tions may be given still further precision in future editions. The entry under copper oxide, for example, on p. 62, which returns nitrate, carbonate, and organic matter as "nil" on the basis of a rather crude test, is obviously capable of revision, and other cases will no doubt suggest themselves to the reader. For routine work, as distinguished from research, these specifications will be of considerable value, and the book will be found useful in all analytical laboratories.

### Refractories

WE have received from Messrs. John G. Stein and Co., Ltd., of Bonnybridge, Scotland, an interesting catalogue of refractory materials, dealing with various grades of firebricks, silica bricks, cements, retorts, etc. This firm has an output of one million refractory bricks weekly. All the clays required are obtained from the firm's own mines, and throughout the process of manufacture every factor is scientifically controlled, thus ensuring uniformity of products. The catalogue, which is well produced and illustrated in colour, gives a number of useful tables and formulæ, together with lists of the principal uses of the products. It contains some phase rule diagrams, for example, of the forms of silica and of the system $SiO_2 - Al_2O_3$, and a glossary of terms relating to silica and fireclay refractories. Special shapes will be made when required, the manufacturers being willing to co-operate in producing a satisfactory result in such cases. This catalogue is of a type which deserves every commendation, since it indicates a close co-operation of scientific and technical knowledge and a realisation of the importance of research in maintaining the quality of the products and in making progress in new directions, which are most encouraging.

### Non-Ferrous Metals Research

THE twelfth Annual Report of the British Non-Ferrous Metals Research Association shows that in spite of the industrial depression, progress has been well maintained. With a Government grant of £8000, the total income has been brought up to more than £25,000, proving that the industry has found the work of the Association of increasing value. In June 1931 the new headquarters in Euston Street, London, N.W.1, were opened, and visitors have been able to see how well the limited space available has been utilised for experimental work, and for the equally important work of collecting information and making it accessible to members. A study of the methods of the Association in this field would provide lessons for other research organisations, especially for such as have to make their results intelligible and serviceable to manufacturers, many of whom may have no adequate scientific staff to interpret the conclusions of the research workers. The subjects under investigation include many which are of interest to workers in pure science as well as to industrialists, and the results of these are usually communicated to a scientific society after they have been circulated to members. Whilst several of the investigations are now carried on at headquarters with the help of the equipment recently installed there, much research of importance is also in progress for the Association at the National Physical Laboratory, the Research Department at Woolwich, the University of Birmingham, and elsewhere.

### Organisation of Living Things

IN a short article in *Scientia* (Aug. 1932, p. 84) Dr. J. Needham discusses the problem of organisation and its place in the biological thought of the present day. Organisation is a property of all matter, and the organisation of living things is at one with material organisation, even if on a grade of its own. It is not something which controls or directs the material system, but is bound up with, and inseparable from, the organised matter itself. From this point of view organisation in the biological sense is something integral with the rest of scientific data, which science can take into account; and it will probably make necessary a widening and stretching of the classical concepts of physics and chemistry rather than an abandonment of them, so that a new mechanism will be evolved to include the modes of action and the organising relations found in living systems. Herein lies the central problem of biology, and biology will make progress only when, as has happened in physics and chemistry, attention is given to the theoretical principles which underlie and would co-ordinate the multifarious studies and researches of the field and the laboratory.

### International Co-operation among Agricultural Brain-workers

UNDER the above title the Czechoslovak Academy of Agriculture has recently published in book form—in French, German, English, and Czech—the proceedings of a meeting of its corps of foreign members held at Prague on June 3, 1931, a matter which has already been referred to in this journal (**128**, 597; 1931). On this occasion detailed proposals were put forward by Dr. Reich, the secretary-general of the Academy, for furthering the international co-ordination of scientific and intellectual effort as applied to the agricultural domain. Among these was the original suggestion that an international 'Nobel prize' of the annual value of 1,000,000 Czechoslovakian crowns (approximately £8333) should be founded and awarded for the best piece of scientific work in agriculture. In this way it is expected that two important results will follow. In the first place, definite financial recognition can be awarded to investigations of outstanding merit. In the second place, an annual award of this character cannot fail to exercise a great moral and intellectual stimulus on the future development of agricultural science. An international committee, consisting of eighteen members, has been appointed to work out the details of the scheme and to collect the capital sum needed. In view of the fact that the welfare of industry is intimately bound up with that of agriculture and that in the future both must stand or fall together, it should not prove an impossible task for the nations to endow such a 'Nobel prize' for agricultural research.

