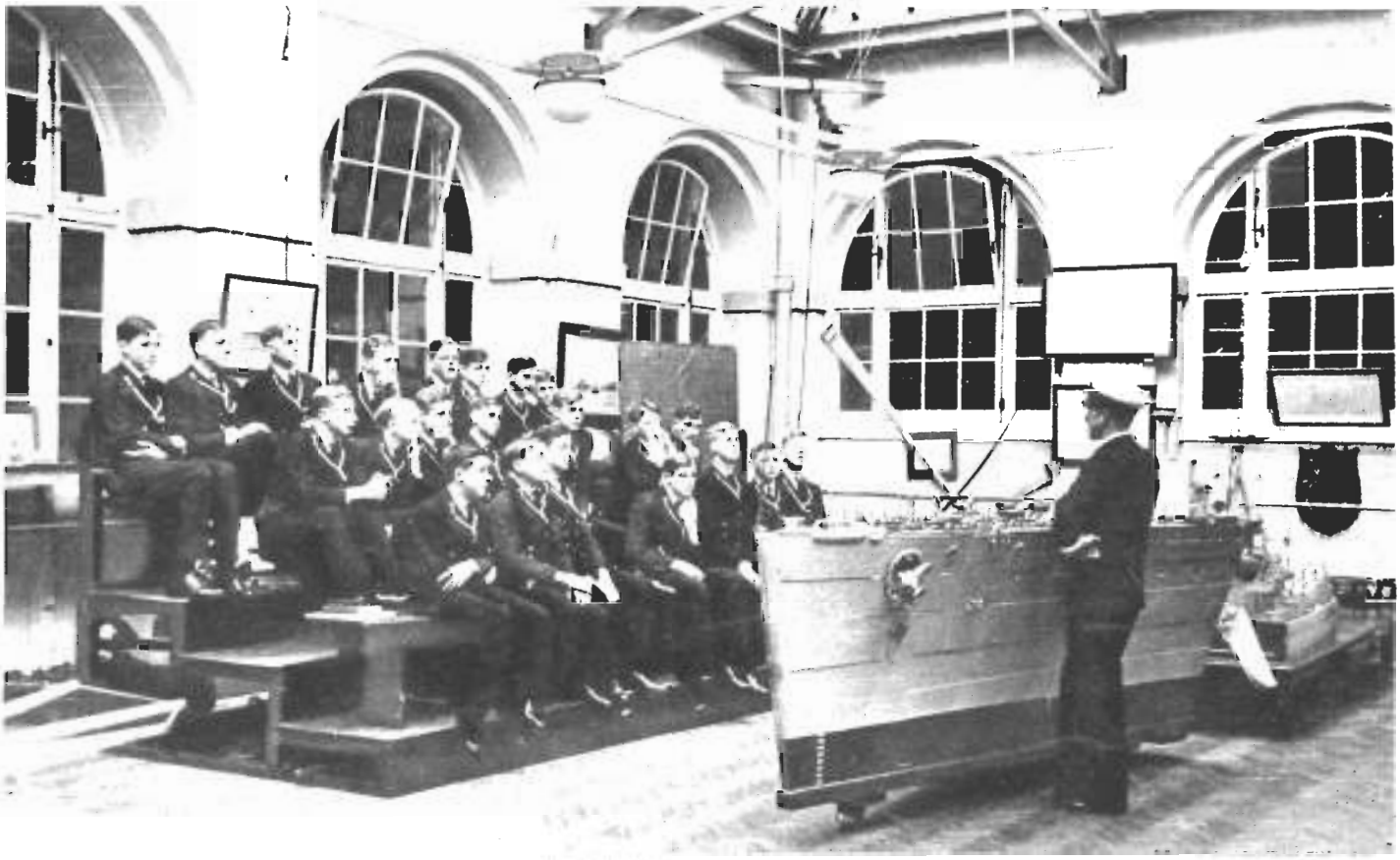
THE KING'S NAVY

ITS STORY IN WORD AND PICTURE

6D

PUBLISHED
SPECIALLY
FOR THE PEOPLE
OF
THE BRITISH
EMPIRE



A CLASS OF CADETS receiving instruction in seamanship at the Royal Naval College, Dartmouth. The forerunner of the college was the famous ship *Britannia* which replaced the training ship *Illustrious* at Portsmouth in 1859. The *Britannia* was removed to Dartmouth in 1863. The college was founded in 1903 and has accommodation for about 400 cadets. It is under a captain and a commander, with a headmaster solely in charge of educational work.

GOING TO SEA IN THE SERVICE

"You can build warships in three years, but it takes ten years to train men who have to handle the intricate machinery," said the late Lord Beatty. This article by PETER DUFF describes the nature of this training and the establishments which provide it.

NEARLY every British boy realizes and appreciates the thrills and joys of a "life on the ocean wave." No country's history is richer in fine Naval tradition than that of Great Britain and no country's literature is richer in stories and songs of the sea.

The ambitions that fired Drake and Ralegh, Rodney and Nelson, are latent in every British character. Many people get no opportunities of giving expression to these ambitions, but every man who joins the Royal Navy is satisfied to some degree in this respect.

Life in the Navy has undergone considerable changes during the last hundred years. Everyone has heard of the hardships that were common in the days of Captain Bligh and the *Bounty*.

Despite the magnificent work that seamen in those days did, and despite the splendid seamanship and navigational skill of such men as Bligh, lower deck conditions were so bad that men were bound to give vent to violent demonstrations of complaint. Even Lord Nelson was aware of this. Writing of his experiences at the age of fourteen, he said: "In July, 1772, I returned a practical seaman with a horror of the Royal Navy." All through his life he was determined to improve the conditions of the men who served in the famous "wooden walls."

Reforms came slowly, but as warships became modernized and mechanized it became necessary for the men who manned them to have a much higher standard of education and in many instances to be skilled craftsmen. A period of training was essential before a rating was able to work efficiently in a warship.

The value and necessity of such training was forcibly expressed by the late Lord Beatty, when First Sea Lord. In 1927 he said: "You can build warships in three years, but it takes ten years to train men who have to handle the intricate machinery."

The training of seaman boys is now carried out mainly at the Shotley Training Establishment, known as H.M.S. *Ganges*, a shore establishment situated on a spit of land between the Rivers Stour and Orwell, near Harwich. Boys serve here for a year or eighteen months and formerly were drafted to the training squadron for service at sea. Before the war the training squadron was constituted by H.M. ships *Northampton, Cleopatra, Curacoa, Calliope* and *Royal Arthur*.

A further shore establishment for the training of seaman boys was later started at Forton, Gosport, near Portsmouth. This is known as H.M.S. *St. Vincent*. There are also training ships at Devonport. Until 1930 the training squadron consisted of the *Benbow, Marlborough* and *Emperor of India*. The boys manned the ships and, as these were the last ships in the Navy to burn coal rather than oil as fuel, the boys even coaled them. The training squadron proper has now been abolished and the boys are drafted to home fleet units when they leave the training establishments ashore.

Life in the lower deck cannot now compare with what it was in Nelson's time. Recreation and reading rooms are

provided, as well as a good library. The mess decks are heated and ventilated and lit by electric light. It cannot be expected that life in a destroyer or a submarine can be the acme of comfort, but the men who serve in them soon get accustomed to these special conditions.

The boatswain's pipe is now being amplified by the use of a microphone and loudspeakers, but the sailors are still roused in the morning by the traditional call, "Heave out! Heave out! Heave out! Show a leg. Show a leg. Lash up and stow."

A man who joins the Royal Navy nowadays is assured of an active life for the length of his service and a life pension, if he re-engages, when he reaches the age of about forty. The normal term of engagement is for twelve years. At the end of this term he may volunteer for re-engagement for another ten years, which will earn him his pension. Re-engagement cannot be claimed as a right, but a man is generally accepted unless there are good reasons for not doing so.

Men may also enter as seamen for Special Service. This means that they engage for a period of twelve years at an age between eighteen and twenty-five. Not more than seven years of the engagement will be served in the Fleet at sea. When his seven years are up a man is enrolled in the Royal Fleet Reserve and thus benefits from many advantages.

All seamen, stokers and Royal Marines may join the Royal Fleet Reserve if they have taken their discharge without a pension. They receive a weekly retainer and are liable to be called up for active service again on a Royal Proclamation.

Selected men who are approaching their time for discharge may be given an opportunity of attending special vocational classes so that they will be equipped to take up employment in civil life. About fifty subjects are taught in this way, and a good seaman has no difficulty in finding a job after discharge from the Navy. In addition there are a certain number of posts in the Civil Service specially reserved for ex-Regular members of the forces.

