Rear-Admiral R. G. Raper, C.B., C.Eng., M.I.Mech.E., M.I.Mar.E. took up his appointment as Director-General Ships on 1st May, 1968, in succession to Sir Alfred Sims, K.C.B., O.B.E.

Admiral Raper entered the Navy as a Dartmouth cadet in May, 1929, trained in H.M.S. *Frobisher* and at the R.N.E.C., Keyham, and after service in H.M.S. *Newcastle*, qualified in 1938 at the Advanced M/E Course at Greenwich, so marking the beginning of an outstanding naval career.

Early in the War he was the Senior Engineer of H.M.S. *Edinburgh*, which was employed on Russian convoy duties and which, in May, 1942, was sunk in action on returning from Murmansk. For his services in this action, Admiral Raper was Mentioned in Despatches and awarded six months' seniority. In the same year he joined the Engineer-in-Chief's Department where he was engaged mainly on new turbine designs. In 1948, on promotion to Commander, he returned to the E.-in-C.'s Department, where he was this time in charge of the Projects Section which was then mainly concerned with the development of prototype machinery for the *Whitby* and *Blackpool* Class frigates and the Canadian *St. Laurent* Class destroyer escorts, and from 1952–54 he was the Engineer Officer of H.M.S. *Birmingham* which took part in the Korean activities. He then was lent to the Canadian Navy, where he established the Naval Engineering Design Investigation Team for the development of propulsion machinery design, and on his return to the United Kingdom became the Technical Assistant to the Engineer-in-Chief of the Fleet, Vice-Admiral Sir Frank Mason, K.C.B. He was promoted to Captain in June 1957 and after qualifying at the Imperial Defence College was from 1959 to 1961 the Commanding Officer of H.M.S. *Caledonia*. This was followed by another appointment to the Ship Department as the Deputy Director of Marine Engineering and from 1963 to the end of 1965 he served as CSO(T) and Maintenance Captain on the staff of Flag Officer Sea Training at Portland. He was promoted to Flag Rank on 7th January, 1966, and returned to Bath as the Director of Marine Engineering, in which capacity he served until the first stage of the reorganization of the Ship Department was announced on 18th September, 1968, when he became the first Deputy Director-General Ships.

In addition to his present appointment, Admiral Raper holds the posts of Chief Naval Engineer Officer and Senior Naval Representative, Bath.

Sir Alfred Sims, K.C.B., O.B.E., C.Eng., M.R.I.N.A., M.I.C.E., M.I.Mar.E., R.C.N.C., who has been the Director-General Ships since the inception of the Ship Department on 1st October, 1958, retired on 31st March, 1968.

Sir Alfred's entry into Admiralty service at Devonport in 1923 marked the beginning of an outstanding and brilliant career. He was selected for special training at the Royal Naval College, Greenwich, and became a member of the Royal Corps of Naval Constructors in 1931. During World War II he served as Constructor Commander on the staff of the Flag Officer, Submarines. From 1947 to 1952, he was the Professor of Naval Architecture at the R.N.C., Greenwich, and from 1953 until his promotion to Director-General Ships, served with the Department of Naval Construction at Bath, where he was closely concerned with the design of submarines and aircraft carriers, particularly with the design of the new angled deck for carriers.

During his tenure of office as Director-General Ships, Sir Alfred has always found time to make regular personal visits to the many outports and establishments which came under his control, and to visit ships and bases in many parts of the world. He has also assisted in many ways and kept a lively personal interest in the many extra mural activities of the Civil Service Associations and Societies in Bath and elsewhere.

Sir Alfred was awarded the O.B.E. in 1943 and the K.C.B. in the Birthday Honours of 1960.

Vice-Admiral Sir Raymond Hawkins, K.C.B., C.Eng., M.I.Mech.E., M.I.Mar.E., who was Fourth Sea Lord and Vice-Controller of the Navy from October, 1963 to May, 1967, retired from the Navy in November, 1967, after a long and distinguished naval career.

