 2.5.1855. K: 20.6.1855. L: 8.9.1855. C: 26.12.1855. BU at Deptford completed 21.11.1863.

Banterer W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (218 ihp.)
Ord: 30.6.1855. K: 12.7.1855. L: 29.9.1855. C: 9.1.1856. Grounded in action with the Taku forts in the Peiho River 25.6.1859, but refloated. Sold at Hong Kong 30.12.1872.

Bullfrog W. & H. Pitcher, Northfleet/John Penn & Sons. (263 ihp.)
Ord: 30.6.1855. K: 20.7.1855. L: 6.10.1855. C: 6.1.1856. BU at Sheerness 8.6.1875.

Bustard W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (212 ihp.)
Ord: 30.6.1855. K: 1.8.1855. L: 20.10.1855. C: 9.1.1856. Fitted for foreign service 1856. Sold to Cheeong Loong at Hong Kong 18.11.1869.

Carnation W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 30.6.1855. K: 7.8.1855. L: 20.10.1855. C: 16.1.1856. BU at Sheerness 1863.

Charger W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (215 ihp.)
Ord: 30.6.1855. K: 9.8.1855. L: 13.11.1855. C: 24.1.1856. Became a buoy boat at Halifax 6.1866. Later renamed *YC.3* on 24.6.1866, then *YC.6* in 1869. Sold 7.1887 as mercantile SS *Rescue*. BU 1921.

Cockchafer W. & H. Pitcher, Northfleet/John Penn & Sons. (288 ihp.)
Ord: 30.6.1855. K: 6.9.1855? L: 24.11.1855. C: 26.1.1856. Fitted for service in China 1859. Sold to Telge Northing Company at Shanghai 1872.

Dove W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (215 ihp.)
Ord: 30.6.1855. K: 11.9.1855. L: 24.11.1855. C: 24.1.1856. Sold to P. & O. S. N. Co. at Shanghai 14.4.1873.

Forward W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 30.6.1855. K: 13.9.1855. L: 8.12.1855. C: 9.2.1856. Fitted for service in British Columbia in 1859. Sold to Hill & Ready, Esquimault 28.9.1869.

Grasshopper W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (223 ihp.)
Ord: 30.6.1855. K: 14.9.1855. L: 12.1.1856. C: 5.2.1856. Sold at Newchang 5.1871.

Hasty W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 30.6.1855. K: 8.10.1855. L: 10.1.1856. C: 20.2.1856. Sold to Castle for BU at Charlton 11.1865.

Herring W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (225 ihp.)
Ord: 30.6.1855. K: 8.10.1855 L: 10.1.1856. C: 29.2.1856. BU at Sheerness 8.1865.

Insolent W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 30.6.1855. K: 24.10.1855. L: 26.1.1856. C: 8.3.1856. Lent to the Board of Works for the Maintenance of Lighthouses in 1856 - later returned. Sold at Chefoo in China 1.5.1869.

Mayflower W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (203 ihp.)
Ord: 30.6.1855. K: 1.11.1855. L: 31.1.1856. C: 17.3.1856. Became tender

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to *President* in 1862. BU at Sheerness 8/9.1867.

Staunch W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 30.6.1855. K: 2.11.1855. L: 31.1.1856. C: 12.3.1856. Fitted for foreign service 9.1856. Between 30.7.1862 and 3.8.1862 stuck on a rock at Canton but managed to get off. Sold at Hong Kong 12.1866 and BU.

Goldfinch Money Wigram & Son, Blackwall/Maudslay, Sons & Field. (205 ihp.)
Ord: 26.7.1855. K: 30.7.1855. L: 2.2.1856. C: 15.3.1856. BU at Pembroke 22.6.1869.

Goshawk Money Wigram & Son, Blackwall/Maudslay, Sons & Field. (210 ihp.)
Ord: 26.7.1855. K: 30.7.1855. L: 9.2.1856. C: 17.3.1856. BU at Devonport 18.3.1869.

Julia Fletcher & Fearnall, Limehouse/John Penn & Sons.
Ord: 26.7.1855. K: 2.8.1855. L: 27.11.1855. C: 25.2.1856. BU by Marshall at Plymouth 2.1866.

Louisa Fletcher & Fearnall, Limehouse/John Penn & Sons.
Ord: 26.7.1855. K: 9.8.1855. L: 12.1855. C: 17.3.1856. Sold to W. Lethbridge to BU 27.8.1867.

Bouncer C. J. Mare & Co., Blackwall/John Penn & Sons.
Ord: 26.7.1855. K: 15.8.1855. L: 23.2.1856. C: 1859. Sold at Hong Kong 1.2.1871.

Hyaena C. J. Mare & Co., Blackwall/John Penn & Sons.
Ord: 26.7.1855. K: 15.8.1855. L: 3.4.1856. C: 12.4.1856. Sold to W. E. Joliffe as a salvage vessel 8.3.1870. BU 1894.

Savage C. J. Mare & Co., Blackwall/John Penn & Sons.
Ord: 26.7.1855. K: 15.8.1855. L: 5.5.1856. C: 13.10.1856. Became mooring lighter *YC.3* 1864. BU at Malta 9.1888.

Wolf C. J. Mare & Co., Blackwall/Maudslay, Sons & Field. (210 ihp.)
Ord: 26.7.1855. K: 15.8.1855. L: 5.7.1856. C: 8.2.1856. Completed BU 8.7.1864.

Griper R. & H. Green, Blackwall (No.324)/Maudslay, Sons & Field. (219 ihp.)
Ord: 26.7.1855. K: 26.8.1855. L: 11.12.1855. C: 22.2.1856. Became tender to a Coastguard ship in 1861 and was fitted for Armstrong guns in 1862. BU at Devonport 18.3.1869.

Fervent R. & H. Green, Blackwall (No.325)/Maudslay, Sons & Field. (209 ihp.)
Ord: 26.7.1855. K: 26.8.1855. L: 23.1.1856. C: 24.3.1856. BU at Devonport 2.1879.

Forester R. & H. Green, Blackwall (No.326)/Maudslay, Sons & Field. (223 ihp.)
Ord: 26.7.1855. K: 26.8.1855. L: 23.1.1856. C: 24.3.1856. Became yard craft *YC.7* at Hong Kong in 1868 and was lost in a typhoon at Hong Kong on 2.9.1871.

Spanker R. & H. Green, Blackwall (No.328)/Maudslay, Sons & Field. (210 ihp.)
Ord: 26.7.1855. K: 26.8.1855. L: 22.3.1856. C: 12.4.1856. BU at Chatham 8.1874.

Traveller R. & H. Green, Blackwall (No.329)/Maudslay, Sons & Field. (213 ihp.)
Ord: 26.7.1855. K: 26.8.1855. L: 13.3.1856. C: 11.4.1856. Fitted for Armstrong guns in 1861. Completed BU at Portsmouth 28.12.1863.

Thrasher R. & H. Green, Blackwall (No.330)/Maudslay, Sons & Field. (212 ihp.)
Ord: 26.7.1855. K: 16.8.1855. L: 22.3.1856. C: 12.4.1856. Sold by AO of 9.5.1883.

Opossum Money Wigram & Son, Northam/Maudslay, Sons & Field. (210 ihp.)
Ord: 26.7.1855. K: 10.9.1855. L: 26.2.1856. C: 31.8.1856. Became a hospital hulk in 1876, then a mooring vessel in 1891. Renamed *Siren* in 1895 and sold at Hong Kong in 1896.

Partridge Money Wigram & Son, Northam/Maudslay, Sons & Field. (210 ihp.)
Ord: 26.7.1855. K: 10.9.1855. L: 29.3.1856. C: 4.1856. Fitted for reserve, 1859 commissioned as tender to *Royal Albert*. Sold to Messrs. Habgood to BU 8.9.1864.

Charon W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 26.7.1855. K: 14.11.1855. L: 9.2.1856. C: 19.3.1856. BU by Marshall at Plymouth 10.1865.

Haughty W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 26.7.1855. K: 20.11.1855. L: 9.2.1856. C: 18.3.1856. Sold at Hong Kong 23.5.1867.

Leveret W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 26.7.1855. K: 10.11.1855. L: 8.3.1856. C: 8.4.1856. BU at Portsmouth 10.1867.

Mackerel W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 26.7.1855. K: 10.11.1855. L: 8.3.1856. C: 8.4.1856. BU completed at Portsmouth on 18.7.1862.

Procris W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (219 ihp.)
Ord: 26.7.1855. K: 19.12.1855. L: 13.3.1856. C: 12.4.1856. Cooking depot ship at Devonport 30.6.1869. Sold to T. Hockling 31.5.1893 and BU at Stonehouse.

Shamrock W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 26.7.1855. K: 19.12.1855. L: 13.3.1856. C: 9.4.1856. Sold to Marshall to BU at Plymouth 4.1867.

Spey W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 26.7.1855. K: 1.2.1856. L: 29.3.1856. C: 14.4.1856. BU at Deptford 12.1863.

Tilbury W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 26.7.1855. K: 1.2.1856. L: 29.3.1856. C: 14.4.1856. BU by Marshall at Plymouth 2.8.1865.

October batch

Peacock W. & H. Pitcher, Northfleet./Maudslay, Sons & Field. (215 ihp.)
Ord: 3.10.1855. K: 5.2.1856. L: 12.4.1856. C: 22.4.1856. BU at Portsmouth 25.3.1869.

Pheasant W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (215 ihp.)
Ord: 3.10.1855. K: 15.2.1856. L: 1.5.1856. C: 31.1.1857. BU completed at Sheerness 31.8.1877.

Primrose W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (215 ihp.)
Ord: 3.10.1855. K: 15.2.1856. L: 3.5.1856. C: 3.1.1857. BU completed 25.5.1864.

Pickle W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (215 ihp.)
Ord: 3.10.1855. K: 20.2.1856. L: 3.5.1856. C: 3.1.1857. BU completed 12.4.1864.

Prompt W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (215 ihp.)
Ord: 3.10.1855. K: 25.2.1856. L: 21.5.1856. C: 3.1.1857. BU completed 6.5.1864.

Porpoise W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (215 ihp.)
Ord: 3.10.1855. K: 8.3.1856. L: 7.6.1856. C: 29.9.1860. BU completed 22.2.1864.

Firm Fletcher & Fearnall, Limehouse/John Penn & Sons. (260 ihp.)
Ord: 4.10.1855. K: 9.10.1855. L: 22.3.1856. C: 12.4.1856. Sold at Shanghai 1872.

Flamer Fletcher & Fearnall, Limehouse/John Penn & Sons. (257 ihp.)
Ord: 4.10.1855. K: 26.11.1855. L: 10.4.1856. C: 10.11.1859. Coastal defence in 1868. Hospital ship 1871. Blown ashore during a typhoon at Hong Kong 22.9.1871 and the wreck then sold.

Fly Fletcher & Fearnall, Limehouse/John Penn & Sons.
Ord: 4.10.1855. K: 10.12.1855. L: 5.4.1856. C: 5.7.1856. BU 1862.

Sepoy T. & Wm. Smith, North Shields/Maudslay, Sons & Field. (217 ihp.)

Scan and/or retouch by Grzechu

Ord: 4.10.1855. K: 8.10.1855. L: 13.2.1856. C: 5.4.1856. Fitted for Armstrong guns 1861. BU 4.1868.

Erne T. & Wm. Smith, North Shields/Maudslay, Sons & Field. (212 ihp.)
Ord: 4.10.1855. K: 8.10.1855. L: 18.2.1856. C: 3.4.1856. BU at Chatham 1874.

Spider T. & Wm. Smith, North Shields/Maudslay, Sons & Field. (218 ihp.)
Ord: 4.10.1855. K: 13.10.1855. L: 23.2.1856. C: 11.4.1856. Fitted for Armstrong guns 1861. Sold to Castle to BU at Charlton 12.5.1870.

Lively T. & Wm. Smith, North Shields/Maudslay, Sons & Field. (216 ihp.)
Ord: 4.10.1855. K: 15.10.1855. L: 23.2.1856. C: 11.4.1856. Wrecked on the Dutch coast 23.12.1863, later salved and became the German mail steamer *Heligolanderin*.

Surly T. & Wm. Smith, North Shields/Maudslay, Sons & Field. (217 ihp.)
Ord: 4.10.1855. K: 15.10.1855. L: 18.3.1856. C: 5.7.1856. Became a tender to the Coastguard in 1861. Sold to Thomas J. Begbie 1869.

Swan T. & Wm. Smith, North Shields/Maudslay, Sons & Field. (215 ihp.)
Ord: 4.10.1855. K: 14.11.1855. L: 12.4.1856. C: 2.10.1856. Became a coal hulk in 1869. Sold 1906.

Delight Money Wigram & Son, Blackwall/Maudslay, Sons & Field. (218 ihp.)
Ord: 4.10.1855. K: 12.10.1855? L: 15.3.1856. C: 5.4.1856. Sold at Halifax as mercantile *M. A. Starr* 11.1867.

Grappler Money Wigram & Son, Blackwall/Maudslay, Sons & Field. (211 ihp.)
Ord: 4.10.1855. K: 12.10.1855. L: 29.3.1856. C: 12.4.1856. Fitted for service in British Columbia 1859. Sold mercantile at Esqimault 6.1.1868. Burnt 3.5.1883. BU 1884.

Growler Money Wigram & Son, Blackwall/Maudslay, Sons & Field. (215 ihp.)
Ord: 4.10.1855. K: 12.10.1855. L: 8.5.1856. C: 30.7.1858. BU at Malta 8.1864.

Parthian Money Wigram & Son, Blackwall/Maudslay, Sons & Field. (215 ihp.)
Ord: 4.10.1855. K: 12.10.1855. L: 8.5.1856. C: 8.12.1856. BU completed 14.9.1864.

Quail Money Wigram & Son, Blackwall/Maudslay, Sons & Field. (215 ihp.)
Ord: 4.10.1855. K: 12.10.1855. L: 2.6.1856. C: 30.7.1858. BU at Malta 9.1861.

Ripple Money Wigram & Son, Blackwall/Maudslay, Sons & Field. (215 ihp.)
Ord: 4.10.1855. K: 12.10.1855. L: 2.6.1856. C: 24.4.1857. BU by Marshall at Plymouth 4.1866.

Cochin R. & H. Green, Blackwall (No.331)/John Penn & Sons.
Ord: 7.10.1855. K: 1.12.1855. L: 8.4.1856. C: 20.4.1856. BU at Sheerness 3.1863.

Cherokee R. & H. Green, Blackwall (No.332)/John Penn & Sons.
Ord: 7.10.1855. K: 1.12.1855. L: 30.4.1856. C: 3.10.1856. BU at Portsmouth 25.3.1869.

Camel R. & H. Green, Blackwall (No.333)/John Penn & Sons.
Ord: 7.10.1855. K: 1.12.1855. L: 3.5.1856. C: ... . BU 30.6.1864.

Caroline R. & H. Green, Blackwall (No.334)/John Penn & Sons.
Ord: 7.10.1855. K: 1.12.1855. L: 9.5.1856. C: 2.10.1856. BU at Portsmouth 19.2.1862.

Confounder R. & H. Green, Blackwall (No.335)/John Penn & Sons.
Ord: 7.10.1855. K: 12.1855. L: 21.5.1856. C: 1856. BU 4.10.1864.

Crocus R. & H. Green, Blackwall (No.336)/John Penn & Sons.
Ord: 7.10.1855. K: 1.12.1855. L: 4.6.1856. C: 1856. BU 27.7.1864.

Beacon John Laird, Sons & Co., Birkenhead (No.151)/John Penn & Sons.
Ord: 8.10.1855. K: 17.10.1855. L: 11.2.1856. C: 29.3.1856. BU 27.8.1864.

Brave John Laird, Sons & Co., Birkenhead (No.152)/John Penn & Sons.
Ord: 8.10.1855. K: 17.10.1855. L: 11.2.1856. C: 3.1856. Laid up after completion at Haslar. BU at Portsmouth 25.3.1869.

Bullfinch John Laird, Sons & Co., Birkenhead (No.153)/John Penn & Sons.
Ord: 8.10.1855. K: 17.10.1855. L: 25.2.1856. C: 6.1857. BU 8.1864.

Redbreast John Laird, Sons & Co., Birkenhead (No.154)/John Penn & Sons.
Ord: 8.10.1855. K: 17.10.1855. L: 11.3.1856. C: 14.4.1856. BU completed 24.9.1864.

Rose John Laird, Sons & Co., Dingle (No.155)/John Penn & Sons.
Ord: 8.10.1855. K: 6.12.1855. L: 21.4.1856. C: 18.5.1856. Fitted for Armstrong guns in 1862. BU at Devonport 8.1868.

Blazer John Laird, Sons & Co., Dingle (No.156)/John Penn & Sons.
Ord: 8.10.1855. K: 17.10.1855. L: 23.2.1856. C: 7.4.1856. Became dredger *YC.29* in 6.1868, later *YC.4* at Gibraltar. Sold at Gibraltar 4.5.1877.

Rainbow John Laird, Sons & Co., Dingle (No.157)/John Penn & Sons. (156 ihp.)
Ord: 8.10.1855. K: 17.10.1855. L: 8.3.1856. C: 14.4.1856. Survey ship 1857. RNVR training ship 1873. Sold to Castle to BU at Charlton 11.1888.

Brazen John Laird, Sons & Co., Dingle (No.158)/John Penn & Sons.
Ord: 8.10.1855. K: 17.10.1855. L: 23.2.1856. C: 4.1856. BU 8.1864.

Raven John Laird, Sons & Co., Dingle (No.159)/John Penn & Sons.
Ord: 8.10.1855. K: 17.10.1855. L: 8.3.1856. C: 5.1856. Sold to Castle to BU at Charlton 13.4.1875.

Rocket John Laird, Sons & Co., Dingle (No.160)/John Penn & Sons.
Ord: 8.10.1855. K: 8.12.1855. L: 21.4.1856. C: 5.1856. BU 10.1864.

Hardy Charles Hill & Sons, Bristol/Maudslay, Sons & Field. (215 ihp.)
Ord: 8.10.1855. K: 19.10.1855. L: 1.3.1856. C: 10.11.1859. Sold at Hong Kong 9.2.1869.

Havock Charles Hill & Sons, Bristol/Maudslay, Sons & Field. (215 ihp.)
Ord: 8.10.1855. K: 20.10.1855. L: 20.3.1856. C: 10.11.1859. Sold at Yokohama 31.3.1870

Highlander Charles Hill & Sons, Bristol/Maudslay, Sons & Field.
Ord: 8.10.1855. K: 22.10.1855. L: 29.4.1856. C: ... . Became dredger *YC.51* in 1868. Sold 5.1884.

Albacore J. & R. White, West Cowes/Maudslay, Sons & Field. (215 ihp.)
Ord: 9 or 10.10.1855. K: 12.10.1855. L: 3.4.1856. C: 5.5.1856. Tank vessel 1874. Hulked in 1882. BU at Bermuda 6.1885.

Amelia J. & R. White, West Cowes/Maudslay, Sons & Field. (215 ihp.)
Ord. 9 or 10.10.1855. K: 12.10.1855. L: 19.5.1856. C: ... . BU at Pembroke 29.9.1865.

Foam Money Wigram & Son, Northam/John Penn & Sons.
Ord: 9 or 10.10.1855. K: 29.10.1855. L: 8.5.1856. C: - Never completed. Hauled up for storage at Portsmouth 1857. Sold to BU 6.1867.

Wave Money Wigram & Son, Northam/John Penn & Sons.
Ord: 9 or 10.10.1855. K: 29.10.1855. L: 25.6.1856. C: – . Never completed as a gunboat. Coal hulk 1869. Hulk, renamed *Clinker* 30.12.1882. Sold 1890.

Magnet Briggs & Co., Sunderland/John Penn & Sons. (267 ihp.)
Ord: 10.10.1855. K: 16.10.1855. L: 29.1.1856. C: 27.3.1856. BU at Chatham 1874.

Manly Briggs & Co., Sunderland/John Penn & Sons.
Ord: 10.10.1855. K: 16.10.1855. L: 29.1.1856. C: 27.3.1856. BU at Deptford 1.1864.

Mastiff (ex-*Hound*) Briggs & Co., Sunderland/John Penn & Sons.
Ord: 10.10.1855. K: 16.10.1855. L: 22.2.1856. C: 1.4.1856. BU at Deptford 10.1863.

Mistletoe Briggs & Co., Sunderland/John Penn & Sons.
Ord: 10.10.1855. K: 16.10.1855. L: 22.2.1856. C: 1.4.1856. BU completed at Sheerness 28.9.1864.

Earnest William Patterson & Son, Bristol/Maudslay, Sons & Field. (215 ihp.)

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Ord: 11.10.1855. K: 15.10.1855. L: 29.3.1856. C: 1856. Placed in storage after completion. Sold to Castle to BU at Charlton 17.1.1885.

Escort William Patterson & Son, Bristol/Maudslay, Sons & Field. (215 ihp.)
Ord: 11.10.1855. K: 15.10.1855. L: 26.5.1856. C: 1856. BU at Pembroke 10.1865.

NOTES: The most numerous class of warships ordered for the RN to a single design since the *Cruizer* and *Cherokee* classes of brig sloop during the Napoleonic era. Virtually repeats of the preceding *Dapper* Class. *Lively* and *Mastiff* names changed from original *Surge* and *Hound* in 1855. Exactly half (49 vessels) engined by Maudslay, Sons & Field; and half by John Penn & Sons. The Penn cylinders were 21in diam., 12 in stroke, while Maudslay's were 15½in diam., 18in stroke (the same applied to *Gleaner* and *Dapper* classes). Of the October batch (50 vessels), all vessels from Smith, Laird, Hill and Patterson yards (also *Cochin* from Green's) were built under cover.

***CHEERFUL* Class** - 'Crimean' gunboat. W. H. Walker design, 1855, with only 4ft draught.
Dimensions & tons: 100ft 0in, 85ft 5½in x 21ft 10in oa (21ft 7in for tonnage) x 6ft 7in. Draught 6ft 6in. 211$^{64}/_{94}$ bm.
Men: 30. Guns: 2 x 32pdr (56cwt) MLSB.
Machinery: 1-cyl. (15in diam., 12in stroke) horizontal direct-acting single expansion. 2 cylindrical boilers (60 lbs/sq.in). Single (non-hoisting) screw. 20 nhp. *Onyx* 92 ihp = 6¾kts.
First cost (£) of each vessel:

Vessel	*Total*	*Hull*	*Machinery*
Cheerful	7,072	5,148	1,137
Chub	8,243	5,475	1,137
Daisy	7,681	4,509	1,187
Dwarf	7,166	4,487	1,187
Blossom	...	5,114	1,287
Gadfly	6,448	5,146	1,288
Gnat	...	5,153	1,290
Garland	...	5,153	1,290
Fidget	7,138	4,399	1,147
Flirt	6,043	4,130	1,147
Onyx	7,869	4,618	1,201
Pert	7,953	4,616	1,201
Midge	7,353	4,717	1,206
Tiny	7,359	4,723	1,208
Angler	6,729	3,069	1,265
Ant	7,346	4,211	1,265
Nettle	8,047	5,001	1,256
Pet	8,065	5,082	1,285
Decoy	7,508	...	1,265
Rambler	7,868	4,803	1,265

Cheerful Deptford Dyd/John Penn & Sons.
Ord: 2.7.1855. K: 2.7.1855. L: 6.10.1855. C: 11.12.1855. BU completed at Haslar 16.1.1869.

Chub Sheerness Dyd/John Penn & Sons.
Ord: 2.7.1855. K: 6.7.1855. L: 15.10.1855. C: 20.2.1856. BU completed at Haslar 29.1.1869.

Daisy Thomas Westbrook, Blackwall/John Penn & Sons.
Ord: 14.11.1855. K: 14.11.1855. L: 20.3.1856. C: 29.4.1856. BU completed at Haslar 7.1.1869.

Dwarf Thomas Westbrook, Blackwall/John Penn & Sons.
Ord: 14.11.1855. K: 19.11.1855. L: 8.4.1856. C: 3.7.1756. BU at Haslar 1863.

Blossom (ex-*Careful*) John Laird, Sons & Co., Birkenhead (No.162)/John Penn & Sons.
Ord: 21.11.1855. K: 11.1855? L: 21.4.1856. C: 7.1856. BU completed at Haslar 21.10.1864.

Gadfly John Laird, Sons & Co., Birkenhead (No.163)/John Penn & Sons.
Ord: 21.11.1855. K: 1.12.1855. L: 21.4.1856. C: 7.1856. BU 11.1864.

Gnat John Laird, Sons & Co., Birkenhead (No.164)/John Penn & Sons.
Ord: 21.11.1855. K: 12.1855? L: 10.5.1856. C: 7.1856. BU 10.8.1864.

Garland John Laird, Sons & Co., Dingle (No.165)/John Penn & Sons.
Ord: 21.11.1855. K: 12.1855. L: 7.5.1856. C: 7.1856. BU 6.1864.

Fidget Wm. Joyce, Greenwich/John Penn & Sons.
Ord: 23.11.1855. K: 27.11.1855. L: 7.4.1856. C: 5.7.1856. BU at Haslar 1863.

Flirt Wm. Joyce, Greenwich/John Penn & Sons.
Ord: 23.11.1855. K: 27.11.1855. L: 7.6.1856. C: 29.4.1858. BU completed at Haslar 30.4.1864.

Onyx Young, Magnay & Co., Limehouse/John Penn & Sons.
Ord: 23.11.1855. K: 15.12.1855. L: 3.4.1856. C: 15.4.1856. Dockyard craft (steam lump) 1869. Sold in Jamaica 8.7.1873.

Pert Young, Magnay & Co., Limehouse/John Penn & Sons.
Ord: 23.11.1855. K: 15.12.1855. L: 3.4.1856. C: 15.4.1856. BU completed 12.3.1864.

Midge Young, Magnay & Co., Limehouse/John Penn & Sons.
Ord: 23.11.1855. K: 15.12.1855. L: 8.5.1856. C: 26.7.1856. BU 10.1864.

Tiny Young, Magnay & Co., Limehouse/John Penn & Sons.
Ord: 23.11.1855. K: 15.12.1855. L: 8.5.1856. C: ... . Completed BU at Plymouth 28.1.1864.

Angler Devonport Dyd/John Penn & Sons.
Ord: 1.12.1855. K: 4.12.1855. L: 8.3.1856. C: 7.4.1856. BU completed at Haslar 21.1.1869.

Ant Devonport Dyd/John Penn & Sons.
Ord: 1.12.1855. K: 4.12.1855. L: 22.3.1856. C: 28.6.1858. BU completed at Haslar 23.2.1869.

Nettle Pembroke Dyd/John Penn & Sons.
Ord: 4.12.1855. K: 1.12.1855. L: 9.2.1856. C: 17.4.1856. BU at Bermuda 10.1867.

Pet Pembroke Dyd/John Penn & Sons.
Ord: 4.12.1855. K: 12.1855. L: 9.2.1856. C: 17.4.1856. Hulked 1865. Renamed *C.17* from c1900. Sold to Castle to BU 12.4.1904.

Decoy Pembroke Dyd/John Penn & Sons.
Ord: 4.12.1855. K: 12.1855. L: 21.2.1856. C: 17.4.1856. BU completed at Haslar 8.2.1869.

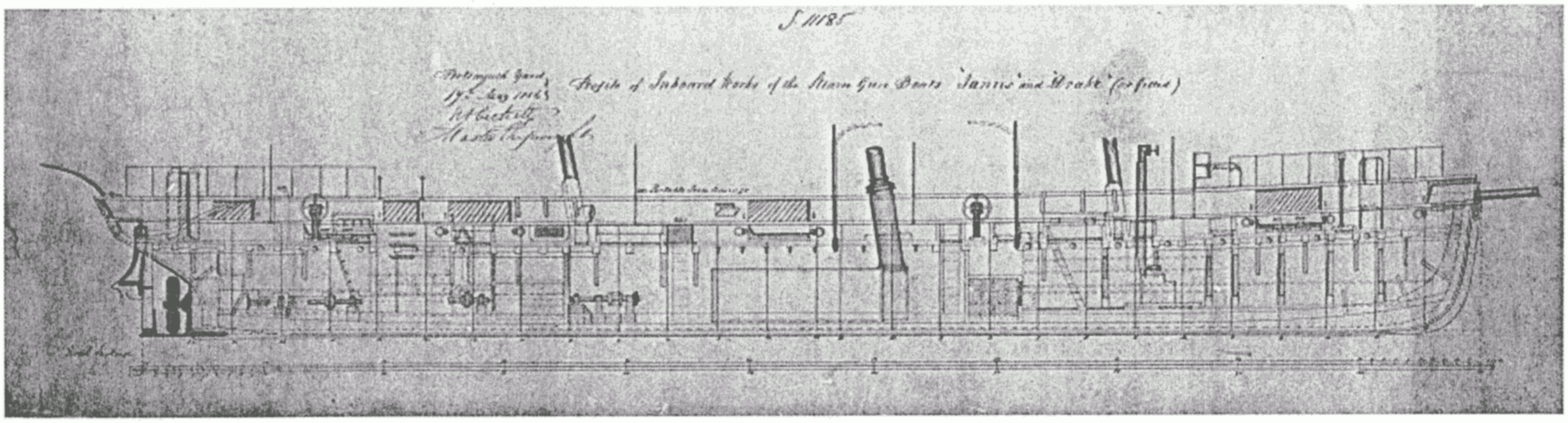
Rambler (ex-*Ramble*) Pembroke Dyd/John Penn & Sons.
Ord: 4.12.1855. K: 12.1855. L: 21.2.1856. C: 17.4.1856. BU completed at Haslar 7.1.1869.

NOTES: Laird and Joyce craft (also *Pert*) built under cover. Original *Careful* and *Ramble* renamed 1855 (while building). The Penn engines, unusually, were single piston-rod type instead of Penn's usual trunked variety. Sail area 1,919 sq.ft.

***CLOWN* Class** 1855. 'Improved *Cheerful*' design.
Dimensions & tons: 110ft 0in, 95ft 5¼in x 21ft 10in oa (21ft 5in for tonnage) x 6ft 7in. Draught 4ft 0in. 232$^{80}/_{94}$ bm. 249 disp.
Men: 30. Guns: 1 x 68pdr (95cwt) MLSB + 1 x 32pdr (56cwt) MLSB.
Machinery: 1-cyl. horizontal direct-acting single expansion. 2 cylindrical boilers. Single (non-hoisting) screw. 40 nhp. *Woodcock* 145 ihp = 7.5kts.
First cost (£) of each vessel:

Vessel	*Total*	*Hull*	*Machinery*
Fenella	8,204	4,759	2,374
Garnet	8,264	4,769	2,374
Handy	8,373	4,766	2,374
Hunter	8,443	4,798	2,374
Drake	9,747	...	...

Scan and/or retouch by Grzechu



Profile, as fitted, for the *Janus* and *Drake* (dated Portsmouth 17 May 1856), two of the *Clown* Class gunboats. *DR11185*

Vessel	*Total*	*Hull*	*Machinery*
Janus	9,737	5,104	2,432
Clown	10,196	5,162	2,429
Kestrel	10,273	5,162	2,428
Ready	8,693	6,011	2,064
Thrush	8,690	6,011	2,464
Watchful	10,502	5,572	2,448
Woodcock	10,512	5,572	2,487

Fenella W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 1.1856. K: 5.3.1856. L: 19.5.1856. C: 26.1.1857. Became a dredger at Woolwich 3.1867, renamed *YC.3* in 1868. BU 14.11.1878.

Garnet W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 1.1856. K: 5.3.1856. L: 31.5.1856. C: 26.1.1857. BU completed 25.5.1864.

Handy W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 1.1856. K: 5.3.1856. L: 31.5.1856. C: 26.1.1857. Sold at Lagos 5.1868.

Hunter W. & H. Pitcher, Northfleet/John Penn & Sons.
Ord: 1.1856. K: 12.3.1856. L: 7.6.1856. C: 26.1.1857. Only partially fitted, never completed for sea. On the sale list 6.1869 but not sold till 1884.

Drake Pembroke Dyd/John Penn & Sons.
Ord: 1.1856. K: 1.1856. L: 8.3.1856. C: 31.5.1856. Sold at Hong Kong 9.2.1869.

Janus Pembroke Dyd/John Penn & Sons.
Ord: 1.1856. K: 25.1.1856. L: 8.3.1856. C: 31.5.1856. Coal lighter 12.1869, renamed *YC.6*. Sold 1871 (possibly shared fate of *Clown*?).

Clown Wm. Cowley Miller, Toxteth Dock, Liverpool/John Penn & Sons.
Ord: 3.1.1856. K: 14.1.1856. L: 20.5.1856. C: 4.5.1857. Became a coal lighter *YC.1* at Hong Kong 1867. Renamed *YC.6* in 12.1869. Wrecked at Hong Kong in the typhoon of 2.9.1871.

Kestrel Wm. Cowley Miller, Toxteth Dock, Liverpool/John Penn & Sons.
Ord: 1.1856. K: 14.1.1856. L: 26.5.1856. C: 4.5.1857. Sunk at the Peiho Forts 6.1859, but salved. Sold 16.3.1866 to Glover & Co., Yokohama then resold to Japanese owners (said to be the navy but there is no sign of this ship in listings of the Japanese Navy - perhaps it was to one of the rebellious clans that she was sold?).

Ready Briggs & Co., Sunderland/John Penn & Sons.
Ord: 1.1856. K: 2.1856. L: 12.5.1856. C: 29.4.1857. Fitted for reserve. BU completed 25.1.1864.

Thrush Briggs & Co., Sunderland/John Penn & Sons.
Ord: 1.1856. K: 2.1856. L: 12.5.1856. C: 29.4.1857. BU completed 14.3.1864.

Watchful T. & Wm. Smith, North Shields/John Penn & Sons.
Ord: 1.1856. K: 25.2.1856. L: 4.6.1856. C: 11.4.1857. Tender 1863. Sold at Hong Kong 1.2.1871.

Woodcock T. & Wm. Smith, North Shields/John Penn & Sons.
Ord: 1.1856. K: 25.2.1856. L: 6.6.1856. C: 11.4.1857. Sold at Hong Kong 1.2.1871.

NOTES: All named 19.1.1856. Miller and Smith vessels built under cover. The Penn engines, unusually, were single piston-rod type instead of Penn's usual trunked variety. Sail area 4,889 sq.ft.

***ALGERINE* Class** 1856. Enlarged *Albacore* Class.
Dimensions & tons: 125ft 0in, 110ft 1½in x 23ft 0in oa (22ft 8in for tonnage) x 9ft 3in. 300$^{88}/_{94}$ bm. 370 disp.
Men: ?. Guns: 1 x 8in/68pdr (87cwt) MLSB + 2 x 24pdr howitzers.
Machinery: 1 set horizontal direct-acting single expansion. Single screw. 80 nhp. 294 ihp (designed) = 9kts.
First cost (£) of each vessel:

Vessel	*Total*	*Hull*	*Machinery*
Jaseur	14,178	5,668	4,350
Jasper	14,195	5,665	4,350
Algerine	13,504	5,641	4,350
Lee	13,424	5,541	4,350
Leven	13,994	5,541	4,350
Slaney	13,970	5,549	4,350

Jaseur R. & H. Green, Blackwall (No.343)/Maudslay, Sons & Field. (301 ihp)
Ord: 22.9.1856. K: 2.9.1856. L: 7.3.1857. C: 5.9.1857. Wrecked on the Paxo Nuevo Shoal 26.2.1859, whilst on passage from Port Royal to Greytown.

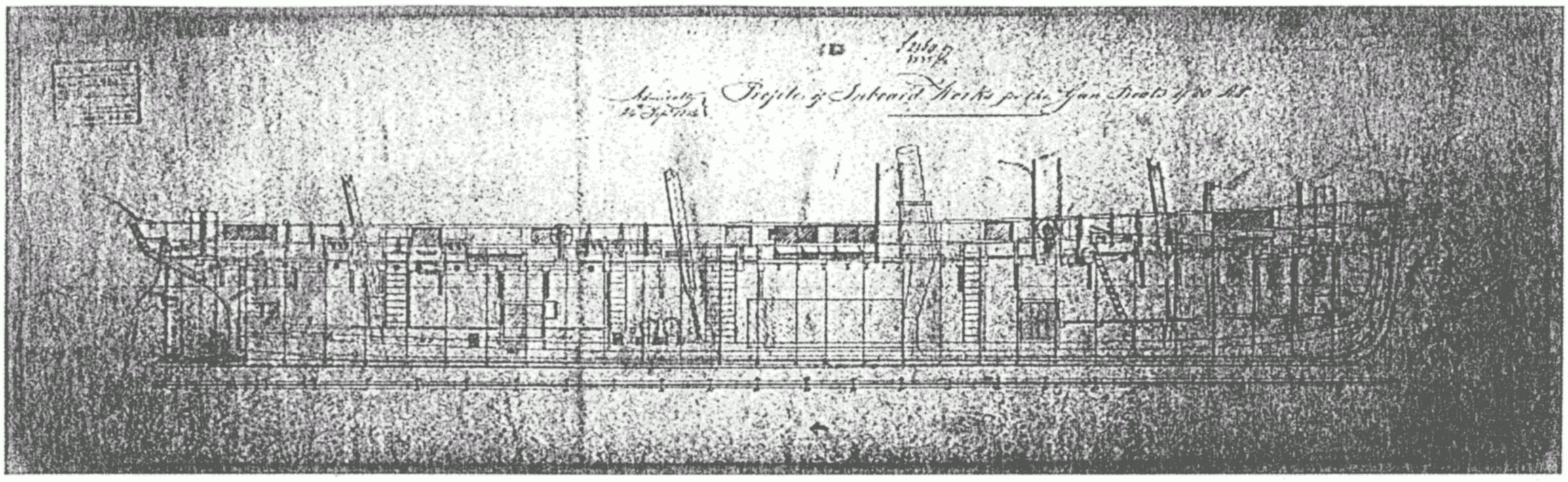
Jasper R. & H. Green, Blackwall (No.344)/Maudslay, Sons & Field. (299 ihp)
Ord: 22.9.1856. K: 26.9.1856. L: 18.3.1857. C: 5.9.1857. Sold 2.8.1862 to the Chinese Imperial Customs, renamed *Amoy*, and sailed 4.1863 (to join Sherard Osborn's 'Vampire Fleet'). Resold to Egyptian Government 30.12.1865.

Algerine W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (293 ihp)
Ord: 22.9.1856. K: 1.10.1856. L: 24.2.1857. C: 9.4.1857. Sold at Hong Kong 2.4.1872, became the mercantile *Algerine*. BU 1894.

Lee W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (303 ihp)
Ord: 22.9.1856. K: 1.10.1856. L: 28.2.1857. C: 13.4.1857. Sunk in action with the Taku forts, Peiho River, China 25.6.1859.

Leven W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (293 ihp)
Ord: 22.9.1856. K: 1.10.1856. L: 7.3.1857. C: 24.4.1857. Sold at Shanghai 21.7.1873.

Slaney W. & H. Pitcher, Northfleet/Maudslay, Sons & Field. (299 ihp)



The design profile for the 'Gun boats of 80 H.P.', Admiralty 24 September 1856. The draught notes that copies were sent to Messrs Green and to Messrs Pitcher on 29 September, for what became the *Algerine* Class. *DR8311*

Ord: 22.9.1856. K: 1.10.1856. L: 17.3.1857. C: 27.4.1857. Wrecked in a typhoon in the Paracel Islands near Hong Kong 9.5.1870.

NOTES: All named 16.2.1857. Reclassed as gunvessels 8.6.1859. Two similar (*Clyde* and *Sir Hugh Rose*) were built for the Bombay Marine.

***BRITOMART* Class** 1859. Improved version of *Dapper* Class.
Dimensions & tons: 120ft 0in, 105ft 7in x 22ft 0in 0a (21ft 10in for tonnage) x 9ft 0in. $267^{82}/_{94}$ bm. 330 disp.
Men: 36-40. Guns: 2 x 8in/68pdr MLSB (later 2 x 64pdr MLR).
Machinery: 1-cyl. single expansion reciprocating. Single (hoisting) screw. 60 nhp. 260 ihp (designed) = 9kts.

First batch

Britomart T. & Wm. Smith, North Shields/John Penn & Sons. (277 ihp)
Ord: 19.10.1859. K: 11.11.1859. L: 7.5.1860. C: 3.1.1861. Sold to Castle 12.1.1892 who resold her to S. Williams of Dagenham as a mooring hulk. BU 6.1946.

Cockatrice T. & Wm. Smith, North Shields/John Penn & Sons. (253 ihp)
Ord: 19.10.1859. K: 11.11.1859. L: 24.5.1860. C: 7.4.1861. Became a luggage lighter as *YC.10* at Malta in 1882. Sold there 1885.

Wizard T. & Wm. Smith, North Shields/John Penn & Sons. (201 ihp)
Ord: 19.10.1859. K: 11.11.1859. L: 3.8.1860. C: 3.1.1861. BU at Malta 9.1878.

Speedy C. Lamport, Workington/... . (218 ihp)
Ord: 19.10.1859. K: 11.11.1859. L: 18.7.1860. C: 2.9.1861. Tender to *Dasher* 1865, then to *Asia* 1870. Sold to Castle to BU at Charlton 8.1889.

Doterel Wm. Cowley Miller, Toxteth Dock, Liverpool/Miller, Ravenhill.
Ord: 19.10.1859. K: 15.11.1859. L: 5.7.1860. C: ... . Sold to Marshall, Plymouth on 6.6.1871.

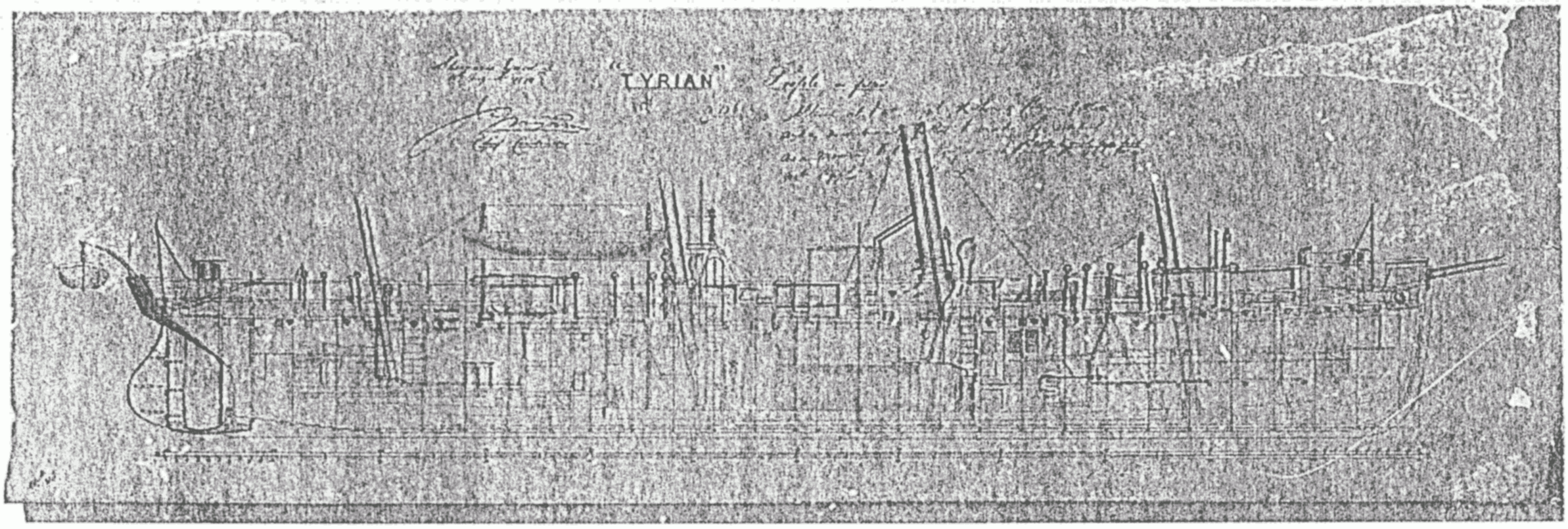
Heron Wm. Cowley Miller, Toxteth Dock, Liverpool/Miller, Ravenhill.
Ord: 19.10.1859. K: 15.11.1859. L: 5.7.1860. C: 4.6.1862. Tender at Jamaica 1875. Sold in Jamaica 6.1879 and BU there 1881.

Pigeon Briggs & Co., Sunderland/... . (211 ihp)
Ord: 19.10.1859. K: 10.11.1859. L: 7.6.1860. C: 1860. BU at Devonport completed 29.9.1876.

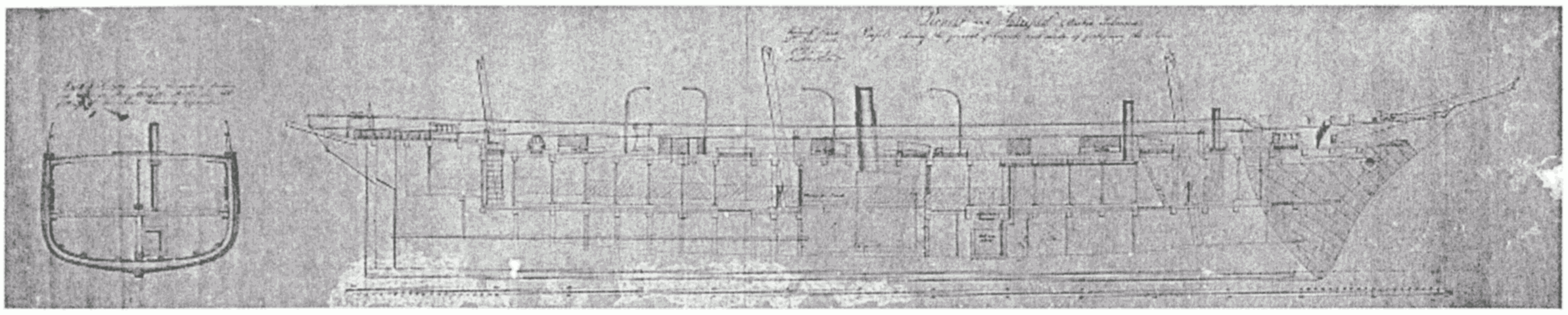
Linnet Briggs & Co., Sunderland/... .
Ord: 19.10.1859. K: 18.11.1859. L: 7.6.1860. C: 1860. BU at Chatham, completed 15.7.1872.

Tyrian Courtenay, Newhaven/... . (157 ihp)
Ord: 19.10.1859. K: 21.11.1859. L: 7.9.1861. C: 1865. Tug 1883 at Jamaica. Sold there 1891.

Trinculo Joseph Banks, Plymouth/... .



A late profile of *Tyrian*, one of the *Britomart* Class gunboats, dated Sheerness 18 August 1879. The vessel spent the last years of her career in the West Indies, and a later note of 11 November 1880 mentions various modifications carried out at Port Royal to allow the craft to act as a mooring lighter, but the proposal to land the guns was turned down. *DR8005*



Profile and section for the steam-assisted 'Arctic schooners' *Intrepid* and *Pioneer*, Woolwich 25 November 1851, showing the methods of strengthening the bows and also the 'warming apparatus'. The vessels were purchased for the attempt under Captain Horatio Austin to find the lost Franklin expedition, and were intended to tow the sailing barques *Resolute* and *Assistance* when necessary. *DR3991*

Ord: 19.10.1859. K: 1.12.1859. L: 15.9.1860. C: 1865 (as tender).
Wrecked after collision with SS *Moratin* off Gibraltar on 5.9.1870.

Second batch

Cherub Portsmouth Dyd/... . (226 ihp)
Ord: 5.3.1860. K: 3.12.1860. L. 29.3.1865. C: 1865. Tender at Harwich 1879 (to Portland 1886). Sold to Castle to BU at Charlton 5.5.1890.
Netley Portsmouth Dyd/... . (230 ihp)
Ord: 5.3.1860. K: 3.12.1860. L: 22.7.1866. C: 1866. Tender at Queensferry 1870. Sold at Portsmouth to Castle to BU at Charlton 9.1885.
Minstrel Portsmouth Dyd/... . (243 ihp)
Ord: 5.3.1860. K: 17.12.1860. L: 16.2.1865. C: 1865. Coal hulk at Bermuda in 1874. Sold 1903 (but still listed to 1906).
Orwell Portsmouth Dyd/... . (228 ihp)
Ord: 5.3.1860. K: 24.12.1860. L: 27.12.1866. C: 11.1868. Sold to the Customs Board 20.12.1890.
Cromer Portsmouth Dyd/... . (245 ihp)
Ord: 5.3.1860. K: 4.7.1861. L: 20.11.1867. C: 1868. Tender at Birkenhead 1870 (to Rockferry 1880). Sold 24.8.1886 to BU.
Bruiser (*Bruizer*) Portsmouth Dyd/... . (158 ihp)
Ord: 5.3.1860. K: 14.8.1861. L: 23.4.1867. C: 7.7876. Tender to *Mersey* at Queenstown. BU at Devonport 5.1886.
Bramble Portsmouth Dyd/... .
Ord: ?2.1861. K: 1861. Cancelled 12.12.1863.
Crown Portsmouth Dyd/... .
Ord: ?2.1861. K: 1861. Cancelled 12.12.1863.
Protector Portsmouth Dyd/... .
Ord: ?2.1861. K: 1861. Cancelled 12.12.1863.
Danube Portsmouth Dyd/... .
Ord: ?2.1861. K: ... . Cancelled 12.12.1863 (unstarted).
NOTES: First batch of 10 approved 11.11.1859. First 10 all named 17.1.1860, next 6 4.10.1860, last 4 21.3.1861. All Portsmouth 'Dyd' vessels were actually built at Haslar Creek, Gosport. Carried barquentine rig (with square sails on foremast only). *Heron* was originally fitted for reserve and carried Armstrong guns. Construction of the six vessels ordered 1860 was suspended 1862/63, but later resumed.

Coastguard Vessel

SEAMEW - transferred from Inland Revenue 1857.
Dimensions & tons: 143ft 0in x 22ft 0in x 9ft 3in. Draught 7ft 11in (fwd), 10ft 3in (aft). 330 bm. 376 disp.
Men: ... . Guns: 1 x 32pdr MLSB.
Machinery: John Penn & Son 2-cyl. horizontal single expansion, trunk. 60 nhp. 160 ihp = 8.785kts.
Sold 3.4.1906.

Surveying and Exploration Ships

INTREPID - purchased 1850 (ex-mercantile *Free Trade* built by R. & H. Green, Blackwall (No.274).), wooden screw 'Arctic schooner'.
Dimensions & tons: 143ft 6in, *c*124ft 3in x 22ft 9in x 14ft 7in. 342 bm.
Machinery: James Watt & Co. 2-cyl. single expansion, oscillating. 60 nhp.
Purchased 28.2.1850 from the Southampton Cattle Steam Ship Conveyance Co. for £9,000 by AOs 16 & 25.2.1850, then fitted at Woolwich for Arctic Seas for £9,111. Initially named *Perseverance*, but renamed *Intrepid* 3.1850. Abandoned in the ice 15.6.1854.

PIONEER - purchased 1850 (ex-mercantile *Eider* built by R. & H. Green, Blackwall (No.277).), wooden screw 'Arctic schooner'.
Dimensions & tons: 143ft 6in, *c*124ft 3in x 22ft 9in x 14ft 7in. 342 bm.
Machinery: James Watt & Co. 2-cyl. single expansion, oscillating. 60 nhp.
Purchased 16.2.1850 from the Southampton Cattle Steam Ship Conveyance Co. for £9,600 by AOs 16 & 25.2.1850. Completed fitting (for £9,6000) for Arctic Seas at Woolwich 27.4.1850. Abandoned in the ice off Bathurst Island 25.8.1854 (written off the Navy List by AO 25.10.1854).

Dredgers

***MALTA* Class** 1859. Builders' design? Both served at Malta.
Dimensions & tons: ... . 280 bm.
Machinery: ... .
Malta Summers, Day & Baldock, Northam.
Ord: ... . K: 17.2.1859. L: 23.7.1859. C: 11.10.1859 at Portsmouth. Sold 6.1870.
Valetta Summers, Day & Baldock, Northam.
Ord: ... . K: 17.2.1859. L: 3.8.1859. C: 24.11.1859 at Portsmouth. Became *YC.27* at Malta.
NOTES: Sailed to Portsmouth Dyd for completion on 20.8.1859 and 5.9.1859 respectively.

Scan and/or retouch by Grzechu

6 Screw Steamers (Iron) to 1863

The marriage of iron hulls with steam screw propulsion – in retrospect so obvious – was accomplished in three phases during the first half of Victoria's reign. In the mid-1840s a series of iron frigates and gunvessels was initiated; but almost before any of these took to the water, Admiralty jitters over the vulnerability of iron hulls to shellfire led to a quick about-face and the cancellation or conversion of most of these ships; their fear was at least partly justified, given the quality of early iron-making. During the Russian War, a second phase began with the construction of a series of floating batteries for coastal bombardment; in addition a number of iron-hulled screw-driven auxiliaries, particularly troopships and storeships, were acquired, which – while not themselves warships – gave the Navy considerable experience in the practical operation of vessels of such construction. However, no battlefleet units or cruising vessels were built at this time. Finally, in 1859, the Navy – now reassured as regards iron construction – began the building of genuine ironclad frigates commencing with the *Warrior*, supplemented by the fitting of iron armour to wooden hulls as a means of making up for a shortage of units (compared with the French).

Armoured Iron Frigates (Broadside Ironclads)

Between 1859 and 1861 inclusive, 10 new armoured frigates were laid down, all carrying their weapons in traditional broadside fashion. The first six originally mounted 7in/110pdr (82cwt) Armstrong breech-loaders and 68pdr (95cwt) muzzle-loaders, but the Armstrong guns were quickly superseded by muzzle-loading rifled guns.

***WARRIOR* Class**. 40 guns. Designed by Isaac Watts, 1859.

Dimensions & tons: 420ft 0in oa, 380ft 2in pp x 58ft 4in. Draught 26ft 4in (fwd), 26ft 10in (aft). 6,039 bm. 9,180 disp.

Men: 635 (later 705). Guns: MD 8 x 7in/110pdr (82cwt) BL, 26 x 68pdr (95cwt) MLSB; UD 2 x 7in/110pdr (82cwt) BL, 4 x 40pdr BL.

Armour: Belt 4½in (with 18in teak backing); bulkheads 4½in.

Machinery: 2-cyl. (104in diam., 48in stroke) horizontal single expansion, trunk. 10 rectangular boilers (20 lbs/sq.in). Single screw (hoisting in *Warrior*, not in *Black Prince*). 1,250 nhp. 850 tons coal = 2,100 miles @ 11kts. Under sail *Warrior* 13kts, *Black Prince* 11kts.

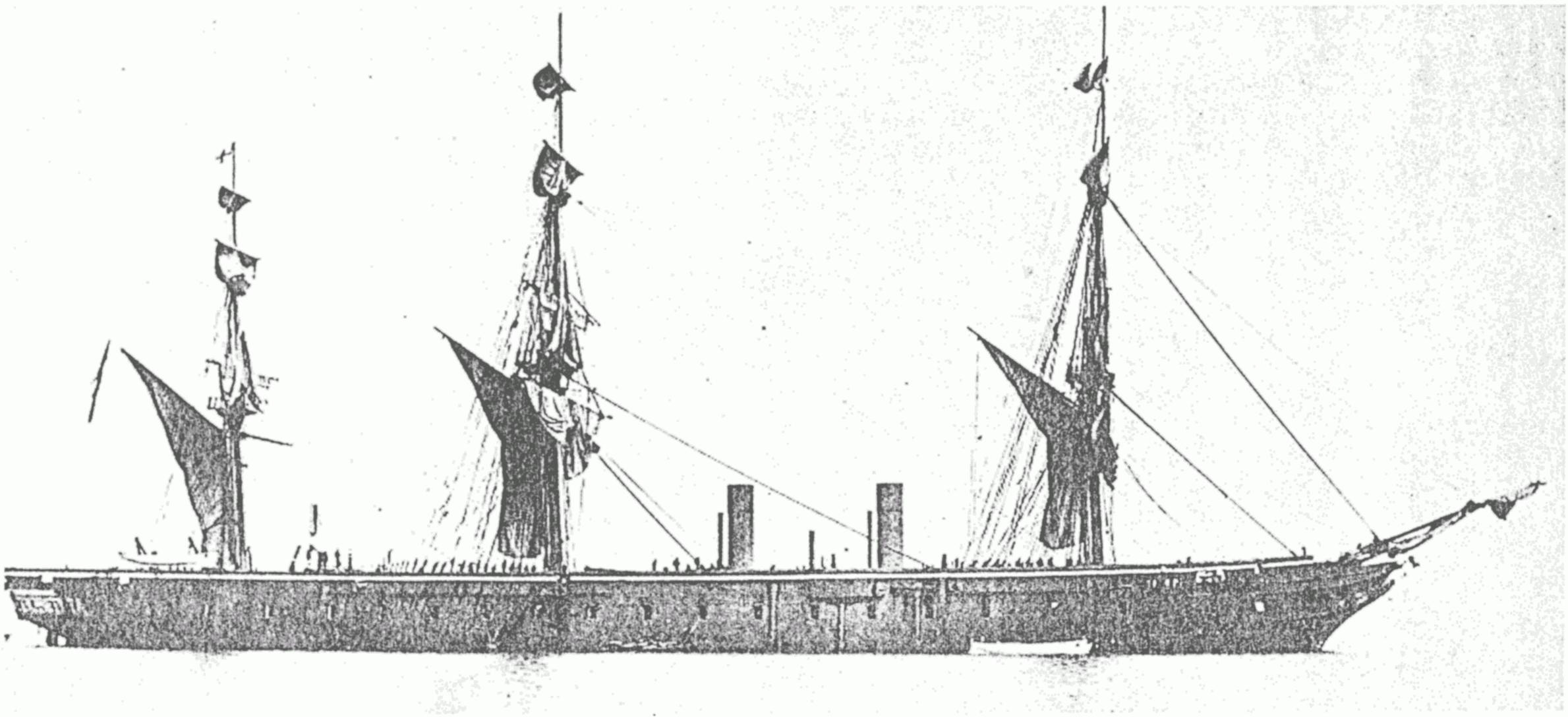
First cost: *Warrior* £377,292 (hull £282,284, machinery £74,409). *Black Prince* £377,954 (hull £283,154, machinery £74,482).

Warrior Thames Iron Sbdg. Co., Blackwall (No.76E)/John Penn & Son. (5,267 ihp = 14.079kts.)

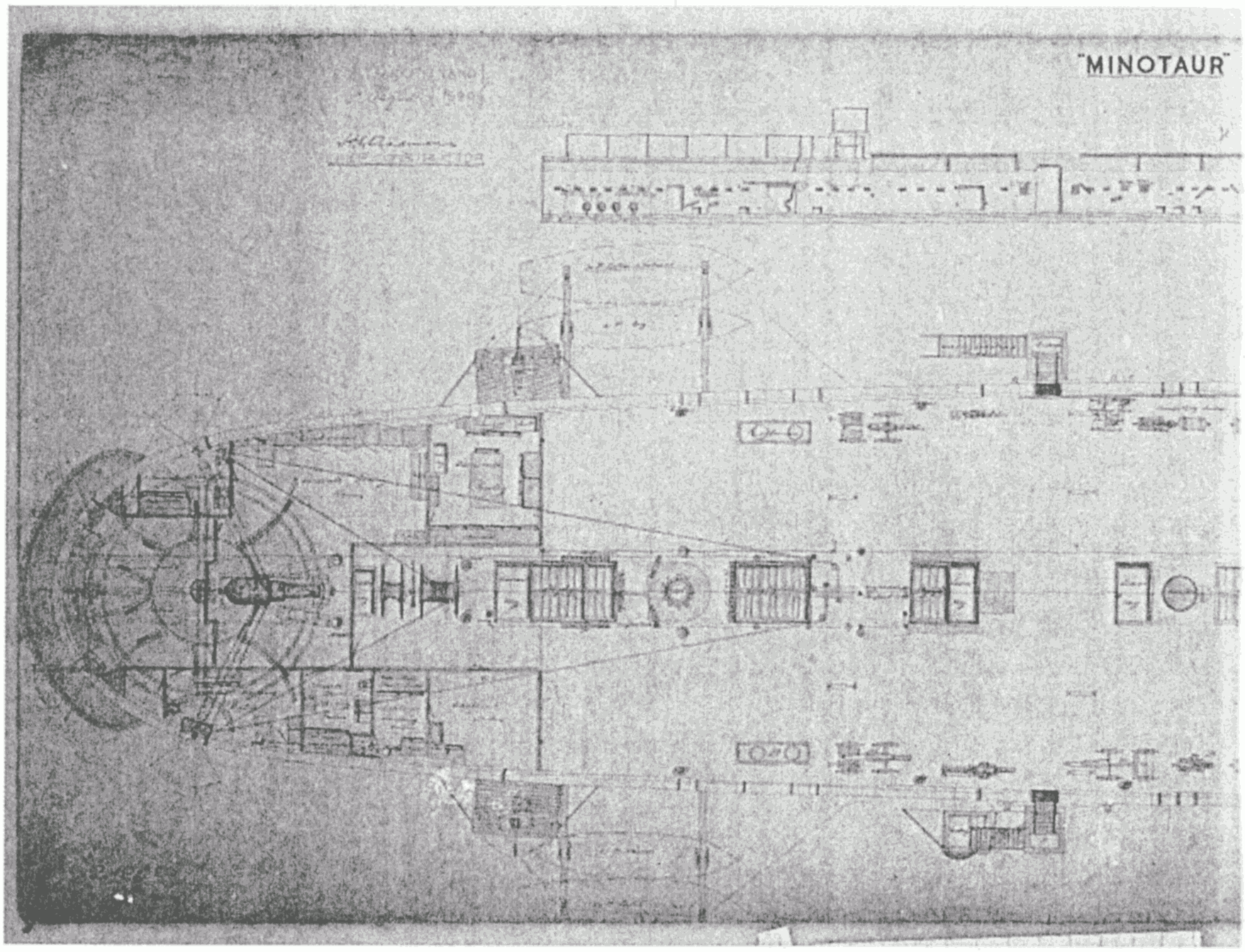
Ord: 29.4.1859 & 11.5.1859. K: 25.5.1859. L: 29.12.1860.

C: 24.10.1861. Harbour service as depot ship 7.1902. Renamed *Vernon III* in 3.1904. Hulked as oil jetty at Pembroke 1923, reverting to *Warrior*. Renamed *C.77* on 27.8.1942. Towed to West Hartlepool for conversion to a museum ship 1979 and then to Portsmouth for exhibition - preserved there (2004).

Black Prince Robert Napier & Son, Govan (No.98)/John Penn & Son. (5,772 ihp = 13.6kts.)



One of the first pair of seagoing iron-hulled armoured ships, the *Black Prince* is seen early in her career at anchor with her sails stowed in the bunts for drying. *D665*



Upper deck plan and topside elevation of *Minotaur* as refitted, dated Portsmouth 1 August 1890. Notable features are the 3pdr QF guns and five-barrelled Gardner machine guns mounted along the rails to cope with the new era of the torpedo boat, but 9in 12-ton ML guns are still carried forward and aft. *DR10980E*

Ord: 6.10.1859. K: 12.10.1859. L: 27.2.1861. C: 12.9.1862. Training ship 1899. Renamed *Emerald* in 3.1903, then *Impregnable III* in 6.1910. Sold to BU 21.3.1923.

NOTES: Built under the 1859 Programme. Originally planned to carry 48 x 68pdr (95cwt) MLSB - MD 38, UD 10 - but completed as above. Second ship ordered as *Invincible*, renamed 1.1860. Ship-rigged, with 48,400 sq.ft sail area. Armour belt was 213ft long over midships section and 22ft deep. The hull was sub-divided into 92 water-tight compartments. Both re-armed 1867 with 4 x 8in (9-ton) MLR - on MD; 28 x 7in (6½-ton) MLR (*Black Prince* only 24 x 7in) - 20 on MD, 8 on UD; 4 x 20pdr BL (saluting guns). Both vessels were reclassed as armoured cruisers in 1881 in view of the comparatively thin armour of these early ironclads.

***DEFENCE* Class**. 22 (*Defence*) or 18 (*Resistance*) guns. Designed by Isaac Watts, 1859.

Dimensions & tons: 302ft 0in oa, 280ft 0in pp x 54ft 2in. Draught 24ft 6in (fwd), 26ft 0in (aft). *Defence* 3,720 bm, 6,150 disp. *Resistance* 3,710 bm, 6,070 disp.

Men: 450. Guns: *Defence* 8 x 7in/110pdr (82cwt) BL, 10 x 68pdr (95cwt) MLSB, 4 x 5in/40pdr BL; *Resistance* 6 x 7in/110pdr (82cwt) BL, 10 x 68pdr (95cwt) MLSB, 2 x 32pdr MLSB.

Armour: Belt 4½in (with 18in teak backing); bulkheads 4½in.

Machinery: 2-cyl. (70¾in diam., 42in stroke) horizontal single expansion, trunk. 4 rectangular boilers (20 lbs/sq.in). Single (hoisting) screw. 600 nhp. 2,540 ihp = 10.75kts. 460 tons coal = 1,200 miles radius. Under sail 10.5kts.

First cost: *Defence* £252,422 (hull £197,879, machinery £34,357). *Resistance* £258,120.

Defence Palmer Bros., Jarrow (No.91)/John Penn & Son. (2,537 ihp = 11.618kts.)

Ord: 14.12.1859. K: 14.12.1859. L: 24.4.1861. C: 12.2.1862. Laid up 1885. Became floating workshop 1890. Training ship, renamed *Indus I* in 6.1898. Hulked 1922. BU at Plymouth 8.1935 (arrived 16.8.1935 at Cattedown to BU).

Resistance Westwood & Baillie, Poplar/John Penn & Son. (2,428 ihp = 11.834kts.)

Ord: 14.12.1859. K: 21.12.1859. L: 11.4.1861. C: 5.10.1862. Laid up 1880. Used as target for gunnery and torpedo experiments 1885. Sold 11.11.1898. Foundered in Holyhead Bay 4.3.1899. Raised and BU at Garston 1900.

NOTES: Built under the 1859 Programme, as smaller versions of the *Warrior*. Both barque-rigged, with 24,500 sq.ft sail area. *Resistance*'s machinery was fitted in Victoria Docks. Both re-armed (*Defence* 1866-69, *Resistance* 1866-68) with 2 x 8in MLR and 14 x 7in MLR.

***HECTOR* Class** - 18 guns. Designed by Isaac Watts, 1861.

Dimensions & tons: 280ft 2in pp, 241ft 6½in x 56ft 3in (for tonnage). Draught 24ft 0in (fwd) 25ft 7in (aft). 4,063 bm. 6,710 load disp. As built *Valiant* 4,077 bm, 6,123 disp; *Hector* 4,089 bm, 6,455 disp.

Men: 530. Guns: MD ('battery deck') 12 x 7in/112pdr (6½ton) MLR; UD 2 x 8in/175pdr (9ton) MLR + 4 x 7in/112pdr (6½ton) MLR.

Armour: Battery and belt 4½in (with 18in teak backing); bulkheads 2½in.

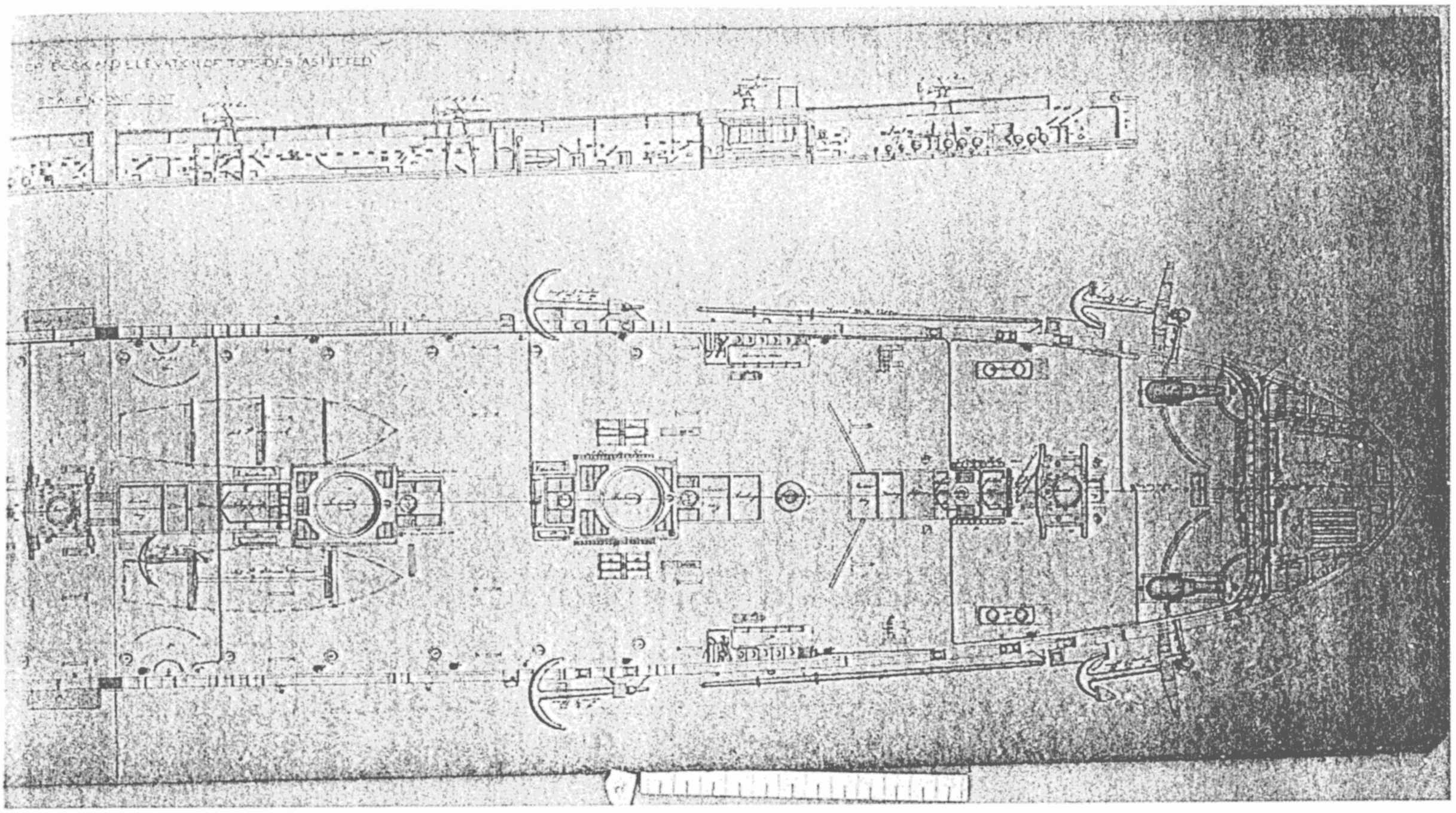
Machinery: 2-cyl. (82in diam., 48in stroke) horizontal return connecting-rod. 6 rectangular boilers (20 lbs/sq.in). Single 2-bladed variable pitch (hoisting) screw. 800 nhp. 450 tons coal = 1,430 miles miles at 10kts (*Hector* 460 tons = 1,460 miles). Under sail 10kts.

First cost: *Valiant* £325,000 (hull £271,964, machinery £48,324). *Hector* £294,000 (hull £237,438, machinery £45,764).

Valiant Westwood & Baillie, Poplar/Maudslay, Sons & Field. (3,560 ihp = 12.649kts.)

Ord: 12.1.1861. K: 1.2.1861. L: 14.10.1863. C: 15.9.1868. Laid up at

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Devonport 8.1885. Depot ship 1897. Renamed *Indus IV* in 1904, then *Valiant* (old) in 1916, *Valiant III* on 3.1.1918. Floating oil tank 1924. BU at Zeebrugge 9.12.1956 (arrival date).

Hector Robert Napier & Sons, Govan (No.104)/Robert Napier & Sons. (3,258 ihp = 12.36kts.)

Ord: 25.1.1861. K: 8.3.1861. L: 26.9.1862. C: 22.2.1864. Laid up 4.1886. Hulked 1900, as part of *Vernon* torpedo establishment. Sold to BU 11.7.1905.

NOTES: Similar to the *Defence* Class, but with straight stems (no rams) and increased speed, protection and armament. Like the *Warrior*, the hull was sub-divided into 92 water-tight compartments. Originally designed to carry 24 x 68pdr MLSB, *Hector* was completed with 4 x 7in BL on the UD and 20 x 68pdr MLSB on the MD; she was re-armed in 1867 with the ordnance listed above, and *Valiant* was completed with a similar armament. *Valiant* was completed by Thames Iron Sbdg., after Westwood & Baillie became bankrupt in 1861. Both were barque-rigged, with 24,500 sq.ft of sail area.

ACHILLES - 26 guns (later 16). Designed by Isaac Watts, 1861.

Dimensions & tons: 380ft 0in pp, 338ft 9in x 58ft 3½in (for tonnage) x 27ft 3in. Draught 25ft 10in (fwd) 27ft 2in (aft). 6,121 bm. 9,820 (load) disp.

Men: 705. Guns: 4 x 110pdr (82cwt) BL, 16 x 100pdr SB; 6 x 68pdr SB added 1865. See Notes below for re-arming.

Armour: Battery and belt 4½in (with 18in teak backing); bulkheads 4½in.

Machinery: 2-cyl. (104¼in diam., 48in stroke) horizontal single expansion, trunk. 10 rectangular boilers (25 lbs/sq.in). Single screw. 1,250 nhp. 5,722 ihp = 14.322kts. 740 tons coal = 1,800 miles radius @ 6.5kts. Under sail 13kts.

First cost: £469,572 (hull £375,429, machinery £69,117).

Achilles Chatham Dyd/John Penn & Son.

Ord: 24.10.1860 & 10.4.1861. K: 1.8.1861. L: 23.12.1863. C: 26.11.1864. Laid up 1885. Became base ship, renamed *Hibernia* 1902. Renamed *Egmont* in 3.1904, then *Egremont* in 6.1916, and *Pembroke* in 6.1919. Sold to Granton Shipbreaking Co. 26.1.1923 to BU in 1925.

NOTES: The first iron-hulled ship to be built in a Royal Dockyard. Completed with 4-masted rig - the only British warship (since the 17th century) to have 4 masts, carrying 44,000 sq.ft of canvas including stunsails; reduced to 3-masted ship in 1865, and re-rigged as a barque in 1877 with 30,133 sq.ft sail area. Re-armed in 1868 with 4 x 8in MLR and 22 x 7in MLR; re-armed in 1874 with 14 x 9in (12-ton) MLR and 2 x 7in (6½-ton) MLR; again re-armed 1889, with 7in removed and 2 x 6in BL, 8 x 3pdr QF and 16 MGs added.

***MINOTAUR* class** - 36 guns. Designed by Isaac Watts, 1861.

Dimensions & tons: 407ft 0in oa, 400ft 3in pp x 59ft 6in x 27ft 9in. 6,621 bm. As completed *Minotaur* 6,643 bm, 10,690 disp; *Agincourt* 6,638 bm, 10,600 disp; *Northumberland* 6,631 bm, 10,784 disp.

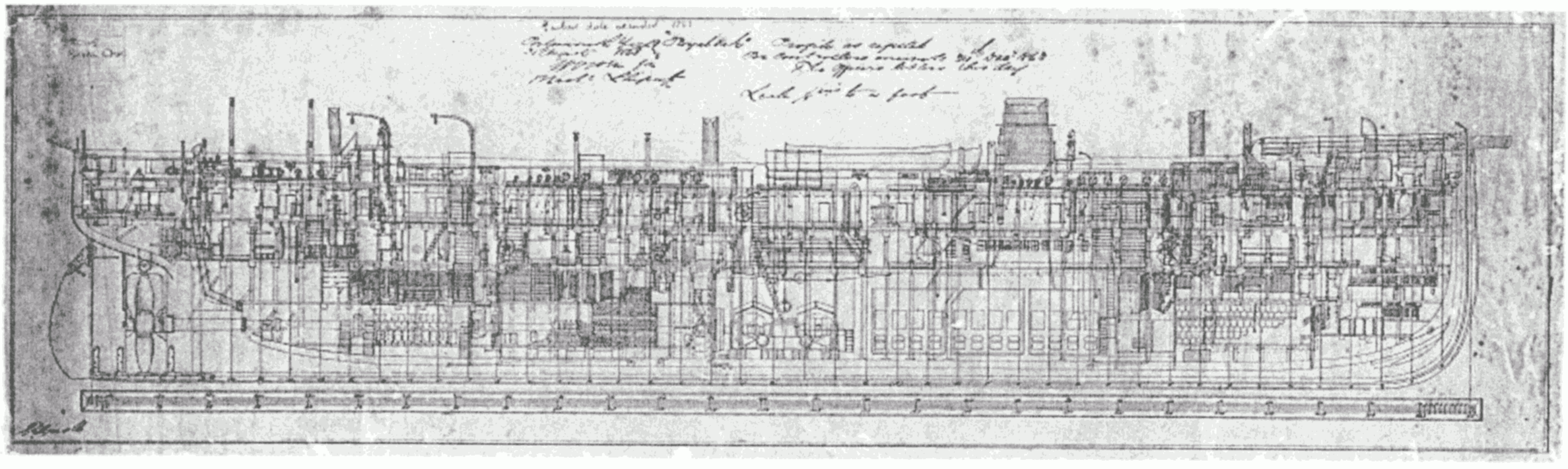
Men: 705 (later 800). Guns: 4 x 9in (12-ton) MLR, 24 x 7in (6½-ton) MLR, 8 x 24pdr brass howitzers. Later 17 x 9in (12-ton) MLR.

Armour: Battery and belt 5¾in amidships and 4½in at ends (with 10in teak backing); bulkheads 5½in.

Machinery: 2-cyl. (104¼in diam. except *Northumberland* 108.9in; 52in stroke except *Achilles* 48in) horizontal single expansion (trunk in *Minotaur* and *Northumberland*, double piston rods in *Agincourt*). 10 rectangular boilers. Single screw. 1,350 nhp. See below for individual ihp/speed. 750 tons coal = 1,200 miles @ 10kts.

First cost: *Minotaur* £478,855 (hull £377,325, machinery £79,505). *Agincourt* £483,003 (hull £381,700, machinery £83,777). *Northumberland* ?total (hull £391,481, machinery £79,871).

Scan and/or retouch by Grzechu



Profile of inboard works for the wooden ironclad *Royal Oak*, as refitted, dated Portsmouth 31 August 1868. At 1/8th of an inch to the foot, this draught is half the normal size. *DR8045*

Minotaur Thames Iron Sbdg. Co., Blackwall (No.81E)/John Penn & Son. (6,702 ihp = 14.411kts.).

Ord: 2.9.1861. K: 12.9.1861. L: 12.12.1863. C: 1.6.1867. Training ship at Portland 1895, renamed *Boscawen* in 3.1904. Renamed *Ganges* 21.6.1906, then *Ganges II* on 25.4.1908. Sold 30.1.1922 and BU at Swansea.

Agincourt Laird Brothers, Birkenhead (No.291)/Maudslay, Sons & Field. (6,867 ihp = 15.433kts.).

Ord: 2.9.1861. K: 30.10.1861. L: 27.3.1865. C: 19.12.1868. Training ship at Portland 1895, renamed *Boscawen III* in 3.1904. Renamed *Ganges II* on 21.6.1906. Coal hulk *C.109* in 9.1908. Sold to Ward, Swansea and arrived to BU 21.10.1960.

Northumberland Millwall Iron Sbdg Co., Blackwall/John Penn & Son. (6,558 ihp = 14.132kts.).

Ord: 2.9.1861. K: 10.10.1861. L: 17.4.1866. C: 8.10.1868. Depot ship 1898. Training ship, renamed *Acheron* in 3.1904. Coal hulk *C.8* in 1909; renamed *C.68* in 1926. Sold to Ward 6.1927, resold as *Stedmound*, hulk.

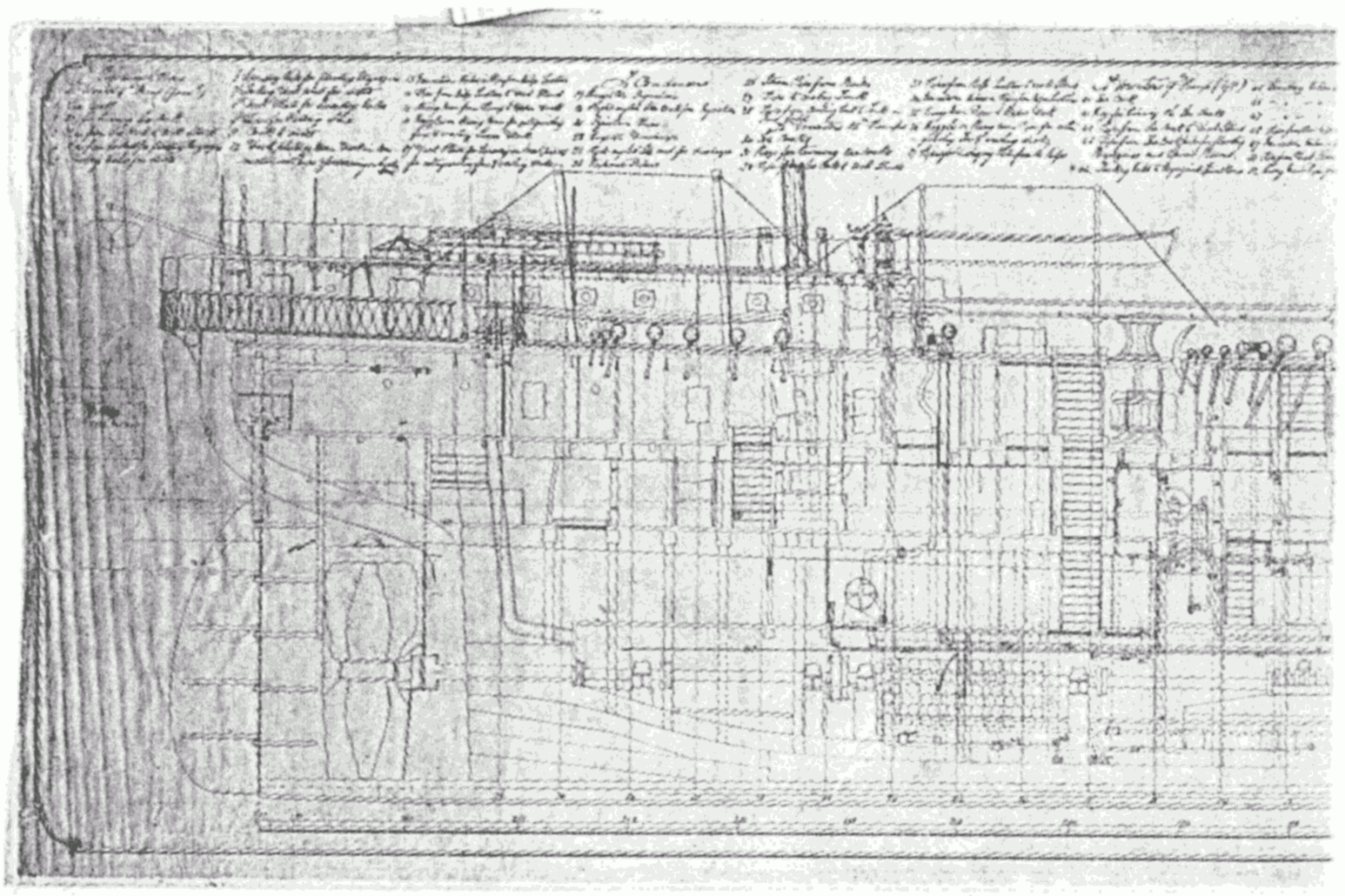
NOTES: First two ordered as *Elephant* and *Captain* respectively, but were renamed 18.10.1861. *Northumberland* was, strictly speaking, a half-sister to the others, being modified by Reed from the Watts design; her armament was always different and armour differed: armed with 4 x 9in (12½-ton) MLR, 22 x 8in (9-ton) MLR, 2 x 7in (6½-ton) MLR initially. Rearmed in 1875 with 7 x 9in (12-ton) MLR, 20 x 8in (9-ton) MLR and 2 x 20pdr (15cwt) BL. She had only 184ft 6in of her sides protected, rather than the 213ft of her near-sisters.

Armoured Wooden Frigates (Broadside Ironclads and Early Central Battery Ironclads)

From 1861 seven wooden screw ships-of-the-line, all of the 91-gun *Bulwark* Class (see Chapter 5), in early stages of construction on the stocks, were converted into ironclad frigates - four to designs by Isaac Watts with full-length side armour, and the last three, after some delays, by Edward Reed with an armoured central battery. Their upper decks were removed, and they were fitted with side armour, ranging from 4½in in the earliest treated to 5½in in the later conversions. Those completed with BL and MLSB guns were re-armed from 1867 onwards with MLR guns. None of these expensive conversions was very successful, and all were removed from the list at an early date. Three smaller conversions from wooden hulls were the armoured sloops *Research* and *Enterprise*, and the somewhat larger (and more successful) corvette *Favorite*; all were central-battery designs by Edward Reed.

ROYAL OAK - wooden-hulled ironclad frigate. Design by Isaac Watts, 1861.

Dimensions & tons: 273ft 0in pp, 232ft 8½in x 58ft 3in (57ft 3in for tonnage) x 24ft 0in. 4,057 bm. 6,366 disp.
Men: 585. Guns: MD: 8 x 7in (82cwt) BLR and 24 x 68pdr (95cwt) MLSB; UD 3 x 7in (82cwt) BLR.
Armour: Belt and battery 4½in (with 28in oak backing), extending to ends of ship at 2½in.
Machinery: 2-cyl. (82in diam., 48in stroke) horizontal single expansion, return connecting-rod. 6 rectangular boilers. Single screw.



Scan and/or retouch by Grzechu

800 nhp. 3,708 ihp = 12.529kts. Coal 550 tons = 2,200 miles @ 5kts. Under sail 13.5kts (the fastest ironclad under sail alone).
First cost: £254,537.

Royal Oak Chatham Dyd/Maudslay, Sons & Field.
Ord: 8.4.1859. K: 1.5.1860. App: (order to convert) 14.5.1861. Began conversion: 3.6.1861. L: 10.9.1862. C: 28.5.1863. Laid up 1871. Sold to BU 30.9.1885.

NOTES: The first British wooden-hulled armoured ship, she was approved for conversion from a 91-gun Second Rate to a 36-gun (36 x 68pdr MLSB) ironclad frigate on 14.5.1861. Conversion involved lengthening by 21ft. Barque-rigged (25,000 sq.ft sail area) on completion, but re-rigged as a ship in 1866. Re-armed 1867 with 4 x 8in (9-ton) MLR and 16 x 7in (6½-ton) MLR on the main deck and another 4 x 7in (6½-ton) MLR on the upper deck.

***CALEDONIA* Class** - wooden-hulled ironclad frigates. Design by Isaac Watts, 1861.

Men: 605. Guns: (initially all slightly different) *Prince Consort* 7 x 7in (82cwt) BL, 8 x 100pdr MLSB, 16 x 68pdr MLSB; *Ocean* 24 x 7in (6½-ton) MLR; *Caledonia* 10 x 7in (82cwt) BL, 8 x 100pdr MLSB, 12 x 68pdr MLSB. All 3 were re-armed from 1867 onwards with 4 x 8in (9-ton) MLR + 20 x 7in (6½-ton) MLR
Armour: Belt and battery 4½in extending to 3in (with 29½in teak backing).
Machinery: 2-cyl. (92in diam., 48in stroke) horizontal single expansion, return connecting-rod (double piston rods in last 2). 8 rectangular boilers. Single screw. 1,000 nhp. See below for ihp/speed. Coal 550 tons = 2,200 miles @ 5kts. Under sail 10 - 11.5kts.
First costs: *Prince Consort* £266,173. *Ocean* £298,451. *Caledonia* £312,034.

Prince Consort Pembroke Dyd/Maudslay, Sons & Field. (4,234 ihp = 13.119kts.)
Dimensions & tons: 273ft 1in pp, 232ft 8¾in x 58ft 7in (57ft 2in for tonnage). 4,045 bm. 6,430 disp.
Ord: 8.4.1859. K: 13.8.1860. App: 31.5.1861. Began conversion: 6.6.1861. L: 26.6.1862. C: 6.2.1864. Sold to Castle to BU 3.1882.

Ocean Devonport Dyd/Maudslay, Sons & Field. (4,244 ihp = 12.896kts.)
Dimensions & tons: 273ft 1in pp, 232ft 9⅝in x 58ft 5in (57ft 2in for tonnage). 4,047 bm. 6,535 disp.
Ord: 5.3.1860. K: 23.8.1860. App: 5.6.1861. Began conversion: 3.6.1861. L: 19.3.1863. C: 6.9.1866. Sold to Castle to BU 11.5.1882.

Caledonia Woolwich Dyd/Maudslay, Sons & Field. (4,092 ihp = 12.94kts.)
Dimensions & tons: 273ft 0in pp, 231ft 3¾in x 59ft 2in (57ft 11in for tonnage). 4,127 bm. 6,753 disp.
Ord: 5.3.1860. K: 1.10.1860. App: 31.5.1861. Began conversion: 6.6.1861. L: 24.10.1862. C: 6.7.1865. Sold to Castle to BU 30.9.1886.

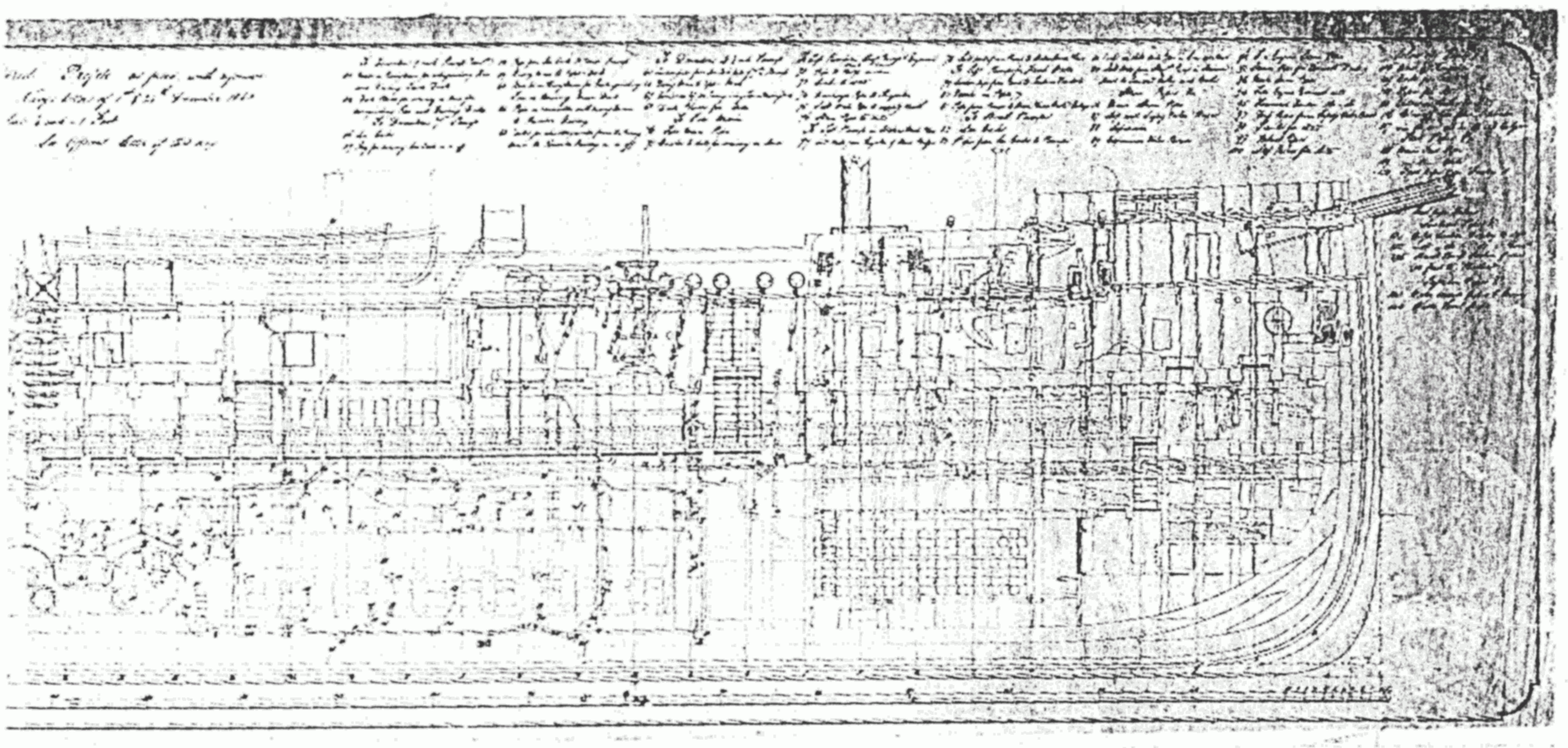
NOTES: All approved for conversion from 91-gun Second Rates to ironclad frigates on 27.5.1861, with a 21ft section inserted when already partially in frame. *Prince Consort* begun as *Triumph*, renamed 14.2.1862; she was re-armed again in 1871 with 7 x 9in (12-ton) MLR + 8 x 8in (9-ton) MLR. More powerful engines than the prototype, *Royal Oak*, but the extra weight cancelled this out and they were slower. All BU at Charlton.

ROYAL ALFRED - wooden-hulled ironclad frigate. Edward Reed design, 1861.

Dimensions & tons: 273ft 0in pp, 232ft 8⅝in x 58ft 7in (57ft 2in for tonnage). Draught 23ft 7in (fwd) - 27ft 2in (aft). 4,068 bm. 6,720 disp.
Men: 605. Guns: MD (battery) 10 x 9in (12½-ton) MLR + 4 x 7in (6½-ton) MLR; UD 4 x 7in (6½-ton) MLR (2 fwd, 2 aft); 6 saluting (howitzers).
Armour: Belt and battery 6in bulkheads 4½in (all with 29½in teak backing).
Machinery: 2-cyl. (82in diam., 48in stroke) horizontal single expansion, return connecting-rod (double piston rods). 6 rectangular boilers. Single screw. 800 nhp. 3,434 ihp = 12.36kts. 550 tons coal = 2,200 miles @ 5kts. Under sail 12.5kts.
First cost: £282,803.

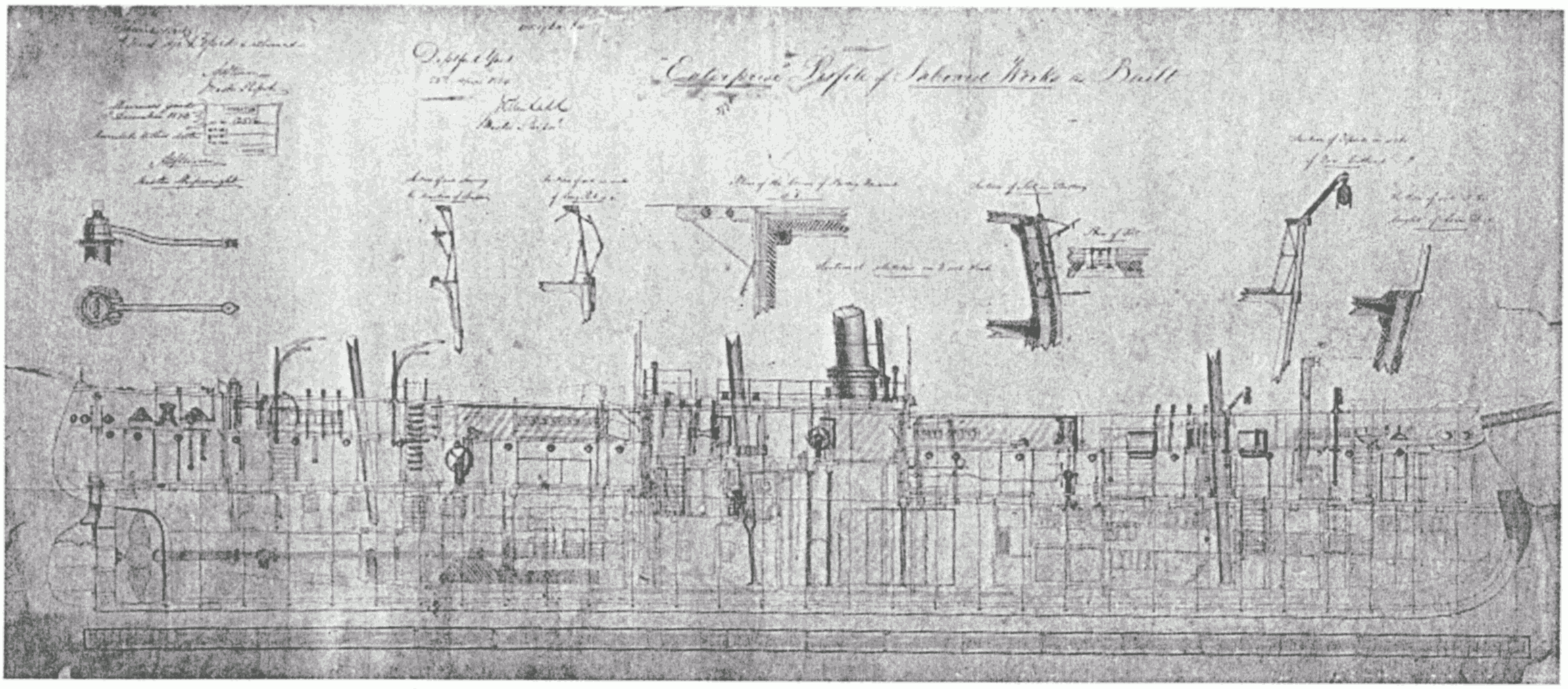
Royal Alfred Portsmouth Dyd/Maudslay, Sons & Field.
Ord: 8.4.1859. K: 1.12.1859. App: 5.6.1861. Began conversion: 22.6.1861. L: 15.10.1864. C: 23.3.1867. Laid up in reserve at Portland 1874. Sold to Castle to BU 12.1885.

NOTES: Approved for conversion from a 91-gun Second Rate to an ironclad frigate on 27.5.1861, with a 21ft section inserted. Intended to be of *Caledonia* design, but delayed to evaluate that Class's outturn, and instead completed with a 115-ft long central box battery. Ship-rigged, with 29,200 sq.ft of sail area.



As fitted profile for the wooden ironclad *Royal Alfred*, Portsmouth 26 August 1867. The extensive key relates to the ship's pipework, valves and pumps. *DR8046*

Scan and/or retouch by Grzechu



Profile of inboard works for the wooden ironclad sloop *Enterprise* as built, Deptford 23 April 1864; later alterations are dated Sheerness 18 December 1872. The twice-scale sketches mainly relate to the bulwarks and ports. *DR12556*

RESEARCH - wooden-hulled ironclad sloop, central battery. Designed by Edward Reed, 1862.

Dimensions & tons: 195ft 0in pp, 168ft 3½in x 38ft 6in (37ft 5in for tonnage). Draught 12ft 4in-15ft 3in. 1,253 bm. 1,740 disp.

Men: 139-150. Guns: 4 x 100pdr MLSB.

Armour: Belt, box-battery and bulkheads 4½in (with 19½in teak backing).

Machinery: 2-cyl. (50in diam., 24in stroke) horizontal single expansion, direct-acting. 2 tubular boilers. Single (hoisting) screw, 12ft diameter. 200 nhp. 937 ihp = 10.176kts (after refit in 1869 - 1,042 ihp = 10.331kts). 130 tons coal. Only 6kts under sail.

First cost: £71,287.

Research (ex-*Trent*, renamed 9.1862) Pembroke Dyd/James Watt & Co.

Ord: 5.3.1860. K: 3.9.1861. App: 1.9.1862. B: ...1862. L: 15.8.1863. C: 6.4.1864. Laid up 1878. Sold to BU 1884.

NOTES: Approved for conversion from a wooden screw sloop (*Camelion* Class) to an ironclad sloop in 1862 (lengthened by 10ft). She had a full-length armour belt reaching a depth of 10ft down from the main deck, with a box battery 34ft long on the MD. Barque-rigged, with 18,250 sq.ft sail area. Re-armed 1869-70 with 4 x 7in (6½-ton) MLRs replacing the 100pdrs.

ENTERPRISE - wooden-hulled ironclad sloop, central battery. Designed by Edward Reed, 1862.

Dimensions & tons: 180ft 0in pp, 152ft 11½in x 36ft 0in (34ft 11½in for tonnage). Draught 11ft 10in-15ft 8in. 994 bm. 1,350 disp.

Men: 130. Guns: 2 x 7in/110pdr (82cwt) BL, 2 x 100pdr MLSB.

Armour: Belt, box-battery and bulkheads 4½in (with 19½in teak backing).

Machinery: 2-cyl. (45in diam., 18in stroke) horizontal single expansion, direct-acting. 2 tubular boilers. Single screw. 160 nhp. 692 ihp = 9.944kts. 95 tons coal. 9.75kts under sail.

First cost: £62,474.

Enterprise (ex-*Circassian*, renamed 22.7.1862) Deptford Dyd/Ravenhill, Salkeld & Co.

Ord: 21.3.1861. App: 17.4.1862. K: 5.5.1862. L: 9.2.1864. C: 3.6.1864. Laid up 1871. Sold to BU 11.1886.

NOTES: Approved for conversion from a wooden screw sloop (*Camelion* Class) to an ironclad sloop in 1862. Full-length armour belt as in the *Research*, but with the box battery on the UD. Barque-rigged, with 18,250 sq.ft sail area. Re-armed 1868 with 4 x 7in (6½-ton) MLRs replacing 110pdrs and 100pdrs.

FAVORITE - wooden-hulled ironclad corvette, central battery. Designed by Edward Reed and the Controller's Dept, 1862.

Dimensions & tons: 225ft 0in pp, 195ft 6¾in x 46ft 9in (44ft 10½in for tonnage). Draught 19ft 7in (fwd), 22ft 7in (aft). 2,081 bm. 3,169 disp.

Men: 250-270. Guns: 8 x 100pdr MLSB in central battery.

Armour: Belt 4½in (with 26in teak backing); battery 4½in (with 19in teak backing); bulkheads 4½in.

Machinery: 2-cyl. (64in diam., 32in stroke) horizontal single expansion, direct-acting. 4 boilers. Single Mangin screw. 400 nhp. 1,773 ihp = 11.825kts. 350 tons coal. Under sail 10.5kts (her screw could neither hoist nor disconnect).

First cost: £152,374.

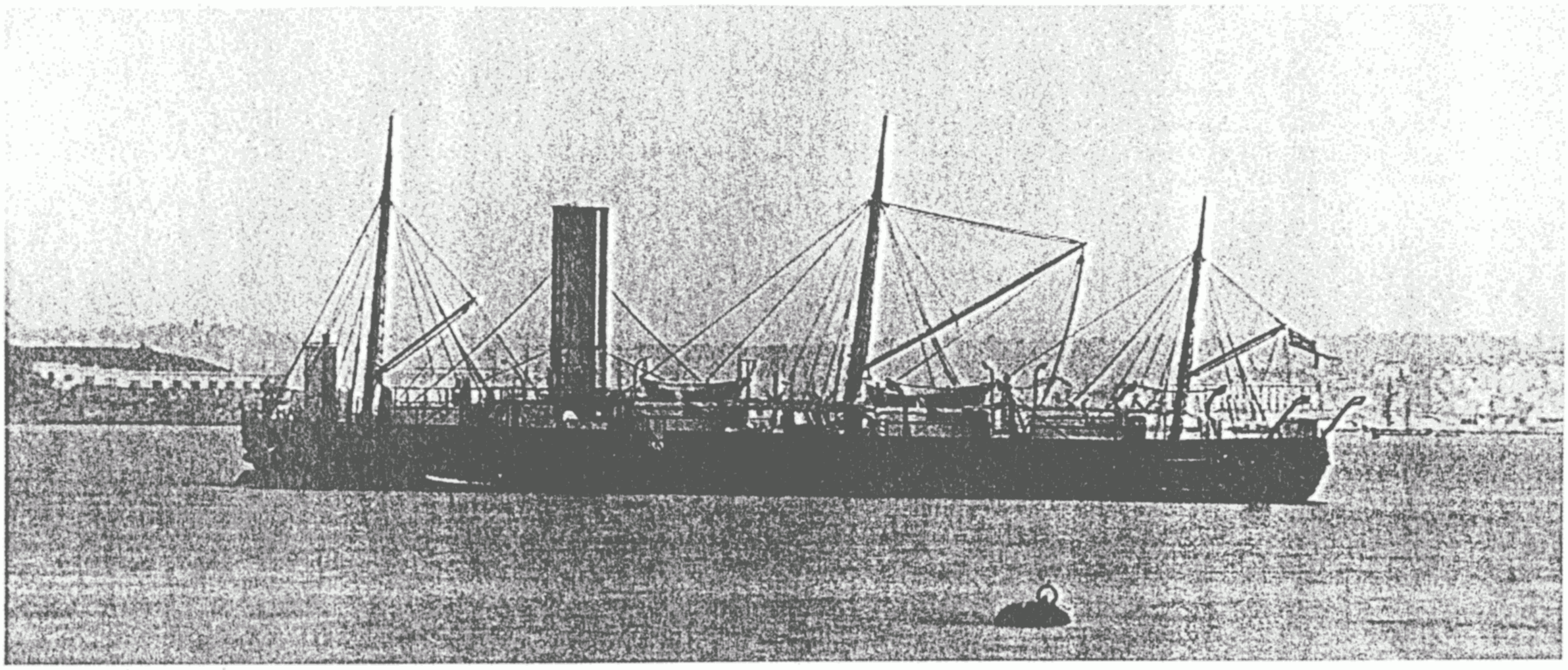
Favorite (*Favourite*) Deptford Dyd/Humphrys & Tennant

Ord. 8.4.1859. K: 23.8.1860. App: 29.5.1862. L: 5.7.1864. C: 17.3.1866. Guardship 1872. Laid up in reserve at Portsmouth 1876. Sold to BU 30.3.1886.

NOTES: Approved for conversion from a wooden screw corvette to an ironclad corvette in 5.1862. Fitted with engines originally intended for cancelled *North Star*. She had a full-length waterline armour belt reaching from the upper deck down to 3ft below the waterline, with a box battery 66ft long on the UD. Ship-rigged, with 18,250 sq.ft sail area. Re-armed 1869 with 8 x 7in (6½-ton) MLR in battery, plus 2 x 6in/64pdr (64cwt) MLR as UD chase guns. Usually listed as *Favourite* from about 1863.

ZEALOUS - wooden-hulled ironclad central battery frigate. Designed by Edward Reed, 1862.

Scan and/or retouch by Grzechu



The most dramatic conversion of the period (with arguably the ugliest outcome) was the cutting down of the wooden three-decker *Royal Sovereign* to make a turreted ironclad, designed to test the Coles principle. With only an exiguous rig of steadying canvas, the vessel had a short operational range. *N5252*

Dimensions & tons: 252ft 0in pp, 213ft 9¼in x 58ft 7in (57ft 2in for tonnage). Draught 24ft 10in (fwd), 25ft 11in (aft). 3,716 bm. 6,102 disp.
Men: 510. Guns: 20 x 7in (6½-ton) MLR - 16 in central battery on MD, 4 on UD (2 under fo'csle, 2 on QD).
Armour: Belt 4½in-2½in (with 30in teak backing); box battery 4½in; bulkheads 3in; pilot tower 3in.
Machinery: 2-cyl. (82in diam., 48in stroke) horizontal single expansion, return connecting-rod. 6 rectangular boilers. Single screw. 800 nhp. 3,623 ihp = 11.71kts. 660 tons coal. Under sail 10kts.
First cost: £239,258.

Zealous Pembroke Dyd/Maudslay, Sons & Field.
Ord: 1.4.1857. K: 26.10.1859. App: 2.7.1862. B: ...1862. L: 7.3.1864.
C: 4.10.1866. Laid up 1875. Sold to Castle to BU at Charlton 9.1886.

NOTES: Approved for conversion from a 91-gun Second Rate to an ironclad frigate in 1862, without lengthening. Ship-rigged, with 29,200 sq.ft sail area.

REPULSE - wooden-hulled ironclad central battery frigate. Designed by Edward Reed.

Dimensions & tons: 252ft 0in pp, c212ft 4in x 59ft 0in oa (c57ft 6in for tonnage). Draught 24ft 4in (fwd), 25ft 10in (aft). 3,734 bm. 6,010 (6,190 load) disp.
Men: 515. Guns: 12 x 8in (9-ton) MLR - 8 in central battery on MD, 4 on UD (2 under fo'csle, 2 under poop) - 2 x 20pdr BL (saluting).
Armour: Belt 6in-4½in (with 31in teak backing); box battery 6in; bulkheads 4½in.
Machinery: 2-cyl. (82in diam., 48in stroke) horizontal single expansion, trunk. 6 rectangular boilers. Single screw. 800 nhp. 3,347 ihp = 12.28kts. 460 tons coal = 1,700 miles @ 10kts. Under sail 10.5kts.
First cost: £183,640 (hull £156,246, machinery £27,394).

Repulse Woolwich Dyd/John Penn & Son.
Ord: 1.4.1857. K: 29.4.1859. App: 14.5.1861, but then suspended. Re-ord: 9.10.1866. L: 25.4.1868. C: (at Sheerness) 31.1.1870. Guardship 1881. Laid up 1885. Sold to BU 2.1889.

NOTES: Approved in 1861 for conversion from a 91-gun Second Rate to an ironclad frigate (without lengthening), but work suspended in 1861 and not resumed until 1866 (under Reed). The engine she received was (initially installed in and) taken from the three-decker *Prince of Wales*. In 1868 she was towed to Sheerness Dyd for completion, as Woolwich Dyd closed in 10.1869. Ship-rigged, with sail area of 29,200 sq.ft. Later re-armed with 10 x 9in (12-ton) MLR, with 8 MGs, 9 light guns and 4 x 16in TCs added in 1880.

Coast Defence Ships (Turret Ironclads)

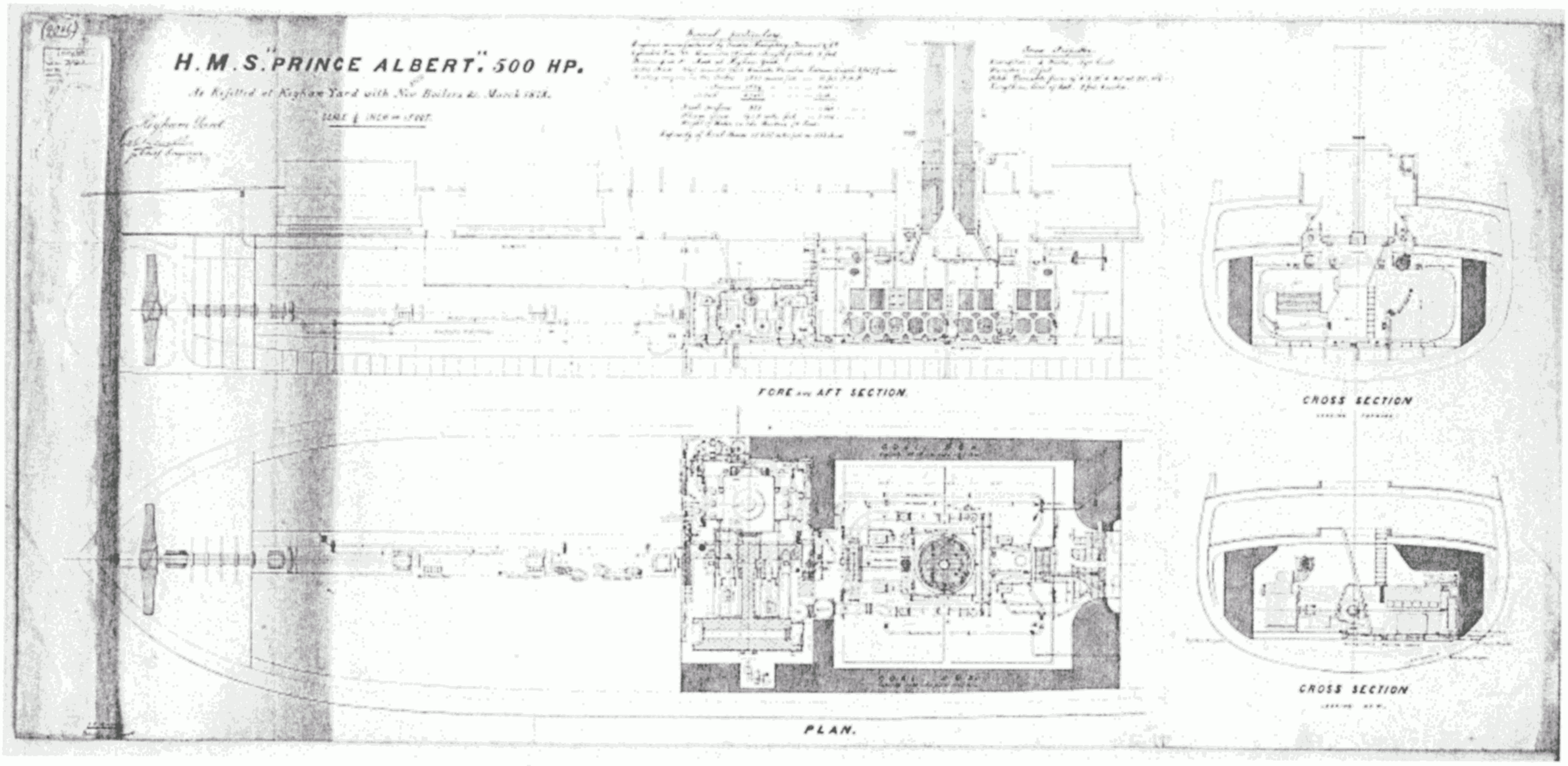
Two armoured vessels were built for coastal defence, with guns mounted in revolving turrets. One was converted from a wooden hull (originally begun as a three-decker) and the other was iron-hulled.