Barrack Life

CONDITIONS of entry into the Royal Navy vary with the branch of service to be taken up. A strict medical examination is first necessary, and then an educational test of an elementary nature with additional professional examinations for special ratings.

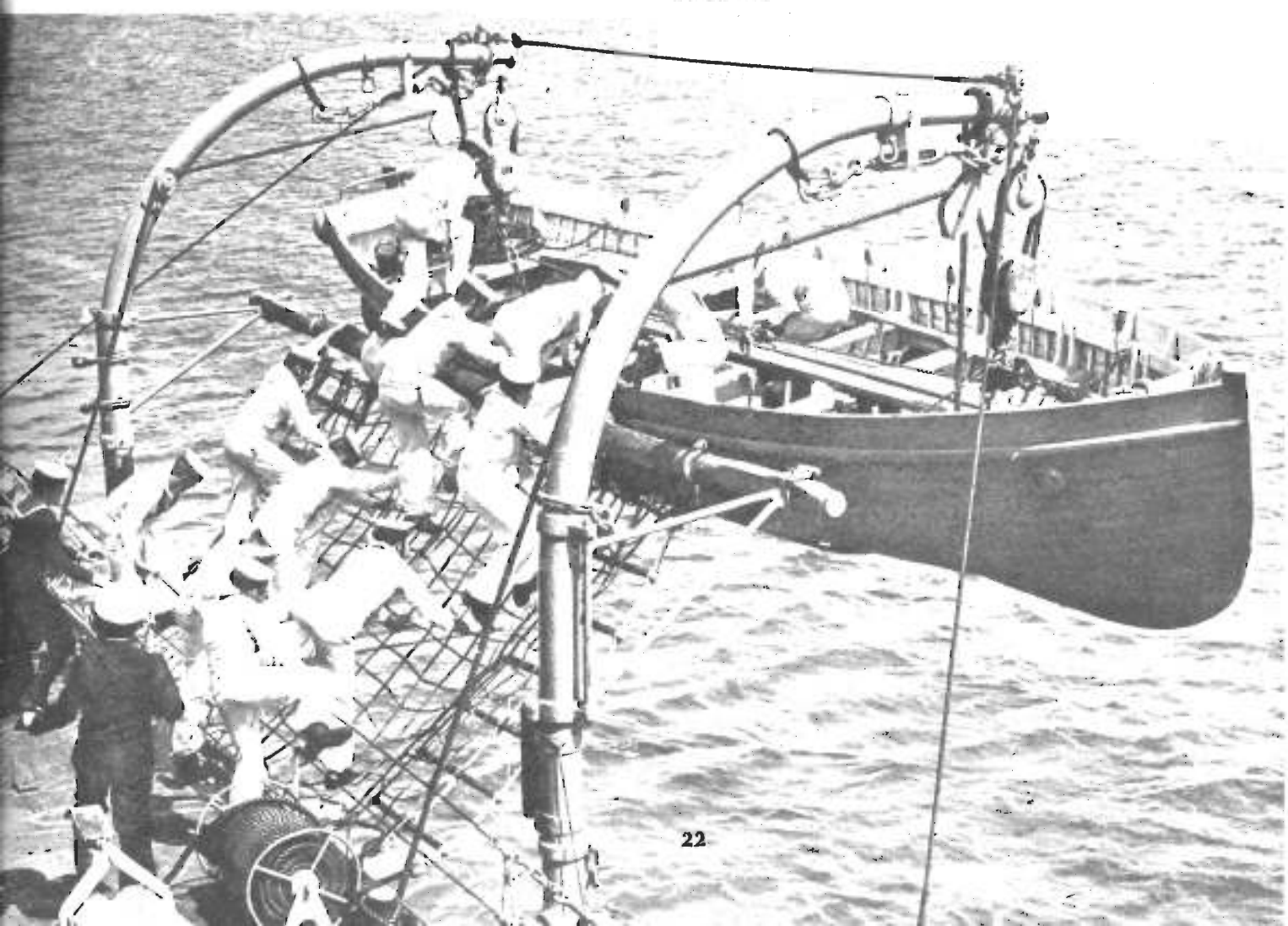
When a man is entered he is sent for a period of training to one of the Naval Barracks at Portsmouth, Chatham or Devonport. One of these barracks will form the rating's headquarters during his service. A commission at sea with the Fleet lasts generally for two and a half years in home or foreign waters. After this time the rating returns to his barracks. Here there are excellent provisions for his comfort. There are recreation grounds for such sports as football and cricket, as well as facilities for indoor games. Athletic sports and regattas are also held from time to time.

Men may specialize in certain branches, such as the Signal Branch. This specialized work brings extra pay and allowances after a certain time. The Signal Branch is recruited mainly from boys already undergoing training, but Special Service men may enter as Signalmen between the ages of eighteen and twenty-three. Similar advantages apply to ratings of the Wireless Telegraphy Branch.

Engine-room Artificers must be competent workmen at necessary trades. They are entered between the ages of twenty-one and twenty-eight, provided that they satisfy the examiners as to their knowledge of their respective trades.

Engine-room Artificers are generally entered as Acting Engine-room Artificer, 4th Class. On advancement to 3rd Class they then rank as Chief Petty Officers. A number of Engine-room Artificer

FAMOUS BATTLESHIP AS TRAINING SHIP. H.M.S. *Ramillies*, which recently returned from service with the Mediterranean Fleet at Alexandria, is now cruising in home waters as a training ship for boys and other new entries into the Navy. In a ship of this size 1,000 men and boys sleep and feed. In addition to routine duties, there is specialized training in signals, wireless and engineering. The picture shows how a sea boat's crew reach their boat.



RIFLE DRILL INSTRUCTION in H.M.S. Royal Sovereign. This battleship, which gives her name to a class of five ships, is now being used as a training ship. Boys are given instruction in the firing of guns including anti-aircraft guns. Below: A cadet receiving instruction in heaving the lead to obtain soundings.

apprentices between the ages of fifteen and sixteen are accepted every year after examination, and given a course of training before entering for service at the age of eighteen. Two apprentices every year are appointed to the Royal Naval Engineering College at Keyham, Devonport, with a view to their becoming officers of the Engineering Branch.

The work of a stoker is now greatly different from what it was when warships used coal for fuel. The minimum age for entry is now eighteen, and a limited number of stokers who show mechanical ability may later qualify as Mechanicians.

Instruction in the Mechanician Branch comprises fitters' and turners' work and knowledge of the working of marine engines and boilers.

Candidates for entry as Electrical Artificers must be efficient turners, fitters and instrument makers, and must equip themselves with a minimum number of tools, as is the general custom of the trade. The same applies to Ordnance Artificers, who must have had at least five years' experience as fitters and turners.

Blacksmiths, joiners, painters, plumbers and shipwrights must all be good workmen at their trade and can enter between the ages of nineteen and twenty-eight. They must first pass a practical examination in their respective trades. Boys who have passed the Civil Service Educational Examination for Dockyard Apprentices are eligible for entry as Naval Shipwright Apprentices.

Accepted candidates for Sick Berth Staff are entered as Probationers and given a course of instruction at a Royal Naval Hospital. Allowances are granted to men who qualify as X-ray assistants, laboratory assistants and masseurs.

Writers and Supply ratings have diverse duties. They keep accounts, render returns, deal with correspondence; the duties of the Supply Branch are concerned with victualling and clothing, storekeeping and the keeping of necessary accounts. Extra pay is given to competent shorthand-typists.

Men are entered for service at the age of eighteen to twenty-five as Officers' Stewards. Youths may be trained in this branch in the Depots and Home Ports for two years until they are drafted into the fleet at the age of eighteen.

Promotion from the forecastle to the quarterdeck is becoming more frequent. Many seamen are now able to reach the rank of commissioned officer. Character, the power of leadership, and personality count for the most in this respect. It is possible for a boy with these characteristics to achieve promotion five years after he has completed his training at the age of eighteen.

In 1912 a scheme was introduced whereby seamen were able to reach the ward room through the intermediate rank of mate. Recently, however, this rank has been abolished and the rank of Acting Sub-Lieutenant substituted. Men reaching this rank are sent for a term to Greenwich Naval College.

The majority of officers entering the Navy do so through the Royal Naval College at Dartmouth. The first college for the training of officers was established at Portsmouth in 1729. Boys entered between the ages of thirteen and sixteen and were taught mathematics, navigation, gunnery, fencing, French, and were given practical instruction in the dockyard.

