edition (1924) omitted reference to much continental work on this subject, done in the years 1907–1916. Two chapters in place of one are now devoted to seismology, and they are placed earlier in the book.

In this and other sections the conclusions reached on many points are more definite than in the first edition; for example, the age of the earth, formerly estimated as between 1·3 and 8 billion (10^9) years is now limited between 1·3 and 3 billion years; the earth is stated to possess a central core, apparently liquid, with a radius rather more than half that of the earth as a whole, and with a sharp boundary; the bodily tide of the earth is stated to imply that the rigidity of this core is less absolutely than that of the outer shell, and not merely less in proportion to its density. The account of the earth's thermal history has been re-cast, and the discussion of isostasy has been clarified and rendered more precise.

The original appendix C, dealing with the relation of geophysics to geology and geologists, is also expanded, and is expressed in very plain terms; for example, the replies of a well-known geologist to certain criticisms by the author are stated to be "a series of evasions and irrelevancies". Many readers may think that controversies are better conducted in milder terms than these. In general, however, the author's clearness and directness of statement are to be welcomed; one may hesitate to believe that his conclusions are always so certain as his language seems to imply, but definiteness at least affords a stimulus and an opportunity to critics, and arouses discussions which often advance knowledge. There is no doubt, moreover, that the author's synthesis of diverse branches of geophysics has been of great service to the science.

Further editions of this valuable work will certainly be called for; it may be suggested that, in these, the author should extend to all the chapters his commendable practice, at present applied only to some of them, of giving a summary of the main arguments and conclusions in the chapter.

Handbuch der Experimentalphysik. Herausgegeben von W. Wien und F. Harms. Unter Mitarbeit von H. Lenz. Band 13, Teil 1: *Die Ionenleitung in Gasen*, von Prof. Dr. E. Schweidler; *Die elektrischen Eigenschaften der Flamme*, von Prof. Dr. A. Becker. Pp. viii + 314. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1929.) 29.60 gold marks.

THIS volume deals with two aspects of the conduction of electricity to which comparatively little attention is being paid at the moment. In the first part of the book, Prof. Schweidler summarises concisely the main work which has been done on the general properties of ions produced in gases at relatively high pressures by external agents. The second part, by Prof. Becker, is upon thermally ionised systems. Both subjects still offer a wide field for research, and it is perhaps significant that the most recent measurement of the recombination coefficient (by Dr. Mohler) has been made by a combined electrical and optical investigation in an ionised system at *low* pressure, whilst at the same time the conceptions of mobility and diffusion, which have been developed in connexion with essentially high-pressure phenomena, are being applied with success to the problems of the glow discharge. There has been too great a tendency to keep high-pressure and low-pressure work in separate compartments, and those who are primarily interested in the low-pressure side will find Prof. Schweidler's article extremely useful.

The article on flames furnishes an admirable introduction, from the experimental side, on one hand to the physical basis of the electrical features of flame technology, and on the other to the study of stellar atmospheres.

Theory of Probability. By the late Dr. William Burnside. Pp. xxx + 106. (Cambridge: At the University Press, 1928.) 10*s*. 6*d*. net.

THIS small volume, a posthumous work of Prof. Burnside, is prefaced by a short biography of the author (see also NATURE, Oct. 15, 1927, p. 555) which shows the variety and extent of his contributions to the advancement of mathematics. Apart from his published work, Burnside was responsible for a large amount of confidential matter during the thirty-four years in which he occupied the chair of mathematics at the Royal Naval College.

The book merits attention not only for the precision of its language but also for the careful statement of the rule for calculating calculable probabilities. The usual postulation of equal likelihood does not satisfy Burnside, who points out that a more fundamental postulation is that "each two events are equally likely". A discussion of this point is given in a note at the end. A valuable feature is the application of difference equations and approximate methods of solution to the calculation of probabilities involving large numbers. This book should certainly be read by all interested in the applications of the theory of probability.

L. M. M-T.

The Child of Circumstance: the Mystery of the Unborn. By Dr. Albert Wilson. Pp. xx + 420 + 50 plates. (London: John Bale, Sons and Danielsson, Ltd., 1928.) 15*s*. net.

DR. WILSON gives us of the best of a long and sympathetic experience of human nature and of its derelicts. It is a great boon to have an understanding of the motives behind the criminals' conduct, and this the author has far more than a number of cranks who write with a very narrow knowledge of criminology and how to reform it. This is particularly so when capital punishment is being discussed. The author takes a broad and sensible view of this and thinks that if the lethal chamber replaced the rope it would be an advance in treatment. At the same time, he points out that when the death penalty is abolished, juries are more ready to convict—perhaps on less certain grounds. Unlike many who write on the subject, he recognises the viewpoint of the murdered one's relatives.