

formally and gradually, came to some such conclusions as those stated above and, feeling that if they were accurate the evidence ought to be carefully collected and arranged, he suggested this work to Dr. Walker as a very worth while undertaking. The facts that Dr. Smith suggested the study and that he undoubtedly read and approved of the manuscript strengthens greatly the reader's confidence in Dr. Walker's conclusions.

An introduction of twenty-nine pages, which sketches the life and character of Roberval, tells of his relations with other mathematicians, and explains how he lost the credit for his discoveries, furnishes an excellent background for the discussion of his merits.

The marshalling of evidence and presentation of the main argument constitute Part II "Discussion of the Contents of the *Traité des Indivisibles*" (pp. 33-167). The author contrasts the work of Roberval with that of Cavalieri, discusses Roberval's treatment and invention of curves and his contributions to the processes of differentiation and integration, and considers the question of priority for his important discoveries.

Part III (pp. 171-258) incorporates the translation of the *Traité* itself and the author has made good her promised effort "to render clear the author's meaning, and to remove, as far as possible, the reproach of obscurity that has always attached to Roberval's writings."

Dr. Walker's style of writing is such as to inspire confidence. The reader soon comes to feel that much patient searching for material and careful consideration in weighing evidence have gone into the making of this book. She deserves recognition for having made a distinct and valuable contribution not only to our understanding and appreciation of the work of Roberval but also to our general perspective of the very interesting period in which he lived.

The addition of a ten page bibliography enhances materially the value of the book as a work of reference. The figures are beautifully drawn, and the work of the publishers has been well done.

U. G. MITCHELL

*Les Théorèmes de Conservation dans la Théorie des Chocs Electroniques.* By L. Goldstein. Paris, Hermann, 1933. 26 pp.

This is number 70 of the series *Actualités Scientifiques et Industrielles*, and number 9 of the sub-series *Exposés de Physique Théorique*, published under the direction of L. de Broglie. The monograph discusses the problem of electron-atom collisions by the method of Born and Dirac and arrives at the conclusion that the principle of conservation of energy and momentum is valid. A short résumé of the Born-Dirac method is given. A reader with a mathematical spirit will doubtless be confounded to meet at the beginning of an essential point of the argument the sentence "Nous ne manquerons pas de signaler que cette démonstration laisse à désirer du point de vue de la rigueur." The monograph concludes with some general remarks on proton-atom collisions and atom-atom collisions.

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