

first evoked by the war's needs. The research work has been continued into the present year through the co-operation of various scientific departments.

WORK DONE UNDER THE ADMIRALTY BOARD OF INVENTION AND RESEARCH

The question of procuring sufficient supplies of helium to replace hydrogen in naval and military airships was first taken up by Sir Richard Threlfall, whose efforts received strong support from the Admiralty Board of Invention and Research under the late Lord Fisher. In 1915 Professor J. C. McLennan was asked by the Board to make investigations to determine the helium content of the natural gas supplies available within the British Empire and assist in devising methods for its production. Associated with him were his colleagues in the Department of Physics, Professors E. F. Burton and J. Satterly, and Captain H. A. McTaggart after his return from Salonica; also Professor Dawes of McMaster University, and Messrs, John Patterson of the Meteorological Office, and R. T. Elworthy of the Department of Mines, Ottawa. Reports were made from all the natural gas fields of Canada, and an experimental station for extracting the helium from the gas was established at Hamilton. In 1918 a new station was opened in the West. A station was also established near London, England, in 1917.

In 1917 when the United States entered the war it was arranged to co-operate with the American scientists in developing the supplies of helium available within their territory, and Professor Satterly was associated with Commander Bridge and Lieut.-Commander Lowcock of the Royal Navy for this purpose. By the summer of 1918 helium was produced in moderate quantities at relatively small cost in both countries, and had the war been prolonged, large supplies would have been assured. Investigations were also begun with a view to developing the industrial and scientific uses of helium for other than war needs.

From May 1917 till the close of the war Professor McLennan himself was in England serving first as a collaborator with the Board of Invention and Research of the Admiralty, and later as Director of Research for the Admiralty. Besides supervising the work done in connection with helium, he was employed in directing a series of investigations and experiments in connection with the development of anti-submarine devices, as well as electromagnetic and magnetic aids to navigation. From December 1917 until September 1919 a number of University graduates and advanced students in the Department of Physics were working under his direction at London and other centres in Great Britain.

In November 1919 the President received a letter from the Lords of