

parison of the results of theory and observation for a part of the Suez canal which communicates at one end with a tidal sea and at the other with small lakes: the differences are not greater than might have been expected.

Chapter IX will be read with interest by those who have taken the trouble to observe the eccentricities of the currents in a tidal river or estuary. Here it is mainly a question, not of the tides produced directly in the estuary by the sun and moon, but of the oscillations due to the rise and fall of the ocean at the mouth. The relation of the height of the water at any point of an estuary to the current at the same place is well and fully worked out. St. Venant's particular solution for a river of constant width and indefinitely prolonged towards the source, which gives the current as a function of the height only, receives considerable attention. The author shows how a defect in the practical application of it can be remedied by introducing friction; the calculations, however, become rather complicated. The chapter closes with the problem of a river whose width varies according to an exponential law. In Chapter X, under the heading of the solitary wave, the author treats standing waves and the propagation of a wave or hollow of given form; he follows the methods of Boussinesq entirely, omitting to mention some of the later investigations. The question of the stability of form of the wave is included.

The book, as a whole, is to be highly recommended and it will form a useful addition to the literature of hydrodynamics. The name of Gauthier-Villars is a sufficient indication of the excellence of the printing.

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#### NOTES.

BEGINNING with Volume XIII the *Annals of Mathematics* will be published under the auspices of Harvard University. A circular, about to be issued by the Department of Mathematics at Harvard, furnishes the following statement in regard to the conduct of the *Annale* under the new auspices:

"There has existed in this country for more than twenty years a journal (the *American Journal of Mathematics*) devoted almost exclusively to original research, and the *Transactions of the American Mathematical Society* will soon give still