Admiral Hawkins joined the Navy as a cadet in 1928 and after training at the R.N.E.C., Keyham, served in the battleships *Iron Duke* and *Resolution*. In 1935 he qualified as a submariner and served in or with submarines for eight years; in 1943 he was the Flotilla Engineer Officer of the 12th Submarine Flotilla which was composed of the midget submarines then preparing for their attack on the *Tirpitz*. On promotion to Commander he became the Engineer Officer of H.M.S. *Orion*, taking part in the Normandy landings. After the war his appointments have included: Assistant to Engineer Admiral, Personnel, in London; Executive Officer of H.M.S. *Thunderer*; Assistant Naval Attache (Technical) in Paris. Following his promotion to Captain in June, 1953, he became the Naval Assistant to the Third Sea Lord and, later, the Commanding Officer of H.M.S. *St. Vincent*, the Boys Training Establishment at Gosport. In 1959 he was

appointed Rear-Admiral, Nuclear Propulsion, and Deputy Director of Marine Engineering, and in January, 1961 became the Director of Marine Engineering and Chief Naval Engineer Officer. On taking up his next appointment in October, 1963 as a Lord Commissioner of the Admiralty, Fourth Sea Lord and Vice-Controller of the Navy, Admiral Hawkins made a mark in naval history. To him fell the honour of being the first representative of the Engineering Specialization ever to serve on the Board of Admiralty, thus realizing the ambitions of generations of engineering specialist officers.

In his earlier days, Admiral Hawkins represented the Royal Navy at rugby football.

Rear-Admiral H. H. Hughes, C.B., B.Sc., C.Eng., A.M.I.E.E., who was from 18th September, 1967 the Director of Engineering (Ships), Chief Naval Engineer Officer, and the Senior Naval Representative, Bath, was placed on the Retired List in March, 1968.

Admiral Hughes, an electrical engineer, transferred to the Royal Navy as a Lieutenant-Commander from the R.N.V.R. in 1945. As a Commander, he was the Electrical Officer of H.M.S. *Vanguard* from 1948–49 and later served in the Electrical Engineering Department in Bath. From 1952–53 he was the Electrical Officer on the Staff of the Senior Officer Reserve Ships at Chatham. Promoted to Captain in December, 1956, he served in the Dockyard Department at Bath, and in 1960 became an Assistant Director of Electrical Engineering in the Ship Department. In 1962 he commanded H.M.S. *Collingwood*, the R.N. Electrical School. The following year he returned to Bath as the Deputy Director of Naval Electrical Engineering and after his promotion to Flag Rank in July 1964, became the Director.

Rear-Admiral D. N. Callaghan, C.Eng., A.M.I.Mech.E., was promoted to Flag Rank on 7th January 1968, and in February took up his appointment as the Senior Naval Member and Vice-President (Naval) of the Ordnance Board.

Admiral Callaghan entered the Navy as a Dartmouth cadet in 1929 and trained in H.M.S. Frobisher and at the R.N.E.C., Keyham, before joining the Royal Oak which was then employed on Spanish Civil War patrols. In 1938 he served in the Iron Duke and in 1939, the Warspite, which at that time was the Flagship in the Mediterranean, and early in 1941 served for four months on the staff of S.N.O. Inshore Minesweepers, operating in North African ports. In April, 1941, he became the Engineer Officer of H.M.S. Hereward, which was sunk off Crete the following month and he was a prisoner of war in Italy and Germany for the next four years. From 1945 to 1948 he served successively as the Senior Engineer of Argonaut and Glory on the Far East Station and returned in 1948 to join the Staff of the R.N.C. Dartmouth as the Senior 'E' Instructor. On promotion to Commander in December, 1949, he qualified as an O/E officer and later became the Assistant Admiralty Ordnance Engineer Officer, Southern Area. He subsequently served as Liaison Officer to D.N.O. at the M.O.S. Armament Design Establishment, Fleet O.E.O. on the staff of C.-in-C., Mediterranean, Commander (E) of H.M.S. Excellent, and from 1956 to 1958 was the E.O. of H.M.S. Eagle. He was promoted to Captain in December, 1958, while serving for a short period at the R.N.T.S., Woolwich, on Tactical Investigation, and in February, 1959, joined the Weapons Department at Bath as Assistant Director (M), Surface Weapons. On completion of the Senior Officers War Course in October, 1962, he became the Commanding Officer of H.M.S. Caledonia, the Artificer Apprentices Training Establishment and in March, 1965 returned to the Weapons Department at Bath as the Director of Surface Weapons.