After having been in existence for more than a hundred years, the college was closed in 1837. Five years previously

however, due to the foresight of Captain Thomas Hastings, the *Excellent* was made into a gunnery school. This became one of the most important schools of gunnery and was responsible for a great deal of valuable research and experimental work.

In 1839 Captain Hastings was knighted and made superintendent of a new Royal Naval College intended mainly for the advanced instruction of commissioned officers. Nineteen years later the *Illustrious*

FIRING THE MAIN BOILERS. Cadets at work in the stokehold of H.M.S. *Thunderer*, which served for some time as a training ship for Special Entry Naval Cadets. The Special Entry system was initiated in 1913 to provide a shortened course for Public school boys who wish to become officers in the Royal Navy. The dreadnought *Thunderer* was completed in 1913. She had a displacement tonnage of 22,500, a speed of 21 knots and carried a crew of 800.

was fitted out at Portsmouth for training cadets. A cadet would join the ship at the age of about fourteen, and after six months' training would go to sea for fifteen months. Two years after having passed his midshipman's examination he would sit for his lieutenant's examination and be examined in seamanship, navigation, mechanics, steam, hydrostatics and French.

In 1859, the *Illustrious* was replaced by the famous *Britannia*. She was a 120-guns ship built in 1820 and accommodated 230 cadets. In 1863 she was moved to Dartmouth and became the predecessor of the Royal Naval College there.

The Royal Naval College at Greenwich was started in 1873 for the higher education of naval officers. The system of training cadets underwent alteration about 1885 and at that date cadets were accepted in the *Britannia* between the ages of twelve and thirteen-and-a-half.

After two years in the training ship they would spend as much as five years at sea and then go to the Greenwich College for a six months' course in navigation and mathematics. Further instruction consisted of one month's torpedo work in H.M.S. *Vernon*, three months' gunnery in the *Excellent*, and two months' course in pilotage at Portsmouth. A fundamental piece of reorganization took place in 1903 at the suggestion of Lord Selborne and Lord Fisher. Two Naval Colleges were formed, one at Osborne in the Isle of Wight, and the other at Dartmouth. Executive and engineer officers from that date made their entry into the Service through the same channels. The College at Osborne was closed in 1921, and the Royal Naval College at Dartmouth now forms the main gateway to the Service.

From "Wart to Snotty"

LIFE has many attractions for cadets at Dartmouth. There are eighteen acres of playing grounds for hockey, football and cricket. Cadets are allowed to sail up the beautiful River Dart in steamboats, motor-boats and sailing cutters. Sailing races are a regular feature of the half-holidays. There is a large gymnasium and a swimming bath where water polo matches are held. The engineering workshops by the river resemble a miniature dockyard.

When they have finished their eleven terms at Dartmouth, the cadets spend eight months at sea in H.M.S. *Frobisher*, a cruiser of 9,860 tons displacement fitted in 1932 as a training ship for 160 cadets. This is the first experience of life with the fleet at sea and the first insight into gunroom life. At the end of this training period cadets are rated as midshipmen. When a midshipman joins his first ship he is popularly known as a "wart" until in due course he becomes a "senior snotty."

Success in examinations raises him in rank to a Sub-Lieutenant and later to a Lieutenant. Eight years later he becomes a Lieutenant-Commander. Promotion to Commander and from Commander to Captain is made by selection, generally after intervals varying from six to eight years.

A Captain generally commands a cruiser or a battleship, and generally serves in administrative posts at the Admiralty, or some other shore establishment, as well. A Rear-Admiral may command a division of battleships or a squadron of cruisers. A Vice-Admiral, Admiral or Admiral of the Fleet may be Commander-in-Chief of a station or a fleet.

The Engineering Branch is becoming more and more important and demands a high degree of specialization. For this reason, when naval cadets who wish to join the Engineering Branch become midshipmen, they spend a further four years in the Royal Naval Engineering College at Keyham, and in the Torpedo School at Portsmouth.

There is a shortened, general course for Public school boys who wish to become officers. This Special Entry

system was started in 1913 when successful candidates went for an eighteen months' course of training in H.M.S. *Highflyer*, a light cruiser of 5,600 tons displacement.

The war complicated these arrangements, but in 1919 H.M.S. *Carnarvon*, 10,850 tons displacement, was used as a training ship for Special Entry Naval Cadets. Since that date the *Cumberland*, the *Temeraire*, the *Thunderer* and the *Erebus* have in turn fulfilled this service. Now H.M.S. *Frobisher* is the training ship.

When the midshipman has become an Acting Sub-Lieutenant, after a short spell at sea he is sent to the Naval College at Greenwich for an advanced educational course lasting six months.

As a Lieutenant he may decide to specialize and may take a further course in gunnery at Whale Island, Portsmouth, a torpedo course in H.M.S. *Vernon* or a navigational course in H.M.S. *Dryad*, at Portsmouth.

The Admiralty also grants a number of nominations to the Royal Navy to cadets from certain training ships such as the *Conway* and the *Worcester* and from the Nautical College at Pangbourne on the River Thames in Berkshire. The story of the two friendly rivals, the *Conway* and the *Worcester*, is one of the greatest interest.

H.M.S. *Conway* was launched in 1832 at Chatham. She was a ship of 652 tons, armed with twenty 32-pounders on her gun deck, six on her quarterdeck and two smaller guns on her forecastle. She sailed to Port Royal, Jamaica, and later to the Pacific and China. In 1857 she became a coastguard ship.

About that time the Mercantile Marine showed great interest in the value of training ships for future officers and asked the Government for a ship to be used for this purpose. The *Conway* was sent to the Mersey and is moored there to this day.

The *Worcester* became a training ship at about the same time. William Bullivant, a merchant, and Richard Green, a well-known shipowner, decided to start a training ship. The Admiralty agreed to lend them the 50-guns frigate *Worcester*, of 1,500 tons, and she was moored in the Thames at Blackwall Reach in 1862.

Fifteen years later she was replaced by another warship which took her name. The second *Worcester* had had a motley career. Originally an 84-guns warship laid down in 1833 she was named the *Royal Sovereign*, but six years later her name was changed to the *Royal Frederick*. In 1853 she was entirely rebuilt as a screw steamer and her name again changed, to the *Frederick William*. She was now a vessel of 4,725 tons burthen. In 1876 her engines and boilers were removed and she replaced the *Worcester* in the following year, again changing her name.

Naval cadetship was granted by the Admiralty in 1882, and the training for the Merchant Service and the Navy in the *Worcester* comprises every branch of practical seamanship.

Every week cadets carry out abandon ship exercises. Splicing and sail-making are learnt. Full instruction is given in rigging, the management of boats, the use of navigational instruments, wireless direction-finding, naval architecture and signalling, as well as full scholastic education.

A less expensive training, for the Lower Deck of the Navy, is afforded by the training ship *Mercury*, moored in the River Hamble not far from Southampton. Commander C. B. Fry, the well-known cricketer, is in command.

The original *Mercury* was a tea clipper, formerly the *wa Illova*. She was established as a training ship by Charles Hoare in 1885 and maintained at his own expense. She foundered in service during the war and was replaced by the former H.M.S. *President* and her tender the *Vishala*. In addition to the training ship *Mercury* there is a shore establishment covering about 45 acres.

Boys enter at about thirteen and the cost of a year's training amounts to about £65. It is notable that one boy who left the *Mercury* in 1927 was promoted from the rank of Acting Petty Officer in the Royal Navy to Sub-Lieutenant in 1933. The earliest training ship for seamen in the Royal Navy was established

Photos, Naval Training Establishment, Shotley

AT SHOTLEY TRAINING ESTABLISHMENT. Suffolk, seamen boys serve for between a year and eighteen months. A shore establishment known as H.M.S. *Ganges*, is situated on a piece of land between the Rivers Stour and Orwell. When their time is finished at Shotley, the boys are drafted to home fleet units for further training. The photograph above shows one of the dormitories; below, a class in progress.

by the Marine Society in 1786. The Society was started by the efforts of Jonas Hanway and a number of city merchants. At that time the Navy was manned mainly by the efforts of the press gangs, and conditions on board were insanitary to say the least.

The Marine Society was formed to encourage landsmen to join the Service. It offered a strong incentive by providing complete sea kits. Young boys in a distressed condition were later clothed and sent to sea. The first lot of boys were sent in H.M.S. *Barfleur*. In 1786 a merchant ship, the *Beatty*, was converted for use as a training ship. By 1799 she was worn out and the Marine Society applied to the Government for the loan of a warship.

