Elliptic Functions Applied to Conformal World Maps. By Oscar S. Adams. Serial No. 297, Dept. of Commerce, U. S. Coast and Geodetic Survey, Special Publication No. 112. U. S. Government Printing Office, Washington, 1925. iv+118 pp.

Somewhat more than half of this interesting pamphlet is devoted to the derivation of the principal theorems and formulas for the elliptic functions arising from the cubic curve $x^3+y^3=1$. The methods and results are mostly modifications and simplifications of those in standard treatises on elliptic functions.

The remainder of the work deals with the applications of the foregoing theory to a number of conformal projections of a sphere on a plane with special attention to several valuable ones which the author believes to be new. The publication concludes with sets of tables for these projections.

The text is written largely from the point of view of the needs of the cartographer. The mathematician will find it of value chiefly as a study of an interesting practical application of the theory of elliptic functions.

C. H. SISAM

The Elements of Mechanics. By F. S. Carey and J. Proudman. London, Longmans, Green and Co., 1925. 314 pp.

The book starts with kinematics treated from a geometric point of view; a point of view which is carried so far that what they call speed-acceleration is *defined* as the slope of the time-speed graph, and velocity-acceleration as a velocity on the hodograph. Along this same line, in illustrating speed as the slope of a curve, the authors make the curious statement that "it is important that the student realize that in the *concept* of speed, we divide a distance by a time." This should give pause even to one who would accept the corresponding statement concerning the *measure* of a speed.

The early chapters cover the ideas of velocity, acceleration, projectiles, relative motion, and general kinematics. Then comes a chapter on vector addition and subtraction; multiplication is left to a later chapter, in fact to a chapter which comes after some of the ideas have been used in getting the moment of a force. Statics and dynamics of a particle and of a set of particles are developed side by side. Then comes the idea of moments, followed by centers of gravity and hydrostatics. The authors have quite justly left to this late date the difficult idea of mass. After momentum and impact are taken up, come work and energy. The book closes with a little celestial mechanics and a few interesting historical notes.

The book is not intended for use in a first course; on the other hand, no use is made of the calculus. The authors have gathered a large collection of problems, about a thousand, and many of them quite substantial enough to test the ingenuity of the best students. They are all gathered at the end, even the illustrative ones, arranged by chapters. Answers are furnished. Graphical methods are used a good deal, including Maxwell diagrams for the solution of truss problems.

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