ROYAL SOVEREIGN - conversion of wooden screw three-decker (see Chapter 5) to wooden-hulled turret ironclad, coast defence. Redesigned at behest of Cowper Coles, 1862.

Dimensions & tons: 240ft 6in pp, 201ft 11½in x 62ft 0½in (59ft 2½in for tonnage). Draught 21ft 2in (fwd), 24ft 8in (aft). 3,963 bm. 4,955 disp.
Men: 296. Guns: 5 x 10.5in/150pdr MLSB in 4 UD turrets (1 twin fwd, 3 single).
Armour: Belt 5½in-4½in (with 36in oak hull behind); turrets 10in-5½in; conning tower 5½in; deck 1in.
Machinery: 2-cyl. (82in diam., 48in stroke) horizontal single expansion, return connecting-rod. Single screw. 800 nhp. 2,463 ihp = 11kts. 280 tons coal.
First cost: £180,572.

Royal Sovereign Portsmouth Dyd/Maudslay, Sons & Field.
Ord: 29.6.1848 (see Chapter 2). K: 17.12.1849. L: 25.4.1857.
App: 3.4.1862. B: 4.1862. C: 20.8.1864. Sold to BU 5.1885.

NOTES: Virtually complete as a 121-gun three-decker when she was approved for conversion to an ironclad frigate on 3.4.1862 (just 25 days after the duel in Hampton Roads demonstrated the effectiveness of the revolving turret).



Machinery arrangements for the turret ironclad *Prince Albert* as reboilered at Keyham Yard, Devonport March 1878. *DR7141*

The original MLSB guns were replaced by 9in (12½-ton) MLR guns in 1867.

PRINCE ALBERT - turret ironclad, coast defence. Design by Isaac Watts, 1862.

Dimensions & tons: 240ft 7in pp, 206ft 4½in x 48ft 1in (47ft 10in for tonnage) x 19ft. Draught 19ft 8in. 2,537 bm. 3,687 disp (3,880 load).
Men: 200. Guns: 4 x 9in (12½-ton) MLR in single centreline UD turrets, 2 fwd and 2 aft.
Armour: Belt 4½in (with 18in wood backing); turrets 10½in-5½in (with 14in wood backing); UD 1⅛in.
Machinery: 2-cyl. (72in diam., 36in stroke) horizontal single expansion, direct acting. 4 rectangular boilers. Single screw. 500 nhp. 2,130 ihp = 11.65kts. 230 tons coal = 930 miles @ 10kts.
First cost: hull £178,537, machinery £24,129.

Prince Albert Samuda Brothers, Poplar/Humphrys & Tennant.
Ord: 8.4.1862. K: 29.4.1862. L: 23.5.1864. C: 23.2.1866. Sold to Ward, Preston for BU 16.3.1899.

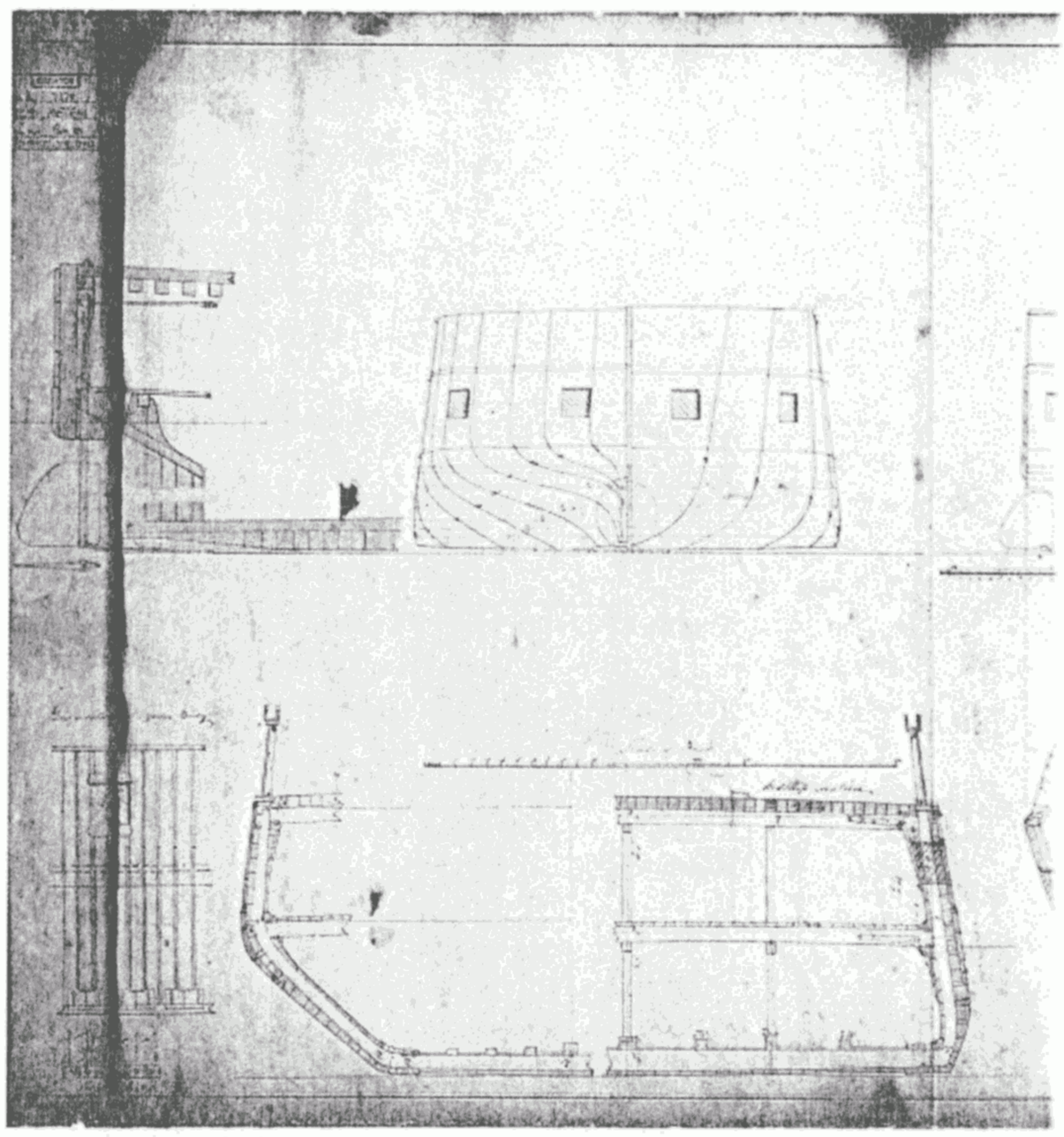
NOTES: Completed with 4 hand-turned turrets (6 originally planned), each weighing 11 tons. Re-boilered in 1878, with 6 x MGs and 2 light guns added during 1880s.

Ironclad Floating Batteries (Wooden-hulled)

The concept of producing steam-propelled floating batteries, clad with plate armour, was initially propounded by the French, and ten were intended for the start of the 1855 campaign of the war against Russia. French shipyards were only able to produce five vessels in the time, and Britain agreed to build the other five.

***AETNA* Class** 1854.

Dimensions & tons: 172ft 6in, 146ft 0in x 43ft 11in (43ft 6in for tonnage) x 14ft 7in. Draught 8ft 8in. 1,469 bm. *Glatton* and *Trusty* had extra 15½in breadth and were thus about 1,535 bm.
Men: 200. Guns: 14 x 68pdr (95cwt) MLSB.
Armour: 3½-4½in iron plates.
Machinery: 2-cyl. (25½in diam., 24in stroke) horizontal single



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expansion, high pressure (62 lbs/sq.in). Single screw. 150 nhp. 4.5 - 5.5kts.

Aetna (i) J. Scott Russell, Millwall/J. Scott Russell.
Ord: 4.10.1854. K: 9.10.1854. L: ... . Caught fire on slip and launched herself 3.5.1854 when nearly complete (was to have been launched 5.5.1855); her remains were BU on river bank.

Meteor C. J. Mare & Co., Limehouse/Maudslay, Sons & Field.
Ord: 4.10.1854. K: 9.10.1854. L: 17.4.1855. C: 4.7.1855. BU 1861.

Thunder C. J. Mare & Co., Limehouse/Miller, Ravenhill & Co.
Ord: 4.10.1854. K: 9.10.1854. L: 17.4.1855. C: 21.7.1855. BU at Chatham 6.1874.

Glatton R. & H. Green, Limehouse (No.314)/Miller, Ravenhill & Co.
Ord: 4.10.1854. K: 9.10.1854. L: 18.4.1855. C: 3.8.1855. BU 1864.

Trusty R. & H. Green, Limehouse (No.315)/Miller, Ravenhill & Co.
Ord: 4.10.1854. K: 9.10.1854. L: 3.5.1855. C: 13.6.1855. BU by Castle, Charlton 1864.

NOTES: Copies of French batteries employed in the Crimean War. Intended to carry 16 guns, but two were deleted to keep down the draught. All were named 10.10.1854. *Trusty* was fitted in 1861 with Captain Coles's 'Shield' and used for experiments, and thus became the first ship in the world to be fitted with an armoured turret. Although completed as single-screw, *Meteor* (and possibly others) quickly altered to triple-screw, with wing shafts presumably driven through a belt arrangement. Note both Mare and Green yards were stated as being at Limehouse, whereas their other building was done at Blackwall (it is not certain if this was an error).

***AETNA* Class** 1855. Lengthened version of previous class, with extra pair of guns.

Dimensions & tons: 186ft 0in, 157ft 9in x 43ft 11in (43ft 6in for tonnage) x 16ft 0in. Draught 6ft. 1,588 bm.
Men: 200. Guns: 16 x 68pdr (95cwt) MLSB.
Armour: 4½in iron plates.
Machinery: 2-cyl. (27in diam., 30in stroke) horizontal single expansion. 200 nhp. 4kts.

Aetna (ii) Chatham Dyd/Maudslay, Sons & Field.
Ord: 16.11.1855. K: 25.11.1855. L: 5.4.1856. C: ... . Harbour service 1866. Burnt out at Sheerness 1873. BU 1874.

NOTES: Boilers were those salvaged from *Aetna* (i).

Iron-hulled Floating Batteries

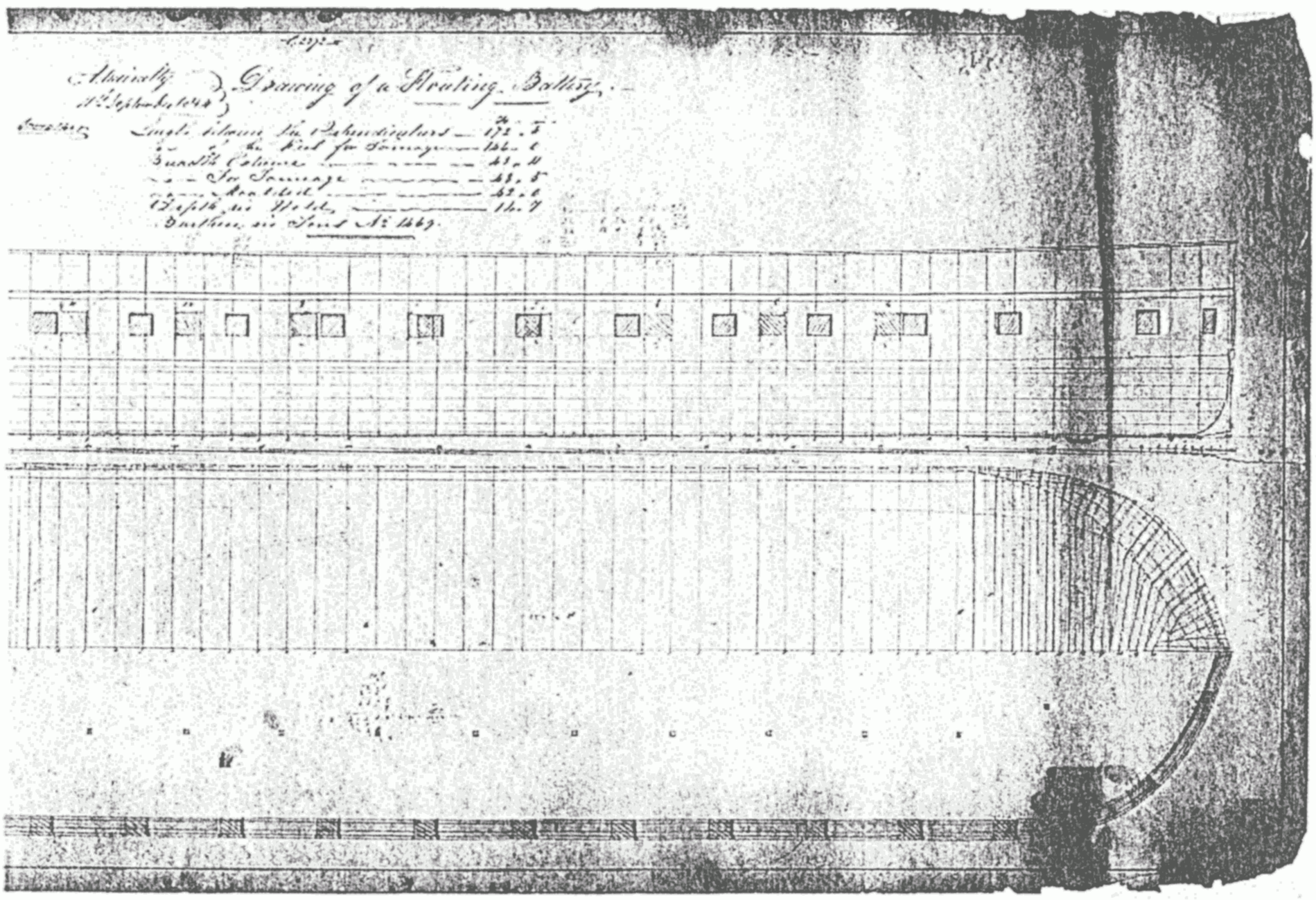
***EREBUS* Class** 1855.

Dimensions & tons: 186ft 8½in, 156ft 2¼in x 48ft 6in x 15ft 6in. Draught 8ft 10in (fwd), 8ft 11in (aft). 1,954$^{29}/_{94}$ bm.
Men: 200. Guns: 16 x 68pdr (95cwt) MLSB.
Armour: 4½in iron plates.
Machinery: 2-cyl. horizontal single expansion. 200 nhp. 5.5kts.
First cost: *Erebus*: Hull £69,724, machinery £11,500. *Terror*: Hull £63,907, machinery £18,501, fitting as floating battery £2,385+, for Bermuda £6,171. *Thunderbolt*: Hull £67,849, machinery £11,600.

Erebus Robert Napier & Sons, Govan (No.77)/Robert Napier & Sons.
Ord: 22.12.1855. K: 1855. L: 19.4.1856. C: ... . Never at sea, being laid up in reserve at Portsmouth on completion. Sold to Castle to BU 5.1884.

Thunderbolt Samuda Brothers, Millwall/Miller, Ravenhill & Co.
Ord: 22.12.1855. K: 26.12.1855. L: 22.4.1856. C: ... . Fitted at Chatham for service in Thames 1861. Floating pierhead at Chatham 13.11.1873. Renamed *Daedalus* 1916-19. Rammed and sunk by tug 3.4.1948. Raised, BU 1949.

Terror Palmer Brothers, Jarrow (No.52)/Robert Napier & Sons.
Ord: 22.12.1855. K: 31.12.1855. L: 28.4.1856. C: 14.7.1857 as base ship for Bermuda. Sold to Walker & Co. at Bermuda 1902.



Lines and sections of the wooden floating battery *Meteor*, dated Admiralty 11 September 1854. Visually they were virtually double-ended, although the rudder and propeller defined the stern. The modified gunport arrangement can be seen on the sheer draught. *DR7279*

Scan and/or retouch by Grzechu

NOTES: The first iron-hulled ironclads ever built. Design adapted from that of the modified French design for the wooden-hulled floating batteries.

First cost (£) of each vessel:

Vessel	*Total*	*Hull*	*Machinery*
Meteor	61,390	43,799	10,123
Thunder	62,337	43,784	10,343
Glatton	60,581	43,479	11,244
Trusty	63,941	43,491	10,446
Aetna (ii)	49,852	38,357	11,000
Erebus	...	69,724	11,500
Thunderbolt	...	67,849	11,600
Terror	...	63,907	18,501

Iron Screw Frigates, converted to Troopships before completion

The success of a number of commercial shipyards in Britain in building ships with iron hulls led the Admiralty in 1844 to embark on a programme of four large iron frigates, to be fitted with screw propulsion, each from a specialist merchant builder. However, the Admiralty's confidence in iron ships was quickly shaken, following adverse reports of damage to iron hulls under fire. On 1 December 1846 they enquired as to the costs of cancelling the programme, and in April 1847 decided to complete the four as troopships. One (*Greenock*) was sold prior to completion and the other three converted to troopships (in which role they served with distinction throughout the Crimean War), fitted with engines intended for blockship frigates instead of those originally ordered. No further iron warships were to be ordered until after the Crimean War.

Tenders for Second Class Iron Screw Frigates and First Class Iron Screw Sloops - November 1844.

The ten tenders received in November 1844 for such ships were (from each builder) of two types, the larger to be rated Second Class frigates, and the smaller as First Class sloops, showing the intended hull dimensions the builders designed:

Contractor	*Second Class Frigates*	*First Class Sloops*
Scott & Sinclair, Greenock	204ft 0in x 36ft 6in x 24ft 1,290 tons	192ft x 35ft 6in x 21ft 3in 1,144 tons
Fairbairn & Co., Millwall	208ft 0in x 36ft 9in x 23ft 1,335 tons	196ft x 36ft 0in x 20ft 6in 1,202 tons
Ditchburn & Mare, Blackwall	215ft 0in x 38ft 6in x 24ft 1,509 tons	210ft x 37ft 6in x 21ft 6in 1,399 tons
Robert Napier, Govan	230ft 0in x 38ft 0in x 22ft 6in 1,591 tons.	215ft x 35ft 6in x 20ft 1,298 tons.
Laird, Birkenhead	221ft 9in x 39ft 6in x 23ft 1,616 tons	(Not tendered)
Guppy, Bristol	205ft 6in x 42ft 4in x 23ft 1,716 tons	192ft x 39ft 6in x 20ft 8in 1,396 tons
Rennie, Deptford	220ft 0in x 40ft 9in x 23ft 1,726 tons	210ft x 38ft 0in x 22ft 6in 1,438 tons
Rigby, Hawarden	220ft 0in x 42ft 0in x 25ft 6in 1,828 tons	200ft x 39ft 6in x 22ft 6in 1,463 tons
Bury, Curtis & Co., Liverpool	225ft 0in x 42ft 0in x 16ft 1,874 tons	216ft x 40ft 0in x 20ft 6in 1,634 tons
Miller & Ravenhill, Blackwall	207ft x 41ft 0in x 22ft 5in 1,608 tons	(Not tendered)

GREENOCK - Second Class frigate. Builder's design, approved 28.6.1845. Sold off before completion.

Dimensions & tons: 213ft 0in, 190ft 7in x 37ft 4in x 23ft 0in. Draught 15½ft. 1,412$^{76}/_{94}$ bm. 1,980 disp.

Men: 175? (intended as frigate) Guns: (intended) 2 x 8in/68pdr (112cwt), 4 x 8in/68pdr (65cwt), 4 x 32pdr (25cwt); never installed.

Machinery: 2-cyl. (71in diam., 48in stroke) horizontal single expansion, geared. 4 rectangular (box) boilers. Single screw. 564 nhp. 707 ihp = 9.63kts.

First cost: Hull £41,261, machinery £29,306.

Greenock (ex-*Pegasus*) Scott, Sinclair & Co., Greenock/Scott, Sinclair & Co.

Ord: 19.2.1845. K: 3.9.1845. L: 30.4.1849. C: 1850. Sold to J. Scott Russell by AO 18.8.1850.

NOTES: Tender submitted 9.11.1844; design approved 10.6.1845 for vessel of 198ft x 37ft x 21½ft dimensions. By AO 12.1.1846 to be lengthened 12ft amidships from original 198ft, and by AO 1.6.1847 to be lengthened another 3ft aft. Name changed from *Pegasus* to *Greenock* by AO 8.11.1846. Ordered 23.4.1847 to complete her as a transport. Sailed from Greenock on 19.5.1850. By AO 18.8.1850 sold to J. Scott Russell (the shipbuilder) on behalf of the Australian Royal Mail Co. 'A wood screw vessel complete of *Highflyer*'s (Class) in exchange when built' (the vessel she was exchanged for was the *Esk*). Re-engined 1852 with 250 nhp engine (2 cyl. of 50$^{1}/_{8}$in diam., 36in stroke) by George & John Rennie (new trials 594 ihp = 8.755kts); her original Scott, Sinclair engine was fitted into the 91-gun battleship *Hannibal*. Sailed 18.9.1852, having been fitted for sea at Woolwich. Renamed *Melbourne* 25.11.1852 for the Australian R.M. Co. Finally sold to BU 1873.

VULCAN - Second Class frigate, completed as a troopship. Builder's design, 1845.

Dimensions & tons: 220ft 0in, 195ft 4¾in x 41ft 5in oa (41ft 0in for tonnage) x 26ft 10in. Draught 17½ft. 1,747$^{15}/_{94}$ bm. 2,396 disp.

Men: 175 (intended as frigate). Guns: intended, as frigate: 8 x 32pdr (56cwt), 2 x 68pdr (113cwt), 4 x 8in (65cwt), 2 x 32pdr (25cwt); as troopship 6 x 6in.

Machinery: 4-cyl. (49½in diam., 24in stroke) horizontal single expansion. Single screw. 350 nhp. 837 ihp = 9.511kts.

First cost: Total £98,927 (machinery £22,853).

Vulcan Ditchburn & Mare, Blackwall/George & John Rennie.

Ord: 4.3.1845. K: 12.3.1846. L: 27.1.1849. C: 3.3.1851. Sold for mercantile use 1.2.1867, converted to barque *Jorawur*.

NOTES: Design approved 30.9.1845. Named by AO 14.4.1845 (after the paddle frigate then building by Laird as *Vulcan* had been renamed *Birkenhead* on 26.2.1845). Ordered 23.4.1847 to complete her as a transport (capacity 677 troops). During construction, Thomas Ditchburn retired and the ship was completed by the new firm of C. J. Mare & Co. Re-engined by Maudslay, Sons & Field with the 2-cyl. (62in diam., 36in stroke) 400 nhp engine taken from the frigate-blockship *Seahorse* and installed for £10,704 (new rating 837 ihp = 8.936kts).

MEGAERA - Second Class frigate, completed as a troopship. Builder's design, 1845.

Dimensions & tons: 207ft 0in, 184ft 4¼in x 37ft 8in x 24ft 3in. 1,391$^{31}/_{94}$ bm. 2,048 disp.

Men: 175 (intended as frigate). Guns: planned as frigate: 4 x 32pdr (56cwt), 2 x 56pdr (87cwt), 4 x 8in (65cwt), 2 x 32pdr (25cwt).

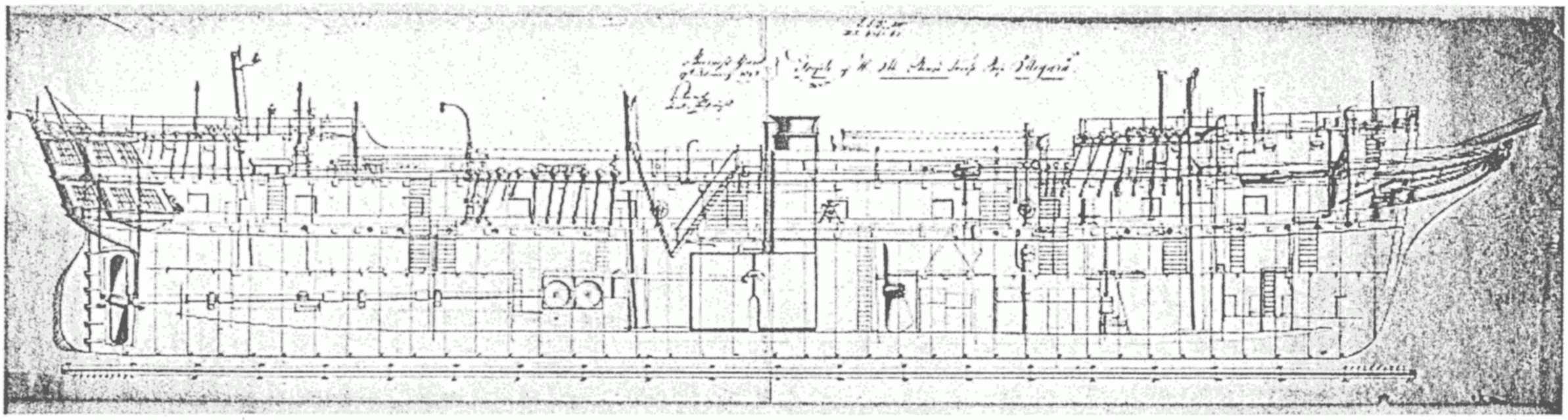
Machinery: 4-cyl. (49½in diam., 24in stroke) horizontal single expansion. Single screw. 350 nhp. 843 ihp = 9.8kts.

First cost: £83,942 (including machinery £22,349).

Megaera William Fairbairn & Co., Millwall/George & John Rennie.

Ord: 4.3.1845. K: 8.1845. L: 22.5.1849. C: 29.12.1851. Beached on Saint Paul's Island, Indian Ocean 16.6.1871 because of major leaks rendering her unseaworthy due to corrosion of her plating.

Scan and/or retouch by Grzechu



Profile of *Megaera* as fitted as a troopship, dated Sheerness 17 February 1852. *DR3445*

NOTES: Originally referred to as both First Class screw sloop and Second Class screw frigate. Design lengthened 11ft by AO of 25.11.1845. Ordered 23.4.1847 to complete her as a transport (capacity 418 troops). In 1864 fitted with Miller, Ravenhill & Salkeld 2-cyl. (55in diam., 30in stroke) 400 nhp engine (1,431 ihp) taken from *Pioneer*.

SIMOOM - Second Class frigate, completed as a troopship. Builder's design, 1845.

Dimensions & tons: 246ft 0in, 221ft 4¾in x 41ft 0in x 26ft 7in. Draught 17½ft. 1,979 $^{57}/_{94}$ bm. 2,789 disp.
Men: 175 (intended as frigate). Guns: as frigate: MD 12 x 32pdr (56cwt); UD 2 x 8in/68pdr (112cwt) + 4 x 10in (85cwt) + 2 x 32pdr (25cwt).
Machinery: 4-cyl. ($45^{2}/_{5}$in diam., 30in stroke) horizontal single expansion, oscillating. Single screw. 350 nhp. 604 ihp = 8.696kts.
First cost: Hull £59,400, machinery £23,359, fitting £23,028.

Simoom Robert Napier & Sons, Govan (No.7)/Boulton, Watt & Co.
Ord: 4.3.1845. K: 10.1845. L: 24.5.1849. C: 20.3.1855. Sold to Collings, Dartmouth to BU 6.1887.

NOTES: Ordered 23.4.1847 to complete her as a screw-driven troopship (capacity 769 troops). Refitted and re-engined 1855 by Portsmouth Dyd with 2-cyl. (62½in diam., 36in stroke) 400 nhp engine (1,699 ihp = 11.589kts).

Iron Screw Gunvessels

See introductory notes under Screw Gunvessels in Chapter 5.

SHARPSHOOTER - First Class gunvessel. John Fincham design, approved 22.5.1845.

Dimensions & tons: 150ft 5in, 134ft 6in x 26ft 7½in x 15ft 9in. 503 bm. 658 disp.
Men: ?80. Guns: 2 x 10in (85cwt) + 4 x 32pdr (25cwt/6ft 8in).
Machinery: 2-cyl. (46in diam., 36in stroke) horizontal single expansion, geared. Single screw. 202 nhp. 348 ihp = 9.327kts.
First cost: Hull £11,030, machinery £10,734, fitting ?£3,539.

Sharpshooter Ditchburn & Mare/Miller, Ravenhill & Co.
Ord: 23.5.1845. K: 8.1845. L: 25.7.1846. C: 16.5.1848. Sold 2.12.1869 for commercial service (name unchanged).

NOTES: Half-sister to wooden *Rifleman* built at Portsmouth Dyd. Re-engined 1864 by John Penn & Son with 160 nhp engine from gunvessel *Lynx*; 438 ihp = 8.4kts.

MINX - Second Class gunvessel. Sir William Symonds design, approved 31.5.1845.

Dimensions & tons: 130ft 0in x 22ft 0in x 9ft 2in. 301 bm. 250 disp.
Men: ?60. Guns: 1 x 10in (86cwt).
Machinery: 2-cyl. (34in diam., 33in stroke) vertical single expansion, oscillating. Single screw. 100 nhp. 234 ihp = 9.137kts.
First cost: Total £13,677 (machinery £4,518).

Minx Miller, Ravenhill & Co., Blackwall/Miller, Ravenhill & Co.
Ord: 22.5.1845. K: 5.9.1845. L: 5.9.1846. C: 4.6.1854. Water tanker 1859. Sold 15.12.1899.

NOTES: Half-sister to wooden *Teazer* built at Chatham Dyd. Machinery fitted by 12.1846 - appears to have been laid up till 1854 before completion, but re-engined 1849 with Seaward & Capel 2-cyl. ($9^{3}/_{16}$in diam., 9in stroke) horizontal, oscillating engine of 10 nhp (36 ihp = 5.44kts). Her 1859 fitting as water tank steamer was at Woolwich for £2,601.

Transports/Troopships

The advent of the Russian War in 1854 witnessed the first large-scale taking up of large merchant vessels to serve as auxiliaries, instead of the traditional practice of using elderly warships; the majority of these were iron-hulled screw ships, which gave the Navy considerable experience of metal hulls prior to their wholesale adoption for large warships.

PERSEVERANCE - purchased 1854 (building C. J. Mare, Blackwall for Russia as *Sobraon*), iron screw troopship.

Dimensions & tons: 270ft 7in, 247ft 0in x 38ft 4in x 17ft 10in. Draught 25ft 9in. 1,929$^{78}/_{94}$ bm. 2,299 disp.
Machinery: John Penn & Son 2-cyl. (55in diam., 36in stroke) horizontal single expansion, trunk. 360 nhp. 912 ihp = 11.297kts.
Purchased from builders for £19 per ton, value of machinery seized from Russians £11,800, builder paid £44,901, by AO 1.5.1854.
L: 13.7.1854. Completed for sea at Sheerness (previously at Woolwich) 19.6.1855; full first cost £87,188. *Urgent* was a near sister but not identical. Wrecked on the Island of Maio, Cape Verdes 21.10.1860.

PRINCE - purchased 1854 (ex-mercantile *Prince*, launched 12.4.1854 by C. J. Mare, Blackwall).

Dimensions & tons: 291ft 6in x 41ft 6in x 30ft 8in. 2,710 bm.
Machinery: Maudslay, Sons & Field 2-cyl. horizontal single expansion. 300 nhp. 815 ihp.
Purchased from General Screw Steam Shipping Co. for £105,000 by AO 7.1854. Wrecked in the Black Sea 14.11.1854.

HIMALAYA - purchased 1854 (ex-P&O *Himalaya*, launched 24.5.1853 by C. J. Mare, Blackwall).

Dimensions & tons: 340ft 5in, 367ft 0¼in x 46ft 1¾in x 24ft 0in. 3,452$^{69}/_{94}$ bm. 4,490 disp.
Men: ... . Guns: nil.
Machinery: John Penn & Son 2-cyl (78in diam., 42in stroke) horizontal single excpansion, trunk. 700 nhp. 2,556 ihp = 12.8kts.
Purchased from the Peninsular and Oriental Co. for £130,000 by AOs 10 & 26.7.1854. Became coal hulk 1894 at Devonport, renamed *C.60* in 12.1895. Sold to E. W. Payne 28.9.1920 (became a hulk at Portland, and sunk there by dive-bombers during a German air raid 6.1940).

NOTES: Was the largest vessel in the world when completed as a passenger liner for the P.& O. Re-engined 1863 by Keyham Factory with a 2-cyl. (77$^{3}/_{8}$in diam., 42in stroke) horizontal single expansion engine (rerated 2,609 ihp).

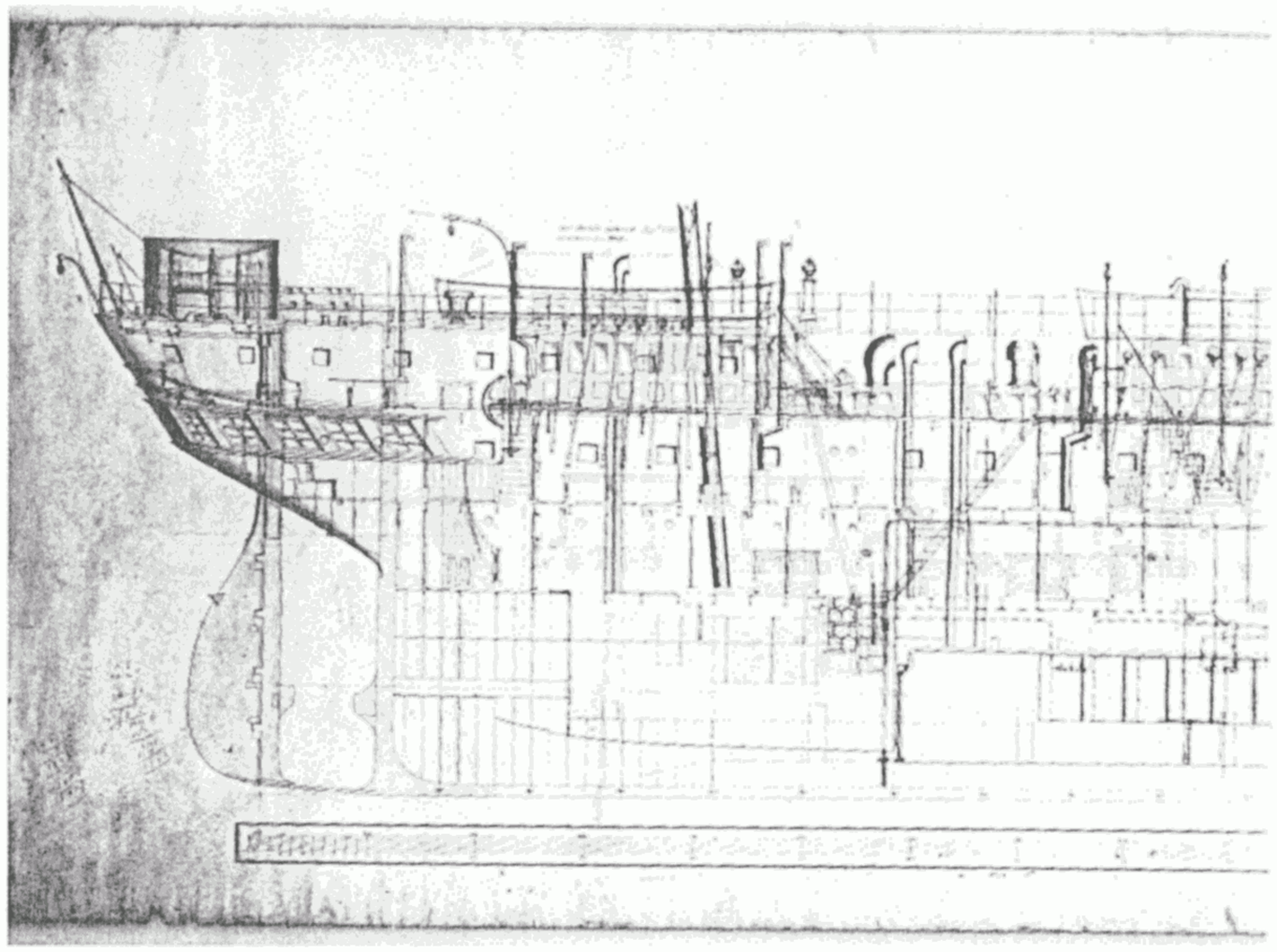
URGENT - purchased 1855 (ex-Russian (?) *Assaye* building by C. J. Mare, Blackwall).
Dimensions & tons: 272ft 3½in, 250ft 2½in x 38ft 5in x 26ft 8½in. 1,964$^{38}/_{94}$ bm. 2,801 disp.
Proposed for lengthening: 300ft 6in, 277ft 3½in x 38ft 5in x 26ft 8½in. 2,204$^{49}/_{94}$ bm.
Machinery: Maudslay, Sons & Field 2-cyl. (64in diam., 36in stroke) horizontal single expansion. 400 nhp. 1,483 ihp = 11.72kts.
Purchased from builders by AO 13.6.1854. L: 2.4.1855. Completed fitting for sea at Sheerness 29.9.1855, full first cost £89,936. Depot ship at Jamaica 3.1876. Sold to Butler & Co. 6.1903.

NOTES: A near, but not identical, sister to *Perseverance*.

TRANSIT - purchased 1855 (building (for Russia?) by C. J. Mare, Blackwall).
Dimensions & tons: 302ft 6in, 277ft 8¾in x 41ft 8½in x 24ft 1½in. 2,569 $^{74}/_{94}$ bm.
Machinery: John Penn & Sons. 400 nhp. 1,234 ihp = 11.9kts.
Purchased from builder by AO 13.8.1854.
L: 20.3.1855. Completed for sea at Sheerness 20.7.1855; full first cost £109,261. Wrecked on a sunken rock in the Straits of Banca whilst carrying troops to the East 10.7.1857.

ORONTES - built by Laird Brothers, Birkenhead (No.286). L: 22.11.1862. C: 3.1863.
Dimensions & tons: 300ft 1in x 44ft 8in x 23ft 7in. 2,823 bm. 4,857 disp.
Men: ... . Guns: 3 x 4pdr.
Machinery: James Watt & Co. 2-cyl. (71in diam., 36in stroke) horizontal single expansion. 500 nhp. 2,143 ihp = 12.354 kts.
Lengthened 1876 to 350ft 0in (becoming 5,330 disp) and re-engined with Laird 2-cyl. inverted compound engine (high pressure cyl. 54in, low pressure cyl. 94½in; stroke 42in), 2,569 ihp = 13.017kts. Sold 3.7.1893 to BU on the Thames.

TAMAR - built by Samuda Brothers, Poplar. L: 5.1.1863.
Dimensions & tons: 300ft 0in x 44ft 7in x 23ft 7in. 2,812 bm. 4,857 disp.
Men: ... . Guns: 3 x 6pdrs.
Machinery: Ravenhill, Selkeld & Co. 2-cyl. (71in diam., 36in stroke) horizontal single expansion. 500 nhp. 1,869 ihp = 10.778kts.
Became receiving ship at Hong Kong 1897. Scuttled there 12.12.1941 during Japanese occupation of the base.



As fitted profile of the troopship *Tamar*, Devonport 19 February 1872, corrected to 2 December 1876.

Storeships

DWARF - purchased 1843 (ex-mercantile *Mermaid*, built 1842 by Ditchburn & Mare).
Dimensions & tons: 130ft 0in, *c*120ft 0in x 16ft 0in x 8ft 0in. Draught 5ft 8in (mean). 164 bm. 98 disp.
Machinery: 2-cyl. (40in diam., 32in stroke) Rennie vertical single expansion, geared. 90 nhp. 216 ihp = 10.537kts.
Purchased from G. & J. Rennie for £5,350 by AO 22.6.1843. Renamed by AO 3.11.1843. Experimental alteration to after body 1846, later removed. Sold to John Broughton for £500 by AO 5.9.1853.

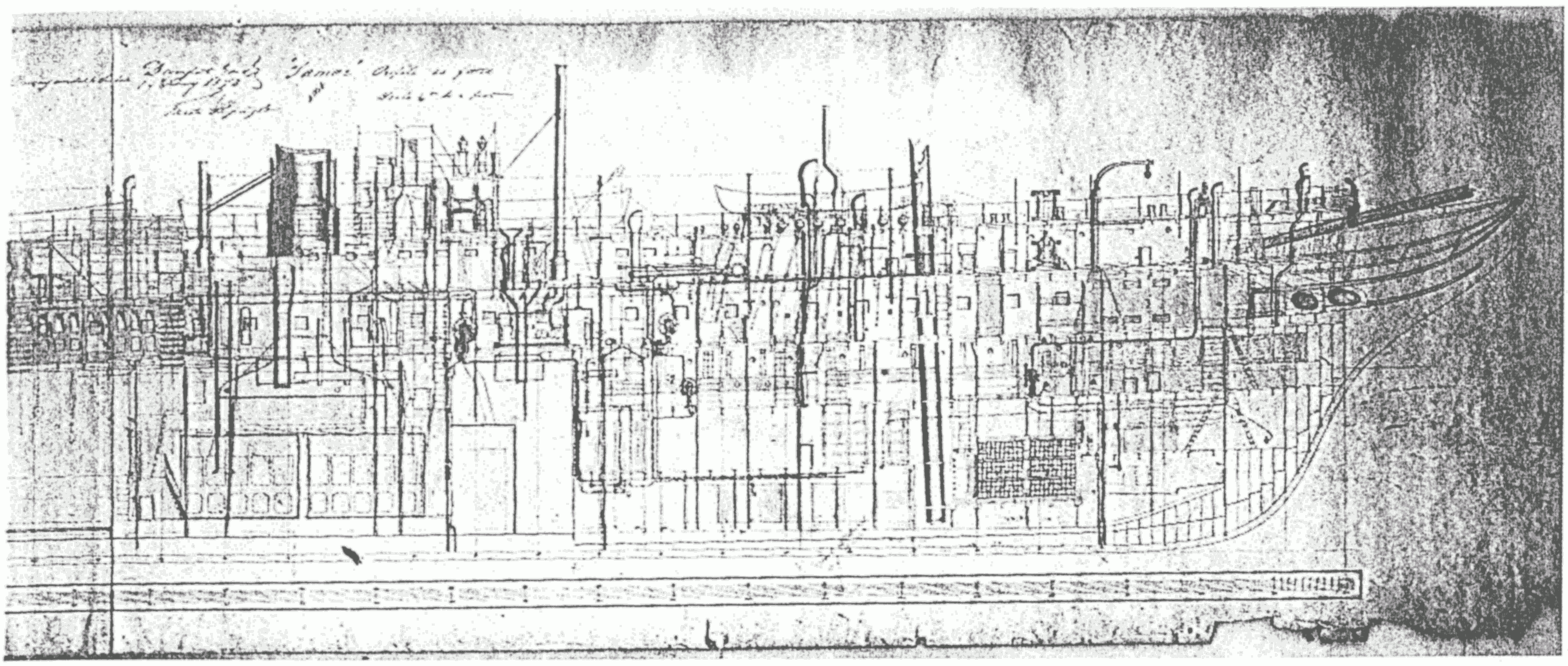
NOTES: The first screw vessel to serve in the Royal Navy.

INDUSTRY - purchased 1854 (building by C. J. Mare, Blackwall).
Dimensions & tons: 178ft 0in, 161ft 8in x 27ft 0in x 19ft 9in. 627$^{38}/_{94}$ bm. 1,126 disp.
Machinery: James Watt & Co. 2-cyl. (36½in diam., 36in stroke) vertical single expansion, geared, oscillating. 100 nhp. 318 ihp = 9.12kts.
Purchased from the builders for £19,250 by AO 19.4.1854. L: 1854.
Boom defence vessel 1901. Sold to Ward, Preston to BU 10.10.1911.

SUPPLY - purchased 1854 (building by C. J. Mare, Blackwall).
Dimensions & tons: 178ft 0in, 161ft 8in x 27ft 0in x 19ft 9in. 627$^{38}/_{94}$ bm. 1,126 disp.
Machinery: G. & J. Rennie 2-cyl. (34½in diam., 27in stroke) inclined single expansion, trunk. 80 nhp. 265 ihp = 8.42kts.
Purchased from the builders for £19,250 by AO 19.4.1854.
L: 3.6.1854. Completed fitting at Woolwich for £2,019 18.8.1854.
BU completed at Chatham 8.2.1879.

NOTES: Sister to *Industry*.

RESOLUTE - purchased 1855 (building by Laird Brothers, Birkenhead. (No.115)).
Dimensions & tons: 282ft 10½in, *c*254ft 4¾in x 36ft 4¾in x 24ft 1in. 1,794 bm. 2,510 disp.
Machinery: Fawcett, Preston & Co. 4-cyl. (45$^{3}/_{8}$in diam., 36in stroke)



horizontal single expansion, trunk. 400 nhp. 825 ihp = 10.316kts.
Purchased from Laird for £66,000 as storeship by AO 16.1.1855.
L: 17.2.1855. Renamed *Adventure* as troopship by AO 16.2.1857.
Re-engined 1862 with Ravenhill, Salkeld & Co. 2-cyl. (63in diam., 3ft stroke) horizontal single expansion 400 nhp engine (rating 1,227 ihp = 11.44kts). BU at Chatham 1877.

ASSISTANCE - purchased 1855 (building Laird Brothers, Birkenhead. (No.116)).
Dimensions & tons: 282ft 10in, *c*254ft 2in x 36ft 5in x 24ft 1in. 1,793 bm. 2,260 disp.
Machinery: Fawcett, Preston & Co. 4-cyl. (45¹/sin diam, 36in stroke) horizontal single expansion, trunk. 400 nhp. 879 ihp = 10.663kts.
Purchased whilst building for £66,000 by AO 16.1.1855. L: 5.4.1855. C: 19.6.1855. Wrecked near Hong Kong 1.6.1860, wreck sold 30.7.1860.

BUFFALO - purchased 1855 (ex-mercantile *Baron von Humbolt*, built by T.D. Marshall, South Shields in 1854).
Dimensions & tons: 137ft 2in, ... x 26ft 2in x 14ft 4in. 440 bm. 620 disp.
Men: ... . Guns: 2.
Machinery: ... . 60 nhp. 252 ihp. (re-engined 1860 with 80 nhp engine).
Purchased by the Treasury for the Crimean Railway Company for £11,965, then transferred to the Admiralty 5.9.1855. Name altered to *Buffalo* by AO 26.11.1855. Sold 11.1888.

HESPER - purchased 1855 (ex-mercantile *Hesperus*, built in 1854 by Charles Mitchell, Newcastle (No. 7)).
Dimensions & tons: 203ft 7in, ... x 28ft 7in x 17ft 11in. 808 bm.
Men: ... . Guns: 4.
Machinery: ... . 120 nhp. (re-engined with 150 nhp engine in 1860).
Transferred from the Treasury 24.5.1855. On the China Station from 1858. Sold 10.1868, retaking original name.

WYE - purchased 1856-66 (mercantile *Hecla* ...) iron screw storeship/tank ship.
Dimensions & tons: 206ft 0in, ... x 26ft 8in x 17ft 2in. 700 bm. 1,161 disp.
Machinery: Blair & Co. 2-cyl. inverted compound engine. 130 nhp. 629 ihp = 10.928kts.
Transferred to the Admiralty on 24.5.1855 by the Treasury who had purchased her for £24,000 for the Crimean Railway. Renamed 6.6.1855 and fitted as a tank vessel for the Crimea. In 1860 described as a 'distilling ship'. Fitted for a storeship 1861. Sold 3.7.1866.

MANILLA - purchased 1860 (ex-mercantile *Atalante*, built 1860 by Pile, West Hartlepool).
Dimensions & tons: 160ft 0in, ... x 23ft 0in x 12ft 4in. 295 bm.
Machinery: ... . 70 nhp.
Purchased at Hong Kong by the authority of the Commander in Chief for £13,000 on or before 6.7.1860. Name changed to *Manilla* by AO 19.7.1861. Exchanged for a sailing barque (mercantile *Ingeberg*, renamed *Manilla*) 28.2.1870.

Depot Ships, etc.

BRUISER - purchased 1854 (ex-mercantile *Robert Stephenson*, building by Richardson & Duck, Stockton-on-Tees).
Dimensions & tons: 183ft 0in, ... x 25ft 6in x 15ft 0in. 580 bm.
Machinery: ... . 80 nhp.
L: 27.7.1854. Purchased for £16,000 as a floating flour mill for the Black Sea by AO 8.12.1854. Completed fitting 4.1855 (still as *Robert Stephenson*). Name changed to *Bruiser* by AO 10.6.1855. Sold to Charles Colman for £8,500 12.1.1857.

ABUNDANCE - purchased 1855 (ex-mercantile *Alfred*, built by James Laing, Sunderland (No.214)).
Dimensions & tons: 170ft 0in, ... x 27ft 6in x 15ft 8in. 617 bm.
Machinery: ... . 70 nhp.
Purchased from Mr Parnal(?) for a bakery (flour mill) in the Black Sea for £14,400 by AO 6.1.1855. Name altered to *Abundance* in 2.1855. Sale approved 3.1.1856. Fitted at Deptford and sold to Messrs. Hambro & Sons for £8,500 by AO 31.10.1856.

Scan and/or retouch by Grzechu

CHASSEUR - purchased 1855 (ex-mercantile, building by T. & E. Smith, North Shields).

Dimensions & tons: 159ft 5½in, 143ft 5½in x 26ft 9in x 17ft 2in. 543 bm.
Machinery: ... . 70 nhp (later removed).
Purchased by AO 28.5.1855 for £12,500 from Smiths as a floating factory for repairing material for the Army. Sold to Ward, Preston 25.5.1901.

VICTORIA - purchased 1856 (ex-mercantile *Water Rail* (?) ...) iron screw tank vessel.

Dimensions & tons: 90ft 0in x 15ft 0in x 6ft 10in. 98 bm. 60 disp.
Machinery: ... . 30 nhp.
Purchased at Constantinople from Henry Aspinall for £7,000 by Admiral Sir Houston Stewart; purchase approved by AO 12.1.1856.
Based at Malta 1857. Known as *Humber* by 7.1859. Sold as mercantile *Virginia* 1866.

Royal Yachts, etc.

FAIRY 1844. ... design. Iron screw tender for Royal Yacht.

Dimensions & tons: 144ft 8in, 133ft 6in x 21ft 1½in x 9ft 10in. 317$^{3}/_{94}$ bm.
Machinery: 2-cyl. (42in diam., 36in stroke) vertical single expansion, oscillating, geared. Single screw. 120 nhp. 364 ihp = 13.324kts.
First cost: Total £20,984 (hull £12,268, machinery £7,110).

Fairy Ditchburn & Mare, Blackwall/John Penn & Co.

Ord: 22.11.1844 (named 19.12.1844). K: 1844. L: 3.1845. C: 6.8.1846. Sold 1.1868.

NOTES: In many ways the forerunner of the Crimean gunboat designs. Used for trials with anti-fouling compounds.

EMPEROR - Iron screw yacht, 1856. Built for the Emperor of Japan.

Dimensions & tons: 136ft 9in, 123ft 5¼in x 22ft 1in x 11ft 6in. 318$^{7}/_{94}$ bm.
Machinery: 60 nhp.
First cost: Total £14,849 (hull £6,370, machinery £3,840).

Emperor R. & H. Green, Blackwall (No.339)/John Penn & Sons.

Ord: ... . K: 24.5.1856. L: 29.11.1856. C: 22.4.1857. Presented to Japan 7.1858.

NOTES: Built as a present to the Emperor of Japan. Named *Emperor* on commissioning by AO 27.2.1857. Transferred at Shinagawa in 7.1858 and named *Banryu*. In 10.1868 went over to the rebels and was sunk in 5.1869. Salvaged by an American firm who renamed her SS *Emperor*. Returned to Japan 1873 as *Raiden Maru* and in 1877 transferred to the Imperial Navy as *Raiden*; served as a gunboat and then a transport. Sold 1888 for conversion to whaler *Raiden Maru*, broken up at Osaka about 1899.

Tenders etc.

SIREN - purchased 1855 on stocks (building as mercantile *Mengin*) for the Colonial Government of Bermuda; builder's design?

Dimensions & tons: 107ft 0in, ... x 17ft 1in x 6ft 7in. 146 bm. 99 disp.
Machinery: J. Key. 25 nhp.
First cost: £5,235.

Siren Laird Brothers, Birkenhead (No.132)./J. Key.

Ord: ... . K: 21.5.1855. L: 21.10.1855. C: 5.1856. Sold 12.1863.

NOTES: Never on the Navy List, as intended solely for use by the Royal family. On 19.11.1863 the Admiralty, having been asked by the Colonial Department whether an application by Attwood & Co. to purchase the vessel for £2,000 should be approved, agreed to the proposal.

Screw Lighters

PERA - purchased 1855 (ex-mercantile ...) iron screw lighter.

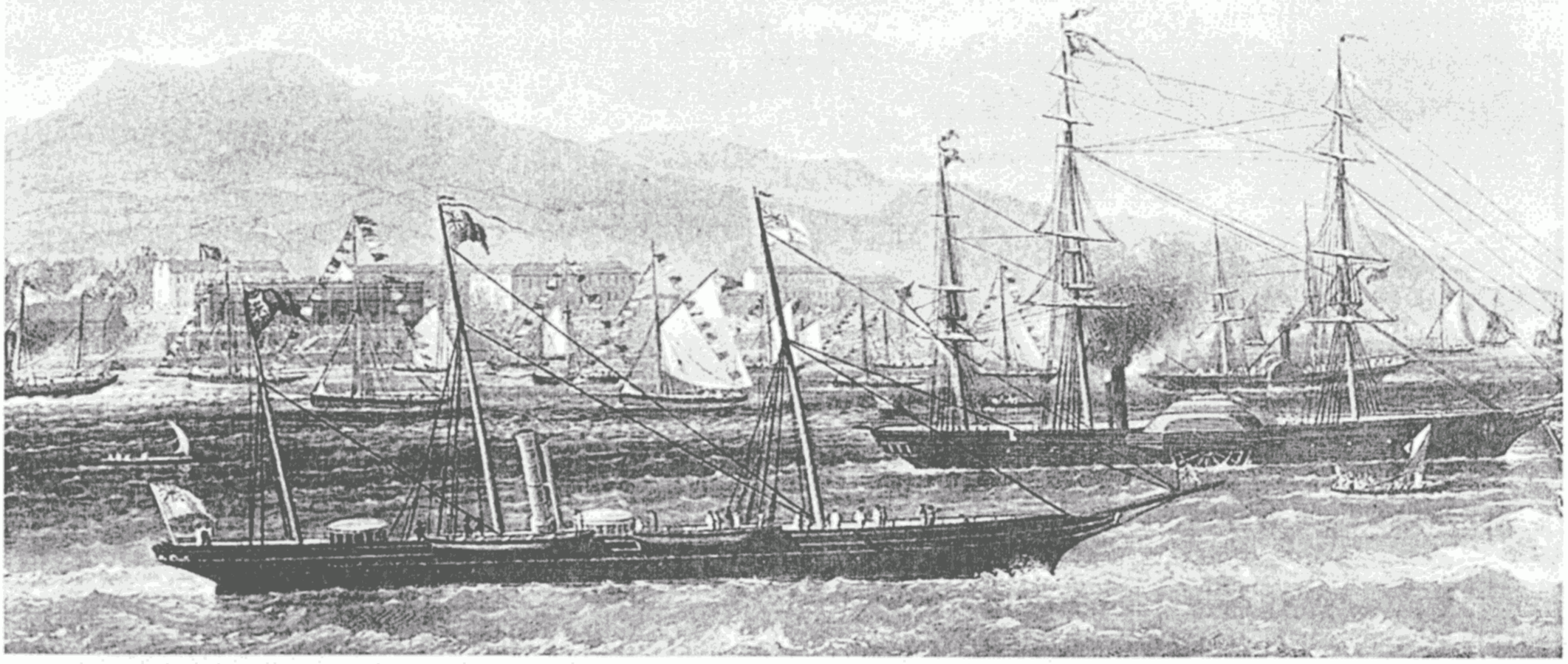
Dimensions & tons: 80ft 0in x 20ft 0in x 9ft 6in. 126 bm (88.9 register).
Machinery: ... . 25 nhp.
Purchased from Joseph Aspinall at Constantinople by Admiral Grey for £4,250 on 30.10.1855. Sold at Constantinople to the Peninsular & Oriental S.N. Co. for £800 on 10.10.1856.

THISTLE - purchased 1857 (ex-mercantile ...) iron screw coal lighter.

Dimensions & tons: 100 bm.
Hull purchased at Hong Kong from Curry for £312 on 12.6.1857 after being seized and set fire by the Chinese; became *Hong Kong Yard Craft No.1* on 11.12.1856. Sold at Hong Kong 1869.

CHESTER - launched 14.3.1861 by Laird Brothers, Birkenhead (No.274); iron screw tank vessel. ·

Dimensions & tons: 104ft 8in x 18ft 3in x 8ft 2in. 164 bm. 234 disp.
Machinery: ... . 30 nhp. 90 ihp. Sold 12.1925.



The iron-hulled tender *Fairy* shown leaving Kingstown, after a royal visit to Ireland in 1849. She was an important vessel in the development of iron hulls, demonstrating the Royal Family's support for the new technology, and was also the starting point for the huge programme of 'Crimean' gunboats. *Detail from C838*

Scan and/or retouch by Grzechu

PART II: 1863 to 1889

(the eras of Reed, Barnaby & White)

While the first generation of ironclads, led by the *Warrior*, had brought together in one hull all the advances in iron construction, propulsion and ordnance that had been achieved by the end of the 1850s – and thereby at one stroke made the world's wooden-hulled battleships obsolete – only a part of the revolution in naval design was as yet accomplished. The *Warrior* may have replaced wood by iron in her hull, but metallurgical progress was soon to replace wrought iron with steel; her engines may have given her some independence from the vagaries of the wind, but she was still essentially a vessel whose hull was designed for maximum performance under sail, and she remained a fully-rigged ship; finally *Warrior*'s largest guns may have been Armstrong's rifled breech-loaders, but the majority of her ordnance still comprised smoothbore muzzle-loaders, and these guns were still mounted in the traditional broadside layout. Within the next three decades, all of these factors were to undergo even greater change.

The ordnance revolution appeared, very soon after 1863, to go into reverse. By this date the battlefleet had been almost entirely re-armed with Armstrong guns, but weaknesses in the breech mechanism, coupled with flaws in casting the barrels, resulted in a series of accidents which led the Admiralty to decide to withdraw them from service. After a series of tests during the early 1860s, the Admiralty decided to revert to muzzle-loading guns, adopting in 1865 the new Woolwich rifled gun over its competitive designs – predominantly the Lancaster gun (which used a twisted oval bore instead of rifling to impart spin to a projectile) and the Whitworth gun with its hexagonal bore. While in 1865 the decision was a practical one, the continuing improvements in the design of breech-loaders meant that several other navies, which switched over to breech-loading guns in the early 1870s, secured an advantage; as gun-casting improved and weapons became larger (and in particular longer), muzzle-loading became increasingly problematic and in 1879 the Admiralty was forced to reverse its policy and re-introduce the by now vastly more reliable breech-loader.

As ships' speeds rose, the strategy of broadside-to-broadside battle became outdated. Warships increasingly needed to use their guns while approaching opponents head-on – and this necessitated a layout where guns could be deployed ahead as well as on each beam. Moreover, as guns grew in size and weight, it became increasingly hard to justify having two such principal guns balancing each other on either side of the ship, only one of them trainable on an opponent. The logical solution was to replace each pair by a single gun, mounted along the centreline of the ship and able to turn to either beam as well as to fire ahead. While this proved impractical with sailing warships, where masses of rigging restricted barrels traversing, the introduction of steam was eventually to eliminate the need for rigging and permit the evolution of barbettes (with which guns could rotate) and turrets (which themselves rotated).

The introduction of ever-larger ordnance, capable of penetrating the relatively thin iron plate of the early ironclads, led initially to increasingly thicker wrought iron (the *Inflexible* of 1874 had 24in thick plate), backed by a thickness of teak and an inner skin of iron in a sandwich construction, but the deleterious impact this had on the weight of armour a battleship had to carry resulted in a concentration of defensive armour in a protected centre section – a central citadel whose sides were protected by a belt of armour stretching to below the waterline – while the bow and stern sections were relatively lightly defended. Steel as a construction material instead of wrought iron was introduced initially in the despatch vessels *Iris* and *Mercury* in 1875, but it was first used in the battlefleet for the *Ajax* and *Agamemnon* in the following year; steel's greater strength also led to its use for their turrets as an extra 'face' welded to wrought iron, a synthesis called 'compound' armour. Compound armour was employed for the entire hull of the succeeding *Colossus* Class in 1879. Further improvements in metallurgy were to await another decade, when the addition to steel production initially of nickel (introduced by the French Schneider works in the later 1880s), secondly of high carbon content outer surfaces (under the 'Harvey' process) and then of chromium and magnesium (in Krupp's cemented armour), was to significantly increase the toughness of steel armour during the 1890s.

Steam propulsion evolved over the same period. Early screws were fitted so that they could be disconnected from the shaft, so as to revolve freely when the ship was moving under sail, or later so that they could be hoisted vertically into a purpose-made well above water, both systems in order to reduce drag. The early screw vessels had single shafts and propellers; twin screws were first used in the ironclad corvette *Penelope* in 1868, but they did not come into general use for large warships until a decade later. Marine boilers, initially rectangular, were replaced by cylindrical or ellipsoidal types, sometimes using furnaces at both ends; subsequently these types, where the heat was produced within the water tank, were replaced by new 'water-tube' types where pipes conducted the water through the middle of the furnaces. Steam pressures increased steadily, to improve the power output fed to engines. The latter in the early 1860s were all single expansion types, either with trunk connection or with return connecting-rods. Compound expansion was first experimentally tried in the ironclad *Pallas* in 1865, and subsequently came into general use a decade later.

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7 Ironclads

The retirement of Isaac Watts as Chief Constructor in 1863 was followed (on 9 July) by the appointment of a 33-year-old naval architect in his place, the first to be brought in from outside the Dockyard service. Edward John Reed, who was to hold the post until 1870, was the advocate of the central-battery form of ironclad, with a reduced number of more powerful guns mounted within an armoured central citadel instead of a battery mounted along the full length of a ship's side. They had short hulls for better manoeuvrability.

Central Battery Ironclads

In all, the RN acquired 16 central-battery ships, most of them built to Admiralty order, but a few purchased 'on political emergency'. With these 16 are included below the last pair of broadside frigates, whose designs were based on that of the contemporary *Bellerophon*, but with the battery armour extending to the full length of the ship. These, the only wooden hulls designed from the start to be iron-cased, were built chiefly to use up the vast stocks of timber at Chatham and Pembroke. A third wooden hull, the corvette *Pallas*, was designed by Reed before joining the Constructor's office to create a cheap, fast, small ironclad, but she never made the intended 14kts. The others were all iron-hulled ships.

LORD WARDEN - (wooden-hulled) broadside ironclad frigate (Third Rate). Design by Edward Reed and the Controller's Department, 1863.

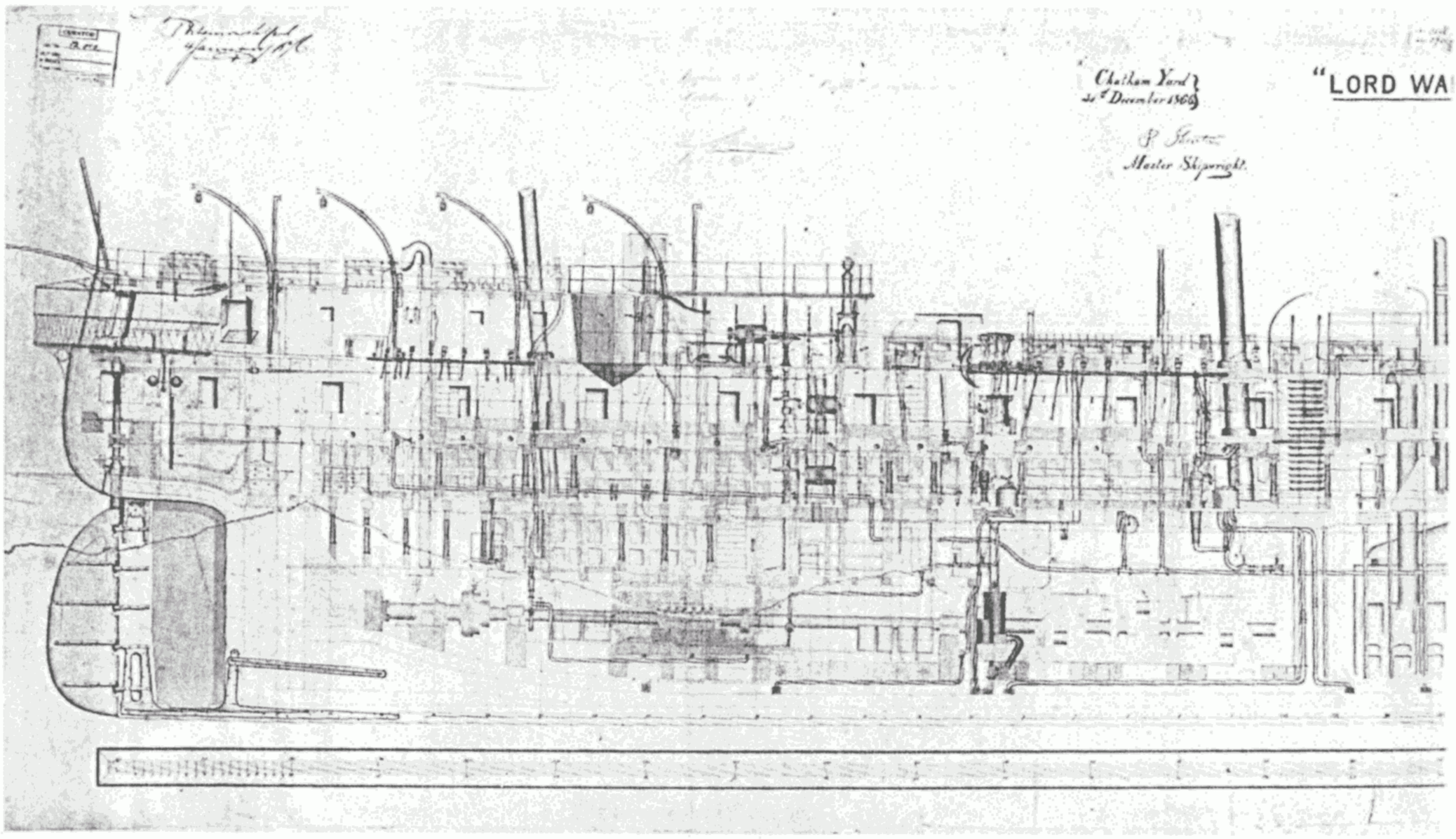
Dimensions & tons: 280ft 0in pp, 233ft 9¼in x 59ft 0in (57ft 3in for tonnage) x 26ft 0in. 4,080 bm. 7,842 disp.
Men: 605. Guns: 2 x 9in (12-ton) MLR - one fwd on UD, one aft on MD; 14 x 8in (9-ton) MLR - on broadside; 2 x 7in (6½-ton) MLR - on MD in bows; 2 x 20pdr BL (Armstrong, for saluting).
Armour: Belt and battery 5½in amidships, 4½in at ends (with 6in oak backing); conning tower 4½in.
Machinery: 3-cyl. horizontal single expansion, return connecting-rod. 9 rectangular boilers, with 28 lbs/sq.in pressure. Single screw. 1,000 nhp. 6,706 ihp = 13.496kts. 600 tons coal. Under sail 10kts.
First cost: £328,998

Lord Warden Chatham Dyd/Maudslay, Sons & Field.
Ord: 26.5.1863. K: 24.12.1863. L: 27.3.1865. C: 30.8.1867. Sold to Castle to BU 2.1889.

NOTES: Sister to *Lord Clyde*, from which she differed in detail, notably in having a clipper bow instead of her sister's standard ram bow. She was the heaviest wooden-hulled ship ever built. Cylinders were 91in diam. (with 54in stroke).

LORD CLYDE - (wooden-hulled) broadside ironclad frigate (Third Rate). Design by Edward Reed and the Controller's Department, 1863.

Dimensions & tons: 280ft 0in pp, 233ft 11¾in x 58ft 11in (57ft 2in for tonnage) x 26ft 0in. 4,067 bm. 7,750 disp.
Men: 605. Guns: 24 x 7in (6½-ton) MLR - 20 on broadside, 2 mounted on Fc and 2 aft.
Armour: Belt and battery 5½in amidships, 4½in at ends (with 6in oak



As fitted profile of the wooden ironclad *Lord Warden*, Chatham 31 December 1866. The ship's unusual bow profile - a clipper shape above water combined with the usual ram - is apparent. *DR12011*

Scan and/or retouch by Grzechu

backing); conning tower 4½in.
Machinery: 2-cyl. horizontal, single expansion, trunk. 9 rectangular boilers with 28 lbs/sq.in pressure. Single screw. 1,000 ihp. 6,064 ihp = 13.433kts (after re-engineering 6,442 ihp = 11.938kts). 600 tons coal. Under sail 10kts.
First cost: £285,750

Lord Clyde Pembroke Dyd/Ravenhill, Salkeld & Co.
Ord: 3.7.1863. K: 29.9.1863. L: 13.10.1864. C: 2.6.1866. Sold to Castle to BU 11.1875.

NOTES: Original cylinders were 116in diameter (with 48in stroke). Re-engined by Ravenhill, Salkeld & Co., with new cylinders (107¾in diam.) by Keyham and re-armed in 1869-70, then receiving same armament as *Lord Warden*. It was discovered in 1872 that she had rotten timbers; lengthy repairs failed to improve the situation and she was quickly sold out of service.

PALLAS - (wooden-hulled) central-battery ironclad/armoured corvette (Sixth Rate). Designed by Edward Reed (as a private venture), 1862.
Dimensions & tons: 225ft 0in pp, 187ft 8in x 50ft 0in (48ft 9in for tonnage) x 24ft 0in. 21ft 8in draught. 2,372 bm. 3,661 disp (3,794 full load).
Men: 250. Guns: 4 x 7in (6½-ton) MLR in central battery + 2 x 7in (82cwt) BL bow & stern chasers.
Armour: Belt and battery 4½in (with 22in teak backing); bulkheads 4½in.
Machinery: 4-cyl. horizontal 2-crank compound expansion; 2 (tandem) high pressure cylinders 51⅛in diam.; 2 low pressure 99½in (from 1871, 104¼in) diam., stroke 39in. 30 lb/sq.in steam. 4 rectangular boilers. Single screw (originally a 4-bladed Griffiths screw of 17ft 10in diam., 19ft 6in pitch; but trials showed she steamed as well with 2 blades permanently unshipped). 600 nhp. 3,581 ihp = 13.058kts. 260 tons coal. Under sail 9.5kts.
First cost: £190,403.

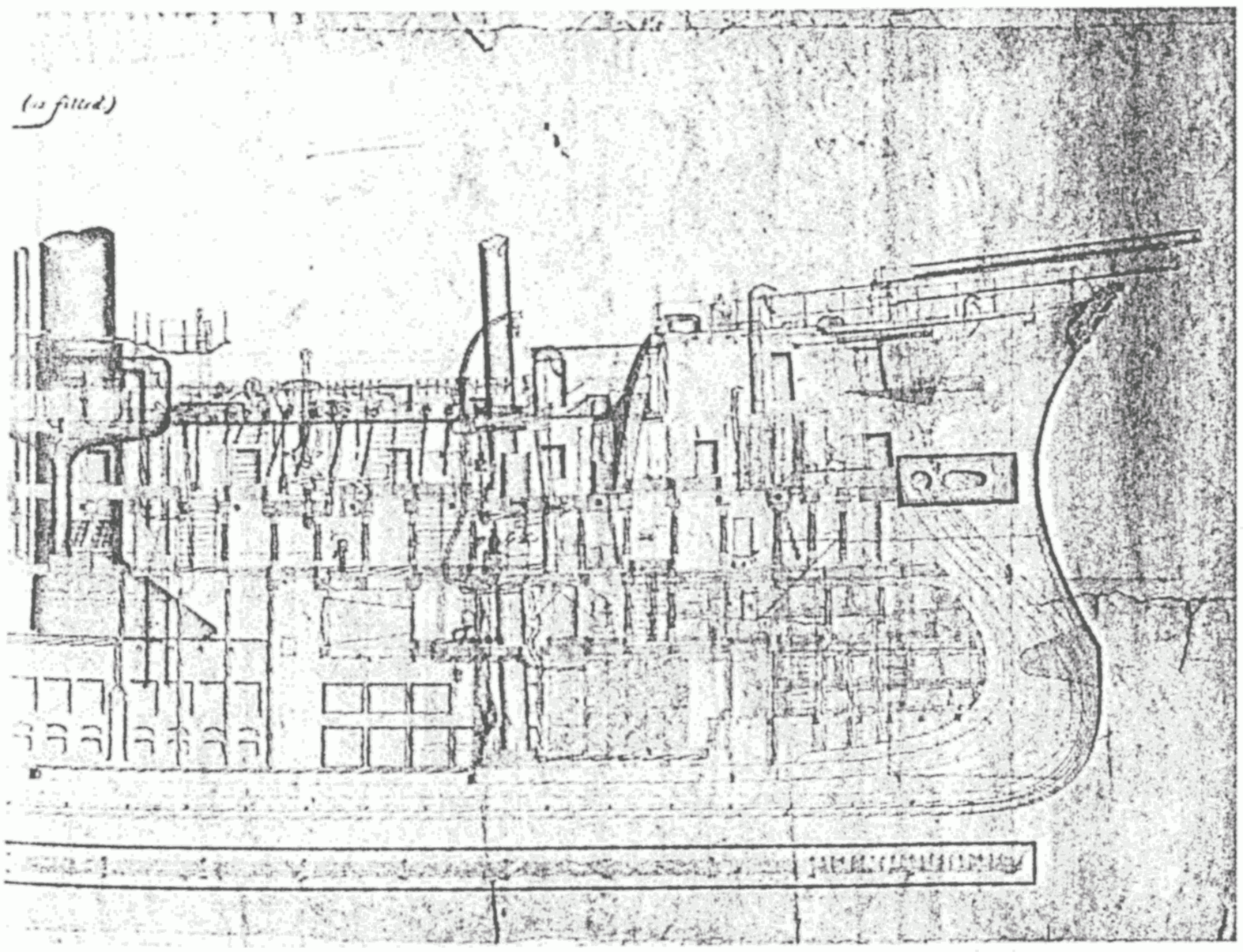
Pallas Woolwich Dyd/Humphrys & Tennant.
Ord. 23.7.1863. K: 19.10.1863. L: 14.3.1865. C: 6.3.1866. Sold to BU 20.4.1886.

NOTES: Originally planned to have iron hull, but when the Admiralty agreed to accept this design it was modified to use up the timber stocks at Woolwich. Designed as an armoured wooden hull from that point, as a smaller version of the *Lord Clyde* and *Lord Warden*. The first 'compound' engine in the RN. After completion in 1866, the 4 x 7in guns in the battery were promptly replaced by 4 x 8in (9-ton) MLR, and 2 x 5in/40pdr (35cwt) BL guns added on the UD. She was re-constructed in 1870-72 with the 7in BL chase guns replaced by 4 x 6in/64pdr (64cwt) MLR guns.

BELLEROPHON - central-battery ironclad. Designed by Edward Reed, 1863.
Dimensions & tons: 300ft 0in pp, 255ft 3¼in x 56ft 1in x 26ft 0in. 24ft 8in draught. 4,720 bm. 7,551 (load) disp.
Men: 550. Guns: 10 x 9in (12-ton) MLR in central battery; 5 x 7in (6½-ton) MLR - 2 bow (MD), 3 aft (2 on MD, 1 on UD), 4 x 12pdr BL (saluting).
Re-armed 1881-84 with 10 x 8in (14-ton) BL in central battery, 4 x 6in (89cwt) BL - 2 fwd, 2 aft, 6 x 4in (22cwt) BL, 4 x 6pdr, 12 MGs, 2 x 16in TCs.
Armour: Belt and battery 6in (with 10in teak backing) reaching from MD to 6ft below waterline; bulkheads 5in; conning tower 8in.
Machinery: 2-cyl. (104¼in diam., 48in stroke) horizontal single expansion, trunk. 8 rectangular boilers (30 lbs/sq.in). Single screw. 1,000 nhp. 6,521 ihp = 14.171kts. 640 tons coal = 1,500 miles @ 8kts. Under sail 10kts.
First cost: Total £356,493 (hull £235,738, machinery £86,963).

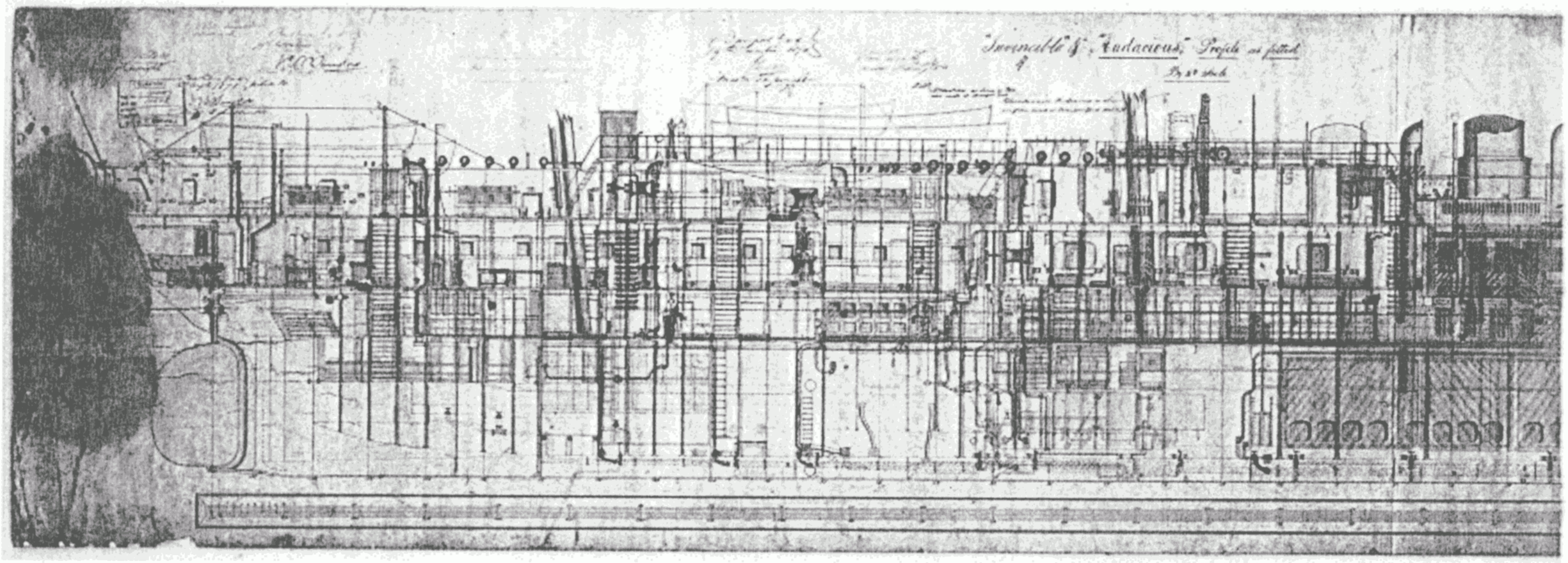
Bellerophon Chatham Dyd/John Penn & Son.
Ord: 23.7.1863. K: 28.12.1863. L: 26.4.1865. C: 11.4.1866. Guard ship at Pembroke Dock 1892. Stokers' training ship at Plymouth, renamed *Indus III* in 3.1904. Sold to P. & W. McLellan, 12.12.1922; arrived at Bo'ness to BU 3.1923.

NOTES: The first ironclad conceived as such, and abandoning the classic full-length broadside inherited from the sailing navy in favour of a rectangular central casemate. Originally ship-rigged (23,800 sq.ft of sail area), but converted to barque during 1881-84 refit. The re-arming at this date was not a success as there was inadequate room to work the longer guns, and was not repeated in other ironclads.



PENELOPE - central-battery ironclad corvette. Nominally designed by Edward Reed, in fact produced by Nathaniel Barnaby (then Reed's chief assistant), 1865.
Dimensions & tons: 260ft 0in pp, 221ft 7⅝in x 50ft 0in. As designed: 3,096 bm. 4,470 disp. As built: 2,997 bm. 4,368 disp.
Men: 350. Guns: 8 x 8in (9-ton) MLR, 3 x 5in/40pdr (35cwt) BL, 2 x 20pdr (15cwt) BL. In 1887, the 5in guns were replaced by 4 QFs, 11 MGs and 2 light guns.
Armour: Belt 6in (with 10in-11in teak backing); battery 6in; bulkheads 4½in.
Machinery: 2 sets of 3-cyl. (55¼in diam., 30in stroke) horizontal single expansion, return connecting-rod. 4 boilers (30 lbs/sq.in). Twin screws (2-bladed Griffiths screws of 14ft dia., 15½ft pitch). 600 nhp. 4,703 ihp = 12.764kts. 470 tons coal = 1,360 miles @ 10kts. Under sail 8.5kts.

Scan and/or retouch by Grzechu



First cost: £196,789 (Hull £145,993, machinery £40,855).

Penelope Pembroke Dyd/Maudslay, Sons & Field.

Ord: 2.1865. K: 4.9.1865. L: 18.6.1867. C: 27.6.1868. Coastguard at Harwich 2.1869 to 5.1887. Guard ship at the Cape of Good Hope 2.1889. Prison hulk there 1897. Sold there 12.7.1912 and BU at Genoa 1914.

NOTES: The only vessel in RN service to carry twin hoisting screws, and (at the time) the first whose boats could carry the entire crew. Ship-rigged, with 18,250 sq.ft of sail area.

HERCULES - central-battery ironclad. Designed by Edward Reed, 1865.

Dimensions & tons: 325ft 0in pp, 282ft 8in x 59ft 0½in x 26ft 0in. 26ft 6in draught. 5,234 bm. 8,680 disp. (8,830 full load)

Men: 650. Guns: MD 8 x 10in (18-ton) MLR in central battery, 2 x 9in (12½-ton) MLR - 1 fwd, 1 aft; UD 4 x 7in (6½-ton) MLR - 2 fwd (replaced by 2 x 6in QF in 1892), 2 aft; 8 brass howitzers. 6 x 4in (6½-ton) and 2 x 14in TC added 1878. 6 x 4.7in/36pdr QF added 1892.

Armour: Belt 9in to 5in (with 12in teak backing); bulkheads 6in-5in; battery 8in-6in; no conning tower.

Machinery: 2-cyl. (118in diam., 54in stroke) horizontal single expansion, trunk. 9 rectangular boilers (30 lbs/sq.in). Single screw. 1,200 nhp. 6,750 (designed), 8,529 (trials) ihp = 14.691kts. 610 tons coal = 1,760 miles @ 10kts. Under sail 11kts.

First cost: Total £396,008 (hull £278,320, machinery £82,814).

Hercules Chatham Dyd/John Penn & Son.

Ord: 2.1865. K: 1.2.1866. L: 10.2.1868. C: 21.11.1868. Coastguard Greenock 5.1878 to 5.1881 then Coastguard Weymouth 5.1881 to 5.1890. Modernised and re-engined 1892. Accommodation ship 1905. Renamed *Calcutta* 1909, then *Fisgard II* in 4.1915. Sold to Ward, Morecambe for BU 7.1932; hulk to Preston 1.12.1932.

NOTES: Reed's 'masterpiece', an enlarged version of the *Bellerophon*. Original designed length 305ft extended by 20ft. Ship-rigged, with 49,400 sq.ft of sail area (including stunsails). Re-engined 1892 with Greenock Foundry inverted triple expansion engines and 8 cylindrical boilers; then made 8,530 ihp = 15.91kts and was rerated Third Class battleship.

***AUDACIOUS* Class** - central-battery ironclads. Designed by Edward Reed, 1867, as diminutives of his *Hercules* design.

Dimensions & tons: 280ft 0in pp x 54ft 0in. Draught 22ft 0in (fwd) - 23ft 0in (aft). 3,774 bm. 6,010 load disp (5,909 light).

Men: 450. Guns: 10 x 9in (12-ton) MLR - all in a two-tier central battery (6 on MD, 2 on UD); 4 x 6in/64pdr (71cwt) MLR - on UD (2 fwd, 2 aft); 6 x 20pdr (saluting).

Armour: Belt 8in-6in (with 10in teak backing); battery 6in-4in, bulkheads 5in-4in.

Machinery: 2 sets of 2-cyl. horizontal single expansion, return connecting-rod. 6 rectangular boilers. Twin screws. 800 nhp. *Audacious* 4,021 ihp = 12.829kts. *Invincible* 4,832 ihp = 14.093kts. *Vanguard* 4,914 ihp = 14.65kts. *Iron Duke* 4,268 ihp = 12.644kts. 460-500 tons coal. Under sail 10kts.

First cost (hull and machinery): *Audacious* £246,482 (hull £193,863, machinery £52,619). *Invincible* £239,441 (hull £187,055, machinery £50,165). *Iron Duke* £196,479 (hull £146,314, machinery £50,165).

Audacious Robert Napier & Sons, Govan (No.141)/Ravenhill, Hodgson & Co.

Ord: 29.4.1867. K: 26.6.1867. L: 27.2.1869. C: 10.9.1870. Torpedo depot ship 1902. Renamed *Fisgard* in 4.1904. Training ship 1.1.1906. Renamed *Imperieuse* 1914 as repair ship. Sold to Ward 12.3.1927 and BU at Inverkeithing.

Invincible (ex-*Crescent*) Robert Napier & Sons, Govan (No.142)/Robert Napier & Sons.

Ord: 29.4.1867. K: 28.6.1867. L: 29.5.1869. C: 1.10.1870. Torpedo depot ship 1901. Renamed *Erebus* as training ship 4.1904. Renamed *Fisgard II* in 1.1906. Foundered in tow off Portland 17.9.1914 (21 men drowned).

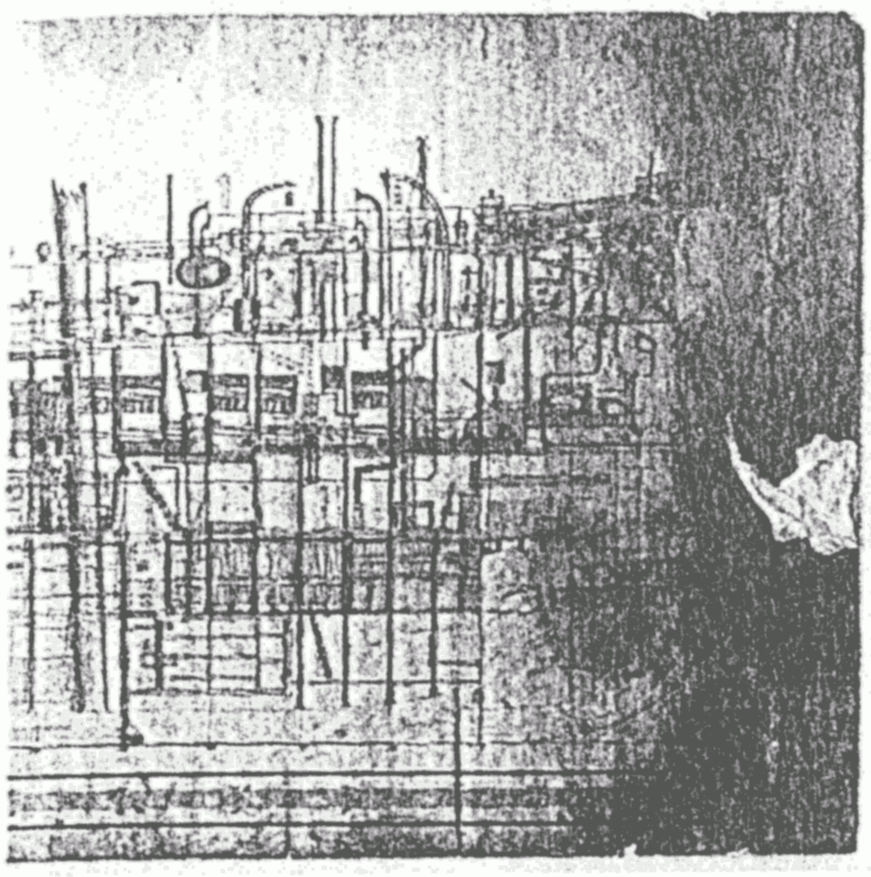
Vanguard (ex-*Centaur*) Laird Brothers, Birkenhead (No.366)/Laird Brothers.

Ord: 29.4.1867. K: 21.10.1867. L: 3.1.1870 C: 28.9.1870. Sunk in collision with *Iron Duke* off coast of Wicklow 1.9.1875. No casualties.

Iron Duke Pembroke Dyd/Ravenhill & Co.

Ord: 26.9.1867. K: 23.8.1868. L: 1.3.1870. C: 21.1.1871. Coal hulk 1900. Sold to Galbraith, Glasgow to BU 15.5.1906.

NOTES: Built under the 1867 Programme. *Audacious* was zinc sheathed. Second and third ships were initially named *Crescent* and *Centaur* respectively, but were renamed as above on 30.4.1867. A further vessel of this class was planned, initially named 5.1.1867 as *Semiramis* and renamed *Bellona* 30.4.1867, but was cancelled 8.1867 without going out to tender. Cylinders were 77in diam. (72in in *Invincible* and *Vanguard*), 36in stroke. Initially ship-rigged, but later barques. The 64pdrs and 20pdrs were



As fitted profile for *Invincible* and *Audacious*. The draught carries various endorsements relating to alterations made to those two ships at different yards during the 1870s, but the oldest is 'Pembroke Yard 29 March 1870' so it was presumably originally intended for the *Iron Duke*, which was built there. *DR10585*

replaced *c*1890 by either 6 or 8 x 4in BL, and 4 x 14in TCs were added.

SULTAN - central-battery ironclad. Designed by Edward Reed, 1868.

Dimensions & tons: 325ft 0in pp, ... x 59ft 0in x 28ft 0in. 26ft 5in draught. 5,234 bm. 9,290 load disp (9,540 full load).
Men: 633. Guns: 8 x 10in (18-ton) MLR, 4 x 9in (12½-ton) MLR, 7 x 20pdr (saluting).
Armour: Belt 9in-6in (with 12in teak backing); battery 9in-8in.
Machinery: 2-cyl. (118in diam., 54in stroke) horizontal single expansion, trunk. Single screw. 1,200 nhp. 8,629 ihp = 14.134kts. Under sail 12.5kts.
First cost (hull and machinery): £357,415 (hull £281,373, machinery £76,042).

Sultan Chatham Dyd/John Penn & Son.

Ord: 1868. K: 29.2.1868. L: 31.5.1870. C: 10.10.1871. Renamed *Fisgard IV* as harbour service 1.1.1906. Reverted to *Sultan* in 1932, as training hulk. Sold 13.8.1946 to BU at Dalmuir (arrived 8.10.1946).

NOTES: Modified from *Hercules* design. Originally named *Triumph*, but exchanged names with *Swiftsure* Class vessel below on 11.3.1868. Grounded on an unknown rock in the South Comino Channel, Malta 6.3.1889 and sank, but raised; taken to Valletta 27.8.1889 and re-fitted. Modernised and re-engined with triple expansion engine 1893-96, when 4 x 4.7in QF added.

***SWIFTSURE* Class** - central battery ironclads. Designed by Edward Reed, 1868.

Dimensions & tons: 280ft 0in pp, ... x 55ft 0in x 26ft 0in. 25ft draught. 3,893 bm. *Swiftsure* 6,910 disp. *Triumph* 6,640 disp.
Men: 450 (later 480 and 490 respectively). Guns: 10 x 9in (12-ton) MLR, 4 x 6in/64pdr (7½cwt) MLR, 6 x 20pdr (saluting).
Armour: Belt 8in-6in (with 10in teak backing); battery 6in-4in, bulkheads 5in-4in.
Machinery: 2-cyl. (98in diam., 48in stroke) horizontal single expansion, return connecting-rod. 6 rectangular boilers. Single (hoisting) screw. 800 nhp. *Swiftsure* 4,913 ihp = 13.755kts. 540 tons coal = 1,640 miles @ 10kts. *Triumph* 5,114 ihp = 13.522kts. 550 tons coal = 1,680 miles @ 10kts. Under sail 12.5kts.
First cost (hull and machinery): *Swiftsure* £257,081 (hull £207,940, machinery £49,141); *Triumph* £258,322 (hull £209,109, machinery £49,213).

Swiftsure Palmer Sbdg & Iron, Jarrow (No.240)/Maudslay, Sons & Field.

Ord: 1868. K: 31.8.1868. L: 15.6.1870. C: 27.6.1872. Stores hulk 1901. Renamed *Orontes* 3.1904. Sold to Castle to BU 4.7.1908.

Triumph Palmer Sbdg & Iron, Jarrow (No.241)/Maudslay, Sons & Field.

Ord: 1868. K: 31.8.1868. L: 27.9.1870. C: 8.4.1873. Depot ship 1900. Renamed *Tenedos* 4.1904, later training ship. Renamed *Indus IV* in 1912, then *Algiers* in 1.1915. Sold to Fryer, Sunderland to BU 7.1.1921.

NOTES: Modified from *Audacious* Class, with which armament, armour and general layout were identical (but with single screw, and much improved performance under sail). Iron hulls were copper sheathed. The last ironclads to have MLR guns of under 10in calibre, or hoisting screws. Wood-copper sheathing was re-introduced in these ships, increasing their displacement by about 900 tons (*Swiftsure*) and 630 tons (*Triumph*) beyond that designed.

ALEXANDRA - central-battery ironclad. Designed by Nathaniel Barnaby, 1873.

Dimensions & tons: 344ft 0in oa, 325ft 0in pp x 63ft 8in. Draught 26ft 3in (fwd), 26ft 0in (aft). 9,490 disp.
Men: 674. Guns: 2 x 11in (25-ton) MLR on UD, 10 x 10in (18-ton) MLR - 2 on UD, 8 on MD, 6 x 20pdr (saluting guns), 4 x 14in TC.
Armour: Belt 12in-6in (with 12in teak backing); battery 12in (on MD) - 8in (on UD); bulkheads 8in-5in; deck 1½in-1in.
Machinery: 2 sets of 3-cyl. vertical inverted compound expansion. 12 cylindrical boilers (60 lbs/sq.in). Twin screws. 1,880 nhp. 8,615 ihp = 14.996kts. 680 tons coal = 2,700 miles @ 10kts.
First cost: £514,324 (hull £394,263, machinery £120,061).

Alexandra (ex-*Superb*, renamed 4.3.1874) Chatham Dyd/Humphrys, Tennant & Co.

Ord: 1873. K: 5.3.1873. L: 7.4.1875. C: 31.1.1877. Laid up 1889. Harbour service 1903. Sold to G. Garnham to BU 8.10.1908.

NOTES: Developed from the *Sultan*, with heavier armour and ordnance. Her cylinders comprised one high pressure of 70in diam., two low pressure of 90in diam.; stroke 48in. Barque-rigged, with 27,000 sq.ft of sail area. In 1884 the 20pdr BLs were replaced by 6 x 4in BLs. Reconstructed in 1889-91, with sailing rig removed (military masts fitted), armoured conning tower (12in armour) installed, and all 4 UD guns replaced by 4 x 9.2in BLs (6 x 6pdr QFs, 12 x 3pdr QFs and 4 x 16in TC also added). In 1897 6 x 4.7in QFs replaced the 4in BLs.

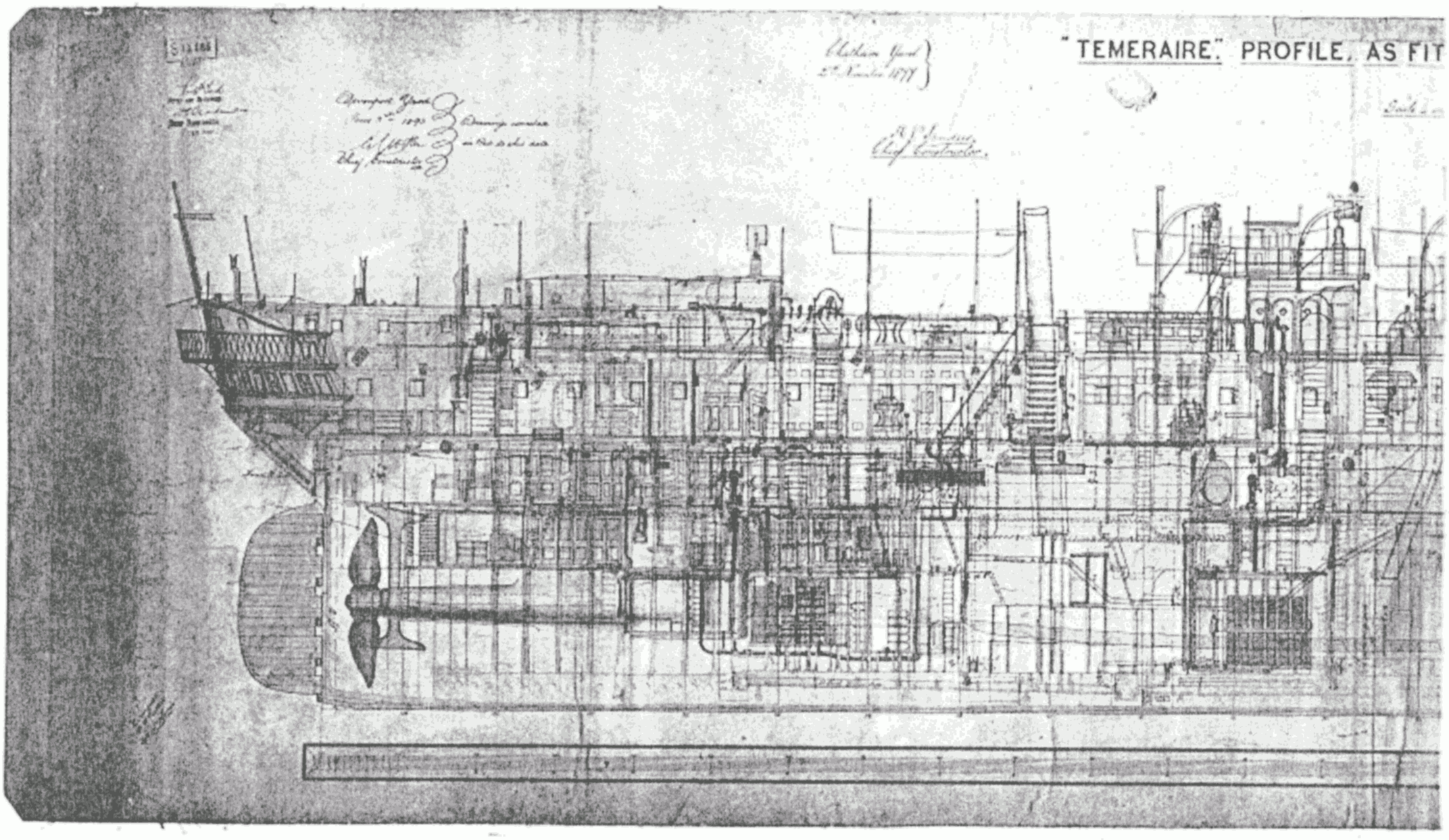
TEMERAIRE - central-battery/barbette ironclad. Designed by Nathaniel Barnaby, 1873.

Dimensions & tons: 285ft 0in pp, ... x 62ft 1in x ... . Draught 26ft 3in (fwd), 27ft 4in (aft). 8,571 disp.
Men: 580. Guns: 4 x 11in/540pdr (25-ton) MLR, 4 x 10in/400pdr (18-ton) MLR, 6 x 20pdr (16cwt) BL, 2 TC.
Armour: Belt 11in-5½in (with 12in teak backing); battery 8in-5in; bulkheads 8in; barbettes 10in-8in.
Machinery: 2 sets of 2-cyl. vertical inverted compound expansion. 12 cylindrical boilers (60 lbs/sq.in). Twin screws. 7,516 ihp = 14.65kts. 620 tons coal. Under sail *c*6kts.
First cost: £489,822 (hull £352,015, machinery £102,954).

Temeraire Chatham Dyd/Humphrys, Tennant & Co.

Ord: 1873. K: 18.8.1873. L: 9.5.1876. C: 31.8.1877. Harbour service 1902. Renamed *Indus II* in 4.1904 as training ship. Again renamed *Akbar* 1.1915. Sold to Rijsdijk Shipbreaking Co. to BU 26.5.1921.

NOTES: Brig-rigged, with 25,000 sq.ft sail area - and hence called the 'Great Brig' as she was the largest brig-rigged vessel ever built. Her cylinders comprised one high pressure of 70in diam., one low pressure of 114in diam.; stroke 46in. Iron hull sheathed with zinc. A hybrid ironclad, in that she mounted 2 x 11in and all 4 x 10in in a central battery, but also had 2 x



As fitted profile of the *Temeraire*, Chatham 2 November 1877, with corrections to 3 June 1893 (later fittings include some prominent searchlights). *DR17390*

11in in single centreline open barbettes, fore and aft. In 1884 the 20pdr guns were replaced by 6 x 4in (22cwt) BL, 4 x 6pdr QF and 10 x 3pdr QF.

***BELLEISLE* Class** - central-battery rams, designed for Turkey.

Dimensions & tons: 245ft 0in pp x 52ft 0in. Draught 21ft. 4,870 disp.
Men: 250. Guns: 4 x 12in (25-ton) MLR, 4 x 20pdr, 2 x 14in TT.
Armour: Belt 12in-6in (with 16in teak backing); battery 10½in-8in; bulkheads 9in-5in; conning tower 9in; deck 3in-1in.
Machinery: 2 sets of 2-cyl. (65in diam., 30in stroke) horizontal direct-acting single expansion. 4 boilers. Twin screws. 3,200 ihp = 12kts (natural draught); 4,040 ihp = 13kts (forced draught) (*Belleisle*).
First cost: *Belleisle* £267,179. *Orion* £295,761 (including hull £239,270, machinery £52,959).

Belleisle (ex-*Peyk-i-Sheref*) Samuda Bros., Poplar/Maudslay, Sons & Field.
K: 1874. L: 12.2.1876. C: 19.7.1878. Used as target 1900 to 1903, wrecked as such by 4.9.1903. Wreck sold to BU in Germany 12.4.1904.

Orion (ex-*Büruc-i-Zaffer*) Samuda Bros., Poplar/Maudslay, Sons & Field.
K: 1875. L: 23.1.1879. C: 3.7.1882. Became torpedo boat depot ship at Malta from 1902. Renamed *Orontes* 12.1909 as depot ship. Sold to BU at Malta 19.6.1913.

NOTES: Originally ordered by Turkey in 1874, and designed by Ahmed Pasha of the Turkish Admiralty to have mounted 4 x 10in (18-ton) MLR. While building, they were purchased 13.2.1878 by the British Navy during the Russian war scare. *Belleisle* was initially classed as an armoured ram, and *Orion* as an armoured corvette; both were reclassed as Second Class battleships, later as coastal defence ships.

SUPERB - central-battery ironclad. Designed (for Turkey) by Edward Reed, 1873.

Dimensions & tons: 332ft 4in pp x 59ft 0in. Draught 26ft 5in. 9,170 disp (50 more than original design).
Men: 620-654. Guns: 16 x 10in (18-ton) MLR - 12 in battery on MD, 2 fwd and 2 aft on UD, 6 x 4in/20pdr (22cwt) BL, 14 QF, 6 MGs, 2 light guns; 4 x 14in TCs.
Armour: Belt 12in-4in (with 12in teak backing); battery 12in, bulkheads 10in-5in; conning towers 8in; decks 1½in.
Machinery: 2-cyl. horizontal direct-acting compound expansion. 9 rectangular boilers. Single screw. 6,580 ihp = 13.2kts. 970 tons coal = 1,810 miles @ 10kts. Under sail (until 1891) 6kts.
First cost: £531, 846 (of which £443,000 was purchase price from Turkey).

Superb (ex-*Hamidieh*) Thames Iron Works, Blackwall (No.82F)/ Maudslay, Sons & Field.
K: 1873. L: 16.11.1875. C: 15.11.1880. Harbour service 1904. Sold to G. Garnham to BU 15.5.1906.

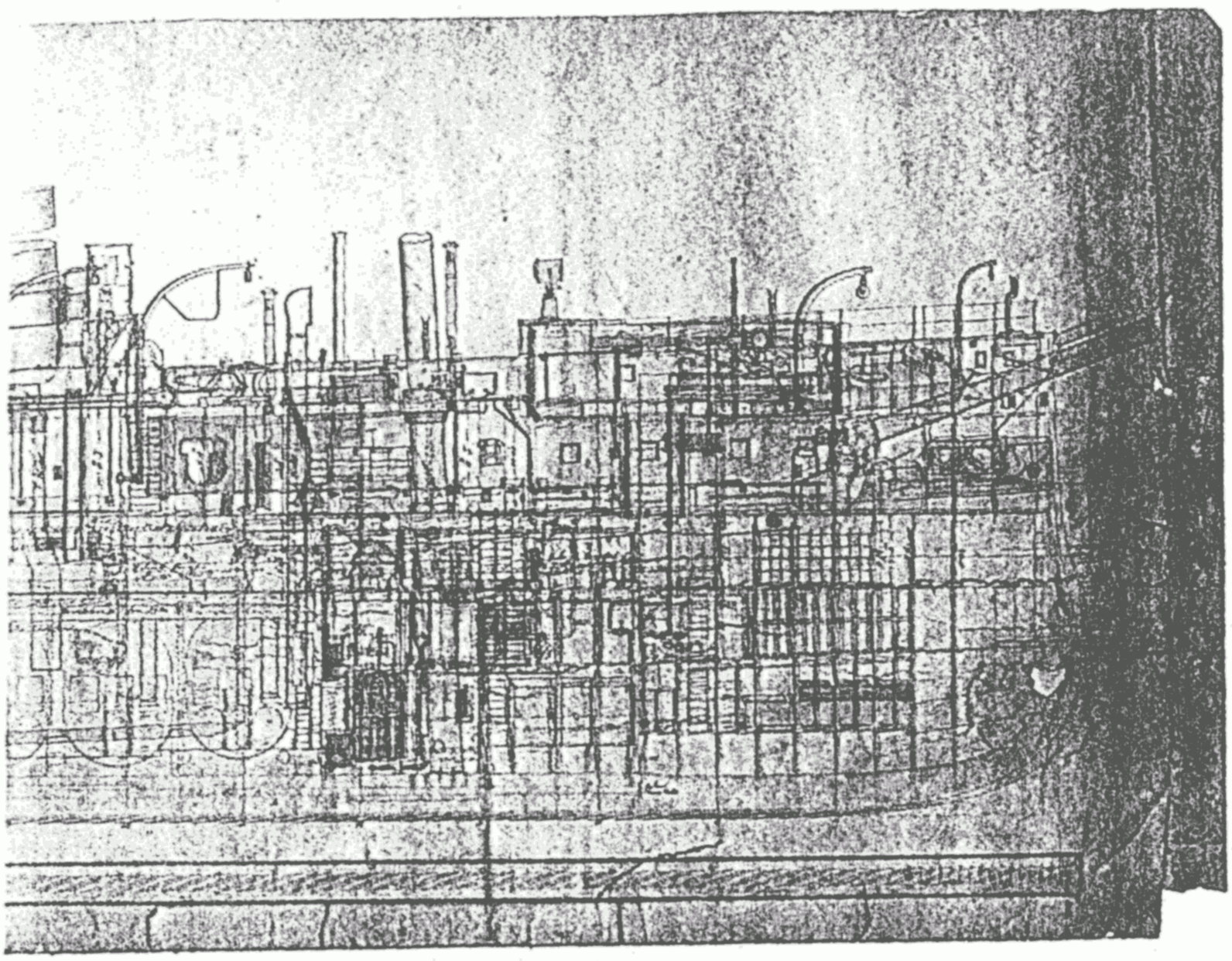
NOTES: Originally ordered by Turkey as the *Memduhie*, later the *Hamidieh*, and purchased 20.2.1878 when building for them by the RN during the Russian war scare. The battery on the MD was 111ft long. Barque-rigged when built. 6 x 4in BL added in early 1880s. Re-fitted (sailing rig removed), re-engined (triple expansion/cylindrical boilers; became 8,500 ihp = 14.5kts) and re-armed in 1887-91 with 12 x 10in MLR, 10 x 6in BL, 6 x 6pdr, 10 x 3pdr, 4 TT.

Turret Ironclads

***SCORPION* Class** - masted turret ships (rams). Builder's design, 1862.

Dimensions & tons: 224ft 6in pp, 191ft 11¾in x 42ft 4in. Draught 14ft (fwd), 16ft 1in (aft) (*Scorpion*, 3in more). 1,833 bm (as built, 1,857 and 1,899 bm). 2,751 disp.
Men: 153. Guns: 4 x 9in (12-ton) MLR in two twin turrets; 6-8 MGs, 1 light gun.
Armour: Belt 4½in-2in (with 8in-10in teak backing), turrets 10in-5in.
Machinery: 2-cyl. (56in diam., 36in stroke) horizontal direct-acting single expansion, double piston-rods. 4 boilers (22 lbs/sq.in). Single screw. 350 nhp. See below for ihp/speed. Under sail c12kts.

Scan and/or retouch by Grzechu



First cost: *Scorpion* £111,614 (hull £92,033, machinery £18,540).
Wivern £118,769 (hull £98,118, machinery £18,396).

Scorpion Laird Brothers, Birkenhead (No.294)/Laird Bros. (1,455 ihp = 10.515kts.)
K: 4.1862. L: 4.7.1863. C: 10.10.1865. Guard ship at Bermuda 10.1869. Laid up 1899. Sunk as target at Bermuda 1901. Raised and sold there for BU 2.1903. Foundered under tow to Boston, Mass. 17.6.1903.

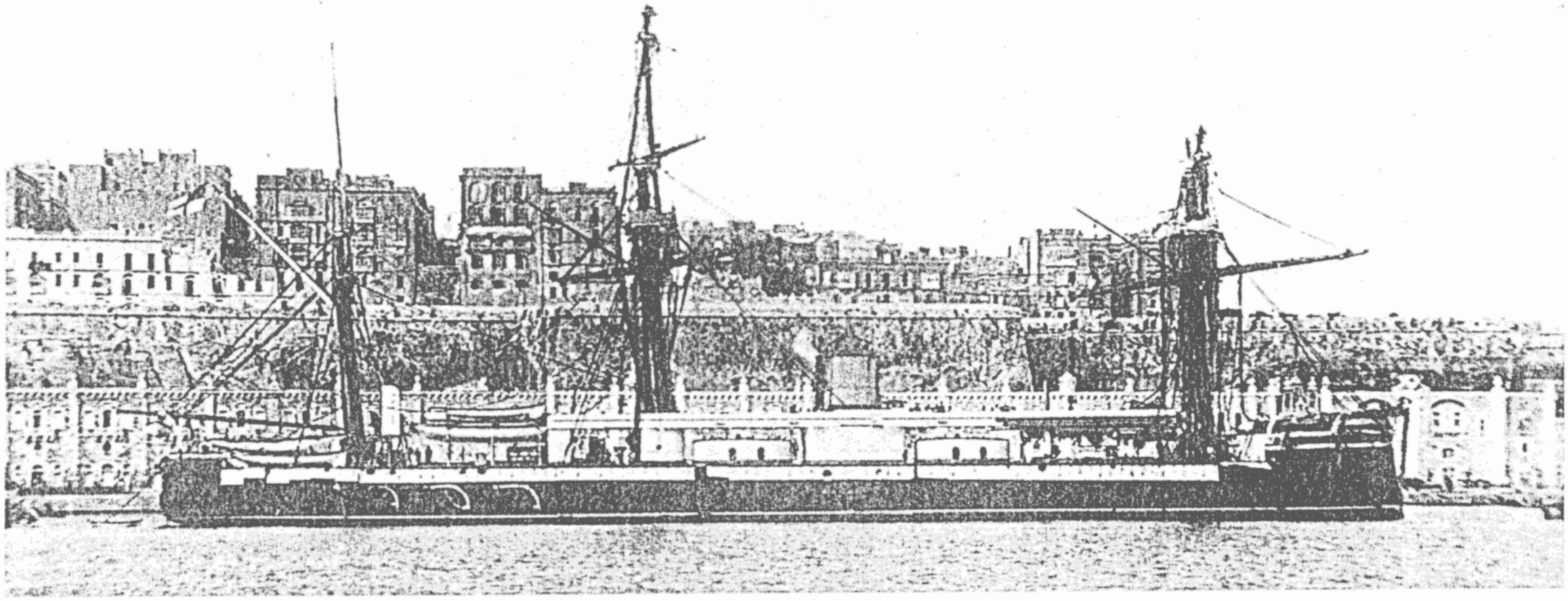
Wivern Laird Brothers, Birkenhead (No.295)/Laird Bros. (1,446 ihp = 10.059kts.)
K: 4.1862. L: 29.8.1863. C: 10.10.1865. Coastguard 1870. Guard ship at Hong Kong 1880. Sold there to BU 5.1922.

NOTES: Seized 10.1863 by British government while building (ostensibly under the cover of building for Egypt, under the names *El Tousson* and *El Monassir*) in reality for the Confederate States of America (who planned to name them *North Carolina* and *Mississippi*), and purchased in 1864 for the RN, who used them in a coast-defence role.

