FLAGSHIPS THREE

C.E.W.BEAN



Reg Illery



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Really, C. E. W. Bean, author of Flagships Three (Alston Rivers, 5s.) ought to be appointed Patriotic Writer-in-Ordinary to the Commonwealth. He is the foremost to the Commonwealth. He is the foremost exponent of the new Australian school of patriotism: he believes in Australia, and he has reason to believe in her; and though so many of us are like him in this respect. so many of us are like him in this respect, none has so far succeeded in marrying that fervent conviction to words that stir and thrill. There are in this small company other writers, doing the finest and most needed service to the Commonwealth—one might mention names like J. II. M. Abbott and Arthur W. Jose (whenever his employer, London TIMES, lets him); and overseas there is Richard Jebb, with his enthusiastic appreciation—it no longer needs a defence—of our growing nationalism. The defence—of our growing nationalism. The existence of a band of writers like this is one of the most stimulating signs of the new spirit stirring the backwaters of this continent.

One need not be told that the author of On the Wool Track and The Dreadnought of the Darling can write. Flagships Three is an altogether fascinating book. The first flagship was the ancestor of all the flagships

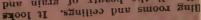
of our race.

"She lies as on that night when some of the first ancestors of our race, coughing the North Sca fog through their sagging red moustaches and heavy beards, crept down past the ghostly white forelands of their newest colony, and beached her safely for the night, under cover of the Channel mists, in some unknown cove along the English shore. It is more than a thousand years since the old flagship, with her stately dead on board, turned homeward from her cruise, and felt, for the last time, the kiss of the wavelets in the home-ford... The centuries have dealt wondrous gently with her, and there, in Christiania a few months since, some of us—Australiaus—saw the first flagship of our race.

It is a brilliant description that Bean gives of this old boat, preserved merely because some forgotten Viking chief was cause some forgotten viking chief was buried in her—on the shore, beneath a great mound of earth. "We were expecting to find something rough hewn, awkwardly shaped, bulky, clumsily fitted with a few rough expedients. What we saw was a long, lightly-built galley, as graceful as a swan, shaped to lines as delicate as those of the P. and O. liner at Circular Quay."

Dicking up the book the present critic

Picking up the book, the present critic said: "Benn ought to be able to tell us something worth reading about H.M.A.S. Australia." But the critic glanced at the first paragraph about the first flagship.... and had to read the whole chapter. Still eager to get to the Australia, he came to the Powerful—the old scrap-heap British flagship. in which Andread on the Powerful—the old scrap-heap British pure units to Andread on the Suggestion and Suggestion of the Suggestion of the









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Photo. Vaering, Christiania.

FLAGSHIPS THREE

BY

C. E. W. BEAN

AUTHOR OF "ON THE WOOL TRACK," AND "THE DREADNOUGHT OF THE DARLING"

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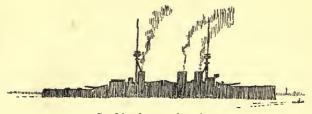
BY THEIR SON



ACKNOWLEDGMENT

THE Author has in the first place to acknowledge his indebtedness to the proprietors of the Sydney Morning Herald for the permission to publish these chapters, of which practically all, in one form or another, have appeared in that journal. He is also indebted for confirmation of much that is herein stated to Viscount Hythe's invaluable Naval Annual, to the Navy League Annual, the Australasian Naval and Military Annual, Capt. Semenoff's Battle of Tsushima, Mr Richard Jebb's Imperial Conference, the Commonwealth Year Book, Mr Stephen Reynolds's The Lower Deck, Messrs Gieve Matthews and Seagrove's How to become a Naval Officer, and many other works. He must acknowledge the kind offices of the Admiralty, Capt. R. M. Collins, R.N., and Capt. Haworth Booth, R.N., Naval Adviser to the Commonwealth, for their courtesy in allowing him to visit the Australia whilst building; to Messrs John Brown & Co. and Cammell, Laird & Co. for their kindness and courtesy on many occasions; and last. but certainly not least, to those many friends by whose goodfellowship his trip on the old flagship became a pleasure cruise.





. . . . Smoking her evening pipe

FOREWORD: A DREAM

It was a fascinating dream. It was a dream of Sydney Harbour, all a hazy, mellow orange under the dying sun, with one long, even bar of grey-blue cloud-the sort of grey you could paint in faded ink stains against a salmon-coloured blotting-pad-along over the western hills; with a mighty Australian flagship, all one hazy grey, smoking her evening pipe lazily in the foreground, a dozen small tenders, pinnaces, gigs busying themselves about her waist, and the seven other grey hulls of the China Squadron in a dim line towards the Heads behind her. A great Admiral—one whose name goes for more in the courts of the world than a Prime Minister in the old time—has brought the Australian-China Fleet back for its yearly trip to the home harbours. In a day or two it will slip in the early morning down the long lane of water, with the band of the flagship playing and the colours flying, and out and out and hull down-a smudge of brown soot along the skyline. And the city will know that its brothers or cousins have gone with their ships a week or so to Wellington, and then back for ten months of deadly earnest around the Straits and Hongkong and Wei-hai-wei. The destroyers of the fleet are just then in Singapore. The cruiser squadron, with the exception of one ship re-fitting in Port Stephens, and

one left last week in Melbourne, has been signalled to join at Auckland.

In 1908 the writer published a smaller book dealing with an earlier stage of that same long progress of events, which is the subject of this one. That book was published at a time when a British naval force was the only defence of Australia and the British dominions in the Pacific. And the words quoted above were the opening words of the last chapter in the book—the dream to which it all led up.

They may well stand as the first words of the first chapter in this one. For the dream they describe is coming true, word by word, line by line, in such fashion as neither he who dreamed it nor anyone else could ever have hoped to behold. Within five years it has fallen to the writer to recast and extend the same story in order

to add to it an already accomplished sequel.

For this book recounts the birth of the latest of a very famous and ancient and heroic line of Navies—the coming of a first-born to the British Navy. Or if the United States Navy should be counted as the Royal Navy's first child, then it deals with the coming of the second child. It is with those two elders, and, of course, especially with the great mother navy, of which it really forms an outlying member, that the Royal Australian Navy will always be compared. The writer has used such opportunities as have come his way to obtain some insight into the three of them.

Four years ago, when the earlier book on this subject was published, the building of an Australian Navy was by no means an accepted policy either in England or Australia; and even the scheme for a mosquito fleet, as proposed by Mr Deakin (at a capital cost of £1,277,000

Foreword: A Dream

and a total annual cost for both Army and Navy of a little over £1,000,000) was looked on by many Australians as an absurd and impossible undertaking. Many of the chapters of that book are included in this volume; but that last chapter on "The Flagship of the Future," which pointed out the inevitable coming of the Australian Fleet, is not included, because the necessity for it has passed away for ever.

The writer there said:—"There is one argument settles the matter. It is a very simple argument; it begins in the future and works backward. Australians cannot assume they are going to be wiped out, even if they are. They are bound to assume that some day there will be 40,000,000 people in Australia; with, perhaps, half as many in New Zealand. Picture them in the year 2108. One cannot think of sixty million people in two great sea lands allowing about as many sea people on a little island in the North Sea to do all their fighting, or provide all the money or men, or ships. They must have a Navy by then. The question of when they had begun to have it is merely a question of time—of sooner or later, not of yes or no.

"That simplifies matters. As to whether the Australian Navy could be all one with the British Navy—one Imperial Navy—simply depends upon whether, by that time, those who pay the money for the fleets have managed to agree on some plan for an Imperial Council, or even Admiralty, on which all those who pay are represented. Because it is older than Magna Charta that an Anglo-Saxon who pays taxes shall say how they are to be spent. If such an arrangement can be hammered out there may be one fleet and one service; perhaps one tax to pay for it. If it cannot, it is a pity; but we shall have to do with a set of sepa-

rate fleets, strongly allied, working together as best they can."

The writer would not, of course, be so foolish as to pretend that his small work had anything to do with the coming of the Royal Australian Navy - unless it may have had some obscure and infinitesimal share in the spadework of popularising the idea. But he may perhaps for once be forgiven if he feels not a little satisfaction at having expressed views which have been so quickly and completely fulfilled. After describing the 8 great dream-battleships of the Australian Fleet, home from the China Seas, the chapter went on to point out that, to possess a fleet of the same size in proportion to her people as the British Fleet, Australia would need 5 battleships and 4 big cruisers-that is, 9 big armoured ships; 8 smaller cruisers; and some 34 torpedo craft. There would have to be dockyards, arsenals, stores, barracks. And the whole would cost nothing under £25,000,000 a year for a start, and over £4,000,000 every year to keep up. The writer, having thus summed up what he believed to be the facts, said :-

"Now that is the cost of one's dream to-day; and as the people grows, so will the cost. And having granted all that, all the expense, all the difficulty, one makes no apology for the conviction that Australia will need her own Navy in spite of it. The task is enormous, but England can manage it; and what England does one will not put beyond Australia."

At that date the biggest scheme contemplated in Australia was Mr Deakin's proposal for a few destroyers and some submarines. Such a thing as even a single *Dreadnought* was not thought of. And what was written in that chapter, of course, had nothing whatever

Foreword: A Dream

to do with changing this state of public opinion. But the same facts on which the writer formed his opinion had everything to do with it. Just a year after those chapters first appeared as articles in the Sydney Morning Herald (by the courtesy of whose proprietors all these chapters are reprinted), the Naval Conference of 1909 decided that Australia should be advised to form her own fleet unit—including one large battle cruiser; and, eighteen months later still, Admiral Henderson, who was invited by the Australian Government to advise it, drew up the following scheme for the Australian fleet:—

He said that it should consist of 8 battle cruisers; 10 smaller cruisers; 18 destroyers and 12 submarines with 3 depôt ships for flotillas (making 30—or perhaps 33—"torpedo craft"); and a repair ship. There would have to be numerous naval ports, docks, stores, etc. The whole capital cost would be about £40,000,000; and the annual cost would rise from £3,000,000 to £5,000,000.

That is now the accepted policy of Australians. Australia is already spending about £4,000,000 yearly on her Navy. An Australian flagship—not unlike her whose great armoured hull figured in the writer's dream in 1908—is already on her way to the harbour in which that frontispiece pictured her. Her name is not the Warrego; but a Warrego does already figure in the Australian Fleet: it is the name of the first warship ever launched in Australia.

There was one prophecy which has not been fulfilled and which does not yet seem to be accepted. It was opined that the Australian Fleet in the Pacific, when it came to business, would be found to need some advanced base considerably nearer to the scene of

probable action than any port in Australasia—which is four thousand miles or so from the nearest probable rival. Although one seems to see many good reasons for this, it must be admitted that their force—if they have any—is not generally realised as yet.

But that forecast may stand.

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PART I





. . . . Her lines were as graceful as those of a P. & O. boat . . .

CHAPTER I

THE FIRST FLAGSHIP

SHE lies as on that night when some of the first ancestors of our race, coughing the North Sea fog through their sagging red moustaches and heavy beards, crept down past the ghostly white forelands of their newest colony. and beached her safely for the night, under cover of the Channel mists, in some unknown cove along the English shore. It is more than a thousand years since the old flagship, with her stately dead on board, turned homeward from her cruise, and felt, for the last time, the kiss of the wavelets in the home-fiord. The years have a little blackened her timbers; gone are part of her bulwarks, and most of the mast, and the grotesque figurehead that once swerved and bobbed and ducked through the stinging spray showers of the North Sea-decayed, and fallen away these hundreds of years. But, for the rest, the centuries have dealt wondrous gently with her. and there, in Christiania a few months since, some of us -Australians-saw, as any Australian may see her who passes that way, the first flagship of our race.

She is a ship in which some of the Vikings once sailed. She is only preserved because some forgotten chief was buried in her. They know nothing about the chief—there was no history in those days. All they know is that on the ocean side of the fiord on which Christiania lies, about one hundred miles down from Christiania, near the farmhouses of Gokstad, not far from the coast, there had from time immemorial existed a large mound known throughout the district as the King's Heap, Kongshaugen.

There was no history of that mound. Only, somehow, there lingered a tradition—one of those absurd old fables, which they tell to amuse the children, as they have told it since goodness knows when—that a king was buried there with all his treasure. It was one of those fairy stories of which these old countries are full. But the people of the neighbourhood, about the year 1880, became persuaded that there was a chance of a successful gamble and that it might be a good speculation to dig the mound up to see if any treasure were left. Fortunately, they were stopped from doing so by order of the Antiquarian Society of Norway, which apparently, by the good laws of that country, had some power to stop them. The Antiquarian Society carried out the excavation very tenderly itself.

They had scarcely begun to dig when they came upon what was clearly the woodwork of a complete ship.

And so the old fairy story that had been told to generations of children all these years had been true enough. A king had been buried there. The true story must have been handed down amongst the farmhouses from father to son for century after century from the actual day when the little crowd—women with their long plaited locks, flaxen-haired men, and children, with their swathed and bandaged leg-wear—stood around and

Graceful as a Swan

watched the ceremony in the days when Alfred was just turning the scales against the plundering Danes in England. The last relic of that tradition still lingered in the nineteenth century. They had buried this chief here by the coast with his treasure, sure enough. They had buried him in his ship.

We saw her only a few days ago. We were expecting to find something rough hewn, awkwardly shaped, bulky, clumsily fitted with a few rough expedients. What we saw was a long, lightly-built galley, as graceful as a swan, shaped to lines as delicate as those of the P. and O. liner at Circular Quay. The thin bow curved away at a delicate angle, bluffed out gradually above, and curved in lightly beneath, until the bottom amidships was almost as flat as that of a modern steamship. There was no clumsy, blunt-ended stern — the same delicate lines as those at the bow swept up to the point of the stern, as cleanly as in the ferries that ply from Sydney to Manly. The light planking on the sides was studded regularly with big, flat-headed iron nails—the joints were planed down so as to be barely noticeable; the stern-post was finished off along all its length with a groove and bevelling as neat as a dining-room table.

There were the bedsteads of the ship's officers, five of them—very like a low wooden bed of these days, with short turned bed-posts, made so that they could be taken to pieces and stowed in the hold. There were the three ship's boats—or, rather, pieces of them—13 feet, 17 feet, and 23 feet long; the biggest must have been nearly a third as long as the ship herself. I suppose they kept her either towing behind or turned upside down along the deck. The boats were shaped exactly like the ship—double-ended, like any modern \$Norwegian rowing boat. But they all had rudders like the big boat.

The big ship herself—she was 75 feet long and 17 feet wide—has her rudder still fixed. It was not hinged on the stern as rudders afterwards were, but on the righthand side of the ship, over the counter, a little way from the stern. It was hinged by a thick rope to a couple of big wooden buttons on the outside of the ship. rudder itself was a stout, dumpy oar, with a very big, thick blade; the modern rudder is really the same thing, only a little more developed. They learned to fasten them on to the stern of the boat a few centuries later. but at this time they were only about half way on their development from the oar stage, although there was already a tiller on this one—the tiller pointed athwart the boat instead of fore and aft. At this time the rudders were always on the right-hand side of every boat—I suppose where a man could work them with his right hand. And that was why they called the right side of a ship the "steerboard" or starboardthe word comes direct to us from the time of the Vikings. only we have long forgotten its old meaning.

There is the old copper pot in which they did their cooking, with the iron chain upon which they must have hung it over the fire. There are the wooden plates and cups of the ship's inventory. They could not cook at sea—the fire was perhaps too dangerous. They had to reserve their feast for when they had moored quietly of an evening inside some foreign bay, and the boats put off with the cooking pots to the shore; when they could stretch the big tent awning over the after half of the ship and sleep comfortably with the watch in the bows. A few scraps of that big tent are still with the ship. It was of white cloth with red stripes sewn across it. There was a gaff running right down the ship to serve as the ridge pole of the tent; and the tent poles at the

The Mast-fish

end were richly painted and carved with horses' heads. The tiller had been richly carved and painted too. Somewhere about the ship was a single armchair also carved with horses' heads.

They evidently sailed this ship when they could. The foot of the mast still stands chocked in position. Just aft of it is a big hump of wood shaped out of a tree trunk with a groove cut through it into which the mast could be lowered. They raised the mast with a capstan, which is still there in the forehold, and put a chock of wood into the groove to help to keep the mast upright. The solid hump of the tree trunk, in which the groove is cut, is rounded and shaped at both ends like a fish's tail. They called it the "maste-fisk," the mast-fish. That hump has long since disappeared from the fittings of a ship; but Norwegian sailors still, for a reason which they probably do not know, call the part of the deck around the mast the "maste-fisk."

Down the centre of the ship, aft of the mast, exactly as you may find them in a modern yacht, are a couple of raised brackets on which to place spars-and there are the spars still resting on them. When the ship was sailing they must have heeled over a bit at times—so they closed up the oar-holes with wooden ports. There are the openings for the oars in the third plank from the top of the ship's side—sixteen holes along each side. As you see them to this day, some of the ports are closed with wooden shutters, and others are open. are round holes (miniatures of the modern porthole, of which I suppose they are really the great-grandfathers), but with a small slit running out of the top of each of them like the tail of a capital Q inverted. That slit was for allowing the blade of the oar to pass through from inside the ship whenever the order came to out-oars.

And there, laid out beside the ship, are the oars—exactly in the modern shape. The same ridge runs down the centre of the blade; the loom is fined off to the handle in precisely the same manner. Of course they are very long—more like the sweeps of a barge than a boat's oar, 17 feet to $18\frac{1}{2}$ feet. But they are lighter than modern sweeps, with much smaller blades, and made of spruce. There is no question that each of them was used by one man only. But one would say he was a

big man.

It would be long to tell all the details of that old ship's equipment which are there to be seen—the short boat's oars for the small boats, and the masts and spars for sailing them; the lump of iron which is all that remains of the big ship's anchor; the anchor stock of identically the modern pattern; the wooden sledge which they carried for their landing parties, the gangway plank made of fir, with steps cut into it, to put across to the rocks when they moored in deep water, or to the wharf in any civilised port. The ship was scientifically built, although her frames were made of the bent arms of trees. For instance, the frames run only up to the eleventh strake on the ship's side—and they find that the tenth strake has been left thicker than the rest for the sake of strength. The fourteenth strake from the keel is also thicker than the rest-and that is the one in which the oar-holes are cut. At the point where the big rudder rested against the side, the ship is specially strengthened inside with extra woodwork to stand the strain.

She was a handsome ship, no question. The two upper planks in her sides—the bulwarks—are slightly tumblehome, like the sides of any modern flagship. And along these bulwarks on the port side near the stern there are

Her Last Berth

still fixed—each one half overlapping the next, so as to make a row along the bulwarks—four round shields. One had often seen them arranged so in pictures. There was evidently a row of them along each bulwark originally, for many more shields were found lying along either side of the ship. But most of the bulwarks had fallen in. The shields had big iron bosses in the centre to protect the man's hand that held them, and they were originally painted alternately yellow and black.

You often see pictures of Viking ships with these shields fixed in place along their sides, whilst at the same time all their oars are working, not to mention the sail. In this ship, at any rate, the oars could not have been used when the shields were fixed, because the shields which we saw were covering up the portholes for the oars. They were probably fixed so for an ornament, on occasion of ceremony.

And that was how they came to be put there this last time, when the old chief was laid on a special bed inside a sort of strong lean-to of timbers built up in the centre of his flagship. The ship had before this been floated up to the beach; and then dragged up the shore by a team of the chief's own horses, and embedded in potter's clay, which was the reason why it was so perfectly preserved. Then, with his chief treasures around him, the harness of his horses, his richest cloak, his precious weapons, and the rare bird—a peacock—which he had brought home from some long cruise down to Spain or the Mediterranean, the old warrior was buried beneath a mound of earth, heaped high over the top of his ship and the chamber by the mast in which he lay.

The antiquaries did not find the treasure. Somebody had been there long before them in search of that. Long

ago when the story of the burial was still fairly fresh, someone, some tow-haired outlaw with a friend or two, that cared as little for dead men as living, had come along, probably in the night, and cut straight down into the chamber where the dead man lay all these years in the dark, with his cloak and his gold weapons and drinking-cups, and bronze and leaden horse harness around him. It must have been in the days when the people in the neighbourhood could still remember under what part of the mound the treasure chamber lay, because the robbers were in no doubt. You can see the big hole they made right through the port side of the ship, as big as a door, straight into the chamber in which the mourners had left the old chief on his bed of state, perhaps a hundred years or two before. And, when the antiquarians opened it up a thousand years later, they found the dishevelled chamber just as the robbers left There were the bones of a very tall, big man, a man getting on in years at the time of his death; and, in a confused heap, where they had been thrown by plunderers in the hurry to get away with all that was valuable, were a few scraps of gold-embroidered silk, a shred of dark woollen cloak, a leather purse, a few harness ornaments of gilded bronze, and lead thrown aside as worth-There was still the bed—somewhat different from the others they found in the ship—on which the old chief had been laid; and some of the feathers of the beloved peacock.



. . . . Round the bluff of the land at daybreak

CHAPTER II

THE FIRST SHIP'S COMPANY

THEY can tell, by the style of the ornaments found with him, that it was about the time when Alfred fought the Danes, or perhaps a little earlier, that they carried the old chief in his flagship to his last rest beside the sea. It was then four hundred years since the first dreaded pirate galleys had crept out of the creeks on the Frisian coast and appeared for the first time in the English Britain was a settled and civilised land in those days, one of the outer colonies of the Roman Empire. The roads—the very same main roads that exist to-day - were mostly in existence then. towns were busy with commerce; the mines were in full swing; the farm lands had spread so wide that Britain was one of the important corn-exporting countries of the world. The state of the country was probably not altogether healthy—the estates were probably too large, the country houses of the landed proprietors too luxurious, the cabins of the working folk too mean. The civilisation was perhaps limited rather to the towns, whilst some of the country folk remained wild and unsympathetic. But at least they looked back upon settled orderly rule for a period as long as that which

separates us from Queen Elizabeth. They had been opened to civilisation for as long as America now—for nearly three times as long as Australia. Their status as a settled Roman colony ran back far beyond the memory of any remembered ancestor, and there can have been no reason for them to dream that the future would bring any change. The existence of the Romans in England was to them as much a part of the settled scheme of the future as is the existence of the British race in Australia to-day.

It was after more than three hundred and fifty years of rule in Britain, that the Romans were faced with a formidable danger nearer home. The Goths were threatening Italy itself. To meet that danger the scattered forces of the Empire had to be concentrated; and the garrison in Britain was temporarily recalled. They were to be sent back, as a matter of course, when the danger at home was over. I suppose not one in a thousand, amongst those that went and those that saw them go, realised that they would never see Britain again. But that day of return never came.

It was not long before, that there had appeared off the British coasts wicked-looking ships carrying down the seas Our Ancestors. It was a sight that became all too familiar to the British as the years went on. They were a long-haired, tow-headed lot, were the Smiths, and the Billings, and the Harlings; and wilder in their ways than in their looks. "Foes are they," says a Roman poet, "fierce beyond other foes, and cunning as they are fierce; the sea is their school of war, and the storm their friend; they are sea wolves that live on the pillage of the world."

When the Romans first came in contact with these folk, they were led by their resemblance to the more

Sea Wolves

Southerly German tribe of Saxons, whom they well knew, to speak of these new sea-peoples as Saxons also. And so the Romanised Britons only knew of them as Saxons; and to the remnants of the Britons in Wales, and to the Scottish Highlandmen and the Irish, they have been Saxons ever since, and are Saxons to this day. But it is said to be doubtful whether any considerable part of them—if indeed any—ever called themselves Saxons for years after their first coming, until they learnt back from the British to use the name. To themselves, long before they ever crossed the sea to Britain,

they were Englishmen.

There still is a small district shut in by two waterways in Schleswig, on the Baltic side of the Danish Peninsula, inhabited by a sort of Danish people, but now belonging to Germany, which is to this day called Angeln-the country of the English. That is the country which was "home" to the first generations of settlers in the new country of the English. It is true that some of our ancestors were probably Goths, and some were probably Swedes, and some Burgundians, and some Norwegians. and more were Danes, and more yet Frisians; and that the English were only an important central tribe, by whose name the rest of these North Sea marauders came The "Vikings" were the people that to be known. issued from the Norwegian creeks. "Viker" means "creeks," and Vikings are simply creek-people. And all these wild strains of blood that were poured into England during the dark ages, while London lay in ruins, and the works of the Romans were gradually blotted out—all were of the blood of sea-peoples.

People of the flords and creeks; people of the Swedish lakes; people of the Danish inlets and sandhills; people of the Belt and of the Sound; people of the Frisian

lagoons and Islands; people of the low wild Baltic and North Sea coasts, swept of the spindrift. Indeed, the country of the Frisians, who came mostly to the south of England, has been actually crumbling off and falling into the sea since the dawn of history. The coast of Europe was sinking there when they sailed for England, and it is sinking still. Their history has been one continuous story of fights against the encroaching sea. North Frisian Islands covered 1100 square miles in the thirteenth century. They cover 110 to-day. There was no Zuyder Zee as yet at the time when the Frisians were crossing to England. The site of the present sea was low land. The sea broke in over the land in 1282. The old island of Nordstrand was swamped in a tremendous gale in 1634. The Frisian Islands make a long chain to-day, separated from the coasts by shallow mud flats which are sometimes dry at low water. They are exceedingly interesting to any English-speaking traveller, because the old language of the Frisians is perhaps the nearest thing to English that exists. But it happens that the Frisian Islands, Norderney, Juist, Borkum, Wangeroog, Spiekeroog, Sylt, and the coast and inland channels are at present being widely fortified by the Germans, and the feeling is that the tourist there runs a considerable chance of being arrested on suspicion of spying.

All these sea-peoples went to the making of our race. What one scarcely realised until one visited their country was, that the whole collection of them lived, of old, in and around a small scrap of country not much bigger than England at the outside. And so it is that an Australian has this big advantage over an American when he travels in Europe—that he knows exactly which little corner of the Continent the great majority of his

The Cradle of the Race

ancestors came from. He can take the train through certain low-lying foreign-speaking lands with the tolerable certainty that his own ancestors, only forty generations or so back, must have driven their old wagons along the same straggling lanes from the same sort of straggling farmhouse; must have worked behind the same sort of hedges, very likely in much the same fields; must have watched their pigs in the same pine forest; must have cut timber and burned charcoal and tramped home at sunset across the heath to where the red speck of light shone from the same black lump of a cottage—their own beloved "humpy"—much as you see them to-day. he wishes, the Australian can go to the museum in Copenhagen, and see, as we saw them a few days since, the tools his fathers worked with, the harness they put on their horses, the shields and swords they fought with the clothes they lived in, and a map of the very tracks along which they lived.

That corner of Europe is crammed to this day with English-sounding place names. Wisby, Tydal, Grinsted, Rye, Moss, Hindfly, Knutby, Lyster, Edset, Boxholm, Sandholm, Northorp, Birkeland, Optun, Lodalsbrae, Linghem, Thisted, Billing, Seffle, Silden, are all in the map of Scandinavia. Their streets are full of English faces and English frames. The English and Germans are fairly alike, but as a rule you can tell a German from an Englishman at sight. You cannot tell a Dane at sight from an Englishman or an Australian; nor can you tell a Frisian; nor, generally, a Swede or Norwegian. If you hear any of them talking but do not catch the words, you will swear they are talking English. They use the same cold monotone, with the same tendency to throatiness. A French or German woman raises and lowers her voice through so many tones, when

she speaks, that she almost seems to sing. But the Scandinavian has exactly the same intonation as the English and the Dutch. At the end of one thousand or twelve hundred years of separation that characteristic still holds good in every one of that group of peoples.

And here were we, only a few months since, feasting our eyes upon the actual remains of one of the ships in which these fierce old seamen carried on their explorations, crossed the sea to colonise England, Scotland, parts of Ireland, Normandy, and Southern Italy, and carried terror and death quite impartially along all the coasts of Europe, and amongst their own earlier colonists in Britain.

Almost every Australian who reads these words may be sure that some forgotten ancestor of his, some founder of his own family, some grandfather of his grandfather only forty generations or so back, once crossed the sea to the new colony in a fleet of those ships, with an Admiral built after the likeness of that old chieftain at their head. They knew well enough the feel of the salt water slipping along those wooden decks, and the regular groan of the drowsy oars through the small hours of the night, when they and half the crew were sleeping curled up in their fur cloaks on the planks, and the rest of the crew, under the officers of the morning watch, were taking their turn at the oars. They knew what it was to watch the ship's high stem edge round the bluff of the land at daybreak, and find gradually spread out before them the white domes and glistening towers of fabled cities; or to lie off some open, sandy, palm-fringed, sun-bathed coast, while distant figures crawled down the sandhills to barter with the ships' boats, which had been sent in to the beach. Some of them sailed round the Mediterranean to Constantinople; and others dis-

A Week too Late?

covered Iceland; and then the Norse Icelanders, under Eric the Red, discovered Greenland. And there seems little doubt that a day came when some of them held on further still until they brought up against shores still further to the south-west, and called them "Markland," and "Furder-strandir," and "Wineland the Good"; and brought back the first news of America five hundred years before Cabot and Columbus.

Now, all this is the reason, if you think of it, why this book comes to be written.

It was no accident that these wild sea-peoples sailed out further to found a new home on the islands which shelter some 800 miles of the European coast from the fury of the Atlantic. And therefore the British people, and the British sea-power, and the British Navy are no accidents either. And it was not an accident that in the fulness of time they found, and kept, and contrived to protect for a century and a quarter, a vast island—a vast cluster of islands—in the South Pacific.

A French expedition of two ships arrived in Australia just a week too late, and found the first British settlers already putting up their homes around Sydney cove; and it is sometimes therefore pretended by historians, that Australia only escaped by a week the fate of becoming a French colony. For one's own part one will never believe that, even if the French had peppered the whole coast line of Australia with their settlements, they would have kept it for twenty years. It was with the greatest difficulty that even the English with all their natural resourcefulness and adaptability, managed to maintain this single settlement at Sydney through all its early hardships. Part of the population had to be sent to Norfolk Island, 800 miles off the coast.

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to save it from sheer starvation, and the rest struggled through on supplies brought from the Cape. What could the French have done in a similar case? Indeed, there were famous French captains in those seas, both before Cook, and after him. They made a colony of Mauritius in 1710, and the English took it away in 1810. Even if the French had taken Australia they would have lost that too. The French were in Canada before the English. There is only one people that could have colonised the great islands of Australasia, and, having colonised them, could have held them against all others ever since; and that is the people which has been for nearly fifteen hundred years an island people, and a sea-people from those dim ages in which the memory of man runs out and loses itself.

And therefore—to return to the point at which we started, it is no accident that the people of Australia are the descendants of Danes and Norse and Frisians and Jutes and Englishmen; it is no accident that the people who came to the greatest island in the world were an island people; it is no accident that there exists the Royal Navy, or that it managed to keep Australia safe during the long one hundred and twenty-five years of its infancy; or that Australia has at last made a start with a Navy of her own with which she will help to defend herself, and those other sea-lands in which the old sea-people during a thousand years has made its home.

And so it is, if you come to think of it, that if the old Norse and Danish galleys had not done their great work upon the ocean in their own time and place, then H.M.S. Powerful — as flagship of the British Squadron in Australian waters—would never have steamed out to do the right and hospitable thing by the American

Wet-nurse of Battleships

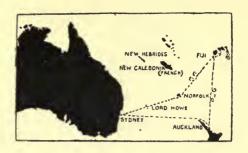
Squadron which visited that part of the world in 1908; and the writer of these words would never have had the great privilege of sailing in her, and acquiring some idea of the men and the work of the Australian Squadron under the old regime. Whilst if the Powerful, and certain other British flagships in their turn, had not been equal to their duty throughout the Seven Seas, the Australian people would never have had the chance of reaching the stage at which, when the British fleets were perforce concentrated to meet a growing pressure in home waters, they could contribute their unit to this confederation of island fleets; and this same writer could not have watched the curtain raised upon the future, when the first flagship of the Royal Australian Navy slipped gracefully down the ways, and felt the supporting hand of that old wet-nurse of battleships, the Clyde, and opened her eyes, and began to live and breathe, on the 25th of October in the year of grace 1911.

The first flagship was the reason for the second; and the second was the reason for the third, and there's the sum of it.



PART II THE SECOND FLAGSHIP





THE SECOND FLAGSHIP

It was on a fresh sunny morning in the winter of 1908 that H.M.S. Powerful—the comfortable, capacious, rather antiquated cruiser, which was the best-known flagship in Australian waters during the last years of the old regime - slipped her moorings in Sydney Harbour; and with the Admiral's flag at the truck, and her band playing on the quarter-deck, and the redroofed knuckles of the harbour-side swimming by her, all in a dreamy haze, started on her way to meet the American Fleet, which visited Australia that year. Australians had never seen a modern battleship, much less a fleet of sixteen battleships, and their visit was looked forward to with an interest which can hardly be realised in England. By the kindness of the Admiral in command of the Australian Squadron, the writer was enabled, as representative of the Sydney Morning Herald, to make the journey to Auckland on board the British flagship. The cruise included, incidentally, Fiji and Norfolk Island. And, during the six weeks that it lasted, the writer was able to gain such insight as was possible into the ways of that Navy to which the defence of the British dominions in the Pacific

was then entrusted—the Royal Navy. He wishes the reader to take with him that glimpse at the old regime; to look on at the incessant preparation that is going forward night and day on every British warship in every ocean for some vague future battle; to watch the firing of guns, fighting of battles, the manœuvres and evolutions which, though make-believe to-day, are carried through with enough of earnestness to give him a picture which he can get in no other way, a picture of the great fight which, Tsushima notwithstanding, has never yet been fought—an equal battle between two big modern fleets; and finally to judge. by the standards of the British Navy, the standards which the Royal Australian Navv has set itself to attain, and which, by the account of those who know them, the men of the Australian Navy are already attaining.

It was in 1908 that the writer obtained his experience of the Royal Navy, and in so far as the following chapters give a picture of the Royal Navy, it is a picture of it at that date. One cannot pretend that it is a picture of it to-day, for, if the ships of the Navy change from year to year, its training changes from month to month. There had been enormous changes in the ten years before 1908, and there have been great changes since. The picture here is mainly of the squadron defending Australia during the last years when that squadron was supplied by Great Britain.



When the ship is a dead thing.

CHAPTER I

MARRYAT-LAND

IT was trespass into Marryat-land from the very moment when, late of a winter's night, a small boat containing the writer and his belongings wandered out across Sydney Harbour, and found itself presently wallowing crabwise around a certain gigantic grey ram. A terrible voice bawled out in the darkness high above: "Yai—hai-wai!"

The boatman shouted: "No-No!"

It seems the terrible person had only been asking who we were, and was really saying: "Boat ahoy!" Even in the dullest times, small busybodies are not encouraged to come about His Majesty's ships after dark. Perhaps at the beginning of the last century, when the Navy was normally at war, the custom grew of asking loiterers their business. Let anyone that reads this take a boat any night and row past even the smallest British warship in any harbour. He will be asked what he is about, and expected to answer. If he is bringing the Admiral aboard, he bawls, "Flag!"—and the watch on board runs to get the commander or the captain, or whoever should receive the Admiral. If it is the captain, he shouts the ship's name—"Powerful!" If a

a ward-room officer—"Aye—Aye!" A gun-room officer, that is, a junior, or anyone else—"No—No!"

The boatman in every naval port knows the right answer. In Japan a boatman who cannot understand a word of English will often answer that hail. A ward-room officer told me that he was being ferried back to his ship in a Japanese port. Neither he nor the ship had ever been there before. He was not in uniform. But the native boatman, though he could not talk English, knew the ship by her name; guessed his rank; and, when challenged, flung back "Aye—Aye," exactly as if he had been the oldest waterman in Portsmouth.

So it happened that on this night in July the Sydney boatman, who was carrying a mere passenger of no importance whatever in the internal economy of His Majesty's ships, answered "No—No." The small boat sidled into the haze of the soft white lights on the gangway that vignetted a patch of soft grey side above and soft silky water beneath. The great hull was softly purring. Already there was one sure sign of the next day's journey in the dense clouds rolling out of the four funnels, rich round clouds all creased and crinkled, as black and soft as—as the coat of a Persian kitten.

Early next morning the cable came off the buoy, the white ensign went down from the stern and up to the peak; the ship slowly swung to sea. In this Navy and any other, the moment a ship becomes a dead thing, tethered to the land, the ensign which means her life comes down from aloft and goes up at her stern. But when the first breath of life stirs in her again, the instant that the anchor comes off the ground and the ship is free to move, the flag is hoisted at the peak. It matters not if she swings scarcely an inch, lies rocking

No False Modesty

hesitating which way to make. The thing is, she is free, free and living, free of all the seas, and her ensign is up wriggling again in the fresh air current from the ocean. By that sign, even whilst she lies motionless, men know she is free—off on some errand of her own which it is no one's business to question. So on that Saturday morning we in our turn slipped out of the harbour on our proper business and with due state.

There is no false modesty about an Admiral's ship when she takes her Admiral to sea. That is the time for a passenger, if there is one, to keep discreetly in the background. The bridge is crowded with at least a score of people, whose attention is strained almost to breaking point on the particular duty before each of them. There is an acute consciousness in everybody. from the captain to the signalman, from the commander to the midshipman who faithfully attends upon the Admiral under the highly descriptive sobriquet of "doggie," that their particular business just then is being carried out under the critical eyes of the whole fleet. The commander, who is responsible for keeping the energy of the ship's company screwed up to the proper degree of tautness, takes up a point of vantage from which he contrives to make every seaman feel that those penetrating eyes command the whole deck in general, but his own corner of it in particular. The point of whitest heat is probably in the cable flat where a party of stalwart Britons has already reached several degrees beyond melting-point under the agonised exhortations of that most sensitive guardian of the ship's honour, whom the Navy list knows as the First Lieutenant, and the Navy, invariably, as "Number One." The guard of marines is drawn up stiffly under the awning on the quarter-deck, with the ship's band. You

on shore may only catch on the buffets of the wind the pulse of a distant trombone, and wonder what on earth the German bands, which honour Sydney as well as London with their talents, are doing at this hour of the morning. But the little community which is bounded by the South Head signal station and Garden Island knows all about it. There are big cities in England where the business of the Navy is the business of the There the seagoing or the homecoming of a flagship is the matter of town talk for a day or two. One could not help thinking of a time when Australia would be no longer an infant, and when a great flagship would swing round her moorings at Jervis Bay or Port Stephens, and swim downstream past dockyards and slips and sheds, past low red ordnance stores, with a whole crowd of grey funnels and masts peeping over them, her music trailing behind her in waves like the smoke from her funnels or the wash from her bows, to furnish gossip for the day to an Australian seaport. . . .

There's nothing that goes quite as direct about its business as a big steamer. A train or a motor-car has to wheedle round hills and coquette with river valleys before it can get where it wants. But a steamer just shakes the dust off its feet, and then makes a bee-line across the world. In the sea-city from which I come, you can tell where she is going by watching her for three minutes after she leaves Sydney Heads. A merchant steamer steps out of the front door, drops the pilot, looks round, and then starts off on one of the invisible paths which you know leads to some lump of rock or outcropping mountain-top some thousand miles or two below the horizon. You know perfectly well that in three or four days the men on the bridge will be looking at the horizon a little over the starboard bow.

A Fingerpost for Sailormen

And just at the time and just in the place where they are looking for it there will crop up a little grey-blue speck, or a quivering, dancing, uncertain flicker, which is a hilltop or a lighthouse in New Zealand or New Caledonia or Norfolk Island or Chili; and, incidentally, has been hit on by sailormen for a fingerpost to show them on their ways about the world.

We did not wait even to drop a pilot and look round, because it is not the way of British warships to carry pilots, even in foreign ports. When warships are most needed there will be no pilots to carry. So when pilots are available it is thought best to do without. Some years ago at a levee of warships, to be polite to some King or Emperor, a British Fleet quietly picked its way through a maze of Baltic channels and dropped anchor in a German-Danish port with an unpronounceable The foreign newspapers were surprised, and some German cruisers followed our fleet in, keeping carefully hull down over the horizon, playing an interesting little game in which we figured as enemy. But it was all in the day's work for the Royal Navy. It slipped unostentatiously in before it was expected, moored itself at the inshore position, which the Germans had marked out for themselves, and made a very good show for a week.

It took quite a long time to get rid of Sydney. We were out of its harbour in half an hour; but not out of its smoke. A thin brown smudge, as though someone had smeared his finger along the horizon on a newly-painted picture, covered the city so thickly that it could not be seen through the Heads, and stretched far to sea. Two hours after we had left port the tail of that smoke was still to the south of us. If Sydney goes on so, it may develop a real London fog before long; in the

distance, this looked a tolerable imitation. Perhaps, if the truth were known, the Powerful may have had something to do with it. She does not generally do business with all four funnels in port. But when she does she produces a cloud worth watching. There is a certain priceless black jewel found somewhere near Cardiff, in South Wales, and supplied to His Maiesty's ships. It is called Welsh steam coal, and burns without smoke. You may watch an English cruiser in home waters steaming at full speed so that the white wisp of foam at her bows almost obliterates her freeboard. but the only sign that is emitted of all that energy, as far as the funnels are concerned, is a thin brown film which almost at once fades into the air. It is hard to say what that coal would not be worth to England in the agony of war. But coal-owners are quite impartial, and supply it by hundreds of thousands of tons to foreign navies also. I suppose they could not be interfered with except by trenching on the cherished rights of free Britons to make a profit out of possible enemies by helping them to any extent within their power.

When they found New South Wales they found no New South Welsh steam coal, more's the pity. The nearest approach comes from Westport, New Zealand, and they bring that to Sydney for His Majesty's ships. "But, bless my soul," said the officer of the watch, as he screwed up his eyes at the rich creamy folds tumbling out of the funnels like the froth from a pewter-pot, "bless my soul, she makes as much of it as the whole Channel Fleet." Still, it is better fuel than some. There are fleets, they say, which wave a great signal before them to anyone who is within forty miles of the horizon. Certainly I can vouch for it that on a morning, two months later, when the American Fleet left Sydney at

Smoke

8 a.m., burning American coal, the smoke it was making could still be seen from Sydney Heads about noon. It should then have been at least forty miles away. Look at any photograph of a single French warship moving out to sea and smudging out half the bald, round Toulon hills, and you can understand it.

But the smoke and haze and loom of the land are out of date nowadays. They know of the land and all about it—of the German Emperor's last letter and the result of to-day's steeplechase—long before they see even the faint, blue, hazy mountain-tops. This was in earlier days of wireless; but a full day out of port, came news of Count Zeppelin starting a line of airships; of Bruce Pearce making another round of 75 in the golf champion-ship; of a bridge collapsed in Cologne, and something winning the Grand National.

Indeed, these modern nuisances are becoming too much for the comfort of a self-respecting ship. It may be all very well for stockjobbers to turn an Atlantic liner into Wall Street, and finish off their breakfast with a smart deal in Chinaman Gulch options. But for a respectable British warship that has left port and settled down comfortable to make her own destination in her own way, to be switched off like a goods engine to China or Bermuda or the Crozets by a telegraph clerk on the roof of the Admiralty Building in London, is too much of a good thing altogether. Yet that is what they can do nowadays. To take the very newest and latest that science has to give, is a way they have in the Navy from which our Navy springs.





. . . . In india-rubber shoes. . . .

CHAPTER II

"EVOLUTIONS"

"For the first six months," said Mr Stubbs meditatively—"for the first six months of that commission, the commander 'e give us 'ell. We wasn't two days out when 'e see me trottin' up the poop very genteel to quarters. 'E says, 'Look, my boy,' 'e says, 'I don't tell you to walk, an' I don't tell you to run; I tell you to fly.' That was the making of me," added Mr Stubbs modestly.

Most respectable people were in bed; but Mr Stubbs and I were standing on the poop. I was there because the breeze was fresh on one's forehead, as only a tropical night breeze can be when you have scribbled into the small hours in a tropical cabin below. Mr Stubbs was there because the rules of the service see fit to put him there in case anyone jumps overboard. Night and day, when the ship is at sea, a marine walks just over the ceiling of the Admiral's cabin—in rubber-soled shoes—across the stern from one lifebuoy to the other. This was Mr Stubbs's night. From two of the grey funnels ahead the soft black smoke was trailing away to the West. The arc lamp over the long stern gun was having

Mr Stubbs

fits. A soft rattle came now and again from the wireless room on the after-bridge. Somebody on board was speaking to somebody at New Caledonia or Wellington or Fiji, or perhaps on a ship at sea. I was leaning on the rail lazily watching the kick of the stern, the scurry of waters underneath, the whirling, phosphorescent corkscrew churned out by the screw. I watched the black figure of Mr Stubbs go up and down on his beat as regular as a pendulum for half an hour or so; until another black figure in india-rubber shoes came up and took his place. Then, by way of saying good night, I had asked Mr Stubbs his views on Australia as a station; and one thing led to another.

"That was in the Sidmouth in the Channel Fleet, sir," he said. "Tug Wilson—Admiral Wilson—'e were

Commander-in-Chief."

From his tone it was obvious this sentence explained a great deal more than it seemed to at that time. As the weeks passed, from the ordinary talk of the wardroom, I came to understand a little of what Mr Stubbs meant. But that is a story which shall be told in its

own proper place.

"I never saw a crew like that one," he went on. "I remember when at last the time come we was to meet all the other fleets. That was at Lagos in ought six. I shan't forget that night, sir. Nor I shan't forget a sight I see the first time it come to an evolution. We was over-anxious, I think, all trembling like with nerves. I couldn't eat no bloomin' breakfast that mornin' myself. We 'adn't met such a crowd before. You see, there was four fleets, the Straits and the 'Ome and the 'tlantic an' Us. The evolution was 'Out Nets'—get out torpedo nets," Mr Stubbs added out of consideration for my ignorance. "They 'ave 'em on those battleships, sir,

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'ung all round like a woman's skirts, you might say. As I was sayin', the signal come 'Out Nets,' an' we was ready for it. We come tumblin' like puppies out of a kennel. The booms was swung out in beautiful time, and was all but done, when by the noise I 'eard I guessed there must be some part of the net hitched up. What I looked up and saw was a or'nary sober seaman, sittin' on the boom, with a pusser's dirk in 'is fist—that's a big jack-knife, sir,—his eyes startin' out of his 'ead, choppin' and tearin' away at the steel mesh like a starin' maniac. They got it free, but that hitch spoiled our time for us. We beat 'em in 'boats row round the fleet,' and on the 'ole we came out about even.

"'Ave you seen a picture of wild 'orses boltin' with their 'eads in the air in front of a prairie fire? That was the way orders was carried out on the Sidmouth. They was blind mad, sometimes, I think. It all begun with that commander. We was hoistin' in the picket boat, an' very charmed with ourselves. But it weren't his idea of hoistin'; so we hoisted it out and in again when otherwise we should have been having our dinner. I tell you, sir, inside of six weeks we was bloomin' flyin' machines."

Mr Stubbs drew a long, expressive breath. You would swear he was sorry that he was not to hoist out a picket boat then and there.

"We could moor with the swivel all fixed inside of ten minutes then," he continued, looking critically up at the awning, which was flapping heavily above our heads as a wayward gust lifted it. "And as for them things, you wouldn't believe me—but we 'ad our awnings set and tied, and the men off the deck and the pennant up, within ten seconds of the signal for the fleet to up awning.

"We 'ad a Roose"

"Ten seconds! There weren't another ship in the fleet that could touch that. Of course it was not like settin' the awning would be on this ship. We 'ad a roose——"

"A what?"

"A roose—an invention like—of the first-lieutenant's. The awnin' was all fixed on the deck ready before'and. We just hoisted it and set it like as you might set a sail. The other ships 'ad rooses, but they none came up to ours. Clearin' ship for action, we 'ad a roose for that. You 'ad to mind your way about the poop, for the 'ole gear 'ld fall flat if you tripped on it. You 'adn't 'ardly to pull a rope, and all the stanchions was over the side.

"It wasn't long before we could beat the Channel Fleet at anything. The men was fair race'orses. Nothin' 'ld stop 'em. They 'ld hack it away sooner. If anything hitched, it was 'Cut it, you fool.' That come to be a sayin' in that there ship—'Cut it, you fool.'

"We was over-anxious, at Lagos, when we met the fleets; and we only done moderate, as I told you. That was at first. By the time we finished we was alright. We beat them in the boats, we beat them in the evolutions, we beat them in battle practice and the gun-layers' test. We couldn't stop our bloomin' selves. There come to be almost too much rushin' and tearin' and breakin' of things in that 'ere ship. But when the commander eased down after six months of it, 'e 'ad such a crew as never was. When they went 'ome and paid off they'd forgot 'ow to enjoy theirselves—s'elp me bob they 'ad, sir. They was like lost lambs ashore. You mayn't believe it, and I don't know if they'd ha' believed it theirselves; but they was really itchin' to be at their rooses again, takin' the time out of the other ships."

Mr Stubbs was looking at the red butt ends of the arc lamp, which had just expired after a struggle like the opening of a soda-water bottle. But, by the tone of his voice, it must have been a heaving grey sea just 12,000 miles over the skyline that he actually saw. There was a real regret in his throat as he went on.

"They left a nucleus crew in her in the dockvardtwo-fifths of the old crew. And a new commander come down and took over. After about a month we was ordered to take in ammunition. The new commander— "I am reckoning we shall 'ave to allow two days for the ammunition,' he says casual like to our Number One. Our orf'cers didn't say nothing. But 'is eves was nearly comin' out of 'is 'ead when we took on all the ammunition in one day, and the coal in less than 'arf the time what 'e give us. She was a wonderful ship, was the old Sidmouth. The Good 'Ope come along afterwards with Percy Scott; an' she beat our gunnery and put up a record for coalin'. But I don't want to see no better crew than that as long as I live. Everybody knows what they done in the Sidmouth, and they'll carry the name of that commission with them on every ship they sail in."

Mr Stubbs looked for a long, long time out on the black, restless water before he went on. "I s'pose you don't 'arf believe all that, sir," he said. "But it was the evolutions what do it.

"Admiral Wilson, 'e give us the or'nary evolutions in the Channel Fleet, same as 'ere, every day of the week; an' there was extra ones besides on three days. I s'pose people in Australia think it is all like this; but, you see, it's different with a fleet. It's ship against ship all the time. Don't matter what they're doin' for an evolution—that is, what's against the other ships, sir—they're fair

"A Sort of Practice Like"

tumbling over themselves to get it done quicker 'n the rest. Each ship runs a pennant up when she's done, and the 'ole fleet knows she's done. You 'aven't got no time to look round whilst you're breakin' your neck over doin' an evolution. But whenever they're through with it, you should just see them cranin' their necks like young starlin's to look if the pennant is up on any ship before theirs."

"What's against the other ships—that is, if there is any others—a sort of practice like, you see." This was the best definition of an "evolution" obtainable from Mr Stubbs. To him it was part of his life, as much as eating his dinner, that once in every day the Admiral should call upon him to stop whatever he happened to be doing, and hurry him and the whole ship's company off to abandon their ship, as though she were sinking, or to clear for action with an invisible enemy, or to rush out the torpedo nets against the attack of non-existent destroyers.

To a passenger to whom an "evolution" had always connoted that decidedly more leisurely process on which they say the descent of man is founded, this system of constant practice came as a complete surprise. One had imagined that a voyage on a warship was much like a voyage on a liner, a more or less even and incident-less progression between its two extreme points. One had pictured the seaman spending such spare time as he had in mending his trousers or cooking his dinner. It had never struck one that a warship, which has a crew for every gun and every torpedo tube, carries far more men than can be employed in the ordinary business of the day's run.

It was the first day out of Sydney. Half a dozen of us were sitting in the wardroom over a comfortable

afternoon tea. Six wide-open portholes let in the soft, sweet evening air; six bright shafts of sunlight struck obliquely across a faint haze of cigarette smoke and kept six warm circles of golden light always edging and backing in perfect unison across the red tablecloth and the carpet and the bulkhead. The staff-surgeon had just strolled in with a book under his arm, which he planted in front of him on the table, whilst he meditatively helped himself to milk and broke off piece after piece of currant cake. On a sudden, one distinctly felt the ship shudder. The shudder increased to a wriggle. Presently the crisp hissing of the lather churned up by the screws

sounded through the porthole.

When that lather comes along the ship's side it is clear she is going astern. One had thought the Powerful was going to Norfolk Island. But here, in mid-ocean, at no time in particular, and with land miles out of sight, she was moving the other way. So one went on deck. There, out over the poop, about a quarter of a mile astern, was some object in the water, smoking furiously. The white smoke clouds marked it out clearly from the deep blue surface across which they were blown. Nearer to the ship two heavy lifeboats, for all the world like two stumpy caterpillars, were digging in a hurry over the way between. The big ship was stopped, heaving lazily and slowly sagging broadside on to the swell. Within twelve minutes the leading boat was back alongside and heaved, men and all, up on to the davits and into the ship. She carried a smoking, evil-smelling lifebuoy in her bow. It had been dropped for practice. Two of them are hung out, one over each side near the stern, with a sentry always by them, day and night. One tug of a wire lets them drop, and fires some stuff which the water will not quench, but which

Man Overboard

marks the place where they float with its flame at night and its smoke by day. There is a brandy-flask tied to them, and they will support four men.

"They want 'em at times, want 'em bad," said a friend of mine for'ard. "But there's times when they ain't no good neither. I remember seein' a fellow down there with eight lifebuoys bobbin' all round 'im. But they done 'im no good, 'cause 'e 'it 'is 'ead on a boat'ook as 'e fell. One man-a Royal Naval volunteer 'e was-ran down the 'ole ship, jumped clear of the screws, and 'eld 'im up till we got 'im. Another time we come into Plymouth to pay off. There was a man I knew 'ose mother 'ad come down in a boat to see 'im. 'E was standin' by the anchor, and when they let it go 'e was 'ooked in it. 'E didn't 'ave no chanst-much." Indeed, even with the lifebuoys in these seas there are deaths worse than drowning. It is a very rare thing to see sharks on the high seas. But I remember that on the first Sunday out of Sydney, as the ship was steaming slowly through the oily calm of a sultry afternoon, leaning over the rail in some of the upper works, I saw, in the water far below, a long, green-grey body, and two ugly, oily fins, circling slowly round a piece of sodden flesh not six paces from the side.

