The British Navy Book



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Cyril Field

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BY PAUL DANBY AND LIEUT.-COL. CYRIL FIELD, R.M.L.I.

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The British Navy Book

BY
Lieut.-Col. and Brevet Col.
CYRIL FIELD, R.M.L.I.

With Full-page Illustrations in Colour and in Black-and-White and Numerous Illustrations in the Text

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Publishers' Note

Just as this book was about to go to press an Admiralty Order was issued forbidding the publication of any text or illustrations likely to prove of service to the enemy. Proofs of *The British Navy Book* were submitted to the Admiralty, with the result that the book has been approved. Acting in accordance with instructions from the Lords Commissioners, we have substituted other illustrations for those more recent ships previously chosen to represent the Great War by sea.

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THE BRITISH NAVY BOOK

PROLOGUE

The Command of the Seas

(A.D. 1915)

"It may truly be said that the Command of the Sea is an Abridgement or a Quintessence of an Universal Monarchy."

SIR FRANCIS BACON.

It is a grey morning out on the North Sea, with but little wind. There is no swell, but considerable movement on the surface of the waters, with here and there an occasional tossing of the white manes of the sea-horses. Swimming majestically through the sea comes one of our monster slate-grey battle-cruisers. She is "stripped to a gantline", and in complete and instant readiness for action. The red cross of St. George flutters bravely at her fore-topmast head, for she is the flagship of the squadron of three or four towering grey ships that are following in her wake. Aft flies the well-known White Ensign, the "meteor flag of England" blazing in the corner. Far away on either bow, but dimly discernible on the wide horizon, are the shadows of other smaller ships, the light cruisers, which are moving ahead and on the flanks of the squadron like cavalry covering the advance of an army. On board is an almost Sabbath-day stillness, save for the wash of the sea, the dull steady whirr of the giant turbines far down below the armour deck, the periodical clang of the ship's bell, marking the flight of time.

Now and again comes a whiff of cooking from the galley. As the day advances the light grows stronger; gleams of sunshine send the purple shadows of masts and rigging dancing fitfully over the wide deck, which is practically deserted. There is the marine sentry over the life-buoy aft, look-outs aloft and at various corners of the superstructures, and the figures of the officer of the watch, signalmen and others are seen in movement up in the triangular platform dignified by the name of the "fore-bridge". Who would imagine that there are seven or eight hundred souls on board, seamen, marines, stokers, and many other ratings of whose existence and duties the "man in the street" is profoundly ignorant?



H.M.S. *DREADNOUGHT* FIRING

But look inside this massive gun-hood, from which protrude forty feet of two sleek grey monster cannon, each of which is capable of hurling 850 pounds of steel and high explosive a distance of a dozen miles. Grouped round their guns in various attitudes are the bluejackets forming their crews. They are tanned and weather-beaten fellows, but there is a strained and tired look about their eyes. Here in the confined spaces of their turret they have eaten, slept, and whiled away the watches as best they might for many, many hours. They have not had the discomforts of their khaki-clad brethren in their sodden trenches, nor listened to the constant hiss of hostile bullets and the howl and crash of "Jack Johnsons" at unexpected moments. But if they have been immune from these constant and manifest dangers, they have had none of their excitements. They have had the temptation to boredom, and the less exciting but always present peril of the dastardly German system of mine-laying in the open sea. Some are writing letters to chums, to sweethearts, and to wives. Others are killing time with the light literature that has been sent to the ship in bundles by the many friends of the fleet on shore. In one corner is a midshipman writing up his "log", and beside him sits the lieutenant in charge of the turret reading for the fourth time a much-folded letter he has taken from an inner pocket.

Look into the next turret and you will see a similar scene, the only difference being that in this case the guns' crews and their officer are marines, wearing red-striped trousers and "Brodrick" caps—the latter not unlike those of the seamen, but with

the corps badge in brass on a semicircular scarlet patch in front, instead of a ribband with the ship's name. In the casemates housing the smaller guns in the superstructures and on the deck below are similar though smaller groups. All are waiting—waiting.

We wend our way below. The clerks and writers are working in their offices, the cooks are busy at their galleys. Men must eat and accounts must be kept though the ship should be blown out of existence in the next ten minutes. We enter a narrow lift and are shot down to the lower regions, where the sweating stokers handle rake and shovel, the artificers and engine-room staff ply oil-can and spanner, and the engineer officers study gauges and dials of all sorts and kinds. There is more life down here than up above. Work is going on that needs constant watching and attention. On our return journey to "the upper air" we glance in at the wireless room. As we do so comes the loud crackle of the electric spark. The operator is acknowledging a signal. A message has come in from a scouting cruiser. "The enemy are out. Five big cruisers, heading north-west." Another Scarborough Raid perhaps.

The ship wakes up, she is alive. The engine-room gongs clang down in her depths. A few signal flags flutter aloft. The admiral is signalling to his squadron to alter course to head off the enemy, and to increase speed by so many revolutions. The big ship gathers way. Her consorts follow in the curve of her foaming wake, and with every big gun trained forward the lithe grey leviathans tear over the watery plain in search of their quarry.

An hour passes. Nothing is seen but the scouting cruisers and a minute speck in the remote spaces of the sky, which someone thinks is a sea-plane, but which may well be a grey gull in the middle distance. Presently, however, a growing darkness along the north-eastern horizon becomes recognizable as smoke—the smoke of many furnaces. Against its growing blackness one of our distant light cruisers shows for a moment as a white ship. Black smoke is pouring from her funnels also, and amidst it all is a sudden violet-white flash.

After an age comes the dull "thud" of her cannon. Now she turns away to port. There are more vivid flashes and the "thudding" of her guns grows continuous. Soon answering flashes sparkle from amidst the smoke-pall on the horizon, and first one then another nebulous outline of a warship disintegrates itself. Flashes break from their sides also, and the noise of the firing swells into a steady roll of sound rising and falling on the wind. We again increase speed. Black smoke billows from our funnels, the bow wave rises higher, and now and again a cloud of spray swishes over our decks. Then "Cra—ash!" The fore-turret has spoken. The ship trembles from stem to stern. We are striking in to the assistance of our scouting cruiser. Through the glasses appears what looks like an iceberg towering over the enemy's nearest cruiser. We've missed her.

But the spotting officer is busy in the control-platform aloft, passing down corrections for transmission to the various gun-stations, and when a second explosion roars from the starboard turret, the enemy's cruiser, after disappearing for some seconds in a black and inky cloud of smoke, bursts into flames. Her consort and our scouting vessel draw

farther and farther away to the northward, fighting fiercely. We continue driving through the tumbling waters, till, with a slight freshening of the wind, the black smoke we are approaching thins off into nothingness, and we see far down on the horizon four or five separate columns of smoke. With a good glass we can distinguish masts and funnels as if lightly sketched in pencil. They have sighted us at the same time, and seem to melt together into one indistinct mass. They are altering course, turning their backs to us and heading for the east.

The engine-room gongs clang again, more revolutions are demanded and are forthcoming, and our four big battle-cruisers rush in pursuit with renewed energy. A distant humming sound increases quickly to a loud hissing and roaring—a noise which may be compared to that of a monster engine letting off steam—and an enormous projectile, passing well over our heads, plunges into the sea on the starboard beam of our following ship, the splash rising as high as the mastheads. Others follow fast. The rearmost ship loses her mainmast, and now the enemy's gunners reduce their elevation and slap their big shells into the sea just ahead of us.

Our own guns are not idle. One after another gives tongue with a volume of noise and a concussion that no words can describe. The pen is powerless to bring before the imagination such a cataclysm of sound. On a sudden, amidst the crashing of the guns and the continuous dull booming of the enemy's in the distance, there is a different and a rending explosion somewhere forward. We have at last been hit. Down on the forecastle all is smoke, blackness, torn iron plates and girders. From the midst of the chaos comes the

shriek of a man calling on his Maker, and piteous groanings. Soon the dull red of fire blushes through the smoke, and a rush of bluejackets and marines with fire-hoses spouting white streams of water engages this dread enemy and succeeds in subduing it.

Stretcher-men appear on the scene and remove the wounded, but there is more than one serge-clad figure that lies heedless of fire or water, friend or foe. These are they who have fought their last fight and have laid down their lives and all that they had for their country.

Inside the turrets the aspect of affairs is very different from what we saw a short time ago. The gun-layers are standing at their sights, the guns' crews are working levers to and fro, the big breech-blocks are swinging on one side, the huge pointed projectiles rising on their hydraulic hoists till they come in line with the bore of the gun. Another lever is pulled, and the rammer-head, hitherto somewhat in the background of the turret, advances towards the gun, impelled by what looks not unlike a monster bicycle chain crawling up from below, and stiffening itself as it advances along a horizontal trough of steel. The rammer-head meets the base of the big shell and drives it resistlessly and with no apparent effort into the gun. It retires; the charges of explosive, divided into sections and carried in cylinders which come in turn in line with the breech, are then one after the other pushed into place by the indefatigable rammer-head, the breech-block is swung to, turned and locked, and the gun is ready to fire again.

We are now in full view of the enemy's squadron, which consists of five large armoured cruisers. Two of these are in a bad way. One on our starboard bow has lost two out of her three funnels as well as a mast. She is barely moving through the water, and has a strong list to port, which is so pronounced as to prevent her elevating her guns, whose projectiles all strike the water short of us, though we are at comparatively close range. Only two or three of her larger pieces are able to fire at all, and these but at intervals. Her foremost turret is nothing but a chaos of broken metal from the midst of which a pair of mutilated cannon point forlornly skyward.

The midships turret nearest to us is in hardly better case. Her superstructures look like the ruins of a town after an earthquake, and several large holes gape in her sides. A dense black smoke sweeps upwards from the midst of the wreckage. About half a mile ahead of her a consort is also stationary and on fire, the flames driving away in sheets to leeward. The ship that followed us as second in the line is very badly damaged also, and is just discernible on the horizon astern under a pall of smoke. These casualties leave us evenly matched—three to three—with plenty of fight left in us, but with the volume and efficiency of our fire considerably reduced. Our own funnels are still standing, but riddled like collanders, the fore-bridge has been swept away, and with it our dear old skipper; but his place has been ably filled by the commander, who is fighting the ship from the conning-tower, which still stands. Both squadrons—the German in line ahead, ours in bow and quarter line—are heading due east, but, just as we are abreast the badly damaged cruiser to which I have referred, the enemy begins edging away to the north-east. We fail to see the significance of this

manœuvre at first, and the admiral, who, though rather badly hurt by the fall of the fore-bridge, is still in the conning-tower with the commander, may have visions of "crossing their T" astern, when there is a sudden shout from aloft. A man is leaning over and gesticulating wildly from the control-platform and pointing towards our starboard bow. There, not far from the burning enemy ship, the glass shows three pairs of what look like black cricket-stumps. Simultaneously there is a gleam in the sea alongside, like the white of a shark's belly when he turns to seize his prey. The deadly torpedo had missed us by a couple of feet.

We instantly turn sharply to port, signalling our consorts to do the same, and all head northwards at our best speed. This brings the enemy's line, which had been turning more and more to port, on a parallel course, and all three ships at once concentrate on us—the nearest ship. We get a worse hammering in the five minutes that follow than we have sustained during the action. The after turret is jammed, one of the guns in the starboard turret loses its muzzle, and fire breaks out in two places amidships, and can only be got under with the most strenuous efforts and great loss of life.



LEARNING TO

Gunnery practice on a British war-ship against an aerial targe
target, such as a towed kite, is

Things are looking ugly. The submarines still follow astern, but are not near enough to risk a shot. We cannot steam any faster, and we are baulking the fire of our friends. We slow down, risking the submarines, to allow our consorts to get ahead of us and enable us to meet the three enemy ships on equal terms. There are many anxious looks astern while this manœuvre is in execution. The periscopes of our submarine foes are still discernible, but beyond them is a fast-growing smoke-cloud from which presently emerge the lithe black hulls of our "X" destroyer flotilla. Apparently the submarines do

not observe their approach; their periscopes are steadily fixed on our ship, reckoning every yard they gain on us. But the destroyers see *them*, and presently we see also a warning signal from the enemy flagship. But it is too late. Before the *Unterseeische Böte* can dive out of harm's way three or four destroyers sweep over them and ram them at the speed of an express train. Slowing down, they circle right and left and open fire. What at we cannot see. Presently up pops a grey lump some way astern. The light guns on the superstructure give tongue so quickly that one has hardly time to recognize it as the conning-tower of a submarine before it is literally blown to pieces.

For the first time during the fight a cheer rings out fore and aft. Almost at once the little guns begin banging away again. This time their long muzzles are nosing about in the air. What are they firing at? "There they are!" cries someone, pointing to the south-east, where two big amorphous monsters have appeared high up in the clouds. Zeppelins, right enough; and the bang, bang, bang of the lighter artillery rises in crescendo from every ship and destroyer till the air echoes like Vulcan's forge. Up come the pair of enormous sausages at a high rate of speed, and as they pass over our destroyer flotilla they begin dropping their bombs. Dull concussions thud apparently on the ship's bottom; fountains of white water spout all round the small craft.

But none are hit. The leading "gas-bag" is heading straight for us. She has probably spotted our damaged condition, and reckons us an easy prey. But our gunners are getting closer to her every shot, and presently she turns slowly to starboard, dropping a futile bomb as she goes. She now presents a fine

broadside target as big as a Dreadnought, another shot gets home somewhere, and she makes off in the direction she came with her nose down, tail in air, and a pronounced list to port. Her consort turns too, and scuttles off at top speed. She hopes to "live to fight another day" over some peaceful English village where there are no nasty, disagreeable quick-firing guns, shrapnel-shell, and other unkind greetings from those she would destroy.

The day is drawing to a close. We are heading homewards in tow of a consort. Low down under the tawny sunset that dim purple line is the coast of "Old England"—the motherland we are engaged in defending from the assault of the most unscrupulous enemy she has ever encountered. The wind has fallen, the waves are hardly more than ripples, and evening is closing down with a soothing hush over land and sea. We have cleared up after the smashing and racket of the battle as far as possible, but we can hardly crawl along, and are bound to go into dockyard hands for some weeks at any rate.

"Are we downhearted?" "No!" For we have given much better than the best efforts of the Huns could give. Two of their ships are at the bottom, with most of their crews; though, thanks to the exertions and humanity of our gallant seamen, a considerable number of them have been saved from a watery grave. To this bag may be added three if not four submarines and a badly damaged Zeppelin, so we are not ill-satisfied with the day's work. We have just passed several "tall ships" on their way out to relieve us on patrol, and as we begin to get under the land

there is a whirring up aloft in the gathering dusk, and a dozen sea-planes, like a flight of wild-ducks, come swooping seaward and make towards the Channel.

Where are they off to? Are they patrolling, or are they bent on a raid on the enemy's magazines, hangars, and gun positions? We do not know, but our ignorance does not worry us. We know the kind of man that is flying down there towards the southern horizon, and are quite satisfied that he will "make a good job" of whatever he has in hand. Just as the sun dips, out comes a destroyer from the shadow of the land to pilot us through the mine-field, and so we are brought "into the harbour where we would be". We have plenty of hard work before us—some of it very sad work. There are our poor wounded shipmates down below in the sick-bay who have to be taken ashore to hospital, and there are the last honours to be paid to those other gallant comrades and shipmates who have "fought the good fight" and are now making their last voyage *en route* for that promised land where "there shall be no more sea".

And now let us consider how this guardian fleet and the men who man it came into being. In the following pages my object will be not so much to describe well-known sea-fights as to give a series of pictures of the sailor and of the navy at different stages of "our island story".

CHAPTER I

A Lesson from Cæsar

"Storm and sea were Britain's bulwarks,
Long ere Britons won their name;
Mightier far than pikes and halberds
Wind and wave upheld her fame;
Storm and sea are Britain's brothers,
Keep, with her, their sleepless guard;
Britain's sons, before all others,
Share with them their watch and ward.

Chorus—

"'Forward! On!' the sea-king's war-word
Ages back—to do or die.[1]
'Ne'er a track but points us forward!'[2]
Ages on—our lines reply."
E. H. H. In *Officers' Training Corps and Naval
Cadets' Magazine*, March, 1913.

WHENEVER we want to find out anything about the early history of Great Britain, we have, almost invariably, to turn to the writings of our old friend Julius Cæsar. In attempting to trace the beginnings of the Royal Navy, that magnificent organization "whereon", point out the *Articles of War*, "under the good Providence of God, the Wealth, Safety, and Strength of the Kingdom chiefly depend", we have to conform to the same rule, and consult this authority.

From Cæsar's *De Bello Gallico* we learn that in his time the Ancient Britons made use of boats with a wooden frame, supporting wicker-work instead of planking, and rendered watertight by a covering of skins—just such boats, in fact, though probably larger—as, under the name of "coracles", are used to this day on the Wye and some other rivers and estuaries.

The portability and rapid construction of these boats commended them to Cæsar's military eye, and later on, in one of his Continental wars, he ordered his soldiers to make some light boats in imitation of those he had seen in Britain, in order to carry his army across a river. But, though Cæsar especially mentions these vessels, he does not say that the British of his day had no other or larger vessels. Though they made use of hides and wicker, they must have known something of wooden vessels. There is no doubt that they or their ancestors had large "dug-outs", hollowed from huge trunks of trees in the same way as Robinson Crusoe constructed his famous boat. We know this because many of these have been discovered buried in the mud of our rivers. One of them, found in the bed of the Rother in 1822, was 60 feet in length and 5 feet wide. Others have been found in Lincolnshire, Scotland, and Sussex, though none of them was nearly as long as the Rother boat. We must remember, too, that the Phœnicians had traded to Cornwall for tin, probably for centuries, and the Britons must have been familiar with their comparatively advanced types of shipbuilding.

But many writers on naval matters are of the opinion that our British ancestors, whose coracles are described by Cæsar, had, even at that time, really

stout and formidable ships. The reason is this. The Veneti, a race who inhabited western Brittany, and the country at the mouth of the Loire, were a kindred race, and when attacked by Cæsar received assistance from Britain. Now the strength of the Veneti seems to have been in their ships, which gave the Roman galleys considerable trouble, and it seems more than likely that the British assistance they received came in the form of a squadron of similar vessels.

According to Cæsar, the ships of the Veneti "were built and fitted out in this manner: their bottoms were somewhat flatter than ours, the better to adapt them to the shallows, and to sustain without danger the ebbing of the tide. Their prows were very high and erect, as likewise their sterns, to bear the hugeness of the waves and the violence of the tempests. The hull of the vessel was entirely of oak, to withstand the shocks and assaults of that stormy ocean. The benches of the rowers were made of strong beams about a foot wide, and were fastened with iron bolts an inch in thickness. Instead of cables they used chains of iron, and for their sails, utilized skins and a sort of thin, pliable leather, either because they had no canvas and did not know how to make sailcloth or, more probably, because they thought that canvas sails were not so suitable to stand the violence of the tempests, the fury and rage of the winds, and to propel ships of such bulk and burden". It is evident that these ships were for that period quite up to date. They were strongly built and iron-bolted, and had already discarded hempen cables for iron ones.

Above all, they were specially constructed to battle with the heavy weather of the Bay of Biscay

and the North Sea, and to take refuge from its fury in the rivers and creeks of the western coasts of Europe. The Roman galleys, relying principally on their oars, and therefore comparatively long and light, were not so seaworthy in Northern waters, and the same difference, in construction, between the ships of the Mediterranean and those of the Northern nations may be traced right down to comparatively modern ages. One gets very bad weather in the Mediterranean at times, notwithstanding its traditional blue skies and sapphire seas, but the big Atlantic rollers are absent.

These ships of the Veneti proved a tough morsel for our old school acquaintance, but his generalship was equal to the task of overcoming them in the end. As he says, "in agility and a ready command of oars, we had the advantage", for the Veneti trusted entirely to their sails. But, against that, the beaks of the Roman galleys could make no impression on the stout timber of the enemy's ships, they were at a special disadvantage in bad weather, and the bulwarks of the Venetan ships towered so high above their heads, even when they erected their fighting-towers, that the Roman soldiers could not hurl their darts on board them, while the Venetan enemy showered their missiles down upon their heads. For the same reason they found it almost impossible to grapple with and make fast to the big ships, and so carry them by boarding. However, "there are more ways than one of killing a cat", and so the Venetans found to their cost. For the Romans, fastening sharp hooks or sickles to the end of long poles, pulled alongside, hooked them over the halyards of their yards and sails, and, rowing away for all they were worth, contrived to cut them through, when down came the yards, and the Venetan vessels became

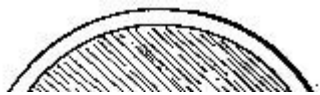
unmanageable. To make matters worse, when a flat calm fell they could not get away to their hiding-places on the coast, and the Romans obtained a complete victory—probably by boarding and fighting at close quarters, when their armour and discipline would tell heavily in their favour. It is interesting to note, by the way, that, according to Vegetius, a fifteenth-century writer on naval and military matters, they painted their scouting-vessels blue, masts, sails, and all, and dressed their crews in the same colour. He adds that Pompey, after defeating Cæsar, called himself "The Son of Neptune", and "affected to wear the *blue* or *marine* colour". As for the Veneti, we may, perhaps, regard them as the original "Bluejackets", Veneti being the plural of the Latin *venetus*, "bluish", "sea-coloured".

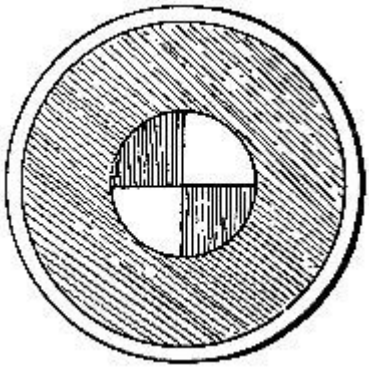


Ancient Roman Tile found at Dover
The letters stamped into this tile, and others like it found elsewhere, are considered to stand for "Classiarii Britannici", i.e. "British troops trained for sea-warfare".

We have now to pass over a gap of several hundred years, during which time there is little or no information available about the ships belonging to

these islands, the greater part of which, as a matter of fact, had become a province of the Roman Empire. There seems to have been a "Classis Britannici", or British squadron, but this was entirely a Roman organization, and had as much to do with the north of France—or Gaul—as Britain. The remains of an old ship—just the keel and lower ribs—which were not long ago unearthed on the right bank of the Thames, just below Westminster Bridge, are considered likely to have belonged to a galley of this squadron, and we know that there was a legion of what we may term British Marines, who formed the fighting portion of the fleet. Tiles have been found at Dover and other known stations of the Romano-British Fleet which bear the following inscription: "C.L., B.R.", which the experts in such matters interpret as standing for "Classiarii Britannici"—that is to say, "British troops trained for sea-warfare". We are also told by Vegetius, the old writer I have already quoted, that the badge of these troops was a "circle", which, by the way, is a somewhat curious coincidence, since that of the Marines of our own day is a globe. These were the men who defended the shores of our island against the growing numbers of pirates from northern Europe, for the rowers of the Roman galleys were merely the machinery of propulsion, and were probably much less considered than the steam-engines of a modern battleship. These troops also manned part of the wall built from the North Sea to the Solway in the vain attempt to keep out the Picts and Scots, for traces of them are to be found at Bowness at its western end. The North Sea pirates, then generally referred to as Saxons, became such a menace that the East Coast received the name of "The Saxon Shore", and a "count" or high official was specially appointed to take charge of its defence.





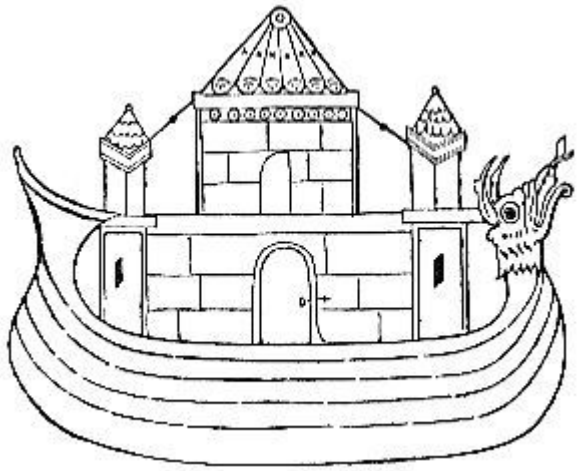
Shield carried by the Soldiers of the "Legio Classis Britannici"
(*From a coloured drawing in the Bodleian Library*)
The centre of the shield is quartered red and white: the rim is white, and the remainder green.

In A.D. 410 the Romans, attacked by the northern nations in their own country, finally abandoned Britain. The British, who had been practically a subject race for nearly 400 years, could make no head against the fierce Picts and Scots, who at once took advantage of the withdrawal of the Roman garrison and swarmed into the North of England. In desperation, the British king, Vortigern, offered to buy the assistance of two Jutish or Saxon pirates—Hengist and Horsa—who were doing a little raiding on their own account on the southern coast. They drove off the northern invaders, in accordance with the bargain that was struck, but, returning home for more of their Danish and Saxon fellow-countrymen, came back and gradually got the country into their own hands. According to another theory, many colonies of Saxons had been established on the East Coast during the time of the Romans, and it was the special business of the "Count of the Saxon Shore" to

rule over them. However this may have been, England became a Saxon country, the remnant of the Britons being driven into Wales and Cornwall.

Now the Scandinavian peoples were at this time the finest sailors in the world. The Jutes and Angles from Denmark and Schleswig-Holstein belonged to this race, the whole of which became known as "vikings"—that is to say, "the sons of the creeks", from the Scandinavian word *vik*, a bay, creek, or fiord. But though there must have been a strong Viking element among the Saxon conquerors of England—so much so that it became known as Angle-land, or England, from the Angles—yet the Saxons or English do not seem to have taken so enthusiastically to the sea as the Norwegians and Danes, and, except when special efforts to create fighting fleets were made by King Alfred and Edmund Ironside, were never able to prevent the incursions of their Danish and Norse kinsmen, who, in process of time, firmly established themselves in the country. After the Danes came the Norman Conquest, and during all this period there was little, if any, change in the types of the ships in which the northern nations fared the seas.





Noah's Ark, according to a MS. of A.D. 1000
Observe the fullness and apparent capacity of the hull of the dragon-ship on which the Ark proper is erected, and compare it with that of the Nydam ship on the opposite page.

What were these vessels like? As it happens, we really know more about them than we do of any between their time and the days of Henry VIII. For not only have we very definite details of them and their "gear" in the long "sagas" or historical and traditional poems which have come down to us, sculptured pictures of them in stone, engravings on rocks and upon arms and ornaments, but more than one of the actual Viking vessels have been dug out of the big burial-mounds where they had been hidden for centuries. For the Viking chieftain loved his ship: he lavished ornament and decoration upon it, and regarded it almost as a living thing. When, therefore, the time came for him to take the long last voyage, from which no man ever returns, it was quite natural that he should have wished to make it in the cherished "Dragon Ship" or "Long Serpent", which

had so often borne him over the waves on his way to those hand-to-hand combats and harryings and plunderings in which his soul delighted. Sometimes a funeral pyre was erected on the ship herself, and with his favourite sword by his side, his shield and his helmet, the dead chieftain set out on his final voyage, his sons and followers watching the well-known long-ship sailing into the west till she, her sails, and her dead captain disappeared in clouds of fire and smoke under the sunset. Or, again, a dying sea-king would elect to be buried in his favourite ship in some spot overlooking the glassy fiord whence he had so often set out on his piratical exploits. The ship was run up on shore over the rollers which all Viking vessels carried to facilitate beaching, the body was laid amidships with his most treasured earthly possessions, a penthouse of timber was built over him, his favourite horses were killed and placed round the hull of the vessel, and the whole was buried in the depths of a huge mound, which was erected over it.

The most famous "finds" of this kind were at Gokstadt, in south Norway, in 1881, and at Nydam, in Schleswig, in 1863. In the latter case the ship does not seem to have been used as a sarcophagus, but with another, which had almost entirely rotted away, was found in a bog. Possibly if the huge oval mound now utilized as a cemetery at Inverness, and known as "Tom-na-hurich" ("The Hill of the Fairies"), were tunnelled into, another Viking ship might be brought to light. In the case of the Nydam ship, Roman coins found on board fix her date as being somewhere about A.D. 250. Both from these ships and fragments of others that have been found in various places it is abundantly evident that their builders were as skilled

shipwrights as ever existed. Space does not allow us to go into details of their construction, but we may say at once that their finish was perfect, and that their lines were not only beautiful but wonderfully well adapted for contending with the stormy waters of the northern seas. Neither of them appears to have belonged to the largest type of Viking ships, which may be roughly divided into "Dragon Ships" or "Drakkars", "Eseneccas" or "Long Serpents", and "Skutas" or small swift scouting-vessels. It seems just possible, by the way, that our modern slang expression "skoot"—"get away quickly", "clear out"—may be derived from this word. We must try in the next chapter to understand what these Viking ships were like.



Broadside View of the Nydam Ship now in the Kiel Museum. O board

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CHAPTER II

Ancient War-ships

"Piracy was the exercise, the trade, the glory, and the virtue of the Scandinavian youth. Impatient of a

bleak climate and narrow limits, they started from the banquet, grasped their arms, sounded their horn, ascended their ships, and explored every coast that promised either spoil or settlement." GIBBON.

"Outlaw and free thief,
My kinsfolk have left me,
And no kinsfolk need I
Till kinsfolk shall need me.
My sword is my father,
My shield is my mother,
My ship is my sister,
My horse is my brother."
CHARLES KINGSLEY.

IF we take the dimensions of the actual Viking boats that have been unearthed, as I have related in the last chapter, we shall have an excellent foundation upon which to form an idea of the bigger and more important ones. Now the Gokstadt boat is nearly 80 feet long and 16 feet 6 inches wide at her greatest beam, and carried mast and sail. The Nydam ship is 75 feet in length, with a beam of 10 feet 6 inches, and had no mast. Both are very flat amidships, and have very fine or sharp ends, but it is evident that in proportion to her length the Gokstadt boat had a much greater beam.



A Viking Double-prowed "L

Observe the well-supported outer stem, the Dragon Head, tl design, which was much used by the Vikings on arms and or the rowers, and the steersman guiding the ship by means of he

That was because she was a sailing-ship and the Nydam vessel was not. The latter may fairly be assumed to have been a "Skuta", and the Gokstadt ship a rather small "Serpent". Now in all the "sagas" that have come down to us the different war-ships which occupy so prominent a place in them are distinguished as to size by the number of oars they pulled. From the Nydam ship, which had fourteen oars a-side, we are thus able to judge the dimensions of famous Viking war-ships like the "Long Serpent" of King Olaf and others, if we allow for the slightly wider space between the rowers' benches necessitated by the greater length of the oars in the larger vessels. Of course, the whole length of the ship

was not occupied by the benches. In the Nydam ship, for instance, they took up 46 feet of her length; the remaining 15 feet at each end were required for fighting- and steering-platforms, stowage of stores, &c. In this way it has been calculated that the "Long Serpent"—you must remember that this was a *special* "Long Serpent", and probably bigger than the usual run of the war-vessels so-called—was 180 feet long, while the still bigger ship belonging to our King Canute works out at no less than 300 feet in length. The beam or width it has not been found possible to estimate exactly, but my own opinion is that the lines, or contour, of these very much bigger ships were much deeper and fuller than in the smaller types.

There is an old manuscript in the Bodleian Library, at Oxford, dating from about A.D. 1000, in which appear three pictures of Noah's Ark (see p. 26). The house part of the design is frankly impossible—it would capsize the ship—but the hull in each case—the boat part—is not at all unlike the well-known Bayeux-tapestry ships, but of a better and more seaworthy shape, though in some of them the big dragon figure-head is unduly exaggerated. The space between the benches was called a "room", and the port and starboard portions of this were known as "half-rooms". The crew were all told off to these half-rooms as their stations, except those quartered forward and aft. Thus the "Long Serpent" had eight men to each "half-room", and from this item of information it has been estimated that she carried a crew of something between six and seven hundred men. Goodness knows how many King Canute's big "Dreadnought" carried.

Some of these Viking ships were very smartly decorated. Armorial bearings had not then been invented, but their sails were worked with the most beautiful emblematic and intricate embroidery, and were not infrequently made of velvet, though generally of a coarse woollen material called "vadmal." Some of the most elaborate ones were actually lined with fur. Not only the ships themselves, but also their sails, like the swords of their warriors, were given poetical sounding names: "The Cloth of the Wind", "The Beard of the Yard", and "The Tapestry of the Mast-head", are some of them. Along their gunwales, above the oars, which worked through holes in the ship's side, ran the "shield-row", composed of circular wooden shields or targets, with big shining bosses of brass or other metal in the middle. Each shield overlapped the next till it touched its boss, and so gave a double protection to the rowers. This was a very ancient custom, as shields were carried in this way by Phœnician ships as far back as 450 B.C. As a general rule, the Norsemen's shields were black and yellow, the Danes' red, and the Saxons' white with red or blue edges.





A "Dragon" Figure-head There was a law that ships must not approach the land with their figure-heads in position with "gaping heads and yawning snouts."

It is rather curious that, with the exception of black, these colours are conspicuous in the flags of the corresponding nations of to-day. But the King of Norway presented our King Athelstan, in 931, with a ship fitted with a complete row of *golden* shields.

A whole chapter might be written about the figure-heads of the Viking ships, for they were much more than mere ornaments. They each had some special signification, and were certainly connected with a most extraordinary superstition which prevailed among the Scandinavian peoples. It is best explained by an example from the saga of which one Egil was the hero. Pursued by a king answering to the suggestive name of Blood-axe, he escaped from Norway and took ship to Iceland. Before he set sail

over the North Sea he determined to take it out of his enemy, Blood-axe, by a species of what we may call "wireless" witchcraft. Landing on an islet, he erected what was known as a "Nithstang", a "contraption" considered very pleasing to the Norse gods. The idea probably had something in common with the "lifting up" of the brazen serpent in the *Book of Numbers*. His installation was a very simple one: a hazel pole with a horse's head stuck on the top. He stuck it up in a crevice of the rocks, saying that he did so "as a curse" on Blood-axe and his Queen. Then he turned it round so as to point to the mainland, and announced that he also "fired off" his curse at the "Guardian Spirits" of the country, who were to get no rest till they had hustled King Blood-axe out of it. Finally he inscribed his curse in Runic characters on the pole, and continued his voyage to Iceland as pleased with himself as a German hero who had dropped a floating mine in the track of passenger vessels.





A Dragon-head and a Representation of a "Nithstang". From a Saxon MS.

Now it appears that these same guardian spirits were extremely susceptible to this sort of "wireless", not only in Norway, but everywhere. And it also seems that—how or in what way I am unable to explain—the figure-heads of the Viking ships had much the same properties as the "Nithstangs". So it was that in Iceland, at any rate, there was a law that ships must remove their figure-heads before approaching the land, "and not approach it with gaping heads and yawning snouts", lest they might scare the guardian spirits of the land.[3] Having carried out this regulation, it was customary for the seamen to hoist a polished shield to the masthead and so flash the signal that the guardian spirits need not now be alarmed. That some connection existed between these "heads" and the "Nithstang" is further

shown by a drawing in an old manuscript of that period, which depicts a human head set on a pole, which is fastened to a dragon figure-head. And again, in a wall-painting in the church of Tegelsmora in Upland, in which the famous King Olaf is seen waging a desperate battle with our old nursery friends the "Trolls", the bowsprit of his ship is adorned with the skull of an ox.

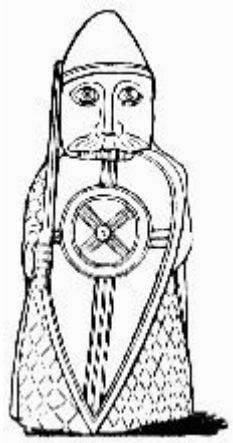
But we must leave the ships and come to their crews. To begin with, they were all "soldiers and sailors too"! They were equally at home on the battle-field ashore and in handling their cherished "long-ships" afloat. The Scandinavians believed that the soul of a warrior killed in battle went at once to Valhalla, which represented their idea of heaven.

There they confidently expected that the brave fighter would spend a happy eternity of fighting and feasting. It is said that their remote forefathers had brought this weird form of belief from the depths of Central Asia—but that must be a very old story. But fighting was the breath of their life. They revelled in it, though they did not despise the plunder which was generally the reward of victory. Many of these fierce warriors were subject to and even cultivated a species of madness, almost amounting to demoniacal possession, which induced them to tear off their clothes and hurl themselves almost naked into the fray, feeling endued with the strength of seven men.

These "Berserkers", as they were called from this custom, were doubtless most dangerous opponents in their "Berserk" fury. Nowadays it is generally accepted that the braver the man the more modest he is about his deeds of valour; the boaster is considered likely to be but a broken reed in the day

of battle. But it was quite otherwise with the Viking warriors. They gloried in boasting aloud of their prowess, of the deeds they had done, and of those that they were ready to perform.

The tactics of the Vikings, if they failed to ram their opponents, was to lash the bows of as many friendly and hostile vessels together as possible, so as to form a floating battle-field. The fighting-platforms were not, apparently, raised above the bows, as later on in mediæval times. They were somewhere about the level of the gunwale, and when several ships were lashed together, all these platforms provided a battle-ground upon which the Berserker and his emulators could indulge in the furious hand-to-hand combats which were their delight. If they could do this they were probably more than pleased that they had failed to ram their enemy. I doubt if every ship was built with a ram, but, on the other hand, it is certain that some ships were specially built for use as rams, and even strengthened by iron plating. So that we see that the armour-clad is no new invention.



"Showing his Teeth"

Figure of a Berserker from a set of ancient chessmen found in the island of Lewis. The Berserkers always bit their "shield-rims" on going into battle.

In the larger "long-ships" a fighting-gangway ran along behind the shield-row, connecting the fore and after platforms. Beneath the latter, which was somewhat elevated so that the steersman could look ahead, was the sleeping-place for the commander of the ship. Other sleeping accommodation was provided under the foremost platform, while, if at anchor, those of the crew who were not on watch slept under awnings or tents, set up on framework which could be erected for the purpose in the centre of the vessel. The men slept in leather bags, which were equally useful either ashore or afloat. In short, these ancient war-vessels were so well and scientifically built, so well arranged and equipped, and so well manned that we cease to wonder at the long voyages they were able to perform by taking advantage of the summer months.



A WAR-GALLEY IN THE DAYS OF KING ALFRE

The Dragon or other figure-head has been unshipped, pos

galley is going into port.

There is not the slightest doubt that the Vikings discovered the continent of America long before Columbus did. They went by way of Iceland, and so were able to touch land more than once on their journey, but they got there all the same. They established a colony in Greenland about A.D. 985. From there they made several expeditions to the southward, and discovered a densely wooded country which is supposed to have been some portion of Nova Scotia. The climate of Greenland must have been very different from what it is at present, for the Viking colony lasted for 400 years, till, in the fifteenth century, an enormous mass of ice was swept down by the Arctic current, piled itself up along the coast, and entirely cut off the settlement—which at that time consisted of thirty villages with their churches and monasteries—from the rest of the world, so that before long every trace of it disappeared.

It seems possible that some of you may say: "This is all very interesting, but I thought we were going to read about the British Navy, and it seems to me that the Saxons and their ships represented the British navy of those days". That is a fair argument, but for my part I do *not* think that we can accept the Saxon Navy as the ancestor of the British Navy of to-day.

The Saxons were no seamen, and apparently but poor soldiers. When King Alfred built a navy of ships, which are stated to have been superior in every way to those of the Frisians, Scandinavians, and Danes, and by means of which he succeeded in securing more than one victory, he could not provide them with seamen. The Saxons were no good, and he had

to hire Frisian pirates to man them. The Saxons fought well at Hastings, but, though there was a strong infusion of the Danish element by this time, they lost the battle through lack of discipline and military experience. It is difficult, therefore, to recognize in these Saxons the progenitors of men like Lieutenant Holbrook, who navigated his submarine through and under rows and rows of deadly mines, knowing that the least touch would bring annihilation, or of Private Pym of the Berkshires, who, *alone* and "on his own", rushed into a house held by a detachment of German soldiers and succeeded in killing the whole of them but three, who "made their escape".

No. For the ancestors of the British seamen and sailors of Elizabethan and modern times I think we should rather look to the Danes, who, it must be remembered, between 870 and the Norman Conquest, were not only continually invading England, but established themselves in a great part of it, especially in the east and north, and to those of the Conqueror's followers who traced their descent directly from the Northmen or Vikings. It is their spirit which has brought us victory both by land and by sea, but more especially by sea, and not the spirit of Alfred's Saxon subjects, who had to pay others to fight for them. Again, take such pre-eminent commanders as Drake and Nelson. Is not the former name one which takes us directly back to the "Draakers", the "Dragon-ships" of the Vikings, and has not Nelson a distinctly Danish sound about it?

The ships of King Alfred "were full-nigh twice as long as the others; some had sixty oars, and some had more; they were both swifter and steadier, and also higher, than the others. They were shapen

neither like the Frisian nor the Danish; but so it seemed to him that they would be most efficient."

CHAPTER III

Fighting-ships of the Middle Ages

"With grisly sound off go the great guns
And heartily they crash in all at once,
And from the top down come the great stones;
In goes the grapnel so full of crooks,
Among the ropes run the shearing hooks;
And with the pole-axe presses one the other;
Behind the mast begins one to take cover
And out again, and overboard he driveth
His foe, whose side his spear-head riveth.
He rends the sail with hooks just like a scythe;
He brings the cup, and bids his mate be blithe;
He showers hard peas to make the hatches slippery.
With pots full of lime they rush

together;
And thus the live-long day in fight
they spend."
Description of a mediæval sea fight,
Legend of Good Women
(modernized), fifteenth century.

WILLIAM THE CONQUEROR, like Cortez, the discoverer of Mexico at a later date, dispelled any thoughts of retreat that might have been lurking in the minds of his followers by destroying the ships which had brought them over. He had come to stay. Now the Normans, though of the same blood as the seafaring Vikings, who had sailed and fought their Dragon-ships to the very ends of the known earth, had been so long settled in France that they had adopted not only the French language, but French ideas, which were not, generally speaking, of a nautical nature.

Among these was the system of feudalism and knight-service. The very word for knight—*chevalier* in French—signified a horseman; and the Norman and other feudal knights of the eleventh, twelfth, thirteenth, and fourteenth centuries looked at war and politics from the point of view of a cavalier armed cap-à-pie seated in his war-saddle. As for ships and sailors, they were merely unpleasant means to necessary ends.[4] But if one wanted to go to fight and plunder and raid across Channel he had to submit himself and his followers to the cramped accommodation of a vessel of some kind, and to the care of the rough shipmaster and his crew—low but necessary persons, in the eyes of the mediæval knight, just as were the experienced "tarpawlins" in the estimate of the scented "gentleman-captains" in the days of the Restoration. So it came about that for

some centuries England had no Royal Navy.

The king and his principal nobles had at times a few galleys or sailing-vessels of their own—almost, if not entirely, their personal property—and these they made use of for purposes of transportation or fighting when required; but during this period the maritime defence of the realm was carried out—on the whole inefficiently—on the hire system. The money for this purpose was forthcoming, since William revived a tax for defence purposes, called the "Heregeld", which had been not long before abolished by Edward the Confessor, on the pretext that by it "the people were manifoldly distressed". Had he not listened to the "little navyites" of his day, perhaps the Norman Invasion would not have succeeded. In addition to this, William placed the five principal ports commanding the narrowest part of the Channel on a special footing, under which, in return for certain privileges, they were to supply him or his successors with a fleet of fifty-two ships in cases of emergency. They could only be retained for fifteen days, however. These ports—Hastings, Romney, Hythe, Dover, and Sandwich—were then, and for ever afterwards known as the "Cinque Ports", though Dover is the only one which can still be regarded as a port at all. Rye, Winchelsea, and Pevensey also became "Cinque Ports" later on.

William's idea with regard to the Cinque Ports was probably not so much the general defence of the kingdom as the defence of his communications with Normandy. With their assistance he could be sure of always being able to move troops either way across Channel as his exigencies required. Thus, when in 1083 William, who was then in Normandy, heard

rumours of the intention of the Kings of Denmark and Norway and the Count of Flanders to invade England with a great fleet, he hurried over-Channel with so great an army that "men wondered how this land could feed all that force". Without the assistance of the Cinque Ports he might have had some difficulty in doing this.

Although we really know a great deal about the ships of the Saxon and Danish periods of our history, we know comparatively little about those which were built between the Conquest and the accession of Henry VII. For, while we have had specimens of the actual Viking ships to work upon, we have for this long period, of over 400 years, little information beyond that afforded by the seals of maritime towns, the ships depicted by monkish chroniclers and romancists in their illuminated manuscripts, and in a few cases old stained-glass windows and decorative carvings.

Now, to begin with, it is obvious that in each of these cases the artist was cramped for space. He had to decide between the calls of accuracy and of decorative effect, and almost invariably he gave way to the latter.

In seals, especially, he was tempted to make the curves of the ship's hull run parallel to the circumference of the seal. In that which belonged to the master of the *Sainte Catherine de Cayeux*, which fought at Sluys in 1340, the exterior curve of the hull of the ship represented upon it is really concentric with the seal itself. In almost every other case—up to the fifteenth century at any rate—the hulls of the ships shown on seals of this description approximate to this shape, and, generally speaking, are of crescent

form, with fighting-stages or "castles" at the bow and stern. There are a few exceptions, which are more likely to be correct, as their designers evidently made up their minds not to be led away from the truth.

In the rather fascinating pictures that appear in mediæval manuscripts, too, the monkish artists had to work in a small space, in which they wanted to put a great deal of ornamental and other detail. They probably knew little or nothing about nautical affairs into the bargain. In the result their ships present the same crescent-shaped hulls as those in the seals of the period, and give the impression of being very small affairs indeed, thanks to the large-sized nobles and men-at-arms with which they are densely packed.



Seal of Demizel, master of the barque *Sainte Catherine de Cayeux*, 1340 (From *Histoire de la Marine Française*, by kind permission of the author, Monsieur C. de la Ronière.)

An example of the impossible ship. Note how the engraver has made the keel exactly parallel to the circumference of the seal. It makes a

handsome and effective seal, but can hardly be accepted as a picture of a ship of 1340.

The reason of this quaint method of representing ships and their crews or passengers is not far to seek. Who has not seen a child's first attempts to draw the human face in profile? He outlines the forehead, the nose, and chin, and puts in the back of the head easily and to his own satisfaction. Then he pauses and deliberates. The eyes are what he is puzzling over. He knows that, though everybody has one nose, one forehead, and one chin, he has *two* eyes. What about them? He may think that one eye looks most suitable, but still he doesn't like to leave the other one out. So, as often as not, he puts in a couple, one about the right place and the other somewhere towards the back of the head.



Wreck of the White Ship, 1120

Another example of the impossible-ship picture. There were said to be 300 souls on board! Observe the rudder, which proves the date of the original drawing to be much later than 1120—probably 100 or 150 years.

The tonsured artist argued very much on the same lines. If he painted a ship it was not a picture of a special ship. What he wanted to portray was the saint or hero of his manuscript—very often Alexander the Great—on a voyage or crossing a river. If he drew him on the same scale as his vessel he would be a mere dot or blob of paint. He wanted to show his face, his armour, robes, crown, halo, or what-not. So, though he could not help knowing that it was inaccurate, he drew him—and, generally speaking, his companions—on a scale about 500 per cent larger than that of the ship in which he was depicted as performing a most cramped and uncomfortable voyage.

We must not therefore accept these brilliantly coloured works of art as corroborative of the accuracy of the figures of ships appearing on the seals of Dover, Yarmouth, Poole, and other English and foreign ports, and in the fifteenth century of various noblemen who held the appointment of Admiral of England or France. But there are, nevertheless, a great many useful details to be learned from these sources of information. From seals we can trace the gradual evolution of the poop and forecastle from the early platforms or fighting-stages, the supersession of the steering-oar or "steer-board" by the rudder, the beginning of cabins, the progress of fighting-tops and action aloft. We see, too, the mode of wearing banners, streamers, and flags, and gain some idea of the gradual growth of sail-power, which culminated, we may say, in the sailing battleship of Trafalgar days.

If we consider the question of mediæval shipbuilding as a whole, we shall find it difficult to

believe that the scientific methods of construction which distinguished the Viking ships, and the improvements on them which were made by Alfred the Great, had all been forgotten and thrown on one side, and that these fine specimens of the shipbuilder's art had been replaced by anything like the ridiculous little "cocked hats" that are supposed to represent the shipping of the British and other Northern nations between 1066 and 1450.

The sea-going ships of these peoples, intended especially for sailing, would naturally be considerably shorter and broader in the beam than the Viking class of ship, which relied principally on oars for propulsion, and was rather too long and narrow to sail well under ordinary conditions of weather. Moreover, though they carried a single sail, they were not intended to contend with heavy winter weather.

We have a description of the *Mont-Joie*, in which Louis IX of France sailed on his last crusade. She was built at Genoa, which then and for long after shared with Venice the distinction of being the birthplace of the largest and finest ships in the world. She is worth describing, for she was one of the precursors of the big Spanish and Genoese carracks that our fleets encountered off the coasts of France and Flanders from time to time during the fourteenth and fifteenth centuries, and which stimulated us to buy or build big ships of our own.

The *Mont-Joie* was 80 feet long on the keel, but over all, measuring from the extremity of the forecastle to the highest point of the stern, she had a length of 120 feet. She is said to have been 26 feet deep amidships. Twelve feet above the keel was a

deck running from right forward to right aft. Below this was the hold, where lay the ballast, and in which were stowed water, provisions, and various war materials. Six feet above the lower deck was another similar deck, which we may call the upper deck, while above this again a gallery or gangway, six or seven feet wide, ran along each side of the ship, between the fore and after castles. The ship's side rose 3½ feet above these fore and aft bridges and was pierced with loopholes for archery. In action the bulwarks would be heightened and further protected by shields or *pavises*.[5] Below the upper deck, aft, was situated the "paradis" (chambre de parade), or state cabin, which in this case was, of course, occupied by St. Louis himself.

There was other accommodation provided forward for the rest of the *Mont-Joie's* passengers, with the exception of the Queen, who occupied another "paradis" on the upper deck, immediately over the King's. These cabins were lighted by ports or scuttles cut in the sides of the ship. Forward there was further shelter provided under the forecastle, and both it and the after part of the ship were surmounted by a *bellatorium*, or fighting-platform, with bulwarks 4 feet in height. The ship was equipped with two tall masts raking forward and carrying large lateen sails. At the summit of each was a *gabie* or fighting-top. Altogether it will be seen at once that here was a real sea-going ship, very different from the open boats, manned by giants, of the seals and manuscripts illustrations.

It is not always easy to convey the impression of size by mere figures, but if we bear in mind that the famous old *Victory*, now lying in Portsmouth Harbour, and which many of us have seen at least

once, is only about twice the length of those thirteenth-century ships, we shall be able to form some idea of their not unimportant dimensions.

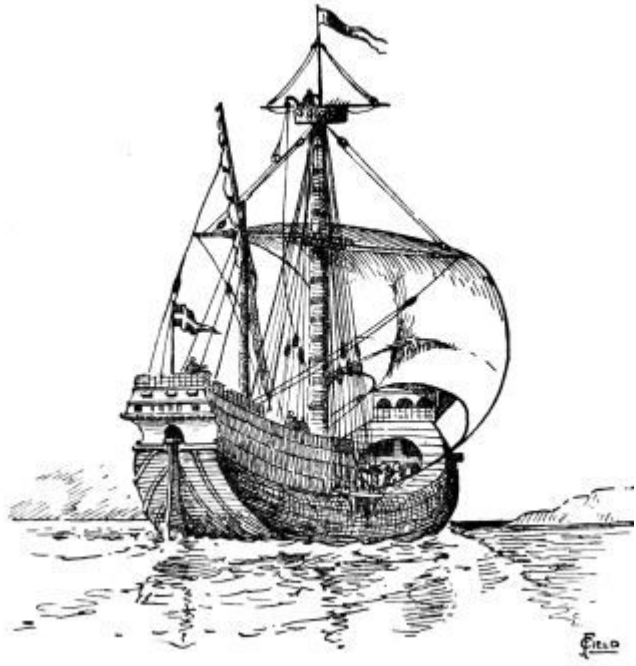
Many of the mediæval ships were most gorgeously painted and decorated. When the French king Charles VI fitted out a great naval armament at Sluys, in 1386, for the invasion of England—which did not come off, by the way—Froissart tells us that "gold and silver were no more spared than though it had rained out of the clouds or been scooped out of the sea". One young noble covered his mast with gold-leaf. "They made banners, pennons, and standards of silk, so goodly that it was marvel to behold them; also they painted the masts of their ships from the one end to the other, glittering with gold and devices and arms: and specially it was shewed me", says old Froissart, "that the Lord Guy de la Tremouille garnished his ship richly; the paintings that were made cost more than ten thousand francs. Whatsoever any lord could devise for their pleasure was made on the ships: and the poor people of the realm paid for all; for the taxes were so great, to furnish this voyage, that they which were most rich sorrowed for it, and the poor fled for it."

Our own Henry V had rather "loud" tastes in his ship decoration. In the year 1400 he had a ship painted red, decorated with collars and garters of gold surrounding fleur-de-lis and leopards, as well as gilded leashes looped round white greyhounds with golden collars. All these were selections from the royal badges. Her mast was red also. The *Good Pace of the Tower*[6] was red too, but her upper works and stern were of a different colour, and she carried a gilded eagle with a crown in its mouth on her bowsprit.

The *Trinity of the Tower* was another red ship, elaborately adorned with coats of arms, while the *Nicholas of the Tower* was black, "powdered" with "Prince of Wales's Feathers", with quills and scrolls in gold. The King's own particular ship, the "cog" *John*, carried the royal crest, "the Lion standing on the Crown", at her masthead, besides other decorations. The Genoese in 1242 painted their war-ships white, spotted all over with red crosses, so Henry perhaps only followed the fashion after all; but, generally speaking, red was the favourite colour, though black at times ran it pretty close in favour as groundwork for various patterns of ornamentation.

But the continually growing decoration in the way of flags, standards, pennons, and streamers must by no means be overlooked. They were, perhaps, the most striking characteristic of the mediæval war-ship.

The standard or pennon of the owner or commander of the ship—and it must be remembered that he was in those days not a seaman, but always a soldier—was planted at the foremost corner of the poop or after-castle, on the starboard side. A ship called after a saint would have, in addition, the banner of that saint, and in the case of the Cinque Ports we may be sure that their arms, "three lions with half a galley in place of tail and hind legs", were displayed on some portion of the vessel. In royal ships there were other banners with the various royal badges, and there were hosts of streamers, pendants, and guidons as well. When fully "dressed", with all her flags flying, the mediæval war-ship must have made a brave display. Galleys, in addition, had a small staff with a pendant attached to the loom of every oar on such occasions.



Fifteenth-century Ship
(*From a painting by Carpaccio*)

Observe the capacious hull, the heavy mast, the way made fast in the middle as well as by the sheets at the cc crane for hoisting missiles to the top, and the darts rangec also the way the main-yard is spliced in the middle.

Nor must we overlook the ornamental nature of the sails in the times of which we are writing. It was no uncommon thing for the whole of the big square mainsail of a "cog" to be decorated with the arms of her owner. This is clearly shown in the well-known manuscript *Life of the Earl of Warwick*, by John Rous. Generally sails, often themselves of the richest colouring and material, were adorned with badges or devices, but sometimes merely with stripes of different colours. Colour ran riot in the war-vessels

of our mediæval ancestors—how different from the sombre grey war-paint of our modern Leviathans!



Ship of the latter half of the Fifteenth Century
(*From an illuminated MS. of 1480*)

Note the diminutive figure-head, the two shields am probably placed there for decorative purposes, as the ship a be "dressed" with many pennons and streamers. The smallne tops is unusual, also the square port-hole and the double-gabl

The end of the fifteenth century saw the development of the carrack into the caravel, such a ship as the *Sancta Maria*, in which Columbus sailed to the West Indies in 1492. As her original plans were found in the dockyard at Cadiz, and a replica of the famous original was built from them by Spanish workmen in the arsenal of Carracas in 1892 for the Chicago Exhibition, which took place in the following year, we know exactly what she was like. She was just over 60 feet long on her keel, and had a length over all of 93 feet, with a beam of nearly 6 feet. She had a displacement of 233 tons when fully

laden and equipped. She had three masts, but only the mainmast had a top-sail. The mizzen carried a lateen sail. She was considerably smaller than many ships of her day, but in general appearance and rig she approximated to the smaller ships of the Elizabethan epoch, and she and her class may well be considered as forming a connecting-link between the old single-masted "round ships" and the square-rigged, many-gunned line-of-battleship, which from the time of Henry VIII to Queen Victoria formed the mainstay of our battle fleets. There were, of course, many developments and improvements during this long period, but the type persisted throughout, just as did that of the modified Viking ship in mediæval ages.

So much for the ships of the Middle Ages. But before we go on to take stock of their crews it will be as well to attempt some description of the way they were fought. Nowadays the ship armed with the heaviest and longest-ranged guns—if her gunners know their work—seems to be able to "knock out" a slightly less powerfully gunned opponent before she can get in any effective reply. The present war has given us many illustrations of this fact. The *Scharnhorst*—a crack gunnery ship—with her heavier broadside, was able to sink the *Good Hope* with little or no damage to herself, and in her turn she was simply demolished by the heavy guns of the *Inflexible* and the *Invincible* off the Falkland Islands.

But in the Middle Ages there was nothing like this. All decisive fighting was practically hand to hand and man to man, except for the use of the ram by galleys and the exchange of arrows and stones at comparatively close quarters. But victory was only achieved, as a general rule, when the enemy's ship

was boarded and her crew defeated in a bloody tussle, at the end of which no one but the victors remained alive, unless, perhaps, some knight or noble who was worth preserving for the value of his ransom. The military portion of the crew, the archers, men-at-arms, and their knightly leaders, carried the usual arms of their day. The seamen, who were in the minority, probably used knives, short swords, and spears, and made themselves very useful in hurling big stones, heavy javelins called "viretons", unslaked lime, and other disagreeable missiles from the "top-castles" at the head of the mast or masts.

We have already mentioned the fore and after fighting-stages, or, as they later on became, poops and forecastles, that were erected when a ship was going on the war-path. We may note, in passing, that in the earlier part of the period we are dealing with, these were so often and so generally required that "castle-building" afloat became a recognized trade, until, in the process of evolution, poops and forecastles became integral parts of the ship.

We may add that, in addition to the fore and after fighting-platforms, special fighting-towers were not infrequently erected, certainly in the Mediterranean, and we may therefore assume that they were not altogether unknown in Northern waters. These towers were generally built up round the mast, and provided with loopholes and battlements, and sometimes protected by iron plates or raw hides.

One account of mediæval war-galleys states that in some cases "a castle was erected of the width of the ship and some twenty feet in length; its platform being elevated sufficiently to allow of free passage under it and over the benches". King John introduced

the famous Genoese cross-bowmen—who so signally failed to distinguish themselves at Crécy—into his navy. The reason most probably was that a cross-bow could be fired through a loophole by a man crouching under cover of the bulwarks or shield-row, whereas a long-bow could not be used in this way. Nevertheless the cross-bow did not succeed in ousting the long-bow in the British Navy, since, in 1456, in the course of a public disputation between the heralds of England and France as to the claim of the former country to the domination of the sea, the French herald claimed for his countrymen that they were more formidable afloat because they used the cross-bow. "Our arbalistiers", he asserted, "fire under cover or from the shelter of the fore and after castles; through little loopholes they strike their opponents without danger of being wounded themselves. Your English archers, on the other hand, cannot let fly their arrows except above-board and standing clear of cover; fear and the motion of the ship is likely to distract their aim." But there does not seem to have been much "fear" among the English archers, and as those that were in the habit of serving afloat doubtless had their "sea-legs", it must have taken a good deal to disconcert their aim, world-renowned for its deadliness.

Still, as we shall see in a later chapter, the cross-bow was a most formidable weapon afloat, and the French herald's argument was a sound one. In the place of artillery the ships of the earlier Middle Ages were provided with mangonels, trebuchets, espringalds and other mechanical instruments for hurling heavy projectiles, which, according to some authorities, were made or imported as the result of the experiences of Richard I and his crusading companions in the Mediterranean. Personally, I

should say that they had been known long before that time. A contemporary chronicle of the siege of Paris by the Northmen in 885-7 mentions that, to cover the Danish stormers, "thousands of leaden balls, scattered like a thick hail in the air, fall upon the city, and powerful *catapults* thunder upon the forts which defend the bridge". The knowledge of the heavy war-machines of the Ancients had never died out. The catapult was the old Roman onager, and consisted of a long arm or beam, of which one end was thrust through the middle of a tightly-twisted bundle of hair-ropes, fibres, or sinews stretched across a solid frame. At the other end was either a sling or a spoon-shaped receptacle for the projectile. This end was drawn back by means of levers and winches against the twist of the bundle of sinews and held by a catch. On the catch being released, by pulling on a lanyard attached to a trigger, the long end of the beam was forced violently forward till it struck against a strongly-supported transverse baulk of timber arranged for the purpose. When this occurred the huge stone or other projectile flew on through the air and struck its target with tremendous force.

The trebuchet and the mangonel were very like the Roman ballista, and acted much in the same way as the catapult, except that the motive force was the fall of a heavy counterweight instead of tension. The springald, or espringald, was a large-sized steel cross-bow, mounted on a pivot, hurling heavy iron darts, with great force, which had considerable penetration. In the battle of Zierksee (1304) one of these heavy "garots", as they were called, struck the *Orgueileuse* of Bruges with such violence that it not only pierced the bulwarks of the forecastle, but took off the arm of one of the trumpeters who were

sounding their silver trumpets, transfixed another, and finally embedded itself in the after castle.

