

Any one familiar with Salkowski's papers in this field would recognize his fitness to prepare a third edition of the book. For a number of his papers are written from its point of view. Many sections have been rewritten and there are a number of essential additions. A notable one is the proof of the fundamental theorem concerning the determination of a curve by its intrinsic equations. A new chapter is devoted to a full discussion of skew ruled surfaces, in preparation for the study of those generated by the principal normals and binormals of a curve.

When two curves in space are in one-to-one correspondence such that corresponding tangents, principal normals, and binormals respectively are parallel, the curves are in the relation of a transformation of Combescure, to use the terminology due to Bianchi. One readily thinks of other correspondences involving parallel arrangements, as well as ones having to do with differential quantities. An investigation of these questions appears in the new edition for the first time, as do also the ideas and properties of successive evolutes.

A student reading one of the advanced treatises on differential geometry will do well to consult this little book, because of its method of attack and its richness in material.

LUTHER PFAHLER EISENHART.

Ten British Mathematicians. By ALEXANDER MACFARLANE. No. 17, Mathematical Monographs edited by Mansfield Merriman and Robert S. Woodward. New York, John Wiley and Sons, 1916. 148 pp. Price \$1.25.

THIS is somewhat of a departure from the preceding sixteen numbers of this series in subject matter, being an account of individual mathematicians and their contributions to mathematics, rather than a survey of some particular field of the subject. The ten men are George Peacock, Augustus De Morgan, Sir William Rowan Hamilton, George Boole, Arthur Cayley, William Kingdon Clifford, Henry John Stephen Smith, James Joseph Sylvester, Thomas Penyngton Kirkman, and Isaac Todhunter. The author had the advantage of personal acquaintance with a number of the men of whom he wrote, as well as the interest of having been born a fellow countryman. He has given us the life history of the man without too much detail, and yet with enough intimacy, so that we have a picture of the man as a man, as well as a scientist.

The book consists of ten lectures delivered to audiences composed of students, instructors, and townspeople at Lehigh University during the years 1901 to 1904. As each was delivered as a separate lecture, there is no direct connection between them. The critical analysis of the contributions of each mathematician is probably as well done as would be possible considering the character of the audience and the length of time at the disposal of the speaker. We get a very good general notion of what each contributed and its value to the science.

The ten men chosen are not equally well known to American mathematicians. Certainly we have a deeper interest in and knowledge of Sylvester than of the others. Todhunter would be best known for his many textbooks, and De Morgan for his *Paradoxes*. It is doubtful if American mathematicians know the English as well as the continental mathematicians, especially the German. American students of mathematics who have gone abroad for study have gone chiefly to the German universities. This has tended to bring American mathematicians into closer relations with the German mathematicians and their work than with the English. For that reason, this book on English mathematicians is valuable.

There is a tendency today to try to give some comprehension of the problems and methods and achievements of mathematics to those who are not specialists in mathematics. A recent book by Professor G. A. Miller, of the University of Illinois, is such an effort. These lectures by Dr. Macfarlane serve that purpose, as they were not prepared for specialists in mathematics alone.

We have a partial promise in the preface that there will be a later volume dealing with ten mathematicians who worked chiefly in applied mathematics. We hope that this promise may be speedily fulfilled.

The reading of the page proofs does not seem to have been done carefully enough. There are too many letters that have dropped out. Otherwise this volume has the same convenient size and neatness of appearance that characterize the other volumes of this set.

THOS. E. MASON.