

the examples are of a numerical type. In our opinion, a text-book such as this is more useful to the teacher than the student; we are inclined to think that it is too diffuse for the latter, but it contains so much that is suggestive and stimulating that few teachers would not gain from using it to supplement and guide their class-work. A good feature of the book is the inclusion of descriptions of calipers, verniers, diagonal and plain scales, the micrometer screw-gauge, the spherometer, the planimeter and opisometer, methods of measurement of volumes, the construction and use of a scale of chords, and Simpson's method for evaluating areas. There is also an appendix on the use of duodecimals.

(4) The author writes primarily for medical students, but there is no reason why his work should not be equally suitable for any student of elementary physics; very small demands are made on the mathematical capacity of the reader. The fundamental results are established at such length, and so clearly, that they should be intelligible to all. Great importance is attached to the use and meaning of algebraic signs; as soon as this idea is grasped, the formulæ employed assume simple forms. The text-book is purposely practical rather than academic; there is, for example, little mention of the general mathematical theory of systems of lenses or properties of the paths of rays in heterogeneous media. But the author supplies an abundance of excellent illustrations and exercises which will give the student a far better grasp of the principles of the subject than he would gain from an abstract mathematical treatise.

(5) This collection of about 270 problems (many of which contain several parts), selected from recent French examination papers, is divided into twelve sections: integration, multiple integrals, analytic functions and curvilinear integrals, differential equations, plane curves, skew curves and surfaces, asymptotic lines and lines of curvature, ruled surfaces, partial differential equations, geometrical applications of partial differential equations, total differentials, elliptic functions. The statement of the problems occupies one-seventh of the book; the rest is devoted to their solution. Where we have tested them we have found them sufficiently clear and detailed for any student of average ability. We have no hesitation in saying that this collection will be of real value to students and teachers alike; and its utility will be still further increased if the publishers are able to issue the problems in a separate volume.

(6) These lectures, which were published a few years ago, are now re-issued with a few notes and corrections. Pressure of other work has prevented

the author from attempting to re-write them in the light of the very considerable progress that has been made in the last six years, but the addition of numerous bibliographical references will enable the reader, if inclined, to see what has been done. In a comparatively small compass the author covers a wide range of theory. In dealing with the bearing of the theory of differential equations upon physical problems, he investigates the elliptic, hyperbolic, and parabolic types with a view to the interpretation and application of the many-valued form of solution and the relation to multiply-connected domains.

#### OUR BOOKSHELF.

*Myths of the Modocs.* By Jeremiah Curtin. Pp. xii + 389. (London: Sampson Low, Marston and Co., Ltd., n.d.) Price 12s. 6d. net.

"THE value of Indian myths lies in the fact that they represent the mental labour of men who lived ages before those who recorded their thoughts on papyrus, baked brick, or burnt cylinder" (p. 383). The author has supplied us with a valuable set of documents embodying the floating traditions of the Modocs, whose country lies on the borders of Oregon and California. "Man does not appear in any of these myths" (p. 383). In their non-human and non-moral elements the myths belong to the same stratum as the oldest Irish and Welsh tales, which are generally admitted to be pre-Celtic. In his too brief notes on the myths the author is evidently impressed with their obvious astronomical significance. The first he records "is evidently a sun myth." Mr. Curtin obtained the bulk of his information from "the oldest woman of the Klamath-Modoc tribe of Indians," and from one who, in the prime of his life, was chief of his people.

It is certain that if the witnesses were cross-examined on their astronomical knowledge, the astronomical significance of the myths would have appeared much clearer than it is found in the book. A golden opportunity has been missed. In one case the astronomical key was simply thrown into the author's hand. The myth of the "Star Brothers" ends as follows:

"You and your brother will no longer be persons; you will be stars, and between summer and winter your people will fight over you."

"The younger boy was at the edge of the sky when the old man's spirit said: 'You will be a star.' Right away he was one. As soon as the elder boy reached the edge of the sky he became a star too."

"NOTE.—These two stars appear early in the morning toward the end of winter. They are the heralds of spring" (p. 117).

It is practically certain that the author's informant could have pointed out the "Star Brothers." What we have given us is the very basis of the astronomical interpretation of myths and monuments.

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