One of the most formidable missiles hurled by the mangonels and such machines was the famous Greek fire, knowledge of which had been brought to Europe from the Crusades. Sometimes it was projected through "siphons" or tubes, of which no exact knowledge has come down to us. But it seems to have ignited the moment it came in contact with the air, and was spouted forth with the violence of water from a fire-hose. It destroyed everything that came in its way, and was inextinguishable by water. It could only be smothered by plenty of earth or sand, a material not generally available at sea. The mangonels threw it in barrels.

"This was the fashion of the Greek Fire," says De Joinville, the historian of Louis IX's first Crusade. "It came on as broad in front as a vinegar cask, and the tail of fire that trailed behind it was as big as a great spear; and it made such a noise as it came, that it sounded like the thunder of Heaven. It looked like a dragon in the air. Such a bright light did it cast, that one could see all over the camp as though it was day, by reason of the great mass of fire and the brilliance of the light that it shed. Thrice that night they hurled the Greek Fire at us, and four times shot it from the tourniquet[7] cross-bow. Every time that our holy King (St. Louis) heard that they were throwing Greek Fire at us, he draped his sheet round him, and stretched out his hands to our Lord, and said, weeping: 'Oh! fair Lord God, protect my people!'" Such was the terror inspired by this fearful mixture, whose chief ingredient is supposed to have been naphtha. It does not, however, appear to have been

used to any considerable extent in Western Europe.

In the latter half of the period we are dealing with, cannon—big, little, and middle-sized—quite superseded the mangonel and other mechanical projectile-throwers. Few large guns were carried, and those mostly fixed rigidly on timber beds and fired over the ship's side—hence the term "gunwale", which we still use in boats, a "wale" meaning a band of timber. Small breech-loading guns were mounted in considerable numbers in the fore and after castles, some of these, generally known as "murderers", being mounted inboard in such a way as to fire at close quarters on any boarding-parties of the enemy who might succeed in gaining possession of the waist of the ship. Others were mounted aloft in the tops, just as they were in our own days until the tops were required for fire-control platforms. But I propose to give the quaint ancestors of our modern monster cannon and rapid-fire guns a chapter to themselves later on.

CHAPTER IV

Mariners of Other Days

"A shipman was ther . . .
All in a gown of faulding[8] to the knee,
A dagger hanging by a lace had he
About his neck under his arm adown;

The hot summer had made his hue
all brown:
And certainly he was a good fellow;
Full many a draught of wine had he
drawn
From Bordeaux-ward, while that the
chapmen[9] sleep;
Of nice conscience took he no keep.
If that he fought and had the higher
hand,
By water he sent them home to every
land.[10]
. . . . . .
. . .
He knew well all the havens as they
were
From Gothland to the Cape of
Finisterre,
And every creek in Bretagne and in
Spain:
His barge ycleped[11] was the
Magdelaine."
CHAUCER, *Canterbury Tales*.

WE have yet to give some descriptions of one or two actual battles, but I think we will commence by trying to picture the seamen themselves.

What were these old "matlows"[12] like, and how were they raised? The second question is easily answered. As Lord Haldane has stated, compulsory service was never foreign to the English laws and constitution. But we may observe that it has never been carried out in the fair and impartial manner which is now universal on the Continent of Europe, where "duke's son, cook's son", and everybody else has to serve his country alike. No; ours has always

been a kind of bullying system or want of system.

In the old days of the Cinque Ports, if more ships were required than they had to provide, their ships were just sent out to "commandeer" any suitable craft they could lay hands on. So with men. Certain places and counties had to provide a regulated quota of soldiers or sailors, or both. If they were voluntarily forthcoming, well and good; if not, the magistrates, the port-reeves, or bayliffs had authority to take as many as they required to make up the number by force, and made no bones about doing so. So while Jones got off free, Brown and Robinson were pressed. But it was all a matter of luck—at any rate ostensibly. That was the hardship of it, not only then, but in the later "press-gang days".

But, once caught, the mediæval seaman had little to complain of in the way of pay. That, no doubt, made up for a good deal of severe discomfort. A mariner or seaman in 1277 got 3*d.* a day—a penny more than an ordinary soldier[13]—and in 1370 it was raised to 4*d.* Now, if we bear in mind that it has been estimated that money at that time was worth something like fourteen times what it is to-day, we must admit that the seaman did not do so badly. The master of the ship at this time was called the "rector", and received 6*d.* a day, while his second in command got the same amount. There were no admirals then, but the senior sea officer of the fleet was termed "captain" and paid 12*d.* per diem. The knight who was in actual military command of a warship would draw 2*s.* a day if he was paid the same rate afloat as ashore.

Whether there was a regular scale of provisioning before John Redynge was appointed "Clerk of the

Spicery" in 1496, to look after the victualling of both army and navy, I am unable to say, but it appears that the usual "sea-stock" laid in for a voyage in mediæval times consisted of bacon, salt meat, "Poor John" or salted herrings, flour, eggs, and poultry.

We have little information as to the personality, manners, and customs of the seamen of mediæval ages. In the earlier period they were pretty certainly more of the long-shore or fisherman class than deep-sea sailors. When not engaged in legitimate trading or warfare they generally took a hand at rank piracy. There was a saying about them that the British sailors were "good seamen, but better pirates"! Even the Cinque Ports, which provided the nearest approach to a national navy, achieved a most scandalous notoriety in this respect. But at the same time there is no doubt that the Normans, Basques, Flemings, French, and other seafarers were just as bad, though perhaps not quite so expert. It was the fashion afloat in those days.

We may gather some small idea of what seamen and sea-going were like in the Middle Ages from the pen of one Brother Felix Fabri, a Dominican of Ulm, who went from Venice to Jerusalem somewhere about 1480. Space forbids as long an extract as could be wished, for his experiences are both interesting and amusing. The seamen with whom he came in contact were not Englishmen, but "sea ways" are generally much the same all over the world. He and his fellow pilgrims chose their berths before starting, and had their names chalked over them. He gives many warnings, which those of us who have been to sea can well appreciate. To the would-be traveller he says: "Let him not sit on any ropes, lest the wind change of a sudden and he be thrown overboard".

And "Let him beware of getting in the way of the crew, for however noble he may be, nay, were he a bishop, they will push against him and trample on him". "He should also be cautious where he sits down, lest he stick to his seat, for every place is covered with pitch, which becomes soft in the heat of the sun". Inadvertently to "steal the commander's paint" is a mishap which may easily overtake the unwary on board His Majesty's ships in these latter days.

The chronicler explains that the captain's authority is absolute; though ignorant of navigation, he commands what course the ship will take. He has under him a master-at-arms, a "caliph" or "ship's husband", and a "cometa" or "mate", who sets the crew in motion—like the commander in a modern man-of-war. "The mate's subordinates", says Brother Felix, "fear him as they would fear the devil." The crew—bar the wretched slaves who worked the oars, and of whose tortures "he shuddered to think"—consisted of "compani", nine in number, who were employed on all dangerous work aloft, and others termed "mariners", who, according to him, "sing while work is being carried on to those who do it". This sounds like a "soft job", but the "mariners" probably may be classed with the so-called "idlers" in our war-ships, who are anything but idle. There was a "scribe", with the duties of the purser on a mail steamer of our day, who "arranges disputes about berths, makes men pay their passage-money, and has many duties. He is, as a rule, hated by all alike." We must not omit mention of the pilot, or navigating officer, with whom were associated "certain cunning men, astrologers and soothsayers, who watch the signs of the stars and the sky". They have a chart, "an ell long and an ell broad, whereon the whole sea is

drawn with thousands of lines". One of them was always on duty, watching the compass and chanting "a kind of sweet song, which shows that all is going well, and in the same tone he chants to him that holdeth the tiller of the rudder, to which quarter it ought to be moved".

The mention of "astrologers and soothsayers" reminds us that sailors have always had the reputation of being exceptionally superstitious. I doubt if this is still true—at any rate as regards the Royal Navy. Take the proverbial bad luck of sailing on a Friday. My own sea experience, which goes back for a good many years, is that Friday was a very favourite day for going to sea. We often left harbour on Fridays. I think it was because on Saturday we got a good clear day for cleaning up the ship, then came Sunday—a quiet day—so that everything and everybody was nicely settled down by Monday morning, and we could start fair on the weekly routine.

But from what we know of life in the Middle Ages it would have been indeed strange if seamen had *not* been superstitious. The wonders and dangers of the deep were very real and close in those days of cogs and galleys—veritably mere specks on the ocean. It is to be feared that seamen of later ages had not the same dread of going to sea in debt as De Joinville the Crusader,[14] or the expression "to pay with the fore-topsail" would never have arisen. Like Chaucer's seaman, some of them "of nice conscience took . . . no keep", and were very glad to escape their creditors by hoisting sail and putting to sea.

"Sailors have ever been superstitious," says a French writer on the Middle Ages;[15] "their

credulous brains are the parents of all the fantastic beings and animals that they persuade themselves that they have seen in their wanderings, and with which they have peopled the mysterious depths of the ocean. The syrens of antiquity, the monsters of Scylla and Charybdis, have been far surpassed by modern legendary creations, such as the 'Kraken', a gigantic mass of pulp which attacked and dragged down the largest ships; the 'Bishop Fish', which, mitre on head, blessed and then devoured shipwrecked mariners; the 'Black Hand', which, even in the days of Columbus, was despicted as marking the entrance to the 'Sunless Ocean'; and the numerous troops of hideous demons, one of whom, in the sight of the whole French Fleet of Crusaders, on their way to attack the Island of Mitylene, in the reign of Louis XII, clutched and swallowed up a profligate sailor who had 'blasphemed and defied the Holy Virgin'."

Strange to say, the St. Elmo's light, or "corposant", was regarded as a heaven-sent vision prognosticating favour and protection. Knowing nothing of electricity, and being unaware that the gradual collection of the electric fluid into the weird luminous balls of light which, during thunderstorms, sometimes collect at mast-head or yard-arm, is supposed to render the ship less likely to be struck by lightning, one cannot help thinking it remarkable that this phenomenon, which certainly has quite a supernatural appearance, did not inspire more terror than confidence in the seamen of the Middle Ages. I remember two "corposants" appearing at the fore-top-mast head and at the yard-arm on board the old *Nelson* in a storm of thunder and wind, off the Australian coast. They remained—occasionally shifting their position a little—for some considerable

time.

It was doubtless something of this kind which William, Earl of Salisbury, saw one night, in a hard gale of wind, on his way back from the Holy Land in 1222. The storm was so fierce that he gave up hope of life, and threw his money and richest apparel overboard. Suddenly, when the tempest was at its height, all hands saw "a mighty taper of wax burning brightly at the prow". They also thought they saw the figure of a celestial being standing beside it, screening it from the wind. The ship's company were at once reassured of ultimate safety, but the Earl was the most confident of all, because he felt certain that he was being repaid for his piety at the time of his initiation into the honour of knighthood, on which occasion he had brought a taper to the altar, and arranged for it to be lighted every day in honour of the Holy Virgin.

CHAPTER V

Some Mediæval Sea-fights

"The King's own galley, he called it *Trenchthemer*
That was first on way, and came the ship full near.
. . . . . .
The ship cast hooks out, the galley to them to draw;

The King stood full stoutly, and
many of them slew;
Wild-fire they cast, the King to
confound;
. . . . . .
The King abased him not but
stalwartly fought.
. . . . . .
The ship that was so great, it
foundered in the flood;
They counted fifteen hundred
Saracens that drownèd were,
Forty and six were selected, and
were all that were saved there.
The sum could no man tell of gold
that was therein
And other riches to sell, but all they
might not win.
. . . . . .
It sank soon in the sea, half might
they not get.
Richard bade, 'Haul up your sails,
may God us lead,
Our men at Acre lie, of help they
have great need.'"
PETER OF LANGTOFT (modernized),
thirteenth-century poem.

ONE of the most interesting episodes of mediæval war afloat was the sinking of the great Turkish *Dromon*, off Beyrout, by King Richard I. After having effected the junction of his fleets off Messina, he had gone on to Cyprus, where fighting, and other matters with which we need not concern ourselves, had delayed him for some time. At length he and his "busses"[16] and galleys set out for Acre. The following day—6th June, 1191—the British fleet

made the Syrian coast, near the Castle of Margat, and continued their way, pretty close under the land, for the town of Acre. About noon the day following, when near Beyrout, it was reported to the King, who led the fleet in his galley *Trench-the-Mer*, that an enormous ship was in sight. None of the English had ever seen such a leviathan. "A marvellous ship," says an old chronicler, "a ship than which, except Noah's ship, none greater was ever read of—the Queen of Ships!" It was a fine and beautiful summer morning, with but little wind. The strange ship showed no distinguishing colours, and was putting on as much sail as she possibly could; but she made little, if any, way at all:

> "The weather was full soft, the wind held them still,
> The sail was high aloft, they had no wind at will",

to quote an ancient poem dealing with the fight that ensued. The big ship was of great bulk, painted green on one side and yellow on the other, probably to render her inconspicuous against either a sandy or a green background, or at sea, when her green side was towards the enemy. But in spite of this curious colouring she is said to have presented a very beautiful appearance, and her decoration was considered "very elegant".

The vessel is stated to have carried 1500 men—an enormous complement—which included 7 Emirs and 80 chosen Turks, for the defence of Acre. She was equipped with bows, arrows, and other weapons, many jars filled with the dreaded Greek fire, and "200 most deadly serpents prepared for the destruction of Christians". Most historians consider

that these "serpents" were some kind of firework used as a missile, since "serpentine" was an early name for one of the smallest-sized cannon. Personally, I do not see why we should not accept the word "serpents" in its everyday meaning. The adjective "deadly" is suggestive, and in one old account it is particularly stated that "the 200 serpents were *drowned*". There have been instances of hives of bees being hurled as missiles from war-engines, so why not baskets of deadly snakes? But it is more probable that these serpents—since none of them were expended in the battle that took place—were intended to have been introduced into the camps of the Crusaders after being landed at Acre.

As soon as the big *Dromon*—as she is generally called by old writers—was sighted, Richard dispatched Peter de Barris in his galley to find out who she was. The word *Dromon*, by the way, was used at that time to denote any exceptionally large ship; just as we use "Dreadnought" in a similar way. But the actual and original meaning of the word was not a big, but a fast, ship. The word is connected with speed and racing, and is of Greek origin. We use it in its proper sense now in hippodrome, velodrome, aerodrome, &c.

As De Barris pulled alongside the *Dromon*, she showed the French king's colours on a lance, and, on being hailed, stated that she was taking French Crusaders to Acre. Further interrogated, another story was tried. She was a Genoese, bound for Tyre. All this was suspicious enough, but in the meantime one of the men in the King's ship announced that he recognized her—he had seen her once at Beyrout—and was brought before Richard. "I will give my head to be cut off, or myself to be hanged," asserted this

mariner, "if I do not prove that this is a Saracen ship. Let a galley be sent after them, and give them no salutation; their intention and trustworthiness will then be discovered." Richard adopted the suggestion. Another galley shot out from the fleet and surged up alongside the towering *Dromon*. There was no mistake this time. Down came whistling flights of arrows, while pots of Greek fire crashed into flame as they struck the galley. Off dashed Richard in the *Trench-the-Mer* to the rescue. "Follow me, and take them," he cried to the other galleys, "for if they escape, ye lose my love for ever; and if ye capture them all their goods shall be yours!" The Turk could not get away, she was practically becalmed, and the oar-propelled galleys of the Crusaders closed around her.

But the assailants were in the same predicament as were the Romans when they attacked the lofty ships of the Veneti. The sides of the *Dromon* towered far over their heads, and do what they would they could not get on board her. The Turks had thrown a grapnel and made fast to the King's galley at the very beginning of the fight. Greek fire and missiles of all kinds rained upon the heads of the English, fully exposed on the decks and benches of their low galleys. The apparent hopelessness of their situation began to affect the efforts of the Crusaders. Richard saw that "something must be done", and he rose to the occasion.

"Will ye now suffer that ship to get off untouched and uninjured?" he shouted. "Oh, shame! after so many triumphs do ye now give way to sloth and fear? Know that if this ship escape, every one of you shall be hung on the cross or put to extreme torture!"

That was *his* way of bestowing the cross—a wooden one, not an "iron" one! But it had its effect. The galley-men dived overboard, and, fastening ropes to the enemy's rudder, "steered her as they pleased". It is rather difficult to understand the precise advantage gained by his manœuvre, unless the wind had sprung up and the big Turkish vessel was gathering a good deal of way and dragging the whole press of galleys along with her, and that many were in danger of being swamped. However, after this they were able to climb up her sides by means of ropes, and a desperate hand-to-hand conflict took place on her decks. Here the martial prowess of the Crusaders had full play. Wielding their heavy trenchant swords, they drove the Saracens right forward into the bows of the ship; but just when they thought victory was in their grasp, up came a torrent of fresh assailants from below, and in such overwhelming numbers that the boarders were hurled back into their galleys.

Things were now very black indeed, but Richard once more showed his generalship. He ordered the whole of his galleys to cut loose from their elephantine enemy, to draw off and form line abreast with their bows towards the foe. Then, at his signal, down went the long oars with a great splash into the water, and, every rower putting his full strength into his stroke, the galleys roared through the sea at the big yellow and green *Dromon*. There was a series of rending crashes as the iron beaks of the galleys struck her sides, like sword-fish attacking a whale. The Crusaders backed their oars for all they knew, to get clear, and, staggering and rolling to her doom, the huge Saracen gradually foundered as the water poured in cataracts through the gaping holes in her sides. Only fifty-five of her crew were saved, being

men whom the Crusaders considered would be useful to help them to make the military engines, for which, it would seem, the Saracens were renowned. The remainder who had escaped the swords of the English were "sent home by water", according to the custom of Chaucer's "schipman" at a later date. This cruel habit would seem to have died hard, for we find one of the English captains in the Armada fight regretting that they had not "made water-spaniels" of the crew of a captured Spaniard who were reported to be short of provisions.

We will now forge right ahead through a couple of hundred years, and take a glimpse at a sea-fight in the days of Richard II. The merchants of Flanders, La Rochelle, and some other places had agreed to sail together in considerable force for mutual protection to La Rochelle, in order to buy wine and other merchandise. The English had wind of this expedition and had every intention of catching them *en route*. But the Flemings contrived to elude them and get safely to their destination. There was nothing for it but to make another attempt, and cut them off on their return journey.

"The English navy", says Sir John Froissart, "lay at anchor before Margate at the Thames mouth, toward Sandwich, abiding their adventure, and specially abiding for the ships that were gone to La Rochelle; for they thought they would shortly return. And so they did. . . ."

When he saw he would have to fight, Sir John de Bucq, the commander of the Flemings, made ready his 700 cross-bowmen and his guns.

"The English ships approached," continues Froissart, "and they had certain galleys furnished with archers, and these came foremost rowing with oars, and gave the first assault. The archers shot fiercely, and lost much of their shot; for the Flemings covered them under the decks and would not appear, but drave ever forward with the wind: and when they were out of the English archer's shot, then they did let fly their bolts from the cross-bows, wherewith they hurted many.

"Then approached the great ships of England, the Earl of Arundel with his company, and the Bishop of Norwich with his; and so the other lords. They rushed in among the Flemings' ships, and them of La Rochelle: yet the Flemings and cross-bows defended themselves right valiantly, for their patron, Sir John de Bucq, did ever support them: he was in a great strong ship, where he had three guns shooting so great stones, that wheresoever they lighted they did great damage. And even as they fought they drew little and little towards Flanders; and some little ships, with their merchants, took the coasts of Flanders, and the low water, and thereby saved them, for the great ships could not follow them.

"Thus on the sea they had a hard battle, and ships broken and sunken on both sides; for out of the tops they cast down great bars of iron, sharpened so that they went through to the bottom. This was a hard battle and well fought, for it endured three whole tides; and when the day failed they withdrew from each other, and cast anchor, and there rested all night, and there dressed their hurt men: and when the flood came, they disanchored and drew up sails and returned again to battle.

"With the Englishmen was Peter du Bois of Ghent, with certain archers and mariners; he gave the Flemings much ado, for he had been a mariner, therefore he knew the art of the sea, and he was sore displeased that the Flemings and merchants endured so long. But always the Englishmen won advantage of the Flemings, and so came between Blankenburgh and Sluys, against Cadsand; there was the discomfiture, for the Flemings were not succoured by any creature; and also at that time there were no ships at Sluys, nor men of war. . . . By this discomfiture of Sir John de Bucq, as he came from La Rochelle, the Englishmen had great profit, specially of wine, for they had a nine thousand tuns of wine; whereby wine was the dearer all the year after in Flanders, Holland, and Brabant, and the better cheap in England, as it was reason. Such are the chances of this world; if one hath damage another hath profit."

There are one or two very interesting points in this account. One, of course, is the fact that there were three guns mounted on John de Bucq's ship, which evidently was exceptional at the time, or attention would not have been so particularly drawn to them. Moreover, they were not little guns, like those which were mounted in such numbers a few years later, but of some size, since they fired "*great* stones". But the most noteworthy point that emerges from the story of the fight is that not only were the cross-bowmen able to fire from under cover on the English without exposing themselves, but their bows had actually outranged the long-bows. Now we know that a long-bow in expert hands would kill at 400 yards, so that the effective range of the cross-bow must have been considerable.

CHAPTER VI

The Navy in Tudor Times

"The various ships that were built of yore,
And above them all, and strangest of all
Towered the *Great Harry*, crank and tall,
Whose picture was hanging on the wall,
With bows and stern raised high in air,
And balconies hanging here and there,
And signal lanterns and flags afloat,
And eight round towers, like those that frown
From some old castle, looking down
Upon the drawbridge and the moat."
"The Building of the Ship."
LONGFELLOW.

THE Tudor period, to which this chapter is devoted, is noteworthy as witnessing the birth of the Royal Navy as a permanent national institution. Though we have accounts—probably to a great extent mythical—of the 3600 "very stout" ships of the Saxon King Edgar (A.D. 975), which are said to have been divided into three squadrons, cruising on the north, east, and west coasts of Great Britain; though Edward III, after the victory over the French at Sluys, was dubbed "King of the Sea"; and though Henry V got together the most formidable navy of his time, yet at none of these periods was there what we may term a navy of the realm. Indeed, for the two years, August, 1447,

to August, 1449, there may be said to have been no navy at all, since during the whole of this time only £8, 9*s.* 7*d.* was expended upon what we now regard as our first line of defence.

At the death of Henry V, in 1422, the "Little Navy" disease broke out again, and nearly the whole of his fine fleet was sold. Things went from bad to worse, till the disgust and uneasiness of the nation found expression in a little work entitled *The Libel of English Policie*. The author, who is supposed to have been Bishop Adam de Molyns, exhorted the nation to "Keepe the Sea and namely the Narrow Sea", and also to secure both Dover and Calais. "Where bene our shippes", says he, "where bene our swerdes become?" He went on to point out how much our naval force had deteriorated since the time when Edward III had caused the famous Golden Noble to be struck, in which he is represented standing in a ship, sword in hand and shield on arm, and thus referred to the signification of the device:

> "Four things our Noble sheweth unto me:
> King, Ship and Sword and Power of the Sea".

That this appeal had some kind of effect is shown by the fact that in 1442 an order was issued "for to have upon the See continuelly, for the sesons of the yere fro Candlimes to Martymesse, viii Shippes with forstages; ye wiche Shippes, as it is thought, most have on with an other eche of hem cl men. Item, every grete Shippe most have attendyng opon hym a Barge and a Balynger." "Hym" strikes one, by the way, as a curious way to refer to a ship. These vessels with "iiii Spynes", which seem to have been

what we might call dispatch vessels, were stationed, one at Bristol, two at Dartmouth, two in the Thames, one at Hull, and one at "the Newe Castell". The whole fleet combined was manned by 2160 men. It was a poor affair, but still it was better than nothing.

Then came the Wars of the Roses, which, naturally, diverted men's thoughts from the navy. That Edward IV, when he had established himself on the throne, had some idea of emulating the naval deeds of the third Edward may be suspected from his having issued a gold noble, which was evidently closely copied from the one we have already referred to. But nothing much was done either by him or by his successor, Richard Crookback, and it was left to Henry VII to reap the honour of being, to some extent, the founder of the Royal Navy of which we are all so proud. Though by some his son, "Bluff King Hal", may be regarded in this light, on account of the very formidable fleet which he raised and organized and the improvements which he is said to have made in its ships, yet I think we must admit that Henry VII laid the foundation-stone upon which his successor built.

He depended greatly on hired merchantmen—we do not despise this method of augmenting our navy even at the present day—but he resurrected the Royal Fleet. Though it was but a very small one, of only about a dozen ships, yet two of them, at any rate, were finer ships than any the British Navy had before possessed. These were the *Regent* and the *Sovereign*. While we had neglected our shipbuilding, to carry on war between ourselves, it had progressed abroad, especially in France, and there is little doubt that the *Regent*, built on the River Rother, was inspired by the French ship *Columbe*, which, perhaps,

was the ship which had brought Henry to England. The *Regent* had four masts, the *Sovereign* three, and each of them was much more like some of the ships we are familiar with in pictures of the Spanish Armada fight than the old cogs of a few years previously, even in their most improved forms. The armament of the *Regent* consisted, it is said, of 225 "serpentines". The number is formidable, but not the weapons themselves. They were merely what might be called breech-loading wall-pieces, corresponding to Chinese "jingalls", and firing balls weighing from 4 to 6 ounces.

In a contemporary picture of the destruction of this ship in her action with the *Marie la Cordelière* in 1512, when both ships caught fire and blew up, the *Regent* is shown with very heavy guns firing through port-holes. Port-holes, by the way, are said to have been invented by Desharges, a Brest shipbuilder, in 1500. I am inclined to think that they were known at an earlier date—possibly Desharges invented port-*lids*. It is, of course, possible that these were cut in the *Regent* some time after her original construction, and heavier guns mounted in place of some of her serpentines. According to some writers this ship was originally christened the *Great Harry*, while the *Sovereign* was built out of the remains of an older ship called the *Grace Dieu*. As a very large and renowned *Henri Grace à Dieu* was launched in 1514, there has been a considerable amount of confusion between one ship and the other. But if the *Regent* was called the *Great Harry*, she had nothing whatever to do with the *Henri*, which is also sometimes referred to as the *Harry Grace à Dieu*.[17] As a matter of fact, the latter was built to replace the former, the loss of which was considered a national disaster, and so much so that an attempt was made to keep her fate a

secret. "At the reverens of God", wrote Cardinal Wolsey, "kepe these tydyngs to yourselfe." There was probably another reason for the construction of an exceptionally fine ship, and that was the desire that the English should not be eclipsed by the Scots in this respect.





***HARRY*, THE FIRST BIG BATTLESHIP OF THE BRIT**

For, the year before the *Regent* was blown up, the King of Scotland, who was hand in glove with the French, had put afloat what a contemporary chronicler terms "ane verrie monstrous great schip". This was the famous *Great Michael*. Her constructor was Jaques Tarret, a Frenchman, and it has been written that "she was of so great stature and took so much timber, that except Falkland, she wasted all the woods of Fife, which were oak wood, with all the timber that was gotten out of Norway". She took "a year and a day to build", and we are given her dimensions, which compare favourably in point of size with many much later line-of-battle ships. "She was 12 score feet in length and 36 feet within the sides; she was 10 feet thick in the wall, and boarded on every side so slack and so thick that no cannon could go through her." It is rather difficult to understand what "slack" means in this context.

"This great ship", goes on the account, "cumbered Scotland to get her to sea." By the time she was afloat and fully equipped she was reckoned to have cost the King from thirty to forty thousand pounds. She carried a heavy battery, and if her cannon were as formidable as their names, they must have been most effective in action. "She bore many cannons, six on every side, with three great Bassils, two behind in her dock, and one before, with three hundred shot of small Artillerie, that is to say, Myand and Battered Falcon and Quarter Falcon, Slings, pestilent Serpentines and Double Dogs, with Hagtar and Culvering, Cross-bows and Hand-bows. She had three hundred mariners to sail her: she had six score of gunners to use her artillery, and had a thousand men of war by her, Captains, Skippers, and Quartermasters." A "basil" or "basilisk", it may be explained, was a gun throwing a ball of 200 pounds

weight, a much heavier projectile than any used at Trafalgar.

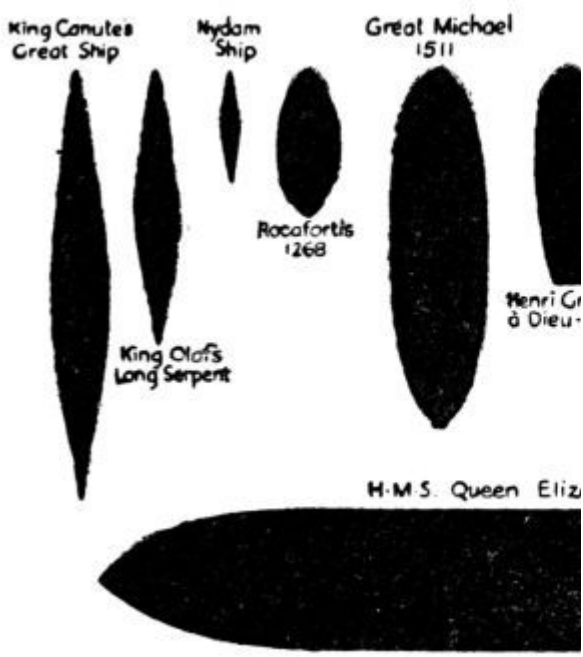
Space forbids further details as to the "menagerie" of other pieces that armed the decks of the *Great Michael*, but you will find more about these and other old-fashioned cannon in another chapter. As soon as she was afloat the King had her fired at to test the resistance of her tremendously thick sides, but, says our old writer, "the cannon deired hir not"; that is to say, could not penetrate her. This is the oldest experiment of the kind of which we have any record. But the most remarkable thing about the *Great Michael*—at least to my mind—is her size. According to the old account from which I have quoted, which, by the way, was written by one Robert Lindsay of Pitscottie, she must have had almost the exact dimensions of the *Duke of Wellington*, one of the last and finest of our steam three-deckers. Now I have a perfect idea of *her* size, because I had the honour of serving on board her for a couple of years. She was in the "sere and yellow leaf" then, her masts had gone, her engines had disappeared, and she had a roof which made her look much more like Noah's Ark than a battleship, but I can remember her in all her glory when she carried the flag of the commander-in-chief at Portsmouth. I was only a boy then, but I recollect that her appearance was fine in the extreme. In reckoning the beam of the *Great Michael* we must remember to add 20 feet for the thickness of her sides, since Pitscottie only gives us her internal width. Having done this, I will put down the dimensions of the two ships for comparison—

Great Michael, length, 240 feet;
beam, 56 feet.

Duke of Wellington, length, 240 feet, 7 inches; beam, 60 feet, 1 inch.

Now if Pitscottie's figures are correct, either the *Michael* must have been almost incredibly bigger than any ship of her day, or, as I have before suggested, the old war-ships of that and earlier centuries were in reality a good deal larger than contemporary representations and records of "tunnage" would lead us to expect.

The old Scots writer, however, offers to prove his figures; for he says: "If any man believe that this ship was not as we have shewn, let him pass to the place of Tullibardine, where he will find the length and breadth of her set with hawthorne: as for my author he was Captain Andrew Wood, principal Captain of hir, and Robert Bartone, who was made her Skipper".



Rough Diagram, showing Comparative S

The sizes of these ships can only be shown approximately, a mean has to be taken between length of keel and length over- was measured. H.M.S. *Queen Elizabeth*—650 feet long, with a Diagram, showing Comparative Sizes of Famous Ships at Differ

The sizes of these ships can only be shown approximately, a mean has to be taken between length of keel and length over- was measured. H.M.S. *Queen Elizabeth*—650 feet long, with a b

With regard to the plan of the vessel in hawthorns, I am indebted to Lady Strathallan for the following interesting items: Tullibardine Castle has quite disappeared. What little was left of it was used in the construction of farm buildings from 1830-40. The spot where the hawthorns were planted to show the dimensions of the *Great Michael* is still known, but there is nothing to mark it. When the great ship

was built, the carpenter or "wright" of the castle went down to superintend the shipwrights. When he got home, as the people at the castle were very anxious to form some idea of the size of this "Dreadnought" of that period, he was given orders to have an excavation made of the exact size of the ship. The hawthorns were, it would appear, planted round the excavation, which was tilled with water and aquatic plants, and remained as an ornamental pond till about the time of the battle of Waterloo. In 1837 the shape of the vessel was distinctly perceptible, but three only remained of the hawthorn-trees that formerly surrounded it. Some time ago Lady Strathallan, anxious that this curious monument of antiquity should not disappear altogether, directed the forester to renew the hawthorn outline of the *Great Michael*. The trees were procured for the purpose, but the tenant of the farm on which it was situated objected that it would take up too much room in his field, so that the project was abandoned. It seems a thousand pities that something cannot, even now, be done to perpetuate this relic of the famous Scots man-of-war, which, year by year, is being rendered more and more indistinguishable by the plough. The field in which traces of the hollow may be looked for is situated 400 yards from the old parish chapel, which was restored a good many years ago and used as a burial vault.

The *Great Michael* did not long remain a Scots ship. The fleet of Scotland went to France in 1513, and in the following year she was bought by Louis XII for 40,000 francs, to replace the *Cordelière*, which, as you will remember, was blown up with the *Regent*. This brings us back to the *Henri Grace à Dieu*, which was built to replace the latter ship. But before we turn our attention to her we cannot but note the

difference between the alleged cost of the *Great Michael* and that for which she was sold. The bargain does not seem worthy of the Scots reputation for "canniness". But we must bear in mind that a "pound Scots" was not at all the same thing as an English pound at that date. Ever since 1355 its value had been falling, till by 1603 it was only worth twenty pence instead of twenty shillings. It was, in fact, at the time of the sale, the kind of "silver pound" that the "chieftain to the Highlands bound" paid or promised the boatman if he would row Lord Ullin's daughter and himself "o'er the ferry". But even if we put it at about a tenth of a pound sterling in 1513, the bargain seems a poor one. Probably it was more of a political deal than anything else, comparable to the German sale of the *Goeben* to Turkey.

The *Henri Grace à Dieu*—I think we may as well call her the *Henri* for short, and save time and paper—is a ship about which we have the most extended information in some respects—those dealing with her decoration and equipment, for instance; but we are left entirely in the dark as to her size and measurements. The only dimensions I have been able to find are those indicated on a plan which, on very insufficient grounds, is claimed to be a copy of the official one on which she was built, and which is stated to be—or at any rate to have been within the last century—at Plymouth dockyard. So far this original has not been traced, and I may remark that anyone who knows anything about the Navy would not dream of referring to the dockyard in the western port except as "Devonport Dockyard". However, I give the dimensions for what they may be worth—not much, I think:

Length, 145 feet; beam, 35 feet 9 inches; tonnage,

839.

Now if this, by any chance, is anything like correct she must have been a very much smaller ship than the *Great Michael*, which is not very likely, since Henry VIII would naturally have wanted "to go one better". Moreover, she is generally credited as having been of at least a thousand tons displacement, and carried a battery little, if any, inferior in weight and numbers to that of the *Michael*.

She was heavily equipped with ordnance, very little of which is apparent in her pictures. According to her inventories she carried something like 185 guns of all sorts and sizes, but many of these must have been kept on shore as reserve stores. She is generally credited with carrying 14 heavy guns on the lower and 12 on the main deck, and 46 light cannon on her upper works. Some of the large and all the smaller ones were breech-loaders, and as most were provided with at least two "chambers" or breech-pieces, which contained the powder-charge and could be quickly substituted one for the other, we may almost call them "quick-firers". She was gorgeously decorated in the first place, and poop, waist, forecastle, and tops were hung with shields showing alternately the St. George's Cross, the Golden Fleur-de-Lis on a blue ground, and the Tudor Rose on a green and white ground. Her sails were woven with a decorative design in gold damask, and she carried a lion figure-head, but the lion was badly executed and a very tame one. Like all Tudor ships she flew a profusion of flags, standards, and immense streamers bearing the St. George's Cross, the fly or long-pointed end being half green and half white. These were the Tudor livery colours. The plain red-cross flag or "Jack" was well in evidence and

generally carried on the fore masthead as well as among the smaller flags placed on poles at equal distances along the bulwarks. The royal standard was also carried, but not in every ship, and sometimes it appears "impaled" with the national red-cross flag—that is to say, the two were placed side by side on the same flag.

The national status of the Royal Navy was becoming recognized. Before this time, though the English "Jack" generally found a place somewhere on board an English ship, the banners and pennons of the nobles and knights on board were most in evidence. Now we see nothing but royal and national emblems. In the war with France in 1455 the ships of the squadron forming the "van" or leading portion of the fleet carried the St. George's Cross at the fore, those of the centre at the main, and the rear squadron at the mizzen.

In describing the *Henri* we have practically described all the "great shippes" of her class, of which there were a considerable number, though none were quite so large, or probably quite so elaborately decorated. Of course she was what we may call "a show ship", like the *Royal James* and *Sovereign of the Seas* of a later date.

But by 1546, if we may accept Anthony Anthony's *Roll* as correct, "timber colour" with scarlet masts and spars was uniform for all classes of ships.

But it is time we turned our attention to the men who manned them. The changes in this respect were quite as important as those we have noted in the ships themselves. To begin with, the nobles and gentry of the kingdom were beginning to wake up to the fact that war afloat offered them at least equal

opportunities of distinction to those they had hitherto looked for in land warfare. Besides, they had now little or no chance of that at home, and there was no longer any land frontier over in France across which they could ride and raid and harry and fight as their fathers and grandfathers had so often done. Naval strategy was still confined to cross raiding, but ships were now better fighting-machines and were not merely used as platforms for hand-to-hand fighting and as transports; so that men of the class which had hitherto looked down on ships and sailors began to turn their eyes towards the sea.



Ships of the Time of Heni
(*From a Drawing of 15*·

Looking at the lofty hulls, the immense mainsails, and the can easily understand how a want of care wrecked the *Mary* right is apparently trying to reduce sail, and has had to lowe the water, to the apparent danger of the ship.

This does not mean that they became seamen. No, they still remained and considered themselves soldiers, and did not trouble to learn any seamanship. That was still the special job of the master or skipper. But they recognized that the command of a fighting-ship was worth having. I may instance the Carew family.[18] At least three of them were serving in command of ships in the battle at Spithead in 1545. Sir George Carew lost his life when his ship, the *Mary Rose*, went down; his brother, Peter Carew, who had been a year or two before in command of a company of infantry in the English army in France, commanded a Venetian ship—probably hired—the *Francisco Bardado;* while their uncle, Sir Gawen Carew, commanded a third. As for the men, the seamen, thanks to more seaworthy vessels, had probably improved in their seamanship, while the navy was formed into a regularly-organized force consisting of "mariners, soldiers"—or, as we should call them now, marines—"and gunners". Every ship had her proper complement of each. Thus the *Henri Grace à Dieu* carried 260 seamen, 400 soldiers, and 40 gunners; the *Mary Rose* 180 seamen, 200 soldiers, and 20 gunners; the *Peter Pomgranate* 130 seamen, 150 soldiers, and 20 gunners; and so forth, according to size.



A SEA FIGHT I
Facsimile woodcut fron

Which particular battle this picture is supposed to represe again for almost every naval engagement to which he makes not then in existence does not appear to trouble him at all. B the times in which the historian lived and wrote.

Though there are indications of a somewhat similar arrangement in earlier times, it would appear that the seamen were either paid by the king or hired with their ship, while the soldiers were paid by some noble or even bishop who had supplied them as a feudal obligation.

The pay does not seem to have been quite so liberal as in former times, but it was not bad if we

allow for the difference in its value compared with that of to-day. In the *Gabriel Royal*, for instance, Sir William Trevellian, the captain—a soldier—got 1*s.* 6*d.* a day. The master and the rest of her company, officers, seamen, and soldiers, got 5*s.* a month (of twenty-eight days), but the master and other officers got in addition what were called "dead shares", in number from six to one-half. This means that the master got six men's pay besides his own—altogether 35*s.*—a month, and so on in proportion. The gunners got extra pay, called "rewards"—we might call it "efficiency pay"—varying from 5*s.* a month for the master gunner to 1*s.* 8*d.* for the private gunners.

The provision allowance was respectable—England was renowned for good feeding at this period. Sundays, Tuesdays, and Thursdays each man had ½ pound of beef and ¼ pound of bacon for his dinner, and the same for supper. On Mondays, Wednesdays, and Saturdays they had to be content with two herrings and 1/8 pound of cheese for each of these meals, while on Fridays or "ffishe days beynge ffastinge dayes" they had to go without supper, but for dinner had either half a cod or half a stock fish and a pound of butter between four men, or, if they preferred it, could divide ten herrings and a pound of cheese between them. As for bread, every man got either a pound of bread or biscuit daily, while instead of the "grog" or "optional cocoa" of to-day, he got a liberal allowance either of beer or "beverage" made of two parts water to one of "sack".

As for the clothing of the Royal Navy, we have very little information so far as the Tudor period is concerned. That there was some attempt at uniformity may be gathered from the constant references to the provision of coats or jackets of

green and white cloth. Some were satin or damask of the same colouring, presumably for officers. But what these garments were like we do not know. In Anthony Anthony's drawing of the *Galley Subtle* the master of the ship appears in the old "jack" with the red cross, while the rowers are apparently clad in pink. This may be intended to represent their bare flesh, for they might be stripped to the waist for rowing, but it is more probable that it was originally red and that the colour has faded. It is said that the rowers of Henry VIII's royal barge wore this colour, and it seems quite possible that the *Galley Subtle*, the only one of her class and a profusely-decorated vessel, *was* regarded as the royal barge.

We know, too, from the costume of the Yeomen of the Guard, or "Beefeaters", that red was making its appearance as a military colour, for their uniform is that of Henry VIII's body-guard. The standard under which Henry VII secured the crown at the battle of Bosworth Field was a red dragon on a white and green field, and was supposed to represent that of Cadwallader, the last of the British kings, from whom the victor claimed descent. The descent, I dare say, was genuine enough, but Cadwallader must have died before the invention of heraldry. But Wales has always been associated with a dragon of this kind, which has from time immemorial been a world-wide emblem of sovereignty. Henry seems to have adopted the colour of the dragon as the royal livery colour—as it remains to-day—but at the same time retained the white and green for the navy. Much in the same way "blue" is accepted as a royal colour, and as such is worn as the facings of royal regiments and as the uniform of the Royal Navy and Royal Artillery.

But it seems probable that blue—very possibly

from dye of that colour being easily procurable; the Ancient Britons, we may remember, decorated themselves with blue woad—had been for centuries a very usual colour for seamen to wear; and when, in 1553, Sir Hugh Willoughby's North Sea expedition was fitted out all his crews were provided with "parade suits" of "Wachett or Skie-coloured cloth". Watchett was a place in Somersetshire where this special material was made. But these, perhaps, were not men actually belonging to the Royal Navy. As for the soldiers or marines, we may suppose that they wore the white "jack" with the red cross, which was so universal at this time that "whitecoat" was used for "soldier" just as "redcoat" was at a later date. The "gunners" wore the white and green and may have been regarded as "seamen gunners".

CHAPTER VII

From Elizabeth to Victoria

"Hearts of oak are our ships,
Gallant tars are our men,
We always are ready,
Steady, boys, steady!
We'll fight and we'll conquer again
and again."
GARRICK.

WE have now followed the story of our navy, its ships, and its men up to the time when the three-

masted, many-gunned man-of-war with two or three decks, and relying entirely on sail-power for propulsion, made its appearance. This class of vessel, with, of course, gradual improvements, remained the principal fighting-unit, not only in our own, but in all other navies right up to the time of the introduction of steam power, and indeed we may almost say later; as, though provided with engines of no very great horse power, the sails, rigging, and hulls of our line-of-battle ships at the time of the introduction of the ironclad were practically the same as those of the ships which fought at Trafalgar. We are, in fact, entering on the period beginning with the time—

> "When that great fleet Invincible,
> against us bore in vain
> The richest spoils of Mexico, the
> stoutest hearts of Spain",

and ending with the imposing but indecisive operations of the combined British and French fleets in the Crimean War.

Now this portion of our naval history is as near as possible all plain sailing, and its course as well known as that from the Mersey Bar to Sandy Hook to transatlantic travellers. I do not therefore propose to conduct my readers through the glorious, though, if I may be allowed to say it, somewhat hackneyed stories of the defeat of the Spanish Armada, Drake's exploits on the Spanish Main, and the series of wars with the Dutch, in which we met the toughest opponents we have ever fought with for the supremacy of the seas. Neither do I intend recounting for the hundredth time the magnificent record of the Royal Navy in its almost continuous

campaign against those of the French kings, the French Republic, and the Emperor Napoleon, which, beginning early in the eighteenth century, was only finally terminated by the downfall of the great Corsican general at Waterloo. As far as all these are concerned I have only to say: "Now the rest of the acts of the Royal Navy, and all that it did, are they not written in the book of the chronicles of James the Naval Historian", and of many other historians for that matter, good, bad, and indifferent. No, so far I have endeavoured to keep a little off the beaten track of naval history as generally presented in books of this class, and until we arrive at our navy of to-day I propose to keep this principle in view; and it is in accordance with this that, before finally quitting the Tudor period, I propose to make a brief reference to our experiences with the Hanseatic League.



DESTROYING A STRAGG
From the paintin

The first Spanish ships to meet their fate were the straggle vessel being engaged by an English captain. The great Spanish which has got the wind of her enemy, and is pouring a destruc

The adverse influence of this great confederation of German cities upon our country for two or three centuries has never been sufficiently emphasized in our histories. Possibly the earlier historians who were contemporary with the Hanseatics were "got at" by their representatives, who swarmed in this country and had an organized system of bribery, with a regulated scale of bribes for all sorts of people, from the Lord Mayor of London downwards. They seem to have been about the only people in the

later Middle Ages with ready cash in the north of Europe, and they were glad to lend the Kings of England money to carry on their interminable wars with France in return for various concessions, which generally hit British trade pretty hard. They knew how to get good security for their loans, and in Edward III's time they actually had the British crown in pawn at Cologne! One proof of their tremendous financial influence in this country remains to this day in the word "sterling". We still say "one pound sterling", "sterling gold", &c. Now "sterling" is nothing but a corrupted form of "easterling"—a man from the eastward, as these Hanse traders used to be called—when they were not referred to as "Prussians".

At the Conquest, and for long afterwards, we were a nation of agriculturists, soldiers, fishermen, and sailors. Our only regular trade was in wool, therefore known as the "staple" industry—generally "the staple" for short. It was the desire to get their greedy fingers into this our only "pie" that first brought the Hanse traders into this country in force some time in the thirteenth century, though we had not been free from them since the days of Ethelred. They were allowed to make their head-quarters in the Steelyard in London (where Cannon Street Station now stands), to import merchandise on paying a nominal duty of 1 per cent, to be licensed victuallers, keeping inns, hotels, and wine shops, to have special courts of jurisdiction of their own, which put them above English law, and actually to hold one of the gates of the city. Have we not seen this financial, business, trading, and inn-keeping undermining of British interests in our own day by the modern easterlings?

Later historians preferred rather to dilate on our victories than to refer to our encounters at sea with

the Hanseatics, in which we did not always show to advantage. For these traders, like their modern representatives, were good pirates on occasion, had a considerable number of fighting-ships at their command, and, according to some authorities, had complete control of the northern seas. Nor was there any reciprocity about their trading arrangements. They made a rule that only their own ships were to carry the goods they dealt in, and sank any English ship that attempted to break it. At the same time they would not allow our ships into the Baltic to interfere with their trade with Russia and Scandinavia, and now and again in return for some real or pretended grievance attacked our seaboard and hung the crews of our coasters to their own masts. All the time they were endeavouring to strangle our trade from their London head-quarters. Like an American "Trust", they were generally able to ruin individuals or smaller companies which endeavoured to compete with them.



LORD HOWARD ATTACKING A
In this fruitless attempt to invade our shores ten thousand Spa hundr

Naturally the "Prussians" were not loved in this country, and it is said that Wat Tyler's insurrection was to a great extent directed against these interlopers, the insurgents killing as many of them as they could get hold of. But their influence with the Government always saved them till the days of the Tudors, when, in spite of all obstacles, our merchants began to make headway. Edward VI imposed heavy duties and restrictions on them, and established an alliance and a trading connection with Russia by sending a mission to Moscow by way of Archangel. The marriage of Queen Mary with Philip of Spain gave the Hanse merchants their chance, since the

Prince Consort's father—Charles V—was Emperor of Germany. The privileges which had been taken away from the "Prussians" by her brother were restored; but they were not to hold them long. Queen Elizabeth had an eye to business; she saw how the Germans were hampering the development of our trade, and reimposed Edward VI's duty of 20 per cent on the Hanse merchants of the Steelyard. But she found that she still had to buy gunpowder and other munitions of war from them, because she could not get them elsewhere, and she did not like them the better for that. Neither did they like the reimposed duties, and they were only too glad to assist the Spanish Armada by sending a fleet laden with provisions and munitions to the Tagus. Drake and the navy countered by seizing the whole of these ships.

The Hanseatics, who had already before this laboured "to render the English merchants obnoxious to the other trading nations by various calumnies", retaliated by turning every Englishman out of Germany. This did not affect us very much, as, though there were a comparatively small number of the "merchants of the staple" and the "merchant adventurers" settled in that country, their trade and interests were not comparable with that of the merchants of the Steelyard in England. But the Hanseatics got a "knock out" blow in return from "good Queen Bess", who turned the whole collection of German merchants out of England, "lock, stock, and barrel", and so freed the country of a menace which, while not so obvious, was probably more insidiously dangerous than the Spanish Armada. Then followed the break-up of Germany in the Thirty Years' War, and British trade came by its own. It does seem a pity that "once bit" we were not "twice shy".

Our historians are considerably to blame; but, in any case, we ought not to have so entirely forgotten what a menace German trade and German immigration might be to this country.

"What has all this to do with the navy?" may perhaps be asked. Possibly not much at first sight, but in reality a great deal. If, during the centuries the Hanse merchants were throttling our trade, we had maintained a formidable and national navy instead of pursuing a hand-to-mouth policy and utilizing our ships principally as ferry-boats to take our armies over to France, we might have been in a better position to deal with the Hanse League. We could have prevented interference with our ships, forced our way into the Baltic, and extended our trade. On the other hand, the navy was not a national navy, but, generally speaking, a personal appanage of the reigning monarch, who as often as not was very heavily in debt to the "Prussians". Gold is a very powerful factor, even in naval warfare, if judiciously applied, and not misapplied, as when some of our feebler Saxon kings bought off the viking invaders with "Danegelt".

I am tempted, before leaving the Hansa, to relate a story of one of their smaller naval operations, which, I must premise, is taken from a German source, so you can believe as much or as little of it as you please. But it is not a bad story in its way. Our King Edward IV had fallen out with the King of Denmark, who, in retaliation for a real or alleged piratical attack made by the traders of Lynn upon his dominions in Iceland, set to work to capture our merchantmen, using apparently the ships of his allies, the Hanse League, for the purpose. King Edward, in his turn, at once closed the Steelyard,

and, according to this account, strangled many of its merchants, and demanded £20,000 compensation for his captured ships. At this time there were a couple of rather big Hanse ships lying in a Dutch harbour, the *Mariendrache* and the *Anholt*. Hearing of the English preparations for war, Paul Beneke, who was in command, stood over to Deal under French colours to intercept the Lord Mayor of London, who was expected to land there on his way back from Paris in *La Cygne* of Dieppe. How he discovered this we are not told.

By the use of French colours Paul Beneke succeeded in kidnapping the Mayor of Deal and various other notabilities, who thought they were going on board *La Cygne* to welcome the Lord Mayor. The two Hanseatic ships then put to sea, intercepted the real French ship and her consort *La Madeline of Cannes*, took out their distinguished passenger and whatever goods they had on board, and made for the Dutch harbour they had started from. The omniscient Beneke knew that it was being blockaded by thirteen small English ships and one much more powerful than either of his, the *St. John*, possibly the *John Evangelist of Dartmouth*. However, thanks to a fog, he got through the blockade undiscovered. Late at night he, with one other companion, pulled out to sea in a fishing-boat, and, under the pretence of being Dutch fishermen, went alongside the big *St. John* and asked leave to make fast astern while they boiled their "beer soup" for supper. Permission was granted, and, as the "beer soup" in question was in reality molten lead, they had not much difficulty, under cover of the lofty and overhanging stern, in pouring it into the iron joints of the rudder, so that it became immovable. Then, "after supper", having thanked the obliging officer of the watch, Beneke and his

confederate made their way back to their own ship. The following morning the two Germans stood out of harbour and attacked the English fleet, and, as none of its ships were big enough to put up any fight against them, with the exception of the *St. John*, and she was not under control, thanks to Beneke's strategem, they are said to have won a "glorious victory". Veracious or not, this tale has one realistic touch about it in the evident desire to win by underhand means rather than by fair fighting. But we seem to have been blown a bit out of our course, and must get back to our point of departure.

Although Henry VIII is inseparably connected with the *Henri Grace à Dieu*, this famous ship was by no means the only improved type of fighting-ship which dates from his reign. There were, besides the great ships, such as the *Henri*, the *Jesus of Lubeck*,[19] and others, a class known as galleasses, without a raised poop and forecastle, with a single tier of heavy guns, and a protruding spur or "beak" forward. They had fully-rigged main- and foremasts, a mizen and a bonaventure mizen—these last two masts very small and carrying a single lateen sail apiece—and a long bowsprit. There is little doubt that these were an adaptation of the Mediterranean galleys modified to suit Northern seas. Ships were longer-lived in those days than at present, and though many of those in Elizabeth's navy had originally belonged to that of her father, in the newer vessels their constructors endeavoured to combine the best qualities of both the great ships and the galleasses. The ships of this improved type were known as "galleons", a word that is generally, but erroneously, taken to refer only to Spanish ships. The battleships of both nations were galleons at this period, but they differed considerably in their general lines and in their armament.

Generally speaking, the Spanish ships were higher out of the water and carried lighter cannon than our own. An Elizabethan battleship, then, was rather longer than earlier great ships, and, though she still had a comparatively high stern, it was not to be compared in this respect with that of the *Henri*. The "fore castle" had come down to a very low affair, the bows finishing with a "beak-head" adopted from the galleasse, but with the spur at its extremity replaced by a figurehead—generally a lion, dragon, or unicorn. The general uniformity in colouring which marked the earlier Tudor men-of-war had been replaced by a "go as you please" system, under which one ship had her upper works painted red, another white and green, a third black and white, while a fourth might retain the old regulation timber colour. Considerable sums were expended in carving, gilding, and decoration in colour, not only at the bow and stern, but along the exterior of the bulwarks. As regards the armament carried afloat, at this and later times, particulars will be given in a future chapter.

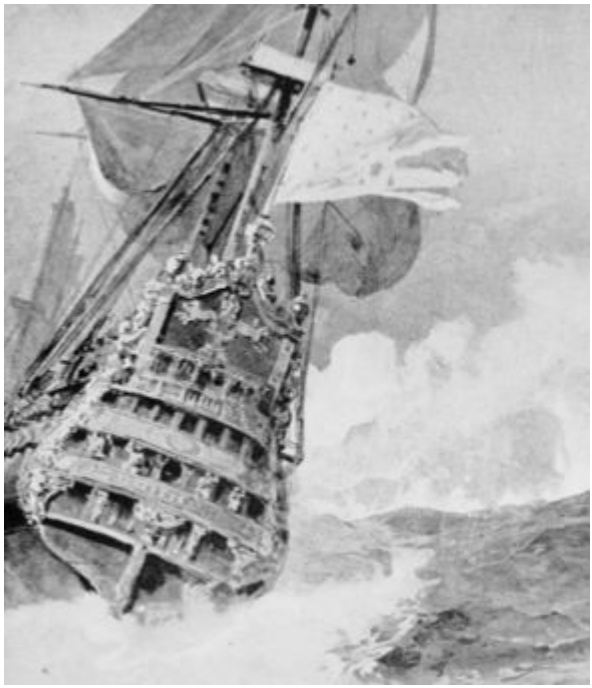
An old writer of the period takes satisfaction in pointing out the superiority of the English over foreign ships. "As for those of the Portuguese," he says, "they are the veriest drones on the sea, the rather because their seeling[20] was dammed up with a certain kind of mortar to dead the shot." "The French," he goes on to say, "however dextrous in land battles, are left-handed in sea-fights, whose best ships are of Dutch building. The Dutch build their ships so floaty and buoyant, they have little hold in the water in comparison to ours, which keep the better wind and so out-sail them. The Spanish pride hath infected their ships with loftiness, which makes them but the fairer marks to our shot. Besides the

wind hath so much power of them in bad weather, that it drives them two leagues for one of ours to leeward—which is very dangerous upon a lee-shore." He states further that the "Turkish frigots", especially those built at Algiers, are much the best foreign ships; being "built much nearer the English mode", and they "may hereafter prove mischievous to us, if not seasonably prevented". The writer was perfectly correct in his last remark, as will be seen in the next chapter.

Here are a few extracts from Sir Walter Raleigh's directions for "clearing for action". The captain is to appoint "sufficient company to assist the gunners", by which it would appear that the number of guns carried had increased faster than the complement of "gonnars" allotted to a man-of-war. If necessary, "the cabins between the decks shall be taken down, all beds and sacks employed for bulwarks". The "musketiers"[21] were to be distributed between the "fore-castell", the "mast", and the "poope". The gunners were ordered not to fire except at point-blank range, that is to say, until pretty close alongside the enemy. An officer was to be specially detailed to see that there was no loose powder carried between decks nor near any lighted gun-matches. About the decks were to be distributed "divers hogsheads" sawn in half and filled with water. No one was to board the enemy's ship without orders; special men were told off to each sail; while the carpenter and his crew were to attend with plugs and sheets of lead, some in the hold, others on the lower deck, in readiness to plug up shot holes between wind and water.

In the early Stuart period there were no very great changes in the construction and appearance of our

men-of-war, but they gradually—if we may judge from their pictures—seem to have acquired a more "ship-shape" look, and give one the idea of greater roominess. The bonaventure mizen-mast disappears, so that there are only three masts instead of four, and the mizen is provided with a topsail in addition to its lateen. At the end of the bowsprit, too, appears a little top and top-mast, while a square sail is spread on a yard slung below it. This sail has a large round hole in each lower corner, to let the water run out when it is plunged under water as the ship pitches. The *Prince Royal* was the show ship of those days, and no less than £441 was spent on her carved decorations, and £868 on gilding them. She was our first three-decker, if we include the upper deck, and had a displacement of 1200 tons.



THE *ROYAL GEORGE* ENGAGING THE

Admiral Hawke in this engagement gained a decisive victo
Her end was a tragic one, for she capsized and sank at Spithea

In 1637 was launched the much more famous *Sovereign of the Seas*. She was a very handsome vessel, longer and lower in the water than the *Prince Royal*, and 483 tons bigger. In the *Travels of Cosmo III*, Duke of Tuscany, through England, about thirty years after she was launched, the following account is given of her: "This monstrous vessel was built in the year 1637 by King Charles I at incredible expense; for, besides the vast size of the ship, which is an hundred and twenty paces in length, it has cabins roofed with carved work, richly ornamented with gold, and the outside of the stern is decorated in a similar manner. The height of the stern is quite extraordinary, and it is hung with seven magnificent lanthorns, the principal one, which is more elevated than the rest, being capable of containing six people. The ship carries 106 pieces of brass cannon, and requires a thousand men for its equipment. His Highness went to the highest part of the stern, and having walked over the whole length from stern to prow as well above as below, stepped into the handsomest cabin in the stern, where there were still evident marks of the sides having been repaired from the effect of cannon-balls, which sufficiently indicated that it had been more than once in action." The *Sovereign* was coloured outside black and gold, and had an elaborate figure-head representing King Edgar on horseback trampling on seven kings. During the Commonwealth and Restoration there were continuous improvements in ship design, due, no doubt, in some measure, to the constant fighting with the Dutch. Our naval constructors naturally

wanted to build better ships; they had the Dutch prizes to study, and our sea officers saw a good deal of the French men-of-war, which during the latter part of the war assisted them against the Dutch. The *Royal Charles* of 1673 may be taken as the link between the *Sovereign* and the eighteenth-century ships of our navy. She was a handsome ship, rather smaller than the *Sovereign*, with a rounded stern at the water-line, instead of its being put in flat like that of an ordinary boat. This not only made ships built in this way, as they always were after this time, stronger, but gave them more graceful lines, as well as better ones for sailing.

The French about this time began to turn out ships on much better lines than our own, and throughout the eighteenth century and part of the nineteenth our French prizes were our best-looking and best-sailing ships. However, a writer at the very end of the seventeenth century makes the following comparison between the fighting capacity of the French and British ships of the period: "Our guns, being for the most part shorter," he says, "are made to carry more shot than a French gun of like weight, therefore the French guns reach further, and ours make a bigger hole. By this the French has the advantage to fight at a distance, and we yard-arm to yard-arm. The like advantage have we over them in shipping; although they are broader and carry a better sail, our sides are thicker and better able to receive their shot; by this they are more subject to be sunk by our gun-shot than we." At the beginning of the eighteenth century the exterior of the bulwarks of the upper deck, poop, and forecastle was generally painted blue, though occasionally red. On this broad band, carved devices, generally representing trophies of colours, arms, and guns, were placed between the ports, which on the

upper deck were round. Outboard a carved wreath encircled them, which, with the numerous other ornamental carvings at bow and stern, was profusely gilded. Below this broad blue band the sides of the ship were of a yellow tinge, and were finished off, just above the water-line, with a single or double black wale.



