is concerned with the results of quite recent research, and I found it of much interest. Unfortunately, it is marred by an error which renders the proof of one of the theorems invalid as it stands. (Equation (4.54) does not follow from the line above, and is, in any case, clearly false, for its truth for arbitrarily small t would imply that $S(x)$ was continuous.)

Apart from the errors which have been mentioned, the book contains a number of slips of minor importance.

B. KUTTNER

Volume and integral. By W. W. Rogosinski. New York, Interscience, 1952. 10+160 pp. $1.75.

This little book is an exposition of the classical Lebesgue theory of Euclidean n-space, following the outer-inner measure approach to measure theory, and the ordinate set approach to integration theory. The book is intended as an introduction to modern abstract integration theory. More specifically, the author has in mind the incorporation of Lebesgue theory into the undergraduate honors programs of English universities. He has therefore chosen to present a detailed exposition of a restricted portion of the subject.

The first chapter takes up the necessary amount of Boolean algebra (with countable operations) and point set topology in Euclidean n-space. The third chapter develops measure theory for n-space by first defining measure for countable unions of "intervals" and then using these sets to define outer and inner measure for general sets. The fifth chapter presents the ordinate set approach to integration, wherein the integral of a non-negative function is defined as the "volume" under its graph in $(n+1)$-space. Included are the basic convergence theorems and the Fubini theorem, but not L^p theory. The sixth chapter takes up the theory of differentiation in one dimension, based on the Vitali covering theorem.

The most novel feature of the book is the inclusion, in chapters two and four, of an independent parallel development of the theory of content and the theory of Riemann integration based on the theory of content. The student is thus led through the historical evolution of the subject, and can better appreciate the tremendous stride taken by Lebesgue.

Proofs of theorems are given in detail. Scattered throughout the book is a collection of 35 exercises, indications of their proofs being collected at the ends of chapters. The book is carefully written, and should admirably serve its purpose as an undergraduate text.

L. H. LOOMIS