

made by fishes of the genus *Therapon*, as described by Dr. Hardenberg in a recent paper (*Zöol. Anz.*, 108; 1934). The other sounds mentioned by Capt. Jansen have also been heard by Dr. Hardenberg, though less frequently, and once, when in the Java Sea, he heard sounds as if made by silver bells. Their origin is still unknown, but he supposes that they are also made by animals.

#### American Society for Testing Materials

It is a great help to industry to have standard specifications for the materials used in commerce, and to have methods of testing to find out whether the materials offered for sale come up to the standard or not. In Great Britain the British Standards Institution (B.S.I.) of 28 Victoria Street, S.W.1, publishes standard specifications and gives also the methods of testing. These have been passed by committees consisting of engineers, manufacturers, Government officials and all interested in securing raw materials or finished products of the best quality. If experience shows that the methods used are ineffective, then the old committee meets again or another committee is formed and it brings out a revised specification. In the United States, the American Society for Testing Materials (A.S.T.M.) performs similar functions. The *Proceedings* of this Society are issued annually, and give reports by committees and the 'tentative' standards adopted. Each of the annual volumes contains about 2,000 pages. In the 1934 volume such subjects as vapour lock of petrol, creep tests and data, soil testing methods, rubber raw materials, etc., are discussed. Twenty-one of the standards appearing in the 1933 "Book of Standards" have been revised or discontinued. Fourteen of them have been revised, five of them have been replaced by new tentative standards and two have been completely withdrawn. The new problems discussed will be found of interest by physicists, and open up new fields of research.

#### Society of Public Analysts

At the annual general meeting of the Society of Public Analysts held on March 6, Dr. Bernard Dyer gave an address embodying his reminiscences of the Society, from its inception to the present day. At the outset of his address, Dr. Dyer pointed out that the occasion was particularly appropriate, since it was the diamond jubilee of the Society, which held its first meeting in February, 1875, when Dr. Redwood was elected president. Much of the early work of the Society was concerned with food adulteration, which at that time was gross and widespread, although gradually analytical chemistry in general was brought within the scope, and in 1906 this was recognised when the title of the Society was enlarged to include analytical chemists other than public analysts. Several of the earlier presidents were well known as medical officers of health, who had also been appointed public analysts. Dr. Dyer also touched on the history of the Society in connexion with the Institute of Chemistry and the Government Laboratory, and laid stress upon the fact, that in

spite of certain coolness and misunderstandings in earlier days, the most cordial relations have for many years existed between the Society and these bodies. The following officers were elected for 1935: *President*, Mr. John Evans; *Vice-Presidents*, Messrs. L. H. Lampitt, S. E. Melling, A. More, W. H. Roberts; *Honorary Treasurer*, Mr. E. B. Hughes; *Honorary Secretary*, Mr. G. Roche Lynch.

#### Hydrogen Cooling

THE losses due to air friction when machines are rotating is often an appreciable fraction of the total working losses. The losses can be considerably reduced by running the machines in hydrogen. As the thermal conductivity of hydrogen is much greater than that of air, the temperature rise of the machine is further reduced and so it can be run at a heavier load and can therefore be rated as a more powerful machine. In the *Electrician* of March 1, there is a description of a 30,000 kilovolt ampere synchronous condenser which has been built for the French Midi Railway. The outer casing is built up of steel plates bolted together and designed to withstand the force of any internal explosion which might occur owing to a mixture of hydrogen and air. The machine is started by a special type of transformer which only takes a quarter of full load current. Tests carried out on the machine with hydrogen and air as cooling media show that the heating of the machine with hydrogen-cooling was thirty per cent less than when it was run in air.

#### The Murdoch Trust

THERE has been in existence for a number of years a most admirable trust, known as the Murdoch Trust, for the benefit of indigent bachelors and widowers who have done good work for science and have fallen on less prosperous days. Few people seem to be aware of the existence of this Trust or of its beneficent purpose, though a modest advertisement occasionally appears, as, for example, in *NATURE* of March 2, p. lxvi, inviting applications for donations or pensions from it. We gladly direct attention to the aid thus available to persons who have promoted or helped the advancement of any branch of science and are in need. The Trustees welcome applications from scientific workers eligible for assistance from the funds they have available. Particulars can be obtained from Messrs. Shepherd and Wedderburn, 16 Charlotte Street, Edinburgh.

#### Ibero-Americana Oceanographical Conference

THE Ibero-Americana Oceanographical Conference was to have met at Madrid in October last, but it was found necessary to alter the date, and the assembly of the delegates was postponed until the latter part of April 1935. As at present arranged, the Conference will hold its meetings partly in Madrid and partly in Malaga. Invitations to attend were sent to the Governments of the various North and South American States and to the Governments of those countries having territories in America. It is understood that the Conference will discuss

measures for obtaining oceanographical data of all descriptions in the oceans and waters adjoining their coasts, including the study of ocean currents, marine meteorology and fisheries. Having regard to the existence of the International Association of Physical Oceanography of the Sub-Committee for Oceanography of the Pacific Science Congress, however, and of various bodies dealing with marine biology and fisheries, it is doubtful whether the creation of yet another is desirable or can serve a useful purpose. The General Secretary is Señor Rafael de Buen, Alcalá, 31, Madrid.

