NEWS and VIEWS

Conditions in the Government Scientific Service

THE Interdepartmental Scientific Panel, of which Sir Edward Appleton is chairman, is charged with rather wider responsibilities than those suggested by the Barlow Committee on Scientific Staff which recommended its establishment. The terms of reference of the Panel include keeping under review the well-being and efficiency of the Government Scientific Service and making proposals for any changes in the organisation or conditions of service which will promote those ends. Reading between the lines of the third report from the Select Committee on Estimates for the Session 1946–47, it may be surmised that there is still plenty of scope for the Panel, despite the considerable ground it has covered since it first met on March 22, 1946. A Treasury proposal for a common pool of special posts of research workers of exceptional ability above the level of principal scientific officer, and numbering about two per cent of the latter class, led to the appointment of a sub-committee under the chairmanship of Dr. C. P. Snow to consider departmental nominations, and recommendations were made and accepted (*Nature*, **159**, 464; 1947). In regard to general conditions of service, the Panel has drawn a broad distinction between attendances at meetings of learned societies and similar bodies which might be plainly regarded as proper and indeed necessary to the efficient conduct of official scientific work, and others which are desirable rather than essential to maintaining a background. While for the first of these categories duly authorized attendance should be regarded as official duty, it is recommended that attendances in the second category should be encouraged by permitting a reasonable number of attendances in official time but without payment of expenses from official funds.

The Panel has also recommended that the existing practice of setting up departmental and inter-departmental panels for regular discussions should be encouraged. The question of the movement of scientific staff has also been considered, and it is emphasized that special attention should be given to opportunities of transfer at least within a department during the earlier years of an officer's career. The Panel, however, does not consider that any general arrangement on the lines of a sabbatical year would be practicable while the current shortage of scientific men persists. It has, however, recommended that it would be appropriate on suitable occasions to allow scientific officers to undertake short courses of lectures at universities and technical colleges, and has endorsed the practice of providing speakers at the request of undergraduate societies to give talks on the scientific activities of the Service. General adoption of the practice of receiving vacation students where this can be arranged is also recommended, and in supporting the inclusion in departmental programmes of reasonably wide research topics, the Panel suggests the creation of some posts to be held on the lines of research fellowships at the universities.

It is clear that the Panel has already done much to formulate definite proposals for implementing the recommendations of the Barlow Committee. If the Panel succeeds in securing the general adoption of its own recommendations, there should be a very different note in the next report on expenditure on research and development from the Select Committee on Estimates.

Gas-Turbine Propulsion in a Naval Vessel

MESSRS. Metropolitan-Vickers Electrical Co., Ltd., Trafford Park, Manchester, have installed gas-turbine propulsion equipment in the experimental naval craft, *M.G.B.* 2009, the trials of which will take place in the near future. The Company claims that this is the first naval vessel ever to be propelled by a gas-turbine. The characteristics of the simple-cycle gas-turbine include low overall specific weight and size with rapid starting, and these qualities make it very suitable for light vessels where high speeds may be required for limited periods and at short notice. In *M.G.B.* 2009, normal cruising and astern power is provided by two 1,250 B.H.P. 2,400 r.p.m. Packard internal combustion reciprocating engines, each engine driving its own propeller through a reduction gear. Maximum ahead power is obtained by bringing into operation a completely independent Metropolitan-Vickers gas-turbine of 2,500 B.H.P., which drives a third propeller through speed-reduction gearing to supplement the power of the reciprocating engines.

The gas-turbine plant consists of a gas generator consisting of a compressor, a combustion chamber, and a turbine driving the compressor, this being followed by a power turbine mechanically independent of the compressor turbine and coupled by a reduction gear to the propeller shaft. The gas generator is the same as a jet engine which has already been developed by the Company, having a nine-stage axial flow compressor, an annular combustion chamber burning 'Pool gas oil', and a two-stage turbine. The power turbine is of the four-stage type. The hot gases on leaving the power turbine pass through a volute which turns the flow to a vertical direction at exhaust. To bring the plant into operation, the rotor of the gas generator is run up by means of a 24-volt D.C. electric starting motor to about 800–1,000 r.p.m., so establishing conditions for the satisfactory lighting of the combustion chamber. Spark ignition then takes place through the medium of a boost coil. At this low speed the power output of the turbine is insufficient to drive the compressor, so that it is necessary to continue the motoring up to about 2,000 r.p.m., when the machine becomes self-sustaining. The time for starting up the gas generator from cold and running up to the idling speed of 3,000 r.p.m. is of the order of 45 seconds.

Mr. D. McMaster

MR. DONALD MCMASTER, formerly deputy chairman of Kodak Ltd., London, recently returned to the United States to take up his new duties as vice-president and assistant general manager to the Eastman Kodak Company, Rochester, New York. Mr. McMaster is British born, but went to the United States as a boy. After attending Cornell University and the University of Buffalo, he joined the Kodak organisation at Rochester in 1917 as a chemist. Except for the First World War he remained at Rochester for eighteen years, by which time he had become assistant to the production manager. In 1935 he came to Britain as assistant manager of the Harrow works of Kodak, Ltd. In 1940 he was elected a director of Kodak, Ltd.; he became assistant deputy chairman of the board of Kodak, Ltd., in 1945, and, with Mr. E. E. Blake, joint general manager of Kodak interests in European countries. The next year he was made deputy chairman of the board of Kodak, Ltd., at the same time as Mr. Blake was appointed chairman. Mr. McMaster is an honorary fellow and a past president of the Royal Photographic Society.