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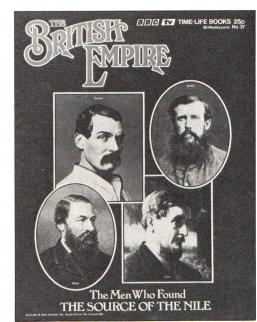
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No. 37. The Source of the Nile. Burton, Speke, Grant, Baker: these were the four major figures who helped satisfy the British craving for discovery in central Africa.



No. 38. From Suez to Khartoum. The need to protect the Suez Canal and the death of Charles Gordon in Khartoum led Britain to seize control of the Sudan.

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Cover: Tars aloft in the harsh days of the sailing Navy struggle to reef in a sodden topsail - a task that sent many sailors to their deaths on heaving decks or in crashing seas.

BRIANNA ROLLS

For a century after Trafalgar, the Royal Navy – unchallenged anywhere – sheltered Britain's growing Empire and brought an unprecedented tranquillity to the seas *



ery early in the morning of July 15, 1815, Napoleon Bonaparte climbed up the side of the British ship Bellerophon, lying at anchor off the port of La Rochelle. The crew leaned out of the gunports or stared in awe from their stations on deck at the corpulent little man in a grey greatcoat buttoned to the chin – the man who had ruled over Europe and threatened England for longer than most of them could remember. A fortnight before, they had heard from a French ship they captured that Napoleon had been beaten by Wellington. But it seemed incredible that this man - he smiled and bowed to the officers – was the ogre who had frightened them as children. He pulled off his small cocked hat and said to the Captain, "I have come to throw myself on the protection of your Prince and laws.'

That moment on the deck of a British man-of-war was the start of a century unique in the history of the sea – 99 years, to be precise, when the prestige of the Royal Navy stood so high that sea warfare entirely ceased.

The British Navy that supervised this century of peace, had changed remarkably little in the previous two centuries. Its ships were much the same in design as the Sovereign of the Seas, the famous and ornate three-decker built for Charles I in 1637. Its officers were professionals, as they had been since it was first called the Royal Navy, a separate service from the Merchant Navy, by Charles II in the 1660s. Its seamen were still a neglected class of men, recruited or pressed by force to man any ship that was ready for sea, and simply put ashore again, with their pay if they were lucky, when the ship was due for a refit.

The Navy's strategic ideas could be traced back further still. When the Spanish Armada was known to be making ready, in 1586, Francis Drake argued passionately that the proper place to fight in defence of England was not off the English coast, but off the enemy's – to blockade the enemy's ports and attack his fleets as soon as they dared to come out. Drake had a hard task to persuade the Queen and her Council, but he got his way in the end, and it was only a shift of wind off the coast of Spain that drove him back to Plymouth and let the Armada

through to the English Channel. Drake's forceful strategy had persisted ever since. It came to its logical conclusion in the years before Trafalgar, when Nelson and his contemporaries, summer and winter, watched the French and Spanish ports and kept Napoleon's navy off the seas, and so frustrated his grand design for invasion of England.

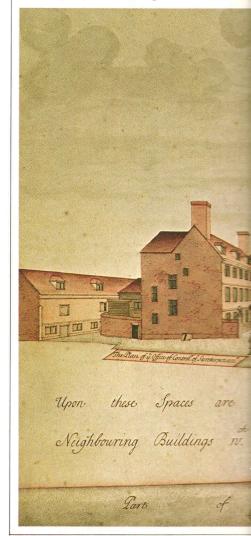
Tactics, too, had changed little. Line ahead – a single file of ships, the stern of the leading vessel separated from the bow of the next by a relatively short strip of water, and so on down the line - was still the normal battle formation. There was good reason for it, of course: ships could fire up to 50 guns in a broadside but very few, perhaps two or four, either ahead or astern; so line ahead was a mutual protection. But it produced a kind of standard battle: two fleets, both in line ahead, converged until they came within range, and then each ship fought a gunnery duel with its opposite number. It took Nelson's genius, at Trafalgar, to make a total break with this ancient conception.

Of course, there had been changes, both at sea and in administration ashore. Oddly enough, the most important change at sea had been in signalling. In the battle against the Armada, the admirals could only give a very few simple orders unless another ship was in hailing distance: most of the time, each captain had to make up his own mind what to do. By the time of the Dutch Wars in the 17th Century, several flags and pennants were in use, and they each had different meanings when they were hoisted in different parts of the rigging: for example, the Union flag and the admiral's pennant flown at the mizzen peak – the upper corner of the aftermast sail – was the signal to form line ahead. So by then, an admiral could more or less control the movements of a whole squadron.

By Nelson's time, there were alphabetical and numeral flags and a fairly comprehensive code-book, so that any order (though it might need a hoist of 60 or 70 flags) could be sent to any ship, and an admiral could manœuvre a fleet of any size. Through this evolution of signals, the fleet became a battle unit – a much more powerful weapon than any mere collection of separate ships – and an admiral could use it at his will.

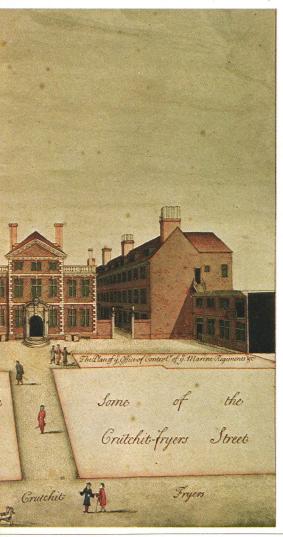


This tiny island off Patagonia was named





Samuel Pepys on its discovery in the 17th Century.





Samuel Pepys: Saviour of the Navy

On the face of it the dry minutiae of naval administration would seem to have little appeal for a musician, theatre-lover, diarist and bibliophile like Samuel Pepys. But Pepys, as his fellow 17th-Century diarist John Evelyn remarked, was a "curious person."

In 1660, the year he began his racy and garrulous diary with its unsurpassed insights into the bawdy life of Restoration London, he was appointed to the Navy Board as Clerk of the Acts. So successful was he in resolving the administrative chaos plaguing the Board that he was made Surveyor-General of Victualling six years later.

When the Navy Board came under violent attack in Parliament for its failure to spur the Navy to victory in the Second Dutch War in 1665–67, Pepys was entrusted with its defence. In a brilliant three-hour speech at the Bar of the House he successfully vindicated himself and his colleagues.

But for all his eloquence, no one was more aware than Pepys himself of the gigantic mismanagement, incompetence and peculation to be found in the Navy. His chance to institute wide-ranging reforms of the ailing service came in 1673 when Charles II appointed him Secretary of the Admiralty. Pepys used sound business principles to cut out waste and curb corruption. To keep the Court's incompetent dandies out of a service into which they had always bought their way, he insisted on seamanship qualifications none of them possessed. In this way Pepys attracted only the most dedicated men and laid the basis of a professional officer corps.

His most important work, however, was accomplished in 1686 when he established a Special Commission "for the recovery of the Navy." This body completely restored the Navy's efficiency and prepared it for the mighty sea battles upon which Britain's fate was so often to hang in the 18th Century.

When Pepys resigned in 1689 he left behind him an invigorated Navy Board, an enlarged and bustling Admiralty, and a body of skilled commanders.

When Pepys died in 1703, John Evelyn commented that he was a very worthy person "none in England exceeding him in the knowledge of the navy in which he had passed through all the most considerable offices . . . all of which he performed with great integrity."

The Navy Office, where Pepys lived and worked, was in London's Seething Lane, just behind the Tower. Although it escaped the Great Fire of 1666, it burned down seven years later.

