

Astronomical Works.

PROFESSOR NEWCOMB'S 'Popular Astronomy' (New York : Harper : \$2.50) has proved to be one of the most successful books of its class ever issued. It first appeared less than five years ago, and has already reached its fourth edition in this country, while in England its sale has been correspondingly good. An eminent foreign reviewer has pronounced it 'the finest general treatise on the subject since Sir John Herschel published his celebrated Outlines of "Astronomy."' and the verdict is no more than just. The book is one which ought to be in the library of every intelligent gentleman; a work to which he can refer with almost perfect certainty that he will find in it any astronomical information he is likely to need, stated concisely, accurately, and clearly. If he can spare the time to read it through consecutively, and with attention, he will find it, moreover, original, suggestive, and interesting, as well as easily intelligible, and its perusal will give him a general understanding of the subject amply sufficient for any one but a professional astronomer. The fourth edition, now before us, has been carefully revised and brought down to date. About a dozen pages of new matter have been added, and numerous slight changes and corrections have been made. A few minor errors have escaped notice, however; such, for instance, as the statement (p. 83) that in the Cavendish experiment the beam of the torsion balance is suspended 'by a fine fibre of silk,' instead of by a metallic wire, or by a *pair* of silk fibres, forming a bifilar suspension. The questionable explanations of the origin of the tides, and of the disturbing force to which precession is due, also remain as in the first edition. In the list of great telescopes it is rather singular that no notice should be taken of the 23-inch equatorial just erected at Princeton, while the McCormick telescope (for the University of Virginia) figures prominently, though it is not yet completed, and will not be for months to come. The diameter of the Lick telescope is wrongly stated as 33 inches instead of 36, and no mention is made of the great 29-inch telescope for the Nice Observatory, now nearly completed in Paris. But these are trifling matters, and do not sensibly affect the value of the work.

'The Stars and the Earth' is a small book, which—appearing anonymously more than thirty years ago—caused a considerable sensation. It was then reprinted in this country with a commendatory letter by President Hill of Harvard, and now reappears in a new edition, with a fresh introduction by him. (Boston : Lee & Shepard : 50 cents). It is a most interesting and suggestive essay, and will well repay the perusal of any thoughtful reader. The first part is especially good, in which, by means of considerations derived from the progressive motion of light, the author shows the relativity of time and the possibility of an eternal present in the mind of God. An insufficient knowledge of the theory of optical images makes the treatment of the idea of space, in the second part of the essay, less satisfactory, at least from the scientific point of view, though without really vitiating the author's conclusions.