Rear-Admiral G. F. A. Trewby, A.D.C., C.Eng., A.M.I.Mech.E., M.I.Mar.E., M.R.I.N.A. took up his appointment with Chief Polaris Executive as Assistant Controller (Polaris) in the acting rank of Rear-Admiral on 22nd May, 1968. He is to be promoted to Rear-Admiral on 7th July, 1968.

Admiral Trewby entered the Navy as a Dartmouth cadet in January, 1931, and was awarded the King's Dirk and the Eardley Howard Crockett prize on passing out in 1934. He received his early sea training in H.M.S. Frobisher and Barham and in 1935 transferred to the Engineering Branch as a midshipman (E). After the normal engineering training at Keyham and a further period of sea service, he qualified in the Advanced Engineering Course at Greenwich. During the last war he served in H.M.S. Nelson and Duke of York and in H.M.S. Dido as the Senior Engineer. After the war he was appointed to lecture in applied mechanics and design of naval machinery at the R.N.C. Greenwich and this was followed by a further period at sea as the Engineer Officer of H.M.S. Cadiz. He then completed the Naval Staff Course and from 1951-54 served as the Inspector of the Gas Turbine Section of the Engineer-in-Chief's Department at Bath. A further period of two years' sea service as the E.O. of H.M.S. Albion followed and in 1956 he became the Director of Engineering at the R.N. Engineering College, Manadon. He returned to the Admiralty, Bath, in November, 1959, and for three years served as Assistant Director of Marine Engineering and from January, 1963, until November, 1964, he was the Commanding Officer of H.M.S. Sultan, the Marine Propulsion Machinery School. After qualifying at the Imperial Defence College, he became Chief Staff Officer (Technical) to Flag Officer Sea Training at Portland where he served until April of this year.

Admiral Trewby has presented many papers on naval marine engineering subjects in the United States, Italy and Sweden as well as in Great Britain, and in 1954–55 he won the Institute of Marines Akroyd Stuart award.

In his early days, he represented the Royal Navy at athletics and for two seasons after the war was appointed as non-running captain to the R.N. Athletics team.

Captain G. A. Partridge, C.Eng., A.M.I.Mech.E., A.M.B.I.M., was placed on the Retired List in January, 1968, after a notable career of forty years' service.

Captain Partridge entered the Navy as an artificer apprentice, joining H.M.S. Fisgard in 1928, and on completion of training served in Renown, Woolwich and Shropshire. Promoted to Sub-Lieutenant (E) in 1937, he served in Resolution and *Newcastle* before specializing in ordnance engineering in 1942, after which he served almost continuously in O/E appointments. In 1942 he joined H.M.S. Nelson and organized repair work in Algiers after the North African Landings, and from 1943-44 was overseeing at Vickers Armstrongs, Barrow-in-Furness. He then went abroad again to serve in dockyards and bases in Taranto, Alexandria and Colombo and on return to the U.K. in 1947 joined the Naval Ordnance Department at Bath where, in 1949, he was promoted to Commander. From 1951-53 he was S.E.O. and S.O.E.O. of the 4th Destroyer Squadron in H.M.S. Agincourt, returning to D.N.O. in 1953 where for three years he was concerned with gunmounting design. For the following three years he was the Admiralty Weapons Overseer, Scotland, installing the new 6-in. and 3-in. gunmountings in H.M.S. Tiger. After promotion to Captain in December, 1959, and completion of the Senior Officers War Course, he became the Superintendent, A.G.E. Depot, Coventry, and Admiralty Weapons Overseer, Midland District, and from September, 1964, until his retirement, served with the Director-General Weapons (N) as the Head of Central Services.

Captain D. J. I. Garstin took up his appointment as Chief Staff Officer (Technical) to Flag Officer Sea Training and Captain of Portland Base on 4th April 1968. He had previously served in H.M.S. *Warrior*, since September 1965, as Deputy Chief Staff Officer (Technical) on the staff of C.-in.C., Home Fleet, and Marine Engineer Officer on the staff of C.-in-C., EASTLANT. More recently, he qualified at the Imperial Defence College.