THE *VICTORY* IN GALA DRESS

Nelson's famous flagship, dressed with flags in honour of th President to Portsmouth.

The hull below this was painted white. The ship's sides inboard were usually coloured red, in order, the story goes, that the crew should not be affected by the sight of blood splashes in action. The gun-carriages were often the same colour. The beak-head had disappeared, and the stem curved up at a somewhat abrupt angle, finishing off with a big figure-head, as often as not a lion. As the century went on it was found that not only were the French building better ships than our own, but the Spaniards also. Our ships might possibly have had thicker sides, as claimed by the old writer already quoted, but towards the middle of the century there were great complaints of their structural weakness, and in 1746 the first of an improved and stronger type was taken in hand. This was the *Royal George*, memorable especially from her tragic end at Spithead, where she capsized and went down, taking 900 men, women, and children with her. In 1765 Nelson's *Victory*—perhaps the most famous ship in history—was built. Thenceforward our battleships were classified by the number of guns they carried. Thus the *Victory* and sister ships carried 100 guns. Then came 90-gun ships, 80-gun ships, "74's", "64's", and 50-gun ships.

As time went on there was naturally a slight increase in size in the newer ships, but they were not altered in type. Thus the *Hibernia* of 1795 was of 2508 tons displacement, as against the 1921 tons of the *Victory*, and mounted ten more guns. Perhaps the finest sailing three-decker ever built was the *Queen*, begun in 1833 and launched in 1839. This ship had a displacement of 4476 tons, yet a picture of her would almost pass muster for the *Victory*. The *Duke*

of Wellington was built as a sailing-ship, but fitted with engines before her launch in 1852, and was very much the same to look at, except that her stern was more rounded and had two or three projecting balconies or "stern-walks". The *Duke* brings us to the end of the epoch of wooden line-of-battle ships. Iron ships protected with armour took their place, but these will be dealt with in another chapter.

The external colouring of our men-of-war remained much the same up to the battle of Trafalgar, though the carving and gilding grew gradually less. At the Nile in 1797 there were ships of all sorts of colouring. Thus the *Audacious* had plain yellow sides, the *Zealous* red sides with yellow stripes. Most, however, were yellow, with different numbers of narrow black stripes. This yellow and black developed into what was known as "Nelson Mode"—yellow bands on the lines of the gun-ports, with black bands between. It is this style with which we are most familiar, on account of the many paintings and engravings of men-of-war in action at that and more recent periods; for, except that later on the yellow was changed to white, the fashion lasted till the advent of the ironclads.

Having glanced in this cursory manner at the ships which flew the "meteor flag" between the times of our two greatest queens, Elizabeth and Victoria, it will be well to give some account, however brief, of the costume of the men who manned them.

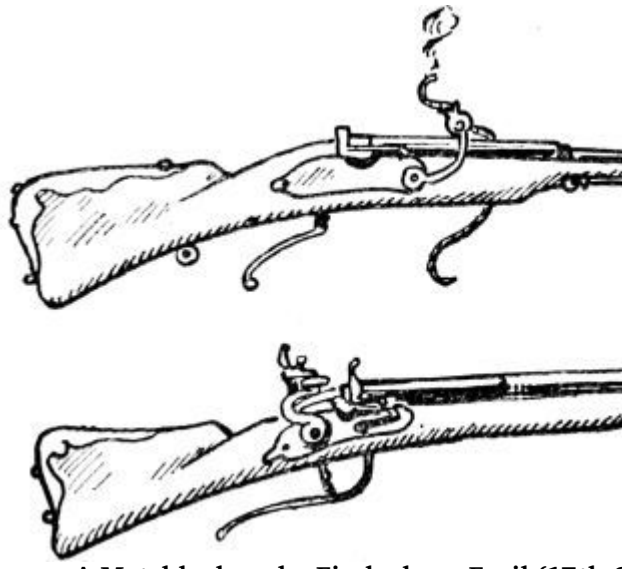
We have little or no personal information about the seamen of the Elizabethan navy, but we know from their doughty deeds that they were good men and true, and we also know that they, like their predecessors, were pretty well paid and provisioned.

Uniform clothing they probably had not,[22] but in the reign of James I there is a description of a masque in which appeared men dressed as "skippers", in red caps, short cassocks, wide canvas breeches striped with red, and red stockings. The six "principal masters of the navy" were provided annually with coats of red cloth, "guarded", or faced, with velvet of the same colour, and "embroidered with ships, roses, crowns, and other devices". But, though this fine apparel was provided for the favoured few, the seamen began at this time to be neglected, poorly paid, badly fed, and ill-treated—thanks probably to having such greedy officials and incapable officers as the Duke of Buckingham and other courtiers at the head of the navy. The Venetian ambassador to James I reports the great falling off of the British navy as compared to that of Henry VII and VIII.



"THE GLORIOUS

On this date Lord Howe achieved a victory over the Frenc fleet to Spithead the King presented Howe with a gold chain a



A Matchlock and a Firelock, or Fusil (17th C

The constantly smouldering match of the former rende weapon in the neighbourhood of cannon; the "snaphaunc with a "fire-lock", in which a spark was struck from a flint.

"Now", he writes, "it only numbers thirty-seven ships, many of them old and rotten and barely fit for service." Never was it in a worse state, and good men were naturally harder and harder to get. Charles I was anxious to restore the navy to its former glory and efficiency, but his persistency in demanding "ship-money" from his subjects led eventually to the Civil War, which resulted in his downfall. The Commonwealth, however, did what he had been ambitious of doing himself: it spent large sums on the navy, and ships and men were once more in good case. With the Restoration set in rottenness and corruption. Even Charles II, though he was too careless or too incapable to remedy matters, recognized the state of affairs. "If ever", said he, at a

meeting of the Council, "you intend to man the fleet without being cheated by the captains and pursers, you may go to bed and resolve never to have it manned." His brother James was more keenly interested in the navy, in which he had himself served against the Dutch, and no doubt improved matters in various respects, but the lot of a seaman was still a hard one. It may have been at his suggestion, when Duke of York, that the maritime regiment, of which he was the first commander, was raised, possibly with some idea of its being the nucleus of a permanent establishment.

These early marines, who were not infrequently referred to as "mariners", wore coats of the duke's favourite yellow with red breeches and stockings, and carried the flag of St. George, with the addition of the golden rays of the sun issuing from each corner of the cross—possibly "the glorious sun of York", as Shakespeare has it. It is interesting to note that they were the first fusiliers, though not in name. For probably to prevent danger from lighted matches on board a ship in action, they were armed with "snaphaunce muskets" or fusils—that is to say, flintlocks instead of the matchlocks usually carried by the infantry of the period. The 7th Fusiliers, who were raised as an artillery escort a few years later, were armed in the same way for a similar reason; and it is curious that, though never called fusiliers, the marines have almost always followed fusilier customs, as to uniform, in never having any officers of the rank of ensign, and in their officers carrying fusils at the time when other infantry officers carried half-pikes. We begin to find references to the familiar navy blue about this period as being worn by seamen. In a quaint old work published in 1682[23]

the devil is referred to as having appeared to someone in Newcastle "in seaman's clothing with a blew cape". And again, in the description of the supporters of the coat-of-arms granted to the Earl of Torrington, who died 1689, we read that they are "Two sailors proper, habited with jackets and caps on their heads *azure*, with white trowsers striped *gules*," i.e. red. The following is a list of seamen's clothing or "slops" and prices, as authorized by James, Duke of York, when Lord High Admiral in 1663:—

	s.	*d.*
Monmouth caps, each	2	6
Red caps	1	1
Yarn stockings, per pair	3	0
Irish stockings	1	2
Blue shirts, each	3	6
White shirts	5	0
Cotton waistcoats	3	0
Cotton drawers, per pair	3	0
Neat's leather shoes	3	6
Blue neckcloths, each	0	5
Canvas suits	5	0
Rugs of one breadth	4	0
Blue suits	5	0





BRITISH NAVY
Midshipman. Admiral. Flag-Lieutenant. Secretary (Flee

A "Monmouth cap" is said to have been worn by both seamen and soldiers, and to have resembled a "tam-o'-shanter", but there appears to be some doubt about it. It seems possible that it may equally well have been what we now call a "fisherman's cap", or a cap like that worn by the bands of the Household Cavalry, but with the peak turned perpendicularly upwards. We sometimes see pictures of boats' crews in such caps at about this period.

In 1706 blue seems to have been superseded by grey, seamen being directed to wear "grey jackets and red trousers, brass and tin buttons, blue and white check shirts and drawers, grey woollen stockings, gloves(!), leather caps faced with red cotton;" also "striped ticken waistcoats and breeches". Naval officers apparently wore what they pleased, though there are indications that red was the favourite colour right up to 1748, when a blue uniform with white facings and gold lace was ordered by the King. But it is said that naval officers did not take kindly to it at first, and in some ships tried to evade the order by having but one or two uniform coats on board, which were only worn by officers when sent away on duty where questions might be asked.

Red was now the recognized military colour, and, as mentioned elsewhere,[24] naval officers took a long time to forget the old military status of the commanders of the royal ships. Blue with white linings or facings is said to have been the uniform of two regiments of marines—who were "to be all fuzileers without pikes"—raised in 1690; but this had no connection with King George's selection, which is stated to have been due to his having seen the Duchess of Bedford, wife of the First Lord of the

Admiralty, riding in the park in a habit of blue faced with white, which prodigiously took His Majesty's fancy. The seamen seem to have worn grey and red up to about this time, when green and blue baize frocks and trousers were provided for them. The sailor of this period is described as wearing "a little low cocked hat, a pea-jacket (a sort of cumbrous Dutch-cut coat), a pair of petticoat trousers, not unlike a Scotch kilt, tight stockings, with pinchbeck buckles on his shoes". The "little cocked hat" is elsewhere described as having its flaps tacked close down to the crown, which made it look like "a triangular apple pasty". This hat was gradually replaced by a tarpaulin or straw hat, not a bit like that worn at the present day, but more nearly resembling a low inverted flowerpot with a narrow curly brim. Short, open, blue jackets began to be worn—"round jackets" they were called—showing the check shirt or a red or buff waistcoat. The trousers were longer than previously, and round the hat was often worn a bright blue ribband bearing the ship's name. Black, or occasionally coloured, bandana handkerchiefs were loosely knotted round the neck. In Nelson's days it was a favourite practice of the seamen to sew strips of white canvas over the seams of their jackets by way of ornamentation, and to adorn them with as many buttons as possible. Pigtails were in full fashion and of a portentous length and stiffness, leading to the adoption of the square "sailor collar" to protect the cloth jackets from grease. But though a regulation uniform had been prescribed for officers there was no strict regulation as to the seaman's dress before 1857, an exact reversal of the previous state of things.

In the early part of the nineteenth century captains very often dressed their crews in "fancy

rigs", but the short jacket, trousers taut on the hips and long and loose in the legs, with a straw or tarpaulin hat—now with a flat brim and lower crown—remained the general costume of the British sailor until, after the introduction of continuous service, a regulation uniform was laid down, as mentioned above. The marines, who had originally been under the War Office, and had worn different facings in their different regiments, were, in 1755, formed into the present corps under the Admiralty and dressed in red with white facings, which were changed to blue in 1802 on the occasion of the distinction "Royal" being granted them, on the representations of Lord St. Vincent, as a recognition of their services both in action and in the suppression of various disorders in the fleet. One more change was made in the uniform of naval officers, by William IV, who instituted red facings. It was a temporary one only, for in about ten years the navy was glad to be allowed to resume the time-honoured blue and white.

CHAPTER VIII

The "Turks" in the Channel

"All, all asleep within each roof,
along the rocky street,
And these must be the lovers' friends,
with gently sliding feet—
A stifled gasp! a dreary noise! 'The
roof is in a flame!'

> From out their beds, and to their
> doors, rush maid, and sire, and dame
> —
> And meet, upon the threshold stone,
> the gleaming sabre's fall,
> And o'er each black and bearded face
> the white or crimson shawl—
> The yell of 'Allah!' breaks above the
> prayer and shriek and roar—
> Oh, blessed God! The Algerine is lord
> of Baltimore!"
> *The Sack of Baltimore*, by THOMAS
> OSBORNE DAVIS.

YOU may read dozens of English histories, and even histories of the British Navy, and find little or no mention of the subject of this chapter. And yet during the sixteenth, seventeenth, and part of the eighteenth centuries the Algerine pirates, or "Turks" as they were generally called, were a real menace to our trade, our fishermen, and even to the dwellers on our coasts. The story is not at all a creditable one to us as a nation, nor did the Navy itself gain any particular distinction in fighting with these pests; but this was not so much the fault of our sea-commanders and their men as of the Government, which rarely gave them any real opportunity of exterminating the Turkish pirates that infested even our home waters.

The most discreditable part of all was that played by the British renegades, who were, more than anyone else, responsible for the Turkish efficiency at sea. Left to themselves, the corsairs from Algiers, Tunis, and Salee would never have become formidable. In mediæval times, as has already been noted, the English had the reputation of being "good

seamen, but better pirates", and piracy (including English piracy), though scotched, was not killed till some time after the days of "Good Queen Bess". Why, in the youth of Edward VI, when the country was ruled by the Regent Somerset, the Regent's own brother—Sir Thomas Seymour, the Lord High Admiral of England—did not disdain to "do a bit in that line" himself!

The story is this. He had been married to the Queen Dowager. When she died, he found himself rather "hard up". From his position he knew all about the Channel pirates; he had dealt with lots of them, and "executed justice" on them for their misdeeds. Now, however, he entered into a surreptitious partnership with them, "winked the other eye" at complaints, and pocketed half-profits. He did so well that he tried to start a special mint of his own at Bristol. He still pretended to the Regent and the Council to be very poor, and eventually succeeded in getting an addition of 1500 ducats a year to his salary. He was allowed, moreover, to draw this in a lump sum in advance. But it was not very long before the Council began to "smell a rat". The pirates naturally got bolder and bolder, knowing that they could work with impunity, and Sir Thomas Seymour was asked "why he did not look after these matters?" "Oh," said he, "I am just sending three ships after these fellows! I'll soon make things all right." His ships sailed, but only to become the worst and most successful freebooters in British waters. Their depredations and his great wealth, which, it seems, he spent openly and extravagantly, could not long remain a secret, and he was again summoned before the Council. He still asserted that he was poverty-stricken, but he could no longer get anyone to believe him, and a piratical captain who was

captured about this time admitted, under examination, that the admiral had "gone halves" with him. "Brother or no brother, he must be executed for this," said the Protector Somerset—and he was.

When a man in Sir Thomas Seymour's exalted position could behave in this manner, one can hardly be surprised that lesser "gentlemen" were not ashamed to follow in his footsteps—even some years later.

The first appearance of Mohammedan pirates in Northern waters was at a time very remote from that of which I am now writing, but I think it is of sufficient interest to deserve a passing reference. It was in the year 1048—just eighteen years before the Conquest—that news came to William of Normandy that a band of Moorish or Saracen pirates had established themselves in a castle which they had built on an eminence right in the middle of the Island of Guernsey, from which they harassed and terrorized the inhabitants. A knight, Samson d'Anville, was sent to destroy "Le Château du Grand Sarrasin", as it was called, and he apparently succeeded in rooting out the wasps' nest; and when in 1203 a church was built on the site, the salvation of the islanders was commemorated by its consecration as "Notre Dame de la Deliverance du Castel". Catel Church still stands on this historic spot. We hear no more of Saracen pirates in Northern seas till the sixteenth century, unless the mysterious ships which were driven ashore near Berwick in 1254 were in any way connected with them. Certainly the ships of any Northern nation would have been recognizable on our north-east coast. The ships in question "were large handsome vessels, but unlike anything ever before seen in this country: well

provided with naval stores and provisions, and laden with coats of mail, shields and weapons of all kinds, sufficient for an army".[25] Their crews were arrested "as barbarians, or spies, or even enemies", but as no one understood their language, nothing whatever could be made of them, and so they were eventually allowed to depart in peace. Who they were, whence they came, and whither they went has never been discovered. The incident remains one of the most impenetrable of the many mysteries of the sea.

The foundation of the piratical States on the north coast of Africa, which were to be the source of untold misery to European nations, may be traced to the final expulsion of the Moors from Spain in 1509. Pursued by the Spaniards to Algiers—or Argier, as it was then usually called—the Moors called in the assistance of Arouji Barbarossa, a noted Mediterranean corsair. He succeeded in beating off the invaders and established himself as first Dey. Tunis, Sallee, and other rover communities soon sprang up along the African coast, and, beginning by retaliating on the Spaniards, the "Turks" gradually extended their sphere of operations till they became a terror to Christendom.

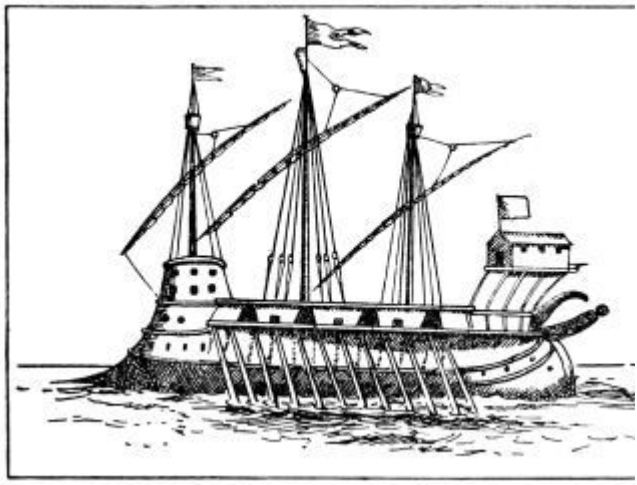
Christendom had itself to blame in a very great measure, since the Christian nations could never agree long enough between themselves to stamp out effectively these nests of pirates. Ceasing to be content with the spoils and slaves they could capture in the Mediterranean, they set themselves to—

> "Keeping in awe the Bay of
> Portingale
> And all the ocean by the British
> Shore".[26]

The churchwardens' accounts of the parish of St. Helen's, Abingdon, bear curious witness to the pitch at which Turkish piracy had arrived by the year 1565. An entry in this year runs as follows: "Payde for two bokes of Common Prayer agaynst invading of the Turke 0*s.* 6*d.*" The special prayer was probably the one that ran thus:

> "O Almighty and Everlasting God, our Heavenly Father, we Thy disobedient and rebellious children, now by Thy just judgement sore afflicted, and in great danger to be oppressed, by Thine and our sworn and most deadly enemies, the Turks, &c."

The danger was evidently felt to be imminent. By 1576 the "Turks" of Argier had no less than 25,000 Christian captives in their cruel clutches. Most, certainly, came from the southern European countries, but our turn was to come, and half a dozen years later the miscreants were boasting as much to their English captives. We still had our own as well as Flemish, Irish, and French piratical gentlemen in the Channel at this time, for in 1580 the Council called the attention of the Cinque Ports to the fact that such robbers were "daily received and harboured by the inhabitants of the said places, making open sale of their spoils without interruption".



A Turkish Pirate Ship of 1579
(*From a print of Algiers of that year*)

Observe the sharp ram, the tower-like forecastle, and perched cabin aft. Also the tail-like ornaments at the st reminiscent of the sterns of the old "Dragon-ships" and "Lo The big and somewhat triangular openings are probably g no guns are visible.

It is probable that the attempts at the suppression of our own sea-robbers drove some of them into the ranks of the Barbary corsairs. And among them, it is shameful to relate, were not a few men of good family. Captain John Smith, who wrote about 1630, explains that at the accession of James I the "Gentlemen Adventurers" and other seaman who had long carried on a sort of licensed piracy against the Spanish possessions and ships on the Spanish Main, found themselves, like Othello, with their "occupation gone". James wanted to live at peace with everybody. As an epigram of the time put it:

"When Elizabeth was England's King,
That dreadful name thro' Spain did

ring;
How altered is the case ad sa'me,
These juggling days of good Queen Jamie".

So that, to quote John Smith on the Gentlemen Adventurers, "those that were rich, rested with what they had; those that were poor, and had nothing but from hand to mouth, turned pirates; some because they were slighted of those for whom they had got much wealth; some for that they could not get their due; some that had lived bravely would not abase themselves to poverty. . . . Now because they grew hateful to all Christian Princes, they retired to Barbary, where altho' there be not many good harbours, but Tunis, Algier, Sally, Marmora and Tituane, there are many convenient roads. . . . Ward, a poor English sailor, and Dansker, a Dutchman made first here their marts when the Moors scarce knew how to sail a ship. Bishop was ancient and did little hurt; but Easton got so much as made himself a Marquess in Savoy, and Ward lived like a Bashaw in Barbary; those were the first taught the Moors to be men of war." He gives the names of several other noted English pirates of the time: some were hung, others were "mercifully pardoned" by King James. Other villains acted as agents and contrived to give the "Turks" wind of the sailing of any punitive expedition.

"For there being several Englishmen," writes Sir William Monson, the celebrated Admiral, "who have been too long in trading with pirates, and furnishing them with powder and other necessaries, it is to be feared those same Englishmen will endeavour to give the pirates intelligence, lest their being taken, their wicked practices should be discovered." Thanks to

such scoundrels as these the "Turks" were able to attack us in our own waters. By 1616 they had no less than thirty ships north of the Mediterranean, and in that year a Salee rover was actually captured in the River Thames. By the year following so many British ships had been taken by the "Turks" that the merchants of London established a fund of £40,000 —the Trinity House contributing £1068—"for the merchants and ships of the Port of London as a fund against the Turks". Four hundred and sixty British ships had already fallen into their hands.

When in 1619 Sir John Killigrew asked permission to erect a lighthouse on the Lizard the Trinity House refused, on the ground "that it is not necessary or convenient to erect a lighthouse there, but *per contra*, inconvenient, having regard to *pirates* and enemies whom it would conduct to a safe place of landing". In 1620 James I was at last persuaded to send an expedition against "Argier". The £40,000 collected in London, and other sums subscribed, went towards its equipment. It consisted of six men-of-war and twelve hired merchantmen under Sir Robert Mansell; but as during the previous sixteen years of the King's reign, "never a nail had been knocked into any of the Royal ships", and as their captains "were of little repute", the whole affair turned out such a dismal failure that the Algerines were encouraged to attack us with greater determination than ever.

"But too true it is," wrote Monson, "that since that time our poor English, and especially the people of the West country, who trade that way daily, fall into the hands of those pirates. It is too lamentable to hear their complaints, and too intolerable to suffer the misery that has befallen them."[27]

By 1625 the Turkish pirate ship was "a common object of the seashore" in the West. There were at least a score of them in the Channel. They captured the Island of Lundy, and, "Hun-like", threatened to burn Ilfracombe unless a large sum was paid as indemnity. They landed in Cornwall one Sunday, surrounded a church while divine service was proceeding, and carried off sixty men from the congregation into slavery. Some months earlier it had been officially reported that there were nearly 1400 Englishmen captive in Salee alone, "all, or greatest part, taken within 20 or 30 miles of Dartmouth, Plymouth, or Falmouth. When the winter takes, then the Sally men-of-war go to Flushing and Holland, where, having supplied all wants, and the winter past, they go to sea again. If they want men in the places with the Dutch, they are furnished."

Perhaps the most celebrated coastal raid was that made by Murad Reis upon the village of Baltimore, on the Munster coast, on 31st June, 1631. Piloted by a traitor from Dungarvon—one Flachet by name, who, it is consoling to learn, expiated his crime on the scaffold—the "Turks" sailed into the little harbour in the dead of night and descended on the sleeping village like a "bolt from the blue". Completely surprised, the Irishmen could oppose no resistance to the dark-skinned demons and their blacker-hearted renegade comrades. Those who were not fortunate enough to be slain on their own doorsteps were herded on board the corsairs with all the weeping women and children of the village, even babies in arms, and carried off into a captivity worse than death itself. The total "bag" amounted to 237 men, women, and children. Baltimore was then a thriving fishing centre, but it has never recovered from this raid. The south coast of Ireland and the Bristol

Channel seem to have been a favourite hunting-ground at this period. Murad had already been harrying the English coast before he carried out his coup at Baltimore. The year before the "Turks" had taken six ships *near Bristol*, and had something like forty ships operating in English waters. But the Government of King Charles was so feeble and so incompetent that even the Sack of Baltimore failed to rouse it to the necessary action.

The navy was willing enough to deal with the pirates, but it was in a very poor way itself, its men robbed, starved, and stinted, its ships and many of their commanders anything but efficient. It is even stated that two of the King's ships lying at Kinsale had word of Murad Reis's attack, but did not attempt to intercept it. Apparently all that was done was to set up additional alarm-beacons on the coast. Captain Richard Plumleigh wrote from Waterford in October of the year following, reporting an engagement he had had with "the arch-pirate Nutt", and adds, "Nutt has 2 Turks with him and his consort. . . . I never saw people in whom one disaster had settled so deep an impression as the Turks' last descent hath done in these Irish: every small fleet they see on the coast puts them into arms, or at least to their heels."

There would appear to have been something like a permanent, though inefficient, watch in St. George's Channel about this time, for in 1634 Sir John Plumleigh, another naval officer, writes from the Isle of Man, after "scouring" those waters, "Of the Turks as yet we hear nothing, though the general bruit runs that they intend hither this year, as some prisoners from Algiers have written over to their friends". So enterprising had the pirates become that not long before this it was represented very strongly to the

Mayor of Barnstaple that "unless vigorous steps are taken for the suppression of these marauders" there was great danger that "they will fall upon our fishing shippes both at Newfoundland and Virginea, for they desire both our shippes and men".

The "Turks" were, in fact, insatiable. At this time it was reported that they had 25,000 Christian slaves in Algiers alone, besides 8000 renegades, among whom were over 1000 women. The petitions to the Government from coastal towns, from merchants, from the friends and relations of the unhappy captives, were legion—but nothing practical was done. The celebrated Robert Boyle writes of his passage from Youghal to Bristol in 1635, that he accomplished it safely, "though the Irish coasts were infested with Turkish galleys".



THE RELEASE OF CHRISTIAN PRISONERS AT ALGIE

The bold and aggressive Turkish pirates were for long

merchantmen. So successful were they in their raids that at c were reported to have 25,000 Christian slaves in Algiers alone.

Two years later a squadron under Captain William Rainsborow was actually dispatched against Salee. This port was blockaded by four ships, which were reinforced by four more, and after destroying every Turkish ship which attempted to break the blockade, the squadron closed in to the city, and so battered its fortifications that the pirates were glad to make terms by giving up 400 English slaves. The success of Captain Rainsborow shows what might have been done had the same process been applied to other pirate cities on the African coast, but, strange to say, our forefathers were content merely to "scotch the snake", without making an end of it once and for all.

By 1640 the Turks were as bold and aggressive as ever. Three Turkish men-of-war attacked the *Elizabeth* off the Lizard and burned her, and shortly afterwards landed at Penzance and carried off sixty men, women, and children. The Deputy-Lieutenant of Cornwall reported that there were about sixty Turkish pirates off the coast at this time. In 1645 it is stated that they landed again at Fowey, and made slaves of 240 persons, including some ladies.

Occasionally some of our merchant-ships were able to put up a successful defence against the "Turks".

There were several instances of this in the Mediterranean, and here is a shipmaster's report of how he did the like in the Channel in 1638: "W. Nurry, of this town and county of Poole, Mariner and Master under God of the good ship called the *Concord* of Poole, burthen, 80 tons, with 6 guns, 12 men, and 2 boys, being about 6 or 7 leagues off

Ushant, coming from Rochelle laden with salt, was set upon by a man-of-war of Algiers having 15 pieces of ordnance and full of men with the colour of Holland displayed . . . and then put out her Turkey colours and bade him 'amain'[28] for the King of Algiers, whereupon this examinant refusing to strike their sails at his command, the Turk boarded his ship in his quarter with great store of men, whereby they continued to fight board by board together by the space of 3 hours, and the Turk being weary of the battery took occasion to cut away this examinant's sprit-sail-yard to clear himself away, and then stood to the northward . . . that he killed a great many of the Turks and beat them out of his top into the sea with his muskets, and then surprised and brought into this harbour of Poole, one Turk and three Christians, viz.: a Dutchman, a Frenchman and a Biscayner." These three men made statements to the effect that the Turkish ship was of 240 tons displacement, carried 15 guns and 124 men, of whom 19 were Christians, 6 of them English, and 3 of them renegades, and that thirty men-of-war from Algiers were "on the war-path" against Spain, France, and England. The "Dutchman" was one Oliver Megy of Lübeck, who admitted that he had been acting as pilot. Dutchman was apparently then used indiscriminately for Dutch or German, as I believe is still to a great extent the case at sea.

Then Sir John Pennington, in his *Journal* on board H.M.S. *Vauntguard*, in 1633, reports falling in with a "fly-boat", which informed him that he had been "clapt aboard" by two Turks, one of eleven, the other of seven guns, "betwixt the Gulfe and the Land's End, and hurt 9 or 10 of his men very dangerously, but at last—God bee praysed—they got from them and slew 4 of the Turkes—that entered them—outright and

drove the rest overboard". Again, when anchored in the *Swiftsure*, in Stokes Bay, Pennington notes on 24th September, 1635: "There came in a freebooter, and in his company a barke of Dartmouth laden with Poore John (dried fish) which he tooke in the Channel from a Turks man-of-warr". In 1652, just after the Republican form of government had been established in England, the *Speaker* frigate was dispatched to "Argier in Turkey" with £30,000 to ransom English captives from slavery. But when the strong hand of the Protector Cromwell had seized the helm of state there was no more question of ransoms or presents to the barbarians of Algiers. He dispatched the celebrated Admiral Blake with a dozen men-of-war to deal with the Turks in the only effective way. Blake stood into the harbour of Tunis, burned all the shipping there, and knocked their fortifications to pieces, with the loss of only twenty-five killed and forty wounded. He then appeared before Algiers, whither the story of his victory at Tunis had preceded him, and had no difficulty in arranging for the release of the whole of the British captives. More than this, the "Turks" gave British waters a wide berth, and there were no more complaints of their performances in the Narrow Seas during the Protectorate.

But with the re-appearance of the Stuart kings at the Restoration the old story of outrage and piracy began all over again. The Turks led off with the sensational capture of Lord Inchiquin, the British Ambassador to Portugal, who with his whole suite was captured off the Tagus and publicly sold by auction in the market-place of Algiers. They would never have dared to act in this manner in the days of Cromwell and Blake; but they knew well enough that there was mighty little patriotism about the "Merry

Monarch" and his Court and Government. But even Charles could not stomach the degrading arrangement which was made by the Earl of Winchelsea, the British Ambassador to Turkey, who had been ordered to call at Algiers on his way out to negotiate a new treaty with the Dey. This nobleman actually granted the pirates liberty to search British vessels and remove all foreigners and their goods. The Earl of Sandwich and Sir John Lawson were sent with a fleet to Algiers to enforce the removal of the obnoxious clause from the treaty. They bombarded the town, but apparently not very effectively. The point was conceded by the Dey, but as the Algerines, like the modern Huns, regarded all treaties as "scraps of paper", to be torn up when opportunity offered, the expedition was practically fruitless.

The Earl of Inchiquin and his son were eventually ransomed for £1500, and Charles showed his weakness by indulging in the unfortunately widespread habit of trying to conciliate the "Turks" by presents of arms and ammunition, which everyone knew would be used against our own ships and men.

From about this time forward the Turkish pirates seem to have generally kept farther out in the Atlantic. They were especially on the look-out for our Newfoundland ships. In 1677 six corsairs destroyed seventeen of these, but one of the Turks was terribly mauled by a small English frigate, and only escaped by the aid of a dark and stormy night. Our watch-dogs were settling down to their work at last. The *Concord* merchantman bound for America had a stiff fight with a Turkish squadron in 1678, 120 leagues from the Land's End. One night they fell in with "The Admiral of Algiers, a new Frigate of 48 guns, called

the *Rose*, and commanded by Canary, a Spanish renegade; the other two Virginiamen, the one of Plymouth, the one of Dartmouth", evidently captured ships. There was also a "barque of Ireland". "The Algerian hailed us in English," says Thomas Grantham, master of the *Concord*, "'From whence?' We answered, 'From London.' He told us he was the *Rupert*, frigate, and commanded our boat on board, which our Captain refused, knowing it could not be the *Rupert*. The Turk kept company with us all night, which gave us some time to fit our ship, and get our boats out: when it was light he put abroad his bloody flag[29] at main-topmast head, fires a gun, and commands us to strike to the King of Algiers and to Admiral Canary.





BETWEEN A MERCHANTMAN AND A TURKISH
Drawn by C. M. Padday

"His sails, masts, and shrouds were all in a blaze. Then we mast went by the board."

"We gave him a 'What cheer ho', he comes up with us and passes his broadside upon us, having 13 guns of a side of his lower tier; we returned him as good a salute as we could; he steered from us, falls astern, loaded his guns with double head and round partridge,[30] and then came up again with us, claps us on board, grapples with us on the quarter, and made fast his spritsail topmast to our main-bowline, our main-topsail being furled. After 2 or 3 hours dispute, finding he could not master us, he cut away our boats, and fires us on the quarter, and our mizzen-yard being shot down, fired our sail which burnt very vehemently, and immediately set all the after-part of our ship on fire. Our captain kept the round-house and cuddy, till the fire forced him to retreat, all that were with him being killed or wounded and being got down into the great cabin steerage, he sallied out with those that were there with a resolution rather to be burnt than taken.

"In the interim, the Turk's foresail hanging in the brails over our poop took fire; then he would fain have got clear of us, but we endeavoured to keep him fast, and as many as run up to cut him clear, we fetched down with our small shot, until his sails, masts, shrouds, and yards, were all in a blaze; then we cut loose, and immediately his mast to the deck went by the board, with many men in his top and his bloody flag; several of the men betook themselves to their boats, but at last they overcame the fire, as, thanks be to God, we did likewise on board our ship, having our mizzen-mast burnt by the board and all the after-part of our ship burnt; there was little or no wind. The Turk got his oars, and rowed till he was

out of fear of us. . . . We had killed or wounded on board of us in the action with Canary 21 men, but of Turks, according to the account from aboard them, at least 70 or 80 are killed." If every merchantman had put up as good a fight as Captain Thomas Grantham, the Turks would soon have had to retire from their piratical business. As it was, they were able to continue their depredations for some years longer, but not in quite the same wholesale way. The British Navy became more and more active, and in 1681-2 made prizes of a number of Turkish vessels, among them the *Admiral of Sally*, the *Two Lyons and Crown of Argiers*, the *Three Half Moons*, the *Golden Lyon*, and —what a name for a man-of-war!—the *Flowerpott*. These captures had an immediate effect. The Algerines became "very inclinable to peace" and offered to release many English captives "gratis". Their last notable exploit in British waters was the attempt to capture a transport in which the Royal Irish Regiment was sailing from Ostend to Cork in 1695.

The "Turk" in this case was a Salee rover, like the one that attacked Robinson Crusoe's ship. She gave chase to the transport and overhauled her, but when she got near enough to see her decks crowded with redcoats she considered discretion to be the better part of valour and hauled off. It is probable that occasional forays were made on our shipping by such marauders in the early part of the eighteenth century, and we have a very detailed account of the wreck of the *White Horse*, an Algerine frigate, near Penzance, in September, 1740. The return of the greater part of her survivors to Algiers on board the *Blonde* frigate is an early instance of our national weakness for too tenderly dealing with alien enemies. Slavery had not been abolished; we could

easily and legitimately have sold them for slaves to the West Indian planters or to the Knights of Malta, or exchanged them for some of the hundreds of our fellow-countrymen the pirate cities of North Africa still held in bondage. But no, we preferred to set them free and to put them in a position to murder, rob, and enslave yet more Englishmen.

The very last appearance of the Turkish pirate in our waters I have been able to find is of so recent a date as 18th May, 1817, when a couple of Moorish vessels captured a ship coming from Oldenburgh, off the Galloper Shoal, which is not far from the Goodwin Sands. This must have been a very exceptional case, though up to the time Lord Exmouth subjected Algiers to a severe bombardment the "Turks" were still a danger to merchantmen in southern waters. The pest was not stamped out until the capture of the famous pirate city by the French in 1830. So confident and so truculent were the Deys of Algiers as late as the early part of the nineteenth century that, in 1804, even Nelson, in command of a powerful fleet, was unable to make the Dey give an interview to Captain Keats of the *Superb*, whom he had sent as bearer of a letter setting forth certain British claims. Incredible to relate, no further steps were taken, and the fleet put to sea and resumed the blockade of Toulon. We can hardly, therefore, be surprised to read that in the same year the "Turks" should have had the hardihood to attack the United States frigate *Philadelphia*, which took the ground off Tripoli when in pursuit of a pirate. The Americans fought for four hours, but, the ship being by that time almost on her beam ends, had eventually to strike their colours, and both officers and men were carried ashore into slavery.

CHAPTER IX

The Honour of the Flag

"Ye mariners of England!
That guard our native seas;
Whose flag has braved, a thousand years,
The battle and the breeze!
Your glorious standard launch again
To match another foe.
. . . . . .
The meteor flag of England
Shall yet terrific burn
Till danger's troubled night depart,
And the star of peace return."
"Ye Mariners of England." THOMAS CAMPBELL.

MOST people, as they listen to the inspiring strains of "Rule, Britannia! Britannia rule the waves", feel a wholesome consciousness of pride and satisfaction in having the privilege of belonging to a nation whose sons have almost always been pre-eminent on the ocean; but few stop to consider what is implied by the expression "rule the waves".

We are not in any doubt at the present moment of at least one meaning of the words. Had not our fleet instantly asserted its supremacy at the very outbreak of the great war with Germany we should have found it very difficult to get along at all, either with the

war or with "business as usual". Does everybody realize, even now, that the war forced us to try to do two stupendous things at once—to carry on the biggest struggle in our history and to keep going the biggest trade and commerce in the world? It is quite certain that if we had not been able to maintain our "ruling of the waves", we should soon have been in a state of commercial collapse.

But in the old days our claim to the empire of the sea was based on other considerations, and though nothing more important was at stake than what may be termed a question of precedence, our naval commanders, even in those periods when our navy was by no means at its best or strongest, were always prepared to enforce their claims by instant resort to arms. Strange to say, it is only since our great victory off Cape Trafalgar that we have abrogated a claim to an extensive watery kingdom, extending from Cape Van Staten in Norway to Finisterre in Spain, which for many hundred years we had fought for, generally maintained, and asserted in the most imperious manner. According to old writers on the subject, even the Saxon kings had claimed the kingship of the "Narrow Seas", which then probably meant what is now the English Channel. This, in the time of our Norman kings, was actually a channel through their dominions, and when, by his marriage to the daughter of the Duke of Aquitaine, Henry II eventually succeeded to that duchy, and extended his dominions to the south-east corner of the Bay of Biscay, he naturally felt he had a claim to rule the seas still farther to the south.

"The striking of the sail" (that is, lowering it) "is one of the ancientest prerogatives of the Crown of

England," says an old writer, "and in the second year of King John, it was declared at Hastings by that Monarch, for a law and custom of the sea, that if a Lieutenant on any voyage, being ordained by the King, encounter upon the sea any ship or vessel, laden or unladen, that will not strike or vail their bonnets[31] at the commandment of the Lieutenant of the King, or of the Admiral of the King, or his Lieutenant, but will fight against them of the fleet, that if they can be taken they shall be reputed as enemies; their ships, vessels, and goods taken and forfeited as the goods of enemies; and that the common people being in the same, be chastised by imprisonment of their bodies." The same writer states that this claim was formally recognized and accepted in the twenty-sixth year of the reign of Edward I (1297) "by the Agents and Ambassadors of Genoa, Catalonia, Spain, Almaigne, Zealand, Holland, Friesland, Denmark, Norway, and divers other places in the Empire, and by all the States and Princes of Europe".

There do not seem to have been any definite limitations to our watery kingdom laid down: it is sometimes convenient not to be too precise. But the earliest claim was *usque ad finem terrae*, which might mean to the "Land's End", to "Finisterre" in Brittany, to "Finisterre" in Spain, or "to the ends of the earth"—all very different things. Certainly the Spanish Finisterre was regarded as the southern boundary in the seventeenth century, for in the Rev. H. Teonge's *Diary*, when chaplain in the *Royal Oak*, we find the following entry written after leaving Gibraltar for England: "13 May, 1679—An indifferent good gale, and fayre weather, and at twelve wee are in the King of England's dominions (*Deo gratia*), that is wee are past Cape Finister and entering on the Bay

of Biscay".

Monarch after monarch asserted his right to be saluted by foreigners "taking in their flag and striking their topsail" when within "His Majesty's Seas", and the Protector Cromwell made the same claim on behalf of the nation. Our men-of-war had also to be saluted in the same way by our merchant-ships. Any neglect used to be summarily punished. Captain Pennington of H.M.S. *Vauntguard* notes in his *Journal* that on 6th September, 1633, he had "in the Bilbowes" (that is, fastened by the legs to an iron bar running along the deck) "Richard Eastwood, Master of a Sandwich hoye, for not striking his topsayle"! He does not say how long he kept him there, or whether he handed him over to the civil power to be prosecuted by the Admiralty.

Not only the sea but "all that therein is" was considered the property of the English monarchs. Foreigners were not allowed to fish without permission, for which they generally had to pay. This was relaxed under Henry VI, but reasserted later, and the enforcement of payment from Dutch fishermen for fishing in the North Sea was one of the prime causes of the wars between Holland and England in the time of the Commonwealth and of Charles II. For the Dutch thought they were strong enough to wrest the trident of Neptune from our grasp. They nearly succeeded, but not quite, and we find William III asserting our claim to sovereignty afloat just as particularly and definitely as any of his predecessors.



TEACHING THE SPANIARD

Philip of Spain, arriving in the Straits of Dover on his journ paying the customary salute. Lord Howard of Effingham, the shot across his bows.

The officers in command of royal ships or fleets were not expected to refer the matter to higher authority, but were to take action at once, and made no bones about doing so. Innumerable instances may be quoted—the only difficulty is to pick out the most interesting cases. Nor were they respectors of persons. When the gloomy and saturnine Philip of Spain arrived in British waters, on his way to espouse our Queen Mary, he came with great pomp and circumstance with a fleet of 100 sail, flaunting

the gaudy flag of Spain even in the Straits of Dover. Lord Howard of Effingham, sent with a guard of honour of 28 men-of-war to meet the Prince Consort elect, had no idea of allowing that even in this very special case, and, seeing no disposition on the part of the Spanish fleet to pay the customary salute, lost no time in sending over a gentle reminder in the shape of a round shot.

The hint was taken, and not till then did Howard go on board to pay his respects to King Philip. Not many years later a Spanish fleet which was on its way to Flanders, to bring Anne of Austria back to Spain, tried it on again on entering Plymouth. Here they found Admiral Hawkins flying his flag on board the *Jesus of Lubeck*—a ship, by the way, that had taken part in the Armada fight. Hawkins was not slow in sending the usual reminder humming through the Spanish admiral's rigging, and, as he still hesitated to "take in his flag", a second messenger came crashing into his ship's side. Still trying to avoid paying the usual compliment, he went personally on board the *Jesus* to argue the point. He might have spared his pains. All the satisfaction he got was a peremptory order to clear out of our seas within twelve hours as a penalty for his rudeness to the Queen.

Again, off Calais, the French ambassador was made to render the proper salute to our admiral of the Narrow Seas, who gave orders to Sir Jerome Turner, his second in command, to "shoot and strike him", should he refuse to do so. In 1605 Sir William Monson had a slight difficulty with a Dutch admiral at the same place. The Dutchmen dipped his flag three times, but Monson insisted that he should pay the ordained salute and take it in altogether, or fight

the matter out on the spot. The salute was paid.

Even in the days of James I, when our fleet was in somewhat a poor way, its captains insisted as firmly as ever on the customary honour being paid to our flag. Captain Best of the *Guardland* sends in a report about two Dutch men-of-war off Aberdeen, and says: "The Admiral of the Holland men-of-war hath his flag in her main-top, but giveth it out that he will not take it in for all the Commanders of His Majesty's ships. Forty years is within the compass of my knowledge, and I never knew but that all nations forbear to spread their flags in the presence of the King's ships. That custom shall not be lost by me. When I come into the road and anchor by him, if the Admiral will not take in his flag when I shall require it, I will shoot it down, though it grow into a quarrel." The last expression is delightful. There certainly would have been the makings of a "quarrel". This was in 1623.

Captain Richard Plumleigh took an even wider view of the obligations of foreigners to pay honour to the English flag. His idea was that they had to do so even in foreign harbours. He writes to the Admiralty on 23rd September, 1631: "It was my fortune to speak with one of these two merchants from whom the French demanded their flag". That is to say that the French had what he regarded as the impertinence to expect that they should have "struck" their topsails to them. He goes on: "They shot at the English some dozen shots and received from the English the like entertainment, with the loss of one man, by which they sat down and gave over their pretences. . . . It hath always been my principal aim to preserve His Majesty's Naval honnour both in his own seas and abroad, and for my part I think that it were better

that both I and the ship under my charge were at the bottom of the sea, than that I should live to see a Frenchman or any other nation wear a flag aloft in His Majesty's seas and suffer them to pass unfought withal. . . . I dare engage my head that with five of H.M. ships I will always clear the way to all French flagmasters, yea, and make them strike to him upon those which they call their own seas. . . . This summer I was at the Texel in Holland, where come in divers French, and though the Hollanders bade me domineer at home in England, yet I forebore not to fetch down their flag with my ordnance." Evidently the gallant captain had strong views on the subject, and did not hide them under a bushel. But he was not alone in his determination to uphold the "honnour of the flag" at all costs.

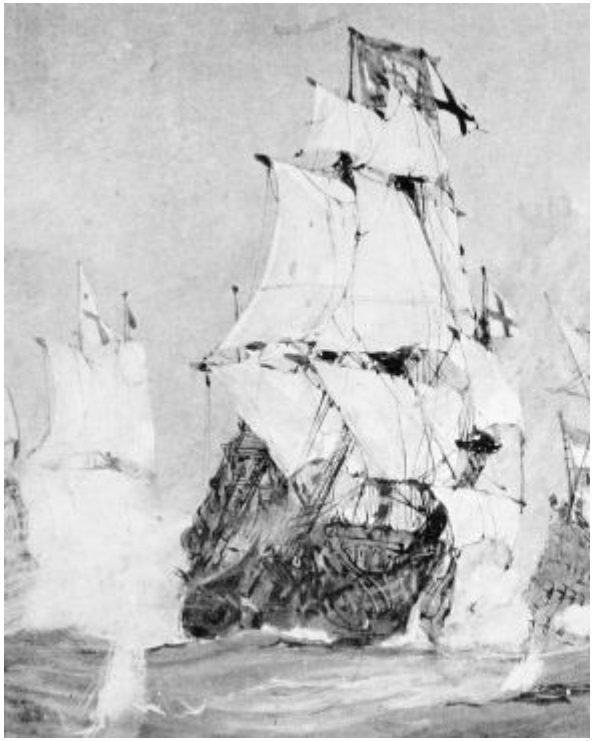
Pennington, a notable naval officer of that period, has several incidents of a similar kind to relate in his *Journals* on board H.M.S. *Convertive*,[32] *Vauntguard*, and *Swiftsure*, between 1631 and 1636. He tells us that sailing in the first-mentioned ship, together with the *Assurance* and a couple of small vessels known as "whelps"—in search of "Rovers and Pyrates"—he met a fleet of eleven Dutch men-of-war in Dover Roads, "whereof two were soe stoute that they would not so much as settle their topp-sayles untill wee made a shott at each of them, soe—they doinge their dutyes—wee stood on our course". A few days later "There came up 4 Dunkerke men-of-warr unto us, who in all submissive wise, with their topp-sayles and top-gallant sayles lowrd upon the capp, saluted us accordinge to the custome of the sea"!

All this seems summary and drastic enough for anybody, so that it is curious to find the celebrated Sir Walter Raleigh not long before lamenting British

decadence in this respect. "But there's no state grown in haste but that of the United Provinces, and especially in their sea forces. . . . For I myself may remember when one ship of Her Majesty's would have made forty Hollanders strike sail and come to an anchor. They did not then dispute *De Mare Libero*, but readily acknowledged the English to be *Domini Maris Britannici*. That we are less powerful than we were I do hardly believe it; for, although we have not at this time 135 ships belonging to the subject of 500 tons each ship, as it is said we had in the twenty-fourth year of Queen Elizabeth; at which time also, upon a general view and muster, there were found in England of able men fit to bear arms, 1,172,000, yet are our merchant ships now far more warlike and better appointed than they were, and the Royal Navy double as strong as it then was."

Possibly Raleigh's words had borne fruit in increased vigilance on the part of the captains of English men-of-war. But the Hollanders were determined to put the matter to the test. Possibly they thought that as there was no King of England after the martyrdom of Charles I there could be no king of the English seas. They began by forbidding their captains to pay the usual salute under pain of death. It was not long before Van Tromp sailed defiantly through Dover Straits with all his flags aloft. He got what he was asking for, a volley of round shot from Robert Blake, who was on the look-out for him, and at once both fleets went for each other "tooth and nail". The Dutch were beaten, but in a second encounter—for by now English and Dutch were openly at war—Blake got the worst of it, and was driven into the Thames to refit. "Tromp meanwhile sailed up and down the Channel as a conqueror, with a broom at his mast-head, thus

braving the English navy in those very seas in which she claimed unrivalled sovereignty".[33]



THE BATTLE OF THE NORE, JUNE 165

But his triumph was short-lived. The British eventually got the upper hand, and their claims to the sovereignty of their seas were formally admitted by the Dutch in 1654. Once again the question was fought out in the days of Charles II, and once again the Dutch were compelled to agree to strike their sails to even a single ship flying the King's flag. This was in 1674. Not long before the first Dutch War the Swedes also wished to question British rights. In 1647 Captain Owen of the *Henrietta Maria*, having with him only the *Roebuck*, a small craft, with a crew

of forty-five men all told, was refused the salute by a fleet of three Swedish men-of-war and nine or ten merchant-vessels off the Isle of Wight. The usual "weighty arguments" were ignored, and the Swedes got away and anchored in Boulogne Roads. Captain Owen was unable to keep in touch with them, as they had shot away his tiller, but he got into Portsmouth and reported the matter, and the Parliament at once ordered the *St. Andrew*, *Guardland*, *Convertine*, and *Mary Rose*, which were lying in the Downs, to attend to the matter. Captain Batten, of the first-named ship, who was in command, at once put to sea, and found the Swedes still at anchor off Boulogne, but flying no colours at all. Batten sent for the Swedish commanders to come on board—and they came, but declared that if their flags *had* been up they would not have taken them in, as they had been expressly ordered not to do so. It was rather a difficult situation. Captain Batten, however, dealt with it by ordering the Swedish vice-admiral to "come with him", and took him back to the Downs. He told the remainder to "run away home". However, they followed the English and their prisoners to the Downs, as their commanders said that they dare not go home without the vice-admiral. The affair was then considered by "the Committee of Lords and Commons for the Admiralty and Cinque Ports", who eventually gave an order for the release of the culprit.

Other nations from time to time attempted to exact salutes from foreign ships in certain places, but apparently without much success. Thus the Spanish demanded that a French fleet under the Duke of Guise when passing Gibraltar in 1622 should strike their flags. The Duke refused, though he said that they had told him that British ships were in the habit

of doing so, and he asked Sir E. Herbert to write and ask the Duke of Buckingham whether this was true or not. But Herbert smelt a rat; and though he complied with Guise's request, he wrote: "Be well advised what answer you return, for I believe that he intends that the French king should exact the same acknowledgements on the coasts of this country, which you will never permit, as to the prejudice of the sovereignty that the Kings of England have always kept in the narrow seas." As regards the Mediterranean, it was laid down by James II, to prevent disputes with "the most Christian King",[34] "That whensoever His Majesty's ships of war shall meet any French men-of-war in the Mediterranean, there shall no salutes at all pass on either side". William III's orders were—after the usual directions to make foreigners pay the customary salute in the English seas—"And you are further to take notice, that in Their Majesties' Seas, Their Majesties' Ships are in no wise to strike to any; and that in other parts, no ship of Their Majesties' is to strike her flag or top-sail to any foreigner unless such foreigner shall have first struck."

A final incident must bring this chapter to a close. It indicates a slightly farther step towards the evacuation of the original position which we had taken up. This was in the year 1730. Lieutenant Thomas Smith, R.N., happened to be in temporary command of H.M.S. *Gosport*, which was lying in Plymouth Sound. In came a French frigate, which, either on account of ignorance or of design, omitted to strike her top-sails. Smith, having so many precedents to guide him, though possibly not very recent ones, sent the usual intimation by hulling her with a cannon-ball. It was at a time of profound peace, and on the demand of the French ambassador

he was tried and dismissed the Service. Plumleigh and Pennington must have turned in their graves! But he was re-appointed to the Navy on the very next day, with the rank of captain, and for the rest of his life was known as "Tom of Ten Thousand".

The old regulations remained in force up to the end of the eighteenth century, but were omitted from those that were published about the Trafalgar period. The orders given by William III for guidance of officers when *outside* English seas were made universal, so that for some unknown reason we finally abandoned our claims at the very time we were in a better position to enforce them than we had ever been before. The old system rather partook of the way the proverbial Irishman in search of "divarsion" asks "if any gintleman will be good enough to thread on the tail of his coat", but it had its advantages. Had it been now in force it is practically certain that some German commander would have challenged it long before the German fleet had reached its present proportions, after which there would have been no German fleet. Again, there could have been no difficulties with neutral nations about contraband or conditional contraband. As the whole sea from Norway to Finisterre would have been recognized as British, no one could have disputed our right to close it to anybody or anything that suited our book. When it comes to fighting, other nations do not thank us for having played "Uriah Heep" beforehand. It has possibly induced them to fight instead of settling the dispute in some other way.

"Striking the sail" is now a thing of the past, but it is customary for merchant-vessels to "dip" their flags to kings' ships. As for men-of-war, they no longer

exchange salutes of this kind when they meet at sea.

CHAPTER X

The Evolution of Naval Gunnery

"It was great pity, so it was,
That villanous salt-petre should be digg'd
Out of the bowels of the harmless earth,
Which many a good tall fellow had destroy'd
So cowardly; and, but for those vile guns,
He would himself have been a soldier."
Hotspur describing his meeting with a "popinjay" after a battle.
SHAKESPEARE. *King Henry IV.* Act I, Scene iii.

"Earth and air were badly shaken
By thy humane discovery, Friar Bacon."
BYRON. *Don Juan.* VIII, 33.

"The hand-spikes, sponges, rammers, crows,
Were well arranged about;
And to annoy Old England's foes,
The Great Guns were run out."
—*Old Verses.*

"WHO invented gunpowder?" There is only one definite and reliable answer to this question, and that is that nobody knows. It has been stated, but I think that it may be dismissed as a "galley yarn", that the first mention of artillery is to be found in an account of a naval engagement between the Phœnicians and Iberians in the year 1100 B.C.—just eighty-seven years after the siege of Troy.

The Phœnician war-vessels, it is said, came out of Cadiz—or Gades, as it was then called—with what their opponents took to be brazen lions at their bows. These turned out to be some kind of machine from which enormous flames of fire were projected by explosives, to consume and destroy the ships of the Iberians. But the most generally accepted theory now is that gunpowder was invented in China some centuries before the Christian era and gradually found its way to Europe by way of India, Arabia, and Africa. As for the stories that it was invented either by Roger Bacon (1214-92) or by the German monk, Barthold Schwartz, in 1320, they must be certainly rejected, since there is evidence that cannon of some kind were in use long previous to Roger Bacon's birth. Doubtless he wrote something about the composition of gunpowder, but so might anyone to-day. That would not make him its inventor.

Much less, then, can this invention be attributed to the German monk. It is probably correct that, in pounding certain ingredients in a mortar, he nearly blew himself "into the middle of next week"—as very many would-be chemical investigators have done at a much more recent date—and it may be that the sight of his pestle flying through the ceiling suggested to him that a mortar might be made of military use.[35] He may possibly, on this account, be

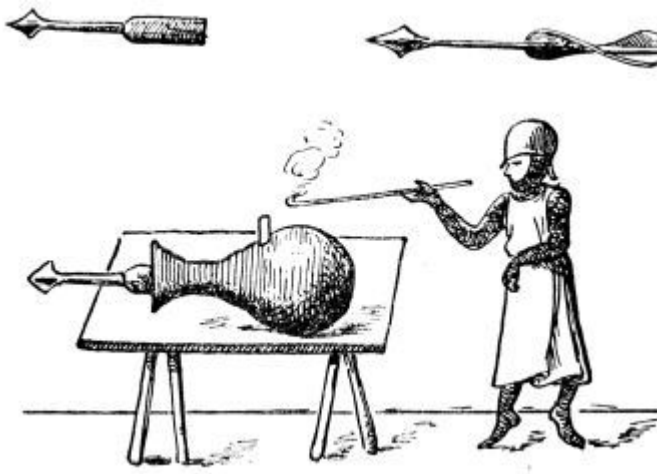
credited with the invention of the muzzle-loading cannon, for it seems probable that the guns in use previous to 1320 were merely *cannae*, or tubes open at each end. The famous battery of three guns, which is said by some historians to have been used by the English at Crécy, was probably of this kind. Whether the guns were used there or not, it would not have been the first time such weapons made their appearance in European warfare, as seems to be assumed by some writers.

More than 100 years previously cannon were employed by the Moors at the siege of Saragossa, in 1118. The Spaniards were not slow to adopt the invention, and in 1132 they built what is stated to have been a "culverin" throwing a 4-pound shot. "Culverin", which is a term, belonging to Tudor times, for a special type of gun, is evidently used as a general term for "cannon". Like the "Joe Chamberlain" and "Bloody Mary",[36] manned by the Naval Brigade in the Boer War, and other prominent specimens of the gun-maker's art, this first European cannon received a special name. It was christened "Salamonica". I have said that the Spaniards "built" this weapon. I wrote this advisedly, for all the earlier cannon were "built up" of staves of iron, or even wood, strongly hooped together with wrought-iron rings.

It was a long time before cannon were "founded" or "cast", and now, strange to say, we have gone back to the original method of manufacture, which, thanks to modern science and workmanship, has absolutely ousted what was at its inception considered a wonderful advance in the art of cannon-making. The early guns, open at both ends, were probably loaded at the breech, which was then closed by a block of

stone or big stake driven into the ground, close to which the gun itself was fixed in some kind of a framework. Such guns are to be seen in a picture in Froissart's *Chronicles* representing the siege of Tunis by the Crusaders in 1390, and it is from this that the often-reproduced drawing of the guns said to have been used at Crécy in 1346 would appear to have been taken.

What is said to be the earliest representation of a cannon in England is to be found in a manuscript of 1326 in the Christ Church Library at Oxford. It is of quite a different appearance from those just described. It is in the shape of a fat vase or bottle, and could not well have been a breech-loader. It is loaded with a big "garot" or dart fitted with a wooden haft which seems to fit tightly into the neck of the weird "cannon", which lies on a very rickety looking table. The gunner, clad in what looks like a suit of Crusader's chain-mail, is an unwary person who is holding a lighted match to the touch-hole while standing directly behind the gun. As there is not the slightest indication of anything whatever to stop the recoil, it seems about three to one that the discharge would be more disastrous to him than to the enemy. It is noteworthy that "metal cannons" and "iron balls" were ordered to be made in this same year at Florence, and in 1331 *vase* appears to have been the usual term for the cannon made in Italy, while in France they were termed *pots de fer*.



A "Vase" or "Pot-de-fer"

The "garot", or heavy dart, to be fired from this early gun w with a wooden plug made to fit the bore. The type of "garot the right was intended to be fired from a large cross-bow on a

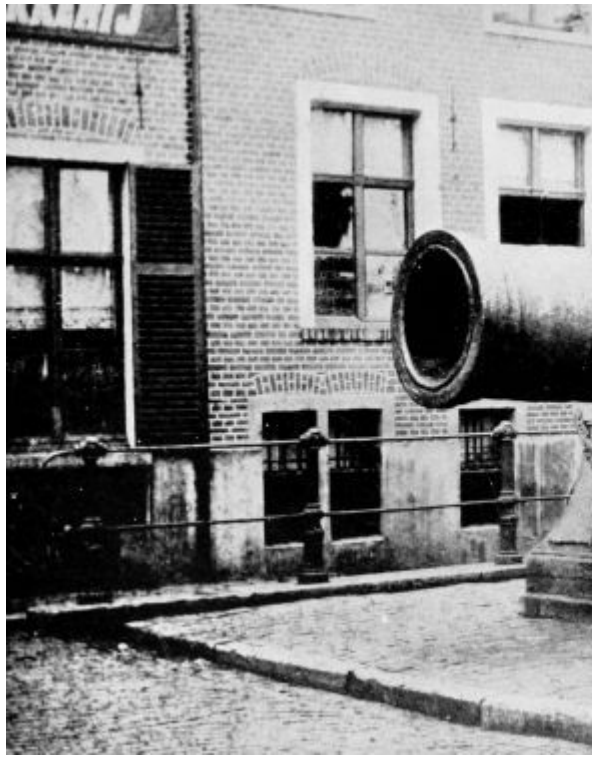
This brings us to the earliest indication that I can find of the use of guns afloat. It is a document dated 1338, in which Guillaume du Moulin, of Boulogne, acknowledges to have received from Thomas Fouques, the custodian of the enclosure for the King's galleys at Rouen, a *pot-de-fer* to throw "fire garots", together with forty-eight garots in two cases, 1 pound of saltpetre, and ½ pound of sulphur "to make powder to fire the said garots". Now it seems more than probable that this *pot-de-fer* or *vase* was very similar to that in the Oxford manuscript and that it was intended for use afloat, or it would not have been among the stores belonging to the galleys. The recipient being at Boulogne, we may fairly assume that it was required by him for use on shipboard. "Garots", we know, were very commonly used in naval actions at this date, either thrown by hand from the tops or propelled from espringalds.