This request was granted and a number of warships were converted from time to time for the use of the Marine Society. The famous *Warspite* came into use in 1876 and was in service until she was burned in 1918. She had formerly been the two-decker *Conqueror*. In 1918 the cruiser *Hermione* became the second training ship *Warspite*.

The objects and aims of the Marine Society are twofold. They wish to relieve distress by equipping boys in poor circumstances for a career at sea in the Royal Navy and the Merchant Service, and they thus provide the two services with a steady stream of trained boys of good character and physique.

Between the years 1769 and 1935, the Marine Society sent 30,392 boys into the Royal Navy, and this number is increased by about sixty every year. The boys are taken into the *Warspite* between the ages of fourteen and sixteen and serve for a training period of two years.

Moored astern of the *Warspite* in the Thames off Grays is the *Exmouth*, a training ship run by the London County Council.

A number of boys are sent to the Navy every year from this ship and from the *Arethusa*, the Shaftesbury Homes training ship. The old frigate *Arethusa* was replaced in 1933 by a steel four-masted barque of 3,191 tons, formerly the *Peking*, a German sailing ship. She is moored in the River Medway, Kent.

Other Training Ships

ANOTHER notable training ship that has sent a number of well-trained boys to the Royal Navy is the *Indefatigable* at Liverpool. Boys of about fourteen years old enter the *Indefatigable* for a two years' training. Recently a number of them have passed into the Navy as Engine-room Artificer Apprentices. The original training ship was a frigate lent by the Admiralty in 1864. She was replaced by the cruiser *Phaeton* in 1913.

The training-ship system became extremely favoured in the middle of the last century, and in 1853 five old line-of-battleships were put into commission as training ships. There were the *Impregnable* and the *Implacable* at Devonport, the *St. Vincent* at Portsmouth, the *Boscawen* at Portland, and the *Ganges* at Falmouth.

Lord Fisher, however, preferred the shore establishment for training purposes and gradually the harbour ships were closed down. The last was the *Impregnable*, which closed down in 1928.

The names of H.M.S. *Ganges* and H.M.S. *St. Vincent* have been transferred to the shore establishments at Shotley and Gosport respectively. In these establishments the seaman boys receive their education and training for a life at sea.

After their training ashore they spend a few months in a unit of the fleet at sea. This final training is one of the most important parts in the shaping of a seaman boy. He has his first experience of life on the sea itself and gets used to the ways of life and service on board.

This summer two capital ships were specially earmarked by the Admiralty for use as training ships for seaman boys after their course ashore. The first was the famous battleship *Royal Sovereign*, which was launched at Portsmouth in 1915. The *Ramillies* has also been used for the same purpose this year.

In these battleships of 29,150 tons displacement, built at a cost of between two and a half and three and a quarter million pounds, boys learn the duties of a sailor with the Fleet at sea. They are given specialized training in signals, wireless telegraphy and other branches, and they learn how to handle the eight 15-in., the twelve 6-in. and the four three-pounders and 4-in. anti-aircraft guns with which each ship is armed. In addition, they man the vessels and learn to keep them ship-shape.

So to-day there are a number of ways for a boy to join the Royal Navy whether as a rating or as an officer. It is an eventful life and a healthy one. It gives the young man an opportunity to see places that he would never otherwise see. The pay is good, the food is good and life is extremely enjoyable. If Nelson were to come back to-day he would not be able to say he had a horror of the Navy, but he would be astonished at the fine conditions that exist in the great modern ships that have replaced his sturdy "wooden walls."

CADETS HOISTING IN THE BOATS on their return to ship from sailing. Although every opportunity is given to ambitious cadets to undertake specialized courses in such subjects as gunnery and navigation, a training ship's principal purpose is to teach cadets practical seamanship and to give them a general knowledge of naval routine.

FLAG SIGNALLING

The use of flags as a means of communication between ships has developed from the complicated and unsatisfactory systems of the seventeenth century to the flexible and comparatively simple code of to-day.

By *Commander Hilary* MEAD

SIGNALLING by means of coloured bunting originated in the seventeenth century. Then orders were conveyed to the ships of a fleet by displaying various ensigns, jacks and pendants in different parts of the flag-ship. The use of national flags and even royal standards for signalling—introduced in the first place because there were no signal code flags—has persisted, more or less, until modern times.

It is only recently that the Union flag has been abolished for signal purposes in the Royal Navy. It is expected that the use of the white-bordered Union as a pilot signal in the British Merchant Service will likewise be abandoned in the near future.

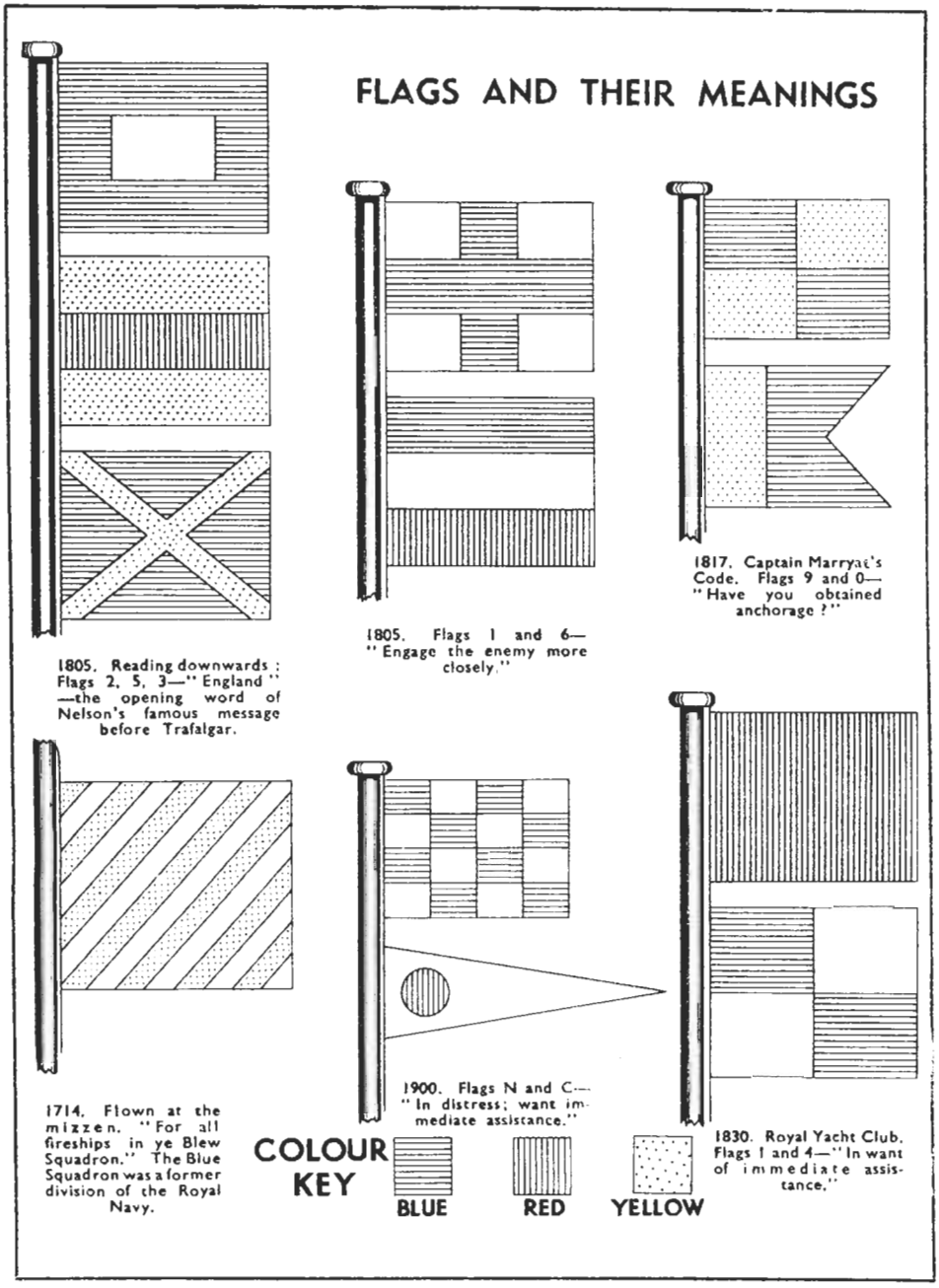
Credit for the first properly organized code of naval signals has been given to the French Admiral, Anne Hilarion de Contentin, Comte de Tourville (1642–1701). Some English writers, however, consider that whatever merit the early French signaliers possessed was derived from the residence among them of the exiled Duke of York, afterwards James II, who was a good naval administrator and influenced their signal policy. Be that as it may, the French Navy led the rest of the world in practical flag signalling for nearly a hundred years.