In administration, there had been several ups and downs. In Stuart times, in the early 17th Century, swindling and corruption had become almost unbelievable. Cromwell's stricter rule, followed by the honest dealing initiated by the diarist Samuel Pepys as Secretary of the Navy, pulled it out of that slough; but fraudulent practices erupted again, in a rather less outrageous way, in the 18th Century. The Navy's efficiency at sea, in every age, reflected the spirit and standards of life ashore. It was always at its best in war, and in peace was always neglected and often neglectful: perhaps all navies have always been the same.

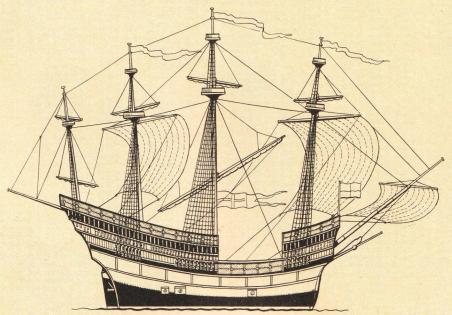
When the 19th Century began, the Navy was fighting its greatest war and had reached a higher peak of efficiency than any navy had ever achieved before. Napoleon learned this to his chagrin. "If it had not been for you English," the defeated Emperor said to the Captain of the *Bellerophon* at dinner that day in July, 1815, "I would have been Emperor of the East; but wherever there is water . . . we are sure to find you in our way."

Both statements were true. Napoleon's ambition for conquest had been worldwide; but at Trafalgar, ten years before, Nelson had driven him off the seas and confined him to the mainland of Europe and the western edge of Asia. And Napoleon himself, in the course of his campaigns, had suppressed all the former rivals of the British Navy, or dragged them down with him: the Dutch, the Spanish and the French themselves – all except the United States of America. So he had created a vacuum of power at sea which only the British could fill; and in doing so - a curious irony - he himself had cleared the way for the British to expand and cement their Empire.

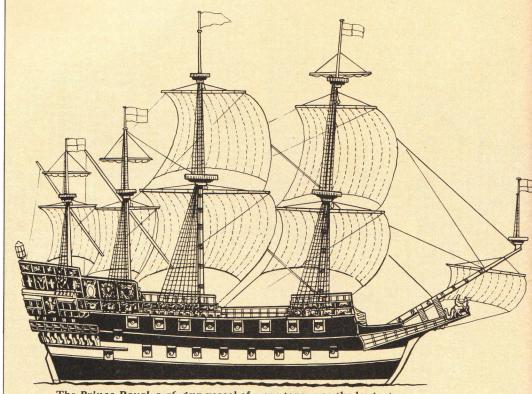
For that, of course, was one use the British made of their century of sea supremacy. But it was not the only one. They also used it to make the sea safe and free for the trade of every nation, including their recent enemies. The Navy put an end to piracy and almost all the slave-trade; and it also studied the sciences of the sea, surveyed all the coasts and oceans of the world, and published its findings for the use of every seafarer. On the day Napoleon surrendered, the role of the Navy abruptly began to change, from fighter to peace-keeper,

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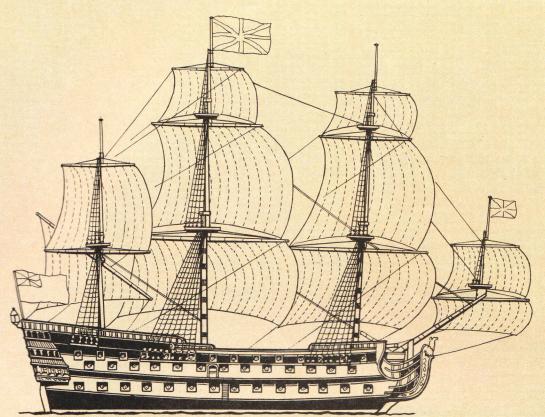
SIR FRANCIS DRAKE could have climbed aboard a ship of the line in 1850, weighed anchor and sailed away, for in 250 years there had been almost no basic change in fighting ships. The two most important modifications had been initiated in the 16th Century: a broadside battery of "grete yron gonnes" was first placed behind gunports under Henry VIII, and the medieval "castle" superstructure began to die out in Elizabeth's reign.



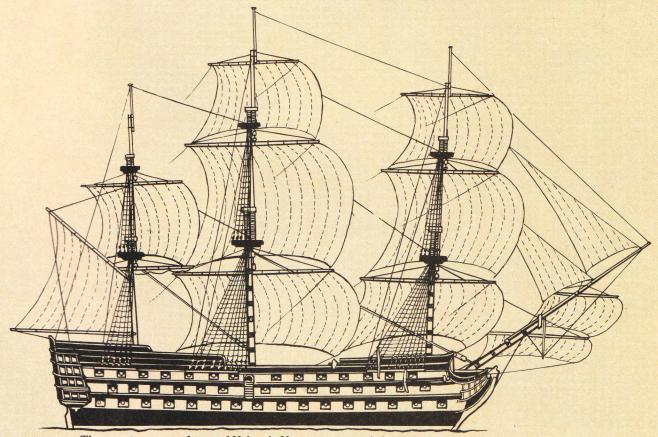
Despite her cannon, Henry VIII's *Great Harry* was really a floating medieval fortress from whose towering forecastle and aftercastle archers could pour down arrows just as they did in sieges on land.



The *Prince Royal*, a 56-gun vessel of 1,200 tons, was the largest ship in the world when she was launched in 1610. Like many ships in the Jacobean Navy, she had a lavishly carved and gilded stern.



Mid-18th-Century warships were longer and had fewer masts than their predecessors. The forecastle survived only in name while the vestiges of the aftercastle had become the quarterdeck and poop.



The 100-gun man-of-war of Nelson's Navy represented the ultimate evolution of the wooden warship. The finest achievement of the age of fighting sail, she ruled the waves until well into the 1850s.

MAX

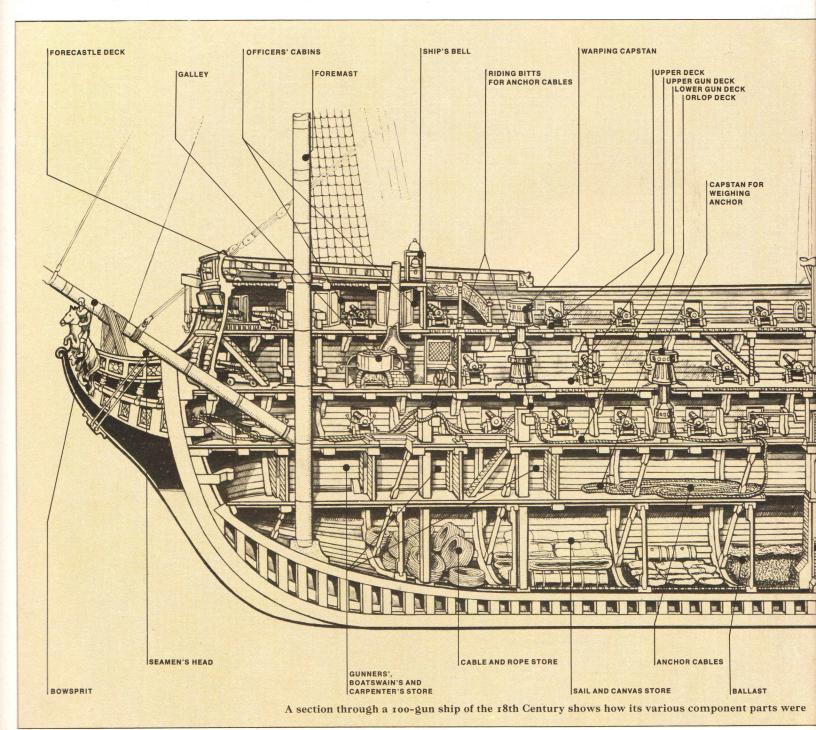
from conqueror to policeman and scientist.