After a quarter of an hour's rest in mid-ocean the flagship went on her way again. That was my first introduction to an evolution; but some such happened every single day at sea except Saturdays. A few days after this occasion, going on deck after tea, one found the wireless room—a wooden deckhouse on the after bridge, bandaged round with what looked like quilting, as if it were a padded room. Only it was padded outside. It turned out we had been "preparing for action." The padding was hammocks, wrapped roll after roll

about the outside of the wireless room so as to catch and stop splinters. Preparing for action, you put all you can in the way of the enemy's guns. This ship has a belt of coal 24 feet thick along part of her side already. But there are nets to be flung over woodwork; narrow compartments—coffer dams—alongside of the engine-room to be filled with water; watertight doors to be shut; traps in the armoured deck slammed tight so that the ship is bottled off into so many watertight, shell-proof boxes. By that arrangement they say the *Dreadnought* can have 100 feet of her side scraped away and still float, so long as the other boxes are sound. If you are in one you stay there. If the water comes in, too, you must keep it out; or climb 30 feet through some authorised air-hole in the roof above you.

They "cleared for action," too, the other day-got everything out of the way of the ship's own guns; flattened the rails and derricks along the side. Excited seamen were doubling on to the poop, bolting off, hugging the Admiral's and captain's and commander's cabin chimneys, which stick out of the quarter-deck and smoke over your head, bundling away companion-rails and skylights, and other gear. And then, as they say, a strange thing happened. On a sudden everyone stopped dead. It looked as though the end of the world were taking place under one's very eyes—the final freezing of humanity. A line of men trotting up the gangway became petrified. A bugle was blown, and everyone, officers and men, stood like a statue exactly as he happened to be when the sound of it caught him; and listened. It turned out the "Still" had been sounded. Someone in authority had a comment to make, and the ship's company came to a stop wherever it was caught until the comment was over. Then they went on clearing for action. In a minute or

To Keep the Fleet Awake

two the deck looked naked and dangerous. At least there was not a rail or a stanchion to prevent you rolling

over the flat edge into the sea.

This flagship kept up those exercises as faithfully upon her solitary yovage across that lonely ocean as if they had been carried out under the critical eyes of the whole Home Fleet. Down the gangway or up the deck would be heard a clamour of shrill little whistles. Then, from some enormous throat, comes something that sounds like anything, but is more like "Yai-hai-wai" than anything else. For the life of one, listening with the best intentions in the world, "Ya-i . . . yai-wai-hai" is all that one can detect. But before the last word dies there is a patter of bare feet. A dozen men in white run—British seamen have to carry out orders at a run round the upper works. And before you realise what they are doing, it is done. Had a fleet been behind, it would, of course, have joined in each performance. When we dropped the buoys the whole fleet would have stopped and raced for them; or perhaps another signal would have been made, and every boat in the whole collection, big and little water-beetles all in a desperate hurry, would have splashed down, careered wildly all round the ships and home again; or for a treat, the men might have bathed close around the ship out in midocean; or some one of a dozen schemes would have been practised-and all to keep the fleet awake and give it the exercise that does not come of itself nowadays. Hard work though it is, there is no doubt that the men half enjoy the excitement of evolutions in a big fleet. That is one strong reason for training men in fleets, not in isolated ships. President Roosevelt actually said he was sending the American Fleet around the world for the sake of the training which the squadrons would get

in the course of that long cruise together. The ships of the Royal Australian Navy will have to be worked together as a fleet whenever it is possible, or with other fleets. I should scarcely wonder if it were found that, when working against ships of a British Fleet, an Australian crew would fare just as well as Australian sportsmen have fared on a hundred mimic battlegrounds -and for the same reason. Australians have a curious capacity for rising to an occasion of that sort, an ability to compress an extraordinary amount of energy into the attainment of a definite object. But, in any case, however they fare, fleet training is an advantage which a Navy intended for business and nothing else cannot afford to forgo. The old Australian Squadron, by reason of the scattered nature of its duties, was able to obtain very little of it, and suffered in consequence. Mr Stubbs was emphatic on that point; and the wardroom also had no doubt about it. To an Australian it was not given to see the working of the Royal Navy at red heat, as it were, in the big fleets. But in chance conversations on the poop, whilst the arc light sputtered and the stars peeped under the awning; in a hundred illuminating lightning flashes in the wardroom, when the wine had gone round and the crumbs were cleared; at the port gangway after breakfast over a cigarette; in the sanctity of half a dozen cabins, or between the groan of a feed-pump and the thunder of the main enginesfrom a thousand varns and arguments and enthusiasms and differences and implications, one was able, almost without realising it, to piece together a fairly accurate picture of the real life of the Navv-the spirit from within that kept, and still keeps, them so wakefully alive under the old regime.



. . . . In line ahead, which is Navy for Indian file. . . .

CHAPTER III

THE BRIDGE

It is a night in June some years ago on the North Atlantic; not a fair sample of midsummer night, either, but a night so bitter that the watch turns in with its jackets frozen as white as Father Christmas. A night so dense that the ships of the Cruiser Squadron, feeling their way through the grey fog blanket in line ahead (which is Navy for Indian file) can make out no trace of the next ahead, not even the glare of her stern light. She is there, no fear of that, her stern just 250 vards from your ram; but she might have been sunk an hour since for any sign of her that you can see. All you know is that you are pitching head on into a dumb blank wall. The only guide to go by is a splashing, foaming, dancing speck of grey, which races like some imp of the sea through the black water beside the bridge. It is really a white barrel tied by a tow-rope to the stern of the cruiser ahead. The Navy has tried having lights fixed on rafts, and many other plans. But so far it has found that it can see best a thing like a white-washed beer-barrel. As long as the officer of the watch keeps that bobbing white cork beside him, abreast of the bridge, he knows his ship is in her station. In the far

corner of the bridge, beyond the vellow haze of the chart-house windows, and the binnacle light, beyond certain dark, muffled forms as watchful and still as figureheads, save where their white breath comes and goes through the circle of the light, you may just make out the bent figure of the lieutenant of the watch as he peers down toward the muddy surface. As you stare at it from the harbour side, the bridge, even of a big steamer, may not seem very high. But it stands, for all that, much higher than the roof of a two-storey house. From up there that barrel looks a long way down. it is not kept well in sight it has a way of vanishing quietly and quickly into the fog ahead or astern. Even as you watch it, it begins to edge slowly forward like the tail-light of a train that has overtaken you and is slipping ahead. The bent figure leaves the side. You hear the distant chilly clang of a gong in the engine-That is an order to add another revolution to room. the speed. A brake seems to have been put on the barrel, for you crawl up on it again.

All that comes in the ordinary way to His Majesty's fleets at sea. As a matter of fact, on this particular night, when Sub-lieutenant Tommy Fawkes, R.N., left his warm bunk at midnight in flannel trousers and a sort of pea-jacket, and climbed shivering up to the bridge, there was no white barrel to be seen; only the vague flare of a light somewhere forward in the fog. Sometime before the barrel had vanished. Possibly the long beak of your own ship knows more about it, if it would only speak. So Mr Fawkes' predecessor, the officer of the first watch, put on a revolution or two, and shoved the ship's nose at random into the mist until a faint halo, which was the stern-light of the ship ahead, showed on the port bow. They had hugged that light

Keeping Station

ever since. It seemed a long way off to Tommy, when he came on the bridge. But he heard that the captain had thought so, too. He had ordered his ship to close in, and, before they knew where they were, there was another light right above them, the steaming light on the mast of the next ahead. After that they fell back in a hurry. The light, after all, cannot have been 50 yards

away.

The captain had turned in. Tommy's orders are to keep that light just in view-to punch along, keeping the ram of his ship not 50 yards astern of a ship he can barely see; with another ram 250 yards astern of him, tracking him by a barrel tied to his tail. In each of the four frail boxes with which he was set there to juggle lives a small township of some 700 souls. It is a sleeping township just now. There is only the haze of a few lamps along the deck. A silent figure or two moves occasionally on some business of the night. The rest of the village is tucked snugly into bunks, hammocks, odd doorways and corners of the deck, trusting implicitly in the mature skill and experience of Tommy. To add to his comfort, next ahead of him but one is a ship which, if anything goes wrong, may tell Mr Fawkes all the Admiral thinks of him. By the strict letter of the law Mr Fawkes, being but a sub-lieutenant, has no business to be in charge of the watch at all. With the knowledge of all this to steady his nerves, our hero, who is only twenty-one after all, and whose experience consists in having navigated a destroyer pretending to be a tramp at 10 knots from Falmouth to Gibraltar and back, uncaught by the B cruisers which were playing at war. sets himself to shadow and pound after the next ahead as softly as a London detective.

So through the first hours of the morning he shadowed

her. The mantle of the fog wrapped itself round him and the dim forms beside him; trailed their white breath away in clouds behind them; flung itself in wisps and folds like a mysterious drapery between them and the pale foc'sle deck far beneath. For eighty minutes by the chart-room clock all went well; until, for some reason or another, the light in front seemed to go ahead into the fog. Probably it was a thicker wrack than usual whisked between. But Tommy was not to know that. He rang at once for another couple of revolutions. Imperceptibly the ship quickened, and slowly but surely pulled that light back to him. It grew and grew, and he began to wonder whether it was not almost as bright as it had been, as it ought to be, when. . . . Allmachtige!

What's that up there?

High above, ever so high, almost up above Tommy's head, there is calmly shining a constant, gentle speck of yellow. That light is not on his ship. It is on the mast of the next ahead. "We're on top of her," yelled from the bows. We are. A rush to the telegraph to signal off some of the speed. The helm hard a-portand, as the ship's head swings slowly off to the right, Tommy is conscious of a hazy deck-light and an awful grey side dreadfully close beside him. He is actually looking down on a slab of pink deck. And he is not clear of shocks yet. He knows it all too well. As the bow of the ship falls off to starboard, two other things happen. She loses her way, and her stern swings out to port, like a tail, across the path which she was travelling, and which the next astern is travelling still. Tommy knows the next astern is uncomfortably close. He has felt her in the nape of his neck all the time. She has been following his vagaries as closely as she could. He knows exactly where to look for her. And here

"We're on Top of Her"

she comes, sure enough. He can make out the stem of her like a purser's dirk parting the cold mist just clear of his stern.

Thanks to the Providence that watches over the British Navy, and sub-lieutenants in particular-just clear. Tommy had time to shiver then. Nobody was going to sink now, for all that His Majesty's 10th Cruiser Squadron, officially imagined to be in line ahead, was clumped around the stern of its happily unconscious flagship like the fringe around a dishevelled tassel. With any luck the Admiral would be asleep just then. The only thing was to get things quietly straightened out again before the fog thinned, and he woke up. That, without a word, but with the perfect understanding of school boys in a scrape, these three ships of 10,000 tons and more set about to do. The light of the next ahead had vanished before Tommy was able to start in chase of it. There was nothing for it but to punch ahead as straight as might be. But with the luck that helps the young, not three minutes passed before he found the glare of her right ahead of him. He fastened on to her then and there. The next astern dodged in behind. And the tail of His Majesty's Squadron swung again in its place.

I would there were space to relate the other events of that interesting night. How the next ahead hung out another buoy instead of the sunk one. How after a time this buoy edged off to one side, and afterwards began to zig-zag first to the right, then to the left. How Tommy concluded his next ahead had lost sight of the flagship's barrel, and was executing a curve of search all of her own to find it. How, finally, to Tommy's intense indignation, she waltzed calmly across Tommy's bows — performed, in fact, very much the

same evolution that Tommy himself had performed earlier in the morning—and ultimately disappeared altogether. How Tommy, to his inordinate gratification, searched for and found a light ahead for the second time that night; and followed it complacently to the end of his watch. How the man who relieved him, and split a pot of cocoa with him at 4 a.m., discovered that the ship Tommy had found was the flagship; and that the next ahead, the ship he had lost, was following Tommy; how, without unnecessary fuss, they quietly executed in the dark a general post not provided for in the text-books; and were there in the morning, all in their places, puffing ahead so innocent, that even Tommy wondered if his memories of the early morning were all nightmare.

That night is typical of work on the bridge. It is

strange to think that, in the day when it comes to be tested, it is not from the bridge that this work will be done. The bridge will be bare—the whole ship will seem as empty and desolate as if she had been towed to her last berth at Motherbank. In that battle of the future it is from a low, half-hidden little nest, tucked deep under the charthouse as under a verandah, that the navigator will have to keep station, coolly, mathematically judging the distance of that wallowing stern ahead, with a different haze to hide it, the deck burning under his nose, and something clipping and chipping and crashing through the stanchions and funnels and upperworks at his back; and one will realise that the work of the executive officer needs, perhaps, in short spells of great stress, even steadier

and people clap their hands when it is done well.

nerve than work in the engine-room. It certainly reaps a more obvious reward, because it is done in the daylight

Friends of Her Babyhood

After being handled and driven some years about the world by men whom ages of patient scientific training have fitted for the trust, each of these delicate costly toys of England comes back to her old nursery. High on the bridge her officers, in the neat blue and gold of the Navy, lead her up the familiar river-mouth and swing round to the dockyard. There at the basin gates a figure clambers up the side, a burly drab figure with three or four mates. It has a towselled beard and a dented billycock hat. It may or may not have a coat. But it has two small hand-flags or a whistle.

From that time the captain can go below. He is out of charge of his ship. True, she has to wind her most intricate way through lock-gates into a basin and across it and through more locks into another basin beyond; almost scraping the sides of fifty other ships, under their noses and over their rams and finally into a row of them like a horse at a trough. But the blue and gold officers, who with engine gongs and twinkling brass rails and the science of the century have brought their Dreadnought so far, may sit and look on. High above them from some favourite perch in the rigging a man in a dented billycock hat is waving little flags, speaking incomprehensible words to men in billycocks below. There might not be a man in the ship for all they heed. Captain and quartermaster, it is all one. But they have hawsers strung out like wheelspokes, and the ship moves gently under an exquisite art.

Her officers need not fear for her. She knows those kind, horny hands even better than theirs. They are

the friends of her babyhood.

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CHAPTER IV

A MAN AND HIS WORK

THE Navy at the present exists purely for business. used to manœuvre once a year in public, with special correspondents on most of the flagships, and a big flourish of trumpets at Spithead to start with. In these days, preparing for that visionary sea-fight, at high tension all the time, about the waters in which an enemy is most likely to be found some day, go some four or five big battle squadrons. On the coast of Portugal (which from time immemorial, by some ancient arrangement probably still binding in war time, is always made free to the British Fleets when there is trouble toward) is a wide bay of a harbour known as Lagos. There once in each year the four fleets, or most of them, meet on business that is strictly private. For a month or three weeks there exists over the face of the Atlantic the nearest thing to the real thing. There is no public there at those meetings; no tugs to carry wide-eyed tourists and their cameras down the lines; no correspondents to jumble it all up. Yet any man in the Navy, officer or seaman, will tell you that such sights have been seen there in late years as have never been seen at a review or anywhere else before, and, it may be, will never be seen again.

Strictly Private Business

At the period when it was my privilege to hear of them on the Powerful, these meetings had of late mostly been ordained just when the world was settling down to its Christmas dinner. About the 20th December ships at home and ships abroad, solid fleets of battleships and cruisers, destroyers in little droves, not to speak of single ships of every sort and kind that had been recruiting their health in English yards, were tumbled out to sea. Two or three days later the white winter sun squints through the winter clouds on to a square of wintry sea, a spot out of sight of any land. At noon, if you were there, you would see a mere patch of grey, heaving Atlantic. Not a sail, nor any smoke; perhaps not even a sea-bird. At five minutes past the noon there peeps above the skyline the faintest smudge of somethingsmoke, from some steamer stoking; then a notched fringe of topmasts—the first sign of the fourteen battleships of the Channel Fleet. As they come over the horizon there are other smudges, other masts, other funnels showing up over the edge of the sea in south and west. Up they crop, thicker and thicker, here, there, everywhere, like the pine round the rim of our central plains in Australia. Squadrons, divisions, big ships, small ships, for some two or three hours the ocean is alive with warships old and new trooping in from every quarter of the globe to that meeting. It is like the reunion of old weather-beaten faces at some travellers' club, after many years. Delighted little crowds squeeze into the gun-ports of every ship. "There's the old Duncan": "Here's the Good Hope. Was on her under -, in nought four. Wonder if old Nobbie is still with her"-a hundred other excited comments from men that know every rope and pin and every other gadget aboard of their old friends. The crowd thickens till, in some

years, its heads may be counted in hundreds. In one year the day for that re-assembling fell out stormy, blowing half a gale. But they re-assembled all the The battleships closed in, all a-bobbing and acurtseying, punching and punching again huge curtains of spray out of the heavy grey seas, their forecastles awash all the time. As for the scouts-swift, flimsy, wisps of some 3000 tons-they were plunging and kicking like wild horses racing round a paddock. The watch, unable to stand, was tied on with ropes to the bridge; the engineers lashed up by their engines, for fear of falling into them. When they moved about their engine-room they crawled on hands and knees while they worked. They were all miserably sea-sickit had been quite superfluous to swallow anything for the last forty-eight hours. But not a man could have guessed it who saw them come in and swing round sharp and short altogether—a sort of a tumbling feat in that seaway—and settle down to the work that brought them there.

The story of that work is told shortly in *The Times* and the service magazines. It was carried out under a man that retired a while ago; a man that had a horror of advertisement; a man of whom nine-tenths of us at the time had never heard; a man of whom you will be told more in a wardroom than of all the rest of the powers that be put together; a man that was beyond all question the greatest English sailor since Nelson; a man that a fair part of the service believes the greatest seaman there ever was; a man who in the manœuvres, year after year, since the later '80's, when he took his fleet unseen in fog into an Irish harbour through the very midst of a blockading fleet, had invariably found by some strange instinct the one thing to be done,

A Man

and had always done it; the man, and the only man, who has handled immense modern fleets as though they were a four-in-hand, pulled them, tugged them, swung them within a biscuit toss of each other's rams, apparently by sheer intuition; the man who has drilled them, dressed them down, sweated and thrashed them, stopped their leave and cut short their holidays, till they ended by almost worshipping him; a man who did not praise overmuch, but whose praise was worth getting. There was a crew in one of the Cruiser Squadrons that by keenness had done wonderful shooting. When it came to the great test their target tore, and many shots went unmarked. They lost their first place; but the Admiral certainly knew, they said, for he signalled them on their good shooting. During the same commission they found the enemy whilst scouting, stuck to him like a terrier night and day, and brought up the fleet. same Admiral signalled, "Well done, ---." Those two signs were the only ones that they got of the Admiral's pleasure during two years of that commission. this day they tell you of them with glowing eyes. was that man who has made possible scenes such as the only two which there is room here to describe.

The first was on a time when some hundreds or so of the warships of the ordinary sea-going fleets of England were at their work off Lagos. They were to moor that day in Lagos. So they moored, the whole bunch of them. They moored at one and the same instant. They steamed straight in, the whole regiment of them, each ship in its proper division, each division in its place. A signal pennant was sent up, and the moment it started to come down again every ship dropped one anchor; with the way still on her, dropped a second; went astern, ran back till her cables were the same length; shackled

them together. That was all. There was no one to see it, save perhaps a grimy Portuguese fisherman or two, and a Hebrew providore on the look-out for orders. Even the town of Lagos was out of sight, over the water.

The other spectacle was away from the land altogether. It was that Admiral's last sea command, the climax of fifty-two years of single-minded, wonderful work. He was leaving his last fleet in a week or two—his last and greatest fleet. So just for one morning he took all the battleships, forty of them, out of the bay, and worked them as one fleet, the biggest fleet that was ever worked together; and worked them as no fleet was ever worked before. He took them at 17 knots, the highest speed of the slowest ship, which was full speed for the whole, —and hour after hour he flung that whole fleet at its full speed this way and that, up and down, and across, with the ships at two cables' distance from one another.

To realise what that means you must know that to work a single division at that distance at full speed was an unheard-of thing. There were seven divisions here, and one mistake in the signals would have piled one on top of another like trucks in a railway smash. But for hours they weltered after one another, and split and divided, and joined and swung their great sterns round at racing speed like the skirts of a chorus ballet. The public, when it read over its morning tea and toast that the battleships at Lagos were exercised at full speed, skipped the paragraph, and went on to something it could understand, the test match, or the horrible details. The pity of it, that such a spectacle was wasted on a fisherman and a Portuguese Jew. But all the Navy knows, and, after all, that is what matters. In every

The Consummation

ship's company for thirty years there will be men who were there. They speak of it as the sight of their lives. In all his fifty-two years' sea-service, fate never threw that Admiral in the way of a single battle on the sea. But no one knows when the results of that one day's impression will die. And the results of his life's work assuredly never will; for they remain solidified in the Royal Navy of to-day, and the Navy is crystallised in the Empire.

The man who was responsible for those scenes at Lagos went over the side a month or two later. He had begun by fighting Arabs with the hilt of a broken sword. He rose by living for his work. He worked with a third of the usual staff. He hated women, dances, holidays; he dressed shabbily ashore. But if he said: "The enemy will on Monday be either at A or B," there on Monday the enemy was. He had an immense courage, and a charm which won every captain in his fleet. His last signal to his last command was: "I hope that you will continue your discipline to the last, and that there will be no cheering when I go over the side." In order that he might still be available to serve his country at the Admiralty when he reached the retiring age for admirals, he was specially promoted, although there was no vacancy, to Admiral of the Fleet. The promotion was urged upon him as the special wish of the King, and rumour says that he argued with the King. Nothing whatever would induce him to accept a peerage.

Opinions differ as to his work at the Admiralty; and it would be too soon to judge it, even if the details were known. But it is on his great work upon the sea, the creation of the modern tactical efficiency of the fleets,

that his reputation will always stand.

We all knew of "Charlie" Beresford; we all knew

of "Jack" Fisher; we all knew of "Percy" Scott. In spite of his personal modesty, it is just a little surprising that, during the years of his greatest achievement, we had most of us never head of Admiral Sir Arthur Knyvet Wilson, V.C.—commonly "Tug" Wilson.



No sea so wild but he will ride through it.

CHAPTER V

THE SHIP'S HEART

I SHALL never forget that day. It was the day of our arrival at Suva, the capital of Fiji. For a week or so one had been drinking in the life of the Navy-its evolutions, its manœuvres, its battle practices and gun-layers' tests, its Tug Wilsons, Jackie Fishers and all down to little Tommy Fawkes; and yet it all left a dim conviction that one had not yet quite reached the heart of things. From Sir Arthur Wilson to Tommy Fawkes, all of them always achieved their great results by first asking somebody else to do something. That was the necessary condition precedent, as it were. They put their hand on the engine-room telegraph and signalled for two more revolutions. And whether they would be able to do what they wanted always depended, in the first place, on whether those two revolutions came promptly and speedily, as if they were automatic. Indeed, so punctually did they always arrive, that one was inclined to assume that they actually were automatic.

But this day, this first day at Suva, has filled in that gap in one's knowledge. For one has seen straight into the ship's heart; and I know that she has a heart, a

beating human heart. And I, for one, can never look upon this ship or any other in quite the same way again.

People are always wondering at it, but it's not in the least wonderful, really, that we call a ship "she." The only other thing we could call her is "he," and she is too pretty for that. "It" is out of the question, simply because there is not one of us that thinks of a ship—whether dozing in harbour or shuddering with speed, or worming over a sleepy swell, or feeling her way through fog, and tooting to other ships somewhere behind the blind white wall of it—as a dead thing. We may find some day, when men build a ship or any other machine, the thing that they put together is really not a dead thing, but living.

Rudyard Kipling says it is the liner that is a lady; and the man-of-war is her husband. So ships may differ as to sex. And of course they do differ minutely in character. For some reason or another, now that one knows a little of the Powerful inside and out in rough weather and calm, one has come to think of her as a "him"—a great grey warhorse, brave and big and fast, and full of the gentleness of all big things. He can race still, though perhaps not so swift nor so strong as once he could. The wild rush of science, with its newer ships and newer ways, has swept past him. There was a day -only twelve years since—when he and his great twin brother were the talk of the world. Their speed-more than 22 knots-was unheard of; and their great size and length unknown amongst warships. Their Belleville boilers, in which the water runs in tubes through the fire. instead of the fire running in tubes through the water, had never been tried on anything bigger than a gunboat. When the two big brothers started from the Irish





THE SECOND FLAGSHIP.

[To face p. 59.

A Great Grey Warhorse

coast on their first manceuvres, to search in one sweeping curve for a vanished fleet, it was by way of finding out what two such great warhorses could do. He has been an aristocrat from the first, this warhorse—an admiral's ship in every ocean. And though he has the kind, sweet manners of a great gentleman, whom the years perhaps have a little softened, there is no sea so wild and black and mountainous but he will ride through it, proud, swift, straighter than most, with the Admiral's flag in ribbons at the truck, and the smoke whisked from his funnels. I doubt not, the bigger and blacker the sea, the more proudly he will shake it from him—this way and that, like a white mane, from his proud old neck.

He is in grand fettle at present—the result of a particularly intelligent and untiring grooming. One saw him in Sydney fuming, fretting at the bit, eager to get off. But he settled down to his pace from the very start, and ran so smooth and yet so constant and strong that he must needs be reined in the day before his journey's end. Just now he is being patted as he lies panting inside the coral breakwater at Suva.

What makes the ordinary four-legged warhorse run so steady and smooth you cannot get inside to see. But on the *Powerful* you can. Suppose you do. Suppose you crawl the wrong way round through an oily steel grating down an oily ladder with an agonised oily feedpump groaning in the small of your back; thirty or forty tons of smooth, oily steel pounding like a caged bear around a harmless circle of its own, just outside your left ear; half a dozen huge, oily steel arms and elbows punching sideways or longways or crossways or any original or contrary ways within a few feet of your face, and some angry little valves, opened by a rod the

size of a knitting-needle, jigging and spitting above your head. Goodness knows where the ship is steamingthat has nothing to do with you. She may be high up on the blue seas, or she may be plunging into a storm cloud, or she may be swinging around the corner of a strange land between little sandy palm islands with strange low huts on them, and long, thin wooden things -perhaps canoes-on the beach. There is a tube in the steel wall behind you, and someone at the other end of it, someone high up on the bridge there, someone in white out in the sun, with a twinkling brass rail in front of him, is bothering about all these things which he can see; perhaps chiefly about certain coral which he cannot But that is not to worry you. Your duty is to look to it that an oily steel thigh-bone should continue to pound up and down. It must pound up and down, because someone on the bridge six days ago and 1700 miles away wanted it to pound up and down; and it will pound up and down until he wishes it to do something else. That is your business, and that is all of it. You may leave the tropical beauties to the man up in the sunlight; that oily, waving, grey thing is enough for you.

I don't mind owning that there is an air of expectancy in that workshop just at present. People do not live and sleep down there all their time. They know that the end of six days' pounding is pretty well due. One or two fairly responsible persons tend to concentrate to the very middle of the hubbub, where there is a sort of a clock with words on its face above, and the steering wheel of a motor-car, or something to that effect, beneath. Someone feels a huge revolving paw to see it is not too hot—as somebody else has done every minute or two, night and day. A speck of light, the colour of muddy

Finished

beer, comes and goes on a scrap of oily wool. Each second that irresistible revolving paw wipes the nose of it-just that and no more-as lightly as you would stroke a kitten. Dreamily round, dreamily roundeverything waves dreamily round, 64 times in each minute, 3840 times every hour, 92,160 times every—. Ding-ding, ding-ding, ding, ding, 30 times ding. Wheels, paws, elbows, thigh-bones are going slower, slower, and steady. Someone steered that motor-car wheel just an inch or two-vou caught it from the corner of your eye-and 25,000 horse-power - eight huge thigh-bones bigger than your body, with various arms, legs, and fingers of steel not worth mentioningare waving once every two seconds instead of twice The scenery must be getting interesting up there in the sunlight. Probably we are wandering almost under the shade of steep green hills with sand and crashing breakers and strange lighthouses just behind us, white roofs of a town, and a few feathery palms across the Ding-ding! slow, slower, slow-er, s-t-o-pped. Someone turned that wheel again. She must be further in than we thought, winding right in amongst the anchored ships, running down to her berth. Wonder what she looks like to them, sailing in like a great grey bird of the sea. She is just dragging her screw behind her, breathlessly still; but her way will carry her a quarter of a mile without. . . . Ding, ding, ding. There's a finger on the clock pointing to "Full astern." A grey steel link is sliding dreamily forward. Everso-lazily-the-thigh-bones-big-and-little begin to turn. The ship shakes her stern, and grinds like a carriage over stones. You know that the anchor must be over the side, and we are tugging back on it, like a horse on a halter. Ding, ding, ding. The thigh-bones

make one last slow journey between their flat steel guides, and the whole maze of machinery drops into its respective chairs and sighs. "Finished," says a low voice alongside. That is one of the men who has been

doing it.

Finished—so it may be finished for us, 1743 miles of it. Up in the sun on deck they have arrived therewhatever "there" is like. Down in the engines they have only just begun. Wheels have only to be oiled at sea: in harbour they must be taken out, cleaned, mended. and put back. You probably imagine one engine. There are ninety-three of them in this ship, ninetythree separate and wholly distinct sets of machinery. Each has to be separately watched and fed and nursed and put to sleep. Each has its separate use and its separate voice, and they all talk at once. In your ignorance you think it a babel; but the men down there know when each one is calling, and what he is calling The little folk, the small fry of the engine-room, generally squeak if they are hurt. "When they go like that," said one of their masters, tenderly slapping a small refrigerator which was coughing distressingly, "when they go like that, it generally means that they're chawing themselves up inside."

"What happens when the big engines squeak?" I

asked.

"Well, the worst of them is, they don't. They've a way of just silently melting and curling up. The white metal quietly heats and drips out of them without saying a word. Things must have gone pretty far if they have started to squeak."

So they go the round of these hippopotami, for all the world like nurses, taking their temperature every few minutes. Their collars are made loose or else they are

Chawing themselves up

apt to become apoplectic from the heat. That portentous thump which is the heart of a steamer is caused by the neck working in this looseness. In my innocence I asked if they left it about an eighth of an inch loose. They did not. They measured it to thirteen-thousandths of an inch, and left that. If that is not enough and the patient goes lead-coloured and steams all over, they call up the doctor. He can do little more than drench it with oil to cool it. The one thing he cannot do is to stop the ship. That is the extreme measure, though it seems worth taking at times. There were once two battleships racing in the Mediterranean. Number one was running in, when something became obviously wrong with a crosshead-which is engine-room for a giant's kneejoint. It turned black and then red and then white, and filled the engine-room with a faint smell of burnt oil. But number two was not far enough behind to be held beaten; so the staff turned its blind eye to that particular part of the engine-room and sailed on. Number one steamed in a beautiful first, and as soon as the crosshead pin was cool enough to approach it was examined. It was found split in half obliquely. Now if the crosshead pin had worked out, the connecting rod would have swung round the shaft like a catherinewheel until it was tangled up with enough of the engine-room to choke its way. And the piston would have shot through the top of the cylinder and the decks above and like a rocket out to sea. Those are the only two things that are certain. The rest is a matter of conjecture.

Another thing that may happen at sea is that the shaft may break obliquely: one piece will stop and the other go on, around it, five times as hard as before. Whether it ploughs through the double bottom depends

on whether it is loosened or bent back far enough. Another thing that may happen at sea is that the water may get low in the boilers, and the tubes curl up and burst, and drive white-hot ashes and steam over three stokers or more. Another thing that may happen at sea

If anything happens on a passenger liner, it happens two days out of a big seaport. But in a flagship it is just as likely to happen at Tongataboo as anywhere else. If the Powerful were just the sort of big steamer with guns on board that most of us imagine, she would spend most of her time making week-end trips to Mort's Dock in Sydney. As a matter of fact, she is a Civil Service store and a Lithgow ironworks and Newcastle coal mine combined; not to speak of the boiler-fitting, joining, carpentering, brass-working, and tailoring, and a soda-water factory which paid for itself, and a dividend besides, in its first nine months. Within a single halfhour I saw great nests of boiler tubes slung out, and new tubes being fitted into them; molten brass being run into moulds; cold brass being bored and turned; boats being planked; boiler casings being renewed; rakes being straightened. It was all done-the great iron plates for the casings had been cut and bored and punched—in an empty stokehold turned for the time into an ironworks. And all in the day's work.

To do this work, the Navy gets men, skilled men, who worked for themselves in the towns before, to carry on their trade in the ships, and calls them engine-room artificers. The result is that if the *Powerful* were wrecked on a desert island to-morrow, it would be the best thing that could have ever happened to the desert island. The next ship to sail in would probably sight a factory chimney or two, and find the *Powerful* melted down into

Engineer Benbow

a railway, with a cold storage, a ferry service, and a North Shore Bridge complete; not to mention a police force, a William Whiteley's, and a sanitary system; and, above all, a population that thinks nothing impossible for the good reason that it can do anything.

It really seems that it can. Consider this:

There was a ship once, an ancient, decrepit river gunboat with one rickety stern wheel, that was sent up an African river to save a wrecked party from the enemy. When she did her very best she could struggle two knots against the stream. There were some forts to pass. She kept down their fire for a time by blazing right into the embrasures, until she came to a position where her guns could not bear. Then the enemy shot through her boiler, and she gave out.

But the moment she began to lose way she dropped anchor, and there hung on for dear life, right opposite the fort. The commander and the men on deck fought with their rifles. And the engineer below set out to cut an iron plate to mend the boiler with. The engineer did it himself, because all the engine-room hands were scalded. He cut the iron plate, and bored holes in it to fit nuts and screws. For thirteen hours the enemy fired heavily, and then for ten hours there was night. By the end of twenty-three hours the plate was cut, bored, fixed, bolted, the engineer reported the work finished, and they steamed away. That was when Lord Charles Beresford in the Safieh saved Sir Charles Wilson on the Nile. Everyone has heard, deservedly indeed, of Lord Charles Beresford; but not of Engineer Benbow.

We talk very glibly of ships being built of so many horse-power, and so many knots, as if someone had merely to turn a handle, and the engines did the rest. All that the builder does is to make a ship which is able

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to be driven so fast. Whether she ever is driven so fast depends on the men who drive her. There are nations that can never get anything like full speed out of their Young, new stokers cannot often do it in any Navy. Shovelling, raking, sweating four hours at a time, they will barely keep steam up. After a few months of hard work has brought up their muscle, and they are learning where to shovel and how to shovel, they can do twice the work with half the labour. One had thought of a stoker as piling on all the coal he could shovel at his own sweet will. In reality, the turn of his particular stokehold comes only every seven minutes or so. Far up in the engine-room someone presses a knob-rings a gong. Somewhere down near the keel a man in a grimy woollen vest shovels open a furnace door, shovels four spadefuls of coal blinking into the fierce light; clamps shut the door again. Opens another caged hell, and another, and another, feeds, and closes the four, four spoonfuls to each; wipes his brown, shining arms and neck, and waits quietly back in the dark for the next signal. He has fed two boilers, and that gong is going the round of the others. There are forty-eight boilers in all. The faster the ship goes, the more she uses. She has worked only eighteen this trip.

Yet it is not down there in the heat, noise, sweat of it, that you realise the awful power driving the ship; not until you look in the cool outer air on the impassive result. Last night a fresh breeze and the whisk of water outside not so far beneath the open port—the bunk was beneath it inside—brought to mind that a wave-top had found its way into the cabin next door on this same trip last year. A cold compress at 2 a.m. is not comforting. It seemed practical to find how near those spiteful hisses

came.

The Ship's Secret

So I looked out. It was cloudy, wild. The water seethed alongside, whispering like wind in gum-leaves. Spray hissed and hissed again, savage as driven rain. It was not that which held one there. As a matter of fact, the waves never came within six feet of the porthole. But down there below them, now near to the surface, now blurred in the depths, was a whirling spiral of green-blue light. Waves might see the at will, shoulder us, heave us, drop us again. But that light was constant. It was one of the huge propellers driving the ship.

Somewhere, one knew, somewhere deep in the dim hull, were men busy in a soft haze of engine-room lights. Somewhere deeper still, right on the ship's bottom, there was a deafening scraping of coal on iron floors, the occasional glare of an open fire-box. Somewhere along a dark passage was the shaft always giddily turning against the insignificant collars that take the whole thrust of the screw. One had some dim notion of the ship's secret—the enormous, anxious strain to keep that same propeller turning. And here was one fine result of it all, grinding away impassively as though it did not know how to stop; utterly reckless of the wallowing It would churn away so all night—all through a week of nights-slashing the phosphorus into flashes. From the port could be heard not a sound nor a creak in the ship, save one. Like the drone of bass under light music of wave-tops, felt more than heard, was one grim, constant grinding. Clouds, wind, sea may have imagined that paddling effortless. But we-we were in the secret.

From the land, ships seem to swim as effortless as melted butter down a plate. But there is one sign of that sternness. From South Head at Sydney when the steamers pass hundreds of feet beneath and a mile away, you can catch the fuss of them through the water—a

rustle as when a lady gathers her skirts and runs upstairs; a shallow plash like the pouring of water in a bath; a relentless ripping of the surface like paper continuously torn. It is the fight of ship and sea.

It is a hot, sweet, oily air that puffs along the narrow alleys there by the keel. They sweat in 110 and 120 and 130 degrees in the tropics, dropping like flies as often as not. "But we can take a bit o' that thrown in," said one of them. "We know when our work is done, and that's more than most. I tell you, the marines often turn over to stokers when they know what it's like."

They work shorter time in the tropics. One cannot help thinking of a day when there will be no half-time: when the big grey ventilation cowls that send cool air down below will be shot away; or the gratings over the intake choked with scraps of torn iron; when the ship up above them will stumble and stagger now and then; with strange crashings overhead, and a thin smell of burning wood and powder and oil filtering down below; when there will be mysterious disturbances in the bunkers above (she carries twenty-four feet of coal instead of an armoured wall along each side), and ghostly knockings on the armoured deck; when they realise that-heaven knows why-the floor has listed, and the ship balances curiously. It is no business of theirs. They have to see that their oily thigh-bone revolves eighty-four times to the minute, and keeps cool. If ever it does come to a certain signal, each man has his way out-some tube or funnel or stairway, with the sunlight at the other end. It may be a mass of scrap-iron by then. He can just wait for that signal and invent another way. A man on the Victoria when she sank one calm blue morning in the Mediterranean was washed by the rush of the water up a ventilation cowl clear of

Out in the Light

the ship. As for the rest—the last officer who looked down into the dark engine-room before the seamen were given the word to jump could see the men there, each quietly standing at his post amongst his bars and tubes and thigh-bones.

Just think of that for a minute as you squirm up the narrow steel ladder, and the starboard feed-pump gives you its last friendly pat on the back. And you will bring out with you into the light for those whose life is in that darkness a feeling that is not unlike reverence.

That is where two of us have just come from. went down there when the ship was tossing in a free seaway. We sat chatting, chatting, chatting, in a dim corner, and watched the huge steel limbs to sleep. was dazzling, at first, out in the sunlight. But there is H.M.S. Cambrian alongside of us; the cable-ship Iris across a distant pier-head; an A.U.S.N. boat in the stream—Sydney's sugar and banana ship, the Suva. A half-moon of grey, saw-toothed mountains stretched behind, one standing out like a thumb-nail. ing muddy line across the sea-it is coral-outside of us; a sloping point inshore; red roofs in the trees; not unlike Sydney, but five times as green; a flagstaff, a few white specks along the beach; a steamy grey satin sea; a dazzling tropical morning just turning to a thundery tropical afternoon.

A ramshackle motor with a nervous cough and a freight of mop-haired, chocolate-skinned men, laughing and interested, ducks under the stern. Out in the sunlight we are in Suva.



. . . . The Dreadnought has no medium guns

CHAPTER VI

THE GUNS

Somewhere in the mud on the bottom of that same ocean, in which the Powerful for so many years sailed, lies a ship which she was built to fight. The Rurik happened upon the Japanese in the cruiser action of the Russo-Japanese war, and never got back to Vladivostock. My Lords built the Powerful larger, steadier, three knots faster, able to stay longer away; protected their gun crews with six-inch steel casemates, but their ship with nothing except six-inch steel deck and some coal-bunkers. The Russians left the men exposed, but gave a little waterline-belt to the ship, and built her with six more guns. That is the way of British shipbuilding. Our ships are called weak. There is a Chilian ship the same age as the Powerful, faster, gunned as strongly, armoured — and half the size. But then My Lords build ships first; and fortresses afterwards.

The *Powerful* was a weak ship, having only twice as many guns as Sydney fortress. Every Friday she fought a battle. Every Friday every ship in the Navy fights a battle. The *Powerful* would have arrived on a

Friday Morning Battles

Friday morning into the quiet of Suva Harbour. But there was that battle to fight; so she slowed down overnight, fought in the morning, and sailed in after lunch.

There is no unnecessary blood about Friday morning battles—no live shells and cordite. They loaded practice shell, especially striped with rings of paint, to save mistakes; swung the old bow gun round—solemn and slow; ducked it, chucked it under the chin; received the range from the tops; fired a tube in every gun to see the gun circuits were correct; reported that the gun would not sulk when it was really wanted; for the rest—pretended to fire or misfire; hauled shell from below—did anything else the imagination suggested; and finally clamped all taut again.

It was old, old practice to them. But they did some gruesomely suggestive things. The surgeons went somewhere near the bottom of the ship to wait out of harm's way till there were no shells to hurt them, but awful work to do. The watertight doors were closed; the deadlights-steel caps to the portholes-shut. The ship was like night within, wardroom, gunroom, cabins all stifling close. You had to switch on the electric light if you wanted to see. Not only that. At Tsushima the Russians found shells boring the ship, exploding inside and catching gun crews in the back. So now every Friday the crews in the casemates, which are armoured rooms along both sides with a six-inch gun in each, have to keep the armoured door behind them shut. It is rather perfunctory. But some day, when all is smoke, scuttle, strain, these men will have stood three hundred times where they will stand; and done what they will do.

There are battles far more thorough than those Friday ones; ferocious shooting with the ship's whole heart behind it. Shooting is a new art in the Navy. Not long since, gun practice was held to be a nasty, grimy, unnecessary business, almost as bad as coaling. Ammunition is actually known to have been thrown over the side rather than that the guns should be dirtied. When gunners did let fly they missed very often. It was thought impossible to do much better. It is not so very long since, at the battle of Santiago in Cuba, the Spaniards shot out a terrific hail on the Americans, and did no damage at all. Some books say the Americans shot brilliantly. Two American officers at Auckland smiled the other day when I told them so. The whole of this has been changed by the work of a single man.

In that same year of the battle of Santiago, there happened to be in the Mediterranean a certain small cruiser, by name the Scylla, which had the luck to be commanded by an optimist. The Admiralty quite accepted the theory of the day, that it was absurd to expect to hit anything when you shot at it-more often than once in every three or four shots, at any rate. would have looked upon it as almost impious to try. had no use or time for telescopic sights and such fallals. It may even be suspected that it did not know very much about them. But this young officer had conceived the wild idea that by taking more trouble to aim straight it might be possible to hit the target more often. The Admiralty was naturally not going to provide an experimentalist with the necessary implements for testing his absurd theories. So with the pride of a young commander he bought them himself; and the Scylla made an apparently impossible record, which many people

Sir Percy Scott

frankly suggested to have been faked. The same captain, one Percy Scott, went afterwards to the *Terrible* in China, and she beat the *Scylla* hands down. Other China ships copied him and did the same. Afterwards he became an Admiral. At the time when I was on the *Powerful*, his flagship, the *Good Hope*, held the record.

The American ships which we met in Auckland were crowded with Sir Percy Scott's tricks for the teaching of shooting. Some even practised with them every day. "There's one thing we think we can do—that's shoot," said one of their officers to me. "We have to thank your Percy Scott for that. All the other Navies followed him." Indeed, Captain Scott worked hand in hand with an American officer. Amongst other things they thrashed out a rod called a "dotter," which, when you aim the gun at different squares on a target hung just outside the gun-port, darts forward and dots the spot you would have hit.

So warships are always shooting nowadays without even soiling the guns. They are always firing, too, not exactly with the guns, but through them. The Powerful, on the way to New Zealand, stopped in mid-ocean to put a little square of canvas over the side; and then steamed round it, and riddled it with screaming small shot. A fixed number of real shells will tear the vitals out of any big gun. So they are only fired at certain special practice. For the rest, short tubes are fixed inside the bigger guns, and one-inch projectiles fired through them. After an hour's diversion of this sort we went on our way again.

And now see the thoroughness of the Navy. It is not enough to practise shooting in the day; because real

shooting may have to be done at night. So, well on into the same night we dropped two more targets; lost them, and searched, searched, searched almost to desperation till we found them about a mile out upon the black water, with the ship's two staring eyes turned on them in the dark; lashed the sea with small shot into ghostly geysers around them, picked them up, and steamed away.

Even that does not satisfy. This far-off sea battle may not be fought in smooth water. So at times they wait for a heavy sea; and then go out and shoot with the ship's deck waving like a tree-top. They even shoot in harbour. You sometimes notice, as you pass a British warship at her moorings, a grey box about the size of a flower-pot, which each six-inch gun holds up just opposite its face, as it might a mirror. They fire small bullets into those boxes from tubes laid along the guns.

Some call them too thorough, at times; as, for example, when the Viper piled herself on a Channel Island by running twenty knots through fog. Manœuvres without lights, too-a friend of mine for'ard had no palate for such excitement. Lord Charles Beresford constantly practised the Channel Fleet without lights-"they call 'im Deadlight Charlie, sir." The metal ports are shut, shades pulled over the deck lights. The only light for the next astern to steer by is a little hooded one at the stern, which shows reflected dimly in the wake. Men tell you how one black night, when something long and black was passing through the shade, something else close by made a wrong turn of the wheel-brought the two together; and it was found that the Tiger had been rammed by a companion, her plates-an eighth of an inch thick at best-

In Ten Years

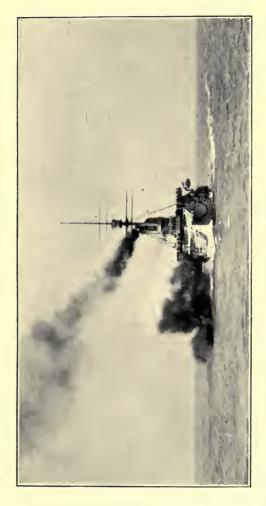
crushed like an egg-shell; and most of her men crushed with them.

Twice in the year come the great gun tests, one for the whole ship, one for the different gunners. The ship has been practising all the year, in some of the fleets practising every day, to fight that one test against the rest of the Navv. At the end of it all, just for two or three minutes, as she steams in the wake of another ship, she may let fly. For that minute or two in all the year the ship lives through a real sea fight-flings on to the target every shell her gunners can rush into their pieces. Another ship lies near the target to mark the shooting. And the shooting is such as was thought utterly impossible ten years ago. The target has been cut down in size by half; the hits are enormously increased. In the three years before the writer's cruise in the Powerful, the average points made had gone from 98 to 194. In the other great trial—the gunlayers' test-each gun fires separately, so that they may mark the work of each gunner. Some years before a sensation was made when a certain petty officer fired eight shots in one minute, all hits. Over fifty men had made eight hits since; and some eleven. The Americans had done the same. This is the ladder which in the ten years from 1898—the Scylla's year—the average hits in each 100 shots climbed in the old Navy: 31, 31, 32, 36, 41, 46, 42, 56, 71, 79.

All of which is only the result of incessant making ready in peace for a war that may never come. Like all efficiency, it is largely the result of punishment and reward to gunners, gunnery lieutenants, even captains, direct and prompt. If a ship does well there are reports to the great office in London to show who did it; if badly, the Admiralty wants to know a good reason, or

someone suffers. From that firm, instant decision there are no Boards of Appeal. The Navy is not weak-kneed, with Courts of Review. My Lords are good friends to their servants; but they are quite absolute. It is the only way.

A seven-inch gun is an ungainly pet. But I noticed that the eyes of one American Jacky in Auckland grew very soft as he slapped one fat barrel on the Louisiana. "She holds a world's record," he said. I forget what it was-every second gun did; but it was certainly very good, and he was a proud man. He fondled that cold steel contour as you might a woolly lamb. Naval men talk in surprising analogies. They tell you how, now that slow-burning, smokeless powder is used, which gives the shell a gradual push, the guns have to be made long, so as to allow that gentle shove to have its full The slowness and gentleness of the powder consists in starting that shell off at about a mile a second; its smokelessness may be judged from the picture on the opposite page. The armour the shell has to pierce is faced so hard that soft spots have to be specially left for boring holes for the bolts which clamp it to the side. The shell must be pointed to bore it; but its hardness splits the fine point of the shell. So they tell you that they cap the shell with some soft substance, which will flatten like india-rubber around the shell when it strikes, and hold it together whilst it bores the first inch. wonderful machine known as an armour-piercing shell will not split then; it will go through and burst the That of a second later, exactly in the ship's inside. Their soft substance is wrought-iron. From the softness and slowness of the British battleship, from its smokelessness and gentleness, from its elephantine playfulness, may a merciful providence deliver us!



"SMOKELESS" POWDER.

[To face p. 76.



Treacherous Pets

They are treacherous pets at times, are the guns. Every year or so on some ship, when they are slamming the breech-block to, in the infinitesimal space before the screw of it engages, there is a pale flash; and the smoke clears, leaving the better part of a gun's crew quite motionless on the deck. The Americans have suffered dreadfully that way. They seldom find the cause. But to make sure, in these new ships in Auckland they had closed every turret, so that when the crew entered it to fire, and shut the door and the lid, it was as nearly as could be in a hermetically-sealed box. Air, they say, is pumped into the turret from below, so that the moment the breech of the gun is opened, a rush of wind finds its way out of it so strong as to clear the gun of fumes and to carry your cap with it if you hold it near the breech. Not only that, but into the breech itself is let a small pipe, through which air is pumped to a pressure of 120 lbs. It opens automatically when the breech does, and blows its jet of air down the barrel. Even so, they say, every time the gun fires, something looking like a sheet of flame flashes back twelve inches through the breech.

It is the small guns that get on people's nerves; the same that fire salutes. There is no tremendous noise in these tight-sealed turrets; nor any dreadful concussion. True, when the wall has been struck from outside, men leaning against it have been stunned. But the dangerous concussion comes for'ard of the gun, when it fires past another gun's crew. The reason why the *Dreadnought* has no medium guns is that they cannot be tucked out of the way.

It was rather disquieting to find these American ships so full of means to save labour as compared with our old flagship. They had overhead railways on which

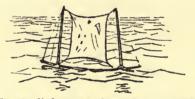
ashes ran to the side; four separate ways by which the little crowd in the tops, who had to take the angle of the range, could tell those at the guns the distance. Down the mast to each gun went (1) a telephone; (2) a voice-tube; (3) a wire to a dial; (4) a wire to a set of ruby glass letters, with electric light at the back of each, called a vigil. In your frescoes of the next Trafalgar two at each gun will wear telephone receivers over their ears. In the *Powerful* we had none of these last—the men serving the big guns received the range by means of a dial and a gong. But the British Navy has left the methods of those days far behind; they have long lost sight of the old flagship—as shall be told in another chapter.

Deep down in all warships is a room of wheels, pipes, tubes, where the torpedoes live. They practise with them occasionally—even run past another squadron, fire soft-nosed torpedoes at it, and then search to see if any nose is crumpled when they pick it up. Torpedoes are apt to be dangerous friends. Once, some time before, when a certain flagship was running torpedoes, in a quiet bay on a distant coast, a Whitehead torpedo, which was fired from the port tube, went astray. It described a beautiful circle, as accurate as if it had been drawn with a compass, and ended by hitting the flagship on the starboard side—the opposite side from which it had been fired.

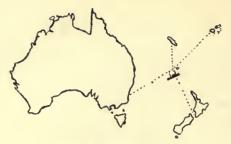
There is one last missile which, even if the gunners and torpedo-men were all gone, the bridge and the engine-room, working together, used to be given to use in emergencies. It is the heaviest missile known. When the fight comes close, and everything goes wrong, and hope gradually flickers and dies out, and they know themselves sinking, and there is just a

The Last Missile

chance of dragging someone else down with them,—then they may, if they get the chance, fling the ship herself at the enemy. That is how a warship comes by her ram bows. But they are building them like liners now.



. . . We put a little square of canvas over the side



The Sea Telegraph, 1908.

CHAPTER VII

THE WARDROOM

On a liner every passenger finds the voyage something of a sensation. He is up and down the deck all day watching mollyhawks wheel about the tumbling wake; blinking across the glare of that restless surface at flying-fish, or porpoises, or sunsets, or passing tramps. Even the man who tells you with a yawn that he has been that way eighteen times, sir, there and back—even he is as excited as the rest at the prospect of airing his knowledge. That yawn was a fine piece of art, and he relished it every bit as much as you enjoyed your porpoises. A passenger ship is something of a sensation, even to the oldest liar that ever astonished the smoking-room.

But this ship was different. To the 850 men who sail by her she was a home, in port and out; and they lived not on her but in her. The *Powerful* was furnished as a home, a comfortable home—probably the most comfortable home on all the seas. And when men were not about their work they lived, forward and aft, in much the same sort of home that each would live in if he were ashore. A comfortable clubroom with its papers and magazines, its lounges and its library, where

The Gunroom

the news of the world is posted up, as the wireless telegraph receives it, just as it would be in a London club, for the officers; the cleanest of clean quarters, with rows of spotless mess tables—which for some reason reminded one of the shearers' hut on a well-kept central Australian sheep-run—for the men.

People have an idea that the officer in the Navy is always sick of the sea, and hankering after a snug billet ashore. It may be so with merchant captains. But the naval officer sees more time in port and generally more comfort at sea. Not always. In this ship, for instance, the gunroom (which is not a room with guns in it, but a sort of narrow dining-room for the midshipmen and junior officers), was on the lower-deck. so near sea-water that its ports could not be open at sea. There were no midshipmen there during that commission, because the Admiralty of the time had very wisely decided to keep its youngsters with their noses to the grindstone in a rather sterner school than the Australian harbours. A boy was something more than an ordinary phenomenon if he managed to keep his head through two years of undiluted spoiling from the pretty daughters of Australian hostesses. And so, for a time, the Admiralty decided that this was not a good station -as indeed it was not-to train a boy on. But even in previous commissions, when the flagship did carry midshipmen, their lot, however pleasant in port, was by no means luxurious at sea. They had to sail to Fiji or Singapore, with a tropical sun outside, with the deck nearly red hot above, and not a single breath of air beneath; with every port fast bottled, and something like a heat fog through the whole flat. In this weltered the midshipmen, the sub-lieutenants, the junior engineers and clerks-slept, ate, stewed, or were schooled between

81 6

whiles. At one time the youngsters were gulled in their business arrangements, and a big sum subscribed for their feeding disappeared. As most of the rest of their money had been invested in a piano, the gunroom lived for a month on bread, butter, and weak tea. were sardines occasionally, when an extravagant fit took the mess, and even cold mutton. There's a diet for

the King's officers, if you please.