In Rodney's fleet the number of flags devoted to signalling had gradually risen to the total of forty-seven. This was due to the meanings of the signals being dependent, not on the combinations of flags but on the several positions on the masts, yards and rigging where they were displayed.

This complicated process, in turn, gave way by degrees to the numerary method, in which each flag was given a number, and combinations of flags could express any figure from 1 to 999. It enabled the quantity of signalling emblems to be cut down, so that at the Battle of Trafalgar, Nelson's ships needed only the ten numerals, with a few extra flags added for answering, annulling and similar purposes.

Until 1800 all naval signals had been arbitrary, that is, certain numbers referred to certain phrases only. Thus, 16 meant "Engage the enemy more closely." It was, therefore, impossible to vary the signals and their meanings. In 1800, Sir Home Popham invented his Telegraphic Signals, consisting of a short dictionary of words each with its appropriate number. Messages could then be spelt out word by word quite apart from the arbitrary sentences. Nelson's famous signal was conveyed in twelve groups of numbers taken from Popham's vocabulary.

It was not until after the Napoleonic wars that inventors were able to turn their



attention to the signalling needs of the Merchant Service. Then there was much activity, and a host of naval officers and others, of several nations, brought forward their schemes, some good and some impracticable. The best of all, and that eventually to be adopted universally, was the Code of Signals for the Merchant Service, produced by Captain Frederick Marryat, the novelist, in 1817.

Marryat's code was replaced forty years later by the first official Commercial Code. This developed into the International Code, after translations had been made into various continental languages. The 1857 code consisted of eighteen flags and there was a new departure from precedent in that they were named after the letters of the alphabet instead of being numbered. The letters allotted were "B" to "W," with the omission of "E," "I," "O" and "U."

The Commercial Code committee paid a tribute to the utility of Marryat's code by adopting twelve of his flags as they stood, and three more with slight alterations. Among them were the three striking pendants, white with red oval, and blue, and red, with white ovals, representing "C," "D," and "F," and remembered familiarly by seamen by the allusion to the words "*C*lear," "*D*ark," and "*F*iery."

In 1900, the code was amended and expanded and flags were provided for the whole alphabet.

When the Great War came, however, the code broke down altogether for interlingual communication, and the first opportunity was seized of making a new and revolutionary revision.

On this occasion the compilation of the vocabulary and the grammatical inflections of seven varying languages was undertaken by a truly representative editorial committee from eight countries. Their difficulties were great. It is believed, however, that the present International Code of Signals, used judiciously, will overcome all such difficulties.

A naval code is distinguished markedly from its commercial counterpart by its flexibility. Signallers using the International Code are limited to arbitrary messages or to sentences made up of vocabulary words. Everything must be searched for in the Code book, with the exception of a few self-evident signals, such as "C," meaning "Yes," and "N," meaning "No."

In the Navy, on the other hand, most signals, including those for manoeuvring and the usual operations at sea, can be read by a professional signalman and by most officers without reference to a signal book.

For an order such as "*Doris* take station two points abaft the starboard beam of *Majestic*, distant four cables," no signal officer or signalman would look out the flags in any signal book; for one reason, such a composite message could not be found there, and the whole must be built up from special knowledge.

From earliest times the shapes and sizes of signal flags have varied greatly. The pendant, one of the most ancient of English emblems, has sometimes had the fly split into two tails, sometimes it has been rounded, and in the Royal Navy for the last hundred and forty years it has had its end cut off square.

In America the name for this piece of bunting is spelt "pennant," and there has been some agitation in England latterly to adopt the more modern, colloquial version. The pendant must be carefully distinguished from the triangular flag, which is a much shorter symbol, and which has quite a different meaning. A square flag cut in a swallow-tail is sometimes known as a burgee and sometimes as a cornet.

Admiral Richard Kempenfelt, hero and victim of the wreck of the *Royal George*, in 1782, was keenly interested in signalling and instituted many reforms. In those days the rectangular flags were nine yards long by five yards wide, and the pendants fifteen yards long by three yards at the hoist.

There is no short cut to learning the colours of modern code flags, and each must be acquired by familiarity, patience and experience. This has not always been so, for, in 1823, the Royal Yacht Club had its own code of signals in which the flags were self-evident.

For example, No. 1 was a plain red flag, one colour; No. 2 was half yellow and blue, two stripes; No. 3, blue-white-red horizontally, three stripes; No. 4, quartered blue-and-white; No. 5, white with five black dots; No. 6, chequer of six, white-and-red, and so on.

This system met the requirements of a yacht club, but would have been unsuitable for a naval code that had to be kept secret in wartime from an enemy.

WHAT THEY EARN

A. P. LE M. SINKINSON explains many of the mysterious terms connected with naval pay and describes the numerous grades and scales of remuneration in the Royal Navy and Royal Marines.

HARDLYING Money, Climate Pay, Command Money, Entertaining Allowance, Equipment Allowances—these are but a few of the terms that mystify the civilian when he tries to learn about the pay of officers and men in the Royal Navy and Royal Marines.

In the Navy remuneration is, as a general rule, according to rank or rating. There are two main divisions—pay and allowances. Pay is the mainstay; allowances are the "extras" that are derived from the performance of special duties. An officer or rating may receive pay without any allowances; it is inconceivable that he should receive allowances without any pay.

The civilian world is accustomed to salaries or wages by the year or by the week. In the Royal Navy and Royal Marines, the unit is normally the day, though this rule is subject to certain exceptions. Indeed, there is scarcely any rule about naval pay to which an exception cannot be found. Although naval pay is generally reckoned by the day, the payments are made monthly for officers, and monthly abroad and fortnightly at home for ratings.

Since pay is normally according to rank or rating, it will be necessary to bear in mind the different ranks and ratings in the Service.

Taking the officers first, there are twelve classes and, in theory, no fewer than sixteen grades for each class. This makes theoretically 192 different subdivisions, each with its appropriate rate of pay. But in fact there is not so much complication: only in one class are all the sixteen grades to be found, and in another there are only two grades.

The twelve classes are: Executive Officers, Engineer Officers, Medical Officers, Dental Officers, Accountant Officers, Instructor Officers, Chaplains, Shipwright Officers, Ordnance Officers, Electrical Officers, Schoolmasters and Wardmasters.

The sixteen grades are: Admiral of the Fleet, Admiral, Vice-Admiral, Rear-Admiral (these four are Flag Officer grades), Commodore 1st or 2nd Class, Captain, Commander, Lieutenant-Commander, Lieutenant, Sub-Lieutenant, Commissioned Gunner (and corresponding ranks such as Commissioned Boatswain, Commissioned Master-at-Arms, etc.), Senior Mate, Permanent Cruiser Service, Gunner (and corresponding ranks such as Boatswain, Warrant Master-at-Arms, etc.), Second Mate, Permanent Cruiser Service, Midshipman, and Naval Cadet.

It is impossible here to give more than a selection of the various rates of pay accruing to these various ranks and grades, but a few representative rates will help.

A Naval Cadet receives a daily rate of 1s. in a training ship and a daily rate of 4s. in a sea-going ship not a training ship. At the other end of the scale, the daily rate for an Admiral of the Fleet is £7 4s. 10d. Midshipmen receive 5s., Acting Sub-Lieutenants 7s. 8d., Sub-Lieutenants 9s., Lieutenants from 13s. 6d. to 18s. 2d., Lieutenant-Commanders from £1 7s. 2d. to £1 10s. 10d., Commanders from £1 16s. 2d. to £2 7s., Captains from £2 14s. 4d. to £3 7s. 10d., Commodores 1st Class and Rear-Admirals £4 10s. 6d., Vice-Admirals £5 8s. 8d., and Admirals £6 6s. 8d.