The Navy's new role was the only thing in that century which remained the same. Every other aspect of seafaring changed completely. The century started with wooden sailing-ships that had scarcely altered since they fought the Spanish Armada. It ended with steamships, steel armour, explosive shells and long-range guns, torpedoes, mines and submarines. Looking back on it now, historians are apt to say the Navy was far too slow in accepting all these inventions — that it was too self-satisfied and rested too much on the Nelson reputation.

There was some truth in this accusation. The great inventions of steam and iron ships were made for the Merchant Navy, and only accepted with open reluctance by the Navy itself. And advances in armament were mostly made by other nations, especially the French in the latter part of the century: the British Navy's advances were mostly made in defence against some novelty the French had introduced. But again looking back, there is one answer to this criticism: that the Navy did succeed completely, all through the century, in the role the nation's policy had given it. And there were some argu-

able reasons at the time for resisting change for the better.

One of those reasons was that the fighting ships of Nelson's day had existed so long. Two hundred years of thought had gone into perfecting every detail of their building and design, and the technique of sailing and fighting them. They had been tested in war after war, and in the early part of the century it was very hard to imagine they could be much improved. Admiral Collingwood, who was Nelson's second in command at Trafalgar, always took acorns in his pocket when he went for country walks at home, and



scattered them in the hedges to grow into oaks for building naval ships a century later. And that was not mere eccentricity: to everyone, the wooden Navy seemed eternal. It was logical enough, in 1815, to think that the ships that had won a world-wide command of the sea were the best of ships to keep it.

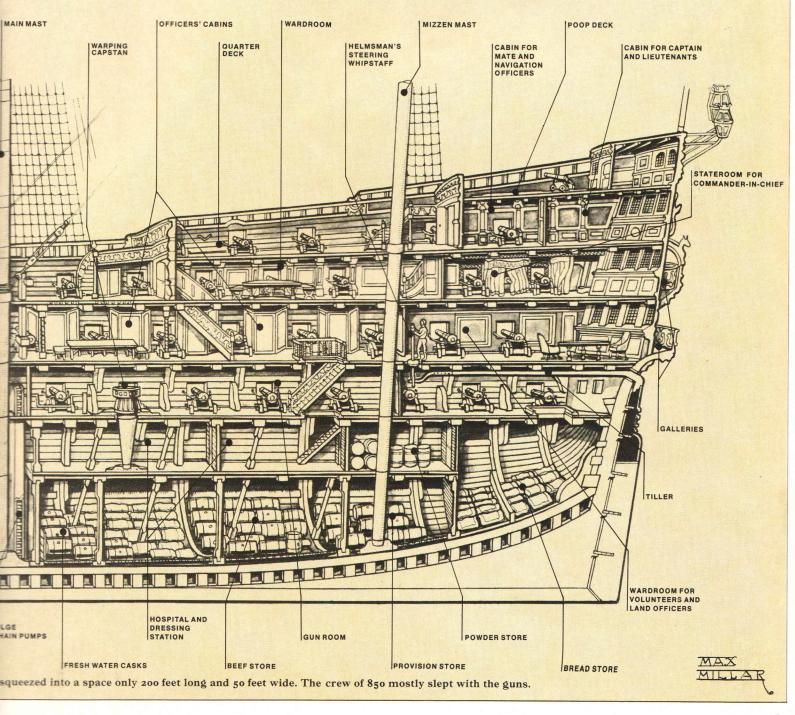
The Navy's new work needed far fewer ships and men than had the war that had ended. In 1815, there were over 700 ships in commission, and 140,000 men; three years later, there were only 130 ships and 19,000 men. The men were simply discharged ashore when their ship's com-

mission ended, and most of them were delighted to be free. If they were still in good health, they spent their pay and then drifted back to their jobs, largely as merchant seamen, fishermen or labourers on the land. But if they were sick or wounded, very little was done to help them, and in all the seaports of Britain, after the war, there were seamen reduced to the level of beggary.

All those who remained in the Navy were volunteers, and that fact made a basic difference in the sailor's life. The press-gangs, which had used force to man the wartime Navy, came to an end in 1815

and were never used again. So did the system of sending minor criminals to the ships instead of prison. The unwilling men those methods had put into ships had always been a nuisance to better seamen – they were notoriously dirty, thievish, ignorant and clumsy. But now, a man knew all his shipmates were there because, for one reason or another, they wanted to be. The comradeship and pride of life at sea began anew.

It would be pleasant to say that the Navy's tradition of drastic punishment vanished as soon as the pressed men had gone. It could have, but it only happened



slowly. Flogging, running the gauntlet and other such customs, had already begun to decline through the influence of Nelson and his friends, who firmly believed in commanding by affection and respect. But there were still a few captains in the fleet - bad-tempered, sadistic, or afraid of the mob of men they had to keep in order – who had men flogged for very little reason. Strictly speaking, indeed, flogging has never been abolished in the Navy: it was only "suspended" in the 1870s. But in the first half of the century, a series of regulations brought it under control, and crews were not entirely left to the whims of their captains.

Shore-leave was another benefit that slowly came into the peacetime sailors' lives. In the war, the Navy had always been afraid of desertion, and men were hardly ever allowed on shore: once hustled on board a ship, they stayed in it for years, and in place of leave, cargoes of prostitutes were brought on board whenever a ship was in port. Even after the peace, no man was entitled ever to set foot on land, but captains began to grant shore-leave, and to find that if most of the men came back dead drunk, they did at least come back. And increasing numbers of trusted men were allowed to take their wives to sea: an Admiralty order with a charming turn of phrase, merely said that no ship was to be "too much pestered" with wives. Sometimes, there were far more on board than anyone knew: one ship, on passage up Channel, ran on to the Royal Sovereign shoal, and several hundred women appeared from every corner of her, manned the pumps and saved the ship from sinking.

And food began to improve - though again, the improvement was much slower than it could have been. It had always been plentiful: there was far more to eat in the Navy than most people could afford ashore. It may have been true that the meat, packed in wooden barrels of brine, could sometimes be carved and polished like mahogany, and that buttons made of naval cheese wore better than metal or bone. But still, the weekly ration was filling: seven pounds of biscuit, six pounds of pork and beef, 12 ounces of cheese, three pints of oatmeal, two pints of pease, six ounces of butter and six ounces of sugar. And on the one day in the week when meat was not issued, each man got the makings of an enormous plum duff: four pounds of flour, II pounds of raisins and half a pound of suet.

At this time, too, came the greatest of all improvements in seamen's food – the invention of bully beef in tins. This, like so many other things, was a French idea, and its name was the British sailor's version of *bœuf bouilli*. It was made in England at the Dartford Iron Works, and began to appear in ships in 1813.

Another benefit to sailors, oddly enough, was a deprivation. For several generations, they had had a daily issue of a gallon of beer and half a pint of rum, diluted with half a pint of water. It was an enormous amount of alcohol, and everyone knew it was far too much: it turned seamen into alcoholics, and drunkenness was the cause of most of the punishments at sea, especially among the men who illegally saved their rum for days and then had one tremendous party. And it was probably the cause of most of the destitution when seamen were discharged. It had come to be regarded as a sacred right, and during the war the Admiralty had not dared to cut it down. But in 1824 the rum ration was halved and tea and cocoa were issued instead; and to everyone's astonishment the seamen only grumbled for a little while, and then began to admit they felt much better for it. In 1850, it was halved again.

the rum were not the central part of naval life; the central part was still the working of the ship, and that was as tough as it had always been — four hours on watch and four off, month after month; working aloft in storm and rain and snow; living below in every climate of the world, on incredibly crowded decks with no heating and little ventilation. The only thing that had gone from the sailor's life with the end of war was the chance of a battle, and life was duller without it.

