

in Galvanism", printed in London in 1803, has the title-page embellished with a representation of the medal. Altogether twenty-eight items are included in the bibliography, all of them being very fully described, while there are photographs of several of the title-pages.

Radcliffe Observatory, Pretoria

THE date of completion of the 74-inch reflector for the new Radcliffe Observatory at Pretoria has been further postponed by a second unsuccessful attempt to cast the disk of Pyrex glass for the large mirror. The first disk was cast by the Corning Glass Company in July 1936, and on being taken from the annealing oven in the following December was found to be useless. A second disk was cast in June of this year, and the disappointing, and unexpected, news has recently been received that this disk also has been a failure. The company is proceeding to make a third disk, and it is to be hoped that on this occasion better fortune will attend its efforts. The other arrangements, though somewhat behind schedule, have been proceeding with greater smoothness. The buildings of the Observatory on the magnificent site to the south-east of Pretoria, 600 feet above the city, which was generously presented to the Radcliffe Trustees by the municipality, are nearly completed. They consist of an office block, three residences and the circular building of brick and concrete to house the telescope.

THE Radcliffe-observer (Dr. H. Knox-Shaw) and Mr. E. G. Williams, the second assistant, have already taken up residence at the Observatory, but Dr. R. O. Redman, the chief assistant, is remaining in England for the present to superintend the construction of subsidiary apparatus. The steel revolving turret, under construction by the Cleveland Bridge Company, is due to reach Pretoria early in the new year, to be followed a couple of months later by the mechanical parts of the telescope, which Sir Howard Grubb, Parsons and Co. have nearly finished. It had been planned to have the large mirror for the 74-inch telescope aluminized when completed, in view of the marked success of this form of reflecting surface as applied to the large mirrors in America. There is, however, no apparatus in England capable of dealing with a mirror of this size, and the estimated cost of the outfit, vacuum chamber and pumps, namely, £1,500, is much more than the resources of the Radcliffe Trustees, already greatly strained by the recent rise in the cost of materials, can afford. It seems likely, therefore, that the new telescope, although thoroughly up to date in other respects, will have, at any rate to begin with, a silvered mirror.

Exhibition of Wilson Track Photographs

It is now twenty-five years since C. T. R. Wilson first succeeded in making visible and photographing the tracks of single ionizing particles by his condensation method. An exhibition has been arranged at the Science Museum, South Kensington, to

illustrate the great variety of effects which have been investigated by means of Wilson chambers during the past twenty-five years. The exhibition will be open free to the public from November 19 until the end of February 1938. The centre-piece of the exhibition is Wilson's original apparatus with which the photographs published in 1912 were taken; the apparatus has been kindly lent by the Cavendish Laboratory, Cambridge, where Wilson's pioneer work was carried out. The remainder of the exhibition consists of a collection of more than eighty photographs, which have been contributed by research workers from many countries. An introductory group of twelve photographs illustrates in as simple a way as possible some of the main properties of alpha and beta rays, X-rays and cosmic rays, for the benefit of those who are not familiar with them. The main collection of photographs is arranged in a series of groups showing typical effects produced by alpha, beta and gamma rays, X-rays, protons, deuterons, neutrons and cosmic rays, while a small group illustrates the phenomenon of induced radioactivity. The section devoted to cosmic rays includes a copy of the photograph taken by Anderson in 1932 which gave him conclusive evidence for the existence of the positive electron, while the discovery of cosmic-ray 'showers' is illustrated by copies of Skobelzyn's pioneer photographs, from which he showed that pairs and groups of 'straight' cosmic ray tracks occur more frequently than is to be expected by chance. In order to bring home to visitors to the exhibition the three-dimensional character of Wilson tracks a number of pairs of stereoscopic transparencies have been mounted for viewing in turn in a stereoscope. A small handbook (London: Science Museum, or H.M. Stationery Office, 6d., by post 7d.) has been prepared by Dr. F. A. B. Ward, an officer of the Museum, who has arranged the exhibition.

Indian Hydro-electric Development

THE hydro-electric power scheme, known as the "Ganges Grid", was formally inaugurated on November 2, when Sir Harry Haig, Governor of the United Provinces, opened two new generating stations near Meerut, which are supplied with water-power from the Ganges Canal. The potentialities of the canal as a source of power were first investigated in 1920 in connexion with a series of local applications, and these gradually led to the development of the available resources on a larger scale, in order to extend the benefits of agricultural irrigation over a wide area. The exploitation of the "Grid" project has cost Rs. 343 lakhs (more than £2,500,000) and it now produces a gross output of 29,000 kilowatts. The energy is distributed by means of some four thousand miles of transmission lines to 1,600 substations scattered over the eight western districts of the United Provinces; thence it is supplied to 88 towns for the purpose of pumping water from rivers or from State tube-wells for land irrigation. The power is also utilized to work agricultural machinery on private farms. Sir Harry opened at the same time the State tube-well irrigation system, consisting