the hands of a pupil previously ignorant of the subject: the pupil finds the book commencing with a series of definitions, on which he naturally imagines that the science is to be built. The first of these, and a fair sample of them is, "Matter is whatever affects our senses" -passing over the objection arising from imperfect translation, he comes to his tutor next morning, and asks whether light and electricity are matter, as they certainly affect our senses. Tutor points out that the definition is rather loosely worded : points out that it might perhaps be made less imperfect by adding the words 'or that through which impressions may be conveyed to our senses': rather doubts whether such an addition will do much good, and finally remarks after all it is scarcely worth while wasting time over it, as the definition is not one of any practical value. Upon which the pupil stares, doubts, and finally asks whether then the definition had not better have been left out? To which query the reply is necessarily in the affirmative-after which the pupil's faith in the necessity and usefulness of the introductory chapter is probably reduced below zero : and after a few more examples of the kind it will be very difficult to induce him to pay attention to explanations and distinctions that are really essential.

We must now say a few words as to the fundamental principles on which the science of statics is made to rest, and the grounds on which they are required to be received. There are, we conceive, two grand principles on which the whole of the science depends, viz. the inertia of matter, and the transmissibility of force. The former principle as applied to Statics is this: "A body once at rest will remain at rest unless some force is applied to it : and any single force applied to a body at rest will necessarily set it in motion." In other words, matter has no power either to move itself or to prevent force moving it. This principle appears again in Dynamics, as the first law of motion, and the complete statement of the principle will be that "Matter has no power of itself to change its state of rest or motion," remembering that a body's state of motion is changed when either the direction or the rate of its motion is altered. This principle then is a fundamental one: it is one which lies at the very w of our systems of Mechanics: how are we to establish its truth. or can we establish its truth at the outset? And especially can we so establish it as to trust the proof of it in the hands of a beginner? These questions M. Poisson, and after him both Messrs. Pratt and Todhunter answer in the affirmative. Poisson's remark, according to Mr. Todhunter's version, is as follows :