

time engaged in research work at Cambridge. His first book on "Buddhist Legends" appeared in St. Petersburg in 1894. In 1895 he was appointed to the chair of Indian languages and literature in the University of St. Petersburg, which he held for thirty years. His election to the Academy of Sciences in 1903 was followed in the next year by his appointment as permanent secretary of the Academy and soon after he was made director of its Asiatic Museum.

At this time Germany, France and Great Britain, through Grünwedel and von Le Coq, Pelliot and Stein respectively, were engaging in a campaign of intensive archæological exploration in Chinese Turkestan. Attention had been attracted to this territory by the Russian expedition under Klements in 1898 and by Sven Hedin's explorations; but the full extent of the opportunities for archæological research had been revealed only by Stein's discoveries. Russia's desire to participate in this important work in the field was met by the organisation under Oldenburg's direction of an expedition of exploration to the oasis of Kucha under the leadership of Berezowski (1906-7). Later, another expedition was sent out by the Academy under Oldenburg himself, which explored Karashahr and Turfan and brought back a rich store of manuscripts, paintings and sculpture from the caves of Tung-hwang discovered by Sir Aurel Stein. The results of the expedition were published in Oldenburg's valuable book, "The Russian Expedition to Turkestan" (1914: in Russian).

After the revolution of 1917, Oldenburg

retained his chair and his secretaryship of the Academy for twelve years. His experience in the organisation of research both at home and in the field was of material assistance to the Soviet Government in carrying out its desire to re-establish archæological and ethnological exploration. In 1929, however, he was dismissed from his posts for political reasons by the Government; but he was so far readmitted to favour that the Academy and other scientific bodies were permitted to express recognition of the celebration of his seventieth birthday.

WE regret to announce the following deaths:

Col. Arthur Lynch, author of several original books on psychology, philosophy and relativity, on March 25, aged seventy-two years.

Prof. C. Matignon, professor of inorganic chemistry in the Collège de France, president of the Société Chimique de France, on March 18, aged sixty-six years.

Sir Thomas Muir, C.M.G., F.R.S., formerly superintendent-general of education in Cape Colony, author of works on the history of determinants, on March 21, aged eighty-nine years.

Prince Sixtus of Bourbon-Parma, whose expeditions to Central Africa produced valuable scientific results, on March 14, aged forty-seven years.

Dr. E. W. Washburn, chief chemist in the United States Bureau of Standards, on February 5, aged fifty-two years.

News and Views

Petroleum in Great Britain

OCCURRENCE of petroleum in Britain is once again in the limelight, this time focused by what, from a public point of view, seems to be sudden and dramatic action on the part of the Government. On March 22, the President of the Board of Trade announced in the House of Commons that the whole question of oil exploration has recently been reviewed following renewed activities in this direction. It is intended to introduce legislation forthwith to remove certain difficulties existent under the Petroleum (Production) Act 1918, and to secure orderly development of any oil which may be discovered. The most far-reaching and drastic proposal is that ownership of all petroleum at present unknown shall be vested in the State. A licence to explore for oil must be obtained from the Board of Trade, payment being made to the Exchequer on any oil produced. The bill was introduced in the House of Lords on March 22. In addition to the provisos mentioned above, the bill makes possible compulsory acquisition of rights to enter on land; further, that in considering any application made to the Railway and Canal Commission under that Act, the Commission shall have regard to the effect on the amenities of the locality. Compensation in respect of granting prospecting rights is to be made subject to

additional allowance of not less than ten per cent on account of compulsory acquisition.

OTHER clauses of the bill deal with the Board of Trade receipts and expenses in connexion with licences; payments to the Exchequer; the manner in which and persons by whom applications may be made; fees; size and shape of chosen areas; right to inspect all plans, etc., the Board throughout exercising its powers through the Secretary for Mines. The opportunity was obviously one too good to be missed by certain more sensational sections of the Press, which translated what is essentially a sober, political measure into actual discovery of oilfields; one paper even going so far as to give a map depicting the 'track of the oil belt' from the Humber to Cardigan Bay! In a long experience we doubt whether British geology has ever received such flagrant affront. Aside from technicalities, it is common knowledge that the existing licences held under the Act of 1918 are in respect of Hardstoft, Derbyshire (1923), Heathfield, Sussex (1930) and Three Bridges, Sussex (1931), trial borings also being made at Hythe, Kent, in 1929. In no case have these activities attained commercial status. The drilling epic of 1918-22, a War-time measure, though forgotten by the public, is still fresh

in the minds of oil technologists in Great Britain, and no Government bill, reports of foreign enterprise, secret explorations in Derbyshire or elsewhere, animates us from resignation to facts which one-time emergency and progressive geological knowledge have taught.