Men often looked back on the war with regret – they called it the "Shooting Season." For battle, after all, had not been so dangerous as it looked: at least ten times more men had died of disease and accident in the war at sea than had ever been killed in battle. And battle had

brought with it the glorious gamble of prize-money, which was paid to any ship's company that captured an enemy ship and brought it home. The seaman's share had always been a very small proportion: a lucky fight could make a captain rich for the rest of his life, yet only give each of his seamen about enough cash to get drunk on. Still, every seaman in wartime had had the excitement of hoping to win a fortune. They never forgot the famous occasion when two British frigates happened to capture a ship that was laden with treasure, and each seaman's share came to nearly £500 - much more than a lifetime's pay – and the glorious party there had been in Portsmouth afterwards, when men expressed the feeling of being incredibly rich by buying gold watches and frying them. Nothing quite so good could ever happen in peace.

Yet the seamen of this time – from 1815 onwards – had a tremendous pride in their calling, and in the Navy's work, and especially, if they were given a chance, in the efficiency and elegance of their own ship. Every seaman, all through the century, had a bit of Nelson in him; and ashore, he enjoyed a bit of Nelson's heroic reputation.

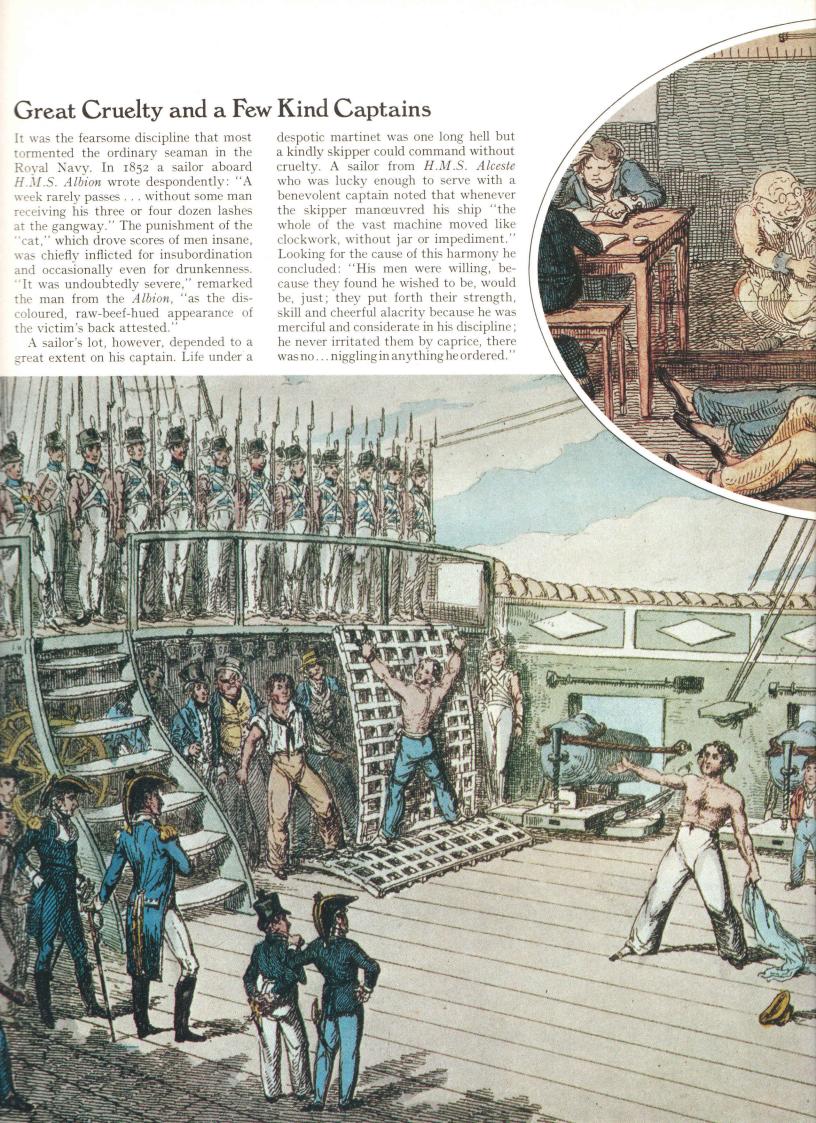
If life in peace was dull for the seamen, it was duller still for the officers. Seamen were paid off at the end of the war, and they signed on again if they wanted to: but officers had started at sea when they were ten or II to make a life's career of the Navy, and there was no way to make them retire. Three years after the war, when the Navy was down to I30 ships and I9,000 men, it still had nearly 6,000 commissioned officers. Four out of five of them were living ashore on half pay with nothing to do, and very little chance of getting a ship again.

Naval wardrooms have always had toasts of their own, and one of them was "Bloody war and quick promotion." In the 30 years after Napoleon's war, naval officers suffered from the opposite: no war and no promotion. The upper ranks became blocked by ageing men. It was a situation that grew depressing, inefficient, and finally fantastic; but the only people who could have changed it were the ageing officers themselves, and they were not likely to suggest a reform that would have lost them their easy living \$\frac{\psi}{2}\$





Very few sailors in the late 18th Century actually volunteered to join the Royal Navy. Life in a man-of-war was so appalling that the great majority had to be seized by ferocious, cudgel-wielding press-gangs (above), knocked senseless and thrown aboard ships that needed a crew. Though conditions improved with the passage of time, the "jolly Jack Tar" remained largely a figment of public imagination. A mid-Victorian sailor might well have echoed Samuel Johnson's acerbic comment: "No man will be a sailor who has contrivance enough to get himself into a jail."





AVariety of Visitors

Whenever men-of-war arrived in port, pedlars and prostitutes rowed out to meet them. Their crews, denied shore-leave and often flush with prize-money, awaited the visits eagerly. Few could resist the trinkets in a pedlar's tray and then, their pockets stuffed with penknives and cheap watches, they chose women and took them below.

An admiral who witnessed the ensuing scenes wrote indignantly of the "dirt, ing; the riots, quarrels, and fightings which often take place, where hundreds of men and women are huddled together . . . witnesses of each other's activities."

It was not all debauchery. Sweethearts visited their lovers aboard ship and wives of the more trustworthy sailors were even allowed to go to sea. One woman who accompanied her husband aboard H.M.S. Tremendous gave birth to a boy just









II. The Coming of Steam

nless an officer had exceptional private influence, promotion was entirely a matter of seniority, of waiting for older men to die; and in peacetime, they stubbornly failed to do so. Half-way through the century, there were lieutenants more than 60 years old in the Navy, and a man could suddenly be promoted captain or admiral when he had not been to sea for 30 years.

When the Crimean War began in 1854, more ships were brought into commission and the age of officers commanding became farcical. The Commander-in-Chief Plymouth was 81; the Commander-in-Chief West Indies was 79, and applied for the more active war command of the Baltic. But that command was given to Sir Charles Napier who was only 68, while Sir James Dundas in the Black Sea was 69. The Commander-in-Chief appointed to the China Station at the same time had been "on the beach" for 31 vears: he started by cancelling all shoreleave (there had been none in his day) and quelled the resulting mutiny by sending his officers below with drawn swords.

These were the men who had had to drag the Navy into the Age of Steam: no wonder they were slow. Steam had already started before Trafalgar: the first steam-tug, the Charlotte Dundas, was towing barges on the Forth and Clyde Canal in 1801. Others followed during the war, in Britain, France and America; and within a couple of years after Napoleon's downfall, a steam passenger service was started from Brighton to Le Havre. About the same time, the Admiralty hired a few tugs to tow ships out of harbour in contrary winds. But the thought of using steam in a warship was a very different matter. In 1828 the First Lord of the Admiralty, Lord Melville, made a famous statement: "Their Lordships feel it their bounden duty to discourage to the utmost of their ability the employment of steam vessels, as they consider the introduction of steam is calculated to strike a fatal blow at the supremacy of the Empire."