During the next two commissions, as there were no midshipmen, the junior officers messed in the wardroom. which is generally sacred to their betters. But that stuffy gunroom on the flat below was still their own particular sanctum. It was the only place where you could make a reasonable amount of noise, and it possessed the only piano—a relic considerately bequeathed by the previous tenants. Its library, too, was not to be sneered I can still see two or three more or less dishevelled youngsters, curled up at various angles of repose. absorbed in the volumes before them, whilst a fourth. with Indian ink and a scratchy pen, works out a series of illuminating illustrations of the life in His Majesty's Navv—as seen from within.

But it was in the wardroom that we lived most of our life—that well-arranged clubroom with the chintz curtains and the bookshelves and the deep leather armchairs. The hours were comfortable-breakfast at 8, lunch at 12, tea 3.30. As for dinner at 7, never was a more delightful, sociable table. Never were such silent, swift, attentive waiters, with their neat white jackets and white cotton gloves. The band - every flagship and battleship has one-plays you in night after night with "The Roast Beef of Old England."

Sitting there in a room bright with thirty odd mess jackets, the talk playing up and down the table in

"The King"

gusts, and Braga's "Serenata" or the "Jewel Song" or the "Merry Widow" filtering down through the skylight, there comes a hush. The last course has been cleared; the wine has gone round. Then the Mess President at the top of the table calls: "Mr Vice, the King!" The band strikes those chords which mean more to Englishmen even than the health of His Majesty. As it finishes, Mr Vice gives: "The King, God bless him!"

There are plenty of us nowadays with nothing but a sneer for loyalty. When that silence fell, just for the moment, a curtain was raised, and one realised in a flash what very shallow thinkers we are. Here in this wonderful service are men-not this present thirty odd, but thousands upon thousands—all living by one simple, quiet unswerving faith. Everyone, from the time he was a little boy, has held it without questioning, that loyalty to his King and his country, and the wonderful ideals that King and country really stand for, is a thousand times more important than such a trifle as his own life. They say it is a lesson in patriotism to hear a Jap say "my country." The toast of the King on the King's ships can be a lesson, too. You do not so often see into the inner places of an Englishman's heart; but you know them all the more sacred when you do.

I remember once, long since, having stood behind a naval officer during the simple church service on a certain quarter-deck. The band was playing "God Save the King," with which every service finishes. At the first chord the back of the blue frock-coat in front of me straightened, the chest was flung out, the chin up, heels together. He stood like a statue till the last word was sung. It was all perfectly unconscious, a quite involuntary symptom of an immense, overpowering loyalty.

Ninety-nine out of a hundred men at the Trades Hall would laugh at him for that sentiment. They would go further—they would honestly despise him for it.

Now one does not in any way underrate the demagogue. There is a sturdy, democratic manliness about the Trades Hall man, and he thoroughly believes himself invincible. But one can't help thinking he miserably underestimates the power of that loyalty. It is not an abstract idea. It is a conviction which has become character. If ever it came to a fight, the Trades Hall man would see some power he could not understand carrying that man through and over everything-over things far worse than death; he might put him through flame, thirst, starvation; through torture, through nerveshattering times and awful, ghastly wounds, and find him still persisting. That loyalty to a life's ideal, the honour of his ship, and of his service, and of his country, would make him the most terrible enemy-the enemy that nothing can stop whilst he lives; and it would carry him on and over one who lacked it. At least, that was the glimpse one thought to catch under that raised curtain.

You may drink that toast in wine; or, in these late years, you may drink it in nothing at all and drink it all the same. A good half of the glasses, in many ships of the Navy, have no wine in them at dinner even for this toast. The old idea that naval officers drank hard and lived harder is hopelessly astray. Perhaps it was so once. But in no warship that the writer has ever stepped on has the drinking been as hard, or the conversation within many degrees as shady, as in the ordinary city office or club. Of course, on small ships, in some of those backwaters of the world whither the Admiralty sometimes sends them, you may come across

"Sweethearts and Wives"

lonely men who have ruined themselves by pegging. But the young British officer on the big ships lives a life straighter, simpler, cleaner than many a city man could understand, much less emulate.

On Saturday night we drank another toast which is drunk every Saturday night on every warship in the old service at sea. It is the prettiest toast in the world.

"Mr Vice," says the President, "Sweethearts and Wives."

"Gentlemen," echoes Mr Vice, "may your sweethearts become your wives, and may your wives ever remain your sweethearts."

There is a story of an incautious major caught muttering "and may they never meet."

Speaking of old customs, these ships are crammed with them. Every man coming aboard a ship salutes the quarter-deck; that is, the stern of the ship. You may see strings of sailors running up the ladder on to the poop. The hand of each flies to his forehead. On those little high-sterned walnut-shells of things, that were the great ships when America was discovered, there was always a shrine somewhere on the towering wooden stern; where the heavy street lanterns burned dimly o' nights, and a sentry with a pike and an iron cap walked up and down under heavy mouldings and oaken rails. A wooden Virgin and Child, or a crucifix, looked down upon the ship from there. And the poop became, what it still is, the sacred quarter of the ship. How many people know that story? or the tale of how the uniform the British Navy wears was chosen for it by George II. because he thought the Duchess of Bedford looked so well in a riding-habit of blue and white?

It is a custom in the Army not to talk shop at mess. We may thank our stars it is not a custom in the Navy.

It would be a bad day that made it so. At present in the Navy you may hear men talking, even at dinner, about the things they understand, things absorbingly interesting; about shells capped with some soft stuff such as wrought-iron—wrought-iron!—as though it were cotton-wool! about strange sea-telegrams that came in the first hours of the morning when the wireless has been stuttering to itself inarticulately all day; of famous signals by sarcastic admirals in home ports which never found their way into any newspaper yet; of ships in the British Navy; and others.

One cannot live for a week on a British warship without being struck with the immense volume of strange experience in strange lands which she carries about with her. A crew of 900 men is an encyclopædia with 900 pages. In truth, to that most various collection of exciting stories, romance and adventure across five continents and seven seas, on the highways and the byways of the world, and the blackest, little, unknown, blind alleys which are not ways at all, there is no end. Stories of shooting—of lion-shooting up and down both sides of Africa, and across the middle of it too; of tigershooting in China and bear-shooting in America; of hippopotamus, of elephant, of leopard and hyæna; stories of black men and white men; stories of the Germans, French, Italians, Japanese, Americans, and Sikhs all intelligently compared and contrasted by men who saw them side by side in China.

There are adventures with the Town Guard in unknown Turkish seaports. Indeed, there is one corner of the world, one big blind alley, where England is always at war. She leaves the Navy to carry on that campaign, and the Navy carries it on all the time. There are no newspaper correspondents there; it is not often that even

A Cache

a hint of their doings gets into some obscure paragraph amongst the morning's cablegrams. But they are at it, for all that, raiding, counter-raiding. Whilst you are peacefully engaged with your morning tea and toast, out on certain tropical sands is a small body of men in white, digging for all they are worth, whilst the blazing sun marks their shadows in bright blue on the ochrecoloured wastes around them. Close to the beach, on a dazzling sea, is a small grey cutter watched by a couple of men in big shady hats. The cruiser to which it belongs is on some similar urgent business forty miles away.

Clink! One of the spades drives against something that is certainly not sand. A seaman stoops and tugs a tag end of sacking which the spade has chipped loose. From beneath the torn rags comes the dull bluebrown gleam of something very hard and heavy. More digging, and the bundle comes to light—not unlike a mummy, a dozen rifles of a certain foreign make and the very latest pattern. Near by the party comes across certain packing-cases; and there lie, shamefacedly winking up at the sun which is now vertically above them, forty modern rifles and a very pretty collection of Mauser pistols.

Now, many good gentlemen in England are firmly convinced of the childlike innocence and gentleness of the people who inhabit those parts, or indeed any other parts, outside of their own country. And, indeed, one is not going to deny that the earth, in the Tertiary period, was given to implanting many geological wonders just below her surface, and perhaps in the Eocene and Pleiocene periods still more so. But the most enthusiastic geologist would probably have doubts whether those particular wonders came there by any known process of geological evolution; and if he thought it worth while to take up

a highly precarious position behind a sandhill, those doubts might possibly be confirmed by an exhibition of deep agitation on the part of certain talkative native gentlemen who appeared shortly after dark with the evident object of investigating the same interesting specimens; which, if the truth be told, they had deposited there about the same time the night before, with the intention of carrying them away comfortably in boats on the following night.

However, they are a persevering lot, those innocent tribesmen. If one way fails, they bow to the will of Providence and try another. Quite lately some building material was being imported to Muscat, and along with the rest of it came a set of double doors. There is no reason why foreigners in Muscat should not import double doors if they wish to; but experience has taught the authorities that it is a safe rule to inspect everything. Consequently, the double doors were opened out; and between them were found eight rifles and eight hundred rounds of ammunition.

The British Navy has a way—much resented by the sporting gentlemen of the interior, who, living out of reach of the attentions of even the latest 6-inch guns, take a somewhat more detached view of its claims upon them—of keeping the sheikhs along the sea-coast on its side. Many circumstances contribute to keep this friendship firm. There is a story of how a foreign man-o'-war had frightened the sheikhs in villages along the Persian Gulf. It was thought well that a big English cruiser should demonstrate also. She demonstrated. She called at each seaside town; invited the sheikh and his chamberlains aboard. As they chatted by the gangway, the guns close behind them were let fly with blank. The Court vanished like rabbits to the bows, and the bow

The Chafe of East and West

guns were fired. It bolted wildly to the stern, and they loosed the twelve-pounders there. Finally, when it had been sufficiently impressed, the Court was set back on shore, and the cruiser went to the next village and demonstrated there.

In this manner the British Navy in the Persian Gulf acquires a considerable store of information, and sometimes articles more valuable still. Recently a capture of two hundred rifles was made by the sheikh of Dabai from a caravan of Tangastanis. These optimistic individuals, however, would not allow themselves to be downhearted even under such circumstances. Having lost what they possessed on the land they forthwith made off to sea in two dhows. Coming across a stray pearling boat from Debel, they ran alongside her. boarded, shot nine of the crew, and helped themselves to the pearls and anything else that seemed good to them. These are the sort of gentlemen with whom the cutters and other small fry from the cruisers in the Persian Gulf are continuously at war-on the raw edge of the Empire, as it were, where East everlastingly chafes against West; and where British sailors are even now standing straining their eyes for the first sign of stealthy dark shapes slipping across the night, whilst we lazy citizens curl comfortably into our beds. The Admiralty gives them, too, in the end, a well-deserved There is a regular rest camp, a sort of Happy Valley, in Ceylon, to which the men of the East India Squadron can be sent from time to time to regain their freshness after these exacting duties in the Gulf.

Those stories cover only one little corner of the immense field over which the wardroom conversation wanders. There are stories from the fisheries—stories of months spent amongst the ice-floes in one continual

fog. There are stories of the strange ways ships can behave; of destroyers rolling to forty and even fifty degrees, when everyone was desperately sick, and most of them tied in their places; of how the Edgar rolled and rolled and rolled in an Atlantic storm until she rolled a funnel overboard. It is a good thing for some of us that sailors do not take to writing books; for

what books they could write!

Those yarns are not hard to follow, though there is a slang of the sea, for ard and aft, which you must learn, The shore is always "beach"; the faint land on the skyline is "mud" as often as not. Portsmouth is "Pompey"; the ship is generally "this packet"; the seamen are the "matelots," and the marines either "jollies" or "jerooks" (save the spelling!). The captain is the "owner" and the "old man" too, unless the Admiral is aboard. As for the wardroom's designation of the ships in which it has previously served, a complete knowledge of the official name of every ship in the British Fleet would leave you bewildered and For the wardroom invariably borrows the ship's titles from the seamen's messes; and the readings and emendations of the Navy List supported by the ship's company for ard would do justice to the great Hermann You might recognise the Old Maggy for H.M.S. Magnificent, and the Sampan for the Sanspareil; or the two fine sisterships Agamemnon and Lord Nelson in the Agapemone and the Lord 'Elp Us. But how about Billy Ruffian for Bellerophon? or Pom One for Pomone? or Subtle Jay for Sutlej? or Hermy One for Hermione? or Psitch or Psyck or Pysh or Fish or anything else ad libitum for Psyche?

A sailor's is an indoor life in these days. The officer takes his fresh air by a curious unwritten routine, either

Holes and Corners

in little groups chatting round the gangway for the space of one cigarette after each meal; or on the long poop, when it grows dark, in the hour before dressing for dinner. The seniors take the starboard side, the juniors the port. During that hour some of the older men generally pace the deck in twos or threes; a few of the younger ones jump into whites and vault, wrestle, box, trot round the ship, practise one of a dozen recognised ways of keeping a waist and a wind. An executive officer gets four hours of breeze on the bridge, now at dawn, now at noon, now before the light. But an engineer sees next to none of it. Actually, there are men who, when there was work doing far down in the engines, have hardly been seen by the rest for months together.

And you can get away with a vengeance in a big

ship. It is as mysterious as a half-explored country. Far beneath the guns and the mess decks, beneath the armoured deck and the ammunition alleys and the coalbunkers, when you come alongside of the end of all things, by the keel and the double bottom, there are corners and crevices only half known; packed with halfforgotten stores, brushes, rope, rags - maybe with nothing at all. The foul drainings of the ship, leakage mostly from the engine-room, swill about the rusted frames-places known only to the rats and cockroaches and the ship's cat. But there is some one man in the ship within whose duty each crevice and cupboard comes. They say that cases are known where these men have disappeared into these depths for monthssleeping there, living there, unknown. How they could do it is a marvel; because there is a custom, relict of

the middle ages, by which every man that can be spared

merely for the sake of being seen. And any seaman absent should be missed on the instant.

In the Australian Fleet, in order to obtain young Australian engineers to start with they have admitted a certain number of university men, who have finished their engineering course at Sydney or Melbourne, or other universities with a similarly high standard, and who have been allowed to undergo a short training in the British Fleet. The plan is an excellent one, and the officers admitted were very keen men. But it must take a man, coming to it at twenty-one or twenty-two years of age, some time to become used to life in a wardroom. Delightful though it is, yet to a civilian, accustomed to the privacy of his own sitting-room or study, it seems almost like attempting to live in Trafalgar Square. The only home and castle which these Englishmen know is their cabin, about the size of a schoolboy's study; and altogether not unlike it, with its tiny writing-table and bookshelf, and its little corner for photographs of home and all that is sacred, which is its owner's real shrine. There are hundreds of those little shrines in the ship, if they be only the size of a seaman's ditty box-shrines at which their owners do worship in as true a sense as any Genoese or Neapolitan that ever fell on his knees before that trusted friend of all good mariners (and of not a few bad ones, too, if appearances are anything to go by), San Antonio.

But they are pathetically tiny, those little centres of privacy in a British warship. Outside of them, the life is entirely in public. By far the greater part of the ship's complement, officers and men, has lived in its respective messes since the days almost of its childhood. You will see the First Lieutenant, apparently immersed in *The Field*, with his peaked cap pushed far back on

"Couldn't Happen, Pills"

his forehead, whilst a deeply interesting argument, concerning a particular failure during a recent target practice, is going forward between the Fleet-Surgeon, the Paymaster, and the torpedo lieutenant in the far corner of the wardroom. Suddenly the argument is interrupted.

"Couldn't happen, Pills," says a Voice from the other

corner. "Impossible."

The First Lieutenant is still deeply absorbed in *The Field*; he has not raised his eyes from an engrossing report of a well-fought game between the London Scottish and Blackheath. However, as there is no one else in the corner from which the Voice came, it belonged presumably to a disembodied spirit. The Fleet-Surgeon—who was invariably "Pills" when he was not "P.M.O."—did not turn round, either, to face the interruption. He leant forward and knocked out his pipe into a bronze ash-tray.

"Oh, of course Number One'll have some confoundedly technical explanation which he thinks we

can't understand " he began.

"Can't answer for you're understanding anything," continued the Voice (the First Lieutenant was still absorbed in *The Field*), "but when you say it was the movement of the cradle accounted for it, I know that's rot, because the whole box of tricks on those new guns is fixed so that any movement of the cradles about the trunnions is scarcely noticeable through the telescopes. . . ."

"All I know," retorted the Doctor, feeling for his tobacco-pouch, without looking round, "all I know is that Biggs came in here afterwards, with a face like

my sea-boot, and that's what he. . . . "

Then, for the first time, The Field was lowered.

"Well, if you want to know," said the First Lieutenant, speaking with emphasis over the top of it, "in those new sights the telescopes are carried on a rocking bar with a hinge near the trunnions, so that. . . ." It is unnecessary to follow the First Lieutenant through the elaborate explanation which followed, copiously illustrated with a pipe-stem in one hand and the first finger of the other. The First Lieutenant was an enthusiast on these subjects.

"Take your word for it, Number One," said the Fleet-

Surgeon when the explanation ended.

"I don't suppose you're much wiser," replied the First Lieutenant, taking up his interrupted Field; "but I

thought you'd like to know you were wrong."

"Thanks," laughed the Fleet-Surgeon. The First Lieutenant was by this time absorbed in a magnificent piece of combination by the London-Scottish threequarters, and the conversation went its quiet way again without him.

The naval officer seems to develop a fifth sense of his own by which he is aware of every conversation in the mess whilst completely engaged on his own business. In a wardroom argument you have to reckon on stray

shots from every corner of the compass.



. . . took him ashore to play rounders . . .

CHAPTER VIII

THE EVOLUTION OF BIG COLLAR

"Where do you live?" asked the Hero of Many Fights, fixing his keen, kindly eyes on the small boy in the big white collar.

"In S-Surbiton, sir."

"How much is the fare to town?"

"I th—think it's one-an'-thrippence third return, sir. You see, I'm n—not sure, because my father's got a season-ticket, and I don't often come alone."

"How did you come here?"

"To this office, sir?"

The Great Man nodded.

"In a taxi."

"What was the number of it?"

They do tell of one candidate who answered promptly: "Two thousand and forty," and who, when he was asked how he knew it, said "he didn't, but he knew they wouldn't either."

But Big Collar could not rise to those heights of repartee. He simply opened his big, dark eyes a little wider, and said anxiously: "I'm af—fraid I don't know, sir."

The Admiral looked kinder than ever. "Well, do you know what makes a motor-car go?"

There Big Collar got into his own subject. His father was the possessor of a car, and some of the happiest hours of Big Collar's life had been spent in the tiled stable-yard watching Reynolds the chauffeur pull "her"

to pieces.

Big Collar got into his stride (the Admiral helping him with judicious interjections). He wanted to make these gentlemen understand his motor-car. He couldn't say how long he had been explaining it to them, when the Admiral nodded across the table to a great Headmaster.

"Your turn now," he said.

The Headmaster took Big Collar away from his dearly beloved car. "Who is your favourite author?" he asked. "What sort of games did the Romans play?" Then they told him to look out of the window and describe in French what he saw there. Big Collar felt himself floundering. He was terribly nervous.

"Why did you want to go into the Navy?" they asked him at last. Big Collar took this question to

mean the end of all things.

"I never thought of doing anything else," he said.

He lay awake for hours that night thinking over that answer. He was quite sure it had done for any chance he had left. Such a rotten sort of answer to give. But it was the only one which had come into his head; and,

after all, it was true.

The Admiral, too, guessed it was true. So did the Headmaster. Big Collar had never dreamed of anything, except the Navy, ever since he could remember; and he was desperately keen to pass. He was quite sure he had failed. At home, afterwards, he would not talk of the exam. They understood him well enough to know that he was worrying; but he would not refer to

The Incredible News

the subject at all. If he had only known, the one thing that gave them any serious doubt was a slight hesitancy in his speech. But they put it down to nervousness; and, because of his keenness, they gave him the benefit of their doubt.

When the incredibly happy news came, one fine day, that he was allowed to sit for his qualifying exam., Big Collar could not understand how in the world they had managed to overlook that last answer of his.

So Big Collar went up, and sat for a qualifying examination in English, French, History, and Geography (especially of the British Empire), Arithmetic, Algebra, Geometry, and Latin. Not a bad exam. for a boy of twelve-and-a-half.¹ Big Collar found in it no difficulty at all compared with that interview. In due course his people bought him his sea-chest, and packed it off, a week before its owner, to the school where the Admiralty first trains its infants into officers.

If there are more ideal surroundings for a school, I do not know of them. The place in which they have built it is the park of a royal palace, laid out by a great queen to be the most beautiful of her many beautiful homes. It is in a corner of England to which the fierceness of the English winter seldom reaches. The yachting port of Cowes is within a mile of it; the little river runs below the grounds out to the smooth enclosed Solent waters which also border them. They have the park almost entirely to themselves—cricket, football, and hockey grounds, stretching away from the college as far through the trees as the eye can see. There is a cadets' golf course and an officers' golf course and a row of large fives courts. The least sumptuous part of the

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¹ The First Lord of the Admiralty in a recent speech stated that the age will be slightly raised.

cadets' surroundings are the college buildings themselves. They are temporary one-storey bungalows, picturesque enough, but built almost entirely of asbestos. Possibly there is a swimming-bath now, but there was none until quite lately. Cadets used to bathe in Osborne Bay during summer.

It was at this great school, one cold winter's afternoon, that little Big Collar arrived. There were some seventy others in the new term, all within a few months of one another in age. In particular charge of them were two

young officers.

Now, for as long as Big Collar was at Osborne, those seventy small cadets remained together. They had the same dormitories; they worked together; they moved through the college together—always with those same two officers to nurse them. At the end of two years they left Osborne together, and together they entered Dartmouth. There were two other officers in charge of them here—their two Osborne officers had been sent to sea again, or to some other billet, in accordance with the fixed principle in the British Navy that no man shall be allowed to grow rusty in one job—it is good neither for the man nor the job. Even the captains in charge of Osborne and Dartmouth, except in special circumstances, are gazetted there for two years only. Then they leave, and other captains take over.

When Big Collar joined there were five terms at the college ahead of his term. There were six in all; his term was the youngest and smallest, and the oldest and biggest seemed very old and big indeed. They were terrific swells indeed, were that sixth term. Big Collar longed inwardly for the day when he, too, might actually wear his trousers turned up; or carry a coloured hand-kerchief; or even push his cap on to the back of his

The First Smell of the Sea

head. Later on, towards the end of the term, the sixth term, who would be shortly leaving for Dartmouth, got their long blue Dartmouth overcoats. And when Big Collar saw them strolling about in all this glory, he scarcely dared to hope that such eminence would one

day belong to the Greynvile term.

For that was the name by which Big Collar's term was known, from the time it joined at Osborne until it finally passed out of Dartmouth four years later. The six terms were known by the names of six great admirals. The sixth term was Exmouth; the fifth was St Vincent; the fourth Drake; the third Blake; the second Hawke; and the last and latest joined Greynvile. In due course, Exmouth, with all its big swells in their long overcoats, went off to Dartmouth. And then St Vincent became the sixth term, and began to turn up its trousers and push back its caps. And Greynvile was now second term, and beginning to feel quite senior. For another term of still smaller cadets had now joined, and was called Exmouth—the name belonging to the term which had just left for Dartmouth. When that senior Exmouth term, after its two years at Dartmouth, finally moved out on to the training cruiser, for its short spell of seatraining, this second Exmouth term was entering Dartmouth, in its turn, from Osborne; and a third and infantile Exmouth term was just beginning its career at Osborne. But that is anticipating matters.

Big Collar obtained his first taste of sea-life within a week of joining. He was turned over, as one of about a dozen cadets from Greynvile, into a cruiser, H.M.S. *Eclipse*, which strolled for a leisurely week around some of the Channel ports. Their officers landed them one afternoon at Weymouth and showed them the town; and another afternoon near Torquay to play rounders.

They have given up this cruise in later years. But that was how Big Collar first learnt, at the very beginning of his training, what he never forgot all through it—the knowledge of what a ship is. The rest of Greynvile went out in batches of twelve during other weeks, until within six weeks of joining, all of them had sniffed in this preliminary smell of the sea.

It was from that time on that Big Collar settled down to solid work. Somehow, he never needed that driving in the absence of which the average English public-school boy of the same class usually allows himself to drift. There was one big definite object always ahead of Big Collar, to get into the great service on which he had set his heart, and to get in as high as And, besides, there was that unseen sword always hanging over his head, by which the naval careers of lazy or unsuitable cadets are cut short, without any reason having to be given, generally at the end of their first year at Osborne. That sword falls upon a few boys in almost every term, and nothing-neither social position nor a great name—will save a boy from that fate if he fails to make a proper use of his time. Big Collar had well in mind, as had all Greynvile, that if they slacked or failed in their fortnightly tests after being warned, they would be asked by the Admiralty to withdraw.

If I were to say that Big Collar found an actual delight in his work, you might think him a prig, which he most certainly was not. Some of the work, especially that in the little workshops and power-house at Kingston, on the riverside below the college, was such as any boy, being a boy, could not help enjoying. They gave him seven hours' practical engineering there in the week against only two hours of lecturing; and, in his

In the Shops

last two terms at Osborne, they increased the practical work to eight hours, and cut down the lectures to one hour. From the time when he started making a simple wooden pattern, under the guidance of his own special engineer-lieutenant (one of the two officers in charge of a term is always an engineer, and the other either an executive lieutenant or a marine), Big Collar found the work about as interesting as work well could be. Day after day you might have seen him, down there in the college shops, with a score of other small boys all in brown overalls, their heads bent intently over the particular boring or moulding, or welding, which each of them was manufacturing. There was a petty officer to every three or four, and their engineer-lieutenant went the round explaining carefully to them what they were doing and what they were to do. But for the rest they managed it all themselves.

Off the Kingston wharf, like a toy boat moored along-side a toy arsenal, lay torpedo boat 87, in which the cadets occasionally went short trips into the Solent; mostly in the engine-room, but sometimes, one or two of them, on the bridge. Big Collar had a sort of secret pride of ownership in No. 87; and he conceived the idea of making a model of her, something like the models manufactured by other cadets, which littered the shelves at Kingston. Every hour that he could spare, he put in at the workshops, bent over this toy. He found no difficulty in getting leave to go down there in his spare time; plenty of others did the same—they were encouraged to do so. When he had finished the torpedo boat, he rounded off the work with a model of the college steamboat, also to scale.

It was about this period that he sprang upon his engineer-lieutenant his marvellous invention for pro-

pelling a battleship by means of a sort of perpetual motion machine rigged up in the inside of her. That was the first of seven epoch-making scientific discoveries which Big Collar made before he left Osborne.

About this time, at the end of his first term, Big Collar's parents began to feel just a little bit anxious. Big Collar was anxious too-apprehensive about that weeding out at the end of the third term. His parents had little anxiety about that; the boy was so interested in his work. What they were afraid of was that he was too interested in it. Big Collar had come home full of strange nautical terms. He had a proper contempt for anyone that talked to him of his "holidays." He was enjoying his "leave" (only he called it his "leaf"). his stories of the college, the floor was generally "the deck," the officers' rooms their "cabins." He talked of port and starboard watches (into which each "term" was divided). He was full of strange slang. But it was noticed with anxiety, in Surbiton, that he was especially full of the slang of the engine-room. His whole enthusiasm seemed to be in those workshops.

Now, before Big Collar entered for the Navy his parents had been requested, as all parents now are, to sign an undertaking that Big Collar was "prepared to serve in any branch, if required." The Admiralty had caused it to be clearly understood that Big Collar, and all cadets now and henceforth entering the Navy, must be prepared to become executive officers, engineers, or marines, as the Admiralty saw fit. As far as possible they would be allowed to choose their branch; "subject," as the regulations said, "to the proviso that all branches are satis-

Now, somehow, Big Collar's mother, in all the mental pictures which she had drawn of her little son during

factorily filled."

That Wonderful School

the years when he was growing up, had never thought of him in the engine-room; indeed, she only had a hazy notion of what an engine-room was. She had always seen him up in the sunlight there on the fore-bridge, looking over the rail, with his white-covered peaked cap on the back of his head, and two shiny gold rings on his cuff, and his telescope under his arm. She had always regretted that the old Britannia system was done away with. The Britannia exam, was supposed to be fairly stiff; but then they could have sent Big Collar to a private school till he was fifteen, to be crammed for it-The marines were entered quite separately in those days. at Greenwich, and the engineers were trained for five years at their own special college at Keyham Dockyard. But Lord Fisher had changed the whole system at one sweep. And here was Big Collar apparently falling in love at first sight with the branch which she least desired for him.

"Let the boy do what he likes, Emma," said Big Collar's father. "He's got an enthusiasm, about something, and that's the great thing. Besides, you couldn't want to see a much finer fellow than that engineer chap in charge of his term. I'm sure, if Jack turns out a man like him, we needn't complain."

But Big Collar's mother still felt that she owed Lord Fisher a grudge. She did not know that the command of the great modern submarines, which, for all they now know, may be the ships of the immediate future, was to be reserved for the special branch to which Big Collar seemed to show such a leaning.

I would that there were space to give a bare idea of Big Collar's career at that wonderful school. For even from the schoolmaster's point of view it is a wonderful school. It is designedly a mixture between a public

school and a technical naval college. There are thirtythree or thirty-four masters—public school and university men. "blues." some of them—not to speak of twenty-five officers, to deal with only four hundred boys. There are never more than ten or twelve cadets in a class, and often only seven or eight. A master of a famous English school told me that the teaching at Osborne was better than at any school he knew. "You see, you're practically under supervision all the time," he explained. "You never know when the captain or the headmaster may not walk into your class-room with a bevy of admirals behind him, or perhaps royalty, or a labour member." Such masters as I know give Big Collar a very good character also. One told me the boys were brighter than at any public school he knew-and he knew intimately three of the very greatest schools. Another master once informed me that the eagerness of the Osborne cadets made them a delight to teach. "You may practically say that laziness doesn't exist amongst them," he said.

You see, although Big Collar was at a public school, and although the Admiralty changed the system from that of the old *Britannia* (which was almost exclusively sea-training) largely in order that he should have the advantage of a general school education as well as the narrow sea-training—yet Big Collar was not merely a school-boy as most school-boys are. He was a member of a great service, and his work was part of the work of that service. His relation to his officers, for example, was something different from anything one knows of at an ordinary school. You may see him standing stiffly to attention at divisions in the morning, in the big hall which goes by the name of "Nelson," the theoretical quarter-deck of a theoretical ship. He is lined up there

The Day's Work

with his officers beside him, all bound by a discipline as rigid as that of the Grenadier Guards on parade. And yet that same afternoon, when the gymnasium is turned into a skating-rink, I have seen Big Collar, with half a dozen others, making their big lieutenant tow them after him like a string of swarming bees. School-boy though he is, the smallest cadet is, in a way, a fellow officer with the broad-chested lieutenant that commands him. They wear the uniform of the same King; and though the discipline is rigid in working hours, there really exists all the time, between these youngsters and their officers, much the same bond that unites the gunroom and the wardroom of a big ship.

For two years Big Collar made his way through Osborne; skated, with swarms of others, up and down the asphalt paths in the grounds; danced each night in Nelson before turning in to bed; sang in the choir from the gallery when church was rigged on Sunday; clambered up and down the big ship's mast in front of the college, when he felt so disposed; learnt the first elements of boat-drill on the big ship's boat, which was mounted high and dry on a pivot on the lawn. Cleared safely that critical hurdle at the end of the first year. He began to develop a mind of his own on most subjects; and was quite ready to give you his opinion, at a moment's notice, with considerable decision, and that whether he knew much about the subject or whether he did not.

And so it came that, almost before he was aware of it, Big Collar was himself in possession of a long blue overcoat and coloured handkerchief and all their attendant glory; and Greynvile term said farewell to the two young officers who had shepherded it through Osborne; and was received into the arms of that other pair, which was to steer it safely through Dartmouth.

For the lions that went out of Osborne, the entry of Greynvile into Dartmouth was curiously lamb-like. Even Big Collar, who had been a cadet captain at Osborne, was only in authority with his term at Dartmouth provided no Dartmouth cadet captain happened to be present. They left a good deal behind them when they left Osborne. There was no more skating about asphalt paths, or hanging on to officers' tails. It was not quite so jolly, not quite so free and easy, in these magnificent palatial Dartmouth buildings, as it had been in those old temporary bungalows—so thought Big Collar. You didn't always babble to your officers exactly whatever came into your head; you kept your own counsel rather.

And yet, in a way, the work was more interesting from Big Collar's point of view. The workshops and power-house at Sandquay, on the River Dart down the hill from the college, were far more elaborately equipped than those at Kingston; fitted for really serious advanced work. They started him in the shops there as if he knew nothing, right at the beginning. But he very soon found himself making a real five-cylinder petrol-engine; and, over and above this, a steam-engine, meant for serious use. They designed it, cast, bored, and fitted it; put it into a steamboat and ran it. Then they were turned on to a complete electric motor—cast, worked, wound, and finished it by themselves. The power-house of Sandquay was planned in some ways like the engineroom of a steamer, complete with a condenser; and they ran full-power trials there as if they were at sea. They repaired all their own machinery at Sandquay. They even cast the statuette of Nelson that stands in their great hall.

There were other subjects, of course-navigation and

Scientific and Literary

seamanship, for example - besides engineering. Collar learnt the theory of getting in and out anchors from certain very pretty models. They worked with multitudes of models—a model mast with rigging and speed signals, flags and cones, and helm signals; a compass and a model steering wheel; the log; the lead; models for signalling by means of lights; models to make clear the trajectory of guns, or the twisting of propeller shafts; models for experiments in the stability of ships. Every sort of work-hydrostatics, electricity, heat, mechanicswas carefully illustrated at every step. Even the languages, French and German, had been begun at Osborne, without looking at a book, by actual conversation. Over and above the naval work, the school work, languages, mathematics, English, and the rest, took up more than half the day. And thereby hangs a tale.

For it was in this way that Big Collar lost his chum.

It has been said that each term was divided into two watches—port watch and starboard watch. The eleverer boys at Dartmouth were in the port watch of their term—the slower in the starboard watch. (At Osborne these names were reversed, so that no especial sense of praise or blame could become associated with either word—that is only a minute instance of the care with which the whole scheme is worked out.)

In the port watch of Big Collar's term at Dartmouth was a youngster who, because of his speed on the football field, and a wonderful ability in dodging, was called, we will say, "Bunny." That was not the real name; but let it stand at that. Big Collar and Bunny had been chums, more or less, from their first day at Osborne; and they were as David and Jonathan before they left Dartmouth. They were both high in the port watch of their term. The general idea was that "natural

science" work settles a cadet's position in his term, but it was not so in Bunny's case. His ability was in English and languages; as Big Collar's was in engineer-

ing subjects.

Now the Admiralty designed the course of training, through which Bunny and Big Collar were going, in order that the naval officer for the future should have the advantage of the ordinary liberal education of a gentleman, as well as the technical education of a naval officer. There was a time when many officers went to sea without having received a really general education. Their despatches and reports often smacked something of the sea, without any too minute attention to the niceties of grammar. The Admiralty decided that if it could give to its youngsters, as well as their naval training, the advantages enjoyed by the boys of the great public schools, at least they could not be the worse off for this equipment.

Accordingly, its advisers drew up for the two colleges, side by side with the engineering and technical syllabus, a scheme of thorough general education. Something had to go—so they left out Latin and Greek. But there remained, in the shape of languages, English, and history—especially naval history—quite enough scope for a

magnificent literary training.

Now among the boys near the head of the port watch, in most terms, there were many very able boys indeed; a few of really exceptional brilliance. And when some of them came within reach of the great field of literary culture, which opened out before them as they rose towards the last stages at Dartmouth, they could not help taking advantage of it. Some leant to science, and some to mathematics. But here and there a boy found that, beyond question, his tastes were literary.

Lack of Imagination

And Bunny was one of these. He came upon history splendidly taught, and found himself wrapped up in it. The dream of his life began to be research—research into those dusty mould-covered corners where history finds its origin. His work brought him a brilliant position at Dartmouth—as did Big Collar's. They were amongst the lions of the place before they left. For two years afterwards, Big Collar, latterly a midshipman in a destroyer, used to hear regularly from Bunny, then a midshipman in the Mediterranean. Bunny was clearly fretting away his soul, for the want of his beloved studies. The letters became more and more pathetic. "You know my whole heart was in history," Bunny wrote.

And Bunny left the Navy.

Now Bunny's case, with variations, has happened more than once. It is a tragedy. Bunny was not to blame for it. Nor was the Admiralty's scheme of education, although that has generally received the blame. The fault lies with that want of imagination which could not find a place for a boy like that in a service of the size and scope of the British Navy. The work of the Navy, and especially of the Naval staff, must call for an abundance of research and of able writing of every sort and kind; writing of reports, writing of works on the art of naval warfare, even writing of history. Admiralty has its big reading-room, at the top of the Processional Arch, with its library of history, biography, strategy, tactics, and administration around the walls, and a library of geography, travels, hydrography, gunnery, machinery, and shipbuilding on the floor below. A great service with interests as wide as that, which, having trained and produced a man of exceptional literary ability, lets him go because it cannot make use of him (and a score or two more) in some niche in its

world-wide service, is surely suffering from want of

imagination.

However, Bunny went. And to return to Big Collar—there remains little more to tell of him. As has been said, he found Dartmouth not quite the same as Osborne. They played what game they chose, in the spare hours—indeed, they were encouraged to vary their games; the only compulsion being that they must play some game, and keep a log showing what game it was. The term had its great comfortable oak-panelled reading- and sitting-room, which went by the name of its "gunroom"—far more comfortable than any ship's gunroom; each term had its own, except the two youngest, which shared one between them.

The old *Britannia* was still in the river then, and the cruiser *Pomone*, attached to the college; and in summer the senior cadets were allowed to sail the twelve boats belonging to the college around the waters in sight of them, whilst the juniors were restricted to swarming up and down the river in rowing-boats. There were also several steam- and motor-boats; and a torpedo-boat and a destroyer which were taken out for a few hours at a time with half a dozen cadets in the engine-room. The weather is not always mild in Torbay; and there was more than one afternoon during which the only thing that Big Collar managed to retain was the instruction he was receiving.

But he never forgot his first enthusiasm. True, there was not perhaps quite the same universal exhilarating keenness that belonged to the first stages at Osborne. They were being worked up to their full power, eight honest hard hours a day—one before breakfast, nearly four during the morning, two in the afternoon, and one at night. The work was designedly kept varied and

Good-bye to Dartmouth

interesting, and there was no revision. They were driven at full power, but not beyond it—probably as hard as the boys of any of the big schools; perhaps a little harder.

Big Collar was allowed to put in between half an hour and an hour of his spare time in the workshops at Sandquay any day he wished—and he was one of a fair percentage that did so. Again and again a wet wintry afternoon would find him there amongst his beloved mysteries.

He has since sailed for eight months as a cadet in the Cumberland, around the Canaries and to Canada; and after that, as midshipman, for two years on a battleship, and for a year in a destroyer. His mother still clings to that picture of him on the bridge; and they say that the influence of the wardroom of H.M.S. Impracticable is likely to have been all against the engine-room.

But I fancy that Big Collar will be seen in command of a submarine yet.



. . . . The destroyer was a British invention

CHAPTER IX

No. 1001

No. 1001 edged slowly forward from the jetty. There was a strong tide ebbing down the little estuary, swirling the greasy yellow water from the muddy river-bank; and somehow No. 1001, which had been lying with her head up stream, was very difficult to turn. The young captain backed her to the jetty, and tried again. She turned all right this time. But, as she hesitated opposite the jetty, her starboard bow, for one fraction of a second, lolled ever so gently against the wooden piles. Then the current took her head, and she swung round, and past the slips and boat-houses and the tarry drawn-up fishing-boats—between the ever-quickening sandhills, and reed banks, and almost under the arm of the bleak semaphore station, and so out to sea.

It was then and not till then that the captain quietly spoke to the quartermaster; and the quartermaster unostentatiously went forward on the starboard side, and leant as far overboard as his centre of gravity would allow, and directed one keen comprehensive glance beneath the bluff of the starboard bow. Then he made his way back to the bridge. "Not a dint, sir," he reported sotto voce. The captain seemed visibly relieved.

The Captain's Cabin

For he was a very, very young captain; and No. 1001 was his first command. He may have been twenty-two years of age; but I doubt it. He lived in a tiny triangular cubby house at the stern of the ship. It was captain's cabin, and wardroom, and gunroom too, for No. 1001. There was the captain's bunk along one side of it, and a triangular table in the middle; and what was left was occupied by a small office stove with a rather crooked, black-leaded chimney. Outside the door you almost stepped on to the iron ladder by which you came down from the deck. The cockpit into which the ladder ran was about six feet deep-standing on the lowest rung you could get a clear view of the horizon on either hand. The cockpit itself was just large enough to use as a pantry. There were kitchen shelves all round it, with hooks screwed along the edges of them; and on the hooks hung the captain's crockery-half a dozen cups, and three jugs-and a toasting-fork, and a battered tin teapot. When No. 1001 made her usual smooth-water speed, which was about seventeen knots. the captain's crockery all danced up and down on its respective hooks in perfect unison; and the captain's servant propped the door of the office stove with the coal shovel. Otherwise it would certainly have shaken open, and distributed red-hot cinders over the captain's linoleum.

It goes without saying that a man's life in the Old Navy is not always cast in such comfortable places as the wardroom of that particularly comfortable flagship which the Admiralty sent to Australian waters. There are wardrooms which you could squeeze comfortably into an average larder. At the other end of the world, some time after his trip on the *Powerful*, it was the writer's privilege to see the inside of more than one such

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mess-room. And as it is his endeavour, in this part of the book, to give a picture of the life within the old Navy, as far as it is within his power to do so, he is, at the risk of digression, devoting this chapter, and some that come after it, to some portions of that life with which it was impossible to become acquainted in Australia, but of which he has been able since to gain some small

experience.

It will be clear that No. 1001 was not a battleship. Indeed, she was one of the smallest commands in His Majesty's Fleet. The big destroyers, in which they carry two executive officers besides a midshipman, and a real live engineer-lieutenant, are Atlantic liners compared with her. And then there are gunboats, on experimental duties, with a lieutenant in command and a warrant officer for his navigator—they, too, are persons of importance by the side of No. 1001. But, be she never so small, No. 1001 is a separate command. The youngster, whose first precious command she is, may be Lieut. Tom Smith, R.N., to you. But from the moment you put foot on the gangway of No. 1001 you will realise that he is Captain, and to be treated as such.

"Captain wants to know if you'd like to come on the bridge, sir," says the Quartermaster as No. 1001 leaves the land behind her, and the presence of a landsman on that sacred territory would not be noted from the shore.

"Captain was a little nervous that bump we got comin' out of 'arbour might have left a dint in one o' the plates," says the same authority, during the course of a conversation which I was privileged to enjoy later on in the afternoon. "You see, 'e's a careful one, this captain. You should have seen the last captain we 'ad. Lor'!"

Of the daring of the last captain, that expressive

"The Last Captain we 'ad"

monosyllable may convey some idea. The risks he took seemed at least justifiable, which is not always the case with young commanders. I met a "captain" once, a certain irresponsible, scarcely out of his teens, who had been given a torpedo-boat to play with during some manœuvres in the 'eighties. He acquitted himself not so badly, following a cruiser hull down across the Bay of Biscay—if I remember rightly. But he told me that, when the time arrived to go home, and the necessity came of navigating his way through the crowded down Channel traffic by night according to the strict rule of the road, he had saved himself the trouble by calmly hoisting the signal which means "not under control" two red lights on the foremast, one over the other, I think he said it was-and had come up Channel like that, with all the scared traffic giving him the widest possible berth. It may be added that he resigned the service at an early date.

The whole coastal protection of England in war time is entrusted to these torpedo craft. The main fleets, the battle fleets, have only one business from the outbreak of war—to find the enemy's fleet and beat it. They are not to worry or care about raiders or invasions, or descents on the English coast, but just to go about their purpose single-minded; the responsibility for all those other trifles, according to Sir Arthur Wilson's memorandum, if that still stands, is to be taken entirely off the shoulders of the battle fleet by the divisions of destroyers and submarines which are now stationed at various ports around the British coast.

For England is making new naval ports as well as Australia. It was about 1896 before the first destroyer put in its appearance at the sleepy little fishing port of Harwich. The other day, crossing the river which

makes the harbour there. I counted seventeen destroyers anchored up the length of it; three scouts; the fast scout cruiser Boadicea; and a fishery gunboat. mother ship of about a dozen submarines, and all the submarines along with her, had gone to sea for practice -as do the destroyers every alternate week. But the old stationary mother ship of the submarines was there—that very same Camperdown which rammed the Victoria twenty years ago. Until she was sold, a few months since, for scrap iron, the officers and men of the submarines used to live on board of her. In the C. class submarine there is only one place where a man can stand upright, and that is under the conning tower; when the submarine is moving under water the crew is lying down in various corners with pipes, taps, wheels, levers, all round it, which it pulls or turns as the man in the conning tower orders. So they have to live elsewhere, and the submarines lie around the parent ship in harbour like a brood of chickens around an old hen. The old hen is being replaced by specially built parent ships; but till recently she was the Camperdown.

These flotillas are the school through which the British Navy passes a big proportion of its young officers. It does not usually keep them long at the game—a year in a destroyer is quite soul-satisfying enough; two years would rattle the bones out of a crew, and perhaps the brains also. The exercises are incessant. If you stay at Harwich, in the big hotel overlooking the Orwell, you will see half the flotilla going to sea these few days, and the other half as soon as they return; and so on alternately, in port and then out, with or without the submarines—throughout the whole of

your stay, in all probability.

Of course there are accidents. Some destroyer comes

There are Accidents

in looking like a battered bowler hat about once a week, in England; or with her bows neatly folded over and stuck down, like a tin envelope. And for each one so buckled every sub-lieutenant can tell you of a hundred hairbreadth escapes. Both in the British and German Navies, destroyers constantly have to manœuvre by night, in company, and without lights. Sometimes, by the nature of the case, those exercises develop into a matter of sheer guess-work. In the German Navy a manœuvre frequently practised is that by which the boats, which have been sheltering behind the line of battleships, are called on to leave their shelter, and dash through the intervals in that line of huge racing ships. The trail of that manœuvre is red with disaster. The Germans have made a rule that when destroyers are engaged in dangerous exercises, the whole ship's company must be on duty. Those men who would otherwise be asleep are forbidden to retire, in case collision should come and half the crew should be trapped before they had time to wake.

For mishaps are in the day's work in the flotillas. When a man sleeps he half expects to be waked by the bows of a sister ship staring in at him through the crumpled side. I was told of one seaman, sleeping in the bows of a British destroyer, who woke up to find his foot, which luckily was in a stout sea-boot, being gripped by the battered stem as by a vice. He got away

by leaving one sea-boot behind.

It often falls to the lot of a lieutenant-commander to have to tow a brother officer out of trouble by the stern. But, considering the work they do, the wonder is not, really, that so many destroyers are damaged, but that so few of them sink. The chief reason seems to be that their bulkheads run right up to the deck, so that

even if the forward part fills, and the boat is down by the head, the water does not readily make its way over the top of the next bulkhead and into the compartment next astern, as it seems to have done in the case of the

Titanic, for example.

The torpedo-boat destroyer was a British invention, first and last. The French Navy, by the early 'nineties, had built up a dangerous lead in torpedo-boats; and the Admiralty, though it only half believed in the danger, decided to meet it by building larger and faster boats on the same lines, with light guns, to catch the torpedoboat and scotch it. Shortly after this the British Fleet happened to be acting with the allied fleets off the coast of Crete. With the British Squadron were several of these low, black, slim greyhounds, which raced off with despatches, and performed a hundred other small duties whenever required; and it was no secret that foreign officers were greatly impressed with their use-From that time on the destroyer gradually replaced the torpedo-boat. The speed of 25 knots grew to 30 and even 33.

But it was found that the old 30-knot class, although fine boats in smooth water, could not keep their speed in a sea way. It was not really that they lacked strength. The plates even of the most modern destroyers remind one more of galvanised iron roofing than anything else, and their tiny frames look about as substantial as shelf brackets. The Destroyer Committee, appointed by the Admiralty, found from its experience that the old 30-knotters were not prevented from keeping up their speed in rough weather by any lack of strength. They would go through most seas—straight through them, by the shortest possible route—and come out of them smiling. But the trouble was that they were apt

The River Class

to leave their deck gear behind. What really limited their speed was that they would not stand hard driving in rough weather without carrying away whatever was on their decks.

Accordingly the Admiralty began again, and built a new class of destroyer with a high forecastle. They were known as the River class, not because they were meant to work in rivers or harbours or sheltered waters, but because they were named after the British rivers. They showed themselves strong, able, sea-keeping boats.

And that is why, when some time later the first three boats were needed for an infant Navy in the wide southern seas, the choice fell upon destroyers of the "River" class.



. . . The Marama was just moving out of Tuesday into Monday .

CHAPTER X

"LONG DISTANCE"

IT was a sultry tropical night, some year or two after the cruise of the *Powerful* to meet the American Fleet. The writer was steaming in a big passenger liner—belonging to one of the local Australasian companies of which probably most English readers have never heard—through those same Fijian waters which he had visited two years before in the old flagship.

Sitting in the cabin, scribbling a last few hurried lines to post to-morrow in Fiji, one could catch, coming from some pipe or air-shaft at the back of one's left ear, a faint buzzing like that of a half-killed bee—

ZZZZZZZZZZZZZZZ

It might have been the wind hissing through broken wallpaper, or a fly up there caught in a spider's web; only there is no wallpaper on the good steamship *Marama*, much less any cobweb; and the only fly one has noticed is a poor stray sleepy creature that must have straggled in here in Sydney or Brisbane and got carried away at the imminent hourly peril of escaping through the window and finding itself all alone from one cruel blue wobbling horizon to the other. zzzzzz! It

An Intermittent Buzz

is clearly not the fly. Perhaps it is just the creak of the ship.

One turns to the letters again. ".... This may reach you in anything from eight days to a fortnight, but we can't get any news of you fellows till we get to London—worse luck. If the New Zealand boat is in Suva when we ..."

Z-Z-Z-ZZZ Z-Z-Z-ZZZ Z-Z-Z-ZZZZZZZ.

That's mighty regular for the creaking of the ship. Sounds like the buzz of a house-fly chopped up into blank verse. The curtains of the bunk, even when they are pulled right back, don't show any crevice or ventilator which might be the cause of it. Indeed, it is a very faint sound, and even the direction it comes from is not obvious. It seems to be sprayed on you from the ceiling.

The ship is very still down below. The passengers are all asleep. The deck lights are out, the doors of the drawing-room are shut, and the carpets are up in all the passages. The bright light which shines on the writing-paper in one's own pretty cabin appears to be the only cabin light still alive. There is very little sound except the deep thump of the engine-room, and the irregular labouring of the ship, and this spasmodic little hum floating as light as soapsuds over the surface of it.

It has ceased now. The letter-writing goes on. Then the ceiling begins to shed that intermittent buzz again. It has a different tune this time—

ZZZ-ZZZ ZZZ-Z-ZZZ Z-Z-ZZZ. ZZZ-ZZZ ZZZ-Z-ZZZ Z-Z-ZZZ.

Now, there's no mistaking that. That is Morse code, if it is anything. It means MKU. It is coming down the cabin wall again and again and again. MKU....

 $MKU \dots MKU$, and again $MKU \dots$ twenty times MKU.

So those sounds do not come from the bunk or the fittings, after all. No crack or crevice in this comfortable little cabin is responsible for them. Those sounds are intelligible human speech, sent out by a human being. They must be leaking down, in some unexplainable manner, through two decks.

Far up on the boat deck—whilst I scribble in this bright, snug little cabin-room below—far up under the hurrying clouds, and the black sky, and the moaning rigging, far up as high as they could place it, dumped like a guard's van on the bare top of the ship, with the fresh air always seething around it, and the wild seas always hissing far below—is a little wooden cabin. Long after the passengers have turned in, long after the lights in the cabin portholes have blinked out, a bright beam still glows from the windows of that solitary little hut and slashes through the door across the deck. It is the wireless-room, and that is where that buzz is coming from.

MKU.... MKU.... Now the Marama has a rather larger colleague, by name the Makura. She passed, inwards bound, three days ago, and she should just be entering Sydney now.

MKU MKU. . . . Where is that Makura?

It is a very unsatisfactory letter one is writing to-night. One's pen keeps wandering off, saying the things one is thinking about, instead of the things one is writing about. Each time the narrative has to be levered back on to the rails again with many scratchings out and considerable effort. There must be at least a dozen quite obvious derailments in the course of one letter.

MKU.... MKU.... He is still calling MKU. I suppose she can't hear him. Makura.... Makura.... Makura.... Now where is that Makura? Afterwards it changes to KN—that is one of the warships, Encounter or Challenger. Then MKU again—cannot either of them hear him? A break. KN, KN, very slowly. After all, they're a very long way off now. We are getting out to the limits of the Australian wireless. We are 1600 miles from Sydney to-night. These ships disappear over the wireless horizon at Suva, and we are just about on the shadowy edge of the vague circle now, and talking over these huge spaces is no certain matter. Perhaps if he sends very slow they will hear.

The slow call ceases. Then MKU very slow; MMM—probably one of the P. & O. boats. No answer can

have come; for the call presently changed to

JQ.

One could not help feeling a sort of proprietary interest in that call. For JQ was the name which, in this language of wireless, belonged to His Majesty's ship

Powerful, then lying in Sydney Harbour.

Whether she heard him or not, that night, one could not tell. Possibly not; for other calls followed which one could not puzzle out. Once a long talk intervened; and presently V.... V.... repeated again and again. That is the letter you give the other man to enable him to tune his receiver up to it. Possibly the *Encounter* or *Makura* has heard him at last, and asked him to "send V's."

The letters to be posted in Suva were finished somehow, and folded up full of blots and erasures, and licked and shut down. Long afterwards, just going to sleep, one was conscious of the cabin roof chattering at a great rate.

So he had got his message through.

