

the Parliamentary Secretary to the Board of Trade, Mr. J. Rodgers, explained that unless the former limit was raised, the Corporation would have to abandon many projects already in hand before they could come to fruition and might quite soon find itself unable even to discuss new projects with inventors or research organizations, however important their proposals. Mr. Rodgers also said that it is hoped in future to publish the annual report of the Corporation rather earlier. He referred to the contribution of the Corporation to the establishment of an electronic computer industry in Britain, and also mentioned its sponsoring of the flexible containers for transporting oil developed by research at the University of Cambridge. He said that the Corporation's income had now risen to nearly £200,000. Mr. A. Albu, in welcoming the Bill, mentioned among other new developments a new mechanism for storing energy in the flywheel of a commercial vehicle when braking and making the energy available afterwards for acceleration, and Sir Thomas Merton's diffraction gratings at the National Physical Laboratory, which will have increasing use in spectrometry and metrology. He believes the Corporation should use to the full its power to place development contracts, particularly for new processes or for new machines; that more use should be made of the section of the 1948 Act which enables the Government to ask the Corporation to undertake work which is not economic and for which it would make good a loss if the work was in the public interest; and that the Corporation would further develop its existing good collaboration with the universities and the colleges of technology.

#### Research and Development in Government Establishments

ANSWERING a question on November 18 in the House of Commons as to the availability of research equipment at the National Chemical Laboratory, Mr. H. Nicholls, Parliamentary Secretary to the Ministry of Works, on behalf of the Lord President of the Council, said that subject to the avoidance of undue interference with its own research programme, the Laboratory is always ready to consider how its resources of equipment and knowledge of special techniques can be utilized by other scientists from industrial laboratories. During the past two years, research workers from seven organizations have spent in all ninety days on experiments with special high-pressure and high-temperature equipment in the Laboratory, and this use is expected to grow. In reply to further questions about scientific and industrial research, Mr. Nicholls said that Government expenditure on scientific research for civil purposes has more than doubled since 1951, and this year the research councils for which the Lord President is responsible will be spending about £20 million, compared with less than £9 million eight years ago. The investigation at the Water Pollution Research Laboratory of the effects of industrial effluents on streams, with the object of developing improved methods of treatment, has been assisted by a contribution from industry through the Federation of British Industries which next year will amount to £13,000. The Pest Infestation Laboratory has developed a rapid and reliable instrument, now available commercially at a cost of about £50, for determining the moisture content of cereals stored in bulk, and the National Institute of Agricultural Engineering of the Agricultural Research Council has examined

the range of moisture meters available for testing the moisture content of grain stored on the farm. The Road Research Laboratory is investigating means of electrically heating road surfaces to mitigate dangers from frost, and it is hoped shortly to lay another experimental surface of this type on a new road-bridge to be constructed at Slough. The work of the Laboratory on the design and siting of snow fences has been outstandingly successful and offers large savings of cost and labour if the snow fences are correctly sited. The British Coal Utilization Research Association has shown that with proper mechanical firing equipment the efficiency of use of small coal in shell-type boilers can be high. Further research and development on automatic handling and control are in progress, in association with the National Coal Board, which is also developing work on the manufacture of briquettes from small coal.

#### Science and Mathematics in Schools

IN answer to a question asked in the House of Commons on November 18, the Joint Under-Secretary of State for Scotland, Mr. N. Macpherson, said that according to estimates by the education authorities and managers of grant-aided schools, 97 teachers with first- or second-class honours degrees were required in October 1957 to teach science and 119 to teach mathematics. A further 152 graduate teachers were needed to teach these subjects in the junior classes of secondary schools. Representations for the release from National Service of third-class honours graduates in science and mathematics to enable them to return to the schools are under consideration.

#### Broadcasting, Television and the Schools

IN an address to the School Broadcasting Council on November 7, Sir Ian Jacob, director-general of the British Broadcasting Corporation, referred particularly to the dependence of Great Britain, and possibly its survival, upon the widest possible diffusion of scientific skills and knowledge. He suggested that the British Broadcasting Corporation might be able to make, in its own way, "a new and massive contribution to the understanding of science in the secondary modern schools, where the need perhaps is greatest and where the shortage of good teachers is likely to be most acute". Sir Ian said he had recently received a deputation comprising the Presidents of the Royal Society and the British Association and the Chairman of the Advisory Council on Scientific Policy, who had come to urge that the Corporation should do its best to interest the broad mass of the people in scientific development and to present science as vital to the well-being of our contemporary world. The B.B.C., he said, is already doing this job, and it proposes to put all the resources it can behind it. The task must begin in the schools, and Sir Ian thought that television might be opening up wholly new possibilities in school broadcasting.

#### Extensions to the Duncan Flockhart Research Laboratories, Edinburgh

EXTENSIONS to the Duncan Flockhart Research Laboratories in Edinburgh, which were opened on November 14 by Prof. John Bruce, president of the Royal College of Surgeons of Edinburgh, consist of additional development and biological laboratories. The former are in the chemical laboratory building,