Perhaps this was not quite so absurdly reactionary as it looks in retrospect. There were arguments against steam – four in particular. Firstly, it was still much less reliable than the wind. Secondly,

paddle-wheels were vulnerable, and would get in the way of the broadside of a fighting ship. Thirdly, if the Navy, with its world-wide mission, relied on steam, it would have to set up world-wide coaling stations, and defend them. And finally (an illogical argument), the Navy had a fleet of sailing-ships that was far more powerful than anybody else's, so why should they encourage a new idea that might make their own ships obsolete?

None of these arguments, of course, could stand against technical progress. In 1836, a new invention demolished the second of them. This was the screwpropeller. It was fitted with great success in the early 1840s to the passenger liner Great Britain. The Admiralty had to admit that a warship with a propeller - if it could really be proved to work - could carry the traditional broadside armament; and they built a small screw-driven sloop, which was named the Rattler. In 1845, they tested her against a paddlesteamer of similar power and size, ending up with a tug-of-war, with the ships lashed stern to stern. The Rattler won, and towed the paddle-steamer backwards.

By 1851, exactly half a century after the *Charlotte Dundas*, the Navy gave up its opposition to steam. New warships after that were designed with engines, and some of the old ones were fitted with them too. But still, they were sailingships; the engines were only used in leaving harbour and, as a last resort, when the wind fell calm.

Even then, most naval officers, or at least the old ones, still detested steam. They had fought it with practical arguments, but at the back of it all was the thought that steam was dirty, inartistic and ugly. When the peace began, much of the Navy's time and energy had been put into spit-and-polish. Some captains took it too far – it was said some had their cannon-balls polished – and some landsmen made fun of it, like Gilbert in *H.M.S. Pinafore*, whose admiral had started life polishing the door-handle of an attorney's office:

I polished up that handle so carefullee That now I am the Ruler of the Queen's Navee!

Nevertheless, it has always been part of a sailor's pride to have things shipshape. And another part of their pride was to handle the ships with perfect artistry. Napoleon noticed it, on board the *Bellerophon*. In a French ship getting under way, he said, everyone shouted at once. But in any good British ship, with the two words "make sail," the mooring



was dropped and the sails unfurled in silence, because every man knew exactly what to do.

That precision and artistry were more important in peace than they were in war, for the Navy's task was not to fight other nations, but to impress them, to "show the flag." It was the primary business of a ship in a foreign port to look immaculate, seamanlike and utterly confident.

What place had steam in all this, the naval officers asked. The answer was provided by the Crimean War in the 1850s. There was no naval opposition, but the ships with propellers were far more useful than the ones without; and while supporting the Army ashore, the steamers could keep out of the way of shore batteries. Sailing-ships, on the other hand, were ideal targets during a calm. And the same war taught another unwelcome lesson: that great ships of the line, impressive though they were, were not of much tactical use when no other navy had them. Their draught was too deep: there were many shores and harbours they could not approach, and small vessels could escape them by making for shallow water. From the problems of that war, in the Black Sea and the Baltic, a new naval concept came: the small steamgunboat. And for the next 50 years, "Send a gunboat" became a well-worn phrase in British diplomacy.

There have always been officers who prefer small ships, from Francis Drake right down to the modern commanders of motor torpedo-boats. In the Victorian Navy, the gunboat gave that kind of officer his chance. At last, after 40 years of stagnation, young men had a prospect of independent adventure and command. And they made the best of it.

Gunboats evolved, like everything else, but all of them were 100 to 120 feet in length, with engines from 20 to 60 horsepower, three masts and a full rig of sail. And there was another type, known as a "gunvessel," that was rather bigger. The idea was to put the largest possible gun in the smallest possible ship, and the early ones carried a 68-pounder forward, a 32-pounder aft, and two 24-pounder howitzers amidships. There were 30 to 40 men in the crew, and when they went into action all the officers and men, except the lieutenant in command and the stokers shovelling coal, were either manning the guns or passing up ammunition; and even so, they could not fire all their guns at once. Most of the space below was filled by the engine, boiler, bunkers and magazines; accommodation for the crew was minimal. A tall officer, it was said, had to

shave with his head sticking out of a skylight and the mirror propped on deck. Nearly 200 of these ships were built in 1855 and 1856, in the rush of the Crimean War, and they were still being built in 1900. During all that time, they were a basic part of the structure of the Empire.

Gunboats were seldom offensive weapons, although they sometimes supported the Army on its campaigns - up the Nile, for example, or up the rivers of China. For the most part, all over the world, they were the equivalent of the policeman on his beat; and all over the world, people in any alarming situation asked for their help and protection. British traders especially, caught up in riots or revolutions in distant countries, sent urgent requests for gunboats; so did colonial governors, consuls, chargés d'affaires, and even foreign rulers. In one year, for example, 1858, such requests came from New Zealand (to help fight the Maoris), Panama, the Kuria Muria Islands (to protect the guano trade), Honduras (over a border dispute with neighbouring British Honduras), Siam, Brazil (to threaten slaves), Sarawak (to fight pirates), Alexandria (as part of British efforts to stop the French building the Suez Canal), Vancouver (because of the excitement of a gold-rush), Vera Cruz, Morocco and the fishing-grounds off Newfoundland; and every one of these farflung requests was granted.

More specific demands were to investigate a murder in the New Hebrides, to help Dr. Livingstone on the Zambezi, to demand the release of British prisoners in Sierra Leone and in Formosa, and to visit Jeddah "on account of an outrage." Even the British Museum and the Archbishop of Canterbury asked for gunboats – the first to protect an archaeological dig in Cyrene, and the second to look after missionaries in trouble in Borneo.

The gunboats were effective simply because they could turn up wherever there was any trouble. They did not often fire their monster guns. The sight of the ship, the guns and the British ensign, sailing into a roadstead or a river-mouth with a conscious air of nonchalant rectitude, was enough to discourage most troublemakers. It was a threat, or a promise, of power, a reminder that the British were keeping an eye on things – the growl of the lion **

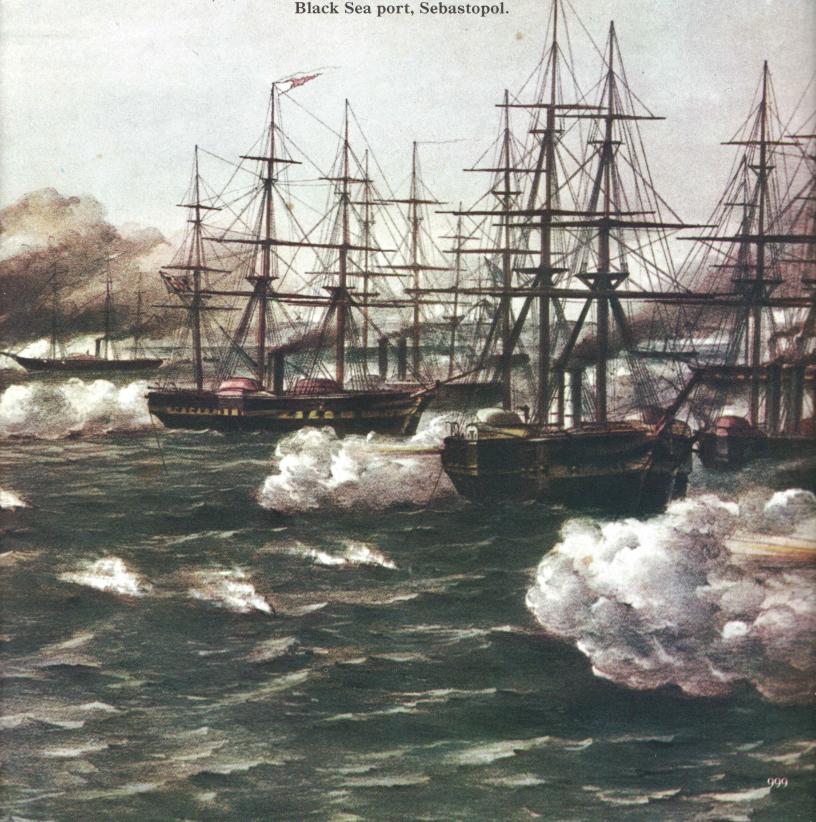


The Alecto, paddle-wheels thrashing the sea, hauls at the screw-vessel Rattler during a test of strength between propeller and paddle in 1845. The Rattler won easily.