I have said that we expected to get beyond the range of the most powerful wireless on the Australian ships (there was no land station of any power on the coast in those days) when we reached Suva—that is 1743 miles from Sydney. There would then be a gap of some days, in the middle of the Pacific, to which no wireless station as yet reached. The trade route from Sydney to Vancouver lay at this point across a sort of desert in the ether—one of the few deserts even then remaining in the way of the world's trade routes. At the further side of that blank space we should pick up the signals of Honolulu, and we should not be out of touch with the shore again.

The night after we left Fiji, the night when we should have entered upon that soundless wilderness in space, it was my privilege, as it was on many other nights afterwards, to sit far up there on the boat deck, in the little guard's van of a cabin, keeping carefully clear of a row of Leyden jars on one side and the bare brass ends of a switch-board on the other; and over cigarette after cigarette, through the small hours of the morning, to learn of a world one had never dreamed of. My tutor was a quick, intelligent American boy of seventeen. The steamer rented her wireless installation from an American company—the "United Wireless"—and they put into her as operator one of their own staff. He had been trained on the Pacific coastal stations.

On this particular night, the first night out of Suva, there was thunder in the air. There was a storm in progress amongst the islands—the operator had been hearing it all day on the wireless, and we were now actually passing it at some distance. You could see the constant reflection of the distant sheet lightning flushing the horizon to starboard.

Atmospherics

The actual point which we had reached was just off the island of Taviuni, through which runs the 180th meridian from Greenwich—the line on which the world's day begins. It was Tuesday on one side of the line and Monday on the other. They say the Taviuni court-house is built exactly on the line, and that when the planters there fell out with the Government and were summoned to appear in court on Tuesday, they would stand in the far corner of the court and plead that it was Monday there, although it might be Tuesday on the bench. If they were told to come next day they would appear on the Wednesday side then—where, of course, the matter ought to have been disposed of the day before.

That sounds like one of those stories that may or may not be true, with heavy chances on the "not." But, anyway, they did have to pass a law which made it the

same day all over Taviuni.

That was the place where the Marama was when she passed over from about 11.15 p.m. on Tuesday to 11.15 p.m. on Monday. We were engaged in listening to the lightning; not to the thunder—indeed, I think that was too distant to hear—but to the sound made by the discharges in the wireless receiver, the curious faint intermittent cracklings or creepings in the telephone, which they call "atmospherics," and which are one of the troubles to be met with in reading long distance wireless. The noise is usually such as a salamander might make crawling round the embers; or like the crackling of a very distant bonfire.

But the atmospherics were much louder to-night; they had been increasing in strength all the afternoon as we came closer to the storm. We had been trying to identify the sounds caused by the brighter flashes—one sitting at the receiver with his eyes closed, so as

only to catch the sound, and the other standing at the open door to watch for the flash on the horizon. The flash and the sound came together every time—and the

brighter the flash the louder the atmospheric.

At least we had settled that point to our own satisfaction; and the operator had resumed his telephone receiver, and lighted his pipe, and was tilting back in his chair in the middle of an interesting narrative of ships and fog and Canadian coastal stations, when he suddenly leant forward and held up his finger.

"Something in here," he said laconically.

Clearly it was something very faint. I held my breath for fear of interrupting him.

"Too weak to read," he remarked presently, sitting back again. The fog narrative was continued, but its thread was almost immediately broken.

"There he is again," he said abruptly. "It's her all right," he added enigmatically. "She must be nearly nineteen hundred miles away now. Wait a bit."

He tuned up his detector rapidly to catch the wave length. "There now," he said, taking the receiver off

his head, and fitting it over my ears.

I could hear the atmospherics very clearly. Every fifteen seconds or so some tiny caterpillar seemed to turn over and curl itself up inside that receiver. But for a full minute one could catch nothing at all except that incessant creeping. Then in a flash one realised that underneath it all the while there had been going on the faint far-off hum as of a mosquito. One's senses had received it all the time without telling one about it—just as they will sometimes receive the ticking of a clock for minutes together without announcing it.

It was just the faintest sound that ever came into this world; as though somebody was touching the disc of the

A High Metallic Ring

receiver with a brush of camel's hair, making a very high, faint, intermittent musical hum. One seemed to catch at first one continuous surging note. After a minute one could detect that the surges were really separate sounds, with intervals between them.

There was no mistaking it now a high metallic ring. It was strangely reminiscent of some other sound, heard long ago, and far away. At times it came nearer to the distant twanging of a Jew's harp; or the far-off beating of a tin can. One searched the dim recesses of memory for the particular place and time where one had heard that note before. And at last it came.

It came with a picture of a clear evening sky, and an endless road running on for ever through the low western scrub; and the smell of burning wood from some fire out of sight; and the sound—the very distant tinkle of a cattle bell on some bullock straying away out through the bush.

There was no need to ask who "she" was Only one ship in the Pacific Ocean had a note like that. I had heard it before, in Sydney, on the first occasion when wireless signals from New Zealand were heard on the Australian coast. The Admiralty had, just previously, sent out their very newest and latest installation for the Powerful. She had left Sydney with it newly fitted, on her way to New Zealand; and a young experimenter in Sydney, who had rigged his plant, mostly home-made, above the roof of a house in the suburbs, had been the first to catch her signals after she turned down the New Zealand coast. He was enthusiastic about her. never heard anything like the Powerful's new spark," he had told me. "We've heard nothing like it in Australian waters—a high, clear musical note. . . . Why, you can hold her through disturbances that would

upset any other signals I've ever listened to. When she turned the north point of New Zealand and the land came in between us, her spark suddenly became much fainter. But it was quite readable still."

So now, on the royal mail steamer *Marama*, off Taviuni, just steaming from Tuesday into Monday, there was no need to ask who "she" was; "she" that was bleating out this solitary call across 1900 miles of sea. She was actually calling to H.M.S. *Challenger*, in Brisbane. Earlier we had heard H.M.S. *Pegasus* calling up the *Challenger* also. Where the *Pegasus* was, we did not know; perhaps at one of the islands nearer to us.

Here, on the margin of that desert in the ether, there were other faint stray notes, too; shadows of sound wandering around space.

"Wait!" The operator would hold up his finger as we talked. "There's some other little beggar in there." But it was too faint to read.

The next night the *Powerful* in Sydney Harbour could still be heard. She was then 2200 miles away. She was speaking to the *Pegasus* and *Cambrian*. The *Marama* called her later, and immediately afterwards there was the faintest possible spark in the receiver, which may have been an answer, but more probably was some independent message. Later we picked up the *Challenger* speaking. That was the last we heard of Australia.

On Wednesday, ten days after leaving Sydney, we were for the first time over the wireless horizon. The operator kept his watch for hours, with the receiver over his ears and the two great wires running away through the roof and far up into the dark, and the wind and the stars. But there was not a sound or a suspicion

Like Bees round a Hive

of a sound all the night, except the faint crackle of distant storms. The next night, Thursday, was still absolutely blank.

On Friday afternoon someone in the far distance was heard speaking to a San Francisco steamer; afterwards speaking to a Japanese boat; then calling to a big steamer going Chinawards. The big steamer did not immediately answer.

There the Marama jumped in. It was Honolulu.

Four days later we steamed into harbour there; and, as we lay beside the wharf that night, far out in the Hawaiian Islands, another distant signal was picked up. It was Sitka, in Alaska, talking to Cape Blanco, Oregon. They are both United States Navy stations on the American coast. Sitka was 2500 miles away. The next day we were working with San Francisco direct—2000 miles.

It was shortly after this that one was really introduced to the wireless world. As the operator said: "This is where you commence to hear wireless, you know, 'long here. They were like bees round a hive last night."

And the operator was right. Personally one had no conception of what wireless meant, and I do not think

many Australians had, at that time.

It happened as we gradually came into range of the American coast. It was like coming under the fire of a battery which has its positions the whole length of the western coast of North America, and its scouts on the seas as far as China. On that coast the United Wireless Company alone had forty-seven land stations, not to speak of the Navy and other Government stations of the United States and Canada.

It was a world that one had never dreamed of, this

strange little world bounded by the Pacific shore stations, and the traffic. The operator had been trained in it, had lived for two or three years almost nightly in this small circle. To come in range of it again, after his long absence in the outer world, is obviously like getting back to one's old village after many years.

He knows every voice in it. The people in the world are certain bluff sea capes, low banks at the river mouths, islands shaken by the surf of the whole Pacific, bare-topped hills overlooking city suburbs, here and there an island town, or the flat, open roof of some huge skyscraper, with the smoke and the noise and the smells of a metropolis rising around it; and outside of all these a certain ever-moving congregation of seacraft. all shapes and sizes, from great liners down to the merest mosquitoes, freighters, oil-tank steamers, tugs, fishing-boats, even oil barges-always coming and going along this fogbound coast. Nine-tenths of those headlands and sand-spits and cities, and the greater part of those steamers, a man on the shore stations may never have seen. But he comes to know their voices, so that when he hears the first brush on the receiver across a couple of thousand miles of sea, he can sometimes say: "That's the Helonian (or whatever she may be). I can't read her, but I can tell her note."

And they are on the look out for him, too; and indeed for any long range wireless that may be going. Early in the evening the conversation may be brisk. There is a fishing steamer from Alaska with a cargo of halibut, asking her owner for orders, ready to sell her cargo before she sights land if necessary. There is a tug to be switched off to a lucrative tow. There are passengers wiring for rooms in crowded Seattle hotels. There are whole sheaves of messages buzzing through.

The Great Silence

And then we, far out at sea, begin speaking over great distances with Cape Blanco and Honolulu. The buzz of conversation from the coast suddenly dies—stops for at least fifteen minutes. The operator knows well enough what they are doing. They are all listening. They are all tuning to try and catch the distant answers from Honolulu.

Afterwards the buzz breaks out again; passengers' messages handed in at dinner-time; dead-head messages; banter from the stations. If Marshfield is sending, and North Vancouver can hear but cannot answer back, and Friday Harbour can answer back but cannot hear, Vancouver will listen and then tell Friday Harbour to answer. "Tell Marshfield it's O.K.," says Vancouver. "But I can't hear him," says Friday Harbour. "Never mind"; says Vancouver. "You tell him to go right ahead." And so the message comes through for certain. But later, at three o'clock in the morning, some of the stations close down. Only a solitary youngster here and there is left listening, listening, always listening in case some stray spark may suddenly turn up in the receiver. That is the anxious time. The whole world is suddenly cut off, and any of the ships going silently on their own paths out there in the black may depend on you for her needs-perhaps for her safety. Early in the evening there were plenty who would catch her if vou didn't. But now-how do you know the plant hasn't suddenly got out of working order? How do you know the contact of that copper wire on the little lump of crystal on the desk before you is not faulty? The other fellow may be calling all this while, and never a sound come in. You test the contact by working the aerial switch. That gives a spark, and if you can hear it the contact must exist. You test it

every few minutes or so all through the night till seven in the morning.

Sometimes in those long hours you may become conscious of someone working. It is worth while seeing an operator galvanise into life when that moment comes. Have you ever seen a boundary rider's dog lying outside the only hut on the plains suddenly stiffen, when you know that he hears or smells or sees or in some mysterious way suspects the existence of another dog on the same plain? That is how an operator stiffens when he catches a stray spark.

He has to tune to it. It is a wave really, and he has to find the exact length of wire which will best receive that length of wave. He can only do this by experiment—moving certain tiny brass contacts backwards or forwards over bared strips in several coils of insulated wire until he finds the adjustment at which the sound comes in best. Very possibly a layman could not recognise any sound even then.

But he has no more idea what it may turn out to be than a layman. It may be some distant warship—perhaps talking to her fleet at manœuvres. It may be a station in some far place where the day is still in the working hours. They even say at San Francisco that they have heard the great station at Poldhu, on the coast of Cornwall, talking. If they ever did, it must have been a "freak message"—one of those messages which, on rare occasions, owing to some mysterious condition in the ether, will come through from a distance which in normal times could never be approached. From Cornwall to San Francisco must be about 7000 or 8000 miles. The furthest this operator had ever heard was when, working at North Vancouver, he had sometimes caught Honolulu 2430 miles, and had

once heard the *Makura* talking on the other side of Honolulu, about 2800 miles away. Long distance wireless is largely a matter of high masts. If you double the height of the mast you can double the range of the message. But if you want to get the same result by increasing your power, you have to cube the power, not double it. Consequently it is simpler to heighten the masts. That is why the masts of the British warships have grown as high as they reasonably can. The Germans have experimented a good deal with wires attached to balloons, but this method has its difficulties.

That faint, barely readable message which comes to hand in the small hours may have another origin. It may come from a ship in distress. Far out on the grey waters, the cold sea sluicing her well deck or creeping into the engine-room, the whole hope of her people may be hanging on the chance of that spark being picked up. For that reason they have one particular signal which may be sent broadcast, which must be given precedence over any other message, however important, and which anyone who hears—even if there are a hundred who hear—must answer. That is the distress signal, S O S.

"I only once heard S O S," the operator told me. "It was one night when the weather was thick. Barge 91 of the Standard Oil Company was coming round into the mouth of the Columbia River in tow of one of their tank steamers, the *Maverick*, when she broke adrift. I could hear the captain of Barge 91 telling the captain of the *Maverick* to stand by him. They got a line on board; but in the end, as they were bringing Barge 91 over the bar, she dropped anchor just a minute too soon, and the tide swung her on to the bar and she capsized.

"That was the only time I heard SOS," he went on, leaning forward to pluck the brass wire on the crystal

in his detector once or twice to make sure of the contact. "But there was another night at that same station, Astoria, inside the mouth of the Columbia River, when I heard a fellow calling such a way I figured something must be wrong. Astoria was a one-man station, and I was on there by myself, and had to choose the times I thought I was most likely wanted—I used to watch the newspapers and see when ships would be likely coming.

"Well, round the corner there from the river-mouth is Puget Sound, and way up Puget Sound is Bremerton, Washington, the United States Navy Yard. It happened early this evening I'm talking of—perhaps 10 o'clock—I heard two cruisers coming down the straits—I could

hear them speaking to each other.

"Later on I heard the Colorado—that's one of those two cruisers—calling to beat the band. I don't know what it was—I didn't hear C Q D or S O S—but I sort of figured something unusual was happening by the way she kept on calling. She was calling pretty well every station along the coast, except Astoria. I suppose being

a little place she left Astoria out.

"We had a line down to the telegraph station, and I had a brother working there; so I rang my brother up and asked him to put me right through to Portland. 'The Colorado's down the river calling away like mad,' I said, 'and I reckon there must be something up.' He told me he'd put me through. I could still hear the Colorado calling, calling, calling every station except me, and she couldn't make any of them hear. At last I thought I'd jump right in. 'What's the matter, old man?' I says (that's 'O.M.,' you know). 'What's the matter?' I says. 'I reckon you've forgotten me. Just say what it is, and I've got a line right through to

"What's the Matter, Old Man?"

Portland. I can send your message right along to any place in the world.' But he didn't answer at all—only went on calling. So after a bit I jumped in again. 'You tell me what it is, old man,' I says, 'and I'll send it right along to Portland.' He didn't take any notice of that either—just went on calling; so I knew he couldn't hear me. I remembered he'd just come out of the navy yard that afternoon, and I figured he hadn't had time to get his detector just there—in going order. If he'd only said what was wrong I could have sent it on for him, but it didn't strike him that anyone might be hearing him all the time without being able to let him know it. My spark was all right, because I could speak to San Francisco, 700 miles away.

"However, the chap on the Colorado, just over the hills, didn't hear me, and he didn't say what was up, so I just had to wait for next day. And when the paper came along there it was, that the U.S. cruiser Colorado had gone ashore last night on the rocks in the Straits. She came off all right next day, but she had to go back to Bremerton. As she went up the river I said to her: 'Was that you calling last night, old man? Next time you're in trouble you just say what's the matter, and

we'll be able to help you."

Those yarns did not always stop at wireless telegraphy. "The best thing I ever heard," the operator once told me, "was one day I looked into the station at Vancouver—away three miles across the harbour there. One of the operators called to me. 'Here,' he says, 'we've got De Forrest in here. Have you ever heard him?' I said I hadn't, and I took up the receiver, and there I heard, of all things in the world, not the ordinary wireless buzz—but a man's voice, talking!

"'D'you hear me?' he says. 'How does it sound?

Good? Yes? Well, then, wait now whilst I put on the

phonograph."

"And then the music began to come in—I never heard anything so fine; it seemed to come out of the air from nowhere.

"'Well, d'you hear me?' says the voice. 'How was that? Did you hear that music? How does it sound, fine? Well, wait now, and I'll turn it on again.'"

"And he did. 'Course I knew who he was. He wasn't talking to us, and we couldn't talk back. De Forrest was the man who invented this system we have here on the *Marama*. Now, the United Wireless has bought it from him, and he is experimenting in wireless telephony. He was along in Vancouver, and he had

his plant rigged up between two hotels there."

It was whilst one sat smoking in that crowded little box on the boat deck, listening to narratives such as these in the long blank nights before Honolulu, or afterwards squeezed in between communications from the Pacific liner Manchuria on her way to China, a Japanese steamer two days out of Honolulu, the Helonian on her way from San Francisco, and the Wilhelmina on her way back there—it was then that one came to realise the existence of that other spirit world which is peopled with wireless messages. We in Australia were practically outside that world in those days. But in London I suppose they were, and are, in the thick of it. The reader of this book, at the very moment when he reads these words, is probably immersed in it. There may not be a sound in the street. The children have gone to bed. There is not a breath stirring through the drowsy garden trees. And yet the very space in this room, around his head, may be singing with messages. It needs but the apparatus—and he is alive to another world, which was

Another World

there all the time had he known it. There is the angry buzz from the Admiralty building — there are the commercial messages, and naval messages, and military messages. Perchance he may happen to strike the faroff call from a German cruiser lying in a German port; or from the Eiffel Tower in Paris; or the long-distance signals of an English battleship, which no doubt they in their turn can hear on the French and German coasts.

At times you may happen to pick up some of the nearer signals on your ordinary telephone receiver. I have heard them on three or four occasions in Sydney. There was no mistaking the Morse letters. They were recorded in the form of a faint buzz in the receiver, and they were much too slow to be post-office telegrams. Several electricians, to whom we mentioned it at the time, told us that the thing could not happen; and we were almost beginning to doubt our own senses, when a leading engineer in the Department of Telegraphs informed us that wireless signals were frequently picked up by some means or another in the telephone instruments of the Department. They probably came from the Powerful herself—she would be lying in the harbour about a mile from where we heard them.

It can be imagined that, under all these circumstances, it is very important for the Admiralty to speak its mind only in cipher; and to see that no private instruments exist without the knowledge of the authorities. It is not yet possible to project messages only in the direction in which you wish them to proceed, although this much is known—that the horizontal wire (or antenna) on the receiving ship picks up the greatest amount of energy from the waves in the ether, when it happens to point in the direction from which they come; and receives no energy at all when it is at right angles to them.

I would that there were space to tell all that one heard and learnt up there on the boat deck. It was often three o'clock in the morning before those yarns were ended, and the operator knocked out his last pipe. and I picked my way bedwards across the dark boat deck and down the silent passages. Sometimes, even then, the familiar buzz from the cabin ceiling told one that he was still at work for half an hour after one lay in bed, firing in a last message or two. It was on my way to the cabin one night that I discovered where that mysterious buzz, which had so puzzled me at the outset, really came from. As I walked along the passage outside my cabin, that night, the wireless happened to be working, and that same angry hiss was more noticeable than ever. It seemed to originate near a certain iron pipe which ran along one side of the passage close under the beams of the deck above.

And there it was. Just at that point a faint blue halo of light was coming and going on the wall. One of the steel girders supporting the deck came close to the pipe there. And between the two, not much brighter than a glow-worm, hissing between its teeth in perfect time to the Morse signals far above, was a tiny electric spark.

When that sound stopped one knew that the youngster above had turned in. One could not help speculating how he relished some of those thundery tropical nights. He sleeps with two highly efficient lightning conductors running into his cabin within four feet of him. He sleeps with a motor just over his feet, and the blower, which it works, and the mica silencer, on a bracket to the right of it. About four inches from the toe of his right foot is a condenser of two dozen Leyden jars—tucked in somewhere near the sheet. There are three

The Strain of Listening

drawers full of copper wire and brass fittings beneath his mattress, not to speak of a transformer which turns the direct current from the engine-room into alternating current for transmission. There is a motor generator beneath his desk, and a storage battery and switchboard above it, and the adjuster and detector and aerial switch just on it. The storage battery is there, so that he would have plenty of current to carry on with, even if the ship were in trouble and the engines stopped.

When he starts transmitting there is a triple green spark at the anchor gap on the aerial, a blue spluttering inside the silencer, about 10,000 tiny lilac snakes' tongues around the Leyden jars, odd forks and spittings, and a pale spark on each of the insulators outside. Without the silencer the chief officer next door would not get much sleep. With it, the noise of transmission inside the wireless cabin is not louder than independent rifle

firing.

The strain of listening, after all that uproar—listening, listening for barely distinguishable sounds—is trying. But it is not so heavy in the merchant service as in the Navy. After all, the chances are that nothing very instant will happen to the operator on a merchant ship if he does fail to answer when he is called, or fails to call when it is expected of him. He is subject to no control, save a sort of rough pack law between himself and his colleagues on other ships. If he shows himself selfish, they can all jump on him the moment he begins to send, and "jam" his messages. But the naval operator, like the signalman, lives under the eagle eve of those in authority. And if, in addition to sins of omission, he should happen to block the flagship's signals. . . .

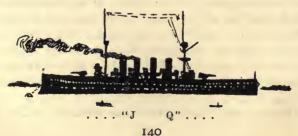
That is why they divide the wireless duties into

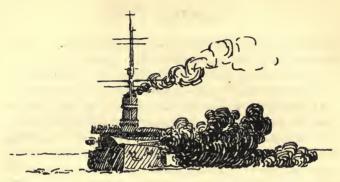
watches in the Navy. Even so they have some stories to tell of the effects of it.

These and many other yarns, spun to me through the small hours in that great desert of the wireless world that lay between Suva and Honolulu, may serve to give others-as they gave to the writer-some idea of the silent language which warships and merchant ships are always talking across the world. And, indeed, they are the only account that I can give of wireless in the Navy. All that I saw or heard or learnt of the Powerful's wireless came from outside. Most Navies have some corner, some holy of holies, which is kept religiously closed against all intrusion; and, at the time when I was on the Powerful, at any rate, the wireless cabins of British warships were iealously guarded. The only time when one was reminded of the existence of wireless on the ship was when, occasionally, someone would come to the wardroom door, with a slip of paper in his hand, and inquire for the commander or the first lieutenant.

Curiously enough, when the American Fleet arrived, their wireless cabinets were the first sight they showed to visitors. The places which they did not show were the big gun turrets.

They, too, had reasons.





"Smokeless."

CHAPTER XI

THE LOWER DECK

GOODNESS knows where he comes from. It is not safe to generalise about it, anyway. Often, of course, very often, he has spent the odd hours of his infancy with his legs hanging over the quayside, spinning long yarns to his kindred spirits about the obsolete guardship in the harbour — yarns which, in spite of their wide-eyed admiration for the narrator, they seldom quite believed. He mixes in a few nautical oaths, and a fine flavour of technical terms, and such scraps and tags of naval lore as he has picked up when the ship's boats come to the "beach." He has settled his own fate long ago. Really it is with him much as it was with Big Collar. He "never thought of doing anything else."

But he may have thousands of other reasons besides. He may never have looked upon the sea in his life. But his uncle is a chief signal boatswain and his sister's young man is a sick-berth attendant. They both warn him solemnly not to enter the Navy — and their conversation, especially when they get together, is

absorbing to the fledgling in the corner to an extent which perhaps they do not realise. The greatest attraction which the Navy holds out to many, in modern times, is an opportunity to see the four corners of the world.

Of the boys whom they are getting in the Navy at present some of the brightest are telegraph boysnumbers of them join nowadays. The Navy is obtaining the sons of all classes of artisans; a constant stream flows in from the recruiting stations—six or eight daily to each of the two great training establishments. probably the best of the lot are the two or three hundred a year that pass in regularly from the Royal Naval Hospital at Greenwich. They are sons of men who have served in the Navy themselves, and who are educated free at Greenwich. Often they come in about as well trained as others go out. Curiously enough, they are mostly small-sized boys, but they are magnificent material. A number of boys have been coming in lately from the Barnardo Naval Training School-and they, too, are said to be excellently trained.

There is an idea in the heads of some good people that you can make a boy into a sailor by just sending him to sea. It was truer in the days of sailing ships. It is only about sixty years now since the Navy has given up relying on a system by which, in the last resort, if a ship's complement was not made up in war time, they bundled the ordinary citizen out of the streets into the line-of-battle ship, and sailed off with him there and then. In the time of our great-grandfathers, two years before Trafalgar, when seamen were badly needed, a certain enterprising officer at Portsmouth marched out a party of marines, with great show, to deal with a pretended riot beyond Haslar. There was nothing like the chance of a row to attract the population of an

The Press-gang

English port—which this captain very well knew. Having drawn the crowds out there, over Haslar Bridge, he threw a guard of his marines across the bridge, and proceeded to select suitable men from the crowd. He obtained three or four hundred able seamen—a magnificent haul. They had no wish to sail in a warship or perhaps to sail again at all. But by that day week those men might be at sea fighting the guns in some of those encounters that have made Britain what she is, with the enemy's loaded muzzles staring out at them through his gun-ports about fifteen yards away, all ready to fire.

That was recognised as a necessary part of the system by which the ships that fought those great British sea-battles were manned. They spoke of it as a regular provision in the scheme of mobilisation. For the first few years of the last century about 10,000 men were pressed into the fleet annually. As late as 1852, when a committee was inquiring into the difficulty of manning the Navy, one old Admiral of the Fleet told them that his opinion was that "if we part with that means of sending forth our fleets with the alacrity which so astonished and confounded the nations against which we armed in 1787, 1790, and 1791, England will no longer be what England was on those occasions."

And, as a matter of fact, when the press-gang had ceased to be used, the British ships had often lain waiting for men—sometimes for months—before they could fill up their crews. The vocation of a seaman on the Queen's ships was the same unmethodical, unorganised anachronism which still lingers on in the merchant service. When a ship paid off, her seamen were simply discharged. When she proposed to go to sea again, she had to scrape together another crew. The calling of

a seaman offered no more semblance of a career than that of a merchant seaman does in these days.

The work of that committee made all the difference for the naval seaman. At one stroke it turned his casual vocation into a permanent service, and gave him a career. The career has been improving ever since, and will improve—it is within the bounds of possibility for a seaman in the Navy to end up as an Admiral nowadays. There is no comparison nowadays between his career and that of a merchant seaman.

To begin with, the naval seaman is trained especially for his work, as the member of every modern profession ought to be. So much is this the case, that the Admiralty will not allow the boys training at their great schools to be employed doing the odd jobs about the place. The boys are there for instruction, to get to know all that can be taught them of their future duties; and the Admiralty very wisely determined that it would be sheer waste of valuable time to use the boys up in fatigue work and ordinary labour. Consequently, at the great school at Shotley, for example, over and above the 250 petty officers who are engaged in instructing the boys, there are 100 seamen as a "crew," to do the incidental work of the place.

Sending a boy into the merchant service at the present time is very like the old method of teaching a boy to swim by pitching him into the deep end of the swimming-bath. In England, they subsidise out of public money a school for training waiters. But on all their schools for training the men of the great industry on which their life as a nation depends, the industry of which they are proudest, they spend a little over £3000 a year. The vast majority of British merchant seamen, of course, have no training at all; and indeed, under the present

The Seaman

system, they have no career worth training for. But the boys entering the naval service have a magnificent training; and what it makes of them we know well enough in Australia. I have been told by squatters that a man out of the Navy was worth three ordinary immigrants—and they do not say the same about soldiers. That is not an accidental circumstance. It is the natural effect of the magnificent thorough training which is now given to naval seamen.

It is possible that there may be some readers of this book who could not say offhand how a British bluejacket comes into being. Of course there are many sorts of bluejackets besides the long-service seamen: there are short-service seamen, and stokers, and properly apprenticed tradesmen who go in as engine-room artificers; there are plumbers, painters, blacksmiths, sailmakers, armourers, bandsmen, stewards and cooks, and others; they are mostly recruited and trained quite separately at Portsmouth. But the backbone of the Navy is the long-service seaman. And he is trained at one of two great training-schools — one in the west of England, the other in the east. There are about 2000 youngsters in each school. All recruits for "seamen" from the west of England, and from Ireland and Scotland, go to the Impregnable at Devonport. And all those from the East Coast of England go to Shotley on a narrow peninsula overlooking the new naval port of Harwich.

It is only seven years since this big school opposite Harwich was opened. About eight years ago the doctors recommended so strongly in favour of the boys living on shore rather than in training-ships, that the Admiralty chose for a portion of them the well-isolated peninsula between the two rivers which flow out at Harwich.

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Seven years ago the commanders of the four old training-ships, St Vincent, Caledonia, Boscawen, and Ganges, received the order, "Boys to proceed to Shotley barracks." They proceeded—and for the next twelve months at Shotley the remnants of the Boscawens, Caledonias, St Vincents, and Ganges fought one another vigorously, until their places were gradually filled by new drafts that knew not the old training-ships. But the four old figure-heads are there; theoretically the boys are living on a ship; and they have given the barracks in the Navy List the title of the old Ganges.

All shore establishments in the British Navy are nominally ships. H.M.S. Ganges, for example, has a recognised quarter-deck; but it is a gravel square between two buildings. She has a mast with her big white ensign flying at the peak; and during off hours there are youngsters swarming up it and down it, squatting in bunches on the cross-trees and the yards, crawling like ants all over it, for mere fun. But the mast and rigging simply spring from the

gravel quarter-deck.

As a matter of fact, the ship of which this is a true picture is H.M.S. Ganges I. Alongside her, in the muddy tidal water just below her green banks and yellow gravel walks, lies H.M.S. Ganges II. H.M.S. Ganges II. is the ancient "armoured cruiser" Minotaur—which once, in the early days of ironclads, was the proud possessor of five very tall masts and two very stumpy funnels. They have put in two longer funnels and taken away two masts, and tied the old ship up below Shotley barracks, to be the home of one section of the youngsters that are trained there.

For there are two classes of entries to Shotley. Youngsters enter either at the age of 15½ and 16, in

H.M.S. Ganges

which case they are called "boys," or at 16½ and 17, when they are called "youths." The two classes are never mixed. They have 1300 "boys" at Shotley and 700 "youths"; but, though they live and are trained and worked for the better part of a year within a quarter of a mile of one another, they are kept rigidly separate, and their training is separate and different. The "boys" are trained for about a year at Shotley, and are then drafted out into the four cruisers of the training squadron for four months. The "youths" are only trained at Shotley for six months or so, and put in a year or ten months at sea; whilst at Shotley the "boys" all live in Shotley barracks, the "youths" all live on Ganges II.

Although those who have let the age of 15 go by without joining are too valuable to the Navy to lose, it is the younger boys whom it is an advantage to get, because they can do more with them. One doubts if the average Englishman has any notion of the education which those "boys" receive. The central idea is to get the boys quickly to the top, so that they may be set to

the special forms of work which need ability.

For the first three months the boys are given the biggest amount of ordinary schooling that can be crammed into the school hours. At the end of those three months a vital decision takes place. Those who reach a good standard are allowed to choose whether they will take up gunnery, wireless, or signalling. Those who have not reached that standard merely go straight on to the ordinary instruction in seamanship. Those who have qualified to take gunnery, wireless, or signalling are given a special training in their subject, and also further schooling, which will immensely improve their chances of getting on in the Navy. This one measure

ensures roughly, from the very beginning, that the brighter seamen go to the more responsible work all through the Navy.

Now the special schools for gunnery and wireless are on the *Impregnable*, and only the special school for signallers is at Shotley. Consequently any Shotley boys who choose gunnery or wireless are sent off to the *Impregnable* forthwith; and any *Impregnable* boys

who choose signalling are sent to Shotley.

Every boy gets 7d. a day from the moment he joins the Navy. It is not all paid to him at the time. He gets 1s. a week as pocket-money, and the rest is paid to him later. But he may increase his pay by his work in signalling, gunnery, and wireless, and the work he has done in that way is all remembered to his credit, when he passes off the training squadron in the Navy proper. About 350 of the 1300 Shotley "boys" take up signalling, and about 400 choose gunnery. Some 600 go on with seamanship.

"Youths" do not get the chance of qualifying for gunnery, wireless, and signalling, but are given the ordinary instruction in seamanship—tying knots, bending and mending ropes, sailing and rowing, working models of anchors and boats, a little rough mechanics (each boy has to mould and make a bolt and nut), gymnastics, and a splendid system of physical drill, squad drill, a certain amount of gunnery and shooting. They have their heavy gun battery and shooting battery, full of Sir Percy Scott's tricks for miniature firing and aiming, in two long buildings overlooking the harbour. In corners of the playground are three masts, from which signals can be sent as if they were separate battleships. For the signallers there are a number of small classrooms full of tricks for teaching of flags, signalling by lamp,

Licking its Pencils

telegraph, and even wireless, of which every signaller has to know something.

The boys spend their evenings in the swimming-baths, or in the gymnasium, boxing, or else reading, or washing their clothes. There are only four hours' regular instruction every day, and, although the boys are in the boats before breakfast or after school, it is something of a problem to fill the spare time. There are two weeks' holiday in winter and three in summer—but about forty boys generally stay on at the school.

Now that is a rough summary of the education of most long-service seamen. It is not claimed that everyone is satisfied with it in every respect. For example, Shotley "boys" have never slept on board a ship until they actually move into the training squadron, and it is sometimes complained by the officers into whose ships they come that they have never slept in a hammock, or run about a deck with bare feet, or become accustomed to slipping down a ladder into the ship's boats; and, of course, it is true that whilst the "youths" on the Minotaur and the Impregnable boys are used to these things, the Shotley "boys" have to learn them when they come to the training squadron. On the other hand, there is no doubt that the health of the boys has gained by living ashore, and there is no likelihood, as far as one knows, of the barracks being abandoned for a trainingship.

That training is turning out already more or less educated men; and the education is improving all the time, and will continue to improve. Moreover, it does not stop when they join the fleets. A certain proportion of the crew actually goes to school on the ship, in front of a blackboard, licking its pencils, writing notes. You do not think of the battleship as a schoolhouse, or the

young naval officer as a schoolmaster or lecturer, working out formulæ on a blackboard with chalk for the benefit of a class; setting them examination-papers, and then sitting down in his cabin to correct them. But that does come all in the day's work.

For the Navy is trained in exactly the opposite way to the Army. In the Army a man will presumably some day have to fight-that is to say, to go to a far land, bake bread, cut up sheep, cook breakfast, boil tea, look after horses, mend boots, find his way across country; and in the intervals lie down behind rocks and shoot. So we used to teach him to stand up and be shot; and nothing else except to present arms in the morning, and lie on his cot and yawn for sheer boredom all the rest of the day, with the result that he was very brave and very foolish whilst he was in the Army, and often uncommonly Whereas in the Navy they make useless when he left it. of the sailor a magnificent handicraftsman at sea; and out and away the handiest citizen ashore. only teaching him the branches of his trade after all. They are giving a far more sensible training to soldiers also, these last few years, with the result that the class of man there, too, is obviously improving. Some of the finest Englishmen in this world are among the noncommissioned officers of the Army. But there is a good way to go before they turn out their average men to compare in ability and steadiness with those of the Navy.

There is one matter in this connection which is a little difficult to deal with. To cast doubts on the perfection of any part of Britain's naval system is, in the eyes of the average Englishman, only a little less heinous than blasphemy. At the same time it is useless to deny that there was recently a great deal more discontent among

Discipline

the rank and file in the service than was consistent with the health of the British Navv. Those who denied the existence of all this grumbling simply did not know; and anyone who did know could not help feeling a little anxious for the welfare of the service. It is hard for an outsider to say what the real strength of the troublewas. But one's own impression, for what it is worth, is that the conditions of the service did not keep pace with the change in the men of the fleet. All the time that the men were changing from the unkempt and uncouth harbour-side population which manned our ships in the days of the press-gang, one doubts whether those in authority fully realised that this change was in progress. There were great improvements in food, of course, and in many other ways. But there lingered on certain methods and traditions of discipline, which were really more applicable to the rough sea-children of the old days than to the members of a modern profession. The fierce punishments of old were abolished; but the idea of putting a man to stand facing the barbette, with his back to the deck, like an overgrown school-boy "stood out" in class, does not belong to a modern profession at all.

After all, the Admiralty has taken the step—and no doubt it was the right one—of throwing open all ranks in the Navy to the humblest boy who enters it. And if a man were potentially fitted to be an officer, he could hardly be subjected to that sort of punishment. A certain number of young warrant officers or petty officers will be chosen every year to attend a school of instruction for the old rank of "Mate," long disused in the Navy. From that rank they may be promoted to lieutenant, and commander; and although the age limit will usually stop them there, it is just possible, by special

merit, to win promotion to the highest posts in the service. The first promotion from the ranks that was ever won in the Navy was obtained for special merit, under the old regulation. The recipient was a warrant officer. During the years of the South African War he was in command of a torpedo-boat, when her main shaft snapped. He brought her safely into shelter with an improvised sail manufactured out of deck-cloths.

Even for those older warrant officers, who have not risen quick enough to seize the chance of promotion to commander, the Admiralty offers the prospect, after long and faithful service, of retiring as lieutenant. In short, the life of a naval seaman has been made into a career—a The Admiralty recognises that each modern profession. boy who comes to it may be, potentially, an admiral, and it knows that it cannot apply, to such a personnel, the standards of Nelson's day. The more vexatious regulations have now wisely been abolished. In a Navy, with a good standard of education, the respect which an officer receives from his men is not really decided by what the naval rules and regulations may enjoin. really depends on whether the officer thoroughly knows his work and is fit to command. That is bound to be more and more the basis of discipline in the future.

The British naval officer is being trained in a way which does not leave this future to chance. And he has always possessed that form of generosity, which we call "sportsmanship"; which has accounted, in spite of all grumblings and discontent, for the wonderful powers of leadership which British officers, above all others, have exhibited. There exists between the officers and men of the Royal Navy, beneath all the superficial forms and ceremonies, a firm undercurrent of feeling that is not far different from true friendship. One saw it again and

Like a Coal-cellar

again on the old flagship when officers and men were outside of their stiffer relations-in the good-humoured turmoil of coaling; in theatricals and sing-songs. give an instance, I shall not forget in a hurry a scene on the quarter-deck towards the end of a winter afternoon at sea. It was the time for gymnastics, and on this particular day an amateur boxer of some note, who happened to be aboard, was sparring with the ship's champion. As they fought under the big, spluttering arc lamp, an irregular ring of officers on the edge of the circle of light watching them, one's eyes could not help wandering to a little cluster of white figures that silently grew in the background. Everyone seemed to find something of pressing importance in that part of the ship. There were at least three sentries over the lifebuoy, a small crowd to clean and mind the lamp, and a dozen others who happened to be caught on the way to somewhere. After the last round between vet another champion and the first, the white figures quietly melted, and the sentry was left to himself.

Going on deck one morning in Auckland I came on a scene just as friendly. That day this spotless flagship looked for once like a coal-cellar. The evening before, you could have wiped the deck with a man and never have soiled his clothes. But all this day good-humoured marines and seamen, with pipes in their mouths, and any sort of fancy head-dress pressed like a lady's bathing-cap over their curls, were trotting their little trolleys to various holes in the deck through a fog of twinkling brown coal-dust. When they coal in the Navy they do it all themselves, tie the collier alongside and swarm over her. In the fleets it is often a fierce competition. Even here the tonnage, jealously chalked on a blackboard hour by hour, showed that we had been taking it

in at a rate unheard of when this ship was new. They say that with the fleets men will work as you had never believed they could; and look on their work as a big joke the while. They paint on their small barrows "Shamrock III." or "Meteor" or "Carbine," and hour after hour career wildly round corners, to collide with other famous yachts and racehorses. It is no use cleaning up for meals. You take them just as the coal-dust happens to have left you. It does your heart good to see the usually speckless naval officer sitting on the wardroom table munching sardines and coffee at midnight in sea-boots and a disreputable, battered Panama, as cheerfully grubby as a chimney-sweep, and actually blessing this New Zealand coal for dustless.

That sort of spectacle gives you more confidence in the British Navy than, perhaps, those who have not seen it can realise. It was proof positive, to the spectator, that there was never much wrong at heart. But it is just as well that the profession is moving with the times.



. . . . In line ahead, which is Navy for Indian file

CHAPTER XII

THE SEA-TRAINING

I HAD the story from Scrubbed 'Ammick. That was three years later, in London. I had just dodged between a motor-bus and a taxicab and was reaching harbour after a precarious crossing from Northumberland Avenue to Trafalgar Square. He was sauntering past the pedestal of one of Landseer's lions. I looked down the street, and he looked up, and—there was no mistaking that cheerful

rubicund phiz and those twinkling blue eyes.

It was four or five years before that we had last met, in the engine-room of the old flagship. In that huge complicated box of tricks, Scrubbed 'Ammick had occupied some very minor position—I forget precisely what, if indeed I ever knew. But the picture came back of this familiar figure amongst others going quietly about its work on a certain never-to-be-forgotten afternoon at Suva. And so one of the first of the many questions which I showered on him was as to the health and subsequent career of the flagship's engines. And in a certain hospitable corner, not a hundred miles from the place where we met, I learnt the sequel.

"You know we done a full-power trial sometime after you was aboard," Scrubbed 'Ammick began. "Did you

ever 'ear the old ship reached twenty-one knots on that run? I can't say as we any of us expected it—seemed to me to come as a mild surprise to the orficers. You know we 'ad two pretty 'ard years in that engine-room. Those engines 'adn't always been first-class. I daresay you remember it got into the papers out there . . ."

Scrubbed 'Ammick stopped and looked up. I nodded. For it was a really great feat that they had accomplished with the *Powerful*. It had been no secret in Australia that, at one time previously, the engines of His Majesty's flagship on the station had been in anything but a satisfactory condition. There had scarcely faded from memory a certain striking frontispiece in one of the local papers—a picture of a venerable relic, with about three and a half tottering funnels leaning, each at its particular angle, towards a couple of misshapen masts. Whatever the reason, there had certainly been an impression abroad that all was not right with the *Powerful's* internals.

Then it was that the Admiralty had chosen two men—two men against whom there was a red mark in those mysterious tablets which some recording angel at the Admiralty keeps in the holy of holies—and sent them out with a comprehensive instruction to put whatever was wrong in that engine-room right. From the moment that he boarded the ship, one of those officers practically disappeared. He dived straight into the engine-room and there for months he lived. Such meals as, at irregular intervals, he indulged in, were brought to him in his cabin, where he snatched them and then dived into the engine-room again. For two months the ward-room hardly saw him, barely knew him even by sight. But at the end of two months the flagship could sail when she was ordered to; could be trusted to steam for

The 'Orrible

a month, if necessary, without anything very serious occurring. During that commission they give this old engine-room such an overhaul as has rarely happened outside of a dockyard basin. Boiler after boiler was remade, nest after nest of tubes slung out and put back as good as new. They were still at work at it all the time that the writer spent aboard. They left the Powerful ten years younger than they found her.

So when Scrubbed 'Ammick hesitated, I indicated that I knew something of the history of the flagship's engines.

He picked up his story again.

"I tell you, I didn't half appreciate what they was, myself," he said, "until some time after I left 'er it come my luck, for a short commission, to be turned over into the 'Orrible. I was looking forward to feelin' quite at home in the 'Orrible. You see, 'cepting for their 'istory, her engines are exactly the same as what the Powerful's was. It felt quite friendly like when I first went into the engine-room aboard of her. But I tell you, I didn't know what we was in for.

"We weren't not 'ardly out of sight of land before the hose 'ad to be turned on to one of the main engines. You know that's a pretty strong order—the heating of a main bearing is the sort of thing that may 'appen once in a ten-thousand mile cruise; and when it does 'appen they take it pretty much to 'eart. They usually sit on its 'ead, and send someone for the senior engineer as quick as they can fetch 'im. Then they 'old a council of war, an' they may even 'ave to ask to ease down.

"But in this engine-room they 'ad to do away with that sort of ceremony before we'd been at sea a day. The orficers were goin' about all the time with a hose in one hand an' a bucket in the other. Sometimes we 'ad three hoses goin' at once. If the engineer of the

watch 'appened to be called elsewhere for the moment, the senior tiffy would turn the hose on any part that wanted it, without thinkin' twice. When the orficer returned 'e'd just report it to 'im; that is, 'e'd put 'is mouth to 'is ear an' shout as loud as his lungs 'ld let 'im: 'Hose—on—main—bearing—sir.' The orficer 'ld understand 'im all right, though I daresay 'e couldn't 'ear a word.

"For a boiler shop wasn't in it with that engine-room. I was more than 'alf deaf for three hours whenever I left it. You see, one thing, the shaft was out of the true; and, each revolution, it used to do a sort of elegant spiral all out of its own 'ead. An' as for the cross-head—well, you know that the ordinary cross-head with a play of thirteen-thousandths of an inch, up to twenty-five thousandths, makes most of the noise in an ordinary engine-room. The cross-head of one main engine in the 'Orrible had a play of one-eighth of an inch. The main bearings alongside of it 'ad heated so often that a curtain of white metal 'ad melted out of the lower side of them, an' remained there like a sort of frozen Niagara Falls.

"Some'ow or other, by keepin' the hoses goin' on the parts that needed it worst, we managed to get along all right—goin' ahead, that is. But the orficers 'ad a sort of understanding with the bridge that we shouldn't be asked to go astern without five minutes' notice bein' given. So when we come to 'Alifax, where the 'arbour was too narrow for a ship with our turning circle to get round properly, once she is inside, an' we should 'ave 'ad to juggle about with constantly reversing the engines, the captain come to the conclusion that Providence 'ad been too good to be tempted any further. 'E just turned 'er round outside, and we come into port stern first."

A Spoilt Masterpiece

Now that, in essentials, is the story; and it has this important moral for English people and Australians too—that a modern engine-room needs very tender handling. It was, possibly, merely the want of enthusiasm on some one of her previous commissions that had reduced the engines of the *Horrible* to a distinctly delicate condition. And the complicated items of machinery in your newest Dreadnoughts require even more tender handling than those of this earlier period.

A little more than a year ago there sailed, from a famous yard in the North, a battleship which was the very latest and newest and most terrible battleship that the shipbuilders of England had yet devised. As these great shipbuilding firms do, when they have to tempt trade in competition with the other builders of the world, they put into her an almost overwhelming amount of fighting-power in proportion to her size. Like many private designers' ships, she was of the sort that is almost too good to be true. On the same displacement as the Admiralty's ships she carried more guns and more armour and could steam faster-in short, the official description of herself and her great sister ship read like the automobile advertisements at the end of an American magazine; made you feel, after reading them, that if ever you wanted a Dreadnought, that particular article in the catalogue was exactly the one for you to buy.

This masterpiece was in due time handed over, as her sister had been before her, to the foreign government for which she had been built. A number of dark-eyed, trim-bearded southern officers took possession of the well-equipped wardroom. A crew of small swarthy southern seamen, with budding moustaches and high cheek-bones, lounged over the rail with cigarettes between their teeth, and spat tobacco-juice to punctuate

an excited staccato conversation. They belong to a fiery little race, as intensely gallant as their proud Spanish The average citizen in that part of the ancestors. globe may have to face death any day in the ordinary day's work. During general elections in that country, the chances are that you will have to pass through the firing-line on your way to office in the morning.

But a fearless gallantry is no qualification for owning Dreadnoughts. Within twelve months those two great sister ships had lost 25 per cent. of their value. There are engineer commanders who speak of them with tears in their eyes. To think that all you precious machinery, the fruit of years of tender labour and the best workmanship in the whole world, should come by a fate like that!

It is no secret that even the British Admiralty has of late been almost at its wits' ends to provide crews fit to be entrusted with those constant contingents of new ships which are always being added to the Navy-the nine Super-Dreadnoughts, for example, which are due to enter it within the current twelve months. It is not that additional men are difficult to get. The popularity of the Navy is such that there is no difficulty in enlisting as many boys as are wanted in any year. To-day, for everyone taken there are many turned away. But it is not boys that are wanted, but the highly-skilled ratings into whom they will develop after six or seven years of patient training. The work of keeping a Super-Dreadnought in the condition in which she ought to be kept needs a higher proportion of petty-officers and skilled ratings than ever. To provide the men who are needed to-day, it would have been necessary to recruit them seven years ago. The boys who are now entering are those who will be needed for ships of 1920-ships which

Skilled Men

will not even be planned or thought of for four years to come.

At the same time foreign admiralties must be at least as hard driven to provide skilled men as the British Admiralty is. After all, in the British Navy the majority of the men are long-service men, whereas the German Navy is for the most part a short-service Navy. largest contingent of German seamen serves only for three years, although the section from which most of the petty officers eventually come is one which is enlisted as boys for a service of nine years. In the British Navy the boy who enters at 15\frac{3}{2} engages to serve twelve years after reaching the age of 18. And although it is true that a seaman may now enlist for five years, after which he goes into the Fleet Reserve, yet the great majority choose the longer service; the normal service for seamen and marines in the Royal Navy is twelve years, and there is no sign whatever that this will change.

The Germans believe that the training of their seamen is so much more perfect than that of all other Navies, that German Fleets, inferior in numbers, should be able to beat a much more numerous enemy. And, indeed, I never found a British naval officer who was in the least inclined to belittle the German training. will ever come to the test—whether that battle for which both Navies have been forced these many years to prepare, is inevitable - none can say. Plenty, who will never fight it, are doing their best to make it so. Those who have for years busied themselves in "sooling" this Empire and Germany to the verge of war think-if ever they do think-that it will go easy for the Empire. Those who will fight it, officers and men too, are not in the least given over to that very foolish mistake. The Navy knows that the German is a magnificent sailor in magni-

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ficent ships. The stress of the training which is crowded into that three years' service is known to be very great. It was noticed, rightly or wrongly, by one of the British service journals, that, of all the ships present at the great naval review at Spithead in 1911, the German cruiser Von der Tann was the only one on which the full regular routine of daily work went on without any modification or intermission whatsoever during the Indeed, the strain upon the men, and the increasing frequency of breakdowns, is known to have reached almost the magnitude of a problem for the German authorities. It is not so long ago that a very distinguished Prussian admiral, addressing the recruits of the year, admitted that the stress of sea-training did throw a burden upon the nerves of the fleet. But that burden was inevitable under modern conditions, and one which, for the sake of the Fatherland, he was sure they would be only too willing to bear.

Breakdowns are not unknown in the British Navy, also; just as they are a regular incident in every modern profession. But one would say that the nerves of British seamen are about as reliable as the nerves of any body of men of any calling and in any country. For my part, I have only seen British seamen look really excited once.

It was during the cruise of the *Powerful*, when the old flagship reached at length the New Zealand coast, and ducked in under the great Barrier Island, past Rangitoto into that miniature Sydney known as Auckland.

When we moored, late in the afternoon, off a bay that is a mixture of Circular Quay and Dawes' Point in Sydney Harbour, it may have looked a very placid operation from the outside. It generally does. All that

Really Excited

you notice is the anchor dropping for no apparent reason off the side, a huge feather of foam, the rattle of a chain through the hawse-pipe, a flag coming down from the peak and going up at the stern. But if you look at it from just inside the ship's wall by the hawse-pipe, the scene is more like a dog-fight. All you know there is that the port cable runs suddenly through the room with a noise like the shunting of railway trucks, only a thousand times more deafening; the air is thick with a cloud of faded red rust; a moment later the starboard cable starts too, doubles the uproar, running as simply as cotton off a reel. Only one of the links has often smashed a man's leg by merely touching it. Gradually the shattering clamour ends; and then painfully they begin to tug the starboard cable back, not through its own hawse-pipe, but around the bows and through the port-pipe; so that they may bring the two cables together; tie them by a swivel; and fix the ship to swing round the fork of an inverted Y rather than sweep at the full length of one cable all round the fairway, knocking holes in half the harbour traffic in the process.

You must have a swivel at the fork, or the cables will kink round one another every time the ship swings a circle. Many merchant ships let it kink so, and have to be towed around the reverse way before they can up-anchor again. But the King's ships may have to start any moment. So they swivel amidst uproar undiluted. All you can see through the dust-cloud is the cable coming slowly home, bringing with it into the flat such portion of the bottom of the harbour as the hose cannot remove. (That, by the by, is the water which you see running from the nose of any ship when she up-anchors.) A dozen men are struggling with their

heads on the ground and their legs in the air, with one officer running over their backs, and the head of another glaring down the gangway from the deck. Everyone is shouting at once. It only differs from a street row in this, that everybody knows exactly what to do, and how to do it.

For that is the very acme and perfection of their training in the Old Navy. The question of discipline is a most interesting one-what one saw of British and of American discipline was of the utmost significance to an Australian, as will be explained later. It must suffice here to say that the British seaman is trained to such a refinement of discipline that he can almost do without it. Of the two forces on board ship, it is the marines that are strictly disciplined. The seamen have been handled more or less from boyhood with such an effect that the stiff discipline of the Army is unnecessary for them; because a man who thoroughly knows his work does not need to be a machine. They can afford to let him talk and joke a little in his drill and stand and work more at ease than a soldier. The marines. who are men before they enter, are easier and quicker to get; and they are not supposed to be turned into the perfect, intelligent instrument that a sailor is. Army discipline makes an utter change in a man in a short time. It is notorious, for instance, that a British soldier picked from the slums a year before is a safe person for any lady to look to who needs someone to take her part in the street. So the marine is disciplined like a soldier.

If that is the theory, all one can say is that the marine is a surprisingly excellent result. He is not quite as handy as the seaman, and perhaps he does not read or learn as much. But he has all the intelligent,

A Much-travelled Man

ready-witted philosophy of the sailor, and more physique. He is a long-service, much-travelled man.

I can see now the picture of my friend Mr Stubbs, in his place on the *Powerful's* quarter-deck, one balmy evening, when the soft breeze was bringing across the water the fragrant wood smoke from some hut of Fijian palm leaves. He was looking over the rail at the Suva

lights dancing in the back-water of the Bay.

