(1) Some Problems in Adsorption
By J. K. Roberts. (Cambridge Physical Tracts.) Pp. x+120. (Cambridge: At the University Press, 1939.) 7*s*. 6*d*. net.

(2) Magnetism and Very Low Temperatures
By H. B. G. Casimir. (Cambridge Physical Tracts.) Pp. viii+94. (Cambridge: At the University Press, 1940.) 6*s*. net.

(1) THE first of these little volumes deserves notice because its author writes with first-hand knowledge of his subject and because it is such a helpful survey of experiments and results which do not appear to be conveniently collected elsewhere. Our views on adsorption processes are changing so rapidly that this tract might well be used as an introduction to the more recent treatment of the subject by the author in his article in the current issue of "Reports on Progress in Physics", vol. 7. This combination will provide the reader with an excellent account of the present state of the subject.

(2) The second tract is likewise written with expert knowledge of its subject-matter. It reviews the methods of producing and results of adiabatic temperature changes obtained by demagnetization processes with paramagnetic salts at very low temperatures. It includes a valuable theoretical discussion of the behaviour of paramagnetic ions with special reference to the Lorentz and Onsager fields, and a short account of the theoretical aspects of relaxation phenomena in paramagnetics.

L. F. B.

University Physics. Part 2: Heat
By Dr. F. C. Champion. Pp. vii+148. (London, Glasgow and Bombay: Blackie and Son, Ltd., 1940.) 5*s*. 6*d*. net.

AS the second volume of a series of books primarily intended for students taking a first- and second-year course in physics at a university, one scarcely expects to find space taken up with references to elementary work which has no doubt been done by a student at a much earlier stage; such space could probably have been used to better advantage. Thus in the first chapter mention is made of various types of thermometers, but a description and discussion of these types is deferred to a later part of the book; surely this must be a little irritating to students. Also the table on pp. 8–9 comparing the various thermometers would probably be better appreciated after all the thermometers had been dealt with. The treatment of the various topics follows a logical order, though probably the chapter on radiation could have followed immediately that on conduction.

The above observations are not meant to detract from the merits of a really useful book, which is sound and attractively produced. The diagrams throughout are good and clear, and the chapter on thermal conductivity is especially good.

Dr. Champion makes an excellent point in stressing the importance of reading widely to acquire experience of different methods of treatment, and it is good to realize that there is a tendency towards less formal lecturing, and more study on the part of students; the art of study should be developed and encouraged.

Experimental College Physics: a Laboratory Manual
By Prof. M. W. White. Second edition. Pp. xvi+383. (New York and London: McGraw-Hill Book Co., Inc., 1940.) 19*s*.

THIS rather high-priced book, which is beautifully bound and produced, is a laboratory manual not apparently designed to cover any special examination course, but it appears to be quite suitable for students of post-matriculation standard. All branches of physics are represented in the course (though the section on sound is rather thin), and if a student has the time and the facility to deal adequately with the point raised in each experiment, the course should prove a most valuable one. The book is not merely a compilation of directions for performing experiments, but it includes also the theory underlying each experiment, a description of the apparatus needed, and suggestive questions and problems. An especial emphasis is quite rightly placed upon the evaluation of errors involved in the various experiments, and the whole course certainly encourages a student to appreciate the possibilities and limitations of the scientific spirit and method of investigation.

In some experiments rather specialized apparatus not likely to be found in all laboratories is used, but such apparatus, which in certain cases is rather ingenious, is designed for precision results; in a course of this standard this may not be altogether a desirable aim.

One is struck by the thoroughness with which the task has been attempted, and there can be no doubt of the tremendous enthusiasm of the author for his work.

Economic Geography of South America
By Prof. R. H. Whitbeck, Prof. Frank E. Williams, assisted by Prof. William F. Christians. (McGraw-Hill Series in Geography.) Third edition. Pp. xi+469. (New York and London: McGraw-Hill Book Co., Inc., 1940.) 24*s*. 6*d*.

SOUTH AMERICA offers great scope for economic development from the European point of view. Too much that is written about that continent has a commercial bias or a political colouring. Thus a purely objective study has much value to students. The present volume is nominally a second edition, but in reality is largely a new book. The survey has been done with much care, with due emphasis on the physical and climatic background, which explains much of the economic geography of the South American republics. Most of them are exporters of raw materials and food and importers of manufactured goods, and thus are of great importance to industrialized lands. Lack of population and undeveloped power resources so far restrict manufacturing activity, but even this is tending to develop, and in time to come South America may be more self-contained than at present.

The book is well balanced and well informed, though perhaps more space might be devoted to an account of the racial ingredients of the population. Surely also the little colony of the Falkland Islands merits a few pages.