THE NAWY IN THE CRIMEA

In the century after 1815 the Royal Navy's chief roles were bombarding enemy cities and landing sailors to fight alongside the Army. In the Crimean War against Russia in 1854 it did both. To protect Britain's ally, Turkey, from Russian landings, a large fleet sailed through the Dardanelles and into the Black Sea. It quickly established its supremacy in the area, blockading ports, bombarding towns like Odessa (below), and providing sailors to man gun-batteries above Russia's key



Odessa SEA OF AZOV CRIMEA Sebastopol BLACK SEA DARDANELLES SEA DARDANELLES

Russia's Black Sea ports of Odessa and Sebastopol were the prime targets when the British Navy, unchallenged by the cowed enemy fleet, bore troops to the Crimea.

Soldier Sailors

The Royal Navy landed over 1,000 blue-jackets in the campaign to take Sebastopol, home of Russia's Black Sea Fleet. While some tars helped unload ships most dragged guns up to the plateau overlooking the town and either assisted the Army gunners or formed gun-crews and worked the weapons themselves. Batteries manned entirely by sailors worked on a watch system as at sea, four hours on duty, four off.

The sailors brought an exuberant gaiety to the batteries. Quite oblivious to enemy fire they would spring on to the protective sandbags surrounding the guns to see the damage wreaked by their salvoes – often speeding the shot on its way with cheers and oaths. As a result, many a sailor was picked off by Russian snipers.

Furious daily bombardments slowly brought the town to its knees and in September, 1855, after the heaviest barrage of the entire war, the Russians' nerve broke. They set fire to the town and fled. The following year the war ended.





III. Unwieldy Guardian of the Pax

he young men who commanded the gunboats were often thousands of miles away from their senior officers, and British policy put a great responsibility on them. Single-handed, they had to weigh up a local situation, judge who was right and who was wrong, and decide whether tact or a salvo of shells was needed.

The power they carried did not seem to worry the young lieutenants, but it did worry the Admiralty and the Foreign Office, and gunboat commanders were often told not to exceed their orders and not to involve themselves in politics – which was easier said than done.

Very occasionally, things went badly wrong: for example, in Jamaica in 1865, when the British Governor, Edward Eyre, declared martial law in a riot and appointed a gunboat commander named Herbert Brand as President of a Court Martial. Brand was only 26, he had no books of law on board and nobody to advise him; and he broke all the rules of the administration of justice and condemned 177 civilian negroes to be hanged.

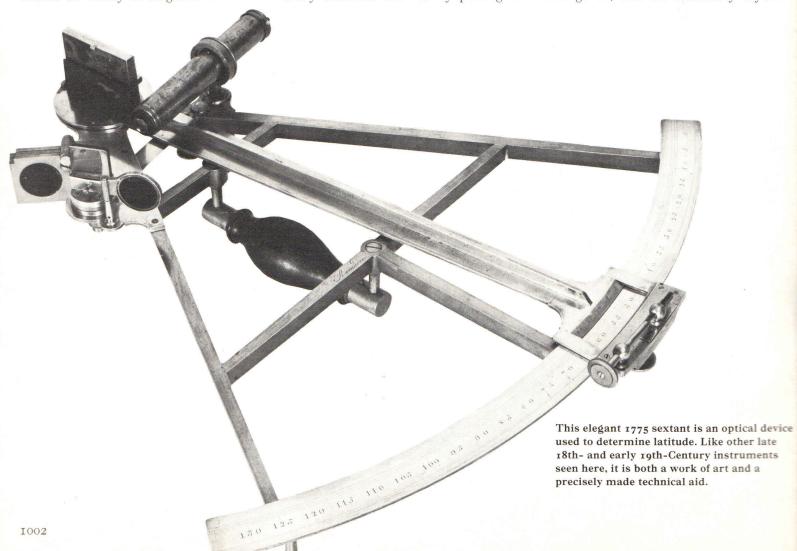
But that was the exception, and it caused an outcry in England. Gunboat

diplomacy on the whole, in its 50 years of life, unquestionably did more good than harm. Of course, it put British interests first - not principally British conquests, but British trade. But it often went far beyond that, to sort out troubles where Britain was scarcely involved at all – to support a local ruler whose régime was peaceful, to oppose a movement that offended British ideas of law or morality, to protect a lawful person against lawlessness whatever his nationality. Perhaps it was arrogant – some Victorians said so – but to most British people at the time it seemed a duty, one of the obligations of wealth and power. And although some people of other nations sometimes resented it, especially in France and the United States, most of the world appeared to be content, for most of the time, to let the British Navy carry on with its laborious and almost thankless chore, and to reap the benefits of it.

To confer world-wide benefits, no less than protect the freedom and safety of the sea: that was the primary British interest, and also the interest of all seagoing nations. One way in which the Navy achieved this was by putting an end to piracy. Pirates had existed ever since men went to sea: the last of them were hunted out of their lairs by British gunboats in the 1860s. The Navy also put an end to the slave-trade at sea, by years of patient and dangerous patrols off both the coasts of Africa and in the Persian Gulf and the Caribbean.

And the policy that the sea should be safe meant more than suppressing human malefactors: it meant also helping ships to avoid its natural hazards. British naval survey ships produced charts and sailing directions for all the seas of the world that were far better than any others, even where others existed. That was a huge undertaking, so expensive that nobody else could have done it, and the fund of information they collected might well have been treated as a naval secret; in war, it would have been priceless.

But war at sea seemed inconceivable, and the British Admiralty charts and pilots – the volumes of sailing directions – were published for anyone to use. They still are. Some other nations since then have made their own, but the original British surveys are hard to beat. They still go on, and the Admiralty Hydro-



grapher meticulously keeps the charts up to date with the help of all the electronic gadgets used by modern surveyors. But many of the charts are still based on those that were drawn by Victorian officers. These men crossed and recrossed every ocean in primitive steamships, sometimes under sail, observed the sun and stars, sounded with machines that used a lead and line, landed with infinite patience on every rock and reef and were rowed into every creek and harbour.

The sea now is safe from pirates, slavers, uncharted rocks and unpredicted currents. Everyone takes it for granted that ships of every nation, in times of peace, can go unmolested on it wherever they wish. But that is not an ancient freedom, it is a legacy of the century when the British said it should be so.

In the second half of the century, the British began to take a romantic pride in the Navy, to show a sentimental affection for it that the Army never shared in quite the same degree. It was a great age for naval songs and poems — not sailors' songs, which might have been considered coarse, but songs that glorified sailors. "The Old Superb," "Drake's

Drum," "Admirals All," "Land of Hope and Glory," "Rule Britannia": gentlemen sang them at musical evenings in ladies' drawing-rooms, and humbler men in pubs, and everyone joined in choruses that could bring tears to their eyes.

