

until his death, of the Imperial College, where his wide knowledge and experience of education and research, and his constructive criticism, were of inestimable value. His many other activities included the chairmanship (1935-39) and the vice-chairmanship since 1939 of the British Standards Institution, and membership of the Royal Commission for the 1851 Exhibition since 1924. Whatever he did was done thoroughly and well; no one ever turned to him in vain for help.

Heath's publications include chapters on English language and literature to the time of Elizabeth in "Social England". He was co-editor with A. W. Pollard and others of the *Globe Chaucer*, and editor

of the *Modern Language Quarterly* from 1897 until 1903. Many of his best writings were published anonymously in official documents, such as the annual reports of the Department of Scientific and Industrial Research; but fortunately he found time, before his death, to complete a book on "Industrial Research and Development" in collaboration with A. L. Hetherington, a close friend and colleague for many years.

Sir Frank married twice. His first wife, Antonia Johanna Eckenstein, died in 1893, only a year after their marriage. In 1898 he married Frances Elaine Sayer, who died in 1939. Two sons of the second marriage survive him.

H. TIZARD

## NEWS and VIEWS

### Royal Society

#### Annual Meeting

THE anniversary meeting of the Royal Society was held, as customary, on November 30, and the president, Sir Robert Robinson, delivered his presidential address, a main part of which is printed on p. 815 of this issue, and also presented the medals for 1946 (see p. 841). In addition, he made some brief comments on the relationship of scientific men to world affairs. He welcomed Sir Henry Dale's plea last year for the general release of scientific knowledge. Speaking of the danger to scientific ideals and integrity in the conception of 'total war', he pointed out that men of science are faced with a dilemma—a conflict between their ideals of service to humanity and their duty as citizens of a democratic community—which can only be resolved by the establishment of real friendship and concord among the nations of the world. Speaking for himself, he said that all men of science should strive for the promotion of international peace and the outlawry of all methods of warfare which by their nature involve 'total war'. The existence of the universal brotherhood of scientific workers shows that this hope is not impractical idealism. Nevertheless, in this connexion there can be no clear-cut distinction between peace and war, and a nation's defences must be prepared at all times against attack. Sir Robert continued, "it is inconsistent to praise our scientists for their outstanding contributions to the war effort and at the same time to suggest that they offend against our ethical code if they serve the country in a similar fashion during an uneasy peace. It is useless to attempt to disguise the fact that such service implies some sacrifice of freedom. During the War the scientific effort was nation-wide and control extended to many university departments. Nevertheless, the universities have preserved intact their precious liberty of action, and I see no signs of any attempt to curtail it. Surely this suggests a feasible line of demarcation in that extra-mural contracts, placed by Service departments with the universities, need not, and should not, contain any clauses restricting free publication of the results. Although it has sometimes been irksome, the refusal of many universities to accept theses that cannot be published is a step in the right direction."

#### Officers and Council

THE following is a list of those elected as officers and Council of the Royal Society at the anniversary

meeting: *President*, Sir Robert Robinson; *Treasurer*, Sir Thomas Merton; *Secretaries*, Sir Alfred Egerton and Sir Edward Salisbury; *Foreign Secretary*, Prof. E. D. Adrian; *Other Members of Council*, Dr. C. H. Andrewes, Prof. W. T. Astbury, Prof. W. Brown, Dr. E. C. Bullard, Prof. A. C. Chibnall, Prof. C. A. Lovatt Evans, Dr. N. H. Fairley, Prof. R. A. Fisher, Prof. S. Goldstein, Prof. E. L. Hirst, Prof. H. W. Melville, Prof. M. H. A. Newman, Prof. M. L. E. Oliphant, Dr. C. F. A. Pantin, Prof. H. H. Read, Sir Reginald Stradling. In his anniversary address, Sir Robert Robinson announced the resignation of Mr. John D. Griffith Davies, assistant secretary of the Society; Mr. Griffith Davies has been appointed a member of the Library Committee and will be chairman of a sub-committee preparing for the celebration of the tercentenary of the Society.

#### Nobel Prize for Physics:

Prof. P. W. Bridgman

PROF. P. W. BRIDGMAN, to whom the Nobel Prize for Physics for 1946 has been awarded, is celebrated for his comprehensive researches into the properties of matter at very high pressures, which began in 1906 and have continued with unabated vigour to the present day. By the ingenious applications of principles in themselves simple and by the informed utilization of new steels, he extended the range of pressures at which systematic measurements could be made from 3,000 atmospheres, the limit reached by Amagat, to 12,000 atmospheres. Up to this pressure he measured, for example, compressibilities, viscosities, electrical conductivities, thermal e.m.f.'s and transition points of a large number of elements and compounds, with results of the highest interest. This work, which necessarily involved the working out of new methods of measuring pressure, is described in his book "The Physics of High Pressure", which appeared in 1931 and has become the classic of the subject.

Since then, Bridgman has again extended the range of pressures. By constructing the vessels of the steel known as 'carboly' and by special methods of construction, including, for the highest pressures, the immersion of the pressure vessel in a fluid which is itself maintained at 30,000 atmospheres, he has pushed the limit up to 100,000 atmospheres. A number of systematic measurements of polymorphic transitions and of compressibilities have been made up to 50,000 atmospheres. It is an extraordinary