

of the Kistna river in Madras, which is an attempt to effect irrigation on a large scale by pumping. The installation comprises eight double-cylinder Diesel engines, each of 160 h.p. and driving a centrifugal pump capable of discharging 73 cu. ft. per second on a 12-foot lift. Another engine is to be added shortly.

Among the works now in hand is the Sarda Canal in the United Provinces. The decision to construct this canal finally settles what has probably been the most contentious question in the irrigation of India. The controversy over the matter has lasted for more than half a century. The canal when constructed will irrigate the North-Western districts of Oudh. It will comprise 478 miles of main canals and branches and 3370 miles of distributaries.

Space does not admit of reference to other interesting schemes which are described in the report. Its 222 pages are replete with useful information, which will repay study by those interested in the subject. There is a helpful series of maps and diagrams, many excellent photographs, and some tabular statements showing the financial results of the various irrigation operations throughout India.

BRYSSON CUNNINGHAM.

Scientific Societies in the British Isles.

The Year-Book of the Scientific and Learned Societies of Great Britain and Ireland: a Record of the Work done in Science, Literature, and Art during the Session 1921-22 by numerous Societies and Government Institutions. Compiled from Official Sources. Thirty-ninth Annual Issue. Pp. vii+374. (London: C. Griffin and Co., Ltd., 1922.) 15s. net.

THE appearance once more of Messrs. Charles Griffin's well-known Year-Book affords us an excellent opportunity for taking stock of the position of science in the British Isles. The volume is arranged in the customary style, the various bodies dealt with being divided among fourteen sections according to the nature of their activities. In each section again, there is a further grouping according to the location of the society, institution, or department in London, the Provinces, Scotland, or Ireland. As is only to be expected, most of the more important entries appear in the London groups. In each case, some particulars of the society or institution are given, together with a list of its publications during the year when available.

The total number of societies, research departments, etc., appearing in the 1922 Year-Book exceeds 550, of which it is fair to say that some 480 are concerned, directly or indirectly, with science. The remaining 70 are accounted for by literature, history, and law. In addition to these, there are long lists of local societies and clubs interested in photography, law, or medicine. The distribution of the societies among the various

sections is also interesting. Section 1, including bodies dealing with all branches of science, has 75 entries; sections 5 and 7, covering biology and mechanical science respectively, have 90 each; section 13, on archæology, has 63, while section 14, on medicine, has 54 entries apart from the long list of local medical societies.

The various societies and bodies of a similar nature appearing in the Year-Book can be divided fairly sharply into two distinct groups; those which exist for the publication of research, and those which are better described as functioning for the popularisation and spread of knowledge. Of the five hundred or so entries appearing, about one hundred seem to fall into the former group; and of these 14, including the Geological Surveys, the National Physical Laboratory and the Royal Observatory at Greenwich, are supported by Government.

A mass of similarly interesting information exists in this valuable publication, and it may seem ungracious to ask for more. That is, however, the penalty of providing good fare. The sub-title of the volume states that it deals with the year 1921-22, but, for example, it is somewhat late in the day to find information on the British Association brought up only to the Edinburgh meeting of 1921. Further, we would suggest the inclusion of the numerous Research Associations now in existence, while it would add much to the interest of the volume if the number of members of each society could be indicated. A few errors in classifying the entries have been noticed; for example, the Nature-Study Society and the School Nature-Study Union appear in the section headed Psychology. These are, however, minor blemishes in a most valuable publication, which we believe is the only single volume providing an outline survey of the activities of most, if not all, the learned societies of the British Isles.

Aluminium and its Alloys.

- (1) *Aluminium and its Alloys.* By Lieut.-Col. C. Grard. Translated by C. M. Phillips and H. W. L. Phillips. Pp. xxxiii+184+16 plates. (London: Constable and Co., 1921.) 17s. 6d. net.
- (2) *The Institution of Mechanical Engineers: Eleventh Report to the Alloys Research Committee: on Some Alloys of Aluminium (Light Alloys).* By Dr. W. Rosenhain, S. L. Archbutt, and Dr. D. Hanson. Pp. ii+256+24 plates. (London: Institution of Mechanical Engineers, 1921.) 42s.

(1) LIEUT.-COL. GRARD'S book is essentially a treatise on the mechanical properties of aluminium and some of its commercial alloys. The extraction of the metal is described in two pages, and no more detail is given than in an elementary textbook,