numerator of the last fraction, page 90, (11). On page 69, t appears in the denominator instead of i, and r is introduced without explanation. At the foot of page 61, it is not clear whether the probabilities are for exit or for remaining. At the foot of page 35, the nth root appears to be required. For the most part, the printing seems to be very good.

Rosmanith's book would be of great value to an actuary, as it gives in compact form so many different methods for constructing tables upon which the superstructure of actuarial mathematics is built.

E. L. DODD

Bibliography of Projective Differential Geometry. By Pauline Sperry. University of California Publications in Mathematics (Vol. 2, No. 6 (1931), pp. 119–127).

It has been said that a mathematician's laboratory is his library. The author of this remark neglected to tell us whether a bibliography of a particular field of mathematics is a test tube. At any rate a reliable bibliography is an essential instrument.

In the field of projective differential geometry anything like a complete bibliography has been lacking until recently. The reviewer in the current volume of this Bulletin called attention to an extensive and very valuable bibliography in the book *Introduction à la Géométrie Projective Différentielle des Surfaces* by Fubini and Čech.

Now we have to thank Miss Sperry for a bibliography of the publications of the projective differential geometers of the United States, Canada, and Japan. This bibliography has been compiled with painstaking care, and is complete as far as it goes. Actual count indicates that it includes references to the works of twelve authors and to sixty-one papers omitted from the bibliography of Fubini and Čech.

E. P. LANE

Lehrbuch der Funktionentheorie. By L. Bieberbach. Vol. I, third edition. Leipzig and Berlin, Teubner, 1930. vii+322 pp.

This revised edition is not appreciably an enlargement. The reviewer noted a few additions to the first edition: Schwarz's inequality, a theorem on power series, and some historical matter on normal families. Various errors in the earlier edition are eliminated, certain changes in notation are made, and numerous slight textual alterations improve the presentation. The most important change is the introduction into the text of sub-headings. These are in heavy type. They improve the appearance of the page and make the finding of desired subjects a great deal easier.

The third edition is thus not essentially different from the first edition of ten years ago. Bieberbach's volume remains, however, one of the best introductions to the theory of functions of a complex variable. It is comprehensive enough for the purpose, and its presentation is clear. The development leans less on the real variable than that of most texts. The point of view is thoroughly modern. The author has applied his unusual skill as a text-book writer to his favorite field with very happy results.

L. R. FORD