### British Association of Commercial Seed Analysts

THE seventh Conference of the British Association of Commercial Seed Analysts was held on July 21 at

the National Institute of Agricultural Botany, Cambridge. The president, Mr. A. E. Birks, stated in his address that members are continuing to avail themselves of the facilities afforded by the Association, and during the year a number of interesting experiments were carried out by members working together. In one case, tests were made on a particularly difficult sample of asparagus kale in an endeavour to arrive at an equable result. The wide divergence in results obtained proves that there still remain factors governing the germination of this seed which are not fully understood. Mr. Harding gave an address on the comparison of soil and laboratory tests. He considers that soil tests properly carried out are of real value in estimating the maximum percentage of plantlets that can be obtained under field conditions. In some instances, when working upon new seeds, results from the laboratory and the soil tests are identical: greater differences occur when old seed is being tested. Finally, soil tests are certainly helpful when made in conjunction with the laboratory, as they assist in revealing discrepancies. The following officers were elected for the coming year: *President*, Mr. E. B. Wallace; *Vice-President*, Mr. A. E. Birks; *Hon. Secretary and Treasurer*, Mr. F. H. G. Neale, "Emmandee", Hawthorn Gardens, Reading.

### Annual Report of the Ministry of Health

THE thirteenth Annual Report of the Ministry of Health, 1931–1932 (H.M. Stationery Office. 5*s*. net), recently issued, is in the main a record of the more important business transacted by the Ministry during the year, and does not cover matters of routine or detail, the Annual Report of the Chief Medical Officer of the Ministry being published separately as in previous years. Allusion is made to the British Postgraduate Hospital and Medical School, now in process of formation, for which a grant of £250,000 had been previously contemplated, but for which Parliament will now be invited to contribute a maximum grant of £100,000 in view of the exigencies of the time. The National Radium Trust has made further purchases of radium, and now owns a little more than 17 gm. Local authorities have been active during the year in the sewering of their areas, and loans sanctioned during the year amounted to nearly 7¾ million pounds. Other subjects dealt with in the Report fall under the main heads of public health, housing and town planning, local government and finance, poor law, and national health insurance.

### Library of Educational Films

THE Empire Marketing Board has published a new edition of its film library catalogue, and copies are obtainable free on request from the Board, 2 Queen Anne's Gate Buildings, London, S.W.1. A great variety of films illustrating different aspects of scenery, natural history, and economic activity is now available. These cover most parts of the Empire. An important addition to the list is a series of class-room films, which are intended for the use of teachers rather than for general circulation. There are about forty of these films, some of which are travel surveys, while others deal with such subjects as canals, irrigation, cotton, wool, water power, or social life. All the films are available free for approved displays at which there is no charge for admission. Carriage must be paid by the borrower.

### Cancer Mortality in the United States

DEATHS from cancer have increased alarmingly throughout the United States of America in the past year and a half, in the face of extremely favourable general health conditions. Science Service, of Washington, D.C., notes, under date Aug. 9, that figures compiled by the Metropolitan Life Insurance Company upon its industrial policy holders show a rise of 7·4 per cent in 1931, and for the first half of 1932, a further rise of 9·5 per cent over the rate for the like part of last year: the average rise in the period 1919–1930 was 1·5 per cent a year. Although official mortality statistics are not yet available for any large part of the country, the provisional reports are said to substantiate the Metropolitan figures.

### Announcements

MR. WILFRED TROTTER has been appointed a member of the Advisory Committee on the Administration of the Cruelty to Animals Act, 1876, in succession to Sir Arthur Keith, who has resigned.

DR. JAMES LAW BROWNLIE has been appointed by the Secretary of State for Scotland chief medical officer of the Department of Health for Scotland in succession to the late Dr. John Parlane Kinloch.

THE annual exhibition of the Professional Photographers' Association was opened at the Princes Galleries, Piccadilly, London, W., on Sept. 5, and will remain open until Sept. 29. The exhibits comprise industrial photography as well as portrait work.

DR. HAROLD MOORE, who has for many years been director of metallurgical research at the Research Department, Woolwich, has been appointed, as from Oct. 1, director of the British Non-Ferrous Metals Research Association, to succeed Dr. R. S. Hutton, who has been elected to the new Goldsmiths professorship of metallurgy at the University of Cambridge.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A lecturer in mechanical engineering at the Swindon Technical College—The Director of Education, Education Office, Clarence Street, Swindon (Sept. 24). Inspectors for the purposes of the Diseases of Animals Act, 1894–1927, in the Ministry of Agriculture and Fisheries—The Secretary, Ministry of Agriculture and Fisheries, 10 Whitehall Place, S.W.1 (Sept. 26). An assistant lecturer in engineering and a lecturer in production engineering at the County Technical College, Wednesbury—The Director of Education, County Education Offices, Stafford (Sept. 29). A lecturer in pure mathematics at the Wimbledon Technical College—The Principal, Wimbledon Technical College, Gladstone Road, S.W.19. A science master (chiefly physics) at the Prince of Wales' Indian Military College, Dehra Dun, United Provinces, India—The Secretary, Military Department, India Office, London, S.W.1.