appreciation the treatment of questions taken up in the introductory volume.

Even in the third volume, which especially deals with elasticity, the analysis is kept in the background wherever possible, although toward the close where the subject of wave motion in elastic media is treated and considerable mathematical machinery becomes necessary there is no shrinking from mathematical complications. Such choice in analysis, setting it aside where it can well be done away and unhesitatingly introducing it where it becomes advisable, is one of the most valuable characteristics of the book — and the more valuable as it is so rare in the majority of books with which we are acquainted. Notwithstanding the introduction of some new material the size of the volume has been diminished by eighty pages. The reduction has been possible partly through the elimination of material that seems less vital, partly through the reservation of some subjects for the contemplated fifth volume. The appearance of this supplementary part of the whole work will be awaited with interest by all who are concerned with the question of the proper presentation of mechanics as a whole.

E. B. WILSON.

Carl Friedrich Gauss Werke. Band VII. Theoria Motus Corporum Cœlestium in Sectionibus Conicis Solem Ambientium. Herausgegeben von der Königlichen Gesellschaft der Wissenschaften zu Göttingen. Leipzig, B. G. Teubner, 1906. Pp. 650.

IT was within two or three years of a century ago that Gauss's famous Theoria motus first appeared. Now it comes out as the first 290 pages of the seventh volume of his complete works. The remaining 360 pages of the volume are made up of various notes and letters, in small type, which have been culled from the huge Nachlass. To rank all this matter as notes would, however, be extreme minimization; for there are two extensive investigations on the perturbations of Ceres and Pallas filling respectively 35 and 200 pages. Of these the latter for a long time seemed destined to receive the large prize offered by the French academy for a treatment of the perturbations of the asteroid Pallas; but like so much of the work of this Princeps mathematicorum, it never came to publication during his life, which lasted some twenty years after the investi-