MONARCH - masted turret ironclad. Design by Edward Reed, 1866.
Dimensions & tons: 330ft 0in pp, ... x 57ft 6in. Draught 24ft 3in (fwd), 26ft 7in (aft). 5,102 bm. 8,322 disp.
Men: 530-575. Guns: 4 x 12in (25-ton/15ft 2in) MLR in two twin turrets, 3 x 7in (6½-ton) MLR - 2 fwd on UD, 1 aft on MD.
Armour: Belt 7in-4½in (with 10in-12in teak backing); bulkheads 4½in-4in; main turrets 10in (face)-8in (sides); secondary turrets 5in; conning tower 8in.
Machinery: 2-cyl. (120in diam., 54in stroke) horizontal single expansion, return connecting-rod. 9 boilers. Single screw. 1,100 nhp. 7,842 ihp = 14.94kts. 600 tons coal = 2,000 miles radius. Under sail 13kts.
First cost: £354, 515 (hull £279,903, machinery £74,672).

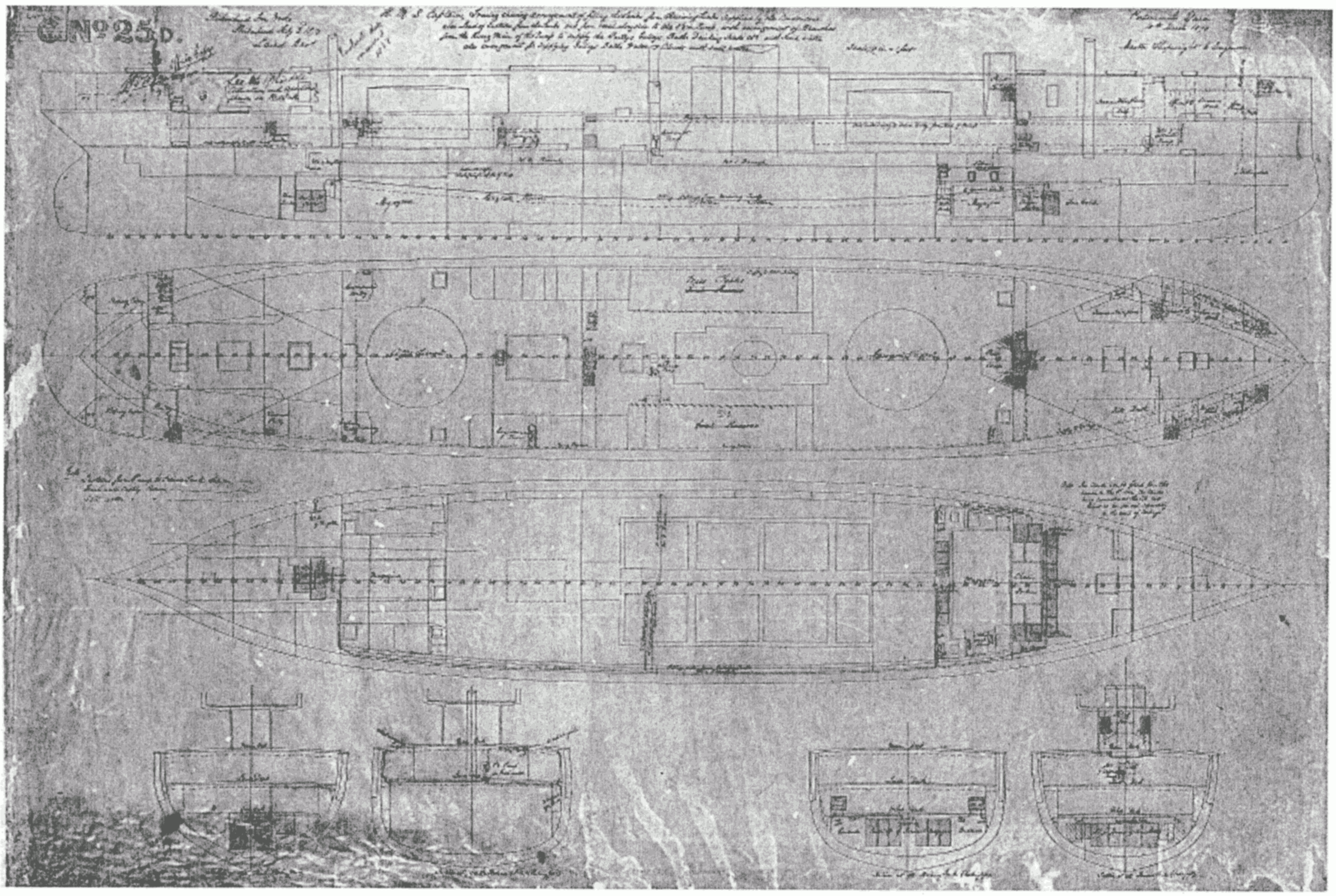
Monarch Chatham Dyd/Humphrys, Tennant & Co.
Ord: 1866. K: 1.6.1866. L: 25.5.1868. C: 12.6.1869. Guardship 1897. Hulked as depot ship, renamed *Simoom* 3.1904. Sold to G. Garnham to BU 4.4.1905.

NOTES: Ship-rigged, with 27,700 sq.ft sail area; altered to barque in 1872. In



The combination of a full sailing rig with revolving turrets was a difficult conundrum for designers, but Edward Reed produced a workable solution with the *Monarch*. Nevertheless, before going into battle the topmasts and spars had to be sent down and much of the rigging dismantled, as seen in this photograph of the ship cleared for action in Grand Harbour, Malta. *N5262*

Scan and/or retouch by Grzechu



Pipework and pumping layout for the ill-fated turret ship *Captain*, drawn in Lairds' Birkenhead Iron Works and dated 3 February 1870. *DR8047*

1871, 2 x 9in (12½-ton) MLR replaced 2 x 7in. In 1890-97, re-engined with triple expansion (8,216 ihp = 15.75kts), and 4 x 12pdr QF + 10 x 3pdr QF were added.

CAPTAIN - masted turret ironclad. Design by Lairds to specification of Cowper Coles, 1867.

Dimensions & tons: 320ft 0in pp, ... x 53ft 3in x 24ft 10in. 25ft 6in draught. 4,272 bm. 6,950 (design) 7,767 (actual) load disp.

Men: 500. Guns: 4 x 12in (25-ton) MLR in two twin turrets, 2 x 7in (6½-ton) MLR at bow and poop.

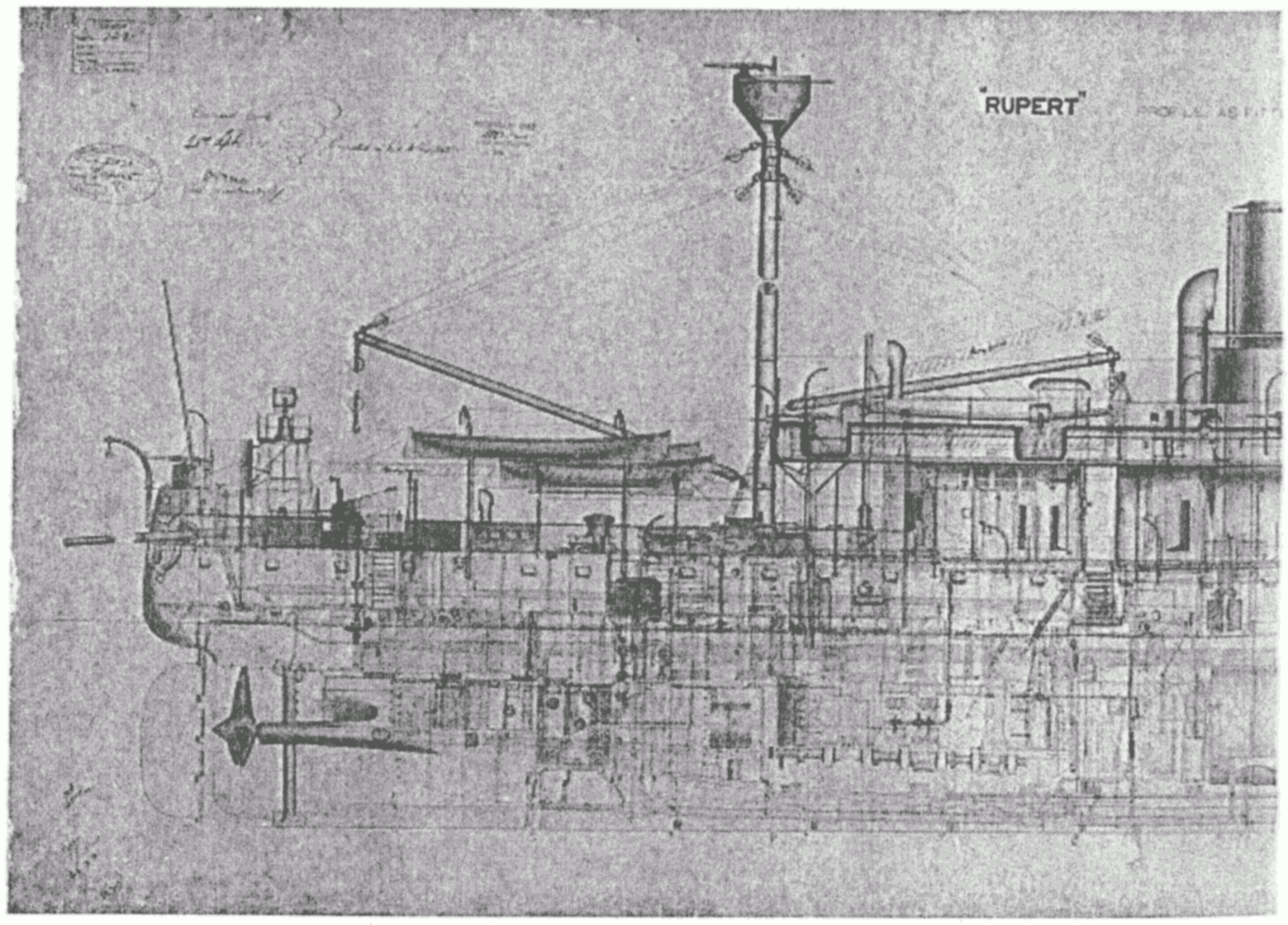
Armour: Belt 8in-4in; turrets 10in (face)-9in (sides); conning tower 7in.

Machinery: 2 sets of 2-cyl. (80¼in diam., 39in stroke) horizontal single expansion, trunk. 8 rectangular boilers (29¾ lbs/sq.in). Twin screws. 900 nhp. 5,400 ihp = 14.25kts. 600 tons coal. Under sail 13kts.

First cost: £335,518.

Captain Laird Brothers, Birkenhead (No.346)/Laird Brothers.

Ord: 30.1.1867. K: 30.1.1867. L: 27.3.1869. C: 1.1870. Capsized in a storm off Cape Finisterre 7.9.1870, with loss of 472 out of 489 aboard



Scan and/or retouch by Grzechu

(including Cowper Coles).

NOTES: Ship-rigged, with 26,322 sq.ft sail area. Owing to a design error over her displacement, the intended 8ft freeboard was reduced to 6ft 7in only. The controversial scheme was strongly opposed by Vice-Adm. Sir Spencer Robinson (Walker's successor as Controller of the Navy) and by Edward Reed (as Chief Constructor), but won public support and that of the Admiralty Board.

HOTSPUR - ironclad turret ram. Designed by Edward Reed (although he strongly objected to the concept), 1868.

Dimensions & tons: 235ft 0in pp, ... x 50ft 0in. Draught 19ft 4in (fwd), 20ft 2in (aft). 2,637 bm. 4,010 disp.

Men: 209-240. Guns: 1 x 12in (25-ton) MLR, 2 x 64pdr (71cwt) MLR.

Armour: Belt 11in-8in; breastwork 8in; gunhouse 10in-8½in; conning tower 10in-6in; decks 2¾in-1in.

Machinery: 2 sets of 2-cyl. (64in diam., 33in stroke) horizontal single expansion. Twin screws. 600 nhp. 3,497 ihp = 12.651kts. 300 tons coal = 920 miles @ 10kts.

First cost: £171,528 (hull £135,067, machinery £36,461).

Hotspur Robert Napier & Sons, Govan (No.144)./Robert Napier & Sons.

Ord: 1868. K: 2.10.1868. L: 19.3.1870. K: 17.11.1871. Sold to BU 2.8.1904.

NOTES: Built with single traversing 12in gun in gunhouse (non-revolving turret). Re-constructed 1881-83, with gunhouse removed and replaced by a proper turret housing twin 12in (25-ton) MLR guns, with 64pdrs replaced by 2 x 6in (81cwt) BLs.

RUPERT - ironclad turret ram. Designed by Edward Reed, 1868.

Dimensions & tons: 250ft 0in pp x 53ft 0in. Draught 21ft 6in (fwd), 23ft 7in (aft). 3,159 bm. 5,284 disp (5440 from 1887).

Men: 217-232. Guns: 2 x 10in (18-ton) in a twin turret fwd, 2 x 64pdr (71cwt) aft.

Armour: Belt 11in-9in (with 14in teak backing); breastwork 12in; turret 14in-12in; conning tower 12in; decks 3in-2in.

Machinery: 2 sets of 2-cyl. (72in diam., 36in stroke) horizontal single expansion. Twin screws. 700 nhp. 3,445 ihp = 12.898kts (after 1887, 4,630 ihp = 13.59kts). 550 tons coal, reduced 1887 to 480 tons = 1,340 miles @ 10kts (only 390 tons after reconstruction).

First cost: £239,197 (hull £193,171, machinery £39,506).

Rupert Chatham Dyd/Robert Napier & Sons.

Ord: 1868. K: 6.6.1870. L: 12.3.1872. C: 1.7.1874. Sold in Bermuda to BU 10.7.1907.

NOTES: Enlarged version of *Hotspur*, incorporating revolving turret. 64pdr MLRs replaced 1887 by 2 x 6in (89cwt) BL, and 4 QFs, 8 MGs, 2 light guns and 4 TCs added. Reconstructed 1891-93 (most unsuccessfully), re-engined (with triple expansion) and re-armed with 2 x 9.2in BLs replacing MLR guns in turret, and further 4 x 6pdr QF and 6 x 3pdr QF added.

***DEVASTATION* Class** - turret ironclads/breastwork monitors. Designed by Edward Reed, 1868.

Dimensions & tons: 285ft 0in pp x 62ft 0in. Draught 27ft 6in (*Thunderer* 27ft 0in). 4,407 bm. 9,387/9,390 disp.

Men: 358. Guns: 4 x 12in (35-ton) MLR in *Devastation*; 4 x 12.5in (38-ton) MLR in *Thunderer* in two twin turrets.

Armour: Belt 12in-8½in (with 18in-16in teak backing); breastwork 12in-10in; turrets 14in (faces)-10in (sides); conning tower 9in-6in; bulkheads 6in-5in; decks 3in-2in.

Machinery: 2 sets of 2-cyl. horizontal single expansion, trunk (*Devastation*) or horizontal direct-acting (*Thunderer*). 8 rectangular boilers (30 lbs/sq.in). Twin screws. 800 nhp. 6,640 ihp = 13.84kts (*Devastation*); 6,270 ihp =13.4kts (*Thunderer*). 1,600 tons coal = 4,700 miles @ 10kts.

First cost: *Devastation* £361,438 (hull £290,660, machinery £63,188). *Thunderer* £368,428 (hull £306,084, machinery £52,458).

Devastation Portsmouth Dyd/John Penn & Son.

Ord: 1869. K: 12.11.1869. L: 12.7.1871. C: 19.4.1873. Sold to Ward, Morecambe to BU 12.5.1908.

Thunderer Pembroke Dyd/Humphrys, Tennant & Co.

Ord: 1869. K: 26.6.1869. L: 25.3.1872. C: 26.5.1877. Sold to G. Garnham to BU 13.9.1909.

NOTES: *Devastation* was the first battleship to be launched entirely omitting sails, while *Thunderer* was the first to fit hydraulic loading for her main guns. Extensive watertight sub-division introduced; 68 compartments in the hold and 36 in the double bottom. The engine cylinders were of 80in diam. in *Devastation*, with 39in stroke; and 77in diam. in *Thunderer*, with 42in stroke. *Thunderer* was planned to have same primary guns as her sister, but 35-ton guns were replaced by 38-ton model while fitting out (note J. W. King report in 1876 stated these were 12in *vice* 12.5in). In 1891 the 12in MLR in both ships were replaced by 4 x 10in/500pdr (29-ton) BL, 6 x 6pdr, 8 x 3pdr and 2 x 14in TT added; both also re-engined with triple expansion engines and cylindrical boilers, producing 7,000 ihp and virtually halving coal consumption/doubling radius.

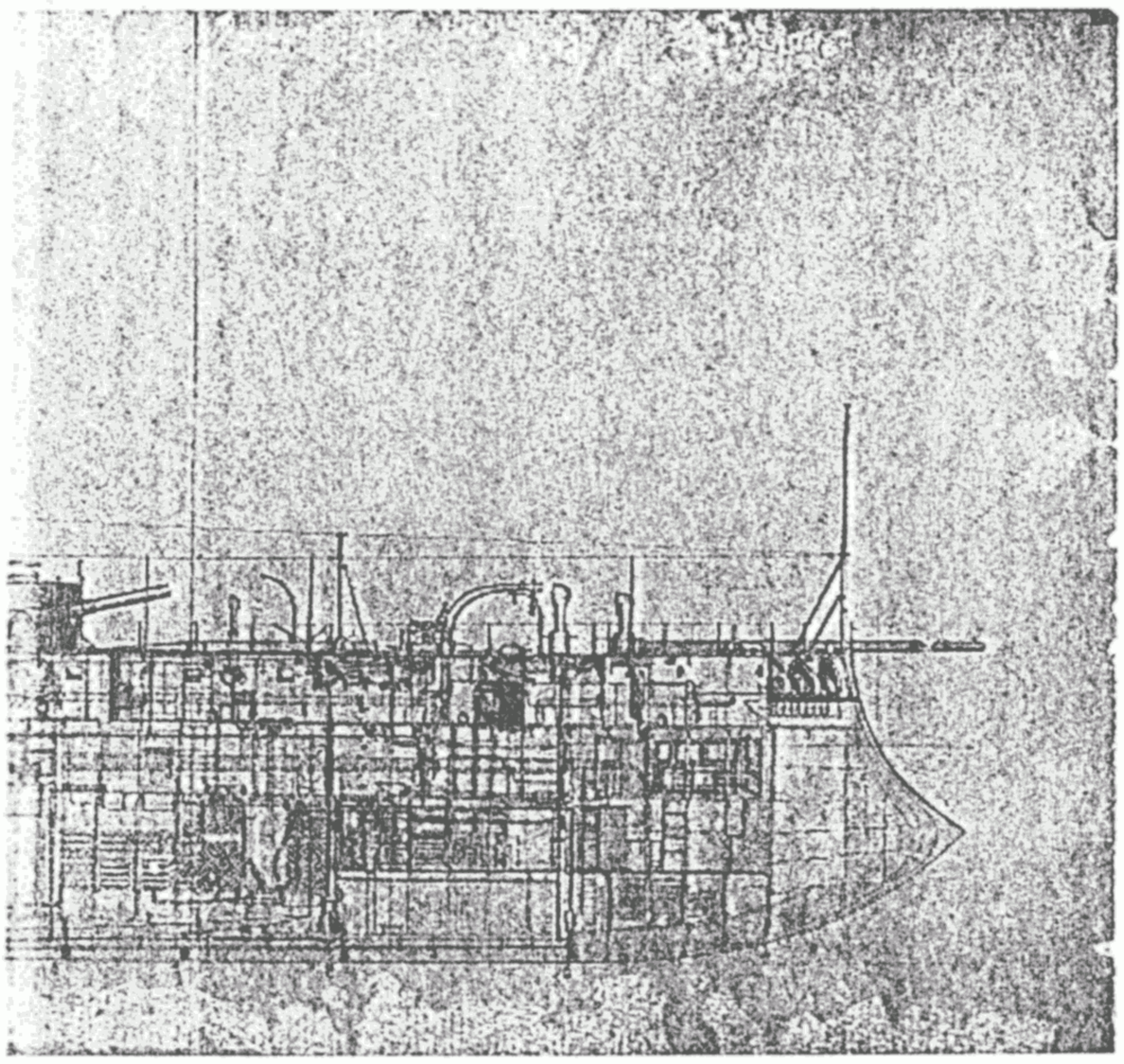
DREADNOUGHT - turret ironclad. Design by Edward Reed, 1870, as amended by William White, 1872.

Dimensions & tons: 343ft 0in oa, 320ft 0in pp x 63ft 10in x ... . 10,820 disp.

Men: 369. Guns: 4 x 12.5in (38-ton) MLR, 6 QF, 2 x 14in TT.

Armour: Belt 14in-8in (with 18in teak backing); bulkheads 13in; turrets 14in; citadel 14in-11in; conning tower 14in-6in; decks 3in-2½in..

Machinery: 2 sets of 2-cyl. vertical compound expansion. 12 cylindrical



As fitted profile of the ironclad ram *Rupert* after reconstruction, Devonport 28 September 1895, with alterations up to that date. *DR7291*

boilers (60 lbs/sq.in). Twin screws. 8,206 ihp = 14.5kts. 1,800 tons coal = 5,700 miles @ 10kts.

First cost: £619,739 (hull £485,573, machinery £107,000).

Dreadnought (ex-*Fury*, renamed 1.12.1875) Pembroke Dyd/Humphrys, Tennant & Co.

Ord: 1870. K: 10.9.1870. L: 8.3.1875. C: 15.2.1879. Harbour service 1902/3. In reserve 1905. Sold to Ward, Barrow 14.7.1908. BU completed at Preston 2.1909.

NOTES: Built under the 1870 Programme, as an enlarged version of *Devastation* Class. However, construction ceased in 1871 following Reed's departure. The Reed designs were cancelled and White was instructed to produce new plans in accordance with his own ideas. However, the *Dreadnought* remained basically a Reed ship, with the subsequent alterations improving but not basically changing it into anything which could be described as a Barnaby design. Her compound engines, with a high pressure cylinder of 66in diam. and a low pressure one of 90in diam., had 54in stroke.

NEPTUNE - masted turret ironclad. Designed (for Brazil) by Edward Reed, 1872.

Dimensions & tons: 300ft 0in pp x 63ft 0in. Draught 26ft 1in. 9,310 disp.

Men: 541. Guns: 4 x 12in MLR in two twin turrets, 2 x 9in (12-ton) MLR under Fc, 6 x 20pdr BL (saluting), 2 x 14in TC.

Armour: Belt 12in-9in; citadel 10in; bulkheads 8in; turrets 13in-11in; conning tower 8in-6in; decks 3in-2in.

Machinery: 2-cyl. horizontal trunk. 8 rectangular boilers. Single screw. 7,993 ihp = 14.22kts. 670 tons coal = 1,480 miles @ 10kts.

Neptune (ex-*Independencia*) J. & W. Dudgeon, Millwall/John Penn & Son.

Ord (for Brazil): 1872 K: 1873. L: 10.9.1874. C: 3.9.1881. Laid up in reserve 1893. Sold to G. Garnham for BU in Germany 15.9.1903.

NOTES: Of improved *Monarch* design. Originally ordered by Brazil, to have been of 9,000 disp and to have mounted 4 x 12in (35-ton) and 2 x 7in (7-ton) guns. Her launch in 1874 was delayed for 2 months after abortive attempts on 16.7 and 30.7 had left her stuck on the slip. She was then taken to Samuda's yard at Poplar for repairs and trials. Purchased 3.1878 when completing for Brazil by the RN during the Russian war scare (purchase price £600,000 with £89,172 in alterations), and completed at Portsmouth Dyd. Among other flaws found, it was alleged that her funnels had inadvertently been installed sideways.

INFLEXIBLE - masted turret ironclad. Nathaniel Barnaby design, 1873.

Dimensions & tons: 344ft 0in oa, 320ft 0in pp x 75ft 0in. Draught 27ft 2in. 11,406 (designed), 11,880 (load) disp.

Men: 440. Guns: 4 x 16in (81-ton) MLR in two twin turrets, 6 x 20pdr BL (saluting), 2 x 14in TT (submerged).

Armour: Citadel 24in-16in sides (iron, with 18in teak backing); bulkheads 22in-14in; turrets 17in-16in; conning tower 12in; decks 3in.

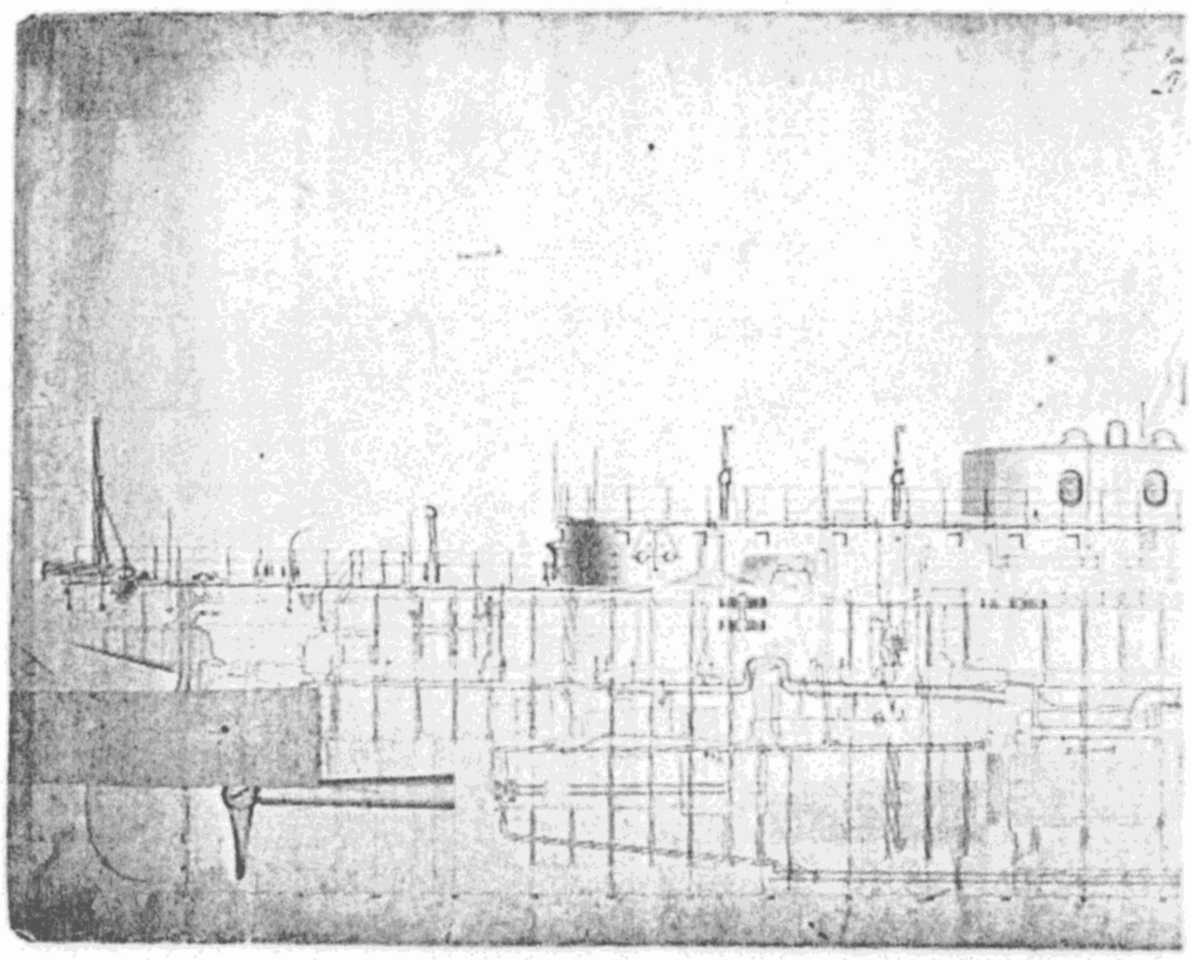
Machinery: 2 sets of 3-cyl. inverted compound expansion. 12 cylindrical boilers. Twin screws. 8,488 ihp = 14.74kts. 1,300 tons coal = 5,200 miles @ 10kts.

First cost: £812,485 (hull £648,811, machinery £146,457).

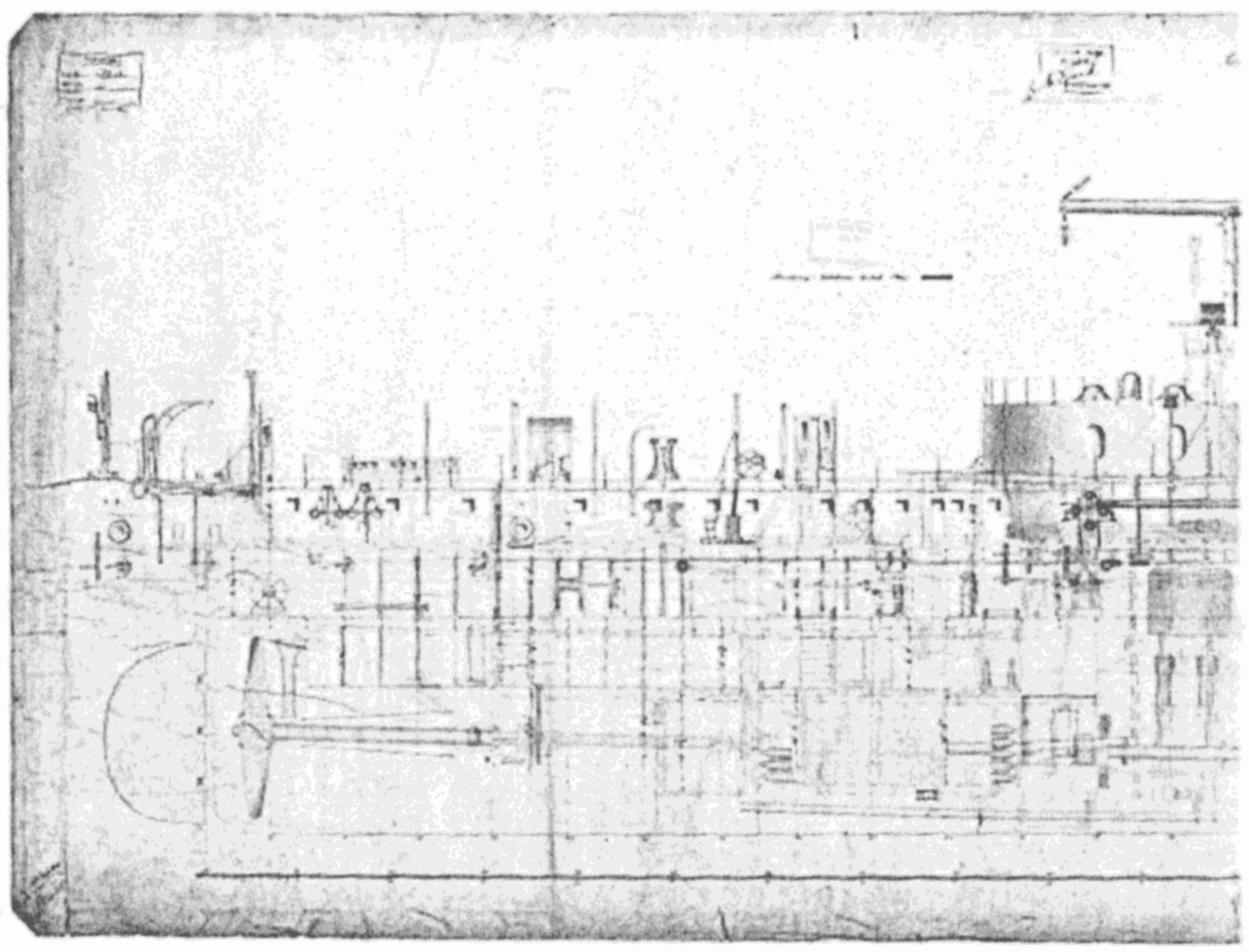
Inflexible Portsmouth Dyd/John Elder & Co.

Ord: 1873. K: 24.2.1874. L: 27.4.1876. C: 18.10.1881. Sold to Ward, Preston for BU 15.9.1903.

NOTES: Brig-rigged, with 18,500 sq.ft sail area which proved virtually useless, and in 1885 was replaced by military masts, at same date 20pdrs replaced by 4in 22cwt BLs (in turn replaced by 4.7in QF in 1897). The first ship to have compound armour, she had the thickest armour ever used, as well as the heaviest MLR guns mounted in the RN so far (*Benbow* and the two *Sans Pareil* Class were to have 110-ton guns, while the Italian *Dandolo* and *Duilio* had 100-ton guns of 17.7in bore). Her turrets, each 750 tons, were 34ft in diameter.



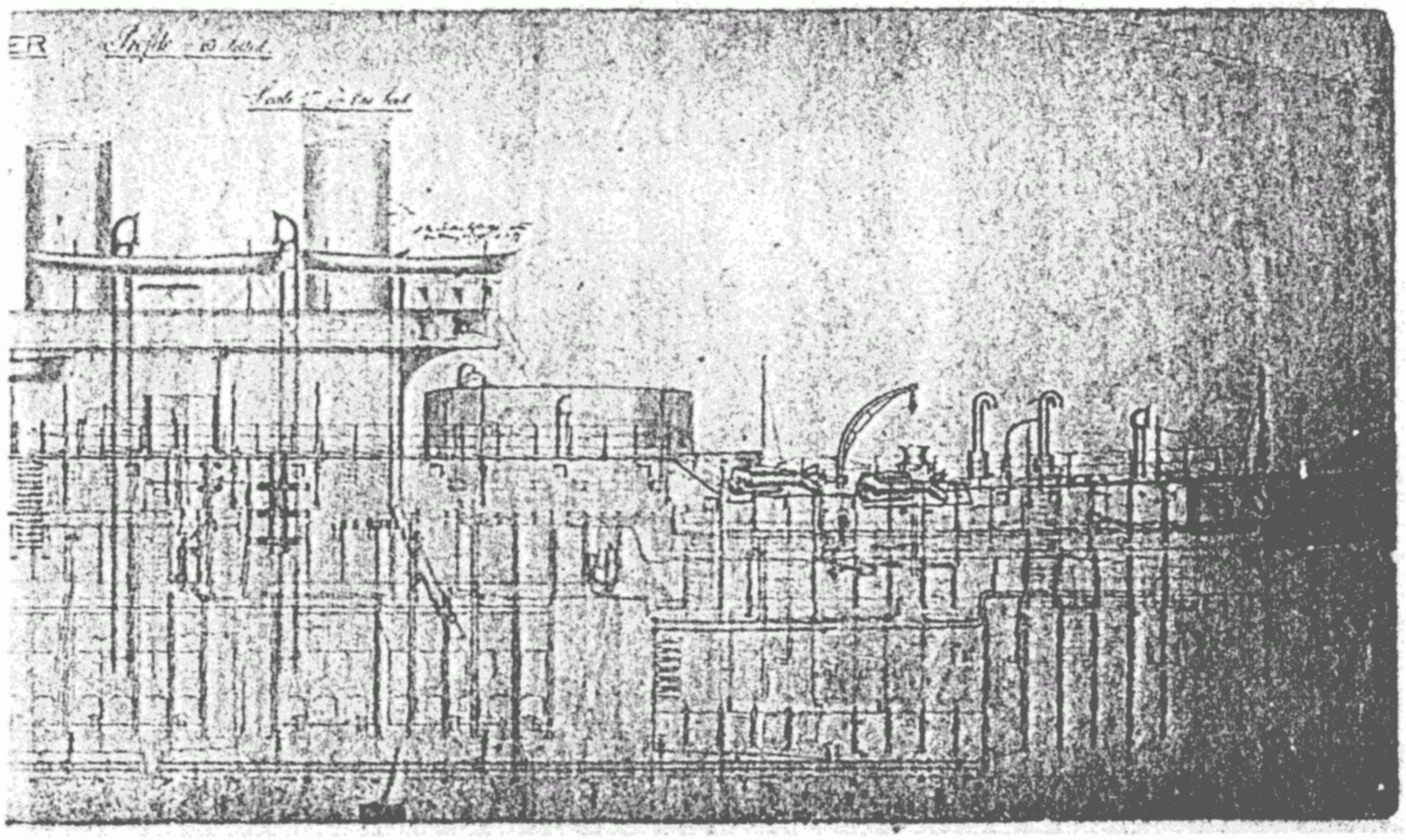
As fitted profile for *Thunderer*, Portsmouth 28 March 1879. The guns in the forward turr shown in the reloading position, while the after turret is turned to face the viewer. *DR74(*

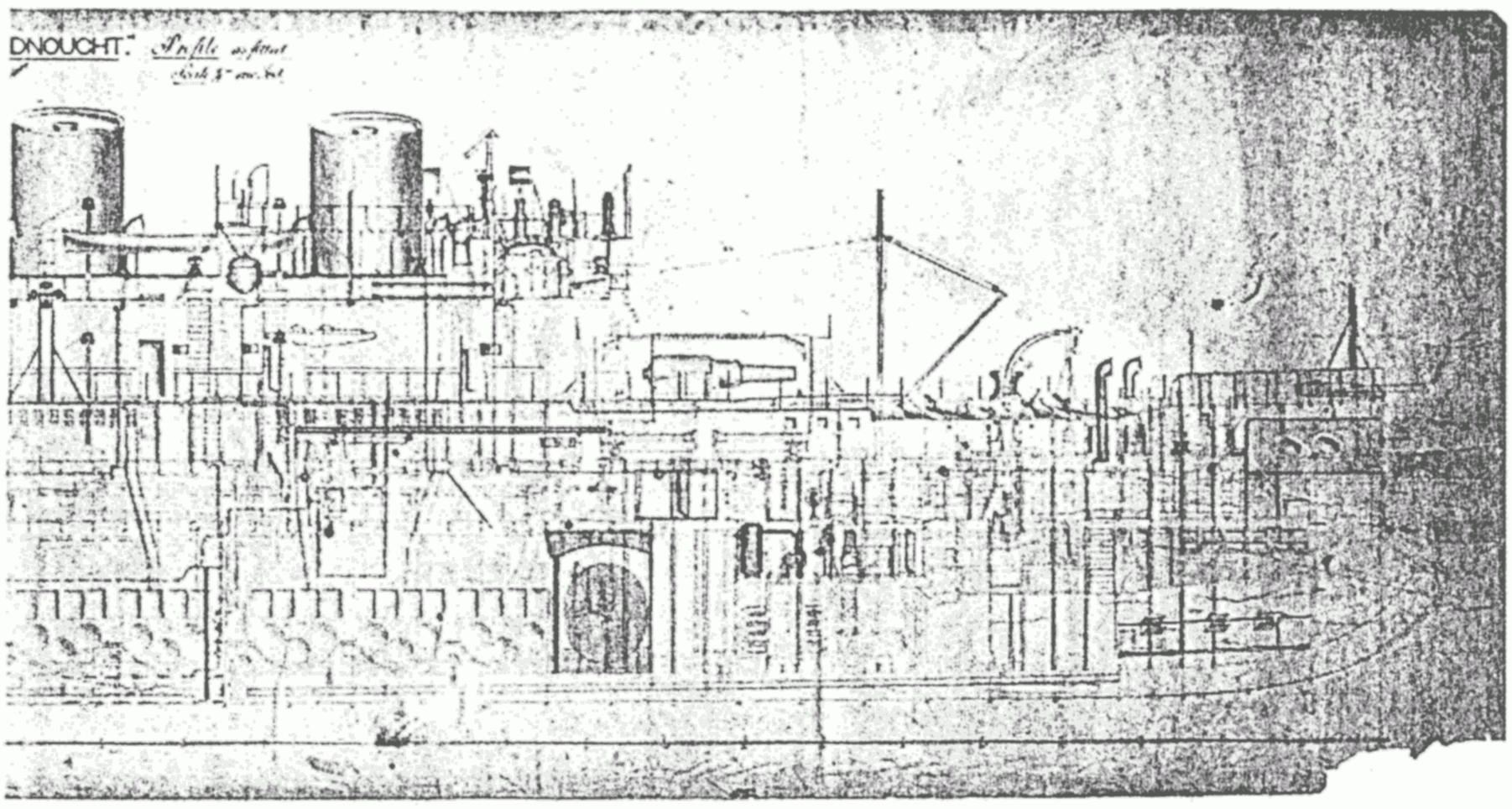


As fitted profile of *Dreadnought*, Portsmouth 1884. The forward turret is shown in section, rev one of the 38-ton guns. *DR9311*

***AGAMEMNON* Class** - turret ironclads. Designed by Nathaniel Barnaby (as diminutives of his *Inflexible* design), approved 13.10.1875.

Dimensions & tons: 280ft 0in pp x 66ft 0in x 24ft 0in. 8,492





Agamemnon Chatham Dyd/John Penn & Son.
Ord: 1875. K: 9.5.1876. L: 17.9.1879.
C: 29.3.1883. BU in Germany 1.1903.

Ajax Pembroke Dyd/John Penn & Son.
Ord: 1875. K: 21.3.1876. L: 10.3.1880.
C: 30.3.1883. Sold to Castle for BU at Charlton 3.1904.

NOTES: With the *Agamemnon* Class the line of rigged turret ships came to an end. They were also the last British ironclads to carry muzzle-loading guns. The 1880s saw the construction of mastless turret (or barbette) ships.

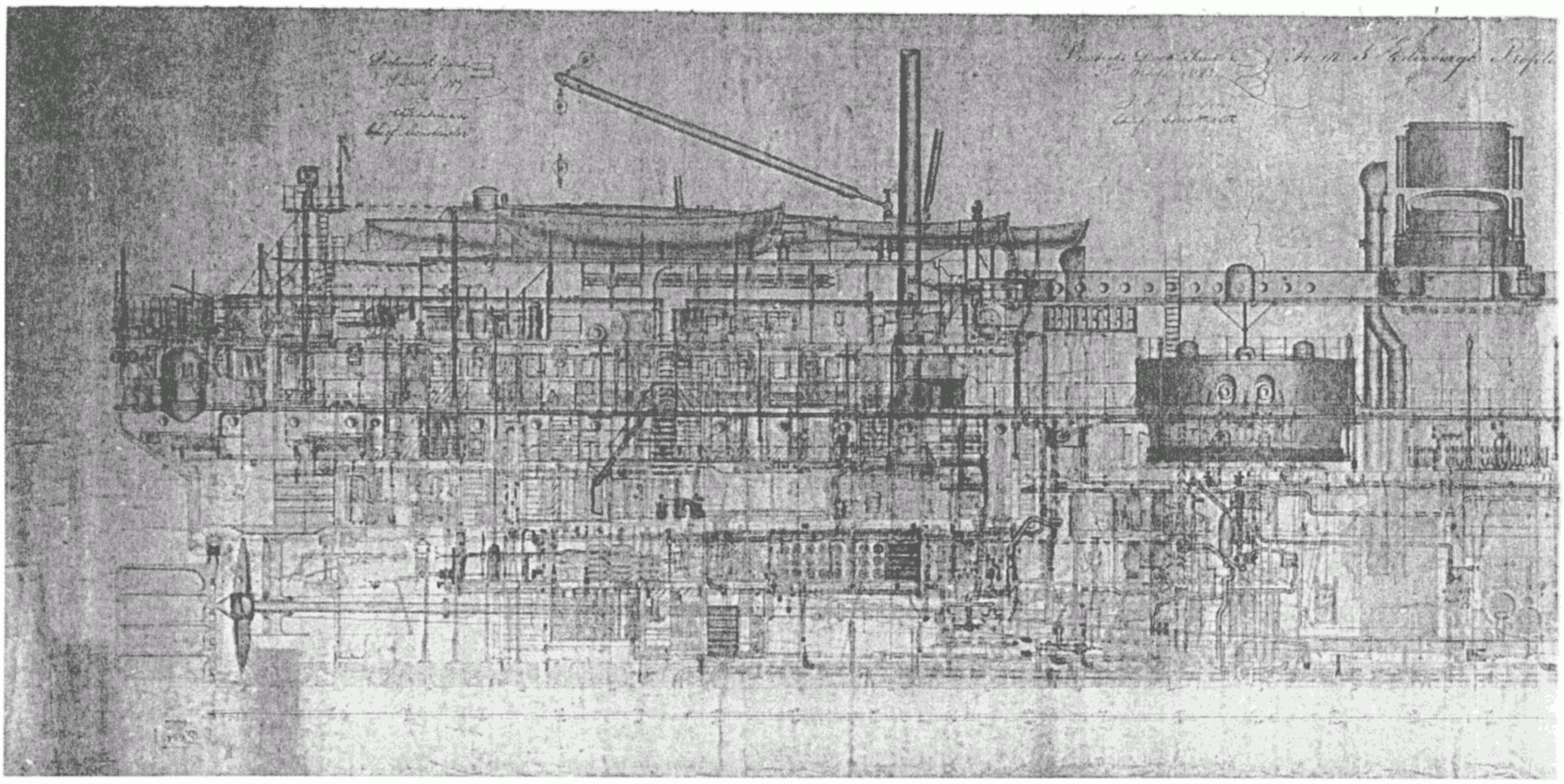
Turret Battleships

With the *Colossus* Class of 1879 emerged the ancestor of the true battleship. All the following vessels were twin-screw ships armed with breech-loading rifled guns mounted in barbettes (although the term 'turret' was applied indiscriminately). The first three ships were designed to carry 12.5in (38-ton) MLR, but were altered while building to have 12in (45-ton) guns instead. All the following had steel hulls, compound vertical armour and steel protective decks.

The barbette, a French development, consisted of a turntable upon which the guns were mounted, revolving inside a fixed armoured parapet; they lacked overhead protection, but this was added for later ships. The advantage lay in a much reduced weight compared with a turret, enabling the battleship to carry its guns a deck higher than in the low-freeboard turret ships.

***COLOSSUS* Class** - turret ironclads. Designed by Nathaniel Barnaby, enlarged versions of *Agamemnon* (but with BL guns, increased endurance and improved sea-keeping qualities) and thus diminutives of his *Inflexible* design.
Dimensions & tons: 325ft 0in pp x 68ft 0in. 25¾ft draught. 9,150 (designed) 9,420 (load) disp.
Men: 396. Guns: 4 x 12in (45-ton) BL in two twin turrets, 5 x 6in (89cwt) BL in single mounts; *Colossus* also had 4 x 6pdr QF, 15 MGs and 4 light guns while *Edinburgh* had 7 QF, 13 MGs and 2 light guns; 2 x 14in TCs.
Armour: Belt ?in (22in teak backing); citadel 18in-14in; bulkheads 16in-13in; turrets 16in-14in; conning tower 14in; decks 3in-2½in.
Machinery: 2 sets of 3-cyl. inverted compound expansion. 10 eliptical boilers. Twin screws. 6,000 ihp = 14kts (natural draught). *Colossus* 7,488 ihp = 16.5kts and *Edinburgh* 6,808 ihp = 16kts (forced draught). 970 tons coal = 6,200 miles @ 10kts.
First cost: *Colossus* £661,716 (hull £533,000; machinery £113,786).

(designed), 8,510 (load) disp.
Men: 345-405. Guns: 4 x 12.5in (38-ton) MLR in two twin turrets, 2 x 6in (81cwt) BL, 6 QF, 13 MGs, 2 light guns. Torpedoes: 2 TCs.
Armour: Citadel 18in (iron only, but with 18in teak backing); turrets 16in (compound).
Machinery: 2 sets of 3-cyl. inverted compound expansion. 10 tubular boilers. Twin screws. 6,000 ihp (*Agamemnon* 6,360 = 13.2kts; *Ajax* 6,440 = 13.2kts). 700 (normal)-960 (max.) tons coal = 4,100 miles @ 10kts.
First cost: *Agamemnon* £530,015 (hull £402,295, machinery £101,770). *Ajax* £548,393 (hull 411,622, machinery £106,735).



As fitted profile for the *Edinburgh*, Pembroke Yard 31 May 1887 – a highly detailed draught that appears confusing in black and white because so many layers of the interior works were depicted in colour line and washes on the original. *DR9886*

Edinburgh £645,138 (hull £555,333, machinery £87,000).

Colossus Portsmouth Dyd/Maudslay, Sons & Field.
Ord: 1879. K: 6.6.1879. L: 21.3.1882. C: 31.10.1885. Laid up in reserve at Portsmouth 1901. Tender to *Excellent* (gunnery school at Portsmouth). Sold to Ward, Briton Ferry to BU 6.10.1908.

Edinburgh (ex-*Majestic*, renamed 16.3.1882) Pembroke Dyd/Humphrys, Tennant & Co.
Ord: ... . K: 29.3.1879. L: 18.3.1882. C: 8.7.1887. Laid up in reserve 1897. Tender to *Wildfire* at Sheerness 1899-1905. Shell and armour plate experiments as target ship 1908. Sold to Ward, Swansea to BU 11.10.1910.

NOTES: Built under the 1878-79 Programme, these ships marked the return to breech-loading guns. They were also the first British capital ships to which the designation 'battleship' was formally applied.

***CONQUEROR* Class** - turret rams.
Dimensions & tons: 288ft 0in oa, 270ft 0in pp x 58ft 0in x 23ft 6in. 6,200 disp (*Conqueror*), 6,440 disp (*Hero*).
Men: 330. Guns: 2 x 12in (45-ton) BL in one twin turret, 4 x 6in (89cwt) BL in single mounts, 7 x 6pdr QF, 5 x 3pdr QF, 6 x 14in TCs.
Armour (compound): Belt 12in-8in (with 13in teak backing); citadel 12in-10½in; turret 14in-12in; bulkheads 11in-10½in; conning tower 12in-6in; decks 2½in-1¼in.
Machinery: 2 sets of 3-cyl. inverted compound expansion. 8 cylindrical boilers. Twin screws. 4,500 ihp = 14kts (natural draught); 6,000 ihp = 15.5kts (forced draught). 650 tons coal = 5,200 miles @ 10kts.
First cost: *Conqueror* £401,991 (hull £325,000, machinery £93,433). *Hero* £ 388,764 (hull £338,971, machinery £58,300). Note totals quoted are less than sum of hull and machinery, for reasons unclear.

Conqueror Chatham Dyd/Humphrys, Tennant & Co.
Ord: 1879. K: 28.4.1879. L: 8.9.1881. C: 3.1886. Sold to Castle to BU 9.4.1907.

Hero Chatham Dyd/J. & G. Rennie.
Ord: 1884. K: 21.4.1884. L: 27.10.1885. C: 5.1888. Target 11.1907. Sunk as target off Kentish Knock 18.2.1908; raised and BU.

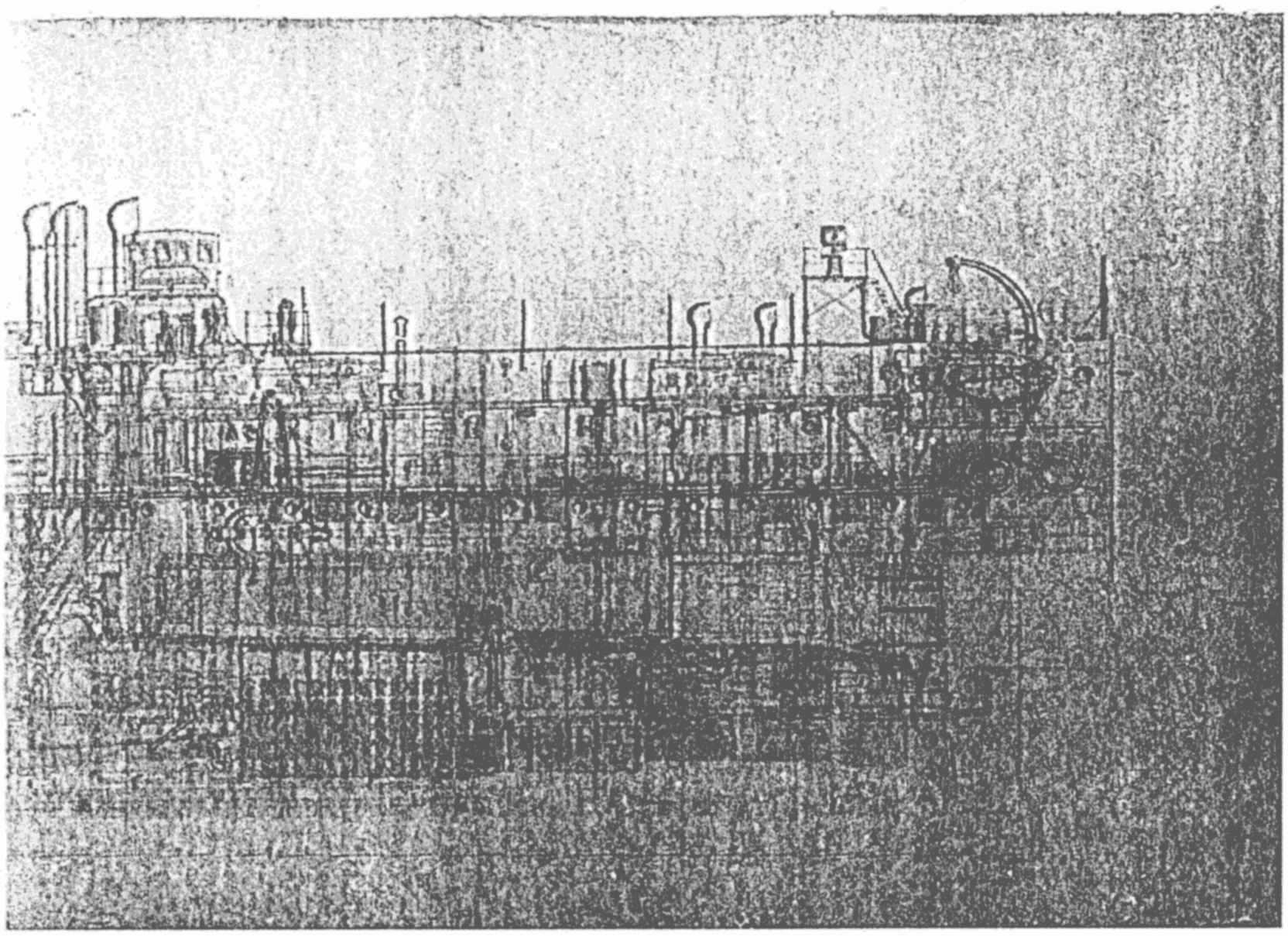
NOTES: *Conqueror* built under the 1878-79 Programme, *Hero* under that of 1881-82. A third vessel was ordered 31.12.1884 from Chatham Dyd, but cancelled in 1885.

COLLINGWOOD ('Admiral' Class prototype) - barbette ironclad. Design by Nathaniel Barnaby (with detailed work by William White), approved 15.3.1880.
Dimensions & tons: 325ft 0in pp x 68ft 0in x 26ft 0in draught. 9,150 (designed) 9,500 (load) disp.
Men: 500. Guns: 4 x 12in (45-ton) BL in two twin open barbettes, 6 x 6in (89cwt) BL in single mounts (broadside) on UD, 12 x 6pdr, 8 x 3pdr, 4 x 14in TT (4 beam, all above water).
Armour (compound): Belt 18in-8in (with 20in teak backing); bulkheads 16in-7in; barbettes 11½in-10in; conning tower 12in-2in; decks 3in-2in.
Machinery: 2 sets of 2-cyl. inverted compound expansion. 12 cylindrical boilers. Twin screws. 7,000 ihp = 15.5kts (natural draught); 9,600 ihp = 16.8kts (forced draught). 900/1,200 tons coal = 7,000/8,500 miles @ 10kts.
First cost: £636,375 (hull *c*£520,000, machinery *c*£104,000).

Collingwood Pembroke Dyd/Humphrys, Tennant & Co.
Ord: 1880. K: 12.7.1880. L: 22.11.1882. C: 7.1887. Laid up in reserve 1903. Sold to Hughes Bolckow, Dunston to BU 11.5.1909.

NOTES: The RN's first true barbette ship, and the first in a continuous line of development stretching to the *Vanguard* of 1945. Also the first to have forced-draught intake to boilers.

Scan and/or retouch by Grzechu



barbettes 14in-12in; conning tower 12in-2in; decks 3in-2½in.
Machinery: 2 sets of 3-cyl. inverted compound expansion. 12 cylindrical boilers. Twin (18ft dia.) screws. 7,500 ihp = 15.7kts (natural draught); 11,500 ihp = 17.4kts (forced draught). 1,200 tons coal = 7,100 miles @ 10kts
First cost: *Camperdown* £677,724. *Anson* £662,582.

Camperdown (ex-*Duncan*, renamed 18.8.1882) Portsmouth Dyd/Maudslay, Sons & Field.
Ord: 30.12.1881. K: 18.12.1882. L: 24.11.1885. C: 8.1889. Hulked as submarine depot ship at Harwich 10.1908. Sold to BU at Swansea 1911.

Anson Pembroke Dyd/Humphrys, Tennant & Co.
Ord: 1883. K: 24.4.1883. L: 17.2.1886. C: 5.1889. Sold to BU 1909.

NOTES: Altered from earlier design to include heavier barbette armour and 10ft longer belt; then length/beam increased to prevent draught increasing.

BENBOW (16.25in 'Admiral' class) - barbette ironclads. Development of Nathaniel Barnaby's design.
Dimensions & tons: 330ft 0in pp x 68ft 6in x 27ft 10in draught. 10,600 load disp.
Men: 525. Guns: 2 x 16.25in (110-ton) BL in two single open barbettes, 10 x 6in BL, 12 x 6pdr QF, 7 x 3pdr QF, 5 x 14in TT (4 beam and 1 bow, all above water).
Armour: Belt 18in-8in (7in teak backing); bulkheads 16in-7in; barbettes 14in-12in; conning tower 12in-2in; decks 3in-2½in.
Machinery: 2 sets of 3-cyl. inverted compound expansion. 12 cylindrical boilers. Twin screws. 7,500 ihp = 15.7kts (natural draught); 10,860 ihp = 17.5kts (forced draught). 1,200 tons coal = 7,100 miles @ 10kts
First cost: £764,022.

Benbow Thames Ironworks & Sbdg., Blackwall (No.21H)/Maudslay, Sons & Field.
Ord: 1881. K: 1.11.1882. L: 15.6.1885. C: 6.1888. Laid up 1904. Sold to BU 1909.

NOTES: Development of *Camperdown* design to mount 16.25in guns.

***RODNEY* Class** (13.5in 'Admiral' Class) - barbette ironclads. Development of Nathaniel Barnaby's design.
Dimensions & tons: 325ft 0in pp x 68ft 0in. 27ft 10in draught. 10,300 load disp.
Men: 510. Guns: 4 x 13.5in (67-ton) BL in two twin open barbettes, 6 x 6in (5-ton) BL in single mounts (broadside) on UD, 12 x 6pdr, 10 x 3pdr, 5 x 14in TT (4 beam and 1 bow, all above water).
Armour (compound): Belt 18in-8in (7in teak backing); bulkheads 16in-7in; barbettes 11½in-10in; conning tower 12in-2in; decks 3in-2½in.
Machinery: 2 sets of 3-cyl. inverted compound expansion. 12 cylindrical boilers. Twin screws. 11,500 ihp = 17kts (forced draught). 1,200 tons coal = 7,200 miles @ 10kts.
First cost: *Rodney* £665,963 (hull £563,878, machinery £105,400). *Howe* £639,434 (hull £560,469, machinery £106,553).

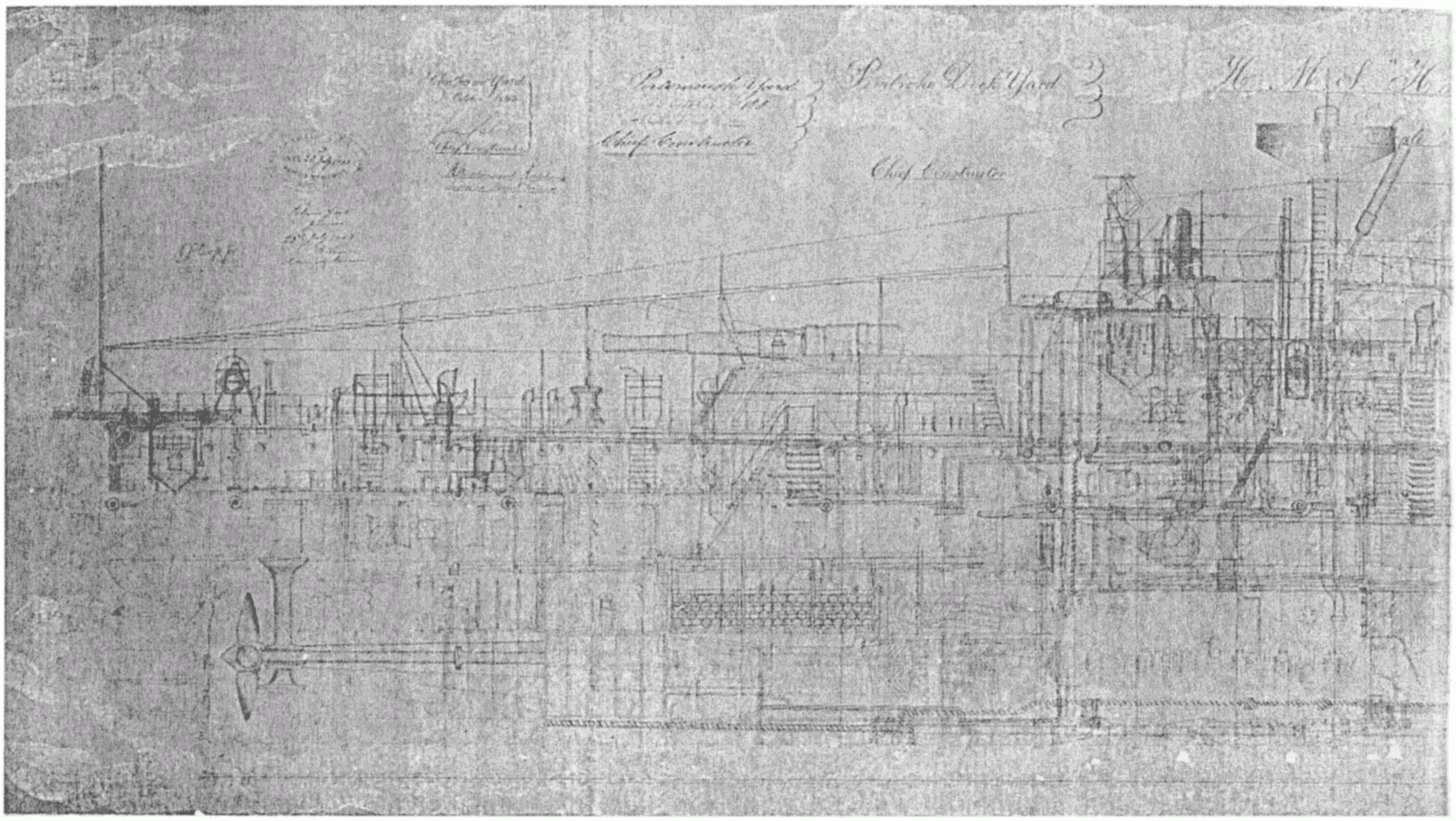
Rodney Chatham Dyd/Humphrys, Tennant & Co.
Ord: 1.8.1881. K: 6.2.1882. L: 8.10.1884. C: 6.1888. Sold for BU 1909.

Howe Pembroke Dyd/Humphrys, Tennant & Co.
Ord: 1.8.1881. K: 7.6.1882. L: 28.4.1885. C: 8.1889. Wrecked on rock off Ferrol 2.11.1892. Salvaged and repaired 1893. Sold for BU 1910.

NOTES: Repeats of *Collingwood*, with 13.5in guns (*vice* 12in), increasing weight by 800 tons and draught by 1½ft.

***SANS PAREIL* Class** - turret ironclads. Designed by Nathaniel Barnaby, 1885.
Dimensions & tons: 363ft 0in oa, 340ft 0in pp x 70ft 0in x 26¾ft - 27¼ft draught. 10,470 (load) disp.
Men: 430 (550 as flagships). Guns: 2 x 16.25-in (110-ton) guns in one twin turret (forward), 1 x 10in (29-ton) BL (aft), 12 x 6in BL, 12 x 6pdr QF, 9 x 3pdr QF, 4 x 14in TT (2 submerged on beams, 1 bow and 1 aft above-water) and 2 x 14in TC.
Armour: (compound) Belt 18in-16in (with 7in teak backing); bulkheads 16in; turret 17in; redoubt 18in; battery 6in-3in; conning tower 14in-2in; decks 3in.
Machinery: 2 sets of 3-cyl. triple expansion. 8 boilers. Twin screws. 8,000 ihp = 16kts (natural draught); 14,482 ihp = 17.75kts in *Sans Pareil*; 14,240 ihp = 17.3kts in *Victoria* (forced draught). 1,200 tons

***CAMPERDOWN* Class** (13.5in 'Admiral' Class) - barbette ironclads. Development of Nathaniel Barnaby's design.
Dimensions & tons: 330ft 0in pp x 68ft 6in x 27ft 10in draught. 10,600 load disp.
Men: 515. Guns: 4 x 13.5in (67-ton) BL in two twin open barbettes, 6 x 6in (5-ton) BL, 12 x 6pdr, 10 x 3pdr, 5 x 14in TT (4 beam and 1 bow, all above water).
Armour: Belt 18in-8in (7in teak backing); bulkheads 16in-7in;



coal = 7,000 miles @ 10kts.

First cost: *Sans Pareil* £778,650. *Victoria* £777,650.

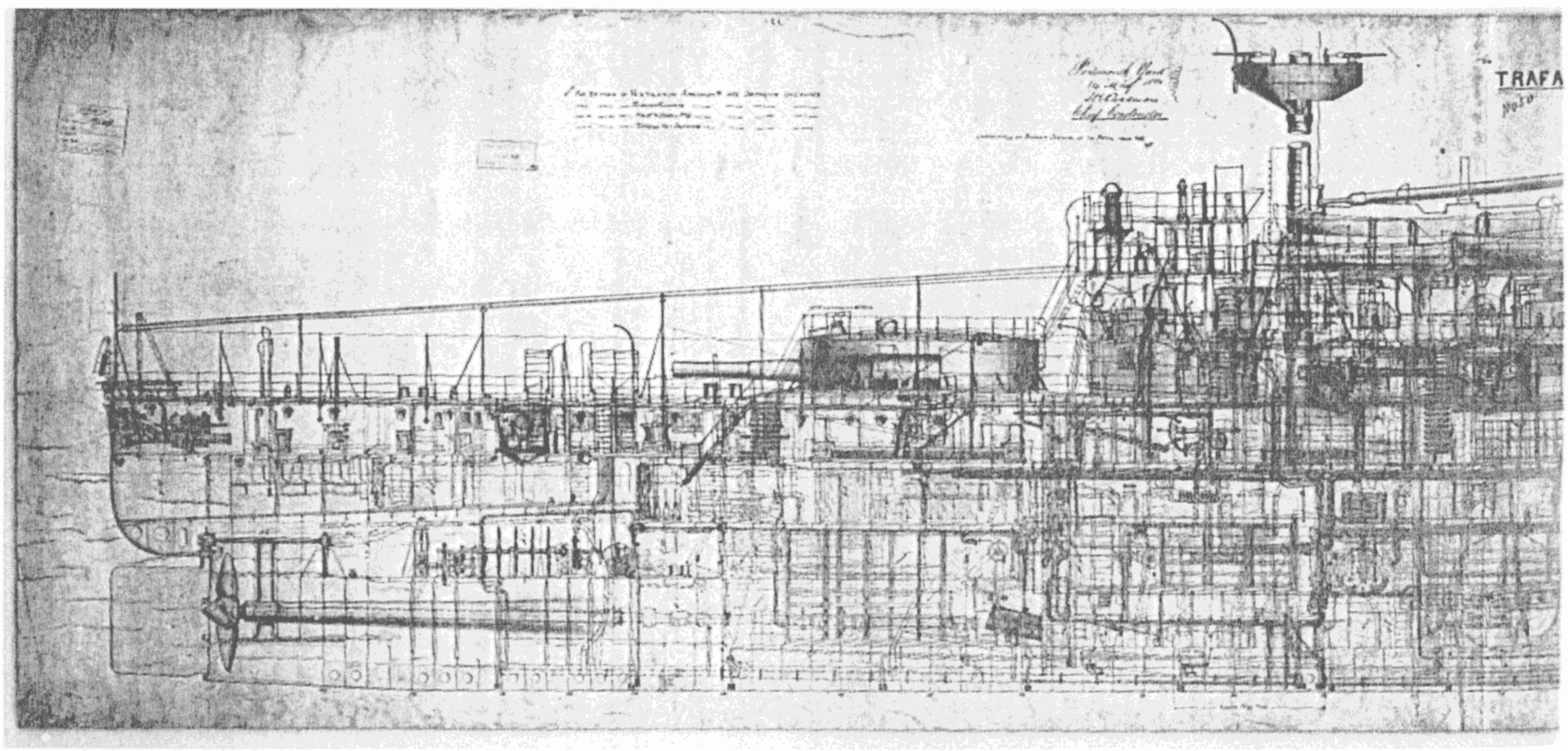
Sans Pareil Thames Ironworks & Sbdg., Blackwall (No.58H)/Humphrys, Tennant & Co.

Ord: ... . K: 21.4.1885. L: 9.5.1887. C: 8.7.1891. Sold to Ward, Birkenhead to BU 9.4.1907.

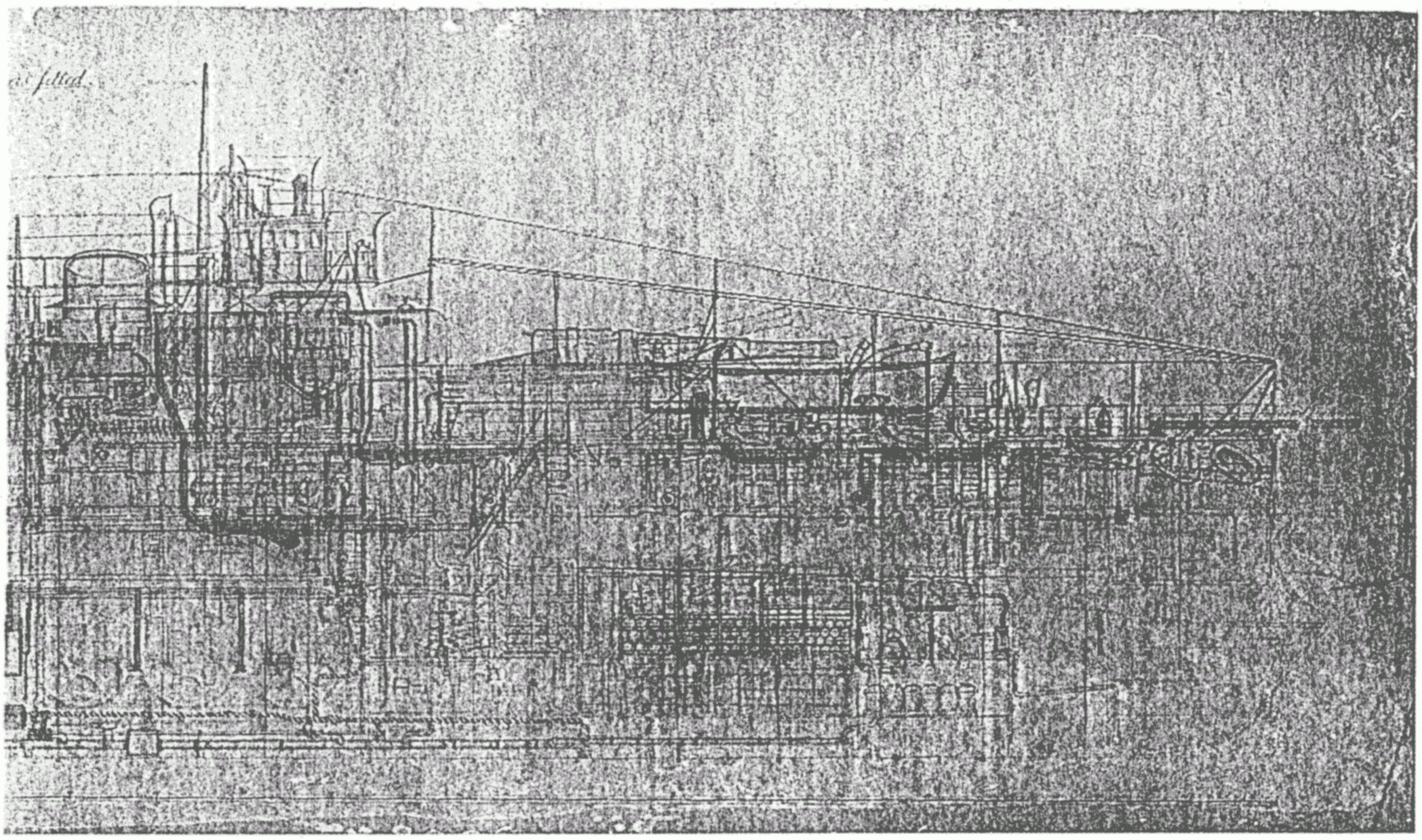
Victoria (ex-*Renown*, renamed 18.3.1887) Armstrong Mitchell, Elswick (No.490)/Humphrys, Tennant & Co.

Ord: ... . K: 23.4.1885. L: 9.4.1887. C: 3.1890. Sunk in collision with *Camperdown* off Tripoli, Syria 22.6.1893.

NOTES: Funded under the Northbrook Programme of 1884 (although included in 1885-86 Estimates). The first ironclads with triple-expansion engines. Enlarged editions of *Conqueror* with a heavily increased battery. Initially planned to mount 2 or 4 13.5in (67-ton) guns.



Scan and/or retouch by Grzechu



As fitted profile of *Howe*, Portsmouth 23 October 188[?9 - the date is incomplete]. It is a well-travelled draught, being annotated Chatham 31 October 1893, Palmers Yard, Jarrow 23 July 1903 and Devonport 14 September 1903. *DR8456*

***TRAFALGAR* Class** - turret ironclads. Designed by William White, 1886.

Dimensions & tons: 345ft 0in pp x 73ft 0in x 28ft 6in draught. 11,940 (12,589 load) disp.

Men: 520-577. Guns: 4 x 13.5in (67-ton) BL in two twin turrets, 6 x 4.7in QF, 8 x 6pdr QF, 9 x 3pdr QF, 4 x 14in TT.

Armour: (compound) belt 20in-14in (with 10in teak backing); 16in fwd bulkhead; 14in aft bulkhead; 18in to 16in citadel; 18in turrets; 14in conning tower; 3in decks.

Machinery: 2 sets of 3-cyl. triple expansion. 6 cylindrical boilers. Twin screws. 7,500 ihp = 15kts (natural), 12,000 ihp = 16.75kts (forced). 900 (normal)-1,200 (maximum) tons coal = 6,500 miles @ 10kts.

First cost: *Trafalgar* £739,541. *Nile* £765,615.

Trafalgar Portsmouth Dyd/Humphrys, Tennant & Co.

Ord: ... . K: 18.1.1886. L: 20.9.1887. C: 4.1890. Hulked as gunnery drill ship at Sheerness 1907 till 1909.

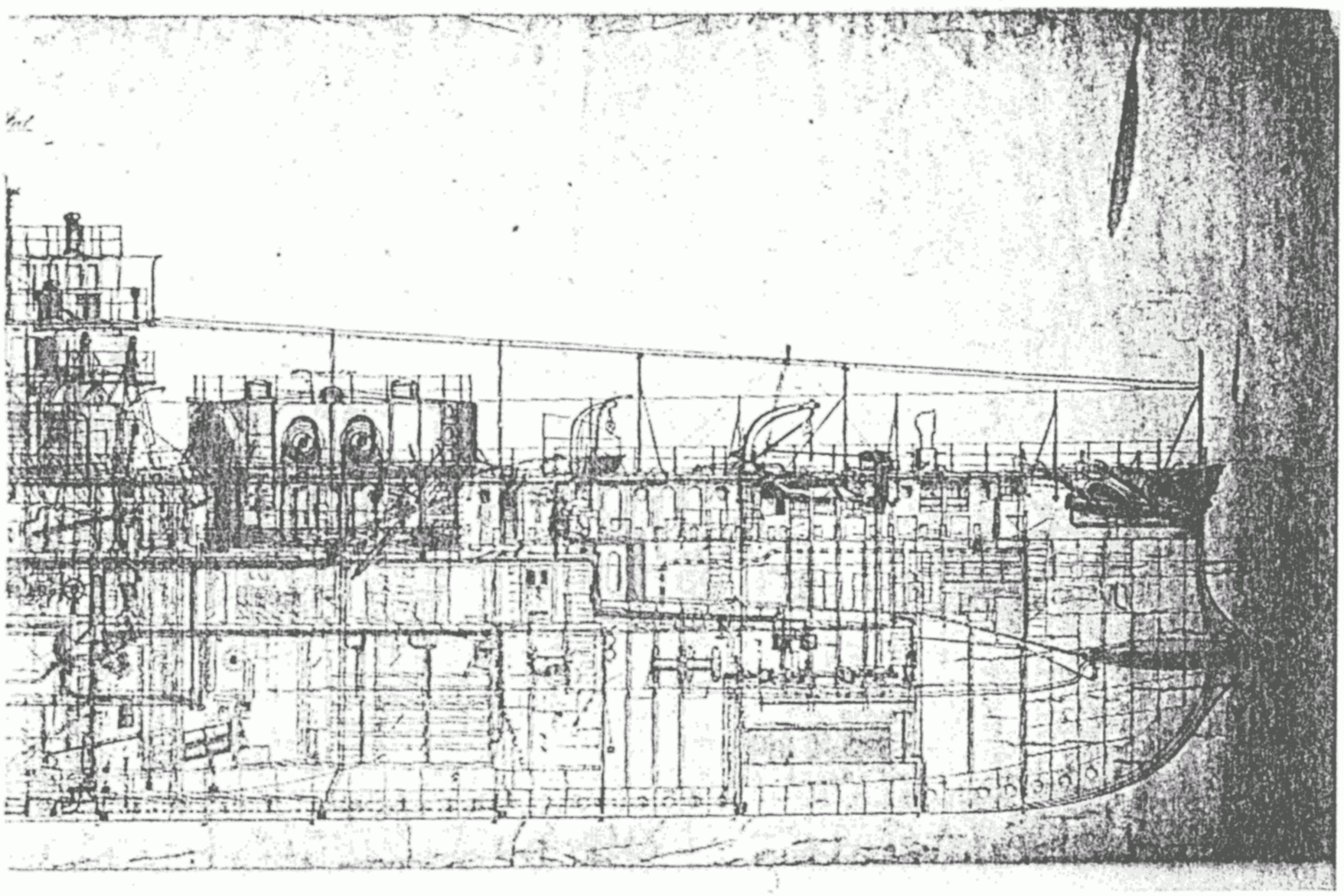
Sold to G. Garnham for BU 9.5.1911.

Nile Pembroke Dyd/Maudslay, Sons & Field.

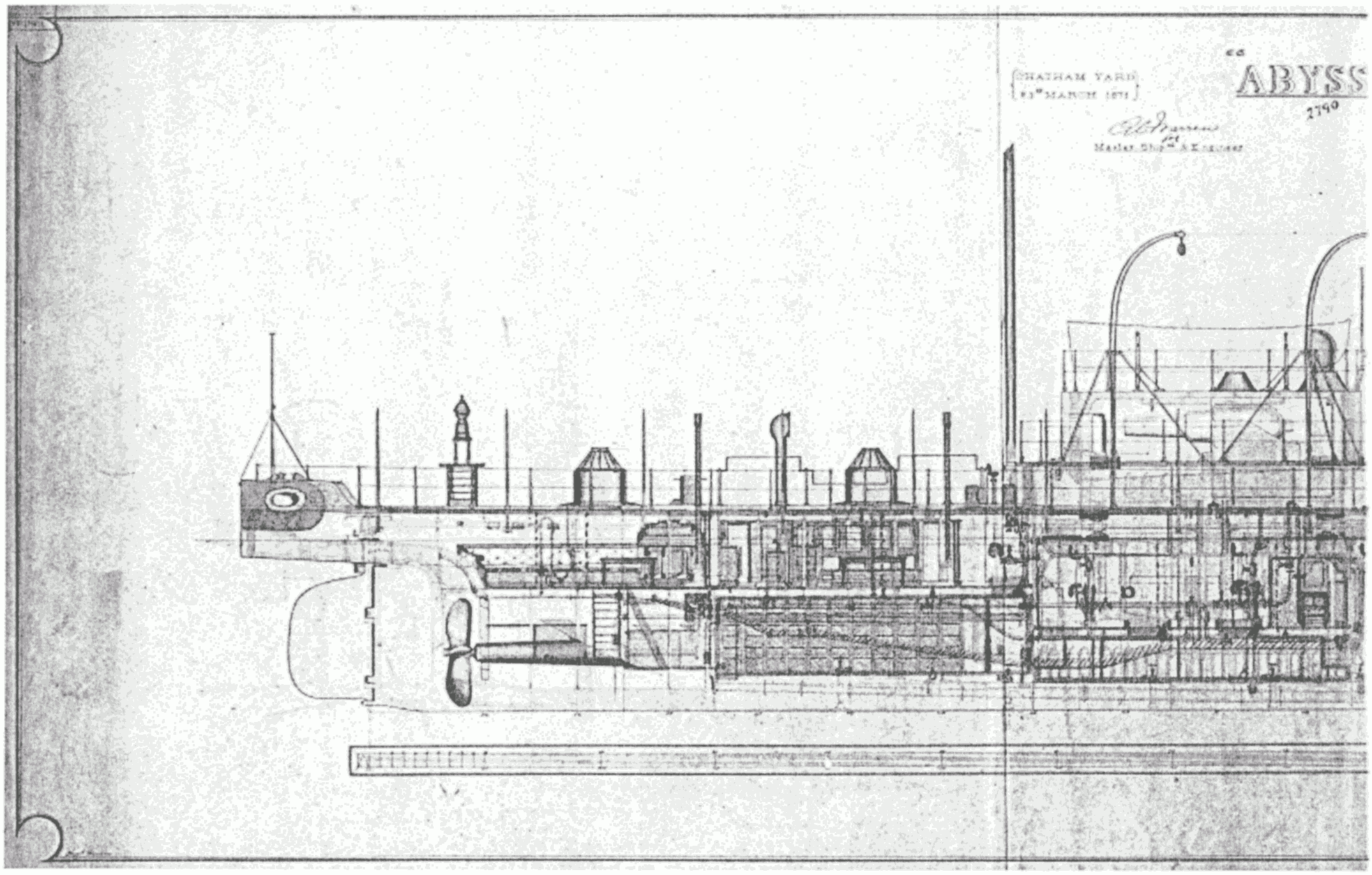
Ord: ... . K: 8.4.1886. L: 27.3.1888. C: 10.7.1891. Sold to Ward, Swansea for BU 9.7.1912.

NOTES: Built under the 1886 Programme. The last central-citadel turret ships to be built.

Under the 1889 Naval Defence Act (and thus beyond the coverage of this book) were 10 battleships, of which the first four were ordered from Royal Dockyards early in 1889. These, the first



Profile of the battleship *Trafalgar* as completed, Portsmouth 14 May 1890, with alterations up to April 1906. By this stage warship drawings were such large, complex and time-consuming items to produce that most alterations and additions were marked on the original in a distinctive colour - in this case 'burnt sienna' - rather than make an entirely new draught. *DR9629*



As fitted profile of the breastwork monitor *Abyssinia*, Chatham 23 March 1871. She was a reduced version of the *Cerberus*, and was designed for the defence of Bombay. *DR7374*

of a decade of high-freeboard pre-*Dreadnought* battleships classes of similar layout, comprised:

	Builder/Engines	*Begun*	*Launched*	*Completed*
Royal Sovereign Class (First Class battleships)				
Renown	Pembroke Dyd/ Humphrys	9.7.1889	7.5.1891	8.1893
Hood	Chatham Dyd/ Humphrys	12.8.1889	30.7.1891	5.1893
Royal Sovereign	Portsmouth Dyd/ Humphrys	30.9.1889	26.2.1891	5.1892
Repulse	Pembroke Dyd/ Humphrys	1.1.1890	27.2.1892	4.1894
Resolution	Palmer, Jarrow/ Palmer	14.6.1890	28.5.1892	5.12.1893
Revenge	Palmer, Jarrow/ Palmer	12.2.1891	3.11.1892	3.1894
Royal Oak	Laird, Birkenhead/ Laird	29.5.1890	5.11.1892	6.1894
Ramillies	J. & G. Thomson/ Thomson	11.8.1890	1.3.1892	17.10.1893
Barfleur Class (Second Class battleships)				
Centurion	Portsmouth Dyd/ Greenock Foundry	30. 3.1890	3.8.1892	2.1894
Barfleur	Chatham Dyd/ Greenock Foundry	12.10.1890	10.8.1892	6.1894

NOTES: *Renown* renamed *Empress of India* in 1890, two years before a new *Renown* was ordered - the first battleship armoured with the thinner and tougher Harvey nickel steel. *Hood* was a variant of the *Royal Sovereign* class, with its main guns in rotating turrets instead of barbettes (within which the guns themselves rotated).

Coastal Defence Ironclads (Breastwork Monitors)

These small turret ironclads were developed in 1867 for harbour defence, initially at Bombay and Melbourne, but a year later saw the ordering of similar craft for home waters. As a sailing rig and deep-water operations were not involved, Edward Reed designed a number of low-freeboard but heavily armoured vessels, with an armoured breastwork amidships - at each end of which was an armoured turret containing two 10in (12in in *Glatton*) MLR guns.

***CERBERUS* Class**. Designed by Edward Reed, 1867.

Dimensions & tons: 225ft 0in pp x 45ft 0in x 15ft 3in draught. 2,107 bm. 3,480 and 3,340 (load) disp respectively.

Men: 155. Guns: 4 x 10in (18-ton) MLR in two twin turrets, 4 MGs and 2 light guns.

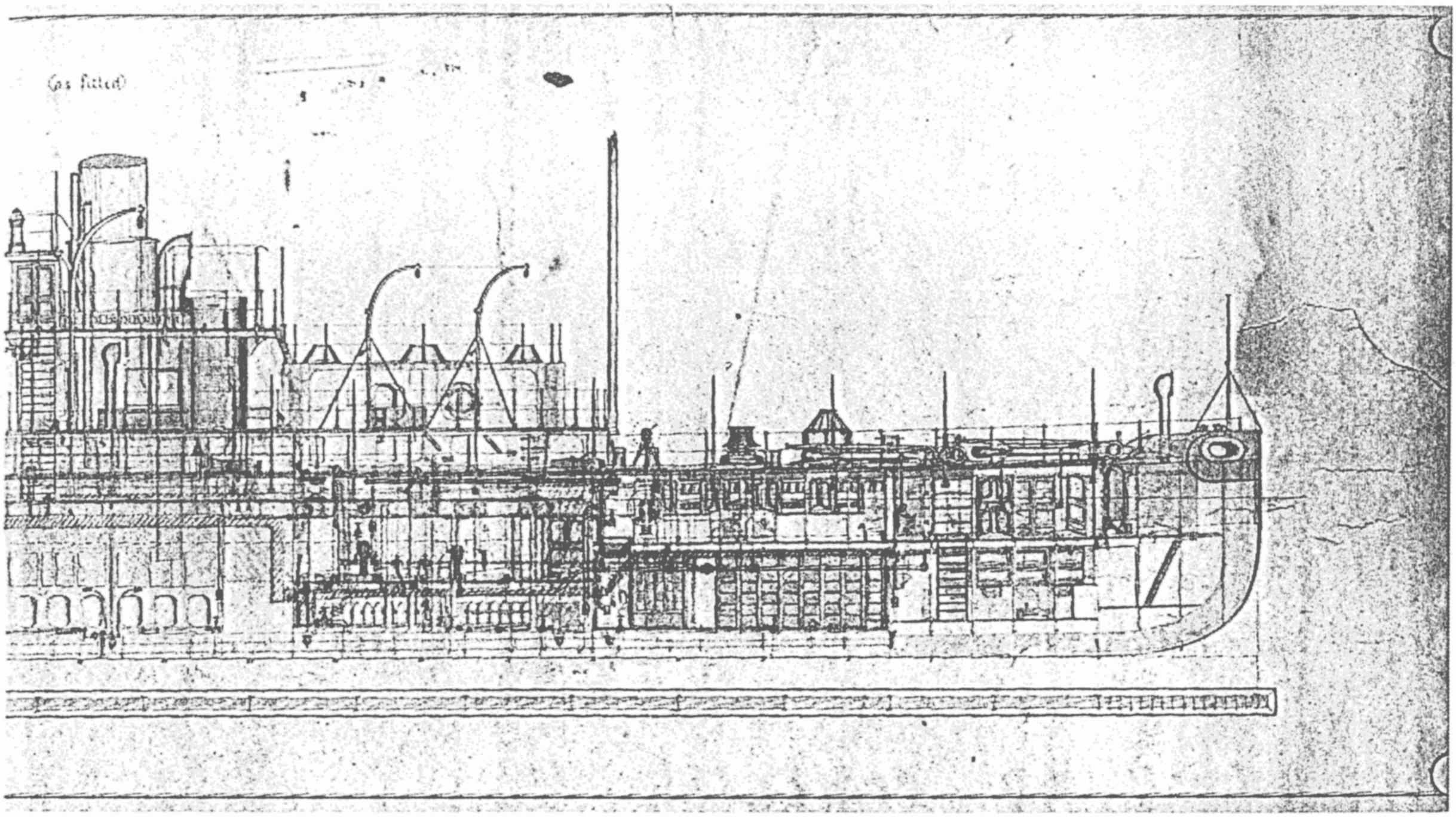
Armour: Belt 8in-6in (with 11in teak backing); breastwork 9in-8in; turrets 10in-9in; decks 1in-1½in.

Machinery: 2 sets of 2-cyl. single expansion, return connecting-rod. Twin screws. *Cerberus* 1,370 ihp = 9.75kts. *Magdala* 1,436 ihp = 10.67kts. 120 tons coal.

First cost: *Cerberus* £117,556 (hull £99,331, machinery £18,225). *Magdala* £132,400 (hull £115,400, machinery £17,000).

Cerberus Palmers Sbdg. & Iron, Jarrow (No.225)/Maudslay, Sons & Field - for Melbourne, Victorian (Australia) Navy.

Ord: ... . K: 1.9.1867. L. 2.12.1868. C: 5.5.1870. Hulked 1900. Became depot ship *Platypus II* 1918. Sold to Melbourne Salvage Co. 23.4.1924;



sunk at Melbourne as breakwater 7.1926 - still visible in 2003, but in very poor condition.

Magdala Thames Iron Sbdg. Co., Blackwall (No.45F)/Ravenhill, Hogson & Co. - for Royal Indian Marine.

Ord: ... .K: 6.10.1868. L: 2.3.1870. C: 11.1870. To RN 31.10.1892, but returned to RIN 19.3.1903. Sold to BU 1904.

NOTES: *Cerberus* had cylinders of 43in diam., 27in stroke; *Magdala* of 48in diam., 21in stroke.

ABYSSINIA - for Bombay (RIM). Designed by Edward Reed, 1868.

Dimensions & tons: 225ft 0in pp x 42ft 0in x 14ft 7in draught. 1,854 bm. 2,900 (load) disp.

Men: 100. Guns: 4 x 10in (18-ton) MLR in two twin turrets, 8 MGs and 2 light guns.

Armour: Belt 7in-6in (with 11in teak backing); breastwork 8in-7in; turrets 10in-8in; decks 1in-1½in.

Machinery: 2 sets of 2-cyl. (34in diam., 21in stroke) diagonal single expansion, return connecting-rod. Twin screws. 200 nhp. 1,200 ihp = 9.59kts. 92 tons coal.

First cost: £116,549 (hull £97,049, machinery £19,500).

Abyssinia J. & W. Dudgeon, Poplar./J. & W. Dudgeon.

Ord: ... . K: 23.7.1868. L: 19.2.1870. C: 10.1870. Sold to BU 1.1903.

NOTES: Made passage to Bombay under her own power. Re-armed 1892 with 4 x 8in BL guns.

GLATTON. Designed by Edward Reed, 1868.

Dimensions & tons: 245ft 0in pp x 54ft 0in x 19ft 5in draught. 2,709 bm. 4,910 (load) disp.

Men: 185. Guns: 2 x 12in (25-ton) MLR in a twin turret, 3 x 6pdr QF, 4 MGs and 2 light guns, 2 submerged TT.

Armour: Belt 12in-10in (with 21in-15in teak backing); breastwork 12in; bulkhead 12in; turrets 14in-12in; conning tower 9in-6in; decks 3in-1½in.

Machinery: 2 sets of 2-cyl. (60in diam., 27in stroke) horizontal single expansion, return connecting-rod. Twin screws. 500 nhp. 2,870 ihp = 12.1kts. 540 tons coal = 2,000 miles @ 10kts.

First cost: £219,529 (hull £189,133, machinery £30,396).

Glatton Chatham Dyd/Laird Brothers.

Ord: ... . K: 10.8.1868. L: 8.3.1871. C: 24.2.1872. In reserve from 1889. Sold to King, Garston to BU 7.7.1903.

***CYCLOPS* Class**. Designed by Edward Reed, 1870.

Dimensions & tons: 225ft 0in pp x 45ft 0in x 16ft 4in draught. 2,107 bm. 3,480 (load) disp.

Men: 150. Guns: 4 x 10in (18-ton) MLR in two twin turrets. 4 x 3pdr QF and 5 MGs added in late 1880s.

Armour: Belt 8in-6in (with 11in-9in teak backing); breastwork 9in-8in; turrets 10in-9in; conning tower 9in-8in; decks 1½in.

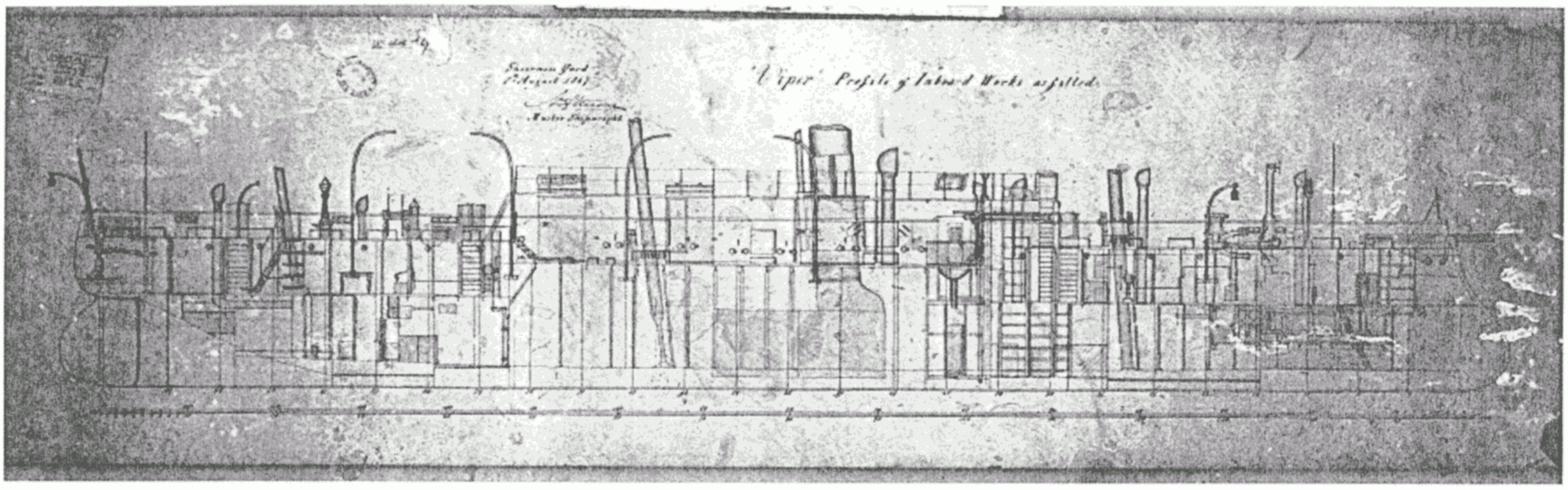
Machinery: 2 sets of 2-cyl. horizontal inverted direct-acting single expansion (inverted compound engines in Elder-engined ships). Twin screws. 250 nhp. *Cyclops* 1,660 ihp = 11kts; *Hecate* 1,755 ihp = 10.9kts; *Gorgon* 1,670 ihp = 11kts; *Hydra* 1,470 ihp = 11.2kts. *Cyclops* & *Hydra* 250 tons coal = 1,920 miles @ 10kts; *Hecate* & *Gorgon* 270 tons coal = 1,230 miles @ 10kts.

First cost: *Cyclops* £154,026 (hull £136,426, machinery £17,600). *Hecate* £140,593 (hull £124,906, machinery £15,687). *Gorgon* £138,567 (hull £122,904, machinery £15,663). *Hydra* £141,372 (hull £124,454, machinery £16,918).

Cyclops Thames Iron Sbdg. Co., Blackwall (No.52F)/John Elder & Co.

Ord: ... . K: 10.9.1870. L: 18.7.1871. C: 4.5.1877. Sold to BU 7.7.1903.

Scan and/or retouch by Grzechu



As fitted profile of the armoured gunboat *Viper*, Sheerness 8 August 1867. From this it is not immediately obvious that the vessel was twin screw. *DR17273*

Hecate J. & W. Dudgeon, Poplar/Ravenhill, Hodgson & Co.
Ord: ... . K: 5.9.1870. L: 30.9.1871. C: 24.5.1877. Sold to BU 12.5.1903.
Gorgon Palmers Sbdg. & Iron, Jarrow (No.270)/Ravenhill, Hodgson & Co.
Ord: ... . K: 5.9.1870. L: 14.10.1871. C: 19.3.1874. Sold to BU 12.5.1903.
Hydra John Elder & Co., Govan (No.136)/John Elder & Co.
Ord: ... . K: 5.9.1870. L: 28.12.1871. C: 31.5.1876. Sold 7.7.1903 and BU at Genoa.
NOTES: *Hydra* also reported as contracted to Robert Napier for the hull, but it appears that Elder actually constructed this hull. *Cyclops* and *Hydra* had 1 high pressure cylinder of 31in diam., 1 low pressure cylinder of 57in diam., 2¼ft stroke (60 lbs/sq.in); *Hecate* and *Gorgon* had 2 low pressure cylinders of 45in diam., 2ft stroke (34 lbs/sq.in).

Armoured Gunboats (Breastwork type)

The only ironclads of gunboat size were three largely experimental (and unsuccessful) vessels ordered in 1864. They carried a barquentine rig. The first two were towed to Bermuda (being considered too unseaworthy to proceed on their own) where they served as harbour vessels.

VIXEN - armoured gunboat (composite construction), 4 guns.
Dimensions & tons: 160ft 0in pp, 134ft 10¼in x 32ft 5in x 11ft 0in.
754 bm. 1,228 disp.
Men: 80. Guns: 2 x 7in (6½-ton) MLR, 2 x 20pdr BL.
Armour: Belt and bulkheads 4½in (with 10in teak backing).
Machinery: 2 sets of 2-cyl. (32in diam., 18in stroke) horizontal single expansion. Twin screws. 160 nhp. 740 ihp = 8.894kts. 110 tons coal.
First cost: £54,193 (hull £46,333, machinery £7,860).
Vixen Charles Lungley, Deptford/Maudslay, Sons & Field.
Ord: 22.3.1864. K: 1864. L: 18.11.1865. C: 1866. Ordered to be BU at Bermuda 11.10.1896; sold there 1896.
NOTES: The first twin-screw vessel for the RN and the first vessel of composite construction for that service.

VIPER - armoured gunboat (iron construction), 4 guns.
Dimensions & tons: 160ft 0in pp, 135ft 4⅝in x 32ft 0in x 11ft 0in.
737 bm. 1,228 disp.
Men: 80. Guns: 2 x 7in (6½-ton) MLR, 2 x 20pdr BL.
Armour: Belt and bulkheads 4½in (with 10in teak backing).
Machinery: 2 sets of 2-cyl. (32in diam., 18in stroke) horizontal single expansion. Twin screws. 160 nhp. 696 ihp = 9.587kts. 110 tons coal.
First cost: £51,127 (hull £43,517, machinery £7,610).
Viper J. & W. Dudgeon, Limehouse/Maudslay, Sons & Field.
Ord: 22.3.1864. K: 1864. L: 21.12.1865. C: 1867. Harbour service 1890. Tank vessel 1901. Sold at Bermuda 1908.
NOTES: Similar to *Vixen* except for her construction. Her scuttled hull has recently been investigated.

WATERWITCH - armoured gunboat (hydraulic powered), 4 guns. Design by Rear-Adm. George Elliot and the Controller's Department.
Dimensions & tons: 162ft 0in pp, 142ft 9½in x 32ft 1in x 11ft 0in.
777 bm. 1,280 disp.
Men: 80. Guns: 2 x 7in (6½-ton) MLR, 2 x 20pdr BL.
Armour: Belt and bulkheads 4½in (with 10in teak backing).
Machinery: 3-cyl. (38½in diam., 42in stroke) horizontal Ruthven hydraulic reaction engine (*ie* water jet, no screw). 167 nhp. 780 ihp = 8.878kts. 100 tons coal.
Waterwitch Thames Iron Sbdg. Co., Blackwall/J. & W. Dudgeon.
Ord: 29.10.1864. K: 1864. L: 28.6.1866. C: 1867. Sold to Castle to BU at Charlton 26.4.1890.
NOTES: Iron construction. Generally similar to *Vixen* and *Viper*, except in being double-ended and being powered by a 'Ruthven turbine' - in other words water-pump propulsion. Iron hulled. She was far from successful, and was on the non-effective list well before she was disposed of.

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8 Cruising Vessels (Iron- and Steel-hulled): Frigates, Corvettes and Smaller Cruisers from 1863

With the appointment of Edward Reed as Surveyor of the Navy in 1863, the construction of iron-hulled masted cruising vessels began, although some wooden-hulled classes continued to be built for a further decade. The terms 'frigate' and 'corvette' continued in official terms to describe the RN's cruising vessels until 1887, when both types were re-categorised as 'cruisers'. These in turn were in 1888 sub-divided into three categorisations, namely First, Second and Third Class, the former including all the armoured cruisers as well as the larger protected cruisers. All existing cruisers (and those on order) were reclassed to conform to the new categorisation. Steel construction did not come to the smaller cruisers (sloops and gunboats) until after the Naval Defence Act, but the few vessels in this category are found in this Chapter for the sake of completeness. To conclude, the various iron-hulled coastal and riverine gunboats of the period are shown, together with the various metal-hulled naval auxiliaries of the period.

Iron-hulled (Sheathed) Masted Frigates and Corvettes

The following cruising vessels were built with an iron hull, sheathed with a double (in frigates and *Bacchante* Class corvettes) or single (in other corvettes) layer of wood, and retained the traditional broadside layout of armament, with a full rig of masts and sails. The *Inconstant* was designed to counter the threat posed to commerce by the building of foreign cruisers/commerce raiders such as the US *Wampanoag* Class. The Controller planned to build six of these big frigates, together with six somewhat smaller corvettes; but only two more iron frigates were ordered in the light of their high cost. In 1887 the three frigates were reclassed as Second Class cruisers, and the six corvettes as Third Class cruisers.

INCONSTANT - iron screw frigate, 16 guns. Designed by Edward Reed, 1866.

Dimensions & tons: 337ft 4in pp x 50ft 4in x 25ft 6in. Draught 20ft 8in (fwd) 24ft 7in (aft). 4,066 bm. 5,782 disp.

Men: 600. Guns: MD 10 x 9in/254pdr (12-ton) MLR - 5 on each broadside; UD 6 x 7in/112pdr (6½-ton) MLR - 4 on broadsides + 2 chase guns fwd. Subsequently 6 x 20pdr BL, 2 QFs, 11 MGs, 4 light guns and 2 TC added 1877.

Machinery: 2-cyl. (104¼in diam., 48in stroke) horizontal single expansion, trunk. 11 boilers. Single (hoisting) screw. 1,000 nhp. 7,360 ihp = 16.2kts. 750 tons coal = 2,780 miles @ 10kts. Under sail 13.5kts.

First cost: £213,324 (hull £138,585, machinery £74,739).

Inconstant Pembroke Dyd/John Penn & Son.

K: 27.11.1866. L: 12.11.1868. C: 8.1869. Hulked 1898. Became training ship 6.1906, renamed *Impregnable II*; again renamed *Defiance IV* in 1.1922, then *Defiance II* in 12.1930. Sold 9.1955, and BU in Belgium 4.4.1956.

NOTES: Iron skin covered by a double layer of 3in oak planking (copper-sheathed from the waterline down). Ship-rigged, with 26,655 sq.ft of sail area.

VOLAGE **Class** - iron screw corvettes, 10 guns. Designed by Edward Reed, 1867.

Dimensions & tons: 270ft 0in pp x 42ft 1in x 22ft 0in. Draught 16ft 5in (fwd), 21ft 5in (aft). 2,322 bm. 3,078 disp.

Men: 340. Guns: 6 x 7in/112pdr (6½-ton) MLR - 3 slide-mounted on each broadside, 4 x 6.3in/64pdr (64cwt) MLR - 1 on each broadside, 1 bow and 1 stern chaser.

Machinery: 2-cyl. horizontal single expansion (trunk in *Volage*, return connecting-rod in *Active*). 5 rectangular boilers. Single (hoisting) screw of 19ft diam. 600 nhp. *Volage* 4,530 ihp = 15.3kts. 420 tons coal = 1,850 miles @ 10kts. *Active* 4,130 ihp = 15kts. 410 tons coal = 2,000 miles @ 10kts. Under sail *Active* 12.5kts, *Volage* 13kts.

First cost: *Volage* hull £91,817, machinery £41,000. *Active* hull £85,795, machinery £40,361.

Volage (ex-*Cerberus*, renamed 2.5.1867) Thames Iron Sbdg Co., Blackwall (No.36F)/John Penn & Son.

K: 9.1867. L: 27.2.1869. C: 3.1870. Sold to Cohen, London to BU 17.5.1904.

Active Thames Iron Sbdg Co., Blackwall (No.37F)/Humphrys, Tennant & Co.

K: 1867. L: 13.3.1869. C: 3.1871. Sold to BU 10.7.1906.

NOTES: Iron skin covered by a single layer of 3in oak planking (copper-sheathed from the waterline down). *Volage* had cylinders of 86$^{1}/_{16}$in diam., 45in stroke; *Active* of 88in diam., 42in stroke. Full ship rig of 16,593 sq.ft of sail. Both re-armed 1873 with 18 x 6.3in/64pdr MLR; again re-armed 1880 and 1879 respectively with 10 x 6in/80pdr (81cwt) BL on broadside, 2 x 6.3in/64pdr MLR chase guns on traversing mounts, 2 light guns, 9 MGs and 2 x 14in TCs.

SHAH - iron screw frigate, 26 guns. Designed by Edward Reed, 1870.

Dimensions & tons: 334ft 0in pp x 52ft 0in x 26ft 5½in. Draught 21ft 6½in (fwd) 25ft 7½in (aft). 4,210 bm. 6,250 disp.

Men: 600. Guns: MD 16 x 7in/112pdr (6½-ton) MLR + 2 x 6.3in/64pdr (64cwt) MLR; UD 2 x 9in/254pdr (12-ton) MLR + 6 x 6.3in/64pdr (64cwt) MLR; also 4 light guns, 12 MGs, 2 TCs.

Machinery: 2-cyl. horizontal single expansion. 10 boilers. Single (hoisting) screw. 1,000 nhp. 7,480 ihp = 16.2kts. 890 tons coal (the most bunkers of any masted ship) = 6,840 miles @ 10kts. Under sail 13kts.

First cost: hull £177,912, machinery £57,333.

Shah (ordered as *Blonde*, renamed 1873) Portsmouth Dyd/John Penn & Son.

K: 7.3.1870. L: 10.9.1873. C: 12.1875. Became coal hulk 12.1904, renamed *C.470*. Sold to W. B. Smith 1919 as a coal hulk at Bermuda, but driven from her moorings and wrecked there 1926.

NOTES: Teak plating instead of oak. Hugo cylinders of 117in diam., 48in stroke. Ship-rigged, with 26,655 sq.ft of sail area.

RALEIGH - iron screw frigate, 22 guns. Designed by Edward Reed, 1871.

Dimensions & tons: ... , 298ft 0in pp x 49ft 0in x 24ft 7in. Draught 21ft 11in (fwd), 24ft 10in (aft). 3,215 bm. 4,780 or 5,200 disp.

Scan and/or retouch by Grzechu

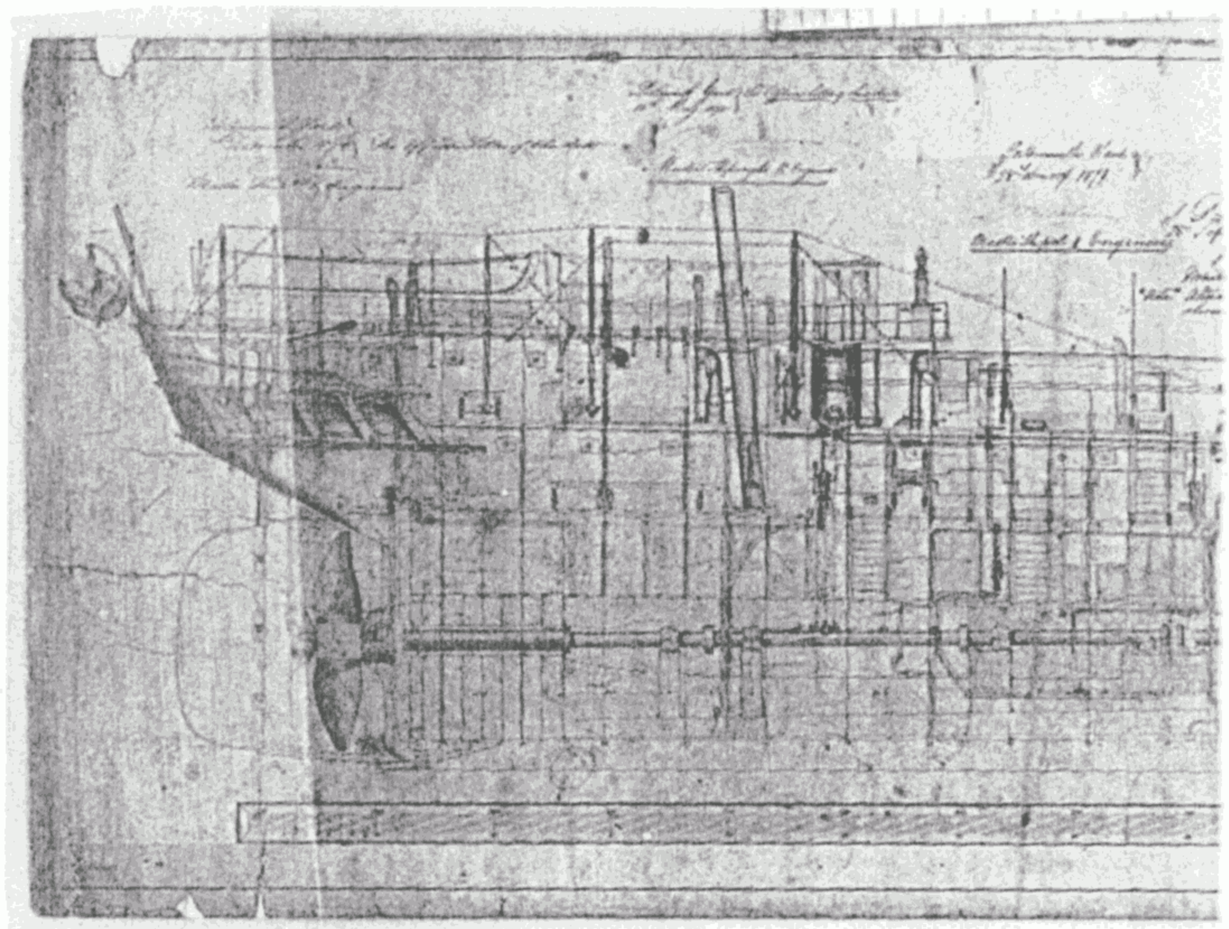
Men: 530. Guns: MD 14 x 7in/112pdr (6½-ton) MLR + 2 x 6.3in/64pdr (64cwt) MLR; UD 2 x 9in/254pdr (12-ton) MLR at bow and stern + 4 x 6.3in/64pdr (64cwt) MLR truck-mounted on broadsides. Machinery: 2-cyl. (100in diam., 54in stroke) horizontal single expansion. 9 boilers (30 lbs/sq.in). Single (hoisting) screw. 800 nhp. 5,639 ihp = 15.321kts. 540 tons coal = 2,100 miles @ 10kts. Under sail 13kts.

First cost: hull £147,248, machinery £46,138.

Raleigh Chatham Dyd/Humphrys, Tennant & Co.

K: 8.2.1871. L: 1.3.1873. C: 6.1874. Sold to Ward, Morecambe to BU 11.7.1905.

NOTES: Re-armed 1883 with 8 x 6in (90cwt) BL (4 on MD, 4 on UD) and 8 x 5in (38cwt) BL (on UD) replacing 8 x 7in MLR; 12 MGs, 4 light guns and 2 TCs also added.



ROVER - iron screw corvette, 18 guns. Designed by Edward Reed, 1872.

Dimensions & tons: 280ft 0in pp x 43ft 6in x 23ft 0in. Draught 17ft 6in (fwd) 22ft 7in (aft). 3,462 disp.

Men: 315. Guns: 2 x 7in/112pdr (4½-ton) MLR on slides at bow and stern, 16 x 6.3in/64pdr (63cwt) MLR on broadside trucks.