All these rates refer to Executive Officers, and are those in force as from July 1, 1935. Naval pay, however, is subject to variation from various causes. Engineer Officers receive pay varying from the 5s. for a Midshipman (E.) to the £4 10s. 6d. for an Engineer Rear-Admiral or Rear-Admiral (E.). In the Accountant Branch the rates from Paymaster Cadet to Paymaster Commander are generally identical with those in the Executive Branch; but a Paymaster Captain receives from £2 9s. 10d. to £3 3s. 4d. and a Paymaster Rear-Admiral £3 12s. 4d. A Surgeon Lieutenant receives £1 4s. a day and a Surgeon Rear-Admiral £4 15s. Chaplains get from 18s. 2d. to £2 8s. a day; Chaplains of the Fleet £1,358 a year. The pay of Instructor Officers ranges from 15s. 4d. (Instructor Lieutenant on Entry) to £3 3s. 4d. (Instructor Captain). Schoolmaster Candidates are paid 10s. 10d.; Headmasters (Commanders) after nine years £2 7s.

Warrant Officers and Commissioned Officers from Warrant Rank are in two classes—Mechanical (Engineer, Mechanician, Shipwright, Electrical, Ordnance) and Non-Mechanical (Gunner, Gunner T, Boatswain, Signal Boatswain, Telegraphist, Wardmaster, Regulating, Writer, Supply, Cook, Steward). The pay of the first class ranges from 13s. 6d. for a Warrant Officer on promotion to £2 11s. 8d. for a Commander (Engineer, Mechanician and Shipwright only) after nine years. The pay of the second class ranges from 12s. 8d. for Warrant Officer on promotion to £2 7s. for Commander (Gunner, Gunner T, Boatswain and Signal Boatswain only).

Each class of officer has its appropriate scale of allowances. Executive Officers may receive Command Money, when appointed in command of sea-going or harbour ships. This varies from 2s. for a Sub-Lieutenant to 7s. or 10s. for a Captain. Table Money for Flag Officers and Commodores, 1st Class, may be as high as £4 10s. a day, free of income-tax. Entertaining Allowance ranges from 2s. 6d. to 8s.

For service in submarines the allowances range from *nil* to 6s. Hardlying Money is paid, at Admiralty discretion, in certain circumstances for service in submarines and certain other small craft.

FACTS AND FIGURES

Remuneration in the Navy consists of pay and allowances.

Pay is the mainstay; allowances are "extras" for special duties.

Naval pay is reckoned by the day, but payments are made monthly for officers and monthly abroad and fortnightly at home for ratings.

The scale of pay is normally according to rank or rating.

A Naval Cadet in a training ship is paid at a rate of 1s. a day; an Admiral of the Fleet at a rate of £7 4s. 10d. a day.

Allowances are numerous both for officers and for the Lower Deck.

Command Money is paid to executive officers appointed in command of sea-going or harbour ships. This varies from 2s. for a Sub-Lieutenant to 7s. or 10s. for a Captain.

Lower Deck "Payments, in addition to Wages" include 3d. for each Good Conduct Badge and 6d. for a Photographer 2nd Class. A Seaman Bugler receives an addition of 1d., a Marine Barber 2d., a Butcher 3d., and a Torpedo Coxswain 7d.

There are over a dozen other kinds of allowances.

The Lower Deck is divided into twenty-four sections: Seaman, Sailmaker, Signal, Telegraphist, Engine Room Artificer (E.R.A.), Mechanician, Stoker, Electrical Artificer, Ordnance Artificer, Armourer, Shipwright, Joiner, Blacksmith, Plumber, Painter, Cooper, Sick Berth, Writer, Supply, Regulating, Ship's Cook, Band, Officers' Steward and Officers' Cook.

The principal ratings are Chief Petty Officer (Chief Yeoman of Signals, Chief Stoker, Chief Petty Officer Writer, etc.), Petty Officer (Yeoman of Signals, Stoker Petty Officer, Petty Officer Writer, etc.), Leading Seaman (Leading Signalman, Leading Stoker, Leading Writer, etc.), Able Seaman (Signalman, Stoker 1st Class, Writer, etc.), Ordinary Seaman (Ordinary Signalman, Stoker 2nd Class, Writer Probationer, etc.) and Boy. There are Signal Boys and Boy Telegraphists and, in the Seaman category, Boys 1st Class and Boys 2nd Class.

A Boy, 2nd Class, receives 6d. a day, a Chief Petty Officer from 7s. to 10s., with subsequent triennial increments of 6d. a day. Intermediate rates are: Ordinary Seaman from 1s. 6d. to 2s. 9d., Able Seaman from 2s. 6d. to 4s. 6d., Leading Seaman from 3s. 10d. to 5s. 6d., and Petty Officer from 5s. 6d. to 7s. 8d. The maximum pay of a Chief Yeoman of Signals is 10s., "with subsequent triennial increments of 6d. a day." The highest grade of Artificer (Chief E.R.A., etc.) receives 12s. 6d. and the lowest grade (Artificer Apprentice) 9d. a day (first year). A Blacksmith 5th Class has a daily rate of 4s. 7d., a Regulating Petty Officer from 7s. to 8s. 8d., an Officers' Cook 3rd Class, entered after October 4, 1925, 3s. 3d., and a Ship's Musician, "after three years as such," 4s. 5d. or 5s. 3d.

It may surprise readers to hear that there is a wages table for native ratings. For Somalis, "on stations where the rupee is not current," the rates include 2s. 3d. for a Head Tindal and 1s. 10d. for a Second Stoker Tindal. A Head Krooman "in other than battleships and cruisers" receives 2s.

The Lower Deck receives, as do the officers, remuneration in addition to pay. This is called "Payments, in addition to Wages." There is a bewildering list of these extra payments, such as 3d. for each Good Conduct Badge and 2s. a week for "Harmonium," and from 6d. for a Photographer 2nd Class or a Mental Ward Attendant to 1s. 6d. for a Torpedo Gunner's Mate and a sum "not exceeding 2s. 6d." for a Senior Officer's Writer's Allowance. Hardlying Money ranges from 1½d. to 1s. 3d. Lamp-trimming is worth only 2d. a day. A Seaman Bugler receives 1d., a Barber 2d., a Butcher 3d., a Torpedo Coxswain 7d., and an Artificer Deep Diver 1s. 2d.

In the Royal Marines a Probationary Second Lieutenant receives 6s. 10d. a day, a Lieutenant from 9s. to 18s. 2d., and a Captain from £1 7s. 2d. to £1 10s. 10d. When we reach the grade of Field Officers, we find that a Major draws from £1 16s. 2d. to £2 7s., a Lieutenant-Colonel from £2 14s. 3d. to £2 18s. 10d., a Colonel 2nd Commandant £2 18s. 10d., and a Colonel Commandant (corresponding to Brigadier) £3 3s. 4d. A Major-General, if employed, draws £4 10s. 6d., a Lieutenant-General £5 8s. 8d., and a General £6 6s. 8d. Brevet rank carries no extra pay.

Marine warrant officers and officers promoted from warrant rank receive from 12s. 8d. (Royal Marine Gunner on promotion) to £1 11s. 8d. (Captain after three years). A Commissioned Sergeant-Major draws from 17s. 2d. to £1 2s. 8d., a Quartermaster-Lieutenant on promotion £1 4s. 6d., and a Chief Schoolmaster Captain £1 8s.

Allowances for Royal Marine officers include Command Money (7s. for Colonels Commandant, with Entertaining Allowance of 5s.), Flag Allowance, Specialist Allowance, Adjutant's Allowance, and so on. The amounts vary from 1s. to 5s.

Other ranks of the Royal Marines are paid from 9d. for Boy Musician or Boy Bugler on enlistment to 9s. 6d. or 10s. 6d. for a Company Sergeant Major, "with subsequent triennial increments of 6d. a day." The Marine on enlistment receives 2s. (or 2s. 9d., if entered before October 5, 1925). After six years' service, this rate has increased by stages to 3s. 8d. or 4s. 6d. Corporals draw from 4s. 7d. to 5s. 9d., Sergeants from 6s. to 7s. 8d., Colour Sergeants, Bugle Majors, Drum Majors and Hospital Staff-Sergeants from 7s. 6d. to 9s. 6d. Armourer Sergeants' rates are between 9s. and 10s. 6d. Armourer Quartermaster Sergeants' rates range from 9s. 6d. to 11s. For Staff Clerks, Quartermaster Sergeants and corresponding grades, the daily rate is 9s. or 10s.

THE NAVAL RATING RECEIVES HIS PAY every other Friday. When it is his turn to come up to the table at which payment is being made he takes off his cap and receives his money on it. This method of payment is derived from an old salute. A Royal Marine, however, keeps his hat on, salutes and his pay is put into his hand.

WELFARE OF THE LOWER DECK

Unnecessary hardships, bad food and an iron discipline against which there was no appeal was the lot of the naval seaman of the past. Nowadays, as SIDNEY HOWARD shows below, the welfare of the Lower Deck is fostered in every way by the Admiralty.

