

Guilds (Engineering) College, of which Unwin was the first professor of civil and mechanical engineering and the first dean, and to publish a biographical memoir based upon the one which was published in the Unwin Memorial issue of the *Central*, the journal of the City and Guilds College Old Students' Association, and so make available a record which so far has only been published for private circulation. Fuller particulars of the Committee's proposal can be obtained from the joint honorary secretaries, Messrs. G. A. Hicks and J. Severs, c/o The Institution of Civil Engineers, Great George Street, S.W.1, and contributions to the fund should be sent to the honorary treasurer, Mr. E. G. Walker, 82 Victoria Street, London, S.W.1.

#### Communications and the Manufacturer

THE fourth of the "Green Papers" issued by the Post Office contains a lecture by E. S. Byng to the P.O. Telephone and Telegraph Society read on January 15, 1934. He points out that the outstanding success of telephone development in the United States is attributed in some measure to the close working arrangement between the operating and manufacturing departments of the business. In the Bell system, the various operating companies and manufacturing associations are controlled by the American Telegraph and Telephone Co. In Great Britain, the State, as owner of the whole system, does not attempt to manufacture to any appreciable extent. The production of the necessary materials and plant is rightly entrusted to industrial companies. By mutual co-operation and understanding, the Post Office and the manufacturers should be able to operate in much the same way as a single organisation. Of recent years, after work has been begun on a contract, engineers rarely ask for changes to be incorporated. Inspection in a factory may be likened to a running commentary on manufacture, as the inspection includes observing, reporting and criticising. It varies from so little as 2 per cent to 100 per cent of the total goods manufactured. Some processes call for continual vigilance, while others have mechanical safeguards against inaccurate performance. The telephone dial alone consists of nearly seventy 'piece' parts each of which must be checked for accuracy of forming and its dimensions gauged between the maximum and minimum limits. In succeeding stages, the tensions of the springs are measured, the dimensions to the thousandths of an inch and the speed of operation to thousandths of a second.

#### A New Domestic Coke

A REPORT issued by the Department of Scientific and Industrial Research (H.M. Stationery Office, 9d. net) records a test by the Director of Fuel Research on a plant erected by the British Coal Distillation Co., Ltd., at Newbold, Leics., and designed to prepare a smokeless fuel from an entirely non-coking coal, high in ash. The unwashed coal is first dried and passed through a revolving inclined retort, where it is carbonised at 600° C. by hot products of combustion of producer gas. The residue from the

retort is discharged into a trough of water, and the 'clean' coke, which floats, is skimmed off the surface, while the dirt sinks and after removal is used for fuel on the plant. The resultant 'clean' coke is made with pitch into briquettes, which are stored to give a domestic fuel. The throughput of the plant as claimed—100 tons per day—was substantially confirmed, giving a fuel which was considered satisfactory for the open grate, a notable achievement for such a raw material. This is a technical test made in accordance with the normal practice of the Department, and does not purport to give an opinion about the commercial success of the process.

#### Journal of the Royal Horticultural Society

WITH the publication of vol. 49, Part 3, in September 1934, the *Journal of the Royal Horticultural Society* became a useful and informative monthly publication instead of a quarterly or half-yearly volume. The change should be welcome to all concerned, and certainly it will enable the Society to inform members of its activities more efficiently. Lord Aberconway, president of the Society, outlined the main features of the change in the September issue. The *Journal* has maintained a high standard of learning, science and practice for nearly fifty years, and has grown from a tiny circulation to a very large one. The new arrangement is designed "to add rather than to replace. . . . Records will be more up-to-date; news can be given while it is still fresh; information of coming events can be made available; notes of more immediate interest can be introduced; the most recent information as to the Society's activities at Wisley can be included". The "Book of Arrangements" will no longer be issued, but the information will be included in the January and February numbers of the *Journal*. The parts which have appeared since the change was effected show that the standard is even higher, if that is possible, than of old, whilst the total volume of subject-matter seems to have increased.

#### National Research Council, Canada

THE seventeenth annual report, for 1933-34, of the National Research Council of Canada, in addition to reviewing the researches on analysis and testing conducted in the National Research Laboratories, gives a summary of the activities of associate committees and of assisted researches in university and other laboratories and under scholarships. A financial statement is included, together with particulars of the personnel of the various research, advisory and special committees. Among the researches completed in the National Research Laboratories during the year may be mentioned investigations on the suitability of Canadian clays for oil-refining, the bonding of rubber to metal, the chemical investigation of Canadian weeds poisonous to livestock, the suitability of Canadian wools for the manufacture of cloth, the causes of premature seeding in turnips, the stability of aircraft floats and the correction of instability in aircraft used for photographic survey work. Researches conducted under associate committees have dealt with methods for combating losses due to

animal and plant diseases; the evaluation of insulating materials; the incidence and control of dangerous parasites in the livestock and wild life of Canada; the distribution and eradication of destructive weeds. Increasing use is being made of the research information service, and attention is directed to the desirability of expanding the National Research Library. The report surveys the outlook for the work of the Council, and concludes that every indication points to the more intensive application of science to industry, including agriculture, than in the past. The opportunities in the survey of resources, in standardisation, and particularly in the building industry and the utilisation of agricultural wastes, are stressed.