OIL pools of commercial magnitude (*pace* natural gas, shale oil and allied indications and potentialities) cannot reasonably be anticipated in any known area in Great Britain. Many years of official geological survey—a centenary in 1935 in point of fact—together with much independent work, leave few spots unknown, if not in detail, at least in sufficient outline to preclude even faint hope. The Government measure is discreetly, if not satirically, worded: it refers to oil which *might* be discovered or *may* exist; it excludes Northern Ireland from the Bill, presumably on political grounds; in this, as with the rest of Great Britain, it has the silent approbation of British geology, though it is in the public interest that that silence should be officially broken if the present bill is in any way interpreted as supporting authoritative views that oil does indeed exist in Great Britain and only awaits public money for its development.

Royal Botanic Gardens, Regent's Park

WHEN the lease of the Royal Botanic Society, Regent's Park, terminated in 1931, the grounds were thrown open to the public, but arrangements were made with the Office of Works for continuing the investigations in genetics which had been carried on there since the War. This arrangement has now been placed on a permanent basis, a portion of the original Gardens, including a quadrangle of buildings and the adjacent grounds, having been set aside for this work on rental from the Office of Works. Through the action of Prof. R. Ruggles Gates, the Courtauld research fund of £5,000 has been obtained as an endowment for this work, which is an important extension of the research facilities of the Department of Botany, King's College. The facilities include two greenhouses with boilers for heating, a potting shed, tool house, cold frames and a laboratory of four rooms. The latter is being fitted up for the examination of genetical material and the collection and treatment of cytological material from plants grown in the Gardens, as well as for photographic work. The Empire Cotton Growing Corporation is also making a grant for three years in aid of further researches on cotton and its relatives. Various other temperate and tropical economic plants are being investigated. The fundamental researches in cytogenetics, with which the name of Prof. Gates has been connected for many years, have now been extended to include a study of the native species of *Oenothera* in eastern Canada. The phenomena of distribution, relationships and hybridisation of the native species and varieties (many of them undescribed) found in this area constitute a genetic survey which throws light on many phases of the complicated evolutionary problems in this genus.

Sir Charles Parsons Memorial

THE Sir Charles Parsons Memorial Executive Committee, composed of the presidents of thirteen scientific and technical societies, with the Engineer-in-Chief of the Fleet, and presided over by Sir Frederick Gowland Hopkins, has just issued a statement of its aims and an appeal for subscriptions. Observing that the name of Parsons will ever be remembered with those of Newcomen, Watt, Trevithick and Stephenson, and that his fame was due not only to his work in marine and electrical engineering, but also to his investigations in various branches of physics, the statement says that it has been decided that the memorial shall take several forms. It is proposed, first, to place a memorial to him in Westminster Abbey; secondly, to found an annual lecture to be given by a distinguished man of any nationality, who will be chosen in turn by the various scientific and technical societies; and thirdly, it is proposed to arrange with the governors of London House that the library in that House shall be called the "Parsons Research Library". A bronze medal will be established in connexion with the annual lecture and a bust of Sir Charles Parsons will be placed in the library. London House was founded in 1931 as a hall of residence for Dominion and Colonial men students of white parentage, from the Empire overseas. The property, now under development, covers an area of about $1\frac{1}{2}$ acres in the Bloomsbury district close to the University of London, and the proposed library will contain scientific and technical works. To carry out the whole scheme, it has been estimated that a sum of at least £12,000 is required. Copies of the appeal are being sent to members of the societies concerned, and the Executive Committee suggests that in general the maximum subscription should be two guineas. Donations should be sent to the Royal Society, Burlington House, W.1, and cheques made payable to the "Sir Charles Parsons Memorial Fund".

The New Hydrogen

IN the course of Lord Rutherford's Friday evening discourse on March 23 at the Royal Institution (see p. 481), experiments were shown to illustrate the differences in freezing point and in vapour pressure between ordinary and heavy water, and the differences in heat conductivity between ordinary and heavy hydrogen. For the first time, experiments were made to show the artificial transformation of lithium by protons and diplotons of energy corresponding to about 100,000 volts. The enormous emission of fast protons when ammonium sulphate containing heavy hydrogen was bombarded by diplotons was clearly shown by counting methods. The transformation apparatus was designed and operated by Dr. Oliphant, while Messrs. Watson and Sons (Electro-Medical) Ltd. loaned an installation to provide a steady potential of 100,000 volts to accelerate the ions.

Developments of Television

AN application of science has enabled a chairman of a company to become a historic figure. At the