C. E. Inglis's work on the transverse oscillations of beams is given, but the chapter on the whirling of shafts is scarcely satisfactory, as no account of this subject in a modern treatise can be so considered which omits to take account of the general question of the stability of the motion and the factors which govern it. The whole is none the less a welcome contribution to engineering literature. The numerous references to various authorities contained in the footnotes are not the least valuable feature of the book, and, in addition to sets of good examples at the ends of the chapters, a large variety of interesting and instructive practical examples are worked out in the text. E. H. L.

Air Ministry: Meteorological Office. The Weather Map: an Introduction to Modern Meteorology. By Sir Napier Shaw. (Published by Authority of the Meteorological Committee.) Sixth issue. (M.O. 225i.) Pp. 112 + 8 plates + 8 charts. (London: H.M. Stationery Office, 1925.) 1*s.* 3*d.* net.

THIS publication was first issued in 1916 for the benefit primarily of those who were making use of meteorology in the War. The work has naturally grown, although only slight alterations are made in the present issue. A note on visibility has been added. The book is of the highest possible value to those who wish to obtain an intelligent interest in the weather and its numerous and complicated changes. The author, who has done much to place meteorology in its present position among the sciences, has achieved an immense success in placing modern meteorology so thoroughly and so simply before his readers. With the extensive broadcasting of the weather forecasts, many are wishful of obtaining an intelligent insight into the construction of the weather map and the weather changes indicated. The sequence of the weather is dealt with, and simple types are given showing the influence of time on changes of weather, winds, temperature, and pressure. Tables and maps are given for the reduction of the observations and show the average or normal conditions of the several elements for the whole or any part of the British Islands. A chapter is given on the upper air; it is stated that the world's height record in an aeroplane is 39,587 feet, achieved by M. Callizo on October 10, 1924, at Villacoublay near Paris. The highest mountain climb was achieved by the climbing party on Mount Everest, seen on June 8, 1924, at a height of 28,230 feet. The ballon-sonde has enabled temperature observations to the height of 22 miles, and on many occasions up to 12 miles.

(1) *The New Matriculation Geometry.* By A. G. Cracknell and G. F. Perrott. Pp. x+303. (London: University Tutorial Press, Ltd., 1925.) 4*s.* 6*d.*

(2) *A School Geometry on "New Sequence" Lines.* By W. M. Baker and A. A. Bourne. (Cambridge Mathematical Series.) Pp. viii+307. (London: G. Bell and Sons, Ltd., 1925.) Books 1-3, 2*s.* 6*d.*; Books 1-5, 4*s.*

THE teachers who objected to the introduction of a "new sequence" in geometry on the grounds that it would merely mean the exchange of Euclid's yoke for another scarcely less objectionable, have evidently some justification for their fears. Both these books give no less than 120 propositions to cover the substance of Euclid I.-IV., in addition to which the former dismisses similar figures in 10 pages, and the latter deals adequately with the propositions of Euclid VI. and XI. Surely some of these 120 propositions could with advantage be treated as riders or, at any rate, a clear distinction should be made between propositions which the pupil is supposed to reproduce and those he is merely asked to understand.

It is interesting to note that the method of superposition flourishes as if nothing had been said to its detriment during the past twenty years.

The riders in both books are good and numerous, but in "The New Matriculation Geometry" the bulk of them are collected together at the end of the book.

Leitfossilien: ein Hilfsbuch zum Bestimmen von Versteinerungen bei geologischen Arbeiten in der Sammlung und im Felde. Herausgegeben von Georg Gürich. Vierte Lieferung: Leitfossilien der Trias. Wirbellose Tiere und Kalkalgen, von C. Diener. Pp. ii+118+28 Tafeln. (Berlin: Gebrüder Borntraeger, 1925.) 24 gold marks.

THE publication of this useful work on characteristic fossils has extended over a long period. Part 1 (Cambrian and Silurian) was issued in 1908; part 2 (Devonian) in 1909; part 3 (Carboniferous and Permian) in 1923. The portion recently published deals with the invertebrates and calcareous algæ of the marine Trias, and has the inestimable advantages of being the work of Prof. C. Diener, whose researches on Triassic cephalopods are known to all geologists and palæontologists. The treatment of the subject is strictly systematic; in each group of fossils the characters of the families and genera are given, with notes on some of the important species. The work is illustrated by numerous figures, mainly copied from the memoirs of recognised authorities, but those of the calcareous algæ are from original drawings by Dr. Julius Pia. Short but useful bibliographies are given for each group of fossils. The work concludes with tables showing the stratigraphical divisions, and the ranges of the characteristic fossils, in all the principal regions of the world where the marine Trias is developed. It is to be regretted that this part, like parts 1 and 2, is without an index.

The Mathematical Theory of Electricity and Magnetism. By Dr. J. H. Jeans. Fifth edition. Pp. viii+652. (Cambridge: At the University Press, 1925.) 21*s.* net.

THE fifth edition of an established text-book calls for little comment. The previous edition was marked by the introduction of a new chapter on the theory of relativity. The present volume has yet another new chapter on "The Electrical Structure of Matter," intended as an introduction to the quantum theory. It seems rather sad that this new chapter should have to confess that some of the conclusions in the earlier part of the book—as to the radiation of energy from an accelerated electron—are in contradiction with modern knowledge, and that the whole theory which led to those conclusions is in need of amendment; but such is the history of science. The chapter will admirably serve its purpose of leading up to modern theory.

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