working of the social, economic and religious systems, imposing on each social group and its individual members an appropriate ritual and code of behaviour. The whole conception has been worked out by the author systematically to its logical conclusions; and lest it should be thought that Dr. Richards has merely added another to 'arm-chair' studies based upon the observations of others, it must be mentioned that she has tested her material thoroughly in the field during over a year's residence among the Bamba.

Petroleum in the United States and Possessions. By Ralph Arnold and William J. Kemnitzer. Pp. xxi + 1052. (New York and London: Harper and Bros., 1931.) 63*s.* net.

THIS volume constitutes the second of a series of four books destined to cover the entire field of petroleum technology, the others being devoted to principles, occurrences external to the United States, and economics. The incentive to this achievement is "the desire to learn the facts of petroleum and the industry . . . without personal prejudice, biassed influence, or preconceived ideas". The task was a gigantic one, as the authors soon found, and if this volume is a foretaste of the others to come (the reviewer is not aware of their appearance in Great Britain yet), then it is truly a *magnum opus*. Even so, it is unwieldy, not so much on account of its bulk of more than a thousand closely printed pages, but of bulk of data.

The plan is to deal with petroleum in productive areas first, giving summarised statements of geology, development, technology and statistics of every field; so to non-productive areas (States) and extra-American possessions. Elaboration, particularly of statistical detail, is overwhelming; one wonders what purpose it all serves. In fact, in so far as this volume is indicative, we are unable to find anything strikingly new or outstanding from the wealth of technical and economic literature already available. If it is a case of geology of petroleum in America, not only is there more than one good modern textbook available, but also the publications of the U.S. Geological Survey and the American Association, to mention only two prolific sources, are easily accessible. If it is statistics or technology, we turn at once to at least half a dozen specialised volumes, and, of course, to the Bureau of Mines. Thus, while one can only marvel at the patience and enormity of labour represented by this particular book, from the point of view of a valued, permanent contribution to science, our reception of it is but lukewarm.

Aristotle. By G. R. G. Mure. (Leaders of Philosophy Series.) Pp. xi + 282. (London: Ernest Benn, Ltd., 1932.) 12*s.* 6*d.* net.

IT is a little more than a year since the admirable translation of the whole corpus of Aristotelian writings was completed under the editorship of Prof. J. A. Smith and Mr. W. D. Ross. It was amazing to think that it had never been done before, but very satisfactory that it was so well done at last. Then we have the full and useful book of Mr. Ross on "Aristotle" and another by Mr. J. L. Stocks on "Aristotelianism". Now Mr. Mure publishes a book which to a large extent combines the merits of both these, and is a model of skilful compression and arrangement. It is not quite easy reading, though very well written, but can be recommended to anyone who, knowing something of philosophy and interested in its general development, desires to see Aristotle's work surveyed as a whole and placed in its true position, in regard both to his predecessors and the subsequent trend of western thought.

Mr. Mure is a Jaegerite in the main, as every one must be, in tracing Aristotle's work back to Plato's, from which it springs, partly by suggestion, partly by criticism. But he treats the particular textual analysis of Jaeger with the caution that any such work demands in detail. The net result is a most enlightening study from which two main conclusions stand out. One, the most obvious, is that we must in future treat the conjunction Plato-Aristotle rather by way of complement than of opposition; the other, the most surprising, that, with his supreme and encyclopædic mind, Aristotle should have made so little of the mathematics which were flourishing in an advanced state around him. "Aristotle and Mathematics" should be the next monograph on the subject; it is the least fully treated in Mr. Mure's volume.

F. S. M.

Respiration in Plants. By Prof. Walter Stiles and Dr. William Leach. (Methuen's Monographs on Biological Subjects.) Pp. vii + 124. (London: Methuen and Co., Ltd., 1932.) 3*s.* 6*d.* net.

IN spite of the importance of respiration as a fundamental property of living protoplasm, there has been for a long time no really general and up-to-date treatment of the subject from the point of view of the botanist and of the non-specialist reader. The present authors have treated the subject particularly from this point of view. They have attempted to indicate the principles underlying modern studies of plant respiration rather than to present a complete summary of recent researches.

While no doubt opinions may differ as to whether the authors have chosen the best examples to illustrate the arguments, there can be no question that on the whole they have succeeded in their object of providing a readable and understandable treatment of a complex subject. They first discuss the respiration of plants in air; secondly, anærobic respiration; and thirdly, the mechanism of respiration. The third of these chapters is naturally the one offering the greatest opportunity of development. It reaches its highest levels, perhaps, in dealing with the bearing of sugar structure on the availability of hexoses, in discussing the rôle of cytochrome and in summarising Blackman's scheme for the respiration of apples.