ment of the theory of relativity and of the theory of quanta, subjects which were not as prominent in 1909 as they are at present. Except in these two matters, the theory of electrons has not progressed much in the last half dozen years. I need only refer, therefore, to my review of the first edition, BULLETIN, volume 17, pages 194–200.

E. B. WILSON.

Einführung in die theoretische Physik in zwei Bänden. Von CLEMENS SCHAEFER. Bd. I. *Mechanik materieller Punkte, Mechanik starrer Körper und Mechanik der Kontinua (Elastizität und Hydrodynamik).* Leipzig, Veit, 1914. xii + 925 pp. + 249 fig.

THE author, Dr. Schaefer, is well known for his popular and excellent introduction to Maxwell's theory. It was the success of this work, with its clear indication of Schaefer's ability as a writer, that led his friends to press him to publish an introduction to theoretical physics—a large work intended to cover a course of lectures four times a week for five or six semesters. There are not so many general treatises on theoretical physics of the scope of this one that the author need fear the chance of duplicating existing texts.

The present volume deals with mechanics taken in a broad way, covering the mechanics of a particle, of systems of particles, of rigid bodies, and of continua; that is, of fluids and elastic bodies.

The treatment of mechanics of a particle contains chapters upon kinematics, general principles of dynamics, special cases of motion (particularly oscillatory and including Foucault's experiments), general principles of dynamics of systems of particles and their application to special systems. As might be expected, the material does not differ very greatly in sort or in treatment from that found in treatises on the mechanics of a particle. The introduction of Coriolis's theorem on relative motion does, however, come somewhat earlier than usual. A small amount of vector analysis is used, being developed from time to time as it is needed. Moreover, there is a good and unusual section on free and forced oscillations of finite amplitude, which has interesting applications in a theory of sound, and there is a demonstration of Dirichlet that in a statical system the potential energy is at minimum for stable equilibrium—a fact which is often assumed without demon-