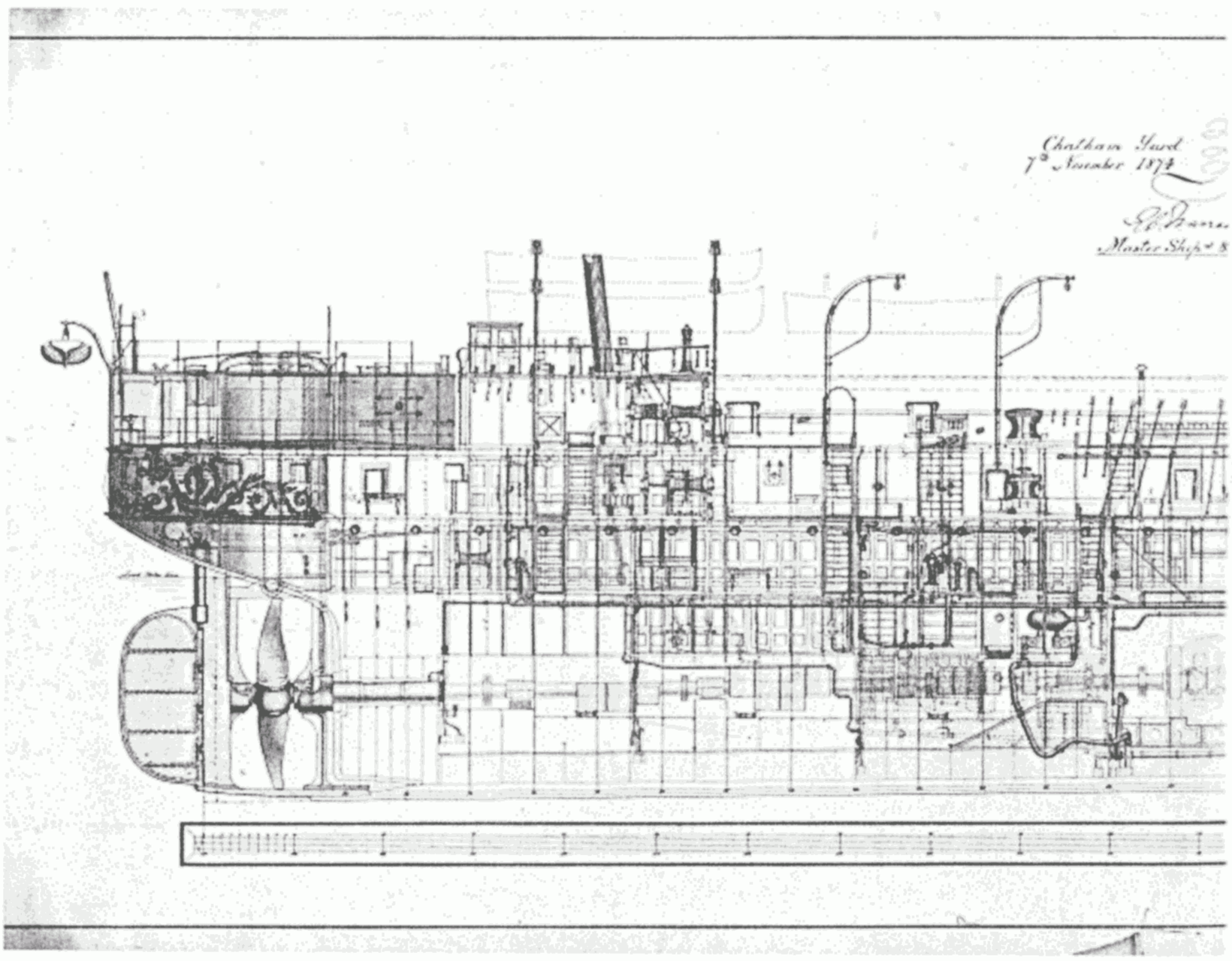
Machinery: 3-cyl. horizontal compound expansion. 10 cylindrical boilers. Single (hoisting) screw. 4,964 ihp = 14.5kts. 420 tons coal = 1,840 miles @ 10kts. Under sail 11kts.

First cost: hull £104,718, machinery £65,021.

Rover Thames Iron Sbdg Co., Blackwall (No.79F)/Ravenhill, Eastons & Co.

K: 1872. L: 12.8.1874. C: 21.9.1875. Sold 1893.

NOTES: Single layer of oak, with zinc sheathing. Her compound engines had one high pressure cylinder of 72in diam., 2 low pressure of 88in diam., 48in stroke; and used boiler pressure of 70 lbs/sq.in (*vice* 30 lbs/sq.in in vessels with single expansion. Re-armed 1879-80 (following first commission) with 14 x 6in/80pdr (81cwt) BLs - 12 on slide-mounted on broadsides, 1 bow and 1 stern chaser; 8 MGs, 1 light gun; also 2 x 14in TCs.



***BACCHANTE* Class** - iron screw corvettes, 14/16 guns. Designed by Nathaniel Barnaby, 1875.

Dimensions & tons: *Boadicea* 280ft 0in pp x 45ft 0in x 23ft 8in. Draught 20ft 5in (fwd) 22ft 8in (aft). 2,679 bm. 3,913 disp. *Bacchante* 280ft 0in pp x 45ft 6in x 23ft 9in. Draught 21ft 0in (fwd) 23ft 4in (aft). 2,690 bm. 4,070 disp. *Euryalus* 280ft 0in pp x 45ft 6in x 23ft 3in. Draught 21ft 6in (fwd) 23ft 6in (aft). 3,932 disp.

Men: 375 (later 420). Guns: MD 14 x 7in/112pdr (4½-ton) MLR, 2 x 6.3in/64pdr (64cwt) truck-mounted MLR (6.3in not fitted in *Bacchante*); UD 2 x 7in/112pdr (90cwt) MLR chase guns. Later *Bacchante* had 4 x 7in replaced by 4 x 6in/80pdr (81cwt) BL, while the other pair had 2 x 7in replaced by 2 x 6in BL; all 3 had 6 or 8 light guns, 8 MGs and 2 TCs added. Finally 12 x 6in BL + 4 x 5in BL in all.

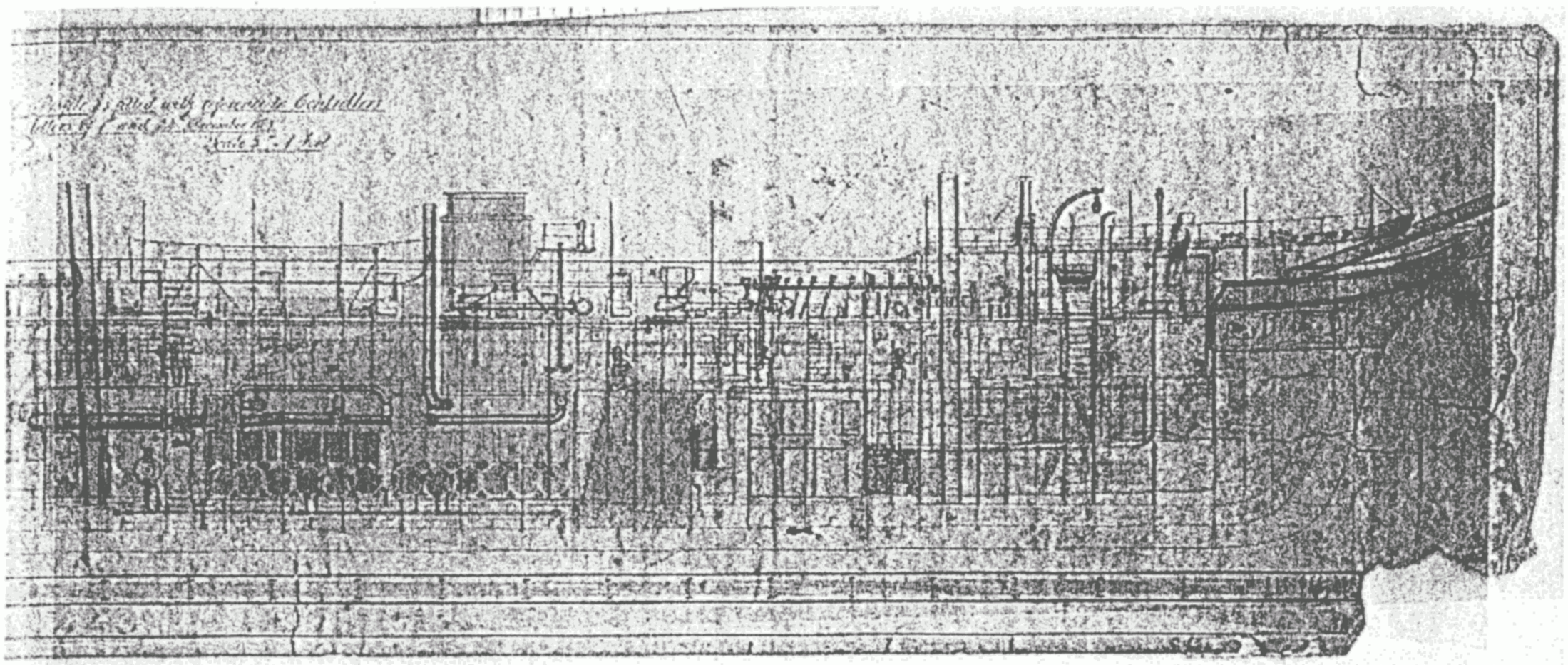
Machinery: 3-cyl. horizontal compound expansion, return connecting-rod. 10 cylindrical boilers. Single (hoisting, 21ft diam.) screw. 700 nhp. *Boadicea* 5,134 ihp = 14.815kts. *Bacchante* 5,416 ihp = 15.062kts. *Euryalus* 5,109 ihp = 14.715kts. 550-570 tons coal = 3,000 miles at 10kts. Under sail *Boadicea* 11kts, *Bacchante* 11.5kts, *Euryalus* 9.5kts.

First cost: *Boadicea* hull £153,167, machinery £70,409. *Bacchante* hull £152,454, machinery £76,954. *Euryalus* hull £132,254, machinery £76,959.

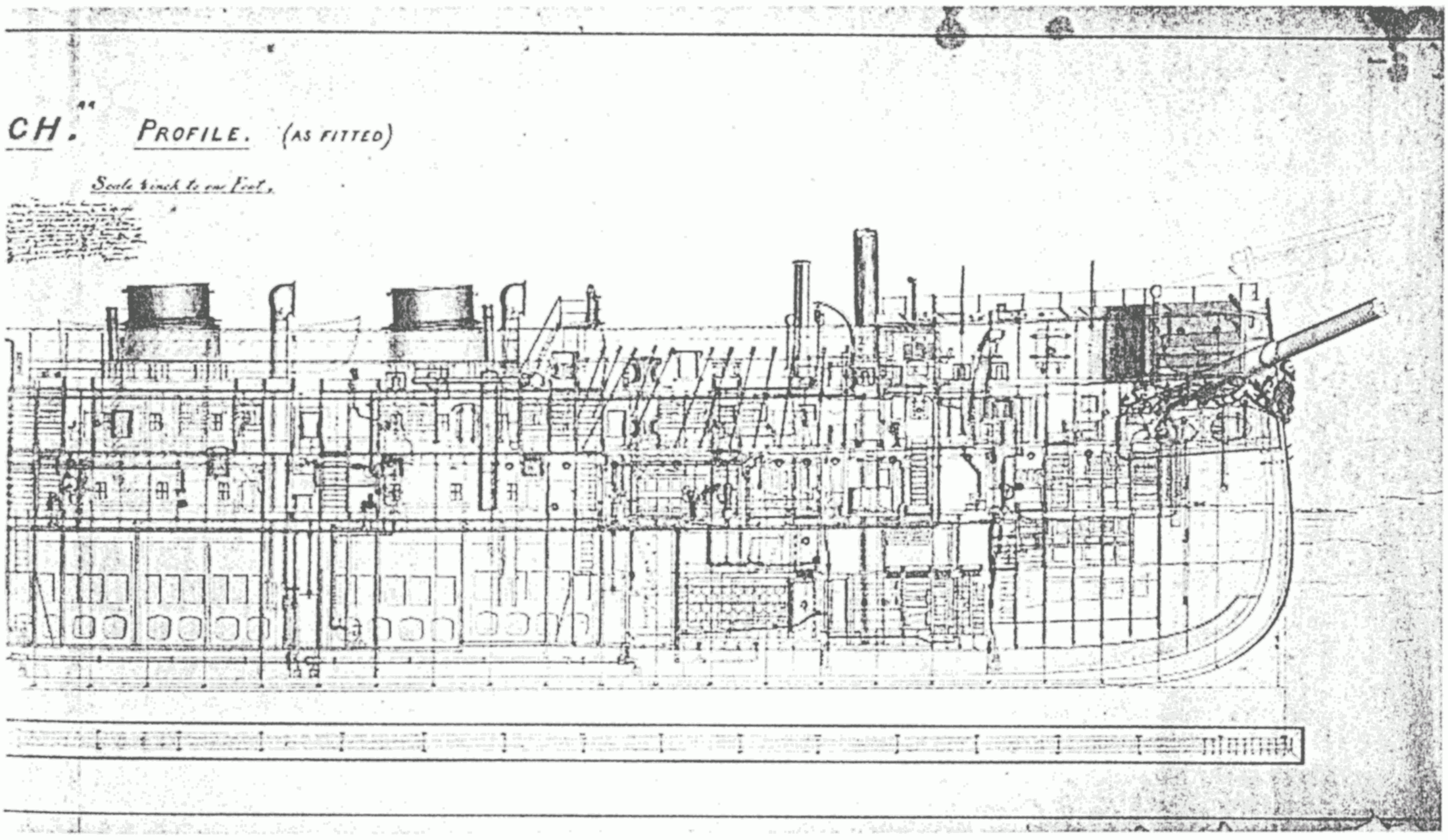
Boadicea Portsmouth Dyd/J. & G. Rennie.

Ord: 1872. K: 30.1.1873. L: 16.10.1875. C: 5.1877. Sold to Ward, Preston to BU 6.1.1905.

Scan and/or retouch by Grzechu



Profile of the inboard works for the iron corvette *Volage* 'as fitted, with reference to the Controller's letters of 1 & 24 December 1863'. A mass of endorsements cover later alterations. *DR2597*



Profile of the iron screw frigate *Raleigh*, as completed, Chatham 7 November 1874. The closely written note refers to 'Alterations discovered to have been made during Commission ending January '81' - mostly relating to changes in the accommodation, they were clearly unauthorised. Note that despite the straight stem the ship carried a figurehead, a bust of the Elizabethan adventurer whose name she bore. *DR6300*

Bacchante Portsmouth Dyd/J. & G. Rennie.
Ord: 1872. K: 15.3.1873. L: 19.10.1876. C: 7.1879. Sold to Cohen, Blackwall to BU 10.5.1897.

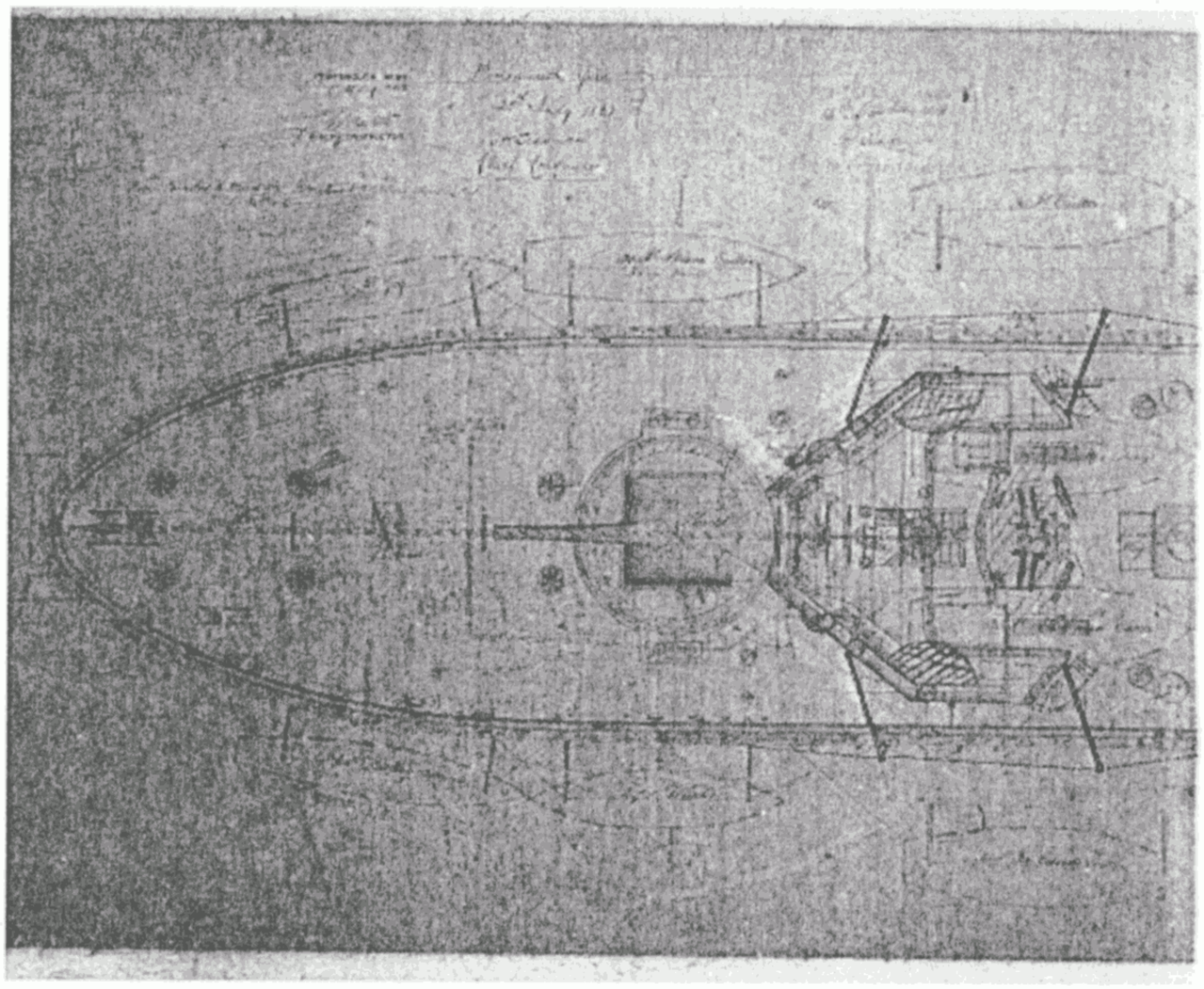
Euryalus Chatham Dyd/Kestons, Anderson & Co.
Ord: 1873. K: 11.1873. L: 31.1.1877. C: 6.1878. Sold to Cohen, Blackwall to BU 10.5.1897.

NOTES: The last ships to be built of iron for the RN, with teak planking. Correctly speaking, these ships formed a group rather than a single Class. *Boadicea*'s planking was double layer throughout, and she had a knee bow, with a figurehead and sloping bowsprit; the other pair had double layer planking to a few feet below the waterline, and then single down to the keel (hence their 6in wider beam), and each had a vertical straight bow with a running-in bowsprit. *Bacchante* was zinc-sheathed, the other pair copper-sheathed. Their compound engines (with one high-pressure cylinder of 73in diam. and 2 low pressure ones of 92 1/16in diam., with a 48in stroke, used boiler pressure of 70 lbs/sq.in (75 lbs in *Euryalus*). A fourth ship (*Highflyer*) was ordered 26.8.1878 from Portsmouth Dyd to this design, but in 1879 this order was rescinded in favour of the steel-hulled *Canada* and *Cordelia* (see Third Class cruisers).

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First Class (Armoured/Protected) Cruisers

The first large British cruisers, constructed during the Barnaby era (1870-86), were essentially second-class ironclads, and as such were considered a failure, although improvements in the later designs resulted in more effective vessels. The appointment of William White as chief constructor in 1886 saw the abandonment of the armoured belt and its replacement by vertical and horizontal protection throughout the ships, but on a lighter scale than in the fully armoured ships.



SHANNON - iron frigate/armoured cruiser. Designed by Nathaniel Barnaby, approved 27.5.1873.

Dimensions & tons: 260ft 0in pp x 54ft 0in x 22ft 3in. 5,455 disp.
Men: 452. Guns: 2 x 10in/407pdr (18-ton) MLR fwd, 7 x 9in/254pdr (12½-ton) MLR - 6 broadside and 1 aft, 6 x 20pdr BL.
Armour: Belt 6in-9in iron, 10in-13in teak backing; bulkheads 8in-9in, decks 1½in-3in conning tower 9in.
Machinery: 4-cyl. horizontal compound expansion (Woolf's Principle). 8 cylindrical boilers (70 lbs/sq.in). Single (hoisting) screw. 3,369 ihp = 12.348kts. 580 tons coal = 2,260 miles @ 10kts.
First cost: £302,707 (hull £233,902, machinery £53,367).

Shannon Pembroke Dyd/Laird Brothers.
Ord: 1873. K: 29.8.1873. L: 11.11.1875. C: 19.7.1877. Coastguard 1883. In reserve 1893. Sold to King, Garston to BU 15.12.1899.

NOTES: Entering service in 1878 (after modifications), she had a very brief service life (to 1883). Iron hull sheathed with zinc. The first ship to have a protected deck, she was initially rated a Second Class battleship. However, she was considered a failure, too slow to be a cruiser and too weak for the battlefleet. Initially ship-rigged, with 24,000 sq.ft sail area; later re-fitted as a barque of 21,500 sq.ft. Her compound engine had two high pressure cylinders of 44in diam. and two low pressure ones of 85in diam., with 48in stroke.

***NELSON* Class** - iron frigates/armoured cruisers. Designed by Nathaniel Barnaby, 1874.

Dimensions & tons: 280ft 0in pp x 60ft 0in x ... . Draught 23¾ft - 25¾ft. *Nelson* 7,473 and *Northampton* 7,630 disp.
Men: 560. Guns: 4 x 10in (18-ton) MLR at corners of box battery, 8 x 9in (12-ton) MLR on broadsides, 6 x 20pdr BL, 3 x 9pdr, 2 x 14in TT (above water).
Armour: Belt 6in-9in iron (with 10in-13in teak backing); bulkheads 6in-9in; decks 2in-3in; conning tower 9in.
Machinery: 2 sets of inverted compound expansion. 10 oval boilers. Twin screws. *Nelson* 6,624 ihp = 14kts. *Northampton* 6,073 ihp = 13kts. 1,150 tons coal = 3,850/5,000/7,000 miles @ 12/10.5/7.5kts.
First cost: *Nelson* £411,302 (hull £303,310, machinery £87,545). *Northampton* £414,441 (hull £296,836, machinery £98,968).

Nelson John Elder & Co., Govan (No.189)/John Elder & Co.
Ord: 1874. K: 2.11.1874. L: 4.11.1876. C: 26.7.1881. Guard ship at Portsmouth 1891. In reserve 1894. Hulked as stokers' training ship 1901. Sold to BU in Holland 12.7.1910.

Northampton Robert Napier & Sons, Govan (No.344)/John Penn & Son.
Ord: 1874. K: 26.10.1874. L: 18.11.1876. C: 26.7.1881. In reserve 1886. Hulked as boys' training ship 6.1894. Sold to Ward, Morecambe to BU 4.4.1905.

NOTES: Initially rated Second Class battleships. Iron hulls sheathed with zinc. *Nelson* had 2-cyl. engines (one high pressure of 60 3/16in diam., one low pressure of 104¼in diam.; 42in stroke), while *Northampton* had 3-cyl. engines (each cylinder being optional HP/LP, of 54in diam., 39in stroke). Both re-fitted during the 1880s and their full rig (of 24,766 sq.ft sail area) replaced by military masts.

***IMPERIEUSE* Class** - armoured cruisers. Designed by Nathaniel Barnaby, approved 14.12.1880.

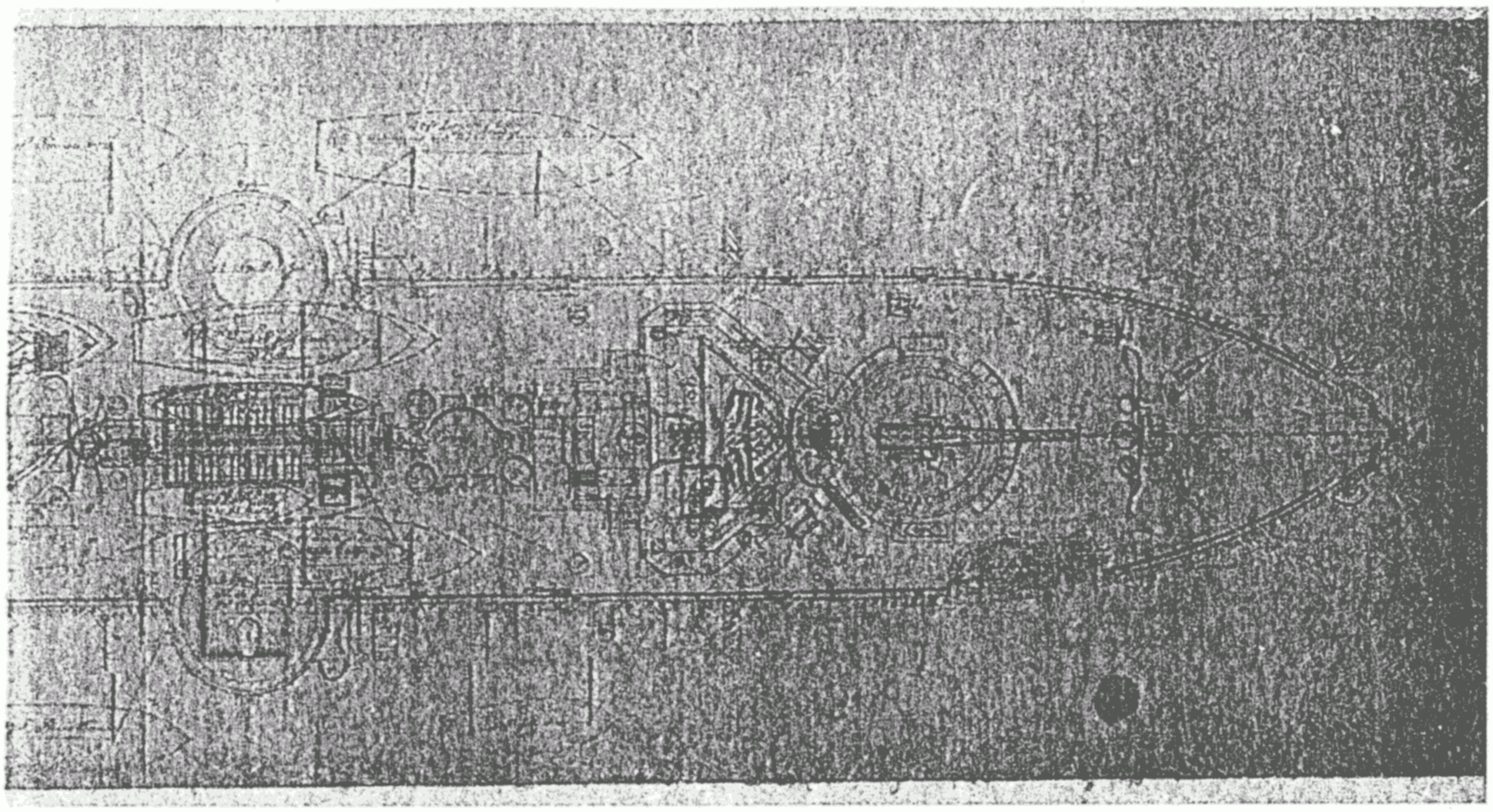
Dimensions & tons: ..., 315ft 0in pp x 62ft 0in x 26ft 9in. 27ft 4in draught. 8,500 (load) disp.
Men: 555. Guns: 4 x 9.2in (22-ton) BL in single mounts in barbettes - fore, aft and on each beam, 10 x 6in (89cwt) BL in broadside single mounts, 4 x 6pdr QF, 6 x 18in TT (above water broadside). In the 1890s the 6in BL guns were upgraded to QF.
Armour (compound): Belt 10in (with 10in teak backing); bulkheads 9in; barbettes 8in; gunshields 2in; ammunition tubes 3in; decks 2in-4in; conning tower 9in.
Machinery: 3-cyl. inverted compound expansion; 12 cylindrical and oval boilers. Twin screws. 8,000 ihp = 16kts (natural draught); 10,000 ihp = 16.75kts (forced draught). 1,130 tons coal = 7,000 miles @ 10kts.
First cost: *Imperieuse* hull £417,437, machinery £113,377. *Warspite* hull £415,546, machinery £113,786.

Imperieuse Portsmouth Dyd/Maudslay, Sons & Field.
Ord: 1881. K: 10.8.1881. L: (undocked) 18.12.1883. C: 9.1886. Hulked as destroyer depot ship at Portland 1905 and renamed *Sapphire II* in 2.1905. Reverted to *Imperieuse* in 6.1909. Sold to Ward, Morecambe to BU 24.9.1913.

Warspite Chatham Dyd/John Penn & Son.
Ord: 1881. K: 25.10.1881. L: (undocked) 29.1.1884. C: 6.1888. Sold to Ward, Preston 4.4.1905 to BU in late 1905.

NOTES: The last armoured vessels to be completed with a full rig, as brigs, which was swiftly removed (in *Warspite*, prior to completion) and replaced by military masts. Steel hulls sheathed with copper. In service, due to overweight, only 6 (*vice* 10) 6in guns were carried, although when the brig rig was removed 2 x 6in were reinstated in war service only; in fact, only 6 of these guns had been included in the initial design, which at 7,390 disp. was grossly exceeded when complete.

***ORLANDO* Class** - protected (belted) cruisers. Designed by Nathaniel Barnaby, 1884.



Armoured cruiser *Imperieuse*, plan of spar deck, Portsmouth 15 October 1886, showing the layout of armament, boats and topside fittings. *DR8882*

Dimensions & tons: 300ft 0in pp x 56ft 0in x 22ft 6in. 5,600 (load) disp.
Men: 484. Guns: 2 x 9.2in (18-ton) BL in single mounts, fore and aft, 10 x 6in (5-ton) BL in broadside single shielded mounts, 6 x 6pdr QF, 10 other QFs, 7 MGs and 3 light guns, 6 x 18in TT (2 submerged TT, 4 above water broadside TC). In 1895-97 the BL guns were upgraded to 9.2in 30 cal. and 6in QF.
Armour: Belt 10in; bulkheads 16in; decks 2in-3in; conning tower 12in.
Machinery: 3-cyl. triple expansion; 4 cylindrical boilers (double-ended). Twin screws. 5,500 ihp = 17kts (natural draught); 8,500 ihp = 18kts (forced draught). 900 tons coal = 8,000 miles.
First cost: *Australia* hull £195,390, machinery £63,000 (*Galatea* same). *Orlando* hull £206,647, machinery £60,165. *Undaunted* hull £195,890, machinery £60,165 (*Narcissus* same). *Immortalite* hull £221,500, machinery (est.) £57,000. *Aurora* hull £195,390, machinery £63,000.

Australia Robert Napier & Sons, Govan (No.397)/Robert Napier & Sons.
Ord: 1885. K: 21.4.1885. L: 25.11.1886. C: 11.12.1888. Sold to King, Troon to BU 4.4.1905.

Galatea Robert Napier & Sons, Govan (No.398)/Robert Napier & Sons.
Ord: 1885. K: 21.4.1885. L: 10.3.1887. C: 3.1889. Sold to BU 4.4.1905.

Orlando Palmer Sbdg & Iron Co., Jarrow (No.567)/Palmers.
Ord: 1885. K: 23.4.1885. L: 3.8.1886. C: 6.1888. Sold to Ward, Morecambe to BU 11.7.1905.

Undaunted Palmer Sbdg & Iron Co., Jarrow (No.568)/Palmers.
Ord: 1885. K: 23.4.1885. L: 25.11.1886. C: 7.1889. Sold to Harris, Bristol to BU 9.4.1907.

Narcissus Earle's Sbdg, Hull/Earle.
Ord: 1885. K: 27.4.1885. L: 15.12.1886. C: 7.1889. Sold to BU 11.9.1906.

Immortalite Chatham Dyd/Earle.
Ord: 1885. K: 18.1.1886. L: 7.6.1887. C: 7.1889. Sold to Shipbreaking Co., Blackwall 11.1.1907.

Aurora Pembroke Dyd/J. & G. Thomson.
Ord: 1886. K: 1.2.1886. L: 28.10.1887. C: 7.1889. Sold to Payton, Milford Haven to BU 2.10.1907.

NOTES: First five ordered under the Northbrook Programme of 1884, with the last pair in 1885-86 Estimates. Unlike the preceding armoured cruisers (which were, in essence, Second Class battleships), these were true cruisers designed for world-wide trade protection, being enlarged versions of the protected cruiser *Mersey*, but with side armour substituted for the protective deck. Nevertheless, the changes from the original 5,040-ton design resulted in the armour belt being submerged when the ship was fully loaded, rendering it pointless. Following this class, the Admiralty therefore abandoned armoured side protection for cruisers for 13 years, concentrating on a full-length armoured deck.

***BLAKE* Class** - First Class protected cruisers. Designed by William White, 1888.

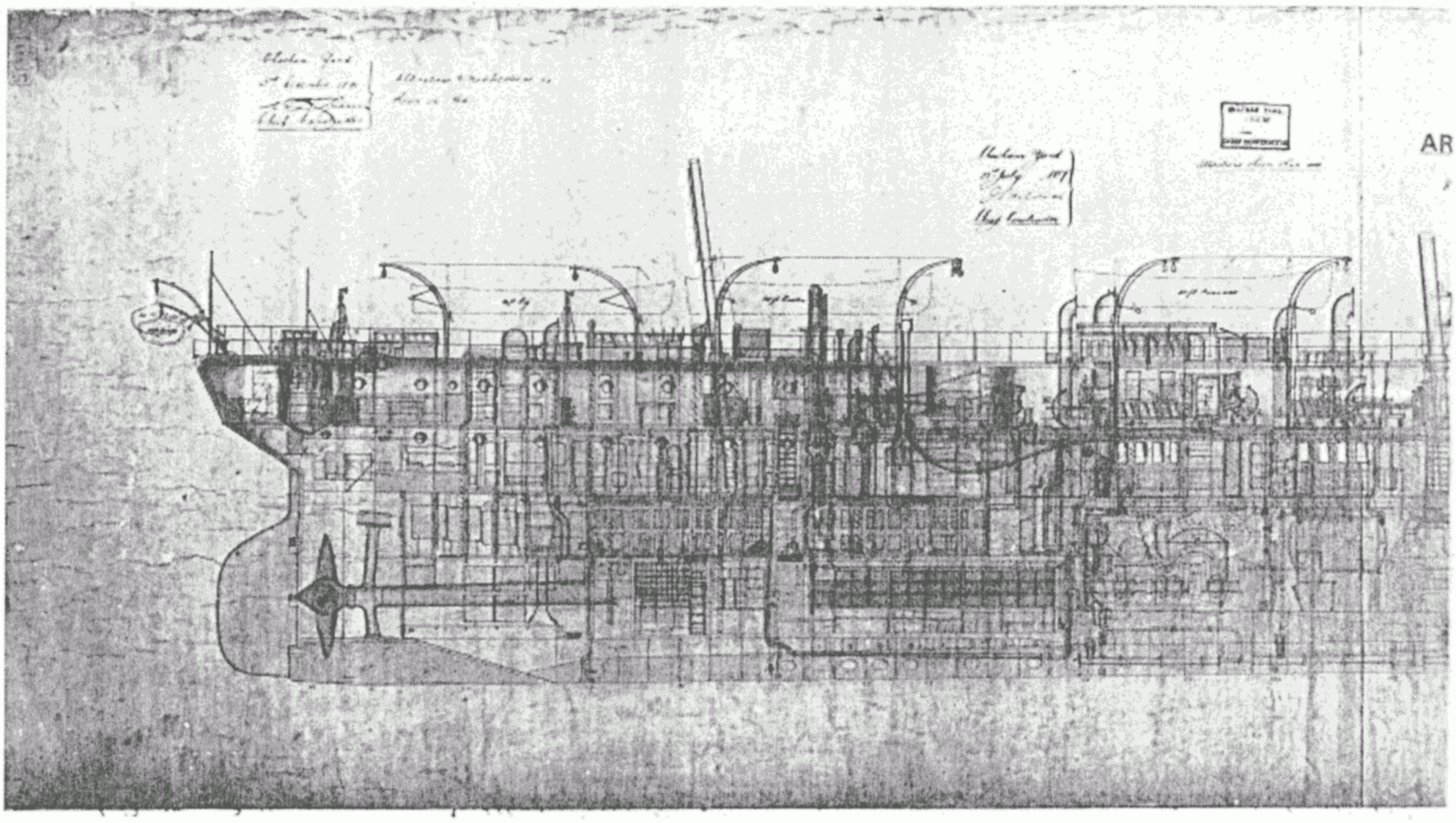
Dimensions & tons: 399ft 9in oa, 375ft wl x 65ft 0in x 24ft 0in. 9,150 load disp.
Men: 570. Guns: 2 x 9.2in (22-ton) BL in single mounts, fore and aft, 10 x 6in QF in broadside single mounts, 16 x 3pdr QF, 2 x 9pdr (boat guns), 7 MGs, 4 x 14in TT (2 submerged, 2 above water broadside).
Armour: Deck 3in-6in; gunshields (on 9.2in guns) 4½in; casemates 6in; conning tower 12in.
Machinery: 4 sets of 3-cyl. inverted triple expansion (coupled); 6 cylindrical boilers (double-ended). Twin screws. 13,000 ihp = 18.5kts achieved as opposed to 20kts designed (natural draught); 20,000 ihp = 22kts (forced draught). 1,500 (normal) - 1,800 (maximum) tons coal. 10,000 miles achieved radius (*vice* 15,000 designed) @ 10kts.

Blake Chatham Dyd/Maudslay, Sons & Field.
Ord: 1888. K: 7.1888. L: 23.11.1889. C: 2.2.1892. Hulked as destroyer depot ship 8.1907. Sold to Rees, Llanelli to BU 9.6.1922.

Blenheim Thames Iron Works, Blackwall (No.80H)/Humphrys, Tennant & Co.
Ord: 1888. K: 25.11.1888. L: 5.7.1890. C: 26.5.1894. Hulked as destroyer depot ship 5.1906. Sold to Ward, Pembroke Dock to BU 13.7.1926.

NOTES: Ordered under the 1887-88 Programme. Carried the same armament as the *Orlando* Class, and were of similar appearance, but abandoned the waterline belt to increase speed and radius - thus meeting the need for long-range cruisers for trade protection duties. Prototype of First Class cruiser design for the next decade. Two engines were fitted in

tandem to each propeller shaft. On trials they made greater power than hoped but no better speeds [*Blake* 14,525 ihp = 19.4kts natural draught (8 hrs); 19,579 ihp = 21.5kts forced draught (4 hrs). *Blenheim* 14,925 ihp = 20.4kts natural draught; 21,411 ihp = 21.8kts forced draught]. In service they never reached their designed 22kts, but were able to exceed and maintain 20kts for long periods.



Under the 1889 Naval Defence Act (and thus beyond the coverage of this book) were nine First Class protected cruisers. These comprised:

	Builder/Engines	*Begun*	*Launched*	*Completed*
<u>*Edgar* Class</u>				
Edgar	Devonport Dyd/ Fairfield	3.6.1889	24.11.1890	2.3.1891
Hawke	Chatham Dyd/ Fairfield	17.6.1889	11.3.1891	16.5.1893
Endymion	Earle, Hull/Earle	21.11.1889	22.7.1891	26.5.1894
Gibraltar	Napier, Glasgow/ Napier	2.12.1889	27.4.1892	1.11.1894
Grafton	Thames Iron Works/ Humphrys	1.1.1890	30.1.1892	18.10.1894
St. George	Earle, Hull/ Maudslay	23.4.1890	23.6.1892	25.10.1894
Theseus	Thames Iron Works/ Maudslay	16.7.1890	8.9.1892	14.1.1896
<u>*Crescent* Class</u>				
Royal Arthur	Portsmouth Dyd/ Maudslay	20.1.1890	26.2.1891	2.3.1893
Crescent	Portsmouth Dyd/ Penn	13.10.1890	30.3.1892	22.2.1894

All were diminutive versions of the *Blake* Class. The *Gibraltar*, *St. George*, *Royal Arthur* and *Crescent* were sheathed in wood and copper for tropical service, and at 7,700 load disp weighed 350 tons more than the other five ships. The last pair differed only in design by the addition of a forecastle and the substitution of 2 x 6in QF guns for the fwd 9.2in gun on the *Edgar* Class.

Second Class Cruisers

The RN's first all-steel cruisers in 1875 were designed for scouting and despatch duties, as well as for the protection or destruction of trade. The cruisers which followed them, all in the range 3,000 to 5,000 tons, had just a protective deck with sloping sides to inhibit shell penetration.

***IRIS* Class** - despatch vessels (later Second Class protected cruisers). William White design, 1875.

Dimensions & tons: 331ft 6in (*Mercury* 315ft) oa, 300ft pp x 46ft 0in x 22ft. Draught 15ft 8in (fwd), 20ft 6in (aft). 3,290 (light) 3,730 load disp.

Men: 275. Guns: (as built) 10 x 64pdr MLR (8 in MD sponsons; 2 on UD pivots, fwd and aft); c1880 *Iris* had MD guns replaced by 4 x 6in BL & 4 x 5in BL; in 1886-87 both re-armed with 13 x 5in (40cwt) BL, 4 x 3pdr QF, 7 MGs, 1 light gun and 4 TC.

Armour: None.

Machinery: 2 sets of 4-cyl. horizontal direct-acting compound expansion (Woolf's principle). 8 oval and 4 cylindrical boilers (65 lbs/sq.in). Twin screws. 6,000 ihp = 17.5kts. 780 tons coal = 2,000/4,400 (*Iris*) 4,950 (*Mercury*) miles @ 17/10kts.

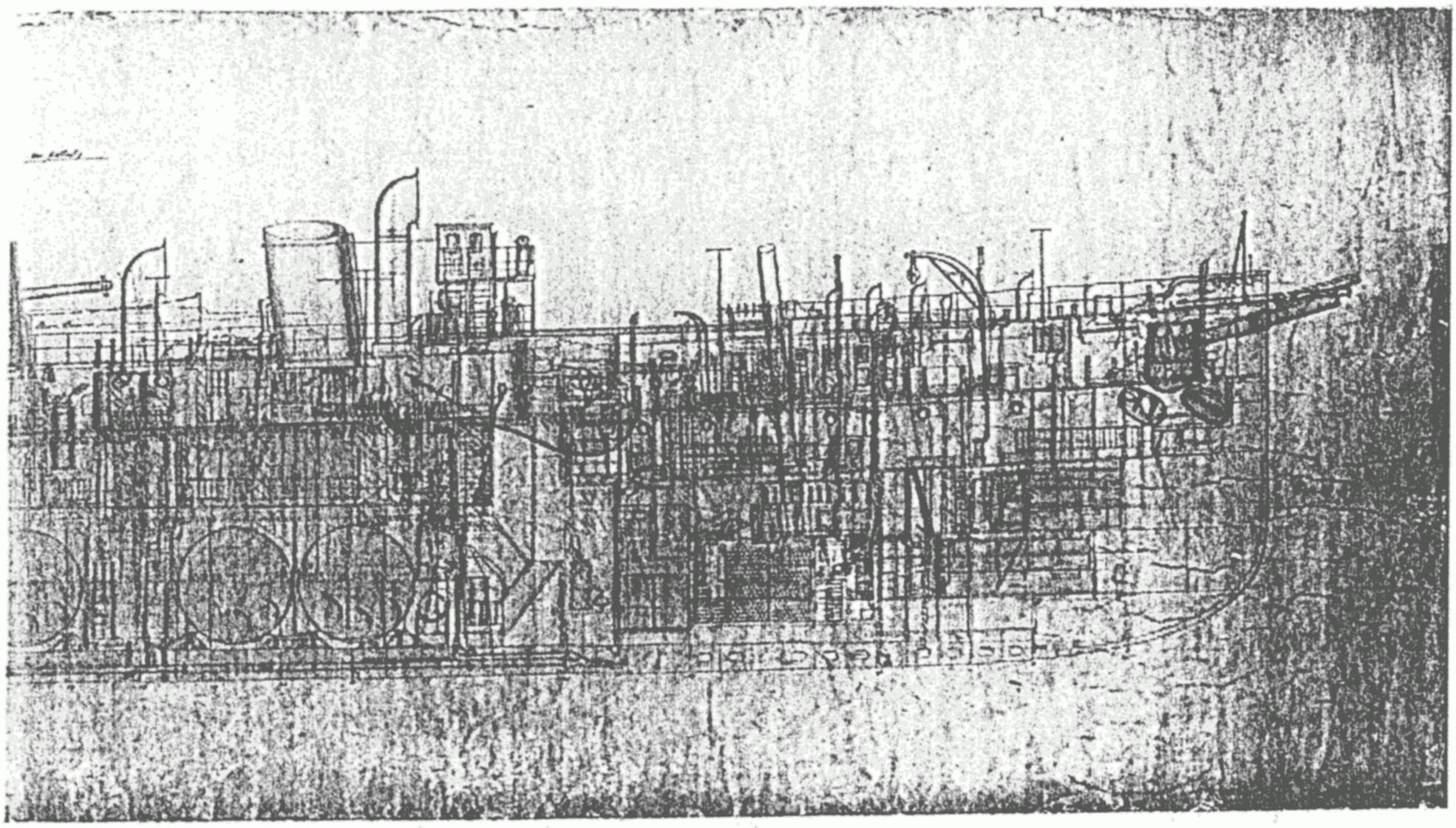
First cost: *Iris* hull £110,868, machinery £102,318. *Mercury* hull £119,452, machinery £93,800.

Iris Pembroke Dyd/Maudslay, Sons & Field. (7,556 ihp = 18.587kts.)
Ord: ... . K: 11.10.1875. L: 12.4.1877. C: 4.1879. Sold 11.7.1905.

Mercury Pembroke Dyd/Maudslay, Sons & Field. (7,534 ihp = 18.876kts.)
Ord: ... . K: 16.3.1876. L: 17.4.1878. C: 9.1879. Submarine depot ship 1905. Intended renaming as *Columbine* in 1912 was rescinded. Became a hulk at Chatham in 1914. Sold to Forth Shipbreaking Co., Bo'ness 9.7.1919.

NOTES: The first major warships built of steel for the Royal Navy, and the prototype for all cruisers built for the Navy over the next 70 years. *Iris* was designed with exceptionally fine lines, and with much of the hull taken up by machinery. *Mercury* was modified from the original, clipper-bowed, design, by having a straight stem. The engines, which had to be placed in tandem and drove shafts of unequal length, each had 2 high pressure cylinders of 41in diam. and 2 low pressure ones of 75in diam., 36in stroke. Originally given a barque rig which was soon removed. Both reclassed as Second Class cruisers in the late 1880s.

***LEANDER* Class** - despatch vessels (rerated Second Class protected cruisers while building). Nathaniel Barnaby design, 1880.



Profile as fitted for the cruiser/ dispatch vessel *Arethusa*, Chatham 23 July 1887, with alterations to 3 December 1891. *DR7966*

Dimensions & tons: 315ft oa, 300ft pp x 46ft x 20ft 6in. 4,300 (load) disp.
Men: 278. Guns: 10 x 6in (5-ton except *Arethusa* 89cwt) BL, 14 MGs, 2 light guns, 4 TCs.
Armour: Deck 1½in; gunshields 1½in.
Machinery: 2-cyl. horizontal direct-acting compound expansion. 12 cylindrical boilers. Twin screws. 5,500 ihp = 16.5kts. 1,016 tons coal = 11,000 miles @ 10kts.
First cost: *Leander* (est.) hull £87,843, machinery £60,610. *Arethusa* hull £86,763, machinery £58,435 (*Phaeton* same). *Amphion* hull £95,000, machinery £65,500.

Leander Robert Napier & Sons, Govan (No.378)/Robert Napier & Sons.
Ord: 1880. K: 14.6.1880. L: 28.10.1882. C: 29.5.1885. Depot ship 1904. Sold to S. Castle, Plymouth to BU 1.7.1920.

Arethusa Robert Napier & Sons, Govan (No.379)/Robert Napier & Sons.
Ord: 1880. K: 14.6.1880. L: 23.12.1882. C: 29.9.1887. Sold to G. Garnham to BU 4.4.1905.

Phaeton Robert Napier & Sons, Govan (No.380)/Robert Napier & Sons.
Ord: 1880. K: 14.6.1880. L: 27.2.1883. C: 20.4.1886. Training ship at Devonport 1909. Sold to Bibby Line to become the training ship *Indefatigable* in 1913 (renamed 1.1.1914). Repurchased by RN to become training ship *Carrick II* in 1941. Sold to Ward, Preston to BU arriving 20.1.1947.

Amphion Pembroke Dyd/Maudslay, Sons & Field.
Ord: 1881. K: 25.4.1881. L: 13.10.1883. C: 8.1886. Sold to King, Garston to BU 15.5.1906.

NOTES: Partial protective deck and improved machinery and armament marked the development of the design of this class over that of *Mercury*. Poor sea-boats, they originally carried a light barquentine rig (removed in late 1890s).

***MERSEY* Class** - Second Class protected cruisers. Nathaniel Barnaby design, 1883.
Dimensions & tons: 315ft 0in oa, 300ft 0in pp x 46ft 0in x 19ft 6in. 4,050 load disp.
Men: 325. Guns: 2 x 8in (15-ton) BL, 10 x 6in BL, 3 x 6pdr QF, 3 x 3pdr QF, 9 MGs, 2 TT and 2 TC.
Armour: Deck 2in-3in; gunshields 2in; conning tower 9in.
Machinery: 2-cyl horizontal direct-acting compound expansion. 12 cylindrical boilers. Twin screws. 4,500 ihp = 17kts (forced draught); 6,000 ihp = 18kts (forced draught). 900 tons coal = 8,750 miles @ 10kts.
First cost: *Mersey* (est.) hull £100,000, machinery £54,000; *Severn* hull £151,681, machinery £60,940. *Thames* hull £151,952, machinery £53,500. *Forth* hull £151,952, machinery £50,000.

Mersey Chatham Dyd/Humphrys, Tennant & Co.
Ord: ... . K: 9.7.1883. L: 31.3.1885. C: 6.1887. Sold to Isaacs 4.4.1905.

Severn Chatham Dyd/Humphrys, Tennant & Co.
Ord: ... . K: 1.1.1884. L: 29.9.1885. C: 2.1888. Sold to G. Garnham 4.4.1905.

Thames Pembroke Dyd/John Penn & Sons.
Ord: ... . K: 14.4.1884. L: 3.12.1885. C: 7.1888. Depot ship 1903. Sold to become the South African training ship *General Botha* at the Cape 13.11.1920. Became *Thames* again as accommodation ship 1942. Out of service 1945. Scuttled in Simons Bay 13.5.1947.

Forth Pembroke Dyd/R. & W. Hawthorn.
Ord: 1884. K: 1.12.1884. L: 23.10.1886. C: 7.1889. Depot ship 1903. Intended renaming as *Howard* in 12.1920 was rescinded. Sold to Slough TC on 8.11.1921, and BU in Germany.

NOTES: Developed from the *Leander* design with increased protection and speed, and adding two 8in guns, one each on the forecastle and poop. Complete protective deck - the first British cruisers to be built without any sailing rig at all. Unusual in being single-funnelled.

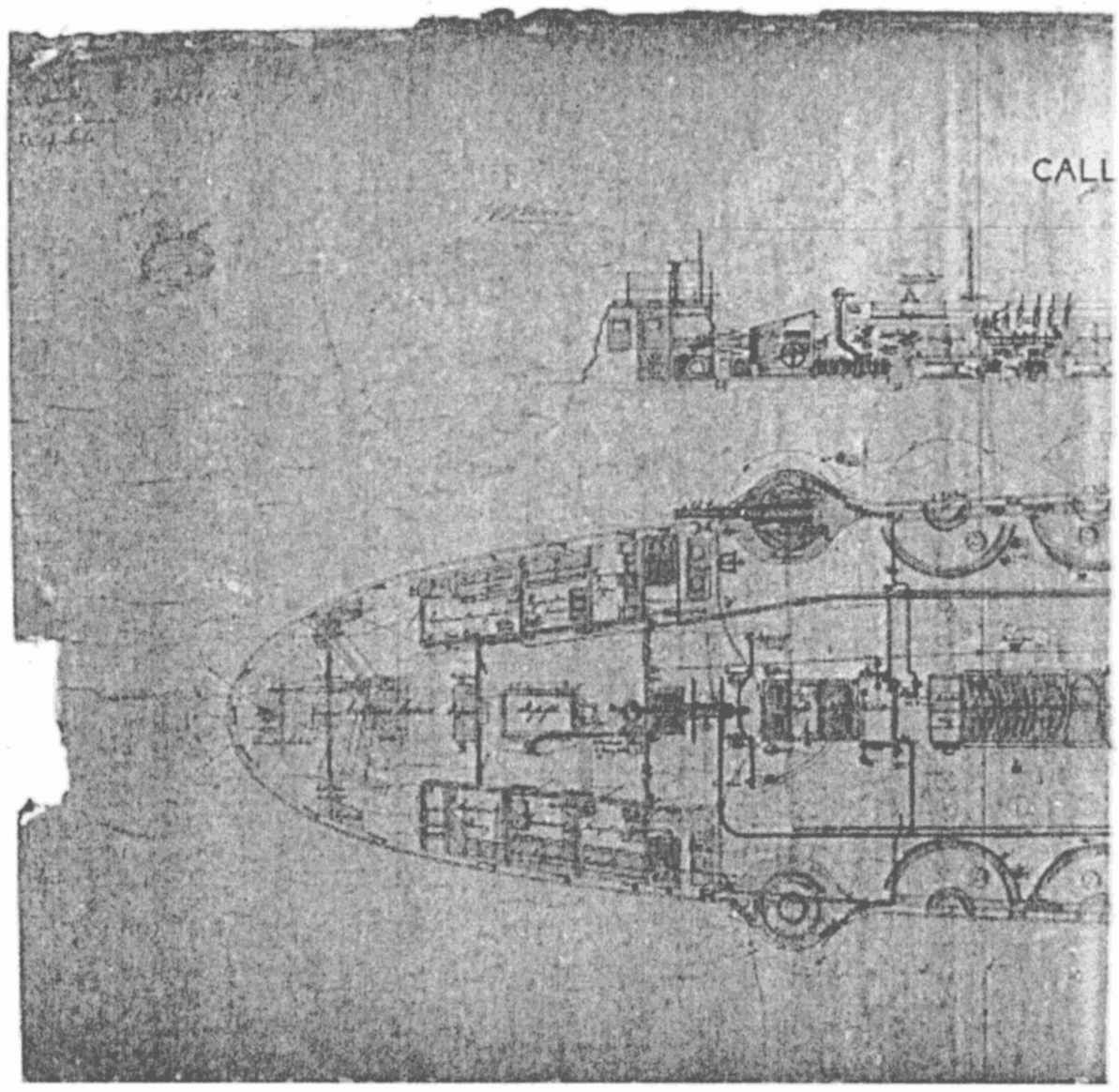
The following *Medea* Class, while ordered in 1887 as Second Class protected cruisers, were rerated as Third Class cruisers 1887-88 while building; the next or *Pearl* Class were likewise ordered in 1888 as Second Class but were similarly rerated as Third Class in 1890. Both classes are included thereunder.

Under the 1889 Naval Defence Act (and thus beyond the coverage of this book) were 29 Second Class protected cruisers, of which the first pair was

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ordered from Chatham Dyd as 'Modified *Medea* Class' early in 1889. These comprised:

	Builder/Engines	*Begun*	*Launched*	*Completed*
<u>*Apollo* Class</u>				
Andromache	Chatham Dyd/...	29.4.1889	14.8.1890	12.1891
Apollo	Chatham Dyd/...	27.5.1889	10.2.1891	4.1892
Latona	N.C.& A. (Vickers)/ N.C.& A.	22.8.1889	22.5.1890	4.1891
Melampus	N.C.& A. (Vickers)/ N.C.& A.	30.8.1889	2.8.1890	12.1891
Naiad	N.C.& A. (Vickers)/ N.C.& A.	3.10.1889	29.11.1890	1.1892
Sappho	Samuda Brothers, Poplar/...	29.10.1889	9.5.1891	2.1893
Scylla	Samuda Brothers, Poplar/...	29.10.1889	17.10.1891	4.1893
Sybille	Robt. Stephenson, Hebburn/...	11.10.1889	27.12.1890	5.1894
Terpsichore	J. & G. Thomson/ Thomson	27.8.1889	30.10.1890	4.1892
Thetis	J. & G. Thomson/ Thomson	29.10.1889	13.12.1890	4.1892
Tribune	J. & G. Thomson/ Thomson	11.12.1889	24.2.1891	5.1892
<u>*Sirius* Class</u>				
Aeolus	Devonport Dyd/ Hawthorn	10.3.1890	13.11.1891	6.1.1894
Brilliant	Sheerness Dyd/...	24.3.1890	24.6.1891	4.1893
Indefatigable	London & Glasgow/ L & G	6.9.1889	12.3.1891	4.1892
Intrepid	London & Glasgow/ L & G	6.9.1889	20.6.1891	11.1892
Iphigenia	London & Glasgow/ L & G	17.3.1890	19.11.1891	5.1893
Pique	Palmer, Jarrow/ Palmers	30.10.1889	13.12.1890	3.1893
Rainbow	Palmer, Jarrow/ Palmers	30.12.1889	25.3.1891	1.1893
Retribution	Palmer, Jarrow/ Palmers	31.1.1890	6.8.1891	5.1893
Sirius	Armstrong, Elswick/ Maudslay	7.10.1889	27.10.1890	4.1892
Spartan	Armstrong, Elswick/ Maudslay	16.12.1889	25.2.1891	7.1892
<u>*Astraea* Class</u>				
Astraea	Devonport Dyd/ Devonport	14.8.1890	17.3.1893	5.11.1895
Bonaventure	Devonport Dyd/ Devonport	9.12.1890	2.12.1892	5.7.1894
Cambrian	Pembroke Dyd/ Hawthorn	1.4.1891	30.1.1893	9.1894
Forte	Chatham Dyd/ Chatham	21.9.1891	9.12.1893	1.1895
Charybdis	Sheerness Dyd/Earle	28.9.1891	15.6.1893	14.1.1896
Hermione	Devonport Dyd/ Thompson	17.12.1891	7.11.1893	14.1.1896
Fox	Portsmouth Dyd/ Portsmouth	11.1.1892	15.6.1893	14.4.1896
Flora	Pembroke Dyd/ Vickers	1.3.1892	21.11.1893	3.1895



The *Sirius* Class were simply a sheathed version of the 3,400 disp. *Apollo* Class, with a consequent 200 tons extra weight. The *Astraea* Class, however, were an improved design, with 960 tons greater disp than the *Apollos*.

Third Class Cruisers

With a displacement generally under 3,000 tons, Third Class cruisers were perceived mainly as fleet scouts, but lack of speed restricted this role in practice, and the type actually made its major contribution in commerce protection across the globe. With limited bunkerage carried, a full rig remained an essential feature of these ships.

***COMUS* Class** - steel corvettes (later Third Class cruisers). Nathaniel Barnaby design, 1876.

Dimensions & tons: 225ft 0in pp x 44ft 6in x 19ft 3in. 2,380 disp. (*Constance* 2,590.)

Men: 265. Guns: 2 x 7in MLR, 12 x 64pdr MLR - except *Comus* 4 x 6in/80pdr (81cwt) BL, 8 x 64pdr MLR, 2 light guns, 8 MGs, 2 TC; and last pair 10 x 6in/100pdr (81cwt) BL, 2 light guns, 6-10 MGs, 2 TC.

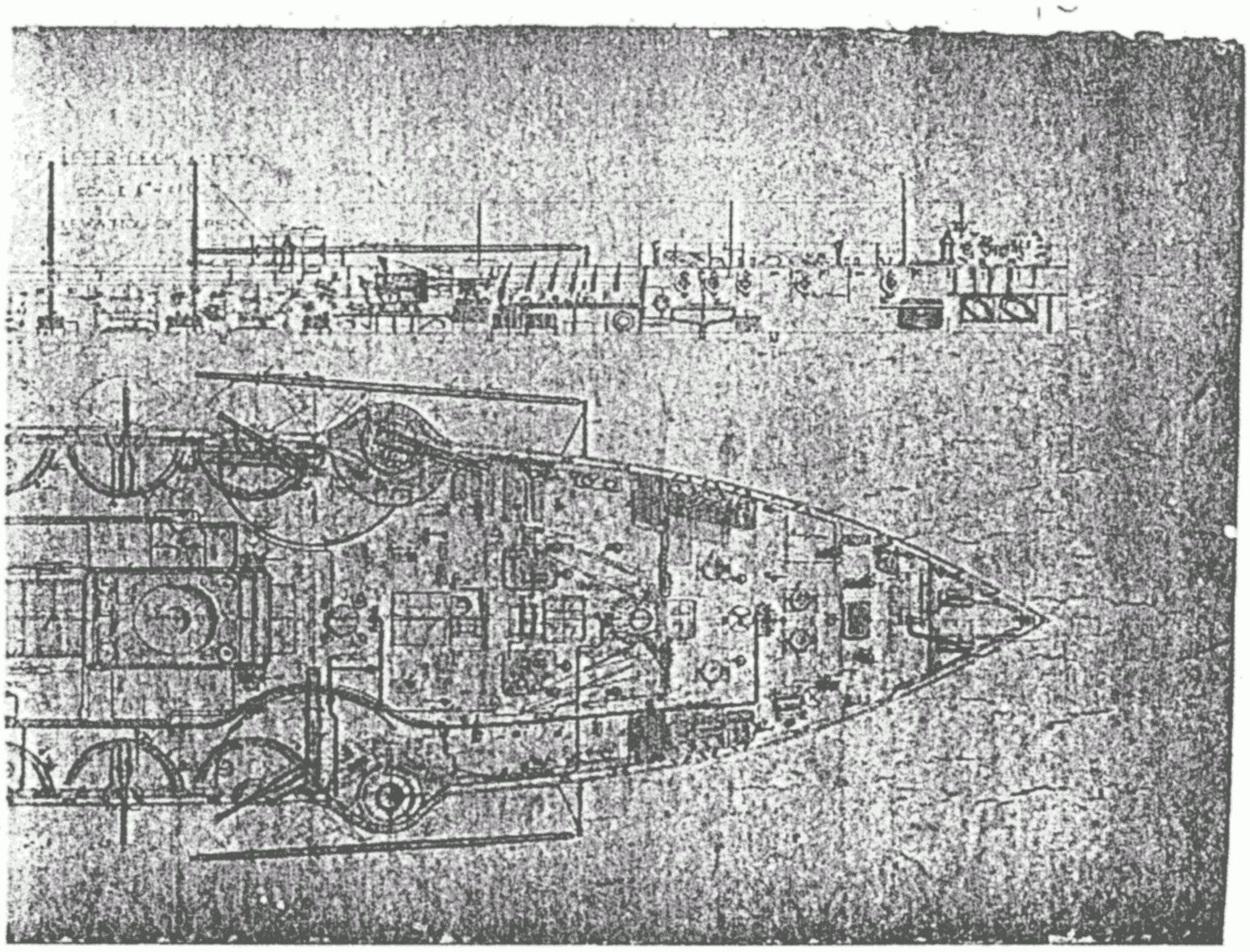
Armour: Deck ½in.

Machinery: 3-cyl. horizontal compound (4-cyl. in last 3). 6 boilers (60 lbs/sq.in). Single screw. ihp/speed as below. 470 tons coal = 3,280 miles @ 10kts (except *Comus* 3,800 miles, *Champion* and *Carysfort* 3,840 miles).

First cost: *Comus* hull £84,477, machinery £29,477. *Curacao* hull £85,833, machinery £27,098. *Champion* hull £84,288, machinery £29,695. *Cleopatra* hull £86,126, machinery £27,798. *Carysfort* hull £84,512, machinery £29,942. *Conquest* hull £83,707, machinery £27,205. *Constance* (est) hull £78,000, machinery £32,000. *Canada* (est) hull £78,000, machinery £26,500 (*Cordelia* same).

Comus John Elder & Co., Govan (No.206)/J. Elder & Co. (2,447 ihp = 12.93kts.)

Scan and/or retouch by Grzechu



Plan of upper deck, and elevation of topside, for the steel corvette *Calliope*, Portsmouth Yard, but undated - an unusually detailed drawing even by the elevated standards of the time. *DR7438*

Ord: ... . K: 17.8.1876: L: 3.4.1878. C: 23.10.1879. Sold 17.5.1904.

Curacoa John Elder & Co., Govan (No.210)/Humphrys, Tennant & Co. (2,540 ihp = 13kts.)

Ord: ... . K: 17.8.1876. L: 18.4.1878. C: 24.2.1880. Sold to King, Garston 17.5.1904.

Champion John Elder & Co., Govan (No.207)/J. Elder & Co. (2,310 ihp = 13kts.)

Ord: ... . K: 17.8.1876. L: 1.7.1878. C: 7.12.1880. Harbour service 1904. Renamed *Champion* (Old) in 1915. Sold to Hughes Bolckow, Blyth 23.6.1919.

Cleopatra John Elder & Co, Govan (No.209)/Humphrys, Tennant & Co. (2,610 ihp = 13kts.)

Ord: ... . K: 17.8.1876. L: 1.8.1878. C: 24.8.1880. Harbour service 1905. Renamed *Defiance III* in 1.1922. Sold to S. Castle, Millbay to BU 7.1931.

Carysfort John Elder & Co., Govan (No.208)/J. Elder & Co. (2,403 ihp = 12.96kts.)

Ord: ... . K: 17.8.1876. L: 26.9.1878. C: 15.9.1880. Sold to King, Garston 15.12.1899.

Conquest John Elder & Co., Govan (No.211)/Humphrys, Tennant & Co. (2,670 ihp = 13kts.)

Ord: ... . K: 17.8.1876. L: 28.10.1878. C: 18.4.1885. Sold to King, Garston 16.3.1899.

Constance Chatham Dyd/John Penn & Son (2,590 ihp = 13.72kts.)

Ord: ... . K: 14.9.1878. L: 9.6.1880. C: 3.10.1882. Sold to King, Garston 15.12.1899.

Canada Portsmouth Dyd/J. & G. Rennie (2,430 ihp = 13kts.)

Ord: ... . K: 7.7.1879. L: 26.8.1881. C: 1.5.1883. Sold to G. Cohen, Blackwall to BU 10.5.1897.

Cordelia Portsmouth Dyd/J. & G. Rennie (2,420 ihp = 13kts.)

Ord: ... . K: 17.7.1879. L: 25.10.1881. C: 25.1.1887. Sold 5.7.1904.

NOTES: The first six (built by Elders) were completed with a ship rig, the last three (dockyard-built) with a barque rig. The Elder-built ships had 3-cylinder engines (a high pressure one of 46in diam., and 2 low pressure ones of 64in diam.; 33in stroke); the dockyard-built ships had 4-cylinder engines (2 high pressure of 36in diam., and 2 low pressure of 64in diam., 30in stroke). All had hoisting screws except *Carysfort* and *Constance* which had feathering screws.

Comus's Mk II 6in BL guns proved unsatisfactory, and the following ships received a MLR armament; all MLR guns were slide-mounted in these ships. All except *Carysfort* and *Constance* later re-armed with 6in BL guns of Mk III or IV. Steel hulls clad with two layers of teak, bottoms sheathed with copper. Habitability was vastly improved; these vessels had greatly improved below-decks ventilation and introduced a sick bay, bathroom for ratings and even a ship's library. Building of *Conquest* was delayed in 3.1882 and *Cordelia* in 3.1884; both completed several years later.

***CALYPSO* Class** - steel corvettes (later Third Class cruisers). Nathaniel Barnaby design, 1881. The last fully-rigged corvettes built for the Navy (barque rig).

Dimensions & tons: 235ft 0in pp x 44ft 6in x 19ft 11in. 2,770 disp.

Men: 293 (later 317). Guns: 4 x 6in (5-ton) BL, 12 x 5in (38cwt) BL, 2 light guns, 10 MGs, 2 TC.

Armour: Deck ½in.

Machinery: 4-cyl. horizontal compound expansion. 6 boilers. Single (feathering) screw. 3,000 ihp = 13.75kts. 550 tons coal = 4,000 miles @ 10kts.

First cost: *Calypso* hull £82,000, machinery £37,500. *Calliope* hull £82,000, machinery £38,000

Calypso Chatham Dyd/J. & G. Rennie.

Ord: ... . K: 1.9.1881. L: 7.6.1883. C: 10.1885. Training ship (Newfoundland Government) 2.9.1902. Renamed *Briton* 15.2.1916. Sold as store hulk 7.4.1922 (still in use as a store for salt in 1952).

Calliope Portsmouth Dyd/J. & G. Rennie.

Ord: ... . K: 1.10.1881. L: 24.7.1884. C: 25.1.1887. RNVR drill ship 29.10.1907. Renamed *Helicon* 6.1915, but reverted to *Calliope* 10.1931. Sold to Hughes Bolckow, Blyth to BU 4.10.1951.

NOTES: Enlarged versions of *Comus* Class, with same form of construction.

***SURPRISE* Class** - steel despatch vessels.

Dimensions & tons: 275ft 0in oa, 250ft 0in pp x 32ft 6in x 13ft 0in. *Surprise* 1,650, *Alacrity* 1,700 disp.

Men: 93. Guns: 4 x 5in (38cwt) BL, 4 x 6pdr QF, 2 MGs.

Armour: Deck 3/8in.

Machinery: 2 sets of 2-cyl. horizontal direct-acting compound expansion. 4 cylindrical boilers. Twin screws. 2,000 ihp = 16kts (natural draught); 3,030 ihp = 17kts (forced draught). 400 tons coal = 6,450 miles @ 10kts.

First cost: *Surprise* hull £49,084, machinery £29,680. *Alacrity* hull £48,289, machinery £29,680.

Surprise Palmer Sbdg & Iron Co., Jarrow (No.539)/Palmers. (3,018 ihp = 17.85kts.)

Ord: 1883. K: 14.2.1884. L: 17.1.1885. C: 8.1886 (commissioned 20.7.1886). Sold 1919.

Scan and/or retouch by Grzechu

Alacrity Palmer Sbdg & Iron Co., Jarrow (No.540)/Palmers. (3,180 ihp = 18kts.)

Ord: 1883. K: 14.2.1884. L: 28.2.1885. C: 8.1886 (commissioned 22.6.1886). Sold at Hong Kong 9.1913.

NOTES: Both remained classed as despatch vessels throughout their lives, and were not rerated as Third Class cruisers, but are for convenience included here. *Alacrity* (re-armed with 10 x 6pdr QF guns in late 1890s) sold 1913 to BU, whereupon *Surprise* was renamed *Alacrity* in her stead.

***SCOUT* Class** - torpedo cruisers/Third Class cruisers.

Dimensions & tons: 220ft 0in pp x 34ft 3in x 14ft 6in. 1,580 load disp.
Men: 147. Guns: 4 x 5in (40cwt) BL, 8 x 3pdr QF, 2 MGs, 1 light gun, 3 x 14in TT, 4 TC.
Armour: Deck 3/8in; gunshields and TT 1in; conning tower 3in.
Machinery: 2 sets of 2-cyl. horizontal direct-acting compound. 4 boilers. Twin screws. 2,000 ihp = 16kts (natural draught); 3,200 ihp = 17kts (forced draught). 450 tons coal = 6,900/2,500 miles @ 10/17kts.
First cost: *Scout* hull £63,916, machinery £23,600. *Fearless* hull £64,202, machinery £23,250.

Scout J. & G. Thomson, Clydebank (No.223)/J. & G. Thomson. (3,370 ihp = 17.6kts.)

Ord: ... . K: 8.1.1884. L: 30.7.1885. C: 10.1886. Sold 5.7.1904.

Fearless Barrow Iron Sbdg Co. (No.129)/Barrow Iron Sbdg (3,302 ihp = 17.27kts.)

Ord: ... . K: 22.9.1884. L: 20.3.1886. C: 7.1887. Sold 11.7.1905 at Portsmouth.

NOTES: The first attempt to provide the fleet with an anti-torpedo boat capability, they proved too slow for fleet service and were relegated to commerce protection, reclassified as Third Class cruisers. They had extensive watertight compartmentalisation, with wing coal bunkers abreast and above the machinery spaces for added protection. Both had their 5in guns replaced by 4.7in (47cwt) QF during the 1890s.

***ARCHER* class** - torpedo cruisers/Third Class protected cruisers. Modified from *Scout* Class design.

Dimensions & tons: 240ft 0in oa, 225ft 0in pp x 36ft 0in x 14ft 6in. 1,770 load disp (1,950 full load).
Men: 176. Guns: 6 x 6in (5-ton) BL, 8 x 3pdr QF, 2 MGs, 1 light gun, 1 x 14in TT, 4 TC.
Armour: Deck 3/8in; gunshields and TT 1in; conning tower 3in.
Machinery: 2 sets of 2-cyl. horizontal direct-acting compound expansion. 4 boilers. Twin screws. 2,500 ihp = 15kts (natural draught); 3,500 ihp = 16.5kts (forced draught). 475 tons coal = 7,000 miles @ 10kts.
First cost: first six (each) hull £55,916, machinery £31,667; last pair (each) hull £60,606, machinery £31,000.

Archer J. & G. Thomson, Clydebank (No.226)/J. & G. Thomson.

Ord: 1884. K: 2.3.1885. L: 23.12.1885. C: 7.1887 (commissioned 11.12.1888). Sold to Forrester, Swansea 4.4.1905.

Mohawk J. & G. Thomson, Clydebank (No.227)/J. & G. Thomson.

Ord: 1884. K: 2.3.1885. L: 6.2.1886. C: 7.1887 (commissioned 16.12.1890). Sold to G. Garnham 4.4.1905.

Brisk J. & G. Thomson, Clydebank (No.228)/J. & G. Thomson.

Ord: 1884. K: 2.3.1885. L: 8.4.1886. C: 20.3.1888. Sold to Ward, Preston to BU 15.5.1906.

Porpoise J. & G. Thomson, Clydebank (No.229)/J. & G. Thomson.

Ord: 1884. K: 2.3.1885. L: 7.5.1886. C: 12.2.1888. Sold at Bombay 10.2.1905.

Cossack J. & G. Thomson, Clydebank (No.230)/J. & G. Thomson.

Ord: 1884. K: 2.3.1885. L: 3.6.1886. C: 7.1888 (commissioned 1.1.1889). Sold to G. Graham 4.4.1905.

Tartar J. & G. Thomson, Clydebank (No.231)/J. & G. Thomson.

Ord: 1884. K: 2.3.1885. L: 28.10.1886. C: 7.1888 (commissioned 30.6.1891). Sold to Forrester, Swansea 3.4.1906.

Serpent Devonport Dyd/Harland & Wolff.

Ord: 1885. K: 9.11.1885. L: 10.3.1887. C: 3.1888. Wrecked near Corcubion Bay, N. Spain 10.11.1890.

Racoon Devonport Dyd/Harland & Wolff.

Ord: 1885. K: 1.2.1886. L: 6.5.1887. C: 7.1888. Sold to G. Cohen 4.4.1905.

NOTES: The first six were funded under the 1884 'Northbrook' Programme, and the last pair under the 1885 Programme. Clipper bows and a three-masted rig (unlike the previous *Scout* Class) gave them an outdated appearance, and they were poor sea-boats. Too slow for their conceived fleet role, they were rerated as Third Class cruisers shortly after completion. The last pair had engines of 2,500 ihp (natural draught) - 4,500 ihp (forced draught, giving 17.5kts) and were completed with 6in QF guns *vice* BL.

***MEDEA* Class** - Third Class protected cruisers (originally Second Class). William White design, 1886.

Dimensions & tons: 265ft 0in pp x 41ft 0in x 16ft 6in. 2,800 load disp.
Men: 218. Guns: 6 x 6in (5-ton) BL, 9 x 6pdr QF, 1 x 3pdr QF, 3 MGs, 1 light gun, 2 TT and 2 TC.
Armour: Deck 1in-2in; gunshields 4½in; conning tower 3in.
Machinery: 2 sets of vertical compound expansion in first pair (see Notes). 6 cylindrical boilers. Twin screws. 9,000 ihp (forced draught) = 20kts. 400 tons coal = 8,000 miles @ 10kts.
First cost: *Medea* hull £88,400, machinery £53,300 (*Medusa* same). *Magicienne* £136,000 (*Marathon* same). *Melpomene* (est.) hull £92,000, machinery £50,000.

Medea Chatham Dyd/Humphrys, Tennant & Co.

Ord: ... . K: 25.4.1887. L: 9.6.1888. C: 5.1889. Sold 2.4.1914.

Medusa Chatham Dyd/Humphrys, Tennant & Co.

Ord: ... . K: 25.8.1887. L: 11.8.1888. C: 6.1889. Hulked for harbour service 1910; became calibrating vessel at Bantry. Sold to Stanlee, Dover 1920; re-sold to J. E. Thomas 21.10.1921.

Modified type with sheathed hulls for tropical service:

Magicienne John Elder & Co., Govan (No.328)/Hawthorn Leslie.

Ord: ... . K: 10.8.1887. L: 12.5.1888. C: 11.2.1889. Sold 11.7.1905.

Marathon John Elder & Co., Govan. (No.329)/Hawthorn Leslie.

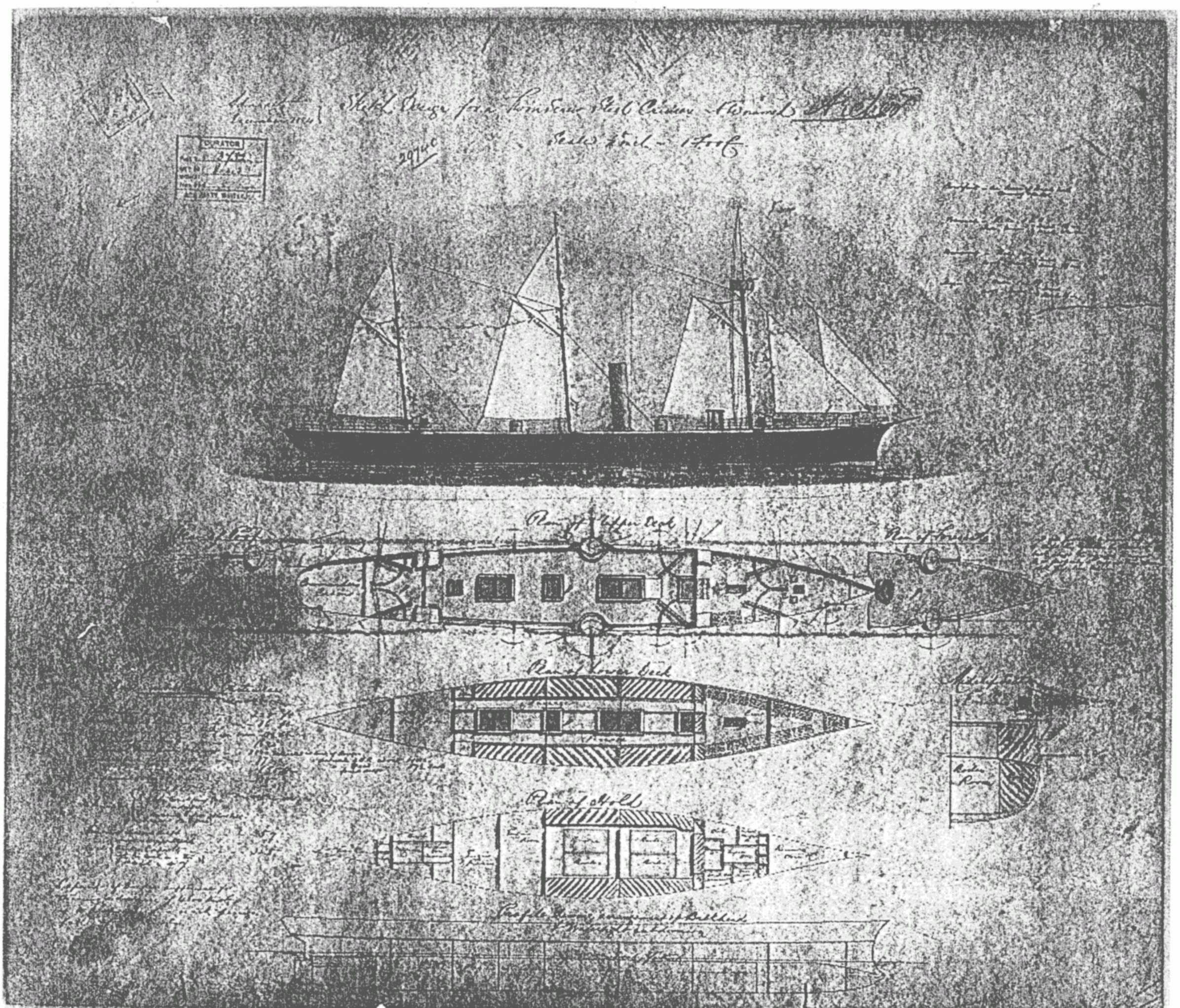
Ord: ... . K: 10.8.1887. L: 23.8.1888. C: 7.1889. Sold to Ward, Preston to BU 11.8.1905.

Melpomene Portsmouth Dyd/Palmers.

Ord: ... . K: 10.10.1887. L: 20.9.1888. C: 7.1889. Sold to Ward, Preston to BU 11.8.1905.

NOTES: Ordered under the 1886-87 Programme as Second Class protected cruisers, but rerated as Third Class cruisers 1887-88 while building. Smaller and in all respects inferior versions of the *Mersey* class, cramped and unsuccessful. *Marathon*, *Magicienne* and *Melpomene* were wood- and copper-sheathed over their steel hulls. The wood insulated the copper from the steel to prevent rapid electrolytic decay, whilst the copper sheathing prevented rapid fouling in tropical waters. This added 1ft to the beam and 150 tons to the displacement whilst causing a ¼kt drop in speed. Within the next few years improved anti-fouling paints would reduce the need for so cumbersome an expedient. These latter three ships also had horizontal direct-acting engines instead of the vertical type in the first pair. All five had 6in BL guns replaced by QF model in the 1890s.

***BARRACOUTA* Class** - Third Class protected cruisers. William White design, 1887.



'Sketch Design for Twin Screw Steel Cruiser to be named *Archer*', Admiralty December 1884. Notes include a requirement for bunkers to steam 4,600 nautical miles at 10kts. *DR13732*

Dimensions & tons: 233ft 0in oa, 220ft 0in pp x 35ft 0in x 15ft 0in. 1,580 load disp.
Men: 160. Guns: 6 x 4.7in (47cwt) QF, 4 x 3pdr QF, 2 MGs, 2 x 14in TT.
Armour: Deck 1in-2in; gunshields 2in.
Machinery: 2 sets of 3-cyl triple expansion. 4 double-ended cylindrical boilers. Twin screws. 1,900 ihp = 15kts (natural draught) in first pair. 1,750 ihp = 15kts (natural draught); 3,000 ihp = 16.5kts (forced draught) in second pair. 160 tons coal = 3,400 miles @ 10 kts.

Blanche Pembroke Dyd/Earle.
Ord: ... . K: 1.5.1888. L: 6.9.1889. C: 2.1891. Sold to Ward, Preston to BU 11.7.1905.

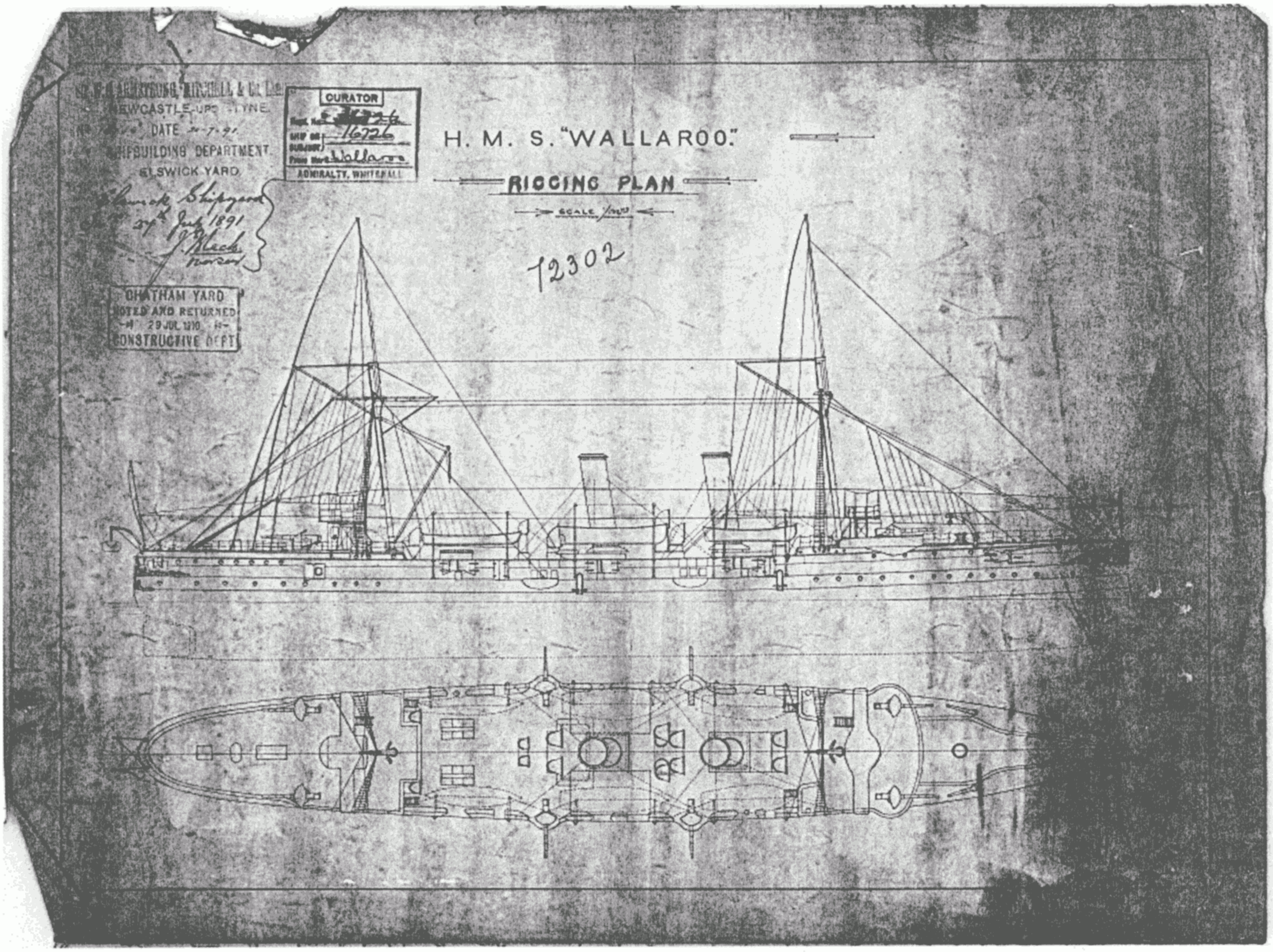
Blonde Pembroke Dyd/Earle.
Ord: ... . K: 1.5.1888. L: 22.10.1889. C: 7.1891. Sold to Ward, Preston 11.7.1905 (BU at Bo'ness).

Barrosa Portsmouth Dyd/Palmers.
Ord: ... . K: 14.5.1888. L: 16.4.1889. C: 6.1890. Sold to Ward, Preston to BU 11.7.1905.

Barracouta Sheerness Dyd/Palmers.
Ord: ... . K: 2.7.1888. L: 16.5.1889. C: 3.1891. Sold to McLellan 4.4.1905 (resold and BU at Bo'ness).

NOTES: Ordered under the 1887-88 Programme. All four were wood- and copper-sheathed for service on remote stations. The first British cruisers fitted with QF guns and triple expansion engines, and the first small cruisers with a full-length protective deck.

***BARHAM* Class** - Third Class protected cruisers. William White design,



Rigging plan for the Pearl Class Third Class cruiser *Wallaroo*, stamped W G Armstrong, Mitchell & Co, Elswick Yard, 20 July 1891.

1888. Lengthened from *Barracouta* Class design, to accommodate engines of twice the power.

Dimensions & tons: 280ft 0in pp x 35ft 0in x 13ft 3in. Draught 14ft 6in - 16ft 0in. 1,830 load disp.

Men: 169. Guns: 6 x 4.7in (47cwt) QF, 4 x 3pdr QF, 2 MGs, 2 x 14in TT.

Armour: Deck 1in-2in; gunshields 2in.

Machinery: 2 sets of 3-cyl. vertical triple expansion. 6 locomotive boilers. Twin screws. 3,600 ihp = 16.5kts (natural draught), 6,000 ihp = 19.5kts (forced draught). 140 tons coal = 2,600 miles @ 10kts.

First cost: *Barham* £113,702.

Bellona Hawthorn Leslie, Hebburn-on-Tyne (No.290)/R. & W. Hawthorn.

Ord: ... . K: 16.10.1888. L: 29.8.1890. C: 7.1891. Sold 10.7.1906.

Barham Portsmouth Dyd/R. & W. Hawthorn.

Ord: ... . K: 22.10.1888. L: 11.9.1889. C: 7.1891. Sold to Ward, Preston for BU 19.2.1914.

NOTES: Ordered under the 1887-88 Programme. Designed for 19.5kts (4,700 ihp), but the forced draught proved unsuccessful and they reverted to natural draught after several boiler breakdowns. Reconstructed 1898 with Thornycroft water-tube boilers installed and made 4,700 ihp = 19kts.

***PEARL* Class** - Third Class protected cruisers (originally ordered as Second Class, rerated 1890). William White design, 1888.

Dimensions & tons: 278ft 0in oa, 265ft 0in pp x 41ft 0in x 15ft 6in. 2,575 disp.

Men: 217. Guns: 8 x 4.7in (47cwt) QF, 8 x 3pdr QF, 4 MGs, 2 x 14in TT, 2 TC.

Armour: Deck 1in-2in; gunshields 2in; conning tower 3in.

Machinery: 3-cyl. triple expansion. 4 double-ended cylindrical boilers. Twin screws. 4,000 ihp = 17kts (first five); 4,500 ihp =17.5kts (last four). All 7,500 ihp = 19kts on forced draught.

Provided under 1887 Imperial Defence Act:

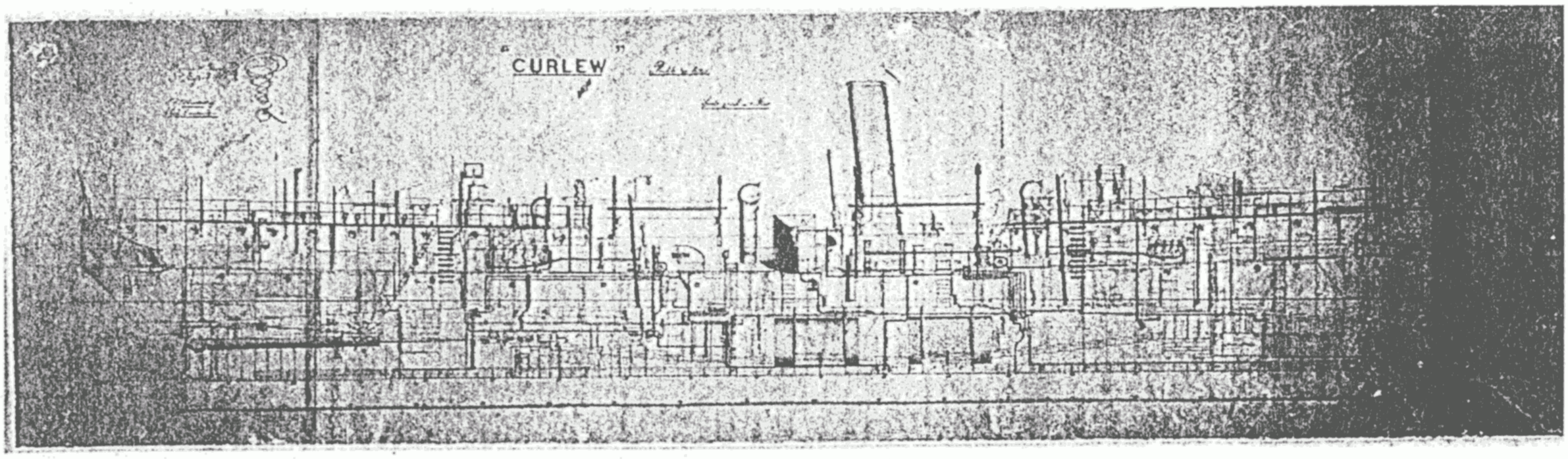
Katoomba (ex-*Pandora*) Armstrong Mitchell, Elswick (No.542)/ Hawthorn Leslie.

Ord: ... . K: 15.8.1888. L: 27.8.1889. C: 24.3.1891. Sold to BU at Morecambe 10.7.1906.

Mildura (ex-*Pelorus*) Armstrong Mitchell, Elswick (No.543)/Hawthorn Leslie.

Ord: ... . K: 15.8.1888. L: 25.11.1889. C: 18.3.1891. Sold to G. Garnham to BU 3.4.1906.

Wallaroo (ex-*Persian*) Armstrong Mitchell, Elswick (No.544)/Hawthorn Leslie.



As fitted profile of the *Curlew*, Devonport 31 August 1886. Note the fixed torpedo tube firing through the stem. *DR14600*

Ord: ... . K: 15.8.1888. L: 5.2.1890. C: 31.3.1891. Hulked in 1906. Renamed *Wallington* on 5.3.1919. Sold to G. Sharpe to BU 27.2.1920.

Tauranga (ex-*Phoenix*) J. & G. Thomson, Clydebank (No.243)/J. & G. Thomson.
Ord: ... . K: 20.8.1888. L: 28.10.1889. C: 6.1891. Sold to Ward, Preston for BU 10.7.1906.

Ringarooma (ex-*Psyche*) J. & G. Thomson, Clydebank (No.244)/J. & G. Thomson.
Ord: ... . K: 20.8.1888. L: 10.12.1889. C: 3.2.1891. Sold to Forth Shipbreaking Co 15.5.1906 and BU at Bo'ness.

Provided under 1889 Naval Defence Act:

Pearl Pembroke Dyd/Earle, Hull.
Ord: ... . K: 1.4.1889. L: 28.7.1890. C: 10.1892. Sold at Simonstown 7.1906. BU by Cohen, Felixstowe.

Phoebe Devonport Dyd/Devonport Dyd.
Ord: ... . K: 23.4.1889. L: 1.7.1890. C: 3.1892. Sold to A. Anderson, Copenhagen to BU 10.7.1906.

Philomel Devonport Dyd/Earle, Hull.
Ord: ... . K: 9.5.1889. L: 28.8.1890. C: 10.11.1891. To New Zealand 1914. Base ship at Wellington 3.1921. Sold to Strongman & Co., NZ as hulk on 17.1.1947. Scuttled off East Coast of NZ on 6.8.1949.

Pallas Portsmouth Dyd/Hawthorn Leslie.
Ord: ... . K: 1.7.1889. L: 30.6.1890. C: 7.1891. Sold at Bermuda 7.1906.

NOTES: The first five ships were ordered under the Imperial Defence Act of 1887 and were paid for by Australia (on the understanding that they were to be stationed in Australian waters; their original 'P' names were replaced by Australian names on 2.4.1890, although they remained RN-manned and under Admiralty control). The final four ships were ordered under the Naval Defence Act of 1889; as such they were by definition technically outside the scope of this book, but are included to complete the class list.

Steel Sloops and Gunboats

Throughout most of the 1880s, construction of the smaller cruising vessels continued to be of composite materials, but in 1885 two torpedo-carrying variants of the gunvessel theme were ordered, with steel hulls, and in 1888 the first sloops to be of steel were ordered. The *Beagle* and *Basilisk* were of steel sheathed with copper, but were otherwise identical to the composite-hulled *Nymphe* Class that preceded them. No others were built before the Naval Defence Act, but in the decade starting in 1893 they were followed by sixteen steel sloops and four gunboats; while these are outside our period, their details are included below to complete the coverage of the Victorian 'Gunboat Navy'. Originally topsail schooner-rigged (the *Condor* Class were barques), they all had yards removed later, and some had masts reduced. Notably 13 of these 24 vessels were built at Sheerness Dockyard; for some years this yard had concentrated upon repair and maintenance, and retained just a single slipway for building; unable to accommodate larger warships, it was ideally adapted for sloop and gunboat work only.

***CURLEW* Class** - steel torpedo-and-gun vessels. 4 guns. William White design, 1885.
Dimensions & tons: 195ft 0in pp x 28ft 0in x 10ft 6in. 790 disp (design) 950 disp (actual).
Men: 46. Guns: 1 x 6in/100pdr (5-ton) BL (fwd), 3 x 5in/50pdr (38cwt) BL (2 midships, 1 aft), 7 MGs, 1 TT, 4 TC (above-water).
Machinery: 2-cyl. horizontal direct-acting compound expansion. Twin screws. 850 nhp. 1,500 ihp = 14.5kts. 250 tons coal = 10,000 miles @ 10kts.
First cost: (each) hull £37,363, machinery £12,600.

Curlew Devonport Dyd/John Penn & Son.
K: 5.1.1885. L: 23.10.1885. C: 22.6.1886. Sold to BU 10.7.1906.

Landrail Devonport Dyd/John Penn & Son.
K: 5.1.1885. L: 19.1.1886. C: 10.3.1887. Sunk as target in Lyme Bay 4.10.1906.

***BEAGLE* Class** - sheathed steel sloops. 8 guns. William White design, 1888.
Dimensions & tons: ... , 195ft 0in pp x 28ft 0in (?30ft oa) x 12ft 6in. Draught 10ft 8in-13ft 4in. 1,170 disp.
Men: 138. Guns: 8 x 5in/50pdr (2-ton) BL, 8 MGs.
Armour: Protective deck of 1in-1½in steel over the machinery and boilers.
Machinery: 3-cyl. horizontal triple expansion. Twin screws. 840 nhp. 2,000 ihp = 14.5kts. 180 tons coal = 3,000 miles @ 10kts.

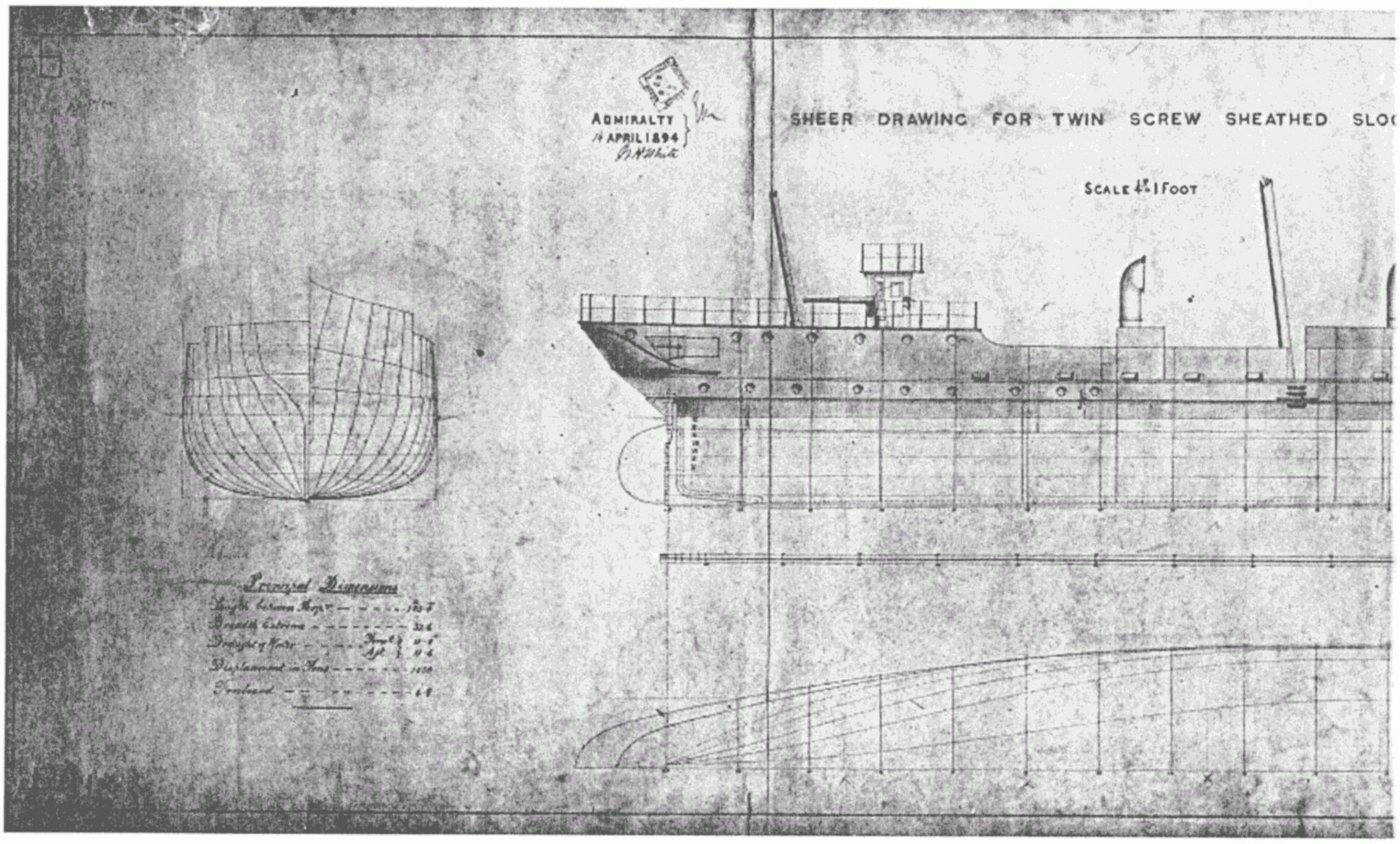
Basilisk Sheerness Dyd/J. & G. Rennie.
K: 1.5.1888. L: 6.4.1889. C: 12.1889. Became coal hulk *C.7*. Sold as *Maggie Grech* 1905.

Beagle Portsmouth Dyd/J. & G. Rennie.
K: 14.5.1888. L: 28.2.1889. C: 9.1889. Sold to BU 11.7.1905.

NOTES: Schooner-rigged with 3 masts, a tall funnel forward of amidships, and a counter stern.

***ALERT* Class** - sheathed steel sloops. 10 guns. William White design, 1893.
Dimensions & tons: 204ft 6in oa, 180ft 0in pp x 32ft 6in x 11ft 6in. 960 disp.
Men: 105. Guns: 6 x 4in/25pdr (1-ton) QF, 4 x 3pdr QF, 2 MGs.

Scan and/or retouch by Grzechu



'Sheer Drawing for Twin Screw Sheathed Sloops, Admiralty 14 April 1894.' A pencil addition notes the name as *Phoenix*. *DR7997*

Armour: Protective deck of 1in-1½in steel over the machinery and boilers.

Machinery: 3-cyl. vertical triple expansion (by dockyard). Single screw. 1,400 ihp = 13.25kts.

Alert Sheerness Dyd/Sheerness Dyd.

K: 8.12.1893. L: 28.12.1894. C: 9.1895. Lent to Basra civil authorities 1906. Sold at Basra as a pilot vessel 12.1.1926. BU 10.1949.

Torch Sheerness Dyd/Sheerness Dyd.

K: 8.12.1893. L: 28.12.1894. C: 10.1895. Given to the NZ Government as training ship 16.8.1917, renamed *Firebrand*; later renamed *Rama*. Sold in New Zealand 7.1920.

NOTES: Schooner-rigged (later main yards removed, but the three masts were retained). Yacht bows and tall slim funnels.

***PHOENIX* Class** - sheathed steel sloops. 10 guns. William White design, 1894.

Dimensions & tons: 210ft 6in oa, 185ft 0in pp x 32ft 6in x 13ft 1in. 1,050 disp.

Men: 106. Guns: 6 x 4in/25pdr (1-ton) QF, 4 x 3pdr QF, 3 MGs.

Armour: Protective deck of 1in-1½in steel over the machinery and boilers.

Machinery: 3-cyl. vertical triple expansion (by dockyard). Twin screws. 1,400 ihp = 13kts.

Algerine Devonport Dyd/Devonport Dyd.

K: 25.7.1894. L: 6.6.1895. C: 4.1896. Sold as a salvage vessel 11.4.1919. Wrecked 1.1924.

Phoenix (ex-*Linnet*) Devonport Dyd/Devonport Dyd.

K: 26.7.1894. L: 25.4.1895. C: 5.1896. Capsized in a typhoon at Hong Kong 18.9.1906. Raised, sold 7.1.1907.

NOTES: Schooner-rigged (later removed). Twin-screw versions of the *Alert* Class.

***BRAMBLE* Class** - First Class sheathed steel gunboats. 6 guns. William White design, 1897.

Dimensions & tons: 187ft 6in oa, 180ft 0in pp x 33ft 0in x 8ft 0in. 710 disp.

Men: 85. Guns: 2 x 4in/25pdr (1-ton) QF, 4 x 12pdr QF, 10 MGs.

Machinery: 3-cyl. vertical triple expansion. Twin screws. 900 ihp (normal draught), 1,300 ihp (forced draught) = 13.5kts. 50 tons coal.

Dwarf London & Glasgow, Govan (No.294)/London & Glasgow.

K: 1897. L: 15.11.1898. C: 8.1899. Sold to Ward, Pembroke 13.7.1926.

Bramble Potter, Liverpool (No.176)/Fawcett, Preston & Co.

K: 1897. L: 26.11.1898. C: 6.1900. Sold at Bombay 26.1.1920.

Britomart Potter, Liverpool (No.177)/Fawcett, Preston & Co.

K: 1897. L: 28.3.1899. C: 6.1900. Sold at Bombay 10.6.1920 and renamed *Sakuntala*.

Thistle London & Glasgow, Govan (No.295)/London & Glasgow.

K: 1897. L: 22.6.1899. C: 1901. Sold to Ward, Pembroke 13.7.1926.

NOTES: Modern design, with two lights masts and no yards.

***CONDOR* Class** - sheathed steel sloops. 10 guns. William White design, 1898.

Dimensions & tons: 204ft 0in oa, 180ft 0in pp x 32ft 6in (first two 33ft 3in oa, last four 33ft 0in oa) x 11ft 6in. 980 disp.

Men: 120-130. Guns: 6 x 4in/25pdr (1-ton) QF, 4 x 3pdr QF.

Armour: Protective deck of 1in-1½in steel over the machinery and boilers.

Machinery: 3-cyl. vertical triple expansion. 4 Belleville boilers. Twin screws. 1,400 ihp = 13kts. Endurance *c*3,000 miles @ 10kts.

Condor Sheerness Dyd/Thames Iron Works.

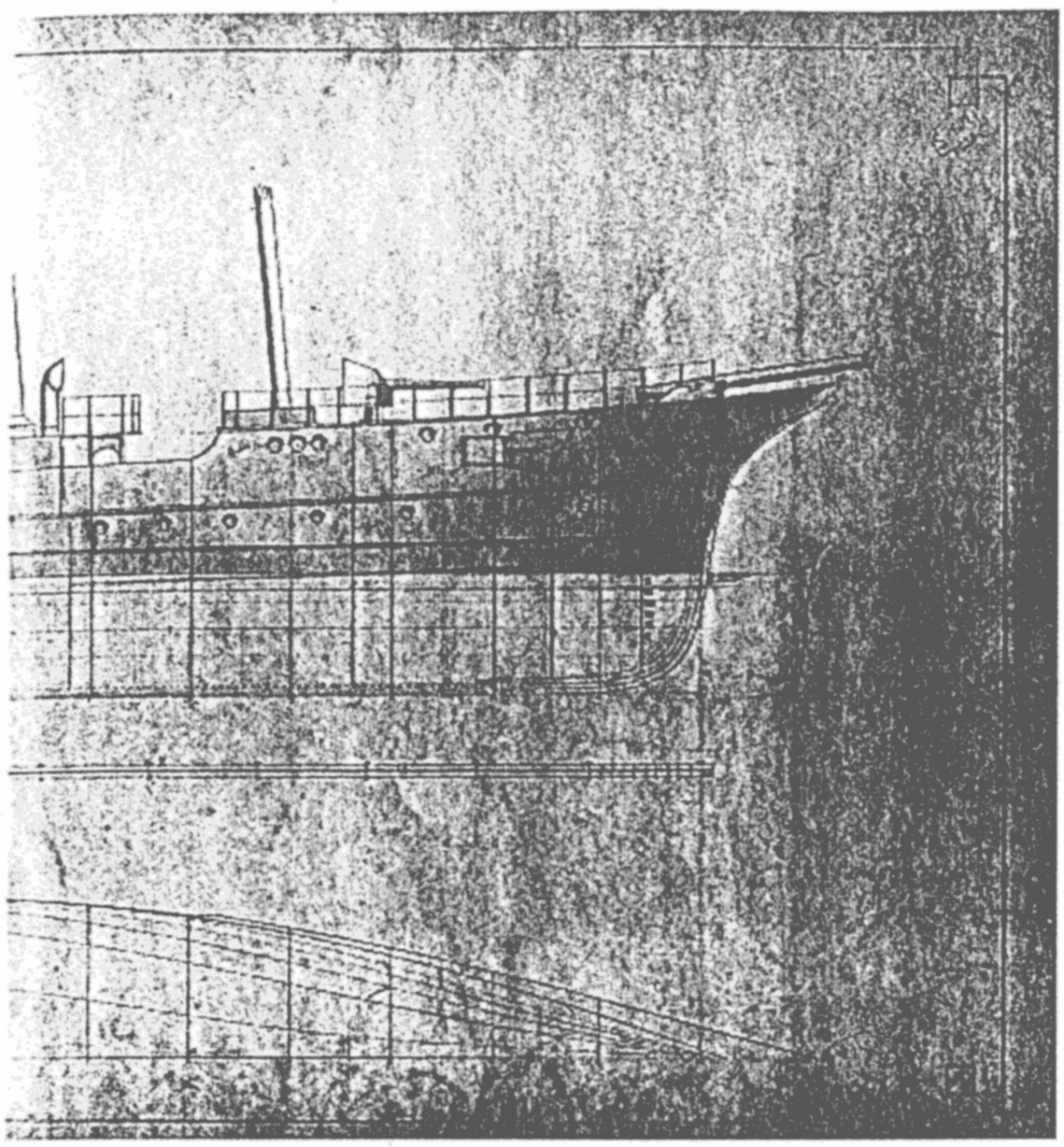
K: 1.1.1898. L: 17.12.1898. C: 1.11.1900. Foundered off Cape Flattery 3.12.1901, during her first commission.

Rosario Sheerness Dyd/Devonport & Sheerness Dyds.

K: 1.1.1898. L: 17.12.1898. C: 5.1899. Depot ship for submarines at Hong Kong 1910. Sold there 11.11.1921.

Mutine Laird Brothers, Birkenhead (No.635)/Laird Brothers.

Scan and/or retouch by Grzechu



K: 1898. L: 1.3.1900. C: 1900. Survey ship 5.1907. RNVR drill ship 9.1925. Sold to Ward, Briton Ferry 16.8.1932.

Rinaldo Laird Brothers, Birkenhead (No.636)/Laird Brothers.
K: 1898. L: 29.5.1900. C: 1900. Sold to W. Thomas, Anglesey 21.10.1921.

Shearwater Sheerness Dyd/Thames Iron Works.
K: 1899. L: 10.2.1900. C: 1900. To RCN as submarine depot ship 1915. Sold to Western Shipping Co., Canada 5.1922, renamed *Vedas*.

Vestal Sheerness Dyd/Devonport Dyd.
K: 1899. L: 10.2.1900. C: 1900. Sold to W. Thomas, Anglesey 21.10.1921.

NOTES: Barque-rigged (later the yards were reduced or removed).

***CADMUS* Class** - sheathed steel sloops. 10 guns. William White design, 1899.
Dimensions & tons: 210ft 0in oa, 185ft 0in pp x 33ft 0in x 11ft 3in. 1,070 disp.
Men: 120-135. Guns: 6 x 4in/25pdr (1-ton) QF, 4 x 3pdr QF, 3 MGs.
Armour: Protective deck of 1in-1½in steel over the machinery and boilers.
Machinery: 3-cyl. vertical triple expansion. Twin screw. 1,400 ihp = 13.25kts. Endurance *c*4,000 miles @ 10kts.

Espiegle Sheerness Dyd/Wallsend Slipway Co.
K: 1900. L: 8.12.1900. C: 1901. Sold at Bombay 17.9.1923.

Fantome Sheerness Dyd/Devonport Dyd.
K: 1900. L: 23.3.1901. C: 1902. Survey ship 1906. Sold at Sydney 30.1.1925.

Merlin Sheerness Dyd/Devonport Dyd.
K: 1901. L: 30.11.1901. C: 1902. Survey ship 9.1906. Sold at Hong Kong 3.8.1923.

Odin Sheerness Dyd/Devonport Dyd.
K: 1901. L: 30.11.1901. C: 1902. Sold at Bombay 12.11.1920.

Clio Sheerness Dyd/J. Samuel White, Cowes.
K: 1902. L: 14.3.1903. C: 1904. Sold at Bombay 12.11.1920.

Cadmus Sheerness Dyd/J. Samuel White, Cowes.
K: 1902. L: 29.4.1903. C: 1904. Sold at Hong Kong 1.9.1921.

NOTES: Schooner-rigged (yards and canvas removed before 1914). The last class of masted sloop. *Espiegle* was the last RN ship built with a figurehead; she was never fitted with sails for her rig. Hull sheathed to about 3ft above waterline.

In most regards, all 24 of the above vessels were small cruisers rather than a development of the gunboat fleet, whatever their nominal rating. Many survived in escort roles in the East Indies, China, etc, during the 1914-18 era.

