The reprint of Carslaw's often quoted Non-Euclidean Geometry is, from the point of view of the mathematician, the most important part of the volume. It begins with an outline of the history of its subject in 39 pages up to the work of Riemann. There follow

Chapter III. Hyperbolic plane geometry in synthetic treatment.
Chapter IV. Hyperbolic plane trigonometry.
Chapter V. Length and Area.
Chapters VI-VII. Elliptic geometry and trigonometry.
Chapter VIII. Realizations.

Cajori's History of the Slide Rule would be useful for deciding related questions that may come up in conversation. But not many purchasers of the book will find the subject inspiring.

The book is printed on excellent paper and nicely bound.

H. Schwerdtfeger, McGill University

Corpuscules et Champs en Théorie Fonctionelle, by Jean-Louis Destouches. Gauthier-Villars, Paris, 1958. viii + 164 pages. U.S. $9.76.

Professor J.-L. Destouches has published a number of papers and tracts on the subject of "functional quantum theory". In the present work he provides a summary of his approach by way of an introduction and then proceeds to apply it to non-relativistic and to relativistic particles of spin $\frac{1}{2}$, to particles with I-spin, to spin-1 mesons and to photons, to non-linear electro-dynamics, and finally to linear and non-linear theories of gravitation.

Apparently the functional quantum theory of Destouches is an outgrowth of the school founded by Louis de Broglie. The presentation of the theory, which forms the first chapter of the present monograph, starts with a definition of elementary particles as portions of physical systems that cannot be sub-divided by any method whatsoever (a definition that to this reviewer has very little bearing on the problems actually confronting us in high-energy physics, - after all, what is the distinction between transmutation and subdivision in the subatomic domain?), and then proceeds to the assertion that particles are to be represented by functions u to be taken from a separable function space (Ru). u is not the wave function in the ordinary sense. For instance, an elementary particle is located at a definite point M, which is a functional of u, M = sing u, where the symbol sing is to remind us of the origin of that idea, de Broglie's "onde pilot" which was to exhibit a singularity at the location of the particle.

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Destouches insists that u is not the usual wave function, even though as a function it depends on the arguments P, T of a four-dimensional continuum. It is pointed out that P and M are not identical, that P is merely the argument of the function u. Finally, however, when it comes to writing down equations for u, they turn out to be Schrödinger equations, with (usually undetermined) non-linear terms added. In spite of some effort on the part of this reviewer, no clear physical theory or model emerged. This is, of course, a very subjective reaction, and other readers may be more successful.

P.G. Bergmann, Syracuse University

Statistical Estimates and Transformed Beta-Variables, by Gunnar Blom. Wiley, New York, 1959. 176 pages. $5.00.

This book deals with a variety of statistical topics, such as estimation of parameters, transformations of variables, order statistics and use of probability paper (and various plotting rules) in estimation theory. The author shows the connection of these and other topics by use of the probability integral transformation, which leads to a uniform distribution in the domain (0, 1), and hence that the cumulative frequency distribution of order statistics leads to the "Beta" distribution.

The first part gives a generalization of R.A. Fisher's theory of the asymptotic variance of estimates of parameters and of the Cramér-Rao inequality which provides lower bounds for the variances of these estimates. The second part deals with the properties of transformed Beta variables. In the third part, the properties of "nearly best linear estimates" for a two-parameter distribution are studied.

In contrast to the modern trend the mathematical treatment does not obscure the statistical aim. The book is clearly written and the theoretical results are immediately applied to various distributions. In addition to the well-trodden path of the normal distribution, the author considers the distributions of extreme values which now play an increasing role in statistics (the so-called Weibull distribution is an example of this type). The notation is perhaps unnecessarily complicated. Let $F(x, \alpha)$ be the probability function of a continuous random variable x with a parameter α. The inverse, the probability point $x = s$, may be written $x(F, \alpha)$. Instead the author writes $F(x, \alpha) = u$ and denotes the inverse by $x = g(u, \alpha)$.

A relatively easy and quick method for estimating parameters is the well known graphical procedure using probability paper. The problem of how best to plot the observations in probability paper so as to arrive at the best estimates of the parameter or parameters of the distribution function from which