"Ah, but you should see Genoa, sir," he said pensively as I came up, "with the little lights twinkling high up on the hills above you. That's a beautiful harbour to lay in at night, and no mistake. Them Italians is a bit sudden, though, and can't say as the Spaniards is much better. The Germans is the decentest lot ever I struck-nice clean fellers what a man can understand. Them French matlows, I brought up again' them, too. But what can you do with a feller that can't speak your language?" (One would have said "speak theirs"only that is an argument the English-speaking race never could understand.) "We entertained them in Portsmouth last year over the Ont-ont Cordial. seemed to enjoy theirselves. At least we got them to drink beer, and that's the chief thing, I s'pose."

"The Yanks are alright, only they are such beggars to swank"—by which, be it explained, Mr Stubbs would say that American seamen are much given to exaggeration. "'Blow your god darn Navy sky high.' But they

couldn't, sir," he added modestly.

"They think their Navy's a long way out of sight of others. But I dessay we thinks ours best, too, and they thinks it's us that's swankin'."

Mr Stubbs was careful to avoid saying so. But I rather suspect he was just a little piqued at the fuss of expectation over the American Fleet, which was to arrive

in a day or two. "This fleet of theirs that's comin'," he said, "it ain't their fleet; it's their 'ole Navy, sir. An' yet I see a fleet at Spit'ead where there was 180 ships, and that was only part of ours. A civilian, 'e wrote to the papers that 68 of them were unfit for action. 'E gave what were wrong with each of 'em, too, and got it

pretty well right."

One's own impression of the Americans and their methods of discipline compared with the British oneswhich I gathered was more favourable than Mr Stubbs's -shall be given in its due place. The point here is, that a man who can talk as Mr Stubbs did, and who has seen as much as Mr Stubbs had, and appreciated it, cannot be an unintelligent man. And indeed everyone has something good to say of the "soldiers." They are trained for twelve years. They are the biggest men in Army or Navy. In these days, seeing there is no work on ropes or sails, the Navy is ordered to drill physically, and run paper-chases round the ship to keep down the size of its collective waist. The marine may be a trifle heavy about the hocks.—but he won the prize for physical drill so often at the Military Tournament in London, that it was reduced to an absurdity and wiped off the programme.



. . . . The Dreadnought has no medium guns

CHAPTER XIII

THE TEST

If one were asked what thing more than any other had impressed one during that six weeks' cruise on the old flagship, there would be no hesitation about the answer. It was this constant preparation at more or less high tension for a dimly-distant battle—a battle which, everyone knew, was most unlikely to arrive during the life of this ship; which, as a matter of fact, has not yet arrived, and, if statesmen and newspapers keep their heads, may never arrive at all during our lifetimes at any rate. With the big fleets that tension is several times higher, because ship is pitted against ship in an eternal game. The men, on the whole, enjoy the fever of that game, in spite of its strenuousness. You know it, because they have told you as much outright.

One is bound to confess that it has not always been so. It is not long that the Navy has lived on tenter-hooks. But in its present temper it will be so more and more every day. The good British citizen may have doubted his Parliament and his glorious Constitution, his Army, and even his Church. But to doubt the Navy was, and is, sacrilege. It is no use shirking the fact that there have been times when it was just as well no

foreigner undeceived him. There was a time, not fifteen years since, when appearances were a great deal more sought after in the Navy than they are now. The public does not know much about how a ship is to win the next sea fight; but it does know when a ship looks pretty and painted and neat, and when it sees such a one it claps its hands. About the public a commander may not care over-much, although possibly he cares more than he would like to own. But he certainly does care when the commanders of other ships grow green with envy; and that reward is to be had for the trouble of winning it any day.

There is another reward, which is only to be had by long years of unpretentious work—which may probably never be had at all. At least it is years and years ahead in the precarious future, when the great grey war-dog moves fast through a fog of its own making, with its teeth bared and its lips curled back, and the dregs of the last explosion oozing from its reeking gun-muzzles. It may be that a ship will never even have a chance of proving what it can do in that awful trial; or, if it does,

that not even the rest of the fleet, much less the crowd

on shore, will ever know of it.

But that sea fight after all is the reward which the ship is there to win. And some years ago there were those in authority who determined that the Navy should set scientifically preparing to win sea fights, and not to look pretty; and should practise everything that pertained or related to or in any distant way bore upon what a sea fight was likely to be—and that at high pressure, night and day, and whether anyone that slaved his eyes out in the practice was or was not ever likely to see, hear, or smell even so much as the outside of a sea fight before he died. And by way of making the

Paint or Efficiency

true reward for this preparation more present, that Admiralty ordered that confidential reports should be sent to it of the work of each young officer; and it rewards and punishes them without ceremony according as that work is good or bad.

The consequence is that the ships of 1913 are not painted more pretty than a new petticoat. They do not glitter and shine and sparkle in quite the same way as fifteen years before. But it is the sober truth-which few outside of the Navy dream of, and no one inside of it thinks of denying—that for doing the work of a sea fight the Navy of 1913 as far excels that of 1898 as an engineer excels a rockchopper. The details of it—how half the ships in the Navy, when they shoot at a thing, hit it so often as was thought quite impossible for any ship a few years back; how they can stow their coal and ammunition, one bidding against another, in a time that was undreamed of; how they have spread and fastened their awning in the Channel Fleet in ten seconds, and cleared the ship for action, or had out their nets, or moored their ships, where a year or two back they would have been looking round to begin; how, in short, they live with the sea fight always in mind, where before they thought only of the ship,—these are bald, plain facts, at which the public is not startled simply because it does not know them.

It is only twice, or it may be three times, in this very modern history that there has been a chance of seeing what such a constant preparing would mean when the real test came. The British Navy has not fought a battle for a hundred years. It is about the only modern Navy which has never been at war. That is because no one has cared to go to war with it. It is out and away the best example of keeping at peace by preparing for war.

But there have been just one or two occasions in recent times when the peace of Britain and some other great nation trembled in the balance. Curiously enough the other nation was never the same nation twice. Once it was France. Once it was Russia. Once it was Germany. How close Britain came to war, few Englishmen realised except those that were at the very brunt of the trouble -along the very edge of the nation's defences, the friction-point, as it were; who saw with their eyes things which the nation heard only long afterwards, scrap by scrap, in the newspapers. Just once or twice at such times, in the hours when it was not known what sort of a struggle the week might not bring forth, the curtain has been raised. And it has been given to a few men to judge, by a hint here and there, what will be the fitness of this modern British Navy when the test does come.

One finds it hard to believe that Germany is England's real opponent on the sea. One cannot help believing that the balance of power will shift some day-will settle further eastwards - and bring England automatically on to Germany's side. And then perchance it will shift still further, as the great sleepy China awakes. . . . But be that as it may, everyone now knows that, as late as 1911, England and Germany did come as near to war as they could safely go; so near that a single attack of nerves, a single unsteady finger almost, might have plunged all Europe into war. In the height of that tension, when both fleets were within a few hours of one another; when neither side quite knew what the other was preparing, and both sides were—as it appeared afterwards-groundlessly suspicious; in the height of that crisis the German destroyers disappeared from view. For a night and a day the eyes and ears of the British

Tension

fleet lost them; for a night and a day the first British destroyer flotilla searched for them high and low across the seas, performing in real earnest what they had practised again and again in manœuvres, until the comforting tidings arrived that the German destroyers had been placed, and the uncertainty was over. What would have happened had a German destroyer appeared, during those hours, off the Scottish harbours where part of the Home Fleet was lying can only be conjectured; probably exactly the same thing that would have occurred to any British destroyer which chose that moment to pay a surprise visit to the German High Seas Fleet. There are times when no fleet of battleships can afford to take chances; and it is only likely, that, as stated by two Members of Parliament afterwards, the Home Fleet had orders, during those hours of uncertainty. to fire on any foreign torpedo craft approaching them. The incident was twisted into a deliberate British plan to raid the peaceful German Fleet. But one has very little doubt at this particular moment the precautions adopted by the German Fleet were every bit as thoroughgoing as those of the Home Fleet; and that the only difference was that in Germany there were no politicians foolish or unpatriotic enough to talk about it afterwards.

The more intimate details of that particular crisis are too recent to be common property; and perhaps their full history will never be written by either side. But a few years before there occurred a sharp exchange of compliments with another Power, of which several interesting stories are told.

It was some nine years since that a mail-steamer on which the writer happened to sail turned in to Gibraltar and found the eight battleships of the Channel Fleet,

under Lord Charles Beresford, lying alongside the mole. In the offing was a single grey cruiser, with steam up; like a cat on the watch night and day; just keeping place against the current. Only a fortnight before, a single half-hour's foolish work upon the waters had brought England and another Power suddenly into holts. The rest of the story is common property. But I never heard it until many years after.

At that time, to a British Squadron in the Gulf of Venice there had come a hurried wire from London. The ships were to proceed to Malta with all speed, fill up with coal and ammunition, and sail wherever ordered. In four days from then the cruisers of that squadron were out of the Straits, and steaming up the shores of a different sea altogether. The newspapers never told us how it was the squadron managed to reach that point within that time. But those who were there say they never saw men work as those crews worked through a night and a few hours of day in Malta. They were the same crews that had coaled and ammunitioned ship a dozen times before, sweating in practice against the records of other ships. But this time, they say, when minutes might be needed in earnest, they fairly flung themselves on the coal-sacks, worked as their officers had not imagined men could work; like devils, they said, not men.

Four days later, when the four cruisers steamed into a certain harbour in the Atlantic, they were told their bird had flown. A foreign fleet had called there. It had sailed the day before. The cruisers turned immediately and swept down the ocean full speed on a long curve of search. That night as they hurried through the darkness, every deck cleared for action, every gun crew sleeping by its gun, a blinding, shimmering eye was

The Shadow

suddenly turned on them out of the blackness. They had come right on top of their quarry.

After that they took station, one at each corner of the other fleet; and in this position, with teeth bared and every hair bristling, shepherded it down the coast until it was out of harm's way. Nothing came of it all. The battleships we saw along the mole never got the word for which they waited. And the strange fleet went on its way to come by a belated fate at other hands, and in quite other waters.

No, the guns of our modern British ships and all the grim apparatus of war, though they have been brought up to the scratch once or twice, have never yet seen that shadowy sea fight which is the end of it all. For which Providence, which in this helps those who for years and years have been at real pains to help themselves, may be thanked. For all that, its shadow hangs continuously over the Old Navy, year in year out.

I well remember one night when the flagship lay under a beautiful starlit sky in a beautiful tropical harbour, the water smooth, deep, restful, shining as black satin, the lights of a small town rather over a mile away, most of the wardroom on shore, and the remainder amusing itself getting bait for its fishing by shooting with a revolver at such small fry as came into the green circle under the gangway light. One could not help thinking of the day when these same grey sides will be rushing in upon a hunt less innocent. There are times on such a ship as this when one comes as it were round a corner suddenly face to face with the grim purpose for which it is all meant. That same day, after the call to quarters had sounded, I had caught sight of a man in an out-of-the-way corner of the ship waiting there alone, rather bored, until the watertight doors were

opened and he could go on deck again. There was his place when the real day came, down there by himself, with the steel doors sealed at his side, and the trap in the armoured deck, through which he had come, slammed and fastened above his head. All that he would know of the fight would be what he could guess from the roar and the shudder, from strange thrills and unaccustomed hammerings above.

And if the end of it all came, and the deck canted steeper and steeper, was he there like a rat in a trap? I asked him afterwards and he took me to a small round cover on the poop, set like a coal-trap in a London pavement, just behind the big gun. It covered the narrow tube, leading somewhere down into the dark interior, through which shells are hoisted to the gun's crew. "If it ever comes to abandon ship," he said, "when the call is sounded, the gun's crew lets a ladder down that hoist for me to climb up." And if by that time the tube is all battered and buckled and red hot in parts and stifling with smoke, or the gun's crew knocked stupid—well, he would have to invent some other way, just like the men down in the engine-room and dozens of others.

It came upon one as a shock then, for the first time, that this vague, speculative sea fight, which we amuse ourselves with imagining, is a living, personal question for these men. Every man knows to three-quarters of an inch the precise square of deck upon which he would be standing—upon which he may be standing a month hence. And each has his own little set of problems which cannot help suggesting themselves at those odd lonely times when we do think of unpleasant things. Perhaps Tom Smith's station is in one of the fire control platforms, which they used to call the "tops"—those little round roof gardens that sprout at intervals up the

Who Hits First

fat masts of big warships. The tops stood well during a great battle in this ocean of ours some years since. But a mast is sure to go some day. When it does lurch tenderly against the funnel, with the fiery tongues and fumes from an inferno beneath roaring up it; when it totters away and crashes over the side into the sea—a steel mast, mind you, not one to float—what will Thomas do? He has thought it all out for himself, lying on his bunk some sleepless night, or on the bridge in the quiet of the middle watch. He has made up his mind what he will do. He has a plan for swarming up the nearest stay on to the deck—a rather pathetic plan really, for there's not one chance in a thousand that he could carry it out. But—well, even the most desperate of plans is some sort of a comfort.

It is all a great guess, for two modern battle fleets have never met on an equality yet. Everyone knows that it will begin at a little, if anything, under 10,000 vards in fine weather, and that he who hits first—not necessarily he who shoots first—wins. Who hits first depends upon who first gets the range. So, as soon as the grey, smoking toys on the horizon, whose wireless has been heard on board all the morning getting closer and closer, come at last well in view, there will be a sort of suppressed fever among the little bunches of heads in the tops. which have to work out their distance. All the while, around the lean barrels below and in the gun-hoods, will be groups of men, shivering with the excitement of waiting—that cold, sickening excitement that douches one before a football match like an icy bath. A wait that drags on, aches positively-and then the brass speakingtube gurgles and squeaks like a phonograph. A clean bell rings. A dial hand moves. A roar, a shudder—and the first shot is on its way.

It is rather a frightening shudder, they say, that the ship gives when her biggest guns are fired, more frightening than the noise of them. The wrench to the hull must be enormous. Her two turret guns, fired right ahead, nearly stopped the Duncan dead. Dreadnought and others of her kind have fired all their ten monsters at once and been unhurt. a broadside from all a ship's big guns, fired simultaneously, or a salvo from half of them, is said to be a recognised part of the scheme of a modern battle; the effect on the ship that is hit is something still untested in modern warfare. The effect on the ship that makes a habit of firing in this way must also be interesting. There was a Russian battleship once that went out from Sebastopol into the Black Sea to fire her guns. She never came back. But then it leaked out afterwards that half of her bolts were of putty, and you could run your knife down the seams in her decks before ever she went to sea. What proportion of the money that was voted for rivets was keeping full certain noble winecellars is not exactly known.

The first shot is on its way. It is high time for the captain to get to his conning-tower crouched there low under the forward bridge. A ship goes into fire without a soul on her bridge; her forehead bare, as it were. There must be a strange, deserted look about her. She will be to all appearance an empty model. There will be none of the familiar little notches that you see against the sky above the handrail of the upper works; not a hand or a head to be seen; only bare sides and decks and platforms and some strange internal power guiding and swinging the ship. It has been proved that the bridge is no place for anyone in a modern fight. Even the conning-tower, a cramped, round-shaped coop with

The Real Thing

steel walls a foot thick, tucked snugly back into the shadow of the bridge, is hardly fit place for the brain of the ship. The conning-tower comes in for a most awful hail of shell, nowadays; especially in the leading ship. You must take every mean advantage that offers in a modern war. So the Admiral's ship comes in for a most terrible punishment—whether she wins or loses—on the offchance of killing the Admiral. When the Japanese fought the Russians at Tsushima, in the Pacific Ocean, it was the two ships at the head of the Russian Squadrons—the flagships—that were first crumpled up by gun-fire. When they were gone, the Japanese deliberately smashed in the two which took their place. It is known that the concentrated fire received on each of those ships in turn was dreadful beyond imagination.

So on this particular day the bridge is clear. If the Admiral were aboard, Heaven knows where he had better go-perhaps on the lee side of the tower. he is on the flagship ahead. The fire control is already at its station overlooking a huge gaping, fuming gulf, the mouth of the fore funnel. The navigator is with the captain. The big guns are roaring continuously now, our own and others. Presently the secondary guns begin to bark, and several great invisible things crash somewhere amidships. You hardly notice it, for you are working like a lunatic; but a faint smell of burning wood oozes through into the casemates. It cannot be from the cabins, for all the woodwork, bunks, drawers, partitions, boxes, tables were chopped away with axes and thrown overboard last night; and the boats-God help you if she sinks-were left out on the ocean yesterday. Probably it is a piece of ripped deck. You realise that the ship is getting a warm time of it behind your back there. The fore funnel must have crashed

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into the sea, leaving a roaring crater in the deck; for dense coal smoke and flame come rolling, rushing flat along the deck, curling and licking into corners, here and there catching a man and shrivelling him like a scorched ant. The after-funnel is making life unlivable in the platforms on the masts with its rich fumes. deck is on fire in at least six places, and the water-mains are mostly cut. You can hear the swish of water on the lower deck, either from the hoses or through some shot-The crew of the aftermost six-inch gun are walking foolishly around their casemate because the big guns fired at an angle past them, and they do not yet quite realise where they are. There are the forms of men laid along the sides and in the corners of the casemates, because there is not a ghost of a chance of taking them elsewhere. The surgeons are in their proper places in action—and as cruel a place as anv—as deep down in the ship as may be, out of harm's way, waiting-waiting -waiting that they may be there when their work comes-afterwards; with a cool brain and steady hand. Not a wound may they probe or an artery bind during the fight itself.

You are whirling round corners now at seventeen knots, just 250 yards behind the flagship. There is an officer keeping distance in the conning-tower. It is his part to stay, with his sextant in hand, rigidly correcting that waving, seething interval, without time to worry about anything else. He can do it, because he has done it on foggy nights in the Atlantic, and a thousand other days and nights besides. What chance would the man have in that hour who had not practised, practised, practised till it was second nature? Your practice is being tested with a vengeance.

Ten minutes later the ship seems to wander a little.

Somebody whose business it is guesses what has happened —and finds no one standing in the conning-tower at all. Even a box with twelve-inch steel walls cannot make sure against the hail that is poured on that particular The chance of one shell, small or big, going home is too great altogether. That very thing happened, only a few years ago, at Port Arthur. Once, and once only, in the Russo-Japanese War, so many naval officers believe, the Russians had made up their mind to use their fleet in Port Arthur as it should have been used, with some small chance of success. They steamed out straight enough, in line ahead, towards the enemy. The fighting began—and then those following her saw the leading ship turning out of the line, circling slowly round, and turning in upon the line again. The others followed her, wondering. Those in her own gun turrets and casemates too were puzzled at these strange tactics; until somebody grew suspicious, and went forward to the conning-tower to find its inmates every one stretched on the floor, and the wheel put over by some last movement of the man who had held it.

It was too late then. The battle had been lost. But such an accident does not stop the routine of the ship for an instant. From the moment when the command falls from one it is taken up automatically by another, somewhere in the ship. There is an intricate scheme, by which everyone knows who takes charge if others go; if the tops carry over the side, if those in the conning-tower are "washed out," if the Admiral is hit, or a casemate is cleared. They are on the look-out for such incidents nowadays. The conning-tower is quickly filled with another complement, rather more anxious, perhaps, but entirely adequate.

All this time deep in the ship there go quietly about

their work the men on whom the ship depends for her life; fighting Trafalgar, with an oil-can in one hand and a piece of waste in the other; giving a knot or two here or there, just as it is asked for from above; oiling, scraping, rigging, patching—anything to keep the ship a normal ship, her head cool and her limbs free.

Up to this moment the vessel has been intent upon the movements of the distant line of angry insects which races parallel to her, and upon the flagship ahead and the long line of her own squadron which swings like a tail behind her. As for the flagship, she leads her line this way and that, to cross the enemy's T or counter his moves, her whole consciousness fastened upon the game which is being played on that waving, heaving, grey chessboard. And then there come two or three Happenings; and they change the course of things.

One cannot do better than tell of those Happenings in the words of a man who actually saw them arrive; and took notes of what he saw; and, by a chance, survived to give those notes to the world. The one great naval battle of modern times was fought in our ocean; not in European or Atlantic waters at all, but near the entrance of certain fogbound straits not so many weeks' sail from Australia. A staff officer of the beaten side, Captain Semenoff, has left of it the most vivid account that was ever given of any sea fight, in "The Battle of Tsushima." It has been translated into English by Captain Lindsay, and was published by Mr John Murray in 1908.

Captain Semenoff watched, from the deck of Rozhdestvensky's flagship the Knyaz Suvoroff, the opening of fire on the Japanese Fleet.

"At 1.49 p.m.," he writes, "... the Suvoroff fired the first shot at a range of 6400 yards, and the guns

Semenoff's Narrative

of the whole fleet thundered forth. I watched closely through my glasses. The shots which went over, and those which fell short, were all close, but the most interesting, *i.e.* the hits could not be seen. Our shells on bursting emitted scarcely any smoke, and the fuses were adjusted to burst inside after penetrating the target. A hit could only be detected when something fell—and nothing fell!

"The first shells flew over us. At this range some of the long ones turned a complete somersault, and could clearly be seen with the naked eye, curving like so many sticks thrown in the air. They flew over us making a sort of wail different to the ordinary roar. . . . But what struck me most was that these 'portmanteaus,' curving awkwardly head over heels through the air and falling anyhow on the water, exploded the moment they touched its surface. This had never happened before.

"After them came others short of us—nearer and nearer. Splinters whistled through the air, jingled against the side and superstructure. Then, quite close and abreast the foremost funnel, rose a gigantic pillar of smoke, water, and flame. I saw stretchers being carried along the fore-bridge. . . .

"There was a tremendous noise behind and below me on the port quarter. Smoke and tongues of fire leapt out of the officers' gangway. . . . The men at the firemains stood as if mesmerised, gazing at the smoke and flames, not understanding, apparently, what was happening. . . . I was taking out my watch and pocket-book to make a note of the first fire, when something suddenly struck me in the waist, and something large and soft, though heavy, hit me in the back, lifting me up and hurling me on to the deck. When I again got up, my

notebook and watch were in my hands, as before. My watch was going; but the second hand was slightly bent and the glass had disappeared. Stupefied by the blow, and not myself, I began carefully to hunt for it on the deck, and found it unbroken. Picking it up, I fitted it into my watch—and, only then realising that I had been occupied with something of no importance, I looked round. . . .

"The fire had been extinguished, and, save for two or three dead bodies on which water was pouring from the torn hoses, no one was to be seen. . . . I looked in the direction where the flag officers, with a party of poop signalmen, should have been. The shell had passed through the deck-house, bursting inside. Of the ten or twelve signalmen, some seemed to be standing by the starboard six-inch turret, others seemed to be lying in a huddled group. Inside was a pile of something, and on the top lay an officer's telescope."

Still those terrible portmanteaus were falling. "They burst as soon as they touched anything—handrails, funnel guys, topping lifts of the boats' derricks. . . . The steel plates and superstructure on the upper deck were torn to pieces, . . . iron ladders were crumpled up into rings, and guns were literally hurled from their

mountings."

The scuppers had long since become blocked and the water from the torn hoses was swishing ankle deep about the decks. This was fortunate, because they could simply throw any burning débris into this pool, where it quenched itself. In the temporary dressing station, which had been wrecked by the first shell, the candles were still peacefully burning in front of the ship's shrine.

So far the ship had been living in the battle, leading

The Death Wound

her own line and trying to head the enemy's turning movement. "I crossed over to the port side," writes Semenoff, "to have a look at the enemy's fleet. It was all there, just the same—no fires—no heeling over—no fallen bridges, as if it had been at drill instead of fighting."

The Japanese ships were trying to head them again. The great battleship *Mikasa* was coming closer and closer to their course. Just then a shell struck the after-turret. Those on other ships afterwards said that the huge armoured shield of the turret was seen to be lifted right up above the bridges and then fall crumpled back upon the poop. "Almost simultaneously there resounded above us a rumbling noise accompanied by the sharp clank of falling iron. Something large and heavy fell with a crash; the ship's boats on the spar deck were smashed to bits. Burning *débris* fell all round us, and we were enveloped in an impenetrable smoke." It was the fore funnel which had fallen.

That was the moment, exactly forty minutes after the first shot was fired, when the ship, this living, moving, breathing, palpitating ship, which had led her line into battle so proudly less than an hour before, received her deadly wound; and first realised the bitter disillusionment of defeat. As happens with those that are mortally wounded, her consciousness was, from that time onward, concentrated upon herself. The battle passed from her. She could hear it—but she was not of it. She was at times enveloped in the smoke of it; but it was an outside affair, not hers. Her duty was to get rid of the wounded Admiral, to tranship him into a torpedo-boat; to stop her own gaping wounds and stem her life's blood if she could. It was a matter of ingenuity to find your way from some parts of the

ship to some others. The ordinary passages were so tangled and blocked and twisted that you had to think of some other circuitous route through the decks below,

and try that.

The ship's steering gear had been wrecked, and she was wandering in a half-circle. Now and again, when they looked up, there, opposite them, was some momentary picture of the fight—a strange distant unreal tableau it must have seemed to them. Of the first such picture Semenoff says: "Not far to starboard our fleet was steaming past, bearing on an opposite course: The Navarin-which ought to have been astern-was now coming up to us, going at full speed and cutting through a big breaker." The guns of the old ship—those that could be worked-would still growl occasionally when the opportunity offered; and the fight would never fail to turn part of its attention upon her as it passed. About 5.30 the unconscious Admiral and his staff were transferred to a torpedo-boat and steamed off to where they could see the disappearing hulls of those Russian ships that still survived. The flagship's great colleague, the Alexander, had just sunk. "In the distance, still further off, could dimly be made out in the dusk, which was now rapidly creeping on, the silhouettes of the Japanese ships—steaming parallel to us. The flashes of their guns twinkled incessantly along the line."

The last picture they had of the Suvoroff, as the torpedo-boat had pushed off with the Admiral, was of a crippled mass, enveloped in smoke and flames. "Her mainmast was cut in half. Her foremast and both funnels had been completely carried away, while her high bridges and galleries had been rent in pieces, and, instead of them, shapeless piles of distorted iron were heaped upon the deck. She had a heavy list to port,

Lion and Jackals

and, in consequence of it, we could see the hull under the water-line on her starboard side reddening the surface of the water, while great tongues of fire were leaping out of numerous rents." One gallant, ever cheery officer was waving his cap, and shouting "Hurrah!" The crew cheered also. Their Admiral was safe.

That is the way a great modern flagship, in this ocean of ours, came to her test; and passed it—who shall say without everlasting honour? And it may yet go that way with us, or with others in the wisdom of Providence.

So the battle goes, one way or the other; and a thousand years of history is made in a day. That evening left far out on the old grey sea is a sick warship-weary to death, heavy-eyed; with hand to heart, as it were, labouring heavily on its side. fight has gone by long since, hull down, and over the horizon. The Admiral left her, perforce, to keep pace with it. She has laboured so far alone, desperately straining to reach a distant harbour; and all alive for a peril that she fears, but cannot see—the awful, swift jackals of the sea wandering through the night. Someone raises an alarm, and two bright blue pencils of light stream from her and wander nervously round the sea like the eyes of a frightened snail. They will see her now, for sure, even over the horizon. Ten minutes. twenty minutes - what was that white thing that slipped into the beams and suddenly winced in the light? Flash, flash, flash—she has fight in her still. the monster. But it is too late now, for they are there, a dozen of them, in at the death, as the hounds worry a dying stag.

Seeing how hard, how desperately hard, it is to find

anything with a searchlight; and how much harder it will be to find everything, and to hit it when found; and seeing that if the water is smooth it takes a destroyer just ten minutes to reach you from the horizon-it does seem that at such times the chances are very strongly with the destroyer. The battleship's best friend has so far generally been that mistiming and losing, and general muddling up of oneself and others, that is usually incidental to a night attack. But with it all they do get where they want-sometimes. With rivals as skilled in this game as are the Germans, it is unsafe to count on miscarriage. The most attractive plan is to set a thief to catch a thief, and use torpedo-boat destrovers to destroy torpedoboats. One must hope that when the sun goes down on a brave fight, and a stricken ship is alone upon the seas, there may be one or two faithful watch-dogs to spare to keep their master from those jackals that prowl by night.

In the case of the Knyaz Suvoroff, there was no such friend at hand to witness her dying moments. The last her own side ever saw of her was as that torpedoboat rolled away in the growing shades, with you merry, great-hearted lieutenant waving his cap in his hand, and the brave crew looking down through the battered gun ports to cheer the unconscious Admiral and their last departing consort. All that is known of her is from a

Japanese report.

"In the dusk," runs this account, "when our cruisers were driving the enemy northwards, they came upon the Suvoroff alone, at some distance from the fight, heeling over badly and enveloped in flames and smoke. The division of torpedo-boats was at once sent to attack her. Although much burned and still on fire—

The End

although she had been subjected to so many attacks, having been fired at by all the fleet (in the full sense of the word)—although she had only one serviceable gun—she still opened fire, showing her determination to defend herself to the last moment of her existence—so long, in fact, as she remained above water. At length, about 7 p.m., after our torpedo-boats had twice attacked her, she went to the bottom."

And thus ended a great story—a tale which, just as it is told at full length by that onlooker in his book, should go down to posterity as one of the most engrossing and moving stories of heroism upon the seas that has ever been written.

The pity of it, that it did thus end. The pity of it, that there is no ship upon every sea—no fair, white lady of the Red Cross to stand by a stricken crew at a time like that. Their boats are over the horizon where they left them yesterday; every stick of wood is on the waters; and what hope is there from an iron hull? They are quite ready to sink. But their ship is dead—what more can be wanted? They have fought a great fight to the end of the day, and—ought not every fleet to take with it one or two such sisters of mercy, to nurse it in peace and succour it in war? Our Navy, with all its fleets, has one hospital ship, given to it by American ladies. The American Government has another—would not accept the free gift, but bought the whole ship for a dollar. Most Navies have none.

So the great day comes and goes. It is all a huge guess; and, on the whole, by the experience of the Japanese War, the British seem to have guessed pretty right. By their latest guess they built the *Dreadnought*. And though many doubt whether it is wise to build ships so big, with guns all very large or very small, and

nothing between, that has been altered, as far, probably, as it is wise to alter it, in others. No one claims that the Navy is perfect. Its ships must be a compromise, after all. They must be able to go anywhere for any time, in any weather, and they cannot be everything else as well. Things have altered a little now, and foreign Navies, too, are building not merely floating fortresses but fine sea ships. When I was on the Powerful it was not altogether so. At that time the men of the Old Navy prayed that, if it came to a fight, it might be their lot to fight, driving, teeth on, into a gale; with certain other ships more heavily armed and armoured ducking and bobbing on their bow.

As for the men, no one dreams them infallible either. They are only engaged in a very strenuous, unprejudiced endeavour to make themselves so. The naval officer does not underrate his rivals, and he will tell you frankly that the German personnel, at any rate, is very hard to beat. One cannot help thinking that, even given equality otherwise, there is one thing that will tell very heavily on the British side in a day of stress—and that is the very happy regard of the officers for the men, and the men for their officers. In truth, there exists there, deep down below the forms of discipline and convention, a feeling of mutual respect that comes very near to friendship. It is a friendship which exists in no foreign service that one knows of. And one can imagine the close of a long day, when it will be more precious

CHAPTER XIV

THE WHITE FLEET

At the end of the flagship's cruise she met, in Auckland, what she had come so far to see—the American Atlantic Fleet of sixteen battleships, which had been sent round the world, partly in order to impress the Japanese; and partly to give the American boys, who formed the crews, a chance of seeing foreign countries—which is one of the inducements which the United States Navy holds out to them.

We in Australia had never seen a modern battleship, much less a fleet of them, although the average Australian sees and knows as much of British merchant ships as the average Englishman. Half the population lives in big sea-ports. If one shipping company alters the colour of its funnels it is the talk of the Continent for a week. The Australian boy can tell you the names of all the largest steamers running to Australia, their tonnage and their flags and their funnels and the colour of their upperworks; and which is the newest and latest to arrive, and which companies are building a newer and later one still—and, if he can, he makes a point of going down to see the new ones when they come to port. If he has no other way of following them, he

keeps track of them diligently in the newspaper advertisements.

But as for warships, the latest British Fleet that visited Australia was the Flying Squadron, the famous Hungry Six, in the days when the sailing ship was just dying out of the fleet. They made a very pretty sight, under sail, did the Hungry Six; and they were fitted with engines for steaming, and little screw-propellers, which the captains could let down, if they wanted to, and give the ship a surreptitious nudge on her way without anybody noticing it. The Hungry Six came round the world before the present generation was born. The Australian people quite realised that British Fleets were much better employed elsewhere than paying courtesy calls on the Mayors of Melbourne and Sydney. But naturally, when the whole battle fleet of a great naval power came their way-and that power one closely connected with us in blood and in language, and having identical interests with ourselves and Great Britain in this ocean,—its arrival was looked forward to with intense excitement.

They entered Australasian waters at Auckland. There is an extinct volcano, Mount Eden, which overlooks Auckland town and harbour. In the small hours of the morning on which they were due to appear, I climbed to the top of Mount Eden, and tried to keep myself warm until the sun, or the long-expected fleet, should appear.

For it is bitter cold up there. In the harbour, three or four miles below, one can see the lights of three British warships, and further upstream the American supply ship, *Culgoa*. The tops of the North Shore hills, and the cone of Rangitoto beyond, are rising dark from the mist that is folded about their feet like cotton-wool.

The Smoke of a Battle Fleet

Fires are smoking here and there across the plains like cigarettes laid aside on a table edge; and over it all, from far away to the right, there is growing fast a light which shows lemon-coloured over the hills, and against the mist a wonderful rosy red. Down harbour creeps a small two-masted steamer, taking some of the earlier spectators, or the pilots, or the doctor. A couple of spectators climb the hill, stamp their feet for cold, search the skyline with their glasses.

Where will they come in—inside of the great Barrier Island, or outside? Far against the horizon, where the Great Barrier should be, is the shaded grey slope of a distant mountain-side. They can't be far off that mountain at this moment. That mountain . . . now that you look again—is it a mountain? Can that be the island? Underneath it, through the glasses, one can just make out a line of little specks, one, two, three—sixteen of them; the last almost invisible in the haze. That island was no island after all, but the far-off smoke of a great battle fleet. On it all, just at this moment, the sun rises.

Little clusters of people are on every hill-top—knots can be made out on every shoulder and knuckle of the harbour-side; at Remuera and Farnell, and on the crests across on the North Shore side are little notches and nicks showing against the mist. Down the harbour fairway troop a few launches and small steam-boats. There came the bang of a gun fired, by order of Sir Joseph Ward, the Premier, to let the town know it was time to come out and look. It was rather late in the day really, for by far the best sight of all—that mysterious, distant bank of smoke—was an hour and a half gone.

And so these pretty toys, for they looked like nothing

else, swept past Rangitoto and into the low sea-fog that hemmed the land. And the great fleet had come.

For the next four days Waitemata Harbour was creeping with lop-sided, overcrowded ferry-boats crawling round the fleet. Motor boatmen made hay whilst the sun, for a wonder, shone. One confessed to me he

was making £10 a day.

Auckland took them to its heart; assured them, in speeches and on placards, it was God's own country; gave them specially-printed books with elaborate covers and beautiful views of all the principal Mayors; took them into tea-rooms and oyster-shops and all the publichouses up and down Queen Street; treated them, honestly speaking, magnificently. The men of the fleet had not expected it, and they seemed genuinely touched; and strolled around with cameras or got enthusiastically waterlogged with entire impartiality.

As one watched those American seamen, and compared them (as everyone was mentally doing) with the British seamen, one could not help thinking of another English-speaking Navy—one that was bound to come into existence sooner or later; and wondering which of the two—American or British—the Australian seaman would resemble. But that is for a later chapter. All that matters here is that the "Jackies" seemed interested in all they saw or heard. One thing, they told us, tickled them to death. "I ha'nt stopped laffin' not since we got here," one said to me. "You all have such a funny accent." They evidently took it for Cockney; which, indeed, it probably is—but in a modified form.

"'Ah d'you like ar 'Arbour?" I heard an American say. That "'ah" and "ar" is Cockney as it is not spoken out of Limehouse. But he meant it for

Australian.

Importunate Visitors

They, for their part, on their own ships, were splendid hosts. Again and again their tempers must have been strained to breaking-point by the crowd which took charge of their precious white decks, as only an Anglo-Saxon crowd can, poked its umbrellas into various holies of holies, and, if it were checked, protested as though the ship were a Commonwealth Government Department and they were abusing the hall-porter or the messenger.

Not but what importunate visitors did occasionally strike a snag, as we say. Later, in Sydney, by the kindness of the Louisiana's officers, a crowd of suburban visitors was being passed through, in batches of thirty, into the sacred shellac-varnished wardroom flat. to inspect the ship's beautiful plate. A burly citizen, standing near a friend of mine, whose batch was held up for a moment by the sentry, was grumbling at the mismanagement.

"You would think we were going to steal it," he said. "We're not afraid of that," said the marine. "It's too heavy."

In spite of all, they put a brave face on it. I only once heard of one losing his temper, and that was at twelve o'clock at night. They even apologised that they could not show us all the secrets. "Every attaché of the British Navy knows what's in that box of tricks as well as we do," they would say; "and it's plum ridiculous we can't let you in." Every attaché may know it. But there's this much in secrecy—that the knowledge does not always reach every officer in the service.

However, what they could they showed us. And when we were tired,—well, spirits are not allowed on board an American warship. But they have most hilarious lemonade. Some years since, an American and a British

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warship forgathered in China. As is the habit with those two Navies when they rub shoulders amongst foreigners, they lived very much aboard of each other; and the American wardroom discovered a certain genial spirit in British lockers. The loo-tenants suggested to the captain that there was something wanting in their What was it? Sloe gin like the British mess mess. had? Impossible. Captain was adamant. The lootenants revisited the British ship, and some days later the American captain was invited to dinner there. Round with the cigars came a refreshing drink, bottled by a Chinaman ashore, with an amateurish green label stuck ostentatiously across it-"Sloe Cordial." The captain was delighted with it. When he went back to his ship, still delighted, the wardroom asked casually if he had tasted "Sloe Cordial." He had. Did he not think it was an excellent drink for their mess, too? did; and the Chinaman received a contract that kept him pasting green labels to the small hours of a summer morning.

The American officers were a most open-hearted lot, with less humbug than any men one ever met. Unless they were far more insincere than ever they appeared, they have a very genuine friendship for British naval men. In Washington, some years ago, they gave our cruiser squadron such entertainment as it speaks of yet with tears in its eyes. Their Government allowed them literally to spend whatever they wanted for it.

The American ships were painted white with buff funnels and upperworks. There is no doubt it was a very pretty change from the unrelieved grey of the British cruisers in port, until the novelty wore off. Then people found they had come to like that neat Admiralty shade better than they had realised. The American

A Question of Colour

ships have been constrained to adopt it since. Indeed, we had a good instance of the advantage of it. Officers on the *Connecticut* said that, when they came up the harbour in the morning fog, they had not seen the *Powerful* to salute her till they were on top of her.

"Say, she's real dusky," said one of them as we scuttled round her in one of the shrieking white peanuts of steamboats which every American warship carries around with her. "But I reckon she's frightened, some, in the middle of all this." And, of course, big as she was, the smallest of them could have blown her into the air. That is to say, they could have made short work of us if they could have caught us, which we should take mighty good care they did not. A "battleship" is whatever sort of ship can go to any sea through any weather and fight any ship she finds when she gets there. This flagship can go through any weather to any sea, but she could not fight American battleships if she found them there; because she is not built to fight battleships—only to find them and run away from them; which being much faster than any of them, her engines at that time being able to do more or less what they were meant to do, and given a good look-out and a tender providence, she should easily accomplish.

I would one could tell more of those four crowded, rather riotous, exceedingly interesting days. But they

have been told and retold too often.



CHAPTER XV

THE END OF THE CRUISE

It may have been a colder puff through the port that woke me. Or perhaps we went astern, when the crisp bubbles would come floating past. For the bunk is high up on one of the chests of drawers. Fresh sea gusts and sounds of harbour or ocean sweep over you at night; and you can always look out by simply sitting

up in bed.

Whatever it was, it did not wake me thoroughly; but just so as to be conscious of a familiar scrub, scrub, scrub down in the cabin. To-day's suit being brushed; more softly than with a kitten's pad, for fear of rousing someone a moment earlier than necessary. When you arrive on a man-o'-war to stay for a while, you will find that, within the few hospitable minutes generally taken to reach your cabin, your baggage is there before you. Someone; some wonder, has found his way about your shirts, collars, stud-boxes, razors, evening ties. They are staring at you from the bunk, with your shoes below and hot water panting in a brass jug by the washstand inviting you to dress for dinner. The rest of your furniture is packed into drawers, lockers, ranged along shelves or boot-racks, pretending shamelessly to

A Certain Invaluable Marine

have been there for months. A friend in need, a certain invaluable marine (for some of them may add this duty to their others in return for a small consolation) receives you, takes you in; nurses, feeds, advises you; keeps you up to time, turns you out more or less presentable for breakfast, lunch, and tea (there were sandwiches and soft drinks waiting in your cabin if you were kept ashore very late); is a father, a brother, a fairy godmother to you for the better part of six weeks; and lands you safely in the end, with hair parted and belongings packed, on Man-o'-war Steps, Sydney. Scrub, scrub, scrub. When clothes and boots were laid out; when shaving water stood steaming, and the tiny bath, which hangs from the ceiling through the day, was hooked down and dumped with about sixteen others in the alleyway outside, and filled; when there was just sufficient time left to break the dressing record in —; then, and not till then, he would wake you. Now there were tub and shaving water not ready vet. it was the breeze or the bubbles woke me.

However, remembering presently to have heard, on coming aboard at four that morning after sending a last batch of cables from Auckland, that we were to sail at breakfast-time for Sydney, I volunteered dreamily: "We'll be shoving off soon, Quinlan?"

"Anchor's off the ground now, sir."

Is it, though! Now one thought of it, there was a wriggle in the ship. I sat up, rubbed my eyes, looked out. It was not a sight to be missed.

We were slipping down a long harbour in the early morning. Through the porthole, across a smooth, steaming harbour surface, one could see H.M.S. *Pioneer*, which had lain beside us for a week, disappearing under our counter. A white stern-post slipped on to the picture

—two enormous black guns, a mountain of complicated buff upperworks, three slender buff funnels, tipped with black, lazily smoking, two more huge guns and a white bow. So their flagship, the Connecticut, one of the most famous ships on the sea, slid past the port, quite close, like a round scene thrown by magic lantern. Up there, hanging over each rail, was a line of fair-haired, loosely-clad American boys, Jackies and marines, their tunics loose at the throat, their caps recklessly cocked to show their long forelocks—smoking, chewing, spitting into the harbour. For a mile and a half down-stream stretched a lane of white battleships, in two lines curving a little with the fairway. Very quietly and without fuss we were slipping along it. The furthest down harbour was still in the mist.

The anchor must have been off the ground this five minutes. Probably we left early to avoid unnecessary ceremonial, turning the seamen on sixteen ships out from their breakfasts or their brasswork to line the decks; keeping the full guard of marines to attention along the quarter-deck. It was not eight o'clock yet. They were not officially awake. At eight the flag goes up on every warship in every harbour. The band, if there is one, plays the National Anthem. If a foreign warship is there, too, the band plays that country's Anthem.

You play the other fellow's Anthem after your own, of course. There are limits to the politeness of ships. Perhaps there are to the politeness of the drawing-room; but they are less obvious. No self-respecting warship, for example, gives up the best chair—her own berth—to any visitor, unless the visitor has come in first and taken it. So your own Anthem comes before anything. For the last week there has reached one from overhead about shaving time "God Save the King," followed by "The

The Other Fellow's Anthem

Star-spangled Banner"; and from far up and down the water a dozen bands fighting one another, like the pianos at a girls' school, over "The Star-spangled

Banner," followed by "God Save the King."

But at this hour they are not officially showing off; nor are we. We are going early to save them the trouble. Yet we seem to be moving very fast. One could swear that, under the eyes of sixteen American battleships, we take good care to up-anchor and slip down the narrow lane exactly twice as neatly and quickly as is necessary. Why not? The more we care how we look, the better for us. The man the British Navy does not want is the man who doesn't care.

One felt strangely proud of the old ship as she swung quietly out under Rangitoto to the open. Their white and buff fleet might be second in the world—first in the Pacific. We in Australia had never seen anything like it or approaching it. And any one ship could have blown the *Powerful* out of the water. But, after all, this ship, only one ship, and not a very strong ship at that, was representative in these parts of the Old Navy—the Navy of Navies; the great grey force, swift and silent, with which, though it be at the other end of the world, every Navy must reckon; and with which no Navy—no two Navies—can reckon.









A Pacine Islander

CHAPTER I

THE DAWN IN THE PACIFIC-AND THE THIRD FLAGSHIP

Long, long ago there was a day when the Pacific was not the backyard of the world. The dawn of history broke late in the South Pacific; but at some time, before even the first vague white glimmerings of it had yet begun to show—perhaps during those very centuries when the forgotten fathers of Australian families, the Johnsons and Thompsons and Nelsons and Smiths and Robertsons and all the rest of them were pitching and punching through the North Sea chops on their way to their earliest colony—perhaps, at that very time, the fleets of a great people were roaming the Pacific.

For there are certain signs that, far back beyond the curtain of the past, the squadrons and galleys of some unremembered nation may—one had almost said must—have ranged through the islands of this ocean. At least some civilisation was at work there which has

left to us traces that neither time nor all the storms of the South Seas have sufficed to expunge.

Far away by itself in the loneliest corner of the Pacific. at a point where the barren pink coast of South America is 2000 miles distant, and the white beaches of Australia 6000 miles, lies a small island. It is the very last island in the Polynesian Archipelago, and one of the least. There is one tiny outcrop about 300 miles to the northeast of it. For the rest the islands to which it may be said to belong are all to the north-west, the nearest 800 miles and the others hundreds of miles beyond that.

It is only 30 miles around the whole coast-line of that island, and life is made difficult by reason of there being little fresh-water in it. But a dark-skinned race reached the place at some time in the past, and was living there when a Dutch Admiral, in 1722, discovered it. He sighted it on Easter Day, and called it Easter Island.

Now the hundred or two of wretched natives who inhabit that island to-day are quite unskilled in the use of stone. They have no craft of stone-hewing and no tradition of it. And yet, facing the sea along the coast of that island there run terraces of great squared stones put together without cement. Some of the stones are 6 feet in length. Above these terraces stand numbers of huge stone figures; human figures, the heads all carved to one pattern; with cruel thin lips, long slender nose, and supercilious eyes.

The smallest of these figures is 4 feet in height, and the largest just 4 inches short of 80 feet; and there are about 555 of them upon the island. The figures themselves were carved from the grey rock in a crater at one end of the island; and crowns for their heads were hewn out of certain red rock in the bottom of a crater at the other end of the island, eight miles away.

Prehistoric

Now someone, on some distant day far back beyond the centuries—someone had brought them together, figures and crowns, from these widely separated quarries, and set them up. Someone had contrived to hoist them out of the craters. Someone had traced them in the rock on the crater side, and worked days and months, mallet and chisel in hand, shaping the thin cheeks, rounding the slender shoulders, until

Nobody knows what happened; whether the ocean race, whose island burial-ground this may have been, summoned them suddenly to return; whether the Polynesian Fleets drove them from the farther islands, and finally found them here too—will probably never be known. The natives who now live there have no tradition about it; no legend of any race that preceded them. Only—there in the quarries to-day still lie the uncompleted images, some half-fashioned, some barely traced. There they rest, winking up at the blue subtropical sky, as on the day when the last gang of stone masons gathered up their chisels and climbed out of the quarry, and the remnants of a forgotten race faded from the Pacific.

And now, after the darkness of the ages, there is life astir in the Pacific again. The forms and shapes of new and great powers and combinations of powers can be discerned growing and gathering, as the mists gather, from across the face of it. Already there can be made out, in the growing light, the dim outlines of some half a dozen nations, which will some day be facing one another across this ocean, much as the nations of old were crowded around the Mediterranean. Steel and steam bring them daily closer into contact.

And so, to cut a long story short, Australia, which never had a foreign policy before, and at one time never

thought to have one, has had a foreign question thrust upon her. And so have New Zealand, and Canada, and the West Coast of America. And with the foreign

question goes a question of defence.

The foreign policy of Australia and New Zealand, and their only foreign policy for a century or two in the future, is contained in two words: "White Australasia." Since there is still some vagueness in England as to what this policy means, a short explanation of it

may be permissible.

But first this word of warning. If in this chapter and the one that follows it, the point of view seems exclusively and narrowly Australian, that is because it is the peculiarly Australian point of view which it is the intention here to explain; and not because the Australian is blind to other considerations. He is quite well aware, for example, of the strategical truths at the back of the Admiralty's argument in favour of a single Navy. But those truths have often been set forth—and this is a book about Australia. It may be of interest to those who live elsewhere to have the purely Australian view laid before them.

The Australian view all springs from the ideal of a White Australia. Six years ago the writer was allowed, by the courtesy of the Editor of the Spectator, to explain in that journal what the "White Australia" policy really meant. The policy has not changed one iota; but it is only necessary to quote that statement of it, only six years old, to realise how greatly the English understanding of it (and, one may add, the Australian understanding of it also) has advanced in the meantime,

The "White Australia" question was there stated (rather than argued) in six propositions:

White Australia

- (1) That, for the good of either Australia or England, a Western and an Oriental race cannot live together in Australia.
- (2) That the probability of an Oriental invasion, peaceful or warlike, is enormous, and justifies urgent measures.
- (3) That, right or wrong, the resolve of Australians to keep their country white is of an intensity undreamed of in England.
- (4) That Australians, knowing this, believing a fierce racial war, due to a policy of which England disapproves, to be ahead of them, and determined to fight it at any cost, "harbour no illusions" as to England's supporting them in it. That this doubt does immense harm to the cause of the Empire in Australia, and is deliberately made use of by separatists.

(5) That England will not refuse her support, but will probably exhibit sympathy for the other side until the eleventh hour, and then pull Australia through; and

so get all the kicks and no halfpence.

(6) That all this harm could be saved, and England get the credit she deserves, if for once a clear statement were made that England was not out of sympathy with the Australian and would not leave him to fight the battle of her race by himself.

These propositions were explained as follows:—

"First, in England one only knows Orientals from history-books or from a few visitors or students. One is proud of the Sikhs and Gurkhas; one realises vaguely that Englishmen live comfortably, not side by side with, but over the head of, native India. Also, one has a cordial admiration for the Japanese. In every one of these sentiments Australians agree.

"But when the Englishman generalises from his facts,

and decides that Westerns and Orientals can live without degradation to both of them side by side, and dubs their objection colour prejudice, Australians part company with him. May there not be something after all in the fact that, while the Briton who never meets the Oriental declares that East and West can live side by side, his own race wherever in the world it meets an Oriental people refuses to live side by side with it? Is it mere pigheadedness that in British Columbia, California—indeed, in all the States—Natal, the Cape, the Transvaal, Australia, and New Zealand—yes, and in India—your own race steadily refuses to consort with coloured races?

"The Englishman in India is the strongest case in A narrow Western aristocracy, of splendid intellect and character, rules, for its great good, a race which you do not believe capable of ruling itself. rulers live absolutely apart. They would be highly shocked if their womenfolk had any intimacy with natives, and hold it the gravest danger to more than the health of their children that they should be brought up in India. Well, the Australian sees a deal of the He has the Queensland coolies, and the Chinese quarter in every town. Every ship brings them to his gates or takes him to them. He knows what every Briton who meets them knows,—that, living together, the Western demoralises the Eastern, and vice verså. He will not contemplate his children growing up amongst Orientals, his poor living amongst them.

"It stands to reason. To do what we think good is as bad in them as to do what they think allowable would be bad in us. That is a great part of the world's history in a nutshell. Again and again we are told it, and shall we never believe it? This antagonism between Western

East and West

and Oriental is no new thing. It was old when the Greeks fought the Persians. Romans and Parthians, Huns and Ostrogoths, Crusader and Saracen, Martel and the Moors, were all in that same battle. The Turks and Macedonians are fighting it to-day. We should know something of it by now. It goes by the name of the Eastern Question, and has lived for some three thousand years continuously on the border of Europe. The 'White Australia' Question is not similar to the Eastern Question. It is the Eastern Question. Australians will not live as a white race over the head of a subject people, even if they could do so. Their ideal is to keep Australia, if possible, a land where their children can live the healthy Western life of their British fathers. That ideal you must allow them.

"And how does it affect England? Why, there is room for forty millions of British folk in Australia; and if the Australian has his way there will be forty millions of them here some time hence. Need you ask: How will the existence of a great British sea nation in the Antipodes, with British ideas and interests, and a big Navy, affect that other forty millions of Britons in the North Sea? Remember, this is the last land open to the white man, - the only one that can be purely British. South Africa cannot be a white man's land. simply because you cannot spirit away millions of The United States - even our magnificent Canada—will be less purely Anglo-Saxon as time goes on. And Australia, of all countries in the world, is an ideal one for the white man to live in. That is what a White Australia means to Australia and to England.

"Secondly, no one can deny the danger of an Oriental overflow who knows the facts. In truth, no one does. There are some three million odd whites in Australia

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inhabiting three million square miles. To the North, at its very gates, up to within a day's sail, are eight hundred million Orientals. The island of Java alone, three days' steaming from tropical Australia, holds thirty millions. The Eastern Question, famine, plague, overcrowding, a vast coast-line to hold—three men to hold it against every

eight hundred—that is the quality of the danger.

"The weakest point that I can see in the Australian case is here, in the moral problem. Have we, so few, a right to keep out those hordes and save Australia for ourselves? But, then, is it for ourselves, or for the forty million white men to come after, and for the perpetuation of our race and the ideals we believe in, and, above all, for our children? Are they to look to us for a healthy home—or for that mixed horror? As for the Australian of to-day, it is his only home, his own native land. He loves it as passionately as any people on earth. Is he to forgo it? If those scruples were to rule, they should have ruled long since, before thousands came here in the promise of a Western home and millions were born and bred in the faith of it. I think Australians owe it to the past and the future to save that ideal.

"So they take steps to keep Australia white. What steps can they take except the total exclusion of Orientals? They know from Natal, America, and elsewhere what a dreadful force are low standards and cheap wages. The Australian does not believe that he can draw a colour-line across three thousand miles of continent. Here he is, with an absolutely new country to make or mar, a clean slate. In the face of American experience, is he to risk it? Is he to open the door ever so little to let in a problem so awful as that which overhangs the United States? Once let it in, and no force on earth for

all time can turn it out.