Iron Coastal Gunboats

The iron screw gunboats were known as 'flatirons' from their appearance, or as 'Rendel gunboats' after George Rendel, the Armstrong designer who first devised them. They were highly manoeuvrable vessels, and were the first RN warships to lack even a rudimentary rig. Each mounted a single MLR gun on a hydraulic mounting that permitted it to be lowered into the vessel's hold for seaworthiness during passage, then raised when needed for action. The *Medina* or 'River' Class gunboats, included for convenience in this section, were very different craft, being fully rigged and carrying three somewhat smaller MLR guns.

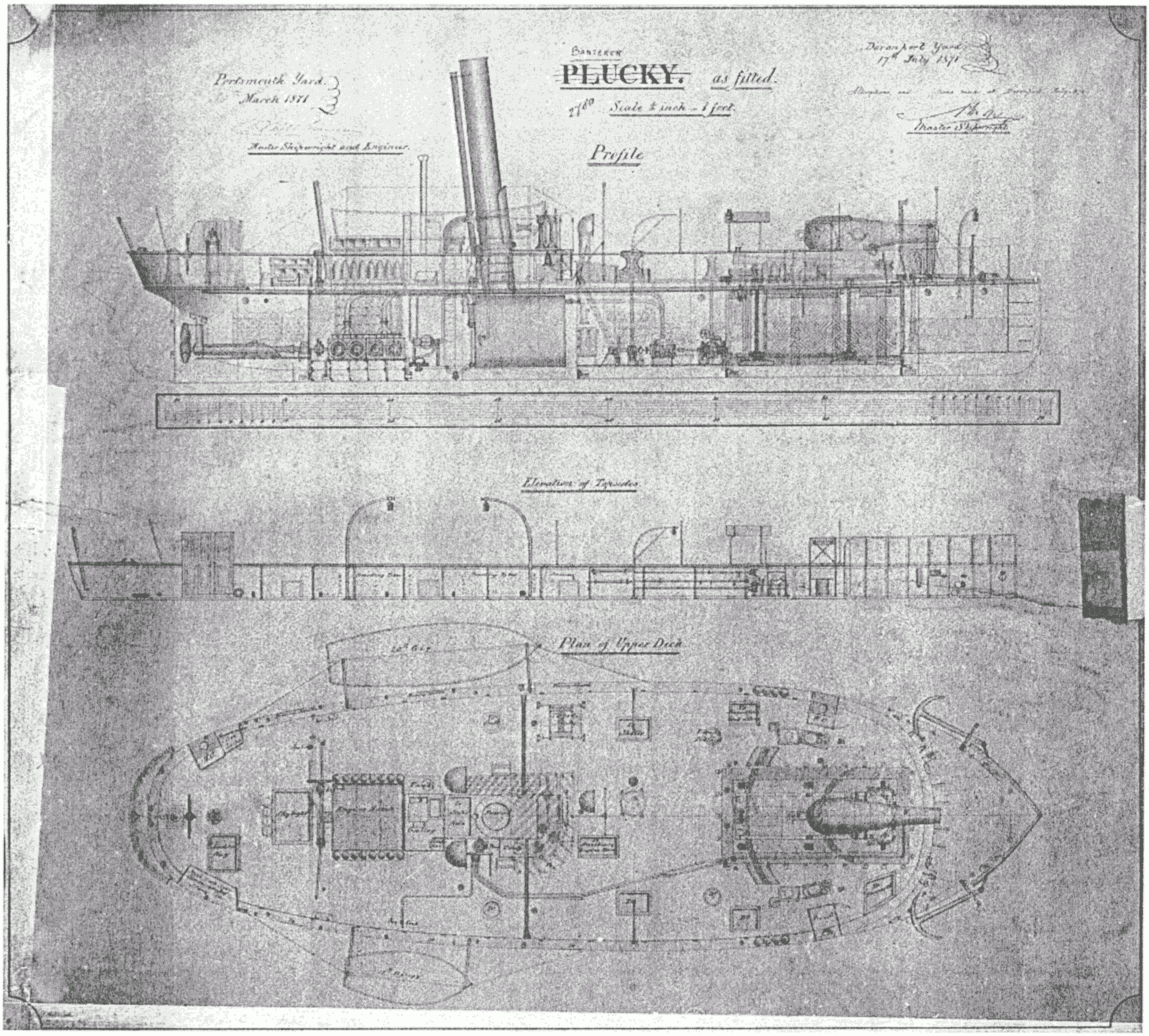
STAUNCH - iron twin-screw coastal gunboat ('flatiron'/'Rendel gunboat').
Dimensions & tons: 75ft 0in x 25ft 0in x 6ft 6in. Draught 5ft 10in-6ft 6in. 200 bm. 164 disp.
Men: 31. Guns: 1 x 9in (12-ton) MLR.
Machinery: 2 pairs of 2-cyl. (14in diam., 14in stroke) horizontal single expansion. Twin screws. 25 nhp. 134 ihp = 7.654kts.
First cost: £6,719.

Staunch Charles Mitchell & Co., Walker (No.160)/Stephenson & Co.
Ord: ... . K: 17.6.1867. L: 4.12.1867. C: ... . Sold for further use as a fuel barge 1904.

PLUCKY - iron twin-screw coastal gunboat ('flatiron'/'Rendel gunboat').
Dimensions & tons: 80ft 0in x 25ft 1½in x 6ft 1½in. Draught 5ft 7in-6ft 1½in. 212 bm. 193 disp.
Men: 31. Guns: 1 x 9in (12-ton) MLR.
Machinery: 2 pairs of 2-cyl. (15⅛in diam., 15in stroke) horizontal single expansion. Twin screws. 25 nhp. 234 ihp = 7.654kts.
First cost: £7,751.

Plucky Portsmouth Dyd/Avonside Engineering Co., Bristol.
Ord: ... . K: ... . L: 13.7.1870. C: ... . Renamed *Banterer* 6.1915. Sold for commercial use 1928; finally BU at Inverkeithing 1969.

***ANT* Class** - iron twin-screw coastal gunboats ('flatiron'/'Rendel gunboats').
(Note: Preston and others list the last four vessels to be completed of this class as a separate class (*Gadfly* Class) - but since the only distinction of these otherwise identical vessels was the administrative one that they were suspended by AO 23.7.1872 and not laid down until 1878 this seems inadequate grounds to separate them from their sisters here.)
Dimensions & tons: 85ft 0in x 26ft 1½in x 6ft 0in. Draught 5ft 9in - 6ft 3in. 245 bm. 241 disp.
Men: 30. Guns: 1 x 10in (18-ton) MLR on elevating platform fwd.
Machinery: 2 sets of 2-cyl. (16in diam., 15in stroke) horizontal single expansion (trunk, except in Napier and Rennie-engined vessels). Twin screws. 28 nhp. 260 designed ihp (see below for actual individual ihp). 8.5kts.
First cost: average *c*£13,000.



The Rendel gunboat *Plucky*, as fitted profile dated Portsmouth March 1871. *DR2780*

Blazer Portsmouth Dyd/J. & G. Rennie. (266 ihp)
K: ... . L: 7.12.1870. C: ... . Became seagoing tender for weapons testing 1904. Gunboat 8.1914. Sold to W. Loveridge, West Hartlepool 19.8.1919.

Comet Portsmouth Dyd/J. & G. Rennie. (262 ihp)
K: ... . L: 8.12.1870. C: ... . Sold to J. Pas 12.5.1908 (for £900) and BU in the Netherlands.

Bustard Robert Napier & Sons, Govan (No.153)/Robert Napier & Sons. (187 ihp)
K: ... . L: 7.1.1871. C: ... . Sold to Ward, Milford Haven 3.1923 (as given by Preston - but Colledge states 'reported sold Ward 11.1917 but listed to 1921' which seems less likely).

Kite Robert Napier & Sons, Govan (No.154)/Robert Napier & Sons. (187 ihp)
K: ... . L: 8.2.1871. C: ... . Sold 'in a partially dismantled state' to Hughes Bolkow on 18.5.1920 and converted to a dredger.

Scourge Chatham Dyd/J. & G. Rennie. (253 ihp)
K: ... . L: 25.3.1871. C: ... . Converted to tank vessel, renamed *C.79* in 1903-4; still listed as in service in 1930.

Snake Chatham Dyd/J. & G. Rennie. (225 ihp)
K: ... . L: 25.3.1871. C: ... . Completed as cable lighter, renamed *YC.15* on 23.9.1907. No further information on her subsequent career.

Mastiff Charles Mitchell & Co., Walker (No.246)/Miller, Ravenhill & Salkeld. (237 ihp)

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K: 1.9.1870. L: 4.4.1871. C: ... . Renamed *Snapper* 1914. Sold to Thames Shipbreakers Ltd. on 28.11.1931.

Bloodhound Charles Mitchell & Co., Walker (No.246)/Miller, Ravenhill & Salkeld. (214 ihp)
K: 1.9.1870. L: 22.4.1871. C: ... . Tender 1905. Boom defence vessel 1917. Sold F. Bevis Ltd. on 28.6.1921.

Arrow J. & G. Rennie, Greenwich/J. & G. Rennie.
K: ... . L: 22.4.1871. C: ... . Sold to W. H. Webber on 1.3.1922.

Bonetta J. & G. Rennie, Greenwich/J. & G. Rennie.
K: ... . L: 20.5.1871. C: ... . Sold 12.1.1909 as salvage vessel *Disperser*. Lost 4.1940.

Badger Chatham Dyd/John Penn & Sons.
K: ... . L: 13.3.1872. C: ... . Sold to W. Loveridge, West Hartlepool 6.10.1908.

Fidget Chatham Dyd/John Penn & Sons.
K: ... . L: 13.3.1872. C: ... . Hulked (according to Preston, may have become yard craft *C.21*, though he also suggests she may have been sold rather than hulked) 1905.

Bulldog Campbell Johnston, North Woolwich/Ravenhill, Hodgson & Co.
K: ... L: 17.9.1872. C: ... Sold to R. Gillham for £900 on 16.7.1906.

Pike Campbell Johnston, North Woolwich./Ravenhill, Hodgson & Co.
K: ... L: 16.10.1872. C: ... Boom defence vessel at Southampton in 1908 - sold to G. Sharpe 27.3.1920.

Pickle Campbell Johnston, North Woolwich./Ravenhill, Hodgson & Co.
K: ... . L: 15.11.1872. C: ... . Dockyard lighter 1906.

Snap Campbell Johnston, North Woolwich/Ravenhill, Hodgson & Co.
K: ... . L: 11.12.1872. C: ... . Sold at Chatham to Deaker, Hull for £900 in 1909.

Ant Laird Brothers, Birkenhead (No.404)/Laird Brothers.
K: ... . L: 14.8.1873. C: ... . Boom defence vessel 1917. Used as target 1921. Sold to Granton Shipbreaking Co. for BU 2.6.1926.

Cuckoo Laird Brothers, Birkenhead (No.405)/Laird Brothers.
K: ... . L: 14.8.1873. C: ... . Became base ship, renamed *Vivid* 19.2.1912, *Vivid II* (Preston - Colledge gives *Vivid* (Old) as the name at that stage) in January 1922, *YC.37* in 1923 and finally sold to Hocking, Plymouth in 1959 (Preston - Colledge gives 1958 as the year of sale).

Hyaena Laird Brothers, Birkenhead (No.406)/Laird Brothers.
K: ... . L: 30.8.1873. C: ... . Sold at Chatham to Adrienne Merveille of Dunkirk for £850 on 3.4.1906.

Weazel Laird Brothers, Birkenhead (No.407)/Laird Brothers.
K: ... L: 4.9.1873. C: ... Became oil fuel lighter *C.118* in 1904.

Gadfly Pembroke Dyd/John Penn & Son.
K: ... . L: 5.5.1879. C: ... . Converted to a coal lighter at Simonstown, completing 18.5.1900 and then renamed *YC.230*. Sold at the Cape 1918.

Pincher Pembroke Dyd/John Penn & Son.
K: ... . L: 5.5.1879. C: ... . Sold at Portsmouth 11.6.1905.

Griper Pembroke Dyd/John Penn & Son.
K: ... . L: 15.9.1879. C: ... . Became steam lighter *YC.373* in 1905. Renamed *Flora* 19.6.1923 as base ship, then *Afrikander* 1933. Believed to have been BU at the Cape in 1951.

Tickler Pembroke Dyd/John Penn & Son.
K: ... . L: 15.9.1879. C: ... . Converted to steam lighter at Simonstown in 1902. Renamed *Afrikander* as base ship 26.2.1919, then *Afrikander II* in 1933. BU at Simonstown 1937.

***MEDINA* Class** - iron twin-screw river and coastal masted gunboats.
Dimensions & tons: 110ft 0in x 34ft 1in x 5ft 6in. Draught 9ft 6in. 386 (designed) 363 (actual) disp.
Men: 51. Guns: 3 x 6in/64pdr (64cwt) MLR.
Machinery: 2 sets of 2-cyl. horizontal single expansion. Twin screws. 60 nhp. 310 ihp = 9.5kts.

Medina Palmers Sbdg & Iron Co., Jarrow (No.332)/R. & W. Hawthorn.
K: ... . L: 3.8.1876. C: ... . Sold at Bermuda 1904.

Medway Palmers Sbdg & Iron Co., Jarrow (No.333)/R. & W. Hawthorn.
K: ... . L: 3.10.1876. C: ... . Sold at Bermuda 1904.

Sabrina Palmers Sbdg & Iron Co., Jarrow (No.334)/R. & W. Hawthorn.
K: ... . L: 3.10.1876. C: ... . Renamed *Sabine* as diving tender 1916. Renamed *Vivid* 1920 (or late 1919). Sold to B. Fryer, Sunderland 7.1922.

Spey Palmers Sbdg & Iron Co., Jarrow (No.335)/John Penn & Son.
K: ... . L: 5.10.1876. C: ... . Deleted c1915. Sold 1923.

Tay Palmers Sbdg & Iron Co., Jarrow (No.336)/John Penn & Son.
K: ... . L: 19.10.1876. C: ... . Sold to Stanlee Shipbreaking Co., Dover 22.10.1920.

Tees Palmers Sbdg & Iron Co., Jarrow (No.337)/John Penn & Son.
K: ... L: 19.10.1876. C: ... Sold to Harris Brothers, Bristol 9.7.1907.

Dee Palmers Sbdg & Iron Co., Jarrow (No.341)/R. & W. Hawthorn.
K: ... . L: 4.4.1877. C: ... . Used for torpedo instruction at Malta 1892-1902. Sold there 10.7.1902.

Don Palmers Sbdg & Iron Co., Jarrow (No.342)/R. & W. Hawthorn.
K: ... . L: 14.4.1877. C: ... . Used as concrete barge at Malta 1906-08. Converted to lighter 1911. Sold there 1914.

Esk Palmers Sbdg & Iron Co., Jarrow (No.343)/R. & W. Hawthorn.
K: ... L: 28.4.1877. C: ... Sold at Hong Kong 4.1903.

Slaney Palmers Sbdg & Iron Co., Jarrow (No.344)/R. & W. Hawthorn.
K: ... L: 28.4.1877. C: ... Diving tender 1906. Sold to Ward, Grays 30.8.1919, and arrived there 10.10.1919, but listed till 1921 and finally moved to Rainham, Kent to BU on 3.1.1923.

Trent Palmers Sbdg & Iron Co., Jarrow (No.345)/R. & W. Hawthorn.
K: ... . L: 23.8.1877. C: ... . Renamed *Pembroke* 9.1905, then *Gannet* 6.1917 as diving tender. Sold to the Dover Shipbreaking Co., 21.2.1923.

Tweed Palmers Sbdg & Iron Co., Jarrow (No.346)/R. & W. Hawthorn.
K: ... . L: 23.8.1877. C: ... . Sold at Hong Kong 21.11.1905.

NOTES: Full 3-masted (barquentine) rig. Bow rudders.

***BOUNCER* Class** - iron twin-screw coastal gunboats ('flatiron'/Rendel gunboats).
Dimensions & tons: 87ft 4in x 26ft 2in x 6ft 6in. 265 disp.
Guns: 1 x 10in MLR.
Machinery: 28 nhp. 230 ihp.

Bouncer Pembroke Dyd/John Penn & Son.
Ord: ... . K: ... . L: 15.3.1881. C: ... . Ordered to be converted to a tank vessel in 10.1904, but instead sold at Sheerness 4.4.1905.

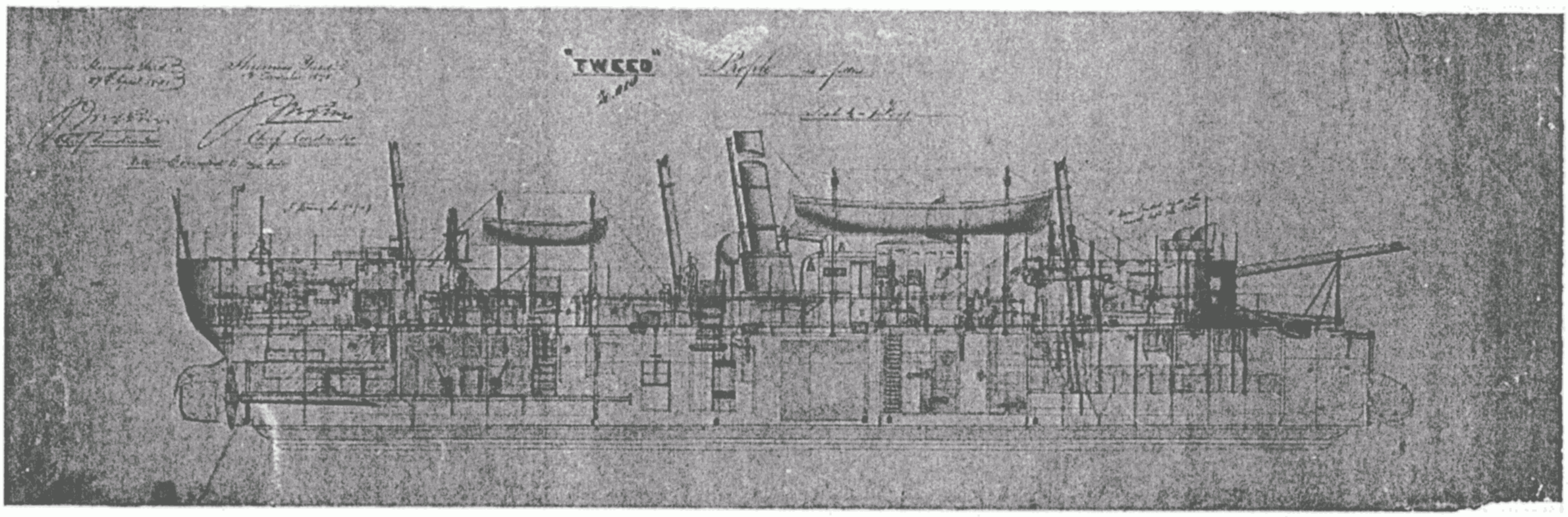
Insolent Pembroke Dyd/John Penn & Son.
Ord: 1878. K: ... . L: 15.3.1881. C: ... . Gate vessel 1.1918. Foundered in Portsmouth Harbour 1.7.1922; wreck was sold to J. H. Pounds, Portsmouth on 18.6.1925.

HANDY - iron twin-screw coastal gunboat ('flatiron'/Rendel gunboats) purchased from builders 1884.
Dimensions & tons: 115ft 0in x 37ft 0in x 9ft 0in. 508 disp.
Men: ... . Guns: 1 x 7.5in, 1 x 4in.
Machinery: 2 sets of 2-cyl. single expansion. Twin screws. 310 ihp.

Handy Charles Mitchell & Co., Walker (No.451)/Ross & Duncan.
K: 8.1882. L: 30.12.1882. C: 7.1883. Renamed *Excellent* 5.1891 as training ship, then *Calcutta* 1.11.1916, finally *Snapper* 8.1917. Sold 27.4.1924. She was sold again to Pounds shipbreakers in the 1970s but not BU, and was still (2002) afloat, at their yard at Portsmouth.

NOTES: Trials gunboat. Experimentally fitted initially with the 13.5in gun intended for *Royal Sovereign* Class battleships. A similar trials gunboat

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As fitted profile of the masted gunboat *Tweed*, dated Sheerness 5 December 1878, corrected to 27 April 1881. Note the bow rudder.
DR8004

(*Drudge* - Yard No.504) of 890 tons (125ft x 35ft) was launched by Armstrong Mitchell (as the firm had now become) on 15.6.1887 for the Ordnance Dept, but was not transferred from the latter to the Navy until 28.2.1901 and thus falls outside this book (she was renamed *Excellent* 21.11.1916, then *Dryad* 26.1.1919, finally *Drudge* 1919, and sold 27.3.1920).

Colonial Service Gunboats

A number of steel-hulled gunvessels were built for the naval services of the individual Australian forces, and the survivors formed the nucleus of the Australian Navy when the Commonwealth of Australia was created in 1901 (see Colin Jones, 'The Purchase of the Australian Colonial Gunboats', *The Mariner's Mirror* Vol 81 No 2 (1995), pp 182-94).

***ALBERT* Class** - large 'flatiron' gunvessel (Armstrong Type B1), built for the naval service of Victoria.

Dimensions & tons: 120ft oa, 115ft pp x 25ft x 9ft 6in. 350 disp.
Men: 55. Guns: 1 x 8in (12½-ton) BL, 1 x 6in (4-ton) BL, 2 x 9pdr.
Machinery: 2 sets compound engines. 2 screws. 400 ihp = 10.5kts. 60 tons coal.
First cost: £27,731.

Albert Armstrong Mitchell, Walker (No.454)/R. & W. Hawthorn.
Ord: 28.6.1882. K: 30.9.1882. L: 6.6.1883. C: 26.1.1884. Sold to War Department as a DYd buoy tender 1897. Sold as a lighter 1917.

NOTES: Ordered and begun as *Melbourne* but renamed (probably while on stocks).

***VICTORIA* Class** - large 'flatiron' gunvessel (Armstrong Type D), built for the naval service of Victoria.

Dimensions & tons: 145ft 0in oa, 140ft 0in wl x 27ft 0in x 11ft 0in. 530 disp.
Men: 53. Guns: 1 x 10in (25-ton) BL, 2 x 13pdr BL, 2 MGs.
Machinery: 2 sets compound engines. 2 screws. 800 ihp = 12kts. 90 tons coal.
First cost: £40,093.

Victoria Armstrong Mitchell, Walker (No.455)/R. & W. Hawthorn.
Ord: 28.6.1882. K: 30.9.1882. L: 25.6.1883. C: 26.1.1884. Sold for mercantile use as a survey vessel 1896; by 1920 used as a tug and BU in 1935.

NOTES: At about the same time as these two gunvessels, the Victoria government also ordered three TBs - the First Class *Childers* and the Second Class *Nepean* and *Lonsdale* (at Thornycroft) - see Chapter 10. The *Victoria*'s 10in gun was replaced in 2.1888 by 1 x 8in (12½-ton) BL and 1 x 6in (4-ton) BL.

***PROTECTOR* Class** - large 'flatiron' gunvessel (Armstrong Type F1), built for the naval service of South Australia.

Dimensions & tons: 188ft 0in oa, 180ft 6in wl x 30ft 0in x 12ft 6in. 920 disp.
Men: 90. Guns: 1 x 8in (12½-ton) BL, 5 x 6in (4-ton) BL, 4 x 3pdr, 5 MGs.
Machinery: 2 sets compound engines. 2 screws. 1,500 ihp = 14kts.
First cost: £67,000.

Protector Armstrong Mitchell, Walker (No.457)./R. & W. Hawthorn.
Ord: 16.11.1882. L: 27.12.1883. C: 6.1884. Harbour service, renamed *Cerberus* 1.4.1921. Sold to J. Hill, Melbourne 10.9.1924 as *Protector*; resold 1931 as *Sidney* and sunk in collision off Gladstone while on loan to US Army 7.1943.

***GAYUNDAH* Class** - large 'flatiron' gunvessels (Armstrong Type B1), built for the naval service of Queensland. As *Albert* design, but with proper UD and a bulletproof steering position.

Dimensions & tons: 120ft oa, 115ft pp x 26ft x 9ft 6in. 360 disp.
Men: ... . Guns: 1 x 8in (12½-ton) BL, 1 x 6in (4-ton) BL, 2 x 1.5in, 2 MGs.
Machinery: 2 sets compound engines. 2 screws. 400 ihp = 10.5kts. 60 tons coal.
First cost: *Paluma* £30,850. *Gayundah* £30,904.

Paluma Armstrong Mitchell, Walker (No.469)./R. & W. Hawthorn.
Ord: 13.7.1882. L: 6.5.1884. Sold 1913 (still registered 1961).

Gayundah Armstrong Mitchell, Walker (No.470)./R. & W. Hawthorn.
Ord: 13.7.1882. L: 6.5.1884. Sold for mercantile use 1921.

NOTES: At the same time, the Queensland government also ordered the Second Class TB *Mosquito* (at Thornycroft).

A number of other gunboats were acquired by the various Australian naval services around the same date. Two iron gunboats - the *Batman* (388 disp, built 1883 by Simons at Renfrew) and *Gannet* (346 disp) were purchased in 1884 and each armed with 1 x 6in BL gun; each lasted until c1895 (*Batman* scuttled in that year). The smaller *Bonito* (120 disp) was built in

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1884 and armed with 1 x 64pdr MLR. The steel gunboat *Otter* (220 disp) was launched by Ramage & Ferguson, Leith (No. 57) on 19.7.1884 and served until sold in 1906 (but would subsequently be hired back by the RN from 9.1939 until 12.1940). The iron gunboat *Lady Loch* (336 disp, 183ft x 24ft 6in) was built in 1886 by Campbell, Melbourne, and carried 1 x 6in BL; she was BU in 1901. Finally the iron gunboat *Fawkner* (387 disp) was acquired in 1887 and armed with 1 x 6in + 1 x 6pdr; fate unknown.

Transports/Troopships

AMBERWITCH - iron troopship (built 1862 as T. & J. Harrison's *Charente*).

Dimensions & tons (probable): 212ft 0in oa, 175ft 6in pp x 32ft 0in x 7ft 0in. 1,010 disp.
Machinery: Fawcett, Preston & Co. 2-cyl. (34in diam., 27in stroke) horizontal single expansion. Single screw. 250 ihp = 7.7kts. 90 tons coal. Sold c1892.

***EUPHRATES* Class** - iron troopships.

Dimensions & tons: 360ft 0in, c327ft 8in x 49ft 1½in x 22ft 4in. 4,206 bm. 6,211 disp.
(*Malabar* slightly smaller at: 360ft 0in, c327ft 2in x 49ft 0¾in x 22ft 4in. 4,189 bm.)
Men: ... . Guns: 3 x 4pdr.
Machinery: 2-cyl. horizontal single expansion (see Notes). Single screw. 700 nhp. See under individual ships for ihp/speed.

Serapis Thames Iron Sbdg, Blackwall (No.12F)/Humphrys, Tennant & Co. (3,945 ihp = 14.059kts.)
Ord: 1865. K: ... . L: 2.9.1866. Sold to I. Cohen 23.11.1894.

Jumna Palmers Sbdg & Iron Co., Hebburn (No.190)/Maudslay, Sons & Field. (4,894 ihp = 14.656kts.)
Ord: 1865. K: ... . L: 24.9.1866. Became coal hulk C.110 in 1893. Sold to A. J. Hellyer 7.1922 as hulk *Oceanic*.

Euphrates Laird Brothers, Birkenhead (No.325)/Laird Brothers. (5,004 ihp = 14.718kts.)
Ord: 1865. K: ... . L: 24.11.1866. Sold to I. Cohen at Portsmouth 23.11.1894; resold to Henry Castle & Son to BU 8.1895.

Malabar Robert Napier & Sons, Govan (No.120)/Robert Napier & Sons. (4,893 ihp = 14.57kts.)
Ord: 1865. K: ... . L: 8.12.1865. Base ship 1897. Renamed *Terror* 1.5.1901. Sold to R. Tucker at Bermuda 1.1918.

Crocodile Money Wigram & Sons, Blackwall/Humphrys, Tennant & Co. (4,044 ihp = 14.003kts.)
Ord: 1865. K: ... . L: 7.1.1867. Sold 11.5.1894.

Notes: First four ships all underwent re-engining. *Serapis* completed with a 4-cyl. horizontal compound engine, with 2 high pressure cylinders of 57in diam. and 2 low pressure ones of 95½in diam., stroke 45in; re-engined 1869 with a single expansion engine of 2 cylinders (96in diam., 45in stroke), producing 4,028 ihp = 13.888kts. *Jumna* original engine of 3 cylinders (77in diam., 48in stroke) modified to compound 1873 with one cylinder replaced at Portsmouth by 58in diam. high pressure one, producing 3,044 ihp = 12.87kts. *Euphrates* original engine of 2 cylinders (94¼in diam., 54in stroke) replaced 1873 by compound engine with a high pressure cylinder of 68¼in diam. and a low pressure one of 116in stroke, 54in stroke producing 1,739 ihp = 10.743kts. *Malabar* with 2-cyl. (94in diam., 48in stroke) also re-engined by Napier in 1873. Only *Crocodile*, with 2-cyl. (96in diam., 45in stroke) engine, escaped re-engining.

TENASSERIM - iron troopship (built 1872 in London).

Dimensions & tons: 285ft 0in, 250ft 0in x 36ft 0in x 16ft 0in. 2,570 (3,300 load) disp.
Machinery: Single screw. 1,080 ihp = 10.5kts. 115 tons coal.

ASSISTANCE - iron troopship/storeship.

Dimensions & tons: 250ft 0in x 38ft 0in x 17ft 0in. Draught 14ft 10in (fwd), 16ft 6in (aft). 2,038 disp (2,515 in 1878).
Men: ... . Guns: 2.
Machinery: 2-cyl. (high pressure 42in diam., low pressure 80in diam., 3½ft stroke) inverted compound expansion. 4 boilers. Single screw. 1,442 ihp = 11.759kts.

Assistance R. & H. Green, Blackwall (No.400)/Humphrys, Tennant & Co.
Ord: 1872. K: ... . L: 26.9.1874. Sold 1897.

DROMEDARY - iron troopship/storeship, purchased 1873 (ex-mercantile *Briton*, L: 6.7.1861. C: 10.1861 by Charles Lungley, Deptford Green).

Dimensions & tons: 235ft 6in pp x 31ft 3in x 16ft 0in. 1,120 disp.
Machinery: 2-cyl. horizontal, trunk. 180 nhp. 640 ihp.
Purchased 4.11.1873. BU 1885.

CANNING - steel troopship (ex-mercantile *Golconda*, L: 15.11.1882. C: 3.1883 by A. & J. Inglis, Pointhouse, Glasgow (No.174)).

Dimensions & tons: 285ft 0in x 36ft 0in x 16ft 0in. 3,300 disp.
Machinery: 2-cyl. Inglis compound expansion. 1,080 ihp = 10.5kts.
Purchased 1882. On sales list 1919.

CLIVE - iron troopship for RIM (L: 15.11.1882. C: 4.1883 by Laird Brothers, Birkenhead (No.493).).

Dimensions & tons: 300ft 0in x 45ft 6in x 16ft 6in. 3,570 disp.
Machinery: 2,300 ihp = 12kts.
On sales list 1919.

DALHOUSIE - iron troopship for RIM (launched 5.6.1886 Caird & Co., Greenock (No.243)).

Dimensions & tons: 239ft 6in x 36ft 0in x 16ft 7in. 1,960 disp.
Men: ... . Guns: 6 x 6pdrs.
Machinery: Caird 3-cyl. triple expansion. 1,500 ihp = 13kts. 300 tons coal.
Depot ship 1939-45.

LAWRENCE - iron troopship for RIM (launched 15.6.1886 by Laird Brothers, Birkenhead (No.535)).

Dimensions & tons: 212ft 0in pp x 32ft 0in x 17ft 6in. 1,154 disp.
Men: ... . Guns: 4 x 4in.
Machinery: Paddle machinery. 1,200 ihp = 13kts.
Renamed *Old Lawrence* 1918, then *Canning* 1919. Sold c1922.

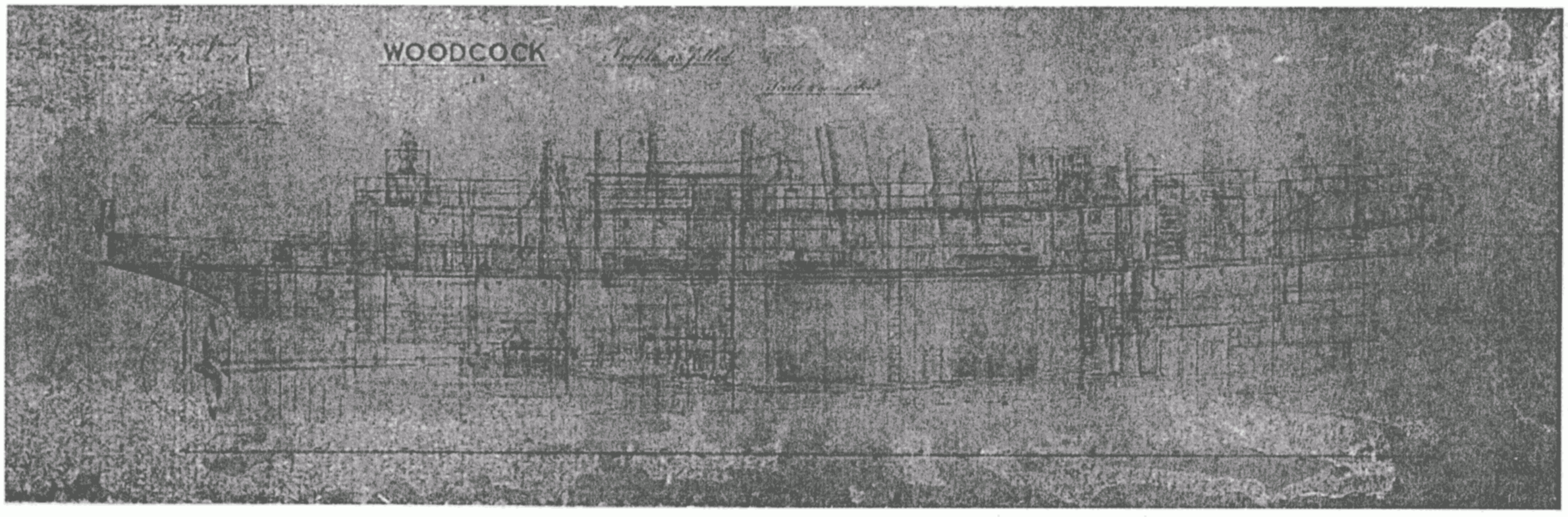
ELPHINSTONE - iron troopship for RIM (ex mercantile *Hindoo*, launched 14.11.1887 by J.Wigham Richardson & Co., Low Walker, Newcastle (No.220)).

Dimensions & tons: 205ft 6in x 31ft 6in x 14ft 0in. 950 disp.
Men: ... . Guns: 4 x 3pdrs.
Machinery: 3-cyl. triple expansion. 1,670 ihp = 14kts.
Purchased 1887. On sales list 1919

Storeships

WYE - purchased 1873 (ex-mercantile, launched 1873 by Osbourne Graham & Co., Sunderland (No.8)).

Dimensions & tons: 220ft 0in pp x 27ft 2in x 21ft 0in. 1,640 disp.



As fitted profile of the purchased survey vessel *Woodcock*, Devonport 25 March 1886, corrected to 23 April 1893. *DR40409*

Machinery: 130 nhp. 629 ihp. (re-engined 1893; 700 ihp).
Purchased 17.12.1873. Sold to Adrienne Merveille of Dunkirk to BU 3.4.1906.

TYNE - purchased 1878 (ex-mercantile *Mariotis*, launched 19.1.1878 by Charles Mitchell & Co., Walker (No.354)).
Dimensions & tons: 319ft 0in pp x 34ft 3in x 16ft 7in. 3,560 disp.
Men: ... . Guns: 2 x 24pdr howitzers (later 4 x 12pdr).
Machinery: R. & W. Hawthorn. 1,194 ihp. 11.7kts.
Purchased from builder 8.3.1878 and completed 6.1878. Became depot ship for destroyers 1914-18. Foundered in a gale at moorings at Sheerness while awaiting sale to Stanlee, Dover 15.11.1920.

HUMBER - purchased 1878 (ex-mercantile *Harar*, launched 7.10.1876 by Earle's Sbdg, Hull (No.205)).
Dimensions & tons: 246ft 0in oa, 234ft 0in pp x 29ft 0in x 17ft 9in. 1,640 disp.
Machinery: Earle. 490 ihp (re-engined 1893; 800 ihp).
Purchased 28.5.1878. Sold 1907 as mercantile *Lucia Victoria*.

Surveying and Exploration Ships, etc.

HEARTY - survey ship, purchased 1885 (ex-mercantile *Indra*, launched 18.4.1885 by W. B. Thompson, Dundee (No. 65)).
Dimensions & tons: 212ft 0in pp x 30ft 0in x 13ft 5in. 1,300 disp (719 tons gross).
Men: ... . Guns: 2 x 4in BL, 2 x 12pdr BL.
Machinery: 2-cyl. compound expansion. Twin screws. 1,800 ihp.
Purchased on stocks 1885. Sold to M. S. Hilton as salvage vessel 6.11.1920.

WOODCOCK - survey ship, purchased 1885 (ex-mercantile *William Jolliffe*, launched 1885 by J. Readhead & Sons, South Shields (No.211)).
Dimensions & tons: 148ft 0in pp x 26ft 0in x 9ft 6in. 750 disp (330 tons gross).
Machinery: 2-cyl. Readhead compound expansion. 804 ihp.
Purchased on stocks 4.1885. Renamed *Jackal* 1.5.1886. Sold to Harland & Wolff for mercantile use 10.7.1906. Hired 1.1.1915; renamed *Jack* 1916, but wrecked 9.8.1917.

Tugs

TURTLE - iron screw tug, purchased 1865 (ex-mercantile, launched 23.1.1864 by J. & W. Dudgeon, Limehouse).
Dimensions & tons: 57ft 7in x 11ft 11in x 7ft 5in. 37 bm. 41 disp.
Machinery: Twin screws. 20 nhp. 119 ihp.
Purchased 1865 for use at Ascension Island. Foundered there 17.4.1873.

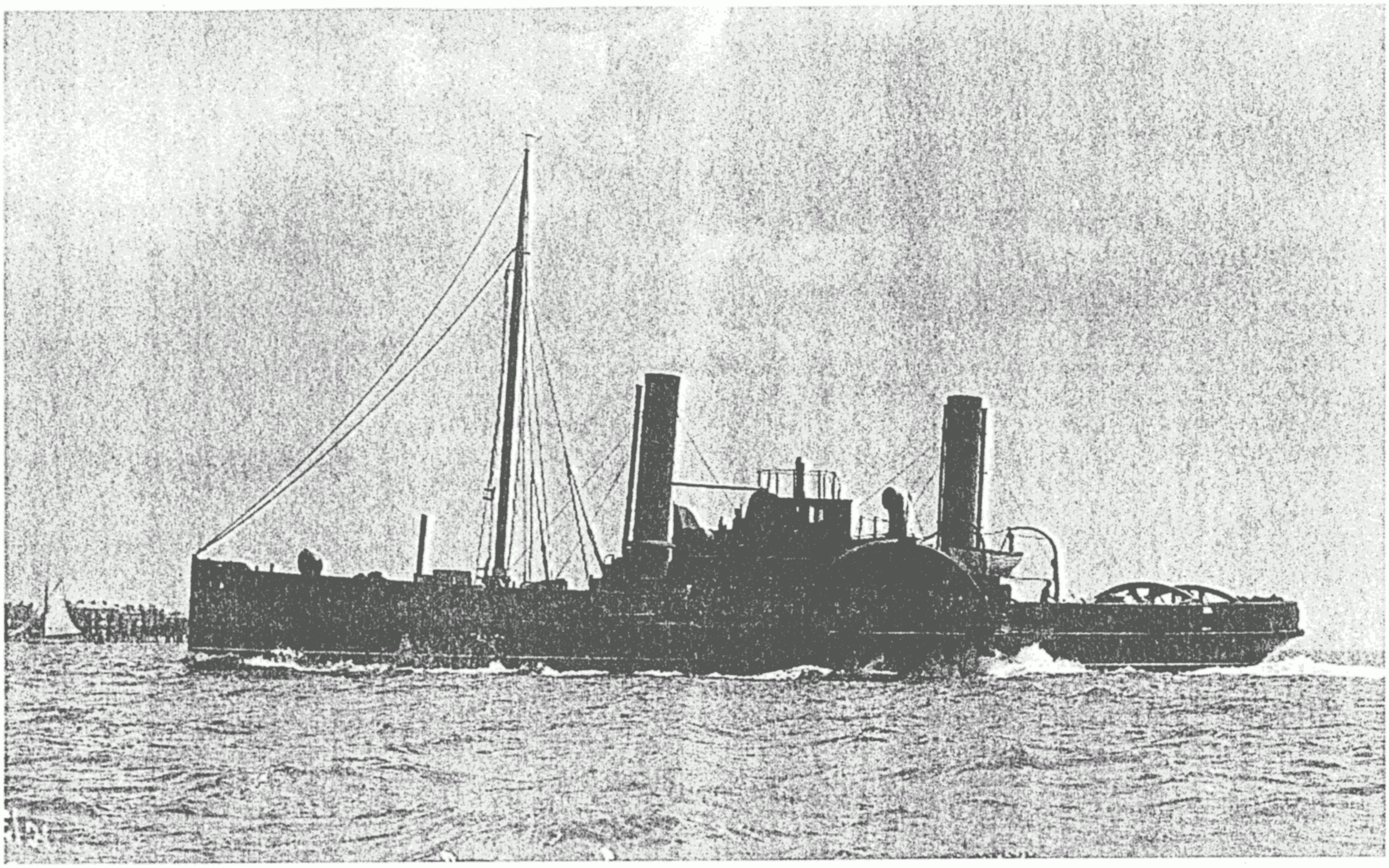
AFRICAN - iron screw tug.
Dimensions & tons: 57ft 6in x 11ft 10in x 7ft 0in. 36 bm. 41 disp.
Machinery: Twin screws. 20 nhp. 99 ihp.
African J. & G. Rennie, Greenwich/J. & G. Rennie.
L: 27.11.1865. BU 1907.

***SEAHORSE* Class** - iron screw tug.
Dimensions & tons: 168ft 6in oa, 160ft 0in pp x 26ft 0in x 10ft 8in. 319 bm. 521 disp.
Men: ... . Guns: 1 x 12pdr, 2 x 6pdr.
Machinery: Twin screws. 1,170 ihp. 12.5kts.
Seahorse Laird Brothers, Birkenhead (No.471)/Laird Brothers.
Ord: 1879. K: ... . L: 7.7.1880. Sold to Chrichton Thompson 1.5.1920.

STORMCOCK - iron screw tug, purchased 1882 (ex-mercantile *Stormcock*, launched 5.12.1877 by Laird Brothers, Birkenhead).
Dimensions & tons: 161ft 0in pp x 24ft 6in x 12ft 6in. 568 disp (364 tons gross).
Men: ... . Guns: 4 x 3pdr QF.
Machinery: 2-cyl. compound expansion. Twin screws. 1,210 ihp.
Purchased 24.9.1882. Sold as mercantile *Morsecock* 7.3.1922.

TRAVELLER - iron screw tug, purchased 1885 (ex-mercantile *Stormcock*, launched 38.9.1885 by Hugh McIntyre & Co., Paisley).
Dimensions & tons: 160ft 0in pp x 24ft 0in x 14ft 0in. 700 disp.
Men: ... . Guns: 4 x 3pdr QF.
Machinery: 2-cyl. compound expansion. Twin screws. 1,120 ihp. 12kts.
Purchased on stocks 22.4.1885. Sold as mercantile *Bullger* 1.5.1920.

MAGNET - iron screw tug, purchased 1885 (ex-mercantile *Knight of the Cross*, built and engined 1883 by W. A. Stevens, Birkenhead).
Dimensions & tons: 136ft 0in pp x 22ft 7in x 11ft 4in. 430 disp (245 tons gross).



The Portsmouth-based paddle tug *Malta*. *N4570*

Men: ... . Guns: 4 x 3pdr QF.
Machinery: 517 ihp. 12kts.
Purchased 22.4.1885. Sold as mercantile *San Antonio* 1.5.1920.

CONFIANCE - iron screw tug, purchased 1885 (ex-mercantile *Navigator*, built 1884 by Edward Foden, Northwich).
Dimensions & tons: 107ft 1in pp x 19ft 4in x 10ft 3in. 270 disp (141 tons gross).
Machinery: Twin screws. 350 ihp.
Purchased 4.1885. Based at Devonport. Sold 5.1947.

While the screw propeller had been adopted by the Royal Navy by 1863 for almost every type of vessel, for its ease of manoeuvrability in harbours the paddle was retained as the principal means of propulsion for the dockyard tug flotilla. The longevity of these sturdy vessels is also apparent below.

***TRUSTY* Class** - iron paddle tugs.
Dimensions & tons: 129ft 11in pp x 23ft 2in x 14ft 0in. 319 bm. 521 disp.
Machinery: 2-cyl. 150 nhp. 855 ihp. 12.5kts.
Camel Palmers Sbdg & Iron Co., Jarrow (No.200)/Palmers.
Ord: 1865. K: ... . L: 3.2.1866. Sold to T. W. Ward to BU at Preston 1913.
Trusty Palmers Sbdg & Iron Co., Jarrow (No.201)/Palmers.
Ord: 1865. K: ... . L: 14.2.1866. ?Based at Devonport. Renamed *Trustful* 6.11.1917. Sold to W. J. Webb 8.9.1920.

***PROMPT* Class** - iron paddle tugs.
Dimensions & tons: 90ft 0in pp x 17ft 0in x 8ft 8in. 120 bm. 136 disp.
Machinery: 40 nhp. 172 ihp.
Prompt Robert Napier & Sons, Govan (No.129)/Robert Napier & Sons.
Ord: ?1866. K: ... . L: 6.11.1867. ?Based at Malta. Sold at Malta 9.1922.
Hasty Robert Napier & Sons, Govan (No. 130)/Robert Napier & Sons.
Ord: ?1866. K: ... . L: 14.8.1867. BU 1885.

MANLY - iron paddle tug.
Dimensions & tons: 100ft 0in x 17ft 0in x 9ft 5in. 135 bm. 188 disp.
Machinery: 50 nhp. 293 ihp.
Manly J. & G. Rennie, Greenwich/J. & G. Rennie.
Ord: 1867. K: ... . L: 23.4.1868. Sold 26.1.1912.

***ESCORT* Class** - iron paddle tug.
Dimensions & tons: 128ft 0in pp x 24ft 0in x 14ft 3in. 340 bm. 525 disp.
Machinery: 860 ihp.
Escort Laird Brothers, Birkenhead (No.403)/Laird Brothers.
Ord: ?1872. K: ... . L: 26.4.1873. Based at Gibraltar. Wrecked on a reef near Malta 20.4.1887.

***PERSEVERANCE* Class** - iron paddle tug.
Dimensions & tons: 130ft 1in pp x 22ft 0in x 12ft 6in. 280 bm. 538 disp.
Machinery: 898 ihp.

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Perseverance Devonport Dyd/... .
Ord: 1872. K: 24.11.1872. L: 19.1.1875. Based at Plymouth. Sold to Cox, Falmouth to BU 27.4.1911.

SHAMROCK - iron paddle tug.
Dimensions & tons: 74ft 0in pp x 13ft 6in x 6ft 8in. 63 bm. 118 disp.
Machinery: 30 nhp. 120 ihp.
Shamrock Pearse Lockwood & Co., Stockton (No.128)/James Watt.
Ord: 1873. K: 1873. L: 11.8.1873. C: 10.10.1873. Converted to screw tug c1890. Renamed *Saint Patrick* 1.11.1917. Sold to the Irish Government 15.5.1923.

***MALTA* Class** - iron paddle tugs.
Dimensions & tons: 128ft 0in pp x 25ft 0in x 10ft 6in. 375 bm.
530 disp.
Machinery: 970 ihp.
Malta Laird Brothers, Birkenhead (No.420)/Laird Brothers.
Ord: 1874. K: ... . L: 21.1.1875. Based at Portsmouth, later Rosyth. Sold to J. W. Houston as mercantile *Benshie* 1.1921.
Sampson Laird Brothers, Birkenhead (No.438)/Laird Brothers.
Ord: 1876. K: ... . L: 31.1.1877. Based at Malta. Renamed *Orient* 7.1918. Sold at Malta 8.6.1923.
Aetna Laird Brothers, Birkenhead (No.517)/Laird Brothers.
Ord: 1882. K: ... . L: 1.9.1883. Based at Devonport. Sold to Young, Sunderland to BU 19.2.1929.
Meteor Laird Brothers, Birkenhead (No.518)/Laird Brothers.
Ord: ?1882. K: ... . L: 5.9.1883. Based at Chatham. Renamed *Perseverance* 1914. Sold to Carriden Shipbreaking Co. 31.1.1923.

CARRON - iron paddle tug, purchased 1888 (ex-mercantile *Flying Eagle*, ex-*Mount Etna*, built 1880 by Chambers, Dumbarton (No.8)).
Dimensions & tons: 139ft 6in x 21ft 9in x 11ft 4in. 232 bm. 459 disp.
Machinery: 500 ihp.
Purchased 14.3.1888. Sold 27.3.1923 at Gibraltar.

On Indian Service there was additionally the iron paddle tug *Undaunted* of 470 bm, which was built at Dumbarton in 1865 and measured 160ft 0in x 25ft 2in x 11ft 7in.

Coastguard Vessels

ARGUS
Dimensions & tons: 136ft x 22ft. 318 bm. 357 disp.
Men: ... . Guns: 2 x 6pdrs.
Argus R. & H. Green, Blackwall (No.290)/... .
L: 1851. Renamed *Amelia* 16.4.1872. Renamed *Fanny* 4.1889. Hulked 1899. BDV 1902. Sold to BU 1907.

IMOGENE
Dimensions & tons: 138ft 6in x 21ft 4in x 10ft 3in. 300 disp.
Machinery: 2-cyl. (24¼in diam., 16in stroke) horizontal, trunk.
Imogene White, Cowes/John Penn & Son.
L: 1864. Renamed *Argus* 22.1.1884. Sold 1903.

HAWK
Dimensions & tons: 146ft 0in x 23ft 2in x 11ft 0in. 372 bm. 416 disp.
Guns: 1 x 40pdr.
Machinery: 2-cyl. (26in diam., 18in stroke) single expansion.
Hawk White, Cowes/John Penn & Son.
L: 14.4.1869. Renamed *Amelia* 1888, then *Colleen* 1905, *Old Colleen* 1916, *Emerald* 1918 and finally *Cuckoo* 1918. Sold to Cove & Distinn 10.8.1922.

OBERON (ex-mercantile *Lady Aline*).
L: 24.4.1884 as yacht by Ramage & Ferguson, Leith (No. 55).
Machinery: 2-cyl. compound expansion. 400 ihp.
Dimensions & tons: 157ft x 24ft. 520 disp.
Purchased 1.1888, initially renamed *Oberon*; renamed *Hawk* 5.5.1888. Renamed *Undine* 1904. Sold at Chatham 3.4.1906.

Steam Yachts

FIREQUEEN - special service vessel, purchased 1882 (ex-private yacht *Candace*, launched 23.9.1881 by Ramage & Ferguson (No. 34)).
Dimensions & tons: 157ft 6in x 23ft 6in x 11ft 8in. 446 disp
(269 tons gross).
Machinery: 2-cyl. Walker Henderson compound expansion. 390 ihp.
Purchased 1882. Sold 5.7.1920, renamed *Firebird*.

IMOGENE - special service vessel, purchased 1882 (ex-mercantile *Jacaman*, launched 20.4.1882 by Barclay Curle).
Dimensions & tons: 159ft 6in x 24ft 2in x 12ft 0in. 460 disp
(301 tons gross).
Machinery: 420 ihp.
Purchased 1882. Sold to Ledger Hill 15.5.1919, renamed *Impey* (and renamed *Julius* in 2.1923).

9 Cruising Vessels (Wooden- and Composite-hulled)

A note on classification

'In late Georgian times any ocean-going cruiser mounting all her guns on a single deck, with no other deck or part deck above them, was called a "sloop" in official language, whether she carried two masts or three. In those days, therefore, the sloops were never above the lowest class in the square rigs: coming only after the Sixth Rate frigates, since even the smallest "frigate" classed as such carried guns on a quarter deck and forecastle above the main tier of armament. The sloops themselves were placed in two grades, according to ship or brig rig.

'But early in the Victorian reign a great enlargement of cruiser models carrying all [their] guns at upper deck level began to develop as a result of the introduction of steam; which, by placing a permanent weight of machinery deep in the hull, increased stability enough to allow the burden of armament to be placed higher up in new designs, with considerable advantage to gunnery. This led by degrees to the extinction of the conventional "frigate"; and although these new cruisers were frigates in their functions and size, it was ordained by tradition that because they carried all guns on deck they must be called "corvettes" or "sloops"; whereby these titles received enhanced importance in the general scale of relative power. By the 1870s a so-called "corvette" was the true successor of the large Georgian frigate formerly classed as a Fifth Rate, and a so-called "sloop" the successor of the small frigate in the Sixth or lowest rank of rated ship. The still lesser craft that took the place of the old sloops below all rated tonnage were now known as "gunvessels" and "gunboats"; which corresponded respectively to the old ship sloop and the brig.'

(Admiral George Ballard, in *The Mariner's Mirror*, Vol 24 (1938), pp 302-3.)

Following on the success of the *Warrior* and *Black Prince*, and taking particular notice of French enthusiasm for building an all-ironclad battlefleet, the Admiralty decided that future battleship construction should be of iron, although for the entire period of iron construction, a sandwich construction was employed for armour protection whereby iron plating was backed by a considerable thickness of teak. As early as April 1861, the House of Commons accepted and passed a motion by William Lindsay, the shipowner and Radical MP for Sunderland, calling for an end to wooden battleship construction.

It was a different issue as regards cruising vessels. The Admiralty decreed that vessels of under 3,000 tons should continue to be built of wood, rather than the expensive alternative of using iron. The issues were hotly debated for the next 20 years (for a very full discussion, the reader is referred to Chapter 2 of John Beeler's *The Birth of the Battleship* – London, 2001). The result was the introduction of iron for framing purposes – an iron keel, frames, stem and stern posts but with wood planking retained over the iron frames. Until iron was overtaken by steel at the close of the 1870s, most of the corvettes and smaller craft were so constructed on 'composite' lines, and for the sloops, gunvessels and gunboats the practice was to continue until the Naval Defence Act in 1889 marked an end to the Victorian gunboat fleet. Of the 97 effective vessels of under 3,000 tons in the RN in 1875, 65 were of composite construction. In the last composite corvettes – the *Emerald* and *Satellite* classes – an internal steel deck was added over the machinery and magazines for protection.

All the vessels in this chapter continued to be built with a full three-masted rig, with a single funnel invariably placed between the fore and main masts to exhaust the furnace gases. Unlike the battlefleet, cruising vessels were deployed around the globe, and the development of a world-wide network of bunkerage stations took decades to achieve. Moreover the risk of major mechanical breakdown meant that cruising vessels were required to have a sailing rig to fall back on in the absence of repair facilities. Even after the arrival of the mastless cruiser, full sailing rigs were retained on most existing cruisers well past the turn of the century.

Screw Corvettes

When corvette construction began again in 1863, two different grades of corvette were built. As Chief Constructor, Edward Reed designed six iron-hulled corvettes (details will be found in the previous chapter), besides two 'armoured corvettes' (in effect, small ironclads - detailed in Chapter 7). The smaller-grade vessels appear in the present section. Unlike other categories of smaller warship, composite construction was not at this stage introduced for corvettes; instead, Reed designed three classes of wooden corvettes during the late 1860s (a total of 12 vessels). A few years later, Nathaniel Barnaby designed the last-ever class of wooden cruisers, the five corvettes of the *Amethyst* Class, and followed them up with the six similarly-sized *Emerald* Class of composite construction. The composite corvettes were re-armed during the 1880s with BL guns, but the wooden corvettes all kept their MLR guns.

***JUNO* Class** - wooden screw corvettes, 6 guns. Edward Reed design 1866, primarily intended for trooping.

Dimensions & tons: 200ft 0in pp x 40ft 4in x 16ft 7in. 1,459 bm. 2,216 disp.

Men: 200. Guns: 2 x 7in (6½-ton) MLR, 4 x 64pdr (71cwt) MLR. Both re-armed 1876: 7in guns removed, *Juno* given extra 4 x 64pdr and *Thalia* extra 2 x 64pdr.

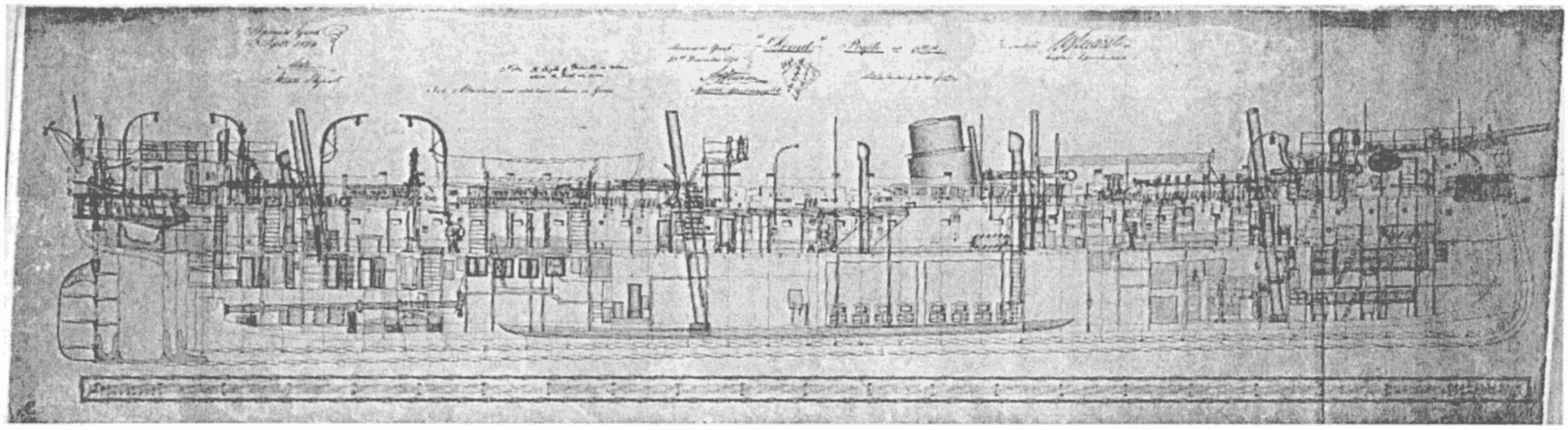
Machinery: 2-cyl. horizontal single expansion. 4 boilers (*Juno* 23lbs/sq.in pressure, *Thalia* 20lbs/sq.in). Single screw. 400 nhp. see below for ihp/speed. 230 tons coal = 2,350 miles @ 10kts.

First cost: *Thalia* hull £47,915, machinery £21,709.

Juno Deptford Dyd/Humphrys & Tennant. (1,090 ihp = 10.534kts.)
Ord: ... . K: 1866. L: 28.11.1867. C: 5.1868. Sold 12.1887.

Thalia Woolwich Dyd/Robert Napier & Sons. (1,597 ihp = 11.136kts.)
Ord: ... . K: 1866. L: 14.7.1869. C: 3.1870. Troopship 10.1886. Powder hulk 1891. Depot ship 2.1915. Sold to Rose Street Foundry 16.9.1920.

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The wooden corvette *Druid*, as fitted profile dated Sheerness 23 December 1871 (the ship was built at Deptford, but was fitted out at Sheerness after Deptford Dockyard closed in March 1869). *DR3690*

NOTES: Primarily designed for carrying troops. Ship-rigged, with a telescopic funnel and hoisting screw. *Juno* had cylinders of 64in diam., 32in stroke; *Thalia* of 65¼in diam., 36in stroke. *Thalia* was the last ship built at Woolwich Dyd, and received the engine intended originally for the cancelled (1864) wooden frigate *Ister* (see Chapter 5).

The seven vessels of Reed's *Eclipse* Class of wooden screw sloops, built from 1865 to 1872, were all reclassed as 12-gun corvettes in 1876. Details will be found under their original designation in the section on sloops below.

***BRITON* Class** - wooden screw corvettes, 10 (later 14) guns. Edward Reed design, 1868.

Dimensions & tons: 220ft 0in pp x 36ft 0in x 21ft 6in. Draught 12¾ft fwd, 16¼ft aft. 1,322 bm. 1,730/1,860 disp.

Men: 220. Guns: First pair 2 x 7in/112pdr (6½-ton) MLR on slides, fore and aft, 8 x 6.3in/64pdr (71cwt) MLR on broadside trucks. *Thetis* completed with 14 x 6.3in/64pdr (64cwt) Mk III MLR only (12 on broadside trucks, plus 2 on traversing slides fore and aft).

Machinery: *Druid* 2-cyl. (67in diam., 33in stroke) horizontal single expansion. 4 rectangular boilers (30 lbs/sq.in pressure). Single screw. 350 nhp. 285 tons coal. *Briton* and *Thetis* 2-cyl. (57in & 100in diam., 33in stroke) horizontal compound (Cowper's plan). 6 cylindrical boilers (60-64 lbs/sq.in). Single screw. 350 nhp. 255 tons coal. See below for individual ihp/speed.

Druid Deptford Dyd/Maudslay, Sons & Field. (2,272 ihp = 13.066kts.)
Ord: ... . K: 1868. L: 13.3.1869. C: 2.1872. Sold to Castle 10.11.1886.

Briton Sheerness Dyd/J. & G. Rennie. (2,149 ihp = 13.126kts.)
Ord: ... . K: 1868. L: 6.11.1869. C: 11.1871. Sold at Bombay 1887.

Thetis Devonport Dyd/J. & G. Rennie. (2,275 ihp = 13.390kts.)
Ord: ... . K: 29.8.1870. L: 26.10.1871. C: 1.2.1873. Sold to G. Pethwick, Plymouth to BU 11.1887.

NOTES: Lengthened versions of *Eclipse* Class (which were built as sloops) and - like them - were ram-bowed, with iron cross-beams but wooden frames and shell. Ship-rigged, with 15,000 sq.ft of sail area, but logged an indifferent 11kts under sail. After their first commissions, *Druid* (1882) and *Briton* (1876) were re-armed like *Thetis*, with 14 x 64pdr MLR, and were re-rigged as barques. *Druid* was the last ship built at Deptford Dyd.

***AMETHYST* Class** - wooden screw corvettes, 14 guns. Design by Nathaniel Barnaby, 1871.

Dimensions & tons: 220ft 0in pp x 37ft 0in x 18ft 0in. 1,405 bm. 1,934 disp.

Men: 225. Guns: 14 x 6.3in/64pdr MLR - 12 (of 71cwt) on broadside trucks and 2 (of 71cwt in *Encounter* and *Modeste*, 64cwt in other three) on slides as bow and stern chasers.

Machinery: 2-cyl. horizontal compound expansion. 6 cylindrical boilers (60 lbs/sq.in pressure). Single (hoisting) screw, 15ft diam. 350 nhp. See below for individual ihp/speed. 270 tons coal = 2,060-2,500 miles radius @ 10kts. Over 13kts under sail.

First cost: *Diamond* hull £50,607, machinery £26,189. *Sapphire* hull £51,986, machinery £26,311.

Encounter Sheerness Dyd/J. & G. Rennie. (2,031 ihp = 13.004kts.)
Ord: 1871. K: 19.6.1871. L: 1.1.1873. C: 7.1873. Sold 10.1888.

Amethyst Devonport Dyd/J. & G. Rennie. (2,144 ihp = 13.244kts.)
Ord: ... . K: 28.7.1871. L: 19.4.1873. C: 7.1873. Sold to G. Pethwick, Plymouth to BU 11.1887.

Modeste Devonport Dyd/Robert Napier & Sons. (2,068 ihp = 12.511kts.)
Ord: ... . K: 27.11.1871. L: 23.5.1873. C: 1.1874. Sold to Castle to BU at Charlton 8.1.1888.

Diamond Sheerness Dyd/R. & W. Hawthorn. (2,140 ihp = 12.556kts.)
Ord: ... . K: 1873. L: 26.8.1874. C: 7.1875. Sold 8.1889.

Sapphire Devonport Dyd/R. & W. Hawthorn. (2,364 ihp = 13.583kts.)
Ord: ... . K: 17.6.1873. L: 24.9.1874. C: 8.1875. Sold to George Cohen to BU 24.9.1892.

NOTES: The last wooden warships built at any Royal Dockyard. The *Encounter* was barque-rigged; the other four were ship-rigged, with 18,000 sq.ft of sail area, and were completed with knee bows. The first two each had a high pressure cylinder of 55½in diam., and a low pressure one of 97¾in diam.; the last three each had a high pressure cylinder of 57in diam., and a low pressure one of 90in diam; in all five, stroke 33in. The last pair had frigate sterns; these and *Amethyst* had their 12 broadside guns replaced for their second commission by 10 slide-mounted 64pdrs of lighter pattern, and were re-rigged as barques.

***EMERALD* Class** - composite screw corvettes, 12 guns. Nathaniel Barnaby design, 1873.

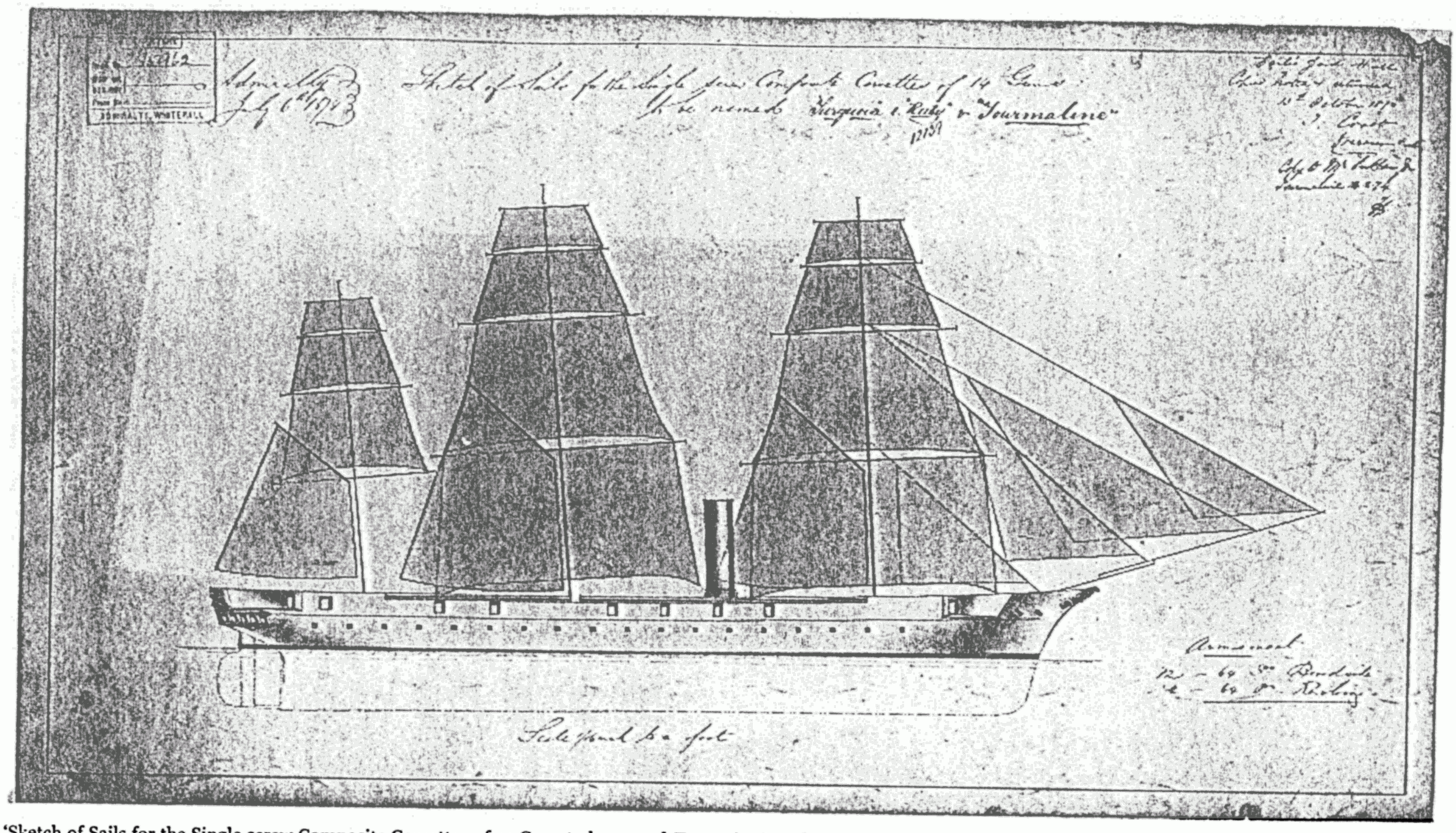
Dimensions & tons: 220ft 0in pp x 40ft 0in. Draught 16½ft fwd, 18ft aft. 1,864 bm. 2,120 disp.

Men: 232. Guns: 12 x 6.3in/64pdr MLR - 10 (of 71cwt) on broadsides, plus bow and stern chasers (of 64cwt) - all slide-mounted.

Machinery: 2-cyl. horizontal compound expansion. 6 cylindrical boilers (60 lbs/sq.in pressure). Single (hoisting) screw. 350 nhp. Designed for 2,100 ihp. See below for individual ihp/speed. 260 tons coal = 2,000-2,280 miles radius @ 10kts.

First cost: *Opal* hull £68,574, machinery £27,375. *Turquoise* hull £68,089, machinery £27,458. *Ruby* hull £66,113, machinery £27,003. *Tourmaline* hull £69,998, machinery £25,771. *Emerald* hull £72,312, machinery £26,130. *Garnet* hull £64,689, machinery £27,779.

Scan and/or retouch by Grzechu



'Sketch of Sails for the Single screw Composite Corvettes of 14 Guns to be named *Turquoise* & *Ruby* & *Tourmaline*' dated Admiralty 6 July 1874. A note on the draught gives the armament as twelve 64pdrs on the broadside and two 64pdrs 'revolving'. *DR15962*

Opal William Doxford, Sunderland (No.63)/Robert Napier & Sons. (2,187 ihp = 12.536kts.)
Ord: ... . K: 13.10.1873. L: 9.3.1875. C: 1.1876. Sold 11.8.1892.
Turquoise Earle's Sbdg., Hull (No.202)/Earle. (1,994 ihp = 12.324kts.)
Ord: ... . K: 8.7.1874. L: 22.4.1876. C: 13.9.1877. Sold to Pounds, Hartlepool to BU 24.9.1892.
Ruby Earle's Sbdg., Hull (No.203)/Earle. (1,833 ihp = 12.280kts.)
Ord: ... . K: 8.7.1874. L: 9.8.1876. C: 14.6.1877. Became coal hulk *C.10* in 12.1904; sold 16.2.1921.
Tourmaline Raylton Dixon & Co., Middlesbrough (No.113)/R. & W. Hawthorn. (1,972 ihp = 12.624kts.)
Ord: ... . K: 17.7.1874. L: 30.10.1875. C: 25.10.1876. Became coal hulk 1899, renamed *C.115* in 12.1904; sold 11.1920.
Emerald Pembroke Dyd/J. & G. Thomson. (2,170 ihp = 13.873kts.)
Ord: ... . K: 29.7.1874. L: 18.8.1876. C: 2.7.1878. Powder hulk 1898. Sold to Cox, Falmouth for BU 10.7.1906.
Garnet Chatham Dyd/R. & W. Hawthorn. (2,005 ihp = 13.206kts.)
Ord: ... . K: 16.3.1875. L: 30.6.1877. C: 31.10.1878. Sold 12.1904.

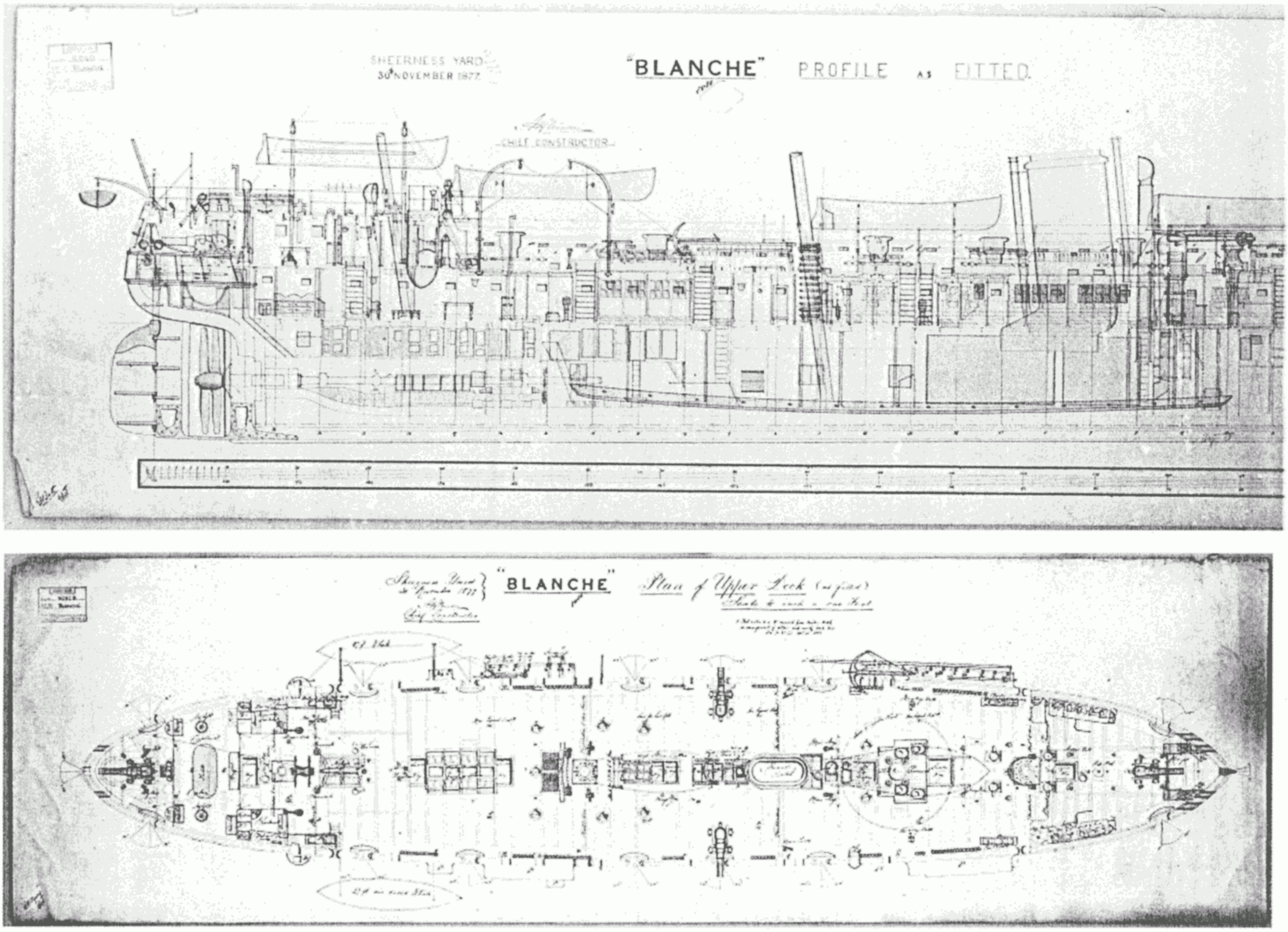
NOTES: The sole composite corvettes, having iron beams and frames and a 4in teak hull, sheathed with copper below the waterline. *Opal* began as *Magicienne*, renamed 12.2.1875. They had a long knee bow, an outward sloping stern and a very full cross-section amidships. Intended to carry 14 x 64pdr (like the preceding *Amethyst* Class), but only the *Opal* actually shipped this quantity, and she had two guns removed following her first commission; the other five were completed with 12 guns as detailed above; *Emerald* and *Tourmaline* were re-armed in early 1880s with 4 x 6in/100pdr (81cwt) BL plus 8 x 5in/50pdr (38cwt) BL guns; *Garnet* re-armed with 14 x 5in/50pdr (40cwt) BL, 7 MGs and 2 light guns. All were first completed with ship rigs (18,250 sq.ft sail area), and were converted to barques during the 1880s. Each had a high pressure cylinder of 57in diam., and a low pressure one of 90in diam; stroke 33in. *Garnet*'s screw was feathering, not hoisting type.

No further wooden-hulled (or composite) corvettes were built as such. Barnaby's seven large sloops of the *Satellite* Class, built from 1880, were reclassed as corvettes in 1884. In the meantime, under Reed and Barnaby, six larger iron-hulled cruising ships had been built and rated as corvettes during the period 1867-78 (see Chapter 7). Following on the *Emerald* Class of composite corvettes, Barnaby's next design was to produce 2,380-ton cruisers with all-metal hulls, albeit clad in two layers of timber (the *Comus* Class).

Screw Sloops

Edward Reed introduced a new series of sloop, departing from the traditional designs of Watts. The new vessels had iron cross beams (although initially retaining wooden frames) and a very full form, stretching towards both ends of the ship. As the design was developed in later classes, the increase in size and ordnance resulted in a redesignation as corvettes, with the *Eclipse* Class being reclassified in 1876. Barnaby's appointment saw a return to the smaller type of cruiser, with a new series of 27 composite (iron-framed) sloops being commenced in 1872; these similarly increased steadily in size and capability, and again the final (*Satellite*) Class were redesignated corvettes in 1884 (balancing a number of larger gunvessels being upgraded to sloops). A final series of composite sloop was produced by William White, who succeeded Barnaby in 1885; these were narrow-beam twin-screw vessels with triple expansion engines.

Scan and/or retouch by Grzechu



Upper deck plan for the *Blanche* as refitted, Sheerness 30 December 1877. Only two of the broadside 64pdrs are depicted, but the positions for the other eight are indicated; the bow and stern chase guns are drawn, along with the firing arcs for their alternative ports. *DR8080B*

***AMAZON* Class** - wooden screw sloops, 4 guns (see below for later changes). Designed by Edward Reed, 1864.

Dimensions & tons: 187ft 0in, *c*160ft 0in x 36ft 0in x 15ft 5in. 1,061 bm. 1,574 disp (actual tonnages as shown individually below).

Men: 150 (170 in re-armed ships). Guns: 2 x 7in (6½-ton) MLR mounted on slides on centre-line pivots, 2 x 64pdr (64cwt) MLR on broadside trucks. Third 64pdr added 1871. (*Dryad*, *Nymphe* and *Vestal* were re-armed in the early 1870s with 9 x 64pdr MLRs only - 4 on trucks on each broadside plus a bow-chaser on centre-line pivot.).

Machinery: 2-cyl. (62in diam., 27in stroke) horizontal single expansion (except *Vestal* and *Nymphe*, see Notes). 4 boilers (30 lbs/sq.in pressure). Single screw (15ft diameter). 300 nhp. (For ihp/speed see under individual vessels.) 200 tons coal. 11kts under canvas.

Amazon Pembroke Dyd/Ravenhill, Salkeld & Co. (1,455 ihp = 12.298kts.) 1,081/1,525 tons.

Ord: ... . K: 1864. L: 23.5.1865. C: 1866. Sunk in collision with collier *Osprey* off Start Point in the Channel on 10.7.1866.

Vestal Pembroke Dyd/Maudslay, Sons & Field. (2,154kts = 12.814kts.) 1,081/1,597 tons.

Ord: ... . K: 1864. L: 16.11.1865. C: 1867. Sold to Castle to BU 12.1884.

Niobe Deptford Dyd/Ravenhill, Salkeld & Co. (1,833 ihp = 12.318kts.) 1,083/1570 tons.

Ord: ... . K: 1864. L: 31.5.1866. C: 1871. Wrecked off Cape Blanc on the island of Miquelon 21.5.1874.

Dryad Devonport Dyd/Robert Napier & Sons. (1,464 ihp = 11.963kts.) 1,086/1,574 tons.

Ord: ... . K: 4.1865. L: 25.9.1866. C: ?1867. Sold 9.1885 to BU 4.1886.

Daphne Pembroke Dyd/Ravenhill, Salkeld & Co. (1,927 ihp = 12.477kts.) 1,081/1,640 tons.

Ord: ... . K: 1865. L: 23.10.1866. C: 1867. Sold to BU 7.11.1882.

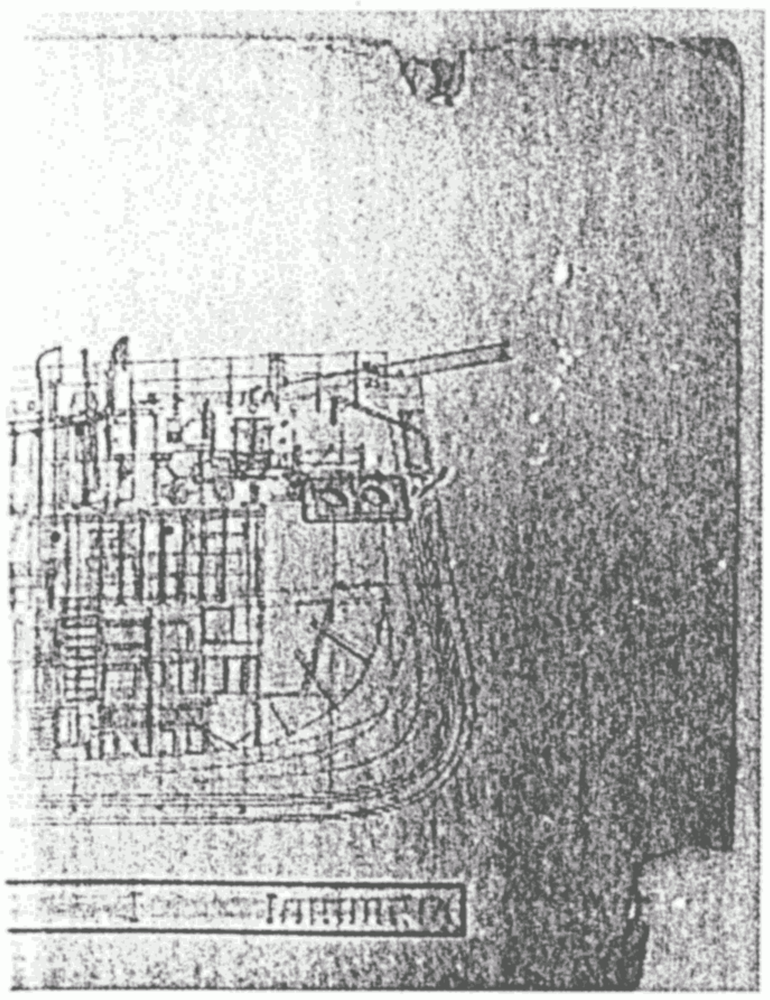
Nymphe Deptford Dyd/Maudslay, Sons & Field. (2,172 ihp = 13.066kts.) 1,084/1,555 tons.

Ord: ... . K: 1865. L: 24.11.1866. C: 1867. Sold to BU 12.1884.

NOTES: Constructed with ram bow, topgallant forecastle and poop. First pair built of teak; *Daphne* and *Dryad* of oak (*Dryad* had teak planking and decks); *Niobe* and *Nymphe* - oak frames with teak cladding, fir decking. Barque-rigged. *Vestal* and *Nymphe* each had 3-cylinder (55in diam., 30in stroke) Maudslay engines.

***ECLIPSE* Class** - wooden screw sloops, 6 guns; later corvettes, 12 guns.

Scan and/or retouch by Grzechu



Profile of the wooden screw sloop *Blanche*. Dated Sheerness 30 December 1877, it depicts the ship as modified with increased armament. *DR8080*

Edward Reed design, 1865.

Dimensions & tons: 212ft 0in pp, ... x 36ft 0in x 16ft 4in. 1,268 bm. 1,760 disp.

Men: 180 (later 200). Guns: 2 x 7in (6½-ton) MLR pivot-mounted in traversing slides, 4 x 6.3in/64pdr (71cwt) MLR.

Machinery: 2-cyl. horizontal single expansion in 4 ships (trunk in *Eclipse*); compound expansion in other 3. Single screw. 350 nhp; see below for ihp/speed. Under sail they varied from 11kts (*Eclipse*) up to 13.5kts (*Blanche*).

Danae Portsmouth Dyd/Robert Napier & Sons. (2,089 ihp = 13.172kts.)

Ord: ... . K: 1865. L: 21.5.1867. C: 11.1867. Lent to War Dept as hulk 1886. Sold 15.5.1906.

Blanche Chatham Dyd/Ravenhill, Hodgson & Co. (2,158 ihp = 13.631kts.)

Ord: ... . K: 1865. L: 17.8.1867. C: 1.1868. Sold to Castle to BU 9.1886.

Eclipse (ex-*Sappho*, renamed 1867) Sheerness Dyd/John Penn & Son. (1,946 ihp = 13.024kts.)

Ord: ... . K: 1866. L: 14.11.1867. C: 6.1868. Lent to War Dept as hulk (for mines storage) 1888 to 1892. Sold 1921.

Sirius Portsmouth Dyd/Maudslay, Sons & Field. (2,334 ihp = 13.086kts.)

Ord: ... . K: 1867. L: 24.4.1868. C: 1869. Sold to Castle to BU at Charlton 1885.

Spartan Deptford Dyd/J. & G. Rennie. (1,960 ihp = 13.1kts.)

Ord: ... . K: ... . L: 14.11.1868. C: 8.1871. Sold to Castle to BU 7.11.1882.

Dido Portsmouth Dyd/Humphrys, Tennant & Co. (2,518 ihp = 13.683kts.)

Ord: ... . K: ... . L: 23.10.1869. C: 20.4.1871. Hulked 1886. Renamed *Actaeon II* in 1906. Sold to J. B. Garnham to BU 17.7.1922.

Tenedos Devonport Dyd/John Elder & Co. (2,038 ihp = 13.009kts.)

Ord: ... . K: 11.11.1867. L: 13.5.1870. C: 7.1872. Sold to G. Pethwick, Plymouth to BU 11.1887.

NOTES: Built as sloops, derived from Reed's *Amazon* Class but with iron cross-beams, and retaining wooden frames and planking. Ram bows, to increase weight forward. Their original six guns were quickly increased to eight, and they were rerated as 12-gun corvettes in 1876, re-armed with 12 x 64pdr (the 2 x 7in being removed). Their original ship rig was replaced by a barque rig. *Danae* and *Dido* had cylinders 64in diam., 33in stroke; *Blanche* of 63½in diam., 33in stroke; *Eclipse* of 63¼in diam., 36in stroke. The other three ships were completed with horizontal compound engines; boiler pressure was *c*60 lbs/sq.in in these compared with 30 lbs/sq.in for ships with single expansion engines. *Sirius* had a 4-cyl. engine (2 high pressure of 34$^{1}/_{16}$in diam., 2 low pressure of 75$^{1}/_{8}$in; 33in stroke). *Spartan*, originally completed with 4-cyl. Allen's engine (2 high pressure of 32$^{1}/_{8}$in diam., 2 low pressure of 64¼in; 33in stroke) was re-engined by Rennie in 1875 with a 2-cyl. (57in & 90in diam., 33in stroke) horizontal compound engine (trials 1,938 ihp = 13.156kts); *Tenedos* had a 2-cyl. (of 57in & 90in diam., 30in stroke) engine. An eighth vessel to this design (*Proserpine*) was authorised on 18.12.1866 but never ordered, and the requirement was rescinded in 5.1867; a further vessel (*Diomede*) was projected also on 18.12.1866 but was likewise not ordered, and was rescinded 30.4.1867.

***FANTOME* Class** - composite screw sloops, 4 guns. Designed by Nathaniel Barnaby, 1872.

Dimensions & tons: 160ft 0in, *c*139ft 3in x 31ft 4in x 12ft 6in. 727 bm. 894 disp (designed). 949 disp (as completed)

Men: 125. Guns: 2 x 7in (90cwt) MLR + 2 x 64pdr MLR, all mounted on pivots.

Machinery: 2-cyl. (38in & 68in diam., 2ft stroke) horizontal compound expansion (trunk in *Daring*). 3 cylindrical boilers (60 lbs/sq.in). Single screw (11ft diameter). 120 nhp. See under individual vessels for ihp/speeds. 100 tons coal = 1,000 miles @ 10kts.

First cost: *Egeria* hull £32,468, machinery £10,414. *Flying Fish* hull £29,444, machinery £10,001. *Daring* hull £30,023, machinery £9,590.

Fantome Pembroke Dyd/Humphrys, Tennant & Co. (975 ihp = 11.064kts.)

Ord: ... . K: 1872. L: 26.3.1873. C: 12.1873. Sold to Read, Portsmouth to BU 2.1889.

Albatross Chatham Dyd/Humphrys, Tennant & Co. (838 ihp = 10.514kts.)

Ord: ... . K: 1872. L: 27.4.1873. C: 2.1874. BU at Chatham 2.1889.

Sappho Money Wigram & Sons, Blackwall./Humphrys, Tennant & Co. (884 ihp = 10.591kts.)

Ord: ... . K: 1872. L: 20.10.1873. C: 2.1874. Sold to Castle to BU 12.1887.

Egeria Pembroke Dyd/Humphrys, Tennant & Co. (1,011 ihp = 11.303kts.)

Ord: ... . K: 30.12.1872. L: 1.11.1873. C: 11.1874. Survey ship 10.1886. Sold to Vancouver Navy League 10.1911.

Flying Fish (ex-*Daring*, renamed 14.1.1873) Chatham Dyd/Humphrys, Tennant & Co. (836 ihp = 10.959kts.)

Ord: ... . K: 1872. L: 27.11.1873. C: 6.1874. Survey ship 1878. Sold 12.1888.

Daring Money Wigram & Sons, Blackwall/John Penn & Sons. (915 ihp = 10.63kts.)

Ord: ... . K: 1872. L: 4.2.1874. C: 9.1874. Sold to J. Cohen to BU 8.1889.

NOTES: Rigged as barques. *Sappho* first ordered from T. R. Oswald & Co., Sunderland.

***OSPREY* Class** - composite screw sloops, 6 guns. Designed by Nathaniel Barnaby, 1874.

Dimensions & tons: 170ft 0in pp x 36ft 0in x 15ft 9in. 1,130 disp.

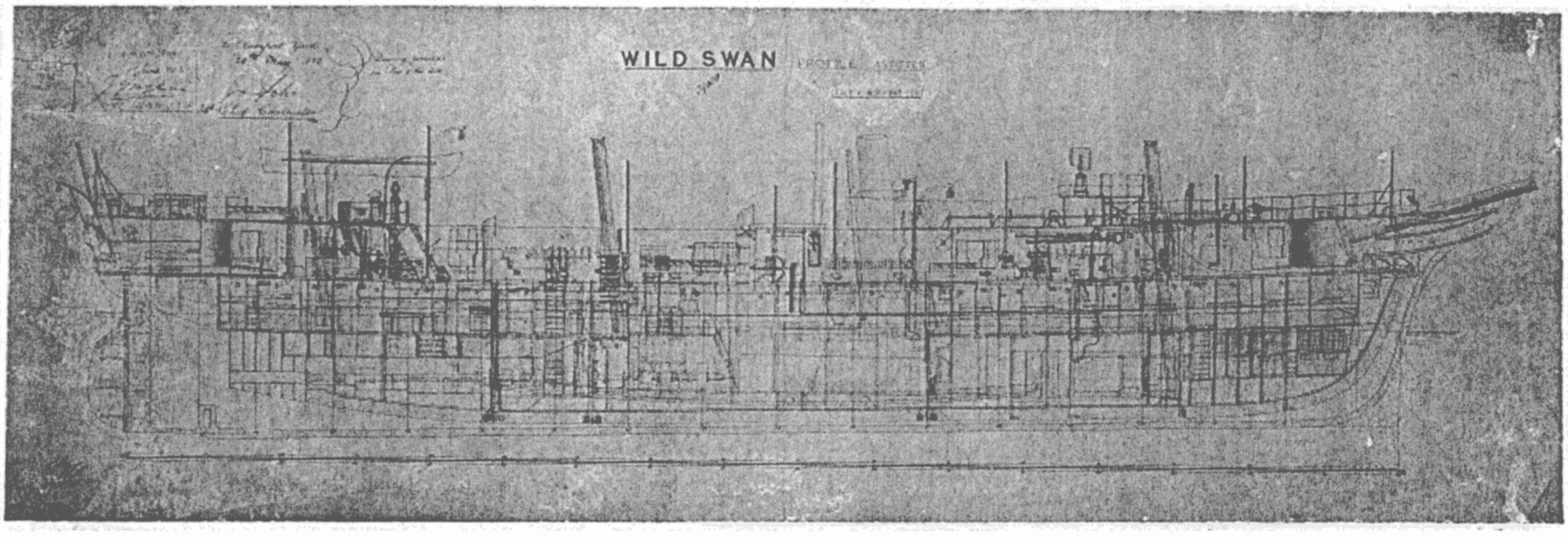
Men: 140-150. Guns: 2 x 7in (90cwt) MLR, 4 x 64pdr (64cwt) MLR, all mounted on pivots, 4 MGs and 1 light gun. *Wild Swan* and *Pelican* re-armed with 2 x 6in (81cwt) BL + 6 x 5in (38cwt) BL instead of MLR.

Machinery: 2-cyl. (38in & 66in diam., 2ft stroke) horizontal compound expansion. 3 cylindrical boilers (60 lbs/sq.in). Single screw (13ft 1in diameter). See below for individual ihp/speeds. 150 tons coal = 1,480 miles @ 10kts (*Wild Swan* 1,120 miles).

First cost: *Wild Swan* hull £39,643, machinery £11,853. *Penguin* hull £39,611, machinery £12,500. *Osprey* hull £39,664, machinery £11,674. *Pelican* hull £41,282, machinery £14,939. *Cormorant* hull £37,630, machinery £11,587.

Wild Swan Robert Napier & Sons, Govan (No.341)/R. & W. Hawthorn. (797 ihp = 10.350kts.)

Scan and/or retouch by Grzechu



As fitted profile of the composite sloop *Wild Swan* after being re-engined, Devonport 1 June 1885, corrected to 20 May 1892. *DR7389*

K: 14.9.1874. L: 28.1.1876. C: 23.8.1876. Became base ship 1.5.1904 renamed *Clyde*; again renamed *Columbine* 7.1913 (the name *Romulus* was first proposed). Sold to Forth Shipbreaking Co. to BU 4.5.1920.

Penguin Robert Napier & Sons, Govan (No.342)/R. & W. Hawthorn. (666 ihp = 9.875kts.)
K: 14.7.1874. L: 25.3.1876. C: 23.8.1877. Survey ship 1.1890. Depot ship 1908 at Sydney. Transferred to RAN 18.3.1913. Sold to Waugh, Sydney as crane hulk 1924; burnt 13.12.1960.

Osprey Sheerness Dyd/Humphrys, Tennant & Co. (946 ihp = 11.383kts.)
K: 1875. L: 5.8.1876. C: 19.4.1877. Sold to BU 29.4.1890.

Pelican Devonport Dyd/Humphrys, Tennant & Co. (1,056 ihp = 12.241kts.)
K: 8.3.1875. L: 26.4.1877. C: 29.11.1877. Sold to Hudsons Bay Company as supply ship 22.1.1901. Hulk scuttled 1953.

Cormorant Chatham Dyd/Humphrys, Tennant & Co. (951 ihp = 11.315kts.)
K: 1875. L: 12.9.1877. C: 2.7.1878. Hulked for harbour service 11.1889. Renamed *Rooke* 7.1946. BU at Malaga 1949.

NOTES: Iron beams and frames, with teak hulls. Rigged as barques. All fitted with graceful clipper bows which distinguished them from the succeeding *Doterel* Class. The first ships in the RN to have glass scuttles instead of square ports or 'rat hole' plug scuttles. First pair originally had single expansion returning-rod engines (2 cylinders of 45in diam., 2½ft stroke), and were re-engined after first commission by Devonport Dyd, as they had failed to meet contract speeds.

***DOTEREL* Class** - composite screw sloops, 6 guns. Nathaniel Barnaby design, 1877.
Dimensions & tons: 170ft 0in pp x 36ft 0in x 15ft 9in. 1,130 disp.
Men: 140-150. Guns: 2 x 7in (90cwt) MLR, 4 x 64pdr MLR, all mounted on pivots, 4 MGs and 1 light gun.
Machinery: 2-cyl. (dimensions varied) horizontal compound expansion. 3 cylindrical boilers (60-62 lbs/sq.in). Single screw (13ft 1in diameter). 11.5kts (see below for individual ihp/speeds). 150 tons coal = 1,480 miles @ 10kts.
First cost: *Dragon* hull £36,427, machinery £13,069. *Pegasus* hull £36,697, machinery £12,809. *Gannet* hull £39,581, machinery £12,889. *Miranda* hull £37,000, machinery £11,700. *Kingfisher* hull £39,300, machinery £11,850. *Mutine* hull £37,500, machinery £11,770 (*Espiegle* same).

Dragon Devonport Dyd/Maudslay, Sons & Field. (1,006 ihp = 11.520kts.)
K: 26.4.1877. L: 30.5.1878. C: 19.2.1879. Sold 24.9.1892.

Pegasus Devonport Dyd/Laird Brothers. (972 ihp = 11.473kts.)
K: 9.5.1877. L: 13.6.1878. C: 5.3.1879. Sold to George Cohen to BU 11.8.1892.

Gannet Sheerness Dyd/Humphrys, Tennant & Co. (1,107 ihp = 11.530kts.)
K: 1877. L: 31.8.1878. C: 17.4.1879. Training ship 16.5.1903, renamed *President*; lent as training ship 10.1913, renamed *Mercury*. Towed to Chatham for preservation 6.1987.

Phoenix Devonport Dyd/Humphrys, Tennant & Co. (1,128 ihp.)
K: 8.7.1878. L: 16.9.1879. C: 20.4.1880. Wrecked off east point of Prince Edward Island 12.9.1882.

Miranda Devonport Dyd/Robert Napier & Sons. (1,020 = 11kts.)
K: 8.7.1878. L: 30.9.1879. C: 22.7.1880. Surveying vessel ?1883. Sold to Reed, Portsmouth to BU 24.9.1892.

Kingfisher Sheerness Dyd/Maudslay, Sons & Field. (1,090 ihp = 11.64kts.)
K: 23.9.1878. L: 16.12.1879. C: 17.8.1880. Training ship 10.11.1892, renamed *Lark*; again renamed *Cruizer* 18.5.1893. Sold 1919.

Doterel Chatham Dyd/Maudslay, Sons & Field. (900 ihp = 11kts.)
K: 13.5.1878. L: 2.3.1880. C: 7.12.1880. Exploded by accident on maiden voyage and sank off Sandy Point, Punta Arenas 26.4.1881, with loss of 143 men.

Mutine Devonport Dyd/Maudslay, Sons & Field. (1,120 ihp = 11.64kts.)
K: 7.6.1879. L: 20.7.1880. C: 10.5.1881. Boom defence vessel 1899. Renamed *Azov* 3.1904. Sold to C. A. Beard to BU at Upnor 25.8.1921.

Espiegle Devonport Dyd/Maudslay, Sons & Field. (1,140 ihp = 11.5kts.)
K: 23.9.1879. L: 3.8.1880. C: 11.10.1881. Boom defence vessel 1899. Renamed *Argo* 3.1904. Sold to W. Thorpe to BU 25.8.1921.

NOTES: Iron beams and frames, with teak hulls. Rigged as barques. Differed from *Osprey* Class by having vertical stems.

***SATELLITE* Class** - composite screw sloops, 12 guns. Nathaniel Barnaby design; reclassed as corvettes 1884.
Dimensions & tons: 200ft 0in pp, ... x 38ft 0in x 15ft 9in. 1,420 disp.
Men: 170-200. Guns: 2 x 6in/100pdr (81cwt) BL, 10 x 5in/50pdr (38cwt) BL, 1 light gun, 4 MGs (last 2 - 14 x 5in BL, 1 light gun, 8 MGs).
Machinery: Horizontal compound expansion. Single screw. 1,400 ihp = 13kts. 400 tons coal = 6,000 miles @ 10kts.
First cost: *Satellite* hull £47,500, machinery £15,400. *Heroine* hull £52,500, machinery £14,500 (*Hyacinth* same). *Royalist* hull £52,134, machinery £16,039. *Rapid* hull £52,107, machinery £16,119. *Caroline* hull £56,000, machinery £15,000. *Pylades* hull £45,500, machinery

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£16,500.

Satellite Sheerness Dyd/Humphrys & Tennant. (1,400 ihp = 13kts.)
Ord: ... . K: 4.10.1880. L: 13.8.1881. C: 24.7.1883. RNVR drill ship 1904. Sold to J. G. Potts to BU 21.10.1947.

Heroine Devonport Dyd/Humphrys & Tennant. (1,470 ihp = 13.1kts.)
Ord: ... . K: 30.8.1880. L: 3.12.1881. C: 19.9.1883. Sold to King, Bristol to BU 28.8.1902.

Hyacinth Devonport Dyd/Humphrys & Tennant. (1,470 ihp = 13.1kts.)
Ord: ... . K: 30.8.1880. L: 20.12.1881. C: 27.1.1884. Sold to King, Bristol to BU 25.8.1902.

Royalist Devonport Dyd/Maudslay, Sons & Field. (1,510 ihp = 13kts.)
Ord: ... . K: 27.4.1881. L: 7.3.1883. C: 14.4.1886. Hulk 2.1900; renamed *Colleen* 1.12.1913, transferred to Irish Free State Government 19.2.1923.

Rapid Devonport Dyd/Maudslay, Sons & Field. (1,400 ihp = 13kts.)
Ord: ... . K: 21.4.1881. L: 21.3.1883. C: 9.9.1884. Hulk 1906. Became coal hulk 1912, renamed *C.7*. Became accommodation ship 1916, renamed *Hart*. Sold at Gibraltar 1948.

Caroline Sheerness Dyd/Maudslay, Sons & Field. (1,400 ihp = 13kts.)
Ord: ... . K: 24.10.1881. L: 25.11.1882. C: 27.1.1886. Hulk 1897; became training ship 4.1908 renamed *Ganges*; again renamed *Powerful III* in 9.1913 and *Impregnable IV* in 11.1919. Sold 31.8.1929.

Pylades Sheerness Dyd/Laird Brothers. (1,640 ihp = 13kts.)
Ord: ... . K: 1.1.1883. L: 5.11.1884. C: 17.8.1886. Sold to Cohen, Felixstowe to BU 3.4.1906.

NOTES: Barque-rigged, with steel protective deck (the only wooden- or composite-hulled vessels to carry deck armour). *Heroine*, *Hyacinth* and *Royalist* completed with, and *Satellite* re-armed with, 8 x 6in BL (all 5in removed).

By the early 1880s, the growth in size and armament of the gunvessel had resulted in the latter becoming equivalent to the sloops, and the last composite gunvessels - of the *Dolphin* and *Mariner* Classes - were rerated as sloops before reaching service. Details, however, will be found under their original rating in the following section.

***NYMPHE* Class** - composite screw sloops, 8 guns. Twin screw, William White design.
Dimensions & tons: 195ft 0in pp, ... x 28ft 0in x 12ft 6in. 1,140 disp.
Men: 135. Guns: 8 x 5in/50pdr (40cwt except *Swallow* 38cwt) BL, 8 MGs.
Machinery: Horizontal triple expansion. Twin screws. See below for individual ihp/speed. 3,000 radius miles @ 10kts.
First cost: *Swallow* hull £44,797, machinery £15,000. *Buzzard* hull £42,500, machinery £16,200. *Daphne* hull £42,400, machinery £15,200 (*Nymphe* same).

Swallow Sheerness Dyd/J. & G. Rennie. (1,570 ihp = 13.5kts.)
Ord: ... . K: 1.1.1885. L: 27.10.1885. C: 7.10.1886. Sold to McCausland & Sons 1904.

Buzzard Sheerness Dyd/Barrow Iron Sbdg. Co. (Vickers). (2,000 ihp = 14.5kts.)
Ord: ... . K: 1.5.1886. L: 10.5.1887. C: 14.4.1888. Drill ship 1904. Renamed *President* 1.4.1911. Sold to C. A. Beard to BU 6.9.1921 (but resold to Dutch breakers).

Daphne Sheerness Dyd/Greenock Foundry Co. (1,570 ihp = 13.5kts.)
Ord: ... . K: 20.6.1887. L: 29.5.1888. C: 2.5.1889. Sold 2.1904.

Nymphe Portsmouth Dyd/Greenock Foundry Co. (2,000 ihp = 14.5kts.)
Ord: ... . K: 5.7.1887. L: 1.5.1888. C: 3.7.1889. Base ship 1906, renamed *Wildfire* 12.1906, then *Gannet* 1916, then *Pembroke* 7.1917. Sold to Ward for BU at Milford Haven 10.2.1920.

NOTES: The last composite-hulled sloops; schooner-rigged with square sails on foremast, fore-and-aft sails on main and mizzen. Two steel-hulled versions of this class were built - *Beagle* and *Basilisk* (see Chapter 8).

Screw Gunvessels

The first small warships to be built after 1863, the *Plover* Class were the last gunvessels to be framed with wood, all subsequent vessels being of composite construction, and thereby having watertight bulkheads. The twelve *Plover*s introduced twin-screw propulsion to gunvessels, and were designed for shallow-draught operations. The eighteen *Beacon* Class which followed were produced for service in China, and utilised engines removed from Crimean gunboats whose hulls were found to have swiftly decayed (usually because unseasoned timbers had been used); four identical vessels were built with new engines (the *Frolic* Class). After Barnaby succeeded Reed as Director of Naval Construction in 1872, he designed a series of larger gunboats better fitted for deep-sea cruising, reverting to single-screw propulsion. By the early 1880s, these had grown to sloop size, and the gunvessel consequently merged into the sloop rating.

***PLOVER* Class** - wooden gunvessels, 3 guns. Edward Reed design, 1865.
Dimensions & tons: 170ft 0in, c148ft 0in x 29ft 0in x 15ft 0in. Draught 9ft 4in-10ft 6in. 663 bm. 774 disp (805 as built).
Men: 90. Guns: 1 x 7in (6½-ton) MLR amidships, 2 x 40pdr (35cwt) BL in fwd and aft chase positions (all centre-line).
Machinery: 2 sets of 2-cyl. horizontal (trunk in *Plover* and *Bittern*; return connecting-rod in *Magpie*). 4 boilers. Twin (non-hoisting) screws. 160 nhp. (See below for ihp/speed.) 110 tons coal.

Plover Deptford Dyd/John Penn & Son. (977 ihp = 11.339kts.)
Ord: 1865. K: ... . L: 20.2.1867. C: ... . Sold to Castle to BU at Charlton 8.1885.

Ringdove Portsmouth Dyd/Maudslay, Sons & Field. (957 ihp = 10.722kts.)
Ord: 1866. K: ... . L: 4.9.1867. C: ... . Sold 17.5.1882 to BU 1883.

Philomel Deptford Dyd/Maudslay, Sons & Field. (961 ihp = 10.982kts.)
Ord: 1866. K: ... . L: 29.10.1867. C: ... . Sold at Bombay 14.4.1886.

Lapwing Devonport Dyd/J. & G. Rennie. (882 ihp = 10.847kts.)
Ord: 1866. K: 21.1.1867. L: 8.11.1867. C: 27.6.1868. Sold to Castle to BU at Charlton 15.4.1885.

Magpie Portsmouth Dyd/C. A. Day & Co., Southampton. (857 ihp = 10.362kts.)
Ord: 1867. K: ... . L: 12.2.1868. C: ... . Survey vessel 1878. Sold 9.1885.

Bullfinch Sheerness Dyd/J. & G. Rennie. (985 ihp = 10.626kts.)
Ord: 1867. K: ... . L: 13.2.1868. C: ... . Sold to BU 6.1885.

Seagull Devonport Dyd/A. & J. Inglis & Co., Glasgow. (898 ihp = 11.224kts.)
Ord: 1867. K: 15.4.1867. L: 6.3.1868. C: 19.4.1871. Sold 11.1887 to BU.

Curlew Deptford Dyd/J. & G. Rennie. (918 ihp = 11.215kts.)
Ord: 1867. K: ... . L: 20.8.1868. C: ... . Sold 7.11.1882 to BU 1883.

Swallow Portsmouth Dyd/J. & G. Rennie. (892 ihp = 11.018kts.)
Ord: 1868. K: ... . L: 16.11.1868. C: ... . Sold to A. Tobin on 18.10.1882.

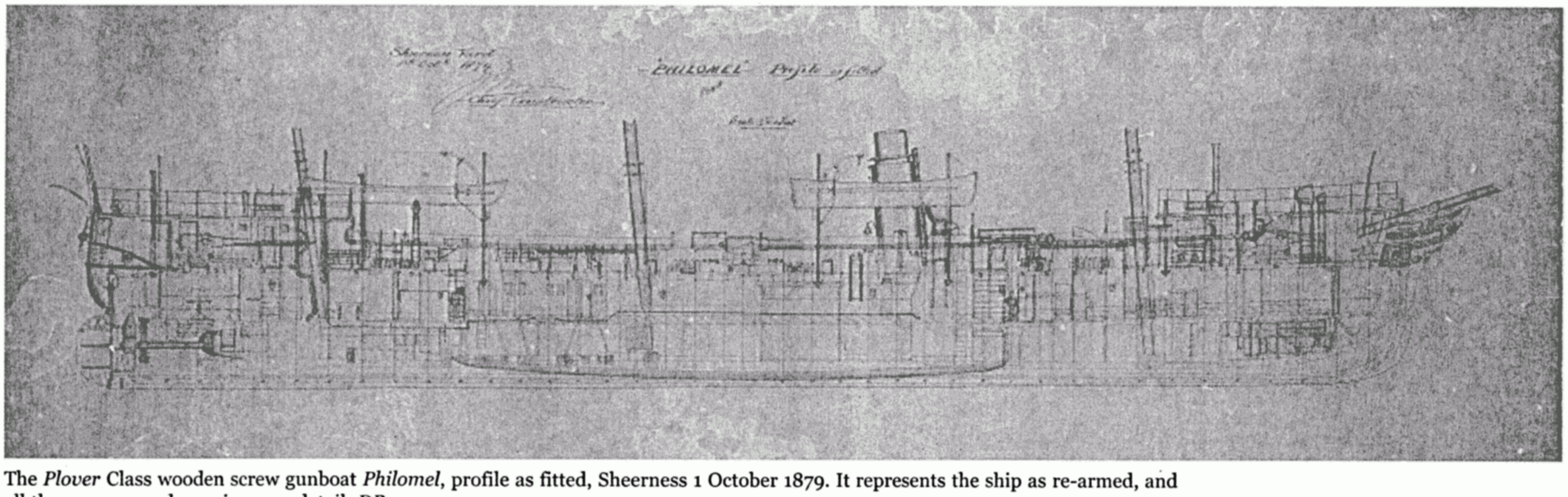
Bittern Pembroke Dyd/Avonside Engine Co., Bristol. (851 ihp = 11.104kts.)
Ord: 1868. K: ... . L: 20.9.1869. C: ... . Sold to BU 11.1887.

Vulture Sheerness Dyd/J. & G. Rennie. (889 ihp = 10.855kts.)
Ord: 1868. K: ... . L: 6.11.1869. C: ... . Sold to Castle to BU at Charlton 9.1885.

Woodlark Chatham Dyd/James Watt & Co., London. (881 ihp = 10.802kts.)
Ord: 1868. K: ... . L: 9.3.1871. C: ... . Sold at Bombay 9.3.1887.

NOTES: Barque rig, 14,100 sq.ft of sail area; telescopic funnels. *Philomel*, *Magpie*, *Seagull*, *Swallow*, *Vulture* and *Woodlark* were later given

Scan and/or retouch by Grzechu



The *Plover* Class wooden screw gunboat *Philomel*, profile as fitted, Sheerness 1 October 1879. It represents the ship as re-armed, and all three guns are drawn in some detail. *DR7954*

topgallant forecastle and poop (thereby becoming 805 disp) to improve habitability in the tropics. All except *Ringdove*, *Lapwing* and *Bittern* were re-armed with 1 x 7in (4½-ton) MLR and 2 x 64pdr (64cwt) MLR.

***BEACON* Class** - composite gunvessels, 4 guns. Edward Reed design.

Dimensions & tons: 155ft 0in, *c*139ft 0in x 25ft 0in x 11ft 0in. Draught 7ft 9in - 9ft 6in. 464 bm. 584 disp (603 as built).

Men: 80. Guns: Planned 2 x 64pdr (56cwt) MLR, 2 x 20pdr BL. As fitted 1 x 7in (6½-ton) MLR, 1 x 64pdr (56cwt) MLR both midships, 2 x 20pdr BL fore and aft, 2 MGs.

Machinery: 2 sets of 2-cyl. horizontal (trunk in Penn, return connecting-rod in Maudslay) engines - all transferred second-hand ex-'rotten'-hulled Crimean gunboats. Twin (non-hoisting) screws. 120 nhp. (See below for ihp/speed.) 90 tons coal.

First cost: *Avon* hull £16,547, machinery £5,797. *Elk* hull £16,107, machinery £5,775.

Beacon Chatham Dyd/John Penn & Son. (506 ihp = 9.613kts.)
Ord: 1867. K: ... . L: 17.8.1867. C: 9.1869. Sold 12.1888.

