the point of view of the principle of relativity, motion cannot be infinitely fast; those interested in these theories may discuss the mechanics founded on the assumption $W = m_0(1 - \sqrt{1 - v^2})$.

It would be useless here to follow in detail the three great sections of the text, namely, equilibrium of an elastic filament, equilibrium of an elastic surface and dynamics of an elastic filament, and equilibrium and motion of a continuous medium; they will be followed in detail by all earnest students of these topics. We prefer here to point out an advantage and a disadvantage of the Cosserats' system. In the main these are those associated with the transfer of any deductive-intuitional physical science to the corresponding formal-deductive mathematical discipline. The gain is in sureness, in freedom from constant doubtful appeal to intuition; a great variety of possible assumptions and corresponding cases may be discussed systematically and accurately from a given uniform point of view. Those who have taught the theory of elasticity will most appreciate this advantage. The loss is in the lessened training of that physical intuition, which is vital for the future success of the young physicist and which can be acquired only by practice in making such various plausible, but not demonstrated, assumptions as are frequent in the theory of elasticity. The simplest explanation of the world already subdued may in the last analysis be mathematically formal; but the subjugation of the regions not yet reached can in the first instance be accomplished only by the imagination.

EDWIN B. WILSON.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

SHORTER NOTICES.

Opere Matematiche. By GIULIO CARLO DEI TOSCHI DI FAGNANO. Pubblicate sotto gli Auspici della Società Italiana per il Progresso delle Scienze. Per cura dei Professori Senatore Vito Volterra, Gino Loria, e Donisio Gambioli. Rome, 1912. 3 Vols. 40 lire.

IF we were to select from the great mathematicians of the world a half dozen whose works we might deem worthy of