Would England Help?

"Thirdly, rightly or wrongly, the Australian has barred his door with a fierce determination, knowing well that it forces him to leave a part of the North undeveloped for the present. One knows men who suffer by this, and face it deliberately for their conscience' sake. The Australian feeling on this point is tense, irritable,—quite different from that on any other. It is the question of their future. I honestly believe they will fight alone, if necessary, a hopeless losing fight to their own annihilation. If this is known in England, all I can say is that I had no idea of it all the years that I was there.

"Fourthly, Australians know that England is out of sympathy, and that her position is difficult; that Indian fellow-subjects and our great allies may be in the one scale, and themselves in the other. The whole nation knows there is a struggle ahead. A great part does not believe that England will help in it. Some think that she would endorse a petition from our allies for free admission. Can you wonder at these doubts, in the face of the persistent hostility of the Press, and the openly expressed regrets of Ministers that Australia is unlikely to go back on her policy? Every issue of the Bulletin rubs it in; and the part of Australia which matters, and which makes no noise, asks itself: What is the use of a Navy if the only war which concerns me is the one it will not fight? Why am I to risk another's war, say, with Germany, if the Empire will not risk my war with That doubt is doing every day perhaps the East? irremediable harm.

"Fifthly, I believe England would support Australia in the end. If she did not, imagine what future historians would say of it, - when the field of a second great maritime Britain had been resown with a crop of vigorous

Orientals. England will come in to help Australians, but ungraciously at the eleventh hour, withholding her

sympathy and losing theirs.

"Sixthly, one simple declaration of unshakable policy by a Minister whom Australians trust would at one blow cut the ground—the only ground—from beneath the feet of Australian separatists. The Australian is reasonable, and he is not ungenerous. If he sees what he receives from the Empire, there will be no stint in his giving. But if he is permitted to believe that the Empire will allow their home, their own dear country, to be filched from his children by Orientals, in peace or war—what would you have him do?"

That appeal would be ridiculous to-day; but it was not ridiculous in 1907. At that time, and even in 1908 at the time of the visit of the American Fleet which has been narrated in these chapters, there was a feeling in Australia, for which English newspapers and occasional speeches of English public men afforded very solid ground, that the United States were more in sympathy with this all-important article in the Australian creed than the mother country. But it has only been necessary to quote that appeal, written in 1907, to show how great has been the change and the advance in understanding in the meantime. The policy of a White Australasia is accepted in England to-day as being almost as essential in the interests of Great Britain as in those of Australia and New Zealand.

In Australia, too, the advance in two respects has been almost as important. In the first place, it has been recognised that, if the country is to be preserved from Eastern peoples, it must be filled with Western people. Since 1907 the encouragement of immigrants from Great Britain and Ireland has become part of the policy of

Immigration

every Australian state. Before 1906 the growth of the population by immigration had for fifteen years been negligible—an average of about 500 a year; and indeed, in some years, an appreciable loss. Now, only seven years later, population is pouring into Australia in quantities approaching 100,000 a year. Practically the whole of this immigration is British.

One does not pretend that all has yet been done that can reasonably be done to increase the white population of Australia. There are certain obvious lines of policy which have as yet been scarcely tried. For example in the old country there is a big excess of women; in Australia there is a great deficiency of them. the interest of both to have this balance corrected but no means in the remotest degree adequate has been attempted. Again, in the old country the excess of population is in the towns, and there is a positive need for population in the country; and yet Australian stateassisted immigration is drawn almost entirely from the country and very little from the towns. This would be justifiable in the ultimate interests of the Empire, if it had been proved that suitable immigrants could not be obtained by a method which should be greatly in the interests of both countries-namely, the admission, in large quantities, of child emigrants from the British cities. It would probably be in the actual interest of Great Britain and Australia to share the cost of a scheme like that; it would mean really substantial help from the Dominions to that portion of the British people which needs it most—the poor—the children who, under present conditions, see little or no light ahead of them in the old country. And, as everybody believes who knows anything of the British city children, it would mean to Australia a perpetual reservoir of immigrants at least as

valuable as the country children; possibly, in some ways, even more valuable. The subject has not really been tackled officially; but the logic of the situation is so clear that the system is bound to be tried.

Australia has realised, within the last six years, that if she is to maintain the White Australia policy she must take steps to bolster it by immigration; and, secondly, to support it by defence. The White Australia policy from the first day of its enunciation has of course always depended really on defence. Although it is an Australian Parliament that passed the laws against Asiatic immigration, and Australian custom-house officers and policemen that discover Chinamen stowed in ships' holds where tea-chests ought to be, and send them back to China again, the only thing that has stood between Australia and an immediate protest from the countries to which these immigrants belong, is the Navy defending That Navy, at the time when I was privileged Australia. to see something of the life in it, was still wholly English. The Australian has since then realised that it must be, at least in part, his own.

And that is the meaning of the third flagship.





. . . . The latest and greatest flagship

CHAPTER II

HOW AUSTRALIA FOUND HER WAY

DAY after day, on the Powerful, as one sat reading in the wardroom, there would come through the skylights the distant blare of the ship's band playing the men to morning prayers. One could hear the ship's bell tolling like the call of a village church heard over the hills. As I listened to that pretty scrap of play-acting-for it is nothing else-thrown like a picture of home into everyday life in the Navy; or as I sat, of a Sunday, at church on the quarter-deck all canvassed in with the reflected sea playing upon the dark awning above; the priest beneath speaking to rows of strong, dark, square set faces the gospel of a straight, clean, simple life; and one grim, silent muzzle-it took you fifteen paces along the deck to walk clear of that gun-peering out, as it were, into some distant future, fairly above his head-I marvelled if that gaunt steel sceptic were not smiling to itself at the mockery of it all. There are times when it seems so useless and hopeless-all this prodigious preparation to kill or be killed.

But, after all, it is based on the one truth, which is true beyond question, that there are matters about which a man worth anything cannot compromise; that there are worse things than dying; that, if it comes to that pass, life which would have to be lived not as you think right, but as some Asiatic may think right, is not worth living at all. We happen to belong to a set of island peoples who can agree closely in their life. One member. at present, buys for that set the greatest Navy. are signs that it cannot afford it indefinitely. Being rich, we could afford between us to buy the greatest Navy, at a price—and be safe. Every sea nation cannot afford the greatest Navy; and other nations have to be content to go unsafe. But not for a tripod nor for the hide of an ox is it that we run, but for the place which Anglo-Saxon men and Anglo-Saxon ideas shall take and keep in the Pacific.

That is really the philosophy of Australian defence reduced to its simplest, plainest, ultimate terms. The mind of many and many an Australian has been busy upon it, these last years. Our safety, he says, where a Western or Eastern life is at stake, is worth any price.

But what is the best price to pay?

It is only four years since a friend of mine, one of the ablest Australians I know, and one of the soundest political thinkers, said to me: "It's all very well to talk about a Navy; but you know, old man, the thing for Australia is this universal service on land. That's far more important to us." That view was once not uncommon amongst Australians. But of late—really because more thought is being expended upon the subject in Australia and New Zealand than ever was before—it has been rapidly altering. Australians who think are becoming convinced of the following facts:—

The Ocean Frontier

If we in Australia give up all idea of sea defence, we are voluntarily giving up the strongest fortification that any country in the world possesses. England during a great part of her history had only twenty miles of sea between the little white farms and orchards along her open countryside and her probable and actual foes. At one time that foe was the most formidable aggressor any country has ever faced; he hated England more bitterly than he hated any other land; for a space he had his soldiers bunched on the French shore at a point where they could actually see the English coast. And yet that twenty miles of twinkling dancing channel was enough. The innumerable laughter of the sea waves fooled him like the others. We in Australia have 4000 miles of sea separating us from our nearest probable enemy.

Now every extra span of ocean, every day's steaming, enormously increases the difficulty of an enemy bent on invading us. He can only transport comparatively small numbers at enormous risk so long as we have any fleet at all upon the seas—even an inferior one. A single lucky shot, one successful torpedo, and 2000 or 3000 soldiers go to the bottom like rats in a trap.

True, on two historic occasions they have chanced it. Napoleon took the risk of his life in crossing to Egypt with his army whilst Nelson was free upon the waters, and it was only through Nelson outsailing him beyond all expectation, and arriving at the anticipated destination too soon, that the Emperor escaped a disaster more final than Waterloo. The Japanese took the same risk, in a lesser degree, by sending their transports across a short stretch of sea when a few inferior Russian cruisers were still at large.

But 4000 miles! You may risk it for 200; but 4000? Remember the vast pains and the time which were needed

to send some 250,000 men to South Africa, in a period of profound peace upon the seas; with all England's merchant ships available for transports; with the biggest Navy in the world behind them and no Navy at all against them; and then think of an Eastern rival sending that number 4000 miles, with the biggest Navy in the world against them—or indeed any Navy, unless it were one that had been securely bottled in its harbours.

If Australia were to lay aside naval defence she would lay aside all that advantage—would voluntarily abjure it. And that is only the beginning of the argument. There are still stronger reasons to come. The sea is not merely the easiest pathway along which we may get help—it is the only way by which we can obtain anything at all from outside; even from New Zealand or Tasmania. And not a man could we send to them, not a rifle, nor a saddle, nor a boot, nor a cartridge, except across the sea. And all our friends are sea friends.

That is what the sea means to Australia. Australia is the sea continent. The Germans may build airships that can do some damage in Britain; and fleets of aeroplanes that can strike across 500 miles of sea are thinkable. But we are 4000 miles away—and what thinkable development of aircraft can ever bring us within the range of anything more than a casual air-scout? Flying may conceivably reduce the value of the sea as a defence even to Great Britain, but it can never reduce its value to us.

The sea is Australia's best means of defence; it is her only means of attack. If Australia ever wants to make her influence felt, or, as is more likely, to prevent others from making their influence felt, in the nearest Pacific islet, or in any South American Republic, she can only do it by sea.

The Sea Continent

And if we deny ourselves the sea; if we leave it free and open to the enemy to come and go upon it; if we actually allow him to pass it, and without disturbance or interference to keep up a stream of transports, like a procession of ants, working across the ocean from his country to ours, 4000 miles—what chance have we? His sea transports are infinitely more mobile than any transcontinental railway. He can simply fool us in his landing place, and pour any army he likes into Australia, and keep it supplied as he goes along. He has the only sort of lines of communication that we cannot cut. And we—we can but stand clucking on the water's edge, like some poor old fool of a hen with a brood of goslings, and watch him going where and how he lists.

For these and many, many other reasons, Australians have come more and more certainly to the conviction that their country cannot forgo her sea defence; that she depends upon it more than upon any other line. She

must employ some Navy to defend her.

Happily, as has been said in the preface to this book, it is no longer necessary to argue that the Navy employed to defend Australia cannot indefinitely continue to be a purely English Navy. Australians do not want, and never have wanted, charity. They know it is only fair business that, if they have the advantage of a scheme of mutual protection, they should undertake their full share—and they are taking a fuller share than any part of the Empire except Great Britain; and nearly the same as Great Britain.

But it has been a long and difficult task for the Australian to grope his way to a clear and definite policy. At times he seemed to see light, but again and again the schemes adopted fell flat for the want of an indefinable something which the political sense of the

nation knew to be necessary. The Admiralty was not always so sympathetic and loyal a helpmate as the modern Admiralty has been, even when its opinion has differed: but at times it gave its best advice-which. naturally, was generally opportunist. The Admiralty. even to-day, has usually quite enough to occupy its attention in the affairs of the next six months without worrying about the political genius of oversea nations or the ultimate destinies of the British Empire. More than once in the history of this question the Admiralty has favoured or adopted a line of policy which within a few vears it has abandoned or opposed; and if Australia had seriously followed all the advice given her by past Admiralties she would have been engaged tying herself into knots.

The history of the long, often disheartening, wanderings by which Australia ultimately felt her way to the broad, clear, even track, upon which she at last came out is

worth telling in brief.

It was chiefly the fear of war with Russia, in which Australia being very distant and unprotected might easily suffer at the hands of stray marauders, that first really awoke Australians to their responsibility for doing something in their own naval defence; or, rather, in the defence of their cities and ports against bombardment by raiding ships. Sydney, having been always the base of the British Navy, felt rather more secure. But Melbourne did not so often see the Queen's ships; the heads of its harbour were unfortified; the last remnant of the British garrison was withdrawn in 1870. And so in 1866 the Victorian Government bought in England the ironclad *Cerberus*. She was a small ironplated turret ship; in her turrets were the fat muzzle-loading Woolwich guns of that day, 400-pounders. She

The Embryo

had a low free-board, and was fit only for harbour The Victorian Government also borrowed from England the old wooden frigate Nelson, to act as training-ship. But the Nelson did not attract trainees. There was no particular national spirit in Australia then -indeed, there was no Australia, but six separate (and often quarrelsome) states, whose soldiers and ships might quite conceivably have been used against one another, had things gone on as they were. So the Nelson failed to attract recruits; and as for the Cerberus, she was taken to Williamstown, in Melbourne Harbour, and at Williamstown she remained, sinking peacefully into obsolescence. In the course of subsequent agitations this Victorian Fleet was increased by two gunboats and four torpedoboats; and at one time or another, all the six colonies, except Western Australia, obtained some sort of ship to defend their harbours against possible "merchant cruisers." The Tasmanian Navy, for example, consisted of one second-class torpedo-boat; which was eventually sold to South Australia.

The serious awakening was in 1881. There had been a scare of war with Russia in 1878—and, indeed, it was a very near thing; and besides this, Australians were disturbed at the great numbers of Chinese then pouring into their country — also a really serious problem. Australia was un-federated; but a conference of the Premiers of the various Australian colonies met in Sydney; and, amongst other things, expressed a wish that the British Squadron in Australian waters should be permanently increased. One Premier, Sir W. Morgan of South Australia, suggested that Australia ought to contribute half the expense of the additional naval forces. But he was the only representative who thought so then.

on growing. In 1885 Admiral Tryon, then commanding the Australian station, the same that a few years afterwards lost his life in his great flagship, the *Victoria*, in the Mediterranean, was instructed to consider any proposals made on behalf of the Australian colonies, "bearing in mind that the object of His Majesty's Government was to encourage an extension of the Imperial Navy rather than separate colonial Navies. . ." The Admiralty suggested that it should provide extra ships for Australian waters; that the Colonial Governments should pay for the building and upkeep of these ships; the ships to belong to the British Navy for ten years, but to become the property of the colonies at the end of that time.

It is this scheme that brings the story down to the first of those great meetings, which have been and probably always will be, far more concerned with the naval defence of the Empire than with any other subject matter — the Conferences between the states of the British Empire.¹ For it was at the first "Colonial Conference" that the Admiralty's scheme came up for consideration.

Those were the days when the idea of Imperial Federation was at its zenith, and the Imperial Federation League urged the British Government to call a conference of all the colonies to consider whether an Imperial Council could not be created. The Canadian Minister for Marine, who happened to be in London, suggested at a Mansion House dinner that there should be a union for defence between the motherland and colonies; and in 1887 there was summoned in London the first Colonial

¹ For the facts narrated in this chapter the author is largely indebted to Mr Richard Jebb's most useful work on *The Imperial Conference* (Longmans, 1911).

The Policy of Contributions

Conference. Lord Salisbury, in opening it, said that, for the purpose of defence, "constant communication and consultation should go on between the various branches of the Empire."

As a matter of fact, this first Conference was almost entirely devoted to considering the schemes of the Australian states and New Zealand for strengthening the naval force in Australasian waters. The main question was—If England built and sent the ships, who was to pay for them? After a protracted haggling, which not even the most ardent supporter of the policy of "contributions" can ever wish to see repeated, it was decided that whilst England should continue to maintain the regular Australian Squadron, she should also build a special auxiliary squadron, towards the cost of which the Australian colonies and New Zealand should

pay £126,000 a year.

In return, the Admiralty agreed that this squadron was not to be removed from Australian waters except by the consent of the Colonial Governments. This was a clause which was always unpopular with British naval experts, who pointed out that, by the immemorial rules of naval strategy, the fleet ought to be free to protect Australia wherever on the seas Australia could be best protected, which would not necessarily be in Australian They thought Australians failed to appreciate this principle, and perhaps to some extent they did. But to do Australians justice it was not the main struggle with the enemy that they were thinking of. All the Australian capitals are on the sea-coast. Sydney, especially, is well within range of a modern cruiser's And the picture which Australians had before their mind, whenever one of the numerous Russian war scares arose, was of themselves waking up one morning

to see a strange merchant steamer off the Heads and learn that she was a Russian "volunteer cruiser," which had eluded the main Australian Squadron, and intended to hold their city, that very day, to ransom. Australians, as the Colonial Secretary said in his address to the Conference, had from an early period shown great earnestness in defending their ports, and the defences of Melbourne and Sydney were, "having regard to their geographical position, among the strongest in the world." Still, the Sydney man would have slept much more comfortably in his bed if he had known that, besides the forts, there was a cruiser or two handy to hunt down intruders. It was all very well for the Admiralty to suppose that the Australian capitals must take the risk. British sea-towns did not. For all the theory of meeting the enemy on the enemy's own coast-line, there was never, and never would be, a time when there were not odds and ends of the Navy available in plenty in the English harbours, to be summoned up in haste if hostile torpedo craft appeared in the Thames or a cruiser showed her nose off Brighton.

That was why the Australasian colonies asked for an auxiliary squadron tied to Australian waters. Those were the settled terms of the mutual agreement between them and the British Government. But the Admiralty never favoured this clause. When it was being settled, a question arose as to whether these ships could be taken from the station in an emergency. Mr Deakin, the Victorian delegate, pointed out that the promise was that this should only be done by consent of the Colonial Governments. Whereupon the spokesman of the Admiralty, Lord George Hamilton, said: "The fact is, that in war or any emergency, whatever arrangements are made in time of peace are overruled."

The Third Conference

That remark was not forgotten.

So this was the basis of the naval defence of Australasia in the Pacific laid down and adopted in 1887. The small auxiliary squadron was built, with Australian names for the ships composing it; and in Australia it remained, along with the rest of the squadron, until it rusted away. A limited number of cadetships were reserved, so that the sons of those Australians who could afford it might become officers in the Royal Navy—a right which, truth to tell, never aroused any enthusiasm.

The same agreement was maintained by the next Colonial Conference in London ten years later, although the Admiralty pointed out that it would prefer the contributions without any condition tying the ships to Australian waters.

Between this Second Conference and the Third, Australia was federated; and Sir Edmund Barton came to the Conference of 1902 as the representative of all Australia. The same old system of a cash contribution was maintained. Only the two Dominions paid more and received a better squadron. The old auxiliary squadron was merged into the fleet on the station; and the only stipulation now was that Great Britain was to keep in the waters of Australia, China, and the East Indies, and based on Australian and New Zealand ports, the following ships:—One first class armoured cruiser; two second class and three third class cruisers; and four sloops. For this Australia paid £200,000 and New Zealand £40,000.

Lord Selborne, the First Lord of the Admiralty, admitted that the fault of the arrangement was that this mere naked payment of a money contribution gave Australians no personal interest in the Navy. It was

sought to remedy this by providing that four of the ships were to be manned by Australians and New Zealanders, engaged for five years at special Australian rates of pay, which were much higher than the rates in the Royal Navv. But it must be confessed that even this aroused little interest. The ships were not Australian ships—the service was not an Australian one. Youngsters joined it in plenty. They were smart and quick - they performed great feats in rowing and other contests up on the China Station. They did not complain of the life; they were quite contented with the service, as far as it went. it gave them small chance of promotion. At the end of their term, good men though naval officers have told me that they were, they did not re-engage in the Royal Navv.

That was practically the end of the "contribution" system. Many members of the Federal Parliament at the time when the agreement was ratified were intensely dissatisfied with it. The system worked about as well as monetary arrangements worked in the days when our tow-haired ancestors, marauding in that first of flagships, used to be bought off by other members of the same breed-the Anglo-Saxon was always equally ready to haggle or to fight, but he showed much more generous in the fighting. From the point of view of Britain, the net result of twenty-five years of "contribution" was that each Australian paid one shilling and three farthings a year towards naval defence where every Englishman had to pay fifteen and twopence. Whilst, as for the Australian, at that price he obtained from the Admiralty an agreement which the Admiralty, for its part, seldom, if ever, observed.

His Ships

in Australian waters the Admiralty never kept there the squadron which it had agreed to keep. The agreement specified one armoured cruiser, and the Powerful was an unarmoured cruiser.

It is little wonder that five years later, when the two parties met at the next Conference, in 1907, each side came with an inclination to abandon the system of contributions altogether. Mr Deakin arrived from Australia with the intention of obtaining the Admiralty's assent to some mild beginning, at any rate, of a local Australian Navv. And Lord Tweedmouth. the First Lord of the Admiralty, came to the Conference already prepared to agree to such a scheme.

It is from that moment, perhaps, that the great change must be dated. Mr Deakin, it is true, was ahead of most of us Australians for the moment-at any rate of those not associated with Mr W. M. Hughes in the Labour Party. There was a good deal of questioning whether Mr Deakin had been authorised to go so far as to turn over the whole system of "contribution" in favour of an Australian flotilla. Someone invented a phrase about "tin-pot navies"—a phrase which seems mighty foolish nowadays, but which was common currency just then. Yet, almost without realising it, the Australian began to wake up from that instant. They were his ships which were being mooted and discussed. They were to be manned by his boys, and perhaps eventually built in his country. The Australian, even if he tried, could never look on the ships of the Royal Navy lying in his harbours as his ships. It was quite natural—there was no fault on either side—but the fact was that the officers and men on those ships owed no allegiance to the Australian's country, or to its customs or ideals, but to their own

home 12,000 miles away, and to the Admiralty who sent them out there.

Mr Deakin was always weak in performance. He could build a great policy, but he could never ask the electors to face frankly the cost of it. When his turn came, some years later, to put into steel plates and frames and rivets the scheme into which his policy eventually crystallised—the building of the Australian unit—he proposed that the country should pay for its Navy-part of its normal defence-out of loan money. The whole political instinct of Australia was against him on the point. The Labour Party repudiated the idea, and advocated the payment for defence out of revenue-and won many Liberal votes on that point alone. But nothing can take from Mr Deakin the credit of the ideas which he, in advance of most Australians at the time, tenaciously supported at the Imperial Conference of 1907. With Mr W. M. Hughes, since then Attorney-General in the Labour Government, and Mr G. F. Pearce, the Minister for Defence, Mr Deakin will always be associated as the founder of Australian national defence.

Mr Deakin, whatever his faults as a politician, had always the mind of a statesman; and the suspicions which the Admiralty, and many well-meaning Australians also, possessed in regard to any local systems of defence, never had any terrors for him. He had realised years before the true grounds on which the British Empire was based. When he came, as a young politician representing Victoria, to the Conference of 1887, he told the Conference in his first speech that he thought he had noticed, in certain dispatches from the Colonial office, a distinction drawn between Colonial and Imperial interests. "That," he said, "is a distinc-

Deakin, Hughes, and Pearce

tion which we ourselves are utterly unable to draw. We cannot imagine any description of circumstances by which the Colonies should be humiliated or weakened, or their power lessened, under which the Empire would not be itself humiliated, weakened, and lessened. And we are unable to conceive any circumstances under which the wealth or status of the Colonies could be increased, which could not increase in the same degree the wealth and status of the Empire."

Those who have opposed the idea of the British Empire developing into a strong group of kindred nations, in constant conference on all subjects of common interest and especially for defence—joined in a sort of "perpetual alliance," to use a term invented by Mr Richard Jebb-generally make the mistake of suspecting that the component members of such an alliance, or some of them, will act in bad faith when the day of trial comes. Whereas, if the Empire is to remain at all. whether federated or unfederated, it must be assumed to be based on good faith. There are some who complain that the present system is unsafe because the Australian Parliament is free to control the Australian Navy, and therefore, when England is involved in war, the Commonwealth Parliament might order its Navy not to fight England's enemy.

It could not order its Navy to remain "neutral," because by international law, as long as Australia is part of the Empire and the Empire is at war, then Australia is at war; but it could order it to take no

part in the war.

Of course the Australian Parliament could do this. It could also pass a law that the head of every tenth Australian citizen should be chopped off, and pickled, if necessary, and stored in the local museums. It might

be a question for the High Court whether it was the Commonwealth Parliament or the State Parliaments that possessed this right—but one or the other of them possesses it. Or if they do not, at least it certainly resides in the British Parliament. And the British Parliament unquestionably possesses the right to pass a law that the British Navy shall never help Australia or New Zealand under any circumstances whatever.

But we in Australia are not afraid, nowadays. accept the risk of the other parts of the Empire acting in bad faith because we know that the risk does not exist. It is not in the nature of the Anglo-Saxon to spend his whole time protesting his affection, and certain well-meaning enthusiasts of the British Empire League and similar organisations do more harm than good by endeavouring always to keep the various members of the Empire screwed up to a high pitch of protestation. But there are occasions—quite frequent enough—when the Dominions feel bound to let the world know what their innermost feelings really are. The attitude of Australia is expressed quite adequately in the words used by the Leader of the Labour Party, Mr Fisher, during one such period of stress, in the course of an electioneering speech to a body of Australian trade-unionists and socialists at an eight-hour demonstration in Melbourne in 1909. should not hesitate to do anything to assist her (the mother country), if the need should ever arise," he said. "My ambitions would not stop in such a case at the price of a Dreadnought from Australia-I am speaking now on behalf of the great party which I have the honour to lead—but I would pledge the whole resources of this great country to Great Britain if ever any real danger were to arise." Men who were in the Queensland Parliament during the years of the South African

The Dark Days of Colenso

War have told me that they can remember how, when the dark days of Colenso and Stormberg and Magers-fontein threw their cloud on the land, the most advanced opponents of Imperialism and Militarism in the Brisbane Assembly were vying with one another to see what could be done to send immediate help. It was into that good soil that Mr Deakin threw the seed of the idea of an Australian Navy. And from that day the plant began to grow and prosper in a way that was never known before.

Shortly, the growth of it was as follows:-

Mr Deakin came back from the Conference of 1907 with a proposal that, for coast defence, quite apart from the Imperial Squadron, Australia should possess her own flotilla of

9 submarines,6 destroyers, and2 depôt ships.

The Admiralty of that time particularly advised submarines, in preference even to destroyers, although this special class of vessel seems more suitable for the advanced training of an old-established Navy than for the first start of a new Navy. However, some time elapsed whilst Mr Deakin was asking for the loan, for training purposes, of four small cruisers, which the Admiralty did not see its way to grant; and before the flotilla was ordered—although money was set aside for it—a Labour Government came into power.

The Labour Government, with the money already appropriated, ordered two destroyers and decided that a third was to be built, if feasible, in Australia. But this Government had barely come into power when there occurred the naval crisis of 1909; when it appeared, for

the time, as if Germany had stolen a march on England by ordering her ships at earlier dates than those publicly announced. It really seemed that the old country was likely to be hard pressed. New Zealand offered a Dreadnought, or two, if desired, to the British Navy. Australia was divided in opinion. Many thought a Dreadnought should be offered—which the two states of New South Wales and Victoria finally decided to do, failing action by the Commonwealth. The Commonwealth Government, however, were anxious to press steadily ahead with their now settled policy of an Australian Navy. Spasmodic gifts of battleships they looked upon as a makeshift policy at best. And so they decided to have built within three years—instead of the previous Government's programme—

4 ocean-going destroyers, and 19 river-class destroyers (including the three already ordered).

Looking back, one has little doubt now that in standing steadily to their policy the Government were right; and although their attitude caused the two other parties in the House to unite in turning them out, yet the new Government under Mr Deakin really adopted the position of its predecessor, and offered to the mother country, not a Dreadnought but "a Dreadnought or such addition to the Empire's naval strength as might be determined after consultation in London." As Canada and Australia had each already cabled to the British Government that in their view the Dominions ought to take a share in defending the Empire, a Conference of the Dominions had already been invited to meet in London. And at this Conference the Admiralty advised that "a Dominion Government desirous of creating a

The Australia Unit

Navy should aim at forming a distinct fleet unit"; and that a fleet unit should consist of

battle-cruiser,
 unarmoured cruisers,
 destroyers,
 submarines,
 and necessary auxiliaries.

So that Mr Deakin's "Dreadnought" eventually took the shape of a compact Australian Fleet. It was agreed that the Eastern Fleet (that is, really, the naval force of the British Empire in the Pacific) should consist of at least three such units. Australia should provide one, the "Australia Unit"; and England should provide two, a "China Unit," and an "East Indies Unit." The Australian Navy, when ready, would relieve the existing Australian Squadron. The ships should be manned, as far as possible, by Australian officers and seamen, and the numbers required to make up the full complement for immediate purposes should be lent by the Royal

This last provision the Admiralty, although a little later they found they needed every skilled hand they could get to man their own new ships, carried out wisely and loyally and generously. Officers and men, and those both of the best, they freely lent in order to put the Australian Navy in such a position that it could train men for itself—a result which has been accomplished beyond all reasonable hopes.

Navy.

The Admiralty has, by force of circumstances, not been able to supply the two units, as promised, to the Eastern Fleet. But the Australian Government has supplied its unit; except for three destroyers and a cruiser, building in Australia, and one submarine, the

whole unit is now afloat. It is manned by Australians to an extent which few believed possible within the time. It has its dockyards, its bases, its training-ship, its barracks, its naval college, its reserves—all in full swing.

By the arrangement of 1909 the British Government generously agreed that, until Australia felt able to take over the whole cost of her Navy, Great Britain should contribute £250,000 per annum towards the expense. The Australian Government, which was now a Labour Government again, decided not to take advantage of this offer, but to meet the whole expense from the start.

So much for the Conference of 1909; but the situation has moved one stage beyond that. The Commonwealth Government in 1913 projected a further big ship-a battleship this time, -three more destroyers, two submarines, and auxiliary ships, to be laid down within three years. These had no place in the Fleet Unit Scheme of 1909. It is obvious that to build a fleet unit is not a permanent policy. You cannot create one fleet unit, and then sit back and rest contented ever after. The unit is the first beginning, from which the fleet of the future can expand. Since 1909, Australia has obtained one further acquisition—a policy. The old idea of providing Australian ships, simply tied to Australian harbours, has been left far behind. There will be a few flotillas of submarines and destroyers on the coast, just as Britain has them. But the duty of the main fleet is that of defending the interests of the Empire in the Pacific. The Australian Fleet is a part of the great Pacific Fleet of the Empire, and likely, as far as the Australian can see, to be the most important part of it.

The Australian Fleet

That being so, what is to guide Australia as to the size of her fleet? The policy now generally accepted by Australians is that it should be of such a size as represents Australia's full and fair share in the defence of the Empire; that is to say, a fleet bearing the same proportion to the population as the British Navy bears to the population of the old country. Australians have generally adopted the scheme, drawn up for them with extreme care and in great detail by Admiral Sir Reginald Henderson and the very able staff who were lent for this duty by the British Government at the invitation of the Commonwealth Government.

This plan was for the building, before the end of 1933, of

8 battle-cruisers,
10 protected cruisers,
18 destroyers,
12 submarines,
3 depôt ships, and
1 fleet repair ship.

The fleet would eventually need 15,000 officers and men to man it. The ships themselves would cost, roughly, £23,290,000. And to turn Sydney and Fremantle into great naval ports, bases for the Eastern and Western Squadrons, with secondary bases for the fleet at Thursday Island and Port Darwin, and destroyer or submarine bases at Brisbane, Port Western, Port Stephen's, Port Lincoln, Townsville, Hobart, and several other places as well, would need at least another £15,000 in capital outlay.

The Australian has emerged into that great plan as one, who has been crossing and re-crossing his own tracks in a jungle, emerges into the light of day; and it

can, perhaps, now be understood why he cannot possibly go back on the plan of a "local" Navy, in spite of the opinion of the Admiralty. There is all the difference in the world between the enthusiasm both in the Service and in the people to-day, and the apathy under the old agreements. And how else would a self-reliant people have it? Admiral Henderson's plan will be-indeed has been-altered in some details. But in the main it will probably be followed fairly closely. For the country is in earnest. Without the Navy we shall cease to exist, and therefore we must provide our share; our Navy must succeed, and therefore it will succeed. It means sacrifice—both of money and effort, and perhaps of lives. But it has been undertaken from beginning to end, from the making of ropes to the building of Dreadnoughts, from the founding of steelworks to the training of Admirals. Of this great task; of the latest and greatest of the flagships; of the Australian seamen, and the men they are proving themselves to be; of the methods employed to obtain officers; of the difficulties ahead and the difficulties already past, the remaining chapters will endeavour to give some small idea.

CHAPTER III

THE PRICE OF ADMIRALTY

THEY did not build the Third Flagship in Australia. There were some who would like to have seen it done, but it was a sheer impossibility. Very wisely the Commonwealth Government decided to start its local shipbuilding in the only sound way which it could have adopted-by building small ships first, and working gradually up to big ones. They started by putting together a destroyer which had been already built in England. Now they have gone on to build three destroyers and a light cruiser in the Federal yard, which they took over from the New South Wales Government. at Sydney. They are going steadily on towards the building of bigger ships. They are laying the foundations of the industry with great care and patience; and for that reason in this, as in other things, they will probably succeed.

It has seemed to some a useless—an almost pitiably useless—enterprise to introduce into a young country this business of building great warships; and pitiable in a way it is. But no one, unless he keeps both eyes firmly shut, denies that the ships are necessary. And, that being unfortunately the case, it is worth while

remembering that the building of big warships has always gone hand in hand with the building of merchant ships. In the great shipvard on the Clyde, where the Australian Government caused its flagship to be built, there was all the time, lying by the side of the Australia, the growing framework of another steamer, which made the great battle-cruiser look like a torpedo-boat. stern of this other ship was on the water's edge beside that of the Australia; but her brown steel frames could be seen running on for more than a hundred yards past the Australia's bows. It was the Cunard liner Aquitania, the biggest ship in the world. The exact details of her length had not then been published, because there was a German rival, the Imperator, at that time building, and either side would have been quite prepared to add on a few feet to the unfinished bows of their own ship, if they could have learned the length of the other. It was whispered at the time that the Aquitania would be 875 feet in length. They had shifted some railway lines and office buildings and a few other trifles to make room for her nose; and the firm had given the Clyde River authorities £10,000 towards the widening of the channel, so as to make room for her when she should leave the Clyde.

But this is to digress. The point is that the Australia was sandwiched in between merchant ships. In the basin just beside the Aquitania was what I took at first sight for a steam tender or excursion boat. She turned out to be a steamer of 13,000 tons to carry the Australian mails. Here was a liner of 12,000 tons owned in New Zealand. There were the engines of eighteen ships lying about the machinery shops and boiler shops of John Brown's: those of the Australia; those of three big New Zealand frozen-meat steamers; of the new

Warships and Merchantmen

Orient liner; of the three biggest ships then in the world—the Olympic and the Titanic, and the still bigger Cunarder; those of the new cruiser Queen Mary; those of a new Aberdeen White Star liner; of a yacht being built for an unknown millionaire on the same lines as the little floating palace lately finished for "Solly Joel"; of two town-class cruisers; and of five destroyers.

So that the industry of building warships may not be so unreproductive as it seems. The steel industry of America partly owes its birth to it. And if it leads to the building of big merchant ships, there is no country more interested in them than is Australia. The size and importance of the Australian coasting trade, with great passenger liners, floating palaces of anything up to 10,000 tons, which never leave Australian waters, is quite unrealised outside of Australia. At the present moment four steamers of 8000 tons and one of over 9000 are said to be building for local Australian companies, apart altogether from mail steamers for oversea traffic.

The building of a Dreadnought, though it will come in due time, if the Dreadnought type endures, means a vast undertaking.

To begin with, it means work for a big town of workpeople to build the hull of one Dreadnought.

A year or two back several of us, Australians and Canadians, went down to see the launch in East London of a Dreadnought slightly bigger than the Australia. It was something we had never seen; but a big ship of some sort must be launched almost every day in Great Britain. Here in England, we told ourselves, the launch of a Dreadnought must be looked on as an everyday affair.

As we got to the east of Stepney I found myself

wondering whether there was not happening some celebration that we had not heard of. Perhaps they were unveiling a fountain to the local Mayor. At least a mile before we got to the place of the launch the streets were decorated with flags - even the meagre squeezed-in dwelling-houses had burst into whole strings of them. What business could the pale little tenants of single front rooms on the third floor have with battleships, that they should buy a Union Jack or a Royal Standard and hang it out of the window alongside of that invariable pot of moulting geranium? There were heads at every window, clusters of people down all the streets. A whole district of London evidently looked on some event as the occasion for a half-holiday. One could hardly think East London was making such a festival out of the launch of a warship.

But it was. Some three thousand men had been at work on her—practically all more or less skilled tradesmen. That meant that £6000 a week had been paid in wages for months past—high, full-rate London wages paid into a very poor depressed district. Shops that had been closed had opened again. We saw coats, trousers, boots, and shirts of the sort that platers and riveters might buy, piled in the windows or on barrows outside the yard. They say in New South Wales that four or five old age pensioners will keep going a town west of the Darling River—and a good part of the East End actually depended for its prosperity on this ship—and they knew it. The moment she was launched a fair proportion of the hands had to be paid off and go and sit down and hope for another Dreadnought.

That other Dreadnought never came; and those shops are closed to-day. The trousers and boots and shirts hang over the pavement no longer. The shutters are

A London-built Ship

up on the windows. The high rates and heavier wages of East London have put that particular yard out of the running in competition with other yards in the north of Britain where expenses are lower. Whether it is morally right or wrong, or in the end really in the interest of Great Britain and the Navy that this should happen, is a difficult question. It has been the life's tragedy of one man—the indomitable little paralysed cripple, who was the heart and soul of the Thames Ironworks, and who has fought defeat inch by inch, and may still possibly win—good luck to him!

That was what the mere building of the hull meant to the whole district of London which happened to surround the shipyard. But the work even on the hull was not finished with the launch. They took her to a jetty, some miles away down the low bleak banks of the Thames; and there she lay for months, with workmen busy about her all the time, and the local railway running a special time-table to the place to serve

her needs alone.

And this was for her hull only. Across the Thames, where the engines were building, another £2000 a week was being circulated. Even hull and engines are a mere part of the ship. The making of her guns is a tremendous industry in itself. The rolling of her armour plates is another; the making of her pumps, the making of her motors and searchlights are separate industries.

And that is how our own great ship, the battle-cruiser Australia, the newest flagship of all, grew up—in little bits all over the United Kingdom. Although she was built and engined in the yard of Messrs John Brown & Co., Clydebank, Glasgow, who were also building at the same time three destroyers and a cruiser, and about a dozen of the biggest liners as well, and the engines for eighteen

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powerful steamers, yet nothing like the whole of the cruiser was built there. The enormous solid steel stem. and stern-post, and rudders—all the huge angular castings that have to be moulded all in one piece—came half way across England from Thomas Firth & Co., of Sheffield. The cruiser's steel armour plates arrived from Armstrong's, at Newcastle, and partly from John Brown's own subsidiary works at Sheffield. Her frames—that is what the layman would call her ribs-and the thin plating that covers them on the bottom and sides and all the rest of the thin plating, were pouring in from the Steel Company of Scotland, on the other side of Glasgow, or from David Colville's. The gun mountings travelled up from Vickers, Sons, and Maxim. So did the guns really, but they had to go to the naval ordnance people first to be accepted, and it was from there that John Brown's received them. The main engines were made at John Brown's, but the motors, pumps, lights, and wireless were collected from Weir's, Crompton's, Siemens's, or other Admiralty firms all over the Kingdom, John Brown's rigged the ship, and they made the masts; but they bought the ropes.

The place where the ship first really exists—from the great frowning outline of her down, not merely to the big gun turrets and turbines and bulkheads, but to the very telephone-wires that run from the fire-control platforms high up the masts to the guns all about the ship—the place where the ship is in actual truth built up bit by bit to completion before ever a single plate of her keel is laid or a rivet driven—is in the interior of a man's brain. The new flagship is 555 feet long, and she had about 7000 tons of steel worked into her even before she was launched, steel not in rectangles or straight lines, but writhing in all sorts of subtle curves.

Design

And yet one knew, with an absolute certainty, that if ever one should be privileged to walk, some day, on any of the decks of that finished ship one would find her turrets, her funnels, her superstructure, her frames, her bulkheads and partitions, her stem and her stern, and her engines to an inch where they were in some man's brain before ever the first plate for her was rolled or even ordered—or, more exactly, as they were in the brains of many men in the interior of that box of cooped-up knowledge and experiment in Whitehall which they call the Admiralty.

For the actual design for that ship does not come from the builders; it issues from the Admiralty. Within those walls they have available all the experience of all the ships in the British Navy, and of a good many ships that are not in the British Navy. They know how the bulkhead on the Imperturbable was disturbed, or how the frames of the Unshakable were shaken; they have full and explicit reports as to how the funnels of H.M.S. Impracticable covered the bridge with bad language and soot, and how the Improbable's turret workings short-circuited; and how the frames of the Impossible liked it when the big guns were turned right across the deck and fired out over the other side of the ship; and what the crew of the afterturret thought when those same guns nearly brought about the end of the world on being fired at a perfectly reasonable angle (theoretically speaking) over their If there is anything—about guns, for example which the men inside that particular building do not know, they can send out a battleship to some quiet corner of the Mediterranean, to test a device of Sir Percy Scott for laying and firing all her heavy guns at once, for example, and see what happens. Not long ago they

sent one of their very latest Dreadnoughts—the Neptune, which cost £1,728,449—to do that very thing. The device scarcely came up to expectations. So they went carefully ahead with their experiments, and two years later tested the "director" system again; ordered two exactly similar battleships to fire at the same time at two precisely similar targets. Some people said the "director" was a fair-weather device, so they ordered the trial to be made in rough weather. They fired, one ship using the old method and one the new, whilst the first Lord, and the inventor, and some other important people looked on. And this time the new method succeeded

beyond belief.

They have experimented with living warships in the dead of peace-time, and sent hundreds of men to the bottom in the Bay of Biscay in one incidental mistake. They have piled the fastest ship in the Navy in scrapiron on a small Channel island because it was worth while sometimes to keep up the pretence of war in peace, and run full speed through a fog. If nothing else is doing, they can tow old battleships out to sea and fill the turrets with dummy men, and fire twelve-inch shells and eighteen-inch torpedoes at her; they have done that to ships many times more valuable and modern than the old Victorian ironclad Cerberus—only the other day the battleship Hood, of 14,150, tons, was towed out to become a target. They were lately submerging submarines and exploding mines and torpedoes near them. If the submarine sinks they reckon it is better to know it sinks, empty, in peace, than to be surprised by its sinking, crew and all, in war. It is all in the day's work for the Royal Navy.

Of course, they can only give to each ship those of the latest ideas that were complete enough to be practic-

A Change of Plans

able on the day when that design was settled. The very next month some experiment may change the whole state of their knowledge on some point—but the chances are the design cannot be altered to suit it. Ships have been altered on the stocks before now; you can keep them hanging there for years—some Navies do. In the case of British ships it is rarely done. But there are occasions which warrant it.

A couple of years ago, for example, after the unarmoured cruisers *Melbourne* and *Sydney* had been ordered by the Commonwealth in England, Senator Pearce, the Australian Minister for Defence, announced that they would each cost somewhat more than had been at first estimated. They had been planned to cost about £350,000 each, but the Admiralty now recommended a rather stronger design, more suitable to the heavy work on the Australian coast. The alteration would mean an increase of about £100,000 on each ship, but was well worth it.

Many months later, when these ships came to be launched, it transpired what the alteration was. They had been planned as "unarmoured" cruisers—or "protected" cruisers, which is more or less the same thing. But behold, each of them was built not only with a protective deck, but with a light armour belt.

What had happened was apparently this: The Germans have a class of cruiser corresponding to these fast light cruisers of the British Navy. They call them "small" cruisers. These small cruisers had always been unarmoured, and, protected like the English ones, only by an armoured deck near the water-line to shelter the vitals of the ship from shells exploding above them. After the *Melbourne* and *Sydney* had been planned, however, news came to the Admiralty through one of

those mysterious channels through which news does. from time to time, leak into Whitehall or Berlin, or Paris or Washington, or wherever there is a market for it, that the very latest of these small German cruisers was having armour put on to her sides. That would make her a very tough customer for any small British unarmoured cruiser to tackle. As it happened, it was not too late to change the plans of the Melbourne and Sydney, and the alteration was quietly made forthwith. But most ships have simply to stand or fall by the knowledge their designers possessed at the time when the country called for them. How many men, apart from the particular man in each case with whom the decision ultimately rests, realise that the mere responsibility of saying whether a new idea is sufficiently advanced to be used, can well be a matter to turn a man's hair grey, and keep him awake of nights? Again and again, where the Admiralty judged some invention worthy the risk, they have jumped into the dark, staked millions upon it.

The old flagship, the *Powerful*, was one of the jumps. Some Frenchman had invented a boiler in which water, instead of being held in a heavy canister which took hours to thaw, ran in hundreds of little tubes and boiled in twenty minutes. The Admiralty tried them in two gunboats; then, all in one jump, put them into its two

precious cruisers, Powerful and Terrible.

It was a big risk to take; for they were famous, mighty cruisers then, and all the Admiralties and Navy Boards of the world watched the experiment narrowly. An American officer told me of his excitement on the day he had first seen the *Powerful*. He was one of a hundred boys on a training-ship. They turned early one morning into Plymouth, and brought up underneath

Taking Big Risks

the towering black sides of what seemed to him, looking up, a monster of a ship. They all knew her by reputation,—with her new Belleville boilers, and portentous speed and size. He said that, boy-like, he prayed inwardly that he might some day come to command a ship like that. The two cost over £1,400,000. The Admiralty staked it on the water-tube boiler; and won. Europe followed.

Years later, when water-tube boilers were an oldestablished fact in all Navies, but when they still clung to the old reciprocating engines for all big ships—it fell to someone in England to make the decision that it was time to put turbine-engines in the *Dreadnought*. It may be nothing to the man in the street—and yet there might well come a day when a certain angry cloud had appeared on the horizon which threw the whole fate of England upon the boilers of a big cruiser whirring back with a report of it; or when something half seen in the night caused the lives of 800 men and more in one grey ship suddenly to hang upon the quickness with which her officers could put her astern or quicken her.

England cannot rest on her oars, because she is the only country, with the possible exception of Australia, that can be killed outright on the high seas. The Admiralty has to seek new ideas, and at the same time it must exactly draw the line against hare-brained innovations. It must adopt every new thing the moment it becomes workable and not the moment before. As a matter of fact, in this matter of turbines the Admiralty showed the way to private shipowners, and they certainly led the other Navies; indeed, in March 1911 there were already twelve big armoured ships completed in the British Navy driven by turbines as

against only four in all the other Navies. The Admiralty broke the way into torpedo-boat destroyers and scouts. It started late in submarines, but easily leads in them to-day.

The one ship in which the Admiralty is distinctly behind is the airship. No doubt they did not wish to go too fast, with the risk of rendering the whole existing Navy more or less obsolete. But when others begin to build really airworthy vessels the Admiralty needs must follow. They did build one unfortunate experiment—an airship as long as the Powerful—but she broke in two on the very first trial. That seems to have shaken the Admiralty's faith in airships, and England appears likely to trust, for her air defence, to aerial "destroyers," quick-rising, swift-moving aeroplanes or waterplanes, each with a machine gun, built to soar above any slower airship or aeroplane and kill it. Of course, the airship is very vulnerable by day; but it has these points worth considering. It can fly as easily by night as by day; it can cross really big stretches of sea; and it can remain stationary over any point.

All this is the worry of the Admiralty; indeed of a single department of the Admiralty, most of it. And it may give a mild idea of what the Admiralty is and what the Navy Board in Australia will have to be. Australians—who know something of the ways of public departments in democratic countries—can imagine the store of energy that must have gone to put and keep a public department in a condition in which, by its own alertness in its own class of enterprises, it now more or less automatically leads the world. It may be the Admiralty is no more than a sound, progressive, modern institution; that it gets no more than a good, honest, average day's work from its sailors. The point is, that

A Progressive, Modern Institution

the mere fact of being a sound, progressive public office; of showing the way, on the whole, to Europe, America, and Asia; of being first into new fields when you may render £250,000,000 worth of steel obsolete in the old one; of getting an honest day's work out of public servants at all, and continuing to get it indefinitely, not scamped but thorough even where it does not show, when the reward of it all may be a hundred and fifty years beyond the horizon—this is a wonder in itself.

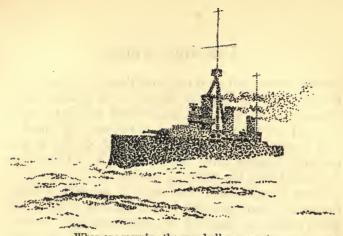
The Admiralty has not always been awake. It is only within quite recent memory that it has been caught out of that dreamy dark backwater where the British offices sleepily revolve, and swept into the mid-current of modern progress. The real origin and reason of the change seems to have been that, in the melting-pot of a very huge service, some three or four men have come to the top of such sort as had the ability to set their standard on the Navy. A Fisher or Beresford or Scott is a man who may possibly exist in every million, but is rarely found out. A single Wilson may not be born to any nation in a century. We talk glibly of the deplorable lack of great commanders in these days, because we do not recognise that it is a rare thing for the world to have even one great commander in it at a time. The country is lucky which finds a single great specialist out of forty millions of citizens.

The unquestioned success of the Royal Australian Navy in the first critical years of its infancy—and of its infant Army too, for that matter—has been due, to an extent which it is perhaps hard to overestimate, to the possession of an able and courageous administrator—Senator Pearce. As Minister for Defence in a Labour Government, on whom the creation of Australia's Army and Navy happened to fall, he first set himself this standard:

that nothing less than the best would suffice for Australia. And he then went on to attain that standard with a determination that would not be denied. Those who are aware of the facts know that this meant the abandonment of the old standards-especially in the case of the Army-and the outright creation of new ones. It is no secret that in carrying out this task the Minister for Defence had frequently to face a fierce opposition. But having chosen advisers who, he believed, would have the courage to tell him what was right and what was wrong, he himself had the courage to stand by their advice; and in spite of the temporary unpopularity of some of the steps which he knew it his duty to take, he lived that opposition down. And the sum of three years' singled-minded administration is that the Australian Army and Navy are now fairly established in such a tradition of thoroughness as few of us ever hoped for and none would ever care to see die out.

Under an administration of this sort, in which political influence has no place, there is every chance that the needed specialist may come to the front.

Indeed, there are signs. . . .



. . . When one morning the grey hull moves out . . .

CHAPTER IV

THE MODEL TANK

THE first place in which the new flagship existed was in the grey matter of her designer's brain; and perhaps, if the idealists are right, that was the only real existence she ever had—and the great rusty construction that we saw growing by the side of the Clyde, like the skeleton of a half-eaten sea-monster, was only a copy of the real ship—as Plato would have said. And in that case the tiny hull, that was trailing its ripples across the tank in a neighbouring shed, was a copy of a copy.

For true it is that the second form in which this flagship existed was as a toy boat in a model dockyard. In John Brown's great shippard at Clydebank, where the Australia was built, is a long, narrow, enclosed tank, not unlike a swimming-bath; and floating in it are a number of miniature hulls. They are models of big ships—made exactly to scale. They could not have been made more exactly; because they were shaped by a machine which, when guided over the lines in a

contour-drawing of each hull, cuts lines in the model to the exact depth and at the exact position of those in the drawing. It is a wax model, moulded a little too large at first; but when these lines have been cut round it like contour lines on a map, the face of the wax is carefully scraped away until the level of those lines is reached, and the model is perfect.

What they do with that model is to make it move through the tank in order to find out the effect of the ship (which the brains of the Admiralty have evolved and sent down to them) on the water and of the water on the ship. They first find the model's weight, and then put further weights into her in the place of those which will be in the ship as she steams out of port with her bunkers full. Or, if they prefer, they test her in the condition in which she will probably fight—with her bunkers half-empty—and put water-lines on her for displacement. They trim her as she lies in a miniature dock, and she comes out of it an exact replica of some

ship of which perhaps the keel is not yet laid.

This particular tank is 133 yards long, and

This particular tank is 133 yards long, and 20 feet wide, and 9 feet 6 inches deep. They do not put a model engine in the boat—they do the same thing in another way. Over the tank, like a bridge, is a travelling platform moving on rails which are laid along either side of the tank. The platform is driven by electricity like a tram-car or a travelling-crane. You can move on it at various speeds up and down the tank—the water whisking by just underneath you. They float the model under this platform, and fix it to the platform by means of a lever; so that when the platform moves it drags the boat through the water below. The boat, of course, tugs on the lever which is holding it to the platform; and the exact strength of the tug is

Her Wash in Miniature

recorded automatically on a chart above in red ink; while on the same chart and at the same time two other pens in blue and green record the distance travelled and

the time occupied.

You may stand on the side of the tank and watch the model cleaving the surface into lines; and you may know that if you should happen to stand on the Clyde shore on a cold, grey morning eighteen months ahead, whilst a certain grey hull opposite makes her way for the first time through that glassy early stillness, the ripples that will come widening from her slender bows towards the shore at your feet will be the exact replica of the wash that waves along the side of this miniature ship to-day.

That is not all. They fit the model with a propeller, and drag it along with its idle propeller after it to see what the added resistance is; and then they repeat the experiment, only with the propeller turning at the right speed to produce the pace the model is moving at—they turn it by electricity. Then they try other propellers of different pitch, to see which one they can get the greatest

efficiency out of.

The model of the "Third Flagship" sailed up and down that tank like all the rest. I do not know what the results were; but the model test of her sister ship, the *Indefatigable*, showed that although she was planned for twenty-six knots she would probably steam twenty-eight. And she did.

They use that tank because there are some things even the naval architect can hardly foretell. He could tell you more or less what the strain will be on his ship's back when the middle of her is supported on a wave, and the two ends are practically unsupported and sagging; or when the two ends are held up on waves,

and the middle is unsupported and hogging. He can reduce those strains to a formula, and strengthen the ship against both by means of her plating, decks, fore and aft bulkheads, or anything else running fore and aft. If the great guns near one side of the ship are going to be turned right round and fired over the other side of the ship, he has to make sure the shock will not wrench the ship's side behind the gun turret. These factors are complicated enough. But they are as clear and certain as the day, compared with some of the forces which have to be taken into calculation. For there are things that can be a perpetual puzzle even to a naval architect. Here, for example, is the sort of consideration in which his brain has to deal.

