E. Vidal Abascal. *Introduccion a la geometria diferencial.* Madrid, Editorial Dossat, 1956, 16+329 pp. 220 ptas.

This book, written by the professor of geometry at the University of Santiago de Compostela, is a textbook of classical differential geometry with the usual subjects. In its use and notation of vectors, its general treatment of material and problems it acknowledges the influence of reviewers text *Lectures on classical differential geometry* (Cambridge, Mass., 1950), now also available in a Spanish translation by Bravo Gala: *Geometría diferencial clâsica* (Madrid, Aguilar, 1955, 11+256 pp.). It contains, moreover, an introduction on vectors, determinants, matrices, and a special chapter on curves in the euclidean plane with some problems on isometry and integral geometry. In the discussion of these problems, as well as in the exposition of Cartan's methods in the theory of Pfaffians, the author acknowledges the influence of Blaschke's books on Differential and on Integral geometry; and in his preface pays tribute to Bieberbach's *Differentialgeometrie* (1932). We can also, in the text, make the acquaintance of some of Professor Vidal Abascal's own contributions to geometry. Among the many illustrations we find some pictures of the creators of differential geometry.

D. J. STRUIK

Champs de vecteurs et de tenseurs. By E. Bauer. Paris, Masson, 1955. 204 pp. 2200 fr.

This text treats three main topics: the elementary theory of vectors and tensors and applications, the more advanced theory of vectors and tensors, an introduction to electromagnetic theory. In the first two topics, the theories of vectors and tensors are presented simultaneously by skillfully interweaving both subjects. First, the customary intuitive approach for three-dimensional Euclidean space is given and in the advanced theory a more detailed study in affine and metric n-dimensional space is presented. The introduction to electromagnetic theory furnishes the basic ideas of this subject.

After defining vectors as directed line segments which add by the parallelogram law and discussing the scalar product, the author examines rectangular and oblique Cartesian coordinates and transformations of coordinates. This leads to Gibbs dyads and the introduction of tensors in terms of their components. Other topics in this section are: vector algebra, differentiation theory, and the theorems of Gauss and Stokes. In treating the last topic, the author uses the physical approach to interpret the divergence and curl of a vector