

of the Bursaries and Lectures Committee of the Company of Armourers and Braziers from the time when it was set up in 1926 until its activities were brought to a close by the outbreak of war in 1939. He served on, and was chairman of, metallurgical advisory committees of the City and Guilds of London Institute, and he gave much time to this work after his retirement.

He was meticulous and economical in his administration, and decisions were never taken without careful consideration. His somewhat austere manner tended to conceal his essential kindness and the satisfaction he found in helping others. His first wife died in 1931 as the result of an accident. He is survived by his second wife and by the two daughters of his first marriage.

A. M. WARD

## NEWS and VIEWS

### Oceanography at Monaco : Captain J. Rouch

CAPITAINE DE VAISSEAU J. ROUCH recently retired from the directorship of the Oceanographical Museum of Monaco on reaching the age of seventy-two and a half years. He had held the post since the death of Dr. Richard in 1945. Owing to successive monetary devaluations, the original endowments of the foundation had become of derisory value, and it redounds greatly to the credit of Rouch's efforts that the vast museum and its companion institute in Paris can now function on the funds produced by entrance fees paid by visitors. During his term of office, the yearly tally of visitors rose from 170,000 to 560,000. Rouch was a collaborator of Jean Charcot during his second Antarctic Expedition of 1908-10 in the *Pourquoi-Pas ?*, and was responsible for the meteorological and oceanographical observations in addition to those on atmospheric electricity. That polar work of his was published in three excellent memoirs of high repute. After his return from the Charcot expedition, Captain Rouch was elected professor of meteorology, oceanography and hydrography at the *École-Navale*, and was, in 1937, made professor of physical oceanography at the Paris Oceanographical Institute, which had been founded and endowed by Prince Albert I of Monaco in 1906. During the years 1943-48 he published his three-volume treatise on physical oceanography. From his pen have come numerous publications on marine meteorology, on the polar regions, and on the Mediterranean Sea, and his writings on hydrography and atmospheric electricity amount to a very impressive total. The many oceanographers who would readily proclaim Rouch the greatest living writer on descriptive oceanography would add their meed of praise for the service he has done in recording so much of the history of the subject in a large array of books and papers which are a delight to read. A facile and elegant writer, he has the attractive habit of adorning his pages with effective citations from the classics. To read Rouch on the subject of the Bosphorus, for example, is to read much about Jason, Herodotus, Darius, Xerxes and other famous men of ancient days. Rouch is a vice-president of the International Association of Physical Oceanography, a member of the French Marine Academy, and has, since 1946, been a corresponding member of the Academy of Sciences.

### Captain J.-Y. Cousteau

CAPTAIN JACQUES-YVES COUSTEAU, distinguished for his work on underwater exploration made possible by the aqualung developed by him in association with Émile Gagnan, is forty-six years of age. Well known to the general public because of his highly-successful film, "The World of Silence", Cousteau's first experiments with self-contained underwater

breathing apparatus date back to 1937. It was in 1944, in conjunction with Commandant Tailliez, that he established the "Groupe d'Études et Recherches Sous-Marines" (G.E.R.S.) for the study of the physiology and techniques of diving. Between 1947 and 1949 he was busy fitting out the vessel *Ingénieur Élie-Monnier* as an oceanographical ship, and was in command of her when he attended the unlucky trials of the Piccard bathyscaphe off the Ivory Coast. The participation of the French Navy in that expedition, and the subsequent signature of the Franco-Belgian convention in respect of bathyscaphe *F.N.R.S. III*, were brought about by the Museum's new director. Captain Cousteau has himself made two bathyscaphe dives to 1,450 and 1,600 metres depth, respectively, and holds the distinction of taking the first colour photographs and colour films by artificial lighting while diving free style. His own free-diving exploits have taken him down to 90 metres depth. Much occupied with underwater photography, submarine television and related activities carried out in great measure from the oceanographical research vessel *Calypso*, bought and equipped with private money obtained by him, Cousteau has recently aroused great interest by his new technique of anchoring ship in the deep-sea to a slender cable of nylon. Having so anchored the *Calypso* in 4,000 metres of water, with a cable-length no more than  $1\frac{1}{2}$  times depth sufficing well for roughish water, Cousteau is confident that his method has no ocean depth limit. New winches of his design are under construction for the purpose in France at the present time.

### Aerodynamics at the Royal Aircraft Establishment : Mr. L. F. Nicholson

MR. L. F. NICHOLSON has resumed his duties as head of the Aerodynamics Department, Royal Aircraft Establishment, on his return to Farnborough after a year at the Imperial Defence College; his promotion to the rank of chief scientific officer has been announced. Mr. Nicholson was educated at King's College, Cambridge, graduating in mechanical sciences in 1939. During his earlier years at Farnborough he was a member of the Engine Department, and worked on the aerodynamics of engine cooling. During 1947-51 he controlled an experimental group concerned with the design and operation of supersonic wind tunnels, and in 1951 he was appointed head of the supersonics division of the Aerodynamics Department. In this period he became well known to the aircraft industry, since the design problems of supersonic aircraft and missiles were making considerable demands of research workers. The Aerodynamics Department comprises a formidable research unit, since it embraces the aerodynamic facilities of the Royal Aircraft Establishment both at Farn-