Very Low Temperatures

Exhibition at the Science Museum

"THE function of a science museum does not end with the record of the achievements of thought and invention of the past; it is also its duty to show the continuous progress of the present". These words were spoken by Sir William Bragg, when he opened the Exhibition of Very Low Temperatures at the Science Museum on March 4. Before a distinguished audience he recalled that one hundred and forty years ago Benjamin Thompson, Count Rumford, wrote a description of what he considered the ideal science museum should be. He was ahead of his time, however, and an attempt to found such a museum at the Royal Institution was a failure.

The Royal Institution has fulfilled another role, and in the Science Museum at South Kensington Rumford's ideals have been achieved. The valuable historical material which is housed there has taken more than three-quarters of a century to collect, but it is only in comparatively recent years, under the stimulus of the late director, Sir Henry Lyons, and of his successor, Colonel E. E. B. Mackintosh, that its second duty, that of showing the "continuous progress of the present", has been attempted, and of this the present exhibition is an outstanding example.

Lord Rayleigh presided at the opening ceremony. In seconding a vote of thanks proposed by Mr. H. T. Tizard (chairman of the Exhibition Committee), Colonel Mackintosh referred to the fact that it was Prof. P. Kapitza who, during the preparation of the Refrigeration Exhibition held in the Museum two years ago, suggested that the very low temperature section should be omitted and treated some day as a separate exhibition. Mr. T. C. Crawhall, an officer of the Museum, has had charge of the arrangements for both exhibitions and has also acted as secretary of the Exhibition Committee. Among those present were Dr. J. Donald Pollock, by whose personal generosity many of the exhibits have been acquired.

The exhibition, which will be on view until May 31, is unique in conception and ambitious in character, the exhibits having been devised in most cases so that they can be operated by the visitor. Some of them have been made for the exhibition by industrial firms, all of whom have contributed anonymously, while others have been made in the Museum to the designs of Dr. O. Kantorowicz, who has been specially engaged for the duration of the exhibition. The difficulties of constructing apparatus which will demonstrate physical principles in as simple a manner as possible are well enough appreciated, but to make these in such a way that they can be operated continuously by visitors to a museum, which has been so successfully achieved in this exhibition, is worthy of great praise.

The exhibits are grouped under the following headings: temperature reduction, temperature and pressure measurement, liquefaction and solidification, storage and transport, applications, properties and historical. Demonstrations involving the use of solid carbon dioxide and liquid air are given at intervals throughout the day by attendants, while a series of lectures, which will include demonstrations at the very low temperatures, is being arranged. Details of the lectures will be published as soon as possible.

For those who want to make a study of the achievements of the past a collection of apparatus from several places in Great Britain and the Continent is available. These illustrate the work of Andrews, Claude, Dewar, de Haas, Faraday, Joule, Kamerlingh Onnes, Keesom, Linde, Olszewski, Wroblewski, Ramsay and Travers, the Continental exhibits having come from Cracow, Leyden, Munich and Paris, while the others have been received from the Royal Institution and the Manchester College of Technology, in addition to those transferred from other sections of the Science Museum.

A small handbook entitled "Very Low Temperatures", giving a brief survey of the physical principles underlying the attainment of very low temperatures and of their uses, has been prepared by Mr. Crawhall and is on sale at the Museum, price 6*d*. net (7*d*. including postage).

Educational Topics and Events

CAMBRIDGE.—Smith's Prizes have been awarded to A. E. Green, of Jesus College, and A. M. Turing, of King's College.

Rayleigh Prizes have been awarded to S. W. Shiveshwarkar, of Sidney Sussex College, E. T. Goodwin, of Peterhouse and D. M. A. Leggett, of Trinity College.

At St. John's College a research studentship and research exhibitions are offered for competition in July. One Strathcona research studentship of the annual value of £200 is offered for competition among research students who are (*a*) graduates of any university other than Cambridge or (*b*) graduates of Cambridge who are not already members of St. John's College. Two Strathcona exhibitions of the annual value of £40 are also offered for competition under the same conditions as the studentship. In special circumstances a supplementary payment may be made to exhibitioners. The election of a candidate is subject to his being accepted by the University as a research student proceeding to the Ph.D. degree, and if he is not yet a member of the College, to his beginning residence at the College in October 1936.

Dr. J. A. Venn, president of Queen's College, has issued an appeal in connexion with the publication of "Alumni Cantabrigienses". The four volumes of Part 1, containing biographies (nearly 80,000 in number) of all recorded members of this University from the earliest times up to 1751, were published by the Cambridge University Press in the years that immediately followed the Great War. Part 2, covering entrants from 1752 until 1900, will be passing through the Press during the next four or five years, and in order that this section may be as complete as possible, an appeal is being made to biographers, genealogists, historians and also old Cambridge men themselves, for biographical facts relating to any man who matriculated at the University or was admitted to any College between January 1, 1752, and December 31, 1900. All information should be sent direct to Dr. Venn.

LONDON.—The Graham Legacy Committee has, under the regulations for the administration of the Charles Graham Medical Research Fund, awarded a Gold Medal of the value of £20 to Sir Thomas