WELFARE work in the Royal Navy has steadily developed in recent years. It is an integral part of the Service and exercises a beneficial influence from the time a man enlists until he has left and taken his place again in civil life. It covers sport and recreation, and extends a helping hand to the wives and families of men who meet with misfortune.

Much of the smooth running of the Service and the happiness of the men are due to its influence and it is keenly fostered by the Admiralty. Part of the work is undertaken by officers and men in the Service, and part through organizations such as the Royal Naval Benevolent Trust and the National Association for Employment of Regular Sailors, Soldiers and Airmen.

The days have gone when an ex-Naval man had to seek, unaided, employment ashore. Every effort is made to place a man in suitable work, and an officer at the Admiralty acts in co-operation with the National Association for Employment of Regular Sailors, Soldiers and Airmen. The State itself gives a lead to civil employers by affording vacancies in Government employ to ex-Service men.

At the three Naval depots of Portsmouth, Devonport and Chatham there are family welfare sections that work under the Commodore of the port. Each section comprises a team consisting of a lady, a retired Naval officer and a secretary.

These sections perform useful service in looking after the interests of the wives and children of men serving on foreign stations. It is a comfort to the seaman when he goes abroad for a period of two and a half to three years to know that there is in his home port a band of helpers to whom he and his family can turn for advice. Some of the problems that arise are financial, and these are investigated by the members of the section.

In the event of the wife of a man serving on a distant station becoming seriously ill and the man applying for leave to return home, the members of the section inquire into the circumstances and report to the Admiralty: or a seaman may be taken seriously ill and his wife may wish to go abroad to see him.

Each case is promptly investigated and reported upon. The procedure varies according to the circumstances. If the man's presence at home is necessary the commanding officer of the vessel in which he is serving is notified of the full particulars. Should a man-of-war be returning to England from the foreign station a passage is arranged for the man. If not, it devolves upon the man to pay his passage in a liner.

The cost of returning home from a distant station is considerable and may be beyond the man's means. Should that be so, an application for aid is made either to the Canteen Committee, who control the ship's fund, or to the Royal Naval Benevolent Trust. In the event of the wife or mother of a seaman in hospital abroad wishing to visit him, there are no official facilities for transport in a naval vessel. Assistance in the way of reduced fares to facilitate the passage of the relation by liner is given, however.

WELFARE WORK . . .

. . . Assists not only the men themselves but also their wives and families. Should the wife of a man serving on a foreign station become seriously ill, arrangements are made for the man to return home at the smallest cost to himself.

. . . Assists a man when he is serving and when he has returned to civil life. Many calls are made by ex-Service men on the funds of the Royal Naval Benevolent Trust.

. . . Provides sports and gymnastic gear and projectors and films for cinema entertainments.

The funds of the Royal Naval Benevolent Trust are derived from the residue of what used to be known as the Grand Fleet Fund and also from the annual receipts of a percentage of the final Naval profits of the Navy, Army, and Air Force Institutes, part of Navy Week profits, and part of the Naval share of the Royal Tournament profits. Serving men make numerous applications to the R.N.B.T. fund, but even more requests for help come from ex-Service men who have fallen on hard times in civil life.

Footballs and other gear for sports and recreation aboard ship and ashore are obtained from the profits derived from the ship's fund. This fund consists of five per cent. of the profits of the canteen. Boxing gloves, bayonets and fencing and gymnastic gear are provided officially by the Director of Physical Training and Sports.

Naval men, generally, are film enthusiasts, but the provision of a projector and the hiring of films is too expensive for most ships' funds. The situation is complicated by the fact that, owing to altered messing arrangements, there is now less trade at the canteens. The profits available for sport and recreation gear are, therefore, lower than they were under the old system and there is no cash available for cinema entertainments.

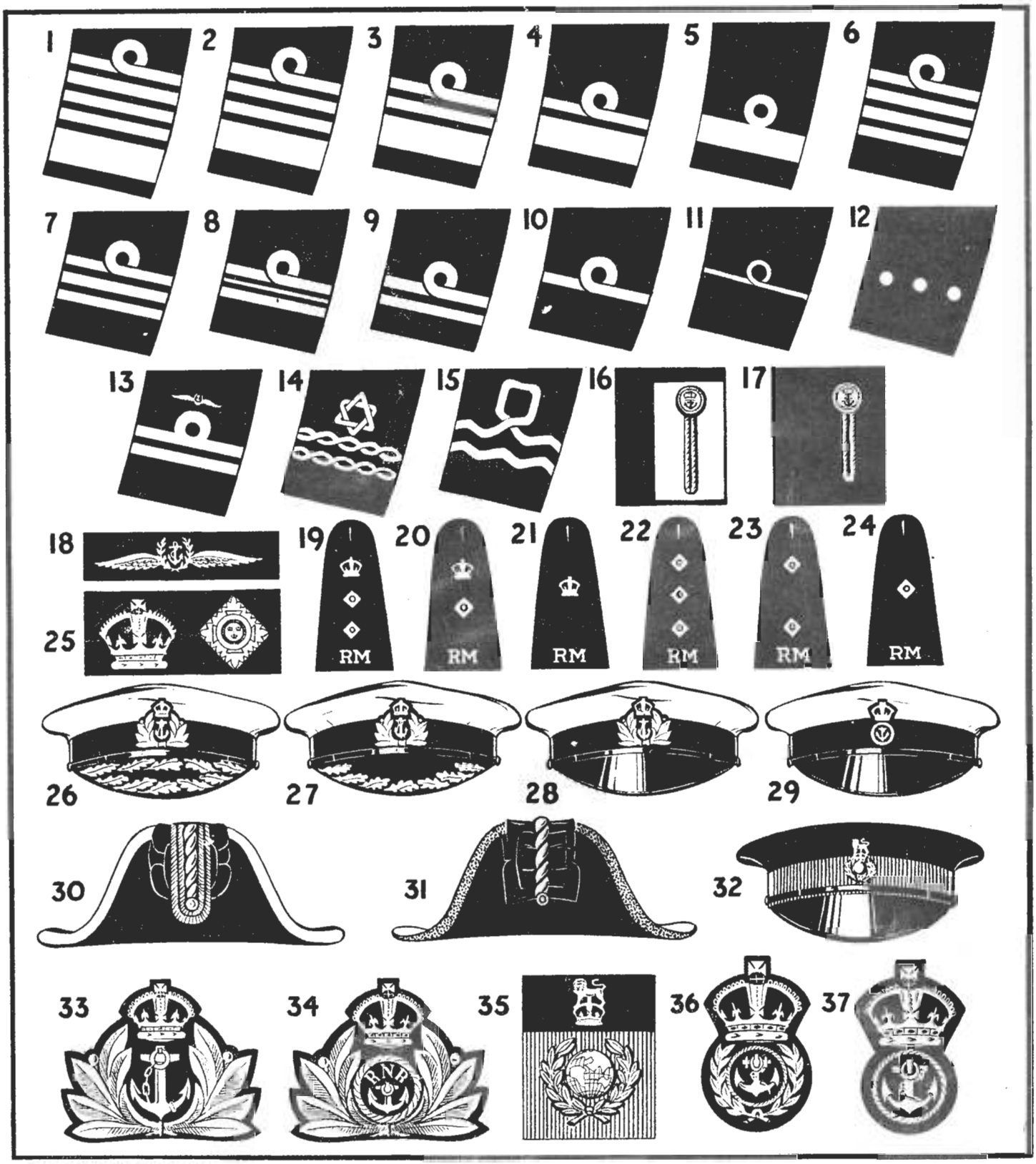
The problem was considered at the Admiralty and a solution found. A number of projectors of a type suitable for use aboard ship has been bought, and the films to be shown are selected, hired and sent out to the Fleet. By dealing with the Fleet's total requirements, the Admiralty secured better terms than if each unit had made individual purchases. The equipment is the property of the Admiralty Cinema Fund and it is issued to the Fleet on a hire basis.

In addition to the general welfare covered by sports and recreation, the welfare of all ranks is watched by the Admiralty. This section of the administrative work comes under the Director of Personnel Services, a Rear-Admiral, who is responsible to the Second Sea Lord. The Director of Personnel Services is an officer of long sea experience who understands every aspect of the Service point of view.