Moreover, it is evident that the gun open at both ends would be a great source of danger on board ship. The system of breech-closing on shore was singularly rough and ineffective; there must have been nearly as much "back-fire" at the breech as flames from the muzzle. This would be a constant danger afloat, and, unless a few *vases* like those described were sometimes used, it is probable that cannon were not adopted for sea service until some more regular and effective breech-closing apparatus had been evolved. But for this seamen had not very long to wait.

The progress of gun-making was now proceeding apace, especially in Germany and Flanders. At first, and for some time, there do not seem to have been any what we may call "moderate-sized" cannon, or, at any rate, they are not so much in evidence as the very large ones and the very small ones. The latter were not bigger than very heavy muskets, and it was with weapons of this kind that the many-gunned ships of the late fifteenth and early sixteenth century were principally equipped, though, as time went on, heavier pieces were added. To show how very small these little cannon were, it is only necessary to quote from Monstrelet's *Chronicles*, in which he tells us that, in 1418: "The Lord of Cornwall . . . crossed the Seine . . . having with him in a *skiff* a *horse loaded with small cannons*". When one reads of the extraordinary numbers of guns which are said to have been used in some mediæval battles and sieges, one should always bear this passage in mind.

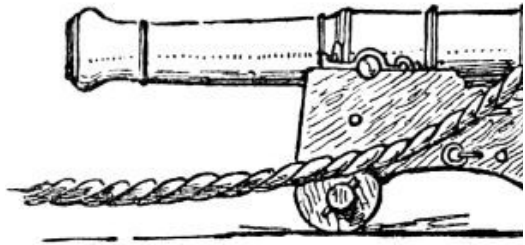
As for the big guns, they were giants when compared with their smaller brothers. Old Froissart, whom I have already quoted more than once, tells of a very notable specimen employed by the "men of

Ghent" to attack Oudenarde: "A marvellous great bombarde, which was fifty feet long, and threw great heavy stones of a wonderful bigness; when this bombarde was discharged, it might be heard five leagues by day, and ten at night, making so great a noise in going off, that it seemed as if all the devils in hell were abroad". All traces of this monster have disappeared, but an 18-feet gun of probably an exactly similar type is still to be seen at Ghent—unless the Germans have stolen it. This gun dates from about 1384, and has a bore something like 25 inches in diameter. As perhaps none of us are likely to be in Ghent for some time, we can see a rather smaller but almost duplicate weapon in Edinburgh—the celebrated "Mons Meg". Though she is supposed to have been built 100 years later, it is quite possible that both were turned out at the same manufactory. The Scots gun evidently came from Mons in Flanders, and the Flemish gun is also called "Meg", i.e. the *Dulle Griete* or "Mad Margery" or "Meg". Another bigger and more handsomely finished gun of the same type, dating from 1464, is to be seen at the Royal Artillery Museum at Woolwich. This is a Turkish piece, and is said to have been "cast", while "Mons Meg" and her sisters are all built-up guns, as can be at once seen on inspection by the most amateur eyes. There are several others on the Continent, notably the two "Michelets" which were left at Mont St. Michael when the siege of that place was abandoned by the English in 1427. The siege began in 1423, so they may date from a good many years earlier. As the English batteries were erected on the Isle of Tombelaine, which is 3000 yards distant from the mount, some idea may be obtained of the distance to which these early cannon could hurl their granite projectiles.



THE *DULLE GH*

This gun dates from 1384, and is very similar to the "marvel men of Ghent to attack Oudenarde.



The Gun with which we won the Gr

**Observe the heavy breeching-rope attaching the gun t
running in and out; the wooden wheels, and the "quoins" or**

Such cannon were all built up of long rectangular bars of iron upon which heavy rings of the same material were shrunk, the whole weapon, on completion, forming a heavy and extremely tough cylinder of wrought iron. The chambers, or breech-pieces, for the reception of the powder-charge, were built separately, with much thicker sides and smaller bores than the rest of the gun, into which they were screwed. The guns must not, I think, be therefore considered breech-loaders; for though it may be possible that they were screwed in and out at each discharge, I think it more probable that, as they were such heavy masses of metal, the breech-pieces were left screwed up and the charges inserted at the muzzle. But when cannon came to be made of more moderate dimensions—big enough to be effective against walls and the sides of ships, and small enough to be transported with reasonable facility—some system of breech-loading was almost universal. I say "almost", because guns began to be cast in brass in Germany at a comparatively early date, and such guns were probably often muzzle-loaders, since cast brass would not have been strong enough for the breech-closing methods in vogue. These were comparatively simple. The breech of the gun, which was built up much in the same way as Mons Meg and others of the same kidney, terminated in a species of trough. Into this trough fitted an iron cylinder which contained the charge of powder and was called a "chamber". The muzzle of the chamber was bevelled off or turned down so as to fit into the breech end of the bore of the gun itself, and was held in position by iron wedges, generally at the rear end, but sometimes across the top. In some of the larger types

the trough was made in the huge block of tough oak to which the gun was fastened. In the Tower of London you can see a gun of this kind that was fished up from the wreck of the *Mary Rose*. As most guns were provided with at least two "chambers", one would imagine that a fairly rapid fire could have been kept up, at any rate with the smaller guns. This, however, would not seem to have been the case, for the French account of the battle off St. Helens (when the *Mary Rose* capsized), which lasted for two hours, and in which a considerable number of ships were engaged, mentions that 300 rounds were fired as a fact indicating the uncommon fierceness of the fighting. And yet the *Henri Grace à Dieu* alone carried over 100 guns of various sizes!

But at first, even at a time when artillery of one kind or another was in common use on land, very few guns were carried afloat. Very likely the reason was that few were suitable; they were either too big, too small, or, as before suggested, could not be safely closed at the breech. Thus in the reign of Henry IV, 1399-1413, the *Christopher*, a rather important man-of-war, only carried "three iron guns with five chambers, one hand-gun, and one small barrel of powder". The barge *Mary* (*Marie de la Tour*) carried one iron gun with two chambers and one brass gun with one chamber. Another *Mary* (of Weymouth) had also one brass and one iron gun, the *Bernard* had two iron guns, and a ship referred to as the *Carrake* one. The *Christopher's* guns are said to have been "stoked". This may possibly mean fitted with "stocks" or oaken beds, like those previously referred to, in which case her guns were probably larger and heavier than those in the other ships. The invention of port-holes was probably coincident with the adoption of really heavy artillery afloat. Before then it would not have

been safe to have carried such heavy weights on the upper decks of the kind of ship then existing. The *Great Michael* may possibly be taken as an exception, for she could hardly have had port-holes cut in her 10-foot thick sides. At the same time, since her heavy guns were probably breech-loaders, they may have been practically built into her sides, since at that time there was no such thing as training a heavy gun right or left on board ship.

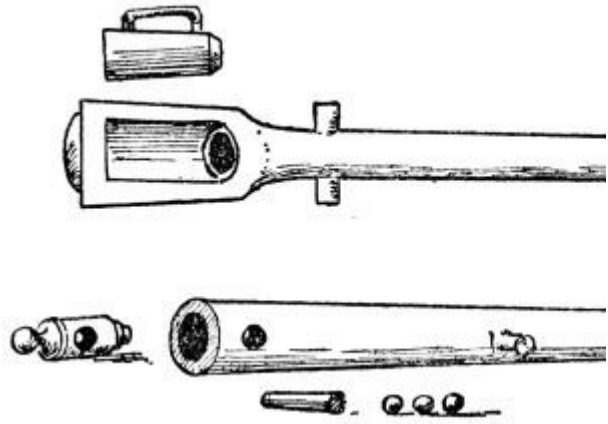
With the numerous batteries of small guns also carried on board ships of this period, it was quite a different matter. They were mounted on swivels on the gunwale, or in openings or ports in the fore- and after-castles as well as in the tops. Others, and among them certain wide-mouthed pieces known as "murderers", were distributed in what were known as the "cubbridge heads", or those sides of the fore- and after-castles which faced inboard and commanded the waist of the ship. Here it was to be expected an enemy's boarders would make their assault, and here —the crew having retired fore and aft—they would be mowed down by charges of all sorts of iron fragments from the "murderers". The same system of dealing with boarders lasted some time after the disappearance of the lofty "castles" at bow and stern; strong athwart-ships bulkheads being provided at bow and stern both on the upper and main decks.

It was in Henry VIII's time that the manufacture of cast-iron guns, for which England soon became famous, began in this country. One Ralph Hogge,[37] at Buxted, in Sussex, cast the first iron cannon. This is said to have been in 1543, and it is stated that the house in which this was done is still standing near the church of that village, and that it has the figure of a hog with the date 1581 carved over the door.

There is another story to the effect that this early gunfounder's name was John Howe, and that there is the following distich, cut in stone, still extant in Buxted:—

"I, John Howe, and my man John,
We two cast the first cannon".

This invention may be said to have sealed the fate of the heavy breech-loading gun for some centuries, though the system remained in vogue for small pieces for another 200 years. A cast-iron or brass muzzle-loading gun could be made so much more easily, rapidly, and cheaply than a built-up wrought-iron breech-loader of the same calibre that with the growing demand for guns afloat there is little wonder that the former drove the more expensive weapon clean out of the field. It must be remembered, too, that the casting of bronze guns had already reached great perfection on the Continent. What is known as "Queen Elizabeth's pocket pistol" at Dover is a standing witness to this. It is supposed to have been cast at Utrecht, and to have been presented to Henry VIII by the Emperor Charles V in 1544. It is 24 feet long, and is a very fine piece of workmanship. Its bore is 58 calibres long—that is to say, it is fifty-eight times as long as its diameter, a proportion not very unlike that upon which some of our most modern weapons are designed.



Early Breech-loading Ca

The first was an Armada weapon. This type of gun remai century

But to return to our early naval cannon. As I have already pointed out, the casting of bronze guns in Germany and Flanders had reached a great pitch of perfection long before anything of the sort was made in England. Germany, in fact, may be said to have led in gunnery for a considerable period. The master gunners in most armies seem to have been Germans, and at the accession of Queen Elizabeth we were buying our powder from the German Hansa Company established in the Steel Yard in London, instead of making sufficient for ourselves. There were many brass guns afloat in Henry VIII's navy besides the wrought-iron breech-loaders. Some of fine workmanship were found in the wreck of the *Mary Rose*, as well as those of the latter class which have been already mentioned. As an indication of the cost and labour expended on such weapons, it may be instanced that a bronze gun cast in Germany in 1406 took from Whitsuntide to Michaelmas to finish, and required 52½ hundredweight of copper and 3½

hundredweight of tin. The metal cost 422 florins, while the master gun-founder received 86 florins for his pains.

The heaviest weapon afloat in Tudor times was the curtall or curtow, generally of brass, and firing a 60-pound shot. The culverin was rather lighter and longer. There were a whole host of fancy names—and doubtless fancy types—for ordnance at this time, several of which have already been referred to as forming the armament of the *Great Michael*. Space forbids further enumeration or description, which, in any case, would be impossible on account of the very different guns which are called indiscriminately by the same name. But by the Armada days the following were the principal guns used afloat:—

Name.	Bore.	Weight of Shot.
Double cannon	8½ inches	66 pounds
Whole cannon	8 "	60 "
Demi-cannon	6½ "	32 "
Whole culverin	5½ "	17 "
Demi-culverin	4½ "	9 "
Saker	3½ "	51 "
Minion	3 "	4 "
Falcon	2½ "	2 "
Falconet	2 "	1½ "
Robinet	1 "	1 "[38]

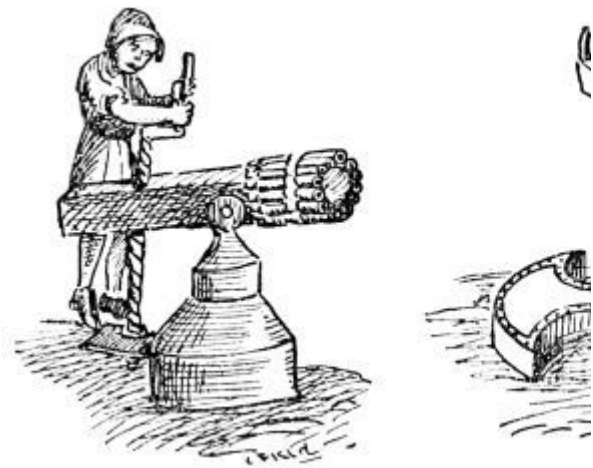
The "double cannon" is sometimes called a "cannon royal" or a "carthoun". The "saker" is often spelt "sacre". The "culverin"—a name that occurs rather more frequently than any other at this time—was so called from the lugs or handles for hoisting it in and

out of its carriage, which were made in the form of an ornamental serpent.[39]

Although the English cast-iron cannon almost at once achieved such a reputation that they sold in Amsterdam for £40 a ton, for £60 in France, and for no less than £80 in Spain, though costing only £12 a ton in this country; and though they were bought so freely at these high prices by foreigners that in 1574 their export was totally forbidden, yet it would appear that the Royal Navy was then using nothing but brass guns, except perhaps in the case of the smaller pieces. But the merchantmen used iron guns. Thus when James I sent an expedition of six men-of-war and a dozen armed merchant-ships against the Algerines in 1620, all the former carried brass and all the latter iron guns. The men-of-war were heavily gunned, so much so, indeed, that it was not unusual for their captains to dismount a few of their heaviest pieces and stow them as ballast for the safety of the ship. The *Prince Royal*, for instance, carried a battery of two "cannon perriers" (i.e. throwing stone shot), six demi-cannon, twelve culverins, thirteen sakers, and four light pieces. The famous *Sovereign of the Seas* in the next reign mounted twenty cannon, eight demi-cannon, thirty-two culverins, and forty-two demi-culverins—all brass guns—and probably some small iron falconets as well. On each gun was engraved the rose and crown, the sceptre and trident, anchor and cable. The engraving cost £3 per gun, but we must remember that the *Sovereign* was a "show ship".

According to an artilleryman who wrote in the first half of the seventeenth century, three shots an hour was about as much as an ordinary gun would stand, "always provided that after 40 shots you

refresh and cool the piece[40] and let her rest an houre, for fear lest 80 shots should break the piece". But I think we may credit our seamen with being able to fire their guns a bit faster than that. Constant running out of powder seems to have been the great trouble in the English fleet engaged in the discomfiture of the "Invincible" Armada. And not only did the English ships carry heavier ordnance and fire heavier broadsides than the Spaniards, so that the British cannon "lacked them through and through", but our gunners are said to have fired their pieces three times to the Spaniards' one. This is a Spanish estimate, and it is abundantly evident that our gunnery proved at least as superior as it did over that of the Germans in Sir David Beatty's victory off the Friesland coast in January, 1915. Later on, at the battle of La Hogue (1692) the British ships were able to fire three broadsides to every two of the French.



Early Attempts at Max

In all probability each barrel of the first gun had to be lo another. In the second case, the eight little cannon are app

revolved by hand.

Coming to the navy of the Commonwealth, we find the same curiously named guns in use. Here is the battery of the *Naseby:* Nineteen cannon, nine demi-cannon, twenty-eight culverins, thirty demi-culverins, and five sakers. The same classification lasted till the time of George I, when it became the custom to designate guns by the weights of their projectiles. Thenceforward we find ship-armaments reckoned in 42-pounders, 32-pounders, 24-pounders, 12-pounders, and 6-pounders. The old 60-pounder had disappeared, and before long the 42-pounder followed it into temporary oblivion, so that at Trafalgar our heaviest gun was a 32-pounder.[41] It was not until nearly 1840 that it reappeared, and was followed by a 68-pounder.

During the period between Elizabeth and Trafalgar there were innumerable attempts to invent and introduce improved forms of ordnance, including shell-guns and machine-guns. The idea of the latter was extremely ancient. There are several manuscript illuminations and old wood-cuts of the fourteenth and fifteenth centuries showing attempts at a "Maxim" gun. The "orgue", consisting of a large number of very small guns or musket-barrels fixed in rows, or revolving rings, or bundles, was a common weapon in those centuries—at least on shore. Then there was something of the kind for which William Drummond was given a patent in 1625, and which he termed a "thunder carriage". Again, there was one Puckle, who in 1781 invented a regular revolving gun mounted on a tripod. It was made in two patterns—one to fire ordinary round bullets, the other to fire square ones—against the "unspeakable Turk". Puckle thought these infidels ought to get as

nasty a wound as possible. With his specification he issued a doggerel which ran as follows:—

A DEFENCE!
"Defending King George, your
country and Lawes
Is defending yourselves and
Protestant Cause".

The invention did not "catch on", and under a picture of the weapon which appeared on the eight of spades in a pack of cards of the period was another attempt at poetry:

"A rare Invention to destroy the
Crowd
Of Fools at Home, instead of Foes
Abroad.
Fear not, my Friends, this terrible
Machine;
They're only wounded that have
Shares therein".

Neither machine-guns nor shell-guns were to appear before the Victorian Era, the reason probably being that there was no machinery capable of turning them and their component parts out in payable quantities. As for shell-guns, mortars were found to answer very well; no navy wanted to introduce a form of warfare that would be absolutely destructive of wooden shipping, and so we find that they did not long precede the appearance of the modern ironclad. But towards the end of the eighteenth century a new and practical weapon was invented by General Melville with the idea of producing a gun which should fire a comparatively large projectile for its weight. To effect this, something, of course, had to be sacrificed,

and this was length, both of the gun itself and of its range and also penetration. But, as naval actions then took place at close quarters, this did not count for much, and what was lost in penetration was more than made up for by the smashing effect of the heavy shot. In fact, the gun itself was at first termed a "smasher", but, from the fact that most of them were cast at the famous Carron foundry in Scotland, they soon became universally known as "carronades".

In the days of wooden ships the "carronade" became a most useful weapon. The smaller kind were light, took up little space, and were just the things for merchant-men and small craft; while the bigger class—generally 68-pounders—were valuable auxiliaries to the batteries of our line-of-battle ships. The carronade was essentially a British gun, and its efficiency was never more conspicuous than in the fight between H.M.S. *Glatton*, a converted East Indiaman, and a French squadron of four frigates and two corvettes, which took place off the coast of Flanders on 15th July, 1796.



THE MAIN GUN DEC

Typical of a ship's battery in the palmiest days of our Wood running the guns in or out, and securing them for sea, are cle or wedges for elevating or depressing the guns. Overhead are latter is the implement with a double corkscrew for withdrawi

The British ship, whose armament consisted of a main battery of 68-pounder carronades, with 32-pounders on her upper deck—fifty guns in all—completely defeated and drove off her six assailants, who retreated to Flushing with their decks ripped up, besides other terrible damages, one of them being so badly mauled that she sank on arrival in port. Had not the *Glatton* been a very slow sailer she could

have destroyed the lot. As it was, she effected her victory with only two casualties—Captain Strangeways of the Marines mortally, and a private marine slightly wounded.

It may be interesting to note the armament carried by Nelson's *Victory* at the Battle of Trafalgar, in order that it may be compared with that of some earlier ships of which particulars have been given and with those of our modern battleships, which will be found in a later chapter.

On that memorable day the famous old three-decker which still swings at her buoy in Portsmouth harbour mounted—

On her lower deck, thirty 32-pounders;
On her middle deck, thirty 24-pounders;
On her main deck, thirty-two 12-pounders;
On her upper deck, eight 12-pounders, and four 32-pounder carronades.

The upper-deck 12-pounders were 2 feet shorter than those on the main deck, and only weighed 21 cwt., as against their 34, but the 32-pounder carronades only weighed 17 cwt. This will give an idea of the comparative lightness of these weapons. The guns at this period, and indeed since Elizabethan times, were mounted on carriages formed of two wooden sides or cheeks strongly connected together by timber cross-pieces or "transoms", and placed on four solid wooden wheels or "trucks". They were secured to the ship's side by thick ropes or "breechings" passing round the breech of the gun,

and long enough to allow of a certain recoil on being fired. The gun was run out again by blocks and tackles, which could also be used to haul it inboard without its being fired, in order to secure it for sea and close the port. It was trained from side to side by means of hand-spikes or levers placed under the rear of the carriage, and elevated in a similar manner, the hand-spikes being used to raise or lower the breech of the gun, while the "quoin", or wedge, supporting it was being adjusted. Similar carriages remained in use in our navy far into the 'eighties of last century, being used for the "converted 64-pounder", which was the old smooth-bore 68-pounder lined with a rifled steel tube. I have drilled at such guns myself. It was fine exercise, and it was necessary to be pretty smart and have all one's wits about one to get outside the breeching, if a loading number, before the gun was run out. The 13·5-inch gun of to-day is, thanks to hydraulics, manipulated with a tithe of the exertion required to serve a truck gun. Here are the orders for "Exercise at the Great Guns" which obtained in 1781, and are considerably simpler than those previously in vogue:

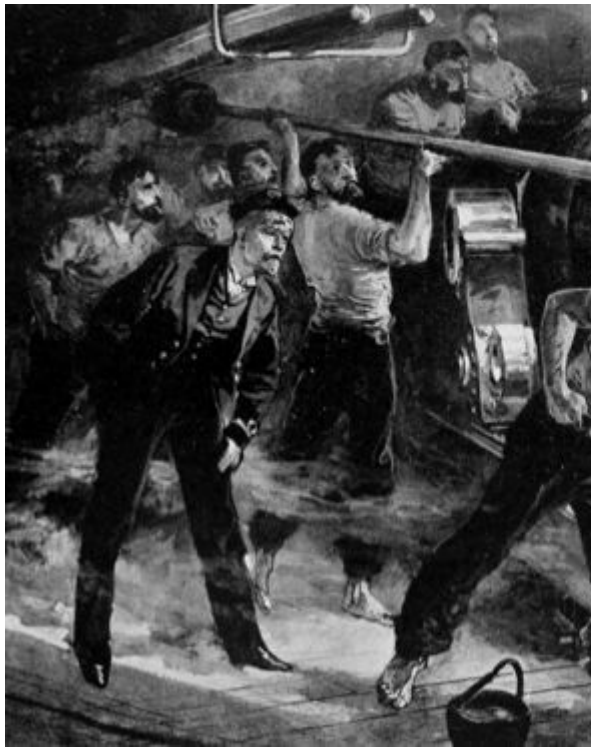
1. "Silence."
2. "Cast loose your guns."
3. "Level your guns."
4. "Take out your tompions."
5. "Run out your guns."
6. "Prime."
7. "Point your guns."
8. "Fire."
9. "Sponge your guns."
10. "Load with cartridge."
11. "Shot your guns."
12. "Put in your tompions."
13. "House your guns."

14. "Secure your guns."

"Tompions" are a species of plug used to close the muzzle of a gun when not in action. In the "days of wood and hemp" they were usually painted red, but in modern guns they are generally faced with gun-metal, decorated in some cases with the badge of the ship. "Prime" means to place loose powder in the pan after having pierced the cartridge with a "priming wire" thrust through the touch-hole or vent. To "house" was to haul the gun inboard ready for securing.

The smooth-bore gun remained the naval weapon right up to the Crimean War, though explosive shells gradually began to be used as well as the old solid round shot. The rifling of muskets and cannon had often been suggested by inventors as far back as Tudor times, and occasionally a few experimental rifled muskets were made. But in the war with Russia, in which most of the combatants were armed with muzzle-loading rifles, rifled cannon began to make their appearance. The Lancaster gun, with a twisted oval bore, was the first rifled naval gun, and was thought a great deal of in its day. Then came the breech-loading Armstrong guns. These were very finely turned out weapons with poly-groove rifling, and closed at the breech by a species of block which lifted in and out and had somewhat the appearance of a carriage clock. It was held in position by a hollow screw through which the charge and projectile were loaded into the gun, and which was screwed up tight against the breech-block before firing. This was not a very satisfactory system, since, if not properly screwed taut, the block had a habit of blowing out, sometimes with unfortunate results. It was probably for this reason that none of these guns

was made bigger than a 100-pounder. The projectiles for the Armstrong gun were covered with leaden jackets in order to take the rifling. This jacket every now and again flew off, which rendered these guns very unsafe to use over the heads of our own troops.



NAVAL GUNNERY

An 18-ton gun in action at the bombardment of Alexandr vent". The sponge end is being passed to be thrust out of the s the gun is fired), so that the big wet end can be placed in the g

The consequence was that while the Germans went in for the Krupp breech-loading system, in which the breech is closed by a sliding block across it, and the French for the interrupted-screw breech-closing plug, the prototype of our present system, we

gave up breech-loaders and went in for built-up, muzzle-loading guns. Their advocates claimed for them simplicity, comparative cheapness, and other virtues, but, as a matter of fact, we were entirely on "the wrong tack" and were gradually being left behind in gun-construction by other nations. These big muzzle-loaders were formed by shrinking successive jackets over a steel tube which formed the bore. They were rifled with a few wide, shallow grooves, their projectiles being fitted with gun-metal studs intended to travel along the rifling and so give them the spinning movement requisite for accuracy. The biggest guns of this class constructed in this country were the 80-ton guns carried by the *Inflexible* at the bombardment of Alexandria, though the Italians, who followed us in sticking to muzzle-loaders for a time, had guns of 100 tons. Of course the biggest guns had special hydraulic mountings, but the broadside guns of 7-, 8-, 9-, or 10-inch bore were mounted on carriages invented by a Captain Scott. These consisted of a pair of iron brackets, or sides, supporting the gun, which ran in and out on slides made of iron girders that could be trained to the right or left by means of tackles, or in most cases by cog wheels working on curved and cogged racers. The carriage on which the gun was mounted had rollers beneath it with eccentric axles, so that, unless these were raised by levers supplied for the purpose, the carriage itself rested on the slide. This helped to check the recoil, further restrained by a system of interlocking plates on the carriage and slide which could be compressed together by a hand-wheel and screw.

After the gun had recoiled inboard and had been reloaded, the compressors were slackened and the gun-carriage put on its rollers, so that it ran down

the slightly-sloping slide to its firing-position. But for all its simplicity there were very many disadvantages attendant on the muzzle-loader. One very important one was the impossibility of preventing the gases caused by the explosion of the powder from escaping past the projectile, so that part of the force of the explosion was wasted. In breech-loading guns the projectile fits the rifling closely—it could not be forced through the gun by the rammer from the rear—being provided with a copper driving-band of slightly bigger circumference than the bore. When the gun is fired, this is driven into the grooves of the rifling, rotates the shot, and at the same time stops any escape of gas and consequently of energy. Thus, size for size, a breech-loading gun must have greater range and penetration than a muzzle-loader. A breech-loader can be made much longer than a muzzle-loader into the bargain, as it is not necessary to get to the muzzle to load it. This also makes for accuracy and penetration.



13.5-INCH GUNS ON

**The muzzles of the monster cannon are closed by plugs c
Above the higher turret is seen a "Barr & Stroud" range-finder i**

It was a considerable time before those in this country who had stuck to the muzzle-loading system through thick and thin could be brought to see the error of their ways, but after 1880 breech-loaders much of the French type were introduced into the navy, till we reached the monster 110-ton guns carried in the *Benbow*, *Sanspareil*, and the ill-fated *Victoria*. As I have already mentioned, the French guns were closed at the breech by an "interrupted screw". What this is may be shortly explained.

Imagine a screw plug about one and a half times as long as its diameter, with a close thread to it. Now, to screw this in and out of the breech of the gun would be a matter taking an appreciable time. Suppose, now, that we take this screw plug and divide the outside of it—the screw part—perpendicularly into six equal parts. Then, if we cut away the thread of the screw on every other sixth, we shall have three-sixths smooth and the other three-sixths with the screw-thread still standing out upon them. If now we treat the corresponding screw-thread in the breech of the gun itself in a similar manner, and then insert the plug with the three threaded portions in line with the three smooth portions cut in the gun, we can push it directly in to its full length, after which a sixth of a turn will lock the threaded parts together and securely close the breech. This has proved amply strong enough to resist the immense strain imposed by the explosion of the charge; but while the principle has been retained in all our cannon—except the small 3- and 6-pounder Hotchkiss guns, which have a sliding block—it has been so improved that the locking of the breech is still stronger, and in all but our very big guns it can be opened and closed with just about as much ease as a cupboard door. Of course, in monsters like the 12-, 13·5-, and 15-inch guns, hydraulic machinery is brought into play, by means of which their immense breech-blocks are manipulated with the greatest ease by the movement of various levers.

Machine-guns at one period were introduced into the naval service for the special purpose of defence against torpedo-boats, but smaller rifle-calibre weapons were also supplied for use in the tops, boats, and in landing operations. The first-mentioned

were "Nordenfeldt" guns, firing steel projectiles of 1 inch diameter in volleys of two or five. These proved too small to deal with the torpedo-boat, which grew bigger and bigger and was superseded by the destroyer; and were replaced successively by 3-, 6-, and 12-pounder rapid-fire guns. But at the present time a 4- or 6-inch shell is required to be really effective against the big destroyers which are now in commission. The rifle-calibre guns were at first Gatlings with revolving barrels, then Gardner and Nordenfeldt volley-firing guns, and lastly the well-known Maxim. Some of these are still carried on board ship but are not now of use in a naval action, though they are most valuable when bluejackets and marines are landed for shore service, and, upon occasion, in the boats.

CHAPTER XI

Evolution of the Ironclad Battleship

"Our ironclads and torpedo-boats
Have never met the foe,
But times of peace don't alter us,
Our hearts are right, you know;
As right and tight as in the days
When glorious fights were won,
And if duty call, we'll on them fall
With torpedo, ram, and gun, my boys,
With torpedo, ram, and gun.

They may blow us up,
They may blow us down,
They may blow us every way;
But we'll sink or win,
And ne'er give in,
Though they blow us right away, my boys,
Though they blow us right away!"
"Sink or Win" (Joe the Marine). From "Per Mare",
Jane's *Naval Annual*, 1895.

We are accustomed to think of the armour-clad war-ship as entirely a thing of to-day, or at any rate of the last fifty or sixty years. This is, however, not altogether correct. Armour is not necessarily steel or iron—witness the derivation of "cuirass" from the French *cuir*, i.e. "leather". A French battleship is called *cuirassé*.

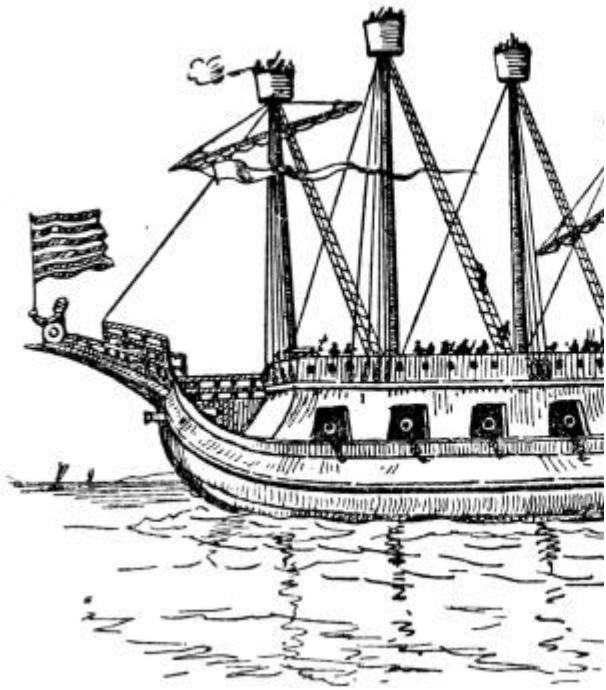
Protective devices of various kinds and materials have been used for hundreds, nay thousands, of years for the defence of ships specially designed for fighting purposes, though never, it must be admitted, so generally and extensively as at the present day. Raw hides were constantly used in ancient and mediæval times to protect ships and the wooden towers used in sieges on shore. Thick felt was also utilized for this purpose. The Normans hung their galleys with this material in a battle with the Saracens off Palermo in 1071, and it played not only a defensive but a decorative part in the equipment of the big "dromons" of the Saracens and Byzantines, which were covered with thick woollen cloth soaked in vinegar to render it fire-proof, and hung with mantlets of red and yellow felt—a rather gaudier war-jacket than the slate-grey of our "Dreadnoughts".

Whatever the advantages of felt, there were naval constructors who stood fast by the old "adage", "There's nothing like leather". Thus, at the siege of Tyre in 1171 and the forcing of the entrance of the Nile in 1218, an extensive use was made of a species of small craft known as "barbots" or "duck-backs", whose crews were protected by a strong domed deck or roof covered with leather. Again, in 1276, Pedro III of Aragon *cuirassed* two of his biggest ships with leather—probably raw hides—before sending them to engage the fleet of Charles of Anjou. Lead was also used for ship armour in mediæval times. It is said that the great dromon captured by Richard I off Beyrout had some kind of leaden plating. Later on, this heavy metal preceded copper as a sheathing for the under-water portions of ships: the *Grande Françoise*, launched in 1527, was lead-sheathed from her keel to the first wale above her water-line. Three years later than this date a regular "lead-clad" was launched at Nice, where she had been built to the order of the Knights of Malta, who had not very long before been driven out of Rhodes by the Turks.

This big vessel, the *Santa Anna*, was a regular "Dreadnought" in her day. While as fast as other unprotected vessels of her time, she was heavily plated with lead, fastened to her sides with brazen bolts, from her upper deck down to her keel; and this armour was so strengthened by the thick backing of her timbers that, "having been many times engaged, and received much cannonading, she was never pierced below the bulwarks". She carried fifty heavy guns, besides numerous smaller pieces, of which not a few were carried aloft in her many fighting-tops.

It is interesting to note that she had a large armoury, a chapel, forges, a bakery, and a band. "She

had various lodges and galleries round the poop, and chests and boxes full of earth, wherein were planted cypresses and divers other trees and flowering shrubs, after the fashion of a garden, small but beautiful." This is about the only garden I have ever heard of afloat, except the mythical "garden in the main-top", where are said to be grown any vegetables, "tin-bag" or other, which arouse the inquisitiveness of ship-visitors. But the main-top has now gone, and I suppose the "garden" with it.



The *Finis Belli,* the first regular Ironclad Sl

The funnel on the poop is presumably the galley funnel, tho

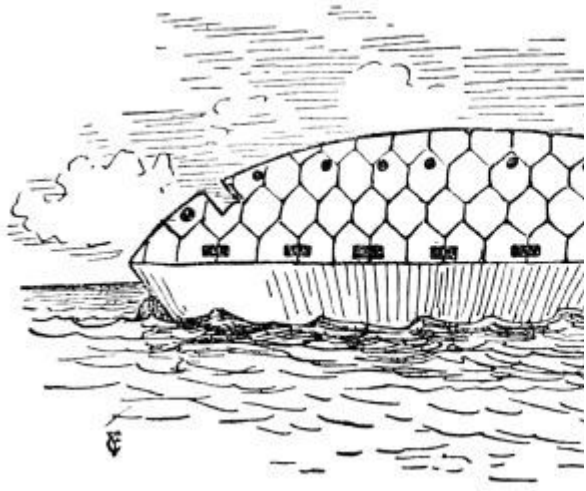
It has been stated, but without any authority being quoted for the statement, that "chain-netting of iron was suspended to the sides of men-of-war,

which were also strengthened by plates in the time of Henry VIII and Elizabeth". I should say this is very doubtful, since Sir William Monson, in his *Naval Tracts*, published at that period, does not mention this practice, although he refers to a number of other protective devices. But, as we have already seen, iron was used as a protection—probably against ramming—by the Viking ships of many centuries before this time.

The first regular ironclad ship armed with cannon appears to be that quaint craft christened the *Finis Belli*, which was constructed by the burghers of Antwerp what time they were closely besieged by the redoubtable Alexander Farnese, Duke of Parma, in the year 1585. With this floating battery, for it was little else, the besieged hoped to be able to break the Spanish blockade. There are various accounts of her. One states that she was protected by iron plates, another that her sides were from 5 to 10 feet thick, "filled with rotten nets, well rammed in, which made them firm and almost impenetrable". Probably the hull proper, which was very low in the water, was protected in this way, and the built-up battery or casemate, which she had amidships, was covered more or less with iron. She mounted twenty heavy guns, besides lighter pieces, and carried a large number of musketeers, some in her fighting-tops, some behind a loopholed bulwark over her battery, and others, "which could not be hurt, being lodged lower than the cannon could batter".

Unfortunately for *les braves Belges* the *Finis Belli* was a total failure. In spite of her three rudders she was "very troublesome to govern", and eventually ran aground and had to be abandoned. The Spanish besiegers laughed prodigiously at this effort, and

nicknamed the abandoned ironclad the *Caramanjula* or "Bogey-bogey". As for her designers, they re-named her *Perditæ Expensæ*, or "Money thrown away".



Japanese Ironclad of abo
(*From a drawing by a Japanes*

With hull covered with plates of copper and iron, two r
and a paddle-wheel as her propelling machinery, fitted insi

The Dutch patriots struggling for freedom from Spanish tyranny had tried their hands at a somewhat similar contrivance about ten years earlier, which was known as *The Ark of Delft*. This seems to have been a double-hulled arrangement, with three hand-turned paddle-wheels placed between the two hulls. The *Ark* only rose 5 feet above the water-line, was 110 feet long and 46 feet broad. She mounted twenty guns, and "a large gallery was suspended from her three military masts"—whatever that may mean. It is a curious but generally accepted fact that a great many more or less modern "inventions" have been

forestalled in the Far East. Gunpowder was first made in China; water-tight compartments were commonly used in the ships of that country hundreds of years before they found a place in our men-of-war. It is not altogether strange, therefore, that the Japanese should have been in possession of what may well have been a pretty formidable armour-clad so far back as the year 1600—a remarkable-looking craft, more like a big turtle than anything else. She was cased with hexagonal plates of iron and copper, fitted closely together. She had a rudder at both bow and stern, and was propelled by a paddle-wheel amidships, something like the *Ark of Delft*. A Captain Saris, who made a voyage to Japan in 1613, mentions that he there saw a junk of from 800 to 1000 tons, sheathed all over with iron. This was probably the one just described, which, by the way, is stated to have carried a battery of cannon.

It is hardly necessary to point out that impenetrability does not necessarily imply armoured protection. An earthen rampart may well be impenetrable, as may a thick-sided wooden ship, as was the *Great Michael* to the artillery of her day; yet, while affording protection to those behind it, neither the one nor the other is armoured. Between 1600 and 1800 there were many attempts at special forms of protection, from the floating batteries employed by the English in the mismanaged expedition to La Rochelle to the famous Spanish floating batteries destroyed at the Siege of Gibraltar in 1781; but iron ship-armour does not appear again till the year of Trafalgar.

In the *Naval Chronicle* for that year we have an account of a vessel designed by a son of the General Congreve who is famous as being the inventor of the

"Congreve rocket", once a somewhat highly esteemed missile. The ship—it does not appear whether it was actually built or not—was intended for the attack of the French invasion flotillas which were blockaded inside their ports by our fleets. It was to have sloping sides covered with iron plates and bars, proof against any gun of the period, and was to be armed with four big mortars and the same number of 42-pound carronades. Her rudder, anchors, and cables were to be entirely under water, and so not exposed to hostile artillery, while she was to be rigged in such a way that masts, yards, and sails could be lowered or erected in a quarter of an hour. When these were "struck" and housed under the armour she could be moved—probably at a very slow pace—by oars pulled by forty men, worked entirely under cover.

Fulton, the famous American inventor, who built a submarine boat, and invented mines and torpedoes and other weapons of war, turned his attention to the protection of war-vessels. He was probably responsible for a little paddle-wheel-propelled vessel for towing torpedoes, which is described as being covered with ½-inch iron plates, "not to be injured by shot". Later on he built a steam frigate, which he called the *Demologos*, or "Voice of the People". This relied on 13-feet-thick sides to protect her crew, but was not armour-plated. She was blown up by accident in 1829, and replaced by the *Fulton the Second*, which seems to have been to some extent protected by iron armour.

But it was not till towards the end of the Crimean War that real steam-propelled armour-clad ships appeared, in the shape of a series of slow and unwieldy floating batteries, specially designed for

the attack of the massive Russian fortifications. If anyone would like to see what these were like—that is, as regards their hulls, for the masts have long since disappeared—he has only to travel as far as Chatham Dockyard and ask the policeman on duty at the main gate to direct him to the *Thunderbolt* pier.

The *Thunderbolt* is one of these old ironclads which has come down to the useful but inglorious duty of acting as a landing-stage in the River Medway. Neither she nor any of her English sisters was ever in action; they were too late in the field—or rather the water. But several of the French floating batteries, almost precisely similar vessels, took a prominent part in the bombardment of the Russian fortress of Kinburn, where their fire proved most effective. As for the shot and shell from the Russian forts, they rebounded from their sloping iron sides like so many tennis-balls. These armoured batteries were, however, slow, clumsy, flat-bottomed affairs, with no speed under steam or sail and but moderately seaworthy. It remained for the French—whose models in the "days of wood and hemp" were generally better than our own—to go another step forward and produce a regular sea-going ironclad.

This was the famous *La Gloire*. She was no beauty. She had an extremely ugly bow and was very short in proportion to her beam. She was not a new ship, but the old two-decker *Napoleon* cut down, lengthened, and covered along her whole side with iron plating 5 inches in thickness. She took two years to finish, and was not ready till the end of 1859. She naturally created a good deal of excitement, and it was at once seen that we must follow suit.

But our naval men did not see why they need be

content with so unsightly a war-ship. They had been much impressed, a year or two before, by the *Niagara*, a fine United States frigate which had visited the Thames, and which had what was then regarded as the immense length of 337 feet. Our constructors, therefore, were rather inclined to follow her lines than those of *La Gloire*, and turned out the *Warrior*, a magnificent-looking vessel, not improvised out of an old wooden ship, but entirely built of iron. Her armour-plating, however, did not extend from bow to stern, but only covered her battery amidships, which occupied somewhere about two-thirds of her total length. The *Warrior* was 382 feet long, and fitted with a not very obtrusive ram. As a matter of fact, it was not perceptible at all, since the stem was finished off with a very graceful swan bow adorned with one of the finest figure-heads ever executed. She was fully rigged, did 14½ knots under steam at her trials, and carried an armament of thirty-eight 68-pounders, then the heaviest guns afloat. In short, the *Warrior* was a triumph of British shipbuilding, and a worthy ancestor of the magnificent armour-clad fleet which has played such an important part in the history of the nation. She had one sister, the *Black Prince*, after which a few smaller ironclads were built, the *Defence*, *Resistance*, *Hector*, and *Valiant*. Next came four bigger ships, the *Achilles*, *Minotaur*, *Northumberland*, and *Agincourt*. These were all improved *Warriors*, armoured along their whole length, with ram bows, a heavier armament, and no less than five masts. They were imposing-looking ships, though, of course, to-day about as obsolete as the *Henri Grace à Dieu*.



H.M.S. *WARRIOR*, OUR FIRST SI

She was a very efficient reply to the French *La Gloire*, whi Red-and-blue Ensign. The White Ensign with St. George's Cross

I have a vivid recollection of a visit to the *Minotaur* when a boy. Possibly a few extracts from notes made at the time may be of interest. "She has five masts and is a tremendous length. Her upper deck is furnished with a good many small guns for repelling boat attacks. Round the masts are placed some of the shot and shell for the large guns below, painted white, and the knobs (i.e. studs to fit the rifling) and points gilded. Were here shown a Gatling gun for service on shore or for clearing the decks of boarders, &c. On going below we saw a couple of

rocket-tubes burnished like a looking-glass. . . . In the steerage we saw a 7- or 9-pounder boat gun polished beautifully (as was all the metalwork in the ship) which had an arrangement for reducing the recoil by a cylinder full of oil. The main-deck battery consisted of 12-ton guns, lacquered to look like jet." The carriages, I remember, were painted white and the slides under them scarlet, which, with their burnished gun-metal machinery, gave them a most brilliant appearance, very different from the slate-coloured monsters of to-day. These guns were some which had replaced her original armament of more numerous but lighter cannon, and in consequence every other port in the battery was vacant. But the long line of guns presented a most imposing appearance. "Between the guns were field-guns, boat-guns, &c. Round the hatchways were ranged shot, shell, and canister, which also appeared in every available corner."

Among other notes, too long to be transcribed, I find that the Whitehead torpedoes in the *Minotaur* were made of copper, a material which has long since been superseded by steel, and that I was shown "the Rumpf coil for generating the electric light which can be shown in three places". Compare this very modest installation with the numbers of powerful search-lights which a battleship carries to-day, to say nothing of the thousands of incandescent lamps which light her interior. The "cylinder full of oil" for checking the recoil of a small boat-gun, which is referred to above, is noteworthy as the prototype of the almost universal system now in use both ashore and afloat, though in the *Minotaur* none of the big guns were fitted with this very effective apparatus.

As guns grew more powerful, and, in consequence, armour increased in thickness and weight, the amount of side protection had perforce to be reduced, so that as time went on the battleship's cuirass was cut down to a comparatively narrow water-line belt, with a "box-battery" containing her heavy guns amidships. In later types the foremost and aftermost guns in these batteries were placed at an angle and the port "recessed" in the ship's side, so that these guns could fire on the broadside and nearly ahead as well. In some ships, such as the *Sultan*, *Alexandra*—which, by the way, was long flagship of the Mediterranean fleet and a notable ship in her day—*Triumph*, and *Iron Duke*, the box-battery was arranged in two tiers, one above the other. All these were broadside ships and fully rigged. If they could not get along very fast under sail alone, the sails, under some circumstances, were useful in "easing the engines" and getting a little more speed out of the ship.

But in any case naval officers had not then brought themselves to accept the idea of relying on their engines alone; they liked to have a second string to their bow. Besides, the work and evolutions aloft were undeniably a splendid thing for the seamen; it rendered them quick, smart, and self-reliant, and kept them in excellent physical training.

The reverse side of the picture was the weight of yards, rigging, and sails, the resistance they offered to the wind when the ship was steaming against it, the danger in action to those quartered on the upper deck from the fall of yards, blocks, and spars from aloft, and the time taken in preparing them for action. The top-gallant masts were sent down on deck as well as the upper yards, the top-masts were

generally lowered till they only showed a few feet above the heads of the lower masts, extra slings had to be put in place to secure the lower yards, the shrouds supporting the masts on either side had to be "snaked down", by coiling wire hawsers in a species of zigzag from top to bottom, so that if one or more shrouds were cut the whole would hang together, and many other precautions taken which occupied valuable time and were, perhaps, after all of a merely negative nature—that is to say, the rigging was more of a danger in action than a useful asset. The tops were the only part of it that were of use. As in ancient days they afforded stations for archers and stone-throwers, and later on for musketry, swivel-guns, and grenade-throwers, so they were at this time utilized for mounting machine-guns to fire down upon an enemy's decks.

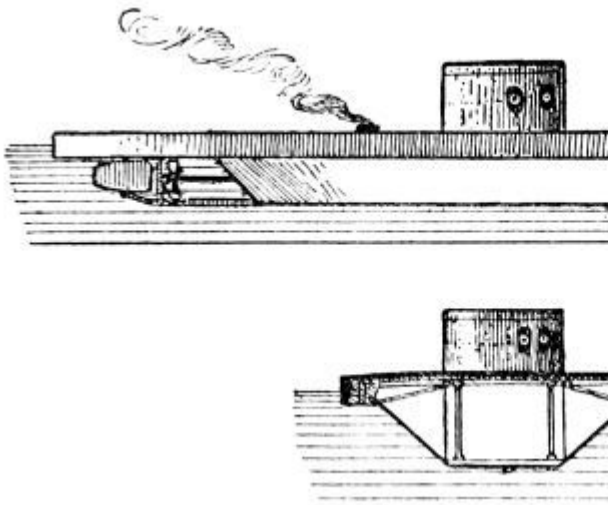
For at that period "close action" was always expected. Boarders were told off when the ship "went to quarters for action", and boarding-pikes and cutlasses were provided for their use, while the small upper-deck guns—usually breech-loading Armstrongs—were mounted on carriages which enabled them to be fired downward to repel a boat attack or the rush of a steamboat with a spar torpedo. The ideas of an action at sea were practically the same as those which obtained in the days of Nelson. "Masts and yards" were the source of yet another danger. The "smartness" of a ship was still generally gauged by her "smartness" aloft. All evolutions in the Navy are done "against time", and for a ship to get her "royal yards across" some seconds before any other ship in the squadron was a notable feat of which every soul on board was proud to a degree. These ideas were those of the old sailing navy, and in spite of the advent of steam, ironclads, rifled guns, and

torpedoes, the conservatism of our great sea service rendered them still paramount, so that even gunnery took a second place. There were regulation quantities of ammunition to be fired—"expended" was the usual term—at regulated periods, there were orders that torpedoes were to be run at stated intervals, that bluejackets and marines should be landed for drill ashore every week when in harbour. But in most ships these things were regarded as secondary and annoying performances, to be got over and done with as soon as possible, if they could not be avoided altogether, so that all hands might be set to their "games with sticks and string", as, in course of time, irreverent observers began to call the cherished evolutions with mast and yards, and the important business of cleaning paintwork, burnishing "brightwork", and generally making the ship as spick and span as possible.

"Spit and polish" were the idols worshipped in those days by captains and more especially commanders, for it was almost universally recognized that their promotion depended more on the brilliant appearance of their ships at an inspection than on any other earthly matter. But for all that the days of "sticks and string" were numbered, as were those of broadside ironclads and box batteries.

The prime cause of the approaching change was the appearance of a queer-looking little craft in the Civil War in America between 1861 and 1864. The United States Government had a fine fleet of wooden steamships at the outbreak of hostilities, but the naval authorities of the seceding Southern States, having raised the *Merrimac*, a 40-gun frigate which had been sunk at the Norfolk navy yard, cut her

down, built a battery amidships armoured with two or three thicknesses of railway iron, and attacked the Federal fleet. The *Merrimac* had it all her own way, rammed and sank the frigate *Cumberland*, set the bigger *Congress* on fire and compelled her to surrender, and withdrew with all the honours of war. But she was yet to meet her match. John Ericsson, a Swedish engineer, was commissioned by the United States Government to construct a small ironclad of his own designing. While the *Merrimac* was engaged in defeating the wooden ships of the Federals in Hampton Roads, the *Monitor*, as the new vessel was called, was on her way south from New York. She joined the Federal fleet the very night before the *Merrimac* made a second sortie. On this occasion, as she came out into the Roads and opened up the fleet she intended to attack, the *Merrimac* spotted what someone described as looking "like a cheese-box on a raft". It was an excellent description of the little *Monitor*, which was built with a very low freeboard and had nothing on her deck but a cylindrical revolving turret containing a couple of guns, no masts, and but the merest apology for a funnel. Yet she proved one too many for the *Merrimac* with her more numerous battery of guns. She was unable actually to pierce her sides, as her commander had received the most peremptory orders not to use more than 15 pounds of powder to load his guns, but the *Merrimac* got so "rattled" that she had to sheer off.



The *Monitor*, the famous little ship that revol

The upper figure is a broadside view, the lower one a trans of the hull was very like a raft, and was heavily armoured all box forward.

This first duel between ironclad vessels attracted an enormous amount of attention, as is only to be supposed. The net result in this country was that Captain Cowper Coles, R.N., was allowed to have a cupola- or turret-ship built which he had designed some years before. The *Royal Sovereign*, a wooden three-decker, was cut down to within a few feet of the water-line, plated with 5½-inch iron, and fitted with four turrets. The foremost one carried two guns, the remainder one apiece. She had very light pole masts and light, hinged iron bulwarks, which gave her 3-1/3 feet more freeboard at sea but had to be lowered before she could fight her guns. Captain Coles, however, had the usual hankering after "masts and yards", and, the *Royal Sovereign* having proved moderately successful, induced the Admiralty to

build a fully rigged turret-ship. This was the unfortunate *Captain*, whose low freeboard, heavy turrets, superstructures, and fully-rigged tripod masts caused her to turn turtle in a squall off Cape Finisterre on the night of 6th September, 1870. Her inventor went down in her. Her gunner and seventeen men were the sole survivors. One other full-rigged turret-ship was built—the *Monarch*. As she had a very considerable freeboard she proved a seaworthy ship, but she was the last of her kind.[42]

In the meantime several small coast-defence turret-vessels had been built, such as the *Scorpion* and *Wyvern* in 1865, the *Abyssinia*, *Magdala*, and *Cerberus* in 1870, and the *Glatton*, *Gorgon*, *Cyclops*, and others a year or so later. They had one or two masts, but were not rigged ships. These little turret-ships developed into the battleships *Devastation*, *Dreadnought*, and *Thunderer*, launched between 1873 and 1877. Each had two turrets containing a couple of heavy guns apiece. Their hulls were heavily armoured, and they had but one mast fitted with a military top for machine-guns. It is from this branch of our earlier armour-clad construction that our modern "Dreadnoughts" derive their descent rather than from the broadside type.

To explain further developments it must be noted that while in this country the success of the *Monitor* induced us to experiment with placing guns in revolving armoured turrets, in France the tendency was to build a fixed armoured tower in the ship, and place the guns inside on a turntable *en barbette*—that is to say, so mounted that they could fire over the top of the armour in any direction. We tried to go one better in the *Temeraire* (1877). She was a broadside ship, with a "box-battery" amidships, but

forward and aft two pear-shaped armoured barbettes were built into her, the tops of which rose about 1 foot or 18 inches above her upper deck. In each of these was placed a 25-ton gun—we classified guns by weight in those days, and not by inches of calibre as we do now—on a mounting, which enabled it to sink down on being fired, and to be raised up again into its firing-position when loaded. The *Temeraire*, it may be said, was an experimental ship in many ways. Though heavily rigged, she had only two masts, so was like an enormous brig. I believe I am right in saying that her mainyard was the longest and heaviest in the Service. At one time, too, she was painted grey, instead of the black which was then universal, except when ships were in hot climates, when it was generally changed to white. Yellow funnels were regulation, as was "mast-colour"—a sort of deep-yellow ochre with a reddish tinge—for all masts and spars. Ships were, and had been for very many years, painted white withinboard instead of the old eighteenth-century red. Outboard the black sides were finished off generally with a white water-line, and a broad white band along the upper part of the bulwarks, known as a "boot-top". Sometimes another white line was painted on the black side a few inches below it.

There was a good deal of controversy about this time as to the relative merits of "broadside" fire and "end-on" fire. Space forbids us from entering further into this question, but, generally speaking, if a British ship carried four guns heavier than the rest, they were so arranged that two could be fired ahead or astern, and all four on either broadside. But in a French ship the four corresponding guns would be each mounted singly in barbettes arranged diamond-fashion, so that three could be fired either ahead,

astern, or on either broadside. A couple of armoured cruisers, the *Imperieuse* and *Warspite*, were built, probably as an experiment, on these lines, on the latter of which I had the honour of serving for something like twelve months. They were originally brig-rigged, like the *Temeraire*, but this was done away with later and replaced by a single military mast. Personally I do not think they were a success. The *Warspite*, at any rate, was a very wet ship. When steaming against quite a moderate sea the water ran all over her, into the barbettes and down below, and she was much cramped in many ways by the arrangement of her guns. The *Devastation* and her sisters proved very formidable and successful ships, but with the idea of getting a heavier fire ahead or astern a new departure was made in the *Inflexible*—the biggest ironclad we had yet constructed—by placing her turrets, not one forward and the other aft on the centre line of the ship, but *en echelon*—that is to say, diagonally amidships. Theoretically this arrangement, which had been copied from the big Italian ships *Duilio* and *Dandolo*, had a good deal to recommend it, but practically there is more to be said against it than for it. Nevertheless, four other smaller ships were built on these lines, the *Ajax* and *Agamemnon*—which gained notoriety as being almost impossible to steer—and the *Edinburgh* and *Colossus*. The last two were armed with breech-loading guns, which were now superseding the old muzzle-loaders to which the ordnance authorities had clung with such obstinacy long after every other nation had consigned them to the scrap heap.

Meanwhile a smaller single-turret ship, the *Conqueror*, had been built, an unwieldy-looking craft which went by the name of the "half-boot" from the resemblance her general outline had to that useful

article of military equipment. But she seems to have met with the approval of the Admiralty, since an improved sister-ship, the *Hero*, was launched about five years later. These ships probably suggested the very much larger ones, *Victoria* and *Sans Pareil*, each of which, on a displacement of 10,470 tons only, carried a couple of 111-ton guns of 16·25-inch bore in a single turret—that is to say, as their main armament. They had also a 10-inch gun aft, and a dozen 6-inch breech-loading guns. These formed what is called her "secondary battery". The provision of such batteries marks a step in the evolution of war-ship construction which is very noteworthy. The bigger and bigger guns carried by battleships necessitated stronger and stronger armour. In spite of improvements in quality and manufacture the weight of armour tended constantly to increase. The area covered had therefore to be more and more restricted. To carry all this weight of guns and armour comparatively large ships were necessary, and a great part of their sides had to go without any protection at all. Their flotation might be preserved —against attack by gun-fire—by the combination of armoured belt and sloping armoured decks which had by now become almost universal. But it was obvious that the unarmoured portions of the ship above water could be torn to pieces by the fire of comparatively light weapons. This led to the installation of "secondary batteries" of 4-, 5-, and 6-inch guns, for the purpose of attacking an enemy's ship in this way and of neutralizing his attack by keeping down the fire of *his* secondary batteries.



A MONSTER GUN WH

The 111-ton gun on the old *Benbow,* which was very slow of

The development of torpedo-attack brought about the Whitehead automobile torpedo, and the improvements in the speed and construction of destroyers and torpedo-boats caused also the introduction of "auxiliary batteries" of rapid-firing 3- and 6-pounder-shell guns. The machine-guns firing rifle bullets, and, later on, small steel shot, were found to have no "stopping-power" against torpedo-craft, and more powerful weapons became imperative.

The tragic end of the *Victoria*, which cost the

nation, not only a fine ship, but the lives of the greater portion of her crew, and that very talented naval commander, Sir George Tryon, is a well-known tragedy of the sea, and there is little doubt that the enormous weight forward of her huge turret and guns, with nothing aft to counterbalance it, was one of the causes contributing to the completeness of the catastrophe.

No more ships were built on such lines, but about this period an important innovation was made by the introduction of a class of ships in which the four heavy guns were carried in a couple of high barbettes with sloping sides, instead of in turrets. The whole gun was exposed, but not its mountings or crew, since the top of the barbette was closed in by a flat shield which revolved with the guns. These were the *Collingwood*, *Camperdown*, *Howe*, *Rodney*, *Anson*, and *Benbow*. The last-named had one 111-ton gun in each barbette, instead of a pair of rather smaller cannon. Amidships, between the barbettes, were secondary batteries of half a dozen 6-inch guns (the *Benbow* had ten). These were entirely unprotected except from fire coming from ahead or astern, from which they were covered by armoured bulkheads reaching across the ship immediately behind each barbette.

I well recollect my first sight of these ships, which had all been completed during four years I had been away on a distant station, though, as a matter of fact, I had seen the *Rodney* launched before I left England. I was on board H.M.S. *Aurora*, a new cruiser which had been specially commissioned for the naval manœuvres. We left Plymouth and proceeded to Spithead, where a large fleet had been assembled to do honour to the Kaiser—with whom we were then

on rather more friendly terms than latterly, and who came over at the head of a squadron of his war-ships. He was much more anxious to exhibit German war-ships to the British fleet than his naval commanders seem to have been during the Great War. We got into Spithead about six on a morning when there was a thick drizzle almost amounting to a fog, and as one after another of these monsters—as we thought them then—loomed up out of the mist and vanished astern, they presented a most impressive picture of strength and solidity. They really did look in the dim light like "castles afloat"!

But they were not by any means among our most successful efforts. No one liked the unprotected secondary batteries, and thought of the well-armoured *Devastation* and her sisters. *They* had no secondary batteries—but they were so well armoured that these were not necessary, except for purposes of offence. This consideration doubtless led to the building of the *Nile* and *Trafalgar*, in which the four big guns were carried in turrets and the secondary armament in an armoured battery amidships. They were extremely well-protected ships and would have given a very good account of any ship of their day. But the tendency was ever for bigger ships, which allowed, generally speaking, for greater speed, greater radius of action, greater seaworthiness, and afforded a steadier gun platform.

This produced the "Royal Sovereign" class, of over 14,000 tons displacement, a great advance in size on any ships which had preceded them. They created a considerable sensation at the time of their appearance, especially the *Royal Sovereign* herself, the first of them. My own first sight of her was somewhere in the Irish Sea, not far from the Isle of

Man. I was serving on board H.M.S. *Triumph* in the naval manœuvres of 1892. The *Royal Sovereign* passed us just at the time tea was going on in the wardroom, which would be between half-past three and four, and I remember how everybody rushed up on deck to get a look at the new marvel in shipbuilding.

The *Royal Sovereign* became practically the regulation type of battleship until the advent of the "Dreadnoughts", though of course each successive batch was an improvement on the preceding one in speed, protection, and gun-power. All had four heavy guns in low barbettes, covered with armoured hoods which revolved with the guns—so they may be said to have been a combination of turret and barbette. The single exception was the *Hood* in the "Royal Sovereign" batch, which carried her four heavy guns in two regular turrets. All had secondary batteries, whose guns were distributed in armoured casemates at considerable intervals from each other, and all had a couple of military masts, with one or two fighting-tops on each, armed with light rapid-fire guns. This fine series of battleships amounted to forty in all, and formed a homogeneous and magnificent fleet, the like of which the world had never seen. Nearly all had a displacement of from 14,000 to 15,000 tons, and a speed of from 17 to 18 knots. Most are still in service, and though they have been put rather in the background by our "Dreadnoughts" and "Super-Dreadnoughts", we may still be very proud of them.

