

the reasonableness of M. Poincaré's exclusion or insertion of matter, none can be entertained of the excellence of his manner of exposition. Without long circumlocutions and yet with comparatively few symbols, he gets right into the heart of the problems he is discussing ; it may be that he has chosen them from this point of view. No better example of his method can be furnished than the way he reaches the action of two rectilinear vortices on one another. The reading of this will appeal strongly to the student and whet his appetite for more information. In all the hydrodynamical part—and, indeed, in the rest of the book—practically the only results of an at all advanced nature that a student needs are those deduced from Green's theorem. But these have already been dealt with in the chapters on potential. An instructor who wishes to give a short course on hydrodynamics can hardly have a better model for the details than this chapter, and he will not find it difficult to add to it the portions which are necessary in order that his hearers may obtain a general idea of the problems which arise in the subject.

ERNEST W. BROWN.

SHORTER NOTICES.

Annuaire pour l'An 1900, publié par le Bureau des Longitudes.
Paris, Gauthier-Villars.

THIS handy little volume, brought out for popular and professional use, is as usual improved by the addition of new matter, the omission of portions of no special value, and the alteration of details here and there. Among the additions may be noticed tables of the right ascension of the sun at mean noon and of the right ascension, declination, and parallax of the moon, together with some auxiliary astronomical tables. The magnetic elements for the principal towns in France have been brought down to January 1, 1900. In the "Notices," M. Janssen gives his annual report of the work done at the observatory on the summit of Mont Blanc ; he also contributes a note on the use of balloons for astronomical purposes. M. Lippmann describes briefly but clearly the discovery and main properties of the newly found atmospheric gases. The longest article is on the theory and construction of dynamos, and this deserves special mention. As is usual with French writers, M. Cornu be-