Avon Portsmouth Dyd/Maudslay, Sons & Field. (528 ihp = 10.345kts.)
Ord: 1867. K: ... . L: 2.10.1867. C: 11.1869. Sold to BU at Charlton 26.4.1890.

Gnat Pembroke Dyd/John Penn & Son. (528 ihp = 9.754kts.)
Ord: 1867. K: ... . L: 26.11.1867. C: ... . Wrecked on Balabac Island in the China Seas 15.11.1868.

Cracker Portsmouth Dyd/Maudslay, Sons & Field. (528 ihp = 10.039kts.)
Ord: 1867. K: ... . L: 27.11.1867. C: ... . BU at Portsmouth 1889.

Dwarf Woolwich Dyd/Maudslay, Sons & Field. (495 ihp = 9.797kts.)
Ord: 1867. K: ... . L: 28.11.1867. C: ... . BU at Devonport 4.1886.

Flirt Devonport Dyd/Maudslay, Sons & Field. (532 ihp = 9.678kts.)
Ord: 1867. K: 4.1867. L: 20.12.1867. C: 12.1869. Sold to George Cohen to BU 11.1888.

Fly Devonport Dyd/Maudslay, Sons & Field. (489 ihp = 9.558kts.)
Ord: 1867. K: 4.1867. L: 20.12.1867. C: 8.1869. Sold to Castle to BU 11.1887.

Elk Portsmouth Dyd/John Penn & Son. (472 ihp = 9.684kts.)
Ord: 1867. K: ... . L: 10.1.1868. C: ... . To coastguard 1887. Tug 1890. Sold for service as dredger 1905.

Boxer Deptford Dyd/John Penn & Son. (587 ihp = 9.885kts.)
Ord: 1867. K: ... . L: 25.1.1868. C: ... . Sold to BU 6.1887.

Thistle Deptford Dyd/John Penn & Son. (641 ihp = 10.058kts.)
Ord: 1867. K: ... . L: 25.1.1868. C: ... . Sold to Read, Portsmouth to BU 11.1888.

Hornet Pearse, Lockwood & Co., Stockton-on-Tees/John Penn & Son. (506 ihp = 9.897kts.)
Ord: 1867. K: ... . L: 10.3.1868. C: ... . Sold 1889.

Rocket London Eng. Co., Poplar/John Penn & Son. (632 ihp = 10.421kts.)
Ord: 1867. K: ... . L: 8.4.1868. C: ... . Sold 12.1888.

Lynx Harland & Wolff, Belfast (No.53)/Maudslay, Sons & Field. (526 ihp = 9.799kts.)
Ord: 1867. K: ... . L: 25.4.1868. C: ... . Sold 12.1888.

Teazer Laird Brothers, Birkenhead (No.363)/John Penn & Son. (489 ihp = 10.333kts.)
Ord: 1867. K: ... . L: 28.4.1868. C: ... . BU at Chatham 12.1887.

Midge Randolph & Elder, Govan (No.76)/John Penn & Son. (472 ihp = 9.069kts.)
Ord: 1867. K: ... . L: 21.5.1868. C: ... . Sold 15.3.1907.

Pert Reid & Co., Port Glasgow/John Penn & Son. (502 ihp = 9.179kts.)
Ord: 1867. K: ... . L: 22.6.1868. C: ... . Sold 12.1888.

Hart J. & G. Thomson, Glasgow (No.98)/John Penn & Son. (474 ihp = 9.286kts.)
Ord: 1867. K: ... . L: 20.8.1868. C: ... . Sold 12.1888.

Growler James Lawrie, Whiteinch, Glasgow/John Penn & Son. (696 ihp = 10.347kts.)
Ord: 1867. K: ... . L: 1.12.1868. C: 6.1869. Sold 11.1887.

NOTES: Built under the 1867-68 Programme. Cylinders were 17⅞in diam., 12in stroke in Penn-engined vessels; 15½in diam., 18in stroke in Maudslay-engined vessels. *Flirt*, *Hornet*, *Rocket* and *Lynx* (plus *Rifleman*, see below) later re-armed with 2 x 7in (4½-ton) MLR (retaining BLs fwd and aft); *Avon* and *Elk* (plus *Frolic*, below) just replaced 6½-ton guns with 4½-ton ones.

***FROLIC* Class** - composite gunvessels, 4 guns. Edward Reed design, 1871 (modified from *Beacon* Class).

Dimensions & tons: 155ft 0in, *c*139ft 0in x 25ft 0in x 11ft 0in. Draught 7ft 9in (fwd), 9ft 6in (aft). 462bm. 610 disp.

Men: 80. Guns: 1 x 7in (6½-ton) MLR, 1 x 64pdr (56cwt) MLR both midships, 2 x 20pdr BL fore and aft.

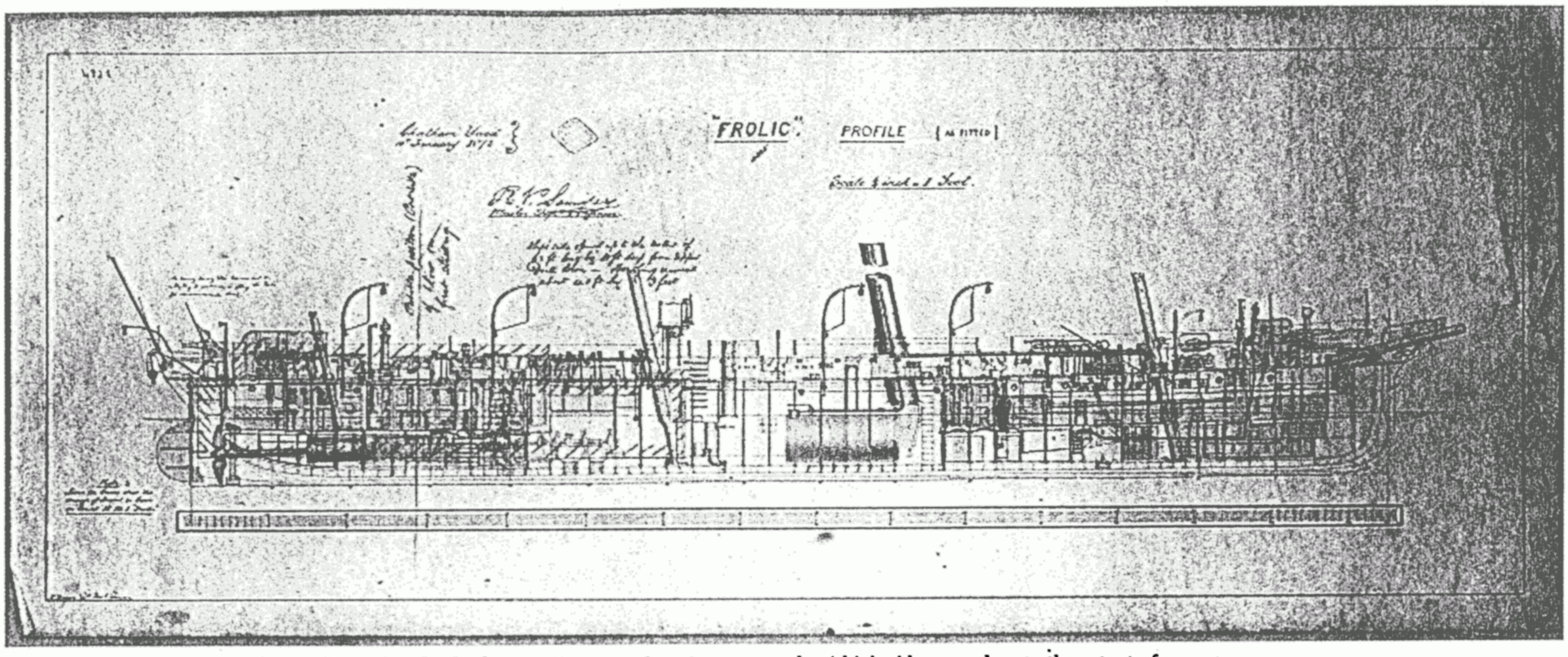
Machinery: 2 sets of 2-cyl. compound expansion, trunk engines. Twin screws. 100 nhp. (See below for ihp/speed.) 80 tons coal = 880 miles @ 10kts.

First cost: *Frolic* hull £16,512, machinery £6,593. *Ready* hull £17,231, machinery £6,613. *Rifleman* hull £17,970, machinery £6,589.

Frolic Chatham Dyd/John Penn & Son. (896 ihp = 10.697kts.)
Ord: ... . K: 1871. L: 29.2.1872. C: 1873. Drill ship 1888. Coastguard *CGWV.30* 1893, renamed *CGWV.41* in 1897. Sold 7.4.1908.

Kestrel Chatham Dyd/John Penn & Son. (835 ihp = 11.017kts.)

Scan and/or retouch by Grzechu



The composite gunvessel *Frolic*, profile as fitted, Chatham 10 January 1873. A note says that 'ship's side opened up to the extent of 62 ft long by 10 ft deep from Upper Deck down - Berthing [bulwarks] removed about 40 ft by 3 ft'. *DR4825*

Ord: ... . K: 1871. L: 29.2.1872. C: 1873. Sold 11.1888.

Ready Chatham Dyd/John Penn & Son. (891 ihp = 11.101kts.)
Ord: ... . K: 1871. L: 24.9.1872. C: 1874. Became tank vessel 1894, renamed *Drudge* 10.1916. Sold in Bermuda 25.2.1920.

Rifleman Chatham Dyd/John Penn & Son. (715 ihp = 10.712kts.)
Ord: ... . K: 1871. L: 20.11.1872. C: 1873. Sold 26.4.1890.

NOTES: Fitted with new engines (unlike the *Beacon* Class), each with one high pressure (27in diam.) and one low pressure (43in diam.) cylinder; 18in stroke. Poops were later added to all four.

***ARAB* Class** - composite gunvessels (begun as sloops, rerated 10.4.1876 as gunvessels). Nathaniel Barnaby design, 1873.
Dimensions & tons: 167ft 0in oa, 150ft 2in pp x 28ft 6in x 17ft 6in. Draught 10ft 6in (fwd), 13ft 6in (aft). 720 disp.
Men: 90. Guns: 1 x 7in (4½-ton) MLR midships, 2 x 64pdr MLR fore and aft (all on traversing slides), 2 MGs, 1 light gun.
Machinery: 2-cyl. (HP 31½in, LP 54in; stroke 24in) horizontal compound expansion. 3 boilers (60 lbs/sq.in). Single (hoisting) screw. 95 nhp. Designed 570 ihp = 10.5kts. (See below for actual ihp/speed.) 70 tons coal = 790 miles @ 10kts.
First cost: *Arab* hull £25,041, machinery £9,982. *Lily* hull £24,141, machinery £9,967.

Arab Robert Napier & Sons, Govan (No.333)/Robert Napier & Sons. (656 ihp = 10.391kts.)
Ord: 1873. K: 1873. L: 13.10.1874. Comm: 7.1875. Sold 1889.

Lily Robert Napier & Sons, Govan (No.334)/Robert Napier & Sons. (829 ihp = 10.735kts.)
Ord: 1873. K: 1873. L: 27.10.1874. Comm: 8.1875. Wrecked off Cape d'Amour, Labrador 16.9.1889.

NOTES: *Arab* (but not *Lily*) re-armed c1879, with aft 64pdr replaced by 3 x 20pdr BL guns (under a new poop deck).

***CONDOR* Class** - composite gunvessels, 3 guns. Nathaniel Barnaby design, 1875.
Dimensions & tons: 157ft 0in pp x 29ft 6in x 13ft 0in. Draught 8ft (fwd), 12ft (aft). 774 disp (780 as completed).
Men: 100. Guns: 1 x 7in (4½-ton) MLR, 2 x 64pdr (64cwt) MLR. (*Flamingo* had 2 x 20pdr BL replacing 1 x 64pdr MLR; she and *Griffon* were re-armed 1884 with 2 x 5in Vavasseur BL replacing 7in MLR.)
Machinery: 2-cyl. (HP 31½in, LP 54in; stroke 24in) horizontal compound expansion. 3 boilers (60 lbs/sq.in). Single screw (Laird vessels with feathering blades). 95 nhp. Designed 750 ihp = 11.5kts. See below for actual ihp/speed.

Flamingo Devonport Dyd/John Elder & Co. (750 ihp = 11.552kts.)
Ord: 1875. K: 15.12.1875. L: 13.12.1876. C: 6.1877. Hulk 1891. Sold to Plymouth Port Sanitary Authority 25.5.1923. Sold 4.5.1931 to BU.

Griffon Laird Brothers, Birkenhead (No.434)/Laird Brothers. (795 ihp = 11.561 ihp.)
Ord: 1875. K: ... . L: 16.12.1876. C: 9.1877. Sold to Board of Trade as hulk 28.9.1891, renamed *Richmond*.

Condor Devonport Dyd/John Elder & Co. (772 ihp = 11.455kts.)
Ord: 1875. K: 15.12.1875. L: 28.12.1876. C: 7.1877. Sold to George Cohen 8.1889.

Falcon Laird Brothers, Birkenhead (No.435)/Laird Brothers. (721 ihp = 11.378kts.)
Ord: 1876. K: ... . L: 4.1.1877. C: 1.1878. Hulk for torpedo range 1891. Sold to E. W. Payne & Co. 25.6.1920.

NOTES: Barque-rigged, more suitable for deep-sea operations than previous gunvessels. Armament disposed as in *Arab* Class.

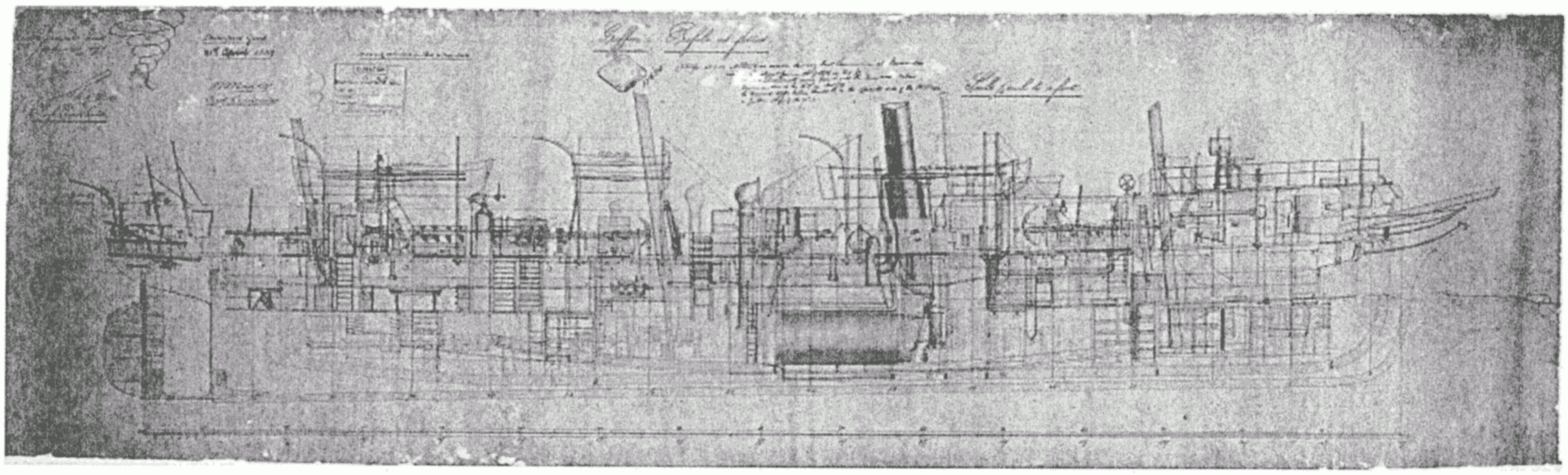
***LINNET* Class** - composite gunvessels, 5 guns. Nathaniel Barnaby design.
Dimensions & tons: 165ft 0in pp x 29ft 0in x 10ft 3in - 10ft 6in. 756 disp (788 as completed).
Men: 92. Guns: 2 x 7in (4½-ton) MLR, 3 x 20pdr BL.
Machinery: 2-cyl. horizontal compound expansion. Single screw. 870 ihp (designed) = 11.8kts. See below for actual ihp.

Swift Thames Ironworks & Sbdg. Co., Blackwall (No.53G)/Thames Ironworks. (1,010 ihp)
Ord: ... . K: 1878. L: 29.11.1879. C: 1880. Sold at Hong Kong (by AO 4.2.1902) for mercantile use, renamed *Hoi Ching*.

Linnet Thames Ironworks & Sbdg. Co., Blackwall (No.54G)/G. & J. Rennie. (1,050 ihp.)
Ord: ... . K: 1878. L: 30.1.1880. C: 1880. Sold as salvage vessel 27.4.1904.

NOTES: Barque-rigged.

Scan and/or retouch by Grzechu



As fitted profile of the *Condor* Class composite gunvessel *Griffon*, Devonport 3 January 1878, corrected to 21 April 1887. A note of 15 March 1881 details alterations made during the last commission at Bermuda, including a chronometer room opened under the commander's cabin, and the bridge widened by 2ft 7in in November 1879; it also notes that the warrant officers' cabin should be on the opposite side of the steerage in future ships of the class. *DR14364*

***ALGERINE* Class** - composite gunvessels, 3 guns. Nathaniel Barnaby design, 1879.

Dimensions & tons: 157ft 0in pp x 29ft 6in x 13ft 7in. 835 disp.
Men: 100. Guns: 1 x 7in (4½-ton) MLR (later replaced by 2 x 5in 40cwt BL), 2 x 64pdr MLR, 2 MGs and 1 light gun. *Rambler* as survey ship had 4 x 20pdr BL, 1 MG and 1 light gun
Machinery: 2-cyl. horizontal compound expansion. Single screw. 810 ihp = 10.5kts. 110 tons coal.
First cost: *Rambler* hull 26,625, machinery £10,413. *Ranger* hull £26,558, machinery £10,710. *Algerine* hull £25,896, machinery £10,556.

Rambler John Elder & Co., Fairfield (No.227)/John Elder & Co. (690 ihp)
Ord: ... . K: 1879. L: 26.1.1880. C: 1884 as survey vessel. Sold 23.1.1907.

Ranger John Elder & Co., Fairfield (No.228)/John Elder & Co. (760 ihp)
Ord: ... . K: 1879. L: 12.2.1880. C: ... . Sold as salvage ship 24.9.1892; re-acquired (on hire) 11.1914 to 1919 as ammunition hulk. BU 1947.

Algerine Harland & Wolff, Belfast (No.131)/Laird Brothers. (750 ihp)
Ord: 1878. K: ... . L: 6.11.1880. C: ... . Sold 10.5.1892.

NOTES: Similar to *Condor* Class, but with poops added.

***DOLPHIN* Class** - composite gunvessels, 4 guns. Nathaniel Barnaby design, 1881; reclassed as screw sloops while building.

Dimensions & tons: 157ft 0in pp x 32ft 0in x 14ft 0in. 925 disp.
Men: 115. Guns: 2 x 6in/100pdr (81cwt) BL, 2 x 5in/50pdr (36cwt) BL, 1 light gun, 3 MGs.
Machinery: 2-cyl. horizontal compound expansion. Single screw. *Dolphin* 720 ihp = 11.3kts; *Wanderer* 750 ihp = 11.3kts. 135 tons coal = 1,700 miles @ 10kts.
First cost: (each) hull £25,850, machinery £9,800.

Dolphin Raylton Dixon, Middlesbrough (No.195)/R. & W. Hawthorn.
Ord: ... . K: 1881. L: 9.12.1882. C:5.1884. Engines removed 1896. Sailing training ship 1899. Hulked as accommodation for submarines 1907. Submarine depot ship at Portsmouth 1912. Sold 13.3.1925, but foundered under tow 19.4.1925, raised and beached; used as accommodation school ship until BU 1977 at Bo'ness.

Wanderer Raylton Dixon, Middlesbrough (No.196)/R. & W. Hawthorn.
Ord: ... . K: 1881. L: 8.2.1883. C: 5.1884. Sailing training ship (brig-rigged) 1894. Sold to Ward, Preston for BU 2.1907.

NOTES: Improved versions of previous designs, but with modern BL guns.

By the early 1880s, gunvessels had grown in size and armament to be equivalent to sloops. Unsurprisingly, therefore, this class and the *Mariner* Class which followed it were rerated as sloops before entering service.

***MARINER* Class** - composite gunvessels, 8 guns. Nathaniel Barnaby design, 1882; reclassed as screw sloops 26.11.1884.

Dimensions & tons: 167ft 0in pp x 32ft 0in x 14ft 0in. 970 disp.
Men: 126. Guns: 8 x 5in (38cwt except *Melita* 40cwt) BL (*Reindeer* had 2 guns removed), 1 light gun, 8 MGs.
Machinery: 2-cyl. horizontal compound expansion. Single screw. 850 ihp = 11.5kts (*Icarus* and *Melita* 12.5kts). 150 tons coal = 1,900-2,300 miles @ 10kts.
First cost: *Mariner* hull £37,156, machinery £12,841. *Reindeer* hull £34,834, machinery £12,787. *Racer* hull £37,000, machinery £12,000. *Icarus* hull £39,369, machinery £12,735. *Melita* (total) ££60,179.

Mariner Devonport Dyd/Hawthorn Leslie.
Ord: ... . K: 8.1.1883. L: 23.6.1884. C: 19.3.1885. Boom defence 1903. Lent to Liverpool Salvage Association as a salvage vessel 1917. Laid up 1922 (to 1929). Sold to Hughes Bolckow, Blyth 19.2.1929.

Reindeer Devonport Dyd/Hawthorn Leslie. (1,030 ihp)
Ord: ... . K: 15.1.1883. L: 14.11.1883. C: 12.1884. Boom defence 1904. Lent to Liverpool Salvage Association as a salvage vessel 1917, renamed *Reindeer I*. Sold to Halifax Shipyard Ltd. (as salvage ship) 12.7.1924. Abandoned at sea 3.1932.

Racer Devonport Dyd/Hawthorn Leslie. (920 ihp)
Ord: ... . K: 9.4.1883. L: 6.8.1884. C: 9.4.1885. Tender to *Britannia* at Dartmouth 1896; to Portsmouth as tender to Osborne College, Cowes 2.1903. Salvage vessel 6.1917. Sold to Hughes Bolckow, Blyth 6.11.1928.

Icarus Devonport Dyd/Barrow Iron Sbdg. (1,230 ihp)
Ord: ... . K: 18.8.1883. L: 27.7.1885. C: 6.7.1886. Sold 12.4.1904.

Acorn Milford Haven Sblg. Co./Maudslay, Sons & Field.
Ord: ... . K: 16.10.1883. L: 6.9.1884. C: 22.2.1885. Sold to Harris, Bristol 15.12.1899. BU at Milford Haven 1904.

Melita Malta Dyd/Malta Dyd. (1,200 ihp)
Ord: ... . K: 18.7.1883. L: 20.3.1888. C: 10.1889. Boom defence 5.1905. Salvage vessel 12.1915, renamed *Ringdove*. Sold to Falmouth Docks Board 9.7.1920, renamed *Ringdove's Aid*.

NOTES: All barque-rigged (except *Icarus*, schooner-rigged). *Icarus* had additional QF guns added 1890.

Scan and/or retouch by Grzechu

A further attempt to update the gunvessel concept was made in 1885 with the two vessels of the *Curlew* Class; rated 'gun and torpedo vessels', they were built of steel and are covered in Chapter 8.

Screw Gunboats

Following the *Britomart* Class, there was a lull in gunboat building until 1870, when the rapid wearing-out of Crimean War era gunboats led to a new programme. All post-1863 gunboats (through two decades) were of composite construction - bringing watertight bulkheads and compound engines to this rank of craft. Additionally, the new construction provided for much improved seakeeping capabilities, at the expense of coastal and esturine capabilities. All bore a three-masted barquentine rig. They can be divided into two periods: the *Ariel* Class and succeeding three Barnaby-design classes (35 vessels in all) mounted four guns on traversing centre-line carriages; the subsequent three White-design classes (a total of 19 vessels) had six guns (4in BL) mounted in broadside pairs (on fo'csle, midships and aft). Notably, all of the White-designed vessels (except the *Bramble* of 1886) were listed as gunvessels in the 1888 Navy List. No further composite gunboats were built after the *Redbreast* Class; the only gunboats constructed after 1889 were the four steel-hulled gunboats of the final *Bramble* Class (launched 1898-99) - see details in Chapter 8.

***ARIEL* Class** - composite gunboats, 4 guns. Edward Reed design, 1870.

Dimensions & tons: 125ft 0in pp x 22ft 6in. Draught 8¼ft - 10¼ft. 295 bm, 430 disp, except *Ariel* and *Zephyr* (23ft beam) 438 tons.
Men: 40 (increased to 60). Guns: 2 x 6in/64pdr (56cwt) MLR, 2 x 4in/20pdr Armstrong BL.
Machinery: 2-cyl. (HP 31in, LP 48in; stroke 18in) horizontal compound expansion (see Notes). 2 boilers. Single (hoisting) screw. 60 nhp. 400 ihp (designed) = 9.5kts. See below for individual ihp. 40 tons coal.
First cost: *Merlin* hull £10,400, machinery £3,800. *Goshawk* hull £10,550, machinery £3,870. *Swinger* hull £10,600, machinery £3,900.

Coquette Pembroke Dyd/James Watt & Co. (406 ihp)
Ord: 1870. K: ... . L: 5.4.1871. C: ... . Sold 8.1889.

Foam Pembroke Dyd/James Watt & Co. (406 ihp)
Ord: 1871. K: ... . L: 29.8.1871. C: ... . Sold 6.1887.

Decoy Pembroke Dyd/James Watt & Co. (459 ihp)
Ord: 1871. K: ... . L: 12.10.1871. C: ... . Sold 10.1885.

Merlin Pembroke Dyd/James Watt & Co. (428 ihp)
Ord: 1871. K: ... . L: 24.11.1871. C: ... . Sold 27.2.1891.

Mosquito Pembroke Dyd/Maudslay, Sons & Field. (501 ihp)
Ord: 1871. K: ... . L: 9.12.1871. C: 11.1873. Sold 12.1888.

Goshawk Pembroke Dyd/Maudslay, Sons & Field. (484 ihp)
Ord: 1871. K: ... . L: 23.1.1872. C: 9.1873. Hulk 1902. Sold *c*1906.

Swinger Pembroke Dyd/Humphrys, Tennant & Co. (461 ihp)
Ord: 1871. K: ... . L: 7.2.1872. C: 9.1873. Hulk 1895. Sold to Rogers & Co. 6.1924.

Ariel Chatham Dyd/Humphrys, Tennant & Co. (540 ihp)
Ord: ?1872. K: ... . L: 11.2.1873. C: 7.1873. Coastguard 26.11.1877. Sold 8.1889.

Zephyr Chatham Dyd/Humphrys, Tennant & Co. (534 ihp)
Ord: ?1872. K: ... . L: 11.2.1873. C: 6.1873. Sold to George Cohen as salvage vessel 8.1889. BU at Briton Ferry 6.1929.

NOTES: Three-masted barquentine rig. On this and the succeeding Barnaby gunboats, all 4 guns were mounted on traversing carriages. Several were re-armed in 1880s with 2 x 5in BLs replacing MLRs, and new Vavasseur 4in BLs. *Mosquito*, *Goshawk*, *Ariel* and *Zephyr* had HP cylinder of 28in diam.; the latter pair with higher ihp reached 10.5kts. *Swinger* had horizontal single expansion engine (2 cylinders of 34in diam., 22in stroke).

***FORESTER* Class** - composite gunboats, 4 guns. Nathaniel Barnaby design, 1873.

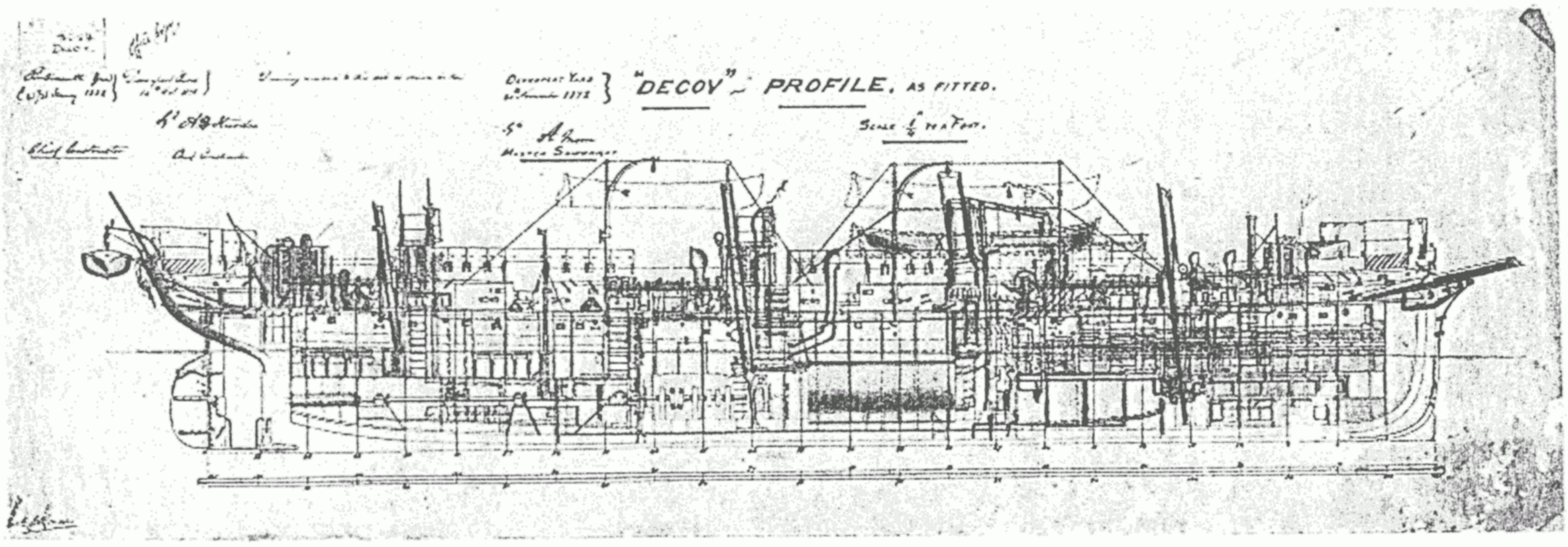
Dimensions & tons: 125ft 0in pp x 23ft 6in. Draught 8½ft - 10½ft. 440 (first 6) 455 (last 6) disp.
Men: 60. Guns: 2 x 6in/64pdr (56cwt) MLR, 2 x 4in/20pdr Armstrong BL.
Machinery: 2-cyl. (HP 28in, LP 48in; stroke 18in) horizontal compound expansion (see Notes). Single screw. 60 nhp. 450 ihp (designed, for 1st 6) 500 ihp (last 6) = 10kts. 40 tons coal.
First cost: *Foxhound* hull £14,150, machinery £6,550. *Forward* hull £14,100, machinery £6,400. *Firm* hull £16,550, machinery £6,080. *Forester* hull £16,500, machinery £6,100. *Firebrand* hull £16,500, machinery £6,300. *Firefly* hull £16,400, machinery £6,300.

Cygnet Wm. Doxford, Sunderland (No.60)/R. & W. Hawthorn. (457 ihp)
Ord: 1873. K: ... . L: 30.5.1874. C: ... . BU 1889.

Express Wm. Doxford, Sunderland (No.61)/R. & W. Hawthorn. (438 ihp)
Ord: 1873. K: ... . L: 16.7.1874. C: ... . Sold 8.1889.

Contest Wm Doxford, Sunderland (No.62)/R. & W. Hawthorn. (515 ihp)

As fitted profile of the *Ariel* Class composite gunboat *Decoy*, Devonport 30 November 1872, corrected to 14 October 1878. *DR8054*



Scan and/or retouch by Grzechu

Ord: 1873. K: ... . L: 29.8.1874. C: ... . BU at Devonport 1889.

Sheldrake Robert Napier & Sons, Govan (No.339)/Robert Napier & Sons. (371 ihp)

Ord: 1874. K: ... . L: 3.7.1875. C: ... . Drill ship, renamed *Drake* 13.3.1888. Coastguard Watch vessel, renamed *CGWV.29* 1893. Renamed *Drake* 1906. Sold to Meyer Isaacs 3.4.1906.

Mallard Earle's Sbdg., Hull (No.204)/Earle. (398 ihp)

Ord: 1874. K: ... . L: 4.8.1875. C: ... . Sold 8.1889.

Moorhen Robert Napier & Sons, Govan (No.340)/Robert Napier & Sons. (378 ihp)

Ord: 1874. K: ... . L: 13.9.1875. C: ... . Sold 11.1888.

Foxhound Barrow Iron Sbdg. (No.33)/R. & W. Hawthorn.

Ord: 1876. K: 21.2.1876. L: 29.1.1877. C: 13.11.1877. Coastguard 1886. Coal tug 1897, renamed *YC.20*. Sold as hulk *Arabel* 1920, and remained in Blackwall Reach for 55 years. BU 1975.

Forward Barrow Iron Sbdg. (No.34)/R. & W. Hawthorn.

Ord: 1876. K: 1876. L: 29.1.1877. C: ... . Coal hulk 1892. Sold 1904.

Firm Earle's Sbdg., Hull (No.209)/Earle.

Ord: 1876. K: ... . L: 14.2.1877. C: ... . Sold to Cox for BU at Falmouth 14.5.1907.

Forester Earle's Sbdg., Hull (No.210)/Earle.

Ord: 1876. K: ... . L: 26.2.1877. C: ... . Coal hulk 1894. Sold 1904.

Firebrand J. & G. Thomson, Govan (No.152)/J. & G. Thomson.

Ord: ... . K: ... . L: 30.4.1877. C: ... . Sold 1905, became mercantile *Hoi Sin*.

Firefly J. & G. Thomson, Govan (No.153)/J. & G. Thomson.

Ord: ... . K: ... . L: 28.6.1877. C: ... . Boom defence 1904. Base ship 3.4.1914, renamed *Egmont*. Renamed *Firefly1*.3.1923. Sold 5.1931.

NOTES: *Moorhen* and *Sheldrake*'s Napier engines were single expansion (direct-acting), not compound - 2 cylinders of 32in diam., 21in stroke. *Mallard*, *Firm* and *Forester*'s Earle engines had 31in diam. HP cylinder.

***BANTERER* Class** - composite gunboats, 4 guns. Nathaniel Barnaby design, 1878.

Dimensions & tons: 125ft 0in pp x 23ft 6in x 10ft 0in. 465 disp.

Men: 60. Guns: 2 x 6in/64pdr (56cwt) MLR, 2 x 4in/20pdr Armstrong BL, 2 MGs.

Machinery: 2-cyl. (28in and 48in diam.; 18in stroke) horizontal compound expansion. Single screw. 440 ihp = 9.5kts. 40 tons coal.

First cost: *Redwing* hull £16,400, machinery £5,800. *Grappler* hull £15,600, machinery £5,250. *Wrangler* hull £17,267, machinery £5,460. *Banterer* hull £15,600, machinery £5,300. *Bullfrog* hull £16,300, machinery £6,050. *Cockchafer* hull £16,000, machinery ?£6,000. *Starling* hull £14,850, machinery £6,250. *Stork* hull £14,900, machinery £6,250. *Raven* hull £14,800, machinery £6,250.

Redwing (ex-*Espoir*, renamed 3.6.1879) Pembroke Dyd/Maudslay, Sons & Field. (440 ihp = 9.68kts.)

Ord: ... . K: ... . L: 25.5.1880. C: ... . Sold at Chatham 4.4.1905.

Grappler Barrow Iron Sbdg. (No.69)/Barrow Iron Sbdg. (440 ihp.)

Ord: ... . K: ... . L: 5.10.1880. C: ... . Boom defence vessel 1904. Sold to King, Garston to BU 14.5.1907.

Wrangler Barrow Iron Sbdg. (No.70)/Barrow Iron Sbdg. (480 ihp = 9.88 kts.)

Ord: ... . K: ... . L: 5.10.1880. C: 10.10.1881. Coastguard 1891. Boom defence vessel 1903. Sold for BU at Dover 2.12.1919.

Wasp Barrow Iron Sbdg. (No.71)/Barrow Iron Sbdg.

Ord: ... . K: ... . L: 5.10.1880. C: 1.12.1881. Wrecked off Tory Island, Ireland with loss of 52 lives 22.9.1884 (wreck sold 11.1910).

Banterer Barrow Iron Sbdg. (No.72)/Barrow Iron Sbdg. (440 ihp.)

Ord: ... . K: ... . L: 2.11.1880. C: 1.10.1882. Sold to Harris, Bristol 14.5.1907.

Espoir Barrow Iron Sbdg. (No.73)/Barrow Iron Sbdg. (470 ihp.)

Ord: ... . K: ... . L: 2.11.1880. C: 11.1.1883. Tug 1895. Yard craft 1903. Sold 1904.

Bullfrog Pembroke Dyd/Maudslay, Sons & Field. (420 ihp.)

Ord: 1878. K: ... . L: 3.2.1881. C: 1885. Hulk 1905. Renamed *Egmont* 3.1923, *St. Angelo* 1.7.1933. Sold 1933.

Cockchafer Pembroke Dyd/Maudslay, Sons & Field. (470 ihp.)

Ord: 1878. K: ... . L: 19.2.1881. C: 1.1883. Sold 6.12.1905.

Starling Samuda Brothers, Poplar/J. & G. Rennie. (360 ihp = 9.5kts.)

Ord: 1880. K: ... . L: 19.4.1882. C: 8.1882. Coastguard 1893. Sold as mercantile 4.4.1905, renamed *Stella Maris*.

Stork Samuda Brothers, Poplar/J. & G. Rennie. (350 ihp = 9.5kts.)

Ord: 1880. K: ... . L: 18.5.1882. C: 1.1883. Survey ship 1887. Lent to Navy League as training ship for boys at Hammersmith 28.3.1893. Sold to Shaws of Kent, Rainham to BU 1950.

Raven Samuda Brothers, Poplar/J. & G. Rennie. (380 ihp = 9.5kts.)

Ord: 1880. K: ... . L: 18.5.1882. C: 4.1883. Diving tender 1904. Lent as training ship 3.1913. Sold for BU 13.3.1925.

NOTES: Distinguished from the preceding class by having vertical stems.

***ALBACORE* Class** - composite gunboats, 4 guns. Nathaniel Barnaby design, 1881.

Dimensions & tons: 135ft pp x 26ft 0in x 11ft 6in. Draught 7ft - 10¼ft. 560 disp.

Men: 60. Guns: 2 x 5in/50pdr (38cwt except *Watchful* 40cwt) BL, 2 x 4in/25pdr (22cwt) BL all on traversing centre-line mountings, 2 MGs.

Machinery: 2-cyl. compound expansion. Single screw. 650 ihp = 10.7kts. 85 tons coal.

First cost: *Albacore* hull £18,000, machinery £8,500 (*Mistletoe* same). *Watchful* (total) £32,527.

Albacore Laird Brothers, Birkenhead (No.506)/Laird Brothers.

Ord: ... . K: 1881. L: 13.1.1883. C: 2.1884. Sold 18.5.1906.

Mistletoe Laird Brothers, Birkenhead (No.507)/Laird Brothers.

Ord: ... . K: 1881. L: 7.2.1883. C: 8.1884. Boom defence 1903. Sold to Shipbreaking Co., London 14.5.1907.

Watchful Laird Brothers, Birkenhead (No.508)/Laird Brothers.

Ord: ... . K: 1881. L: 13.2.1883. C: 8.1884. Boom defence 1903. Sold to Shipbreaking Co., London 14.5.1907.

NOTES: Reintroduced BL guns as main weapons on gunboats, but were the last to use traversing mountings.

***BRAMBLE* Class** - composite gunboats, 6 guns. William White design, 1885.

Dimensions & tons: 165ft 0in pp x 29ft 0in x 11ft. 670 bm; 715 disp (810 full load).

Men: 76. Guns: 6 x 4in/25pdr (25cwt) QF, 4 MGs.

Machinery: Triple expansion. 2 boilers. Single screw. 1,000 ihp (*Rattler* 1,200) = 13kts. 105 tons coal = 2,500 miles @ 10kts.

First cost: *Rattler* hull £28,134, machinery £10,600. *Lizard* hull £42,770, machinery £10,000. *Bramble* hull £39,835, machinery £10,000.

Rattler Armstrong Mitchell, Elswick (No.491)/Hawthorn Leslie.

Ord: ... . K: 15.8.1885. L: 4.8.1886. C: 5.1887. Harbour service 1910. Navigation school ship 9.1919, renamed *Dryad*. Sold to BU 10.1924.

Wasp Armstrong Mitchell, Elswick (No.492)/N. E. Marine Engineering.

Ord: ... . K: 8.1885. L: 13.9.1886. C: 1887. Believed foundered with all hands after leaving Singapore for Shanghai 10.9.1887.

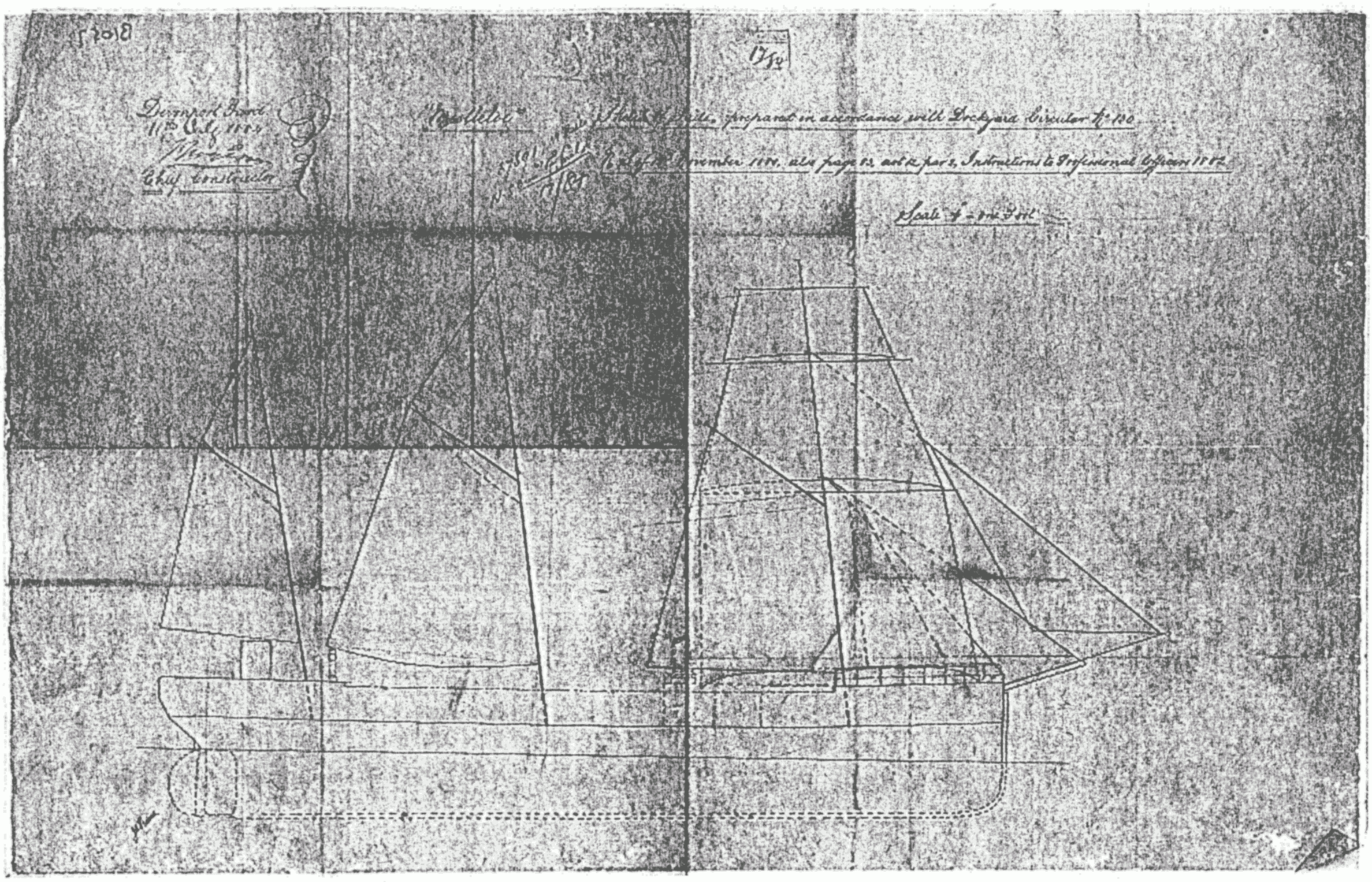
Lizard Harland & Wolff, Belfast (No.190)/Harland & Wolff.

Ord: ... . K: 1885. L: 27.11.1886. C: 10.1887. Sold at Sydney, NSW 1905.

Bramble Harland & Wolff, Belfast (No.191)/Harland & Wolff.

Ord: ... . K: 15.8.1885. L: 11.12.1886. C: 10.1887. Renamed *Cockatrice* 6.1896. Sold at Chatham 3.4.1906.

NOTES: Built under 1885-86 Programme. By late 1887 *Lizard*, *Rattler* and *Wasp* (but not *Bramble*) were reclassed as gunvessels.



Sketch of the barquentine sail plan of the composite gunboat *Mistletoe*, Devonport 11 July 1884, prepared in accordance with a dockyard circular of 13 November 1880. *DR37691*

***PIGMY* Class** - composite gunboats, 6 guns. William White design, 1887.

Dimensions & tons: 165ft 0in pp x 30ft 0in x 11ft 3in. 755 disp.

Men: 76. Guns: 6 x 4in/25pdr (25cwt) QF, 4 MGs.

Machinery: Triple expansion. 2 boilers. Single screw. 1,200 ihp = 13.25kts. 105 tons coal = 2,500 miles @ 10kts.

First cost: *Pheasant* hull £27,800, machinery £10,000 (*Partridge* & *Pigeon* same). *Peacock* hull £27,600, machinery £10,000. *Pigmy* hull £28,000, machinery £9,700 (*Plover* same).

Pheasant Devonport Dyd/Devonport Dyd.
Ord: ... . K: 6.6.1887. L: 10.4.1888. C: 10.1888. Sold to Cox to BU at Falmouth 15.5.1906.

Partridge Devonport Dyd/Devonport Dyd.
Ord: ... . K: 6.6.1887. L: 10.5.1888. C: 12.1888. Sold 1909 at Simonstown to Ward of Preston; arrived Preston to BU 6.5.1913.

Peacock Pembroke Dyd/Barrow Iron Sbdg.
Ord: ... . K: ... . L: 22.6.1888. C: 11.1888. Sold to Ellis, Chepstow to BU 15.5.1906.

Pigmy Sheerness Dyd/Barrow Iron Sbdg.
Ord: ... . K: ... . L: 27.7.1888. C: 7.1889. Sold to Cox to BU at Falmouth 4.4.1905.

Pigeon Pembroke Dyd/Barrow Iron Sbdg.
Ord: ... . K: ... . L: 5.9.1888. C: 3.1889. Sold to V. Grech for commercial use 15.5.1906.

Plover Pembroke Dyd/Barrow Iron Sbdg.
Ord: ... . K: ... . L: 18.10.1888. C: 7.1889. Boom defence vessel 1904. Sold at Gibraltar 27.4.1927.

NOTES: Built under 1886-87 Programme.

***REDBREAST* Class** - composite gunboats (First Class), 6 guns. William White design, 1888.

Dimensions & tons: 165ft 0in pp x 31ft 0in x 11ft 0in - 13ft 9in. 805 disp.

Men: 76. Guns: 6 x 4in/25pdr (25cwt) QF, 4 MGs; last 5 also had 2 x 3pdr QF and only 2 MGs.

Machinery: Triple expansion. 2 boilers. Single screw. 1,200 ihp = 13kts. 105 tons coal = 2,500 miles @ 10kts.

First cost: *Magpie* hull £29,400, machinery £9,300 (*Redbreast* & *Redpole* same). *Ringdove* £39,300 total (*Lapwing* & *Goldfinch* same). *Thrush* £39,000 total (*Sparrow* same). *Widgeon* £38,000 total.

*Magpie** Pembroke Dyd/Earle. (720 ihp.)
Ord: ... . K: 1888. L: 15.3.1889. C: ... . Boom defence vessel 1902. Gunboat 1915, depot ship 10.1915. Sold to Duguid & Stewart 29.12.1921.

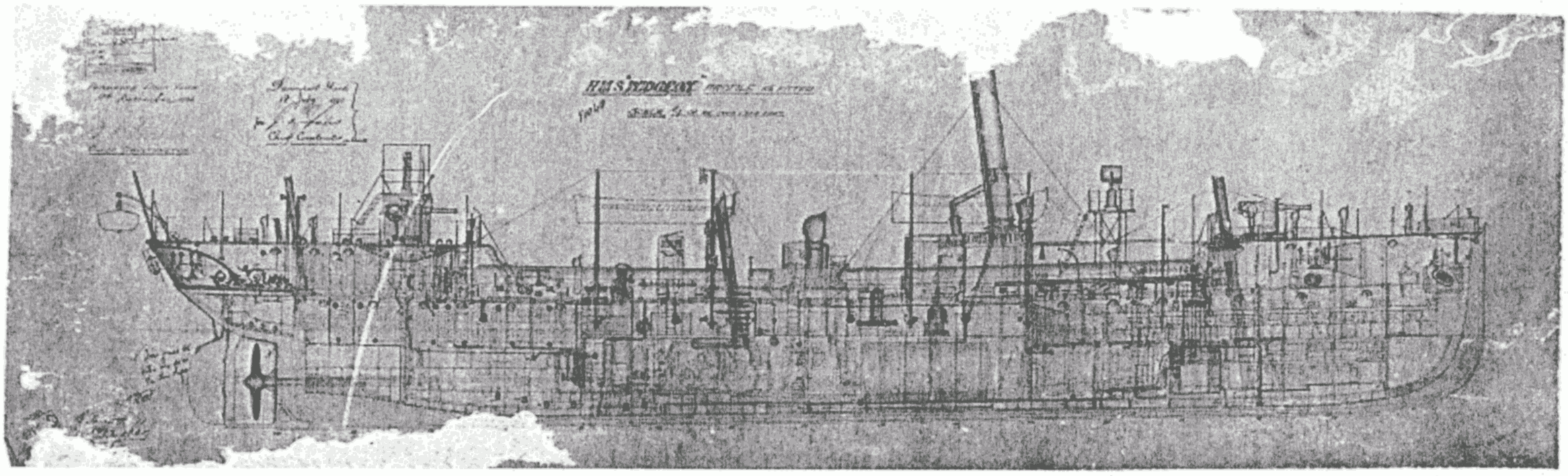
*Redbreast** Pembroke Dyd/Earle.
Ord: ... . K: 1888. L: 25.4.1889. C: ... . Sold 1910.

Redpole Pembroke Dyd/Earle.
Ord: ... . K: ... . L: 13.6.1889. C: ... . Sold to Cox to BU at Falmouth 15.5.1906.

*Ringdove** Devonport Dyd/Devonport.
Ord: ... . K: 1.6.1888. L: 30.4.1889. C: ... . Salvage vessel 7.12.1915, renamed *Melita*. Sold to Ship Salvage Corp. 22.1.1920.

Lapwing Devonport Dyd/Devonport.

Scan and/or retouch by Grzechu



Redbreast Class First Class gunboat *Widgeon*, profile as fitted, Pembroke Dockyard 10 December 1889. *DR15817*

Ord: ... . K: 1.5.1888. L: 12.4.1889. C: ... . Sold at Bombay 10.11.1910.

Goldfinch Sheerness Dyd/Sheerness.
Ord: ... . K: ... . L: 18.5.1889. C: ... . Survey vessel 2.1902. Sold to BU 14.5.1907.

Thrush Scott's, Greenock (No.262)/Greenock Foundry.
Ord: ... . K: ... . L: 22.6.1889. C: ... . Coastguard 1906. Cable ship 1915, salvage vessel 1916. Wrecked off Glenarm, N. Ireland 11.4.1917.

Widgeon Pembroke Dyd/J. & G. Rennie.
Ord: ... . K: ... . L: 9.8.1889. C: ... . Sold to Castle to BU at Charlton 15.5.1906.

Sparrow Scott's, Greenock (No.261)/Greenock Foundry.
Ord: ... . K: 1888. L: 26.9.1889. C: ... . To New Zealand as training ship 10.7.1906, renamed *Amokura*. Sold as coal hulk 2.1922. BU 1955.

NOTES: First three (*) under 1887-88 Programme; last six under 1888-89 Programme.

Surveying and Exploration Ships

DISCOVERY - wooden screw Arctic discovery vessel (ex-mercantile *Bloodhound*, built 1873 by Alex.(?) Stephen, Dundee (No.53)).
Dimensions & tons: 166ft 0in pp x 29ft 1in x 17ft 9in. 556 bm. 1,247 disp.
Machinery: Greenock Iron Foundry. 96 nhp. 312 ihp.
Whaler, purchased 5.12.1874 and strengthened for ice navigation.
Sold to D. Murray 2.1902.
NOTES: Bought and employed for the 1875-76 expedition led by Capt. George Nares (in company with ex-sloop *Alert*).

DART - composite survey ship (ex-Colonial Office vessel *Cruiser*, launched 6.6.1877 by Barrow Iron Sbdg Co. (No.39) as a private sailing yacht).
Dimensions & tons: 133ft 0in pp x 25ft 2in x 13ft 2in. 470 disp.
Guns: 1 x 7pdr MLR.
Machinery: (installed 1881). Barrow Sbdg engine of 750 ihp.
Transferred to Navy 3.1882. Lent to NSW government as training ship 1904. Sold at Sidney 9.5.1912.

RESEARCH - composite paddle survey ship.
Dimensions & tons: 155ft 0in pp x 24ft 0in x 8ft 9in. 520 disp.
Guns: 1 x 7pdr MLR.
Machinery: Paddle machinery. 450 ihp = 10.5kts. 70 tons coal.
First cost: hull £18,500, machinery £7,500.
Research (ex-*Investigator*, renamed 5.11.1887) Chatham Dyd/Barrow Iron Sbdg.
K: 1887. L: 4.12.1888. Sold to Ward, New Holland 29.7.1920.

Tugs

SHEERNESS - wooden paddle tug (ex-mercantile *Scotia*, launched 31.8.1859 by R. & H. Green, Blackwall (No.352)).
Dimensions & tons: 132ft 2in x 20ft 4in x 12ft 1in. 233 bm.
Machinery: 114 nhp. 363 ihp.
Purchased 16.6.1863. Sold 3.4.1906.

SCOTIA - wooden paddle tug (ex-mercantile, launched 20.6.1863 by R. & H. Green, Blackwall (No.358)).
Dimensions & tons: 131ft 11in x 21ft 0in x 12ft 5in. 268 bm.
Machinery: 114 nhp.
Purchased 28.11.1863. Sold 1898.

***GRINDER* Class** - wooden paddle tug.
Dimensions & tons: 120ft 0in pp x 25ft 1in x 14ft 2in. 332 bm. 505 disp.
Machinery: 150 nhp. 876 ihp.
Grinder J. Samuel White, Cowes./J. & G. Rennie.
Ord: 1867. K: ... . L: 21.3.1868. Based at Sheerness. Sold to Multilocular Shipbreaking Co. 28.10.1919.

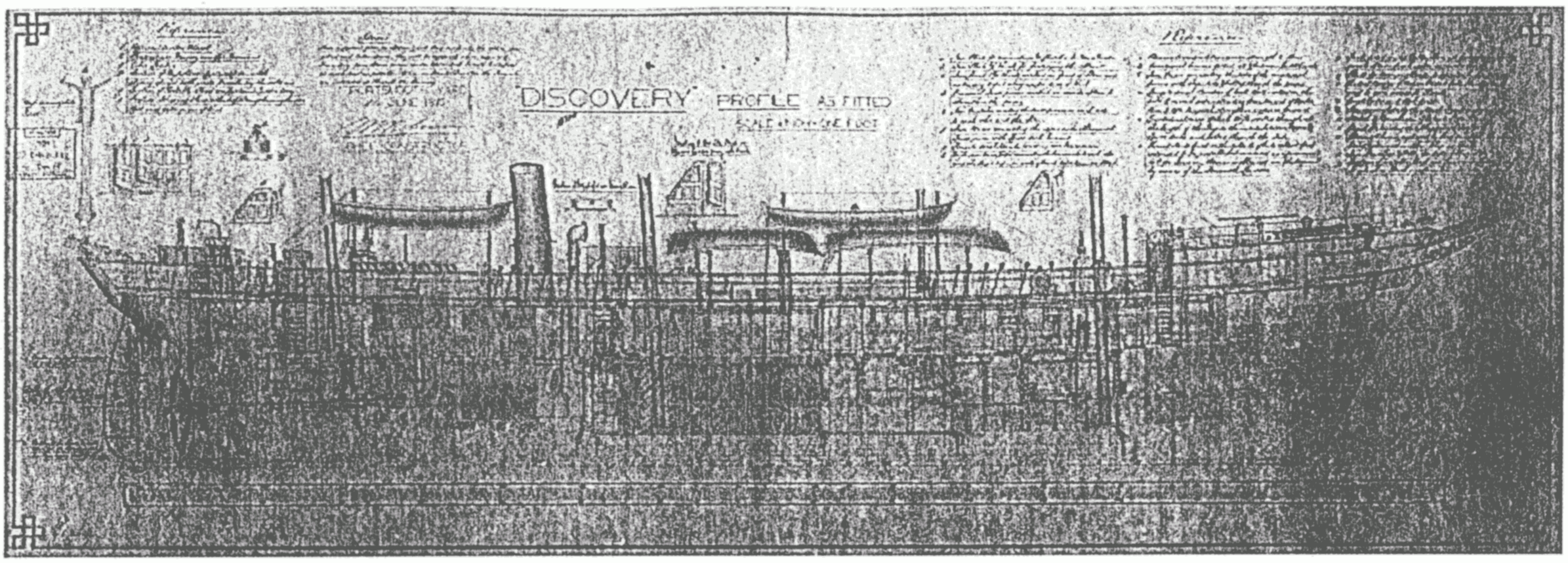
CLOVER - wooden screw tug (ex-mercantile, origins unknown).
Tons: 101 bm.
Purchased 10.2.1876 for use at Bermuda. BU 9.1882.

HELLESPONT - composite paddle tug (ex-mercantile *Hellespont*, built 1867 by Readhead & Softley, South Shields (No.22)).
Dimensions & tons: 114ft 0in pp x 19ft 10in x 10ft 3in. 137 bm.
Guns: 1 x 7pdr MLR.
Machinery: 60 nhp. 200 ihp.
Purchased 20.4.1878. Sold 12.2.1904.

Special Service Vessels

PIONEER - composite paddle vessel.
Dimensions & tons: 160ft 0in x 25ft 6in x 8ft 2in. 576 disp.
Guns: 6 x 20pdr.
Machinery: Paddle machinery. 480 ihp.
Pioneer J. Blumer, North Sands, Sunderland (No.29)/J. Watt & Co.

Scan and/or retouch by Grzechu



As fitted profile for the purchased wooden Arctic exploration ship *Discovery*, Portsmouth 14 June 1875. The draught is almost covered with a key detailing all the fittings specially introduced for the ship's new role, enshrining the Navy's century of experience in ice navigation. *DR7397*

L: 26.10.1874. Sold to BU 1888.

NIGER - composite paddle vessel.
Dimensions & tons: 160ft 0in x 25ft 6in x 8ft 5in. 543 disp.
Guns: 2 x 20pdr.
Machinery: Paddle machinery. 540 ihp.
Niger John Elder & Co., Fairfield, Govan (No.229)/Fairfield.
Ord: 1878. L: 10.3.1880. Renamed *Cockatrice* 2.4.1881. Renamed *Moorhen* 1896. Sold to BU 1899.

TRITON - composite paddle vessel.
Dimensions & tons: 145ft 0in x 23ft 0in x 8ft 4in. 410 disp.
Guns: ?.
Machinery: Paddle machinery. 350 ihp.
Triton Samuda Brothers, Poplar/Maudslay, Sons & Field.
Ord: ?1880. L: 4.3.1882. Lent to Gravesend Sea School 24.6.1919. BU 10.1961.

ALECTO - composite paddle vessel.
Dimensions & tons: 160ft 0in x 26ft 3in x 7ft 4in. 620 disp.
Guns: 1 x 7in MLR.
Machinery: Paddle machinery. 490 ihp.
Alecto Westwood & Baillie, Millwall/J. & G. Rennie.
Ord: 1881. L: 14.8.1882. Sold at Sierra Leone 12.10.1899.

SPHINX - composite paddle vessel.
Dimensions & tons: 200ft 0in x 32ft 3in x 10ft 2in. 1,130 disp.
Guns: 2 x 7in MLR + 4 x 64pdrs. Later 1 x 6in + 6 x 4in.
Machinery: 2-cyl. compound oscillating. 1,138 ihp. 12.4kts.
Sphinx R. & H. Green, Blackwall (No.464)/John Penn & Co.
Ord: ?1881. L: 28.11.1882. Sold at Calcutta 27.7.1919.

Royal Yacht

OSBOURNE - wooden paddle vessel.
Dimensions & tons: 250ft 0in, c220ft 9in x 36ft 2in x 23ft 0in. 1,536 bm. 1,703 disp.
Machinery: 400 ihp. 2,700 ihp (later measured 3,363 ihp).
Osbourne Pembroke Dyd.
Ord: 1867. L: 19.12.1870. Sold at Felixstowe to BU 31.7.1908.

Tender

WAVE - wooden paddle tender (ex-mercantile *Edeline*, built 1874 by T. B. Seath, Rutherglen).
Dimensions & tons: 133ft 7in pp x 22ft 8in x 9ft 5in. 308 disp.
Machinery: 160 ihp. Purchased 27.11.1882. Sold 1907.

Sailing Vessels

MANILLA - wooden bark (ex-mercantile *Ingeborg*, built 1861).
Dimensions & tons: ... . 373 bm.
Purchased 28.2.1870. Sold at Yokohama 14.8.1872.

***BEAGLE* Class** - schooners.
Dimensions & tons: 77ft 0in x 18ft 6in x 8ft 6in. 120 bm.
Men: ... . Guns: 1 x 12pdr.
Beagle L: 5.12.1872. Sold at Sydney 1883.
Sandfly L: 5.12.1872. Sold at Sydney 1883.
Renard L: 16.1.1873. Sold at Sydney 1884.
Conflict L: 11.2.1873. Sold at Sydney 1882.
All four were built by John Cuthbert at Miller's Point, Sydney, NSW, and came into service in 8.1873 to help enforce the Imperial Parliament's Kidnapping Act of 1872 which aimed to eliminate the practice of kidnapping Pacific Islanders as a labour force for white settlers in tropical north-east Australia; this was known in Australia as 'blackbirding'.

ALACRITY (ex mercantile *Ethel*, built at Sydney).
Dimensions & tons: 87ft 0in x 19ft 2in x 7ft 9in. 85 bm.
Men: ... . Guns: 1 x 12pdr.
Came into service (hired) 4.1872 to enforce the Kidnapping Act.
Purchased 4.11.1872. Sold at Sydney 1.1882.

In addition to the above, a number of small brigs were built for training purposes (see details in Chapter 2).

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10 Torpedo Craft

Notwithstanding earlier attempts at devising submarine attacks on warships, the earliest practical product of torpedo warfare was the 'spar' torpedo, consisting of an explosive charge mounted on the end of a long pole, and rigged from the bow (usually) of a small steamboat, angled so that the charge was a foot or so below the surface and was rammed into the target vessel below the waterline.

The invention in 1866 by Robert Whitehead of the compressed-air-driven torpedo turned the idea into a capable weapon that increased rapidly in its potency throughout the remainder of the century. The earliest specialised torpedo-carrying vessels were essentially defensive weapons platforms, but ships capable of accompanying the fleet were soon produced, in spite of early Admiralty qualms about their adoption.

Early Torpedo Vessels

During the 1870s the Admiralty, after careful consideration, introduced two novel vessels to take advantage of the new technology. Although both contemporary opinion and much of posterity has ridiculed both as 'failures', in fact they represented well-conceived and practical means to take advantage of the torpedo (note in particular Andrew Lambert's commentary in the Introduction at the start of this volume). The innovative *Polyphemus* in particular was designed to present a potent threat to the armoured battleship.

VESUVIUS - torpedo vessel (iron). Designed by Nathaniel Barnaby, 1873.

Dimensions & tons: 90ft 0in pp x 22ft 0in x 8ft 6in. Draught 7ft 0in (fwd), 8ft 6in (aft). 245 disp.

Men: 15. Guns: nil. Torpedoes: 1 x 16in (submerged) bow TT.

Machinery: 2 sets of inclined 2-cyl. (22in diam., 15in stroke) compound expansion engines. Twin screws. 382 ihp = 9.713kts. 25 tons coal. Hull £10,522, machinery £7,465.

Vesuvius Pembroke Dyd/Maudslay, Sons & Field.

Ord: 1873. K: 16.3.1873. L: 24.3.1874. C: 11.9.1874. Classed as tender to HMS *Vernon*, Portsmouth. Sold to Cashmore 14.9.1923, but foundered in tow to Newport.

NOTES: A comparatively slow and small vessel, with a low silhouette, low-noise engines and exhaust gases intended to be expelled through side ducts instead of a funnel (although one was added during construction), to achieve surprise in a stealthy attack. Boilers (100 lbs/sq.in) fired by smokeless coal (anthracite). Employed solely for experiments and training for the torpedo school.

***POLYPHEMUS* Class** - torpedo rams (steel). Designed by Nathaniel Barnaby, 1878.

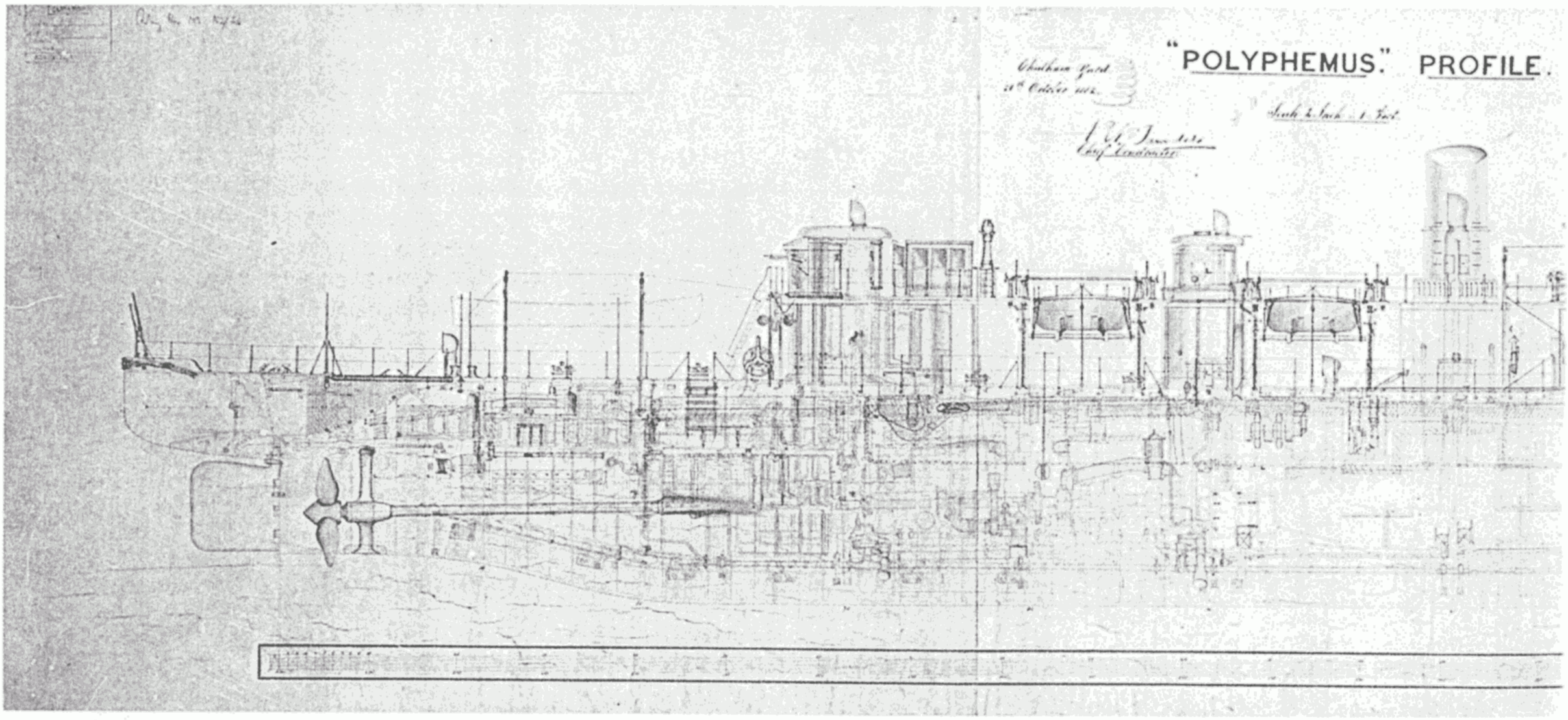
Dimensions & tons: 240ft 0in pp x 40ft 0in x 20ft 6in. 2,640 disp.

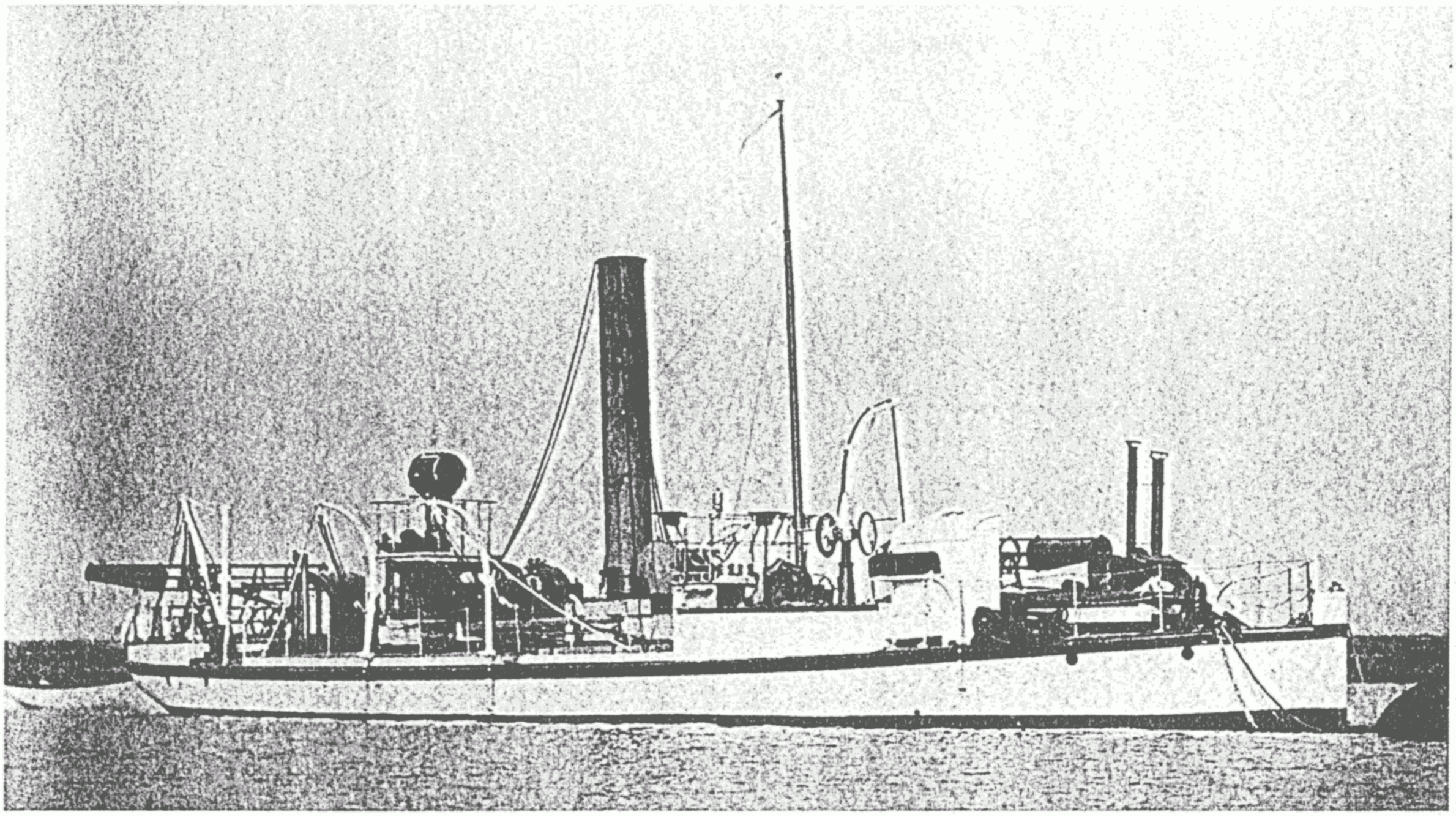
Men: 146. Guns: 6 x Nordenfelt 1in MGs mounted in towers on the flying deck. Torpedoes: 5 x 14in submerged TT - one bow + 4 broadside (18 torpedoes carried).

Armour: 3in along the 4ft above-water part of her curved sides.

Machinery: 2 sets of 2-cyl. compound expansion engines. Twin screws.

Profile of the *Polyphemus* as fitted, Chatham 21 October 1882. The bow torpedo tube can be seen running back from the spur ram, abaft which is an impressive array of reloads. *DR26750*



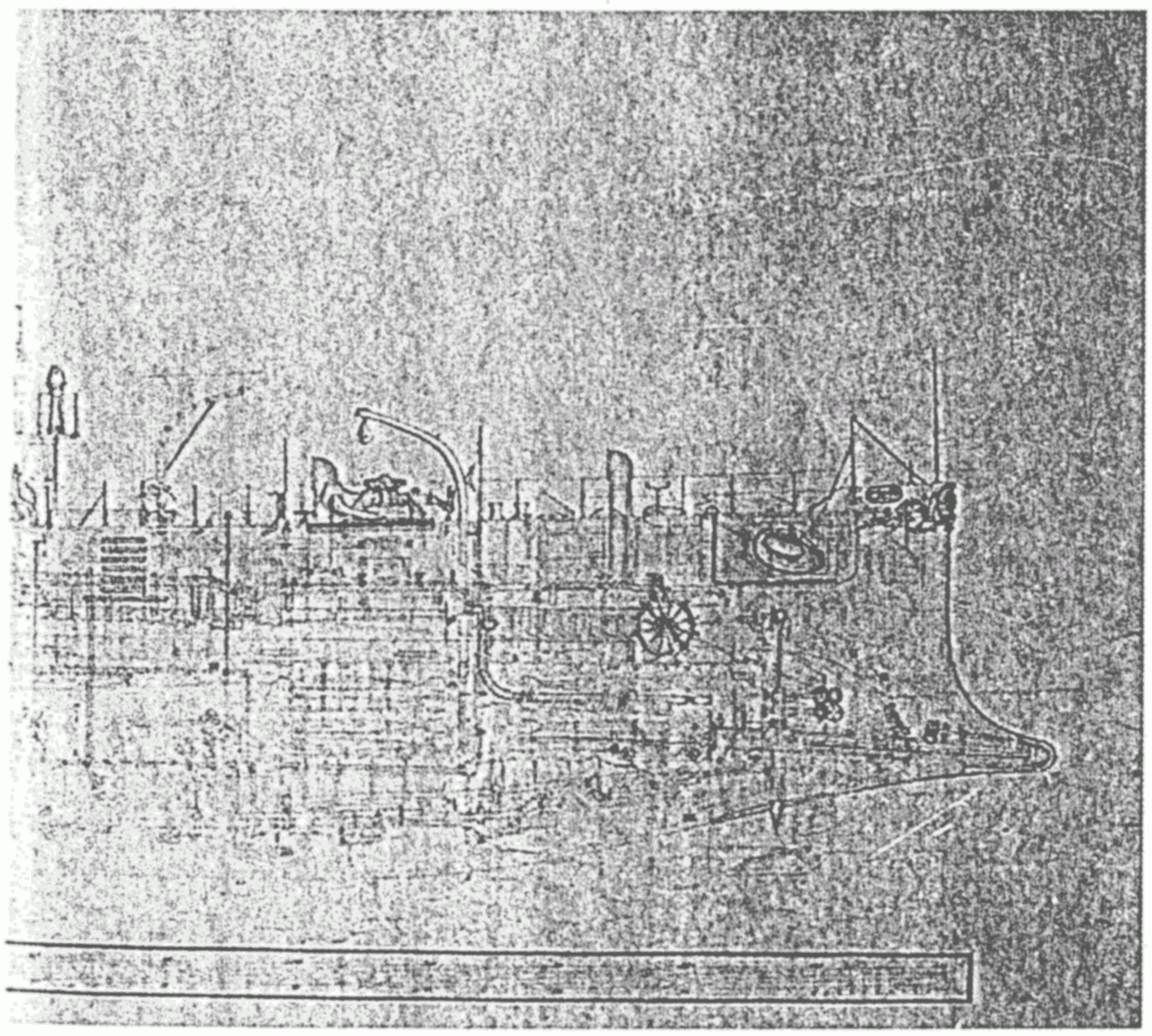


Vesuvius towards the end of the nineteenth century, with torpedo launching frames fore and aft and a searchlight amidships. *N5381*

5,520 ihp = 17.85kts (natural draught), 7,000 ihp = 18kts (forced draught). 200 (normal) - 300 (maximum) tons coal = 3,400 miles radius.

First cost: Hull £114,000, machinery £60,450.

Polyphemus Chatham Dyd/Humphrys, Tennant & Co.



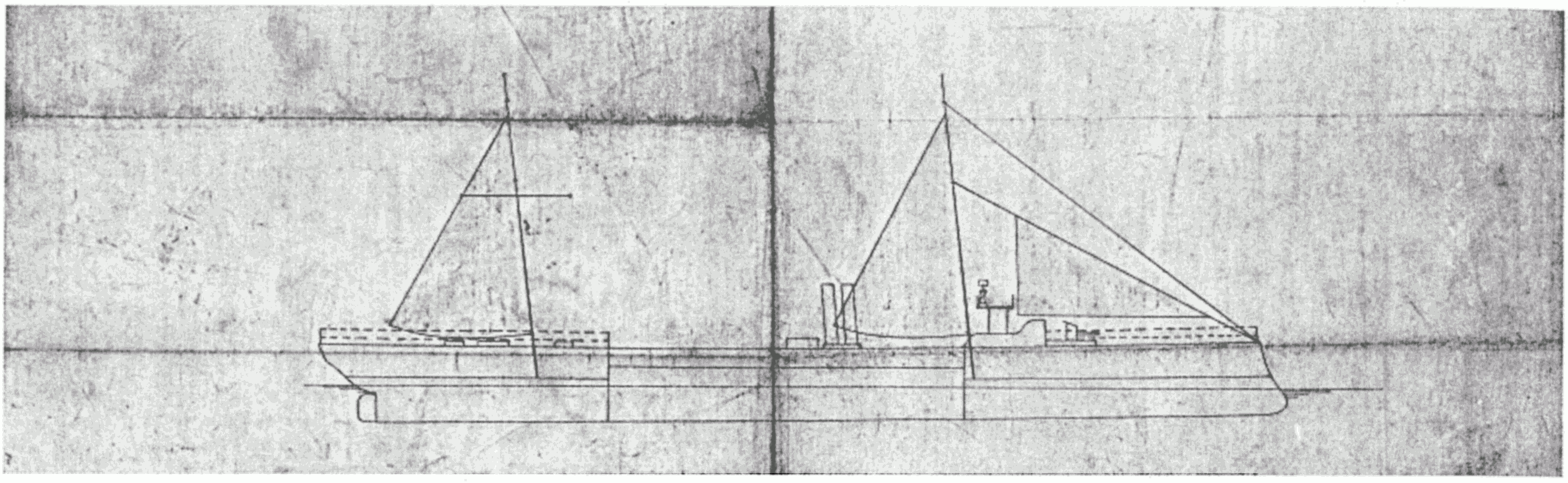
Ord: 5.2.1878. K: 21.9.1878. L: 15.6.1881. K: 9.1882. Sold to George Cohen to BU 7.7.1903.

NOTES: The superstructure was composed of two separate rafts, designed to float off if the vessel sank; the hull itself was a cigar-shaped form which was mainly submerged - a fore-runner of the Holland type submarine of 20 years later. A sister-ship was ordered from Chatham on 30.12.1881 but neither laid down nor named and was cancelled 10.11.1882. Another order to the same design was placed at Chatham on 6.3.1885 and this vessel was named *Adventure*, but was cancelled 12.8.1885. Notwithstanding the designation 'ram', this powerfully-armed torpedo vessel only carried a ram as a secondary weapon, which was added to the original design as an afterthought to fit the popular philosophy advocated by Admiral Sir George Sartorius (the ram also formed the cap of the bow TT). The introduction of quick-firing guns during the mid-1880s rendered this type of vessel too vulnerable for her conceived role, and no more were built.

Various countermeasures were considered from the 1870s onwards to the threat from torpedo attacks. Some ocean-going torpedo boats were stripped of their torpedoes and given an enhanced gun armament, on the basis that their speed and manoeuvrability made them the most effective vessels to take on the torpedo boat. The *Scout* and *Archer* Classes of torpedo cruisers represented an attempt to combine anti-torpedo defence for the fleet with an offensive role in providing an effective torpedo capability, while the contemporary *Curlew* Class represented an attempt (ultimately unsuccessful) to provide the same mixture on a sloop-sized platform; details of all the above craft will be found in Chapter 8.

In the same year the first torpedo gunboats - sometimes called torpedo catchers - were begun in order to compensate for the lack of speed of such small cruisers. The rapid increase in torpedo speeds, coupled with rising speeds in the battlefleet, rendered even the torpedo gunboats

Scan and/or retouch by Grzechu



Sketch of sails, as fitted, for the torpedo gunboat *Grasshopper*, Sheerness 3 July 1888. The small area of canvas was little more than steadying sail to reduce rolling when cruising, but might have been useful to get the ship home in the event of engine failure. *DR34516*

ineffective, particularly in heavy seas. The emergence of the much faster torpedo-boat destroyer (or destroyer as it swiftly became known) in the 1890s quickly made the earlier types obsolete; but that lies outside our present period of study.

Torpedo Gunboats

RATTLESNAKE - torpedo gunboat. Designed by Nathaniel Barnaby, 1885.

Dimensions & tons: 200ft 0in pp x 23ft 0in x 10ft 2in. 550 disp.
Men: 66. Guns: 1 x 4in/25pdr (25cwt) BL, 6 x 3pdr QF.
Torpedoes: 4 x 14in - 2 fixed bow TT & 2 TCs (with 4 reloads).
Armour: ¾in protective deck only.
Machinery: 2 sets of vertical triple expansion. Locomotive boilers. Twin screws. 1,600 ihp = 16.75kts (natural draught); 2,700 ihp = 19.25kts (forced draught). 100 tons coal = 2,800 (or 3,050) miles radius @ 10kts.
First cost: Hull £21,425, machinery £14,000.

Rattlesnake Laird Brothers, Birkenhead (No.537)/Laird Brothers.
Ord: 1885. K: 16.11.1885. L: 11.9.1886. C: 5.1887.
Experimental submarine target ship 1906. Sold 1910.

NOTES: Ordered, like the 'torpedo cruisers' and the sloop-type *Curlew* Class, as a result of the 1885 Russian war scare. The first vessel in the Navy to have triple expansion engines.

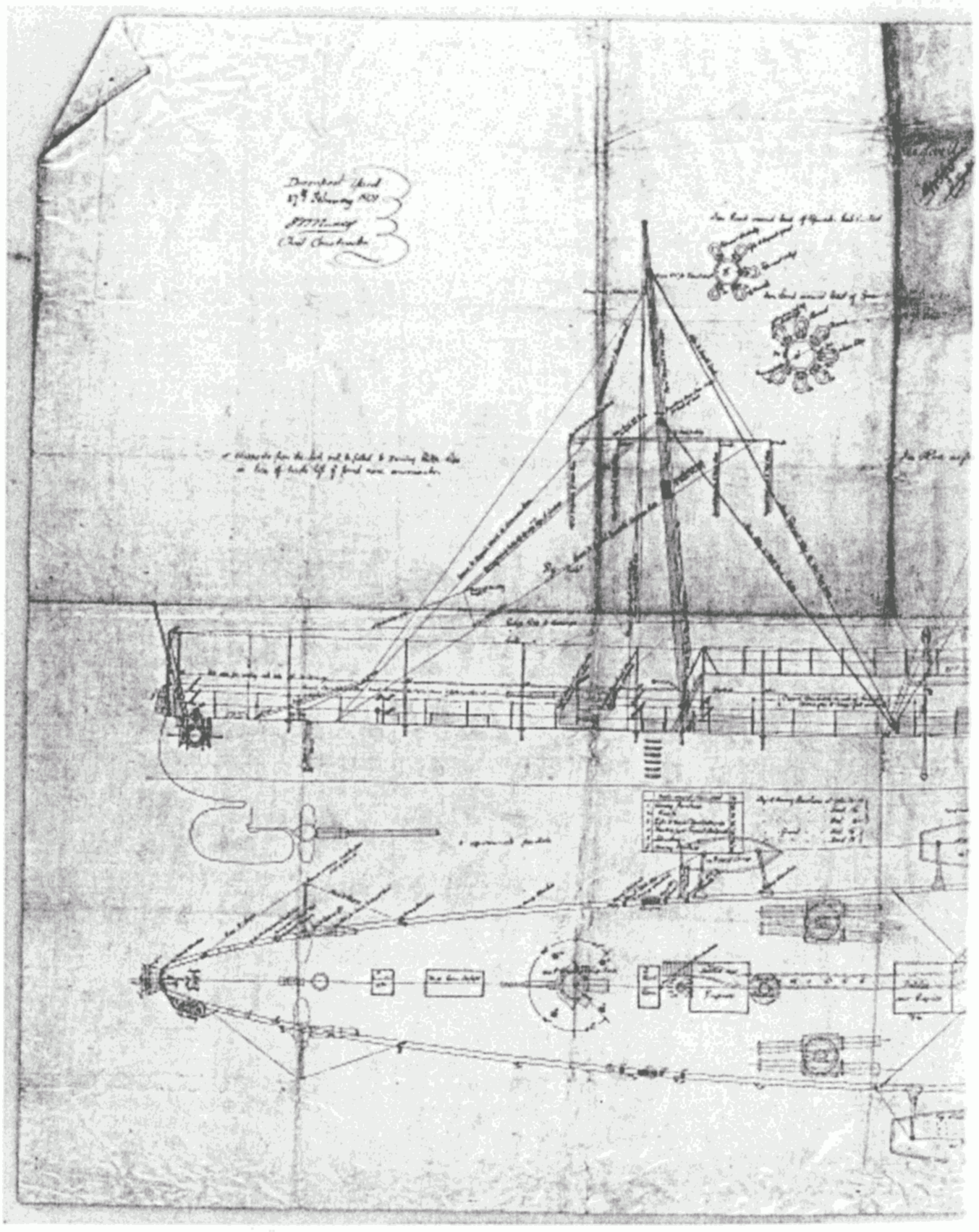
***GRASSHOPPER* Class** - torpedo gunboats. Designed by Nathaniel Barnaby, 1886.

Dimensions & tons: 200ft 0in pp x 23ft 0in x 8ft 9in/10ft 4in. 525 disp.
Men: 66. Guns: 1 x 4in/25pdr (25cwt) BL, 6 x 3pdr QF.
Torpedoes: 4 x 14in - 2 fixed bow TT & 2 TCs (with 4 reloads).
Machinery: 2 sets of triple expansion. Twin screws. 1,600 ihp = 16.75kts (natural draught); 2,700 ihp = 19.25kts (forced draught). 100 tons coal = 2,400 miles @ 10kts.
First cost: *Sandfly* hull £22,877, machinery £13,290. *Grasshopper* hull £20,897, machinery £13,168. *Spider* hull £23,000, machinery £13,300.

Sandfly Devonport Dyd/Maudslay, Sons & Field.
Ord: 1886. K: 19.4.1886. L: 20.8.1887. C: 7.1888. Sold at Malta 17.3.1905.

Grasshopper Sheerness Dyd/Maudslay, Sons & Field.
Ord: 1886. K: 27.4.1886. L: 30.8.1887. C: 7.1888. Sold 11.7.1905.

Spider Devonport Dyd/Maudslay, Sons & Field.



Scan and/or retouch by Grzechu

Ord: 1886. K: 7.6.1886. L: 17.10.1887. C: 7.1888. Sold at Malta 13.5.1903; BU by Ward, Preston.

NOTES: Virtually identical to the prototype *Rattlesnake*.

***SHARPSHOOTER* Class** - torpedo gunboats. Designed by William White, 1888.

Dimensions & tons: 242ft 0in oa , 230ft 0in pp x 27ft 0in x 8ft 6in. 735 disp.

Men: 91. Guns: 2 x 4.7in/45pdr (2-ton) QF, 4 x 3pdr QF. Torpedoes: 5 x 14in TT (with 3 reloads). The RIM pair had just 3 TT.

Machinery: 2 sets of triple expansion. Locomotive boilers (later reboilered with water-tube types). Twin screws. 2,500 ihp = 16.5kts (natural draught); 3,600 ihp = 19kts (forced draught). 100 tons coal = 2,500 miles @ 10kts.

First cost: *Sharpshooter* hull £29,675, machinery £20,354.

Sharpshooter Devonport Dyd/G. E. Belliss & Co.

Ord: ... . K: 13.1.1888. L: 30.11.1888. C: 8.1889. Hulked for instructional duties, renamed *Northampton* 1904 (or later). Sold 27.3.1922 and BU by C. A. Beard at Upnor.

Spanker Devonport Dyd/G. E. Belliss & Co.

Ord: ... . K: 12.4.1888. L: 22.2.1889. C: 17.10.1890. Became minesweeper 1909. Sold to Cornish Salvage Co., Ilfracombe to BU 20.3.1920.

Speedwell Devonport Dyd/Laird Brothers.

Ord: ... . K: 18.4.1888. L: 15.3.1889. C: 1.7.1890. Became minesweeper 1909. Sold to Cornish Salvage Co., Ilfracombe to BU 20.3.1920.

Seagull Chatham Dyd/Maudslay, Sons & Field.

Ord: ... K: 23.4.1888. L: 31.5.1889. C: 1.12.1890. Became minesweeper 1909. Sunk in collision in the Firth of Clyde 30.9.1918.

Salamander Chatham Dyd/Maudslay, Sons & Field.

Ord: ... . K: 23.4.1888. L: 31.5.1889. C: 8.7.1891. Sold to Ashdown, London to BU 15.5.1906.

Sheldrake Chatham Dyd/Maudslay, Sons & Field.

Ord: ... . K: 4.7.1888. L: 30.3.1889. C: 18.3.1890. Sold to Shipbreaking Co., London 9.7.1907.

Skipjack Chatham Dyd/Laird Brothers.

Ord: ... . K: 4.7.1888. L: 30.4.1889. C: 8.7.1891. Became minesweeper 1909. Sold to Hammond Lane Foundry Co., Dublin to BU 23.4.1920.

Boomerang (ex-*Whiting*) Armstrong Mitchell, Elswick (No.545)/G. E. Belliss & Co.

Ord: ... . K: 17.8.1888. L: 24.7.1889. Renamed *Boomerang* 2.4.1890. C: 14.2.1891. Sold at Portsmouth 11.7.1905.

Karakatta (ex-*Wizard*) Armstrong Mitchell, Elswick (No.546)/ G. E. Belliss & Co.

Ord: ... . K: 17.8.1888. L: 27.8.1889. Renamed *Karakatta* 2.4.1890. C: 2.1891. Sold at Portsmouth 11.1.1905.

Plassey (RIM) Armstrong Mitchell, Elswick (No.547)/Maudslay, Sons & Field.

Ord: ... . K: 19.11.1888. L: 5.7.1890. C: 2.1890. Sold 17.5.1904.

Assaye (RIM) Armstrong Mitchell, Elswick (No.548)/Maudslay, Sons & Field.

Ord: ... . K: 19.11.1888. L: 11.2.1890. C: 1.1892. Sold 5.1904.

Gossamer Sheerness Dyd/Sheerness Dyd.

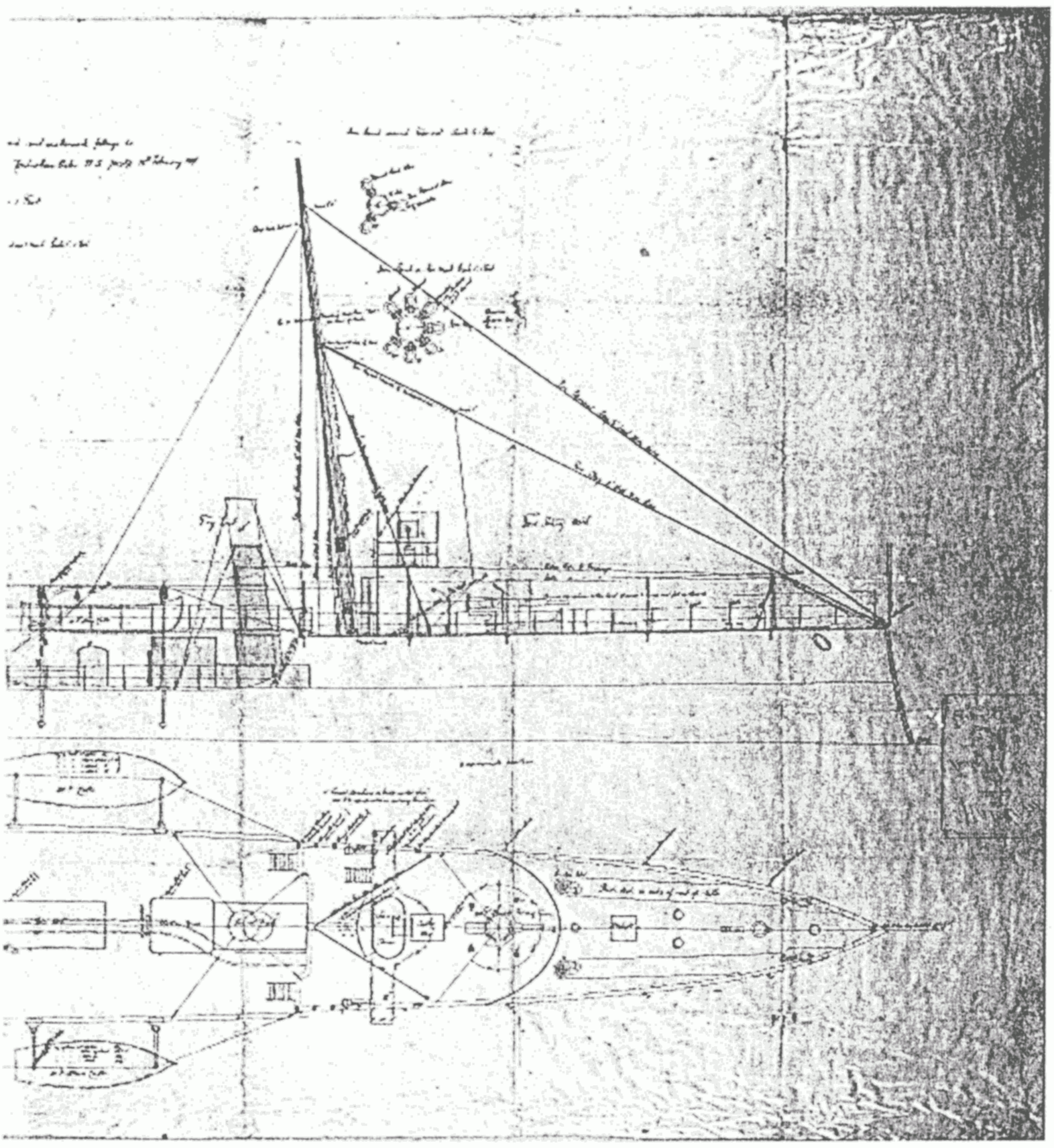
Ord: ... . K: 21.1.1889. L: 9.1.1890. C: 16.6.1891. Became minesweeper 1908. Sold to Cornish Salvage Co., Ilfracombe to BU 20.3.1920.

Gleaner Sheerness Dyd/Sheerness Dyd.

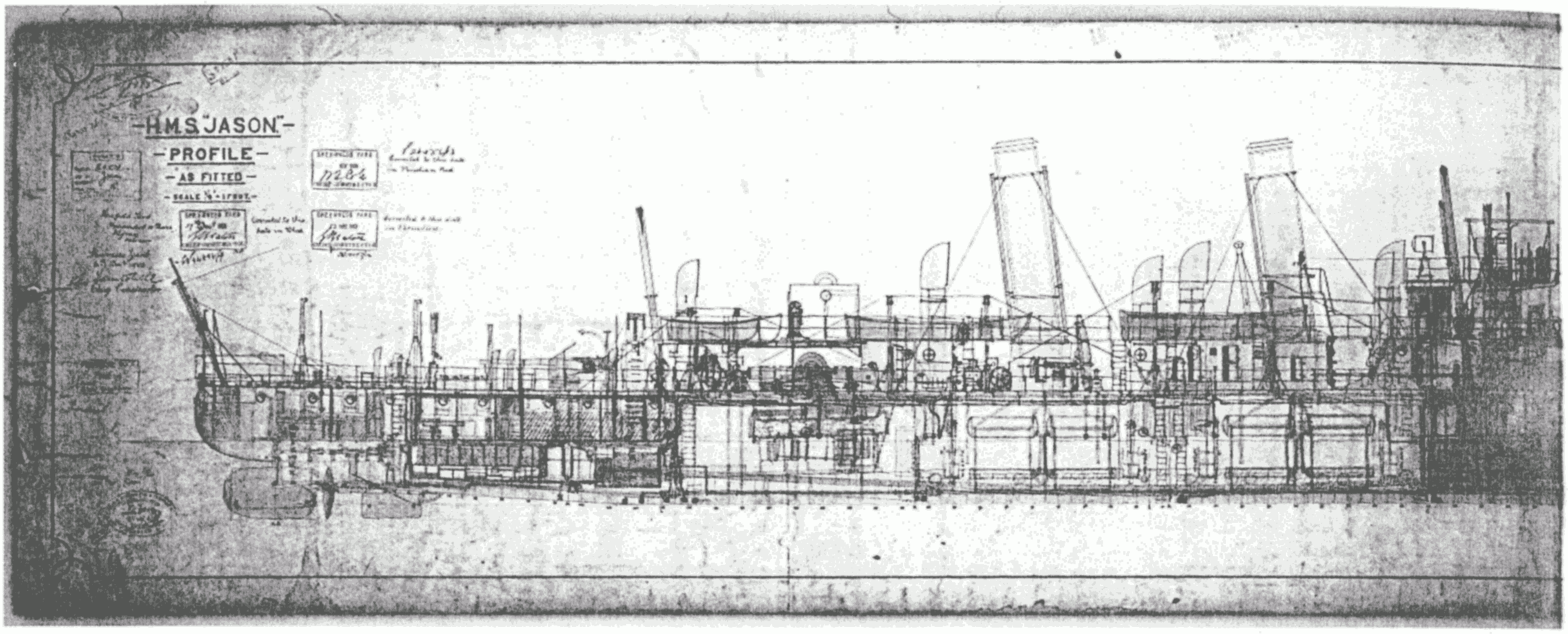
Ord: ... . K: 21.1.1889. L: 9.1.1890. C: 21.12.1891. Sold to George Cohen to BU 4.4.1905.

NOTES: The four Armstrong-built vessels were from the outset allocated to colonial stations - two to the Australian squadron (renamed in 1890 while completing) and two to the RIM. The last two vessels (*Gossamer* and *Gleaner*) were provided for under the Naval Defence Act, 1889. In 1895 the new French-designed Belleville boilers were experimentally fitted to the *Sharpshooter*; over the next 3 years, other types were fitted - Babcock into the *Sheldrake*, Niclausse into *Seagull*, Du Temple into *Spanker*, Mumford into *Salamander* and Thornycroft into *Speedy* - the last three being of the small tube type.

The *Sharpshooters* were followed by two further classes of torpedo gunboat - the *Alarm* Class which was virtually an enlarged *Sharpshooter*, and then the bigger *Dryad* Class which were contemporary with the first torpedo-boat destroyers, which



The torpedo gunboat *Speedwell*, sketch of rigging, sails, outboard and weatherwork fittings, Devonport 27 February 1891. *DR20576*



quickly overshadowed the TGBs. All were funded under the Naval Defence Act. The early TBDs are covered in detail in David Lyon's *The First Destroyers* (London, 1996) and the data on the last torpedo gunboats is included hereinunder so as not to leave a gap.

***ALARM* Class** - torpedo gunboats. Designed by William White, 1889.
Dimensions & tons: 242ft 0in oa, 230ft 0in pp x 27ft 0in x 11ft 9in. Draught 10ft-12½ft. 810 load (735 light) disp.
Men: 91. Guns: 2 x 4.7in/45pdr (2-ton) QF, 4 x 3pdr, 1 MG (Gardner). Torpedoes: 5 x 14in TT (3 reloads) in first five; 3 x 18in TT in last six. Included a fixed bow TT and 2 revolving deck TT.
Machinery: 2 sets of 3-cyl. vertical triple expansion. Locomotive boilers (except *Speedy*). 2 screws. 3,500 ihp = 18.7kts (forced draught). 100-160 tons coal.
First cost: *Speedy* hull £24,935, machinery £28,558, masts etc £5,973.

Antelope Devonport Dyd/Yarrow.
K: 21.10.1889. L: 12.7.1893. L: 18.7.1894. Harbour service 1910, used as training ship at Devonport. Sold to T. R. Sales to BU 27.5.1919.

Circe Sheerness Dyd/John Penn & Son.
K: 21.1.1890. L: 14.6.1892. C: 11.2.1893. Minesweeper 1909. Sold to H. Auten & Co. 30.7.1920.

Hebe Sheerness Dyd/Sheerness Dyd.
K: 21.1.1890. L: 15.6.1892. C: 18.7.1894. Minesweeper 1909. Depot ship for submarines, 1910 (guns retained). Sold to Ward, Preston to BU 22.10.1919.

Leda Sheerness Dyd/John Penn & Son.
K: 25.6.1891. L: 13.9.1892. C: 22.3.1894. Minesweeper 1909. Sold to Cardiff Marine Stores 14.7.1920; BU in Germany 1922.

Alarm Sheerness Dyd/John Penn & Son.
K: 25.6.1891. L: 13.9.1892. C: 3.1894. Sold to Thames Shipbreaking Co. 9.4.1907.

Jason Naval Construction & Armament, Barrow (No.199)/N. C. & A.
K: 7.9.1891. L: 14.5.1892. C: 11.7.1893. Minesweeper 1909. Sunk by mine off the west coast of Scotland 7.4.1917.

Jaseur Naval Construction & Armament, Barrow (No.200)/N. C. & A.
K: 14.9.1891. L: 24.9.1892. C: 13.2.1893. Sold 11.7.1905.

Niger Naval Construction & Armament, Barrow (No.201)/N. C. & A.
K: 17.9.1891. L: 17.12.1892. C: 25.4.1893. Minesweeper 1909. Torpedoed by *U 12* off Deal 11.11.1914.

Onyx Laird Brothers, Birkenhead (No.585)/Laird Brothers.
K: 8.10.1891. L: 7.9.1892. C: 1.1894. Depot ship for submarines, 1907 (armament removed). Renamed *Vulcan II* in 6.1919 (or 4.1920?). Sold to King, Garston 8.1924; resold to L. Basso, Weymouth 9.10.1924.

Renard Laird Brothers, Birkenhead (No.586)/Laird Brothers.
K: 26.10.1891. L: 6.12.1892. C: 1.1894. Sold to McLellan, Bo'ness 4.4.1905.

Speedy Thornycroft, Chiswick (No.281)/Thornycroft. (4,703 ihp = 20.55kts.)
Ord: 7.1891. K: 4.1.1892. L: 18.5.1893. C: 20.2.1894. Minesweeper 1909. Sunk by mine off the Humber 3.9.1914.

NOTES: Ordered under 1889 Naval Defence Act. *Speedy*, to Thornycroft's own design, was a 3-funnelled vessel (other ten ships being 2-funnelled) with water-tube boilers compared with locomotive boilers in all other TGBs, and in service could 'easily' make 5,000 ihp (forced draught).

***DRYAD* Class** - torpedo gunboats.
Dimensions & tons: 262ft 6in oa, 250ft 0in pp x 30ft 6in x 11ft 6in. Draught 10½ft-13ft. 1,070 disp.
Men: 120. Guns: 2 x 4.7in/45pdr (2-ton) QF, 4 x 6pdr, 1 MG (Nordenfelt 5-barrelled). Torpedoes: 5 x 18in TT (2 reloads).
Machinery: 2 sets of 3-cyl. vertical triple expansion. Locomotive boilers. 2 screws. 3,500 ihp = 18.2kts (forced draught). 100-160 tons coal.

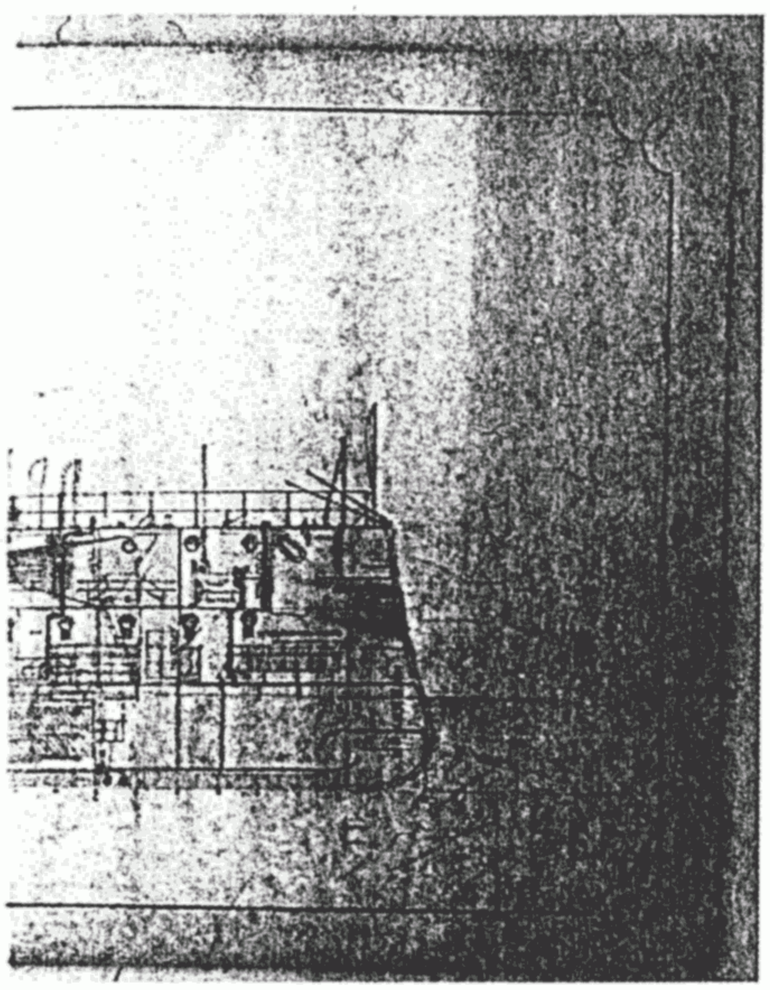
Hazard Pembroke Dyd/Fairfield.
K: 1.12.1892. L: 17.2.1894. C: 24.7.1895. Depot ship for submarines, 1901. Sunk in collision with SS *Western Australia* in the Channel 28.1.1918.

Halcyon Devonport Dyd/Hawthorn Leslie.
K: 2.1.1893. L: 6.4.1894. C: 16.5.1895. To Coastguard 1905. Minesweeper 1914. Sold to J. H. Lee, Dover to BU 6.11.1919.

Harrier Devonport Dyd/Hawthorn Leslie.
K: 21.1.1893. L: 20.2.1894. C: 8.7.1896. Minesweeper 1914. Sold to T. R. Sales at Haulbowline (Cork) 23.2.1920.

Hussar Devonport Dyd/Hawthorn Leslie.
K: 3.4.1893. L: 3.7.1894. C: 3.12.1896. Minesweeper 1914. Sold

Scan and/or retouch by Grzechu



A much-amended as fitted profile for the *Alarm* Class torpedo gunboat *Jason*. The earliest date relates to forwarding the draught to Fairfield's yard in August 1903, but with many stages of modifications running down to 1913. *DR20531*

12.1920; resold to L. Gatt, Malta to BU 13.7.1921.

Dryad Chatham Dyd/Maudslay, Sons & Field.

K: 15.4.1893. L: 22.11.1893. C: 21.7.1894. Minesweeper 1914. Harbour service, renamed *Hamadryad* 1.1918. Sold to H. Auten & Co. 24.9.1920.

NOTES: Ordered under 1889 Naval Defence Act. *Halcyon* engines 6,000 ihp = 20kts. *Hussar* mounted 1 x 4.7in, 2 x 12pdr QF and 1 x 6pdr only. Those converted to minesweepers at start of WW1 carried 2 fewer TT.

Torpedo Depot Ships

HECLA - mercantile conversion to torpedo depot ship.

Dimensions & tons: 392ft 3in pp x 38ft 9½in. Draught 20ft 1in (fwd), 22ft 7in (aft). 6,400 disp.

Men: 277. Guns: as built: 5 x 64pdr MLR, 1 x 40pdr BL. One 64pdr was replaced by a 5in (38cwt) BL during the 1880s. As re-armed 1912: 4 x 12pdr (2 x 4in added in 10.1916).

Machinery: 2 sets of 2-cyl. inverted compound. Twin screws. 1,758 ihp = 12.054kts. 2,200 tons coal = 26,400 miles @ 10kts.

First cost: £126,190.

Hecla (building as *British Crown*) Harland & Wolff, Belfast (No.117)/ George Forrester & Co.

K: ... . L: 7.3.1878. C: 10.1878. Rebuilt as destroyer depot ship (5,600 disp) 1912. Sold to Ward, Preston to BU 13.7.1926.

NOTES: Purchased on stocks 1878. Iron hull.

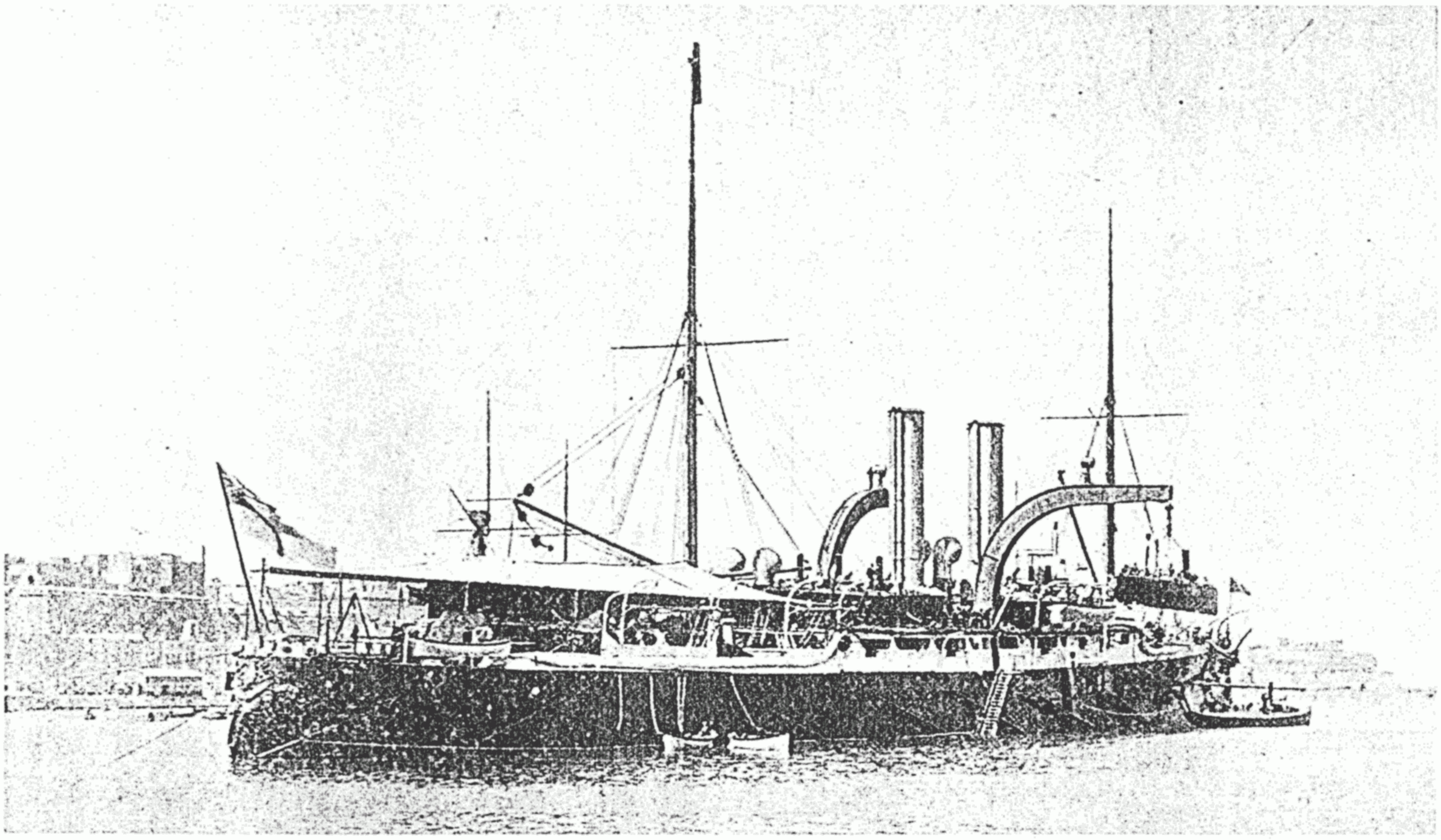
VULCAN - cruiser-type torpedo boat carrier/torpedo depot ship.

