of the continuum considered as an order type, and with the second number class and the problem of distinguished sequences. A few of the point-set-theoretical consequences of the continuum hypothesis are noted. There is a brief remark on the formal representation of ordinal numbers, and a short section on alternatives to the axiom of choice.

The work closes with a chapter on inaccessible numbers.

In addition to an index, the book is supplied with a useful bibliography arranged according to groups of sections in the text.

Springer's printing is excellent, as usual.

F. BAGEMIHL

Experimental design, theory and application. By W. T. Federer. New York, Macmillan, 1955. 19+544+45 pp. $11.00.

This book is addressed exclusively to the experimenter and practical statistician and presents a thorough comprehensive discussion and description of all major types of designs and of the methods for their analysis. Many of the designs described are here for the first time incorporated in a book. The underlying mathematical models are not discussed, but references to the pertinent literature are given. Although the book is not addressed to mathematicians or mathematical statisticians, it will be useful for this group as a reference work.

H. B. MANN

Mathematical theory of elasticity. 2d ed. By I. S. Sokolnikoff. New York, McGraw-Hill, 1956. 11+476 pp. $9.50.

This book constitutes a welcome contribution to the field. It is well written, and is extensively documented, particularly in so far as work in Russia is concerned. This book fills a need which has been apparent for quite some time.

There are seven chapters. Chapters 1–4 and Chapter 7 contain the material which appeared in the first edition, except for minor modifications.

Chapter 5 is new. It deals with the two-dimensional problems of plane strain and of generalized plane stress, which are of course identical mathematically. The method of attack which is usually associated with the name N. I. Muskhelishvili is treated in considerable detail. It will be recalled that in this method the problem is reduced to the determination of two functions of a complex variable, which functions are determined by conformal mapping, together with either solution in series or the solution of certain integrodifferential equations. This material appeared in the author's Brown University

Notes, which were widely circulated but which have been unavailable for quite some time.

Chapter 6, which deals with three-dimensional problems, is also new. The basic approach involves the expression of the components of displacement in terms of four arbitrary harmonic functions. Treated here are cases of concentrated loading, the problem of Boussinesq, the equilibrium of the sphere, thermoelastic problems, vibration problems and others.

G. E. HAY

La géométrie des groupes classiques. By Jean Dieudonné. Berlin, Springer, 1955. 7+115 pp. 19.60 DM.

This book gives an excellent survey of recent work on classical groups, simplifying and unifying the results of many authors. No attempt is made to cover all of the voluminous literature on classical groups; the author deals with only that portion of the subject which can be handled by the methods of linear algebra. By thus restricting his scope, he is able to include proofs of most of the results described, thereby making the book more self-contained than most Ergebnisse tracts.

While the book is written on an advanced level, it presupposes only some familiarity with linear algebra. However, a reader with a minimum background will have to work hard to master this book, which cannot be skimmed lightly. By use of a highly-condensed method of presentation, and omission of many routine details of proofs, the author has succeeded in packing a large amount of information into relatively few pages. The average reader will want to keep pencil and paper handy, in order to work through most of the proofs. There were several places where this reviewer would have been grateful for a few extra lines of exposition.

Chapter I (Collineations and correlations, pp. 1–35). By a *collineation* of an n-dimensional vector space E over a skew-field K is meant a one-to-one semi-linear map of E onto itself. The group $\Gamma L_n(K)$ of all such collineations contains the group $GL_n(K)$ of linear one-to-one maps of E onto itself. The "projective" groups are defined as groups modulo their subgroups of homothetic maps ($x \to xa$, $a \in K$). The beginning sections take up the concepts of dilatations and transvections (these are collineations leaving a hyperplane pointwise fixed), involutions and semi-involutions (these are collineations u for which $u^2(x) = x$ or xc ($c \in K$), respectively), and their centralizers in $P\Gamma L_n(K)$, the group of projective collineations.

By a *correlation* is meant a one-to-one semi-linear map ϕ of E onto