nometry". The strict chronological order followed for the most part in Cantor's work constituted a great difficulty in the way of the reader who wished to inform himself on any particular point at short notice, since the information had to be laboriously gathered together out of a number of different chapters in the book, with the help of the index. For a reference book, therefore, which should enable a student to get light on this or that point without loss of time, a systematic arrangement according to subjects is infinitely preferable, and Tropfke's book is written from this point of view.

The seven parts of the second edition divide the subjects thus: (1) Calculation (numeral systems, whole numbers and fractions, arithmetical operations, etc.); (2) general arithmetic (including algebra, logarithms, theory of numbers); (3) proportions and equations; (4) plane geometry; (5) plane trigonometry, sphæric and spherical trigonometry; (6) analysis and analytical geometry; (7) stereometry, with indices to the whole work arranged (*a*) according to names and works, (*b*) according to subjects.

As the editor explains, there is no pretension to literary style; the account is summary, approximating to the brevity of a lexicon; the object is, above all things, to catch the eye and make the salient points stand out, as it were. References are given in the notes to the original authorities for the statements made; the fullness of these notes will be gathered from the fact that there are 1343 notes, of various lengths, to 218 pages of text in the volume before us. They are brought up to dates so late as 1929 and 1930: there are references to light-years as units of distance; to Eddington's calculation of the diameter of the universe, regarded as finite under the relativity theory; to the latest researches into Babylonian and Egyptian mathematics by H. Wieleitner, O. Neugebauer, T. Eric Peet, A. B. Chace, Kurt Vogel, and others; to B. Datta's papers on ancient Indian mathematics, and so on.

There are and must be omissions. We have not so far traced any reference to the 'Russian peasant' method of multiplication (by means of duplicating and halving only), which in effect comes to the same thing as the ancient Egyptian method. In citing other works, the author does not always refer to the latest editions. But, taken as a whole, the work is an invaluable, nay, indispensable, *Nachschlagebuch*; and we look forward with lively interest to the appearance of the remaining parts.

T. L. H.

Our Bookshelf.

Soviet Union Year-Book, 1930. Compiled and edited by A. A. Santalov and Dr. Louis Segal. Pp. viii + 670. (London: George Allen and Unwin, Ltd., 1930.) 7*s.* 6*d.* net.

THE "Soviet Union Year-Book", which first appeared in 1925 as the "Commercial Year-Book of the Soviet Union", is a bulky and informative volume, concerned chiefly, as its origin would suggest, with matters of commercial interest. There are sections on the constitutional and political organisation of the Union of Socialist Soviet Republics and of its constituent republics; on the economic organisation and development of the Union, including a short notice of the Five-Year Plan; and separate sections dealing with agriculture, mineral resources, industry, transport, foreign trade, finance and currency, labour, and co-operation. There is also a legal section, dealing only with private law.

Of most interest to readers of NATURE are probably the sections dealing with education and with health. Under the former heading we read that there were in 1928–29, in the U.S.S.R., 109 Workers' Faculties with 60,200 students, and 134 universities with 155,300 students. One would be grateful if subsequent issues of the "Year-Book" gave more information concerning these institutions; there is nothing here concerning their organisation, their method of recruiting students, their geographical distribution, or the subjects studied in them. In the same section are included the numerous scientific institutes that have been opened in the U.S.S.R. and where research is being done in problems of applied science likely to assist the industrial development of the country. A list of these institutes is given and, as a sample of their activities, a summary of the work carried out in the Chemical Institute. Since the summary only occupies a page and a half, our curiosity is aroused rather than satisfied.

The legal section includes an account of the Soviet Union laws on copyright, trade-marks, industrial designs, and patents, including the full text of the most important decrees and ordinances in the matter of patents.

Other interesting features are maps, showing the new political and administrative divisions of the Union and the progress of electrification; a list of the more important periodicals published in the Union, including several technical and scientific ones; and a "Who's Who" of scientific workers. The value of the "Year-Book" as a work of reference is increased by the presence of an index.

The Universe around Us. By Sir James Jeans. Second edition. Pp. x + 363 + 24 plates. (Cambridge: At the University Press, 1930.) 12*s.* 6*d.* net.

COMMENT on this well-known book is almost a work of supererogation; the remarkable popularity it has attained, which shows no sign of abating, makes praise superfluous and adverse criticism futile.

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