In sober fact, the British were beginning to delude themselves about their Navy – to think the British, in some special way, had the sea in their blood, and that British sailors by nature were the best in the world, and always had been. Britannia seemed to have ruled the waves so long that they came to believe she had always ruled them in the past, and always would in the future:

When Britain first, at Heaven's command,
Arose from out the azure main,
This was the charter of the land,
And guardian angels sung this strain:
"Rule, Britannia, rule the waves;
Britons never will be slaves."

It was an old verse, but they gave it a new lease of life; it was a call to greatness, but it was taken as a statement of historical fact. As such, it was nonsense. Britain in fact had been a late starter as a maritime power; her prowess at sea only dated back to the defeat of the Spanish Armada, and most of the other nations of Europe had had their turn of dominance at sea before her. And between the Armada and Napoleon's downfall, Britain's power had often been challenged – by the Dutch, for example, in the 17th-Century wars, and the French before Trafalgar, and the United States in the War of Independence and the War of 1812. Historically, Britannia's selfappointed task did not go back far.

And as for the future, it was dangerous nonsense. The British began to have blind faith in the Navy's invincibility, and the blind faith infected the Navy too. It seemed unthinkable that the Navy of Nelson could ever be defeated. But towards the end of the century, the Navy's supremacy rested more and more on bluff, a hollow self-confidence with no real power, or not enough, behind it. And it is the nature of a bluff that somebody sooner or later will call it.

But meanwhile, popular admiration improved the sailor's lot. People outside





the Navy began to take an interest in the way it was run. No sailor likes to be told what to do by landlubbers, and the Admiralty was as touchy as ever at anything that looked like criticism. But the public interest made it take a new look at its own administration. A Royal Commission on Manning the Navy was set up in 1858, and its work went deep. As a result, the use of training-ships was started. Hitherto, a young volunteer had had to learn the ropes affoat in a warship, and risk a flogging if he was slow to learn. Now, boys were taught seamanship and sometimes gunnery, and given some general education, before they joined.

Just as significant was the introduction of continuous service for seamen. For hundreds of years men had signed on in a specific ship for a single term. Now, they signed on in the Navy, and a ship was always found for them – sometimes they were allowed to choose their own. So the Navy became a steady career for seamen, with a pension at the end of it. Pay was increased, and new ratings with extra payments were introduced, so that a skilful seaman could be reasonably prosperous. And a system was also found at

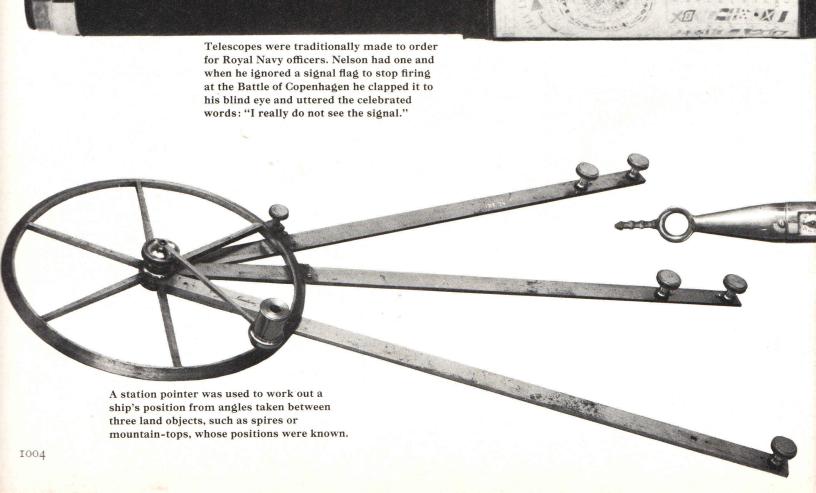
last for pensioning off redundant ancient officers. All this gave the seaman's job a new kind of dignity.

So did another thing, the introduction of uniform in 1857. It is a mystery why the Navy had resisted the use of uniform so long - except that it always resisted change of any kind. Soldiers had had uniforms for centuries, often garish and always designed to make a man feel braver and more virile than he was. They had been recommended in the Navy for at least a hundred years, especially by naval doctors who knew that men who came and lived on board in their own dirty clothes brought lice and typhus with them. Pursers in naval ships sold clothes to the seamen from their slopchests, and they were more or less standardized, but men had to pay for them, and when they were broke they wore what rags they had.

The new uniform was designed by an Admiralty Committee, but it followed the fashion that sailors had made for themselves. It was much the same as it is today, except that it included a black canvas hat and, in addition, a wide straw hat for the tropics. The Navy has always

liked to think that the black silk scarf was a sign of mourning for Nelson, and that the three rows of tape on the collar represented his three great victories, the Nile, Copenhagen and Trafalgar. But the Committee does not seem to have had that romantic idea. The black scarfs had been in fashion long before Nelson's time: men tied them round their heads when working the guns, to protect their ears and keep the sweat out of their eyes. And as for the tapes, the Committee only decided on three rows because some members wanted two and some wanted four. But still, generations of sailors have worn these things as emblems of Nelson, and the tribute is sincere, if unofficial.

The uniform had none of the Army's peacock gallantry, but it was certainly distinctive, something the sailor at last could "cut a dash" in. Any man who swaggered into town in it was assumed to have a character to match – intrepid at sea and devil-may-care ashore. By the end of the century, the music-halls added their songs to the sailor's new and glamorous reputation. "All the nice girls love a sailor": that at least was an image a sailor was glad to live up to.



In the end, it was not in the quality of its seamen or its officers that the Navy lagged behind; it was in the design of its ships and armament. It was not surprising. For generations, the Navy had been designed to keep the peace, and the peace looked everlasting. It could not give all its attention to that and still be prepared for war. British seamen may not have had quite the heaven-sent skill of the patriotic songs, but they were certainly good, and there was something peculiarly British about the finer arts of naval seamanship. But seamanship could not win if a hostile power appeared on the sea with faster ships and guns of longer range; and that was what happened.

The French were the principal pace-setters in design, with the United States sometimes taking a part when she was not too preoccupied with her own expansion to the west. The competition with France went back as far as 1848, when the French launched the first line-of-battle ship that was designed for a steam-engine. She was ominously named the *Napoleon*. The British made their counter-move two years later with the *Agamemnon*. But the *Napoleon* could and

did make voyages under steam alone, and reached a speed of nearly 14 knots; the *Agamemnon* was no more than a sailingship with a small auxiliary engine, and could only be distinguished, at a glance, from a ship of a hundred years before by its narrow funnel.

The next move was in the late 1850s, when the French replaced solid cannonballs with explosive shells for naval guns, and also built the obvious corollary: an armour-plated ship that could withstand them. This was the Gloire, launched in 1859; the British replied with their first ironclad, the Warrior, which had four and a half inches of wrought iron on a backing of 18 inches of teak. And it was the same with guns. Both navies started breech-loading guns at about the same time, but the French mechanism worked and the British one did not; it so often burst and injured or killed its crew that the British went back to muzzle-loading for another 20 years.

Larger guns had longer range and far more hitting power, so that a few large guns became better than a mass of small ones. That meant putting them in revolving mountings on the centre-line of the ship, instead of in the broadside gunports that had been used since Henry VIII. And that in turn meant that the masts and rigging of a sailing-ship restricted the arcs of fire. The daring answer to this was to get rid of the rigging and rely on steam alone. The United States took this step with the Monitor in 1862. But she was not really a seagoing ship, and the British could claim the first battleship in the world without any sail: the Devastation of 1873. She was a product of fierce controversy, and a rather more orthodox rival, the Captain, was launched the same year. She had armour, steam, centre-line guns and a full rig of sail. But she also had the low freeboard that the heavy guns demanded, and she overturned and sank in a storm in the Bay of Biscay, and took her designer down with her. That disaster was the final end, after so many centuries, of the battleship under sail.