Dimensions & tons: 373ft 0in oa, 350ft 0in pp x 58ft 0in x 22ft 0in. 6,620 disp.

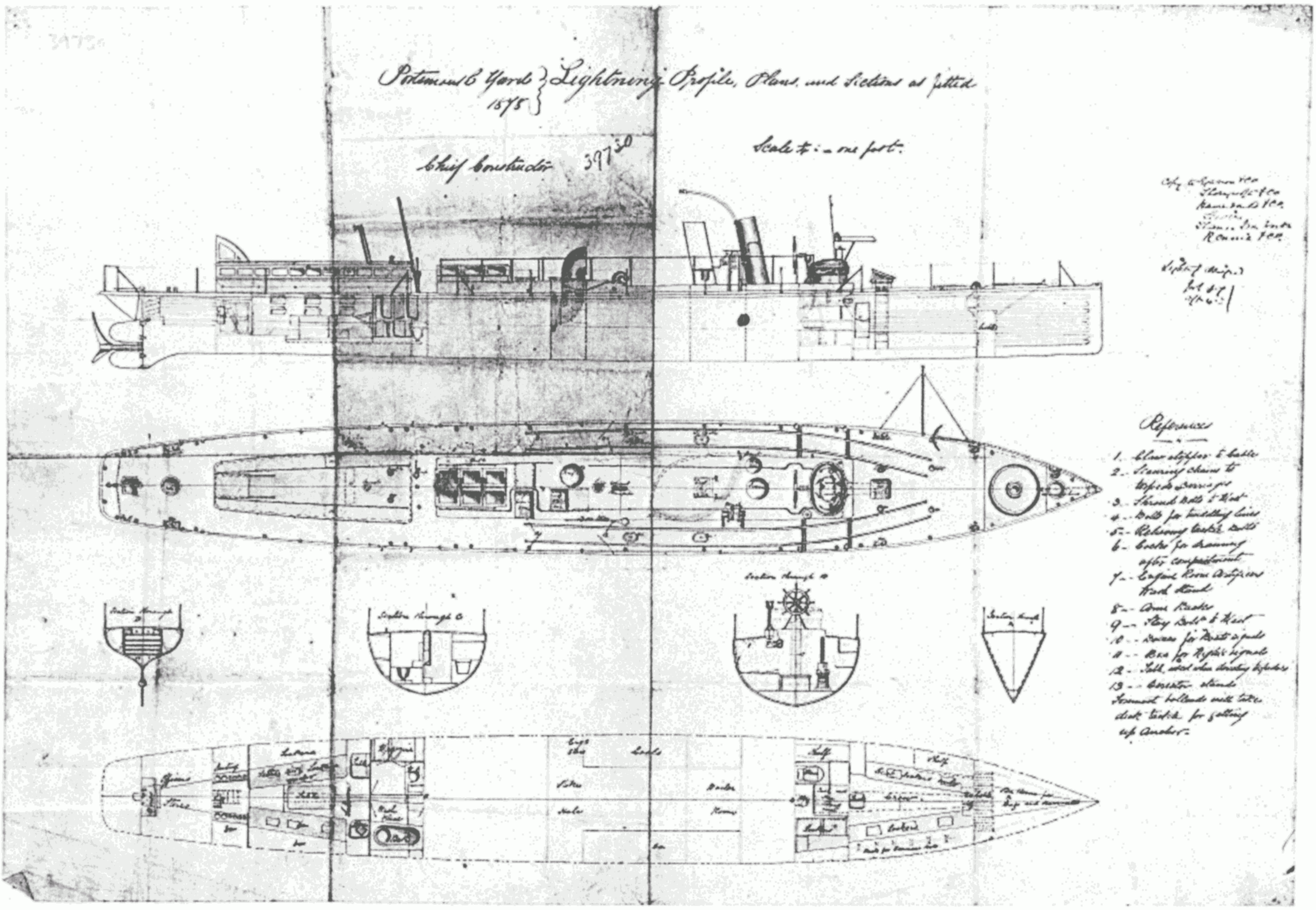
Men: 432. Guns: 8 x 4.7in QF, 12 x 3pdr, 12 MGs. Torpedoes: 6 TT (2 submerged, 4 above water).

Armour: Deck 5in (amidships); conning tower 6in; engine hatches 5in.

Machinery: 2 sets of vertical triple expansion. 4 double-ended (+ 1 single-ended, auxiliary) boilers. Twin screws. 8,167 ihp = 18kts



The torpedo depot ship *Vulcan* seen hoisting out a Second Class torpedo boat. *Neg 59/229*



Profile, plans and sections for the prototype torpedo boat, *Lightning*, Portsmouth 1878. Copies were noted as sent to Yarrow, Thornycroft, Hanna, Donald & Co, Lewin (Poole), Thames Iron Works, and Rennie. *DR39730*

(natural draught); 12,000 ihp = 20kts (forced draught). 1,000 tons coal = 12,000 miles @ 10kts.

First cost: £257,000.

Vulcan Portsmouth Dyd/Humphrys, Tennant & Co.

Ord: ... . K: 18.6.1888. L: 13.6.1889. C: 7.1891. Submarine depot ship 1914-18. Hulked as training hulk and renamed *Defiance III* on 17.2.1931 as torpedo school ship at Plymouth. Sold to BU in Belgium 2.1955 (arrival date 12.1955).

NOTES: 'Mother ship' for six Second Class torpedo boats stored on deck aft, with two huge goose-neck cranes for hoisting them out. Steel hull.

First Class Torpedo Boats

TB No.1/*LIGHTNING* - Thornycroft, Chiswick (Yard No.47)/ Thornycroft.

Dimensions & tons: 87ft 0in oa, 84ft 6in wl x 10ft 10in x 5ft 2in. 28 tons.

Men: 15. Guns: none. Torpedoes: originally 2 torpedo frames (16in Whiteheads).

Machinery: 2-cyl. compound engine. Single screw. 460 ihp = 19kts.

TB 1 - Lightning

Ord: 26.1.1876. Trials 22.5.1877. Sold 1896.

NOTES: Tender to *Vernon* from completion. Bow TT fitted 1879. Temporary fitting with Thornycroft 'guide blade' screw (ducted screw) 1881. Fitted with torpedo side dropping gear for trials 1883 - condemned as inefficient and thereafter used for harbour service only 1884. Hull sold to P. Rice of Portsmouth for £25 in 1896, the engine having been appropriated as yard machinery for Portsmouth the previous year.

THE '*LIGHTNINGS*' - TBs 2-12 - Thornycroft, Chiswick (Yard Nos. 71 to 81)./Thornycroft.

Dimensions & tons: 87ft 0in oa, 86ft 4in pp x 10ft 10in x 5ft 5in. 32½ disp.

except for *TB 10*: 91ft 6in oa, 90ft 10in pp x 10ft 10in x 5ft 9in. 32½ disp.

Men: 15. Guns: none. Torpedoes: 1 bow tube (16in).

Machinery: Compound engine. Single screw. 460 ihp = 20kts.

TB 2. L: 1878. C: 1878. Hull sold to H. Scown, Plymouth 1897 (for £25). Engine taken for use in Devonport Dyd.

TB 3. L: 1878. C: 1878. Harbour service 1901. Sold by 1906.

TB 4. L: 1879. C: 1879. Sold as mercantile 1905, renamed *Rocket*.

TB 5. L: 1879. C: 1879. Sold 1897 (engine retained for use in Devonport Dyd).

TB 6. L: 1879. C: 1879. Sold at Cape of Good Hope 1906.

TB 7. L: 1879. C: 1879. Sold at Gibraltar as mercantile 1904, renamed *Mosquito*.

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TB 8. L: 1879. C: 1879. Sold at Hong Kong 1903.
TB 9. L: 1879. C: 1879. Sold at Malta 1900 (engine removed for use in Malta Dyd).
TB 10. L: 1879. C: 1880. Sold at Malta 1904.
TB 11. L: 1880. C: 1880. Sold 1904.
TB 12. L: 1880. C: 1880. Sold 1904.
NOTES: All ordered 3.10.1877. *TB 10* altered, with ram bows and modified lines.

***TB 13* Class** - Maudslay (Lambeth) design and build, 1878.
Dimensions & tons: 87ft 0in oa, 82ft 4in pp x 10ft 9in x 4ft 0in. 28 disp.
Men: 15. Guns: none. Torpedoes: 2 x 14in.
Machinery: 460 ihp = under 20kts.
TB 13. L: 1879. Sold to BU 5.1897.
NOTES: Brass hull, but believed sub-contracted by Maudslay to Thames Ironworks. A slow and unweatherly vessel.

***TB 14* Class** - Designed and built by Yarrow, Poplar (Yard No.425), 1878.
Dimensions & tons: 86ft 3in oa, 84ft 0in pp x 11ft 0in x 4ft 5in. 323 disp.
Men: 15. Guns: none. Torpedoes: 2 x 14in.
Machinery: 2-cyl. compound expansion. Locomotive boilers. Single screw. 550 ihp = 21.75kts.
TB 14. L: 1879. BU 1904.
NOTES: A fast and seaworthy vessel, but with notoriously poor accommodation. High pressure cylinder 12½in diam.; low pressure 21½in diam.; stroke 18in.

***TB 15* Class** - Hanna, Donald & Wilson design and build, 1879.
Dimensions & tons: 87ft 0in oa, 84ft 0in pp x 10ft 9in x 4ft 0in. 28 disp.
Men: 15. Guns: none. Torpedoes: 2 x 14in.
Machinery: 450 ihp = 21kts.
TB 15. L: 1879. Sold 1905.

***TB 16* Class** - Lewin (Poole) design and build, 1878.
TB 16. Cancelled due to delays in construction.
NOTES: An unsuccessful hydraulic jet propulsion system resulted in the delays and subsequent cancellation.

***TB 17* Class** - Designed and built by Yarrow, Poplar (Yard Nos. 419 & 420), 1878.
Dimensions & tons: 86ft 0in oa. 81ft 3in pp x 11ft 0in x 4ft 5in. 33 disp.
Men: 15. Guns: none. Torpedoes: 1 x 14in TT (later replaced by dropping gear for 2 torpedoes).
Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 450 ihp = 21kts.
TB 17. Sold at Malta 1907.
TB 18. Sold at Gibraltar 1902.
NOTES: Ordered for Russia, but purchased by the Admiralty during the Russo-Turkish war scare. High pressure cylinder 12½in diam.; low pressure 21½in diam.; stroke 18in.

***TB 19* Class** - Designed and built by J. Samuel White, Cowes, 1878.
Dimensions & tons: 93ft 1in x 10ft 9in x 4ft 0in. 28 disp.
Men: 15. Guns: none. Torpedoes: 1 x 14in TT.
Machinery: 450 ihp. 21kts.
TB 19. L: 1880. Sold 1899.
NOTES: Unfit for service after about 1886.

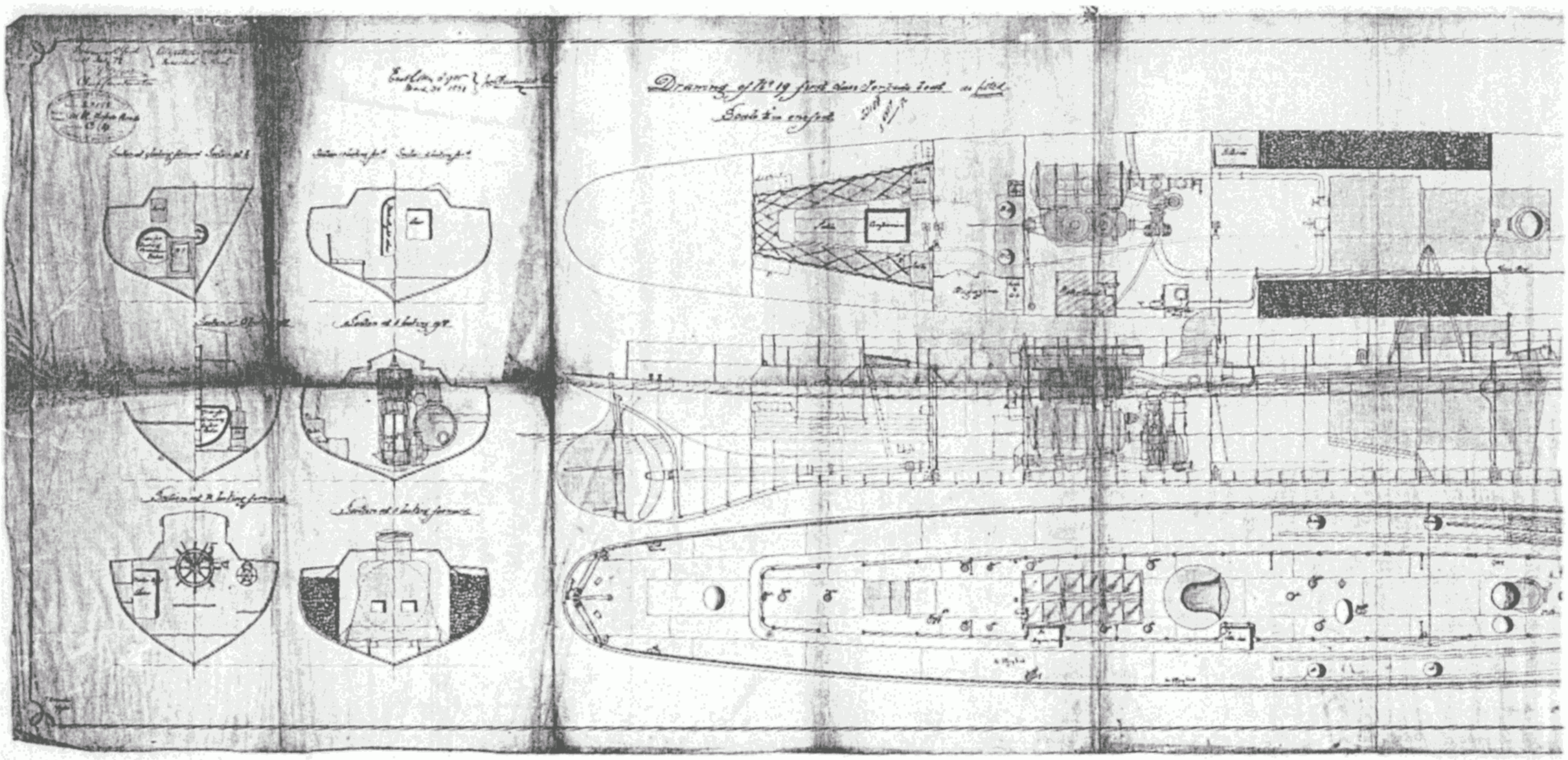
***TB 20* Class** - Designed and built by J. & G. Rennie, Blackfriars, 1880.
Dimensions & tons: 87ft 3in x 10ft 0in x 4ft 0in. 28 disp.
Men: 15. Guns: none. Torpedoes: 1 x 14in TT.
Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 360 ihp. 16.75kts.
TB 20. L: 1880. Sold at Hong Kong 1903.
NOTES: This vessel was ordered from Rennie on 8.5.1878; as launched in 1879, she was 84ft 6in pp long and 28 tons disp. On trials, the TB was rejected by the RN as unsatisfactory and sold abroad. Rennie instead built the above vessel as a replacement, which was accepted and purchased by the RN on 25.3.1880. However, she ultimately still proved unsuccessful, being much slower than the rest of this batch, and spent most of her life at Hong Kong.

***TB 21* Class** - Designed and built by Thornycroft, Chiswick (Yard Nos. 201 & 202), 1884.
Dimensions & tons: 113ft 6in oa x 12ft 5in x 5ft 7in. 63 disp.
Men: 14. Guns: 1 or 2 Nordenfelt 1in MGs. Torpedoes: 3 x 14in TT (2 fixed bow, 1 deck swivel).
Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 730 ihp = 18kts. 11 tons coal = 1,100 miles at 11kts.
TB 21. Ord: 19.1.1884. L: 18.3.1885. Sold at Malta 1907.
TB 22. Ord: 19.1.1884. L: 5.5.1885. Sold at Malta 1907.
NOTES: Based on *Childers* (already supplied to Victoria government, Australia - see below). An earlier *TB 21* was ordered 8.5.1878 from E. H. Newby; 71ft pp in length, it was - like the first *TB 20* - launched in 1879 but rejected on 29.8.1879 by the RN as unsatisfactory.

***TB 23* Class** - Designed and built by Yarrow, Poplar (Yard Nos. 666 & 667), 1884.
Dimensions & tons: 113ft 6in oa x 12ft 5in x 5ft 5in. 67 disp.
Men: 14. Guns: 2 x 3pdr. Torpedoes: 3 x 14in TT (2 fixed bow, 1 deck swivel).
Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 600 ihp & 500 ihp respectively. 18.75kts.
TB 23. L: 1886. Sold 1905.
TB 24. L: 1886. Sold 1904.
NOTES: Similar to previous Thornycroft pair. High pressure cylinders 14½in diam.; low pressure 26in diam.; stroke 16in.

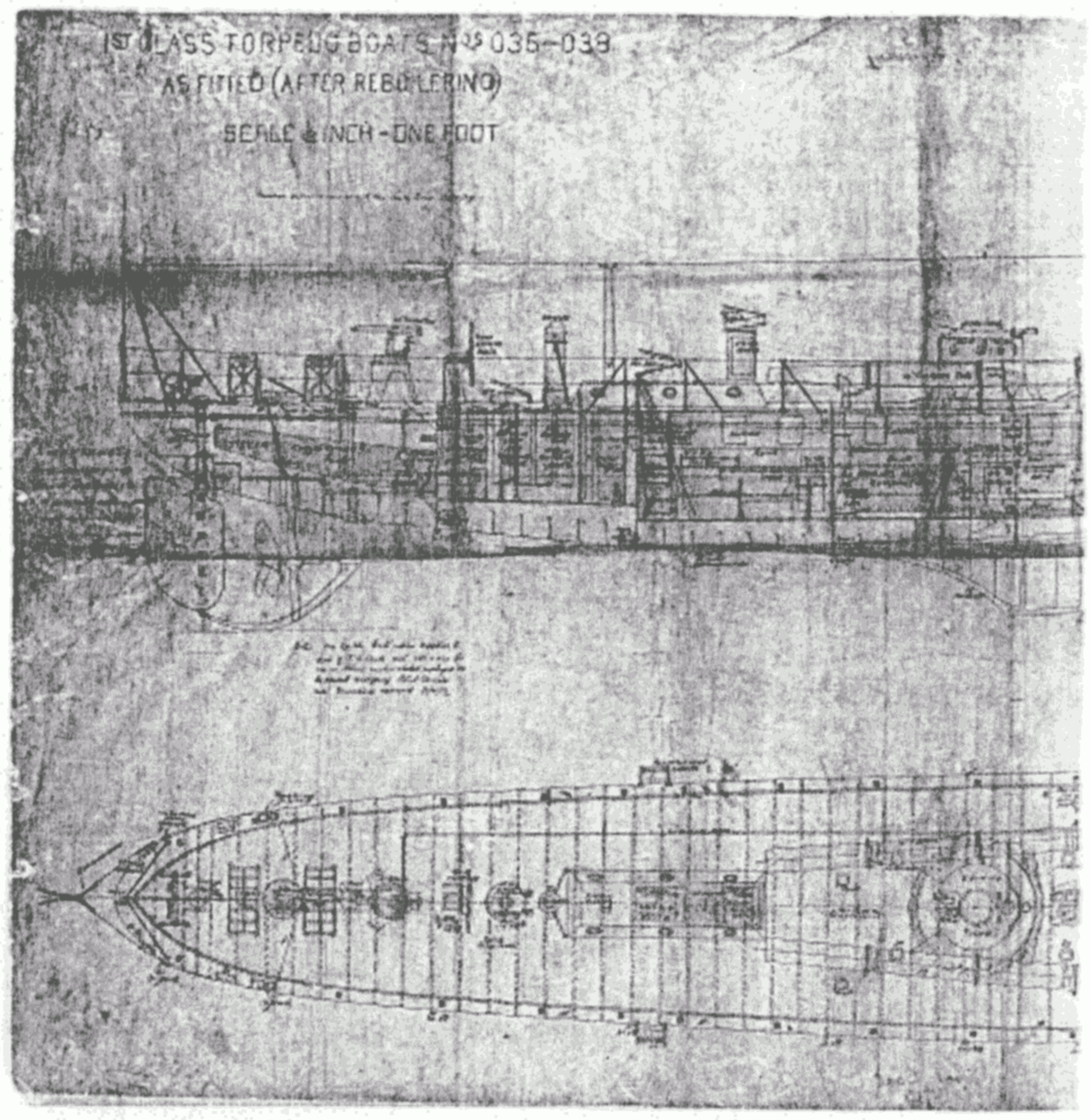
***TB 25* Class** - Designed and built by Thornycroft, Chiswick (Yard No. 212), 1885.
Dimensions & tons: 127ft 6in oa, 125ft 0in pp x 12ft 6in x 8ft 3in. 69.8 disp.
Men: 16. Guns: 3 x 2-barrel Nordenfelt 1in MGs. Torpedoes: 5 x 14in (1 single bow fixed, 2 x twin deck swivels).
Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 591 ihp = 19.384kts. 5 tons coal.
TB 25. Ord: 24.2.1885. L: 7.10.1885. Sold to BU 10.1919.
NOTES: Prototype of 125ft group of TBs. Lengthened version of *Childers* (see below). This vessel, and *TB 26* to *TB 38* inclusive, were funded under the Northbrook Programme.

***TB 26* Class** - Designed and built by Thornycroft, Chiswick, 1885-87.
Dimensions & tons: 127ft 6in oa, 125ft 0in pp x 12ft 6in x 8ft 3in. 93 (full load) disp.
Men: 16. Guns: 3 x 2-barrel Nordenfelt 1in MGs. Torpedoes: 5 x 14in (1 single bow fixed, 2 x twin deck swivels).
Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 771 ihp = 21.66kts (*TB 50* on trials).
First cost: First four each £10,000; last twenty each £11,000 (hull £6,000, machinery £5,000).

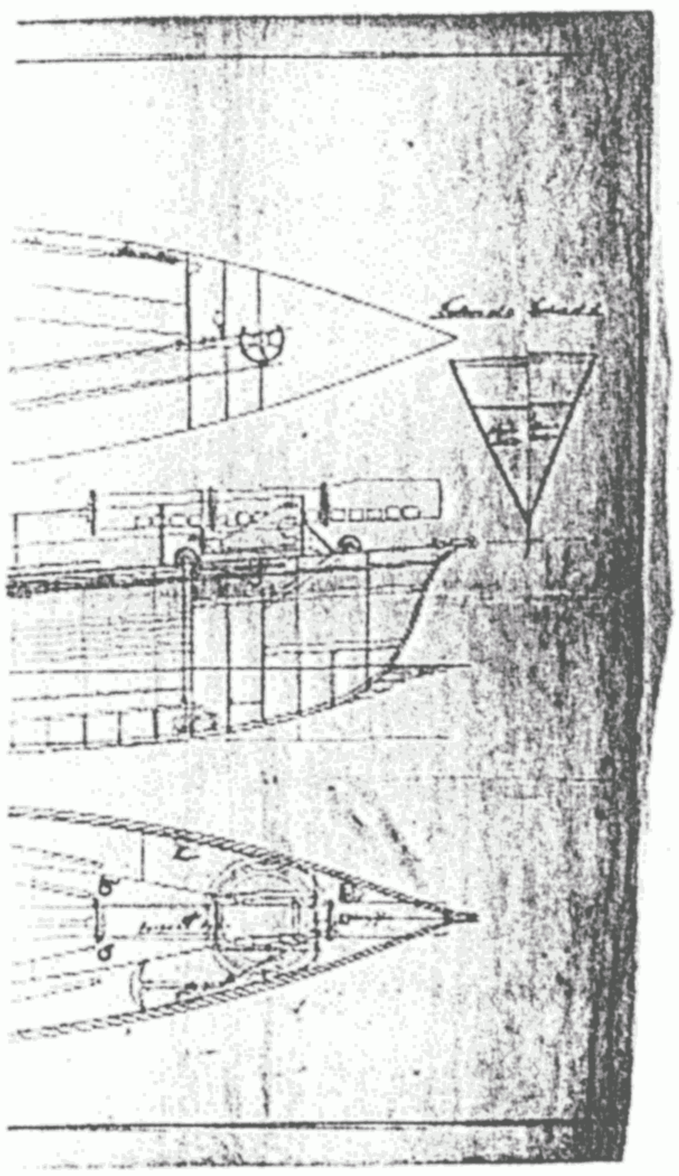


First Batch: Yard Nos. 218 to 221 (ordered 30/31.3.1885).
TB 26. L: 22.10.1885. Sold to Maden & McKee 2.10.1919.
TB 27. L: 26.10.1885. Sold to Maden & McKee 2.10.1919.
TB 28. L: 7.11.1885. Stranded in Kalk Bay, South Africa 29.7.1898; sunk as target 12.1898.
TB 29. L: 19.11.1885. Sold at Capetown 1.7.1919.
Second Batch: Yard Nos. 222 to 241 (ordered 30.4/1.5.1885).
TB 41. L: ... . 1885. C: 6.1886. Sold 1.8.1919.
TB 42. L: 4.12.1885. C: 6.1886. Sold to Maden & McKee 2.10.1919.
TB 43. L: ... . 1885. C: 6.1886. Sold at Malta 18.12.1919.
TB 44. L: ... . 1885. C: 6.1886. Sold at Malta 18.12.1919.
TB 45. L: ?21.12.1885. C: 7.1886. Sold 1.8.1919.
TB 46. L: 4.1.1886. Wrecked 27.12.1915 while under tow in Mediterranean; salved and BU 1920.
TB 47. L: ?28.6.1886. Sold *c*1908.
TB 48. L: ... . 1886. Sold *c*1915.
TB 49. L: ... . 1886. C: 8.1886. Sold 1.8.1919.
TB 50. L: ?17.6.1886. C: 9.1886. Sold to R. Longmate 23.2.1920.
TB 51. L: 30.7.1886. Sold *c*1913.
TB 52. L: ... . 1886. C: 9.1886. Sold to Multilocular Shipbreaking Co. 19.12.1919.
TB 53. L: ?16.9.1886. Sold 1913.
TB 54. L: 28.8.1886. Sold 1.8.1919.
TB 55. L: ?29.8.1886. Sold to R. Longmate 23.2.1920.
TB 56. L: ?1.10.1886. Foundered while under tow off Damietta 17.5.1906.
TB 57. L: ?2.10.1886. Sold to Maden & McKee 2.10.1919.
TB 58. L: ?18.10.1886. Sold to Multilocular Shipbreaking Co. 19.12.1919.
TB 59. L: ?11.11.1886. Sold *c*1913.
TB 60. L: ?10.12.1886. Sold at Capetown 1.7.1919.
NOTES: Ordered as a result of the Russian war scare (the Afghan border dispute). Completed with 'bullnose' bow, which proved totally unseaworthy and, together with its bow TT, was replaced by a straight bow.

***TB 30* Class** - Designed and built by Yarrow, Poplar, 1885-86.
Dimensions & tons: 125ft 3in oa x 13ft 0in. 60 tons.
Men: 16. Guns: 2 Nordenfelt MGs. Torpedoes: 2 x twin 14in + 1 x single bow tube.
Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 670 ihp = 19.5kts.
First Batch: Yard Nos. 708 to 711 (ordered ?30/31.3.1885).
TB 30. Sold *c*1905.



Scan and/or retouch by Grzechu



Drawings of First Class torpedo boat *No 19*, a White drawing datelined East Cowes, 30 March 1881, with alterations and additions endorsed Portsmouth 11 July 1882. *DR23188*

TB 31. Sold 1913.
TB 32. Sold c1905.
TB 33. Sold 1.8.1919.
Second Batch: Yard Nos. 715 to 732 (ordered ?30/31.3.1885).
TB 61. Sold 1909.
TB 62. Sold 1905.
TB 63. C: 9.1886. Sold at Malta 18.12.1919.
TB 64. C: 9.1886. Wrecked in the Aegean 21.3.1915.
TB 65. C: 10.1886. Sold to Maden & McKee 2.10.1919.
TB 66. C: 8.1886. Sold to Ward, Hayle 30.6.1920.
TB 67. C: 8.1886. Sold to Willoughby, Plymouth 27.1.1920.
TB 68. C: 8.1886. Sold to Ward, Hayle 30.6.1920.
TB 69. C: 1886. Sold c1908.
TB 70. C: 8.1886. Sold at Malta 18.12.1919.
TB 71. C: 1886. Sold to B. Newton 5.7.1923.
TB 72. C: 7.1886. Sold to Ward, Rainham 19.12.1919.
TB 73. C: 1886. Sold to L. Basso, Weymouth 6.2.1923.
TB 74. C: 12.1886. Sold to Willoughby, Plymouth 27.1.1920.
TB 75. C: 1886. Sunk in collision with *TB 77* in the Maidens 8.8.1892.
TB 76. Sold to Ward, Hayle 30.6.1920.
TB 77. C: 8.1886. Sold to Stanlee, Dover 27.3.1920.
TB 78. C: 1.1887. Sold to Maden & McKee 2.10.1919.
NOTES: Similar concept and order sequence as the Thornycroft vessels, but with better-designed ram bow. High pressure cylinders 14½in diam.; low pressure 26in diam.; stroke 16in.

***TB 34* Class** - Designed and built by J. Samuel White, Cowes (Yard Nos. 683 to 687), 1885-86.

Dimensions & tons: 125ft 0in pp x 14ft 6in x 4ft 0in. 85 disp.
Men: 16. Guns: 2 Nordenfelt MGs. Torpedoes: 5 x 14in.
Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 950 ihp.

TB 34. L: 1886. C: 8.1886. Sold to Maden & McKee 2.10.1919.
TB 35. L: 1886. C: 3.1887. Sold at Hong Kong 27.11.1919.
TB 36. L: 1886. C: 3.1887. Sold at Hong Kong 27.11.1919.
TB 37. L: 1886. C: 3.1887. Sold at Hong Kong 27.11.1919.
TB 38. L: 1887. C: 3.1887. Sold at Hong Kong 27.11.1919.
NOTES: Ordered 4.1885 to meet the Russian threat. Last pair measured 131ft 11in length, carried 2 x 3pdr guns.

***TB 39* Class** - Designed and built by Yarrow, Poplar (Yard Nos. 511 & 525), 1882.

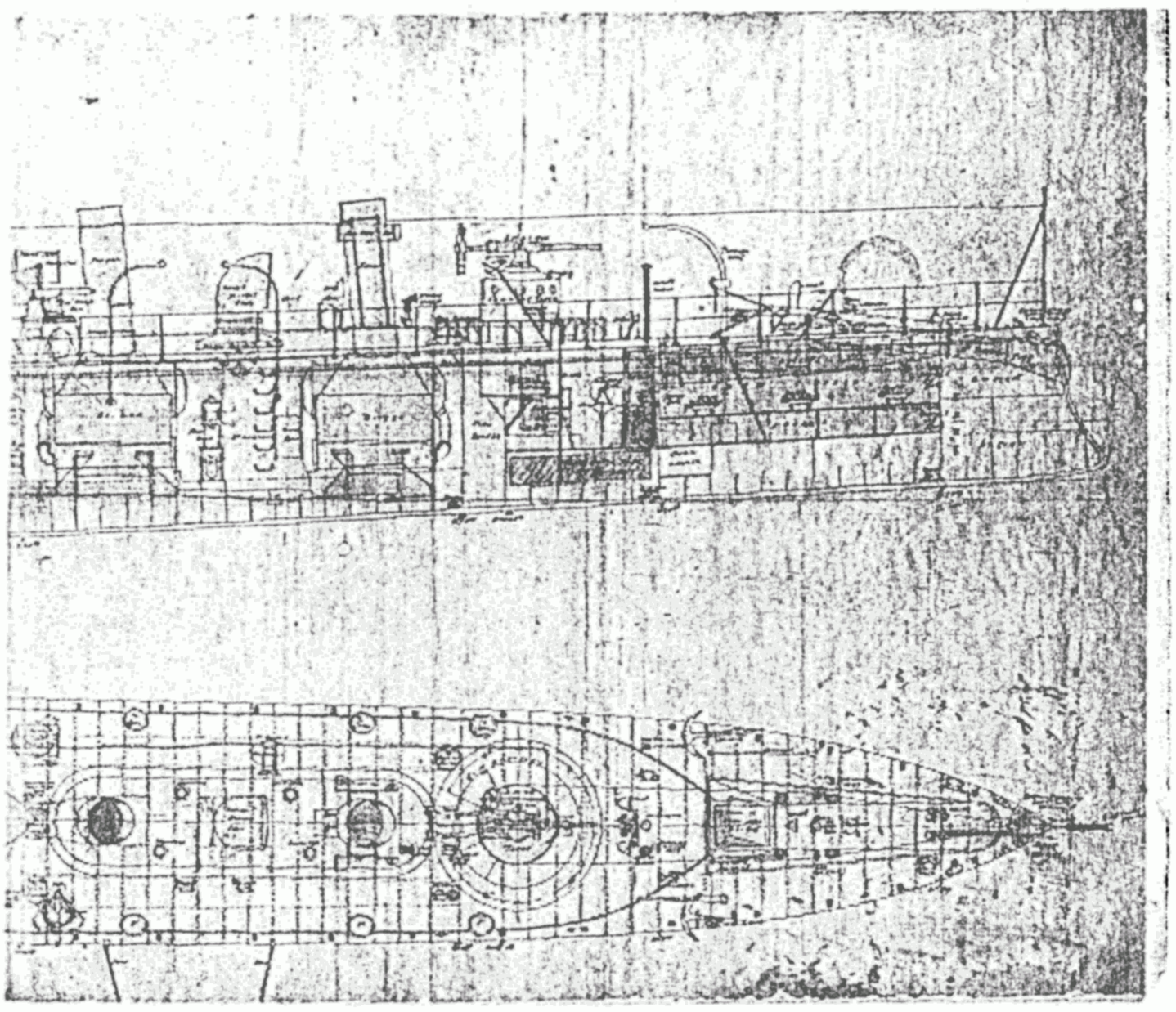
Dimensions & tons: 100ft 0in pp x 12ft 5in x 5ft 0in. 40 disp.
Men: 15. Guns: 2 Nordenfelt MGs. Torpedoes: 1 x 14in.
Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 500 ihp.

TB 39. Sold at Esquimault 2.1905.
TB 40. Sold at Esquimault 2.1905.
NOTES: Ordered for the Chilean Navy as *Glaura* and *Fresia*, purchased by RN 1888. High pressure cylinders 12½in diam.; low pressure 21½in diam.; stroke 12in.

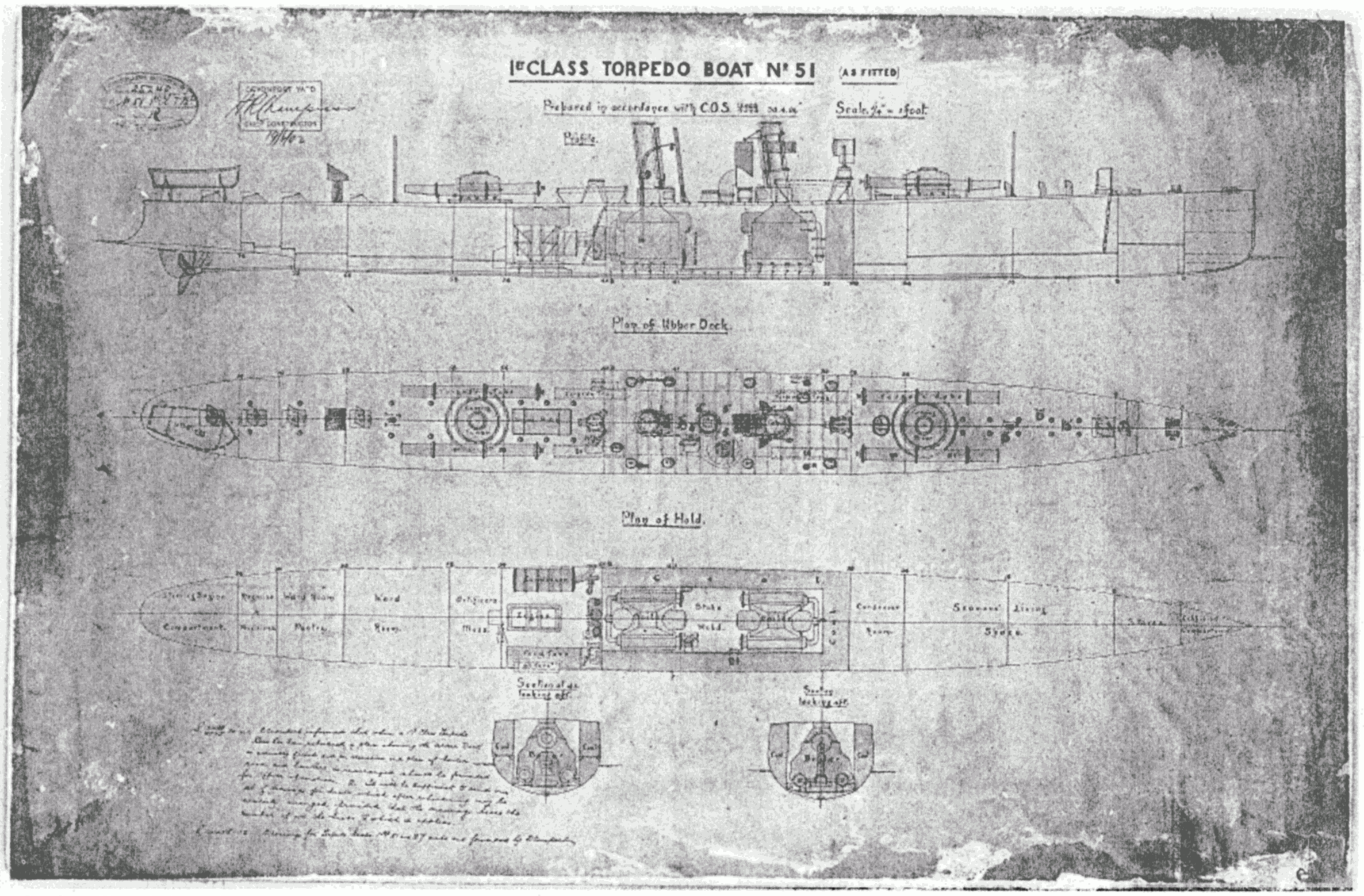
***TB 79* Class** - Designed and built by Yarrow, Poplar (Yard No. 733), 1886.

Dimensions & tons: 128ft 8in oa, 128ft pp x 13ft 0in x 5ft 6in. 75 disp.
Men: 16. Guns: 2 x 3pdr. Torpedoes: 3 x 14in (2 fixed bow, 1 on deck turntable).
Machinery: (Experimental) triple expansion (cylinders of 14½in, 21in & 30in; 16in stroke). Locomotive boiler. Single screw. 1,000 ihp = 22.25kts.

TB 79. C: 12.1886. Sold to Ward, Grays 19.11.1919.



Profile and upper deck plan of First Class torpedo boats *35-38* after reboilering (undated but probably post-1900). There is a 3pdr QF gun forward and a .45in Maxim gun aft and on each broadside abreast the searchlight, with two 14in TT aft and one firing through the stem. *DR8295*



As fitted profile and plans of First Class torpedo boat *No 51* as reboilered, Devonport 19 June 1902. The draught notes a standing instruction that after reboilering a new plan of the upper deck and a plan and elevation of the boiler room arrangements as fitted should be sent to the Controller's Department for reference. *DR25240*

***TB 80* Class** - Designed and built by Yarrow, Poplar (Yard No. 748), 1886.

Dimensions & tons: 134ft 9in pp x 14ft 0in x 6ft 0in. 105 disp.

Men: 21. Guns: 3 x 3pdr. Torpedoes: 3 x 14in (1 fixed bow, 1 twin deck turntable).

Machinery: Triple expansion (cylinders of 18in, 26in & 39½in; 18in stroke). Locomotive boiler. Single screw. 1,539 ihp = 23kts.

TB 80. C: 5.1887. Sold to J. E. Thomas 22.10.1921.

***TB 81* Class** - Designed and built for own account by J. Samuel White, Cowes (Yard No. 440), 1885.

Dimensions & tons: 153ft 8½in oa, 150ft pp x 17ft 6in x 9ft 6in. 137 disp.

Men: 25. Guns: 4 x 3pdr. Torpedoes: 3 x 14in (1 fixed bow, 2 single deck).

Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 1,330 ihp = 23.75kts.

TB 81 (ex-*Swift*). C: 1885. Grounded off Alderney 1901, but salved. Sold to J. E. Thomas 22.10.1921.

NOTES: Built by J. Samuel White as the 'stock' boat *Swift*, and purchased by the RN in 1888.

***TB 82* Class** - Designed and built by Yarrow, Poplar (Yard Nos. 800 to 805), 1889.

Dimensions & tons: ... , 130ft 2in pp x 13ft 6in x 5ft 6in. 85 disp.

Men: 19. Guns: 3 x 3pdr. Torpedoes: 3 x 14in (1 fixed bow, 1 twin deck turntable).

Machinery: Triple expansion (cylinders of 14½in, 21in & 32in; 16in stroke). Locomotive boiler. Single screw. 1,800 ihp = 23kts.

TB 82. C: 6.1889. Sold to Stanlee, Dover - then re-sold to J. E. Thomas, Newport 22.10.1921.

TB 83. C: 6.1889. Sold to Brand 12.10.1919.

TB 84. C: 1889. Sunk in collision with HMS *Argent* 17.4.1906.

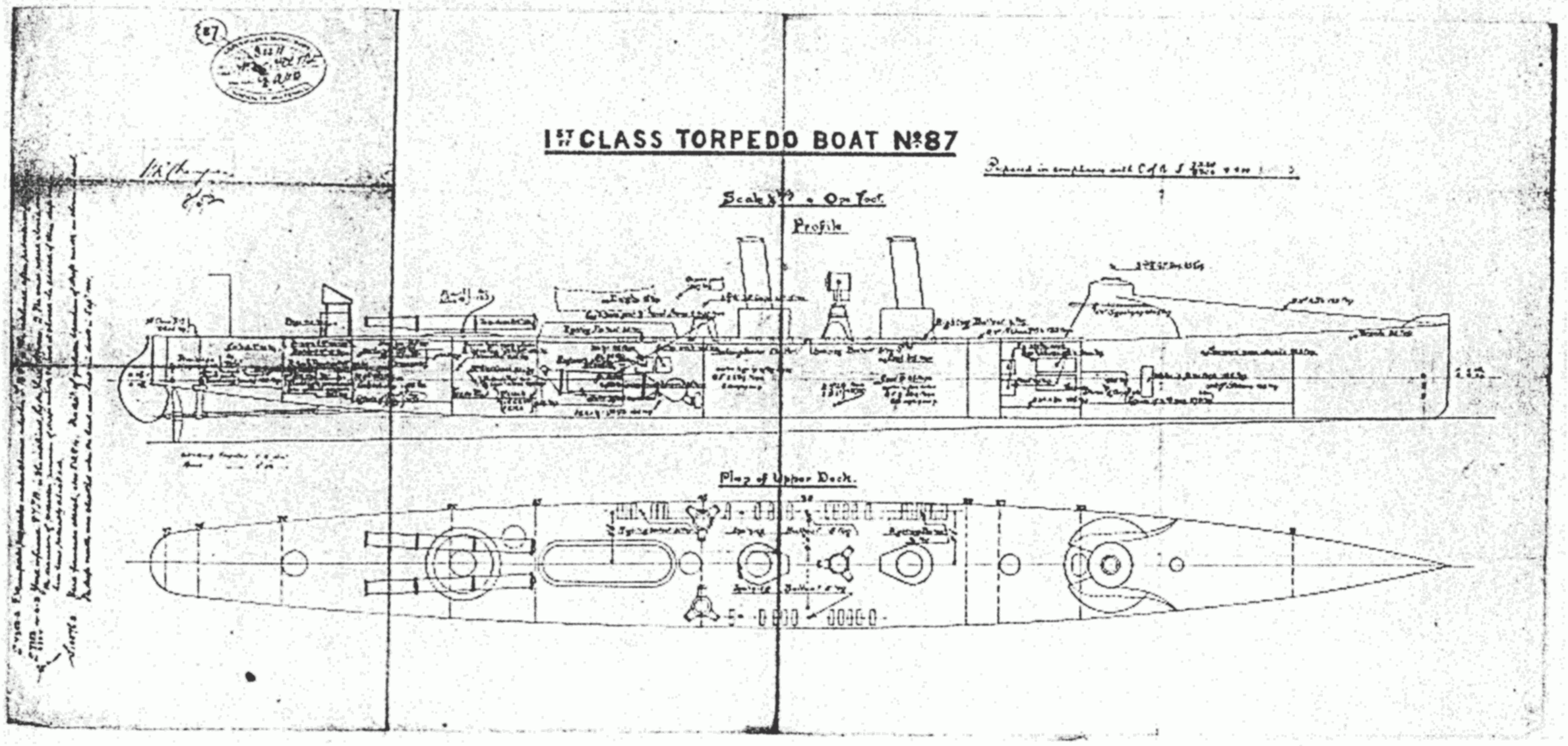
TB 85. C: 9.1889. Sold to Stanlee, Dover - then re-sold to J. E. Thomas, Newport 22.10.1921.

TB 86. C: 9.1889. Sold to Stanlee, Dover - then re-sold to J. E. Thomas, Newport 22.10.1921.

TB 87. C: 9.1889. Sold to Stanlee, Dover 27.3.1920.

Note that between 1892 and 1905 a further 30 First Class torpedo boats were added to the Navy. These comprised 10 boats of about 140ft length, ordered 7.1892 (about the same time as the prototype TB destroyers) and built 1892-95, carrying 3 x 18in TT and 3 x 3pdr guns (*TB 88* to *TB 97*); seven boats of about 135ft length, transferred from the Royal Indian Marine in 1892, carrying 5 x 14in TT and 2 x twin-barrelled Nordenfelt guns (*TB 100* to *TB 106*, numbers assigned 1901); and 13 boats of about 165ft length, built 1900-05, carrying 3 x 18in TT and 3 x 3pdr guns (*TB 98* to *TB 99* and *TB 107* to *TB 117*). They do not fall within our period except for the seven RIM boats, originally built 1888, listed below under 'Colonial Service TBs'.

Scan and/or retouch by Grzechu



Sketch of the arrangements of *TB 87* after reboilering, Devonport 8 May 1902. The notes on the draught refer to instructions to incline the newly refitted boat to establish its stability. *DR30211*

Second Class Torpedo Boats

Second Class torpedo boats were introduced in the late 1870s, primarily developed by Thornycroft. Unlike their larger sisters, they were designed to be carried in the davits of larger warships. They were all small launches (about 60ft long) and proved to be exceedingly fragile. It was soon decided that the larger steam picket boats already carried were quite adequate to the role of carrying a couple of smaller locomotive torpedoes and their dropping gear, and the purpose-built Second Class boats were not continued.

***TB 51* Class** - all designed and built/engined by Thornycroft, Chiswick/ Thornycroft (Yard Nos. 82 to 93), 1878-79. All ordered 3.10.1877, completed 1878 (first 6) and 1879 (last 6) - the 'C' below indicating trials date.

Dimensions & tons: 60ft 6in oa, 60ft 4in bp, x 7ft 6in x 3ft 0in. 10¾ tons.

Men: 7. Guns: none. Torpedoes: originally 2 torpedoes in lowering cages.

Machinery: 2-cyl. compound expansion. Locomotive boiler (120 lbs/ sq.in). Single screw. 120-150 ihp = 15kts.

First cost: Contract price £2,285 each (hull £970, machinery £1,530).

TB 51. L: 10.1878. C: 31.10.1878. Sold 1907.
TB 52. L: 10.1878. C: 2.11.1878. Sold 1904.
TB 53. L: 9.1878(?). C: 5.10.1878. Sold 1904.
TB 54. L: 10.1878. C: 15.10.1878. Sold 1904.
TB 55. L: 12.1878. C: 2.1.1879. Sold 1902.
TB 56. L: 12.1878. C: 6.1.1879. Sold 1904.
TB 57. L: 6.1879. C: 10.6.1879. Sold 1904.
TB 58. L: 2.1879. C: 1.3.1879. Sold 1902.
TB 59. L: 2.1879. C: 1.3.1879. Sold 1902.
TB 60. L: 6.1879. C: 10.6.1879. Sold 1902.
TB 61. L: 9.1879. C: 23.9.1879. Sold 1902.
TB 62. L: 9.1879. C: 20.9.1879. Foundered in North America 21.10.1890 (in tow of HMS *Buzzard*).

NOTES: First four attached to *Hecla* after their completion.

***TB 63* Class** - Designed and built by Herreshoff Co., Bristol, Rhode Island, USA (the sole foreign-built steam warship purchased by the RN during the nineteenth century), 1878. Lower hull was wooden, with steel topsides. Never brought into service, and used for experiments only.

Dimensions & tons: 60ft 0in x 7ft 6in x ... . 15 tons.

Men: 7. Guns: none. Torpedoes: intended for 2 torpedoes in lowering cages (but doubtful if ever carried). Machinery: ... = 15kts.

TB 63. Sold 1907.

***TB 64* Class** - Designed and built/engined by Thornycroft, Chiswick (Yard Nos. 104 to 113), 1880-81. All ordered 27.5.1879 or 11.7.1879, completed 1880 (first 2), 1881-82 (other 8).

Dimensions & tons: 62ft 10in oa, 60ft 4in pp x 7ft 6in x 3ft 6in. 13 tons. *TB 71* and *TB 72* were 63ft 3in pp.

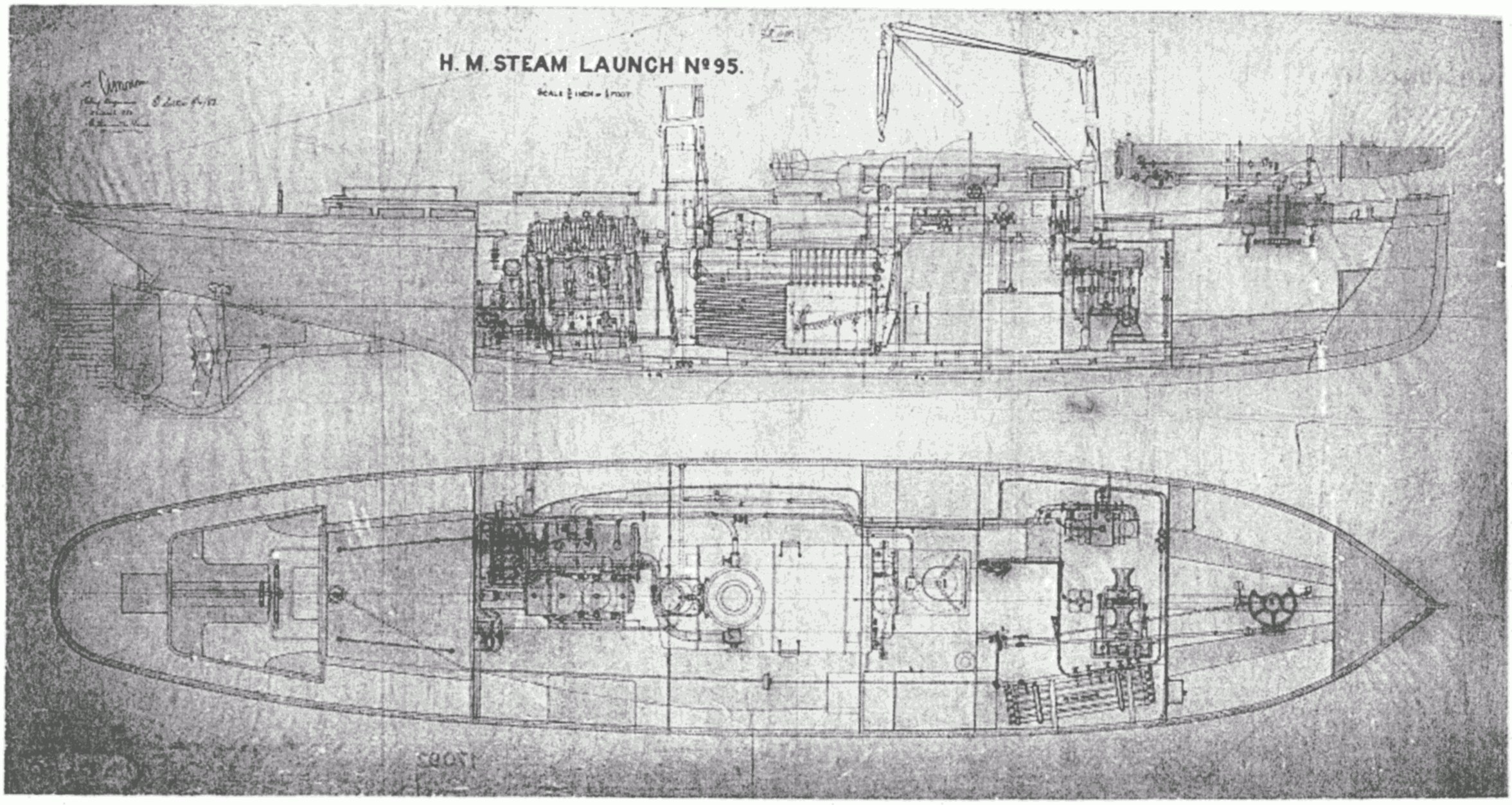
Men: 7. Guns: none. Torpedoes: 2 torpedoes in dropping gear.

Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 110 ihp = 16.5kts.

TB 64. L: 1880. Sold 190?.
TB 65. L: 1880. Sold 1907.
TB 66. L: 1880. Sold 1905.
TB 67. L: 1880. Sold 1905.
TB 68. L: 16.2.1882(?). Transferred to Newfoundland.
TB 69. L: 1880. Sold 1906.
TB 70. L: 1880. Sold 1906.
TB 71. L: 1880. Sold 1909.
TB 72. L: 1880. Sold 1898.
TB 73. L: 1880. Sold 1905.

***TB 74* Class** - Designed and built by Yarrow, Poplar (Yard Nos. 457 & 456), 1881-83.

Dimensions & tons: 60ft 8in pp x 7ft 9in x 3ft 6in. 12 tons.



Profile of 'H M Steam Launch *No 95*', Portsmouth 8 April 1885, a Thornycroft-designed Second Class torpedo boat. It shows the torpedo loading gear very clearly. *DR17092*

Men: 7. Guns: 1 MG. Torpedoes: 2 x 14in tubes.
Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 220 ihp = 16kts.

TB 74. L: 1883. Sold 1906.
TB 75. L: 1883. Sold 1903.
NOTES: High pressure cylinder of 8in, low pressure cylinder of 13in diam.; 10in stroke.

***TB 76* Class** - Designed and built by Thornycroft, Chiswick (Yard Nos. 117 to 136), 1880-83. All ordered 28.2.1880 (contract date 3.3.1880).
Dimensions & tons: 64ft 0in oa, 63ft 0in pp x 7ft 6in x 3ft 6in. 12½ tons.
Men: 7. Guns: none. Torpedoes: 2 x 14in in bow troughs.
Machinery: 2-cyl. compound expansion. Locomotive boilers (first 2 with Herreshoff spiral water tube boilers). Single screw. 170 ihp = 16.5kts.

TB 76. L: 3.1.1883. Sold 1906.
TB 77. L: 24.1.1883. Sold 1906.
TB 78. L: 12.1882(?). Sold 1906.
TB 79. L: 16.1.1882(?). Sold 1902.
TB 80. L: 9.1882. Sold 1907.
TB 81. L: 5.10.1882. Sold 1902.
TB 82. L: 17.10.1882. Sold 1906.
TB 83. L: 11.11.1882(?). Sold 1898.
TB 84. L: 24.11.1882. Sold 1904.
TB 85. L: 17.1.1883. Sold 190?.
TB 86. L: 1.2.1883. Sold 190?.
TB 87. L: 17.2.1883. Sold 1905.
TB 88. L: 20.2.1883. Sold 190?.
TB 89. L: 2.3.1883. Sold 1907.
TB 90. L: 3.3.1883. Sold 1902.
TB 91. L: 9.3.1883. Sold 1902.
TB 92. L: 4.4.1883. Sold 1902.
TB 93. L: 5.4.1883. Sold 1898.
TB 94. L: 18.4.1883. Sold 1906.
TB 95. L: 20.4.1883. Sold 1912.
NOTES: All 20 were ordered 28.2.1880 and contracted for 3.3.1880.

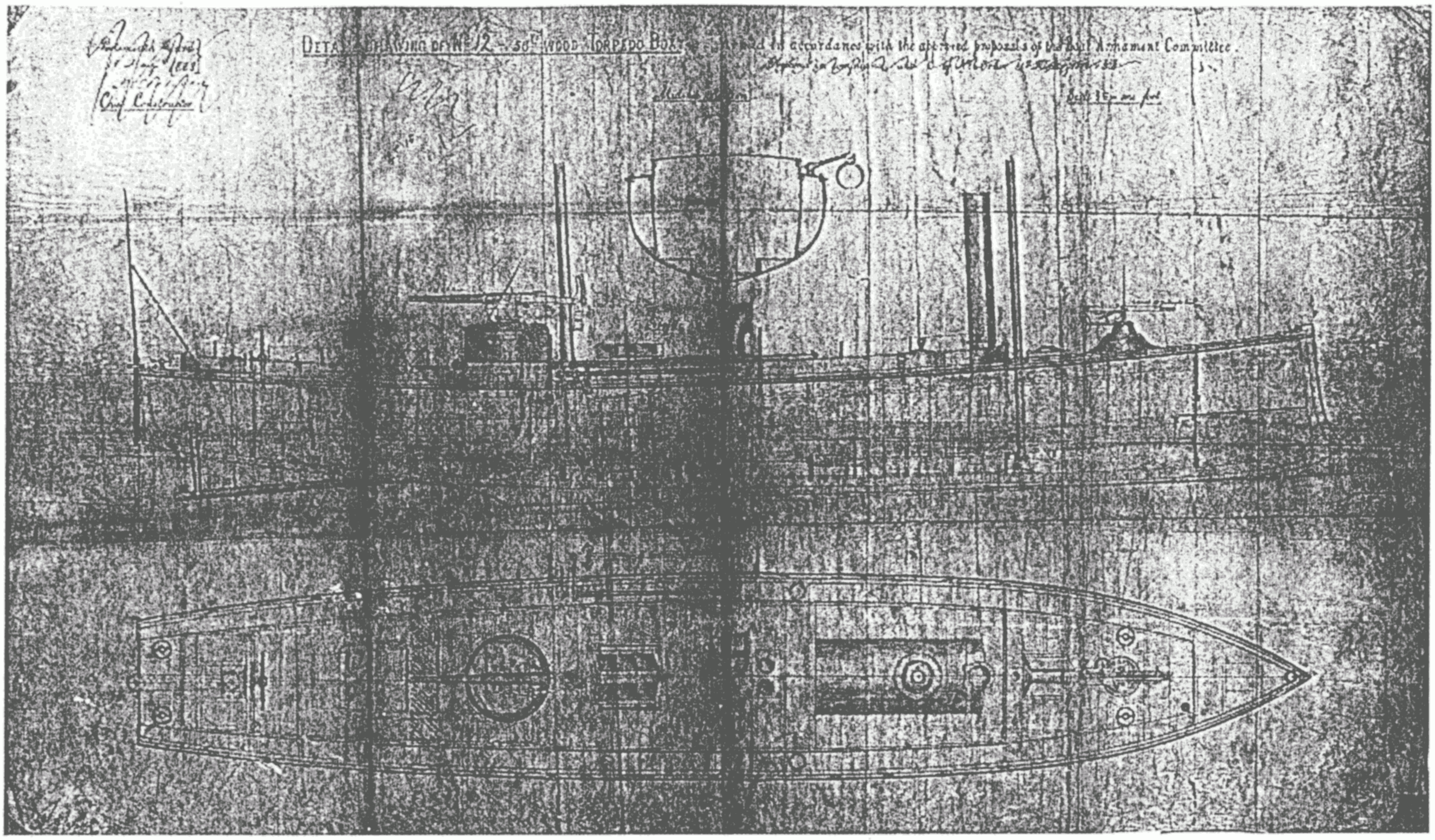
***TB 96* Class** - Designed and built by Yarrow, Poplar (Yard Nos. 495 & 510), 1881-83.
Dimensions & tons: 63ft 7½in pp x 7ft 9in x 3ft 6in. 12 tons.
Men: 7. Guns: 1 MG. Torpedoes: 2 x 14in tubes.
Machinery: 2-cyl. compound expansion. Locomotive boiler. Single screw. 220 ihp = 16kts.

TB 96. L: 1883. Sold 1906.
TB 97. L: 1883. Sold 1902.
NOTES: High pressure cylinder of 8in, low pressure cylinder of 13in diam.; 10in stroke.

***TB 98* Class** - Designed and built by Thornycroft, Chiswick. (Yard No. 141), 1880-83. Ordered 21.12.1880. Experimental water-jet propulsion by centrifugal pump (this hydraulic drive, like that of the *Waterwitch* earlier, proved a failure).
Dimensions & tons: 66ft 4in wl, ... x 7ft 6in x 2ft 0¾in. 14½ tons.
Men: 7. Guns: none. Torpedoes: 2 x 14in in bow.
Machinery: Locomotive boiler driving Ruthven 'turbine'. 167 ihp = 11.75kts.

TB 98. L: 13.9.1883(?). Fate unknown (still extent in 1898).

***TB 99* Class** - Designed and built by Thornycroft, Chiswick (Yard Nos. 207 & 208), 1884-86. Both ordered 17.11.1884.
Dimensions & tons: 64ft 8in oa, 64ft 0in wl, 63ft 0in pp x 8ft x 3ft 7in. 12 tons.
Men: 7. Guns: none. Torpedoes: 2 x 14in in bow.



Detail drawing of the '56ft wood Torpedo Boat *No 12*' [*WTB 12*], Portsmouth 18 May 1888, 'armed in accordance with the approved proposals of the Boat Armament Committee' - one 6pdr QF aft and a twin-barrelled 1in Nordenfelt forward. *DR45115*

Machinery: 2-cyl. compound expansion. Locomotive boilers (*TB 99*); water-tube boiler (*TB 100*). Single screw. 189 ihp = 16.808kts (TB 99).
First cost: TB 99 £4,000 (hull £2,500, machinery £1,500); TB 100 £4,100 (hull £2,500, machinery £1,600).

TB 99. L: 28.9.1885. Sold 1907.
TB 100. L: 5.4.1886. Sold 1908.

***WTB 1* Class** - Designed and built by J. Samuel White, Cowes, 1883-88. The first eight were ordered in 1883, another two in 1887, and WTB 12 in 1888. White yard numbers in parenthesis.

Dimensions & tons: 56ft 0in x 9ft 3in x 4ft 9in. 10½-14 tons.
Men: 9. Guns: 1 or 2 MGs. Torpedoes: 2 x 14in in dropping gear or 1 x 14in tube.
Machinery: ... . 150 ihp = 16kts.

WTB 1 (No. 587). L: 1883. Sold by 1905.
WTB 2 (No. 588). L: 1883. Sold 1900.
WTB 3 (No. 591). L: 1883. Sold by 1905.
WTB 4 (No. 592). L: 1883. Sold by 1905.
WTB 5 (No. 602). L: 1883. Sold 1909.
WTB 6 (No. 603). L: 1884. Sold by 1907.
WTB 7 (No. 605). L: 1884. Sold by 1905.
WTB 8 (No. 646). L: 1885. Sold by 1905.
WTB 9 (No. 647). L: 1885. Sold 1912.
WTB 10 (No. 731). L: 1887. Sold by 1905.
WTB 11 (No. 732). L: 1887. Sold 1912.
WTB 12 (No. 745). L: 1888. Sold 1910.

NOTES: Unlike the Thornycroft and Yarrow boats, these were wooden-hulled, and were precursors of the 56ft steam pinnaces which superseded the Second Class steel boats (both in a multi-role function).

***TB 49* Class** - Designed and built by Yarrow, Poplar (Yard Nos. 765 & 764), 1888.

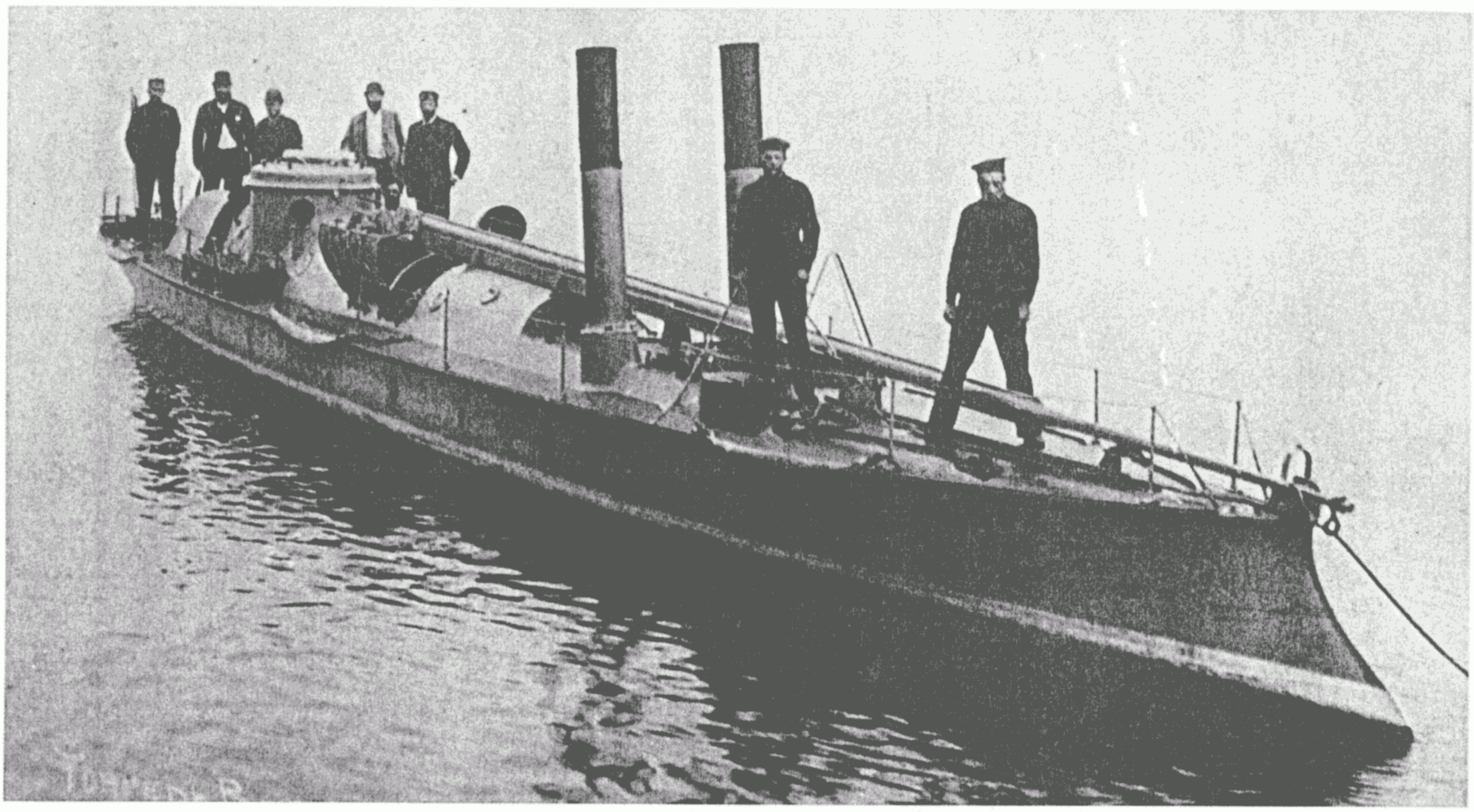
Dimensions & tons: 59ft 6in pp x 8ft 3in x ... . 15 and 15½ tons.
Men: 9 Guns: 1 MG. Torpedoes: 1 x 14in tube.
Machinery: Triple expansion (cylinders of 8in, 12in & 17½in; 9in stroke). Locomotive boiler. Single screw. 200 ihp = 16.5kts.

TB 49. Sold 1906.
TB 50. Sold 1904.

***TB 39* Class** - Designed and built by Yarrow, Poplar (Yard Nos. 806 to 815), 1889.

Dimensions & tons: 60ft 0in x 9ft 3in x ... . 16½ tons.
Men: 9. Guns: 1 MG. Torpedoes: 2 x 14in in dropping gear.
Machinery: Triple expansion (cylinders of 8in, 12in & 17½in; 9in stroke). Locomotive boiler. Single screw. 240 ihp = 16.5kts.

TB 39. Sold 1907.
TB 40. Sold 1907.
TB 41. Sold 1907.
TB 42. Sold 1907.
TB 43. Sold 1907.
TB 44. Sold 1907.
TB 45. Sold 1912.
TB 46. Sold 1912.
TB 47. Sold 1912.
TB 48. Sold 1912.



One of the New Zealand *Defender* Class Second Class spar torpedo boats (exact vessel unidentified). The retracted spar is very evident on deck. *D4769*

Colonial Service Torpedo Boats

All the following were built and engined by Thornycroft, Chiswick - except the first pair (built by Atlas Engineering Co., Sidney), the *Midge* and *Gordon* (built by White) and the last four (RIM) craft as shown.

***ACHERON* Class** - torpedo boats (material uncertain) for New South Wales naval service.

Dimensions & tons: 78ft 0in x 10ft 3in x 3ft 0in. 16 disp.
Men: 9. Guns: none. Torpedoes: originally spar, replaced 1887 by 2 x 14in.
Machinery: 200 ihp = 15kts.

Acheron L: 1879. Subsequently to NSW quarantine service, renamed *Jenner*. Sold 12.11.1902.
Avernus L: 1879. Sold 12.11.1902.

***DEFENDER* Class** - Second Class spar TBs for New Zealand naval service (Yard Nos. 168 to 171).

Dimensions & tons: 62ft 10in pp x 7ft 6in x 3ft 10¼in. 12 disp.
Men: 7. Guns: 1 x 2-barrelled Nordenfelt MG. Torpedoes: 1 x McEvoy charge on steel spar.
Machinery: 2-cyl. compound expansion. Locomotive boiler (130 lbs/sq.in). Designed 17kts. 15cwt coal.
First cost: Contract £12,600 for all four.

Defender Ord: 26.8.1882. L: 30.7.1883. C (trials): 18.9.1883. (17.524kts)
Taiaroa Ord: 26.8.1882. L: 10.8.1883. C (trials): 19.9.1883. (17.222kts)
Waitemata Ord: 26.8.1882. L: 30.8.1883. C (trials): 19.9.1883. (17.318kts)
Poneke Ord: 26.8.1882. L: 31.8.1883. C (trials): 18.9.1883. (17.324kts)
NOTES: Similar to RN Second Class TBs 78-95. Shipped to New Zealand 1.2.1884 (first pair) or 3.5.1884 (second pair).

***CHILDERS* Class** - First Class TB for Victoria naval service (Yard No.172).

Dimensions & tons: 113ft 0in oa, 111ft 8in wl x 12ft 6in x 5ft 6in. 60.5 disp.
Men: 18. Guns: 2 x 1pdr. Torpedoes: 2 x 15in fixed bow TT.
Machinery: 2-cyl. compound expansion. Locomotive boiler (130 lbs/sq.in). 679 ihp. Designed 18kts. 10 tons coal.
First cost: Total £11,027 (hull & fittings £3,750, machinery £4,750, armament £1,500, 'outfit' £1,027).

Childers
Ord: 25.9.1882. L: 18.8.1883. C (trials): 16.11.1883. (679 ihp = 19.116kts). Sailed for Australia 5.2.1884. Sold 5.8.1918 and became a hulk.

***NEPEAN* Class** - Second Class TBs for Victoria naval service, with 2 x 14in fixed bow TT.
These vessels (Yard Nos. 189 & 190) were identical to the *Defender* Class above, except in mounting fixed TT.
Nepean Ord: 30.3.1883. L: 22.2.1884. BU 1913.
Lonsdale Ord: 30.3.1883. L: 12.3.1884. BU 1913.

'No. 191' - Second Class spar TB for Tasmania naval service.
This vessel (Yard No.191) was identical to the *Defender* Class above. The name *Wasp* was used by Thornycroft only; in Tasmanian service the boat was never named but retained its yard number.
(unnamed) Ord: 5.4.1883. L: ?18.12.1883. To South Australia 1900. Out of service 1910. Sold 1917.

***MOSQUITO* Class** - Second Class spar TB for Queensland naval service.
This vessel was identical to the *Defender* Class above.

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Mosquito
Ord: 17 or 21.8.1883. L: 11.7.1884. Sold.1910.

MIDGE - Second Class spar TB for Queensland, built by J. Samuel White, Cowes (Yard No.744).
Dimensions & tons: 56ft 4in x 9ft 3in x 4ft 7in. 12 disp.
Men: ... . Guns: 2 x 2-barrelled 1in Nordenfelt guns.
K: 10.1887. Trials 27.3.1888. Sold 1912 and became yacht *Nola II*.

***GORDON* Class** - torpedo launch for the Victorian naval service built by J. Samuel White, Cowes (Yard No. 606).
Dimensions & tons: 56ft 0in x 9ft 6in x 4ft 10in. 12 disp.
Men: 11. Guns: 3 x 1in Nordenfelt. Torpedoes: 2 sets of dropping gear.
Machinery: Compound surface condensing engine by G. E. Belliss & Co., Birmingham. 150 ihp = 15kts.
Gordon
Ord: 5.2.1885. L: ... . Trials: 4.1886. Rammed and sunk by the picket boat *Picket* 14.11.1914.

***BALUCHI* Group** - First Class TBs for India Office (but never actually delivered).
Men: 18. Guns: 2 x twin Nordenfelt 1in MGs. Torpedoes: 5 x 14in TT (1 fixed bow, 2 x twin deck revolving).
(a) Thornycroft design and built. Yard Nos. 256-258.
Dimensions & tons: 134ft 7½in oa, 133ft 7½in wl x 14ft 9in x 6ft 9¾in. 96 disp.
Machinery: Compound expansion. 2 water-tube boilers. 1,300 ihp = 22kts.
Baluchi (RIM *TB 1*) Ord: 31.8.1887. L: 1888. Became *TB 100* in 1901. Sold 1908.
Kahren (RIM *TB 2*) Ord: 31.8.1887. L: 24.9.1888. Became *TB 102* in 1901. Sold 1909.
Pathan (RIM *TB 3*) Ord: 31.8.1887. L: 23.10.1888. Became *TB 103* in 1901. Sold 1909.
(b) White design and built. Yard Nos. 753-755.
Dimensions & tons: 135ft 0in oa, 130ft 0in pp x 14ft 6in x 7ft 6in. 95 disp.
Machinery: Compound expansion. 2 locomotive boilers. 1,000 ihp = 22kts.
Mahratta (RIM *TB 4*) Ord: 31.8.1887. L: 1889. Became *TB 104* in 1901. Sold 29.7.1920.
Sikh (RIM *TB 5*) Ord: 31.8.1887. L: 1889. Became *TB 105* in 1901. Sold 27.1.1920.
Rajput (RIM *TB 6*) Ord: 31.8.1887. L: 1889. Became *TB 106* in 1901. Sold 11.10.1910.
(c) Hanna, Donald & Wilson design and built.
Dimensions & tons: 135ft 0in oa, 130ft 0in pp x 14ft 0in x 7ft 0in. 92 disp.
Machinery: Compound expansion. 2 locomotive boilers. 1,000 ihp = 21.5kts.
Gurkha (RIM *TB 7*) Ord: 31.8.1887. L: 1888. Became *TB 101* in 1901. BU 1920.
NOTES: All seven vessels were taken over by the RN in 1892, and re-numbered *TB 100-106* in 1900 as shown above.

Torpedo Mooring Steamers/Mine Vessels

The use of the term 'torpedo' (sole cause of including the following in the present chapter) is in modern terms a misnomer; the early use of the term was to designate the non-propelled devices later called 'mines' (the self-propelled weapons at this stage being called 'Whiteheads' after their inventor). These purpose-built vessels - designed to lay and recover submarine (floating) mines - were operated by the Submarine Mining Service of the Royal Engineers, established in 1871 and continuing until April 1904, when its fleet was split between the RN (21 vessels) and the War Department (27 vessels).

TMS 1. Palmers Sbdg & Iron Co., Jarrow (No.338). L: 13.1.1877.
TMS 2. Palmers Sbdg & Iron Co., Jarrow (No.339). L: 14.2.1877.
TMS 3. Palmers Sbdg & Iron Co., Jarrow (No.340). L: 15.2.1877.
TMS 4. Palmers Sbdg & Iron Co., Jarrow (No.362). L: 6.4.1878.
TMS 5. Palmers Sbdg & Iron Co., Jarrow (No.363). L: 17.5.1878.
TMS 6. Barrow Iron Sbdg (No.55). L: 16.5.1878.
TMS 7. (unknown details). L: 1878.
TMS 8. Palmers Sbdg & Iron Co., Jarrow (No.396). L: 29.12.1879.
TMS 9. Palmers Sbdg & Iron Co., Jarrow (No.397). L: 30.12.1879.
TMS 10. Palmers Sbdg & Iron Co., Jarrow (No.398). L: 31.12.1879.
NOTES: Each of the above was of 72 tons bm, and had twin screws and engines of 110 ihp. In 1880 they were renamed *Miner 1* to *Miner 10* respectively. The change of name reflected a change in terminology rather than a functional alteration.

Miner 11. Barrow Iron Sbdg (No.66). L: 28.1.1880.
Miner 12. Barrow Iron Sbdg (No.67). L: 28.1.1880.
Miner 13. Palmers Sbdg & Iron Co., Jarrow (No.410). L: 8.7.1880.
Miner 14. Barrow Iron Sbdg (No.75). L: 10.8.1880.
Miner 15. Palmers Sbdg & Iron Co., Jarrow (No.437). L: 18.2.1881.
Miner 17. (builder unknown). Later renamed *Starling*.
NOTES: Each of the above was of 80 tons bm, and had engines of 110 ihp. The first five were ordered as *TMS 11* to *TMS 15* respectively, and renamed while building. The fates of the above 16 vessels are unknown.

Gordon L: 1885.
Solent L: 1885.
Burgogne L: 1886. Renamed *Adder* 1905. Sold to Carriden Shipbreaking Co. 31.1.1923.
Lord Heathfield L: 1886. Renamed *Firebrand* 1905. Sold to Stanlee, Dover 10.2.1920.
Victor L: 1886. Renamed *Beaver* 1905. Sold 9.7.1911.
Dundas L: 1887. Renamed *Elfin* 1905. Sold to Ward 29.2.1928 to BU.
NOTES: Most of the above were of 125 tons disp, and measured *c*95ft x 17ft 6in (*Dundas* and *Solent* were slightly longer), with engines of 280 ihp. They were re-named as shown upon transfer from the War Dept to the Admiralty. Those surviving until 1914 served mainly as tenders during WWI.

Sir Richard Fletcher L: 1886. Renamed *Bouncer* 1905. Sold 14.5.1920.
Sir John Jones L: 1886.
General Elliot L: 1889.
Sir William Reid L: 1889. Renamed *Biter* 1905. Sold 5.1923.
Sir William Green L: 1889.
Sir Francis Head L: 1889. Renamed *Esk* 1906. Sold 6.1920.
NOTES: The first pair were of 100 tons, while the last four were of 110 tons disp, and measured 80ft x 17ft; all had engines of 200 ihp.

Smaller craft acquired in 1889 were the *Courier* and *Endeavour*, each measuring 52ft x 11ft. A number of other small vessels were built for the SMS from 1889 on. All of *c*24-27 tons and measuring 48ft x 11ft, these were the *Volta* (1889), *Ampere*, *Farad*, *Joule*, *Ohm* and *Watt* (all 1890), *Admiral*, *Hoptown*, *Pembroke*, *Sir Charles*, *Sir Donald*, *Sir James* and *Swale* (all 1891), *Carrigaline*, *Dragon* and *Erg* (all 1892), *Dodo* (1893), *Maroon* (1895) and *Musquash* (1895).

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Postscript

The Fleet List of 1 January 1889

The few accidental losses apart, almost every vessel detailed in Part II remained in service at the end of 1888, while almost no significant vessels dating from before 1860 (except the iron frigates of 1859-63) were still in service.

The ironclad fleet consisted of 63 vessels totalling 460,918 (tons) displacement. These comprised:
(a) Fourteen turret ships of 136,168 disp - comprising *Agamemnon*, *Ajax*, *Colossus*, *Devastation*, *Dreadnought*, *Edinburgh*, *Inflexible*, *Monarch*, *Neptune*, *Nile*, *Sans Pareil*, *Thunderer*, *Trafalgar* and *Victoria* (ex-*Renown*). Among these, the *Colossus*, *Edinburgh*, *Nile*, *Sans Pareil*, *Trafalgar* and *Victoria* were built of steel.
(b) Four turret rams of 22,090 disp - comprising *Conqueror*, *Hero*, *Hotspur* and *Rupert*. Among these, the *Conqueror* and *Hero* were built of steel.
(c) Nine barbette ships of 87,240 disp - comprising *Anson*, *Benbow*, *Camperdown*, *Collingwood*, *Howe*, *Imperieuse*, *Rodney*, *Temeraire* and *Warspite*. All except the *Temeraire* (zinc-sheathed iron) were built of steel, with the *Imperieuse* and *Warspite* having copper sheathing.
(d) Twelve central-battery ships of 82,606 disp - comprising *Alexandra*, *Audacious*, *Belleisle*, *Hercules*, *Invincible*, *Iron Duke*, *Orion*, *Penelope*, *Sultan*, *Superb*, *Swiftsure* and *Triumph*. Among these, the last pair had copper sheathing and the *Audacious* had zinc sheathing.
(e) Eleven broadside ships of 92,602 disp - comprising *Achilles*, *Agincourt*, *Bellerophon*, *Black Prince*, *Defence*, *Hector*, *Minotaur*, *Northumberland*, *Repulse*, *Valiant* and *Warrior* (the *Resistance* was now a torpedo target ship, and had been struck from the Navy List). Among these, the wooden-hulled *Repulse* was marked for sale, and the *Defence* was classed as non-effective.
(f) Thirteen coast defence ironclads of 40,212 disp - comprising *Abyssinia* (RIM), *Cerberus* (Australia), *Cyclops*, *Glatton*, *Gorgon*, *Hecate*, *Hydra*, *Magdala* (RIM), *Prince Albert*, *Scorpion*, *Viper*, *Vixen* (composite hull) and *Wivern*. The non-effective *Waterwitch* had been struck from the Navy List.

With these may be classed ten other armoured vessels:
(g) Three armoured cruisers of 20,073 disp, formerly rated Second Class battleships - comprising *Nelson*, *Northampton* and *Shannon*. All were iron-hulled vessels, sheathed with zinc.
(h) Seven protected cruisers of 39,200 disp - comprising the seven *Orlando* Class (*Aurora*, *Australia*, *Galatea*, *Immortalite*, *Narcissus*, *Orlando* and *Undaunted*), each steel-built of 5,600 disp.

The unarmoured cruising vessels were:
(a) Seventeen other protected cruisers - comprising two First Class (*Blake* and *Blenheim* - just begun), and four Second Class (*Forth*, *Mersey*, *Severn* and *Thames*), plus eleven Third Class cruisers building including four of 1,580 disp (*Barracouta*, *Barrosa*, *Blanche* and *Blonde*), two of 1,830 disp (*Barham* and *Bellona*) and five of 2,500 disp (*Pandora*, *Pelorus*, *Persian*, *Phoenix* and *Psyche*).
(b) Nine partially protected (Second Class) cruisers of 31,100 disp - comprising the four *Leander* Class (*Amphion*, *Arethusa*, *Leander* and *Phaeton*) and the five *Medea* Class just launched (*Magicienne*, *Marathon*, *Medea*, *Medusa* and *Melpomene*).
(c) Three iron-hulled frigates of 17,022 disp - comprising *Inconstant*, *Raleigh* and *Shah*. All were sheathed in wood and copper, and were rerated as Second Class cruisers.
(d) Eighteen corvettes of 36,883 disp - comprising the two *Calypso* Class (*Calliope* and *Calypso*), the nine *Comus* Class (*Canada*, *Carysfort*, *Champion*, *Cleopatra*, *Comus*, *Conquest*, *Constance*, *Cordelia* and *Curacoa*) and the seven *Satellite* Class (*Caroline*, *Heroine*, *Hyacinth*, *Pylades*, *Rapid*, *Royalist* and *Satellite*). Sixteen somewhat older corvettes of 42,634 disp were no longer considered front-line units - the six iron-hulled *Active*, *Bacchante*, *Boadicea*, *Euryalus*, *Rover* and *Volage* (all sheathed with wood and either copper or zinc); the six composite *Emerald* Class (*Emerald*, *Garnet*, *Opal*, *Ruby*, *Tourmaline* and *Turquoise*); and the four last surviving wooden corvettes of the *Juno* Class (*Thalia*), *Eclipse* Class (*Eclipse*) and *Amethyst* Class (*Diamond* and *Sapphire*). All of these were rerated as Third Class cruisers except the six iron-hulled vessels.
(e) Six despatch vessels of 12,785 disp - comprising *Alacrity*, *Enchantress*, *Helicon*, *Iris*, *Mercury* and *Surprise*.
(f) Seventeen sloops were on the effective list - comprising one of the *Osprey* Class (*Pelican*), four of the *Doterel* Class (*Gannet*, *Kingfisher*, *Mutine* and *Espiegle*), the six *Mariner* Class (*Reindeer*, *Mariner*, *Racer*, *Acorn*, *Icarus* and *Melita* - all built as gunvessels), the two *Dolphin* Class (*Dolphin* and *Wanderer*) and the four *Nymphe* Class (*Swallow*, *Buzzard*, *Daphne* and *Nymphe*). The first two steel sloops (*Basilisk* and *Beagle*) were listed but not yet begun. The remaining twelve sloops were considered non-effective - these comprised the last remaining five of the *Fantome* Class (*Albatross*, *Daring*, *Egeria*, *Fantome* and *Flying Fish*), the other four of the *Osprey* Class (*Wild Swan*, *Penguin*, *Osprey* and *Cormorant*) and the other three survivors of the *Doterel* Class (*Dragon*, *Pegasus* and *Miranda*). These thirty-one sloops totalled 32,710 disp.
(g) Thirty-four 'gunvessels' were on the Navy List, but seventeen of those listed were White-designed vessels which were now rated as gunboats (see note in Chapter 9). Of the other seventeen, ten gunvessels were considered effective - comprising two of the *Frolic* Class (*Frolic* and *Rifleman*), the two *Arab* Class (*Arab* and *Lily*), the four *Condor* Class (*Condor*, *Falcon*, *Flamingo* and *Griffon*) and the two *Linnet* Class (*Swift* and *Linnet*). Another five gunvessels were considered non-effective - consisting of one elderly wooden *Beacon* Class (*Midge*), one of the *Frolic* Class (*Ready*) and the three *Algerine* Class (*Rambler*, *Ranger* and *Algerine*). The other two were the elderly wooden gunvessels of the *Cormorant* Class (*Myrmidon* and *Sylvia*), which served as survey ships.
(h) There were twenty-seven 'gunboats' listed, totalling 12,837 disp, but these excluded the seventeen White-designed vessels that had been included with the gunvessels and were now rated First Class gunboats. The latter comprised two of the *Bramble* Class (*Lizard* and *Rattler*), the six *Pigmy* Class (*Pheasant*, *Partridge*, *Peacock*, *Pigmy*, *Pigeon* and *Plover*) and the nine *Redbreast* Class just commenced (*Goldfinch*, *Lapwing*, *Magpie*, *Redbreast*, *Redpole*, *Ringdove*, *Sparrow*, *Thrush* and *Wigeon*).
(i) Those now listed as Second Class gunboats comprised five of the *Ariel* Class (*Ariel*, *Goshawk*, *Merlin*, *Swinger* and *Zephyr*), eight of the *Forester* Class (*Cygnet*, *Express*, *Firebrand*, *Firefly*, *Firm*, *Forester*, *Forward* and *Foxhound*), the ten surviving *Banterer* Class (*Banterer*, *Bullfrog*, *Cockchafer*, *Espoir*, *Grappler*, *Raven*, *Redwing*, *Starling*, *Stork* and *Wrangler*), the three *Albacore* Class (*Albacore*, *Mistletoe* and *Watchful*) and one of the *Bramble* Class (*Bramble*). Of these the *Ariel*, *Cygnet* and *Express* - plus the unlisted *Mallard* and *Mosquito* - were considered non-effective and were to be sold.

All the above sloops/gunvessels/gunboats were composite-built except for the steel-hulled *Basilisk* and *Beagle*, and the handful of elderly wooden vessels identified above. There were also the forty iron-hulled 'flatiron' (or 'Rendel') gunboats of a combined 11,402 disp, which were all considered effective - the *Staunch*, *Plucky*, all twenty-four of the *Ant* Class (see Chapter 8), two *Bouncer* Class (*Bouncer* and *Insolent*), and the twelve *Medina* Class (see Chapter 8).

Early in 1889, the Admiralty reclassed all the surviving gunvessels and gunboats according to their type of ordnance. Those armed with

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breech-loading guns (the gunvessels re-armed with 5in Vavasseur breech-loaders, and the *Albacore*, *Bramble* and *Pigmy* Class gunboats - as well as the new *Redbreast* Class gunboats under construction) were classified as First Class gunvessels and gunboats. The older composite gunvessels and gunboats, armed with muzzle-loading weapons, were classified as Second Class. The flatiron gunboats, likewise carrying muzzle-loaders, became Third Class.

The 'torpedo flotilla' consisted of the early *Vesuvius* and *Polyphemus*; the first five of the torpedo gunboats - *Rattlesnake*, the three *Grasshopper* Class (*Grasshopper*, *Sandfly* and *Spider*) and the first of the *Sharpshooter* Class (*Sharpshooter*); ten torpedo cruisers of the *Scout* Class (*Fearless* and *Scout*) and *Archer* Class (*Archer*, *Brisk*, *Cossack*, *Mohawk*, *Porpoise*, *Racoon*, *Serpent* and *Tartar*) - now rated with the Third Class cruisers; the two torpedo-and-gun vessels of the *Curlew* Class (*Curlew* and *Landrail*) - now rated as First Class gunvessels; the depot ships *Hecla* and *Vulcan*; eighty First Class torpedo boats (numbered *TB 1* to *TB 81* but excluding *TB 16*); and sixty-one Second Class torpedo boats (numbered *TB 51* to *TB 100* and *WTB 1* to *WTB 11*).

The 1889 Naval Defence Act

The Naval Defence Act, introduced in Parliament by Lord George Hamilton (the First Lord) on 7 March 1889 and passed on 31 May 1889, provided for the building, over a period of three years, of eight First Class and two Second Class battleships; of nine large (First Class) and twenty-nine smaller (Second Class) cruisers; and of four 'fast gunboats' (actually, Third Class cruisers) and eighteen torpedo gunboats. The cost of the entire seventy-ship programme was to be some £21,500,000. The names and construction dates of all seventy vessels, and full details of the twenty-two smaller, are included in Part 2 above.

At the same time, the concept of the 'Two-Power Standard' was to be established, with the minimum size of the Royal Navy's combatant strength to be fixed equal to those of the navies of the next two maritime powers combined. The intention was to raise the size of the battlefleet to twenty-six (First Class) battleships, compared to a French level of fifteen.

It is worthwhile briefly considering the development of the major types of warship - not solely those ordered under this Act, but their successors during the remaining decade of the century:

Battlefleet

The vessels ordered under the Naval Defence Act comprised the eight (First Class) battleships of the *Royal Sovereign* Class, and the two (Second Class) battleships of the *Centurion* Class; all were launched in 1891 or 1892. The *Royal Sovereigns* were principally armed with four 13.5in, 67-ton breech-loaders mounted in two twin barbettes (one fore, one aft), except for the slightly differing *Hood* which had turrets instead of barbettes. Both classes, like their predecessors, were protected by 'compound' armour, with the iron plating faced with steel.

They were followed by further ('pre-Dreadnought') battleships over the next decade - the *Renown* (launched 1895), the nine *Majestic* Class (launched 1894-96), the six *Canopus* Class (1897-99), the three *Formidable* Class (1898-99), the three *London* Class (1899), the six *Duncan* Class (1901) and the two Improved *Formidable* or *Queen* Class of the 1900-01 Programme (both launched 1902). The *Renown* and *Majestic* Class battleships were armoured with thinner and tougher H. A. Harvey 'nickel' steel, specially hardened with high carbon content in its outer inch; the *Canopus* and later ships had plating manufactured by the superior Krupp cementing (KC) process.

Finally, the last pre-Dreadnoughts were the eight *King Edward VII* Class, under the Programmes of 1901-02 (three ships), 1902-03 (two ships) and 1903-04 (three ships), and the two *Lord Nelson* Class under the 1904-05 Programme, while two Second Class battleships of the *Swiftsure* Class were purchased in 1903. All but the last pair (with 10in guns only) were principally armed with four 12in breech-loaders (46-ton in *Majestic* and *Canopus* Classes, then 50-ton, finally 58-ton in last pair) mounted in barbettes, but with the term 'turrets' adopted instead as in popular usage.

First Class Cruisers

The Naval Defence Act provided for nine First Class protected cruisers of the *Edgar* (seven ships) and *Crescent* (two ships) Classes. They were followed by the two ships of the *Powerful* Class under the Programme of 1894-95 - both launched 1895 - and the eight of the *Diadem* Class under the Programmes of 1895-96 (four ships) and 1896-97 (four ships) - all launched 1896-98.

There was then a return to the armoured cruiser concept, with the six *Cressy* Class under the 1897-88 Programme being virtually armoured cruiser versions of the *Diadems*; these were followed by further First Class armoured cruisers - the four *Drake* Class under the 1898-99 Programme, the ten *Monmouth* Class under a 1898-99 Supplementary Estimate (two ships), the 1899-1900 Programme (two ships) and 1900-01 Programme (six ships), the six *Devonshire* Class under the 1901-02 Programme, the two *Duke of Edinburgh* Class under the 1902-03 Programme, the four *Warrior* Class under the 1903-04 Programme, and finally the four *Minotaur* Class under the 1904-05 Programme.

Second Class Cruisers

The Naval Defence Act provided for twenty-nine protected cruisers of the *Apollo* Class (twenty-one ships) and *Astraea* Class (eight ships). These were followed by the nine *Eclipse* Class under the (Spencer) Programme of 1893-94, four *Arrogant* Class under the 1895-96 Programme, three *Highflyer* Class under the 1896-97 Programme and two *Challenger* Class under the 1900-01 Programme.

Third Class Cruisers

The Naval Defence Act provided for four more protected cruisers of the *Pearl* Class; as these were a continuation of a class begun earlier, details of these ships are included in Chapter 8 above. They were followed by the eleven *Pelorus* Class under the Programmes of 1895-96, 1896-97 and 1897-98, and finally by the four *Gem* Class under the Programmes of 1902-03 (two ships) and 1903-04 (two ships).

Torpedo Vessels

The Naval Defence Act provided for 'eighteen torpedo gunboats' comprising two additional units of the *Sharpshooter* Class (launched 1890), eleven vessels of the *Alarm* Class (launched 1892-93) and the five vessels of the *Halcyon* Class (launched 1893-94). Details of all these - the final TGBs - are likewise included in Chapter 10 above.

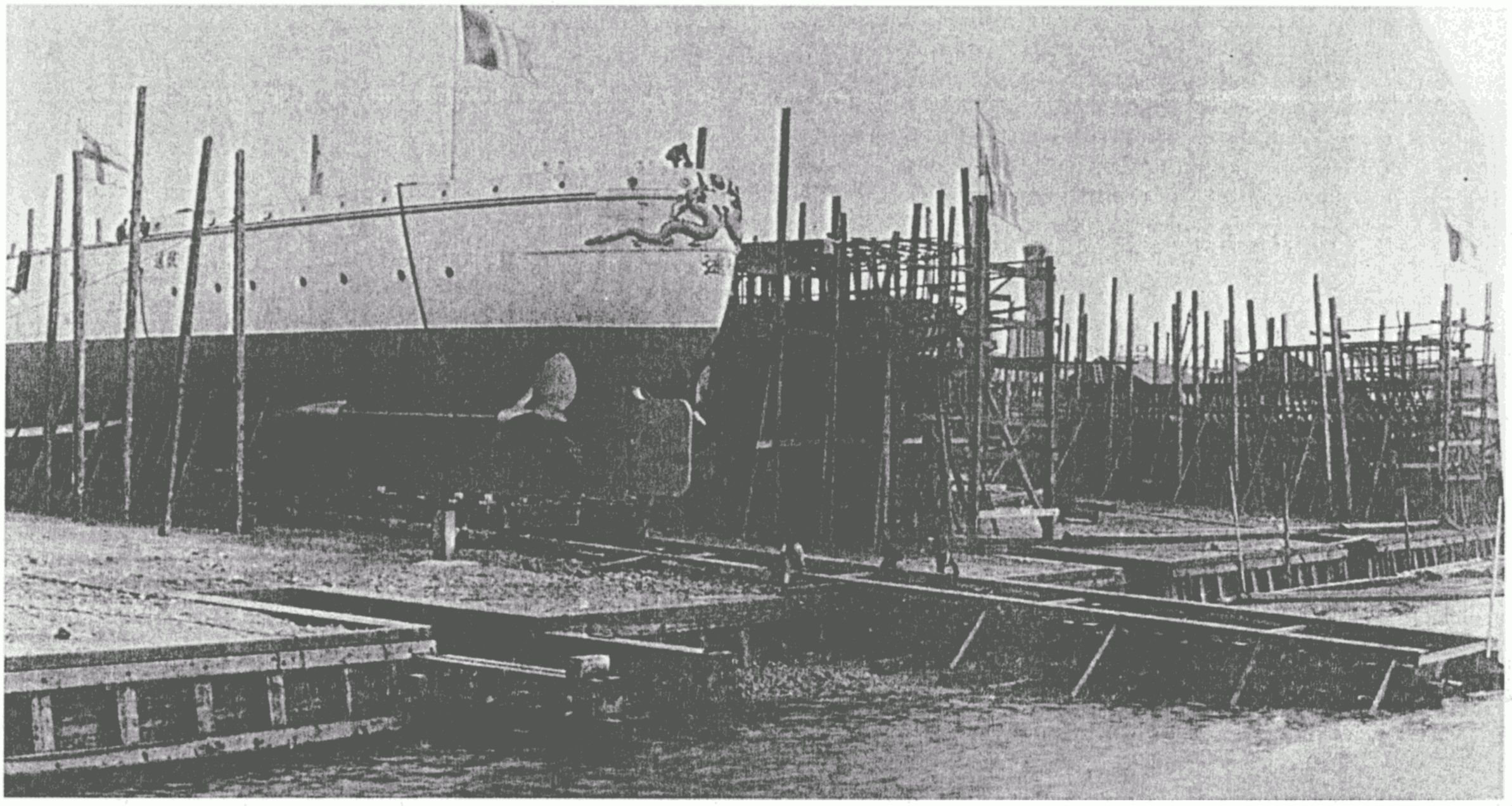
Other Warship Types

While no other vessels were included in the 1889 Act, new types of warship were to emerge within a few years. The first four torpedo-boat destroyers - the 26-knot *Havock*, *Hornet*, *Daring* and *Decoy* - were to be ordered in July 1892, followed by another pair (*Ferret* and *Lynx*) in January 1893. There were thirty-six more (27kts) ordered in 1893-94 and a further seventy-two (30kts) over the next decade. Over the period 1892-95, ten new First Class torpedo boats were also built. Nine river gunboats were provided for service in the Far East and Africa. And the first submarines ('Holland' type) for the Navy were to be ordered in 1901.

Scan and/or retouch by Grzechu

A Warships Built in the UK for Export, c1840 to 1889

This list, in alphabetical order of merchant shipbuilders, does not claim to be fully comprehensive. It is based chiefly on a listing compiled by Fred Dittmar, with some additions by the author and by others – notably John Houghton. It reveals how much, while contributing to the construction of the nineteenth-century British Navy, a small number of commercial shipbuilders also provided a sizable proportion of the smaller navies of the world.



In terms of exports one of the most successful warship builders was Armstrong, Mitchell on the River Tyne. This is their Elswick yard on 29 September 1886, showing the preparations for launching the Chinese protected cruiser *Chih Yuan* later that day. *P35105*

Armstrong, Mitchell

Sir W. G. Armstrong, Mitchell & Co., Newcastle-upon Tyne - yards at Elswick (E) and Walker (W).

Formed by the 1882 amalgamation of Sir William Armstrong, Elswick, with Charles Mitchell, Low Walker.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
W/453	Protected cruiser	*Giovanni Bausan*	Italy	15.12.1883
W/454	Steel gunvessel	*Albert*	Victoria (Aust.)	6.6.1883
W/455	Steel gunvessel	*Victoria*	"	25.6.1883
W/457	Steel gunvessel	*Protector*	South Australia	27.12.1883
W/469	Steel gunvessel	*Paluma*	Queensland (Aust.)	6.5.1884
W/470	Steel gunvessel	*Gayundah*	"	6.5.1884
W/475	Protected cruiser	*Naniwa*	Japan	18.3.1885
W/476	Protected cruiser	*Takachiho*	"	16.5.1885
E/480	Protected cruiser	*Panther*	Austria-Hungary	10.9.1885
E/481	Protected cruiser	*Leopard*	"	13.6.1885
E/482	Protected cruiser	*Dogali**	Italy*	23.12.1885
E/493	Protected cruiser	*Chih Yuan*	China	29.9.1886
E/494	Protected cruiser	*Ching Yuan*	"	14.12.1886
E/497	Protected cruiser	*Isla de Luzon*	Spain	18.11.1886
E/498	Protected cruiser	*Isla de Cuba*	"	11.12.1886
E/510	Protected cruiser	*Piemonte*	Italy	23.8.1888
E/512	Gunboat	*Castore*	"	1888
E/513	Gunboat	*Polluce*	"	1888
W/514	Revenue cruiser	*Chuen Tiao*	China	26.11.1887
W/515	Revenue cruiser	*Li Kin*	"	13.12.1887
W/516	Revenue cruiser	*Kai Pan*	"	17.12.1887
E/517	Protected cruiser	*Elisabeta*	Romania	29.12.1887
E/541	Protected cruiser	*Necochea/ 25 de Mayo*	Argentina	5.5.1890
E/542	Protected cruiser	*Katoomba (Pandora)*	Australia	27.8.1889
E/543	Protected cruiser	*Mildura (Pelorus)*	Australia	25.11.1889

Scan and/or retouch by Grzechu

E/544	Protected cruiser	*Wallaroo* (*Persian*)	"	5.2.1890
E/545	Torpedo gunboat	*Boomerang* (*Whiting*)	"	24.7.1889
E/546	Torpedo gunboat	*Karrakatta* (*Wizard*)	"	27.8.1889
E/547	Torpedo gunboat	*Plassey*	RIM	5.7.1890
E/548	Torpedo gunboat	*Assaye*	"	11.2.1890

* This ship was originally ordered by Greece as the *Salamis*, but was bought by Italy while building, and renamed first *Angelo Emo*, and then *Dogali* under which name she was completed. Just to confuse further, in 1908 Italy sold her to Uruguay, for whom she was renamed *24 de Agosto* and later *Montevideo*.

Blackwood & Gordon, Paisley & Port Glasgow

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
PG/164	Gunboat	*Lorna Doone*	Sarawak	17.3.1881

Denny's, Dumbarton

William Denny & Brothers Ltd., Dumbarton.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
/108	Commerce raider	*Brazil* (*Enterprise*)	C.S.A.	1864
/109	Commerce raider	*Amazona* (*Adventure*)	"	1864
/111	Gunboat	*Olustre (Ajax)*	"	15.12.1864
/112	Gunboat	*Vicksburg* (*Hercules*)	"	29.12.1864
/127	Composite gunboat	*Kwang Tung*	Viceroy of Canton	1868
/128	Composite gunboat	*Shang Tung*	"	1868
/200	Composite sloop	*Glasgow*	Sultan of Zanzibar	1878
	Gunboat	*Eurotas*	Greece	1884
	Gunboat	*Peneos*	Greece	1884

Ditchburn & Mare, Blackwall

Thomas Ditchburn & Charles Mare were in partnership from 1837 at Deptford, but took over the yard at Blackwall from 1838 until Ditchburn's retirement in 1846. Mare then owned the business - as C. J. Mare & Co. - until 1856, when he went bankrupt. The yard was then operated as Thames Ironworks & Sbdg until it went bankrupt in 1911.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Paddle frigate	*Blasco de Garay*	Spain	1845
	Paddle corvette	*Vulcano*	"	1845
	Paddle vessel	*Reina de Castilla*	"	1846
	Paddle frigate	*Isabel II*	"	1850
	Paddle frigate	*Francisco de Asis*	"	1850
	Paddle frigate	*Feyz-I-Cihat*	Egypt	23.12.1851

Dudgeon, Millwall

J. & W. Dudgeon, Millwall.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Battleship	*Independencia**	Brazil	10.9.1874

* This ship was purchased by the Royal Navy before completion, becoming the *Neptune*.

Earle, Hull

Earle's Shipbuilding & Engineering Co., Kingston-upon-Hull.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
/187	Central battery ship	*Almirante Cochrane*	Chile	25.1.1874
/188	Central battery ship	*Valparaiso*	"	1875
/206	Armoured corvette	*Kongo*	Japan	4.1877

Elder, Glasgow

John Elder & Co., Govan, Glasgow. Established in July 1870 on a 'greenfield' site at Fairfield, the firm was the successor to Randolph, Elder & Co., which undertook shipbuilding in a small way from 1860 to 1870. In July 1889 it became the Fairfield Shipbuilding & Engineering Co.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
/181		*Fulminante*	Argentina	9.11.1874
/220	Gunboat	*Zeemeeuw*	Netherlands	19.1.1874
/221	Gunboat	*Havik*	Netherlands	18.6.1878
/240	Paddle vessel	*Maipu*	Argentina	15.10.1880

Fletcher, Limehouse

Henry Fletcher, Son & Fearnall, Hog Yard, Limehouse.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Wood paddle frigate	*Memnon*	India	1841
	Wood paddle frigate	*Moozuffer*	"	1846
	Wood paddle frigate	*Ajdaha*	"	1846

Green, Blackwall

Richard & Henry Green, Blackwall. Formerly partners in the Blackwall yard of Green & Wigram, the business was split in 1843, Green taking the eastern half of the premises, where they continued shipbuilding until 1907.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Paddle sloop	*Atalanta*	India	1836
	Paddle frigate	*Moctezuma*	Mexico	1842
/301	Wood screw corvette	*Beberibe*	Brazil	4.8.1853
/303	Wood screw corvette	*Viamao*	"	1854
/304	Wood screw frigate	*Apurimac*	Peru	1854
/305	Wood screw corvette	*Jequitinhonha*	Brazil	1854
/306	Wood screw gunboat	*Tumbes*	Peru	1854
/308	Wood screw gunboat	*Colon* (later *Loa*)	"	1854
/311	Wood screw gunboat	*Maracana*	Brazil	1854
/337	Paddle gunboat	*Paraguasse*	Brazil	1856
/345	Wood screw corvette	*Bartolomao Diaz*	Portugal	2.1.1858
/346	Wood screw gunboat	*Mearim*	Brazil	1858
/347	Wood screw gunboat	*Tieté*	"	1858

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/348	Wood screw gunboat	*Ivahy*	"	1858
/349	Wood screw gunboat	*Araguaia*	"	1858
/351	Wood screw corvette	*Estephania*	Portugal	15.8.1859
/361	Broadside ironclad	*Arapiles*	Spain	17.10.1864
/362	Composite corvette	*General O'Higgins*	Chile	1865
/363	Composite corvette	*Chacabuco*	"	1866
/391	Composite corvette	*Magallanes*	"	1874
/401	Composite corvette	*Rainha de Portugal*	Portugal	16.10.1875
/402	Composite corvette	*Mindello*	"	16.10.1875

Hall, Aberdeen

Alexander Hall & Co., Aberdeen.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Armoured corvette	*Ryujo*	Japan	1864
	Gunboat	*Unyo*	"	1868
	Gunboat	*Hosho*	"	1868

Hanna Donald & Wilson, Paisley

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Torpedo boat	*Delos*	Greece	1.8.1878
	Torpedo boat	*Sappho*	"	1.8.1878

Laird, Birkenhead

Laird Brothers, New Monk's Ferry Yard, Birkenhead. Established by John Laird in Birkenhead in 1824, the firm (as John Laird, Sons & Co.) built at yards in Birkenhead from 1829 - and in Liverpool (Dingle) briefly in the mid-1850s. Following John Laird's retirement, it became Laird Brothers from 1863 until, amalgamating with Sheffield steelmakers Charles Cammell & Co. in October 1903, it became Cammell Laird & Co.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
/18	Paddle gunboat	*Comet*	India	1839
/21	Paddle gunboat	*Nimrod*	"	1839
/22	Paddle gunboat	*Nitrocris*	"	1839
/23	Paddle gunboat	*Assyria*	"	1839
/25	Paddle sloop	*Ariadne*	"	12.1839
/26	Paddle sloop	*Medusa*	"	12.1839
/27	Paddle sloop	*Phlegethon*	"	30.4.1839
/28	Paddle sloop	*Nemesis*	"	23.11.1839
/76	Paddle gunboat	*Pruth*	Russia	7.1851
	Iron paddle corvette	*Guadeloupe*	Mexico	1842
/243	Gunboat	*Zambezie*	Portugal	17.5.1859
/290	Wood screw sloop	*Alabama**	C.S.A.	14.5.1862
/294	Turret sloop	*North Carolina**	"	4.7.1863
/295	Turret sloop	*Mississippi**	"	29.8.1863
/296	Gunboat	*Tientsin*	China	2.2.1863
/297	Paddle vessel	*Kwang Tung*	"	4.3.1863
/311	Gunboat	*Zarco*	Portugal	15.11.1864
/321	Turret sloop	*Huascar*	Peru	6.10.1865
/326	Coast defence ship	*Minerva***	Paraguay	6.10.1865
/327	Coast defence ship	*Bellona***	"	21.12.1865
/330	Turret ironclad	*Prins Hendrik van Nederlanden*	Netherlands	9.10.1866
/360	Turret Ram	*Stier*	"	9.4.1868
/361	Monitor	*Heiligerlee*	"	14.1.1868
/364	Monitor	*Krokodil*	"	13.2.1868
/408	Gunboat	*Parana*	Argentina	12.11.1873
/409	Gunboat	*Uruguay*	"	26.12.1873
/412	Coast defence ship	*La Plata*	"	29.8.1874
/413	Coast defence ship	*Los Andes*	"	29.10.1874
/414	Coastguard patrol	*Resguardo*	"	2.7.1874
/415	Coastguard patrol	*Vigilante*	"	7.7.1874
/418	Flatiron gunboat	*Libertad*	Mexico	26.11.1874
/419	Flatiron gunboat	*Independencia*	"	24.12.1874
/421	Flatiron gunboat	*Republica*	Argentina	4.5.1875
/422	Flatiron gunboat	*Constitucion*	"	6.5.1875
/423	Gunboat	*Rio Lima*	Portugal	3.7.1875
/424	Gunboat	*Tamega*	"	15.11.1875
/425	Gunboat	*Sado*	"	30.12.1875
/426	Flatiron gunboat	*Fu Shêng*	China	8.5.1875
/427	Flatiron gunboat	*Chien Shêng*	"	11.5.1875
/431	Gunboat	*Han Kwang*	"	25.1.1876
/456	Gunboat	*Mandovi*	Portugal	16.8.1879
/457	Gunboat	*Bengo*	"	23.8.1879
/469	Paddle vessel	*Rio Negro*	Argentina	1879
/470	Paddle vessel	*Rio Neuquen*	"	1879
/477	?	*Villarino*	"	11.12.1879
/527	Gunboat	*Liberal*	Portugal	9.8.1884
/528	Gunboat	*Zaire*	"	9.8.1884
/529	Tug	*Lidador*	"	24.6.1884
/539	Gunboat	*Cacongo*	"	19.6.1886
/540	Gunboat	*Massabi*	"	3.7.1886
/572	Torpedo gunboat	*Almirante Lynch*	Chile	10.2.1890
/573	Torpedo gunboat	*Almirante Condell*	"	8.3.1890
/574	Torpedo gunboat	*Espora*	Argentina	22.4.1890
/575	Torpedo gunboat	*Rosales*	"	7.5.1890
/577	Coast defence ship	*Libertad* (ex-*9 de Julio*)	"	11.12.1890
/578	Coast defence ship	*Independencia*	"	26.2.1891

* The first of these ships was originally ordered as the *Enrica*; the other pair were nominally ordered for Egypt as the *el-Tousson* and *el-Monassir*, but were seized by the British government and purchased for the RN as the *Scorpion* and *Wivern* respectively.

** Sold by Paraguay during building to Brazil, by whom renamed *Bahia* and *Lima Barros* respectively.

Milford Haven

Milford Haven Shipbuilding Co., Pembroke.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Armoured corvette	*Hiei*	Japan	12.6.1877

This vessel's construction was sub-let from Earle's - their Yard No. 207.

