ship a couple of years later. He died in 1841, but before then had published some ten papers, each of which marked a definite advance. They were mainly applications of the celebrated theorem, known by his name, to various problems in wave motion. His college, feeling that his ability and publications had not met with the recognition they deserved, commissioned Ferrers to collect them in a volume which appeared in 1871. This so thoroughly fulfilled its object that for many years a copy has only been obtainable at second-hand book stores. The present edition is a facsimile reprint by a process reproduction, so that the collection will, owing to the enterprise of A. Hermann, be available to readers and libraries in exactly the original form. Most of the papers appeared in the *Cambridge Philosophical Transactions*, the early volumes of which are not found in a large number of American libraries. As might be expected, the printing has suffered slightly in the reproduction but the defect is in its general appearance ; in no case will there be the least trouble from this cause to the reader.

ERNEST W. BROWN.

Problems in Astrophysics. By AGNES M. CLERKE. A. and C. Black, London, 1903.

THIS book has only an indirect bearing on mathematics and thus does not call for an extended notice in the BULLETIN. And yet it is one which the student of mathematical physics cannot altogether afford to neglect, for it contains much material which may be useful to him. Just as in bygone days the celestial motions furnished many problems to mathematicians and were indeed often the means of suggesting those problems, so in modern times the new astronomy has raised a new set of less exact and more difficult questions to be undertaken. As facts accumulate, and the phenomena begin to be grouped, the time comes when theories may be rightly broached, so that the problems enter within the range of the mathematician. He can find enough of them in this volume. The laws of rotation of the sun, the behavior of a mass of fluid or gas under its own attraction, the whole history of stellar development, the various forms of nebulæ, are some of them. The problem of the light curve of β Lyræ may perhaps belong to the older astronomy. The well-known work of G. H. Darwin on cosmical origins, and of Johnstone Stoney on atmospheres are instances of the new methods, and Schuster