Captain H. D. Nixon, M.V.O., C.Eng., M.I.Mar.E., A.F.Inst.Pet., joined the staff of Director-General Dockyards and Maintenance as the Director of Fleet Maintenance on 1st March, 1968. He had previously qualified at the Imperial Defence College.

Captain B. McHugh became the Commanding Officer of H.M.S. *Terror* in January, 1968, on completion of the Senior Officers War Course. He had previously served since April, 1964 in Rosyth Dockyard as the Nuclear Power Superintendent.

Captain A. H. Little, C.Eng., A.M.I.Mech.E., M.I.Mar.E., F.Inst.Pet., after qualifying at the Imperial Defence College, took up his appointment as Chief Staff Officer (Technical) on the staff of Flag Officer Medway, and Captain, Fleet Maintenance, in February, 1968.

Captain A. J. Monk, B.Sc. (Eng.), C.Eng., A.M.I.Mech.E., M.I.Mar.E., A.F.R.Ae.S., who was Assistant Director of Marine Engineering in the Ship Department at Bath from October, 1965, took up his appointment with D.G.A. in London as Director of Aircraft Engineering (Naval) in May, 1968, in succession to Captain N. C. N. Goodhart.

Captain D. J. N. Porter, M.A., was appointed to the M.O.D. in London for duty with the Director-General of Naval Manpower as the Marine Engineering member of the Naval Manpower Future Policy Division in May, 1968. He was promoted to his present rank in June, 1967, and has recently attended the Senior Officers War Course.

Captain D. W. Cramond joined H.M.S. *Sultan* on 1st April 1968, to take up his appointment on the Flag Officer Admiralty Interview Board. He was promoted to his present rank in June, 1967, while serving with the Director-General Aircraft.

Captain M. S. Drewett, C.Eng., A.M.I.Mech.E., will take up his appointment as Naval Ship Production Overseer, South East Area, in June, 1968. He had previously served in Rosyth Naval Base where he was promoted to Captain in December, 1967.

Captain E. J. W. Flower joined H.M.S. *Warrior* as the Marine Engineer Officer on the staff of C.-in-C., Western Fleet, in December, 1967. He previously served in the Ship Department at Bath, and has recently attended a course at the Canadian National Defence College. Captain D. G. Titford, C.Eng., A.M.I.Mech.E., A.F.R.Ae.S., joined the Ship Department on 11th March, 1968, taking up his appointment as Assistant Director of Marine Engineering in succession to Captain A. J. Monk. He was promoted to his present rank in December, 1967, while serving as Technical Assistant to Director-General Aircraft.

AWARD TO AN ENGINEER OFFICER

Lieutenant (E.M AE.P) R. H. Burn, R.N., was presented early this year with the coveted Navy League of the United States of America award for being the outstanding student of the year at the Empire Test Pilots Course at Patuxent River, U.S.A.

Lieutenant Burn joined the Navy as a Dartmouth cadet on 1st January, 1955. He was awarded his Wings on 11th November, 1960.

OBITUARY

ENGINEER VICE-ADMIRAL SIR HAROLD BROWN, G.B.E., K.C.B.

Engineer Vice-Admiral Sir Harold Brown, G.B.E., K.C.B., who was the Engineer-in-Chief of the Fleet from 1932 to 1936, died on 15th February, 1968. He was in his 90th year.

Admiral Brown entered the Navy as a Probationary Assistant Engineer in June, 1899, and rose to the top of his profession during a distinguished naval career of more than 37 years. He was serving as the Engineer Commander of H.M.S. *Barham* at the end of World War I and thereafter served mainly in Staff appointments which included more than ten years at Headquarters. He was placed on the Retired List in September, 1936, consequent on being appointed Director-General of Munitions Production on the Army Council, a post in which he was able to exercise his great technical knowledge and administrative ability in taking a leading part in speeding up the arms supply in the rearmament programme. In 1939 his post was absorbed in the Ministry of Supply and in 1941 he became Controller-General of Munitions Production. The following year he was appointed Senior Supply Officer and Chairman of the Armament Development Board, Ministry of Supply. He was Chairman of the Fuel Research Board from 1947 to 1950 and, later, Chairman of the Machine Tools Advisory Council.