There were two intermediate steps between them and the epoch-making *Dreadnought*. The first was the creation of the "King Edward" class of five ships, dating from 1902-3. These were very similar to their predecessors, but had over 1000 tons more

displacement, were more thoroughly armoured, and, in addition to the four 12-inch and ten or a dozen 6-inch guns which formed their armament, were provided with four guns of 9·2 inches calibre, each placed singly in a turret at the corners of the superstructure. The final type before the *Dreadnought* made her sensational appearance was the "Lord Nelson" class, which, however, only comprised two ships—the *Lord Nelson* herself and the *Agamemnon*. [43] They were very little bigger than the "King Edwards", but in their case the 6-inch guns were replaced by ten guns of 9·2-inch calibre, a most formidable secondary battery, capable of penetrating a considerable thickness of armour. The Battle of Tsushima, between the Japanese and Russians, led to the temporary abandonment of the secondary battery. It was considered that battles would in future be fought at such immense ranges that a decision, one way or another, would be reached before the smaller guns could be brought within effective range of the enemy, and the events of the European War go to confirm this theory. So it was that we once more arrived at the "all-big-gun ship", and in the *Dreadnought*, launched in 1906, went back to the principle followed in the armament of her namesake of 1875, and confined her armament—except for a few small anti-torpedo-boat guns—to cannon of the largest size. A comparison of the two *Dreadnoughts* will form an appropriate termination to this chapter, which has already occupied more pages than I intended.

1875—H.M.S. *Dreadnought*. Displacement, 10,820 tons; speed, 14 knots; guns, four muzzle-loaders; armour, 10, 11, 13, and 14 inches; weight of projectiles, 809 pounds; penetration of wrought iron at 1000 yards, 17½ inches.

1906—H.M.S. *Dreadnought*. Displacement, 17,900 tons; speed, 21 knots; guns, ten breech-loaders; armour, 6, 7, 9, and 12 inches; weight of projectiles, 850 pounds; penetration of wrought iron at 1000 yards, 36 inches.

CHAPTER XII

The Evolution of the Submarine and Submarine Mine

Thomas. They write here one
Corneilius'[44] son
Hath made the Hollanders an invisible eel
To swim the Haven at Dunkirk and sink all
The shipping there.
Pennyboy. But how is't done?
Cymbal. I'll show you, Sir.
It's an automa, runs under water
With a snug nose, and has a nimble tail
Made like an auger, with which tail she wriggles
Betwixt the costs[45] of a ship and sinks it straight.
Pennyboy. A most brave device
To murder their flat bottoms!
The Staple of News. BEN JONSON.

"PITT", said the famous Admiral Lord St. Vincent, in the course of an interview with the American inventor Fulton, "is the greatest fool that ever existed, to encourage a mode of war which they who commanded the seas did not want, and which, if successful, would deprive them of it." Truer words were never spoken. Fulton had invented floating mines or torpedoes—"infernals" as they were then called—and even an ingenious form of submarine boat. The French, to whom he first offered them, to their honour be it spoken, would have nothing to do with them even though hard put to it to hold their own against the British fleet. Admiral Decrès reported that Fulton's inventions were "fit only for Algerines and pirates". The Maritime Prefect at Brest refused to allow him to attack an English frigate off the coast with his submarine, "because this type of warfare carries with it the objection that those who undertake it and those against whom it is made will all be lost. This cannot be called a gallant death", he said. Finally, Admiral Pléville le Pelly, the Minister of War, stated that it appeared to him to be "impossible to serve a Commission for Belligerency to men who employ such a method of destroying the fleet of an enemy".

It is a sad reflection that after a century of much-boasted "advance in civilization", we none of us appear to have any chivalric scruples of this kind. But, in spite of our tremendous ascendancy at sea, Pitt—being a politician and not a naval officer—was, as St. Vincent said, "fool" enough to listen to Fulton when, repulsed from France, he took the name of Francis and brought his schemes over to this country. Experiments were made in the Downs, and Lieutenant Robinson of the Royal Marines carried out a demonstration before Pitt with some of Fulton's

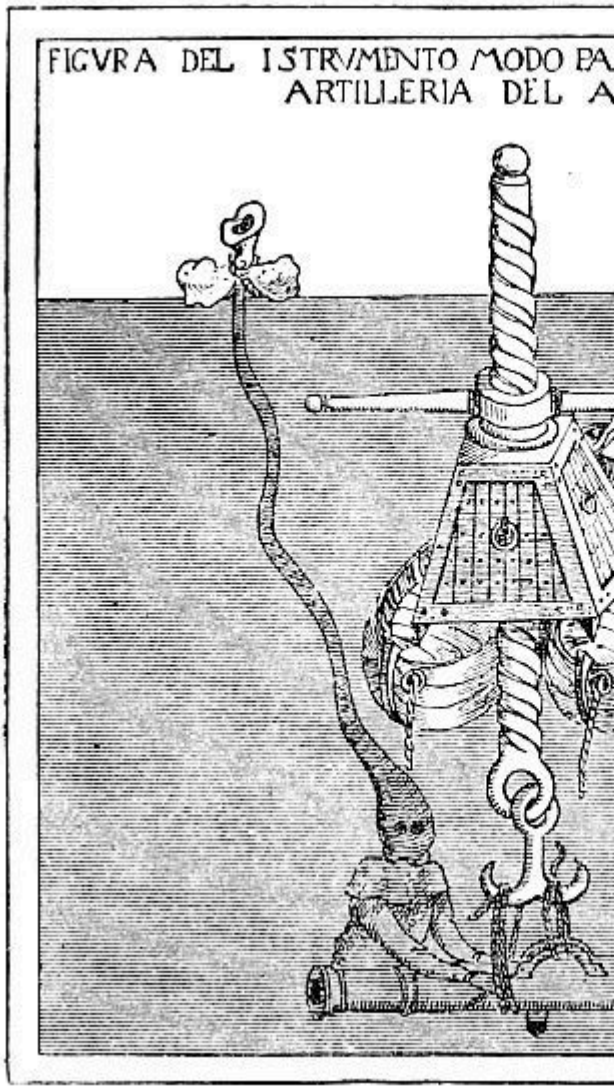
torpedoes, or "carcasses" as they were called, by blowing up a brig anchored off Walmer Castle.

The famous Sir Sydney Smith was an aider and abettor of Fulton, though a naval officer, but his attitude may have been due to a desire to stand well with Mr. Pitt rather than to a conviction that the adoption of his proposed methods of warfare would be of real service to the navy. What doubtless attracted both men was the hope of destroying the French invasion flotillas at Boulogne and in the Basque Roads, which our fleet could not get at. Attempts were made, but ended in dismal failures. The public generally was dead against the employment of what were regarded as dastardly and underhand apparatus, and so were most naval officers. An officer, in a diary made at the time, describes[46] "six copper submarine carcasses, some to hold 540 pounds of powder and others 405 pounds" that were sent on board his ship for the purpose of being employed against the enemy's vessels. He says further that "Johnstone the smuggler laid one down near the gates of the new harbour before Flushing surrendered, but we never heard of any damage being done by it. As for our part we never tried them—indeed, *our Admiral said it was not a fair proceeding*."

The idea of attacking an enemy under water was, however, by no means a novel one. Attempts in this direction have been made almost from time immemorial. Swimming under water and diving seem to have been often resorted to in order to cut ships' cables, and even for the purpose of boring holes in their bottoms; but the latter would appear to be rather an impossible performance.[47] The Romans are said to have had a corps or society of

divers known as *Urinatores*. Then there are legends of diving-apparatus employed by Alexander the Great, who himself is frequently depicted in mediæval manuscripts being lowered to the bottom of the sea in a glass barrel.

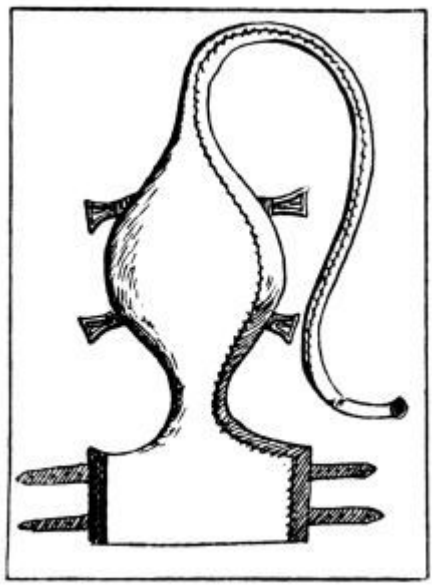
In manuscripts and woodcuts of the Middle Ages there are to be found several pictures representing men in a species of diver's costume, supposed to have been made of leather, with air-tubes leading to the surface of the water, where they are buoyed by bladders. Some, instead of tubes, are provided with flasks of air. Personally I should doubt whether such dresses ever had any actual existence. I fancy they are originally derived from a species of swimming-jacket or life-belt which is depicted in a fourteenth-century manuscript in the Imperial Historical Museum at Vienna.[48]



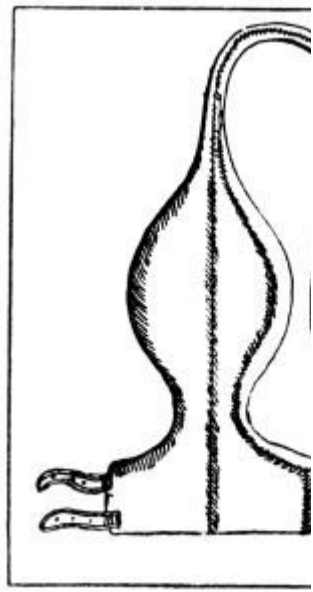
Diver Salving a Gun
(*From a print of 1613*)

A comparison between the two sketches over page will, I think, go far to prove me right, since the so-called "Diver's Helmet" is taken from Vegetius' *De Re*

Militari, not published before 1511. The earliest picture of a diving-helmet of this kind I have been able to find is in a German work published in 1500: both are therefore of a later date than the "Swimming Jacket". This "jacket" was intended to be worn as follows: The lower rectangular part was to be placed at the back, the oval portion to the front of the body. When the swimmer wished to remain at the surface he inflated his jacket by means of the tube; when he required to dive out of sight he would let the air out. Look at the position of the buckles and straps in the two drawings and you will see that there is a strong presumption that the later artist deliberately made the alteration in order to support his bogus picture of a diving-*helmet*.



Swimming Jacket (from a fourteenth-century MS.)



Diver's Helmet from Ve (sixteenth century

Observe the close similarity between these two no very different articles. The shape of the earlier draw suggested a helmet to the illustrator of *De Re Mil* Vegetius, and he has therefore done away with two str buckles and altered the positions of the other two. I clear how they are to be fastened together; but the us straps and buckles on the jacket is apparent.

The earliest mention of a submarine boat occurs in "Salman[49] and Morolf", a German poem of 1190. This was, of course, an imaginary one, like the famous *Nautilus* in Jules Verne's *20,000 Leagues under the Sea;* but in the days of "good Queen Bess" one William Bourne, a naval gunner, published a detailed description of how to make "a shippe or boate that may goe under the water unto the bottome, and so to come up againe at your pleasure". The "device", as he calls it, had some quite practical points.[50]

In the following reign a Dutchman, Corneilius Van Drebbel by name, seems actually to have built a submarine vessel, which is stated to have gone under water from Westminster to Greenwich, and with which James I was so pleased that he not only had a duplicate one built, sending it as a present to the Tsar of Russia, but so far overcame his constitutional timidity as to adventure his precious and royal person in a submarine trip in the Dutchman's invention. Then followed many suggestions for submarines, but between Van Drebbel's boat in 1620 and Fulton's in 1800 probably not more than half a dozen were actually constructed.

Van Drebbel was probably responsible for the "water mines, water petards, forged cases to be shot with fireworks, and *boates to goe under water*" which

Buckingham took with his fleet on the ill-managed and inglorious expedition to La Rochelle in 1626. The water-petards or floating mines were of a very feeble description. The following is a French contemporary account of what they were like.

"The composition of these petards was of Lattin (i.e. Brass) filled with powder, laid upon certain pieces of timber, crosse which there was a spring, which touching any vessel would flie off and give fire to the petards, but only one took effect, which did no great hurt, only cast water into the ship, and that was all, the rest being taken by the King's boats."

About 1771 David Bushnell, a native of Maine, built a curious little submarine not unlike a walnut in shape, if you imagine a walnut floating with the point downwards. It was propelled by a hand-turned screw and carried a case of powder provided with a clockwork apparatus for exploding it at the required moment. There was an ingenious arrangement for screwing this mine to the bottom of a ship, and by its means the navigator of Bushnell's submarine very nearly succeeded in blowing up H.M.S. *Eagle* when lying in the Hudson River in charge of a convoy of transports bringing troops for the campaign against the revolted American colonists. Other attempts were made by the Americans to blow up our men-of-war in the course of the war, but without success. In the war with the United States (1812-14) the Americans again attacked our ships in a similar manner. The *Ramillies* in particular seems to have been singled out for these attempts. She was attacked both by a submarine boat and by various explosive contrivances. The British retaliated by embarking in her 100 American prisoners and notifying their

presence on board to the United States Government. They also bombarded the town of Stonington for being "conspicuous in preparing and harbouring torpedoes".

Between this time and the latter portion of the century innumerable submarine boats were designed and a considerable number of experimental ones actually built. A few of them promised very well, though most were failures, the principal reason of their non-success being the want of a suitable means of propulsion. Every conceivable method was attempted, but it was not till the advent of the internal-combustion engine that the submarine became a really practical proposition. Space forbids mention of even a tithe of these inventions, but among the most notable was that invented by the German Bauer, between 1850 and 1860, when he made a futile attempt to blow up a Danish man-of-war. Then there were the *Davids*, used by the Confederates in the Civil War in America. Most of these drowned their crews. One, however, succeeded in torpedoing the Federal sloop *Housatonic*, but accompanied her to "Davy Jones's locker". A Swede, Mr. Nordenfeldt, built about half a dozen submarines between 1880 and 1890, one for this country, one—his first experimental one—which was eventually purchased by Greece, two for the Turkish Government, and, lastly, two or three for the German Admiralty. All of these may be regarded as experimental craft, but they are noteworthy as being the first submarines to be equipped with Whitehead torpedoes, and certainly marked a step forward in the science of underwater navigation.

The French navy was the first to tackle the problem of submarine navigation with any real

enthusiasm. French inventors had been responsible for a very large proportion of the designs for submarines, which had continually increased in numbers as the nineteenth century progressed. After extensive experiments with the *Gymnote* (launched 1888), *Gustave Zèdé* (1893), and *Morse* (1899), France set about the construction of a regular submarine flotilla of considerable size, launching nearly thirty boats between 1900 and 1903. Other Powers, except perhaps Russia, held back from the new departure, and it is not impossible that it would have been politic for the British Government to have maintained that attitude, in accordance with the views of Lord St. Vincent, and to have announced that it would refuse to recognize the crews of submarines as legitimate belligerents. To have done this would not have been to enunciate any new theory, for from time immemorial this was the attitude adopted by all navies towards the crews of fire-ships, and that it was later on accepted to apply to those who made use of torpedoes and floating mines is evident by the following quotation from the naval officer's diary which has already been referred to.

He states that on the occasion of the attack on the French ships in the Basque Roads by Lord Cochrane, when *explosion-ships* as well as fire-ships were used, volunteers were called for to take them in, and "no one was compelled to go, as the enemy by the laws of war can put anyone to death who is taken belonging to a fire-ship". Had we refrained from following the example of the French most probably the Germans would have done so also, first because the French submarines sustained many accidents and did not appear very likely, to experts such as the German naval officers, to become a very valuable

arm; and, secondly, because in naval matters they have always tried to follow our lead. But the newspaper "experts" and other laymen in this country to whom the idea of submarine navigation was most captivating as something mysterious, new, and strange, with great potentialities, not only for warfare but for "copy", clamoured in the Press for submarines. The Admiralty eventually ordered four "Holland" boats for "experimental purposes".

John P. Holland was an American inventor, and his first boat, built in 1875, "was a tiny affair with just enough room in her for one man to sit down amidships and work the pedals that turned the propeller. It was only 16 feet long, 2 feet deep, and 20 inches wide, and it is probably the smallest submarine ever constructed. The 'crew' had to wear a diving-dress, and drew air from reservoirs at either end of the vessel. Five little torpedoes were carried, which could be put out through the dome and fired from a distance by electricity."[51] Between this time and 1902 Holland was responsible for six more submarines and the design for another which was never built. The earlier ones were small, but the last two or three of considerable size.

The *Holland VIII* deserves some description, as she may be regarded as the prototype of the British earlier submarine vessels from which nearly all of our larger and later types have been evolved. "She was a porpoise-like vessel 65 feet long, nearly 11 feet in diameter, and of 75 tons displacement. Her single propeller was driven by a gas-engine when at the surface and by an electric motor when below, both being placed on the same shaft and connected or disconnected as required. She carried a torpedo-tube, a tube for throwing aerial torpedoes, and a

submarine gun, the latter being placed aft and inclined upwards, as was the aerial torpedo-tube forward".[52] This vessel, after very considerable alterations had been made in her, was re-named the *Holland IX* and purchased for the United States navy.



A FLEET OF SUBMARINES

Observe the *Victory* in the background. If Nelson were stan these "microbes of the sea"?

The First Lord of the Admiralty, in reply to a question asked in the House of Parliament in 1900, had replied "that the Admiralty had *not* designed a submarine boat, and did not propose to design one, because such a boat would be the weapon of an inferior power". Whether he was right or wrong, the

statement was a straightforward and an understandable one. Possibly it struck the First Lord as being too straightforward for a politician, so he at once began to "hedge", and qualified what he had said by adding: "But if it could be produced as a working article, the Power which possessed such an article would no longer be an inferior but a superior Power". It is hard to reconcile the two statements; for if a submarine was an unworkable proposition it would be no good to any Power, strong or weak.

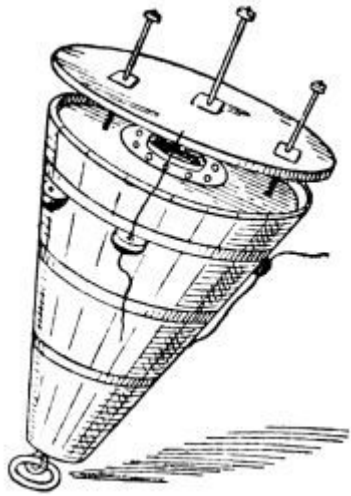
However, a couple of years later, as I have already mentioned, the Admiralty determined to acquire a few submarine boats, nominally with the view of finding out how their use by an enemy could be rendered abortive. First one and then four other practically similar ones, to be built on Holland's designs, were ordered from Vickers of Barrow-in-Furness. Their displacement—submerged—was 120 tons. It must be remembered that a submarine's surface displacement is always less than when she has filled her tanks to sink her deeper in the water. They were 63 feet 4 inches long and 11 feet 9 inches wide at their greatest beam; steamed from 8 to 10 knots above and 5 to 7 knots below water, carried a crew of seven men, and had a single torpedo-tube. Many experiments were carried out with these little vessels, the net result being that series after series of larger and larger submarines were constructed, each batch an improvement on the preceding one. Thus we had, after the first five "Hollands", the A, B, C, D, and E classes, and are now turning out the "F" class. The description of our latest submarines must be postponed till the chapter dealing with the fighting-ships of to-day; but it may be noted that up to 1914 all had been improved "Hollands". That is to say, that while some other naval powers, notably Germany,

were building their submarines more and more on the lines of surface vessels with flat tops or decks, we remained faithful to the "porpoise" or "fat cigar" type, only modifying them by increasing their size and length, and by adding to the length of the narrow superstructure, which formed a deck and eventually a cut-water for use at the surface, but which was independent of the actual watertight hull or body of the vessel, since the water was allowed free access below the platform.

It is time now to give some description of the evolution of that terrible instrument of destruction, the Submarine Mine, under which head may be included both those that are placed below water and those that float or drift at the surface. The utilization of explosives for the attack of shipping has been attempted by belligerents for centuries, but I am not aware that they have ever been employed against peaceful traders and fishermen before the Great War. The Germans may attempt to excuse themselves by alleging that some merchantmen carry guns for defence; but that has been the universal practice for centuries, and no merchantmen were more heavily armed than the old trading-ships of the Hansa League. Such ships were entirely different from the privateers, provided with Letters of Marque which entitled them to attack and capture enemy vessels if they could. On principles of self-defence, merchantmen were always entitled to beat off an attack if they could, and such action exposed other merchantmen to no reprisals. It is only of late years, when civilization was supposed to be so far advanced as to render the sinking of merchantmen "on their

lawful occasions" an impossibility, that they ceased to carry guns.

Probably the first inventor of a floating mine—in the shape of an explosion-ship, as distinguished from a fire-ship—was an Italian engineer, who in contemporary accounts is variously referred to as "Gianibelli", "Gedevilo", "Genebelli", "Gienily", "Jenabel", and "Innibel", who, by means of a couple of small vessels filled with powder, which was built over with tons of bricks, gravestones, millstones, and "everything heavy, hooked, and sharp which 'this wicked witty man thought most damageable'", blew to absolute "smithereens" the great bridge which the Duke of Parma had built across the Scheldt in order to complete the blockade of Antwerp in 1585. It is rather interesting to note in passing that Gianibelli seems to have spent some time in this country. He had a good deal to do with the building of Tilbury Fort, and brought forward extended proposals for the reopening of Rye Harbour, which had become silted up. This he does not seem to have effected satisfactorily, and payment of £821, 9*s.*, which he demanded of the Mayor and jurats of that famous town, was refused. He may have had something to do with the preparation of the fire-ships sent against the Spanish Armada in Calais Roads. At any rate the Spaniards on board thought so, for they, considering them "to be of those kind of dreadful Powder-Ships, which that famous Enginier Frederick Innibel had devised not long before in the River of Skeld", cried "the Fire Antwerp", cut their cables, and put to sea in the confusion that proved their ruin.

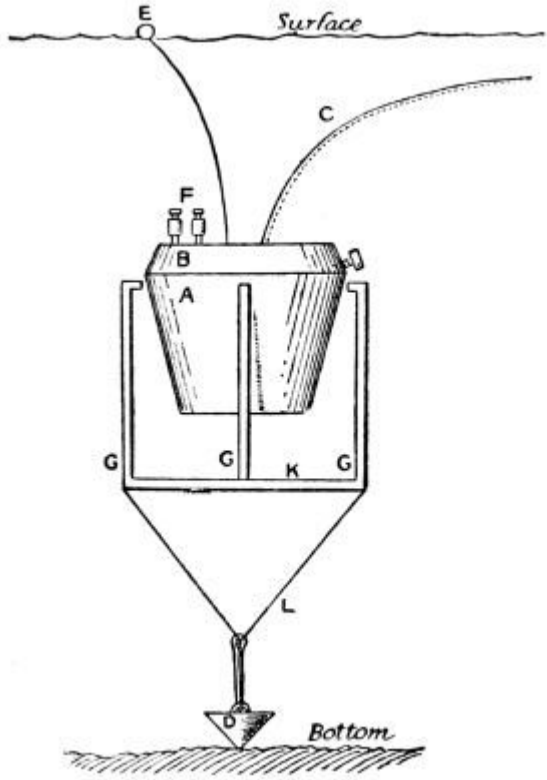


Submarine Mine laid by the Russians in the Crimean War

Made of staves about 3 in. thick, and containing an inner case filled with flue gunpowder.

We have already mentioned the attempts made by the British at La Rochelle with floating mines and devices of that kind, and, coming to the time of William III, we find "Honest Benbow" employing an explosion-ship, evidently modelled on those of Gianibelli, against the town of St. Malo. It did a lot of damage and unroofed a great number of houses, but effected nothing of any military value. One Meesters, a Dutchman, was the leading spirit in this kind of warfare. Whether he was any connection of Van Drebbel and Dr. Kuffler I cannot say, but he induced the Government to use his explosion-ships, or "machines" as they were termed, probably with the view of emulating these two nautical Guy Fawkeses who had succeeded in getting good incomes and considerable sums of money out of the

British Government for their ideas and inventions, although, as far as can be ascertained, none of them had proved of the slightest value or efficiency. Explosion-ships or machines became for a time recognized units in the British navy, and were employed against Dunkirk, Dieppe, and various French ports without much effect. "At the former, the machine-ships, as they are called, did nothing but blow up themselves, and the credit of their inventor, as some say; but he being come hither, complains he was not seconded with ships as he ought to have been."[53] Very possibly he was not, for this class of warfare did not meet with much appreciation in the Royal Navy. On the other hand, the naval commanders complained that Mr. Meesters "had not his machine-ships in readiness when they had a fair opportunity of wind and weather to attack the forts at Dunkirk, and that he had trifled all the time and put the Government to great expense only to enrich himself, when the whole matter was impracticable". It is not surprising, therefore, that we hear no more of explosion-ships for a very long time.[54] The attempts made against the British ships by the Americans, and those we ourselves carried out with indifferent success against the French Invasion flotillas, have been already referred to. Though this form of attack was not again employed by the navy for many years, the following description in Müller's *Elements of the Science of War* (1811) shows that something like a floating mine was used in armies for the destruction of bridges. It consisted of a chest fitted with a rudder and filled with powder, and fired by means of two gun-locks, which were set in action by a stick protruding from the water and attached to their triggers.



Russian Mine laid in the Baltic in the Crimean War

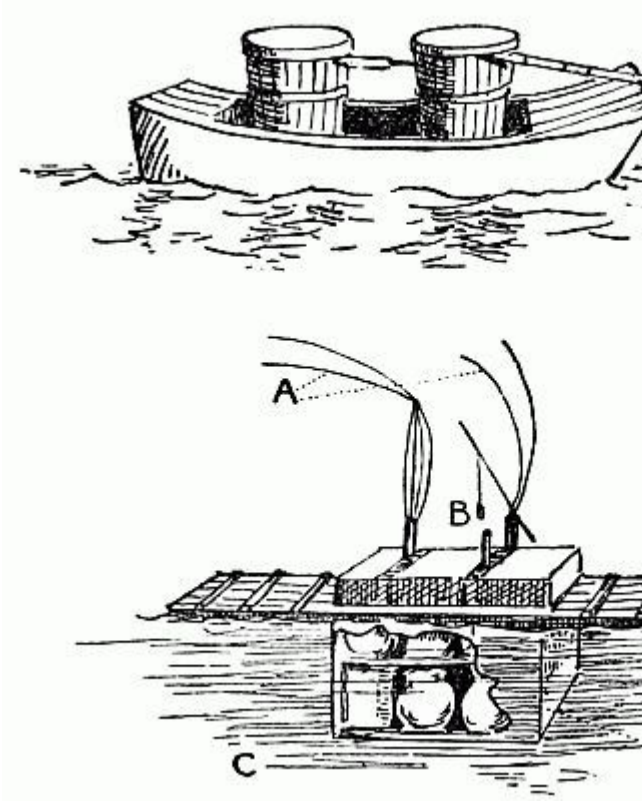
A B, Close-fitting copper cases containing powder. C, Leather tube containing electric wire. D, Mooring weight. E, Small white wooden ball showing position of mine. F, Openings to load mine. G, Iron framework supporting mine. K, Iron ring-part of frame. L, Mooring rope.

In 1844 some attention was attracted to an alleged invention of a Captain Warner for blowing up ships. The *John of Gaunt*, a sailing-ship, was taken in tow by a steamer and blown up off Brighton in the presence of an immense crowd of spectators; but as the inventor wanted the Admiralty to pay him £400,000 for it before he showed them what it was

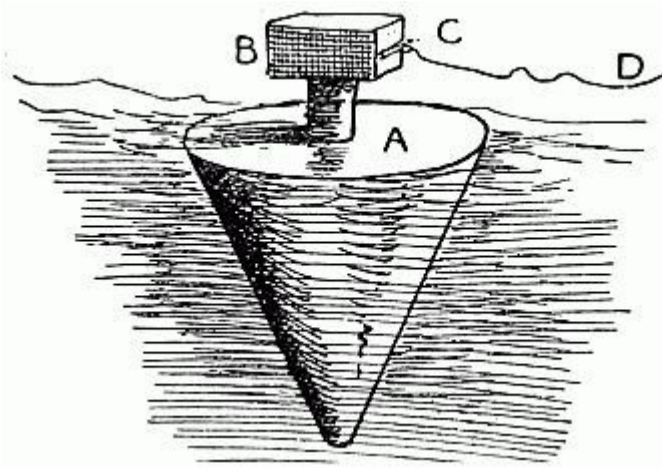
like, his secret naturally remained a secret. It would seem to have been merely a mine floating just beneath the surface of the water, with some arrangement to explode it on contact. The Crimean War gave us some little experience of underwater mines, for several were employed by the Russians in the Baltic and the Black Sea. They were feeble affairs, and did no damage worth mentioning. One was fished up and exploded on board one of our ships, but no one was seriously hurt. Some were made of copper, others of wood fastened together like the staves of a barrel. But the rumour of these mines, which were stated to contain 700 pounds of powder and to explode either on contact or by what was then called a "galvanic current"—that is to say, electricity—caused the allied French and British fleets in the Baltic to exercise great care in their movements. As at the present day, a system of trawling for them was instituted, and no less than fifty were picked up off Cronstadt in ten days.

"The angling for this dangerous kind of prey was thus managed: two boats took between them a long rope, which was sunk by heavy weights to a depth of ten or twelve feet, and held suspended at that depth by empty casks as floats; the boats then separated as far as the rope would allow, and rowed onwards at right angles to the length of the rope; it was a species of trawl fishing in which the agitation of the floats showed that a prey had been caught, which prey was then hauled up carefully."[55] Mines were also fished up off Kertch and other Black Sea ports, showing that the Russians had gone in extensively for submarine defence, and only failed in causing us serious loss on account of the primitive character of the mines and the precautions which we took against them. On our part we had some idea of using a so-called submarine

invented by Mr. Scott Russell, a noted engineer; but it seems to have been merely an elongated diving-bell which could not carry out a satisfactory trial. Two attempts were made by Boatswain John Shepherd, R.N., to blow up Russian ships in the harbour of Sebastopol, but apparently without success. He went in alone in a punt, taking with him some kind of an explosive apparatus, and for his "bold and gallantly executed" exploits he received the Victoria Cross.



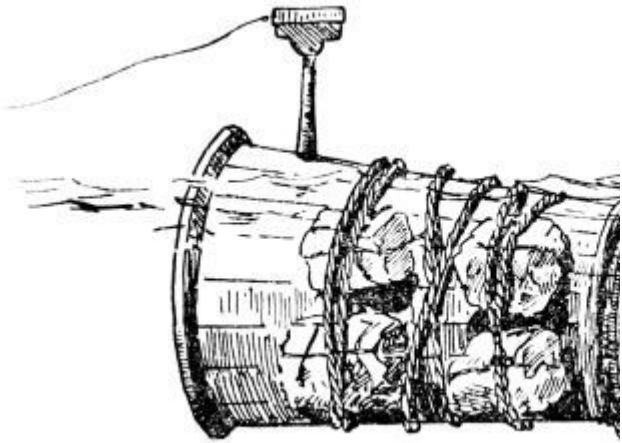
A, Wires to catch side of ship. B, Lead weight. C, Jars of broken away to show jars. E, Raft.



A, Can buoy containing powder. B, Box containing lighted below. C, Lid or slide between match and punk. D, String for] to allow match to ignite punk.

VARIOUS CHINESE FLOATING MINES USED AGAINST H.M.S

At the end of the 'fifties we were engaged in war with China for a considerable period, and the wily Celestials tried all sorts of dodges to blow up our ships by means of floating mines, or "infernal machines" as they were still called. They were ingenious apparatus, some of them. The following extracts from a letter written by an officer on board the *Encounter*, off Canton, give a good idea of the means employed. Three attempts were made to blow her up.

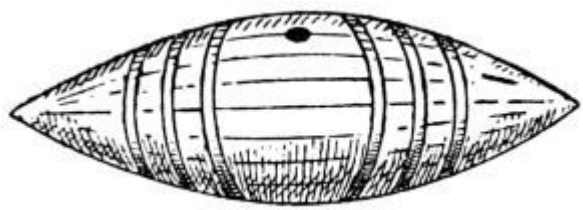


Chinese Floating Mine

One of two, tied together, with which an attempt was made

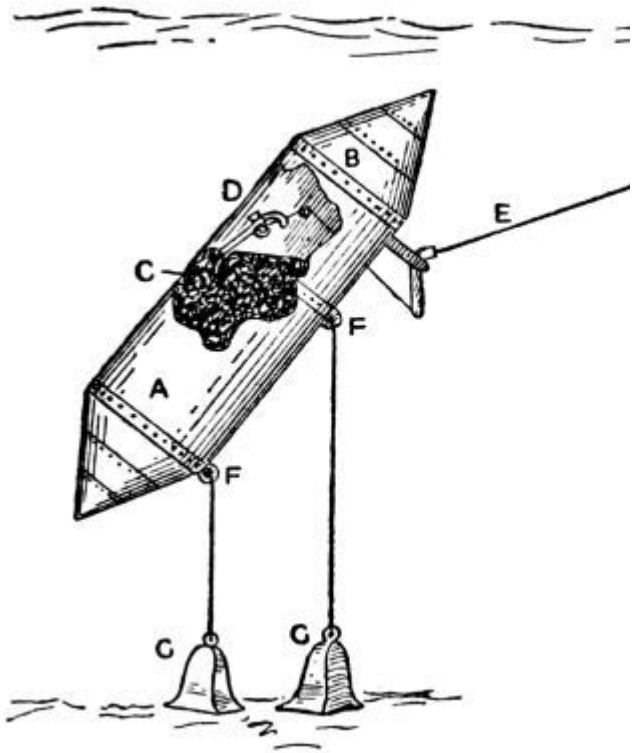
"The first was a sampan", he writes, "towed by a canoe on 24th December, 1856, and captured close under the bow by our second gig rowing guard. The fuse was lighted in the bamboo tubes at the side. The second attempt was on the morning of 5th January, 1857, about 2.30. Two rafts, moored together, with about 20 fathom of line buoyed up, with hooks to catch cables or anything else, and, on the wires touching the ship's side, to break by the little lead weight the lighted fuse on the top of the bamboo, which communicated with the powder. These were lighted and all ready, but fortunately observed by our guard-boat and towed clear of ship. Being only a raft it was just awash, and in each caisson at least 17 cwt. of gunpowder in open tubs and jars. The raft itself was made of 6-inch plank well bound together, and caulked. The third attempt was on the morning of the 7th January, 1857, at 4.30. A pair of vessels in the shape of a can-buoy with a flag on the top, about

8 inches long; the fuse, with a tin box containing punk[56] over the fuse, then a cover with lighted match on top; this had a string to it, which, when pulled, drew out the centre partition and communicated the fire to the punk, to allow the fellows who swam off with them towards the ship to make their escape; but they got frightened at some stir with the boats, and by accident one went off with a fearful explosion on the starboard bow, about 60 yards, and the other, being deserted, floated down on our booms. One of the men was caught and brought on board here, and had his brains blown out at the port gangway. The buoy-shaped vessel was capable of holding about 10 cwt. of gunpowder." The *Encounter* was afterwards attacked by two floating mines coupled together by a length of rope, each containing half a ton of powder. They were towed by a Chinaman in a small boat, who was shot by the look-outs and the mines destroyed. The *Niger*, however, had a small junk exploded alongside her which had, on the top of the powder in her hold, a cargo of the most evil-smelling filth that could be found even in a Chinese city. No damage was done to her hull, but she was absolutely smothered with this poisonous muck, and for years afterwards the crew of the *Niger* was subject to the annoyance of being reminded of this malodorous incident, for whenever a man belonging to another ship met a *Niger*, he made a point of holding his nose!



Barrel Torpedo used at Charleston, made of an ordinary barre

with ends of solid wood; fired by electricity



Confederate Torpedo for Rivers

A, Outer shell. B, Air chamber to keep end up. C, Gunpowder connected with rod. E, Rod with prongs to catch vessel comi bands with rings. G, Weights anchoring torpedo.

SUBMARINE MINES USED IN THE AMERICAN CIV

It remained for the mechanical ingenuity of the Americans to establish the submarine mine as a recognized naval weapon. In the long war between North and South a considerable use was made of improvised submarine mines, principally by the Southerners in trying to prevent the ships of the big Federal Fleet from penetrating their estuaries and

harbours. Space forbids description in detail of these contrivances, but the sketches on p. 185 will enable you to form some idea of their construction. The results obtained induced the British Admiralty to carry out a series of experiments in 1865. The old *Terpsichore* was blown up by a "torpedo-shell" charged with 75 pounds of powder, and very much higher powered mines were tried in various ways. Other European nations could not afford to overlook this form of warfare, and it was largely owing to the use of defensive submarine mines that the Germans kept the powerful French fleet from attacking their coast in the war of 1870. Ten years later mines and their appliances were part of the equipment of most large war-vessels, which carried two kinds, one holding 250, the other 500 pounds of gun-cotton. They were perfectly safe to handle, although fully charged, since the gun-cotton was kept wet and could only be exploded by inserting a small canister of dry gun-cotton as a primer. They were intended to be used for countermining and blowing up an enemy's mine defences, or for defending the ship at anchor. For harbour defence at home and in our overseas dominions a special branch of the Royal Engineers was formed, known as the Submarine Miners, who had charge of everything connected with this part of our national defences; but with the advent of the submarine this duty was assumed by the Royal Navy.

CHAPTER XIII

Naval Brigades

"The sailor who ploughs on the watery main,
To war and to danger and shipwreck a brother,
And the soldier who firmly stands out the campaign,
Do they fight for two men who make war on each other?
Oh no, 'tis well known,
The same loyal throne
Fires their bosoms with ardour and noble endeavour;
And that each with his lass,
As he drinks a full glass,
Toasts the Army and Navy of Britain for ever."
Chorus—"And that each, &c."

WHAT is a "Naval Brigade"? "Brigade" is a military term, and in our service an infantry brigade now consists of four battalions, with their head-quarters staff. Not long ago two battalions constituted a brigade. So that we see a brigade is the combination of a small number of complete units. In like manner a naval brigade is either, in the case of a single ship, a landing-force composed of her bluejackets and marines brigaded together, or, in the case of a fleet or squadron, of its various ships' companies. In a fleet of any size the naval brigade available for landing—if there was no chance of an attack by sea—might amount to two or three battalions formed out of seamen and stokers, and one of marines. It has frequently fallen to the lot of naval brigades to carry on a small campaign "on their own", but very often a

naval brigade has been attached to an army on active service. A big book might be written on the services of British naval brigades, so that we cannot hope to do more than glance at a very few instances of their work in "soldiering on shore".

"Naval Brigade", by the way, is not a very ancient term, though in the sixteenth, seventeenth, and early eighteenth centuries we often find references to the employment of a "regiment" or "battalion" of seamen. This may possibly be because, although embarked as part complement of our men-of-war, the marines, who were in those times organized in regiments and not in one large corps, did not actually belong to the Admiralty, but to the War Office. They were landed together, if possible, in their own regiments, and became for the time being a part of the army, to which, in addition, a battalion of seamen—which, it is rather confusing to find, is sometimes referred to as a "marine regiment"—might often be attached. But seamen and marines were not in those times generally brigaded together, as they so frequently have been in the nineteenth and twentieth centuries.



UNIFORMS OF THE BRITISH NAVY
A. B. (Marching Order). 1st Class Petty Officer. S

Though for many a long day the sailor proper "had no use for soldiering", which he contemned as an inferior profession to his own, he was always a pretty useful man with the heavy gun. Naturally, if a man can make decent shooting with a weapon tossing about on an unstable platform, he finds it comparatively easy to hit his target on terra firma. One of the earliest references to the employment of seamen in operations on shore is at the siege of Leith —then held by French troops—in 1560. The town was beleaguered from seaward by the English fleet under Admiral Winter, and on the shore side by a combined English and Scots army; and in the list of troops detailed for an assault—which unfortunately proved unsuccessful—we find that the "Vyce-Admyralle of the Quene's Majestye's Schippes" was to furnish 500 men.

Drake's men in his expeditions to the Spanish coast were formed into regiments and fought on shore, and after the Restoration a battalion of seamen took part in the severe fighting with the Moors at Tangier. It does not seem quite clear whether this included marines or not.[57] Anyway, it was under the command of Admiral Herbert and had been put through a special course of exercise "by an expert old soldier—Captain Barclay", who, after the first engagement, was reproved by the Admiral "for suffering too forward and furious advancement, lest thereby they might fall into the enemy's ambushments". Captain Barclay retorted that "he could lead them on, but the furies could not bring them off"!

At the siege of Cork by the Duke of Marlborough, in 1690, besides the two marine regiments of the Earls of Torrington and Pembroke, a naval brigade of

600 seamen and marines[58] was landed from the fleet, with as many carpenters and gunners as could be spared, to assist in the construction of the siege-batteries and gun-platforms. The brigade was under the command of the Duke of Grafton, then captain of one of the ships, though previously in command of the 1st Foot Guards. The readiness and cheerfulness with which both seamen and marines dragged their heavy guns into position in the face of the enemy's opposition is specially recorded. The capture of the "Cat", an important outwork covering the approaches to the city, is set down to the credit of two of the seamen. These worthies, with or without leave, were cruising about in front of the outposts in the early morning in the neighbourhood of the "Cat", and, seeing no sign of life or movement, crept cautiously up to its formidable ramparts and found that it had been deserted by the Irish garrison. They installed themselves in possession and signalled the state of affairs to their friends, on which 200 men of Colonel Hale's regiment were sent to occupy it.

In the expedition to Flanders in 1694 it is stated that 6000 seamen were "mixed with our land forces, and each of them on landing" was to receive "a guinea a man".[59]

In the capture of Gibraltar in 1704 the seamen played a prominent part. The marines were all landed together under the Prince of Hesse, to cut off communication with the mainland, while the seamen, under Captains Hicks and Jumper—Jumper's Bastion commemorates his name at the present day—stormed its defences at the southern end. The marine regiments played such a distinguished part in the gallant defence against overwhelming odds which followed that the corps

bears the word "Gibraltar"[60] on its colours and accoutrements to the present day; but at one part of the siege a force of seamen and guns was landed from the fleet and did most useful service.

One of them[61] has left a very interesting account of his experiences on this occasion. "On the morning we got thither", he says, "the Spaniards were discovered that came up the back of the hill. Then there was a command for twenty of our men to go ashore with fire-arms. . . . We were all in high spirits and fit to do execution, not being at all daunted at their numbers, for they were like swarms of bees upon the hill and in great confusion, and we like lions in the valley seeking whom we might devour; as our duty required. At it we went, loading and firing as fast as we could. Our men had a great advantage of the Spaniards in firing uphill, and it was a very great advantage they were not obliged to wade, for the water often overflows that part where we were obliged to engage them. We were happy enough in missing the tide; had it been otherwise, we had been but in a bad situation. The Spaniards rolled pieces of rocks down the hill and wounded a great many of our men, but our advantage in firing was more than all they could do. When they found they could do no good they laid down their fire-arms. . . . We stayed ashore all night, and in the morning returned to our ship. They found the duty too hard for the soldiers, and then there were orders sent for ten men of a ship to go ashore again. . . . When we went over we found that the works were very much demolished, for there was not a gun that we could fire one day without its being unfit for service on the next, for the Spaniards would dismount them. . . . We found the duty extremely hard, for what they beat down by day we were obliged to clear away at

night."

After a further description of their work, the writer speaks of the Spanish bombardment and tells how he just escaped a "Jack Johnson" of the period by throwing himself flat on the ground. "Had I been so unwise", he says, "as to have stood up when it fell, I should have been lifted up on its wings. I was hardened in that employment, and a great many of our men ran in a terrible fright, thinking that I was blown up. They said, when they saw me, we are glad to see you alive. I thanked them for their regard for me, and told them I never minded a bomb at all, only to observe its falling and step out of the way and fall with my face to the ground. . . . We continued making our works by night and in the daytime we were employed in drawing guns from the New Mole to Wills's Battery. We had very indifferent ground some part of the way, therefore we were obliged to draw in gears, in the same manner as horses do. But when we came among the rocks we were obliged to lay deal spars, and parbuckle them up with hawsers, and by these means we haled them up to the Battery."

It is in this kind of work that our seamen have ever proved so invaluable to the sister service on shore. A military officer, writing of the taking of Martinique in 1762, writes: "The cannon and other warlike stores were landed as soon as possible, and dragged by the 'Jacks' to any point thought proper. You may fancy you know the spirit of these fellows; but to see them in action exceeds any idea that can be formed of them. A hundred or two of them, with ropes and pulleys, will do more than all your dray horses in London. Let but their tackle hold and they will draw you a cannon or mortar on its proper

carriage up to any height, though the weight be ever so great. It is droll enough to see them tugging along with a good 24-pounder at their heels; on they go huzzaing, hallooing, sometimes uphill, sometimes downhill, now sticking fast in the brakes, presently floundering in mud and mire . . . and as careless of everything but the matter committed to their charge as if death or danger had nothing to do with them. We had a thousand of these brave fellows sent to our assistance by the Admiral; and the service they did us, both on shore and on the water, is incredible."[62]



ENGLISH BLUEJACKETS AT THE DEFENCE OF

Seamen and marines constantly worked together on shor

expeditions in the course of the long series of wars which or the Battle of Waterloo.

Two or three years previously the seamen of the fleet had performed a similar duty at the siege of Quebec, and it is related that after bringing up the guns they met a battalion of soldiers about to go into action and insisted in falling-in alongside them, some armed with cutlasses, some with sticks, and others with no weapons at all. General Wolfe, coming up, thanked them for their spirit, but urged them to continue on their way to their ships, as they were both unarmed and unacquainted with military discipline and manœuvres. He said that it would be of more service to their country if they did so than for them to lose their lives for no result. To this address some of them called out: "God bless your Honour, pray let us stay and see fair play between the English and the French". Wolfe again urged them to go on board. Some followed his advice, but others, as soon as his back was turned, swore that the soldiers should not have all the fighting to themselves. They contrived to remain with the redcoats, and whenever one of the latter fell a seaman put on his accoutrements, seized his musket, and charged with the battalion. Seamen and marines constantly worked together on shore during the numerous expeditions that were directed against the enemy's possessions in the course of the long series of wars which only terminated with the Battle of Waterloo, not so very often in regular brigades but in landing-parties from their own ships, notably at the defence of Acre by Sir Sidney Smith, Captain of the *Tigre*, assisted by Colonel Douglas of the Marines and by Colonel Philpoteaux, an engineer officer and a French Royalist refugee. A very usual operation was for one or two of our ships to set about the capture

of a number of the enemy's merchantmen and small craft that had sought refuge in some harbour on the Mediterranean coast. If there was a battery defending the entrance the ship would engage it, and after its guns were silenced, it would be stormed by the bluejackets and marines. After this the latter would take up a covering position while the seamen brought out the shipping.

We have a somewhat amusing account of a naval brigade of seamen which was put on shore during the unfortunate Walcheron Expedition of 1808. It was written by a soldier, so perhaps may have been a bit overdrawn, but it must be remembered that there was no attempt to teach seamen infantry drill in those days, and none of them was enlisted for longer than a ship's commission. "These extraordinary fellows", says the writer, "delighted in hunting the 'Munseers', as they called the French, and a more formidable pack was never unkennelled. Armed with a long pole, a pike, a cutlass, and a pistol, they annoyed the French skirmishers in all directions by their irregular and unexpected attacks. They usually went out in parties as if they were going to hunt a wild beast, and no huntsman ever followed the chase with more delight. . . . They might be seen leaping the dykes by the aid of their poles or swimming across others, like Newfoundland dogs; and if a few French riflemen appeared in sight, they ran at them helter-skelter, and pistol, cutlass, or pike went to work in good earnest. The French soldiers did not at all relish such opponents—and no wonder, for the very appearance of them was terrific, and quite out of the usual order of things. Each man seemed a sort of Paul Jones, tarred, belted, and cutlassed as they were. Had we had occasion to storm Flushing I have no doubt they would have carried the breach

themselves."

The writer gives a humorous description of their drill, of which they wisely only attempted enough to assist them in moving from place to place. "'Heads up, you beggar of a corporal, there', a little slang-going Jack would cry out from the rear rank, well knowing that his diminutive size prevented his being seen by his officers. Then, perhaps, the man immediately before the wit, in order to show his sense of decorum, would turn round and remark: 'I say, who made you fugleman,[63] Master Billy? Can't you behave like a sodger afore the commander, eh?'"

Drill was looked upon merely as an amusing interlude in the serious business of war and appreciated accordingly. It was an exhibition of the same spirit of cheerfulness which has made us so proud of our Tommies for "sticking it out" so heroically in the trenches. This spirit never left these gallant seamen till the last, for the account above quoted tells how, when one of them was brought to the ground by a bullet which broke the bones of his leg, while pursuing some of the enemy's riflemen, he "took off his tarpaulin hat and flung it with all his might after them, adding a wish, 'that it was an 18-pounder for their sakes!' The poor fellow was carried off by his comrades and taken to the hospital, where he died. Such were the men who fought our battles."

At the landing in Aboukir Bay in 1801 a body of seamen under Sir Sidney Smith were of great assistance to our army—very badly provided with artillery with which to reply to the numerous French field-pieces. The seamen, however, landed some guns, dragged them to a good position among the sand-hills, and by their fire materially contributed to

the victory which ensued. It was in the same part of the world—to be exact, on the coast of Syria—that some years afterwards, in 1840-1, a naval brigade from the Mediterranean fleet, under Sir Charles Napier, assisted by a reinforcement of the Royal Marines sent out from England, carried on a campaign against Mehemet Ali, the Pasha of Egypt, who had revolted from the Sultan and forcibly occupied Syria. There were Turkish troops also engaged and a small detachment from one or two Austrian ships, but Sir Charles Napier was in charge of the operations, and no British soldiers, other than the few marines, took part in the campaign.

Sir Charles, though a sailor, always thought that he was a soldier spoiled, and was very proud of the rank of Major-General which had been given him by the Portuguese Government about ten years before. He had seen a little fighting on shore in the Peninsula, and entered into this shore-going campaign with the greatest zest. The marines, who were formed into two battalions, did the greater part of the fighting on land, as the seamen were required to man the guns of their ships, which constantly co-operated with the land forces by bombarding the enemy's towns and positions; but the bluejackets took part in the storming of Tortosa—where they preceded the marines as a pioneer party to remove obstacles—the assault of a castle near Acre, the occupation of Tyre, and the capture of Acre and Sidon. The seamen and marines of the fleet engaged in the Chinese war of 1840-1 also did a considerable amount of shore work of which space precludes any account, the operations they were engaged in being so numerous and so scattered. But we may say that, generally speaking, the seamen acted as gunners, while the marines were employed as infantry.

Naval guns mounted in shore batteries played a most distinguished part in the Crimean War. They were manned both by seamen and by marines, and were employed at the bombardment and capture of Bomarsund in the Baltic and in the trenches before Sebastopol. At the latter place, although a brigade of the Royal Marines had been encamped on the heights above Balaclava, and though they and the Royal Marine Artillery manned the guns in the redoubts built to secure our right flank from a Russian attack, it had not been intended to place naval guns in the siege-batteries. But when our siege-train found that they had all they could do to contend with the unexpected efficiency of the Russian guns, it was hurriedly determined to call on the navy for assistance. Fifty heavy guns were at once landed, with 35 officers and 732 seamen under Captain Stephen Lushington. The reinforcement was most valuable. The guns were powerful and the seamen's fire most accurate. The brigade did "yeoman service", and sustained by the end of the siege the loss of 7 officers and 95 men killed, and 39 officers and 432 men wounded.

Perhaps the most famous naval brigade in history is the *Shannon's* brigade, under Captain Peel, which made such a glorious record in the strenuous days of the Indian Mutiny. Although nearly all accounts would lead the reader to believe that it was entirely composed of seamen, it consisted, in point of fact, of 450 seamen, 140 marines, and 15 marine artillerymen, drawn from both the *Shannon* and the *Pearl*. The guns which they took with them and which did such invaluable service were twelve in number—ten 8-inch guns—pretty heavy pieces to haul along—and a couple of brass field-pieces. The brigade participated in the action at Kajwa, 1st

November, 1857, when Peel took charge of the operations on the death of Colonel Powell of the 53rd, and brought them to a victorious conclusion. On the 13th of the same month eight heavy guns and 250 of the brigade, with Peel himself, arrived before Lucknow, where they formed part of the army under Sir Colin Campbell which had advanced to the relief of the Europeans besieged in the Residency. After the capture of the Sikander Bagh, the relieving-force was checked in a narrow way by the desperate resistance offered by the garrison of the Shah Najif, "which was wreathed in volumes of smoke from the burning buildings in front but sparkled all over with the bright flash of small-arms".[64] The guns could make little or no impression on it; retreat was impossible along the narrow crowded lane by which the advance had been made. Desperate measures were necessary. Peel was equal to the occasion. While his marines and the Highlanders did their best to keep down the fire from the rebel loopholes, his seamen man-handled two of their big guns to within a few feet of the walls. But they had to be drawn off again under cover of the fire from a couple of rocket tubes, which were brought into action for the purpose. Still their gunners had made a small breach, which they had not even noticed themselves, and by this breach fifty men of the 93rd Highlanders, under Colonel Adrian Hope and Sergeant Paton—who received the V.C. for this service—later on effected an entry and expelled the garrison. The naval guns were of the greatest service during the withdrawal of the hardly pressed garrison of the Residency, since they kept down the fire from the Kaisar Bagh, the principal stronghold of the rebel sepoys. At Cawnpore and at the battle of Futtygurh, and in the final relief of Lucknow, the *Shannon* and *Pearl* brigades

distinguished themselves time after time; but we must leave further details, to deal with later naval brigades.

Passing over the operations in China in 1858-9-60, and the attack on Simomosaki in Japan, in all of which both seamen and marines were engaged, we come to the Ashanti War of 1873. The opening operations were entirely carried out by the navy, with the assistance of a few black troops. The invading army of Ashantis was forced back over the River Prah by the marines and seamen of the squadron, reinforced by a small force of the former sent especially from England, Cape Coast Castle and Elmina were saved, and time was gained for the arrival of the expeditionary force from England under Sir Garnet Wolseley. A small naval brigade of 200 seamen, and 60 marines, with a rocket train, accompanied the army on its advance to Kumassi and played a conspicuous part in the battle of Amoaful, suffering a loss of six officers and forty men wounded.

A little naval brigade of 3 officers and 121 men with two rocket-tubes, six 12-pounders, and a Gatling gun participated in the fighting with the Kafirs in South Africa in 1877-8; while in the Zulu War of a year or so later the *Shah*, *Active*, *Boadicea*, and *Tenedos* landed a brigade of seamen and marines of the strength of 41 officers and 812 men, with several guns. It was employed in somewhat scattered detachments. In 1881 a small naval brigade took part in the inglorious Boer War and suffered heavily at the unfortunate battle on Majuba Hill, where it lost more than half its strength. It is to one of the seamen present that the following terse summary of that disastrous day is attributed. "We took three mortal

hours to get up that bloomin' hill," he said, "but we come down in three bloomin' strides."

The navy and marines played a considerable part in the shore operations which followed on the bombardment of Alexandria in 1882. After the fire of Sir "Breach'em" Seymour's fleet had driven Arabi and his soldiers out of the city, the mob gave itself up to murder, looting, and incendiarism. No troops had yet arrived, and the only thing to do was to land the naval brigade to keep order and save the city and its European inhabitants. The bluejackets, with their Gatling guns, supported by the marines with their rifles, lost no time in clearing the streets of the murderous rabble. The work was done in a thorough and effective manner, and as soon as possible a rough-and-ready tribunal was established to deal with special cases. In addition to these duties the naval brigade had to find detachments to hold a line of outposts round the landward side of the city, ready to check a very probable attempt of Arabi to recapture the city. In a day or so the hardly-worked seamen and marines were strengthened by the arrival of a battalion of the Royal Marines which had been specially sent out from England in the *Tamar* in view of possible hostilities. It could easily have arrived at Alexandria two or three days earlier but for a series of orders and counter-orders from home which delayed it at Gibraltar, Malta, and finally sent it out of the way to Cyprus, where it was greeted with news of the bombardment, and the *Tamar* steamed straight out of Limasol harbour without letting go her anchor. When the army began to arrive, the naval brigade was gradually withdrawn on board its ships, but shortly afterwards was employed in seizing Port Said, Ismailia, and other points on the canal.

In the advance along the Sweet-water Canal, which culminated in the victory of Tel-el-Kebir, only a very small naval contingent from the ships took part, but a battalion of the Royal Marine Light Infantry and another of Royal Marine Artillery were attached to the army, the latter being told off as a body-guard to Lord Wolseley. But we must not omit to mention Lieutenant Rawson of the Royal Navy, to whom was committed the important task of guiding the night march of the army against the Egyptian lines of Tel-el-Kebir by the aid of the stars, and who fell in the moment of victory. "No man more gallant fell on that occasion," reported Lord Wolseley.

Naval brigades were well to the fore in the fighting which took place in the Sudan in 1884-5. At the Battle of El Teb 13 naval officers and 150 seamen, with six machine-guns, were present, as well as a battalion of 400 marines. It was in this action that Captain A. K. Wilson—now Admiral of the Fleet, Sir A. K. Wilson, V.C., G.C.B., O.M., G.C.V.O.—gained the V.C. for the gallant way in which he, single-handed, engaged no less than six of the enemy who had endeavoured to capture one of his machine-guns. The naval brigade suffered heavy casualties at the Battle of Tamaii, which took place not long afterwards. In the Gordon Relief Expedition the naval brigade was naturally of great use on the Nile, and a small detachment of fifty-eight seamen under Lord Charles Beresford accompanied the Camel Corps in its dash across the desert and took part in the fiercely-contested fights of Abu Klea and Abu Kru. The marines formed the fourth company of the Guards Camel Corps on this occasion. In the operations on the upper Nile which preceded the fall of Khartoum there were a few naval and one marine officer in command of the Egyptian gunboats, whose

fire proved such a useful auxiliary to the advance of the Anglo-Egyptian Army, while about a dozen non-commissioned officers of the Royal Marine Artillery were responsible for the instruction of their Egyptian gunners and the direction of their fire.



THE NAVAL BRIGADE I

Naval brigades were very much in evidence in the South African War. No special squadron and no battalions of marines were sent out, because it was necessary to keep our main fleet and its personnel ready to hand in case of complications with European powers. The big cruisers *Terrible* and *Powerful*, however, appeared on the scene, and their crews assisted in the formation of the naval brigades. In October, 1899, one of these was formed at Simonstown from the *Doris*, *Terrible*, *Powerful*, and *Monarch*.

It is noteworthy that for the first time on record

both seamen and marines were provided with khaki uniform in place of their usual blue-serge service-dress. This brigade was sent to Stormberg, on to Queenstown, and then, to its intense disappointment, back to Simonstown by sea from East London. That is, with the exception of the *Terribles*, who sailed for Durban. However, the very day the brigade arrived at Simonstown it was ordered off again to join Lord Methuen's force on the Modder River. The khaki-clad bluejackets, with their straw hats covered with the same coloured material, were rather a puzzle to the soldiers. During one of the engagements which took place, some of the Scots Guards, passing them standing by their guns, said to each other: "Blimy, Tommy, there's them Boer guns we've took!"

At the Battle of Graspan the naval brigade particularly distinguished itself. Captain Protheroe was in command, Commander Ethelston commanding the seamen, and Major Plumbe the marines. In the course of the action Captain Protheroe was wounded and both the other officers mentioned were killed, the brigade being brought out of action by Captain Marchant of the Royal Marines.[65] The Boers were strongly posted on a pair of kopjes. The eastern kopje was attacked by a force distributed as follows:—

Firing Line.—One company bluejackets, 50 strong; three companies Royal Marines, 190 strong in all; one company King's Own Yorkshire Light Infantry.

Supports.—Seven companies King's Own Yorkshire Light Infantry.

Reserve.—Half a battalion Loyal North Lancashire Regiment.

The remainder of the seamen belonging to the naval brigade—about 150 in number—helped to cover the attack by bringing their guns into action at about 2800 yards range. The kopje was taken, but a heavy price was paid by the naval brigade. There were 2 naval and 2 marine officers killed and one of each wounded, 2 seamen and 6 marines killed, and 13 seamen and 82 marines wounded. During the farther advance on our western flank the guns of the naval brigade were constantly in action. One of the big 4·7 guns, mounted on the travelling carriage suggested by Captain (now Admiral) Sir Percy Scott of the *Terrible*, and put into practical form by one of her engineer officers, arrived in time for the naval brigade to use it at Magersfontein with considerable effect. At Paardeberg they had four of these weapons in action, besides smaller guns. Manned either by bluejackets or marines, and hauled along either by teams of oxen or by the men of the brigade themselves, they again and again proved most effective during the operations which followed.



OUR SEAMEN GUNNERS WITH A MAXIM

Meanwhile the *Powerfuls* had formed a naval brigade of their own, and in response to the appeal made by Sir George White, the defender of Ladysmith, for more guns, Captain the Hon. Hedworth Lambton of that ship rushed up 17 officers and 267 men with two 4·7 guns, four 12-pounders, and four Maxims, just managing to get into the beleaguered town in time. On the very first day the 12-pounders managed to put the Boer "Long Tom", which was lobbing its big projectiles into the place, out of action, and their presence undoubtedly saved the situation. Another naval brigade formed part of the relieving force and fought at Colenso. This force comprised 20 officers and 403 bluejackets and marines, to whom must be added 2 officers and 50 men belonging to the Natal Naval Volunteers. A formidable battery of one 6-inch, five 4·7-inch, and eighteen long 12-pounders accompanied this brigade, which was of the greatest possible assistance to the army.