Millwall Iron Works

Millwall Ironworks & Engineering Co., Millwall.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
?	Paddle despatch vessel	*Fuad*	Turkey	1865

?	Turret ram	*Affondatore*	Italy	3.11.1865

Mitchell, Newcastle

Charles Mitchell & Co., Low Walker, Newcastle - also at St. Petersburg, Russia ('SP' below).

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
W/96		*Flugarka*	Russia	5.7.1861
SP/97		*Ijora*	"	19.6.1861
SP/98		*Slavianka*	"	8.8.1861
W/100	Launch	*?* unnamed	"	1861
W/101	Launch	*?* unnamed	"	1861
SP/107	Coast defence ironclad	*Netron Menya*	"	11.6.1864
SP/117	Coast defence ship	*Smertch*	"	23.6.1864
SP/137	Central battery ship	*Kniaz Pojarski*	"	12.9.1867
SP/148	Coast defence ship	*Rousalka*	"	12.9.1867
SP/149	Coast defence ship	*Charodeika*	"	12.9.1867
W/270	Gunboat	*Ever*	Netherlands	16.10.1873
W/271	Gunboat	*Hydra*	"	17.10.1873
W/327	Flatiron gunboat	*Lung Hsiang*	China	23.2.1876
W/328	Flatiron gunboat	*Hu Wei*	"	13.4.1876
W/334	Flatiron gunboat	*Fei Ting*	"	14.6.1876
W/335	Flatiron gunboat	*Hse Tien*	"	23.6.1876
W/349	Gunboat	*Soerabaya*	Netherlands	14.6.1877
W/350	Gunboat	*Kediri*	"	11.7.1877
W/351	Floating dock	*Batavia*	"	25.9.1877
W/374	Flatiron gunboat (steel)	*Chen Tung*	China	20.1.1879
W/375	Flatiron gunboat (steel)	*Chen Hsi*	"	22.3.1879
W/376	Flatiron gunboat (steel)	*Chen Nan*	"	5.2.1879
W/377	Flatiron gunboat (steel)	*Chen Pei*	"	27.3.1879
W/399	Protected cruiser	*Arturo Prat**	Chile	11.8.1880
W/406	Protected cruiser	*Chao Yung*	China	4.11.1880
W/407	Protected cruiser	*Yang Wei*	"	29.1.1881
W/411	Flatiron gunboat (steel)	*Chen Chung*	"	9.12.1880
W/412	Flatiron gunboat (steel)	*Chen Pien*	"	31.12.1880
W/413	Flatiron gunboat (steel)	*Chen Hai*	"	22.12.1880
W/429	Protected cruiser	*Esmeralda*	Chile	6.6.1883

* Sold by Chile to Japan, becoming the *Tsukushi*.

Napier, Glasgow

Robert Napier & Sons, Govan, Glasgow.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
?	Wood paddle sloop	*Berenice*	India	1836
?	Wood paddle frigate	*Akbar*	"	1841
/110	Coast defence ship	*Rolf Krake*	Denmark	6.5.1863
/113	Broadside ironclad	*Osmanieh*	Turkey	2.9.1864
/114	Broadside ironclad	*Abdul Aziz (Azizieh)*	"	1.1865
/115	Broadside ironclad	*Orkanieh*	"	26.6.1865
/139	Turret ram	*Buffel*	Netherlands	10.3.1868
/140	Monitor	*Tijger*	"	22.2.1868

Patterson, Bristol

William Patterson & Co., Wapping Dock, Bristol. The builder of the *Great Western* and *Great Britain* built the following trio for the North German Federation as well as 2 gunboats and 4 mortar floats for the RN in the 1850s.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Wood paddle frigate	*Köngliche Ernst August*	North Germany	1848
	Wood paddle frigate	*Grossherzog Von August*	"	1849
	Wood paddle frigate	*Frankfurt*	"	1849

Pitcher, Gravesend

William & Henry Sotheby Pitcher, Northfleet, Gravesend. The business, established in the late eighteenth century by Thomas Pitcher, passed when he retired in 1825 to his second son and the latter's cousin, who continued construction there until 1855 when the business went bankrupt. However, shipbuilding continued until 1861 with the business in receivership, with Charles Mare acting as manager.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Wood paddle sloop	*Cleopatra*	India	1839
	Wood paddle sloop	*Queen*	"	1839
	Wood paddle sloop	*Sesostris*	"	1839
	Wood paddle sloop	*Peloro*	Two Sicilies	1842
	Wood paddle sloop	*Rondina*	"	1842
	Wood paddle frigate	*Ruggiero*	"	1842
	Wood paddle frigate	*Guiscardo*	"	1842
	Wood paddle frigate	*Roberto*	"	1843
	Wood paddle frigate	*Tancredi*	"	1843
	Screw corvette	*Esmeralda*	Chile	18.9.1855
	Screw sloop	*Hellas*	Greece	1861

Rennie, Greenwich

John & George Rennie & Co. The engine-works of this firm was established at Albion Ironworks, Blackfriars in 1821. It started a shipyard at Greenwich in 1858 and produced some 25 vessels including a dozen warships before closing down in 1915.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Coast defence ship	*Colombo*	Brazil	1866
	Coast defence ship	*Cabral*	"	1866
	Coast defence ship	*Triton**	Paraguay	1866
	Coast defence ship	*Medusa**	"	1866
	Flatiron gunboat	*Pilcomayo*	Argentina	1874
	Flatiron gunboat	*Burmejo*	"	1874
	Gunboat	*Mexico*	Mexico	1875
	Gunboat	*Democrata*	"	1875

* Acquired by Brazil while building, and renamed *Mariz E. Barros* and *Herval* respectively.

Samuda, Poplar

Samuda Brothers. Joseph and Jacob Samuda established their shipyard at Poplar in 1843. Among other vessels, they built 13 vessels for the RN and the following for foreign navies before the yard closed in 1893.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Paddle despatch vessel	*Talia*	Turkey	1863
	Paddle despatch vessel	*Süreyya*	"	1865
	Monitor	*Arminius*	Prussia	20.8.1864
	Central battery ship	*Independencia*	Peru	8.8.1865
	Central battery ironclad	*Kronprinz*	Prussia	6.5.1867
	Casemate ironclad	*Muin-i-Zafer*	Turkey	1869
		Arteltschik	Russia	1869?
		Kompas	"	1869?
		Strelna	"	1869?
	Paddle yacht	*Miramar*	Austria-Hungary	1872
/B65	Central battery ironclad	*Kaiser*	Germany	19.3.1874
/B66	Central battery ironclad	*Deutschland*	Germany	12.9.1874
	Battleship	*Peik-i-Sheref**	Turkey	12.2.1876
	Central battery ironclad	*Fuso*	Japan	14.4.1877
	Central battery corvette	*Almirante Brown*	Argentina	6.10.1880
	Battleship	*Büruc-i-Zaffer**	Turkey	23.1.1879
	Battleship	*Riachuelo*	Brazil	7.6.1883
	Battleship	*Aquidaban*	Brazil	17.1.1885

* Purchased by the British government for the RN as the *Belleisle* and *Orion* respectively.

Scotts, Greenock

Scott's Shipbuilding and Engineering Co. The oldest shipbuilding concern in existence was founded by John Scott in 1711.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
/74	Tug	*Clyde*	Spain	25.4.1860
/79		*Actif*	France	4.7.1861

Seath, Glasgow

T. B. Seath & Co., Rutherglen, Glasgow.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
139		*El Presidente*	Dominican Republic	1873

Private steam yacht named *Red Rose*, sold to Dominica and re-named 1.1888.

Smith, Newcastle

Thomas & William Smith, Limekilns Shore, North Shields. In 1899 the firm became Smith's Dock Co. Ltd., and in 1910 their business was transferred to new premises at South Bank, Middlesbrough.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Screw frigate	*Carlo Alberto*	Sardinia-Piedmont	23.5.1853

Thames Iron Works, Blackwall

Thames Iron Works & Shipbuilding Co. Formerly C. J. Mare & Co., the firm was reconstituted in 1857 following Charles Mare's insolvency, and continued until closure in 1912 (acquiring John Penn & Sons's engine production at Greenwich in 1899 during its existence).

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
/85e	Gunboat	*Absalon*	Denmark	1862
/86e	Gunboat	*Esbern Snare*	"	1862
/88e	Coast defence ship	*Pervenetz*	Russia	18.5.1863
	Gunboat	*Napo*	Peru	1863
	Gunboat	*Putumayo*	"	1863
/97e	Central battery ironclad	*Vittoria*	Spain	4.11.1865
/99e	Broadside ironclad	*Mahmudieh*	Turkey	13.12.1864
/3f	Paddle dispatch vessel	*Iz-ed-din*	"	21.6.1864
/6f	Screw sloop?	*Charkieh*	Egypt	1864
/30f	Ironclad	*Fatikh**	Turkey	25.4.1868
/35f	Central battery ship	*Basileos Georgios*	Greece	28.12.1867
/44f	Casemate ironclad	*Avni Illah*	Turkey	28.4.1869
/46f	Casemate ironclad	*Fethi Bullend*	"	17.1.1870
/80f	Central battery ironclad	*Messoudieh*	"	28.10.1874
	?Paddle troopship	*Purus*	Brazil	1878
/82f	Central battery ironclad	*Memdouhieh***	Turkey	16.11.1875
/93f	Coast defence ship	*Vasco da Gama*	Portugal	1876
/99f	Torpedo sloop	*Zieten*	Germany	9.3.1876
/39g	Customs vessel	*Faro*	Portugal	1878
/40g	Customs vessel	*Guadiana*	"	1878
	Dispatch vessel	*Tejo*	"	1878
	Transport	*Principe Dom Carlos*	"	1878
	Torpedo boat	*Sphinx*	Greece	1878
/59g	Customs vessel	*Guadiana* (ii)	Portugal	1879
	Paddle vessel	*Principe do Grao Para*	Brazil	1879
		Ionia	Greece	1879
	Mine layer	*Fulminante*	Portugal	1880
/75g	Gunboat	*Hydra* (later *Ambrakia*)	Greece	1881
/76g	Gunboat	*Spetsai* (later *Akteon*)	"	1881
	Mine layer	*Aghilea*	"	1881
	Mine layer	*Nauplion*	"	1881
	Mine layer	*Monembastia*	"	1881
	Unprotected cruiser	*Gravina*	Spain	1881
/81g	Unprotected cruiser	*Velasco*	"	1881
/94g	Gunboat	*Vilhenna*	Portugal	1881
/95g	Composite gunboat	*Mircea*	Romania	1882
/96g	Sloop	*Rahova*	"	1882
/97g	Sloop	*Swardan*	"	1882
/98g	Sloop	*Opanez*	"	1882
	Mine layer	*Alexandru cel Bun*	"	1882
/45h	Sloop	*Alfonso de Albuquerque*	Portugal	9.7.1884

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/47h		*Aedon*	Greece	1884
/48h		*Kichle*	"	1884
/49h		*Kissa*	"	1884
/50h	Gunboat	*Acheloos*	"	19.11.1884
/51h	Gunboat	*Alpheos*	"	1884
/68h	Customs vessel	*Bistritsa*	Romania	1888
/69h	Customs vessel	*Oktul*	"	1888
/70h	Customs vessel	*Seretul*	"	1888
	Transport	*Marechal Machalon*	Portugal	1889
	Transport	*Limpopo*	"	3.9.1890

* Sold while on stocks to Prussia, renamed *Konig Wilhelm*.
** Later renamed *Hamidieh*, then to RN as *Superb*.

Thomson, Govan

J(ames) & G(eorge) Thomson established their yard at Mavisbank in 1847; George's sons moved the shipyard downriver to Clydebank in 1871. The firm was renamed Clydebank Engineering & Shipbuilding in 1896, but was taken over by the Sheffield steelmaker John Brown & Co. three years later and - as John Brown, Clydebank - was to be one of the major warship builders of the twentieth century.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
M/53	Ironclad	*Fingal* (*Atlanta*)	C.S.A.*	9.5.1861
M/57	Ironclad	*Cortes* (*Louisiana*)	"	1862
M/61	Broadside ironclad	(*Glasgow* or *Santa Maria*)	"	23.2.1864
M/64	Screw corvette	*Canton* (*Pampero*)	"	29.10.1863
C/233	Torpedo boat	*Viborg*	Russia	1886
C/234	Torpedo gunboat	*Destructor*	Spain	29.7.1886
C/236	Protected cruiser	*Reina Regente*	"	1887
C/245	Armoured cruiser	*Chiyoda*	Japan	3.6.1890

* All four ordered covertly by the Confederate Navy under alleged orders for other navies. The last two were never delivered due to the defeat of the Confederacy; the *Santa Maria* was purchased by Denmark and served as their *Danmark*, while *Pampero* was acquired by Chile, but was captured by Spain in 1865 on route from Clydebank and served as their *Tornado*.

Thornycroft, Chiswick

John I. Thornycroft & Co., Chiswick.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched (*trials)*
/23	Torpedo launch	*Rapp*	Norway	*18.10.1873
/26	Torpedo launch	*Choutka*	Russia	1874
/29	Spar torpedo boat	*Spring* (later *Glint*)	Sweden	1874
/32	Spar torpedo boat	*No.I*	Austria-Hungary	19.6.1875
/33	Spar torpedo boat	*No.1*	Denmark	*16.3.1875
/43	Spar torpedo boat	*No.5*	France	1876
/44	Spar torpedo boat	*No.6*	"	1876
/48	Spar torpedo boat	(unnamed)	Netherlands	1877
/54	Torpedo boat	*No.8*	France	*28.6.1878
/55	Torpedo boat	*No.9*	"	*22.6.1878
/56	Torpedo boat	*No.10*	"	*28.5.1878
/57	Torpedo boat	*No.11*	"	*28.5.1878
/58	Torpedo boat	*No.12*	"	*31.5.1878
/59	Torpedo boat	*No.13*	"	*1.6.1878
/60	Torpedo boat	*Nibbio* (ex-*Veloce*)	Italy	1878
/63	Torpedo boat	*No.14*	France	*23.6.1879
/64	Torpedo boat	*No.15*	"	*25.6.1879
/65	Torpedo boat	*No.16*	"	*23.6.1879
/66	Torpedo boat	*No.17*	"	*30.6.1879
/67	Torpedo boat	*No.18*	"	*15.7.1879
/68	Torpedo boat	*No.19*	"	*19.7.1879
/69	Torpedo boat	*No.II*	Austria-Hungary	21.5.1878
/94	Spar torpedo boat	(unnamed)	Netherlands	*21.3.1879
/95	Spar torpedo boat	(unnamed)	"	*22.3.1879
/96	Spar torpedo boat	(unnamed)	"	*31.5.1879
/97	Spar torpedo boat	(unnamed)	"	*29.5.1879
/98	Spar torpedo boat	(unnamed)	"	*25.8.1879
/99	Spar torpedo boat	(unnamed)	"	*26.8.1879
/100	Torpedo boat	*No.29*	France	*9.8.1879
/101	Torpedo boat	*No.30*	"	*13.8.1879
/102	Torpedo boat	*No.2 (Hajen)*	Denmark	*9.8.1879
/114	Torpedo boat	*No.9*	Argentina	*23.8.1880
/115	Torpedo boat	*No.10*	"	*7.9.1880
/116	Torpedo boat	*Kefal*	Russia	*9.6.1880
/137	Torpedo boat	*No.58*	France	*8.7.1881
/138	Torpedo boat	*No.59*	"	*24.6.1881
/139	Torpedo boat	*No.23* (*Aquila*)	Italy	*22.11.1881
/140	Torpedo boat	*No.24* (*Gabbio*)	"	*8.12.1881
/142	Torpedo boat	*No.6* (*Svoerdfisken*)	Sweden	2.9.1881
/143	Torpedo boat	*No.26* (*Aldebaran*)	Italy	21.2.1882
/144	Torpedo boat	*No.27* (*Antares*)	"	21.3.1882
/145	Torpedo boat	*No.28* (*Andromeda*)	"	11.5.1882
/146	Torpedo boat	*No.29* (*Centauro*)	"	16.5.1882
/147	Torpedo boat	*No.30* (*Dragone*)	"	15.7.1882
/148	Torpedo boat	*No.31* (*Pegaso*)	"	5.6.1882
/149	Torpedo boat	*No.32* (*Perseo*)	"	15.8.1882
/150	Torpedo boat	*No.33* (*Sagittario*)	"	31.8.1882
/151	Torpedo boat	*No.34* (*Sirio*)	"	12.10.1882
/152	Torpedo boat	*No.35* (*Orione*)	"	19.10.1882
/153	Torpedo boat	*No.4*	Denmark	16.6.1882
/154	Torpedo boat	*No.5*	"	21.6.1882
/157	Torpedo boat	*Seid* (later *Blixt*)	Sweden	23.11.1882
/158	Torpedo boat	*No.3* (*Euterpe*)	Italy	23.3.1883
/159	Torpedo boat	*No.4* (*Talia*)	"	*27.4.1883
/160	Torpedo boat	*No.5* (*Erato*)	"	20.4.1883
/161	Torpedo boat	*No.6* (*Melpomene*)	"	25.4.1883
/162	Torpedo boat	*No.7* (*Terpsicore*)	"	4.5.1883
/163	Torpedo boat	*No.8* (*Polimnia*)	"	7.5.1883
/164	Torpedo boat	*No.9* (*Urania*)	"	2.5.1883
/165	Torpedo boat	*No.10* (*Calliopeo*)	"	23.5.1883
/167	Torpedo boat	*Soukhoum*	Russia	22.6.1883
/168	Spar torpedo boat	*Defender*	New Zealand	30.7.1883
/169	Spar torpedo boat	*Taiaroa*	"	10.8.1883
/170	Spar torpedo boat	*Waitemata*	"	30.8.1883
/171	Spar torpedo boat	*Poneke*	"	31.8.1883
/172	Torpedo boat	*Childers*	Victoria (Aust.)	18.8.1883
/173	Torpedo boat	*No.12* (*Mosca*)	Italy	5.10.1883
/174	Torpedo boat	*No.13* (*Ape*)	"	9.10.1883
/175	Torpedo boat	*No.14* (*Vespa*)	"	23.10.1883
/176	Torpedo boat	*No.15* (*Farfalla*)	"	31.10.1883
/177	Torpedo boat	*No.16* (*Lucciola*)	"	22.8.1883

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/178	Torpedo boat	*No.17* (*Formica*)	"	22.8.1883
/179	Torpedo boat	*No.18* (*Cicala*)	"	5.9.1883
/180	Torpedo boat	*No.19* (*Locusta*)	"	6.9.1883
/181	Torpedo boat	*No.20* (*Grillo*)	"	21.9.1883
/182	Torpedo boat	*No.21* (*Zanzara*)	"	27.9.1883
/183	Torpedo boat	*Delfinen*	Denmark	6.7.1883
/184	Spar torpedo boat	*Alpha*	Brazil	14.8.1883
/185	Spar torpedo boat	*Beta*	"	24.8.1883
/186	Spar torpedo boat	*Gamma*	"	24.8.1883
/187	River gunboat	?	"	*21.9.1883
/188	River gunboat	?	Brazil	20.9.1883
/189	Torpedo boat	*Nepean*	Victoria (Aust.)	22.2.1884
/190	Torpedo boat	*Lonsdale*	"	12.3.1884
/191	Torpedo boat	(unnamed)	Tasmania (Aust.)	?18.12.1883
/193	Torpedo boat	*Mosquito*	Queensland (Aust.)	11.7.1884
/194	Torpedo boat	*Th.2*	Germany	24.5.1884
/195	Torpedo boat	*Hugin*	Sweden	30.5.1884
/196	Torpedo miner (launch)	(unnamed)	Brazil	1884
/197	Torpedo boat	*Th.1*	Germany	13.6.1884
/198	Torpedo boat	*Hvalrossen*	Denmark	5.9.1884
/199	Torpedo boat	*No.6*	"	9.9.1884
/200	Torpedo boat	*No.7*	"	18.9.1884
/204	Torpedo boat	*Iquatemi*	Brazil	*14.4.1885
/209	Torpedo boat	*Julian Ordonez*	Spain	27.7.1885
/210	Torpedo boat	*Acevedo*	"	25.7.1885
/211	Open launch	(unnamed)	Brazil	2.7.1885
/243	Torpedo boat	*No.8*	Denmark	1886
/244	Torpedo boat	*No.9*	"	1886
/245	Torpedo boat	*Habana*	Spain	?27.10.1886
/247	Torpedo boat	*Ariete*	"	?25.3.1887
/248	Torpedo boat	*Rayo*	"	?5.8.1887
/249	Torpedo boat	*Storen*	Denmark	*11.8.1887
/250	Torpedo boat	*Soloven*	"	*17.8.1887
/253	Torpedo boat	*Narhvalen*	"	10.8.1888
/254	Torpedo boat	*Navhesten*	"	11.7.1888
/255	Torpedo boat	*Coureur*	France	13.6.1888
/256	Torpedo boat	*TB 1* (*Baluchi*)	RIM	*25.9.1888
/257	Torpedo boat	*TB 2* (*Karen*)	"	24.9.1888
/258	Torpedo boat	*TB 3* (*Pathan*)	"	23.10.1888
/259	Torpedo boat	*No.10*	Denmark	?9.6.1888
/260	Torpedo boat	*No.11*	"	?20.6.1888
/263	Torpedo boat	*No.12*	"	?4.3.1889
/264	Torpedo boat	*No.13*	"	8.4.1889
/267	Torpedo boat	*Comodoro Py*	Argentina	?19.5.1890
/268	Torpedo boat	*Murature*	"	?14.10.1890
/271	Torpedo boat	*No.7* (*Araguary*)	Brazil	?16.10.1890
/272	Torpedo boat	*No.8* (*Iguatemi*)	"	?9.6.1891
/273	Torpedo boat	*No.9* (*Marcilio Diaz*)	"	?27.4.1891

Watkins, Blackwall

William Watkins & Co., Orchard Wharf, Blackwall.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
?	Gunboat	*Pischal*	Russia	1866
?	Gunboat	*Sekira*	"	1866

White's, Cowes

Established by Thomas White at East Cowes in 1802, and continued by his two sons as separate businesses on opposite side of the Medina, the East Cowes yard was inherited and continued by his grandson J(ohn) Samuel White from 1860, and from 1884 he also took over the West Cowes shipyards.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
?	Screw sloop	*Sinop*	Turkey	1858
?	Screw sloop	*Sed-dül-Bahir*	"	1859
?	Screw gunboat	*Akka*	"	1859
?	Screw gunboat	*Sahir*	"	1859
	Paddle frigate (wood)	*Kiangtsu**	China	1867
	Torpedo boat (3rd Class)	(unnamed)	Chile	1880
/746	Torpedo gunboat	*Sea Serpent* (*Fei Ting*)	Spec (to China 3.1894)	1887
/753	Torpedo boat	*TB 4* (*Mahrata*)	RIM	1889
/754	Torpedo boat	*TB 5* (*Sikh*)	"	1889
/755	Torpedo boat	*TB 6* (*Rajput*)	"	1889
	Torpedo boat (2nd Class)	(unnamed)	Chile	1890

* Purchased by Japan (Satsuma clan) in 1867 as Shogun's yacht, renamed *Katsuga*, became naval frigate in 1869.

Wigram, Blackwall

Money Wigram & Sons. In 1850 Wigram opened a second yard at Northam (Southampton) owing to shortage of timber around London.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
B/	Paddle frigate	*Colon*	Spain	1849
B/	Paddle frigate	*Pizarro*	"	1849
B/	Paddle frigate	*Fernando el Catolico*	"	1850
B/	Paddle frigate	*Isabel la Catolica*	"	1850
B/	Screw frigate	*Amazonas*	Peru	12.2.1852
N/	Paddle vessel	*Kaiserin Elisabeth*	Austria	1854
N/	Screw frigate	*Radetzky*	"	13.4.1854
B/	Screw sloop	*Izmir*	Turkey	1859
B/	Sloop	*Edirne*	"	1859
B/	Sloop	*Bursa*	"	1859
B/	Sloop	*Beirut*	"	1859
B/	Screw gunboat	*Pevket Nüma*	"	1859
B/	Screw gunboat	*Vama*	"	1859
B/	Screw gunboat	*Sünne*	"	1859
B/	Paddle despatch vessel	*Esploratore*	Italy	2.1863
B/	Paddle despatch vessel	*Messagiere*	"	5.1863

Wilson, Liverpool

Thomas Wilson, Liverpool.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
	Paddle frigate	*Amazonas*	Brazil	7.4.1852

Yarrow, Poplar

Formerly Yarrow & Hedley, later Yarrow & Co., Poplar.

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
/209	Torpedo boat	*Primera Torpedo*	Argentina	1875
/307	Torpedo boat	*Segundo Torpedo*	"	1875

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/336	Torpedo boat	*No.1*	Netherlands	1875
/338	Torpedo boat	?	France	1875
/390	Torpedo boat	*Delphino*	Greece	1878
/391	Torpedo boat	*Aspis*	"	1878
/419	Torpedo boat	? *	Russia	1878
/420	Torpedo boat	? *	"	1878

* taken over by the RN and added as *TB 17* and *TB 18*.

/435	Torpedo boat	*No.31*	France	1879
/436	Torpedo boat	*No.32*	"	1879
/441	Torpedo boat	*Pollux*	Spain	1879
/442	Torpedo boat	*No.III*	Austria-Hungary	9.1879
/443	Torpedo boat	*No.IV*	"	9.1879
/450	Torpedo boat	*Avvoltoio*	Italy	1879
/468	Torpedo boat	*No.1*	Japan	1879
"	Torpedo boat	*No.2*	"	1879
"	Torpedo boat	*No.3*	"	1879
"	Torpedo boat	*No.4*	"	1879
/470	Torpedo boat	?	Russia	1880
/472	Torpedo boat	*Batoum* (*No.251*)	"	1880
/475	Torpedo boat	*Colocola*	Chile	1880
/476	Torpedo boat	*Tucapel*	"	1880
/506	Torpedo boat	*Ferré*	Argentina	1881
/507	Torpedo boat	*Enrique Py*	"	1881
/508	Torpedo boat	*Glaura*	Chile	1880
/509	Torpedo boat	*Guale*	"	1880
/511	Torpedo boat	*Janequio* (i)	"	1880
/512	Torpedo boat	*Rucamilla*	"	1880
/520	Torpedo boat	*TB.7* (*Kos*)	Greece	1881
/521	Torpedo boat	*TB.8* (*Mytelene*)	"	1881
/522	Torpedo boat	*TB.9* (*Rhodos*)	"	1881
/523	Torpedo boat	*TB.10* (*Samos*)	"	1881
?	Torpedo boat	*TB.11* (*Kalithea*)	"	1881
/524	Torpedo boat	*Teguelda*	Chile	1880
/525	Torpedo boat	*Janequio* (ii)	"	1880
?	Torpedo boat	*Fresnia*	"	1880
?	Torpedo boat	*Lanca*	"	1880
?	Torpedo boat	*Quidora*	"	1881
?	Torpedo boat	*Glaura* *	"	1882
?	Torpedo boat	*Fresia* *	"	1882

* purchased by the RN in 1885 and added as *TB 39* and *TB 40* respectively.

/526	Torpedo boat	*No.IX*	Austria-Hungary	9.9.1881
/527	Torpedo boat	*No.X*	"	29.8.1881
/530	Torpedo boat	*Cyprus*	Greece	1881
/531	Torpedo boat	*Chios*	"	1881
/532	Torpedo boat	*Etna*	Netherlands	1882
/533	Torpedo boat	*Hekla*	"	1882
/534	Torpedo boat	*TB.1* (*Espadarte*)	Portugal	1881
/535	Torpedo boat	*Sparviero* (*22Y*)	Italy	1881
/536	Torpedo boat	*Falco* (*25Y*)	"	1881
/546	Torpedo boat	*Alerta*	Argentina	1881
/547	Torpedo boat	*Centella*	"	1881
/588	Torpedo boat	*Colonel Urseanu*	Romania	1882
/591	Torpedo boat	?	"	1882
/618	Torpedo boat	*Riachuelo*	Brazil	1884
/679	Torpedo boat	*Y*	Germany	1885
/693	Torpedo boat	*Falke* (42)	Austria-Hungary	12.1884
/694	Torpedo boat	*Adler* (41)	"	12.1884
/695	Torpedo boat	*Retamosa*	Spain	1885
/734	Torpedo boat	*Tso I*	China	1887
/735	Torpedo boat	*Kotaka*	Japan	1886
/737	Torpedo boat	*76YA*	Italy	1887
/738	Torpedo boat	*77YA*	"	1886
/740	Torpedo boat	*Ardjoeno*	Netherlands	1886
/741	Torpedo boat	*TB.2*	Portugal	1886
/742	Torpedo boat	*TB.3*	"	1886
/743	Torpedo boat	*TB.4*	"	1886
/745	Torpedo boat	*Sargente Aldea*	Chile	1886
/750	Torpedo boat	*Halcyon*	Spain	1887
/751	Torpedo boat	*Azor*	"	1887
/763	Torpedo boat	*Gungurahua*	Ecuador	1887
/768	Torpedo boat	*Empong*	Netherlands	1888
/788	Torpedo boat	*Branlio Garrillo*	Costa Rica	1891
/789	Torpedo boat	*No.46*	Russia	1888
/820	Gunboat	*Chirin*	Portugal (for E. Africa)	1889
/821	Gunboat	*Cuama*	"	1889
/884	Torpedo boat	*Thorne*	Argentina	1890
/885	Torpedo boat	*Pinedo*	"	1890
/886	Torpedo boat	*Buchardo*	"	1890
/887	Torpedo boat	*King*	"	1890
/888	Torpedo boat	*Jorge*	"	1890
/889	Torpedo boat	*Bathurst*	"	1890

The above list excludes a large number of steam launches built by Yarrow for a variety of naval forces.

Contractors Unknown

Yard/ Bldg No.	*Type*	*Vessel*	*Country*	*Launched*
?	Paddle frigate	*Dom Afonso*	Brazil	1847
?Blackwall	Paddle frigate	*Constituzione*	Sardinia-Piedmont	15.1.1849
?Blackwall	Paddle frigate	*Governolo*	Sardinia-Piedmont	18.10.1849
?Blackwall	Paddle frigate	*Fulminante*	Two Sicilies	1849
?	Paddle despatch vessel	*Ismail*	Turkey	1865
?Clydeside	Screw corvette	*Abtao*	Chile	1865
London	Gunboat	*Moshun*	Japan	1865
London	Composite gunboat	*Peng-chao-hai*	China (Customs)	1869

This list is incomplete, but is provided as a fairly accurate presentation of foreign orders secured by British shipyards in this period. Attempts to improve on this provisional list will be welcomed.

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B Harbour Craft (from 1864)

Shortage of space precludes the inclusion here of a complete listing of the myriad of harbour craft used in the various dockyards at home and overseas. The following list is restricted to those vessels still in service in 1864 or added subsequently; for all craft disposed of earlier the reader is referred to Chapter 4 of Part III of *The Sailing Navy List* (a few of these craft will also be found among the minor vessel in the main listing of this book).

A separate sequence of numbering – each prefixed by 'YC' (for 'Yard Craft') – was employed from 1864 for each separate naval dockyard, including each victualling and ordnance yard as well as each overseas Dockyard. Vessels re-assigned to a different dockyard were re-numbered accordingly, but when vessels were sold or BU, the numbers were frequently re-used. Furthermore, many resumed their former names on 17 November 1870. As a consequence of all this, there was and remains a considerable confusion as to the numbers borne by each vessel, and even as to the identity of many yard craft. The following is simply the most accurate information that can be given at present.

Note: for former warships (including the high number of former mortar vessels and mortar floats included below) more complete details including builder and full original building dates can be found in the main listings. With rare exceptions, dimensions are rounded off to the nearest inch, and are those *measured* (not design) and thus – for former warships – may differ slightly from the figures in the main listings.

Deptford Dockyard

Dating from the sixteenth century, use of Deptford diminished during the Napoleonic War and it was closed in 1833 (with the frigate *Worcester* still on the stocks). It re-opened in 1843 but finally closed in March 1869.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Stores carrier (103 bm)	*MF.104* (1856, Blackwall)	60ft 2in x 20ft 1in x 6ft 6in	*Steady* 9.1865; to RVVY as *YC.1*
YC.2	Mooring lighter (131 bm)	*Staunch* (1854, Sheer. Dyd)		Renamed *Staunch* 1870; sold 10.5.1870
YC.3	Fire float (64 bm)			BU 1869
YC.4	Stores carrier	*MF.110* (1856, Blackwall)	61ft 2in x 20ft 0in x 6ft 6in	*Trusty* 1866; BU c1874
YC.7	Sailing lighter (163 bm)	*Tortoise* (1864, Allen & Warlow, Pembroke)		Renamed *Tortoise* 17.11.1870; BU 2.12.1874 at Devonport

Royal Victoria Victualling Yard, Deptford

Developed from 1742 on land formerly owned by the diarist John Evelyn. Although the main dockyard closed in 1869, the victualling yard remained in use until the close of the nineteenth century, and retained its own yard craft.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Barge (107 bm)	*Ant* (1815, Woolwich)	72ft 1in x 21ft 1in x 7ft 2in	Sold 12.1.1869
YC.4 (i)	Cutter (70 bm)	*Wight* (1835, Cowes)	51ft 2in x 18ft 3in x 6ft 5in	BU 1864
YC.5	Hoy (85 bm)	*Lion* (1855)		Sold 1869
YC.6	Hoy (83 bm)	*Ann & Eliza* (purch. 1855)		BU 1864
YC.4 (ii)	Cutter (78 bm)	(purch. 20.8.1864)		*Bonetta* 17.11.1870. Sold 11.1887

Woolwich Dockyard

Founded in 1520, the Woolwich Dockyard was enlarged in 1701 but finally closed in October 1869.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Sail lighter (158 bm)	*Falmouth* (1807, Topsham)	70ft 3in x 23ft 1in x 11ft 0in	To Portsmouth 1870 as *YC.46*
YC.2	Sail barge (122 bm)	*Julia* (1864, Wright at Milton)		To Sheerness 1872 as *YC.22*
YC.3	Sail lighter (109 bm)	*Sinbad* (1834, Pemb. Dyd)	60ft 1in x 20ft 9in x 9ft 0in	BU at Woolwich 10.11.1866
YC.3 (ii)	Dredger (235 bm)	*Fenella* (1856, Pitcher)	109ft 7in x 21ft 11in x 6ft 6in	BUat Woolwich 14.11.1878
YC.4	Sail barge (148 bm)	*Manoeverer* (1845, Wool. Dyd)		To Sheerness 1867 as *YC.21*
YC.5	Cutter/longboat	*Jemmy* (purch.1835)		Sold 1866
YC.6	Iron mooring lighter	*MF.106* (1856, Blackwall)	60ft 3in x 20ft 0in x 6ft 6in	To Sheerness 1872 as *YC.23*
YC.7	Iron mooring lighter	*MF.108* (1856, Blackwall)	60ft 6in x 20ft 0in x 6ft 6in	To Sheerness 1872 as *YC.24*
YC.8	Iron water tank	*MF.123* (1856, Blackwall)	60ft 2in x 20ft 0in x 6ft 7in	To Pembroke 1886 as *YC.2*
YC.9	Lump no.1	*MV.33* (1856, Millwall)	75ft 0in x 23ft 4in x 9ft 6in	To Sheerness 1872 as *YC.27*
YC.10	Lump no.2	*MV.34* (1856, Millwall)	75ft 0in x 23ft 4in x 9ft 6in	To Sheerness 1872 as *YC.28*
YC.11	Iron luggage lighter	*MF.121* (1856, Blackwall)	60ft 5in x 20ft 0in x 6ft 7in	To Sheerness 1872 as *YC.25*
YC.12	Iron luggage lighter	*MF.137* (1856, Birkenhead)	60ft 6in x 20ft 2in x 6ft 8in	To Sheerness 1872 as *YC.26*
YC.13	Iron fire float (65 bm)			To Chatham 1872 as *YC.76*

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YC.14	Iron lighter	Probably ex-MV (75ft type)	75ft 0in x 23ft 4in x 9ft 6in	To Devonport as *YC.17*
?	Mooring lighter (113 bm)	(1837, Wool. Dyd)	65ft 0in x 20ft 4in x 6ft 6in	Sold 1886

(Most of the above were designated as yard craft at Woolwich in 1866 [many had already been serving there in that role] except *YC.3* (ii) and *YC.14* which were designated in 1867.)

Tower of London

Stationed as a tender at the Tower, armed with 4 x 12pdr carronades, this vessel was hulked in 1816 at Deptford, and transferred in January 1817 to the Thames Police.

Name	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
Tower	Tender (150½ bm)	(1809, Bools, Bridport)	68ft 8in x 22ft 4in x 12ft 0in	Sold 27.1.1825

Chatham Dockyard

In use as a naval base from about 1550, construction of the Dockyard itself was begun about 1570. It was enlarged in 1662 and again in 1864-83 but finally closed in 1984.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Stores lighter (105 bm)	*Camel* (1798, R. Thames)	64ft 6in x 20ft 7in x 10ft 2in	To Devonport as *YC.17*
YC.2	Sail lighter (154 bm)	*Rochester* (26.11.1833, Chat. Dyd)	68ft 5in x 23ft 3in x 11ft 1in	BU 4.1877
YC.3	Sail lighter (154 bm)	*Aid* (30.11.1838, Chat. Dyd)	68ft 6in x 23ft 2in x 11ft 0in	BU 1870
YC.4	Sail lighter (111 bm)	*Duck* (4.4.1833, Ports. Dyd)	60ft 2in x 20ft 9in x 8ft 10in	Renamed *Duck* 11.1870; sold 1908
YC.5	Sail lighter (135 bm)	*Dove* (1828, Chat. Dyd)		BU 1872
YC.6	Tank vessel (108 bm)	*Magpie* (1830, Sheer. Dyd)	60ft 9in x 20ft 6in x 9ft 0in	BU 1872
YC.7	Mooring lighter (168 bm)	*Mooring Lighter No.6*		BU 1868
YC.7 (ii)	Steam tug (48 bm)	*Firefly*		BU 1908
YC.8	Mooring lighter (168 bm)	*MV.27* (1856, Rotherhithe)	75ft 0in x 23ft 5in x 9ft 7in	BU c1901
YC.9	Mooring lighter (169 bm)	*MV.25* (1856, Rotherhithe)	75ft 1in x 23ft 6in x 9ft 7in	BU c1901
YC.10	Mooring lighter (125 bm)	*Mooring Lighter No.12* (1807)	62ft 2in x 22ft 0in x 8ft 9in	BU 1874
YC.11	Mooring lighter (170 bm)	*MV.48* (1856, Ipswich)	75ft 7in x 23ft 6in x 9ft 6in	BU 1868
YC.11 (ii)	Iron sail barge (102 bm)			BU c1901
YC.12	Mooring lighter (119 bm)	*MV.3* (1855, Blackwall)	65ft 2in x 21ft 0in x 7ft 8in	Sold to Thames Conservancy 10.1867
YC.12 (ii)	Barge (87 bm)	(purch.1883)		BU c1901
YC.13	Sail barge (43 bm)	(1825)	50ft 0in x 15ft 3in x 6ft 9in	BU 1876
YC.13 (ii)	Barge (85 bm)	(purch.1883)		BU c1901
YC.14	Pitch boat (38 bm)	(1828, Chat. Dyd)	41ft 0in x 15ft 6in x 5ft 10in	?
YC.14 (ii)	Barge (88 bm)	(purch.1883)		BU c1901
YC.15	Iron dredger (285)	(1844, Blackwall)	95ft 0in x 26ft 0in x 12ft 0in	?
YC.16	Mud barge (58 bm)	*Mud Boat no.1* (1814)		BU 1871
YC.16 (ii)	Barge (86 bm)	(purch.1883)		BU c1901
YC.17	Mud barge (58 bm)	*Mud Boat no.2* (1814)	54ft 0in x 18ft 10in x 4ft 11in	?
YC.18	Mud barge (55 bm)	*Mud Boat no.3* (1818)	49ft 6in x 16ft 4in x 4ft 4in	?
YC.18 (ii)	Steam dredger			Wrecked 1891
YC.19	Mud barge (55 bm)	*Mud Boat no.4* (1833)	51ft 2in x 17ft 1in x 5ft 0in	BU 1877
YC.20	Mud barge (55 bm)	*Mud Boat no.5* (1833)	51ft 2in x 17ft 1in x 5ft 0in	?
YC.20 (ii)	Steam dredger (600 bm)	*St. Dunstan*		BU c1901
YC.21	Mud barge (55 bm)	*Mud Boat no.6* (1824)	50ft 8in x 16ft 6in x 4ft 11in	?
YC.22	Mud barge (94 bm)	*Mud Boat no.7*		BU 1875
YC.23	Mud barge (33 bm)	*Mud Boat no.8*		BU 1868
YC.24	Iron lighter (102 bm)	*MF.113* (1856, Blackwall)	60ft 1in x 20ft 1in x 6ft 6in	Sold c1901
YC.25	Iron lighter (105 bm)	*MF.130* (1856, Millwall)	60ft 5in x 20ft 3in x 7ft 2in	Sold c1901
YC.26	Iron lighter (105 bm)	*MF.133* (1856, Millwall)	60ft 5in x 20ft 3in x 7ft 3in	Sold c1901
YC.27	Iron lighter (104 bm)	*MF.135* (1856, Millwall)	60ft 2in x 20ft 2in x 7ft 3in	Sold c1901
YC.28	Iron lighter (104 bm)	*MF.138* (1856, Birkenhead)	60ft 5in x 20ft 2in x 6ft 9in	*Torpedo Lighter No. 3* (19.7.1876); to War Dept 1.1886
YC.29	Barge (74 bm)	*Barge no.1*		Sold 1883
YC.30	Barge (63 bm)	*Barge no.2*		BU 1887
YC.31	Barge (53 bm)	*Barge no.3*		BU 1887
YC.32	Barge (54 bm)	*Barge no.4*		BU 1888
YC.33	Barge (55 bm)	*Barge no.5*		Sold 1883
YC.34	Barge (63 bm)	*Barge no.6*		BU 1881
YC.35	Barge (63 bm)	*Barge no.7*		BU 1887
YC.36	Barge (64 bm)	*Barge no.8*		BU 1887

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YC.37	Landing stage (113 bm)	*MV.4* (1855, Blackwall)	65ft 0in x 21ft 0in x 7ft 0in	Sold 1894
YC.38	Mud barge (67 bm)			BU 1888
YC.39	Mud barge (66 bm)			BU 1888
YC.40	Mud barge (70 bm)			Sold 1890
YC.41	Mud barge (70 bm)			Sold 1883
YC.42	Mud barge (70 bm)			Sold 1890
YC.43	Mud barge (80 bm)			Sold 1890
YC.44	Mud barge (68 bm)			BU 1881
YC.45	Mud barge (66 bm)			Sold 1890
YC.46	Mud barge (66 bm)			BU 1879
YC.47	Mud barge (65 bm)			Sold 1890
YC.48	Mud barge (76 bm)			?
YC.49	Engine boat (23 bm)			?
YC.49 (ii)	Tank vessel (105 bm)	*MF.136* (1856, Birkenhead)	60ft 0in x 20ft 0in x 6ft 6in	To Devonport as *YC.37*
YC.50	Engine boat (17 bm)			?
YC.51	Steam dredger (233 bm)	*Highlander* (1856, Bristol)	108ft 2in x 22ft 0-in x 8ft 0in	Sold 5.1884
YC.52	Engine boat (81 bm)			?
YC.53	Iron dredger (102 bm)	*MF.102* (1855, Millwall)	60ft 0in x 20ft 1in x 6ft 7in	?
YC.53 (ii)	Iron bridge (105 bm)	*MF.127* (1856, Millwall)	60ft 2in x 20ft 0in x 6ft 7in	BU *c*1901
YC.54	Barge (73 bm)			?
YC.55	Barge (71 bm)			?
YC.56	Barge (73 bm)			?
YC.57	Barge (80 bm)			Sold 1890
YC.58	Barge (71 bm)			Sold 1890
YC.59	Barge (70 bm)			?
YC.60	Barge (72 bm)			?
YC.61	Barge (67 bm)			?
YC.62	Barge (71 bm)			Sold 1883
YC.63	Barge (70 bm)			?
YC.64	Coaling lighter (70 bm)			?
YC.64 (ii)	Lighter (43 bm)			BU *c*1901
YC.65	Mud barge (70 bm)			Sold 1890
YC.66	Mud barge (72 bm)			BU *c*1901
YC.67	Mud barge (81 bm)			Sold 1890
YC.68	Mud barge (70 bm)			Sold 1890
YC.69	Mud barge (70 bm)			Sold 1890
YC.70	Mud barge (72 bm)			Sold 1890
YC.71	Mud barge (72 bm)			BU *c*1901
YC.72	Mud barge (71 bm)			Sold 1890
YC.73	Mud barge (68 bm)			Sold 1890
YC.74	Mud barge (76 bm)			Sold 1890
YC.75	Mud barge (69 bm)			Wrecked 1890
YC.76	Iron fire float (65 bm)	Woolwich		*YC.13*; fate unknown
YC.77	Iron lighter (102 bm)	Probably ex-MF		BU *c*1901
YC.78	Luggage lighter (166 bm)	Probably ex-MV		BU 1879
YC.78 (ii)	Barge (70 bm)			BU *c*1901
YC.79	Barge (65 bm)			BU *c*1901
YC.80	Barge (70 bm)			BU *c*1901
YC.81	Barge (75 bm)			BU *c*1901
?	Bridge to hulk (103 bm)	*MF.112* (1856, Blackwall)	60ft 1in x 20ft 1in x 6ft 6in	BU *c*1901
?	Iron barge (102 bm)	*MF.114* (1856, Blackwall)	60ft 2in x 20ft 0in x 6ft 6in	?
?	Iron lighter (103 bm)	*MF.122* (1856, Blackwall)	60ft 4in x 20ft 1in x 6ft 7in	Dummy pier 8.1872
?	Pontoon to hulk (105 bm)	*MF.128* (1856, Millwall)	60ft 4in x 20ft 3in x 7ft 3in	BU *c*1870
?	Pontoon (105 bm)	*MF.132* (1856, Millwall)	60ft 4in x 20ft 3in x 7ft 3in	BU *c*1898

Sheerness Dockyard

Originally founded in 1667, the Sheerness Dockyard was enlarged in 1815-26 but finally closed in March 1960.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Cutter yacht (83 bm)	*Hart* (1822, Wool. Dyd)	53ft 6in x 18ft 6in x 7ft 7in	Renamed *Drake* 17.11.1870; BU at Chatham 6.3.1875
YC.2	Cutter (65 bm)	*Thames* (1805, Rochester)	52ft 0in x 17ft 6in	Sold 1872

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YC.3	Tank schooner (107 bm)	(1820, Chat. Dyd)	66ft 6in x 19ft 1in x 8ft 0in	Sold 1891
YC.4	Luggage lighter (110 bm)	*Royal Escape* (1792, Northam)	63ft 5in x 20ft 1in x 8ft 4in	BU 2.1877
YC.5	Pitch boat (38 bm)			Sold 1892
YC.6	Mooring lighter (168 bm)	*No.1* (4.4.1836, Chat. Dyd)	70ft 4in x 24ft 7in x 8ft 11in.	BU *c*1874

(Note that in 1900 six coal lighters - *Manxman*, *Highlander*, *Gascon*, *Coolie*, *Circassian* and *Bedouin*, each of 180 tons - were purchased and re-named *YC.1* to *YC.6* respectively)

YC.7	Mooring lighter (169 bm)	*No.2* (5.4.1836, Chat. Dyd)	70ft 7in x 24ft 7in x 8ft 11in	BU 1878
YC.8	Mooring lighter (160 bm)	*No.3* (1827, Frindsbury)	70ft 0in x 23ft 5in x 8ft 5in	BU 1873
YC.9	Mooring lighter (161 bm)	*No.4* (1827, Sheer. Dyd)	70ft 1in x 23ft 5in x 8ft 2in	BU *c*1901
YC.10	Mooring lighter (161 bm)	*No.5* (1827, Sheer. Dyd)	70ft 1in x 23ft 5in x 8ft 2in	Sold 1891
YC.11	Mooring lighter (157 bm)	*Speedy* (1828, Pemb. Dyd)	63ft 9in x 22ft 4in x 9ft 6in	BU 1876
YC.12	Iron luggage lighter (104 bm)	*MF.119* (1856, Blackwall)	60ft 2in x 20ft 1in x 6ft 6in	BU *c*1901
YC.13	Iron luggage lighter (102 bm)	*MF.120* (1856, Blackwall)	60ft 5in x 20ft 0in x 6ft 7in	BU *c*1901
YC.14	Luggage lighter (159 bm)	*MV.16* (1855, Blackwall)	70ft 0in x 23ft 5in x 9ft 6in	BU 1873
YC.15	Luggage lighter (169 bm)	*MV.23* (1856, Rotherhithe)	75ft 2in x 23ft 6in x 9ft 8in	?

(Note that in 1900 two coal lighters - *Ivy* and *Blanche*, each of 250 tons - were purchased and re-named *YC.14* and *YC.15* respectively.)

YC.16	Iron fire float (82 bm)	*No.1*		BU *c*1901
YC.17	Iron fire float (83 bm)	*No.2*		?
YC.18	Fire float launch (14 bm)			BU 1868
YC.19	Tank vessel (20 tons)			?
YC.20	Hopper mud barge (78 t)			BU 1890
YC.21	Barge (148 bm)	*Manoeverer* (1845, Wool. Dyd)	74ft 3in x 22ft 0in x 7ft 9in	Sold 1894
YC.22	Barge (122 bm)	*Julia* (1864, Milton)		BU 1872
YC.23	Iron stores lighter (103 bm)	*MF.106* (1856, Blackwall)	60ft 3in x 20ft 0in x 6ft 6in	BU *c*1901
YC.24	Iron luggage lighter (103 bm)	*MF.108* (1856, Blackwall)	60ft 6in x 20ft 0in x 6ft 6in	?
YC.25	Iron luggage lighter (104 bm)	*MF.121* (1856, Blackwall)	60ft 5in x 20ft 0in x 6ft 7in	BU *c*1901
YC.26	Iron luggage lighter (104 bm)	*MF.137* (1856, Birkenhead)	60ft 6in x 20ft 2in x 6ft 8in	BU *c*1901
YC.27	Lump/stores lighter (162 bm)	*MV.33* (1856, Millwall)	75ft 0in x 23ft 6in x 9ft 6in	BU *c*1901
YC.28	Lump (162 bm)	*MV.34* (1856, Millwall)	75ft 0in x 23ft 6in x 9ft 6in	BU 1873
YC.29	Steam mooring lighter (209 t)	(1873, Sheer. Dyd)		BU *c*1901
YC.30	Steam mooring lighter			BU *c*1901

Portsmouth Dockyard

Originally founded in the medieval period, the first building dock was begun in 1495 and it was developed as a naval base by Henry VIII from 1509 to 1545. A new dock was constructed in 1656 and the Portsmouth Dockyard has remained in operation ever since.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Cutter yacht	*Portsmouth* (1794, Ports. Dyd)	70ft 4in x 18ft 11in x 11ft 8in	BU 4.9.1869 (102 bm)
YC.2	Lighter (155 bm)	*Lively* (26.5.1838, Ports. Dyd)	68ft 7in x 23ft 3in x 11ft 0in	Renamed *Dromedary* 11.1870; sold 11.1894
YC.3	Lighter (48 bm)	*Dart* (1814, Dept. Dyd)	45ft 0in x 15ft 10in x 7ft 8in	BU *c*1866
YC.4	Buoy boat (66 bm)	Unnamed (1808, Ports. Dyd)	51ft 3in x 18ft 1in x 9ft 4in	Renamed *Chub* 17.11.1870; sold 23.11.1894
YC.5	Mooring lighter	*No.1* (1789)		BU 1867 (119 bm)
YC.5 (ii)	Steam mooring lighter (198 t)	(29.1.1869, Ports. Dyd)		Sold 1901
YC.6	Mooring lighter (180 bm)	*Swinger* (1813, Bridport)	84ft 0in x 22ft 1in x 11ft 0in	BU 1877
YC.7	Mooring lighter (180bm)	*Fervent* (1804, Bucklers)	80ft 3in x 23ft 8in x 9ft 5in	BU 1879
YC.8	Mooring lighter (181 bm)	*Intelligent* (1805, Bridport)	84ft 0in x 22ft 1in x 11ft 0in	BU 1867
YC.8 (ii)	Steam mooring lighter (196 t)	(1866, Ports. Dyd)		Sold 8.1897
YC.9	Mooring lighter (160 bm)	*No.5*		?
YC.10	Mooring lighter (121 bm)			Sold 1891
YC.11	Mooring lighter (197 bm)	(1861)		BU 1874
YC.12	Mooring lighter (197 bm)	(1860)		BU 1887
YC.13	Iron hopper barge (103 bm)	*MF.148* (1856, Birkenhead)	60ft 0in x 20ft 1in x 6ft 10in	?
YC.14	Open lighter (95 bm)	*Lighter No.1* (1795, Shoreham)	51ft 8in x 21ft 2in x 5ft 11in	BU 1876
YC.15	Open lighter (92 bm)	*Lighter No.2* (1795, Buckler's)	52ft 0in x 21ft 0in x 7ft 4in	BU *c*1901
YC.16	Steam dredger (280 bm)			Sold 1890
YC.17	Mud punt (45 bm)	*Mud Punt No.2* (1839, Ports. Dyd)	9ft 0in x 15ft 0in x 5ft 6in	?
YC.18	Open lighter (95 bm)	*Lighter No.5* (1795, Bursledon)	51ft 8in x 21ft 2in x 7ft 7in	BU 1868
YC.19	Mud punt (45 bm)	*Mud Punt No.4* (1839, Ports. Dyd)	49ft 0in x 15ft 0in x 5ft 6in	?
YC.19 (ii)	Iron lighter (104 bm)	*MF.142* (1856, Birkenhead)	60ft 6in x 20ft 1in x 6ft 10in	BU *c*1901
YC.20	Open lighter (33 bm)	*Pitch Boat No.1*		BU *c*1901
YC.21	Open lighter (33 bm)	*Pitch Boat No.2*		?
YC.22	Open lighter (46 bm)			BU 1889

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YC.23	Iron lighter (103 bm)	*MF.143* (1856, Birkenhead)	60ft 3in x 20ft 2in x 6ft 9in	BU c1901
YC.24	Mud punt (47 bm)	*Mud Punt No.1* (1839, Ports. Dyd)	49ft 2in x 15ft 2in x 5ft 8in	?
YC.24 (ii)	Open lighter			?
YC.25	Mud punt (45 bm)	*Mud Punt No.3* (1841, Ports. Dyd)	51ft 2in x 17ft 0in x 2ft 8in	BU 1868
YC.26	Mud punt (45 bm)	*Mud Punt No.5* (1839, Emsworth)	51ft 2in x 17ft 0in x 2ft 8in	?
YC.27	Mud punt (45 bm)	*Mud Punt No.7* (1839, Emsworth)	51ft 2in x 17ft 0in x 2ft 8in	?
YC.28	Mud punt (45 bm)	*Mud Punt No.9* (1839, Emsworth)	51ft 2in x 17ft 0in x 2ft 8in	?
YC.29	Mud punt (45 bm)	*Mud Punt No.13* (1841, Ports. Dyd)	51ft 2in x 17ft 0in x 2ft 8in	?
YC.30	Mud punt (40 bm)	*Mud Punt No.19* (1839, Ports. Dyd)	46ft 0in x 18ft 0in x 5ft 9in	?
YC.31	Mud punt (40 bm)	*Mud Punt No.20* (1839, Ports. Dyd)	46ft 0in x 18ft 0in x 5ft 9in	?
YC.32	Steam dredger (246 bm)	*Harwich* (1863)		Sold 1890
YC.33	Steam dredger (312 bm)	*Port Patrick* (1863)		Sold 1891
YC.34	Iron coal lighter (105 bm)	*MF.145* (1856, Birkenhead)	60ft 7in x 20ft 3in x 6ft 9in	?
YC.35	Iron fire float (87 bm)	*No.1*		BU c1901
YC.36	Iron fire float (86 bm)	*No.2*		BU c1901
YC.37	Engine boat (37 bm)			BU c1901
YC.38	Engine boat (43 bm)			Sold 1877
YC.39	Engine boat (24 bm)			?
YC.40	Engine boat (19 bm)			?
YC.41	Iron barge (104 bm)			?
YC.42	Tank vessel (49 bm)	*Hope* (1813, Dept. Dyd)	46ft 9in x 15ft 10in x 8ft 0in	BU c1880
YC.42 (ii)	Iron pontoon (104 bm)	*MF.141* (1856, Birkenhead)	60ft 6in x 20ft 2in x 6ft 8in	Based at Portland; fate unknown
YC.43	Iron pontoon (99 bm)			
YC.43 (ii)	Iron coal pontoon (104 bm)	*MF.140* (1856, Birkenhead)	60ft 6in x 20ft 2in x 6ft 8in	Based at Portland; BU c1901
YC.44	Iron pontoon (99 bm)			
YC.44 (ii)	Iron coal pontoon (103 bm)	*MF.146* (1856, Birkenhead)	60ft 6in x 20ft 2in x 6ft 8in	Based at Portland; BU c1901
YC.45	Iron pontoon (99 bm)			
YC.45 (ii)	Iron coal pontoon (104 bm)	*MF.149* (1856, Birkenhead)	60ft 6in x 20ft 2in x 6ft 8in	Based at Portland; fate unknown
YC.46	Sailing lighter (160 bm)	*Falmouth* (1807, Topsham)	70ft 3in x 23ft 1in x 11ft 0in	Renamed *Falmouth* 11.1870; sold 1883
YC.46 (ii)	Iron coal pontoon (103 bm)	*MF.150* (1856, Birkenhead)	60ft 2in x 20ft 2in x 6ft 9in	Based at Portland; BU c1901
YC.47	Iron coal pontoon (104 bm)	*MF.126* (1856, Millwall)	60ft 0in x 20ft 3in x 7ft 2in	Based at Portland; BU c1901
YC.48	Iron coal pontoon (105 bm)	*MF.129* (1856, Millwall)	60ft 4in x 20ft 3in x 7ft 2in	Based at Portland; fate unknown
YC.49	Iron coal pontoon (105 bm)	*MF.131* (1856, Millwall)	60ft 3in x 20ft 3in x 7ft 3in	Based at Portland; BU c1901
YC.50	Iron coal pontoon (104 bm)	*MF.134* (1856, Millwall)	60ft 5in x 20ft 2in x 7ft 3in	Based at Portland; BU c1901
YC.51	Steam coal lighter			BU c1901
YC.52	Coaling lighter (150 t)			BU c1901
YC.53 -72	Were identical to *YC.52*			BU c1901

Royal Clarence Victualling Yard, Gosport

The victualling yard retained its own yard craft.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Sea hoy (75 bm)	*Bat* (4.4.1836, Chat. Dyd)	54ft 6in x 17ft 11in x 9ft 4in	Sold 1890
YC.2	Harbour hoy (55 bm)	*Bessie* (1861)		BU c1901
YC.3	Harbour hoy (44 bm)	*Bounty* (1809, Fishbourne)	47ft 0in x 15ft 3in x 9ft 4in	BU c1901
YC.4	Harbour hoy (60 bm)	*Kitty*		BU 1872
YC.5	Harbour hoy (70 bm)	*Swale* (purch.1833)	52ft 3in x 17ft 6in x 9ft 2in	BU c1901
YC.6	Tank vessel (55 bm)	*Alpheus* (1839, Ports. Dyd)	51ft 0in x 18ft 8in x 8ft 5in	BU c1902
YC.7	Tank vessel (48 bm)	*Sisters* (1812, Hythe)	53ft 7in x 18ft 6in	BU 1877
YC.8	Landing stage (45 bm)	*Mud Punt No.13* (1841, Littlehampton)	51ft 2in x 17ft 0in x 2ft 8in	Sold 1887
YC.9	Tank vessel (70 bm)	*Sisters* (1838)	50ft 0in x 18ft 8in x 8ft 0in	BU c1901
YC.10	Steam tank vessel	*Portsmouth*		BU c1901
YC.11	Lighter			BU c1901

Plymouth (from 1843, Devonport) Dockyard

Founded in 1691, the Plymouth Dockyard was enlarged in 1844 and has remained in operation ever since.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Cutter yacht (115 bm)	*Admiralty* (1794, Wool. Dyd)	68ft 7in x 19ft 11in x 12ft 8in	Sold 10.5.1870
YC.2	Breakwater (317 bm)	*Chatham* (1811, Frindsbury)	109ft 8in x 26ft 0in x 17ft 4in	BU 1878
YC.3	Harbourmaster vessel (25 bm)	*Ceres* (1830, Ports. Dyd)	38ft 6in x 12ft 9in x 7ft 8in	Sold at Greenock 26.7.1877
YC.4	Lighter (154 bm)	*Devon* (24.9.1835, Chat. Dyd)	68ft 7in x 23ft 3in x 11ft 1in	Wrecked 1868
YC.5	Sailing lighter (153 bm)	*Hamoaze* (1844, Devon. Dyd)	69ft 1in x 23ft 0in x 12ft 0in	Renamed *Hamoaze* 1870; BU c1901

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YC.6	Sailing lighter (70 bm)	*Mercury* (7.2.1837, Chat. Dyd)	54ft 0in x 18ft 0in x 8ft 7in	Sold 17.5.1904
YC.7	Sailing lighter (163 bm)	*Tortoise* (9.2.1864, Allen & Warlow, Pembroke)		Renamed *Tortoise* 17.11.1870; BU 2.12.1874 at Devonport
YC.8	Mooring lump (166 bm)	(*No.1*) *Plymouth* (1799, Frank's Quarry, Plymouth)	69ft 10in x 23ft 6¾in x 8ft 5in	BU c1901
YC.9	Mooring lump	(*No.2*) *Mooring Lighter No.7* (?)		BU c1901
YC.10	Mooring lump (94 bm)	(*No.3*) *Mooring Lighter No.8* (1795, Edwards, Shoreham)	52ft 8in x 21ft 2in x 5ft 11in	BU 1876
YC.11	Mooring lump (172 bm)	(*No.4*) *Tavy* (1797, Frank's Quarry, Plymouth)	71ft 3in x 23ft 11½in x 8ft 5in	BU 1869
YC.12	Mooring lump (172 bm)	(*No.5*) *MV.54* (1856, Briggs, Sunderland)	75ft 9in x 23ft 7in x 9ft 4in	BU 1893
YC.13	Mooring lump (142 bm)	(*No.6*) *Unity* (1788, Hooper, Torpoint)	66ft 0in x 22ft 7in x 8ft 0in	BU 1878
YC.14	Mooring lump (112 bm)	(*No.7*) *Stone Vessel No.8* (?)		BU 1885
YC.15	Mooring lump (167 bm)	(*No.8*) *Little Nelly* (?12.11.1860, Plym. Dyd)		BU c1901
YC.16	Mooring lump (116 bm)	(*No.9*)		Sold 1889
YC.17	Lump/haulabout (105 bm)	(*No.10*) *Camel* (1798, R. Thames)	64ft 6in x 20ft 7in x 10ft 2in	BU 1877
YC.18	Lump/haulabout	(*No.11*) Buoy Boat (60 bm)		BU 1883
YC.19	Lump/haulabout	(*No.12*) Luggage Schooner (77 t)		BU 1885
YC.20	Lump/haulabout (88 bm)	(*No.13*) *Tavy* (1819, Plym. Dyd)	54ft 2in x 19ft 6in x 8ft 6in	BU c1901
YC.21	Dirt boat	*(No.1)*		?
YC.22	Dirt boat	*(No.2)*		?
YC.23	Steam dredger (287 bm)			BU 1878
YC.24	Luggage vessel (169 bm)	*MV.37* (1856, Lymington)	75ft 1in x 23ft 6in x 9ft 5in	BU 1876
YC.25	Fire float (83 bm)	(*No.1*)		BU 1878
YC.26	Fire float (85 bm)	(*No.2*)		Sold 1879
YC.27	Lighter (168 bm)	*Fanny* (1870)		BU c1901
YC.28	Lighter (115 bm)			Sold 1872
YC.29	Lighter (115 bm)			Sold 1876
YC.30	Ash boat			Wrecked 1876
YC.31	Lighter (125 bm)			BU c1901
YC.32	Mooring lighter (204 bm)	(*No.9*)		BU c1901
YC.33	Dredger (235 bm)			BU 1878
YC.34	Mooring lighter (204 bm)			?
YC.35	Steam coal barge			BU c1901
YC.36	Steam lighter			BU c1901
YC.37	Iron tank vessel (105 bm)	*MF.136* (1856, Birkenhead)	60ft 3in x 20ft 3in x 6ft 8in	BU c1901

Royal William Victualling Yard, Plymouth

Established in 1834 at Stonehouse, this victualling yard - like the others - retained its own yard craft.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Hoy (70 bm)	*Arthur* (1829, Shaldon)	55ft 0in x 17ft 3in x 8ft 8in	Renamed *Arthur* 1870; BU c1901
YC.2	Hoy (76 bm)	*Cremill* (1836, Pemb. Dyd)	54ft 6in x 18ft 0in x 9ft 3in	Renamed *Cremill* 1870; BU 1897
YC.3	Hoy (67 bm)	*Hythe* (1806)	49ft 6in x 18ft 2in x 7ft 2in	BU 5.1872
YC.4	Hoy (49 bm)	*Wasp* (1806, Ports. Dyd)	44ft 9in x 15ft 8in x 6ft 11in	Sold 1874 at Plymouth and BU 11.1878
YC.5	Tank vessel (78 bm)	*Coronation* (1831, Plym. Dyd)	57ft 3½in x 18ft 1½in x 8ft 8in	Sold 2.12.1869 to BU
YC.6	Tank vessel (76 bm)	*Plym* (1842, Plym. Dyd)	57ft 7in x 18ft 4in x 8ft 8in	Sold 2.12.1869 to BU
YC.7	Barge (53 bm)	*Barge No.1*		?
YC.8	Barge (53 bm)	*Barge No.2*		?
YC.9	Yawl (15 bm)			Sold 1872

Pembroke Dockyard

Milford Dockyard (on the north shore of Milford Haven) was begun on the site of Jacobs' private yard when that shipbuilder became insolvent. In October 1815 it moved to Pater (on the south shore of Milford Haven); Pater Dockyard was quickly renamed Pembroke Dock in 1824, and expanded rapidly during the 1830s. It was closed in 1926.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Sailing lighter (109 bm)	*Drake* (25.3.1834, Ports. Dyd)	60ft 0in x 20ft 9in x 8ft 11in	Sold 1884
YC.1 (ii)	Stores lighter (26 bm)	Ex-steam launch		BU c1901
YC.2	Mooring lighter (160 bm)	(27.12.1826, Pemb. Dyd)	70ft 0in x 23ft 5in x 8ft 2in	BU c1874
YC.2 (ii)	Iron lighter (103 bm)	*MF.123* (1856, Blackwall)	60ft 2in x 20ft 0in x 6ft 7in	Sold 1894

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YC.3	Barge (107 bm)	Ex-open barge (1831, Pemb. Dyd)	65ft 0in x 20ft 0in x 5ft 5in	Sold 1877
YC.3 (ii)	Open timber barge (26 t)			Fate unknown (before 1900)
YC.4	Fire float (74 bm)			Sold 1888
YC.5	Mud barge (65 bm)	*A*		Sold 1880
YC.6	Mud barge (61 bm)	*B*		Sold 1875
YC.7	Mud barge (52 bm)	*C*		Sold 1880
YC.8	Mud barge (52 bm)	*D*		Sold 1890
YC.9	Mud barge (60 bm)	*E*		?
YC.10	Mud barge (50 bm)	*F*		Sold 1894
YC.11	Mud barge (55 bm)	*G*		Sold 1882
YC.12	Dirt boat (7 t)	(*No.1*)		BU *c*1901
YC.13	Dirt boat (7 t)	(*No.2*)		?
YC.14	Iron barge (99 bm)			BU *c*1901
YC.15	Iron barge (99 bm)			BU *c*1901
YC.16	Iron lighter (116 bm)			BU *c*1901
YC.17	Iron tank vessel (103 bm)	*MF.112* (1856, Blackwall)	60ft 1in x 20ft 1in x 6ft 6in	To Chatham as pontoon to police hulk 1880
YC.18	Iron mooring lighter (102 bm)	*MF.111* (1856, Blackwall)	60ft 2in x 20ft 1in x 6ft 6in	Wrecked 1892

Most of the yard craft employed here were built locally in the Dockyard. *YC.1* had served as the prototype Mortar Vessel 1854-56.

Haulbowline Dockyard

The construction of Haulbowline Dockyard (on the island of the same name in Cork Harbour) began during the 1860s and it did not become fully operational until the turn of the century. Used for maintenance but never for shipbuilding, it was transferred to the Irish Free State government in 1921. Nevertheless, it had its own sequence of 'YC' numbers.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Tank vessel (51 bm)	*Cork* (1844, Pemb. Dyd)	50ft 1in x 15ft 9in x 8ft 3in	BU 1879
YC.2	Mud and mooring lump (32 t)			BU 1879
YC.3	Coal and mooring lighter (103 bm)	*MF.103* (1855, Birkenhead)	59ft 10in x 20ft 1in x 6ft 7in	BU 1869
YC.4	Tank vessel (12 bm)			BU *c*1874
?	Iron coal pontoon (102 bm)	*MF.101* (1855, Poplar)	60ft 3in x 20ft 3in x 5ft 11in	?
?	Iron coal pontoon (102 bm)	*MF.117* (1855, Blackwall)	60ft 1in x 20ft 0in x 6ft 6in	?

Naval Ordnance Yards

There was a single separate sequence of 'YC' numbers allocated to barges stationed at the Ordnance depots within the main dockyards.
These were *YC.1* (at Devonport), *YC.2* (?), *YC.3* (at Portsmouth), *YC.4* (at Chatham), *YC.5* and *YC.6* (added at Devonport), *YC.7* and *YC.8* (added at Portsmouth), *YC.9* and *YC.10* (added at Chatham). Later additions in 1891 were *YC.11* - *YC.14* and a variety of newer but un-numbered (named instead) barges. All 14 numbered barges were BU *c*1901.

Malta Dockyard

The most important of the overseas naval yards, Grand Harbour at Malta - acquired in 1800 - was expanded in 1871 with a second dry dock, and retained until its closure in 1958.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Iron tank vessel (98 bm)	*Humber*		BU *c*1874
YC.2	Iron tank vessel (58 bm)			BU 1884
YC.3	Mooring lighter (235 bm)	*Savage* (1856, Blackwall)	108ft 6in x 22ft 1in x 8ft 1in	BU at Malta 9.1888
YC.4	Iron mooring Lighter (104 bm)	*MF.144* (1856, Birkenhead)	60ft 8in x 20ft 1in x 6ft 10in	?
YC.5	Mooring lighter (119 bm)	*MV.10* (1855, Blackwall)	65ft 0in x 21ft 0in x 7ft 0in	BU *c*1901
YC.6	Crane vessel (160 bm)	*MV.14* (1855, Blackwall)	70ft 0in x 23ft 6in x 9ft 6in	BU *c*1901
YC.7	Iron lighter (49 t)			BU *c*1901
YC.8	Iron lighter (49 t)			BU *c*1901
YC.9	Luggage boat (19 t)			Sold 1887
YC.10	Dirt boat (10 t)			?
YC.10 (ii)	Luggage lighter (269 bm)	*Cockatrice* (1860, Newcastle)	120ft 0in x 22ft 1in x 9ft 6in	Sold at Malta 1885
YC.11	Coal pontoon (*No.1*) (57 bm)			Sold 1884
YC.12	Coal pontoon (*No.2*) (57 bm)			Sold 1884
YC.13	Coal pontoon (*No.3*) (57 bm)			Sold 1884
YC.14	Coal pontoon (*No.4*) (57 bm)			Sold 1887
YC.15	Coal pontoon (*No.5*) (57 bm)			Sold 1872
YC.15 (ii)	Coal pontoon (72 t)			BU *c*1901
YC.16	Coal pontoon (*No.6*) (57 bm)			?
YC.17	Coal pontoon (*No.7*) (57 bm)			?
YC.18	Coal pontoon (*No.8*) (57 bm)			BU *c*1901

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YC.19	Coal pontoon (*No.9*) (57 bm)			?
YC.20	Coal pontoon (*No.10*) (57 bm)			?
YC.21	Coal pontoon (*No.11*) (57 bm)			?
YC.22	Coal pontoon (*No.12*) (57 bm)			?
YC.23	Victualling yard boat/luggage boat (19 t)			BU c1901
YC.24	Victualling yard boat/luggage boat (19 t)			BU c1901
YC.25	Victualling yard boat/luggage boat (19 t)			?
YC.26	Steam dredger (280 bm)			
	see Portsmouth *YC.16*			
YC.27	Steam dredger (280 bm)	*Valetta* (1859, Northam)		?
YC.28	Dirt boat (?)			Wrecked 1892
YC.29	Dirt boat (10 t)			BU c1901
YC.34	Iron pontoon (104 bm)	*MF.141* (1856, Birkenhead)	60ft 6in x 20ft 2in x 6ft 8in	To Portsmouth as *YC.42* in 1868
YC.35	Iron pontoon (99 bm)			To Portsmouth as *YC.43* in 1868
YC.36	Iron pontoon (99 bm)			To Portsmouth as *YC.44* in 1868
YC.37	Iron pontoon (99 bm)			To Portsmouth as *YC.45* in 1868
YC.38	Iron pontoon (99 bm)			?
YC.39	Iron hopper pontoon (104 bm)			BU c1901
YC.40	Iron hopper pontoon (104 bm)			BU c1901
YC.41	Mud barge (15 t)			BU c1901
YC.42	Mud barge (15 t)			BU c1901
YC.43	Iron lighter/pontoon (59 bm)			BU c1901

A number of yard craft were locally built in the Dockyard during the Napoleonic era, and a few subsequently.
Note that a considerable number of other yard craft were added later (numbered up to *YC.96* consecutively in 1900), but it is unclear how many of these were in use or acquired by 1889.

Gibraltar Dockyard

This dockyard was expanded in the 1870s after the opening of the Suez Canal brought increased strategic importance to the site, although it was not until the 1890s that the most significant gains to the infrastructure were made.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Tank vessel (94 bm)	*Kerch* (1855, Malta)	64ft 0in x 18ft 8in x 6ft 11in	BU c1875
YC.2	Tank vessel (28 t)			BU c1901
YC.3				Sold 1890
YC.4	Steam dredger (235 bm)	*Blazer* (1856, Birkenhead)	108ft 5in x 22ft 1in x 8ft 0in	Sold at Gibraltar 4.5.1877
?	Steam dredger (?)	*St. Martin*		BU c1901

Trincomalee

Besides *YC.1*, a 60-ton tank vessel (built 1849, probably as *Teazer* at Moulmein, and in use from c1874 until sold in 1887), vessels in use here from 1864 included *YC.2*, *YC.3* and *YC.4* (type unknown, all sold 1895) and *YC.5*, a 49-ton iron coal barge (BU in 1884). A considerable number (c10) of coal lighters, mostly of 50 tons, were built locally about 1890. Two earlier tank vessels were built at Cochin in 1822 and 1821, but *Cochin* (54 bm) was sold in 1850 and the fate of *No.2* (32 bm) is unknown.

Hong Kong

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Coaling lighter (100 bm)	*Thistle* (1857)		Sold 1869
YC.1 (ii)	Coaling lighter (238 bm)	*Clown* (1856, Liverpool)	110ft 3in x 21ft 11in x 6ft 6in	Wrecked at Hong Kong 1871
YC.2	Lump (*No.2*) (60 t)			?
YC.3	Lump (*No.3*) (60 t)			Wrecked 1871 - remains sold
YC.4	Lump (*No.4*) (53 t)			?
YC.5	Lump (*No.5*) (53 t)			?
YC.5 (ii)	Lighter (22 t)			Sold 1883
YC.6	Coal lighter (238 bm)	*Clown* (1856, Liverpool)	110ft 3in x 21ft 11in x 6ft 6in	Re-numbered *YC.1* in 1870
YC.6 (ii)	Coal lighter (238 bm)	*Janus* (1856, Pemb. Dyd)	110ft 0in x 21ft 11in x 6ft 6in	Sold at Hong Kong 1871
YC.7	Coal lighter (233 bm)	*Forester* (1856, Blackwall)	108ft 0in x 22ft 0in x 8ft 0in	Wrecked at Hong Kong 1871

Thistle was purchased in China in 1857; of the former gunboats, *Clown* became a lighter (as *YC.6*) in 1867, with *Janus* and *Forester* following in 1869.

Jamaica

From 1864, *YC.1* to *YC.4* here were 115-ton schooners, used as tank vessels (*YC.3* was sold 1886, *YC.4* was BU c1874) while *YC.5* was a small (12 t) cutter, likewise employed as a tank vessel until BU in 1865. Two launches (*YC.6* and *YC.7*) were classed as 'lumps' (*No.1* and *No.2* respectively) from 1874 until sold in 1886. A pinnace (*YC.8*) and another launch (*YC.9*) were likewise in service. *YC.10* was the station commodore's boat (formerly *Caroline*) and *YC.11* was a decked stores boat (ex-*Emily*, sold 1868). Finally *YC.12* was another launch, of 10 t, purchased 1864 and used as a fire-engine lump (wrecked 1880).

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Bermuda Dockyard

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	'Sloop' (130 bm)	*Devonport* (3.6.1851, Devon. Dyd)	62ft 4in x 22ft 9in x 8ft 0in	BU at Bermuda 1870
YC.2	Schooner (37 bm)	*Albicore* (1828, Bermuda)	44ft 0in x 14ft 6in x 7ft 4in	Sold 1932
YC.3	Tank vessel (*No.1*) (63 bm)	(1829, Bermuda)	51ft 0in x 20ft 6in x 6ft 8in	BU 1881
YC.4	Tank vessel (*No.2*) (107 bm)	(1849, Bermuda)	62ft 10in x 21ft 2in x 8ft 11in	BU 1874
YC.5	Coal barge (*No.1*) (22 t)			BU 1870
YC.6	Coal barge (*No.2*) (16 t)			Sold 1873
YC.7	Decked sailing boat (21 t)	*Diamond*		BU c1901
YC.8	Decked sailing boat (16 t)	*Pearl* (1844)		BU c1901
YC.9	Decked sailing boat (13 t)	*Princess Alice* (1845)		BU c1901
YC.10	Decked sailing boat (12 t)	*Lady Stewart*		BU c1901
YC.11	Decked sailing boat (6 t)	*Hawk* (1839)		BU 1865
YC.11 (ii)	Decked sailing boat (9 t)	*Emerald*		?
YC.12	Decked sailing boat (5 t)	*Porgey* (1848)		Wrecked 1875
YC.13	Decked sailing boat (11 t)	*Lord of the Isles* (1819)		BU c1901
YC.14	Stone barge (*No.1*)	(1840)		BU 1866
YC.15	Stone barge (*No.2*)	(1840)		?
YC.17	Decked sailing boat (11 t)	*Adelaide*		BU c1901
YC.18	Engine float			?
YC.19	Steam dredger (428 bm)	*Espoir* (1860, Pemb. Dyd)	145ft 0in x 25ft 5in x 13ft 0in	BU at Bermuda 6.1881
YC.20	Mooring lighter (204 bm)	(1872)		?

Devonport was employed as an anchor hoy and buoy boat from 1851. Earlier vessels (all reported still in service in 1864) for which no 'YC' number is listed were as follows (all being locally built): anchor hoy (1812, unnamed); *Hope* (1819); *Sea Breeze* (1822); *Horn* (1827); flat lumber boats *No.1* and *No.2* (1829 and 1840 respectively); *Clara* (1848, decked sailing vessel); *Cassius* (purch. 7.9.1847, diving bell vessel); and *Hebe* (1850s, decked sailing vessel). The paddle packet *Kite* (ex GPO *Aetna*) was still in use here as a sheer vessel in 1854.

Cape of Good Hope

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Tank vessel (230 bm)	*Progresso* (ex slaver, purch. 23.4.1844)		BU 3.1869
YC.2	Pitch boat (10 t)			?
YC.3	Mooring lighter (361 bm)	*Swift* (1835, as brig by Colson, Deptford)	95ft 5in x 30ft 4in x 14ft 7in	Sold 1866
YC.3 (ii)	Mooring lighter (352 bm)			Wrecked 1898
YC.4	Tank vessel (110 bm)	Unnamed (15.11.1864, Dept. Dyd)		BU c1901
YC.5	Iron coal barge (49 t)			BU c1901
YC.6	Iron coal barge (49 t)			BU c1901
YC.7	Iron coal barge (49 t)			BU c1901
YC.8	Iron coal barge (49 t)			BU c1901
YC.9	Iron coal barge (49 t)			BU c1901
YC.10	Iron coal barge (49 t)			BU c1901

An earlier tank vessel (*Fawn*, another ex-slaver schooner of 1842) was sold in 1847.

Halifax Dockyard (Nova Scotia)

The principal British naval base in North America until its transfer to the Canadian government in 1906.

Number	*Description*	*Original name (launch date)*	*Dimensions (if known)*	*Subsequent history*
YC.1	Mooring lighter (92 bm)	Unnamed (1814, Hal. Dyd)	57ft 6in x 19ft 11in	BU c1874
YC.1 (ii)	Mooring lighter (130 bm)			BU c1901
YC.2	Tank vessel (107 bm)	*Zeldina* (?1839, Hal. Dyd)		BU c1874
YC.2 (ii)	Tank vessel (173 bm)			BU c1901
YC.3	Tank vessel (54 bm)	Tank schooner (1839)		Sold 1867
YC.3 (ii)	Buoy boat (236 bm)	*Charger* (1855, Northfleet)	108ft 1in x 22ft 2in x 7ft 11in	Renumbered *YC.6* in 1869
YC.5	Coal lighter			Sold 1892
YC.6	Buoy boat (236 bm)	*Charger* (1855, Northfleet)	108ft 1in x 22ft 2in x 7ft 11in	Sold 7.1887

Most yard craft here were locally built in the Dockyard. The original *YC.1*, *YC.2* and *YC.3* were in service by 1864; *YC.3* (ii) entered service in 1866. An anchor lighter (built 1817 Hal. Dyd) and two earlier buoy boats (built 1823 at Plym. Dyd and 1841 at Hal. Dyd respectively) were unnumbered but still in service in 1864.

Other Dockyards

There are few records of yard craft elsewhere. The dockyard at English Harbour in Antigua was rarely employed during the nineteenth century and was abandoned in 1899. Other bases were primarily used as coaling yards during the nineteenth century and had few facilities or identifiable yard craft attached.

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C Coastguard Vessels

A very mixed collection of naval and revenue vessels were turned over to the Coastguard from 1824 onwards; all those transferred by/in 1863 (the majority on 25.5.1863) were assigned numbers instead of their former names; a few had been disposed of before this date, and these are listed first in the list below, which is otherwise in sequence of CGWV numbers. The naval vessels involved comprised a miscellany ranging from elderly brigs (even some Napoleonic War gunbrigs) to surplus Crimean War mortar vessels. The former revenue vessels (both Customs and Excise vessels) are identified as 'RC' in the following table.

After 1863, further vessels were transferred to the Coastguard during the next 13 years, some of them taking over the numbers of earlier Watch vessels that had been scrapped. The following table includes two composite vessels - the gunvessel *Frolic* and the gunboat *Drake* (originally *Sheldrake*, renamed 13.3.1888) - which also became Watch vessels in 1893-94 after the period covered by this book, but which are included for the sake of completeness.

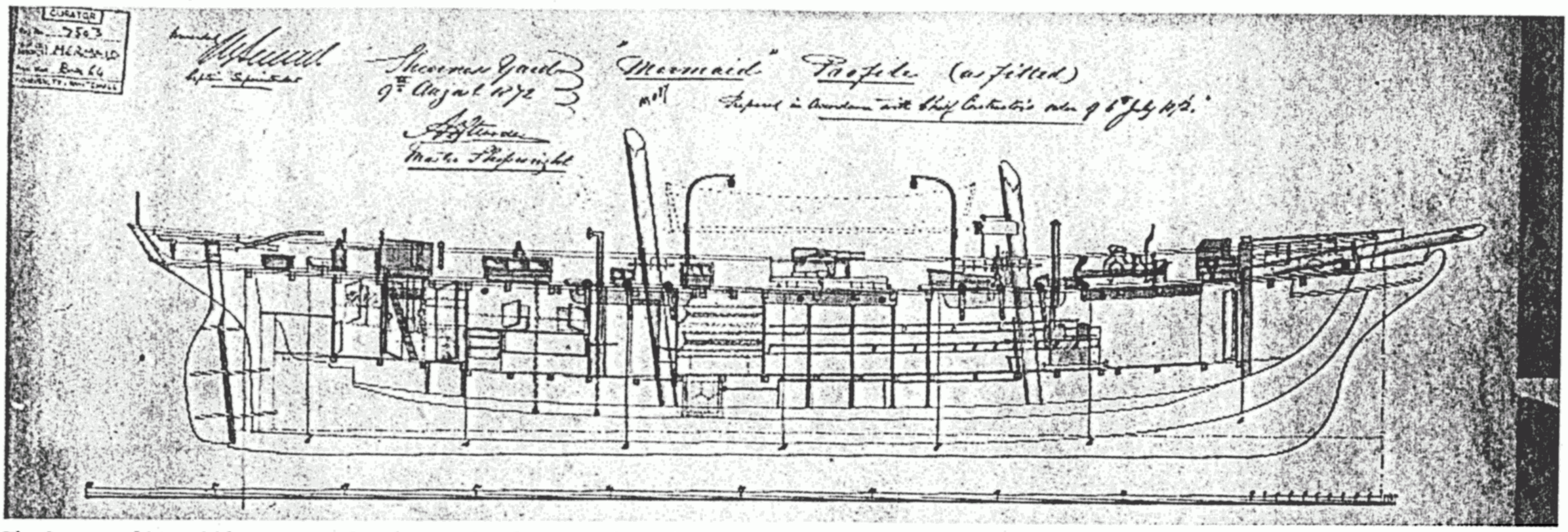
Watch vessels sometimes changed their number, often upon redeployment; *CGWV.13* (ii) became *CGWV.28* (ii) in 1863; *CGWV.10* (ii) became *CGWV.31* (ii) in 1865; *CGWV.22* (ii) became *CGWV.19* (ii) in 1868; *CGWV.24* (ii) became *CGWV.10* (iii) in 1896 (but resumed former number in 1897); *CGWV.30* (ii) became *CGWV.41* in 1896.

COASTGUARD WATCH VESSELS

Number	*Date*	*Former name*	*Built*	*Tonnage*	*Stationed at*	*Fate*
-	2.1824*	brig *Bathurst*	purch. 1821	170 bm	Swale	Sold 11.4.1858
-	5.1824*	gunbrig *Snapper*	1813	184 bm	?	Sold 3.7.1865
-	1825*	gunbrig *Griper*	1813	182 bm	Blackwall	BU at Portsmouth 11.11.1863
-	1.1826*	gunbrig *Adder*	1813	182 bm	Beachy Head	Wrecked near Newhaven 12.1831
-	1826*	gunbrig *Pelter*	1813	184 bm	Folkestone	Sold 8.8.1862
* Date transferred to the Coast Blockade Service (passed to Coastguard 1832).						
-	3.1834	gunbrig *Havock*	1805	184 bm	Hamble River	BU 7.1859
-	1838	brig *Icarus*	1814	234 bm	Lymington	Sold 4.4.1861
-	1857	brig *Pandora*	1857	319 bm	?	Sold 11.1.1862
CGWV.1	7.1863	ex-RC *Victorine*	1832	26 bm	Orford Haven	Sold 26.11.1877
CGWV.2	7.1863	ex-RC *Fairy*	1842	24 bm	Harwich	Sold 1866
CGWV.3	1861	ex-RC *Dolphin*	1832	90 bm	Walton Gap	BU at Harwich 10.10.1874
CGWV.4	1863	ex-brig *Badger*	1808	240 bm	Stangate	Deleted 1866
CGWV.4 (ii)	5.1864	ex-*MV.38*	1856	168 bm	Stangate (at Hamford Water 1878, Landermere 1879, and Walton Creek 1882)	BU 1901
CGWV.5	1833	ex-brig *Chanticleer*	1808	237 bm	Crouch River	BU at Sheerness 6.1871
CGWV.6	by 1860	ex-RC *Dove*	1818	125 bm	Crouch River	Sold 1865
CGWV.6 (ii)	10.1865	ex-*MV.55*	1856	168 bm	Crouch River	Sold 18.6.1881
CGWV.7	1845	ex-brig *Beagle*	1820	235 bm	Paglesham	Sold 13.5.1870
CGWV.8	by 1863 ?			156 bm	Wakering Haven	Sold 1866
CGWV.8 (ii)	1866	ex-*MV.39*	1856	169 bm	Wakering Haven	Sold to BU 23.6.1897
CGWV.9	by 1863	ex-RC *Harpy*	1837	145 bm	Egypt Bay	Sold 3.1869
CGWV.9 (ii)	by 1863	?*Kite*		156 bm	Egypt Bay	BU 1864
CGWV.9 (iii)	1864	ex-*MV.31*	1856	167 bm	Egypt Bay (Lent 6.1870 to War Dept for torpedo experiments)	Sold 1887 or 1893
CGWV.10	by 1863	?*Childers*		175 bm	Cliffe Creek	Sold 1863
CGWV.10 (ii)	5.1863	ex-*MV.46*	1856	169 bm	Cliffe Creek	Renamed *CGWV.31*
CGWV.11	9.1857	ex-brig *Star*	1835	358 bm	Gravesend	BU 1897
CGWV.12	11.1831	ex-gunbrig *Clinker*	1813	183 bm	Yantlett Creek	Sold 24.1.1867
CGWV.12 (ii)	6.2.1864	ex-*MV.43*	1856	167 bm	Yantlett Creek	Sold 11.1898
CGWV.13	1834	ex-brig *Emulous*	1819	235 bm	Haven Hole	Sold 1864
CGWV.13 (ii)	5.1863	ex-brig *Elk*	1847	484 bm	Haven Hole	Renamed *CGWV.28*
CGWV.13 (iii)	1864	ex-*MV.51*	1856	168 bm	Haven Hole	Sold to BU 4.8.1883
CGWV.14	by 1863	ex-RC *Prince of Wales*	1830	170 bm	Thames Haven	Sold at Southend 6.1868

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CGWV.15	by 1863	ex-RC *Active*	1836	101 bm	Mucking Creek	Sold 1868
CGWV.15 (ii)	1868	ex-*MV...*	1856	167 bm	Mucking Creek	BU 1871
CGWV.16	by 1863	ex-RC *Mermaid*		104 bm	Purfleet	Sold 1868
CGWV.16 (ii)	6.2.1864	ex-*MV.52*	1856	167 bm	Purfleet	BU 5.1894. (Lent 10.1871 to Customs as Guard Ship at Tower of London)
CGWV.17	by 1863	ex-RC *Royal George*	1834	149 bm	Barking Creek	Sold 10.1866
CGWV.17 (ii)	1866	ex-*MV.50*	1856	169 bm	Mucking Creek	Sold to BU 12.1887
CGWV.18	1833	ex-gunbrig *Shamrock*	1812	180 bm	Rochester	Sold 24.1.1867
CGWV.18 (dup)	5.1863	ex-brig *Arab*	1847	481 bm	Rochester (to Queenborough 1868)	BU at Chatham 1.6.1879
CGWV.19	1863	ex-*MV.49*	1856	169 bm	Cockleshell Hard	Sold 11.11.1898
CGWV.19 (ii)	1868	ex-*CGWV.22* (see below)		167 bm	Colemouth Creek	BU at Sheerness 31.3.1874
CGWV.20	by 1863	?		164 bm	Stangate Creek	BU 1863
CGWV.20 (ii)	5.1863	ex-brig *Kangaroo*	1852	483 bm	Stangate Creek (at Crouch River 1870)	Sold 10.5.1897
CGWV.21	5.1863	ex-brig *Eclipse*	1819	235 bm	Queenborough	Sold 10.11.1863
CGWV.21 (ii)	1863	ex-*MV.44*	1856	156 bm	Queenborough	BU 1864
CGWV.21 (iii)	1863	ex-*MV.29*	1856	169 bm	Queenborough (at West Mersea 1866, at Stangate Creek 1874)	Sold to BU 12.1906
CGWV.22	by 1863	ex-RC *Francis*		46 bm	King's Ferry	Sold 1866
CGWV.22 (ii)	11.1864	ex-*MV.56*	1856	167 bm	Colemouth Creek	Renamed *CGWV.19*
CGWV.22 (iii)	1866	ex-*MV.45*	1856	169 bm		Fate unknown
CGWV.23	1857	ex-brig *Philomel*	1842	358 bm	Milton	Foundered in the Swale 1869
CGWV.24	2.1835	ex-brig *Cadmus*	1808	237 bm	Whitstable	Sold 12.3.1864
CGWV.24 (ii)	5.1863	ex-brig *Despatch*	1851	483 bm	Whitstable	Sold 13.5.1901
CGWV.25	5.1863	ex-brig *Britomart*	1847	330 bm	Beresford, Ireland	BU at Chatham 25.7.1874
CGWV.26	1857	ex-brig *Dart*	1847	319 bm	Beresford, Ireland	BU at Chatham 9.1.1875
CGWV.27	by 1863	?		85 bm	Castle Coote	BU 1863
CGWV.27 (ii)	10.1863	ex-*MV.5* (*Havock*)	1855	120 bm	Castle Coote	BU at Chatham 7.1874
CGWV.28	by 1863	?		50 bm	Sandwich Haven	BU 1865
CGWV.28 (dup)	5.1863	ex-*CGWV.13* (see above)		484 bm	Sandwich Haven (at Greenhithe 1866, at Tilbury 1871)	Sold 30.5.1893
CGWV.29	1848	ex-brig *Pelican*	1812	385 bm	Rye Harbour	Sold 7.6.1865
CGWV.29 (ii)	1893	ex-gunboat *Drake*	1875	440 disp	?	Sold 3.4.1906
CGWV.30	1857	ex-brig *Cygnet*	1840	359 bm	Chichester Harbour	BU at Portsmouth 3.1.1877
CGWV.30 (ii)	1894	ex-gunvessel *Frolic*	1872	462 bm	?	Sold 7.4.1908
CGWV.31	1857	ex-brig *Penguin*	1838	360 bm	Hamble River (berthing hulk at Cowes 1868)	Sold 5.6.1871
CGWV.31 (ii)	1865	ex-*CGWV.10*	(see above)	169 bm	Cliffe Creek	Sold to BU 30.5.1893
CGWV.32	1843	ex-brig *Partridge*	1829	231 bm (278 disp)	Netley	Sold 2.2.1864
CGWV.32 (dup)	7.1863	ex-*MV.41*	1856	168 bm	Netley	Sold 19.2.1881
CGWV.33	by 1863	?		170 bm	Southampton	BU 1868
CGWV.34	7.1863	ex-RC *Stag*,	1827	130 bm	Itchen River	Sales list 9.1866
CGWV.35	1863	ex-RC *Gertrude*	1836	35 bm	Fleet	Sold 1866
CGWV.36	1857	ex-brig *Linnet*	1835	361 bm	Gravesend	Sold 30.10.1866
CGWV.37	by 1863 ?			15 bm	Barry	BU 1863
CGWV.37 (ii)	11.1864	ex-*MV.7* (*Mastiff*)	1855	118 bm	Tilbury (to Sheerness 1870)	BU 8.1875 at Chatham
CGWV.38	1864	ex-*MV.28*	1856	168 bm	Branksea	BU at Poole 18.10.1878
CGWV.39	1869	ex-RC *Victoria*	1835	114 bm	Moville	Sold at Moville 1872
CGWV.40	1869	ex-RC *Royal Charlotte*	1836	130 bm	East Cowes	BU at Portsmouth 17.2.1877
CGWV.41	1876	paddle packet *Lucifer* (former GPO *Comet*, renamed 1837)	1825	387 bm	East Cowes (in Crouch River 1881)	Sold 1893
CGWV.42	1876	ex-*MF.107* (later renamed *CGWV.7*, date unknown)	1856	103 bm	Chichester Harbour	Sold 5.1.1891



The Coastguard 'cutter' (she appears to be schooner rigged) *Mermaid*, profile as fitted, Sheerness 9 August 1872. Typical of many small sailing craft operated by paramilitary forces like the Customs and Excise services and Coastguard down to the end of the nineteenth century. *DR7503*

Among the former Revenue cutters, the *Victorine* (*CGWV.1*), *Dolphin* (*CGWV.3*) and *Prince of Wales* (*CGWV.14*) were built by William Ransom & William Ridley at Hastings; the *Harpy* (*CGWV.9*), *Stag* (*CGWV.34*), *Gertrude* (*CGWV.35*) and *Royal Charlotte* (*CGWV.40*) were built by Thomas White at Cowes; and the *Active* (*CGWV.15*) and *Victoria* (*CGWV.39*) were built by Thomas Inman at Lymington. Details of the builders (and other data) for the former Navy vessels are to be found in the main body of this book.

REVENUE (CUSTOMS AND EXCISE) VESSELS

England (including Wales) and Scotland each possessed their own Customs and Excise services, the resulting four bodies operating a varying number of preventative cruisers (usually 'cutters') throughout the century, as did the Irish Revenue Board, which was responsible for both Customs and Excise duties. The Excise Department was formerly part of the Inland Revenue, and was not amalgamated with the Customs Department until 1 April 1909.

The revenue cutter service (separately for Customs and for Excise) originated during the early years of Charles II's reign, although collection of Customs dues can be traced back to the eighth century. All the early vessels were described as smacks, probably cutter-rigged with a single-mast fore-and-aft rig. Following the Napoleonic War, all the revenued cutters were transferred to the Admiralty on 24 February 1816 except for two Customs cutters (*Vigilant* and *Fly*) and four Excise vessels (*Scout*, *Fortitude*, *Lively* and *Resolution*). The cruisers were divided by the Admiralty into 3 classes with following armaments:

1st Class - 140 tons & over - 6 x 6pdr carronades + 2 x 6pdr brass long guns
2nd Class - 100 tons to 140 tons - 4 x 6pdr carronades + 2 x 6pdr brass long guns
3rd Class - less than 100 tons - 2 x 6pdr brass long guns.

Many of the older cutters were swiftly disposed of, and by 1820 there were some 57 cutters under Admiralty control, although their deployment was in fact directed by four Port Admirals. From this was formed in 1822 a new Coastguard, under the control of the Customs Board but managed by a naval Comptroller-General; this also took control of the Irish and Scottish preventative service and their Revenue vessels on 19 February 1824, when there were 33 Customs cutters operating in England and Wales, plus one Excise vessel (*Fortitude*) in England, four Customs and two Excise vessels in Scotland, and eleven in Ireland. From 1831 the personnel of the Coastguard were exclusively naval (most officers already were so) - thereby creating a permanent reserve for the RN. By 1834 it operated some 48 cutters (plus 18 smaller craft, rated as tenders), and a decade later this had grown to an all-time total of 78 cutters.

From July 1822 onwards a total of 69 new Revenue cutters were built in the period to October 1838, by when the rising cost of cutter construction led to the formation of a Commission of Enquiry. The two main contractors, Thomas White and Thomas Inman, had virtually established a cartel - and a 50-ton cutter from each cost about £1,225 (including £700 for fitting out!); of the 69 cutters mentioned above, White had built 30, Inman 15 and Ransom & Ridley of Hastings 15 also (the last-named had recently ceased building).

The Commission's primary recommendation that future building should concentrate on three classes of cutter and a single class of tender was adopted, and in July 1839 four existing vessels were evaluated at Portsmouth and became the models for all subsequent sailing cutters. The First Class (which now comprised all vessels over 100 tons) was thus based on the 150-ton *Royal George* and the 130-ton *Stag*, the Second Class (60 to 100 tons) on the 99-ton *Active*, and the Third Class (below 60 tons) on the 42-ton *Neptune*. Designed details of these vessels appear below. These standards continued into the 1850s, by which time steam launches had begun to replace the cutter-rigged sailing craft.

Royal George [built by Thomas Inman, Lymington in 1838].
Dimensions & tons: 70ft 7in, 55ft 6in x 22ft 6in x 10ft 1in.
$149^{42}/_{94}$ bm.

Stag [built by Thomas White, Cowes in 1827; 1880 still in service].
Dimensions & tons: 66ft 1in, 52ft 6in x 21ft 10in x 9ft 10in.
$129^{80}/_{94}$ bm.

Active [built by Thomas Inman, Lymington in 1808; 1880 still in service].
Dimensions & tons: 60ft 6in, 47ft $2^{3}/8$in x 20ft 3in x 9ft 9im.
$101^{23}/_{94}$ bm.

Neptune [built by Thomas White, Cowes in 1838].
Dimensions & tons: unrecorded.

This book lacks the space to give details of all the vessels operated by the Coastguard, plus the remaining vessels under the control of the Customs and Excise services, between 1815 and 1890. The earlier work in *The Sailing Navy List* (Part 3, Chapter 5) includes an inevitably fragmentary list of sailing cutters 'of naval significance', but no full list of revenue vessels is known to have been compiled.

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Index

For reasons of space, the following alphabetical list of ships is confined to named vessels serving in the Royal Navy between 1815 and 1890 – that is, those covered in the book's main entries. No attempt has been made to include the names of merchant vessels before or after their period of naval service, names of harbour craft appearing only in Appendix B, or names of foreign warships appearing in Appendix A. Where a vessel's allocated name was changed prior to launch (or before 1815), the original name is not indexed, although full details of all such earlier names appear in the text; similarly for vessels which changed their name after 1899, names assumed at a later date are not indexed but are given in the text.

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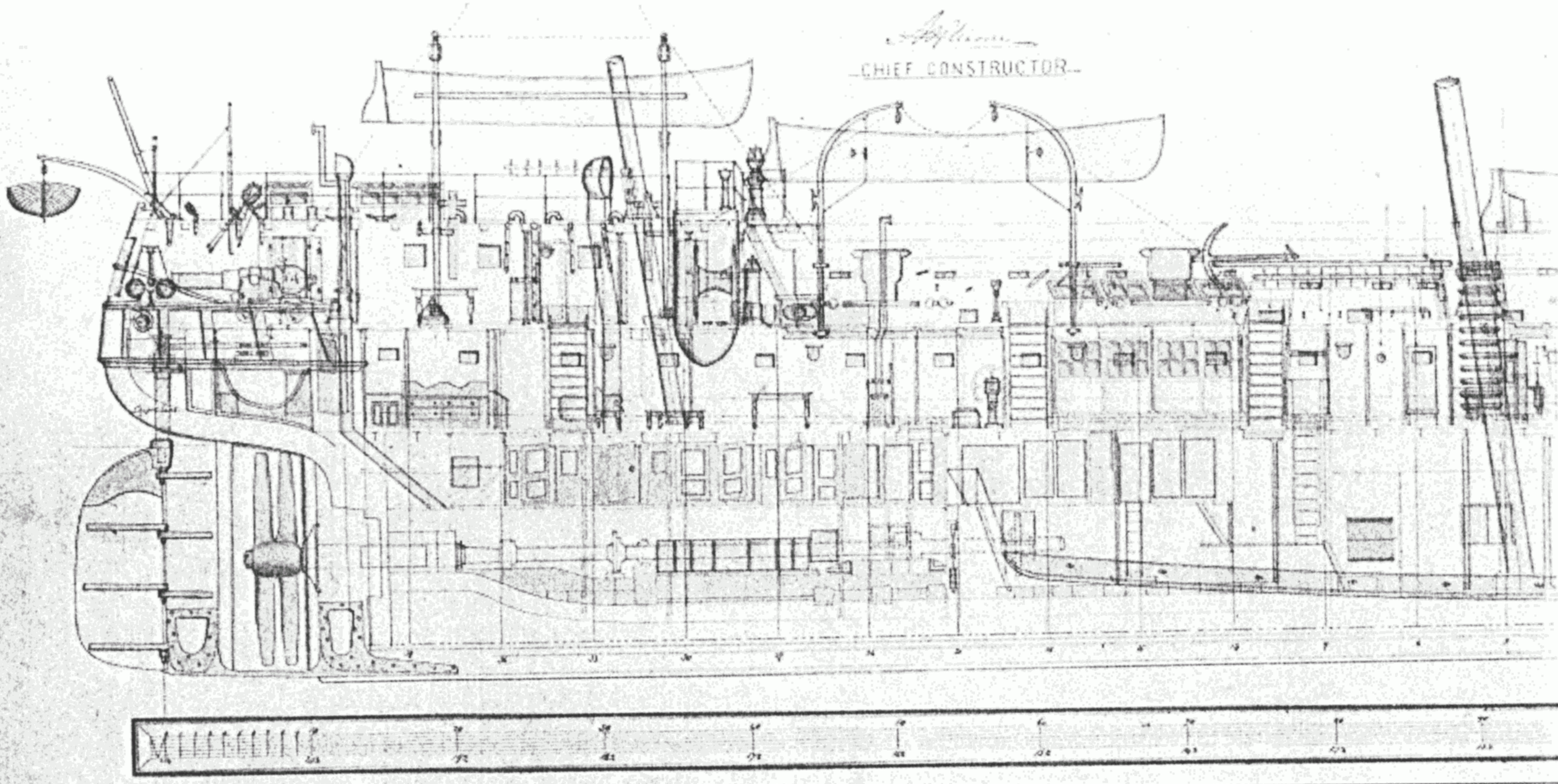
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TECHNICAL SCSC Blanche

SHEERNESS YARD
30th NOVEMBER 1877.

"BLANCHE" PROF

CHIEF CONSTRUCTOR

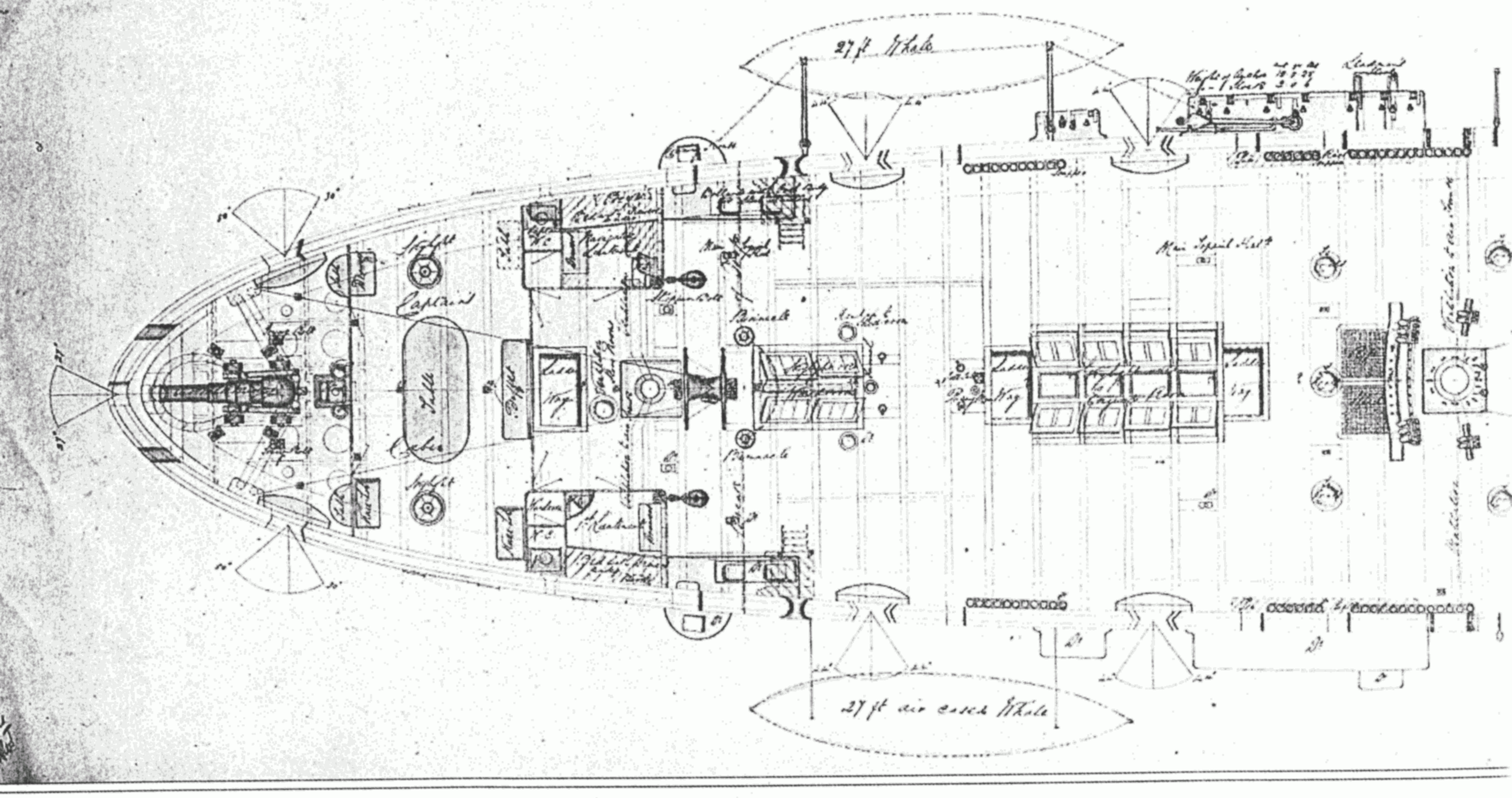


CURATOR
No. 905.O.B.
BLANCHE.
DOCKYARD, WHITEHALL

Sheerness Yard
30th November 1877

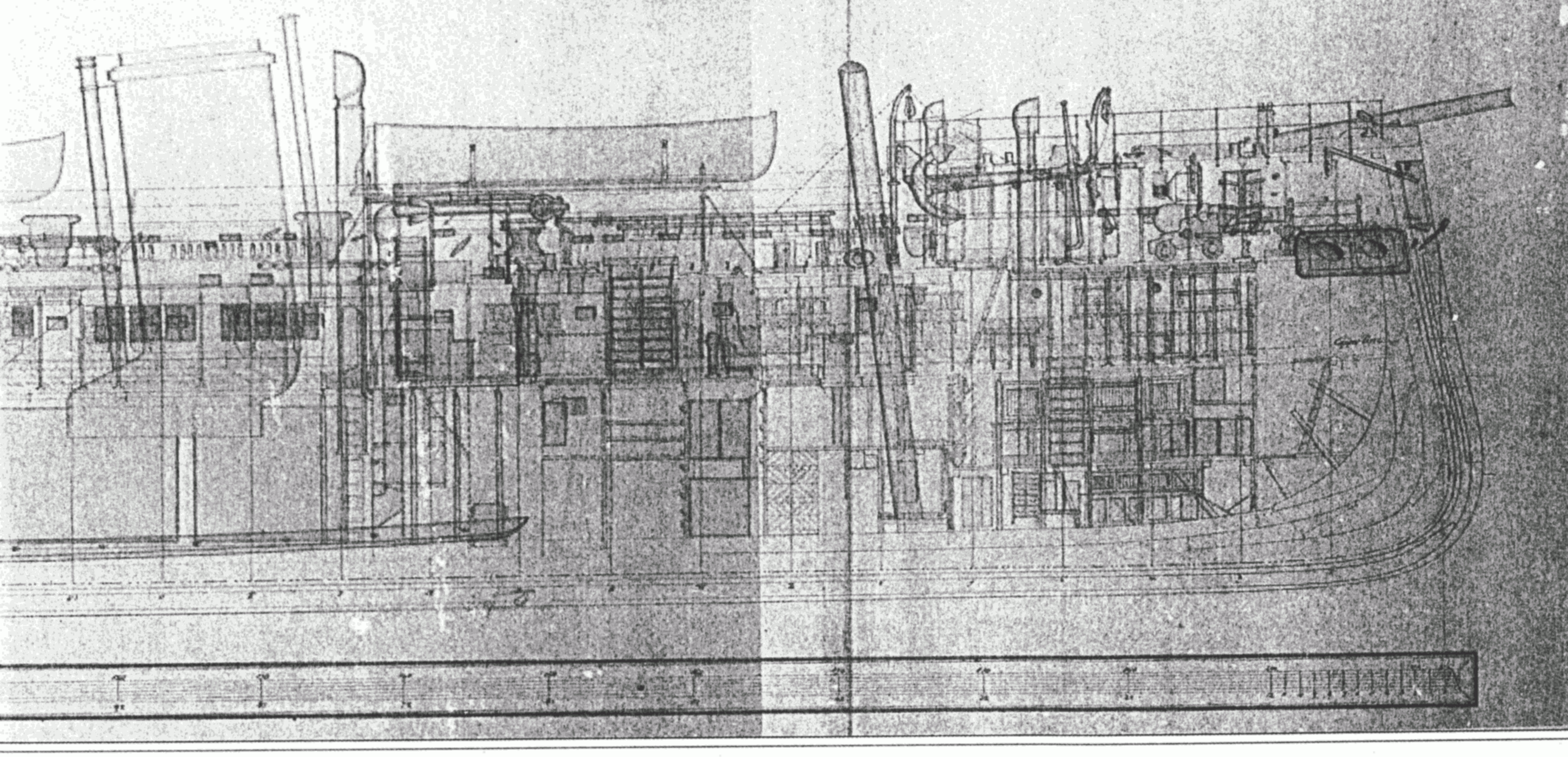
Chief Constructor

"BLANCHE



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T T E D.



f Upper Deck (as fitted)

Scale ½ inch = one foot

A Skylight 4 in No removed for Boiler Hatch
re-arrangement of pillars and main deck beams
See A No 23. Nov 25th 1861

