

turbo-fan engine design and latterly aircraft engine and helicopter rotor noise control.

Botany in Monash University, Melbourne:

Prof. M. J. P. Canny

DR. M. J. P. CANNY has been appointed to the foundation chair of botany in Monash University. Dr. Canny, who is at present University lecturer in botany in the University of Cambridge, was born in Sydney. Prior to his Cambridge appointment he was senior research chemist in the Central Research Laboratories of Imperial Chemical Industries (Australia and New Zealand), Ltd., in Melbourne, where he worked on the movement and metabolism of weed-killers and carbohydrates in plants. His principal interest is in 'whole-plant' physiology. He has had long experience of radioactive isotopes and their assays applied first to investigations on ion accumulation, later to movement and metabolism of growth substances, and more recently to carbohydrate translocation. He has published, singly or with others, some sixteen papers in learned journals, and is at present writing a book on carbohydrate translocation in plants.

Walther Hermann Nernst

BORN one hundred years ago on June 25, Walther Nernst goes down in chemical history along with Arrhenius, Ostwald and Van't Hoff as a father of physical chemistry, yet also as one having fruitful contacts with industry during his Berlin period. From his West Prussian birth-place of Briesen he went on to Zürich and Würzburg, and after meeting Ostwald at Graz, joined that eminent chemist at Leipzig. But it was after Nernst succeeded Landolt at Berlin and took charge of the physico-chemistry department there that his brilliant researches came. Nernst, who was awarded the Nobel Prize for Chemistry in 1920, is remembered whenever his heat theorem is encountered by students, his third law of thermodynamics which perpetuated him; or his work on electrochemistry, begun as he pictured electrodes as "reservoirs of ions" with their solution pressure. There came also his classic "Theoretical Chemistry from the Standpoint of Avogadro's Rule", together with other contributions on photochemistry, solubility products, on lithium hydride and other topics. Nernst might well have benefited chemical engineering had he not been fully engaged in foundations, for he was ever constructing practical apparatus to verify his concepts. As examples of his breaking away from such essentials came his piano with strings vibrated electrically, and also the Nernst filament lamp with ceramic rod, a lamp with no future in industry when first tantalum and then tungsten filaments superseded all others. Nernst died in Berlin on November 18, 1941.

Towards a National Industrial Organization

A REPORT on the formation of a National Industrial Organization made by two joint commissioners, Sir Henry Benson and Sir Sam Brown, to the National Association of British Manufacturers, the Federation of British Industries and the British Employers' Confederation, proposes, in accordance with the task entrusted to them in July 1963, the constitution of a National Industrial Organization embracing these three organizations (Pp. vii + 62 + 16 appendixes. London: National Association of British Manufacturers—Federation of British Industries—British Employers' Confederation, 1964). It should not be a Trade Union but should be incorporated by Royal Charter: the main objects of the new Organization should be to provide for industry the means of formulating, making known and influencing general policy in regard to economic, fiscal, commercial, labour, social and technical questions, and to act as a national point of reference for those seeking industry's views; to develop the contribution of industry to the national economy; to encourage industry's efficiency and com-

petitive power; and to provide advice, information and services to British industry to that end. Nothing in the constitution should empower the Organization to interfere in the conduct or management of the affairs of its members. Its membership should comprise individual businesses in the United Kingdom, trade associations and employers' federations, and full membership should only be available for those engaged in the United Kingdom in productive or manufacturing industry. Nationalized industries should be admitted to membership. The 'small manufacturer' is defined as a business employing up to 200 persons. A strong regional organization is recommended and close ties with the British Institute of Management.

Library Development at the Bradford Institute of Technology

THE report of a working party on library development at the Bradford Institute of Technology well illustrates the problems now facing librarians in the colleges of advanced technology (Pp. 24. Bradford: Bradford Institute of Technology, 1964). The working party recognizes that, in view of the increasing importance of a good library service and the rapid growth of scientific literature, and assuming the continued use of books as the main vehicle for conveying information, a large, up-to-date collection of books and periodicals is essential. Calculating on a projected daily population in 1973 of 4,195 students and 950 academic and research staff, it finds the present stock of 26,000 volumes inadequate, and comparing unfavourably with universities and foreign technological institutions. The ultimate stock should not be less than 500,000 volumes; an increase to 100,000 volumes by March 1969 is essential and then to 200,000 volumes by March 1973. By March 1967 about 25 per cent of the stock should be in science, 35 per cent in pure science, 16 per cent in social science, 8 per cent in literature, and 5 per cent in general works. A strong central library is recommended as offering the best service. Departmental needs should be met by laboratory collections and quick-reference works in departmental reading rooms. The formula recommended for calculating the size of the library would provide seats for one-fifth of the estimated daily population and space for books on open and limited access. Ancillary accommodation would also be provided for offices, cataloguing, micro-text rooms, control counter, catalogues, periodical racks and exhibition display. There would be adequate space for internal circulation. All students should have instruction in the use of the library and in the bibliographical approach to their subject. Assistance to readers should be improved and extended. Audio-visual facilities should be provided, and the use of automatic data processing equipment of library routines investigated. Annual expenditure on books, periodicals and bindings would rise to about £40,000 in April 1964, and to about £65,000 from April 1969, while additional expenditure on staff might be about £7,000 from April 1964, and a further £6,000 from April 1969.

The Commonwealth Institute

THE annual report of the director to the board of governors of the Commonwealth Institute for 1963 records the first full year's work in the new building opened in November 1962 (Pp. 52. London: Commonwealth Institute, 1964). During the year, 612,000 visitors came to the exhibition gallery and some 27,000 people attended concerts, film-shows, receptions and other evening occasions; the grand total compares with 246,000 visitors to the old building in 1961. The director sees as the Institute's most urgent task to help people of all ages, especially in Britain, to understand the new Commonwealth. The report, which is illustrated, gives a comprehensive account of the Institute's activities, which included the continued development of work with teachers