About this time the Boxer outbreak in China led to the formation of other naval brigades. Though hardly to be termed a naval brigade, it may be noted that the British portion of the small international force which so stoutly defended the Pekin Legations consisted of 79 Royal Marines and 3 officers, together with a leading signalman, an armourer's mate, and a sick-berth steward. But the relief column, under Vice-Admiral Sir E. H. Seymour, was a big naval brigade of various nationalities, of which about half were British—62 officers, 640 seamen, and 218 marines. The British were under the immediate command of Captain J. R. Jellicoe, C.B., C.V.O.,[66] the marines being under Major J. R. Johnstone, R.M.L.I.[67] A determined attempt was made to advance along the railway line to Pekin, but

the Chinese troops, who were exceedingly well armed, having thrown in their lot with the Boxers, the brigade was unable to get farther than An-tung, which was occupied by Major Johnstone with sixty men, while preparations were made to fall back on Tien-tsin. The force had come up in a series of trains, but, the railway having been broken behind it in more than one place, a great part of the return journey had to be carried out on foot. Village after village had to be stormed, and not far from Tien-tsin the retreating column had to pass close under the walls of the important Chinese arsenal of Hsi-ku, which stood on the opposite bank of the river. From this big fortified enclosure a heavy fire was poured upon the Europeans at short range. It was a regular death-trap. However, the principal part of the column sought what cover the rather high bank of the river afforded, while Major Johnstone, with the British marines and half a company of bluejackets, contrived to get across in junks a little higher up, and, forming under cover of a small village, fixed bayonets and stormed the enclosure in flank with a tremendous rush, driving out the garrison before him. The column halted for the night and for the next day or two inside the arsenal, where it was attacked again and again till a relief column moved out from Tien-tsin and brought off the harassed naval brigade. In the meanwhile Admiral Seymour's brigade were fighting fiercely in Tien-tsin itself. The Pei-Yang Arsenal held by the Chinese had to be stormed, the European quarter defended, and finally the high-walled native city had to be taken by assault, an operation in which the British seamen and marines suffered very heavily.

This is the last important occasion on which a naval brigade was in action until the European War.

So far no naval brigade, in the sense of a force of bluejackets and marines disembarked from their ships, has taken part in the fighting, except perhaps at the Dardanelles. The Naval Division which went to Antwerp was composed of marines and reservists from their head-quarters and of naval reservists and volunteers, but we have so little reliable information of what happened on that occasion that it would be very inadvisable to attempt to give any account of its performances at the present time.

CHAPTER XIV

War-ships of all Sorts

> "The King's Navy exceeds all others in the World for three things, viz.: Beauty, Strength, and Safety. For Beauty, they are so many Royal Palaces; for Strength, so many moving Castles and Barbicans; and for Safety, they are the Most Defensive Walls of the Realm. Amongst the Ships of other Nations, they are like Lions amongst silly Beasts, or Falcons, amongst fearful Fowle."—*Lord Cokes Fourth Institute.*

IN a previous chapter was set forth the story of the evolution of our battleships, up to and including the famous *Dreadnought* of 1907, the so-called "first all-

big-gun type". As there had been several "all-big-gun ships" among our earlier ironclads, this description seems hardly warranted. However, the *Dreadnought* stands pre-eminent as the first of the modern type of battleship, though in power, speed, tonnage, and general efficiency she has been far out-classed by the successive batches of Super-Dreadnoughts which have followed her, which are represented by the *Bellerophon*, *St. Vincent*, *Colossus*, *Orion*, *King George V*, *Iron Duke*, and, last of all, the monster *Queen Elizabeth*, or "*Lizzie*" as she is irreverently called. To describe this latest product of the naval designer's art is the best way of explaining what a really modern battleship is like.

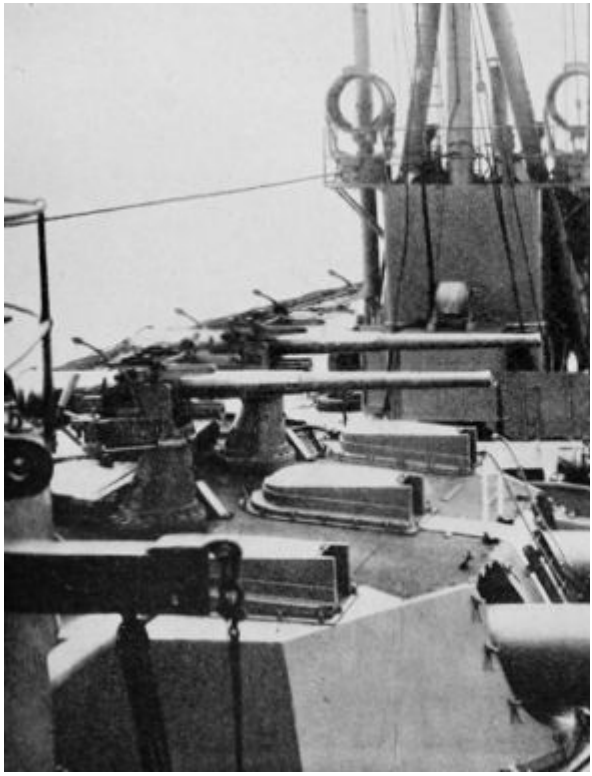
The *Queen Elizabeth*, then, is 600 feet in length—that is to say, just 200 yards. Think of the distance you have often seen measured off for a hundred-yards' race, multiply it by two, and you will have some idea of what this means. Or, if you have ever done any shooting on the range, try to remember how far off the 200-yard target looked, and you will realize what must be the size of a ship long enough to cover all the ground between it and the firing-point. (The *Dreadnought*, by the way, was only 490 feet in length.) The beam of the *Queen Elizabeth* is 92 feet—10 feet more than that of the *Dreadnought*. You may well imagine that the tonnage, or weight of water displaced, by a ship of these dimensions is enormous, and so it is, being no less than 27,500 tons! So, also, is the horse-power of her engines—58,000! But when we know that they have to be able to drive this leviathan through the water at a speed of 25 knots an hour, we can well understand the necessity for powerful engines. To feed their furnaces 4000 tons of fuel are carried. It is not coal, but what is known as "heavy oil", arrangements having been

made by the Admiralty for an immense quantity of this fuel, which is considered to have many advantages over coal. Earlier ships carry a proportion of both coal and oil. The engines are, of course, of the turbine type, which has entirely superseded the old reciprocating engines in the Royal Navy.

"The introduction of the turbine engine", writes a naval officer, "has revolutionized the appearance of the engine-room. The flashing piston-rods and revolving cranks have vanished. All the driving-power of the ship is hidden in some mahogany-sheathed horizontal cylinders, and there is nothing to indicate that the engines are in movement but a small external dial and needle no larger than a mantelpiece clock, attached to each of the shafts, of which there are two in each engine-room."[68]

The *Queen Elizabeth* can hardly be called an "all-big-gun ship", since besides the eight huge 15-inch guns which form her principal armament she carries sixteen 6-inch quick-firing guns, firing projectiles of 100 pounds weight, and about a dozen little cannon specially mounted for firing up at Zeppelins or aeroplanes. But her 15-inch guns are the biggest and most powerful cannon now afloat. Not only do they fire huge elongated shells of 1950 pounds weight, but their range and accuracy is most remarkable. We have seen a little of what they can do in the Dardanelles, when the ship, steaming well out at sea, pitched these terrible projectiles right over the peninsula of Gallipoli, to descend like a combination earthquake and avalanche upon the Turkish forts in the straits. The *Dreadnought* had 12-inch guns firing 850-pound projectiles, but she carried ten to the four of all her predecessors. But though the *Queen Elizabeth* had to give up one turret,[69] and therefore

two guns, in order to make room for more boiler-power for the production of greater speed, her broadside totals 15,600 pounds of metal as against the 8500 of the earlier war-ship, or the 12,500 pounds of later Super-Dreadnoughts armed with ten 13½-inch big guns. But the ability to throw heavier projectiles was by no means the only reason for increasing the calibre of our big guns. The fact was that gradual improvements in the 12-inch gun had made it so long in proportion to its calibre that there was an imperceptible sort of "whip" at the muzzle on discharge that was yet quite enough to interfere with its accuracy.[70] So we brought out the 13.5-inch, a most formidable weapon, and, later on, the 15-inch gun. With each of these the difficulty of making sure of hitting at long range decreased, and the encounters in the war that have taken place between our ships and those of the Germans which have had the temerity to put their noses outside their harbour defences have all gone to prove the previously-advanced theory that the battles of the immediate future will take place at immense ranges, at which the smaller guns and torpedoes cannot be effectively used.



DECK OF A *DREADNOUG*

It would be superfluous to describe the general appearance of the *Queen Elizabeth* in words, the photograph opposite presenting it better than the most detailed description: but it may be fairly said that while in picturesque beauty modern battleships cannot compete with the masterpieces of "the days of wood and hemp", there is yet an appearance of power, proportion, and impressiveness about them which forms a combination that may be almost called a beauty in itself. In the same way we may compare the plain, severe beauty of the Parthenon at Athens with the elaborately carved, gilded, and painted workmanship of a Japanese temple. Both are

attractive to the eye in their own peculiar and far differing ways. In the old wooden ships an appreciable proportion of their cost went in decoration alone, but out of the £2,400,000 expended on the "*Lizzie*" such expenditure may be set down practically as *nil*. A plain slate-coloured coat of paint, extending from truck to water-line, is all the painter has had to do with her external appearance.

The turrets in which the *Queen Elizabeth's* big guns are carried are four in number, and are placed on the centre line of the ship—two forward and two aft. Each turret contains a pair of guns, and the two innermost turrets are perched up on a species of protected tower or pedestal in such a way that they can fire directly over the foremost and aftermost turrets. By this arrangement four guns can be discharged dead ahead, four astern, and the whole eight on either broadside. We have been some time evolving this arrangement of turrets—in point of fact some foreign "Dreadnoughts" were the first to adopt it.

Our original *Dreadnought* had five turrets, three on the centre line of the ship and one on either broadside. The same arrangement was carried out in the *Bellerophon* and *St. Vincent* classes, which followed her, but in the *Colossus* class, which succeeded them, the position of the five turrets was altered. There was one right forward on the centre line of the ship, then one on the port side, and farther aft another on the starboard side. In fact, these two turrets were arranged *en echelon*, just as they were in the earlier *Colossus* and other ships. The fourth and fifth turrets were on the centre line, and the fourth was able to fire over the fifth, just as the second can fire over the first in the *Queen Elizabeth*.

In the *Orion* class, which came next, the same arrangement as in the *Queen Elizabeth* was followed, but as there was an additional turret it was placed by itself right amidships. No change in this respect was made in the *King Georges*.

We must not leave our typical modern battleship without some reference to the way in which she is protected by armour. As in all such ships, the armour-plating is distributed (*a*) to protect her flotation and (*b*) to protect her guns. With the former object in view she has a broad water-line belt of the finest and strongest 13½-inch armour procurable, which is supplemented by an armoured deck of considerable thickness. Each turret stands on a species of armoured tower, going right down to the armoured deck, and is itself made of 13½-inch armour. Her flotation is further safeguarded by minute subdivision below the water-line.

"Long experience of naval war has established a belief, shown by the practice of maritime powers to be unanimous, that a navy should comprise three great classes of ships, these classes admitting of much internal subdivision. In the period of the great naval wars there were ships of the line, frigates, and small craft. These are now represented by battleships, cruisers, and smaller and special-service vessels. Individuals of the first-mentioned class are intended to fight in large groups, that is to say, in fleet actions; those of the second class are intended for solitary service, or, at any rate, to fight only in small groups; while those of the third are intended, according to the subdivision to which they belong, for a variety of special purposes." So writes Admiral Sir Cyprian Bridge in his *Art of Naval Warfare*, and his definitions are clear and compact.

With the battleship class we have already dealt, both as regards its evolution and present-day pitch of perfection; but want of space has precluded any attempt to trace the evolution of the cruiser in the same way. It is therefore necessary, before going on to describe the cruisers of our modern navy, to glance, in the briefest possible manner, at their predecessors of days gone by. Perhaps we may take the viking *skuta*, or fast scouting vessel, as its first prototype, scouting being one of the most important duties of a cruiser. Possibly the galleys and balingers of mediæval times may be regarded as the *skuta's* successors, while the low-lying *Tiger* and other ships of her class in Tudor reigns may be considered as the immediate precursors of the famous frigates and corvettes which figured so largely and did such yeoman service in our eighteenth- and early nineteenth-century maritime campaigns. Our first frigates were the *Satisfaction*, *Adventure*, *Nonsuch*, *Assurance*, and *Constant Warwick*, all built in the year 1646; and from that time up to about 1870 a constant succession of ships of this useful type were added to the navy, the latest ones being, of course, steam frigates.

A frigate, according to an old work of 1771, was defined as "a light nimble ship built for the purposes of sailing swiftly. These vessels mount from twenty to thirty-eight guns, and are esteemed excellent *cruisers*." The name was derived from *fregata*, a Mediterranean vessel propelled both by sails and by oars. It is said the British navy was the first to adopt frigates for use in war, but the French, and afterwards the Americans, were generally successful in building the finest vessels of this class. These ships were full-rigged, with three masts, and carried all their principal guns in one battery on the main deck.

The corvette may be regarded as a smaller frigate, but was not square-rigged on her mizzen-mast, and carried her main battery on her upper deck. This later type of cruiser outlasted the frigate by some years, and the last of them, such as the *Opal* and other corvettes of the "Jewel" class, were very handsome vessels, though by no means so formidable as the pole-rigged cruisers which took their place.

The frigates in the old French War were considered "the eyes and ears of the fleet". They sought out and reported the enemy, they attacked his cruisers and commerce and protected our own, and fully justified their name and the general reputation for smartness which they were accorded. The duties of our cruisers of to-day are of a very similar kind, although the invention of wireless telegraphy and the aeroplane has supplemented and to some extent superseded their scouting work.

As for what they have actually done, we have only to recollect the various incidents of the Great War as regards its aspects at sea. Acting in unison with those of France and Japan, they have swept German commerce and German cruisers from the face of the ocean, and so far, except for shore bombardments and submarine attacks, have been the only war-vessels engaged on either side. At the time of writing no battleships have as yet been in action against one another, for we may regard all those ships which have been reported in action at sea as cruisers, from the big battle-cruiser *Lion* down to the destroyers—and even, perhaps, our submarines, which are very useful scouts.

Cruisers proper in our navy are now officially classed in three main divisions—"battle-cruisers",

"cruisers", and "light cruisers", though a very short time ago they were subdivided into "armoured cruisers", "first-class protected cruisers", "second-class protected cruisers", "third-class protected cruisers", "unarmoured cruisers", "lightly-armoured cruisers", and "scouts".

The battle-cruiser is a hybrid and, as this war has proved, a most useful war-vessel. She is not so heavily armed or armoured as a battleship of equivalent age, but has much greater speed. She is as big or bigger, and costs just about as much. Thus the *Lion* was launched in the same year as the battleship *Orion*—1910. Note the comparison below:—

	Displacement.	Guns.	Speed.	Thickest Armour.	Cost.
Orion	22,300	Ten 13·5 in.	21 knots	12 in.	£1,900,000
Lion	26,350	Eight 13·5 in.	28 knots	10 in.	2,100,000

Thus it will be seen that of these two contemporary ships the battle-cruiser is the bigger, cost £200,000 more, has two less big guns, 2 inches less protection, but steams at least 7 knots faster than the battleship. Indeed, it is hard to say whether she is or is not, on the whole, the more useful ship, even as a battleship. The Admiralty and naval constructors would seem to incline to this opinion, for, as we have seen in the latest battleship—the *Queen Elizabeth*—two guns have been sacrificed for the sake of 4 knots more speed than the *Orion*.

The cruiser-battleship or battle-cruiser, then, not

only has almost precisely the same appearance as a battleship, though probably of rather greater length, but has special battle duties as well as cruiser duties. Thus, if working with battleships, it is her business to pursue an enemy's battle squadron in retreat, and, by bringing its rearmost ships to action, try to induce their consorts to stand by them till her own slower but more powerfully gunned consorts can come up and take a hand. As for her cruising duties, we have had conspicuous examples during the course of the war, both as to the right and wrong way of such ships' employment. The unexpected and opportune intervention of the *Inflexible* and *Invincible* in the Falkland Islands battle, whose mere appearance convinced von Spee that his "game was up"; and the way in which Sir David Beatty was "on the spot" and swooped down on the German North Sea raiders, are both excellent examples of the way these formidable fighting-cruisers should be used. If you want to see "how not to do it" you have only got to consider the misuse of the *Goeben* in the Mediterranean, where, after a useless bombardment of one or two not very important Algerian towns, she fled for shelter to the Dardanelles, instead of trying to break out into the Atlantic. It is claimed, of course, that, but for her appearance at Constantinople, Turkey would not have been drawn into the war on the side of Germany, but it is hard to believe that the long-pursued German intrigues in Turkey would have all gone for nothing without the arrival of the somewhat discredited *Goeben*. Nor was the use of battle-cruisers to bombard a few defenceless coast towns a sound method of strategy. As it was, they were within an ace of being lost—and for what result? Absolutely *nil* from a military point of view. The battle-cruiser has a great future before it, and it does not seem unlikely

that, now that the enormous advantages of high speed have been so clearly demonstrated, it will altogether supersede the slower and heavier armed and armoured battleship proper.

After battle-cruisers we come to cruisers. Our typical modern cruisers may be taken to be represented by the "*Defence*" and "*Achilles*" classes, the latest of which dates from 1909. The former class have a displacement of 14,600 tons apiece, and carry four 9·2 and ten 7·5 guns. The latter are about 1000 tons smaller, and have an armament of six 9·2 and four 7·5 guns. Both types have 6- to 8-inch armour, and about 23 knots speed. They are exceedingly smart-looking vessels, with their numerous turrets or gun-houses, four funnels, and two lightly-rigged masts. They sit comparatively low in the water, and present an appearance of both speed and war-like efficiency.

The "County" class of cruisers, which immediately preceded those just mentioned, are considerably smaller, though to some minds but weakly gunned for their size. None of them have heavier guns than 7·5-inch, and most only 6-inch weapons. Neither have they a great deal of armour protection or an extraordinary high rate of speed. As none have been built within recent years, we may fairly assume that they are not considered quite what we want at the present time, though many or most of them have done excellent work in the present war. You will remember how the *Kent* and *Cornwall* fought at the battle off the Falklands.

The "Town" class, of not much more than half the size, would appear to have superseded the "Counties", and they, too, have been very much in

evidence in the hostilities which have been carried on afloat. The biggest of these are of 5400 tons displacement, and carry eight 6-inch guns, and as these are the latest cruisers built, with the exception of the monster battle-cruisers, it seems likely that it is not intended to have any cruisers of intermediate size. Big sparsely-armoured cruisers, like the unfortunate *Good Hope*, which did not steam faster than smaller ones, and which carried but a poor armament considering her size and cost, cannot be considered a good investment. The "Town" class have done splendidly in the war at sea. The *Birmingham* had the distinction of sinking the first German submarine; the plucky little *Gloucester* hung closely on the heels of the giant *Goeben* and her consort the *Breslau* during their flight to Constantinople, though one well-directed shot from the former would have put her out of action and probably sent her to the bottom. The *Glasgow*, *Carnarvon*, and *Bristol* were of great use in the Falklands fight, the first-named having already fought against the heavy batteries of the *Scharnhorst* and *Gneisenau* off the coast of Chile, while later on she sank the Dresden; while the *Sydney* won undying fame by defeating and driving on shore the notorious commerce-destroyer *Emden*.

Another distinctly modern type of cruiser is the "light cruiser", a fast unprotected vessel with light guns of 4-inch calibre, which has proved of immense value in the area of "liveliness" in the North Sea. The *Amphion* opened the ball by sinking the German mine-layer *Königin Luise* at the very opening of hostilities, but was very soon after herself blown up by a mine the latter had laid. She, like her sisters, was almost exactly like a big destroyer in appearance. The "Saucy" *Arethusa* has proved a worthy descendant of the famous frigate after which

she was named, and has more than once particularly distinguished herself, notably in the fight off Heligoland. But space forbids more than the mere mention of the smallest class of cruiser, the "scouts", of just under 3000 tons, which are also extremely useful little vessels, since it is necessary to give some account of destroyers and submarines.

The destroyer was originally built to "destroy" the torpedo-boat, which, from its small size, had its limitations in anything of a sea-way. The earliest torpedo-boats were ordinary steamboats, such as are carried by most ships of any size, fitted with a long spar with a tin of gun-cotton at the end of it, which could be run out some way over the bows. The idea was to approach an enemy's ship under cover of the darkness, lower the outer end of the spar with its "torpedo" below the water-line, place it in contact with the enemy's ship, and explode the charge by means of an electric current. This seems a crude way of going to work, but several ships have been sunk by its means, notably the Confederate ram *Albemarle*, which was attacked by Lieutenant Cushing of the United States navy in this way in the course of the Civil War in America. Special boats were then made for this purpose, but the advent of the "Whitehead" automobile torpedo provided them with a much more formidable weapon. Naval powers built these "torpedo-boats" in considerable numbers, and they were considered such a menace to bigger ships that the destroyer, an almost exactly similar boat, but of larger size, was designed to cope with them. In point of fact it did destroy them, for it was found to be so much better an "all-round craft", not only for attacking torpedo-boats, but to act as one itself, that the smaller craft before long were entirely

superseded by the destroyers. Beginning about 1897 with boats of about 180 tons, armed with 6-pounder guns, we have now improved our destroyers till at the present day our latest types are more than twice as big, and are armed with 4-inch guns, which give them a decided advantage over less heavily-gunned destroyers, as has been amply demonstrated in more than one encounter with German destroyers. The destroyer is used, generally speaking, for scouting purposes, and especially to attack an enemy's submarines, which, if caught at the surface, may be approached in a swift destroyer and sunk by gun-fire before they are able to dive, or, with luck, may even be rammed. Destroyers, too, may be used to attack at night as torpedo-boats, or even in the course of a naval action if a favourable opportunity offers; it will be remembered that the *Goliath* was torpedoed by a Turkish destroyer.

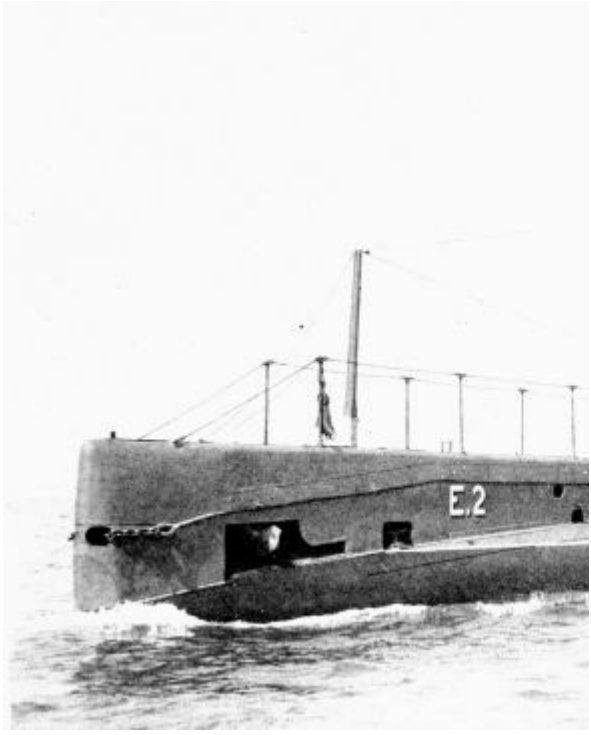
"Vessels of stealth", as submarines have been called, have now taken the place of the obsolete torpedo-boat. The latter relied on torpedoing her enemy under cover of the darkness, but the submarine is most dangerous in day-time. At night it is almost impossible for her to find her target or to estimate the speed at which she is travelling if under way, without which knowledge it is extremely difficult to arrange for a torpedo to intercept her course unless fired at very close quarters indeed. As the particulars of our submarines are wisely kept secret, no more can be said about them than is already public property.

The "E" class, our latest improved "Hollands", are 176 feet long, with a beam of a little over 22 feet, and have a displacement—when submerged—of 800 tons. When at the surface their heavy oil-engines, of

something like 2000 horse-power, enable them to travel at a speed of from 16 to 20 knots. When under water the electric engines are brought into play, but owing to the increased friction and larger area of the vessel to be forced through the water the speed of the boat drops to 10 knots. Moreover, travelling at the most economical rate of speed, not more than 140 knots can be negotiated when submerged, while at the surface an "E" submarine can travel for no less than 5000 miles without refilling her oil-tanks.

These boats preserve the "porpoise" shape, are equipped with wireless apparatus, and provided with panoramic periscopes to enable them to sight their target when submerged. There is no necessity nowadays to describe the principle of a periscope, since little portable patterns of this optical instrument, of various types, made for use in the trenches, can be seen exposed for sale almost anywhere. But, of course, those in use on a submarine are of a large and highly perfected type. The conning-tower of the "E" boats is armoured, and they carry a couple of quick-firing guns of 3 inches calibre in recesses on their decks, closed in by folding doors. These little weapons can be quickly raised into position by an arrangement of hydraulic machinery, and by merely pressing a lever they sink down and are boxed in again in a second or two.[71] They are so mounted as to be able to fire at a very high elevation, in order to defend the boat against bomb-dropping air-ships or aeroplanes, but, of course, can be used against surface vessels in the same way as those of the German submarines, which have made several attempts to sink merchantmen. As a modern Whitehead has a range of something like 3 miles, travels at a speed of 50 miles an hour, and carries a heavy charge of high explosive in its head,

we need not dwell on its formidable nature, which has been amply proved in the course of the war. It has also been equally proved that it is almost impossible for a submarine to torpedo a fast and well-handled vessel once it has located the position of its attacker.



THE BRITISH

It was a boat of this class, *E9*, by which the German cruiser another, *E11*, specially distinguished herself at the Dardanelle

"The modern submarine has every comfort commensurate with the size and service of the vessel. The principal item making for comfort is, of course, properly-prepared food. . . . As time passed, electric

cooking-apparatus was installed. This was always subject to the many troubles inherent in early electrical heating-apparatus. However, the idea was a step in advance. To-day there is installed a well-arranged oven, four or five independent plates for cooking meats and vegetables, and an urn for keeping coffee constantly hot and on tap when cruising. All of these things, though small in themselves, make for contentment in the crew."[72] Whether or not such cooking appliances are installed in our own submarines I am unable to say, but there is no doubt that everything necessary for the comfort of their crews has been provided by the Admiralty, and the boats themselves are very like the American submarines which are referred to above.

"Monitors" are novel vessels in our navy, and at present we have only three of them—the *Humber*, *Mersey*, and *Severn*—which were originally built for Brazil, but were acquired from their builders, Vickers, Maxim, & Co., immediately on the outbreak of war. They proved their usefulness by standing close inshore and attacking the flank of the German advance on Nieuport in the fighting between that place and Ostend which took place in the autumn of 1914. Their light draught of water—under 9 feet—enabled them to do this, and rendered them very difficult targets for the German submarines, which, moreover, could not operate in such shoal water.

The appearance of the original *Monitor* in the Civil War in America has already been referred to. The United States Navy had a considerable number of such vessels during and after that campaign. Russia also purchased several of a similar type. But for many years, if we except a few of an improved type which were built for the United States Navy between

1885 and 1895, they fell quite into disuse, except for river work. The Austrians have a small flotilla of such vessels on the Danube, and Brazil has had others for use on the Amazon before the ones we took over were ordered. It is, however, one would imagine, not without the bounds of probability that there may be some return to the shallow-draught "Monitor" type among the battleships of the future, as being less vulnerable to torpedo attack. A battleship design put forward some years ago by a Russian inventor, which he claimed to be nearly torpedo-proof, certainly approximated somewhat to a "Monitor".

The three "Monitors" which were added to our own navy as described, are of only 1200 tons displacement apiece. They are 265 feet long, with a beam of 49 feet, and have a speed of 11½ knots only. But it is obvious that speed was of very secondary consideration for the purposes for which they were designed. They have thin armour-plating on their sides, and carry two 6-inch guns in a turret at the bows. Aft are a couple of 4·7-inch howitzers under revolving shields, while half a dozen machine-guns are mounted on their upper works. They are smart-looking little craft, with one funnel and a single military mast with a search-light platform.

Having described the various classes of our fighting-ships, we may for a moment or two consider the subject of fighting tactics afloat. In the old sailing-ship days it was the object of the commander of a fighting-ship to get what was known as the "weather-gage" of his opponent. Put into shore-going

English, this meant that, as far as possible, he kept his own ship between the direction of the wind and his enemy, which enabled him to manœuvre more easily, close in upon him or not as he considered more advantageous to himself. The French were not so keen in seeking for the weather-gage, since in that position it was not so easy to break off the engagement and get away. This remark must not be necessarily taken as imputing any want of courage to our then gallant enemy, for whereas the Admiralty orders to our captains were to find the enemy and "sink, burn, or destroy" him, those given to the French naval officers impressed upon them that it was their first duty to save their ships. The result was that though as a general rule our sea-captains took the weather-gage whenever they could get it, there were some of them who, according to a pamphlet published in 1766, were fond of "engaging to leeward", to prevent an enemy from running away!

In fleet actions in Nelsonian times our object was to break the enemy's line in one or more places, and, having effected this, to set upon the broken portions with all the strength available and defeat them in detail. This was the principle followed so successfully at Trafalgar. Of course the leading ships of our two lines suffered severely from the broadsides of the enemy as they approached him at right angles, but it must be remembered that the range and efficiency of the guns of those days was so limited that the leading and rear ships of the combined French and Spanish fleets could not damage any of our rear ships very much, nor even our leading ones. As for our own ships, we were prepared to take this preliminary pounding and not really to begin our offensive till we had broken their line and got within close range of that portion of their fleet we intended to destroy

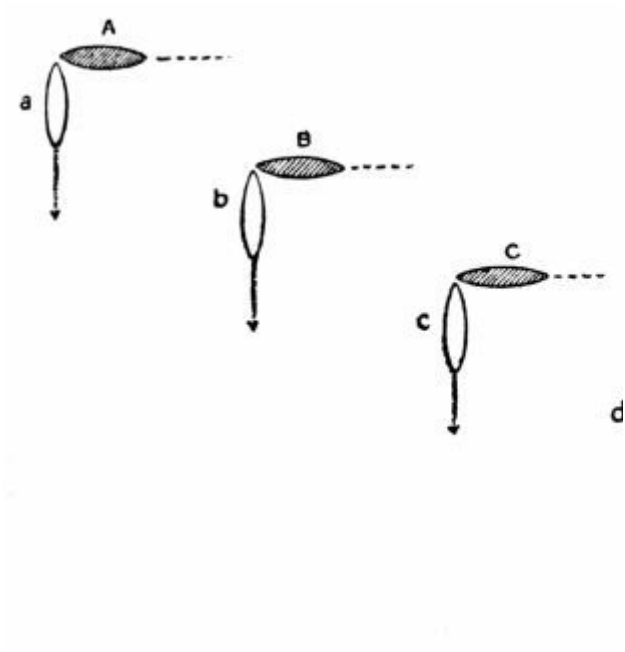
first. If, as at the Nile, the enemy foolishly chose to await our attack at anchor, it simplified matters for us pretty considerably. We could, as we did, move towards one end of their line at an angle on which we could exchange broadsides as we advanced on equal terms, and as soon as one-half of our ships had passed the flank selected for attack, both halves altered course so as to move parallel to the line of anchored Frenchmen and engage half their line with a superiority of two to one. Each French ship had to fight two British ones, one on either side. The ships farther down the line could do nothing to assist them unless they weighed anchor, made sail, and broke their formation, and so simply lay there waiting their turn to be dealt with.

Steam has, of course, put all this class of manœuvring long out of date, though as long as naval warfare endures on this earth the main principle of attempting to take the enemy at a disadvantage must always remain. In the early days of ironclads there were various theories as to the best fighting-formations. There were advocates of "line ahead", that is to say, each ship following the other in "Indian file"; of "line abreast", in which ships advanced like a line of soldiers in "extended order", and which necessitated that each ship should have a very powerful "right ahead" fire; and various group formations. At the battle of Lissa, in 1866, practically the only fleet engagement during the ironclad period prior to the Chino-Japanese and Russo-Japanese wars, the victorious Austrians attacked the Italian fleet in a wedge-shaped formation; but they intended to use their rams and to fight at absolutely close quarters, a procedure which in the present days of long-range guns of tremendous power and extraordinary accuracy would be almost, if not quite,

impossible. The ram, moreover, is now practically obsolete. In the naval actions in the Far East, to which reference has been made, the generally adopted battle-formation was that of "line ahead", the first of those explained above, and the ideal manœuvre was considered to be what was known as "crossing the T"—that is to say, to get one's line of ships into such a position with regard to the enemy's line that, while his represented the perpendicular part of the "T", one's own would be in the place of the horizontal line forming the top of the letter: in fact, to be in the same relative position as were the enemy's fleet at Trafalgar to our advancing lines. With modern guns and gunnery the whole fleet could concentrate on and smash up the leading ships one after the other, those following in rear not being able to do very much to assist them. Obviously it is the object of every fleet commander to avoid being caught in this way. If he sees the enemy's line are steering so as to cross his course at right angles, he will alter course to one parallel to theirs. If within range, broadsides will doubtless be exchanged while passing, but each opposing line will then try to turn and cross the enemy's "T" for him by passing in rear of his line. Both will be awake to this manœuvre, so that if the manœuvre continues on normal lines the battle will resolve itself into two curved lines of ships chasing each other round the circumference of a circle.

But varieties of speed, the disabling of some ships, and the menace of destroyers or submarines will probably throw any such regular sequence entirely out of gear, and, other things being equal, victory will incline to the fleet whose commander is quickest to adapt its formation to meet the sudden emergencies of the fighting and to turn them to his

own advantage. But he will not be able to do this unless his fleet is well drilled in manœuvre, and at least as capable of carrying out his orders and signals with smartness and efficiency as that of the enemy.



Squadron in "Line on a Bearing" or "Bo

Observe the first position of the five battleships A, B, C, D, E astern, and on both broadsides. They are steering due west. They will then be in similar formation, as indicated by a, b, c,

At the present time, perhaps what is known as the "line on a bearing"—i.e. compass bearing—or "bow and quarter line" as it is sometimes called, is the favourite formation, and there is a very great deal to be said in its favour. It is what is known as an "echelon" formation when applied to the manœuvres of soldiers. The word "echelon" is derived from the French *echelle*, a ladder, and the ships in this case are

disposed in a way suggestive of the steps of a ladder or stair. Thus, suppose the flagship leading, the next ship would follow her on a parallel course, not immediately in her wake but some way astern on her port or starboard quarter, the next in a corresponding position with regard to the second ship, and so on, as indicated in the annexed diagram.

If you look at this you will at once see its advantages over "line ahead". Every ship can bring its broadside to bear either to port or starboard, as in that formation, but, in addition, every ship can fire directly ahead or astern as well. If ships in "line ahead" all turn together to the right or left, or, to use the correct wording, alter course together eight points to starboard or port, only the leading and rear ship could use their broadsides, and only one of them at that. But a similar turn in "bow and quarter line" can be made without any loss of fire effect.

In the Great War we have not, at the time of writing, yet had a fleet action. The German Navy has shown itself most determined—to take no risks. It seems to be imbued with the principles impressed by the French Government on its sea commanders in the old wars with us.[73] Never, on any account, are ships to be hazarded against superior force, or, in other words, the ships of the "admiral of the Atlantic" are not to fight unless in very superior force to their antagonists, as was the case in the action off Chile. The German squadron, starting out on the second raid on our coasts, no sooner clapped eyes on Admiral Beatty's ships—which only numbered one more ship than the German squadron—than it turned tail and made off for all it was worth. So the British had no chance of crossing the "T", or of any manœuvre other than a stern chase. Such a chase is

proverbially a long one, but in this case it was long enough to enable our seamen and marines to sink one German and badly damage at least two others, who only got away "by the skin of their teeth", thanks to the intervention of their mine-fields and submarines.

CHAPTER XV

The Manning of a Ship

"We're sober men and true,
And quite devoid of fe-ar.
In all the Royal N.
There are none so smart as we are.
When the wind whistles free
O'er the bright blue sea
We stand to our guns all da-ay;
When at anchor we ride
By the starboard side,
We've plenty of time for play."
—*H.M.S. "Pinafore".* W. S. Gilbert.

At the beginning of our naval story we found our fleets composed of rowing-vessels, fought and commanded by soldiers. Then came a time—the viking period—when fighting-ships were manned and fought by warriors who were emphatically "soldiers and sailors too". In battle their dragons and long-serpents relied mainly on their oars, but the sail began to take a much more important position than

before, and the oars were not pulled by slaves but by the crew proper, all of whom were fighters. In the period that followed, the sail—in northern waters at any rate—continued to grow in importance, till in the biggest ships it entirely ousted the oars.

Then arose the professional sailor. Ships carried but a few sails, so that comparatively few men were required to handle them, and the fighting-men on board and the commanders of ships and squadrons were once more soldiers. When the fully rigged ship arrived—in Tudor times—the sailor element naturally was considerably increased, and, the heavy gun making its appearance on shipboard at about the same time, the "gunners" seem to have been taken from that class rather than from the soldiers, who formed about half the ship's company. But in the royal ships the supreme command was always in the hands of a military officer, till the successes gained by the privately-equipped ships commanded by men like Drake and Frobisher introduced a new type of distinctly naval officer. But he did not supersede the military ship-commander much before the time of William III. Up to that time ships seem to have had sometimes a soldier, like Blake, in command and sometimes a sailor, like Sir George Rooke and others.

The latter is a good example of what may be called the transition period, because he, like Sir Cloudesley Shovel and many other sea-commanders, had a commission in the Duke of York and Albany's Maritime Regiment, instituted in 1664 and generally accepted as being the ancestor of the present corps of Royal Marines. But it seems possible that there must have been an idea underlying the institution of this regiment of sea-soldiers that has never been explained. The key to it may perhaps be found in the

oft-repeated reference to marine regiments at this period as "nurseries for the fleet". The idea did not work, as the men trained as soldiers did not volunteer to become sailors to an appreciable extent; but in my own opinion there was more in the idea than this. It must be remembered that at this time there was a great controversy as to the most suitable officers to command our war-ships. The "gentleman captains", who were in many cases soldiers, but often merely courtiers, clung tenaciously to their position, and the Court influence at their back enabled them to stand their ground. But at the same time the claims of the real sailors—the "tarpawlins", as they were called—who were neither soldiers nor gentlemen, were being more and more recognized by the public, and grew stronger and stronger. And they certainly had a very strong case. They could themselves sail, navigate, and fight their ships, while the other class had to have "masters" to do everything but the fighting for them.

It seems possible that the intention of those responsible for the raising of the "Maritime Regiment", the men of which were indifferently referred to as "marines" or as "mariners", was not only to provide the nucleus of a disciplined personnel, but to produce a corps of officers who, while retaining a military status, would yet be professional seamen. It was an experiment, but not on a sufficiently comprehensive scale, to transform the ill-paid, ill-treated, and ill-fed seamen of the day into a loyal, contented and disciplined body, or to supply a sufficient number of "gentleman-tarpawlins" to command our ships and fleets. A large number of these officers did do so, but quite as many continued to serve as soldiers, some afloat in command of marines, and many others in the army.

As time went on, things adjusted themselves, and before the eighteenth century had progressed very far the sailor came into his own. The "days of oak and hemp" were at their zenith. Our men-of-war were commanded by officers who were thorough seamen, able to handle their ships under sail themselves, though masters who were navigation experts still remained. Their crews were composed of two distinct classes—seamen and marines.[74] The former were, as before, still recruited for the commission only, while the latter were enlisted for a fixed period of service.[75] The best seamen, nevertheless, made a regular profession of the navy, going from one ship to another as they were paid off and commissioned. If they made an occasional trip to sea in a merchantman or privateer between whiles, that by no means impaired their professional ability, and the "prime seamen" of those days were the finest sailors in history. Unfortunately their number, for various reasons, was somewhat limited, and a ship's company, especially if she or her commander bore a bad name afloat, had to be completed by all kinds of people. Even the marines, regularly enlisted men as they were, were by no means always of the same calibre.

According to our apparently interminable national practice, we always began our wars shorthanded in this as well as in every other militant service, and recruits had on these occasions to be sent on board in the rawest stages of their training. Yet, in spite of all these drawbacks, look at the victories our navy won in those glorious days! Good, bad, or indifferent, sailor or marine, the men were all true Britons when the time came to "strike home" for King and Country, just as their gallant descendants have proved themselves in the Great European War. As the

nineteenth century progressed, and our navy had no big wars on hand, the seaman element by no means deteriorated. The professional sailor was forthcoming in sufficient numbers to man our navy in peace-time or in minor operations, and there was no necessity to send untrained marines afloat. Steam had made its appearance, but it was far from superseding sail-power. The executive were still sailors, heart and soul, and had no hankering after soldiering and drill ashore. All the same, the sailing-masters were still retained, and seemed to be indispensable. Admiral John Moresby, in his interesting work entitled *Two Admirals*, which relates his own and his father's naval experiences from 1786 to 1877, gives the following account of the naval officers of 1847:—

"The officers, with few exceptions, were content to be practical seamen only. They had nothing whatever to do with the navigation of the ship or the rating of the chronometers. That was entirely in the hands of the master, and no other had any real experience or responsibility in the matter. I may instance the case of a captain whose ship was at Spithead. He was ordered by signal to go to the assistance of a ship on shore at the back of the Isle of Wight. In reply he hoisted the signal of 'Inability: the master is on shore.' 'Are the other officers on board?' he was asked. He answered 'Yes,' and to the repeated order, 'Proceed immediately,' he again hoisted 'Inability', and remained entrenched in his determination until a pilot was sent to his assistance."

If a "practical seaman" was so dependent on his master as this he would not appear to have been much of an improvement on the soldier-captains of earlier times. It seems a most extraordinary position,

and it is almost as extraordinary that now, when sailoring proper is a thing of the past, we may be quite certain that no captain in His Majesty's service would hesitate to get under way on receipt of an order to go to the assistance of a ship in distress, whether the navigating officer was on board or not. But, probably on account of the long period of peace which had followed after Waterloo, neither our navy nor army was in such a high state of efficiency as it had been earlier in the century or is at the present minute. The Crimean War broke like a thunder-clap on our peace-organized forces. We know what terrible times our gallant soldiers went through before Sebastopol on account of deficiency of commissariat, equipment, and every other aid to efficiency which ought to have been in readiness, but which, in fact, had no existence. We commissioned a fine fleet for the Baltic, but it practically effected nothing, and we had the greatest difficulty in manning it.

"Public opinion", writes Admiral Moresby, "resented the revival of the press-gang; therefore the only alternative was the offer of a large bounty, and by this means the ships were filled with counter-jumpers and riff-raff of all sorts, and rarely a sailor amongst them. What this meant only those who had to do the necessary slave-driving can tell. . . . In the *Driver* . . . we may have had twenty seamen as a nucleus. The rest were long-shore fellows, and when Admiral Berkley came on board and told us that the Russians were at sea, and probably in a few days we should be in action, there was a strong dash of anxiety in our satisfaction."

So short were we of men that I have been told by an officer who served in that fleet that had it not

been for the coast-guardsmen and marines it would never have been ready for sea. "On board the *St. Jean d'Acre*," said this officer, "we had a splendid crew, thanks to the popularity of Harry Keppel: the work of fitting out from a mere hulk was done by the Royal Marines with a small number of seamen-gunners from the *Excellent* and some boys. The officers at Portsmouth and other places raised men *who would not join until the hard work was over*." But good arose out of this evil, which was so patent that it could not be overlooked by anyone. The usefulness of the seamen-gunners and Royal Marines pointed the way to a remedy. The marines were a permanent force; the seamen-gunners were on the spot and under naval discipline. It was determined to institute an equally permanent establishment of bluejackets. The creation of this force was the most momentous and beneficial step ever taken by the Admiralty, and to it we owe the magnificent body of trained seamen who have done such yeoman service to the country during the war. Where should we have been without it? Imagine the disasters which would have befallen us if, as at the outbreak of the Crimean War, we had had to hunt up crews for our fleet after the 4th of August, 1914! As it was, everything went "on wheels", as the saying is. The Grand Fleet was ready and other ships were put into commission without the least delay or hitch in the smooth running of our mobilization for war. Reserves were so plentiful that a residuum of both bluejackets and marines was available as the nucleus of the Royal Naval Division, which was soon recruited up to a high figure.

It is not too much to say that the end of the Crimean War saw the beginning of our modern naval forces, with the exception of the Royal Marines, who had been in existence as a naval force under the

Admiralty ever since 1755, and the later instituted Royal Naval Reserve, Royal Fleet Reserve, and Royal Naval Volunteer Reserve. It may be noted, in passing, that the first-mentioned reserve consists of men in the merchant service, who, seamen by profession, receive a training in gunnery and other matters connected with naval warfare, and are paid an annual retaining-fee, which renders them liable to be called up for service when required.

The Royal Fleet Reserve consists of both bluejackets and marines, who, having served for twelve years on the active list, are permitted to transfer to this force. They receive a small daily rate of pay, and have to undergo a short revision of their drills annually. The last-mentioned reserve has been in existence on and off under one name or other for a considerable number of years. In 1861 Captain Vernon of the 4th Cinque Ports Artillery Volunteers at Hastings instituted a so-called "marine company" in his regiment, which wore a semi-naval uniform and was drilled at naval guns. From this small beginning grew in time the Royal Naval Artillery Volunteers, first formed in 1873, which assumed considerable proportions and had branches at every important seaport. This corps was eventually abolished because the naval authorities did not quite see how men who in very many cases had at most but "a bowing acquaintance" with Father Neptune could well be utilized afloat. This decision was a great blow to its members, who were very proud of their voluntary duties, and after a time the Admiralty was strongly pressed by those interested in the movement to resuscitate it. Hence the Royal Naval Volunteer Reserve was created.[76]

The bluejacket of the present day is better termed a seaman than a sailor, since sails are non-existent in the navy except in boats.[77] Besides, his official rating is seaman—ordinary seaman, able seaman, &c. Some writers in journals dealing with naval matters have coined the, to me, objectionable-sounding name of "fleetman". This may answer for a comprehensive term, including seamen, marines, and stokers, writers and other auxiliary branches of the service, but they might all be equally well classed together as seamen or mariners, since there is little if any difference nowadays between the time each branch spends afloat. There are big naval barracks now at our ports as well as marine barracks, and bluejackets often spend there as much time as, or more time than the marine does in his barracks.

The outstanding difference between the ship's company of to-day and of past centuries is that it is composed entirely of trained men. There are no "landsmen" and odds and ends of humanity pitchforked on board to complete the number of the company. Seamen, marines, and stokers all are specially instructed in their own line of business before they appear on board a ship in commission. The same holds good in the case of their officers. No more boys of nineteen are appointed captains on account of family connections; no more are officers of marines appointed from line regiments or even from the cavalry, as they were in days gone by. It is only fair to say that we must go back a long way to find cases of this sort, for as regards its officers the navy has been a permanent profession for centuries, though its seamanhood was not in the same position before the middle of the last century.

What our naval officers and men are to-day in

their work and duties is best demonstrated by a glance at the crew of a modern man-of-war in commission. First and foremost, of course, is the captain, not infrequently referred to by those under his command as the "skipper", "the Old Man", or sometimes as the "Owner". His rule may be termed a benevolent despotism. He can no longer be the tyrant that he occasionally was "in the days of wood and hemp", and has no desire to be anything of the kind. He is far too much of a gentleman and a good fellow. But there can be little limitation to his monarchy or the machine would not work. He lives somewhat apart from his subjects, having his meals in lonely state, and only occasionally comes into the ward-room, in which most of the ship's commissioned officers live and move and have their being. The sub-lieutenant's, midshipmen's, junior engineer officers', assistant paymasters', and clerks' mess is known as the gun-room. In the old days what is now the ward-room was called the gun-room, and what is now the gun-room, the midshipmen's berth. It is probable that this enforced seclusion is one of the worst trials of the captain's greatness, since he has spent the whole of his previous service afloat in the *camaraderie* and good-fellowship of the ward-room and gun-room. At sea he passes a great portion of his time on the bridge, and in most ships has a special sea-cabin in its close proximity. He is the supreme court of justice on board, and as he can dispense punishment up to ninety days' imprisonment with hard labour "off his own bat", it must be a pretty bad case, or one in which an officer is concerned, that he has to send before a court martial.

This should be remembered when, as is sometimes the case, comparisons are drawn in the Press between the numbers of courts martial in the naval

and military services, or between those held on the men of the navy and on those of the marines. A naval court martial is a very big affair, only resorted to on rare occasions, while in the army, besides the general court martial, which may be ranked with the naval court, there are district and even regimental courts martial, the latter very small affairs, composed of three junior officers, which deal with offences which in the navy would probably be settled off-hand, if not by the commander, at any rate by the captain. When marines are serving ashore in their barracks they come under army rules, so that the proportion of courts martial held on a given number of marines must always be expected to be greater than in the case of a similar number of bluejackets or stokers. No comparison as to good conduct or otherwise can therefore be instituted along these lines.

The captain of a ship, being in supreme command, exercises a general supervision over his ship and all that it contains, and is, of course, directly responsible to the admiral under whom he is serving and to the Admiralty for its condition both as to material and personnel. But the second in command—the "commander"—addressed by the courtesy title of "captain" also—may be regarded as the managing man. He lives, or rather has his meals, in the ward-room. As to where he actually *lives*, it may be said to be everywhere on board except in his own cabin. He is perhaps the hardest-worked man in the ship. Up at daylight, he is engaged in running the whole show till he goes the rounds at 9 p.m. to see that everything and everybody is properly settled down for the night. He draws up a regular daily and weekly routine, which he personally sees is regularly carried out. He "tells off" the "hands" for this, that, and the other duties, and sees that everyone is at his

proper station at "general quarters" for action, fire quarters, collision stations, and many another "evolution". He holds a daily court of justice, and either deals with the defaulters who have been "shoved in the rattle", i.e. put in his report, himself, or in more serious cases passes them on to the higher court—the captain. In most ships there is yet a minor court, held by the senior officer of marines on his own men. His powers are yet more limited, and if after investigation he finds that they will not admit a sufficient punishment for an offence, he takes the offender before the commander. In some ships he is empowered by the captain to bring such cases directly to him.

In spite of the commander's hard work, he has little to grumble at, nor, I believe, does he ever do so, except in the ordinary conversational way we all do at times, when we "let off steam". For he knows that, unless he is very unfortunate in his "skipper", he has his promotion in his own hands. He is showing what he is made of, and once he succeeds in negotiating the big jump to captain's rank he is assured of going right on to admiral, even if he is not fortunate enough to "hoist his flag" in command of a squadron or fleet. He has the relative rank of a lieutenant-colonel in the army, and is almost invariably a much younger man, probably from thirty to thirty-five years of age, and can take and bear the strain of his position.

After the commander the lieutenants. Of these in a battleship three or four are lieutenant-commanders, and five or six lieutenants. The senior of these is known as the first lieutenant, or, less officially, as "No. 1". In smaller ships they are, of course, fewer.

One of these will be the gunnery lieutenant, another navigating lieutenant, and a third torpedo lieutenant. The remainder are classed as watch-keepers, in which duty they are now assisted when in harbour by the officers of marines belonging to the ship. As everyone knows, the day and night on board ship are divided into periods of four hours, known as "watches", except for the "dog watches" of two hours apiece. They run as follows:—

NAME.	TIME.	BELLS.
Middle watch ...	Midnight to 4 a.m. ...	8 to 8
Morning watch ...	4 a.m. to 8 a.m. ...	8 to 8
Forenoon watch ...	8 a.m. to noon ...	8 to 8
Afternoon watch ...	noon to 4 p.m. ...	8 to 8
1st Dog watch ...	4 p.m. to 6 p.m. ...	8 to 4
2nd Dog watch ...	6 p.m. to 8 p.m. ...	4 to 8
First watch ...	8 p.m. to midnight ...	8 to 8

The bell is struck, generally by the marine sentry posted nearest to it, or the corporal of the gangway, every half-hour, after reporting the time to the officer of the watch, and being instructed to "make it so". Thus at 8.30 in the morning he strikes it once, at 9 twice—two strokes quickly following each other; at 9.30 three times—two quick strokes, an interval, and a single stroke—and so on up to eight bells struck in a succession of double strokes. There is also "little one bell", a gentle stroke five minutes after midnight for the watch to "fall in". The dog watches have stood from time immemorial, in order to change the men of the night watches every twenty-four hours. Otherwise the same men would always be keeping the same watches. Some men would always be on at

night and others in the daytime. By dividing the 4 p.m. to 8 p.m. watches into two halves—the "first" and "second" dog watches—the rotation is changed, so that men come on watch at fresh periods. There is said to be a tradition that the origin of the word "dog" is "dodge", and that they were originally known as "dodge watches", the reason being obvious. But I should be sorry to vouch for the accuracy of this statement.

The officer of the watch is practically in command of the ship for the time being. He has to deal with any sudden emergency himself; there may very probably be no time to refer to the captain, even if it is advisable to do so. He keeps his watch on the fore-bridge, and sees that the quartermaster at the wheel keeps the ship upon her proper course. He takes observations from time to time, and is entirely responsible—under the captain—for the safety of the ship and all on board. All sorts of reports have to be made to him from time to time, and he makes or sends any necessary reports to the captain.

The lieutenants have charge of their "divisions", which may be said to correspond to the companies of a regiment; have to inspect them at morning and evening parades, known respectively as "divisions" and "evening quarters", and are responsible for their men's clothing being uniform and kept up to the regulation quantities. They have many other incidental duties, such as boarding ships coming into harbour as "officer of the guard", going ashore in charge of men for drill, musketry, and other miscellaneous work of which space precludes the merest mention.

The gunnery lieutenant is, of course, responsible

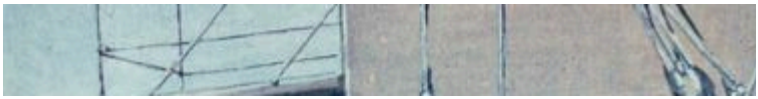
for the guns and gunnery of the ship, which includes the musketry and infantry drill of the seamen and stokers. The torpedo lieutenant, as his name implies, has charge of the torpedoes and their tubes and the mining gear, and it is his business to see that they are all kept in proper working order and in instant readiness for action. In addition, he has entire charge of the electric lighting and wireless telegraphy.

The navigating lieutenant has taken the place of the old "master", but is not, as he was, outside the executive line. His duty is to lay off the course for the ship, take her position at various times during the day by "shooting the sun" with his sextant, keep the chronometers wound up, and take general charge of the navigation of the ship. Following the order taken in the Navy List of the officers of a ship, we come to that very important personage the engineer commander. In some sort he occupies a similar position to the old sailing-masters in the days when ships were commanded by soldiers. The ship couldn't get along without the special engineering knowledge of this officer and his understudies any more than William the Conqueror could have got across Channel without Stephen FitzErard, his sailing-master.

We may note, in passing, that to this day the executive ranks of the navy always call themselves the "military branch". They are, of course, the "militant" branch, though in one sense no one on board a ship in action can help being a militant too.

The engineering branch, at any rate, stands as good a chance of casualties as even the executive or marine portions of the ship's complement, and it is perhaps partly for this reason that its officers have

recently been allowed to wear the much-prized executive "curl" of gold lace on their sleeves. The engineer commander has charge of all the engines on board, the number of which runs to several dozen, for besides the big main engines for propelling the ship there are smaller engines for almost every conceivable purpose. There are engines to work the steering-gear, the winches and hoists, the dynamos to produce electric light, for the magazine refrigerating machinery, and many others, to say nothing of those in the steamboats belonging to the ship. He and the carpenter are also responsible for the hull of the ship, the expenditure and replenishment of coal and oil, and goodness knows how many other things! To assist him in all this mass of work and responsibility he has two or three engineer lieutenants and a number of artificer engineers, engine-room artificers, mechanicians, chief stokers, and, in a big ship, hundreds of stokers.





ROYAL MARINES
Gunner, R.M.A. Colour-Sergeant, R.M.L.I. Majo

The duty of senior engineer lieutenant is no sinecure either, since he occupies much the same position in regard to his chief as the commander does to the captain of the ship. The remaining engineer lieutenants keep watch down in the engine-room in the same way as the other lieutenants do on deck.

Still following the order of the Navy List, we come to the officers of marines. In the old days there were, perhaps, five or six of these in a line-of-battleship, but the biggest "Dreadnought" of to-day never carries more than two, unless, perhaps, there is another one attached to the admiral's staff—supposing it to be a flagship—for special duties in connection with the Intelligence Department, &c. Generally in a flagship there is a major and a subaltern. Of the two, one, probably, will be a marine artilleryman. Other big ships will have a captain and a subaltern, and in smaller ones a captain or subaltern alone. Their duties are considerably more onerous than they used to be, since they are wisely made of much more use in the general work of the ship, instead of being relegated to the unsatisfactory rôle of being "lookers on at life".

The major is, of course, responsible for the conduct, drill, and military efficiency of his detachment, which may number about 100 men, but he has, in addition, to inspect those of other ships in the squadron or fleet from time to time, and to command and drill the marines of the fleet when landed together for drill or tactical instruction. He or the captain of marines in another ship has charge also of the gunnery of his men, who are told off to man some of the guns in the ship, and may very possibly be himself stationed in one of the control-

positions in time of action. He also commands the detachment when drawn up as a guard of honour to receive the admiral or any distinguished visitor who is entitled to this mark of distinction. His subaltern assists him generally with the detachment, visits the sentries from time to time during the night and day, keeps his turn of watch in harbour and of officer of the guard, drills and looks after the marine guns, and not infrequently acts as assistant gunnery or torpedo officer. All this is very different from the old days, when the captain or major of marines was popularly supposed to spend his time on the stern lockers practising the flute, and when on arrival in harbour it was considered to be a near thing as to whether he or the "killick"[78] touched the ground first.

The Church takes the next place, in the shape of the chaplain, generally a great acquisition to the mess. The "padre" or "sky pilot" requires to be a man of considerable tact, and generally speaking he is. He has to be on more or less friendly terms with everyone fore and aft, or he would find it difficult to carry out his spiritual duties effectively. On the other hand, I may fairly say that it is his own fault if, in this respect, he is not met more than half-way both by his messmates in the ward-room and by the "lower deck".[79] He reads prayers at divisions or morning parade, visits the sick-bay and cells, superintends the instruction given by the ship's schoolmaster, and, of course, carries out divine service on Sundays. Sometimes he occupies the post of naval instructor in addition to his strictly clerical duties, and in that capacity instructs the midshipmen in various more or less scientific subjects, such as applied mathematics and navigation, &c., and generally musters his pupils on deck with their sextants at noon to take their observations and work

out the exact position of the ship. He and the paymaster often look after the men's savings-bank, and make themselves useful in other small matters connected with the interior domestic economy of the ship and her ward-room mess.



THE 13.5-INCH GUN: SC

Thirteen midshipmen seated upon this monster naval gun s each carry eight or ten 13.5-inch guns. They settled the fat German ships back to port shattered and on fire.

The fleet surgeon, with one or two surgeons, has entire charge of the health of both officers and men. His special domain is the "sick-bay", generally situated forward, so that the sick get the freshest air,

and he is assisted in his duties by a staff of sick-berth stewards and sick-berth attendants. He is an autocrat in his way, as not even the captain can traverse his decisions as to health or disease. He makes a daily report of the officers and men on the sick-list to the captain, and arranges that one of his surgeons is always at hand in case of accidents. In action he and his staff and what extra assistants can be spared arrange a place down below the armoured deck where they can do what is possible for the wounded that are passed down to them. But in these days, when guns are closed up in separate turrets and casemates, it is not too easy a business to arrange for the transport of these poor fellows.

The fleet paymaster is another non-combatant—so far as it is possible for anyone to be so classed on a ship-of-war—and has the responsible duty of looking after the pay, accountant, and clerical work of the ship, stores of all kinds, and many other matters of a like nature, including "slops" or clothes for the ship's company. The paymaster line has no curl on the sleeve and wears white cloth between the gold stripes of rank. The surgeons also have plain stripes, but with scarlet cloth between them. The engineers wear purple between their stripes, and the naval instructors sky-blue, but this is rarely seen, since most naval instructors are also chaplains and wear the ordinary clerical rig. Personally I have never set eyes on the sky-blue.

This about finishes the list of ward-room officers, but those in the gun-room are at least as numerous. The autocrat of the gun-room is the senior sub-lieutenant, who is supposed to rule his subjects with a rod of iron, or, to be more exact, a leather dirk scabbard, which at times forms a useful and effective

instrument of justice. In the gun-room live the midshipmen, clerks, and assistant-engineer officers, and their duties have, generally speaking, been already indicated in describing those of the senior officers of the various branches to whom they are assistants and understudies. But a word or two about the midshipmen—the "young gentlemen" as they are generally called—will not be out of place. They have plenty to do. They have to keep watch like their seniors, and one important, though unofficial, part of a watch-keeping midshipman's duties used to be to brew and bring up a cup of cocoa to the officer on the bridge in the middle watch. But this is probably now an exploded custom. A midshipman generally has charge of one of the boats, and takes great pride in keeping it and its crew well up to the mark. The "young gentlemen" drill under the gunnery lieutenant before breakfast, work with the chaplain or naval instructor during the forenoon, and at any moment must be ready to go away in charge of their boats. Every midshipman is expected to keep a daily "log", which is periodically inspected by the captain. Some of them take the greatest pains not only to make their logs models of neatness, but to decorate them with sketches, drawings, and plans, often of considerable merit and interest. This is but a very partial and fragmentary account of the duties of the boys from whom our future admirals and commanders-in-chief will be recruited, but it is time this chapter was drawing to a close, and we cannot leave our ship without at least mentioning a few other people who, though not commissioned officers, are yet of very great importance in her interior economy.



