

subject, and exhibit its practical bearing. It is the best collection of mathematical examples we have yet met.

(9) Now that an experimental course of statics has obtained a firm foothold in the school curriculum, it is possible to introduce boys of no special mathematical talent to certain features of theoretical work. In addition to the elements of geometry and algebra, nothing more than a knowledge of the trigonometry of the right-angled triangle is needed for applications of all the fundamental ideas which make this subject educationally valuable.

The volume before us contains just what is needed for work of this character. It opens with the use of pulleys and the ideas of work, power, velocity-ratio, and efficiency. Then follow simple cases of moments and applications to the more important machines. In this way the student is led at once to see the practical utility of the work, and is able by experiment to clarify his conception of force, etc. No use is made of the parallelogram and triangle of forces until comparatively late in the course, and formal bookwork proofs are postponed to the end. The examples are chosen so as to illustrate the principles of mechanics rather than to test the student's analytical ability.

(10) We are glad of this opportunity of directing attention to the work that is being done by the London Mathematical Society. All those who are interested in any branch of higher mathematics, whether they hope or intend to do any research work or not, should apply for election. Only in this way is it possible for students to keep in touch with the trend of modern developments when their University days are over.

OUR BOOKSHELF.

British Rainfall, 1913. Compiled under the direction of H. R. Mill. By R. C. Mossman and C. Salter. Fifty-third annual volume. Pp. 92+384. (London: E. Stanford, Ltd., 1914.) Price 10s.

THIS valuable publication is well known to readers of NATURE, having been frequently referred to in its columns. The fundamental part of the work includes: (1) general tables of total rainfall, and (2) observers' remarks on the weather; these are of great interest, and refer mostly to exceptional phenomena. The discussion of the data deals *inter alia* with monthly and seasonal rainfall, heavy daily falls, and the relation of the annual rainfall to the average. A great rainstorm of September 17, which was most intense near Doncaster, is illustrated by a coloured plate; the area with more than an inch of rain in about fourteen hours comprised more than 1300 square miles. The rainfall of the year over the whole of the British Isles was almost exactly equal to the

average of thirty-five years (1875-1909). The excess in Wales was 9 per cent. and in Ireland 7 per cent.; elsewhere there was, generally speaking, a deficiency. The volume includes three special articles: (1) an appreciative memoir of the late Sir John Murray, who represented Scotland on the Board of Trustees of the British Rainfall Organisation; (2) the dry summer of 1913—in July and August the rainfall deficiency was 60 per cent. over the United Kingdom as a whole; (3) frequency of heavy rains in short periods, 1868-1913. The useful work of the organisation is dependent upon voluntary contributions, but unfortunately it is not self-supporting; the director has to meet considerable deficiencies, consequently application for Government aid has become necessary.

Handbook of Photomicrography. By H. Lloyd Hind and W. Brough Randles. Pp. xii+292+44 plates. (London: George Routledge and Sons, Ltd., n.d.) Price 7s. 6d. net.

THIS book gives a useful and adequate account of the theory and practice of photomicrography. It is written from the point of view of the beginner and amateur, and full explanations are given of the principles governing the results aimed at and of the methods for obtaining these results. Photomicrography with the lowest and highest powers is dealt with, and wherever possible simple and home-made apparatus is described. In addition to photomicrography proper, the various photographic processes are explained and described, and methods of making lantern slides, colour photography, and the preparation and mounting of objects are included. The book is well produced and profusely illustrated both by figures in the text and with forty-four plates, several of which are coloured and reproduced from direct colour photographs. The plates illustrate very well the different results that can be obtained with different methods of illumination, various objectives and varying adjustments. We believe that Messrs. Hind and Randle's handbook will be found a very useful work on the subject of photomicrography.

The Microscopy of Drinking Water. By Prof. G. C. Whipple. Third edition, rewritten and enlarged. Pp. xxi+409+xix coloured plates. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1914.) Price 17s. net.

WE are glad to welcome the third edition of this valuable book. Since the first edition was issued in 1880 an enormous amount of work has been devoted to the study of the microscopic organisms in water, and the increase in size of the present edition bears witness to this. The mystery of the comings and goings of various groups of algæ and protozoa in our lakes and reservoirs still, however, remains unsolved. From the practical side much progress has been made in the artificial means of controlling Plankton growths and the purification of waters containing them.

The first part of the book has been almost rewritten, and contains chapters on copper treatment for eradication of algæ, the soil-stripping of