

Dynamics of Rotation: An Elementary Introduction to Rigid Dynamics.

By A. M. Worthington, M.A., Headmaster and Professor of Physics at the Royal Naval Engineering College, Devonport. Longmans, Green & Co. 1892.

THIS little volume of only 155 pages will be very useful to those persons who have a slight knowledge of the most elementary principles of mechanics, giving them in a dozen sittings, or not many more, all that is necessary to render their previous knowledge applicable to practical problems. It is written, too, in no perfunctory way; but the author has seriously addressed himself to the problem in practical psychology of how to bring a mind uncultivated in mechanical conceptions into a state comparable with that of a good mechanical engineer, and has produced a successfully working solution of it. Having judiciously divided his subject, so as to separate the difficulties which the learner must encounter, he begins, under each branch, by pointing out either familiar phenomena or else simple experiments to be performed; and by reflection upon these--by comparing and analyzing them under the guidance of the author--the student is gradually brought to a conception mathematically clear, which is at the same time firmly attached to well-recognized facts of observation. The result, we are confident, will be found to be that, considering the small amount of mathematics this little book supposes or teaches, the mastery it imparts to the student will be very satisfactory. As a good instance of the author's care, the mathematician should look over the explanation he gives of the gyroscope. We do not know where we have seen another, equally elementary, that has been so clear and detailed as this.

The merits of the work are such that we must forgive a few little slips of logic. Some persons might object that it does not cover the whole ground, in that, not only in the broad realm of rigid dynamics, but even in the narrower province of the dynamics of rotation, it does not teach all with which every man of good ordinary education ought to be well acquainted. But we are inclined to think that the author has exercised sound judgment in restricting his subject as he has done.

P 00503