So it went on. It was the French again who first made steel armour instead of iron, followed ten years later by the British. In retrospect, one would think the British were lacking in inventiveness. But that was certainly not the trouble: Britain led the world in mechanical

continued on p. 1008







invention, even at sea, with the single exception of developments in warships. The trouble was that the Admiralty still behaved, with all these new ideas, exactly as it had with steam: it wanted to shut its eyes to anything that threatened to make its huge fleet obsolete.

The most striking case of this attitude was in the history of the submarine. The early submarines were American, and they began - under manpower - a surprisingly long time ago. One at least was used in the War of Independence in 1776; and in 1804, a year before Trafalgar, another was offered to the British by Robert Fulton, the American inventor who built some of the earliest steamships. The First Lord of the Admiralty, Lord St. Vincent, rejected it - not because it would not work, but because it might. The Prime Minister, he said, was "the greatest fool that ever existed to encourage a mode of warfare which those who commanded the seas did not want and which, if successful, would deprive them of it." Submarines continued to exist, but the Admiralty continued for nearly a hundred years to pretend they did not, until the French built one in 1899 that could make ocean passages.

Torpedoes were another weapon the British would gladly have discouraged. In various elementary forms, they also dated back to the War of Independence, but the first that could steer itself under its own power was invented by Robert Whitehead in 1867. Whitehead was a Scotsman, but his invention was inopportune for Britain. It could be fired by a very small ship and sink a very big one - and Britain owned most of the big naval ships in the world. France, Germany, Russia and Japan all equipped themselves with fleets of small fast torpedo-boats: the British had to fit their battleships with small defensive guns, as an anti-torpedo-boat armament, and with cumbersome torpedo-nets that were rigged round the ships at anchor.

In the 1880s and 1890s, new ideas and inventions were coming so fast that a new naval ship could be obsolete before it was launched. Britain had formed a policy of maintaining a Navy at least as large as any other two navies in the world. But other navies grew, and a race in sheer numbers began. British yards turned out new battleships and cruisers at a hectic

speed. But they had an inherent weakness: most of them were designed to counterbalance some specific threat — a new arrangement of armour, for instance, to stop a new kind of shell. They were not designed as a coherent fleet to fit a strategic plan. There were far too many different kinds of ships, and of machinery, guns and ammunition; and training, store-keeping and maintenance had grown impossibly complex.

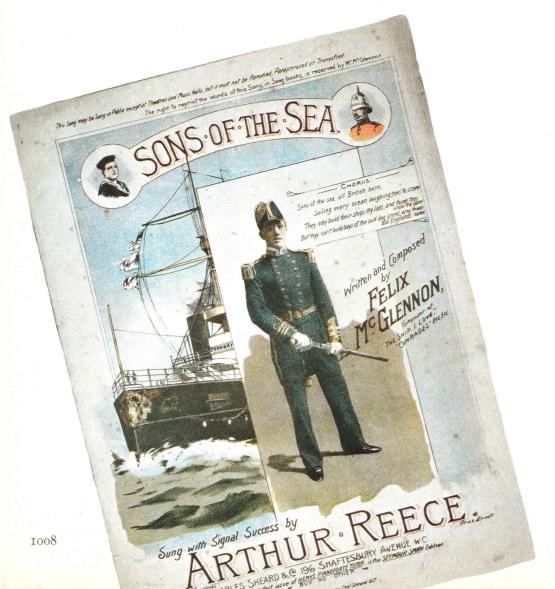
At the end of the century, the Naval Review at Spithead was a splendid spectacle and a source of pride to the nation – the line upon line of ships immaculate in appearance and faultless in ceremonial. But something was terribly wrong, and one or two people knew it. The truth was that if any other nation started from scratch and built a modern, smaller and more coherent fleet, most of the British ships would be useless against it. And in 1898 another nation began to do so: not any of Britain's traditional rivals, but a naval upstart – Germany.

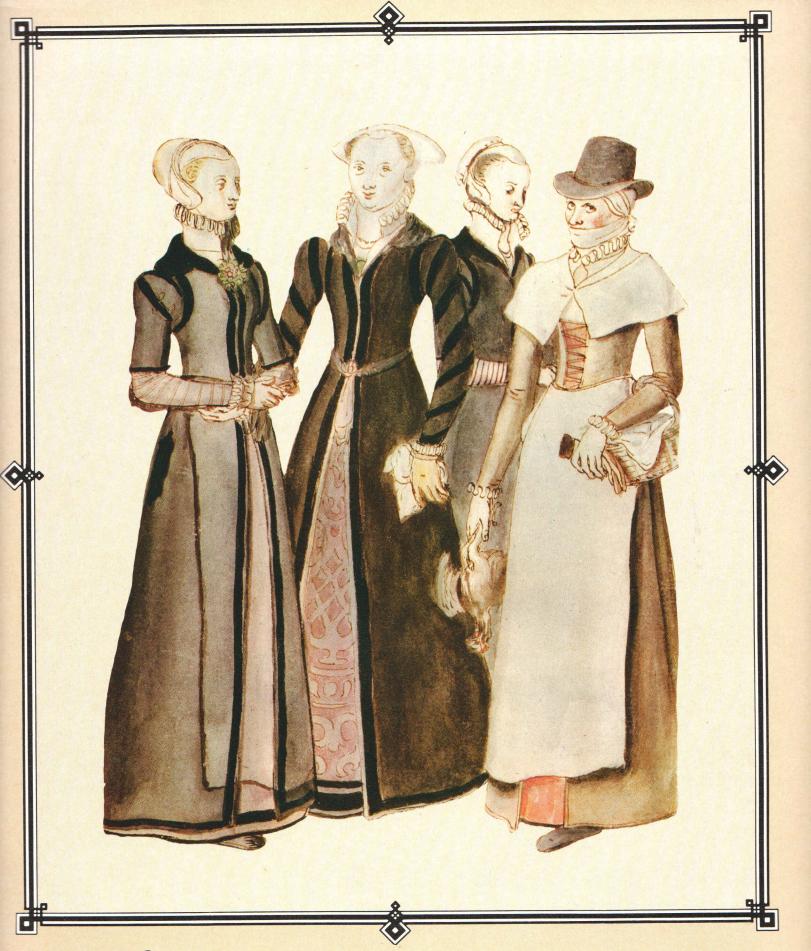
What the Navy needed was a man who was clear-headed and perfectly ruthless, and luckily it produced one: Admiral Fisher. In 1901, he became Second Sea Lord, and instantly began to show his power. The appointment made him responsible for personnel, and within two years he totally changed the Navy's training. He disregarded or trampled on opposition — there was plenty of it—founded the colleges for officers at Osborne and Dartmouth, extended officer training from 18 months to four years, scrapped the ancient training-ships for seamen and replaced them with schools ashore.

For a year after that, he was Commander-in-Chief Portsmouth. Then, in 1904, he came back to the Admiralty as First Sea Lord, which gave him the chance to be equally ruthless about the Navy's ships. "Scrap the lot" was his best-remembered phrase: he wrote it across a list of 154 ships, including 17 battleships. Then he produced worldwide strategic plans for the Navy's disposition, no longer as a police force, but in readiness for the war at sea that the Germans were seen to be planning. A new battleship was planned with ten 12-inch guns and turbine-engines, and the first of the class was built from start to finish in II months - the famous Dreadnought.

The storms he raised had blown away a century's dust and cobwebs. It was just in time to meet the challenge of 1914*

While this 1897 songsheet admits that other nations are building fleets to challenge the Royal Navy, it confidently asserts that no one can produce an equal of the British tar.





Elizabethan town and country women, 1574

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