6-INCH GUN DRILI

First and foremost there are the warrant officers, pre-eminent among whom are the boatswain, gunner, and carpenter, three time-honoured titles. The first-named may be regarded as the commander's right-hand man, and has multifarious duties and responsibilities. The duties of the other two are sufficiently indicated by their titles. Then there are engineer warrant officers, and of late years marine warrant officers known as "Royal Marine gunners". The "sergeant-major" of marines, which is the courtesy title borne by the senior non-commissioned officer of the corps on board, is also a man of

considerable importance on a man-of-war. Then there are the chief petty officers, and petty officers such as the yeoman of signals, the chief quartermaster, chief boatswain's mate, and many others, together with sailmaker, blacksmiths, armourers, electricians, coopers, cooks, bandsmen, plumbers, and all kinds of ratings whose presence on board His Majesty's ships and vessels of war is little suspected by the man in the street. Then there is the ship's police, headed by the master-at-arms or "jaundy".[80] These men are recruited from all branches of the navy, and perform much the same duties as the "bobby" on shore, look after the prisoners in cells, and are supposed to detect all irregularities that may take place on board and to bring the delinquents to justice.

If a ship is a flagship there is naturally a more important personage on board than any of the officers whose ranks and duties have been detailed—the admiral in command of the fleet or squadron. He may be a full admiral—the highest rank employed afloat—a vice-admiral, or a rear-admiral, the difference in rank being indicated by the number of stripes on the cuff of his coat, placed above the lower very wide stripe of gold lace. Thus a rear-admiral has one narrow stripe above it, with the executive curl, a vice-admiral two additional narrow ones, and an admiral three. The admiral lives in a regular suite of cabins, generally right aft, consisting of a dining-room or fore-cabin, a sitting-room or after-cabin, and two or three sleeping cabins. The captain of a flagship is known as the flag-captain, and he, with the flag-lieutenant, secretary, and sometimes an officer of marines, form the admiral's staff. All these officers are distinguished from the rest of the officers in the squadron by wearing aiguillettes. The captain,

of course, has to command his ship like other captains, but the secretary, who is a staff-paymaster or paymaster told off for this special duty, is the admiral's right-hand man as regards the tremendous amount of paper work connected with the command of a fleet or squadron. The flag-lieutenant is the admiral's personal aide-de-camp and so is specially to the fore, both in the big man's inspections of ships and naval establishments and in social duties and functions. He is also an authority in connection with signalling in its various branches, and necessarily and generally a smart young man all round. He and the secretary mess at the admiral's table and not in the ward-room. A man-of-war, it will be realized, even from this necessarily very brief attempt to describe those who make their "home on the rolling deep" on board her, is a little world in herself.

CHAPTER XVI

Beginning of the War Afloat

"Hark! I hear the cannon's roar
Echoing from the German shore."
Old Nautical Ballad (in Huth Collection).

"Come all ye jolly sailors bold,
Whose hearts are cast in honour's mould,
While English glory I unfold.
Huzza for the *Arethusa!*

Her men are staunch
To their fav'rite launch,
And when the foe shall meet our fire,
Sooner than strike we'll all expire
On board of the *Arethusa*.

"And, now we've driven the foe ashore
Never to fight with Britons more,
Let each fill his glass
To his fav'rite lass;
A health to our captain and officers true,
And all that belong to the jovial crew
On board of the *Arethusa*."
Old Naval Song.

Ordered by the Admiralty to be engraved upon a brass plate and fixed in a conspicuous position on board H.M.S. *Arethusa*, after the Battle of the Bight, 28th August, 1914.

IN July, 1914, it was determined to have a "test mobilization" of the British fleet. "Mobilization" means, in connection with either the navy or the army, the calling up of reserves and filling up regiments or ships till they have the numbers necessary to complete them for war service. In previous years it was usual to have a series of naval manœuvres during the summer or autumn, to practise our fleets in working together or to work out strategical problems. This generally entailed a partial mobilization, but in 1914 it was determined to see how the machinery for mobilization would work at full power.

On the 19th and 20th July the magnificent naval force formed by the assembly of the first, second, and third fleets, with various flotillas of destroyers and submarines, was inspected at Spithead by King George. After a few days' fleet exercises in the Channel the great armament dispersed, the first fleet going to Portland, the remainder to their home ports to give manœuvre leave. But in the meanwhile affairs on the Continent became so threatening that it was deemed a wise precaution to keep the first fleet in readiness where it was, and to defer giving leave. On the 27th July Austria declared war against Serbia. Two days later the first fleet steamed out of Portland and disappeared from sight. Where it went we do not know, but in a short time it and all our other fleets were swallowed up in "the fog of war", from which some of their ships have from time to time made dramatic entrances upon the scene of conflict, generally attended with unpleasant consequences to the enemy.

Events now moved with the greatest rapidity. Germany declared war on Russia on 1st August, and on the day following her troops violated the neutrality not only of Luxembourg but of Belgium, although she—equally with Great Britain and France—had guaranteed the neutrality of the latter country by a formal treaty. On 3rd August the action of Germany automatically brought France into the war, and on the same day the mobilization of the British fleet was completed at four o'clock in the morning. On the 4th the British ultimatum was dispatched. It was summarily rejected, and by 11 p.m. the two countries were at war.

The next morning the first shots were fired by the British Navy. H.M.S. *Amphion*, a smart four-funnelled

vessel of the light-cruiser class, which, with a flotilla of destroyers, was on patrol duty in the North Sea, was spoken by a trawler about 9 a.m., who reported having recently seen a suspicious steamer "throwing things overboard". The skipper described her position as nearly as he could. It was easy to guess what the "things" in question were. Germany had made little or no secret of her intention to pursue a policy of strewing mines in the open sea, though she had a fine fleet, only second to our own, both in numbers and discipline. (Nelson, it may be pointed out, won the battle of St. Vincent with 15 line-of-battle ships, 4 frigates, a brig and a cutter, although he attacked an enemy fleet consisting of 27 line-of-battle ships, 7 of which carried more guns than any English ship, and 13 frigates.) We may well imagine the zest with which our little squadron set off to punish the naval "dynamitards", and it was not long before a mercantile-looking steamer hove in sight, which proved to be the *Königin Luise*, of 2000 tons, belonging to the Hamburg-Amerika Line. She was steering east, and four destroyers shot after her like greyhounds unleashed. The chase was good for about twenty knots, but after a thirty-mile run the *Amphion* and destroyers opened fire, which the German returned. The destroyer *Lance* now crept up abreast of her on the port hand and fired[81] at comparatively close quarters. Four shots did the trick. The first absolutely wrecked her fore-bridge, the second got her fair amidships between the funnels, while the last two made such a mess of her stern that she began to founder.

With true British sportsmanship and humanity, every attempt was at once made to rescue her crew, with the result that twenty-eight escaped a watery grave. The *Amphion* and her satellites, having

disposed of the mine-layer, proceeded with their work until about 6.30 the following morning. The flotilla was at this time in the neighbourhood of the spot where the *Königin Luise* had been dropping her mines. Every precaution was taken to avoid what was supposed to be the dangerous area, but suddenly, without any warning, the *Amphion* struck a mine and the catastrophe occurred. "A sheet of flame instantly enveloped the bridge, rendered the captain insensible, and he fell on the fore-and-aft bridge. As soon as he recovered consciousness he ran to the engine-room to stop the engines, which were still going at revolutions for 20 knots. As all the fore part was on fire, it proved impossible to reach the bridge or to flood the fore magazine. The ship's back appeared to be broken, and she was already settling down by the bows. All efforts were therefore directed to placing the wounded in a place of safety, in case of explosion, and towards getting her in tow by the stern. By the time the destroyers closed, it was clearly time to abandon the ship. They fell in for this purpose with the same composure that had marked their behaviour throughout. All was done without hurry or confusion, and twenty minutes after the mine was struck the men, officers, and captain left the ship."[82]

It was not long before the corner of the curtain shrouding the North Sea was again raised for a moment to give us a fleeting glimpse of the destruction of the German submarine U15 by the cruiser *Birmingham*. There have been one or two versions of this event. According to one account, the look-outs on board the cruiser "spotted" the periscope of a German submarine rather over a mile distant and opened fire; and so good was the marksmanship of her gunners that, small as was the target offered

by the periscope, it was carried away at the first shot. The submarine dived, but, being unable to see where she was going, came to the surface, only to have her conning-tower wrecked by another projectile, which did so much damage that the U15 sank like a stone. According to a well-known writer on naval matters[83] this story, however, is "entirely fictitious, except in so far that the *Birmingham* did sink the U 15; but the real truth of the matter is that the U 15 fired at a certain British ship and missed her. Thereafter the U 15 might have got home in safety had not her captain imagined that he had succeeded, and come to the surface to shout 'Deutschland über alles'. That little incident settled the fate of the U 15, as she came up alongside the *Birmingham* and was sunk at once."

This incident took place on the 9th August, and for the next fortnight or so the "fog of war" rolled very thick over the North Sea. There is reason to believe that things were not exactly peaceful during all this time, since on the 19th there was an official reference to some "desultory fighting", resulting in no loss to either side. Between the 24th and 28th the Germans sank twenty-two fishing-boats. Immediately after, a well-planned move by the British Navy resulted in what is known as the "Battle of the Bight". The rocky, cliff-bound islet known as Heligoland—the German Gibraltar of the North Sea covering the approaches to Cuxhaven and the Kiel Canal—was not so long ago a British possession. It had been ours for over a century when we exchanged it for Zanzibar, because we thought "there was more money in it". We had never made any use of it when we had it. Had we fortified it, as the Germans have now done, its value in the war would have been priceless. That we did not do so may be set down to our fear of

offending German susceptibilities and to our fixed resolve not to contemplate a war with Germany as being in the plane of practical politics. If any Government had attempted to make an advanced naval base of it, what an outcry there would have been!

It has been described by a German naval writer as "the strategical basis of the German fleet, distant about 40 miles from the mouths of the Elbe, the Weser, and the Jadhe. It is a fortress of the most modern kind, furnished with the newest weapons, and fortified with the utmost technical skill. Its guns, contained in armour-plated revolving towers and bomb-proof casemates, dominate the sea over a circle from 20 to 25 miles in diameter. Powerful moles, some 650 feet long, protect the flotillas of torpedo-boats and submarines, and great stores of ammunition and supplies facilitate the provisioning of our ships."[84]

Over and around this rock-bound fortress in the early hours of the morning of 28th August hung a thick mist—almost a light fog. Now and again the watchers on duty caught sight of the phantom shapes of the German destroyers and torpedo-boats as they carried out their never-ending sentry-go over the approaches to the Elbe. Presently out at sea there were ruddy glimmers through the haze, followed by the slam of small cannon. Away to the westward, in a lift of the mist, the German patrols suddenly "spotted" the porpoise-like forms of three big submarines brazenly exposing themselves on the surface, and a general dash was made in the direction of this splendid "bag".

But they were too late. The intruders had dived,

and were out of sight or hearing. Then suddenly broke out a rapid banging all round in the mist.

What was happening? As a matter of fact, our First and Third Destroyer Flotillas, supported by the First Light-cruiser Squadron, and with the First Battle-cruiser Squadron in reserve, were carrying out an ingenious plan which was described as "a scooping movement" against the German war-craft known to be in the neighbourhood of Heligoland. Some of our submarines were also playing their part, and it is probable that the "scoop" was planned on information previously gained by these little craft, since it was officially announced by the Press Bureau, after the battle, that "the success of this operation was due in the first instance to the information brought to the admiral by the submarine officers, who have, during the past three weeks, shown extraordinary daring and enterprise in penetrating the enemy's waters".



THE SINKING OF THE G
A snapshot from one of the British war-

The three submarines were a decoy to draw the enemy's flotillas to the westward. Then down came the saucy *Arethusa*, looking not unlike a big destroyer herself, flying the broad pennant of Commodore R. Y. Tyrwhitt, and the destroyers of the Third Flotilla. The new-comers immediately attacked the German Flotilla, which was now making for Heligoland. The *Arethusa*, in her turn, was attacked by two German cruisers, and there was something in the nature of a general mêlée, in which the *Fearless* and the First Destroyer Flotilla very shortly took a hand. Our gunnery seems to have been the more effective, but all the same our flotillas were somewhat hardly

pressed until the Light Cruiser Squadron, and finally the battle-cruisers, with their enormous guns, came looming colossal out of the mist and gave the German cruisers the *coup de grâce*. The *Köln* and *Mainz* were set on fire and sunk outright, the third cruiser, subsequently understood to have been the *Ariadne*, disappeared blazing into the fog, only to founder shortly afterwards, while two destroyers were also accounted for. The *Arethusa* was somewhat damaged, and was towed out of the fight by the *Fearless*. Of course, with the arrival of our reinforcements, we were in overwhelming superiority, and our principal risk lay in the enemy submarines, which attempted an attack that was balked by the high speed of our ships and the alertness of our destroyers.

A thrilling account of the engagement is contained in a letter[85], written by a naval officer who evidently was serving on board one of our destroyers. I do not think I can do better than quote from it: "We destroyers went in and lured the enemy out and had lots of excitement. The big fellows then came up and did some excellent target practice, and we were very glad to see them come; but they ought not to consider we had a fight, because it was a massacre, not a fight. It was superb generalship having overwhelming forces on the spot, but there was really nothing for them to do except shoot the enemy, even as Pa shoots pheasants. For us who put up the quarry in its lair, there was no doubt more to do than 'shoot the enemy', for in our case the shooting was passive and not active only! For that very reason the fight did us of the destroyers more good than it did our big fellows, for my humble opinion, based on limited observation, is that no ship is really herself until she has been under fire. The

second time she goes into action you may judge her character; she is not likely to do normally well the first time. We all need to be stiffened and then given a week or two to take it all in. After that we are 'set'. A ship will always do better in her second action. To see the old *Fearless* charging around the field of fight (it was her second engagement) seeking fresh foes was most inspiriting. Until the big brothers came up she was absolutely all in all to us, and she has no bigger guns than we have. I also learn that there is all the difference in the world between a 4-inch gun in a cruiser and a 4-inch gun in a destroyer. I would regard a cruiser armed with a 3-inch as about a match for a destroyer with a 4-inch; but then I have personally only looked at it from a destroyer point of view. But it must be more unpleasant to have half a dozen plumped accurately and together at you, with a well-arranged 'fire-control' guiding them, watching their fall, and applying corrections to the range scientifically and dispassionately, rather than to have isolated shots banged off from a vibrating pulsating destroyer, turning this way and that, with no one to look where the shot falls, except, perhaps, the captain, who has a lot of other things to attend to. . . .

"Have you ever watched a dog rush in on a flock of sheep and scatter them? He goes for the nearest and barks at it, goes so much faster than the flock that it bunches up with its companions; the dog then barks at another and the sheep spread out fanwise, so that all round in front of the dog is a semicircle of sheep and behind him none. That was much what we did at 7 a.m. on the 28th. The sheep were the German torpedo-craft, who fell back just on the limits of range and tried to lure us within fire of the Heligoland forts. *Pas si bête!* But a cruiser came out

and engaged our *Arethusa;* they had a real heart-to-heart talk while we looked on, and a few of us tried to shoot at the enemy too, though it was beyond our distance. We were getting nearer and nearer Heligoland all the time; there was a thick mist, and I expected every minute to find the forts on the island bombarding us; so *Arethusa* presently drew off after landing at least one good shell on the enemy.

"Seeing our papers admit it, so may I—our fellows got quite a nasty 'tummy-ache'. The enemy gave every bit as good as he got there. We then re-formed, but a strong destroyer belonging to the submarines got chased, and *Arethusa* and *Fearless* went back to look after her, and we presently heard a hot action astern. So the captain, who was in command of the flotilla, turned us round and we went back to help, but they had driven the enemy off, and on our arrival told us to form up on the *Arethusa*.

"When we had partly formed and were very much bunched together, a fine target, suddenly out of the 'everywhere' arrived five shells not 150 yards away. We gazed at whence they came, and again five or six stabs of fire pierced the mist, and we made out a four-funnelled cruiser of the 'Breslau' class. These five stabs were her guns going off, of course. We waited fifteen seconds and the shots and the noise of the guns arrived pretty simultaneously fifty yards away. Her next salvo went over us, and I, personally, ducked as they whirred overhead like a covey of fast partridges. You would have supposed the captain had done this sort of thing all his life; he gives me the impression of a Nelson officer who has lived in a state of suspended animation since, but yet has kept pace with the times, and is nowise perturbed at finding his frigate a destroyer. He went full speed

ahead at the first salvo to string the bunch out and thus offer less target, and the commodore from the *Arethusa* made a signal to us to attack with torpedoes.

"So we swung round at right angles and charged full speed at the enemy, like a hussar attack. We got away at the start magnificently and led the field, so that all the enemy's fire was aimed at us for the next ten minutes. When we got so close that the debris of their shells fell on board, we altered our course and so threw them out in their reckoning of our speed, and they had all their work to do over again. You follow that with a destroyer coming at you at 30 knots it means that the range is decreasing at the rate of about 150 yards per ten seconds. When you see that your last shot fell, say, 100 yards short, you put up 100 extra yards on your sights; but this takes five seconds to do. When you have in this way discovered his speed you put that correction in automatically; a cruiser can do this, a destroyer has not room for the complicated apparatus involved. Humanly speaking, therefore, the captain, by twisting and turning at the psychological moment, saved us; actually I feel we are in God's keeping these days.

"After ten minutes we got near enough to fire our torpedo, and then turned back to the *Arethusa*. Next our follower arrived just where we had been and fired his torpedo, and of course the enemy fired at him, instead of at us. What a blessed relief! It was like coming out of a really hot and oppressive orchid house into the cool air of a summer garden. A 'hot' fire is properly descriptive; it seems actually to be hot! After the destroyers came the *Fearless*, and she stayed on the scene, and soon we found she was

engaging a three-funneller, the *Mainz*. So off we started again to go for the *Mainz*, the situation being, I take it, that crippled *Arethusa* was too 'tummy'-aching to do anything but be defended by us, her children.

"Scarcely, however, had we started (I did not feel the least like another gruelling) when from out the mist and across our front in furious pursuit came the First Cruiser Squadron, the Town class, *Birmingham*, &c., each unit a match for three *Mainz*, and as we looked and reduced speed they opened fire, and the clear 'bang! bang!' of their guns was just a cooling drink! To see a real big four-funneller spouting flame, which flame denoted shells starting, and those shells not aimed at us but for us, was the most cheerful thing possible. Even as Kipling's infantryman, under heavy fire, cries 'The Guns, thank Gawd, the Guns', when his own artillery has come into action over his head, so did I feel as those 'Big Brothers' came careering across.

"Once we were in safety I hated it. We had just been having our own imaginations stimulated on the subject of shells striking us, and now, a few minutes later, to see another ship not three miles away reduced to a piteous mass of unrecognizability, wreathed in black fumes, from which flared out angry gouts of fire like Vesuvius in eruption, as an unending stream of 100-pound shells burst on board; it just pointed the moral and showed us what might have been! The *Mainz* was immensely gallant. The last I saw of her, absolutely wrecked alow and aloft, her whole midships a fuming inferno, she had one gun forward and one aft still spitting forth fury and defiance, 'like a wild cat mad with wounds'. Our own four-funnelled friend recommenced at this juncture

with a couple of salvos, but rather half-heartedly; and we really did not care a ——, for there, straight ahead of us in lordly procession, like elephants walking through a pack of 'pi-dogs', came the *Lion*, *Queen Mary*, *Invincible*, and *New Zealand*, our battle-cruisers. Great and grim and uncouth as some antediluvian monsters, how solid they looked, how utterly earth-quaking.

"We pointed out our latest aggressor to them, whom they could not see from where they were, and they passed down the field of battle with the little destroyers on their left and the destroyed on their right, and we went west while they went east, and turned north between poor four-funnels and her home, and just a little later we heard the thunder of their guns for a space, then all silence, and we knew. Then wireless: '*Lion* to all ships and destroyers; retire'. That was all.

"Remains only little details, only one of which I will tell you. The most romantic, dramatic, and piquant episode that modern war can ever show. The *Defender*, having sunk an enemy, lowered a whaler to pick up her swimming survivors; before the whaler got back an enemy's cruiser came up and chased the *Defender*, and thus she abandoned her whaler. Imagine their feelings; alone in an open boat without food, twenty-five miles from the nearest land, and that land the enemy's fortress, with nothing but fog and sea around them. Suddenly a swirl alongside, and up, if you please, pops His Britannic Majesty's submarine E 4, opens his conning-tower, takes them all on board, shuts up again, dives, and brings them home 250 miles! Is not that magnificent? No novel would dare face the critics with an episode like that in it, except, perhaps, Jules Verne—and all true!"

CHAPTER XVII

Operations in the North Sea and Channel

"Grey and solemn on the wave,
Vast of beam, immense of length;
Coldly scorning death and grave—
Citadel of monster strength.

"Darkened sky and troubled sea,
Thunder-crashing sound in air;
Massive citadel—was she
Such a thing as founders there."
"Submarined." (From *The Battleship*,
by Walter Wood, 1912.)

THE next phase of the naval operations in the Channel and North Sea does not afford quite such satisfactory reading as the "Battle of the Bight", for the loss of several of our cruisers and smaller vessels by mine and torpedo has to be recorded. At the same time the very fact that our ships were at sea, and so offering a target to the German submarines, while their ships were hiding under the fortifications of Kiel and Heligoland, must not be lost sight of.

If we claim command of the sea we must face the risks of the position. The sinking of a few men-of-war by mines or submarines will not transfer the "trident of Neptune" to a fleet which only plays for safety, any more than the destruction of one or two public buildings by a dynamitard will give him the reins of

government. The "silver lining" to the cloud of our losses in men and material is the magnificent bravery and discipline displayed by the crews of the vessels attacked, officers, seamen, and marines alike. Space forbids a detailed account of each of these losses, but it is as well to mention them.

Thus the *Speedy* and *Pathfinder*, small cruisers of mature age, were blown up, the first by a mine, the second by a submarine, during September. In the month of October the cruiser *Hawke*, when in company with the *Theseus* in the North Sea, was attacked and torpedoed by a German submarine, while the *Hermes*, fitted as a tender for aeroplanes, was sunk in a similar way in the Channel, where, on the 27th, the German submarine service went so far as to torpedo the French steamer *Amiral Ganteaume*, crowded as she was with 2500 refugees. The biggest and most dramatic of the losses occasioned by the enemy submarines was the torpedoing of the three big cruisers *Aboukir*, *Cressy*, and *Hogue* on the morning of 22nd September. The ships were by no means new, and their loss is not to be compared with that of the many gallant men who formed their crews.

To quote the official statement issued to the Press: "The duty on which these vessels were engaged was an essential part of the arrangements by which the control of the seas and the safety of the country are maintained, and the lives lost are as usefully, as necessarily, and as gloriously devoted to the requirements of His Majesty's Service as if the loss had been incurred in a general action." The ships were in the neighbourhood of the Hook of Holland when they were attacked by the U 9—alone, according to the German story, though some of the

survivors think there were more, and claim that one was sunk. The *Aboukir* was the first victim, and the other ships, seeing her plight, stopped, or at any rate reduced their speed, to lower their boats to pick up her men, thus giving the enemy an opportunity of torpedoing them also which he was not slow to take advantage of.

"The natural promptings of humanity have in this case led to heavy losses which would have been avoided by a strict adherence to military considerations," remarked the authorized statement published by the Press Bureau, which went on to point out the necessity of this rule being observed, especially in the case of large ships.

The material loss inflicted on the navy by the loss of the *Aboukir*, *Cressy*, and *Hogue* was not great. The three ships were all designed as far back as 1898, which may perhaps account for the rapidity with which they foundered, since the torpedo at that time was by no means so formidable, either as regards range, accuracy, or explosive effect, as those of to-day. It is probable, therefore, that the precautions against these weapons, in the shape of internal subdivision, were not so extensive as in our more modern ships of war. The *Aboukir*, *Cressy*, and *Hogue* were among our very oldest armoured cruisers, and, big as they were, had a comparatively light armament considering their 12,000 tons of displacement.

Considering the extremely limited opportunities afforded by the coyness of the German so-called "High Seas Fleet", our submarines and destroyers retaliated fairly effectively. The E 9, one of our newest submarines, commanded by Lieutenant-

Commander Max K. Horton, R.N., torpedoed the *Hela*, a light 2000-ton cruiser of an old type, on 13th September. The ship was not a great loss to the German Navy, as she was quite an old stager, dating from 1895, but the exploit was a notable one, being carried out, as it was, well behind the Island of Heligoland, that very formidable German naval fortress.

The same boat scored another success on 6th October, when she sighted two German destroyers patrolling off the mouth of the Ems, not far from the island of Borkum, and managed to torpedo one of them—the S 126, of 420 tons. "It was an easier case than that of the *Hela*," said one of the E9's crew on her return to Harwich, "but luck was with us."

"When we rose," he said, "we saw two German destroyers travelling at a speed of some 30 knots. Our commander was at the periscope, and ordered the forward tubes to be fired." They then rose to the surface, and the commander said: "Look at her; the beggar is going down." Then they saw the German rise perpendicularly, and men rushed up to her stern and dived into the water. The submarine then submerged and made her way back.

"I don't want to boast," continued the narrator, "but we got our 'rooties'[86] home. It was not a bad performance."[87]

Again, a smart little action was fought on the afternoon of 17th October between the light cruiser *Undaunted*, commanded by Captain Fox, who was blown up in the *Amphion*—with the destroyers *Lance*, *Lennox*, *Legion*, and *Loyal*, and four German destroyers, all of which were sunk.

"We steamed out of Harwich," wrote an officer who was engaged, "with all the ships' companies jubilant and eager to get into the danger zone, as it was reported that a 'certain amount of liveliness' prevailed in the North Sea.[88] All was quiet till two o'clock, when, heading up northwards and skirting the Dutch coast-line, we sighted the smoke of four vessels. Our captain immediately cleared for action, and signalled the order to chase. We steamed at top speed, with two destroyers disposed on either side of us. It was a never-to-be-forgotten sight—nerves strained to their utmost tension, and everybody as keen as mustard. Sea and spray flew all over us, and covered us fore and aft. The German destroyers turned about and fled, but we had the advantage in speed, soon got within range with our 6-inch bow gun, and opened fire. . . . Once within effective range our 4-inch semi-automatic guns blazed away, the destroyers acting independently. The Germans, seeing themselves cornered, altered course, with the intention of obtaining a better strategic position. Most of their shooting was aimed at the destroyers. Lusty cheers rang from our ships as the first German destroyer disappeared. A 6-inch lyddite shell struck her just below the bridge. She toppled over on her beam-ends like a wounded bird, then righted herself level with the surface, and finally plunged, bow first, all in about two minutes.



"MISSED!"; THE HELM THE BES

This picture illustrates an incident which has frequently oc down submarines and the latter have retaliated by firing torp the war-ship's best protection against attack by submarine.

"We had by this time closed, and the enemy commenced firing their torpedoes. They must have discharged at least eight, one missing our stern by only a few yards. Fortunately for us, we caught sight of the bubbles on the surface denoting its track, and just missed the fate of the *Aboukir*, *Cressy*, *Hogue*, and *Hawke* by a hairbreadth. At 2·55 p.m. the second of the enemy's vessels was seen to be out of action, being ablaze fore and aft, showing the fearful havoc our lyddite shells were making. As each shell hit its mark, funnels, bridge, torpedo-tubes, and all the deck fittings disappeared like magic, dense fumes

from the explosive covering the vessels fore and aft. We actually passed over the spot where the first vessel had sunk, and just for the space of a couple of seconds, as we were tearing through the water at over 30 knots an hour, we caught sight of scores of poor wretches floating about and clinging to charred and blackened debris and wreckage. This was truly a pitiable sight, but as we had two more combatants to put out of action, to stop at such close range, even to save life, would have been courting disaster. We should have been merely exposing ourselves to torpedoes. We had to tear along and try and forget the gruesome result of our work. The second ship, now a mass of seething flame, sank quite level with the water, and we soon had the remaining two literally holed and maimed. Their firing was very poor and inaccurate, although several shells flew around, throwing shrapnel bullets about. It was a marvel that none struck us. The *Loyal* and *Lennox* got quite near one of the German vessels. The surviving German fired her last torpedo, which, however, went wide of the mark. During these activities we had closed in with the last of the Kaiser's destroyers, and placed her *hors de combat*. The *Legion* had two wounded. By 3·30 the action was over, and the German fleet had been reduced by four units. Then came the order to get out boats and save life. Altogether we saved 2 officers and 29 men. . . . Those wretched Teutons made a good fight. They were, of course, completely outmatched."

A few days afterwards the destroyer *Badger* did a smart piece of work in ramming and destroying a German submarine off the Dutch coast. The Admiralty wired to her commanding officer—Commander C. A. Fremantle—that they were "very pleased with your good service". But about the same

time our submarine E 3 was reported to have been lost in the North Sea. The navy made rather a surprise appearance on the Belgian coast towards the end of October, enfilading the right of the German attack on Nieuport, which was being stoutly defended by the Belgians, and formed the extreme left of the "far-flung battle line" of the Allies. Three "Monitors"—novel craft in our service—which had been building for Brazil, but had been taken up by the Admiralty at the outbreak of war, played the leading part to begin with, but later on other heavier ships took a hand in the proceedings. The "Monitors" were especially well adapted for work in the shallow waters between Dunkirk and Zeebrügge. Their appearance was unexpected by the Germans, who suffered severely from their fire, and were unable to press their attack against Nieuport. The "Monitors" *Mersey*, *Severn*, and *Humber*, assisted by destroyers and a French flotilla, steamed within a couple of miles of the shore and were in action from 6 a.m. till 6 p.m. on the first day. Their fire was incessant, one vessel alone firing 1000 lyddite and shrapnel shells. The German trenches, which were about 3 miles inland, were especially aimed at, and the most terrible execution was done upon the troops in them. The German batteries among the big sand-dunes along the beach also came in for a good deal of attention. One battery of field-guns was entirely wiped out, a train collected to force the passage of the Yser was totally dispersed, an ammunition column blown up, and General von Tripp and the whole of his staff, who were near Westende, were killed.

The Germans seemed unable to make an effective reply, and even an aeroplane sent up to signal the ranges by smoke-balls proved a failure. By the end of

the day the Germans had lost 4000 men and had been driven from the coast, where nothing was visible but dense masses of black smoke and lurid patches of flame. The British fire was extremely rapid, some of the guns firing no less than fourteen rounds a minute at times. A few casualties were suffered by the British, but no material damage of a serious nature was sustained, although exposed both to gun-fire and, it is stated, to submarine attacks, which were warded off by the attendant destroyers.

The British Navy continued to do valuable work on the Belgian coast for a considerable time. The *Venerable*, a pre-Dreadnought battleship, did great execution with her big 12-inch guns, which outranged the German batteries. In November, Zeebrügge, where the enemy had established a submarine station, was heavily bombarded and considerable damage done. The British casualties during these coastal operations were but slight. The destroyer *Falcon*, however, received one very destructive shell, which killed 1 officer and 8 men and wounded 1 officer and 15 men.

CHAPTER XVIII

In the Outer Seas

"The idea that an inferior power, keeping its battleships in port and declining fleet actions, can,

> nevertheless, bring the trade of an enemy to a standstill, has no basis either in reason or experience."
>
> SIR GEORGE SYDENHAM CLARKE.

IT had been generally understood that the German programme of hostilities against this country—when the "selected moment" arrived—was to deliver a sudden blow with the full force of their fleet against ours, before the declaration of war and during a time of "strained relations". The first move would probably have been made by submarines and destroyers, and it was hoped that after a successful surprise attack, before war was declared, the German High Seas Fleet would be stronger than the residuum of our own.

For various reasons, which we have not room to discuss here, the Germans had made up their minds that in August, 1914, Great Britain would *not* fight, and that they would be able to carry out their programme against France, Russia, and Belgium, after which they would decide exactly their selected moment to attack us. At the outbreak of war their High Seas Fleet was apparently lying in different deep fiords on the Norwegian coast. What it was doing there, goodness only knows; but we may be sure it was not for anybody's good, except, possibly, Germany's.

Anyway, these ships were not in a position to carry out the programme laid down for war with England, and so scurried back to the security of their fortified bases. So, also, they were not quite ready for raiding our commerce. Still, they were able to put a good many cruisers, regular and auxiliary, on the ocean highways, and for a time gave us a good deal

of trouble. In the Mediterranean they had the big battle-cruiser *Goeben* and the small cruiser *Breslau*, and on the morning of 4th August these two ships bombarded Bona and Philippeville on the Algerian coast. They did but little damage; in fact, it was merely a "runaway knock". The next morning they arrived at Messina, a neutral port, where they had either to remain indefinitely and be disarmed or leave within a prescribed period. The German officers decided to leave, and after a theatrical business of devoting themselves to death, and depositing their wills and private papers with the German Consul—taking good care to report this to the Berlin Press, which published glowing accounts of the "mad daring" of their devoted seamen—they got under way and steamed out, with colours flying and bands playing.

Soon after midnight—6th-7th August—the look-outs on board the *Gloucester*, a light cruiser carrying no heavier gun than a 6-inch, "spotted" them moving along under cover of the land. After steering a parallel course for some time she crossed their sterns to get between them and the land in order to see them better, and hung closely to them all night and morning. "We let the two ships go on under cover of the darkness," wrote one of the crew, "and they were moving without lights at about 23 knots, and then followed almost at full speed. The *Goeben* went on ahead, and the *Breslau* not far behind her. Just about two o'clock the *Breslau* slowed down. . . . As far as we could tell she fired two torpedoes . . . and then discharged several salvoes from her 4-inch guns. We at once replied with our fore 6-inch gun, and, although it was dark, we found that with the second shell we cleared her quarter-deck. . . . Neither the torpedoes nor shells from the *Breslau* hit their

mark. . . . Although they were slightly faster vessels, we kept our distance from them without losing anything all day, and in the afternoon sighted the Greek coast after having made the fastest run across that open bit of water that ever was made. The weather was fine, and there was not a sight of another war-ship except the Germans. . . . When they were off Cape Matapan, the most southerly point of the Greek mainland, the *Breslau* stopped again, as she had done in the night, and waited for us to come on. This time we did not wait for her to open fire, but discharged our fore 6-inch gun directly we got within range."[89]

"After the first shot," wrote another *Gloucester*, "our lads were quite happy, and they kept firing as quickly as possible. One chap near swallowed his 'chew of 'baccy' when the first shot fell short. The next one he spat on for luck, and it took half the *Breslau's* funnel away. He repeated the operation on the next shot, which cleared her quarter-deck and put her after-gun out of action. Then he began to smile."[90]

This interchange of compliments lasted nearly five-and-twenty minutes. The *Breslau* fired heavily, but, though her gunnery was good, she had nothing bigger than a 4-inch gun, and the *Gloucester* was so well handled by her captain—W. A. H. Kelly, M.V.O. —that every salvo arrived just after she had left the spot where it arrived. At last the big *Goeben* turned slowly round and approached the plucky little British cruiser and opened fire, but without effect. As a single shot from her heavy guns would have put the *Gloucester* out of action, and probably sunk her, she withdrew in accordance with her instructions. The *Goeben* and *Breslau* eventually arrived at

Constantinople, where the farce of a sale to Turkey was carried out; but they left behind a good deal of the prestige of the German Navy and a new phrase for our bluejackets' vocabulary—the "*Goeben* glide"—that is, to "skedaddle rather than fight".

About five German cruisers were known to be in the Atlantic, and a considerable force of both our own and the French cruisers set to work to "round them up". The *König Wilhelm der Grosse*, a big armed mercantile cruiser of 14,000 tons and ten 4-inch guns, was "bagged" by the *Highflyer* off the Oro River on the West African coast on 26th August. She had sunk three of our merchantmen, and was holding up a couple more when the *Highflyer* hove in sight. The German, a much faster vessel, was made fast to a captured collier, from which she was coaling, which enabled the *Highflyer*, which dated from 1900, to get within range with her heavier guns. "If all British ships shoot as straight as the *Highflyer*," said the captain of *König Wilhelm der Grosse*, "I shall be sorry for our poor fellows in the North Sea." Nearly a month later the *Carmania*, a big armed liner, sank the *Cap Trafalgar*, a similar vessel—which was disguised as a "Castle" liner with grey hull and red funnels—off the Island of Trinidad to the eastward of Rio de Janeiro.

"We sighted the German", wrote an officer on board the *Carmania*, "about 10 a.m. on 14th September, in the South Atlantic. She was coaling from a collier, and two others were standing off. On sighting us the *Cap Trafalgar* hurried off, smothering the colliers, and soon after the latter steered to the eastward and the *Cap Trafalgar* to the southwards. We steamed after her at top speed, and when about 4 miles off, she turned and steered towards us. We

were cleared for action, and had been standing by our guns for some time, all strangely fascinated by the movements of our enemy. When about 3½ miles off we fired our challenge shot across her bows, and immediately after this she displayed her colours at the masthead, and fired her first shot from her starboard after-guns. This shot came right close over our heads, dropping in the water. Then the firing from both ships became fast and furious. Projectiles and splinters from bursting shells showered around us. The engagement began at 12.10 midday and lasted hot until about 1.10 p.m., when she showed signs of having been badly hit, and was taking a heavy list to starboard, and was on fire fore and aft. We were also on fire on our fore-bridge. Our bridge-telegraphs and steering-gear were completely wrecked, and the captain's cabin, the chart-house, and a number of officers' quarters were gutted. We were also badly holed by her fire. When we found we had crippled our enemy, and that she was sinking, we ceased firing, although her colours were still flying. She gradually listed over till her funnels nearly touched the water. Then she settled down forward till her second funnel almost disappeared. At last she rolled over, showing her keel and propellers, stood up on end, and gradually assumed a perpendicular position and dived out of sight.

"We could make out some boats with survivors, and one of the colliers rendered assistance. We had to clear away, because low down on the horizon the signalman saw smoke and what appeared to be the *Dresden*. We steered away south, and then doubled on our course. By that time darkness was setting in, and we thus escaped her clutches."

An auxiliary cruiser, of course, would not stand

much chance in a duel with a man-of-war cruiser, as was shown by that between the *Highflyer* and the *König Wilhelm der Grosse*, a much newer, larger, and faster ship. Rather later in the year the *Navarra*, another German auxiliary cruiser of the Hamburg-Amerika line, was sunk also in South Atlantic waters by the British auxiliary cruiser *Orama*, an Orient liner. The Germans do not appear to have put up much of a fight, and the British gunnery proved much superior, but details are wanting.[91]

If space permitted, a good deal more might be written about the cruiser operations in the Atlantic, but we have now to turn our attention to the Indian Ocean. The first incident to be noticed is an adverse one to the British. The *Pegasus*, a small cruiser dating from 1899, after having in conjunction with the *Astrea* destroyed the German wireless station at Dar-es-Salem, and sunk the gunboat *Möwe* and a floating-dock, was caught while overhauling her machinery in the harbour of Zanzibar by the German light cruiser *Königsberg*, a much newer vessel.

The *Königsberg* approached at full speed at five o'clock on Sunday morning, 20th September, and, having sunk the British patrol boat by three shots, opened fire on the *Pegasus* from 5 miles distance, closing to 7000 yards. The *Pegasus*, being at anchor, presented an easy target, and the German fire was so well directed that in a quarter of an hour the only guns she could bring to bear were put out of action.

After an interval the German re-opened fire for another fifteen minutes, after which she stood out to sea. The British crew, caught under such disadvantageous circumstances, showed true heroism, though, as may be supposed, they suffered

very severely. The ensign was twice shot away, but afterwards held up proudly by hand by two men of the detachment of Royal Marines, who stationed themselves in the most conspicuous place they could find. One was killed by a shell and his place was at once taken by another comrade. The *Pegasus* was holed badly on the water-line, her fires had to be put out, and she was run aground in shallow water but subsequently driven by wind and tide into deeper water, where she sank.

It was at about this time that the German light cruiser *Emden* began to gain notoriety. She had belonged to the German squadron in China, but had slipped away south, and now began to sink one after another of our merchantmen in the Indian Ocean. This was in contravention of international law, but as, generally speaking, her commander, Captain Müller, saved their crews, and showed both dash and humanity, the British public were more or less inclined to look with a lenient eye on his semi-piratical proceedings. He fired a few shots at Madras and destroyed an oil-tank, and at Singapore torpedoed the *Jemtchug*, a Russian gunboat, and the *Mousquet*, a French destroyer. The *Emden* was enabled to approach unsuspected on account of having rigged up an extra funnel and hoisted Japanese colours. However, her day was yet to come.

By this time British, Russian, Japanese, and French cruisers in the East were on the qui vive, as well as those belonging to the newly-formed fleet of the Australian Commonwealth, and it is to one of the Australian cruisers, the *Sydney*, that the honour of ridding the seas of the "wanted" *Emden* belongs. On 9th November the raiding German arrived at the Cocos Keeling Islands, an isolated group in the

Indian Ocean, and, landing a party of men, set about destroying the British wireless station. Luckily the operators were suspicious of the strange craft, and managed to get off a message which reached the cruisers *Melbourne* and *Sydney* in a somewhat broken condition. "Strange warship—off entrance" it ran. This was about seven in the morning, when they were 50 miles to the eastward of the islands, and in charge of a convoy. The *Melbourne*, as senior officer, ordered the *Sydney* off at full speed to investigate. Before half-past nine the tops of the *Emden's* funnels were made out close to the feathery palm tops denoting the position of the Cocos. She was 10 or 14 miles distant, but she "spotted" the *Sydney*, and very soon opened fire at a tremendous range.

"Shortly after, we started in on her," wrote one of the *Sydney's* officers.[92] "The Australian opened fire from her port guns. Before long a shot from the *Emden* knocked out nearly the whole gun's crew of No. 2 gun on the starboard side."

"There was a lot of 'Whee-oo, whee-oo, whee-oo'," continued the officer above quoted, "and the 'But-but-but' of the shell striking the water beyond, and, as the range was pretty big, this was quite possible, as the angle of descent would be pretty steep. Coming aft, I heard a shot graze the top of No. 1 Starboard. A petty-officer now came up limping from aft, and said that he had just carried an officer below (he was not dangerously hit) and that the after-control position had been knocked right out, and everyone wounded (they were marvellously lucky). I told him if he was really able to carry on to go aft to No. 2 Starboard and see there was no fire, and, if there was, that any charges about were to be thrown overboard at once. He was very game and limped

away aft. He got aft to find a very bad cordite fire just starting. He, with others, got this put out. I later noticed some smoke rising aft, and ran aft to find it was but the remnant of what they had put out, but found two men, one with a pretty badly wounded foot, sitting on the gun-platform, and a petty-officer lying on the deck a little farther aft with a nasty wound in his back. I found one of the men was unwounded but badly shaken. However, he pulled himself together when I spoke to him, and told him I wanted him to do what he could for the wounded. I then ran back to my group.[93]

"All the time we were going at 25 and sometimes as much as 26 knots. We had the speed of the *Emden* and fought as suited ourselves. . . . Best of all was to see the gun-crews fighting their guns quite unconcerned. When we were last in Sydney, we took on board three boys from the training-ship *Tingira* who had volunteered. The captain said: 'I don't really want them, but as they are keen, I'll take them'. Now the action was only a week or two afterwards, but the two out of the three who were directly under my notice were perfectly splendid. One little slip of a boy did not turn a hair, and worked splendidly. The other boy, a very sturdy youngster, carried projectiles from the hoist to his gun throughout the action without so much as thinking of cover. I do think that for two boys absolutely new to their work they were splendid. . . . Coming aft the port side from the forecastle gun, I was met by a lot of men cheering and waving their caps. I said: 'What's happened?' 'She's gone, sir, she's gone!' I ran to the ship's side and no sign of a ship could I see. If one could have seen a dark cloud of smoke it would have been different. But I could see no sign of anything. So I called out: 'All hands turn out the life-boats;

there will be men in the water'. They were just starting to do this when someone called out: 'She's still firing, sir,' and everyone ran back to the guns.

"What had happened was, a cloud of yellow or very light-coloured smoke had obscured her from view, so that looking in her direction one's impression was that she had totally disappeared. Later we turned again and engaged her on the other broadside. By now her three funnels and her foremast had been shot away, and she was on fire aft. We turned again, and after giving her a salvo or two with the starboard guns, saw her run ashore on North Keeling Island. So at 11.20 a.m. we ceased firing, the action having lasted one hour forty minutes. Our hits were not very serious. We were 'hulled' in about three places. The shell that exploded in the boys' mess-deck, apart from ruining the poor little beggars' clothes, provided a magnificent stock of trophies. For two or three days they kept finding fresh pieces. The only important damage was the after control-platform, which is one mass of gaping holes and tangled iron, and the foremost range-finder shot away. Other hits, though 'interesting', don't signify." As for the *Emden*, she was a perfect shambles. Her voice-pipes had been shot away early in the action, and, with the exception of the forecastle, everything was wrecked on the upper deck. The German party on shore seized a schooner, the *Ayesha*, and contrived to escape to sea.

Thus ended the adventurous career of the *Emden*, by far the most successful of the German commerce-raiders. In seven weeks she had destroyed something like 70,000 tons of British shipping, so that the news of her suppression was most welcome in Great Britain. But no one who has not been in Australia

will be able to realize the delight and exultation the news of the *Sydney's* exploit brought to the people of that island continent. That one of their own ships, out of the many that were looking out for the *Emden*, should so effectively have disposed of her was the most magnificent and acceptable news that could be imagined, and it is hoped that her guns will be salved and placed as trophies in the big Australian cities.

Almost simultaneously another sea-wasp, the *Königsberg*, the same vessel which had so mauled the *Pegasus*, besides doing other mischief among our merchant-shipping, was "cornered" by the cruiser *Chatham* in the Rufigi River on the East Coast of Africa. Harried this way and that by our cruisers, she at last took refuge so far up the river that she was out of range from the *Chatham's* guns. At the same time she landed a party of her men on an island at the mouth of the river with Maxims and quick-firing guns. Here they entrenched themselves. The British at once sent secretly to Zanzibar and procured a steamer—the *Newbridge*—loaded with 1500 tons of coal, which, upon arrival, they deliberately anchored across the river channel, in spite of the fire directed upon them by the German detachment on the island. When all was ready, her crew took to their boats, blew three holes in her bottom, and sank her, effectually "bottling up" the *Königsberg*. Several casualties were incurred during this operation. The German cruiser after this contrived to conceal her exact position for some time, by fastening the tops of palm-trees to her masts, but an aeroplane, being brought down the coast in the *Kinfauns Castle*, flew over her and indicated her position by means of smoke bombs, enabling her to be fired at, at long range, by the 12-inch guns of the battleship *Goliath*,

which had now arrived on the scene.

Powerful as were the battleship's guns, they were unable to effect her destruction. It was not until several months had elapsed that the British Navy was able to finish off the German cruiser. The work was eventually carried out by the little monitors *Severn* and *Mersey*, which had made their *debut* on the Belgian coast. While the *Weymouth* and *Pioneer* engaged the guns on the island and others which had been mounted on the river bank, the two monitors steamed up the river and engaged the *Königsberg*. The battle lasted for a long time, as the raider was so ensconced in jungle that the airmen who were "spotting" for the British found the greatest difficulty in seeing where their shot fell. Most of the time the German got six guns to bear on the monitors, and generally fired salvoes. After six hours her masts were still standing, but shortly afterwards she was set on fire by a salvo from the monitors. Her effective guns were reduced to one, and before long she ceased fire altogether.

CHAPTER XIX

A Reverse and a Victory

"Through the fog of the fight we could dimly see,
As ever the flame from the big guns flashed,
That Cradock was doomed, yet his men and he,
With their plates shot to junk and their turrets smashed,
Their ship heeled over, her funnels gone,
Were fearlessly, doggedly, fighting on.

. . . . . .

"We could see by the flashes, the dull, dark loom
Of their hull as it bore toward the Port of Doom,
Away on the water's misty rim—
Cradock and his few hundred men,
Never, in time, to be seen again.

"While into the darkness their great shells screamed,
Little the valiant Germans dreamed
That Cradock was teaching them how to go
When the fate their daring, itself, had sealed,
Waiting, as yet, o'er the ocean's verge,
To their eyes undaunted would stand revealed;
And snared by a stronger, swifter

foe,
Out-classed, out-metalled, out-ranged, out-shot
By heavier guns, but not out-fought,
They, too, would sink in the sheltering surge."
JOHN E. DOLSON. (In an American Newspaper.)

A SAD but glorious day in the annals of the British Navy has now to be referred to—the defeat of Sir Christopher Cradock's squadron off the coast of Chile, with the loss of the *Good Hope* and *Monmouth* with all hands. Sad because of the defeat and the loss of so many gallant officers and men—glorious on account of the way they fought and met their deaths. It is the only thing approaching a naval victory scored by the Germans up to the time of writing.

The German squadron, which was commanded by Admiral Graf von Spee, consisted of the *Scharnhorst*, *Gneisenau*, *Dresden*, *Nürnberg*, and *Leipzig*. The two former had been on the Chinese station and were big armoured cruisers of 11,600 tons, dating from 1907. They were sister ships, each mounting eight 8·2-inch, six 6-inch, and several smaller guns. The *Scharnhorst* (flag) was the crack gunnery ship of the German fleet. The other three ships were third-class cruisers of between 3000 and 4000 tons, similar to the *Emden*, and carried ten 4·1-inch guns apiece, firing 34-pound projectiles. They had been carrying on various separate commerce-raiding operations in the Pacific, had bombarded the French port of Papeete in Tahiti, and now, when the numerous cruisers of the allied Powers were beginning to make the Pacific Ocean "unhealthy" for them, had apparently concentrated off the Chilian coast with the view of

slipping out of it into the Atlantic in hopes of doing further mischief, after capturing the Falkland Islands as a base, or possibly of eventually attempting to find their way back to a German port.

On 1st November at 2 p.m. a British squadron consisting of the *Good Hope* (14,100 tons), *Monmouth* (9800 tons), *Glasgow* (4800 tons), and *Otranto* (12,100 tons) were at sea to the westward of Coronel, in Chile, when it was reported that there were enemy's ships in the neighbourhood. The two first-named ships were armoured cruisers of large size, but not too well gunned for their displacement. The *Good Hope* had a couple of 9·2-inch guns and sixteen 6-inch guns, the *Monmouth* fourteen 6-inch guns. The *Glasgow* was a light cruiser with two 6-inch and ten 4-inch guns, while the *Otranto* was merely a big mail-boat, belonging to the Orient line, armed as a mercantile auxiliary.

At 4.20 the smoke of hostile ships was made out on the horizon, and about a quarter to six the British squadron was formed in line ahead in the order in which their names have been already noted. The enemy came in sight about this time at 12 miles distance, but kept away as long as the sun was above the horizon, as it showed them up well to our gunners and was in the eyes of their own. As soon as it dipped, the light was entirely in their favour. The grey forms of their ships were but dimly discernible, whilst ours were silhouetted black against the ruddy glow of the sunset.

The following account of the action is from the pen of one of the crew of the *Glasgow:*[94] "By 6 p.m. we were steaming abreast each other. The *Monmouth*, as she passed us close on our port side,

gave us a few cheers, which were readily returned. Everyone was stripped and ready, and all seemed satisfied to think that we had found the enemy after searching for nearly three months. The sea was still very rough, and the ships were washing down forward. The enemy's squadron seemed to be going faster than we were, and were getting on our port bow. The sun was setting in the west, and we must have made very nice targets for the Germans, as we were between them and the sun. They had some dark clouds behind them and were difficult to see even then. As soon as the sun had set they altered course towards us, and we turned slightly towards them, the *Otranto* going away off our starboard quarter and taking no part in the action. As soon as the enemy were within 14,000 yards they opened fire, each of the armoured ships firing at the *Good Hope* and *Monmouth*, while the two smaller ships concentrated their fire on the *Glasgow*, although they did not open fire until the fourth ship had joined them and they had got much closer than when the armoured ships opened fire.

"The *Good Hope* and *Monmouth* returned the enemy's fire, and soon the action became general. We were very close to each other on the British side, but the Germans were much farther apart. The enemy soon got the range of our ships and were hitting the *Good Hope* and the *Monmouth* very often, and it was not long before the *Good Hope* was on fire. Soon after the *Monmouth* took fire, but this was kept under.

"After about forty minutes the *Good Hope* seemed to break out of the line and close towards the enemy, and she was not seen again (although some state that she was still firing her after-turret)." According to the

official report made by the captain of the *Glasgow:* "At 7.50 p.m. an immense explosion occurred on board *Good Hope* amidships, flames reaching 200 feet high. Total destruction must have followed. It was now quite dark."

The *Monmouth* and *Glasgow* still fought on gamely, both sides firing at the flashes, the Germans firing salvoes. "The *Monmouth* was very badly damaged by this time", continues the account we have already quoted, "and she hauled off to starboard, followed by the *Glasgow*, as the big ships had now commenced to fire on us as well as the small ones. It was very dark now, but owing to the fire on the *Monmouth* no doubt the enemy had a good mark to aim at. The enemy's fire ceased as soon as we turned away to starboard. It could easily be seen as we passed the *Monmouth* that she had suffered heavily, and it appeared to me that she was still on fire. She also had a list to port and was down by the head.

"Our captain made a signal to her, asking if she was all right, and was told that she was making water badly forward and was trying to get her stern to the sea. He then asked him if he could steer north-west, but received no reply. The enemy were now coming towards us, and we thought that we might have drawn them away from the *Monmouth*, but in a few minutes we could see search-lights and gun-flashes, and we knew that it was the *Monmouth* they were firing on." Under the growing light of a full moon, which was now rising slowly in the stormy heavens, the practically undamaged German squadron was seen bearing down directly on the little *Glasgow*, which, as she could by no possibility be of any assistance to the *Monmouth*, made off at full speed to avoid annihilation, and by 8.50 had run

the enemy out of sight. About half an hour later a number of flashes were seen afar off, which, without doubt, marked the death throes of the gallant *Monmouth*. The *Glasgow* was badly knocked about. She had an enormous gash in her side 9 feet long and 3 feet wide, besides minor injuries. But she lived not only to fight another day, but to take signal revenge on her opponents.

"Nothing could have been more admirable than the conduct of the officers and men throughout. Though it was most trying to receive a great volume of fire without chance of returning it adequately, all kept perfectly cool, there was no wild firing, and discipline was the same as at battle-practice. When target ceased to be visible, gunlayers spontaneously ceased fire."[95]

It must be borne in mind that the only guns in the British squadron equal in power to the sixteen 8·2-inch much more modern weapons of the two big German armoured cruisers were the two 9·2-inch guns carried by the *Good Hope*, one of which was knocked out ten minutes after the battle began.

The *Glasgow*, on the second day after her escape, had a curious experience, if we are to believe the story of one of her men, as she ran plump into a sleeping whale! "That was another shock for us. The ship trembled and we all rushed up on deck to find out what had happened." The *Glasgow* picked up the pre-Dreadnought battleship *Canopus*, which at the time of the fight was unfortunately 200 miles away to the southward, and both ships proceeded in company to Port Stanley in the Falkland Islands. The German ships do not appear to have followed them, but went to Valparaiso, presumably to send home

news of their victory. The news of the disaster to Sir Christopher Cradock's squadron naturally created great enthusiasm in Germany and corresponding grief in this country. But the naval authorities, in dead secrecy, at once prepared to settle accounts with Von Spee and his ships. On the 8th December, just over a month after the catastrophe off Coronel, their efforts bore the fullest fruit. On the previous day a squadron consisting of the battle-cruisers *Invincible* and *Inflexible* and the cruisers *Carnarvon*, *Cornwall*, *Bristol*, and *Kent*, under the command of Sir F. C. Doveton Sturdee, had arrived at Port Stanley in the Falkland Islands, their crews greeting the *Glasgow*, which was lying there in company with the *Canopus*, with round after round of cheering.

The inhabitants of these remote islands were unfeignedly glad to see the new arrivals, since they had received warning that they might expect a German raid. At 8 a.m. the look-outs on Sapper Hill to the south-west of Port Stanley reported columns of smoke coming up over the south-west horizon. Soon afterwards a two-funnelled ship and a four-funneller were made out, and the *Kent* was ordered out to the harbour mouth and orders given for all ships to raise steam for full speed. The *Kent*, it is interesting to note, went into action this day flying the silken ensign and jack which had been presented by the ladies of Kent on her first commission. To conceal the presence of the two big battle-cruisers, which might be spotted by their tripod masts, these two ships were ordered to stoke up with oil fuel, and the thick black greasy smoke billowing from their funnels soon shrouded the harbour with a dusky veil. Twenty minutes later other smoke columns were reported more to the southward.

The two ships first observed, which proved to be the *Gneisenau* and *Nürnberg*, continued to advance steadily towards the island, training their guns on the wireless station, and about an hour and a half after they had first been sighted came within 11,000 yards of the *Canopus*, which let fly at them with her big guns, firing over the low-lying land between the south side of the harbour and the open sea. The Germans at once hoisted their colours and turned away. Then, seeing the *Kent* at the harbour mouth, they turned towards her, but very shortly afterwards turned away again and went off at full speed towards their consorts, who were now coming up. It is thought that they must have got a glimpse of the "surprise packet", in the shape of the *Invincible* and *Inflexible*, that was awaiting their advent.

At a quarter to ten the *Carnarvon*, *Inflexible*, *Invincible*, and *Cornwall* weighed and stood out to sea in the order named, and overtook the *Kent* and the *Glasgow*, which had gone out and joined her a few minutes earlier. The German ships were now in full sight to the south-east—hull down, and doing the "*Goeben* glide" for all they were worth. In the British ships the stokers were working furiously, the smoke belching in thick volumes from the funnels; and, with every man at his post, their decks flooded with water as a preventive against fire, and hoses ready, the vessels gradually gathered way.

At 10.25 the big ships were making 23 knots, and gradually drew ahead of their consorts. The *Invincible* led, the *Inflexible* followed at some little distance on her starboard quarter. The *Glasgow*—all on board burning with eagerness to avenge their late squadron-mates—was ordered to keep at 2 miles distance from the flagship. It was a fine, clear, bright

day, comparatively warm for those latitudes, and it was easy to keep the enemy in sight.

Shortly before one o'clock the two battle-cruisers opened fire with their big guns, presently concentrating on the light cruiser *Leipzig*. She was not hit, but the big shots crept closer and closer, till after about a quarter of an hour she turned away to the south-west, followed by the *Dresden* and *Nürnberg*. At the same time the remaining German ships, the two big armoured cruisers, turned slightly to port and began to return the fire of our battle-cruisers. Thenceforward the fighting resolved itself into two battles, one between the big ships, the other between the smaller cruisers.

As soon as the German light cruisers turned off to their starboard hand the *Kent*, *Glasgow*, and *Cornwall* started after them in accordance with the orders they had received from Admiral Sturdee. The *Bristol* had previously signalled that three more Germans, looking like colliers or transports, had appeared off the Falklands, and, having received orders to take the armed auxiliary cruiser *Macedonia* with her and destroy them, had proceeded to chase them to the westward. The strangers turned out to be two and not three ships, the *Baden* and *St. Isabel*. Both were captured and sunk after the removal of their crews.

Meanwhile the *Invincible* and *Inflexible* were pressing closer and closer on the *Scharnhorst* and *Gneisenau*. "Suddenly we altered course", wrote a midshipman on board the *Invincible* to his father,[96] "and made for the enemy. I had not noticed we were closing, and when their first salvo went off I was still on the top of the turret. I could see all the shells coming at us, and I felt they were all coming straight

at me. However, they all missed except one, which hit the side of the ship near the ward-room, and made a great green flash, and sent splinters flying all round. I hopped below armour quickly and started working again. We were nearing the *Scharnhorst* and began firing for all we were worth. We hit again and again. First our left gun sent her big crane spinning over the side. Then our right gun blew her funnel to atoms, and then another shot from the left gun sent her bridge and part of the forecastle sky-high.

"We were not escaping free, however. Shots were hitting us repeatedly, and the spray from the splashes of their shells was hiding the *Scharnhorst* from us. Suddenly a great livid flame rushed through the gun-ports, and splinters flew all round, and we felt the whole 150 or 200 tons of the turret going up in the air. We thought we were going over the side and would get drowned like rats in a trap. However, we came down again with a crash that shook the turret dreadfully, and continued firing as hard as ever. Nothing in the turret was out of order at all. The range continued to come down, and the whistles of the shells that flew over us grew into a regular shriek. Down came the range, 11,000, 10,000, 9000, 8800 yards. We were hitting the *Scharnhorst* nearly every time. One beauty from our right gun got one of their turrets fair and square and sent it whizzing over the side." By 3.30 the *Scharnhorst* was in a bad way. She was on fire, smoke and steam poured out of her in many places, and when a shell would knock a big hole in her side a dull furnace-like glow was seen within. Several of her guns were out of action and she now turned partially to starboard, apparently with the idea of getting her starboard guns to bear.