Complaints, although rare, will come the way of the Director of Personnel Services. In the event of a man having a grievance, he is at liberty, and is expected, to represent the matter, through his Divisional Officer, to the Commanding Officer. The latter generally adjusts matters. If, however, the Commanding Officer either refuses, or is unable, to provide a remedy, the machinery exists whereby the complaint is forwarded to the next superior authority. Should it be necessary, the matter then goes to the Commander-in-Chief and, finally, to the Admiralty.

In the past the seaman was bound by an iron discipline, so rigid that there was no appeal against it, and he worked under conditions that were far below those obtaining ashore.

Ignorance of conditions afloat persisted far too long, but the Great War brought home to the public the merits of the men upon whom the safety of the Empire depended. Nowadays, Navy Week provides the public with an opportunity of seeing how the Navy lives and of aiding the Trust which benefits those Service men who may need its help.



RANK DISTINCTIONS IN THE ROYAL NAVY AND THE ROYAL MARINES

1. Admiral of the Fleet.
2. Admiral.
3. Vice-Admiral.
4. Rear-Admiral and Commodore 1st Class.
5. Commodore 2nd Class.
6. Captain.
7. Commander.
8. Lieutenant-Commander.
9. Lieutenant.
10. Sub-Lieutenant and Commissioned Warrant Officer.
11. Warrant Officers.
12. Midshipman.
13. Lieutenant in Fleet Air Arm.
14. Lieutenant R.N.R.
15. Lieutenant R.N.V.R.

Note.—All engineer officers wear a stripe or stripes of purple between gold stripes of their rank; medical officers wear red stripes between gold; instructor officers wear light blue stripes and all paymasters wear white stripes between gold.

16. Midshipman's " patch " R.N. (worn on lapel of Collar).
17. Naval Cadet's " patch " R.N. (worn on lapel of Collar).
18. Detail of wings worn on left cuff by Officers in the Fleet Air Arm.
19. Colonel, Royal Marines.
20. Lieutenant-Colonel, Royal Marines.
21. Major, Royal Marines.
22. Captain, Royal Marines.
23. Lieutenant, Royal Marines.
24. 2nd Lieutenant, Royal Marines.
25. Detail of Crown and Star worn by R.M. Officers.

Note.—A Major, R.M., and those of superior rank, wear oak leaves on cap similar to No. 27.

CAPS

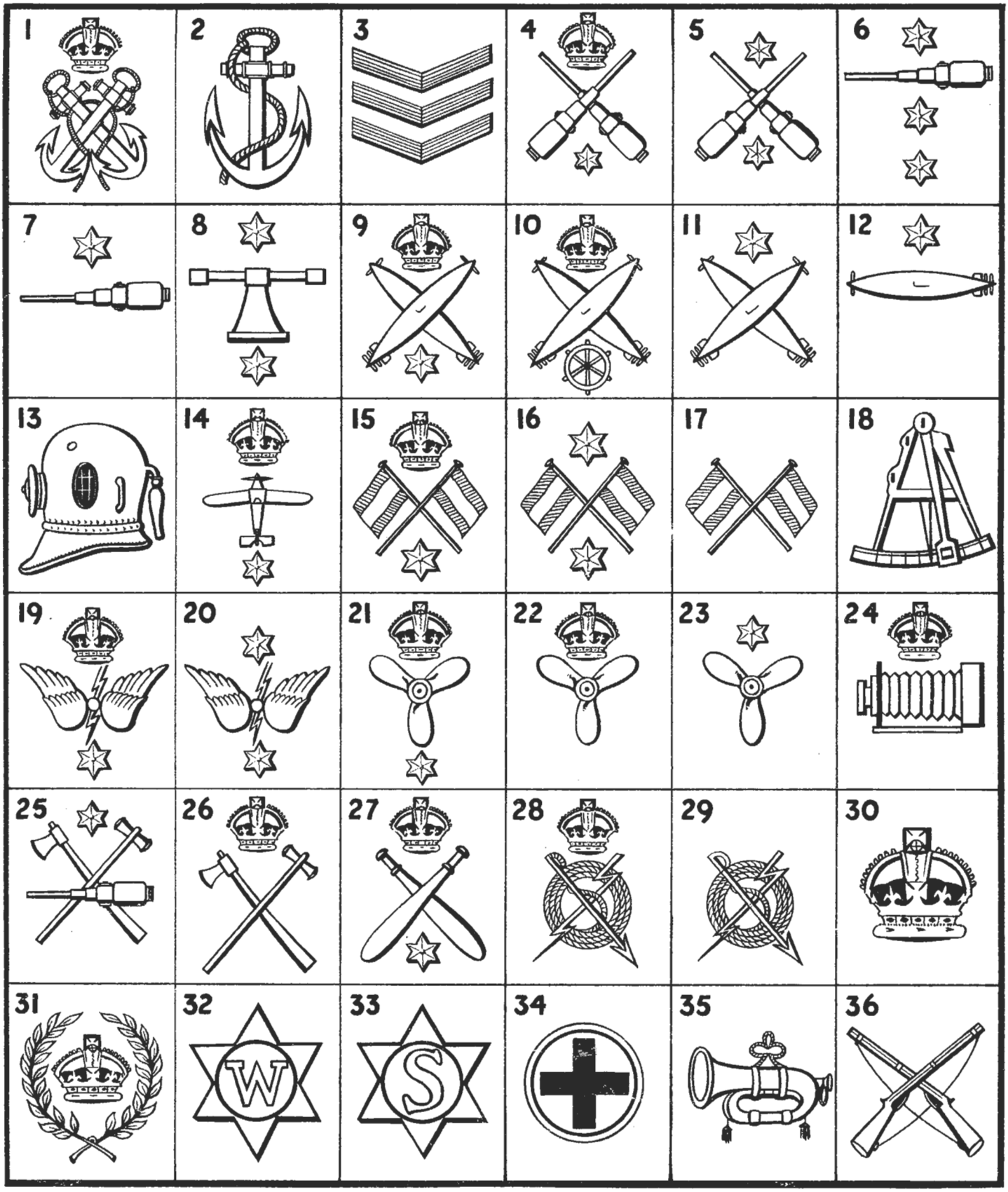
26. Flag Officers.
27. Captains and Commanders.
28. All other officers.
29. Petty Officer (Chief Petty Officer similar, but with badge No. 36).
30. Flag Officer's Cocked Hat (Full dress).
31. Lieutenant's Cocked Hat (Full dress).
32. Royal Marines, N.C.O.s and lower ranks (badge similar to No. 35 but one colour gilt all over, and lion attached to world).

Note.—Officer's cap similar but with badge No. 35, and has red piping round crown.

CAP BADGES

33. All officers of R.N.
34. All officers of R.N.R. (Royal Naval Volunteer Reserve the same but lettering R.N.V. over anchor).
35. Royal Marine Officers.
36. Chief Petty Officer.
37. Petty Officer (confirmed).

Note.—Caps Nos. 26 to 29 have white tops for summer (May 1 to Sept. 30) or hot-weather station wear. In winter, dark blue cloth top as R.M. cap No. 32. In summer this is also covered by white top which extends right down to top of red band.



1. Petty Officer.
2. Leading Seaman.
3. Good Conduct Badges :
   One stripe, 3 years and over ;
   Two stripes, 8 years and over ;
   Three stripes, 13 years and over.
4. Gunner's Mate.
5. Director Layer.
6. Captain of Gun 1st Class.
7. Chief P.O., P.O. and Leading Seaman, S.G. and Seaman Gunner.
8. Range Taker 1st Class.
9. Torpedo Gunner's Mate.
10. Torpedo Coxswain.
11. Leading Torpedo Man.
12. Chief P.O., P.O. and Leading Seaman, S.T. and Seaman Torpedo Man.
13. Diver.
14. Observer's Mate.
15. Visual Signalman 1st Class.
16. Visual Signalman 3rd class.
17. Signalman, not T.O. (V/S) Ordinary Signalman and Signal Boy.
18. Surveying Recorder.
19. Wireless Telegraphist 1st Class.
20. Wireless Telegraphist 3rd Class.
21. Mechanician.
22. Chief Petty Officer and Petty Officer Stoker.
23. Leading Stoker and Stoker 1st Class.
24. Chief Photographer.
25. Chief Armourer and Armourer.
26. Chief Shipwright.
27. Physical and Recreational Training Instructor 1st Class.
28. Submarine Detector Instructor.
29. Submarine Detector Operator.
30. Regulating Petty Officer.
31. Master-at-Arms.
32. Writer.
33. Supply Rating.
34. Sick Berth Attendant.
35. Bugler.
36. Marksman badge (Musketry).