the vector can be expressed as the sum of three parts, but cannot be distributed with respect to these parts, has no meaning. A non-distributive operator is in no sense a quaternion, since it does not obey the laws of quaternions (which are associative and distributive), and since no operational meaning can here be attached to the quadrinomial form so important in quaternions.

The reader who studies out the problems of the remaining 20 pages will do well to avoid an increasing sense of irritation. Very little use is made of the principles first laid down; but a great deal of a mysterious looking but trivial notation for loci, in no way a necessary part of the system. The problem work has no advantage in compactness of reasoning over the usual analytic geometry. In this respect it endures no comparison with the pages of Hamilton or Grassmann, of Heaviside or Gibbs. No doubt it is too much to expect such a test of a brief monograph, but one naturally assumes the problems to have been chosen so as to show the method at its best.

<div style="text-align:right">FRANK L. HITCHCOCK.</div>

Mechanics of Particles and Rigid Bodies. By J. PRESCOTT. London, Longmans, Green, and Company, 1913. viii+535 pp.

THIS book has been designed to meet the needs of students aiming for a pass degree at a British university and contains all that they require in the subject of applied mechanics except hydrostatics.

Practically all English texts on mechanics include long lists of problems; many of them consist principally of illustrative examples and problems. This volume, however, presents a systematic development of the theory in which no pains have been spared to make the proofs rigorous enough for pure science, while the practical side of the subject has not been neglected. The problems following each chapter have evidently been chosen with great care and cover a wide range. Some of them demand merely substitution in formulas and numerical calculation, while others offer considerable theoretical difficulty. A special feature is that the answer is given to nearly every question.

An elementary course in the calculus is presupposed for the study of this text and the author appreciates the fact that the student who is applying the calculus for the first time to