#### New Land Speed Record

SIR MALCOLM CAMPBELL set up a new motor speed record on Daytona Beach on March 7, by obtaining a speed of 276·816 miles an hour. The previous record, also set up by Sir Malcolm, on February 22, 1933, was 272·108 miles an hour. The figures for the time to cover the measured mile work out as follows: first run, 272·727 miles an hour (13·20 seconds); second run, 281·030 miles an hour (12·81 seconds); average speed, 276·816 miles an hour. Sir Malcolm's car, *Bluebird*, was designed by Mr. R. Railton, and contains a 2,500 horse-power Rolls-Royce Schneider Trophy engine.

#### Announcements

PROF. W. N. HAWORTH, director of the Department of Chemistry, University of Birmingham, was elected a corresponding member of the Bavarian Academy of Sciences on February 16.

THE Bessemer Gold Medal for 1935 of the Iron and Steel Institute has been awarded to Prof. A. M. Portevin, director of the Institut de Soudure Autogène, professor at the Ecole Supérieure de Fonderie, and at the Ecole Centrale des Arts et Manufactures, Paris.

THE D'Arsonval prize has been awarded by the Société française d'électrothérapie et de radiologie to the Belgian physician Dr. Etienne Hubert Hennard, for a thesis on "Short Hertzian Waves and their Medical Applications".

PROF. H. LEVY will deliver a lecture on "Science and Social Responsibility" before the Institution of Professional Civil Servants on March 22 in the lecture hall, Royal Society of Arts, John Street, Adelphi, W.C.2. The chair will be taken by Mr. H. T. Tizard. Tea will be served at 5 p.m. and the chair will be taken at 5.30 p.m. Admission is free and tickets of admission are not required.

THE Royal Society of Arts has recently announced the subjects for the Thomas Gray prizes to be offered in 1935. One prize of £100 will be awarded for an "invention, publication, diagram, etc., which . . . is considered to be an advancement in the Science or Practice of Navigation". The other prize will be awarded for the best essay on "Modern Navigational Appliances." Further information can be obtained from the Secretary, Royal Society of Arts, John Street, Adelphi, London, W.C.2.

THE following appointments have recently been made by the Secretary of State for the Colonies: Mr. H. Atkinson, to be deputy Government analyst, Ceylon; Mr. J. R. E. Hindson, inspector of plants and produce, to be assistant superintendent of agriculture, Gold Coast; Mr. A. H. Malpas, assistant marine biologist, to be director, Colombo Museum, and marine biologist, Ceylon; Mr. D. B. Sabiston, deputy superintending produce inspector, to be superintendent of agriculture, Nigeria.

At the annual general meeting of the Institute of Metals, held on March 7-8, the following officers were elected for 1935: *President*, Dr. H. Moore; *Vice-Presidents*, Mr. W. R. Barclay, Dr. C. H. Desch, Dr. A. G. C. Gwyer, Prof. D. Hanson, Mr. H. C. Lancaster, Mr. E. L. Morcom; *Honorary Treasurer*, Mr. John Fry.

THE Royal Astronomical Society is prepared to issue (provided sufficient support is forthcoming) a third edition of the Franklin-Adams Chart of the Sky, in 206 sheets, each covering an area  $15^\circ \times 15^\circ$ . The Chart is in three sections: (1) North Pole to Dec.  $+ 22^\circ$ , (2) Dec.  $+ 22^\circ$  to  $- 22^\circ$ , (3) Dec.  $- 22^\circ$  to South Pole. The price of the complete set, in three cases, has been fixed at £27, including carriage. Should any desire one or two of the sections only, subscriptions will be received for the part required at a corresponding rate. Further particulars, and application forms, may be obtained from the Assistant Secretary, Royal Astronomical Society, Burlington House, London, W.1.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A temporary assistant engineer in the Headquarters Offices of the Ministry of Transport—The Establishment Officer, Ministry of Transport, Whitehall Gardens, S.W.1 (March 18). A lecturer (woman) in biology and nature study in the Saffron Walden Training College, Essex—The Principal (March 22). A lecturer in physiology, an assistant lecturer in mathematics, and an assistant lecturer and demonstrator in housecraft at Brighton Technical College—The Secretary, Brighton Education Committee, 54 Old Steine, Brighton, 1 (March 29). A lecturer (woman) in biology and natural history in the Diocesan Training College, Derby—The Secretary (April 1). A professor of physiology in the King Edward VII College of Medicine, Singapore—The Director of Recruitment, Colonial Service, 2 Richmond Terrace, Whitehall, London, S.W.1 (April 8). Two lecturers in mechanical engineering at the Lester Technical Institute, Shanghai—The Lester Trust, c/o Messrs. Viney, Price and Goodyear, Empire House, St. Martin's-le-Grand, E.C.1 (April 8). A chief mining engineer for the Northern India Salt Revenue Department—The High Commissioner for India, General Department, India House, Aldwych, W.C.2 (April 10). Assistant keepers in zoology, entomology, geology, mineralogy, and botany in the British Museum (Natural History), London, S.W.7—The Secretary (May 31).