As a ship moves through the water, he will tell you, she presses away from her with her bows the water through which she moves. That particular water is to some extent stopping the ship, and stops her more or less according to the shape of her bows. But as soon as the water pushed aside reaches the long, straight side of the ship it ceases to stop her except for a certain small friction upon the surface of the ship's plates. As the ship begins to narrow in towards the stern, the water pushing against her sides, so far from being an obstacle, begins to help her-exactly as the wind pushes along the mainsail of a cutter which is sailing into it. If a ship had a stern cut off abruptly half-way down her length, the water would not help her at all. And here again, according as her stern is shaped, the water will help her more or less. The propeller following her adds another series of sums to the problem, and the water following the propeller adds one series more, and the pitch of the screw and the rate it is turning, and the water it is churning, all come into it. They have had

Complicated Problems

the propeller turning so fast in modern ships that there formed a big vacuum behind it, and only the tips of the propeller blades were touching the water at all.

The truth is, a ship does not even look the same to her designer as she does to the man in the street. To the man on the Quay, standing and looking up at her, she is something of a big blundering elephant. Jove! She'd shake down anything she bumped into, he thinks. But a delicately-framed hollow parcel, with walls of paper tied together with string, and propped out with matchwood, a little less flimsy than an aeroplane, just calculated to do a little more than stick together under any reasonable strain—that is not more delicate than a big ship to a naval architect. If you lifted a liner out of the water by putting slings round each end, and hoisting, she would break in half in most cases, out of sheer weakness.

There was a torpedo-boat destroyer some years back, which had been handed over to the Admiralty by her makers, and was steaming down the North Sea through a fierce wind, plunging as destroyers do from the heart of one wave through the heart of the next, when they heard or felt a sudden grating. A little later something grated again—and the bows of the boat began to rise and the stern to rise also, and the centre of the deck to sink, as if it were on a hinge. The last thing the survivors saw was the two forward funnels telescoping against the two after funnels.

The idea of the papers next morning was that she had touched some sandspit off the coast—and the men that were drowned probably never knew what the cause of the accident was. But it was found there was no sand or rock anywhere near. What had happened was that some time in that storm—perhaps when they heard that

first grinding in the depths-she had crashed from one wave on to another in such a wav that her centre, with all the weight of the engines above it, was in the trough, unsupported, whilst the two ends were held up; and the rivets and plates on the bottom had torn asunder with the strain; and as the tear spread the ship shut up like a footrule. A private firm had built that ship to see how swift a ship it could build; but before the Admiralty had taken her over they had required her to be strengthened, and strengthened she had been. that they were at some pains to find out whether the existing destroyers would be likely to do the same. They had numbers of them brought into dry dock, and then caused the blocks supporting the middle of them to be withdrawn, leaving the chief weight in the ship reposing on thin air, while the strain was carefully observed. It was found they could stand the test pretty well, though many were strengthened; but the oceangoing destroyer they build to-day is a considerably stronger affair.



Photo. Cribb, Southsea.

THE THIRD FLAGSHIP.

CHAPTER V

THE HULL

THEY built the first flagship by the side of a Norwegian creek; propped her up on the sloping, sandy shore, in front of the soft, dark pine trees; and brought down poles from the forest, and heavier timbers from the sea. And neighbours passing up and down the fiord caught the echo of the hammers and watched the new ship grow from day to day down there by the water's edge.

And there they have gone on building ships ever since, and there they build them still—on the mud by the creek's side. Only it takes six months, more or less nowadays, to make the mud on a river-bank fit to support a ship, and especially a heavy warship. The bank of the Clyde, where they built the third flagship (and about a dozen other ships of all sizes alongside of her) looked, to the uninitiated, just the ordinary muddy bank of an extraordinarily muddy river. But the weight of a modern hull is so enormous that the ordinary riverbank would sink under it. And, besides, there has to be provided a way down which the ship may slide when she comes to be launched. They have to drive whole pine trunks into the mud by the hundred, and build on top of them a foundation fit for a skyscraper, before they

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can put a single steel plate in position. That is what a slipway really is. But the only sign of it all that remains above the surface is two processions of pine baulks lying flat in the mud, with a sort of raised backbone of wooden blocks between them, like some skeleton of an antediluvian fish stamped in prehistoric strata.

That is the matrix of a Dreadnought.

Fortunately they do not have to lay down a new slip for every hull built there. The same ways can be used again and again. But the mere enlarging of launching ways originally made for the battleships of only six years ago, to fit the increased width of the battleship of to-day—it is generally the great width of the new battleships more than their great length that outgrows the docks and slipways—may mean the driving of six hundred pine poles from twenty-five to seventy feet long, and the building of a heavy framework on top of them.

The slipway has to be there, with a host of cranes and attendant machinery, before a ship can be undertaken. The actual procedure of ordering a Dreadnought is as follows:

The Admiralty sends out the plans of the ship it wants. The great firm, that has set all its energies going to get out its best possible tender, and has waited anxiously, and at last has received the glad news that its tender is provisionally accepted, runs up the Union Jack over the slipways, and sets its whole drawing staff at once to work to get out its plans of the details—the actual position and number of the plates on the ship's side and such smaller matters as are left to the builders to work out; and sends those details along to the Admiralty for approval. The Admiralty asks by what day the firm will want the guns and gun-mountings and

The Keel

armour plates to arrive, unless, as in the case of the two great firms of Armstrong Whitworth and Vickers Maxim, the same firm makes all these things itself. The Admiralty, sees to it that the contractors for guns and armour shall have those things sent along and lying at the ship's side by the dates on which the builders have said they will be ready for them. The plans come back from the Admiralty. And the first great function in the life of a ship takes place—the laying of the keel.

The keel is the beginning of the ship. The Australia has three of them—though to the landsman they look like one. There is the outer keel, which is flat; and the vertical keel, which is erected on top of it like the stem of an inverted T; and the inner keel, which is laid flat above that, making a capital H laid on its side. The whole lies like a gigantic tram-rail down a line of

sleepers. It is the ship's backbone.

Every few feet along the keel spring the frames which are what the layman looks on as the ribs of the ship. They do not need to be quite so close together in the Australia as in the Mauretania for example, because the Australia is stronger otherwise. The stiff, massive band of armour, which runs round the warship up above, makes her stronger than a merchant ship; and so does the fact that some of the decks and bulkheads (which a landsman would call the main partition walls inside the ship) are made of armoured plates instead of thin steel.

On to the outside of the frames are laid the steel plates, thin or thick, which make the skin of the ship.

Australians have to trust themselves to steel walls more than most; at least, they travel by sea far more than any people I know of except the New Zealanders. But somehow it had never struck one to worry, in the

course of all those coastal journeys, when a thin steel plate was the only thing between oneself and the sea bottom, how it is that shipbuilders manage to keep water out of a steel ship. One realised vaguely that the skin of a steamer was made by laying steel plates together; and, of course, if they were wood you could caulk the chinks to keep water out. But, if you think of it, you cannot caulk the chink between the edges of two steel plates.

As a matter of fact, they do not simply lay the edges of two steel plates together where they want them to keep out the water. They overlap them about five inches and then rivet them together,—one plate inside, the next outside, next inside. The edges of the frames, on to which the plates have to be riveted, are bulged in or out to suit-first recessed a little, then protruding a little, then recessed again, so that the plates shall lie flat Though they could not caulk the crack between the edges of two thin plates they can easily caulk an overlapping joint like that. They open the edge of the joint a fraction, force in a metal caulking, and then nip down the edge again. Where a plate comes to an end and cannot be overlapped, they have to tie its edge to that of the next plate by laying a small strip of steel (called a butt-strap) overlapping the two where they join, and riveting it down to each. To prevent drops of sea-water slinking in through loose rivet holes, they bevel off deeply the outer edge of the hole and hammer the red-hot end of the rivet like putty into that.

In spite of all the care that they can use, however, very few steel ships are absolutely water-tight. There is in most ships a rivet-hole or two, or a joint, through which a small salt tear does trickle occasionally. They call it weeping. The water wanders off into the waste

Like a Low Roof

places of the ship, along with oil, and condensed steam, and liquids of one sort and another from inside the ship—but it is an infinitesimal stream whose chief significance is that some rivet or other is not doing the work it ought to be doing. In the case of the Third Flagship, and all such ships built for the Admiralty, they take no chances. Before they allow them to be launched every compartment which will be below the water-line has to be filled up with water at high-pressure, and tested separately to make sure that it is equal to its work.

It is hardly a wonder if a rivet occasionally does go a very little wrong. There are about 2,000,000 in the ship; and in the lower half of her every one of them is

driven by hand.

I shall not easily forget a certain afternoon, not many months after they had begun work on the new flagship, when we dodged in between the props and blocks and underneath the bottom plating of the Australia-and there, in the half dark, watched them flattening the glowing rivets that were thrust through from the inside. There was barely twilight beneath the Australia. The huge ship's bottom was stretched like a low roof over about an acre of ground—perfectly flat and just grazing one's cap as one walked. One seemed to be in a vast low-built shed. Down the middle ran the blocks supporting the keel, an endless procession of them; and far out on either side were two other rows of blocks beneath the docking keels—two extra keels built parallel to the main one, but one near each side, so that they can place other lines of blocks underneath them for the ship to rest on when she is docked. The extra keels are there to strengthen her where she bears upon those blocks. There is no difficulty in getting a modern ship to stand upright. She sits as flat as a packing-case.

As we stood, that afternoon, in the dim light beneath the flagship's hull a red-hot finger would suddenly appear through a small bevelled hole near one's head. Two men-who of course are paid according to the number of rivets they can drive-would immediately hit it heavily and regularly on the nose with big sledge-There was just room for them to stand full height without knocking their heads against the hull. Between the blows you could hear an intermediate knock coming from someone on the inside of the ship. The three were exactly as regular as a clock. The man inside was really holding his hammer against the head of the rivet to keep it down while the other two flattened it, and every time they hit it his hammer jumps a little. The rivet jumps too at first—backwards and forwards. Then its nose gradually bulges, flattens, its movement becomes scarcely perceptible and ceases altogether. red-hot iron has been jammed like so much clay into the bevelled hole. The two men below pick up smallerheaded hammers to smooth off the job-hitting twice as fast as before—chisel off the dull plum-coloured end so that there shall be only a barely perceptible swelling and the ship may pass through the water as smoothly as a clean-shaven chin—and then leave the rivet to its fate.

Its responsibility in life has begun, and the strain of that responsibility will never leave it till, fifteen or twenty years hence, the old ship is towed down Sydney Harbour with her engines cold and dead and her funnels all rusty, to be sold (under strict limitations) for scrapiron to the factories at Botany.

In the big yards where ships are building for them the Admiralty have officers whose duty it is to see how the work on those ships is done. It may probably be taken for granted that a British shipbuilder will not put

The Protective Deck

in putty instead of bolts and rivets, in spite of the fact that it would save trouble. A firm would be scratched off the Admiralty List mighty quick—some well-known firms do disappear from the list from time to time—for far smaller offences than anything of that sort. But, as was mentioned in a previous chapter, there was once a foreign battleship that sailed from a port in the Black Sea to fire off her guns, and never came back. Afterwards it was said that half the rivets driven into her were wooden ones.

It is as impossible to help thinking of a ship as a living being as it would be to imagine a railway engine a dead thing. Her heart, her power, all that keeps her living and moving, are as precious to her existence, and as delicate and sensitive to interference, as the heart of any living animal. In a warship, for protection, these vitals are stowed away well below the water-line; and, like a vault over the top of them, rising from below the water-line, there is drawn, from end to end of the ship, a moderately armoured deck—generally known as the "protective deck." If you happen to catch a warship at the stage when her sides have just reached the protective deck, and it is in process of being laid like a cap over her, she looks more like a gigantic cigar than anything else.

The chief duty of this deck is to protect the engines and magazines from fragments of those shells which have pierced the side of the ship and explode within her. Of course, there have to be holes in the deck for light and air and entrance; but they cover these with layers of strong steel gratings to keep out splinters and fragments. They have to protect the side against shot for some eight feet below water, or even ten. Allowing for alterations in the ship's load, and her roll in heavy seas, it is doubtful if less than nine or ten feet below the

water-line should be armoured. The protective deck springs there; and on the edge of it, as on a shelf, rests the ship's armour.

The armour actually rests on an extension of the protective deck. On almost any armoured ship at her launch you can see the ledge left for the armour plates. As soon as the thin steel plates, which make the skin of the ship, reach the protective deck, they are recessed perhaps a foot or so, and carried up inset to the next deck but one or wherever the top of the armour is to come to, and then carried out again. The armour plates fit into the wide matrix that is left, and form part of the

ship's side, and a very strong part of it.

They used to make armour out of iron. When the privateer Alabama was challenged out of port to her famous fight in the English Channel, her people actually improvised a belt of armour out of chain cable. the days of ironclads came compound armour-steel in front to make a hard face, iron to give toughness behind. There were twenty inches of that armour on a British battleship. Then they changed to nickel steel. Afterwards they found that by laying steel face-downwards on charcoal, dipping it in water and other various means. they could harden the face of it so that it would split almost any ordinary steel projectile. For some time it was the Harvey process, then the Krupp process, later the Simpson process. Ten to twelve inches of Simpson steel will resist as much as twenty inches of compound armour used to.

The ordinary shipyard tools will make no impression on that steel. Holes have to be made in each plate at the original mills for the bolts which will hold it to the ship. When the plate comes along to the ship you can see all over the back of it holes two or three inches in diameter.

Armour

These holes do not go right through to the front of the plate; there is a thread in them, and the bolt is screwed into them from the back. A sheet of the ordinary skin plating is riveted on to the ship's frames first, and the armour plate is bolted on to this. Sandwiched between the two is a thick layer of teak. This wood backing is not added by way of armour, but in order to get the armour plate to fit. There is a great difficulty in inducing huge plates ten or twelve inches thick to lie absolutely plumb and flush with the steel plate behind them. The teak can be shaved to make the plate lie perfectly flat. They do not want the steel to begin shaking loose as soon as certain visitors of 1200 lbs. or more come knocking at the face of it.

The protective deck is armoured too, but they choose nickel steel for this, so that it may not be too hard for

the ordinary dockyard tools to work.

The designer of an armoured ship does not plaster steel plates all over her sides. The weight would be too colossal. He keeps his eye fixed on the day when it will all come to the test; and protects with armour the very smallest portion of the hull which—for the safety of the ship and the men—will need it on that day. Elsewhere the ship is left naked, free to be turned into any sort of an inferno. Cabins, messes, superstructure, funnels, may be blown about by any shell that bursts there. It is said the Japanese are armouring their funnels in order to ensure their standing, and to prevent smoke and flame emerging from shell holes and sweeping along the decks.

The masts became very important in recent years because the hole of the long-range shooting was ranged and directed from platforms high up on them. They have to trust to luck, up there, that a high shot or ricochet does not carry their station away. But to

prevent their support from being blown away beneath them, in most recent designs, including that of the Australia, they placed the platform, like a tabletop, on three huge legs. The legs are hollow, and men climb up to their station through the inside of the tube. Tripod masts had to be taken out of some of the latest cruisers because the heat from the funnels made life impossible with the masts as originally designed—but that is another story. The Americans have substituted for single masts, even on the ships we saw in Australia, open trellis-work masts, with the appearance of elongated waste-paper baskets. One has heard it said that the vibration in these is very great. The very latest development, however, is that Sir Percy Scott's wonderful invention has altered the whole system of fire control; and it is said that the use of the mast, except as a mere pole to hold up the wireless gear and signalling arrangement has practically vanished.

You will hit your opponent where you can, if ever the great test comes; over the head or below the belt or wherever he is opening. Great Britain did try to get a sort of Queensberry rule adopted, putting such an incredible horror as unanchored floating mines outside the pale of naval warfare. The letting loose of a single floating mine on any sea—much more in the crowded waters connected with the North Sea and the Channel—might well be considered an act of hostility by all civilised nations; but, on the objection of Germany, no rule could be passed against it.

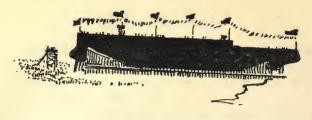
No doubt the Admiralty are defending their ships nowadays against attacks from the air. They have long defended them against aggressors from below the water. It is no secret that some of those in power at

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which believes that the weapon which will prove the master in the next war will be the torpedo. The only way to preserve the mastery for the battleship has been to make her, by every conceivable means, as nearly as possible unsinkable. Warships have, of course, long been divided below water into compartments; but it is only of late years that the compartments have been really water-tight. They now keep them so rigidly separate that there is in some cases no connection between them except over the top. In one ship, at least, they had a system of lifts to help men getting from one compartment to another.

As one walked down the unfinished protective deck of the new flagship, one looked down between the frames into this series of huge empty boxes, with the bottom of the ship as the floor of them. Some of those boxes now contain the engines; others the magazines. It is not possible, even if it were desirable, to have just one central magazine. The ammunition for twelve-inch guns cannot be wheeled about, up and down the ship. Each pair of guns has to have its own magazine directly below it, so that the big shells can be lifted by machinery straight from the magazine to the gun turret. The new flagship has eight twelve-inch guns, arranged in pairs at intervals down the length of the ship. Each pair is in a turret; and far below the four turrets, in the bowels of the ship, are the four corresponding magazines. that magazines and engine-rooms alternate at intervals down the hull.

In the new flagship the magazines have been protected against torpedoes by armouring them, although they are far below the water. There has been built, inside the outer skin of the ship, an inner skin of steel armour. It is called the magazine protection bulkhead.



. . . . She's moving!

CHAPTER VI

THE FIRST BREATH

You could scarcely hear the parson's voice above the skirl of the wind; and he was quite hidden by the gathering of personages and the flutter of feathers in the ladies' hats. The red carpeted platform was as crowded as any drawing-room reception.

For the great day had at last come. The Personages, and their friends, and the other invited guests, had been arriving by various trains from London for the last twenty-four hours. They had come to see a ship launched. "Generally worth seeing, you know," as Major Heavilands had remarked to the Hon. Edeline Normantree, during a dinner-party given by the Firm at the big hotel the night before. "Someone presses a button or cuts a ribbon, don't you know, and the whole box of tricks slides into the water. Always reminds me of a landslip," he had added, giving another twist to the regulation moustache.

The Firm, for its part, in its best-groomed top-hat and morning-coat—or whatever the orthodox apparel for the occasion might happen to be—was laying itself out to entertain the Personages, as if the entertaining of guests were the solitary clause in the company's

Chink Chink Chink

articles, and the shareholders had subscribed their money for that end alone—that distinguished Personages from London should spend a pleasant afternoon. in the course of which they might incidentally see H.M.A.S. Australia bow her way backwards into the The Firm devoted itself to seeing that the Personages did not get their boots muddy, and to bowing, and passing compliments, and generally receiving its visitors in the regal manner in which the big British firms do carry off these functions. Occasionally, one noticed somebody who seemed to have no business in that assemblage-somebody, generally, in an ordinary blue serge suit, rather bagged about the knees -would come up to the Firm and whisper in its ear for a moment, and vanish as silently as he came. And all the time from quite near at hand came the chink chink chink of iron sledge-hammers, and the occasional deep thud of some heavy body falling upon the ground. One could not place that noise at first. Afterwards one decided that it came from somewhere in the mysterious dark spaces underneath the keel. Whatever was happening up there on the crowded platform in front of the towering grey bows, this accompaniment never ceased. Chink chink chink. . . . You could still hear it even above the sound of the parson's voice as he read the service.

The truth is, that although the Chairman, between the preliminary glass of sherry and the latest story about Mr Lloyd George, manages to give to the distinguished visitors the idea—which he means to give—that the launching of a battleship is a mere pressabutton-and-there-you-are sort of affair, it is in reality a considerable feat of engineering, about which he is just the least wee bit anxious before it is performed, and

not a little proud afterwards. Those sledge-hammers beneath the keel are timed to finish their work at the exact time fixed for the launch, and not a whit sooner. They are knocking away the blocks on which the weight of the ship rested during building; and when their work is finished they leave her weight supported simply by the cradle which rests upon the launching ways. The cradle and the ways look broad and staunch enough to bear a very big responsibility. they are dealing with a mass weighing anything up to ten thousand tons. They know that if they leave such a mass bearing for long, even on so broad a support as a launching cradle, the foundations of the ways may succumb beneath the heaviest part of the hull. structure may sink so slightly that nothing amiss would be perceptible to the ordinary eye. But, when the cradle comes to move towards the water, it may have to move over an undulation or two, which would be quite enough to bring the cradle to a halt, and, perhaps, buckle the ship.

The ladies with the fluttering hats on the platform are not thinking of these things; because all they see before them is the bulging form of a monstrous grey mastodon, decked out with flags; which like most warships, when they are dressed for review, gives rather the impression of a crocodile with a wreath round its neck. But the Chairman—the Chairman sees a huge frail eggshell which he has to move over six hundred feet of land into the water without cracking it. He knows that a few years back a French battleship, the pride of the whole country, was sliding down the ways when the earth beneath her subsided and she came to a stop. She might easily have broken her back, or received a permanent curvature; and it took days of hard work

An Awkward Pause

before that launch was finished. There was an English warship, long ago, that actually toppled over on the launching ways.

If anything is wrong, once that button is pressed, or the cord cut, it is too late to go back on it. Nothing can stop her then. There was once a ship which stood ready for launching in a certain yard not a hundred miles from where the new flagship rested this day. She too was dressed up to look pretty-flags and standards were flapping along the bare top of the hull; and the Distinguished Personage in the pavilion, just in front of the ship's big ram, was ready to press the button, and see the monster duly bow its way backwards-as they do before royalty-into the water. Only, when the Personage pressed the button, though the timbers groaned, and the ship obviously stirred: though she breathed her first breath as it were and began to creep by infinitesimal degrees towards the sea-though, in short, she started all right, she did not seem to get a move on. There was an awkward silence on the platform—the personages watched and waited and did their best not to show their anxiety. In half an hour's time the ship had moved just far enough to make it certain that, if she continued at that rate, she would take the water in three days and three nights. So the distinguished personages, and officials, and suites left her still sliding, and retired to the official luncheon and toasts and speeches. Outside in the shipyard other officials were holding hurried councils of war. The tide was going out, and there was danger that if the ship quickened she might launch herself about the time it was dead low. So they decided to try and hold her up and wait for the next tide.

They tried to do so in the following manner: Up to

a short time before launching, the cradle, on which the ship rests, is clamped to the standing wavs below by thousands of long iron staples, known as dogshores. These prevent the ship, when the other permanent supports are taken away, from running down the slip into the sea. Before launching, however, all these dogshores are wrenched out; and, for the last minute or so before the actual release, the cradle is only held from slipping down the standing ways by a series of about six steel bars and triggers, arranged at even intervals down the ship. The pressing of an electric button or the cutting of a cord, releases certain weights, which fall and set in work the apparatus which knocks these last spurs aside, and leaves the cradle and hull free to movewhich constitutes the ceremony of launching in so far as the gracious lady on the daïs has anything to do with it.

In this case the ship had, of course, slipped past the first of these trigger-mechanisms. But, as she was moving all the time—one who was there told me that, watching closely, you could just perceive the motion. and that it was almost exactly an inch a minute—the probabilities were that, in the course of time, the first set of triggers would reach the point where the second set of triggers had originally been. They decided that when this moment arrived they would endeavour to lock the first set of triggers into the catches which had previously held the second set, and so bring the ship to a stop.

The critical moment came. They slipped in the triggers. The ship was locked again to the ways. She pushed aside the impediment as you might brush a hair from your cheek. They drove in dogshores by the hundred-hammered them into the ways and the cradle

What Happened to the Ramillies

Suddenly, after moving steadily for an hour and twenty-six minutes, just about the time when the Distinguished Personage inside the luncheon-hall was making a somewhat difficult speech, she quietly quickened her pace and slid gracefully into the water. It only remains to be said that she was a thoroughly successful ship; and, after about twenty years of excellent service, retired only the other day, greatly regretted, from the active list.

That is what happened to the Ramillies through a slight subsidence of the substructure about half-way down the ship. And it may serve to explain why, at the launch of a heavy ship, such as was the new flagship, the few moments after the pressing of the button, whilst they provide an interesting sideshow for the feathers and furs and matinee hats and bright uniforms on the platform, are sometimes anxious moments for the ship's foster parents. The feathers and furs do not see why, if you chose, you should not just take the ship up by the two ends and drop her into the water; whereas to the shipwrights, who have had this great eggshell tenderly in their keeping for the last twelve months or so-bearing it like a bowl of glass all the time, wedging it up, now and then with an imperceptible lift to give support to some particular weight which they are building in some particular portion of the hull,—to those men this great possession is something to be handled more delicately than a big empty paper box.

For example, for three weeks before the launch they have been preparing, with infinite precaution, to transfer the flagship's weight from the stocks to the launching

ways.

"Those wooden things," the Hon. Edeline, who had learned it from Heavilands, remarked to a small cousin,

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who was squeezed in beside her against the rail of the platform, "those wooden things, dear, they call the 'stocks.' You see, they've built the ship on them, but now they don't want them any longer, because she's ready and they're going to push her into the water."

Many more than the Hon. Edeline had the same idea. But in truth the ship had not been built on "those wooden things" on which they found her standing when they arrived that day. Indeed, these particular wooden things had only started to carry her weight the night before. The building of them, so that they might eventually support her, had been begun about three weeks ago.

Three weeks ago the ship had been resting on the supports on which she had all along been built. As has been said, she was built with three keels-the ordinary keel on the centre line, and two short docking keels, one on each side beneath the bilge amidships, placed there specially in order to help to carry the weight of the broadest part of the hull when in dock. These keels rested on three parallel roads of blocks, short fat blocks of timber piled one on top of another like sleepers. There might be six or seven separate pieces of wood in each pile, and the piles stood nearly as high as a man. The means of moving the ship whilst on the stocks is obtained by inserting as one layer near the top of each pile of blocks a pair of long wedges, laid in from each side, so that they exactly fit one another. Both faces of each wedge are black-leaded, so that they can move smoothly against one another. During the whole progress of the ship they had been continually hammering those chocks further in, first in one place, then in another, so as to tighten up the supports beneath parts of the hull. The ship has in reality been moving ever since the

The Launching Ways

day when Lady Reid drove the first rivet into her keel. It is true they have been shifting her only by imperceptible fractions of inches; but she has never been still.

The blocks under the keel were laid at intervals of between three and four feet—beneath each frame of the ship. Further out, where the bottom began to round up towards the sides, were the shores—not dogshores, but big timber supports for the ship—a whole forest of them, growing taller and taller as they reached higher up the ship's side. On these shores and the three rows of blocks beneath the keel the weight of the *Australia* had been resting.

Between these three rows of blocks there were of course two empty spaces; two open avenues, as it were, left between the blocks under the central keel and the blocks under the docking keels. These dark alley ways lie clear, beneath the ship's wide bottom, down her whole length. Along them, three weeks ago, they began to

lay down the "launching ways."

That is to say, down these two avenues, as near the outer side of them as they could and just inside the docking keels, they laid down, on two more rows of blocks, two smooth, even pathways, leading down as straight as a pair of tram-lines to the sea. Those two fixed paths are called the standing ways. The smooth, wide surface of each path was covered deep with tallow; and then on top of the tallow were laid down a second pair of wooden surfaces, face downwards, so as to slide smoothly over the standing ways. These upper surfaces, above the tallow, are known as the "sliding ways"; and from them, reaching up to the side of the ship itself, is a stout structure of timber, built so as to fit the side of the hull, and known as the "cradle." As has been said, the

sliding ways and the cradle are clamped down to the standing ways by the hammering in of innumerable dogshores. At the bow and the stern, where the ship is narrow, and the timbers of the cradle reach far up the side, the tops of the timbers fit into a long metal shelf or socket, which is riveted into the side of the ship.

Those timbers and launching ways were all in position beneath the hull of the Australia by the afternoon of Tuesday, 24th October 1911. The cradles were touching her sides; but although to all outward appearance they were bearing her, as a matter of fact they were only leaning against her. The whole of her weight still rested on the blocks beneath the three keels—some three hundred of them—and a forest of baulks and poles beside.

Just about the time the day shift was leaving the yard on Tuesday evening, the men around the great cruiser, which was to be launched next day, had begun to hammer in the wedges beneath the cradle—for there were wedges there too—so as to lift the cradle taut up against the ship; and from that moment the weight of the ship began, infinitesimally at first, but in an ever-increasing degree, to be borne by the cradle and the launching ways. All the night they worked, always tightening the cradle up to her, and also letting her down on the cradle by gradually felling the long props along the sides, felling them like trunks in a pine forest, until it was almost dangerous to walk there for the poles toppling about your path.

That same night, working like devils in the weird uncertain light reflected in the black water under the stern, they fixed the four great golden propellers on to

the carefully swathed shafts.

And then, at last, towards morning, they began to

Wednesday, October 25th

knock away, one by one, the blocks beneath the keel, and the few short remaining shores beneath the bilge of the ship. They picked up a log, and battered them down, whole gangs of men running at them and ramming them, as Roman soldiers would batter a city wall. In the meantime they were knocking away the blocks from beneath the three keels-not all away at once-forcing the wedges out by ramming them also with some wooden apparatus. It was so dark beneath the ship's flat bottom that even at midday, and though they worked there with flares, one could not make out exactly what sort of apparatus it was. By half-past eleven on Wednesday they had knocked away as much of the supports as they cared to for the time being. It was whispered that the tide was coming in a little late—a contrary wind kept it back—and the launch was timed for high tide. All the blocks under the ship's stern had been knocked away. About one in three was standing amidships, where she was now resting chiefly on the two docking keels, and all but the last sixteen blocks had gone from the bows.

It is very near the time now. Visitors begin to arrive—it is about time they did, for they do not wish the few remaining keel blocks to buckle the frames above them. After all, frames are only frames! They will hold up the responsibility of the whole ship manfully for a certain time. But there comes a limit. . . .

The last scene—you can see it all for yourself at the launch of any great ship. They have left the knocking away of the blocks to the very latest possible hour, so that the men will have reached the last few exactly at the moment when the choir has finished its hymns, and the Chairman of the Company has safely entered his peroration, and gives a last twirl to his eyeglass, and

puts his right hand in the breast of his frock-coat, and bows the Personage to press an electric button or cut a

rope and add another Dreadnought to the fleet.

Even now they do not knock away quite all the blocks. They leave her to pull a few of them over, out of harm's way, as she goes. But for an hour past you have listened to that unceasing chink chink chink of sledge-hammers somewhere under the ship's bottom. You could hear it above the airs of the band. Its origin is hidden from you by the dense wooden frame of the ways; but every now and then a man goes in between the great timbers and disappears. Chink chink chink There is a fuss amongst the frills and hats and feathers up there on the platform—some great person arriving, no doubt explanations being made, compliments bandied—and all the time, from under the keel, that unceasing chink ... chink ... chink ... The Chairman of the Company can hear it. He has introduced the Hon. Edeline twice within two minutes to Major Heavilands -a curious mistake for one not accustomed to lose his head in a crowd. The Hon, Edeline wondered if he was playing a mild joke; he looked at her rather grimly, she thought. But what he really saw was a gang of sweating sinewy workmen driving wedges into refractory blocks of wood, down there in the half-dark, splitting them and knocking aside the bits, taking away chock after chock upon which the ship is actually resting. The Chairman is turning to receive another gracious Personage. But he can feel the ship settling down on to the cradles as acutely as if he were receiving her on the broad of his back. Two minutes later, over the heads of the crowd, there comes to you the distant sound of the choir singing. But that never-ending chink

The Creak of Timbers

chink chink runs through it like a nightmare. The hammers are getting louder now, and closer. The sound of them comes from almost opposite you, underneath the cradle at the bows. The time is getting very near—ten minutes, eight minutes, five——

What's that? You could swear you heard the timbers of the cradle in front of you creak. Can it possibly be the settling down of this monster? Heavens! it must take something to make seventy tons of timber baulks creak! Perhaps you were mistaken. The man beside

you says he heard something too. . . .

Cre—e—eak! There was no mistaking that. The weight is coming down on to those timbers with a vengeance. An official in a bowler hat, with a watch in his hand, walks past just below you, going towards the bows. You can see up there the men in charge of one of the hydraulic rams—insignificant instruments butting into the cradle on each side of the ship, to be applied if she does not move after the first few seconds—standing in suspense by their taps. Clearly they can see the gangs at work right under the bows now, for you can notice the ladies watching them. The Engineer on the platform, in the society circle, is smiling and talking bravely, but he must be feeling it down his spine by this. . . .

Someone shouted goodness knows what. The men are scuttling out from underneath the ways like rabbits bolted from a burrow. There is an instant's silent hurrying, and then an iron weight suspended high up the ship's side drops—Bang!

The metal spur, which has been holding the cradle from moving, slips aside. Somebody helps it with three or four feverish sledge-hammer blows. For half a minute the pins had been withdrawn from those six

bars which still locked the ship. For just half a minute the sliding ways had hung to the standing ways by six insignificant links—and now that last catch was

slipped.

We did not see anything happen. We only knew that the whole monstrous structure had heaved one vast sigh. Every one of the last sixteen blocks, that had been left to support the bow, simultaneously groaned. Then they creak—creak—creaked again. Fifteen seconds passed. The mechanician was bending over his hydraulic ram. The rest of the world was watching—holding its breath. The gangs were standing by, watching too. To outward appearance they were unexcited—but I saw one old warrior catch hold of the cradle and give the ship a shove, under the vague impression he was helping her.

For as long as it takes to read this there was not a motion in the hull. I had marked a certain spot of grease on the cradle and on the ways, and I could swear it had not moved. Someone behind said, "She moves." He was a foreman. He said it again.

Watching with all one's eyes one did seem to detect a movement—a shift of a hair's-breadth. But it must have stopped. She was not stirring now—surely.

"Oh yes, she's moving," said the quiet voice again.

"Can't you see the tallow squeezing out?"

Some seconds later, there was no doubt of it. She was moving. It was the gentlest thing in motion that ever was. It was slower than the hands of a big clock—but it always increased. The tallow—there were ten tons of it buttered on the ways, besides oil and soft soap—began to squelch out from beneath the cradles, at first lazily, then like mud under the wheels of a motor-car. The sixteen blocks at the bows were still all taut against

She Moves

the keel, but they all seemed to be moving, bending over, all together, like a squad of soldiers. She pulled them over like ninepins as she went. Presently the ram passed us, moving as fast as a man could walk-and she always went faster, faster, faster; dwindled as the tail of a vanishing train dwindles. We could see the vacant berth, the sky above, the long thin poles of scaffolding, the little figures of the crowd waving and cheering opposite. As her stern took the water she made her bow; that is to say, the river lifted her stern, and a weight of some 2500 tons was brought suddenly to bear upon the forward part of the cradles. They strengthen the cradles especially to bear that tremendous crushing, and strengthen the ships also, from the inside. The Hon. Edeline thought it looked very pretty; with cheeks flushed and lips parted she vigorously waved her doll's pocket-handkerchief along with the rest.

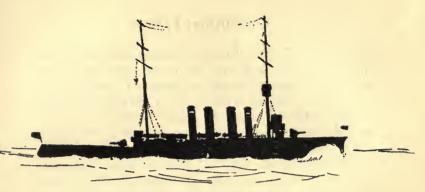
They let the ship make her curtsey, and they pulled her up, to all appearances, within her own length. Four huge wire cables had been fastened in staples on each side of the hull. The cables were lifted up temporarily along either side towards the stern, and laid forward again along the ground towards the bows. On the ground near the bows on either side of the ship were lying four great coils of heavy chain cable, wound and wound till each was piled in a heap about five feet high. The end of each cable was fastened to one of these coils. I imagined at first that the chains were fastened to the cable as a sort of prolongation, but it was not so. The cable is not fastened to the end of the chain, but is looped round the whole coil at the end furthest from the water. As the ship recedes the cable snaps the thin cords that hoop it up along the ship's side, and finally tugs on the coil of cable. As it is attached to the further

end of the coil, it has to pull the whole coil of chain over to start with, and then drag it along the ground. When you have eight cables and eight coils at the end of them, the action of pulling them over is quite enough to stop the ship. The Australia dragged them quite a short way along the ground after her, like a puppy worrying a rag. The wooden portions of the cradle floated easily away from her—they could not float far, for they had been all carefully tied with a wire hawser beforehand. The steel portion of the cradle was, of course, still fixed to the hull—not to be removed until she was dry-docked just before her trials. The ship checked and came moving slowly back towards the land again.

Heavilands wondered if the Hon. Edeline often looked

so bewilderingly pretty.

And the first flagship of the Australian Navy had breathed her first breath.



. . . They put turbines also in the Melbourne . . .

CHAPTER VII

THE NEW ENGINE-ROOM

It may be that in describing the Australia I am writing of an age that is drawing to its close. There are not wanting signs that the age of steam is well-nigh finished; and that the day of the warship of huge size, driven by these wonderful ponderous engines, is already almost done. The big warship is a ship of big guns—she has to be big in order to carry those guns. And although the big guns of to-day are tremendously effective, especially with the new methods of control, it is no longer certain that the gun has that great lead over the torpedo which it possessed five years ago.

For the torpedo has been vastly improved of late. Five years ago the big guns had twice the effective range of the torpedo. To-day the Whitehead torpedo equals, if it does not exceed, the big gun in this respect. The range of the 21-inch English torpedo, Mk II., is from 10,000 to 11,000 yards, and it has an effective range of 6560 yards. It now carries an explosive charge three times as heavy as those used in the war between

Russia and Japan. Torpedoes to-day are not driven by compressed air simply, as of old—they are fitted with superheaters for heating air and steam, which more than doubles the efficiency. Fighting by day, the torpedo craft will stand far out towards the horizon, and discharge a comparatively slow-running torpedo—for example, a 21-inch torpedo which will travel 8000 yards at 27 knots. But by night the chances are that you can dash in closer to the enemy, and get away again before harm reaches you. And so for night they will probably carry a torpedo of short range, but very swift—one, perhaps, that will travel 3000 yards at 41 knots.

There are signs that the torpedo, and the bomb of the aircraft, may be more than a match for the big ship. And England has been steadily experimenting, of late, with the large submarines and submersibles, which may conceivably be the battleships of the future. And even the newest surface craft, the "light armoured cruisers," are really enlarged destroyers under another name. If either of these classes beat the Dreadnoughts of the seas, and become themselves the battleships of future fleets, England will have hedged well against the new development, and will have as good a lead in torpedo craft as she had in big-gun ships.

It may be that the Australia will be one of the last ships in the Royal Australian Navy to carry steamengines. It may be that readers of this book, a few years hence, will be wondering as they read, how we, their benighted predecessors, could ever have tolerated those antiquated, uncleanly bunkers, and stokeholds, and engine-rooms, and the grimy coal or the ponderous machinery that filled them. Of course coal will go—the Admiralty has not been in the least blind to that.

Coal or Oil?

It has experimented for years with oil as fuel, well ahead of the rest of the world. All the small craft and most of the big ships in the British Navy are now built to burn oil, either by itself or as well as coal. They can use coal or oil - whichever they please-in the Australia's furnaces; or both mixed. The separate doors for the two fuels are beneath every boiler. coaling of the future ships of our fleet, lying quietly alongside a wharf at the federal port, with a few big pipes siphoning oil from tanks ashore into other tanks in the ship's double bottom, will rob future Australian wardrooms of some very interesting and grimy episodes. Oil is so much more efficient to burn and easier to transport, and to handle; the ship's tanks are so easily replenished at sea; the saving in time and space and labour, and therefore perhaps also in money, is so great, that coal is already obsolete, provided that oil can be obtained. The mere prospect that the battleships in a blockading fleet can be refilled with oil, without having to return to some haven to coal, means a huge economy. In a blockading fleet of nine ships, burning coal, you would have to allow for the absence of at least one ship at any time. Whereas with oil a ship can be almost independent of ports. The value of coaling stations all round the world has been appreciably lowered by this prospect.

There are many who go further, and say that oil will shortly be used in the biggest ships not merely as fuel in the ship's fires, but as an explosive in the ship's cylinders; in short, that steam is a past number, and that not only the merchant ship but the battleship of the future will be a motor-boat. The great efficiency of internal combustion makes this certain. With small ships the change from steam to oil engines is practically

in process now. But with very big ships there is reason to doubt if it is as near as some people think. Big ships of late have been given such enormous horse-power, that it is asking rather much of the oil-engine to become responsible for them all at one step. The Australia has engines of 44,000 horse-power. Up to a few months ago there had, I believe, not been built an internal-combustion engine capable of developing more than 1200 horse-power per cylinder. It would need nearly forty cylinders of this power to drive the Australia. And since the Australia was designed the horse-power has sprung to 70.000 in the Lion and Princess Royal, 75,000 in the Queen Mary, and 110,000 in the Tiger. There the limit has certainly been reached for a time, as the Admiralty has since gone back to rather slower but more powerful ships. But it is worth remembering that it would need between ninety and a hundred cylinders, of the present size, to drive the Tiger by internal combustion.

Now your despised steam can produce those enormous horse-powers without winking; and the marine steam turbine, at any rate, is not by any means at the end of its possibilities yet. Its inventor is still at work on the new "geared" turbine, and the Admiralty has lately received a first experiment with them in the shape of H.M.S. Badger. They find every day that further economies are possible with superheated steam—and there is still the whole field of steam-generated electricity in the background.

Therefore, although steam is probably obsolete, the turbine is fighting well the last fight for the steamengine, and it will die hard. It may be of interest to those in the next age, which is almost entered, to know something of the clumsy, ponderous, elephantine wasteful

The Old Steady Heart-beat

machinery upon which their predecessors looked with such pride as the very perfection of the science of their time.

It is not an engine-room like that of the Powerful which has here to be described. Listen a man never so hard, he will not catch on the Australia that comforting old slow-and-steady heart-beat of the Powerful. It has gone with all those great steel thews and thighbones, that used to pound their slow circle in the huge complicated engine-room of the old flagship. They were all part of the still more ponderous stateliness of a still earlier era that closed before the Royal Australian Navy began. The main engines are all neatly enclosed in compact easings, nowadays. There is practically nothing left to oil or pet or feel the pulse of. The

engine-room scarcely knows itself.

For they have taken the heart out of the battleship. They have installed a sort of whizzing, whirring power plant instead. Excepting only in the American Navy, which still clings to the old style of marine engines in its newest and largest ships, the old familiar throb of the reciprocating engines can be heard only in mediumpaced merchant ships nowadays—the newest, fastest passenger steamers have turbines. The Admiralty, which has kept well ahead of the merchant service of late years, brought in turbines to the Dreadnought, and it has never gone back on them. Every one of the ships built or building for the Australian Government is turbine-driven, except the submarines, which will be driven, like a motor-car, with an engine whose fuel explodes inside the cylinder, and which they therefore call an internal-combustion engine. On the day when they drive Dreadnoughts also like motor-cars the throb of the piston thumping the crank round will be heard again in the British Navy.

They have put into the new flagship, and into the Sydney and Melbourne too, and probably there will be put into the warships built in Australia until the oilengine supplants it, the invention with which an engineer, the son of an Irish peer, a Cambridge man and a wrangler, astonished the world in the year of Queen Victoria's Diamond Jubilee. He fitted a small private torpedo-boat with it, and at the naval review, just before the procession came along, raced her down prohibited places between the lines at a pace at which the Admiralty's newest thirty-knot destroyers, ships of twice her length and three times her power, could not have caught her; and reaped a fine gratuitous advertisement. Some laughed at him, at the time; and others put the exhibition down as "deuced bad form" and very improper - and it was two years before the Admiralty gave him an order. But he is the Hon. Sir Charles Parsons now; and the turbine engines already afloat would aggregate six million horse-power.

Sir Charles Parsons's turbine was practically unchallenged until lately an American invented another sort of turbine, which began to fight hard for place in the world's warships. These new turbines were known as Curtis turbines, and they had some advantages over the Parsons turbines. For one thing a ship fitted with them did not need more than two screws. Ships driven with Parsons turbines had at least four—the Australia has four screws and two rudders.

The struggle between these two is a matter of intricate modern engineering. It has resulted in all sorts of combinations and variations of the two, which the writer is not in the least competent to describe. But it may be of interest to explain, in very rough and untechnical

The Parsons Turbine

language, something of the difference between these two

leading types of marine turbine.

The turbine arrangement itself is the simplest thing that ever was. The main engines of a ship have one thing to do-to make the screw go round. On the end of the shaft which sticks out into the water is fixed a screw: on the other end is fixed the turbine. The steam is merely brought straight from the boilers in a pipe and let loose on the turbines. The old reciprocating engines turned the shaft by bringing the steam into big cylinders above the shaft, and making the steam drive, in and out of those cylinders, certain ponderous arms and elbows known as pistons, which were fixed to a crank and turned the shaft in much the same way as you turn a mangle. Parsons did away with the arms and cylinders -he simply fixed the screw on one end of the shaft and a big drum on the other, and rushed the steam straight from the boilers on to the drum and made the drum turn. The drum was in a tightly sealed-case, and, row after row, around the inside of this chamber, sticking down from it so that they nearly touched the drum, were processions of brass blades. On the outside of the drum itself-not on the flat faces of it, where if it were a real drum the parchment would be, but all round its curved body-were other rows of blades running free in the intervals between the rows that stuck down from the walls of the chamber. The rows on the chamber walls were, of course, stationary; but the drum and the rows of blades which were on it would revolve with the shaft for their axis. The two sets of blades were given slightly opposite curves.

Into that chamber, fuming and whirling from the boilers, bursting the sides of the steam-pipe in its wild impatience to expand, roaring and shuddering through

its prison, they admit the steam. As it rushes into one end of the chamber it meets first a row of fixed blades. It tears through them, and their curve sends it whizzing against the row of blades next door to them-which are free blades fixed to the drum. It wrenches these aside, and wriggles through on to the next row-which is a fixed row-and which swerves it, with a sort of box on the ear as it passes, on to the next row, which is movable again. It always brushes the movable ones aside and tears through the next barrier of fixed blades, which send it reeling off on to another row of movable blades, which it pushes aside again. The steam is expanding all this time - wriggling just a little less wildly than at first; and, as it makes its way across the drum, opening out its chest, the blades gradually become larger and larger and very much larger to fit it. It flashes through sixteen tiny moving rows to start with, not counting the sixteen fixed ones between, and then twists through thirteen taller rows, and through thirteen taller still, and another thirteen, and another, and finally shoulders its way off, in a more or less leisurely fashion, through thirteen rows of positive grenadier guards of blades.

When one talks of steam stepping off the turbine in a "leisurely" fashion one talks in strictly comparative terms—just as when they speak of "slow-burning" powder. The steam leaving the high-pressure turbine is not bursting its sides with quite as much delirium as when it entered; but it is compressed tight enough to be sent shuddering into another chamber containing a low-pressure turbine, with bigger blades, and to squeeze its way—like a cascade pouring through rocks—at a tremendous pace through them. In a ship with Parsons turbines the chambers for the turbines are so

The Curtis Turbine

big that there is not room for a low-pressure turbine behind a high-pressure turbine on the same shaft—they give each a separate shaft and screw to itself, and that is why those ships have to have so many screws. turbines are more compact, and allow of each shaft having a high- and a low-pressure turbine on it.

There are between 600,000 and 700,000 blades in the Australia's turbines, all separate. They fill the chamber so full and fit so close that it is thought wise to taper them down at the end to a regular knife edge, so that the edge will wear off at once if they do happen to graze the walls of the chamber. They have found, before now, on opening up the casing after long use. that the fine ends of the metal had been worn as round and polished as pebbles on the sea-shore. The whole 600,000 blades have to be packed tightly by hand into the drum or the chamber at their proper curve or angle. The struggle between the Parsons turbine and the Curtis turbine is all about that curve.

The blades of the Parsons turbine do not attempt to face the steam outright and cast it straight into the hollow of the next row of blades, as you might pour water from one cup into another. They merely guide it so that it will rush past the next row, as the wind rushes past the mainsail of a close-hauled yacht. The blades of a Parsons turbine sail into the wind as a cutter does (although, scientifically speaking, the cases are not the same, because the steam expands, which the wind does not). A Curtis turbine sails in front of the wind like a full-rigged ship. The steam is not turned past its blades by other blades; it is squirted on to them through nozzles. As it comes to the turbine it finds its way blocked by a barrier, the only way through which consists of a number of gradually contracting passages.

Through the further end of those passages it squirts with tremendously-increased velocity fair into the middle of a row of blades—the first moving row. They catch it full in their hollow, like cups, and turn it back into the hollow of the next row of fixed blades, which return it again to another moving row. After being battered backwards and forwards perhaps half a dozen times it comes up against a second wall; and, as it cannot expand, it has to squeeze its way, again at greatly increased velocity, through another set of nozzles on to other cup-shaped blades—and that is the principle of the Curtis turbine.

It is the misfortune of a turbine that its blades are fixed in one direction, and it will only turn one way. Consequently they have to put on each shaft two turbines, with the blades directed in opposite ways. When you want to go astern you have to shut the steam out of the going ahead turbine and turn it into the going astern turbine. But even that is not quite enough. As soon as you go astern the going ahead turbine, of course, begins to work against itself. There is no steam there to stop it from doing so, but if there is air amongst the blades that air is quite enough to make a tremendous obstacle. So they have to withdraw all the air from whichever turbine is not being used. There is an automatic system of dry and wet air-pumps to create a vacuum. But besides this, in the lowpressure turbines they can use the steam to create a vacuum. On leaving this turbine the steam is fully expanded and fairly useless, so they condense it into fresh water to go through the boilers again. (Boilers, of course, start a voyage with fresh water, and use the same over and over again, only losing a little each time, which they can replace by condensing from sea water.

Babcock and Wilcox

Consequently, as the steam slips off the low-pressure turbines, it is condensed in a big heart-shaped chamber full of cold water pipes.) Now it takes a very big proportion of steam to make a very little drop of water; and, as no air can get into the condensing chamber, the space the steam leaves behind is vacuum. They have an arrangement by which they can use that vacuum to keep up the vacuum in whichever side of the lowpressure turbine happens to be idle. In order to make sure that the turbines are hermetically sealed—to keep the steam in and the air out—they finish them off with a series of little barriers, some of them containing small glands to delay the steam; and they pack those glands to make them perfectly tight. They do not pack them with cotton-waste or oil, or even water. They cork the steam in with more steam from outside.

There were forty-eight separate boilers in the Powerful, the first water-tube boilers ever put in a big ship. Australia's are the latest word in water-tube boilers after seventeen years of experience. In the Powerful's great French boilers it was possible for the water to get lowit did more than once-and if the fire underneath were not drawn mighty quickly some tube would curl up and burst, and the steam, escaping into the furnace, would blow white hot ashes all over a few stokers. There was a plug in the end of each tube, which was expected to melt and blow out first, and which could generally be relied on to do so. But inside the Babcock and Wilcox boilers the water is just one flurry of steam and bubble in every tube at once. The smoke does not go straight up through the boilers and away. It goes to the back of the furnace, and then to the roof, and there is turned by a barrier, or "baffle," and has to come down and up again before it can escape, which wastes no fire and

leaves little smoke. The boiler tubes are not laid above one another, so that they might shield one another from the fire. They are set alternately a little to the right and left, so that the fire gets at each one. Those are the sort of devices the stokehold and the engine-room are full of.

Of course, where you have many boilers they have to be stowed wherever you have room for them. Every little helps in a warship—and so, though they cannot stow a full-size boiler away in the odd corners, they stow a smaller one. Where they get more room in the ship they manage to squeeze in an extra element (i.e. an extra set of tubes) to the boiler.

Here is what happens to every tube in those boilers before they put them together. Every one of those tubes is pickled—dipped in weak acid to clean it. Every one is electro-zinced (because that is the best way of showing up a possible crack in it), and examined for defects. Every one is tested by putting water in it to an enormous pressure. One in every hundred is mechanically tested as well; that is-bent and flattened. Every single tube is tested to find its thickness, and whether it is of the same thickness all round and all through. The amount of rolling of every tube is examined. Every tube-and double that number of holes in the staggered pipes into which the tubes fitis gauged for size to the two hundred and fiftieth part of an inch. Afterwards, the end of every tube is belled out inside the holes it fits into, so as to hold it there immovably.

It may not appear highly important to the man in the street whether the machinery in an engine-room is fitted in one way or another—sideways or lengthways so long as it all gets in. But it makes all the difference

Whatever Happens

to the men who work these whether the designer has managed to fit in the pieces of his Chinese puzzle, so that there is plenty of room to turn round in. Some day, when things are going on up above which you can only guess at down there—when the one thing is to stand by like a surgeon, and get whatever is wanted out of those engines whatever happens; when from time to time a hiss or a spit or a fizzing or a crash or the musical ring of metal struck by metal tells you there is a wound to be got at and stanched or cut away or patched up somewhere-it may make all the difference if you can get to the place quickly with as much of tools or tubing or cotton-waste as you can drag along. There are engine-rooms that men speak of with enthusiasm, and there are others they remember like nightmares. And the whole of that depends on how some engineer years and years before in a foggy upper room in an English city managed to put down on paper the ideal that was in him.



. . . . picked from the whole youth of the country . . .

CHAPTER VIII

THE CADET MIDSHIPMAN

In order to obtain its naval officers the Commonwealth Government is taking a step which has never been taken by any Government yet. It is searching the whole country for the most suitable boys-choosing them from every class in the country by one criterion only, that they are suitable; and, having chosen them, it pays the whole of their expenses for them from that time forth. A boy's parents may be the poorest in the country—it need make no difference to their son. If the Interviewing Committee decide that he is of the right stuff, and he can pass the qualifying examination, the Commonwealth does the rest; pays the whole of his expenses at the Royal Australian Naval College for the four years of his training; pays his travelling expenses to and from his home when he is on leave; allows him his pocketmoney; even finds him the cost of most of his clothing.

The Australian Army officers, or rather the picked and highly-trained regular officers of the staff, who are

Finding the Boys

to be the backbone of the whole system, are being chosen and trained in the same way—picked from the whole youth of the country and then given the very best education that can be devised for them, the State bearing the whole expense. The extra cost of this course to the State is quite trivial—out of all comparison to the value of the experiment in a democratic country such as Australia is. One cannot help wondering whether this method does not hold in itself the seeds of some great system by which the Australian State will some day choose for itself the cream of the country, not for its Army and Navy only but for other of its great public services also.

