

who was born a century ago, on January 28, 1852, at Castlebar, Co. Mayo, was the inventor of the Brennan torpedo. At the age of nine he emigrated to Australia. While working as a watch-maker in Melbourne he conceived the idea of a dirigible torpedo for coast defence, which could be fired and controlled from a fixed position on the shore. His machine was fish-shaped and had two screws revolving in opposite directions; drums, mounted on each propeller shaft, were wound with wires of fine steel, the ends of which were connected with a high-speed engine on the coast. The torpedo was steered by varying the rate at which the wires were unwound, and thus the relative speed of rotation of the screws. In 1880 the Admiralty appointed a committee of naval officers serving on the Australian station to report on this invention. On their recommendation, Brennan returned to Britain and was attached by the War Office to the Royal Engineers at Chatham. Seven years later he was appointed superintendent of a government torpedo factory at Gillingham, serving as its consulting engineer during 1896-1907. At Gillingham he began work on a monorail locomotive with gyroscopic stabilizers, which he demonstrated at a conversazione of the Royal Society in 1907 and which had a public trial run two years later; but it did not come into practical use. During the First World War he served with the Ministry of Munitions, and during 1919-26 with the Air Ministry at the Royal Aircraft Establishment, Farnborough, experimenting with a helicopter. He was made a C.B. in 1892, and in 1922 became a foundation member of the National Academy of Ireland. He died on January 17, 1932.

#### Awards for Radar Inventions

THE Ministry of Supply and the Admiralty have considered many claims for awards and compensation in relation to inventions which have been used by the Armed Forces of the Crown in radar equipment. A large number of these claims have been dealt with by the Government department concerned without reference to the Royal Commission on Awards to Inventors. But the claims of twenty-four claimants, after receiving preliminary consideration by the department concerned, were referred to the Commission by the Treasury. The first public hearing before the Commission took place on April 12, and each of the twenty-five claimants was, in accordance with the Commission's procedure, permitted to address the Commission and to call such evidence in support of his claim as he desired. Evidence was called by and on behalf of the Crown. The Commission was advised that the Ministry of Supply and the Admiralty had already paid independently of the Commission a sum of about £200,000 by way of award and compensation to claimants other than those heard by the Commission in respect of the development of radar devices. After full consideration of the evidence, the Commission has recommended to the Treasury that a further sum be paid in regard to the use by, and on behalf of, the Crown of radar inventions as follows: Sir Robert Watson-Watt, in respect of his initiation of radar and his contribution to the development of radar installations, £50,000; Dr. E. G. Bowen and Mr. A. F. Wilkins, £12,000 each; Mr. L. H. Bainbridge-Bell, Mr. H. Larnder, Mr. G. A. Roberts, Dr. D. Taylor and Dr. A. G. Touch, £2,400 each; Mr. W. A. S. Butement, Mr. R. Hanbury Brown and Mr. P. E. Pollard, £1,200 each; Mr. R. H. A. Carter, Mr. H. Dewhurst, Dr.

J. H. Mitchell, Mr. S. Jefferson and Mr. B. Newsam, £750 each; Wing-Cdr. E. J. Dickie and Dr. B. J. O'Kane, jointly, £500; Mr. P. A. Marchant, £250; Mr. P. A. Marchant and Mr. D. A. Weir, jointly, £250; Mr. R. V. Whelpton, £250. The Commission did not recommend any award in respect of the joint claim by Sir Robert Watson-Watt, Mrs. G. Fleming Herd and Mr. L. H. Bainbridge-Bell, or to Mr. D. N. Sharma and Mr. L. L. K. Honeyball. The total sum recommended by the Commission in respect of these claims is £94,600. The awards recommended are *ex gratia* and are not likely to be subject to tax.

#### Prehistoric Cave Paintings in South Africa

MISS J. R. HARDING has continued her archaeological explorations on the farm Trekpod in the district of Bethlehem, Orange Free State, and some more poorly drawn paintings, with the bodies of the animals filled in with dots, have been noticed. These investigations are recorded in the June 1951 issue of the *South African Archaeological Bulletin* (see also *Nature*, August 18, 1951, p. 275). The results of Miss Harding's work in Bethlehem and previously in Saulspoot, Transvaal, can best be given briefly in her own words: "The people making the Smithfield C stone implements were contemporary with the early Bantu settlers . . . of very recent date; and present-day Bushmen are the degenerate remnants of the Smithfield C people" . . . , or, again, she suggests "the Bushmen themselves were the makers of the Smithfield C implements. In the absence of any earlier remains in this shelter, I believe that the paintings on its walls must also be assigned to the Smithfield C period". The paintings at Trekpod and at Saulspoot are different in style from the well-known so-called Bushman art of the Union of South Africa and not necessarily of the same age. At the same time, one is more and more inclined to doubt the great antiquity of the main bulk of the latter. In the Union there are vestiges of earlier paintings which may well date to a remoter period, and these can be equated with the later phases of the art in Southern Rhodesia; the earlier phase in this area may be very old indeed. There are reasons, however, for dating much of the rock-shelter art in the Union to a more recent period, and Miss Harding's work supports to some extent this contention.

#### International Symposium on Problems of Desert Research

THE Research Council of Israel, in co-operation with Unesco, is planning a symposium on desert research in Jerusalem during May. This will aim at giving an integrated picture of the present state of desert research. It will last about a week, four days of which will be devoted to meetings, and these will be followed by excursions into the Negev, the arid zone in the south of Israel, and visits to other places of interest in the country. Five sections are envisaged for the symposium: (1) climate; (2) soil; (3) water; (4) energy; (5) biology. Among those who have agreed to present papers are: Prof. J. B. Leighley (University of California), Dr. W. S. S. Ladell (Hot Climate Physiological Research Unit, Oshodi, Nigeria), Prof. W. C. Lowdermilk (U.S. Department of Agriculture), Brigadier R. A. Bagnold (Great Britain), Mr. A. N. Khosla (Central Water and Power Commission, India), P. Danel (Laboratoire Dauphinois d'Hydraulique, France), Prof. Th. Monod (Institut Français d'Afrique Noire, Dakar) and Prof. F. W. Went (California Institute of Technology). Further