#### Institute of Physics

THE annual general meeting of the Institute of Physics was held on May 14. After election of officers and completion of the panel of the Board, it was announced that the following would take office on October 1: *President*, Prof. A. Fowler; *Vice-President*, Dr. G. W. C. Kaye; *Honorary Treasurer*, Major C. E. S. Phillips; *Honorary Secretary*, Prof. J. A. Crowther; *New Members of the Board*, Mr. A. P. M. Fleming and Dr. B. L. Worsnop. The annual report for the year 1934 states that the total membership of the Institute at the end of that year was 753. New activities have included the holding of informal discussions on industrial physics and the completion of the scheme for the training of laboratory assistants and the issuing of certificates of competence in laboratory arts. The report shows that employers are making greater use of the services of the panel of consulting physicists and of the appointments register.

#### International Conference on Documentation

THE thirteenth International Conference of the International Institute of Documentation will be held in Copenhagen on September 9-14, under the presidency of Dr. Alingh Prins. The following subjects will be considered: methods of documentation, theory of classification, indexing and abstracting services, co-operation between libraries and abstracting services, statistics, cataloguing, rights of authors in respect to photo-copies, decimal classification and classification of standards and patents, and also classification in municipal administration. Further information can be obtained from Mr. E. Lancaster-Jones, Honorary Secretary of the British Society for International Bibliography, Science Library, South Kensington, London, S.W.7.

#### Congress of Physical Education

THE Belgian Medical Society of Physical Education and Sport has organised an international congress to be held at Brussels on June 30-July 3, when the following subjects among others will be discussed: motor tests in physical education, introduced by Prof. Laugier (Paris), Covaeiu Ulmeanu (Bucharest) and René Ledert (Liège); cycling, introduced by Prof. Hedon (Montpellier), W. Missiuro (Warsaw), Brandt (Geneva) and Prof. C. Heymans (Ghent).

The subscription is a hundred Belgian francs. Further information can be obtained from the secretary, M. Rebuffat, 50 rue de l'Abbaye, Brussels.

#### Conference on Spectroscopy

A THIRD special programme on "Spectroscopy and its Applications" is to be held at the Massachusetts Institute of Technology this summer, culminating in a research conference during the week July 15-20. This conference, which is to be held in the George Eastman Research Laboratories, will comprise lectures and discussions on photographic photometry, absorption spectrophotometry, spectroscopic analysis of materials, biological and chemical effects of spectral radiation, spectroscopy of the extreme ultra-violet, and astronomical applications of spectroscopy. The meetings of the first day will be largely devoted to consideration of general spectroscopic problems of the metallurgist, chemist and biologist; on July 16 and 17 the chief emphasis will be on specific applications of spectroscopy to biology and medicine. During the latter part of the week, applications of spectroscopy to astronomy will be emphasised, a portion of the programme being held in collaboration with the Harvard Observatory Summer School. The research conference coincides with the conclusion of the Institute summer school courses in practical spectroscopy, and the meetings are open to all interested persons. An invitation is being extended by the Institute to all properly qualified investigators, to make use of the facilities of the spectroscopy laboratory in connexion with their researches during such portions of the summer months as they may desire. A bulletin giving further information regarding the entire summer programme on spectroscopy can be obtained from Prof. G. R. Harrison, Department of Physics, Massachusetts Institute of Technology, Cambridge, Massachusetts.

#### Institution of Electrical Engineers Awards

THE following awards of premiums for papers read during the session 1934-35, or accepted for publication, have been made by the Institution of Electrical Engineers: Institution premium to N. Ashbridge, H. Bishop and B. N. MacLarty; Ayrton premium to R. Grierson and D. Betts; Fahie premium to W. West and D. McMillan; John Hopkinson premium to W. D. Horsley; Kelvin premium to C. E. Webb and L. H. Ford; Paris Exhibition (1881) premium to A. Monkhouse; Overseas premium to F. T. M. Kissel; extra premiums to Dr. T. E. Allibone, W. G. Hawley and F. R. Perry; C. Wallace Saunders, H. W. Wilson and Dr. R. G. Jakeman; E. S. Byng; C. M. Longfield; R. Poole; Dr. J. C. Prescott and Dr. J. E. Richardson. *Wireless Section Premiums*: Duddell premium to C. F. Booth and E. J. C. Dixon; extra premiums to R. H. Barfield and C. R. Burch and Dr. C. Sykes. *Meter and Instrument Section Premiums*: Silvanus Thompson premium to Dr. N. H. Searby; extra premium to Prof. J. T. MacGregor-Morris and J. A. Henley. *Transmission Section Premiums*: Sebastian de Ferranti premium to Dr. D. M. Robinson; extra premium to W. J. John and F. M. Sayers.