Once he has been chosen, the Australian cadet is given, as nearly as may be, exactly the same training as the Admiralty provides for its youngsters. Even the method by which he is selected is as nearly as possible identical. The boys are taken very young—they have to be in their thirteenth year—and, in the first instance, those who offer themselves have to face an "Interviewing Committee." The Committee consists of the Captain of the Naval College, the Captain of the Training Ship, the District Naval Officer, a Naval Medical Officer, and the Director of Education in the State to which the boy belongs. The Committee visits the different States, and endeavours to decide which of the boys who come before it have the qualities of leadership in them.

It is not an easy task. There were 134 applicants, in the past year, for 24 vacancies. The Committee travelled to each capital, and saw personally every boy. It tested their readiness, their powers of observation—asked them, for example, to look for a minute through the porthole of the cruiser *Encounter*, on which the examination was held, and describe what they saw there. Some boys could tell everything they had seen—others

nothing. Where the applications are so many as they are in Australia, and the vacancies so few, the slightest hardness in hearing, the smallest defect in speech or in physique is apt to be an insurmountable obstacle. quite possible that the naval genius of the century would fail to pass. Nelson could never have got into any modern Navy. If some Admiral on the Committee, taken with the brightness of his eyes, had let this pale little slip of a fellow in, it is a hundred chances to one the doctors would have turned him out; and if, by a miracle, he had survived them, his grammar and spelling of his native tongue would have eliminated him. Probably Nelson would have possessed a better chance under the interview system than under any other. Some English private schoolmasters, whose protégés have been weeded out by the Interviewing Committee in spite of a thorough cramming, have complained of the system. But it is within my knowledge that two of the most eminent schoolmasters in England, who have sat on the Committee, were satisfied that the right boys got through.

The Australian cadet, after passing the Interviewing Committee, and the doctors, and sitting for a qualifying examination in English, history, geography, and elementary mathematics, is sent on to the Royal Australian Naval College. The college will eventually be at Captain's Point, Jervis Bay, a fine harbour on the coast of New South Wales, which is destined to be the chief naval port of the Commonwealth. It is there that the railway from the Federal capital, Canberra, will come down over the mountains to the sea. The land around the harbour has been given by the State Government to the Commonwealth, and the chief arsenal and naval shipbuilding yard of Australia will probably be placed here.

The R. A. N. C.

The one drawback is that it is, perhaps, somewhat

exposed, strategically.

Of the funds devoted to building the college, some £40,000 was raised by private subscription in Sydney at the time of the naval "scare" of 1909. This was part of a sum raised for another object, but it was afterwards decided to present it to the Government for the building of the Naval College, provided that college was built in or near Sydney. Very wisely indeed, the Government refused to accept the proviso. The attractions and distractions of society in a great capital city were the very last conditions to be desired for youngsters starting on a serious career—and the career of an officer in the Royal Australian Navy has to be a far more serious one than that of an officer in the old Australian Squadron; officers of the old squadron themselves have been the first to recognise that. Commonwealth Government decided to put their college in the fresh country air, between the mountains and the Australian bush and the wide sea. And the subscribers of the £40,000 wisely accepted this decision.

Until the college at Captain's Point is ready, the Defence Department has leased a large house and grounds, with a wide frontage to Corio Bay, just outside Geelong in Victoria. Curiously enough, the name of this temporary college is Osborne House—a name which was given to it years before its present use was ever

thought of.

There is one small difference in the terminology of the British and Australian systems. When an English youngster goes to Osborne he is known as a "Naval Cadet," but that term was already appropriated, in Australia, to the ordinary citizen "cadets" who serve in the naval branch. Under the compulsory service system

the majority of Australian youngsters receive some physical and military training either as military cadets or naval cadets. The Defence Department therefore had to find a name to distinguish the youngsters who went to Osborne House. The Navy Board therefore came to the following decision: "As the term Naval Cadet has throughout the Commonwealth another meaning to that in use in the Imperial Navy, the rank hitherto known in the British Navy by the term 'Naval Cadet' will be designated instead 'Cadet Midshipman,' the young officer attaining the rank of Midshipman

on passing out of the college."

There are no marines in the Australian service. But the other branches will all enter together at the Naval College, as they do in Great Britain, and receive the same training, afterwards specialising as Lieutenants (Engineer), Lieutenants (Gunnery), Lieutenants (Navigating), and so forth as required. There has been no question which has exercised the minds of British Naval officers in recent years as this question of "common entry" has done, but one cannot think that the Australian Government were wrong in adopting it. I have known, in Great Britain, naval officers who were inclined to be hostile to the new system before they came into contact with it, and who are enthusiastic about it to-day. Executive officers are often heard to sav that there is too much engineering under the new system, whilst the objection of some engineers is that there is too little; and of course there is not quite so much time spent exclusively upon engineering as there used to be when engineers were entered separately and trained for five years at their college at Keyham. Every officer who enters the British Navy through Osborne-whether he is to be a marine, navigator, gunnery, or torpedo

The Common Entry

expert or other deck officer, or an engineer, has now to be trained as an engineer. After all, what is a naval officer nowadays but an engineer, even though his only engine be a big gun? There was a time when an engineer was held an excrescence on a ship—a sort of artificer carried to look after some bothering details in her interior which needed special knowledge and an oil rag. But when these steel muscles grew and multiplied, stretched their sinews and tentacles into every corner of the ship, and away up to the electric flash at the masthead, it became gradually clear that nothing could be got out of a ship without asking the engineers to give Roughly, there are four sorts of officers. One fires guns; one steers; one drives engines; one keeps accounts. The man who steers does not point guns at the enemythough he is pointed at more than most. He used not to be ranked an executive officer, but he is now; just as the executive had to absorb navigators, so it has had to absorb the engineers. If it had not, engineers would have absorbed executive. Some say if more fighters become needed, paymasters, too, will be absorbed.

This "Common Entry" was the system also adopted for Australian officers. I have asked an engineer officer, who to my knowledge at one time took the view that the cadets could not be given sufficient engineering in the time available, but who had since had some experience in England of the "new entry," whether he still held the same opinion. His answer was that the new system was very much better. Another officer, with similar experience, told me that the course of instruction at Osborne and Dartmouth was so much better and more elaborately planned and illustrated, that, counting the eight months subsequent training in cruisers, the cadets were turned out as well trained in engineering as the

Keyham ones. One has also heard an executive officer admit that he was once opposed to the new system; but he had been in touch with Osborne for a week, and his regret now was that he had never had the advantage of that training.

That is the system which has been adopted by the Australian Government for its officers. If for no other reason, the Government would have adopted it because it was the main system on which the Royal Navy relies, and the Government realises the all-importance of keeping the Australian training as minutely as possible upon the British lines, and in every way up to the British standard.

The cadet midshipman at the Naval College will get eight weeks leave at mid-summer and two at mid-winter; with a week at each half term. He can spend these halfterm weeks at home, if he has time to get there. But if his home is too distant he will spend them on the instructional cruiser.

At the end of four years at the college, he will go to sea for six months' training in the cruiser; and at the end will pass as a midshipman into the ships of the fleet.

In order to make sure that no long-headed parent should send his son to the Royal Naval College for the sake of a free education, and withdraw him at the end of it, the parent or guardian has to declare in writing his intention that, if the boy succeeds in entering the college, he will adopt the Navy as his profession and will remain at the college unless the Navy Board requests his withdrawal. As at Osborne and Dartmouth, the Navy Board can at any time ask a boy to withdraw, if he turns out lazy or unsuitable; the Board is the sole judge and need give no reason. But except for the few slackers, or delicate, or otherwise unsuitable boys, who

Ten Receptive Years

will be weeded out by the Board, no boy can be withdrawn without his parent or guardian (who must reside in Australia) becoming liable to a penalty of £75 for each year's training that the boy has received. In Great Britain, where the State pays, roughly, half the cost of a naval cadet's education, there is a similar proviso.

That is the scheme. It will be a matter of fascinating interest to watch it develop—like watching an experiment from Plato's Republic. It is an attempt to obtain the best ability from the people, wherever it lies. State realises that, for the sake of efficiency, it must catch young those who are to fill its higher posts. certain proportion of the younger petty officers and warrant officers, if they show marked ability, can be promoted to commissioned rank at a later age, and will be able to pick up the standard of those around them. But, for the main body of officers, those ten receptive years from thirteen to twenty-two are far too valuable to be wasted. And therefore, both in its Army and its Navy, the Commonwealth, whilst giving to any exceptionally bright soldier or seaman the chance of a commission, provided he is not too senior for the needs of a vigorous service, looks for the men who are to set the standard and the tone to the whole service, the main body of its officers, in an equally wide field, but at a younger age.

Is there any reason why that experiment, if it succeeds,

should end with the Army and the Navy?



The Australian seaman.

CHAPTER IX

THE MAN HE PROVES TO BE

It was a very interesting question whether the Australian seaman would more nearly resemble the American or the British seaman. During the stay of H.M.S. *Powerful* in Auckland in 1908, when we saw the American sailors and the British side by side for the best part of a week, one found oneself constantly speculating on this point.

The personnel of the two fleets was quite different, although many of the forms and ceremonies in the two Navies were identical. One thing the American officers told us over and over again was: "When we started our Navy we took over all our traditions from your Navy." One did not realise what that meant till one day aboard the Connecticut. Suddenly came a familiar shrill whistle; and a throat deep as a geyser gurgled: "Yai—wai—hai—wai!" There was the same challenge at night, the same "Aye—Aye!" "No—No!" Whatever you wanted you shouted for the same "Messenge—r!" to fetch it.

Their officers were older than ours; especially the

Mere Slips of Boys

captains, who cannot have averaged much under sixty, at least fifteen years older than most British captains. They were intelligent, courteous, widely read-authors of books many of them. They are old because they are only promoted by seniority. Amongst the younger American officers there was a sprinkling of rather wilder spirits than any in the British Fleet, and their speech and their manners were undoubtedly often far less restrained. There were also amongst them many of the quietest and most genuine and pleasant fellows in the world. And no one could help being impressed with their intelligence. The American crews were as young as their officers were old-mere slips of schoolboys, brimful of bright intelligence, sparkling, and overflowing with humour. They had been through the State schools—hardly the class that we know as sailormen. There is an idea in England that the American Fleet is manned by deserters from the British Fleet eked out by those from the Scandinavian Navies and other foreign services. It certainly was not true of the men of this fleet. I saw one boatswain who had joined without finishing his time in the Royal Navy. But there was no mistaking the birth and breeding of 99 per cent. of the crews. Many of them had joined on the prospect of this voyage round the world and others like it; they were enjoying the chance of seeing other lands. You came upon them in cabs and in motor-cars, whisking round the street corners with cameras on their backs. They slouched a bit. Their discipline did not obtrude. But there was possibly more real discipline amongst them than appeared on the surface; for they seemed to like their officers, and worked cheerfully, without as much growling as then existed in the British Fleet.

It struck one that it was not so much discipline as

workmanlike smartness that the American crews lacked. There is a certain advantage in carrying out duties in the orderly way; especially when those duties may sometimes have to be performed under conditions which make it difficult to know whether you are on your head or on your heels. And though the Americans were exceed-

ingly quick they were not really smart.

As for intelligence, the British sailor is not at all on the surface. He is unquestionably a highly-trained man; and it would be quite unsafe to judge, because he does not take you into his confidence about his work, that he does not think about it. On the other hand, there are few who would claim that the British seaman, in spite of his pre-eminent qualities of nerve, possesses quite the same intelligence as the American. The "Jackies" were simply keen-witted, light-hearted boys—just the sort of man that does things unexpectedly great when the time comes. The British sailor will do the great thing that is expected. The sum works out equal, if you apply your mind to it.

And that is how it has actually worked out in the past. When America fought ship duels with England all through 1812, they found that wherever the two crews had the same training there was nothing at all to choose between the men. The French and Spaniards owned they would rather meet anyone than the English—except it was the Americans; but of those one was as bad as the other. It strikes one the same thing is

true to-day.

And how about the Australian? What like man would he show himself?—as they would say in Scotland. Looking back to that time in Auckland, I find that I ventured to prophesy as to the qualities of the Australian bluejacket. "One cannot help thinking," ran the fore-

Attempting the Impossible?

cast, "that the Australian seaman will have every bit as much intelligence as the American; and the nerves and energy of the British. His difficulty will be discipline."

There have been thousands of other prophets too, both then and since. From the moment that the Australian Navy was mooted, the prophets in Australia and abroad all seemed to concern themselves with this question of the Australian seaman. It was said that Australia could not found a Navy. It was said-and quite truly—that the least difficulty was the building of ships, and that the real difficulty would be in finding the men. It was said that Australians, even if they came forward, would prove difficult to train, and impossible to discipline; but it was doubted if they would come forward at all. I heard one great antipodean politician (who, as may be inferred, was in favour of a policy of "contribution") proffer, as a piece of important but confidential information, the perfectly well-known fact that the Australians and New Zealanders serving under the old agreement as seamen in the British ships in Australasian waters, although they made good seamen, and did not complain of their service, yet never re-engaged at the end of their five years term. The chances ashore, he said, were too much. That was the reason why Canada had failed to raise men when she tried. Surely Australia was attempting the impossible.

Well, Australia had some pretty good examples to follow, if that was so. The Anglo-Saxon race has lived by attempting the impossible ever since its Scandinavian ancestors crossed the ocean and discovered America five hundred years before Columbus. As for Canada, one would be sorry to conclude on the strength of a solitary experiment that the great Dominion cannot man a

squadron with its own citizens. There may be matters of organisation and detail to account for the failure, of which we know nothing. But in any case it is absurd to argue from the Canadian case to the Australian; the two peoples, although alike in some ways, are at opposite poles in others. The Australian is used to the idea of serving the State—he probably relies upon public services more than any people on earth. On the other hand, there are very few countries which entrust to private enterprise the huge interests which Canada does.

Anyway, whatever the reason, Australia in the event did not fail. On the contrary, she has succeeded beyond all expectations. She has already raised 200 more men than she had promised the Admiralty to raise within To man the Australian Fleet Unit it was estimated that 2501 officers and men would be required. The British Government, and the Admiralty, which have loyally assisted in every step, consented to help by lending officers and men from the Royal Navy in the first instance; by allowing Australia to enlist pensioners who had been in the Royal Navy and Royal Fleet reserve men; and by paying £250,000 a year towards the expense as long as Australia liked to ask it of the old country. Australia for her part was to shoulder the rest of the expense and to find as many officers and men as she could. Admiral Henderson's estimate was that 1623 officers and men "cannot be provided by Australia in the two years available, and must, therefore, be obtained from the mother country under the Agreement . . . of 1909"; and that "the balance, 878, should be provided by the Commonwealth by the time the vessels of the Fleet Unit arrive in Australia."

Admiral Henderson calculated that of the men obtained from England, 816 could be raised by enlisting pensioners

A Known Quantity

and reserve men. As a matter of fact, only 353 of these had been recruited by 31st March 1913-463 short of the number required. The Admiralty lovally made up part of this deficit by lending 115 active service men above the estimate. On the other hand, so ready had Australians shown themselves to serve in their own Navy, that instead of 878—15 officers and 863 men being raised in Australia, the actual number by the end of March 1913 was 32 officers and 1004 men, and at least 140 more were to be raised before the Fleet Unit was complete; in all, 27 Australian officers and 271 Australian men more than Admiral Henderson had allowed for. At the same time, the training establishments were so full that in spite of the opening of reserve barracks, as a temporary measure, to accommodate these unexpected numbers, the age limits for the entry of seamen and stokers had to be narrowed by three or four years.

So the Australian seaman is already a known and established quantity. The prophecies about him can already be put to the test. When the British public saw cruiser after cruiser leaving for Australia manned by bluejackets who to all appearance were English—who wore the English uniform, and went about their work in the English manner, without any particular fêteing or parading, they put down the crews as English. I read in at least one newspaper of the expense to which all these "Dominion ships" were subjecting the British taxpayer. There was even a point made about the failure of Australia to get recruits for her Navy.

The publicists were only confusing Australia with Canada. As a matter of fact, at the actual time when they were writing, the cruiser *Encounter*, which had been lent by the Admiralty to Australia, had 155 Australians

in her crew; the three Australian destroyers had 124; the *Melbourne* was running her trials around the British coasts with 190 Australians aboard, specially sent home by the Commonwealth Government. There were another 372 Australian seamen sent to England for the cruiser *Australia* and a further 146 for the cruiser *Sydney*. And this fleet was not costing the English taxpayer a penny, unless it be for the indirect cost of having originally trained the British seamen who formed about half the crews.

It has been given to certain officers of the British Navy to see a good deal of the Australian seaman during these last years, and to form a pretty close estimate of the sort of fellow he is. And the following is the account which one British officer gave me of him, and which others have also borne out:—

"You want to know if the Australian seaman is like the American," he said. "I should say not. I should rather say that whenever he gets alongside a British seaman, his one object is to show himself a smarter man. I should say that, so far from resembling the Americans, the Australian seamen are at the opposite pole in many ways. Those I have known would, if anything, set an example in smartness to our own men.

"The Australian seamen have been found wonderfully quick to learn. They are better educated, to start with; and the result is that it does not take so long to train them into skilled and responsible work as it does with the average man in the Royal Navy. That, of itself, solves one difficulty in the manning of ships.

"So far from the Australians showing any disinclination to remain in the service, the thing I have chiefly noticed in them is that they are so constantly ambitious to rise in the service. I have spoken to numbers of

They will be Worth It

them about it, and they seemed to look upon the service as a career, and to have no idea except to get on in it. Under the old arrangement, by which Australians engaged to serve in the British Navy in Australian waters in what was called the 'Australian Naval Force,' their age and the conditions of service hampered their chances of promotion, and of course there was not the same ambition. But to my own knowledge, since the creation of the Royal Australian Navy scores of men have already re-engaged for the longer period of serviceseven years. They are perfectly aware that their Navy now offers them a career, and they have no intention of leaving it. Some of them will no doubt eventually get commissions; and," added my informant, with such whole-hearted approval in his voice as one had scarcely expected-"and they will be quite worth it.

"The Australians I have come across, if they have a fault, suffer from over-keenness," he went on. "I mean that a man is apt to think, as soon as he has passed an exam. and qualified, that he ought to be promoted at once. They are very quick in getting through the theory, and the Australian doesn't seem to believe in the value of experience. He cannot understand why it is, when he is qualified, he does not immediately get

his step.

"But if that can be called a fault, it is a fault on the right side. I do not think in discipline the Australian seaman shows any fault at all. So long as an officer knows his job, and shows that he knows it, he will have no trouble at all in the matter of discipline. I do not think it would do to put in charge of them a man who does not know his job; but, after all, there is nothing wrong in that. It is the officer's business to be competent; and, given competent officers, the discipline

of the Royal Australian Navy will not leave anything to be desired."

The British officer has in reality always depended on the affection and respect of the men behind him for his discipline, far more than on the severity of the regulations. The historic instance is, of course, the great Lord Nelson. He sailed with rougher crews than those that man the roughest "wind-jammer" in these days. And they worshipped him. When he died, a seaman on the Royal Sovereign wrote home to his parents:—

"HONOURED FATHER,—This comes to tell you I am alive and hearty except three fingers; but that's not much, it might have been my head... How my fingers got knocked overboard I don't know, but off they are, and I never missed them till I wanted them....

"Our dear Admiral Nelson is killed! So we have paid pretty sharply for licking 'em. I never set eyes on him, for which I am both sorry and glad; for, to be sure, I should like to have seen him—but then, all the men in our ship who have seen him are such soft toads, they have done nothing but blast their eyes, and cry, ever since he was killed. God bless you! chaps that fought like the devil, sit down and cry like a wench. I am still in the Royal Sovereign, but the Admiral [Collingwood] has left her, for she is like a horse without a bridle, so he is in a frigate that he may be here and there and everywhere, for he's as cute as here and there one, and as bold as a lion for all he can cry!—I saw his tears with my own eyes when the boat hailed

¹ This letter is here quoted from "The Lower Deck," by Stephen Reynolds. It is to be found in a collection entitled *Letters of the English Seamen*, 1587-1808. Edited by E. Hallam Moorhouse. (London: Chapman & Hall, 1910.)

An Unmistakable Career

and said my lord was dead. So no more at present from your dutiful son .- SAM."

Of course the chief foreseen difficulty was—that under the Old Navy Agreement the authorities had utterly failed to get any enthusiasm out of the Australians whom they enlisted, good men though these were. The Navy Board tackled this difficulty by going straight to the cause of it with admirable frankness and thorough-In one of its own publications the Navy Office frankly admitted that the belief had been "not infrequently held, that Australians had not inherited the maritime instincts of their race." The Board went on to explain its belief as to the real reason why the old Agreement had failed in obtaining enthusiasm. "Service," it said, "in the ships of the Royal Navy stationed in Australian waters under the Naval Agreement could not offer the same prospect as that held out by the Royal Australian Navy, as the paucity of facilities for early training inevitably resulted in Australians having to enter the Royal Navy at a higher average age, as a rule, than the men from the Mother Country, and, in consequence, the native born often found themselves at the end of their period of engagement with but small prospects of promotion to even the grade of Leading Seaman."

The Navy Board, that is, believed that the real difficulty lay, not in any want of enthusiasm for the sea - for certainly Australian boys have never been lacking in the outward signs of that enthusiasm-but in the fact that nothing worth calling a "career" had been offered them on the sea. The Board, therefore, set before itself this first principle—that its service should offer an unmistakable career; a career as good

And so, as the Navy Office itself explains, "in regard to the question of pay, the rates have been fixed after very careful consideration of the average earnings in equivalent employments on shore. It will be found that the Royal Australian Naval rates of pay compare not unfavourably with those ruling on shore; but when one takes into account the permanent nature of the Naval employment; the fact of being doctored, clothed, lodged, fed, at no cost to oneself; the additional amounts it is possible for one to earn whilst acting in certain capacities; the scale tilts decidedly in favour of the Naval vocation. A thrifty man ought to find it not a difficult task to save out of the active pay he would earn in the Royal Australian Navy, and these savings would be supplemented in time by his deferred pay, which, as explained later, goes on increasing automatically year by year, by reason of the 31 per cent. interest granted by the Government." Deferred pay is the Australian equivalent for a pension. It would be absurd to pension off for life a number of comparatively young and able-bodied men leaving the service in a country where the chances are so good and the demand for labour so constant as in Australia. Retirement from the service even at the age of forty or forty-five will probably be the beginning, and not the end, of a man's career; and his naval training, and the portion of deferred pay which he will then receive, will be his instruments in carving out that second career. Deferred pay begins with ordinary seamen, who get £1, 1s. per week "active pay," and 5s. 3d. "deferred pay," credited to them and kept to accumulate for them. These rates increase: a Chief Petty Officer of over twelve years' standing gets £2, 9s. active pay and 12s. 10d. "deferred"; a Gunner or Boatswain can rise to

Avenues of Promotion

£200, 15s. a year "active" pay, and £50, 3s. 9d. "deferred"; a Chief Gunner or Chief Boatswain (who is a commissioned warrant officer) can reach £243, 6s. 8d., with £60, 16s. "deferred"; and, if promoted to the rank of Lieutenant, he will start with £273, 15s., and £68, 8s. 9d. "deferred," and may reach £328, 10s., with £82, 2s. 6d. "deferred."

Wisely the Board decided that, given reasonable scope for ambition, the Australian youngster would keep the Service alive. In its own words, "the question which will be uppermost in the minds of many contemplating service in the Royal Australian Navy is-What are my prospects of advancement? It is clearly recognised that, if the Royal Australian Navy is to succeed in inducing the most intelligent of the lower deck men to regard the Naval Service as their life's work, it must be arranged that the avenues leading to promotion are neither inadequate nor narrow." The Board goes on to point out that, for a smart boy, who enters the training-ship at 141, it should be possible to reach the rank of Ordinary Seaman (2nd class) at the age of 17, Ordinary Seaman at 18, Able Seaman at 19, Leading Seaman at 21, Petty Officer at 23 or 24, and Warrant Officer at from 30 to 35 or even earlier. "There will also," says the Board, "be avenues of promotion to Commissioned rank-

- "(a) For young Warrant Officers passing certain examinations,
- "(b) For Senior Warrant Officers of long and meritorious service.

"Those promoted under (a) will be eligible for further advancement to Commander."

That is to say, the Board is making the Naval career

a modern profession, fit and more than fit to be compared with any calling that is within the range of the average man. The more refinement and decency that can be brought into the life, the better for the Service and the type of man who joins it. "Recreation," says the Board, "is essential if a ship's company is to be kept in good heart, and plenty of opportunities will be given men fond of cricket, football, etc., to indulge in their favourite pastimes.

"For those fond of reading, libraries will be provided, which, in addition to general literature, will contain a number of selected technical books on torpedo, gunnery, ordnance, and other Service subjects. These will be of value to men anxious to push on and become thoroughly efficient in their duties." Specialising, and good conduct badges will all help to add to their pay.

As a final and a great inducement to intelligent youngsters the Navy Board offered the probability of their being able to see other countries. "The privilege," it says, "of seeing countries and institutions other than one's own has always been highly prized, but it is the fortune of but few to be so privileged. In this respect, however, service in the Royal Australian Navy will bring its opportunities, as H.M. Australian ships, in addition to visiting different parts of the Commonwealth for the purpose of tactical exercises, etc., will probably, at certain intervals, visit other countries. Travel in itself is a liberal education, and the advantages of the Naval life in this respect will be apparent to those eager to avail themselves of the opportunities now afforded."

Those who know that the ideal, the one cherished object, of ninety per cent. of Australians is to visit the Old Country and the world outside before they die,

may realise the strength of this appeal.

Of Very Good Character

The Board's plans were laid with an amount of anxious, patient care which is quite unusual in the case of many public departments; and they proved right beyond all expectation. Over and above the men who were actually serving by the time the first fleet unit was ready, there were—

Twenty-eight midshipmen cadets training at Osborne House.

Two hundred and fifty boys on the training-ship *Tingira*, which lies in Rose Bay, Sydney Harbour.

And four hundred young seamen and stokers at the Naval Depôt at Williamstown, Melbourne (to which the old Victorian harbour defence ship Cerberus is attached), receiving their first naval training, and their special training as signalmen, cooks, telegraphists, and so forth. These young seamen and stokers are taken on between the ages of 17 and 25 years for "short service" of 5 or 7 years, at the end of which time they may be allowed to re-engage for further periods of 5 years. In their case the recruiting was so keen that it outran all accommodation, and the age limit had to be narrowed temporarily by 4 or 5 years.

It is before the "boys," who enter at 14½ up to 16, that the best chances lie. The Navy Board again wisely decided that it must be a testimony to a boy's character that he should be able to say: "I am serving in the Australian Navy's training-ship." It was determined that boys must be of "very good character" to obtain this privilege. No boys who have been in prison or reformatories are admitted to the training-

ship. Boys from industrial schools and industrial school ships are not debarred "if in all respects suitable."

The result of this wise decision has been that the *Tingira* has been filled with boys of a splendid quality.

For the rest, over and above the seamen and stokers (and the signalmen, telegraphists, mechanicians, etc., into whom they may develop), the Royal Australian Navy especially engages competent carpenters, blacksmiths, sailmakers, plumbers, painters, coopers, shipwrights, electricians, bandsmen, cooks, stewards, writers, and others. Mechanics, such as engine-fitters, coppersmiths, boilermakers, engine-smiths, and occasionally a patternmaker or a moulder—thoroughly trained men, including the holders of First Class or Second Class Engineers' Certificates—are taken on, if suitable, and graded right away with the rating of Chief Petty Officer, as Engine-room Artificers; it is possible for them, as for most others, to obtain promotion to warrant rank (in this case Artificer Engineer), and commissioned rank (Engineer-lieutenant).



. . . . Square as a lump of sugar

CHAPTER X

AUSTRALIA'S CHARGES

STRICTLY speaking, a Navy without a foreign policy is somewhat of an anomaly.

To put the same thing into everyday language—it may happen some day that an Australian is murdered somewhere up in the French or German Islands in the Pacific, under particularly aggravating circumstances. It is quite possible that the Australian public would not cry out next day to have the new flagship sent at once to that port to demand redress; or it is quite possible that, even if they did, the Commonwealth Government would refuse to send her. But it is not probable that the British Foreign Secretary, who was charged with the settlement of the matter, along with some scores or perhaps hundreds of others, would be any easier in his mind for the knowledge, always present in the back of it, that there existed in the far corner of the world a British Dominion boiling over with indignation, and with a fleet of its own free to be sent where and when it listed.

For that reason, an agreement was arrived at between Great Britain, Canada, and Australia by which the Canadian and Australian Fleets have assigned to them

their own particular waters. Within the sea area portioned out to them, they may come and go and work without consulting those who are responsible for the foreign policy of the British Empire. But, "in the event of the Canadian or Australian Governments desiring to send ships to a foreign port, they will obtain the concurrence of the Imperial Government " and "the officer in command of a Dominion ship, so long as he remains in a foreign port, will obey the instructions he may receive from the Government of the United Kingdom, as to the conduct of any international matters that may arise, the Dominion Government being informed."

Of course, that arrangement can only be temporary. The Australian Fleet is in the Pacific in order to defend the interests of Australia and the Empire in the Pacific. It will be a "Pacific Fleet"-or at least a most important part of one-and it must ultimately be guided in its goings and comings and actions by one object only, the efficient performance of its duties as the Pacific Fleet. An expensive fleet is not kept for amusement, but for that business solely and simply. It cannot permanently be restricted to a rôle limited by local waters; and the Australian Government cannot permanently forgo all responsibility for its actions when outside of them. The solution may be a sort of joint naval board for the Pacific, formed from the several British peoples that support the fleet there. Whatever it is, some solution will come eventually.

But in the meantime, until another solution is found, a part of the Southern Pacific has been measured off as the Australian naval waters. The Australian Navy can come to very little harm in them, internationally speaking. They include a vast expanse of water reaching

A Mysterious Passing

down to the South Polar Circle; and practically no land (outside of Australia and her dependency of Papua).

The Australian Navy can pay two calls within its own waters—they do include two small islands out in the ocean to the east. Such as they are, these two small outliers of the Empire, for which the Australian Navy now takes up the responsibility, they have their interest for Australians, and perhaps for others also.

We saw both of them during the cruise of the *Powerful* to Fiji. I shall not readily forget the evening when we passed the first of them. It was late on the second day out from Sydney. I give the description of it as I wrote it at the time. It is dated, "H.M.S. *Powerful*, at Sea, July 13, 1908." It says:—

"We passed at sunset yesterday between two outcrops of rock standing sheer from the Pacific. One swam by square as a lump of sugar against the sunset; the other saw-toothed like the broken stump of a tree. They were Lord Howe Island and Ball's Pyramid.

"It is a curious thing that if you take a map and draw a straight line from Sydney Heads to Norfolk Island it runs at about half-way fair down the channel between these two; and they are only thirteen miles apart. The Powerful was not steering for these islands, and she could not stop there, because there is coral around them. But her casual way led her straight over the shallow neck between them and out into the deep sea beyond. It was a mysterious passing that. The first faint blue speck lifted itself above the horizon at 2 o'clock—seventy miles away. By 6 o'clock the great grey shadow, for all the world like the square, roughhewn pedestal of a statue, 2850 feet sheer, was just four miles off, slipping by against the yellow sunset. Someone besides me swore that a light flickered half-way up

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the side of it—and it may well be. There are 120 white men on that ridge and the slip of earth at its foot. They went there in 1840, but what induced them to go there one cannot imagine. At any rate, a good number of them have come away since, for there were 300 in 1859. The whole island, which includes two mountains as steep as the Matterhorn and a fair amount of beach, gives five and a half square miles to live in—about the size of a respectable Central Division farm. Its people came from New South Wales, and apparently they farm it differently from their mother country. Luckily, it grows a garden palm of the sort that enthusiastic suburban stationmasters plant about their platforms. At present Lord Howe Island lives on that palm.

"Now, if these details are a trifle vague, there is an excuse for it. When you are travelling distant seas in a ship, and a small ocean ant-heap slips mysteriously past you in the dusk, you may be very eager to chase all the romantic details about it from book to book until you run them home. But a ship is not a National Library and a British Museum rolled into one. And so why white men went from New South Wales to Lord Howe Island and who they were, and what induces

them to stay there, must remain a mystery.

"But if they were a mystery to us, it is not hard to imagine what we must have been to them. The farmers' youngsters on the face of their precipitous island of a Sunday afternoon spy an unexpected smudge of smoke above the rim of the sea, and find the grey monster—they know well enough who she is—making up for them; and later in the grey of sunset sweeping through their narrow channel. A few subdued lights begin to peep from her ports; the grey shape melts down again into that wide grey of moonlit sea and sky. Last—only

Primitive Justice

the precarious flicker of a stern-light to show where His Majesty's flagship in the South Seas has passed upon His Majesty's business. It is a picture to dream on, not to draw. For if a man has not felt the mysterious fascination that clings like a scent about the passing of a great ship, no description ever penned in cold black ink could

bring it home to him."

Months afterwards, when the flagship was safely stabled in Sydney, one was able to solve some of those mysteries. Long before New Zealand was ever a colony. when only a white trader or two-tough customers for the most part—took their lives in their hands and built trading stations along the wild coast, three white men hired a whaling captain to take them off with three Maori wives and two Maori boys, and dump them on that forsaken ocean islet which Lieut. Ball had sighted from H.M.S. Supply in 1788 and called Lord Howe. They could not abide it long. A man who called himself an army captain-one Poole-bought them out for They went back to their beloved New Zealand. He ran the island as a speculation, and brought in settlers. That scrap of an island saw a wild time then. They had no laws except a few crude rules, agreed on one afternoon; and some of them would not be bound. Those were riotous rich days in California, and the Pacific was full of American whalers. Most of the islanders had deserted from these. One deserter, a servant of Poole's, would not be orderly. So Poole chained him to a tree. He broke loose, took to the bush on the mountains. A live brigand on an island five square miles in all was too much for their nerves. They caught him and kept him in the stocks. When they became afraid he would grow deformed if left so, they took him out and cooped him in a cask where he

had two positions standing and lying, instead of only sitting; and kept him there until the Sydney authorities heard of it.

In those days Californian whaling captains would leave their wives and children safe in Lord Howe whilst they meandered in the South Seas. And Lord Howe flourished so long as California did. It was nearly made a convict settlement, but Lord Newcastle stopped that. It grew all sorts of fruits. The pig and goat went wild, and are good shooting to this day. There was only one land animal originally on the hills, a white guinea-hen with a red bill. But mice smuggled themselves in through an accident and overran every inch of it. There is no plague of house flies. But they say the fleas more than make up for them.

The island lives on its palms—Kentias. Apparently each settler found a different sort and called it after himself or the Governor in Sydney. There is Kentia Moorei, Kentia Forsterii, Kentia Poolei, Kentia Belmoreana, Kentia Canterburyana—and probably Kentia Smithii, and Jonesii and Brownii and Flanniganii and O'Branniganii, for all one knows. Besides these there are great banyan trees on the island, each a forest in itself. One covers three acres.

The peaceful history of Lord Howe—it is part of a New South Wales electorate—consists in having grown onions for Sydney. And where the great countries had their wars, this island has had its one murder. In the 'sixties an old Irishman killed his son-in-law—a wastrel of a fellow from an American whaler. A water policeman was sent from Sydney. This dread authority held stately inquisition in the island. He came back to report that if the old man had chosen to hide in those dark mountains—Mount Ledgbird or Mount Gower—no

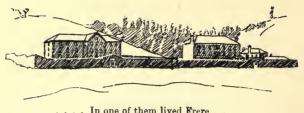
Wards of the New Navy

man could have found him. But he had given himself up; and seemed to have been first assaulted before ever he broke the other's skull. So he was left on his island.

So much for Lord Howe, with its old ruined farms, its flagstaff, its Goat Island, and Rabbit Island, and Soldier's creek. They are no longer a charge upon the old ship that passed them far out upon a winter evening some few years since. They are in the care of another flagship, and a new Navy guards them.

The other island which from this July 1913 is in the care of the Royal Australian Navy, we reached some two days later. It is more intimately bound up with the history of Australia, and deserves a chapter to itself.





In one of them lived Frere .

CHAPTER XI

NORFOLK ISLAND

In a hundred years or so, when men's chief wonder about this age will be how it ever came to wear trousers. and they will never talk of us except to laugh at quaint. ungainly old buffers who hung dismal sackcloth on their backs and cased their legs in drainpipes—the Australians of those days will look with a little reverence on a certain small island far away across the breast of the For it is not at home in Sydney or Hobart, but away locked up in this safe, 940 miles oversea, that they

keep some of the relics of their earliest history.

It is a tiny island in a huge ocean. It is only six miles long-not as big as a small sheep-run. It is hopelessly lonely; the nearest land to it, the northern point of New Zealand, 400 miles away to the south. And yet as the old flagship swung round the southwestern point we could see, four miles away, tucked in low under the steep hills, with a slender white beach tied like a pinafore around them, a line of big, solid, stone houses. As they stand there, gaunt with fifty years' neglect, and staring with their unshaded old eyes and jaundiced yellow faces out towards the land that used to support them, one cannot help fancying that

The Wicked Past

they hunger always for the wicked past; and wait anxiously for the day when a certain pot-bellied, wooden sailing ship, with her innocent canvas above and her foul, crowded hull below, shall sweep once more down the roadstead. For only a little more than fifty years ago a red sentry, all white pads and straps and braid, with a thing like a coffee-pot on his head, marched up and down in front of the house on the right. He was set there to guard the new Pacific Islanders, whose life and breeding and thought was of Newgate and Fleet Street, and the Bank; who worked under strange pinetrees, talking the slang and telling the stories of Eastcheap and the Minories. You can still see there a barrack-room, with the old arm-rack round it, where each soldier kept his musket by his bed. There are the long slots for each butt, and the little circles which their muzzles dinted long ago in the wood when they stood them upside down to clean, or of carelessness. Look well at those houses. In one of them lived Frere-Captain Frere, of Marcus Clarke's great story-with his sweet girl wife. Nearer to the shore is a low, grey, tumbled wall. There was imprisoned the man whose life had been one long, steady, passionate love of her. It was all a heart-breaking, tragic mistake that ever he came there, or that she married Frere. They found out each mistake at last, those two, on board of the schooner bringing them to Sydney. And, before the end came in the wild storm under which she foundered the bitter. dreadful waste of two lifetimes was atoned for by just one minute of perfect understanding.

That story may be overdrawn—and one who knew him has told me that Price, whom convicts murdered afterwards at Williamstown, was only a stern, straight man, and nothing of a monster. But there is enough

true colour in the tale to make it worth remembering when first you run past those yellow relics of Norfolk Island.

The island is nearly square. There is no harbour. People have to land on the side away from the wind if they can—not land at all if they can't; but go on somewhere else and trust for better luck next time. As the lee side of it opened out, we saw smoke rising over the point, and found a large, grey steam yacht lying close in. The island is kept alive by two interests—the manufacture of missionaries and the cable station. The ship was the *Iris*, owned by the Pacific Cable, to repair their lines. The flagship swung round the corner and anchored two miles from the hills. There were five hours for a rush ashore.

It was worth it. The island is beautiful enough from the sea. Almost the first things you can make out are certain long, thin trees standing along the whole stretch of its skyline. There is no need to be told what trees they are. Presently you catch the gauzy green of the hills beneath, stooping to the sea in steep dells where they are not shorn into cliffs. But it is from the island itself that the landscape is most beautiful. Two steep hillsides as green as lawns, bending into a narrow valley. down which you look through a long vista of most graceful, high pine-trees. Far below you down the valley the lawn flattens out. The long, low broken wall of some old stone building drawn across it. A thin, even sweep of pale pink sand, with the dark Pacific lazily tripping on to it now and again in crisp, sparkling, dazzling bars of white. And high above and far beyond all, set like an agate in the richest, deepest, bluest sea man ever saw, a single, crude, pink mountain-top of an island. It is as naked as your hand, and rather the

A Satisfying Picture

shape and colour of it, scarred with orange, tanned to red. It is obviously barren and grassless. But it is the centre of one of the most satisfying pictures nature ever drew.

The peach-trees were in blossom on Norfolk Island. By all the rules it was just as much mid-winter there as in Sydney. But rules do not worry the trees in Norfolk Island. The bitterest cold in June was 57 degrees, and its hottest midday 71. For almost the whole month the glass was at 64—which is exactly the temperature to which doctors try to engineer a sick-room when the man in the bed has pneumonia. If that is not a perfect climate, it is hard to imagine one. One would think that for anyone who is tired of the modern hurly burly, and content to live most of the year with his books, there could not be a better home than this. One Australian squatter did try it, after the drought. He gave it up, it is true. But think of this. A little house bedded into the great dark trees-a little, shingle-roofed, early colonial house, very grey and old and modest, hiding its eyes deep behind a long shingle verandah with slim, round columns. A neat, square garden closed with a neat, square hedge before. A cluster of the sweetest, delicate peach-blossom cuddled like a nosegay against the side wall. An orange tree or two that can scarcely hold up their weight of golden fruit. A vegetable patch with a clump of banana palms down in the ranker corner where the hill drains away. A little field bent over the brow of the hill, where the rich grass is cropped to a lawn by one shaggy pony. On either hand a thick growth of trees, stouter than the pines, and shorter—white oaks, some sort of giant fig, bushy pines and tobacco scrub. A road of rich chocolate mud winding between green banks to a cross-road on

the hilltop. The grey shingles of a house or two peeping from the trees along it. A boy on a pony cantering beyond the hedge. And far down the dell between the hills a startling blue triangle of pure Pacific. They are quite beggarly poor, the people of Norfolk Island—for money. It means selling horses and carts or cows, or even houses, to find the money for a trip to Sydney. But nothing is going to persuade one that they are not rich in comfort on their island. The opinion of the flagship seemed to be that they lived in an English park—

and the flagship ought to know.

They are poor in gold—they have very little indeed—just because others do not give it in exchange for what Norfolk Island has to sell. They could sell oranges, and bananas. If they send them to Australia they have to pay to get them carried; and pay more to get them past the Customs. If they join the Commonwealth, the taxes may come off. But then oranges and bananas grow in Australia already. They could sell yams, and they say they are as good as artichokes; but they have not managed to persuade Australians so. Oranges and bananas do not grow in New Zealand, but there are no boats to carry the Norfolk Island ones there. There used to be schooners once, but they were run out of the trade by the Sydney boats. So the islanders have not an easy problem.

Whether they have money or not, the Norfolk Islanders have not got to travel for scenery with their feet bedded in grass richer than velvet, and that warm, scarred, arid desert rock of a Philip Island just under their eyes. How it came by its aridity is an interesting story. Though it lies so close to Norfolk Island, there were no men there to carry things from one to the other during the whole time until Cook found them. And

Rabbits and Starlings

they find that, although Norfolk Island has no wild animals save the birds, this Philip Island and another little rock close inshore have. Their wild beasts are lizards and big centipedes.

Philip Island has a few Norfolk Island pines. It used to have grass—used to be a perfect pasture like Norfolk Island once. To-day it is only an object lesson. When the soldiers came to Norfolk Island they found nothing to shoot. Even the wild beasts of Philip Island were not exciting. So they transplanted some rabbits on to Philip Island; with such success that there is barely a green blade on it to-day. They say the rabbits have turned cannibal and begun to eat each other. Goodness knows how many millions of pounds it would have saved Australia if some of her early benefactors had only sailed down the channel between the red island and the green one.

There is another pest that has found its way to Norfolk Island only this last two years. The mystery is, how in the name of what is wonderful it did find it. Presumably the starlings do not send out explorers on curves of search over new, landless seas merely for the sake of finding where they will come to. But they have hit on this island somehow. They never found Australia by themselves. They were brought there to eat fruit pests; and ate fruit instead. Now, they have found their own way to the peach-trees on Norfolk Island.

About many of the far little islands of the Pacific there is a darker mystery than how the starlings get to them. It is the mystery of how men ever got to them. Sailors come, after punching through one or two thousand miles of blue water, upon some solitary mountain-top — properly belonging to the muddy

mountain folds into which the bottom of the ocean is crumpled-sticking up out of the sea, without brothers and sisters, like a stranded merman. It has stood there quite lonely and forlorn for a million years or so. sea-birds found it, and they may have brought the seeds of a tree or two, which grow there to this day. The land-birds once in a million years were blown there, and staved there. But man could not be blown there on wings. Whenever he came, he came in the dim past on some brave adventure, in a ten-foot canoe, searching the high seas for a home. Some tiny mountain-tops a thousand miles over the horizon he found, and on them left his mark. Others from the beginning of the world to this have gone unseen. On Easter Island-by more than a thousand miles the farthest outpost in the Pacific - someone has built, goodness knows how, huge monuments in stone, whose secret has died with their The galleys and fleets of some great forgotten nation may have ranged, somewhere behind the curtain of the past, from South America and through these seas. If so, they hit Pitcairn Island, for their colossal stone figures still stick out from it. But there was not a vestige of man's work on Norfolk Island. And thereby hangs the most incredible tale of how Pitcairn and Norfolk came by their present people. The flagship talked of nothing else for the best part of a week. There were three histories of it on board, and they were devoured as quickly as they could be passed along; and more especially the story of Bligh's voyage. Old Mr Cornelius Quintal, a grandson of one of the Bounty mutineers, whom we were taking to his home because the steamers were so far between, had given a lecture on it all to the ship's company for'ard.

Slaves lived pretty cheap, but not cheap enough for

The Bounty

the West Indian planters. It filtered through to England that, on the edge of the known world, a tree had been found which grew ready-made loaves. They sent a captain to bring a load of it in a warship. He was

Bligh, and she was the Bounty.

Just after the first fleet left for Botany Bay, Bligh sailed to Tahiti. There he gathered bread-fruit for six months. The islanders were very pleasant, Bligh very unpleasant. They started homewards; and in the dim hours of one morning Lieutenant Christian, on whom Bligh had borne hardly, found himself alone on his The midshipman of the watch had overslept himself. There in the dark hours on the bridge Christian made up his mind to put Bligh overboard in a boat, and sail the ship back to Tahiti. Nineteen in all, officers and men, were seized and put in the cutter. That was the 28th April 1789—near Samoa. On the 28th May that same nineteen heard at night a noise of breakers. It was the Barrier Reef of Australia. Bligh might have turned south for Sydney village on the coast, near where Cook first landed. The first fleet must have arrived there since Bligh had sailed. But he could not have been sure it was there. He turned inside the Reef. round Cape York, across the Gulf, and crept into Timor harbour on 14th June. Six weeks for 3000 miles through unknown seas and lands in an overcrowded, open boatno one denies Bligh was a skilful, brave sailor.

Far away back, Bligh's old warship was sailing to Tahiti. From there nine of them with twelve Tahiti women and seven Tahiti servantmen, wandered around the ocean, and at last settled for a home on Pitcairn Island, on the very edge of the world. Some people had lived there long ago, for there were great stone works on the place. Its new people burned their boat. For a

Flagships Three

start, M'Coy and Quintal learned how to brew rum from roots, and drank too much of it. Christian took a Tahiti man's wife, and was shot—eleven months after landing. Murder followed murder. Young, a midshipman, died. At last only one man, Adams, eight or nine women, and a few children of the other men were left. From them, by intermarriage, are descended almost all the 850 people of Norfolk Island. The Colonial Office

has always looked on them as an experiment.

The Bounty disappeared in 1791. In 1814 two English warships put in to what was thought an unknown desert island. A dark, naked man came along-He shouted. What he said was: "Won't you throw us a rope now?" It was pure English. They had hit on the children of the Bounty people-46 of them, very piously reared by old Adams as a sort of foster-father. There were 27 in 1790; 25 in 1800 (1 man, 5 women, 19 children); 35 in 1804; 40 in 1814; 87 in 1830; in 1856 nearly 200-far too many for Pitcairn. As the convicts were just leaving Norfolk Island, the Government shipped all the Pitcairners 2000 miles and let them have those deserted, jaundiced, great houses on the beach for their own. Those houses are not the very oldest. A few heaps of grey stones on the hills are all that remain of the first fleet. The others are of Captain Frere's time, but as hoary as the wynds of Edinburgh—quaint, cumbrous, lichen-covered. Into them went the Pitcairners. They have still with them one rusty gun and one rusty kettle from the Bounty: and her coffee, which grows over the island.

It is not 120 years since the mutiny. Yet there are 850 persons on Norfolk Island. It is an extraordinary race this—slight, dark, rather handsome; speaking a very exceptionally pure English, and a weird, shrill

A Sea Race

patois besides; nearly the whole race descended from six British sailors, and very proud of it; mostly owning about half-a-dozen of the old names, the Adams, Youngs, Christians, Quintals; with a great friendship for the Navy, which the men of the Navy pay back. The whole island was down at the landing to meet the ship and Mr Quintal. They vanished from a Government House garden party the other day because someone cried, "Sail ho!" They are a sea race if ever there was one, as used to it as the porpoises. The *Iris*—the big grey yacht of a cable-ship that often lies in Neutral Bay—carries a whole crew of them.

As for their swimming, old Mr Cornelius Quintal told a story, which is also in the books. "Soon after we came here," he said, "a mother whale turned some of us out of our whaleboat, four miles out from the shore. One man was hurt; another, an old English sailor, could not swim; I was a young boy. But we swam, taking turns to hold up the old sailor. After a time something brushed along my chest. I looked down, and saw a school of sharks. We were very tired. But our people were looking for us, and near inshore they picked us up."

"But why did not the sharks touch you?" asked the wardroom.

The old man laughed. "Tell me why the lions did not touch Daniel?" he said.

And there you have in a nutshell the whole spirit of the Norfolk Islanders.



ENVOI

WITHIN less than four years from the meeting of the Conference of 1909, the Australian Navy Board, supported, as it happened, by a Labour Government throughout, has accomplished all that has been told in recent chapters. Its dockvards, its Royal Naval College, are building. It has had built to its orders the battle-cruiser Australia, the light cruisers Melbourne and Sydney, the destroyers Parramatta and Yarra, and the submarines A.E. 1 and A.E. 2. It has put together in Australia the destroyer Warrego, has received, as a loan from the Admiralty, the cruiser Encounter, and, as a gift, the small cruiser Pioneer. It is building for itself in Sydney the light cruiser Brisbane and the destrovers Torrens, Swan, and Derwent; and it has projected a battleship, three destroyers, and two submarines; all this besides the necessary supply and depôt It has established a solid Naval Reserve, at least as thoroughly trained as the Royal Naval It has organised its harbour and dockyard Volunteers. establishments. And last, and by far the most important of all, it has managed to establish in the personnel of its service a standard, of which this much may be said:

Envoi

that it is for the main part the work of those officers who have been generously lent by the great service of which this is the younger sister; and that it has surprised those officers themselves.

And what is the future of that fleet? The Navy Board has definitely stated, in recruiting the men, that the Royal Australian Navy will be administered and controlled by the Government elected by the people of the Commonwealth. Subject to that proviso it will undoubtedly be part, and, some day probably the main part, of the fleet defending British interests primarily in the Pacific—just as the Royal Navy defends them primarily in the Atlantic to-day.

In any policy for the defence of Australian and British interests in the Pacific, there is one consideration so obvious that it must be mentioned here. We in Australia have seen the American "Jackies" amongst our children and in our homes, and know that, whatever they may be by name, it is sheer nonsense to call them foreigners. We know they, and they only, have exactly the same reason for a Navy in the Pacific as England and Australia have; and that it would save England and America millions in the future, if they each had someone to keep the Atlantic whilst they were busy in the Pacific, or vice versa. Therefore, let Australia always have it known that she would realise a wish very dear to her, if America could join England some day on the terms Japan has now. Unfortunately, for some reason not easy to see, we have known for years that America does not want it. It is our straight road for all that.

But, whether things ever shape themselves in the direction of an alliance between the British Empire and America, in the Pacific, there is no jot or tittle of a question as to where Australia will be standing if ever

22

Flagships Three

there is trouble in the air. For so long as the big things in life, which are sentiment, bind the Anglo-Saxon race together, there is no fear of disunion. In these days they speak as if no bond except trade could be strong enough to bind this crumbling old empire. Trade! as though it were a pennyweight in the balance against that sentiment for which they have a portentous,

ignorant contempt.

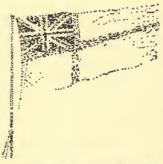
There is a certain pure old cross of St George which the smallest grey gunboat carries about the world. It flies, and will always fly, at the stern of every Australian warship. There is the same jack in the corner of it that has its place on the Australian flag in the bows, and on the Canadian flag, and on the New Zealand flag, and half a hundred others. It meant something once. A man may scarcely mention it in these days but some politician is there to pour on him the vials of his scorn for flagwagging, for making a fool of himself, for a howling sentimental jingo. But is he? I will tell you, Sir Politician, what that flag means to me, and I doubt not to hundreds of thousands besides—and that whether it has five stars upon it, or a maple leaf. It stands for each and every one of these ideas-for generosity in sport and out of it; for a pure regard for women, a chivalrous marriage tie, a fair trial, a free speech, liberty of the subject and equality before the law; for every British principle of cleanliness in body and mind, in trade or politics, of kindness to animals, of fun and fairplay; for a politeness that is no mere foreign paper currency, but, like a Bank of England note, represented by just so much gold in the bank cellars, politeness that will be made good in real life by real sacrifices if need be; for British games and the right to play them; for the British Sunday; for clean streets and a decent drainage; for

Envoi

every other canon of work and sport and holiday, and a thousand and one ideas wrung out by British men and women from the toil and sweat of nine hundred years, that make the Anglo-Saxon life worth living for the Anglo-Saxon. And when century upon century of men, aye and of women too, have lived under that flag and fought around it and died beneath it and shed over it tears with which you have not the capacity to sympathise, it was not to a vain symbol that they paid that tribute, nor to a piece of painted rag; but to all those ideals and ideas, the heritage of your race and mine, which they at least, good souls, thought worthier than life itself.

Therefore, although money and trade are the only material things nowadays, and sentiment, to which they are, after all, nothing but the precarious means, is at a discount, so long as this despised sentiment gives the British race the same enemies to fight and the same ideas to fight about, there is no question as to the destiny of the Royal Australian Navy.

London, 1913.



. There is a certain pure old cross . . .

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