Tables of the Moments of Inertia and Section Modulus of Ordinary Angles, Channels and Bulb Angles with Certain Plate Combinations. New York, Works Projects Administration, 1941. 13+197 pp. $1.25.

These tables are a result of a suggestion of the U. S. Bureau of Marine Inspection and Navigation, which is now a part of the Navy Department. The most important entries in these tables are the moments of inertia and the section moduli of rectangular areas with adjacent *L*-, Γ- or *C*-shaped areas (called, respectively, "angles" for the *L*- and Γ-shape and "channels" for the *C*-shape, the word "bulb angle" being reserved for an *L*-shaped area with a lateral circular swelling at the top). Both moments of inertia and section moduli are taken with respect to the neutral axis of the whole area parallel to the larger side of the rectangle. These entries were calculated by means of the parallel axis theorem, and the tables of the U. S. Steel Corporation were used for the moments of inertia and for the position of the centroid of the "angles" and "channels." The dimensions of the areas (or "sections" as they are technically called) which we find in these tables correspond to the commercial types, and—as one would expect—the tabular entries are not appropriate for difference checking. However, the accuracy of the values was insured through independent computing by two groups of workers, and was checked by graphing the entries. The calculations are carried out to two decimal places for small entries and are limited to integer digits for large entries (the units being $in.^4$ and $in.^3$). The arrangement of the tables is simple and handy, and the photo-offset reproduction gives them a very clear appearance. This publication will certainly be appreciated by many engineers.

I. OPATOWSKI

The Mathematical Papers of Sir William Rowan Hamilton. Vol. II. *Dynamics.* Edited for the Royal Irish Academy by A. W. Conway and A. J. McConnell. (Cunningham Memoir, no. 14.) Cambridge University Press; New York, Macmillan, 1940. 15+656 pp.

This volume contains Hamilton's work on dynamics and some investigations in optics. The period covered is, with two or three minor exceptions, that from 1833 to 1839. Except for a few short abstracts of papers read by Hamilton, most of the material presented has never before been published, and consists in the main, of a transcript of Hamilton's original work books and some scientific correspondence. The editors have added a few footnotes and some short explanatory material at the end of the volume.