Just after four o'clock she was observed to give a

heavy roll to port. She slowly listed farther and farther over, till she lay on her beam-ends, and at 4.17 disappeared below the waves in a dense cloud of smoke and steam. The *Gneisenau*, passing on the far side of the mass of scattered debris marking the grave of her consort, still spat out defiance from her guns. But her hours were numbered, and everyone on board must have known that it was only a matter of minutes before her two huge opponents settled accounts with her. She put up a first-rate fight for nearly two hours longer. She ranged her guns well and hit her adversaries again and again. But each of them was much more than her match, and their great 850-pound projectiles got her time after time.

"5.10. Hit, hit!" wrote one of the *Gneisenau's* officers in a pocket diary.[97] "5.12. Hit! 5.14. Hit, hit, hit! again! 5.20. After-turret gone. 5.40. Hit, hit! On fire everywhere. 5.41. Hit, hit! burning everywhere and sinking. 5.45. Hit! men dying everywhere. 5.46. Hit, hit!" The ship must have been an inferno. At last she could only fire a single gun at intervals, and at 5.40 the *Invincible*, *Inflexible*, and *Carnarvon* closed in on the stricken leviathan and the "cease fire" was sounded. At six o'clock she turned slowly, slowly, over to port till only her rounded side was visible lying in the water like a great whale, with those of her crew who survived walking and crawling over it. Then, suddenly, down she went amid a swirl of waters, leaving those of her crew who were not sucked down with her struggling amid the waves. During the fighting the weather had changed for the worse, the sea had begun to rise, and now a cold drizzle was falling.

"Out boats," was the order on board the British ships, and no pains were spared to rescue their late

enemies. Some of them had their heads quite turned and tried to kill their rescuers, or jumped into the sea again and drowned themselves. "One officer tried to shoot us with an automatic pistol, but it was wrenched from his hand and we escaped," wrote the midshipman before quoted. It is thought that before she sank 600 of the *Gneisenau's* ship's company had been killed or wounded. The British seamen, working indefatigably, were only able to save less than 200, fourteen of whom subsequently died from the effects of cold and exposure.

We must now return to the other running fight which had been proceeding between the smaller ships on both sides. The Germans had no notion of fighting if they could avoid it, and seem to have gone off "helter-skelter" without assuming any definite formation. The *Glasgow* was our fastest cruiser and was ordered to head off the *Nürnberg* and *Leipzig*. As for the *Dresden*, she seems to have got a very long start from the first and was never overtaken. The *Glasgow* opened fire on the *Leipzig* and *Nürnberg* with her 6-inch guns about three o'clock, and succeeded in making them alter course. The former turned to meet the *Glasgow*, while the latter was obliged to turn in a direction which rendered it easier for the *Kent* to come up with her. The *Kent*, an older and slower ship than the *Nürnberg*, made a record spurt and succeeded in getting within range of the German. She had but little coal on board. "The old *Kent* set off and her engines worked up to 22 knots—more than she had ever done on her trials. Then the word was passed that there was hardly any coal left. 'Well,' said the captain, 'have a go at the boats.' So they broke up all the boats, smeared them with oil, and put them in the furnaces. Then in went all the armchairs from the ward-room and the chests from the officers' cabins.

They next burnt the ladders and all. Every bit of wood was sent to the stokehold. The result was that the *Kent's* speed became 24 knots."[98] But it was five o'clock before she could get within range and both ships went at it hammer and tongs for an hour, by which time the *Nürnberg* was evidently on fire. The sea was by now rather choppy and the atmosphere somewhat misty. Just after half-past six the *Nürnberg*, well alight forward, ceased firing. The *Kent* thereupon ceased fire also and closed in to 3300 yards; but, as the German still kept her colours flying, she once more set her guns to work. Five minutes of this and down fluttered the German ensign, and the *Kent* set herself to save as many of her late opponents as she could; but she was, of course, handicapped by having burnt her boats, and only twelve could be rescued with the assistance of the *Cornwall*. It was nearly half-past seven before the *Nürnberg* took her final plunge.

The *Kent* was hit a considerable number of times and lost four killed and a dozen wounded, nearly all by one shell. She had, moreover, a very narrow escape from destruction, from which she was only saved by the heroism of Sergeant Charles Mayes of the Royal Marines. In the words of the notification awarding him the Conspicuous Gallantry Medal: "A shell burst and ignited some cordite charges in the casemate. Sergeant Mayes picked up a charge of cordite and threw it away. He then got hold of a fire-hose and flooded the compartment, extinguishing the fire in some empty shell-bags which were burning. The extinction of this fire saved a disaster which might have led to the loss of the ship."

While the *Kent* was disposing of the *Nürnberg*, the *Glasgow* and afterwards the *Cornwall* tackled the

Leipzig. "We continued to fight the *Leipzig*," writes one[99] of the *Glasgows*," and the *Cornwall* was now coming up to help us, so she hauled off again, and we followed. We soon got close enough to open fire again, and this time we had begun to make good shooting though it was at a long range. She had then turned slightly towards us, and we began to get her range; but she was altering her course so much that it made it extremely difficult to hit her. We got one shell through our control and the splinters killed one man and injured several others. This was the only shell that did much damage. We were getting much closer now and our shells were hitting her as her fire slackened, but we had to be careful owing to the enemy throwing mines over the side. As we got closer . . . our fire became even more effective, she turned to port and we had to cease fire for a while. Then the other battery had a chance and they made some very good shooting. By this time she had altered course again and this allowed the *Cornwall* to open fire on her, but it looked to us as if her fire was going very short. The *Leipzig* now fired at the *Cornwall* and we got up fairly close and poured in a heavy fire. She then took fire on her stern, and her mast and funnel went over the side. Then she was smoking amidships and a shell knocked away the upper half of her second funnel. She was now beaten but she refused to answer our signal to surrender, and after a while we opened fire on her again, and, as it was by this time quite dusk, we could see the shells strike and burst. She was lying quite helpless now and burning fiercely from amidships to the after end. The smoke which came from her in dense clouds, came across us and we could smell the faint burning.

"Then she fired one of her guns, and this was a

signal for a fresh outburst from us. We kept steaming round near the burning ship, and then we saw them fire a white rocket. We and the *Cornwall* then lowered boats and went nearer to the now sinking ship." "When we went right close to", says another eyewitness, "she looked just like a night-watchman's bucket—all holes and fire. She was a mass of white heat. You would not think an iron ship would blaze like that." To continue to quote the previous narrator: "Our boats had just arrived near the ship, when she rolled gently over and then sank. Our boats picked up ten of them and the *Cornwall's* four. . . . Everyone seemed overjoyed to think we had avenged the loss of the *Good Hope* and *Monmouth*, and especially so later on when we heard that the *Kent* had sunk the *Nürnberg!*"

The *Glasgow*, which had fought and escaped at Coronel, and participated in the signal revenge taken upon Von Spee and his squadron off the Falklands, was lucky enough to assist in the final act of retribution when the *Dresden*, which had got away for a time, was caught and sunk off Juan Fernandez —Robinson Crusoe's island. The *Glasgow* and *Orama* came up from the south-west, and presently the *Kent* appeared hurrying up from the south-east. After the exchange of some shots the *Dresden* appeared to be on fire and hoisted a very large white flag, while many of her crew jumped overboard and made for her boats, which were in the water at a little distance off. "As soon as it was clear she did not intend to fight again, we lowered boats and sent medical aid, and several of the wounded were brought alongside the ship for treatment." Eventually the magazine seems to have been blown up—possibly intentionally by her officers, as just previously the German ensign was re-hoisted, and she sank with it and the white

flag of surrender both flying.

With the sinking of the *Dresden* the German Navy disappeared from the ocean. Not a man-of-war of German nationality floated in the "Seven Seas", and only in the security of their own fortified harbours and in the mine-defended area of the Baltic dared the "black, white, and red flag" show itself.

CHAPTER XX

German Raids and their Signal Punishment

"I saw a mast abaft the light
In the tail of the offshore breeze,
A beacon flared on Dover Head,
A lean hull slipped the quays;
And out of the mist beyond the Fore,
Hell howled across the seas.

"Sudden and terrible, in one night,
A fleet had sprung to grips;
Nor' and nor'-east the signal sped
To the scattered scouts and the ships;
And racking the Channel fog the war
Roared in apocalypse."
LEWIS HASTINGS in the *Navy*.

EARLY in November, 1914, a German squadron of considerable force made what the Germans proudly termed a "hussar stroke", a number of big ships

approaching the English coast, driving off the *Halcyon*, an antiquated gunboat, and firing a few futile shots at long range at Yarmouth. Suddenly they turned tail and made off. They strewed mines behind them, one of which blew up the submarine D5; but the so-called raid was a case of "much cry, little wool", and finally ended by the *Yorck*, a very big cruiser, running into a German mine defending the entrance to the Jahde and being blown up with great loss of life.

On the 23rd November a patrol vessel rammed the German submarine U 18 off the north coast of Scotland. She was badly damaged and shortly afterwards foundered. Five days later the navy suffered a severe loss in the blowing up of the pre-Dreadnought battleship *Bulwark* as she lay at her buoy off Sheerness. The cause of this catastrophe was, of course, impossible to ascertain with any certainty, as the ship was sunk and destroyed with almost every soul on board.

Encouraged by what they seem to have considered the success of their vaunted "hussar stroke" at Yarmouth, the Germans thought they might as well have another. This time their raid resulted in the deaths of a large number of civilians, men, women, and children, at East and West Hartlepool, Whitby, and Scarborough, upon which undefended places they opened fire with their heavy artillery. Another "famous victory!" To make it look more like an operation of war, and to excuse themselves to neutrals, they tried to make out that these towns were fortified positions. It is not very likely that anyone believed them, since these places are well known to be nothing of the kind.

As a matter of fact, it was a carefully-planned affair. "Practically the whole fast-cruiser force of the German Navy, including some great ships vital to their fleet and utterly irreplaceable," wrote Mr. Winston Churchill to the Mayor of Scarborough, "has been risked for the passing pleasure of killing as many English people as possible, irrespective of sex, age, or condition, in the limited time available to this military and political folly. They were impelled by the violence of feelings which could find no other vent."

There is little doubt that the First Lord's diagnosis of the cause of the raid was absolutely correct, though it was perhaps more generally considered that it had the ulterior motive of "frightening" the British nation. So far from doing anything of the kind, it produced a perfect rush to enlist. Men wanted to take a personal hand in the payment due for such violence. The few British destroyers and patrolling vessels that were encountered opened fire on the big German leviathans, but were naturally in no position to put up anything of a fight against such overwhelming odds. That the Germans were unable to sink them goes to prove that they were in too great a hurry to fire carefully, as all they wanted to do was to escape, for, to quote the official announcement, "on being sighted by British vessels the Germans retired at full speed, and, favoured by the mist, succeeded in making good their escape". What a pity that mist intervened! But it merely postponed the evil day for the raiders after all.

Our men-of-war about this time set to work to give the German positions along the Belgian coast another shaking up, and the year finished by a brilliantly executed naval air raid on Cuxhaven and

the German war-ships lying in the Elbe, in the process of which their escorting flotilla had a somewhat unique scrap with German submarines and Zeppelins, an account of which will be found in a later chapter.

The year 1915 opened badly for us with the loss of the *Formidable*—a sister-ship to the *Bulwark*—which was torpedoed, it is supposed, by a German submarine well down the Channel. At two o'clock in the morning there was a heavy explosion, and the ship began to settle down to starboard. There was no panic, the boats were got out, and some were already in the water when there was a second explosion and a mass of debris was shot into the air. The sea was rough, and the survivors, who numbered less than a hundred, endured severe hardships. Some were rescued by a Brixham trawler, and others managed to row ashore at Lyme Regis. "The discipline was splendid," said a bluejacket survivor.[100] "The last that I saw of Captain Loxley"—who was in command of the ship—"was that he was on the bridge calmly smoking a cigarette. Lieutenant Simmonds superintended the launching of the boats, and as he got the last away I heard the Captain say: 'You have done well, Simmonds'. The stokers must have done magnificently, as they drew all the fires, and, steam being shut off, there was no boiler explosion when the *Formidable* sank.

"Captain Loxley was as cool as a cucumber. He gave his orders calmly and coolly, just as though the ship was riding in harbour with anchors down. I thought nothing was amiss. The last words I heard him say were: 'Steady, men, it's all right. No panic, keep cool; be British. There's life in the old ship yet!'

Captain Loxley's old terrier 'Bruce' was standing on duty at his side on the fore-bridge at the last."

One of the few stokers who were saved said that they were expecting to be relieved, and to have gone back to port, in about another hour. "An officer passed down by us. He stopped and explained in a matter-of-fact way that the ship had been struck, was sinking fast, and it was now a question of saving as many lives as possible. He advised us to go on deck and lay hold of anything we could." One of the finest examples of self-sacrifice was given by Bugler S. C. Reed of the Royal Marines, a mere boy, who, when advised to use his drum to keep himself afloat, replied that he had thought of it, but had given it to one of the bluejacket boys for that purpose, as the lad had nothing to keep himself afloat in the heavy seas then prevailing, and *that he did not feel very nervous*. Surely the cool courage in the face of death, superlative bravery, and absolute self-devotion that have been displayed during the last few months by officers and men—yes, and boys too—of navy and army alike, have equalled, if not eclipsed, the finest deeds of our forefathers "in the brave days of old".

At last, on 24th January, our eager navy had its chance of castigating the evasive enemy. The Battle-cruiser Squadron, consisting of the *Lion*, *Princess Royal*, *Tiger*, *New Zealand*, and *Indomitable*, under the command of Sir David Beatty, who flew his flag on the *Lion*, in company with Commodore Goodenough's Light Squadron, comprising the *Southampton*, *Nottingham*, *Birmingham*, and *Lowestoft*, was patrolling in the North Sea, preceded some way ahead by the *Undaunted*, *Arethusa*, and *Aurora*, with destroyer flotillas, when about half-past seven in the morning the flashing of guns was observed to the

south-south-east. Presently came a message to the flagship from the *Aurora* that she was in action with the enemy.

Speed was increased, and the British squadrons rushed at full speed towards the scene of conflict. Other messages came in from the ships in advance reporting that the enemy's force, consisting of the *Blücher*, three battle-cruisers, and six light cruisers, had altered course to south-east, while a number of destroyers were heading to the north-west. The main body of the enemy very shortly came in sight, but they were at a great distance, and making off as fast as they knew how. After them ploughed the British leviathans and their satellites, but it was not till nine minutes after nine that the *Lion* got in her first hit on the *Blücher* at something like 10 miles distance!

The enemy were in "line ahead", the *Blücher* being the rearmost ship. Their light cruisers were away ahead and their destroyers on their port flank, apparently meditating a dash against the advancing British. Our flotillas, with their attendant cruisers, were at this time away on the port quarter of the battle-cruisers, where they had been placed so as not to obstruct the aim of the big guns by their smoke, but the "M" division of destroyers was now sent ahead in order to attend to the German flotilla.

By this time the leading German ship—supposed to be the *Seydlitz*—was on fire, and so was the third ship in their line. The enemy's destroyers now began to stoke up, and threw out thick black clouds of smoke, under cover of which their big ships altered course to the northward. As soon as this manœuvre was apparent, the British ships, which by now were tearing through the water at tremendous speed,

turned to follow, whereupon their destroyers again evinced a disposition to attack. But upon the *Lion* and *Tiger* turning their guns upon them they thought better of it, and returned to their former position. Our light cruisers kept station on the port quarter of the enemy, ready to pounce upon any cripples. Just after a quarter to eleven the *Blücher*, which had been gradually falling astern, turned out of the line to port. She was on fire, had a heavy list, and was evidently very badly mauled. A few minutes later the periscopes of a number of submarines were noticed on the starboard bow of our battle-cruisers, which at once turned to port to avoid them.

At the pace at which our ships were travelling these insidious foes would soon be left behind. Soon afterwards the flagship, having received damage which could not be at once repaired, was ordered to go off to the north-west, the admiral calling the destroyer *Attack* alongside and going in her to the *Princess Royal*, on board of which he rehoisted his flag. On arrival he was informed that the *Blücher* had been sunk, and that the remainder of the enemy's ships were making off to the eastward in a badly-damaged condition.

The *Seydlitz* and *Derflinger*, particularly, were said to have been desperately knocked about. But as the battle had now approached the area of the German mine-fields, it was wisely determined to break it off and return to English waters, the *Lion*, which had received a shot in her condensers, being taken in tow by the *Indomitable*. The only ships on our side that were hit were the *Lion* and the *Tiger*, and the little *Meteor*, which led the destroyers interposed between the German destroyers and our main line; and the total casualties were only fourteen officers and men

killed and twenty-nine wounded. The German losses must have been terrible.

One of the survivors of the *Blücher* gave a vivid account of the effects of our gunnery.[101] "The British guns were ranging. Those deadly waterspouts crept nearer and nearer. The men on deck watched them with a strange fascination. Soon one pitched close to the ship, and a vast watery pillar, a hundred metres high, fell lashing on the deck. The range had been found. Now the shells came thick and fast, with a horrible droning hum. At once they did terrible execution. The electric plant was soon destroyed, and the ship plunged in a darkness that could be felt. Down below there was horror and confusion, mingled with gasping shouts and moans as the shells plunged through the decks. At first they came dropping from the sky. They penetrated the decks, they bored their way even to the stokehold. The coal in the bunkers was set on fire. Since the bunkers were half-empty the fire burned merrily. In the engine-room a shell licked up the oil, and sprayed it around in flames of blue and green, scarring its victims and blazing where it fell. Men huddled together in dark compartments, but the shells sought them out, and there death had a rich harvest.

"The terrific air-pressure resulting from explosion in a confined space left a deep impression on the minds of the men of the *Blücher*. The air, it would seem, roars through every opening and tears its way through every weak spot. All loose or insecure fittings were transformed into moving instruments of destruction. Open doors bang to and jamb, and closed iron doors bend outwards like tin plates, and through it all the bodies of men are whirled about like dead leaves in a winter blast, to be battered to

death against the iron walls." Has Dante beaten this description of an Inferno?

CHAPTER XXI

The Royal Naval Air Service

"The human bird shall take his first flight, filling the world with amazement, all writings with his fame, and bringing eternal glory to the nest whence he sprang."

LEONARDO DA VINCI.

"The feathered race on pinions skim the air,
Not so the mackerel, and still less the bear;
Ah! who hath seen the mailèd lobster rise,
Clap her broad wings, and claim the equal skies?"
Poem in *The Anti-Jacobin*.

"The French are all coming, for so they declare;
Of their floats and balloons all the papers advise us;
They're to swim through the ocean and ride on the air,
On some foggy evening to land and surprise us."

The Invasion. DIBDIN.

WE have had a good many surprises during the Great War, and so also have the enemy; but the fine record of the British air service is not the least of them. It is not that we had not every confidence in the pluck and resourcefulness of our gallant British flying-men, but, if we may trust available sources of information, we began the war miles behind our French friends and our German foes, both in numbers and organization.

Of course no exact figures can be quoted, but, according to an authority on aeronautic matters,[102] Germany alone was in possession of a thoroughly organized and equipped fleet of 1300 aeroplanes. According to the same authority, Austria had about 100, France 800, and Russia 300, while we ourselves are credited with 100 machines belonging to the military wing of the air service, besides those in the naval wing, whose number is not forthcoming, but which, I think, may fairly be put down at well below a hundred. Neither we nor our allies had more than three or four air-ships or dirigible balloons, while Germany had a fleet of nearly twenty, most being of the famous Zeppelin type, from which very great things were expected. The naval and military authorities in this country either did not or would not believe in these "gas-bags", and, so far, events seem to have proved that they were correct in their views.

In every estimate of the strength of navies we must not only make comparisons of material, but of personnel. "The man behind the gun" is a factor of the highest importance, and it is here that we "came in", handicapped as we were in other respects. I do

not think that I can do better than again quote the same authority on this point. As regards the enemy, his estimate of the German air personnel is that its pilots were "mediocre, with a few brilliant exceptions". The Austrians were "brave and skilful pilots badly organized". As to our allies, he considers the French to have had "a very uneven air service". "Many magnificent fliers, many very bad"; while the Russians possessed "numerous skilful and daring aviators, but not very well equipped". We must not overlook the little Belgian squadron of five-and-twenty aeroplanes, which he assesses as "good", both in men and machines. We may, without vanity, accept his estimate of our own aerial establishment as "a small but highly efficient flying corps", since its efficiency has been proved over and over again.

The "Royal Flying Corps" only dates from a few years ago, and we are principally indebted to Major-General—then Lieutenant-Colonel—Sir David Henderson, K.C.B., D.S.O., for its formation. He had no easy job before him when he took the matter in hand, since neither Admiralty nor War Office appeared to be in any hurry to attain a commanding position in the novel arm, in spite of the great efforts being made by France, and more especially by Germany. However, nothing daunted, he made the very best possible of the small beginnings he was able to deal with, and we are now reaping the harvest he sowed. For a time naval and military officers and men worked together, but gradually, as numbers increased, drew rather more apart, and the naval wing had its own flying-schools at Eastchurch, near Sheerness, and at Upavon, near Salisbury, its central air office at Sheerness, an establishment at Hendon, and nine or ten air stations on the coast.

At the beginning of the war, confident in their numbers and organization, the German aviators showed considerable boldness, and their skilfulness in picking out our guns and positions, and signalling them by flares, strips of glittering tinsel, circling movements, and other devices to their gunners, rendered the fire of their artillery—which at first greatly outnumbered that of the Allies—very deadly indeed. Our own airmen were by no means such adepts at this particular work to begin with, but, few as they were, they soon proved themselves the better men. They worked on the old principle that so often brought us victory afloat in Nelsonian days. "Directly you see an enemy go for him." This system of fighting enabled Sir John French to report, quite early in the campaign, that "The British Flying Corps has succeeded in establishing an individual ascendancy which is as serviceable to us as it is damaging to the enemy. . . . Something in the direction of the mastery of the air has already been gained." The fact was that the very qualities of preciseness, method, painstaking, and avoidance of risk which make the German so formidable in some respects do not fit in where such warfare is concerned.

The German cavalry was the same. It worked by the book. If it could mass against ours at a strength of three to one, then by all the rules of the game we ought to have retired or waited for their ponderous squadrons to ride us down and overwhelm us by sheer weight of flesh and bone. But when our dashing horsemen whirled into their masses in their shirt-sleeves, and plied sabre and lance in a way that showed they meant business, and then turned round and cut their way home again in the same way, they did not like it. They have never dared to "take on"

our cavalrymen on anything approaching equal terms. Brave as we must admit the Germans have shown themselves, they have not the same individual dash and self-reliance as the British races.

No German would ever attack single-handed like Sergeant O'Leary, V.C. If any proof were wanted of this, one has only to consider that the mass attack formations, which have proved so deadly to our enemies, were deliberately designed by the German military experts, with full knowledge of the growing power of modern guns and rifles, because from their experience of the war of 1870 they had formed the reasoned opinion that in no other formation could they keep their "cannon fodder" up to the scratch. All their views are well set forth in a German pamphlet published some years ago, entitled *A Summer Night's Dream*. It has been translated into English, and is well worth perusal at the present time.

Now look at our own men. Here is what Viscount Castlereagh wrote of them from the front to his wife last autumn. "The thing that has impressed me most here has been the aeroplane service; a splendid lot of boys who really do not know what fear is."[103] The German army was provided with a large quantity of guns especially designed for bringing down hostile airmen; but they proved singularly ineffective, and our flying-men simply laughed at them. And yet, with all their talk of air-raids and the effect they were supposed to have on this country, the German fliers have never attempted to attack any place over here where they thought there might be any guns in waiting to receive them.

The Naval Air Service, primarily intended for scouting at sea, not only for hostile ships but for

submarines—for from high up these deadly craft are visible deep under water, just in the same way that one can see fish from a bridge that are invisible from the bank—was originally equipped with water-planes, fitted with floats instead of wheels, so that the naval aeronauts could rise from or alight on the water.

But though these machines proved of the greatest service in guarding and watching the Channel and the Straits of Dover, the enterprising spirit of the naval and marine officers who acted as air pilots, squadron commanders, &c., was not content to devote itself entirely to such necessary but perhaps rather monotonous work. The Naval Air Service after the outbreak of war went ahead by leaps and bounds. Not only were the numbers of sea-planes increased, but wheeled aeroplanes were purchased as fast as they could be obtained, and supported by a whole fleet of armoured motors fitted with machine-guns, a regular naval air contingent appeared on the Continent ready to assist the army by raiding in any direction likely to be of service. All sorts of mechanics, motor-drivers, and other men were enlisted for special service with this new organization, which lost no time in proving its great value and efficiency.

The leading spirit and commanding officer was Commander Samson, R.N., and by 4th September, 1914, he was able to report that bombs had been dropped on four German officers and forty men who had got rather too near Dunkirk. Then, about a fortnight later, came the first raid in force against the enemy's country, which created quite a scare in the German frontier cities, since, judging our gallant airmen by their own low-down standards, they

feared for the lives and property of civilian inhabitants.

After carefully and successfully assisting in covering the transit of the Expeditionary Force to France, a temporary base for the naval wing was established at Ostend. It was to assist in establishing this base that the three battalions of Royal Marines were dispatched to that place in the early part of the war. Other outlying bases were gradually established in Belgium. The naval motors, acting in conjunction with the Belgians, made things very warm for the prowling Uhlans, and eventually a regularly organized combined expedition of motors and aeroplanes was directed against Cologne and Düsseldorf, with the object of destroying the Zeppelin sheds at these places and, haply, any Zeppelins that might be taking their repose within.

It fell to Flight-Lieutenant Collet of the Royal Marine Artillery to score the first "bull's-eye". This officer had attracted some attention by the way he had handled a heavy German-built biplane which the Admiralty had bought from a Leipzig firm in 1913. In the hands of the German pilot who came over with her the new machine appeared but a slow and lumbering affair, but flown by Collet she became endued with a new life, and was made to perform all sorts of startling manœuvres. "To see him descend for a thousand feet or so," says an eye-witness, "in a closely wound spiral, with the machine standing vertically on one wing-tip, was an education in the handling of big aeroplanes."

Accompanied by other aviators, Lieutenant Collet set out from their base on 22nd September, and made for Düsseldorf, about 100 miles distant from

Antwerp. Here, flying very low, he dropped four bombs on the Zeppelin shed which was the special object of attack. What damage was done was not ascertained. The attacking machine was only struck by a single bullet, which did no damage, and Collet and his companions regained their base without difficulty.

About a fortnight later another raid was made against the same sheds and also against those at Cologne.

The aviators on this occasion were Squadron-Commander Spencer-Grey and Flight-Lieutenants Marix and Sippe, all belonging to the Royal Navy. The last-named had trouble with his engine shortly after starting and had to drop out, but the remaining two rushed along through the growing light—the start had been made at the first streak of dawn—Grey making for Cologne and Marix for Düsseldorf. There was a good deal of fog, which, while it served them to a certain extent by concealing their approach, at the same time made it no easy job to steer a correct course. Travelling at 80 miles an hour Grey reached Cologne, but had no luck. Owing to the fog he was unable to locate the Zeppelin shed of which he was in search, and would not drop a bomb without a definite and legitimate objective, for fear of harming women and children. He, however, was able to do some damage to the railway station.

As for Marix, he found his way to the shed already struck by Collet. Rising to a great height, he made a spiral dive at the tremendous speed of 140 miles an hour. He had been seen some time before, and was greeted with a tremendous fusillade from machine-guns, anti-aeroplane guns, and rifles. His machine

was struck several times, but he descended to within 500 feet of the shed to which a Zeppelin had been recently removed from that damaged by Collet, let go his bombs, and shot upwards again with marvellous velocity. As he went he saw that at least one of his projectiles had scored a success, for a volcano of flame was spouting 500 feet into the air. There was one Zeppelin the less. His "mount" had been hit no less than twenty times and two of his control-wires cut, but by the exercise of great judgment and skill he contrived to travel for 10 miles on his way back and to get across the frontier, where he was met by a Belgian car and taken safely to Antwerp.

A correspondent of the *Globe* who was at Düsseldorf at the time gives the following account of what an eyewitness saw of Flight-Lieutenant Marix's exploit and its effect. "A friend of mine saw an aeroplane one day near Düsseldorf. He followed its movements with great anxiety, and saw that it dropped when it was close by the Zeppelin shed. He had an idea that something was wrong, but about 200 metres from the ground the machine turned again and disappeared. Almost at the same moment he heard two explosions, and a few moments after saw big flames of a light colour, giving him the impression that the whole shed was on fire. My friend went down to the place as quickly as he could, but at a distance of a few hundred metres the people who had already run to the spot were kept away by a ring of soldiers. A few minutes later a rumour spread through the crowd that two more enemy aeroplanes were reported from Cologne, and immediately all the soldiers were ordered near the shed to be ready for firing at the new-comers. My friend followed the soldiers, and came quite near the place where he had

seen the flames. He saw that the contents of the shed had been entirely burnt out, and only the walls of the building were erect. In the shed was the carcass of a Zeppelin, burned and broken to pieces. It was one big heap of aluminium."

The next exploit of the Naval Air Service was the attack on the Zeppelin sheds at Friedrichshafen, on the Lake of Constance. There are three or four big sheds here close together, with workshops and all appliances for building and fitting out these monster air-ships. The newspapers had for some time previously been publishing paragraphs giving accounts of Zeppelin experiments at this place. Some may have been more or less correct, while others bore the stamp of the usual "bogey-bogey" stories set about by the Germans with the somewhat childish idea of frightening us. Anyway the naval airmen made up their minds to go and see for themselves. Of course their departure from the usual scene of their activities in the north was made "without beat of drum", and, as Friedrichshafen was something like 150 miles from the French frontier, their visit was entirely unexpected.

The raiders were Squadron-Commander Briggs, Flight-Commander Babbington, and Flight-Lieutenant Sippe, all of the Royal Navy. They are supposed to have started from the neighbourhood of Belfort, that very strongly fortified town on the eastern frontier of France. They were mounted on similar machines—Avro biplanes. Heading almost due east, they struck the Rhine in the vicinity of Basle—where it turns almost at a right angle from east to north—flew upstream as far as Schaffhausen with its picturesque falls, and then struck across country to Ludwigshafen, at the western extremity of Lake

Constance, or the Boden See as the Germans term it. Thence they steered directly down the lake at their objective, the cluster of hangars and workshops on the lakeside, just east of the town of Friedrichshafen. Their advent was both seen and heard, and the whirr of their propellers was at once answered by the stutter of Maxims, the banging of guns, and the popping of musketry. But it is not easy to disable an aeroplane unless you are successful in damaging it in a vital part; so, regardless of this very warm reception, the naval airmen swooped down one after the other from the high altitudes at which they were travelling, and, passing over their target at a height of about 1200 feet, discharged their cargoes of bombs.

Commander Briggs was the first to arrive and drop his bombs, but his petrol tank being pierced by a bullet the petrol ran out and he was brought to the ground, where he was made prisoner and taken off to hospital, having received some injuries from his fall. Babbington and Sippe, following in his tracks, bombarded first the hangars and afterwards the Zeppelin factory, and, circling round, flew off down the Rhine and arrived safely at their starting-point, though their machines had suffered some minor damages. Both were decorated on their return with the Cross of the Legion of Honour, which was pinned on their breasts by General Thevenet, the Governor of Belfort. All three, too, appeared as recipients of the Distinguished Service Order in the New Year's Honours List. And they had well earned their distinctions. Putting on one side the risks inseparable from such an enterprise, they had flown right into the enemy's country for a very considerable distance, over a mountainous district and in quite unfavourable weather conditions, and had created a

tremendous moral effect in the enemy nations. They had probably done a considerable amount of material damage to the hangars and workshops, possibly to one or more Zeppelins as well, but no certain details as to the extent have yet become available.

The Germans had been taught to expect great things from their well-organized and numerous fleets of air-ships and aeroplanes. They were to bombard London, defeat our fleets, and terrorize the whole of our "right little, tight little island" with these monster gas-bags. And, lo and behold! before anything of the kind had happened, here were these pestilent English flying-men attacking them in their own country. Not blindly dropping bombs just anywhere in haste to get rid of them, frighten civilians, and get away as fast as possible, but deliberately attacking—and hitting—selected targets. German opinion was profoundly moved. No wonder that their airmen felt that it "was up to them" to show their fellow-countrymen what *they* could do. But what a poor show it was! On 5th December one gallant airman got within sight of Dover, but turned round and made off again. On the 24th this one, or another, actually flew over the town and dropped a bomb into a cabbage-patch. He was in too much of a hurry to select a more important target, much less hit it. The British reply, if such an unimportant exploit could be deemed worthy of receiving a reply, was prompt and effective. The very next day—Christmas Day—the Naval Air Wing, working in conjunction with its own branch of the service, carried out an extremely well-organized attack upon Cuxhaven, the strongly-fortified port at the mouth of the Elbe which protects the approaches to Hamburg. The following officers participated in this exploit: Flight-Commanders

Oliver, Hewlett, and Ross, R.N., and Kilner, R.M.L.I., Flight-Lieutenants Miley and Edmonds, R.N., and Flight Sub-Lieutenant Blackburn, R.N.

The aeroplanes were all of an identical type—Shorts—just as those used against Friedrichshafen were "Avros" and against Düsseldorf "Sopwiths". They were carried on three very fast Channel steamers that had been "taken up" by the Admiralty, each of which was commanded by a naval officer belonging to the air service. It is interesting to note that the navigating officer of one of these vessels was Mr. Erskine Childers, a lieutenant in the Royal Naval Volunteer Reserve, the author of that fascinating novel *The Riddle of the Sands*, which deals most minutely with the navigation of the German coastal waters between the Elbe and the Zuyder Zee. The little expedition was convoyed by the *Undaunted* and the "saucy" *Arethusa*—a pair of new light cruisers which have proved themselves a most effective type of war-vessel—and a cordon of submarines and destroyers. Everything had been worked out in detail.





RAID ON CUXHAVEN
Drawn by John de G. Bryan

On approaching Heligoland, that German Gibraltar with which we so foolishly parted some years ago, the sea-planes were hoisted out and sped away on their errand of destruction. It was a misty morning, and on arrival at Cuxhaven the aviators were much hampered by a fog which lay in shallow patches over the town and harbour, but it is thought that they succeeded in destroying a Parseval air-ship in its shed and in badly knocking about some of the Zeppelin sheds. According to the German account they also dropped bombs on a gasometer and on some men-of-war lying in the river, of course "without doing any damage". The fog was, however, much closer and thicker over the Elbe than over the town, so that ships were in any case difficult targets.

But while our aviators were carrying out their mission, under fire from guns of all sorts and kinds, there was a most remarkable fight going on outside —a battle unprecedented in the annals of warfare.

The aviators left the flotilla sharp at daybreak, and it would seem that neither they nor their escort were seen. But as the light grew, the British ships were picked up by the look-outs on Heligoland, and an instant attack was made upon them by submarines, sea-planes, and a couple of the redoubtable Zeppelins. But the high speed of the British vessels and the consummate seamanship and gunnery of their crews defeated every attempt made to injure them. For three hours they fought while waiting the return of the aviators. The white flash made by the German torpedoes in the water was detected by sharp eyes, ships and boats dodged and turned and cleared the "lurking death" by the "skin of their teeth". The sea-planes whirred overhead and dropped their deadly bombs, which exploded in fire,

smoke, and fountains of water; but though they often fell close alongside, none of the flotilla was touched. The big bluffing Zeppelins also dropped a few, but they soon felt "they could no longer stay", since the 100-pound shells from the *Arethusa* and *Undaunted* were coming closer and closer, and their crews knew —none better—that one fair hit would mean annihilation. So, as the official report stated, they "were easily put to flight". None of the German surface vessels dared to show their noses outside, or, perhaps, were able to disentangle themselves from their elaborate defences in time, and after three of the daring raiders had been safely re-embarked with their machines, the flotilla stood out to sea again, leaving a detachment of submarines to look out for the remainder. Three of the four remaining airmen were rescued by this means, though their machines had to be sunk. The seventh—Flight-Commander Hewlett, son of the famous novelist—after dropping bombs on some of the German ships, one of which, at any rate, he felt certain he had hit, lost his way in the fog, missed the flotilla, and, having trouble with his engine, descended to the sea not far from Heligoland. Here he was picked up by a Dutch trawler. He destroyed his engine and sank his machine, and after experiencing two or three days of very heavy weather on board the fishing-vessel was landed safely at Ymuiden, in Holland.

Curiously enough, the same day was selected for a somewhat feeble raid up the Thames by a German Taube, which, apparently, was working independently. The hostile air-craft was seen, fired on, and, after harmlessly dropping a bomb here and there, was chased away by three of our own airmen, and there is reason to believe that its return journey ended at the bottom of the North Sea.



THE BRITISH AIR I

Seaplane 151, which was flown by Flight-Commander R. F dose of their own medicine.

The day before the big expedition to Cuxhaven a dashing attack was made by Squadron-Commander R. B. Davies, R.N., on a hangar which the Germans had erected at Etterbeek, a suburb of Brussels, probably on the manœuvre-ground of the crack Belgian cavalry regiments, the Guides. This officer travelled on a Maurice-Farman biplane and dropped eight bombs on a shed which was supposed to contain a Parseval air-ship, circled round, and dropped four more on his return journey. He was

unable to see exactly what damage he had effected, on account of the clouds of smoke which arose from the hangar. His machine was recognized by the citizens of Brussels as belonging to the Allies, and his exploit created great enthusiasm among them.

At last the German airmen determined to have a raid of their own. A nice quiet little trip this was to be, out of the way of nasty, unpleasant guns and Maxims. And so we had the "great Zeppelin raid" on Yarmouth and on a few quiet out-of-the-way villages in Norfolk, and the slaughter of men, women, and children. The German aviators, however, did more respectable work when considerable squadrons of aeroplanes twice attacked Dunkirk in January, 1915. The first attempt would appear to have been originally directed against Dover or some other place on this side the Channel, as sixteen German aeroplanes were sighted hovering over the Channel. But either by reason of the good look-out kept by our own airmen and gunners, or on account of unfavourable weather conditions, the "Boches" changed the direction of their flight and a dozen of them attacked Dunkirk and dropped about thirty bombs. As usual, most of the victims were civilians, but Dunkirk was a fortified town and an important position of the allied armies, so that, but for the fact that on one occasion the market-place seemed to be selected for an especial target, we may consider these raids as legitimate military operations. But the Germans were not able to carry them out at their leisure. Belgian, French, and British airmen rushed their machines aloft and engaged and drove off the raiders with the loss of one of their machines, while a couple of our naval officers flew off and countered at Zeebrugge, dropping twenty-seven bombs on a couple of submarines and on the guns mounted on

the mole. One of them, Squadron-Commander Davies, R.N., was attacked during his approach by no less than seven hostile aeroplanes, but got away from them with a slight wound and delivered his bombs at their destination.

The following letter, written shortly before, and referring to the first German raid on Dunkirk, is interesting as showing the consciousness of superiority in the minds of our airmen:—

"I must tell you something about the beano we had yesterday. It *was* a day! Engaged with three Taubes in the morning and in the afternoon—and I went and dropped 18 bombs and 6 grenades on various works and the railway at Ostend, with incidentally another scrap with a German machine. Hope we tickled them up and gave them —— at Ostend. We've got 'em scared stiff—absolutely. It's a great game entirely. I hope we get to hear about what damage we did at Ostend, though I'm afraid it's impossible. I know I got the railway with one bomb —a clinking shot right in the middle. I tell you they let us have it. The machine was hit in nine places."[104]

The writer was evidently "keen as mustard", and against such airmen the German air service could make no headway.

The biggest air raid on record took place on Tuesday, 16th February, 1915, when no less than thirty-four sea-planes and aeroplanes belonging to the Naval Wing made a combined attack on the German positions on the Belgian littoral. They were assisted by eight French airmen, who made a determined attack on the German aeroplane depot at Ghistelles, situated inland and south of Ostend,

thereby preventing the German airmen from intercepting our main attack. This big "flight"—a regular "aery navy"—was commanded by the redoubtable Wing-Commander Samson, R.N., who had made things so hot for the Germans in Belgium that a price of £1000 was set on his head; Wing-Commander Longmore, R.N., and Squadron-Commanders Porte, R.N., and Courtney and Rathbone of the Royal Marine Light Infantry.

It was a great performance. Most of the British aeroplanes crossed the Channel in the teeth of very violent winds, flying in the bitter cold of high altitudes and obstructed by not infrequent "flurries" of snow. Once over the water, they flew down over Ostend, Middelkirke, and Zeebrugge. Bombs were dropped on the German guns hidden from the view of our ships at all three places: the stations at Ostend and Blankenberghe were either destroyed or much damaged, as well as the power-station and mine-sweeping vessels at Zeebrugge and a Zeppelin shed. Unfortunately no submarines were seen. All this was carried out in the face of a very heavy gun-fire from every class of weapon that the Germans could get to bear on our "wild ducks". But all got away without loss of life or limb, and with only a couple of machines damaged. The celebrated airman Grahame-White, who served in the expedition as a flight-commander, fell into the sea off Nieuport, but was rescued by a French vessel. This is the last big air raid carried out by the Naval Wing up to the time of writing, and space forbids any mention of the hundred-and-one smaller exploits carried out by its fliers, either aloft in the air or working on the ground in their armoured motor-cars. The price set on Commander Samson's head by the exasperated "Boches" sufficiently indicates what a thorn in the

side they proved to the German desecrators of Belgium and France.

Conclusion

"The Fleet of England is her all in all:
Her fleet is in your hands,
And in her Fleet her fate."

HAVING now traced the beginnings of the Royal Navy, glanced at some little-known episodes of the naval history of Great Britain, sketched the development of our men-of-war and their weapons, and finally endeavoured to portray—in a very inadequate way, I am afraid—the gallant men who man them, and some of their deeds in the greatest and most terrible war that has ever been known in the history of the world, I have arrived at the time when I must hoist the signal "Permission to part company" with my readers.

But I cannot leave the subject of this book without some reference to the part played by the navy in the Dardanelles. The outstanding points in regard to the navy's participation in these operations were without doubt the tremendous effect of the monster guns of the *Queen Elizabeth*, the severe fighting which fell to the lot of the Naval and Marine Brigades in the attack of the Turkish shore positions, and last, but not least, the wonderful exploits of our submarines. The achievements of Lieutenant Norman D.

Holbrook, who, in the B11, crept under five rows of mines and blew up the Turkish ironclad *Messudiyeh;* and of Lieutenant Commander Martin Nasmith, who, in the E11, penetrated right into the Sea of Marmora, torpedoing transports and creating a scare in Constantinople itself, are examples of that brilliant daring which has been exemplified again and again during the war.

The operations against the Dardanelles forts opened on the 3rd November last year, when an allied British and French squadron bombarded those nearest to the entrance. Operations were then practically suspended until the 19th February, when the allied fleets returned to the attack in greater force, and made a resolute attempt to break down the defence of the narrow waterway leading to Constantinople. The outer forts having been silenced, the *Queen Elizabeth*, with four other battleships, entered the Dardanelles and bombarded the defences of what are known as the Narrows. But they were unable to advance farther, partly on account of the heavy mobile batteries of the Turco-Germans, but more especially from the great danger of floating mines and of torpedoes launched from stations on shore. These submarine weapons began to take heavy toll of the allied ships. The British battleships *Irresistible*, *Ocean*, and *Goliath* were all sunk—the two first on the same day. With them, too, went down the French battleship *Bouvet*, and, later on, the *Triumph* and *Majestic* succumbed to torpedoes said to have been fired from one of two submarines which are supposed to have made their way to the scene of action from Germany. Space forbids any further account of these operations, which are still being continued; but, in order to give some idea of what they were like, I cannot do better than quote from a

letter just written to his chum by a midshipman on board one of the ships engaged in the Straits, so vivid an account does he give of the fighting as it presented itself to his eyes:

"Since we have been out we have been in four or five big actions and a large number of small ones. I think the hottest one that this ship personally has been in was on Sunday, ——. This ship and one other were ordered to reduce, or attempt to reduce, two of the most powerful forts going. The action commenced just when you—if you were a good boy—were going to church. As usual we cleared for 'immediate action' on the way in. I must say before the action I felt rather as if I was going to the dentist to have a bad tooth out, but once the show started and we were fighting I felt as happy as a lark, despite the infernal noise and smell!

"My action station is in No. — turret, two — guns. I wear the officer's telepads, and have to sing out all the orders, ranges, &c., that come down from the controls, and work all the voice pipes, &c. If the lieutenant of the turret gets knocked out I am supposed to take charge. The forts opened a heavy fire as soon as we were in range, and as we were the leading ship we had the concentrated fire of *both* forts on us for the first quarter of an hour, one fort shifting to the second ship later. The water round both ships soon became like an animated moving fountain, with the ships as the centre, from the splashes made by the falling shell, most of the splashes reaching as high as the foretop (about 110 feet). We really had a most miraculous time, considering the large amount of shells fired at us and the comparatively small number of hits we received. Also the way we managed to avoid getting any

casualties was a miracle, some of the men having most marvellous escapes. However, we let them have it pretty hot as well, and it was absolutely ripping to feel the ship lurch and stop on her course as we let rip broadside after broadside at them. After two and a half hours the forts ceased firing altogether, and we drew off, having done our job.

"About the most exciting show I have had myself was when I had to go away sweeping up the Straits one night in a picket-boat. Our objective was to locate and blow up an electric cable which was connected to a long row of mines at a certain point in the Dardanelles. We started off at about 7.30 p.m., and it was an absolutely pitch-black night. There were five other boats with us, and of course we could show absolutely no lights. I was steering the boat, and it was hard to see anything at all. . . . We arrived at about 10 p.m., and at the position for commencing the sweep at about 11.15. The Turks had a lot of beastly search-lights going. The first sweep up they did not discover us, but the second time they fairly caught us and let rip with all sorts of things—Nordenfeldts, rifles, pom-poms, and a few howitzers. It was beastly uncanny hearing the shells shrieking and whizzing about in the still air of the night—much worse than in daytime. However, a picket-boat is a very difficult thing to hit even at the best of times, and in a pitch-black night it wants a lot of luck despite all the search-lights. As soon as they started firing I commenced zigzagging all over the place, and the nearest we had was about ten yards away, although a lot of rifle bullets went whistling overhead. I was never more pleased than when we turned round and started back to the fleet. We blew up something, but whether it was the cable or not I don't know. The boat next to us got into the middle

of a bunch of mines, and we had to stand by her; however, by great luck she managed to clear, blowing up two mines with rifles. We got back to the ship about 5 a.m., after quite an exciting night. I really thought I looked quite ferocious that night; life-saving waistcoat, overcoat, sea-boots, muffler, a huge revolver with 60 rounds of ammunition, both my pockets full of sandwiches, and a Thermos flask full of cocoa, which I kept on spilling all over myself in the dark.

"We have been covering the landing and supporting the advance of the troops. It is a pretty strenuous time, as we are at action stations on and off from 5 or 6 a.m. till 7 or 8 p.m., with a night watch to keep as well, so we are kept pretty busy. We also live in a constant state of 'immediate action'."

But as it had been decided to supplement the naval attack by the landing of an army, a disembarkation was effected towards the end of April at five points on the Gallipoli Peninsula and one on the Asiatic shore. The latter was carried out by the French, but it was only intended to be a temporary measure to assist the British landings on the western shore. The troops, which were composed of British, Australians, and New Zealanders, effected their landing in the face of the most tremendous opposition, making their way through masses of wire entanglements under a terrible fire from all kinds of weapons. Their losses were very great, but they effected their object and established themselves on shore, and set about a series of operations against the Turkish positions which are still continuing. The navy's share was to cover the landing with the fire of its big guns, and to transport the soldiers to the

shore. Its work was magnificent. The Turkish entrenchments were plastered with high-explosive shell, while the bluejackets and marines employed in the actual business of landing the troops behaved with a coolness, energy, and gallantry which has never been surpassed. Nor must it be forgotten that the navy was represented in the landing force by the newly-formed Naval Division, under the command of Brigadier-General Paris of the Royal Marine Artillery, consisting of several battalions of the Royal Marines and a number of others formed from the R.N.V.R. and other reserves, and distinguished one from the other by bearing the names of celebrated naval commanders—such as "The Drake Battalion". These had all been organized and trained by the staff of the Royal Marines under the Adjutant-General, Sir William Nicholls, and were commanded by naval, marine, or in some cases army officers. As for their work in the campaign, we have, so far, little or no information. Beyond extensive mention in the casualty lists, the press seems to have overlooked them. But their very losses prove that they have been well to the front, and we may be sure that they have given a very good account of themselves.

Everywhere the Royal Navy has proved itself worthy, nay, more than worthy, of its gallant ancestors and their gallant deeds. To quote Lord Charles Beresford, in a letter written to the London Chamber of Commerce: "The brilliant work of the Navy in clearing the North Sea and providing safety for the transport to France of their comrades in the sister service will be gratefully appreciated by the country. Such work could only have been effective by superb organization, loyalty to duty, and discipline, requiring not only caution but courage. The watching fleets of the present day have none of

the charm and change to occupy their mind which accompanied the sailing-ship navy, making and shortening sail, trimming sails, tacking, and wearing, necessary for cruising on the look-out. There were no air-vessels, mines, submarines, or torpedoes in the old days, no under-water warfare. The strain upon officers and men of the sea-going fleet in these days is terrific: nothing to occupy their thoughts as in the days of sailing-ships."

But with all this we know what the navy has done, and we know that it will never be found wanting. Only let us all try to emulate the spirit of thoroughness and devotion to duty which has made our navy what it is; let us all try to "do our bit", however small, and, in those inspired words of our great poet Shakespeare which we should always bear in mind—

"Nought shall England rue,
If England to herself do prove but true".

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FOOTNOTES:

[1] "If we go backward we die: if we go forward we die:
Better go forward and die."—

Viking war-call.

[2] "Nulla vestigia retrorsum."—Motto of 5th Dragoon Guards.

[3] I am indebted to the Rev. S. Baring-Gould for the following very interesting note, which indicates that there was some affinity between the ancient Grecian and the Viking ideas with regard to figure-heads: "The Greeks never allowed an image of an entering ship to arrive un-removed, and then it was conveyed to the shore to salute the Goddess of the port. The altar 'to the Unknown God' St. Paul saw *was actually to any unknown Deity of an approaching vessel*."

[4] "No doubt the noblemen of France prefer land to sea warfare, so hard and so little in accord with nobility ", stated a French Herald in 1456.

[5] Pavises, plural of Pavois. The "Pavois", or "Pavise" as it was generally termed in English, was a big round-topped shield like a tombstone. It was set up with a prop on shore or fastened to a ship's bulwarks, either on going into action or as a decoration. This is why to this day a French man-of-war when "dressed" with all her colours at a review, for instance, is said to be "*en grand pavois*".

[6] "Of the Tower": this signifies that she was a royal ship, like "H.M.S." of to-day.

[7] A strong bow that needed a tourniquet or winch to draw it back.

[8] A coarse woollen stuff.

[9] Innkeepers.

[10] Threw the enemy's survivors overboard and drowned them.

[11] Called.

[12] At one time the "British Blue" was rather fond of calling himself a "matlow" or "matlo", though it is said the custom is falling into disuse. It has been stated that it dates from the old comradeship of French and English in the Crimean War. The French word *matelot*, by the way, is derived from *matelas*, a mattress. Before hammocks, two men used a mattress in turn, one being always on watch.

[13] I say "ordinary" advisedly, as an archer got 3*d.* a day in 1346 and probably earlier.

[14] "Hereby would I shew you how foolhardy is he who adventures himself in such peril, if he be in debt to any man, or is in deadly sin; for one goes to sleep at night never knowing whether one will awake at the bottom of the sea."

[15] Paul Lacroix.

[16] "*Bus*", "ships of the largest size, with triple sails".

[17] She was first called the *Gret Carrick*, then *Imperyall Carrick*, next *Henry Imperiall*. The name *Henri Grace à Dieu* was written with all kinds of variations; sometimes she was merely called the *Harry*, and finally, after King Harry's death, the *Edward*.

[18] Each of the Carews adopted the badge of a ship's "fighting-top", which still appears as the crest of the family.

[19] Purchased about 1544, probably from the Hansa.

[20] Seeling means literally to "roll from side to side", but it is evidently here used for the sides themselves.

[21] As guns of these days were called after animals and birds, the "musket" received its name from "mosquito".

[22] The Elizabethan seamen, and indeed their successors, must have inherited somewhat of the old Viking Berserkers' dislike of defensive armour, or any equipment limiting bodily activity. Sir Richard Hawkins complained in 1593 that though he had with him in his expedition to the South Seas "great preparation of armour, as well of proofe as of light corsletts, yet not a man would use them ".

[23] Law's *Memorialls*.

[24] Chapter VI.

[25] Nicholas. *History British Navy*.

[26] Massinger.

[27] From the Parish Books of Portishead, Somerset: Acct. of Disbursements:—

"1722.—Gave 5 sailors taken by Pierates	...	10*d.*
1723.—Gave 1 man that had been in turkey	...	1*d.*
1726.—Gave 6 poor men tacking by the pirits	...	6*d.*
1726.—Gave 7 poor sailors burnt	...	1*s.*"

Mr. Henry Caer of Portishead, who has been good enough to send me these extracts, thinks that "burnt" in the last entry means that their ship had been burnt.

[28] i.e. "yield".

[29] This, the old Grecian signal to engage, in 1292 "signified certain death and mortal strife to all sailors everywhere". In the

sixteenth and seventeenth centuries it was constantly used as an emblem of "Defiance" and "No Quarter". The mutineers at the Nore hoisted it in 1797, as did the Paris Communists in 1871.

[30] A species of grape-shot.

[31] "Bonnet", an extra piece of canvas laced to a sail to enlarge it. "Vail", to lower.

[32] Or *Convertine*, originally the *Destiny*.

[33] Guizot, *Cromwell, and the English Commonwealth*.

[34] Louis XIV of France.

[35] In the Civil War, according to Warburton's *Memoirs of Prince Rupert*, apothecaries' mortars were sometimes used in emergencies.

[36] In Henry V's expedition to Harfleur he took with him, among others, two big guns known as the "London" and "the King's Daughter".

[37] Sometimes called Hugget.

[38] Compiled from five authorities, who differ slightly.

[39] Lat., *coluber*, a serpent.

[40] In 1586 "gunners were provided with milk and vinegar to cool their pieces".

[41] There may have been some 68-pounder *carronades* in action.

[42] If we except the *Neptune*, which was built by a foreign Government and eventually acquired by the Royal Navy.

[43] It would perhaps be more correct to

call the *Lord Nelson* and *Agamemnon* contemporaries of the *Dreadnought*. They were practically experimental ships offering an alternative type. The cost of thirty of these ships would have been the same as that of twenty-nine *Dreadnoughts*. The annual upkeep of twenty-nine *Dreadnoughts* would be less by £15,000 than that of thirty *Lord Nelsons*.

[44] i.e. Corneilius Van Drebbel.

[45] Sides.

[46] *A Mariner of England, 1780-1817.* Colonel Spencer Childers.

[47] The Chinese considered this a practical form of warfare even in comparatively recent times. In *The Voyage of H.M.S. Nemesis* (1841) an account is given of the preparations made against the British fleet. At Canton it was stated that "several hundred divers were said to be in training who were to go down and bore holes in our ships at night; or even, as the Chinese privately reported, to carry down with them some combustible material which would burn under water and destroy our vessels".

[48] There is, however, in this MS. a picture of what is probably intended for a diver wearing a metal helmet without a tube.

[49] i.e. King Solomon.

[50] Included in the ships' companies of the Middle Ages were "seamen who knew how to swim for a long time under water". These divers "pierced the ships (of the enemy) in many places so that the water could enter". In an old work on naval architecture, published in 1629, it is stated in reference to the Turkish pirates of Barbary that "The Corsairs, indeed, are very wily in attack and defence,

acquainted with many kinds of projectiles, even *Submarine Torpedoes*, which a diver will attach to an enemy's keel".

[51] See *The Story of the Submarine*, by Colonel C. Field, R.M.L.I.

[52] *See The Story of the Submarine*, by Colonel C. Field, R.M.L.I.

[53] Letter from Mr. Ellis to Lord Lexington, 9th August, 1695.

[54] In the Civil War in America the *Louisiana* was filled with 430,000 pounds of powder, and exploded against Fort Fisher on Christmas Eve, 1864, with little or no effect. This is the last recorded case of an explosion-ship, unless we reckon the four fireships in the form of rafts that in April, 1915, were sent by the Germans against a fort at Osowiec. Some never arrived; the others were blown up by the guns of the fort.

[55] *War with Russia*, by H. Tyrell.

[56] i.e. tinder.

[57] Possibly not, as there was a composite battalion at Tangier composed of companies from various regiments, including one of marines.

[58] "Five or six hundred seamen and others of the Marine Regiment."—*Reminiscences of Cork*, by Crofton Croker (MS.).

[59] Lutterell.

[60] Several years ago the Kaiser bestowed this distinction on a Hessian Regiment on account of its ancestors—so it is stated—having participated in the capture. I have studied the taking of Gibraltar pretty

thoroughly, but have never found any mention of a German regiment taking part in it.

[61] *Life and Adventures of Matthew Bishop*. London, 1744.

[62] Quoted in Cassell's *British Sea Kings and Sea Fights*.

[63] A soldier who used to be placed in front of a regiment, by whose motions the movements of the exercises with arms were directed. In some regiments at the present day the right-hand man steps a pace forward on the order "Fix bayonets", to give the time and ensure all moving together.

[64] *Blackwood's Magazine*, October, 1858.

[65] Now Brigadier-General Marchant, C.B., A.D.C.

[66] Now Admiral Sir John Jellicoe, K.C.B., K.C.V.O., the famous commander of our Grand Fleet.

[67] Now Major-General Johnstone, C.B.

[68] Engineer-Commander Chas. E. Eldred, R.N., *Everybody's Book of the Navy*.

[69] "The Progress of Dreadnoughts", *Journal of Commerce*, 4th March, 1915.

[70] "Your Navy as a Fighting Machine." Fred. T. Jane.

[71] Particulars from *Submarines, Mines, and Torpedoes in the War*. C. W. Domville Fife.

[72] Paper by Lieutenant C. N. Hinkamp, United States Navy, reprinted in *Journal of Commerce*, 29th April, 1915.

[73] German ships, by the way, are often

provided with a heavier astern fire than a forward one, so that apparently they have long decided to fight a retreating action. The opposite system is pursued in our navy.

[74] Except between 1713 and 1739, when there were no marines.

[75] "Fixed" is, perhaps, not the right word to use. Up to and including part of the nineteenth century, marines and soldiers seem to have been enlisted for an indefinite period—for as long or short a time as the Government chose to keep them.

[76] The Royal Naval Artillery Volunteers were disbanded in 1892 on the report of a Committee of which the late Admiral Sir George Tryon was president. The report said: "The corps of Royal Naval Artillery Volunteers is composed of men who have not, as a rule, practical acquaintance with the sea, but are attracted by sympathy and aspiration. The Committee suggest that there are grounds for maintaining that a Volunteer Force affiliated to the Royal Marine Artillery—from the system of training and discipline that would be established—would be a far more permanently valuable force than any so-termed naval force in which are enrolled men not inured to sea-life and who have no sufficient practical experience at sea, which experience cannot be given by Government under any volunteer system we can devise."

[77] The bluejacket of to-day, by the way, often refers to himself as a "Matlow" or a "Flat-foot", while the marines are often termed "Leather-necks".

[78] i.e. the anchor

[79] i.e. the ship's company.

[80] Said to be a corruption of *gendarme*.

[81] The first shot, probably from the *Amphion*—thus the first shot of the war afloat—was fired by Private J. B. King, R.M.L.I. (Plymouth), who died of wounds in Netley Hospital soon after the sinking of the *Amphion*.

[82] Official account.

[83] Fred. T. Jane, *Your Navy as a Fighting-machine*.

[84] *Naval and Military Record.*

[85] In the *Morning Post*.

[86] i.e. torpedoes.

[87] *Naval and Military Record.*

[88] *Ibid.*

[89] *Naval and Military Record.*

[90] *Ibid.*

[91] *Journal of Commerce*, Weekly Edition, 14th April, 1915.

[92] In the *Times*.

[93] i.e. of guns.

[94] Lance-Sergeant H. Blanchard, R.M.L.I., in *The Globe and Laurel*.

[95] Captain Luce of the *Glasgow* in his official report.

[96] Mr. Esmonde, published in *Penny Pictorial Magazine*.

[97] Quoted by Mr. Esmonde in his letter.

[98] Mr. Esmonde's letter.

[99] Lance-Sergeant H. Blanchard.

[100] *Globe and Laurel.*

[101] *Times.*

[102] Editor *Aeronautical Journal.*

[103] Published in *The Sphere*.

[104] *Naval and Military Record.*

Transcriber's Note:

Obvious punctuation errors were correced.

The text uses both warships and war-ships. This, and other varied hyphenation, was retained.

The text uses both Zeebrügge and Zeebrugge.

The remaining corrections made are listed below.

Page 6 and also on actual illustration near 192, the hyphen was removed from BLUE-JACKETS to reflect the many uses in the text.

Page 44, "Mont-joie's" changed to "Mont-Joie's" (of the *Mont-Joie's*

passengers)

Page 105, "intollerable" changed to "intolerable" (too intolerable to suffer the)

Page 107, "ther" changed to "their" (written over to their)

Page 130, "Greite" changed to "Griete" (*Dulle Griete* or "Mad Marjery")

Page 172, "fforged" changed to "forged" (forged cases to be shot)

Page 182, "cassion" changed to "caisson" (caisson at least 17)

Page 238, illustration caption, "Blucher" changed to "Blücher" (fate of the *Blücher* in)

Page 245, "markmanship" changed to "marksmanship" (was the marksmanship of her)

Page 295, footnote 103, number of footnote added to citation. Footnote text: (Published in *The Sphere*)

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