

The slopes of Pisgah, where Lot is said to have sought refuge in a cave, though they command a view of the Dead Sea, can scarcely have been subject to "volcanic storms of bitumen," which, by the way, is not usually an eruptive product. Whether it is "some thirty thousand years" since the last glacial period in Palestine may or may not be correct, but that was not indicated by the "earth's appearance above the sea," nor was the former unfit for men to live upon until "some five or six thousand years ago." "Sandstone, limestone and chalk," should probably be read "and shale," for chalk, in the strict sense of the word, is not found in Palestine. To say that the Jordan valley is not due to a "rift cut down into the rock by a flowing stream," but "to the original folding of the earth's crust," is both vague and inaccurate, and the peculiar physical features of the Kishon valley, which indirectly have so often made it a battlefield of nations, hardly receive even a passing notice. No doubt "geologically Palestine is a most interesting country with which to become acquainted," but we fear that this book will not do much to bring about so desirable a result.

OUR BOOKSHELF.

The Science of Mechanics: a Critical and Historical Account of its Development. By Prof. E. Mach. Supplement to the third English edition containing the author's additions to the seventh German edition. Translated and annotated by P. E. B. Jourdain. Pp. xiv+106. (Chicago and London: The Open Court Publishing Co., 1915.) Price 2s. 6d. net.

MACH completed the first edition of "The Science of Mechanics" at Prague in 1883. An English translation (by McCormack) appeared just ten years later, and of this two further editions embodying the alterations made in the successive German editions have been published.

With the seventh German edition (Leipzig, 1912), however, the alterations made were much more numerous and important; and the present volume, which forms a supplement to the third English edition (1907), contains a full account of them, together with some pages of notes due to the translator. It is remarkable that notwithstanding the thirty years which separate the first and seventh editions, Prof. Mach finds himself able to strike identically the same note in his new "conclusion" as he had done in the preface to the first edition. In that preface he undertook that "Mechanics will here be treated, not as a branch of mathematics, but as one of the physical sciences"; whilst in a concluding passage in the present volume he points out that "the doctrines of mechanics have developed out of the collected experiences of handicraft by an intellectual process of refinement . . . we see that the savage discoveries of bow and arrows, of the sling, and

of the javelin, set up the most important law of modern dynamics—the law of inertia—long before it was misunderstood with thoroughgoing perversity by Aristotle and his learned commentators."

Mach speculates much as to the validity of the conceptions of absolute space and time, and on the effect of using as a reference system the "fixed" stars. What would have been the consequence had there existed a sufficiency of cosmic dust to render the stars invisible to an observer on the earth? In Mach's opinion the "surroundings in which we live, with their almost constant angles of direction to the fixed stars, appear to me to be an extremely special case, and I would not dare to conclude from this case to a very different one."

It is to be hoped that no library which possesses the third English edition will be without this companion volume.

Report on the Building and Ornamental Stones of Canada. Vol. ii., Maritime Provinces. By Dr. Wm. A. Parks. Pp. xii+264. Plates i-xlv, sketch maps 1-9. (Ottawa: Government Printing Bureau, 1914.)

THIS volume constitutes the third part of the monograph on the building and ornamental stones of Canada, and worthily upholds the high standard established in the earlier portion of the work. The greater part of this report is occupied by a systematic account of the quarries of the maritime provinces and of their products. The stones are considered according to the class to which they belong, e.g., granite, black granite (greenstones), sandstone, limestone, &c., and arranged according to more or less definite geographical areas into which the quarries naturally fall. In order to give prominence to the economic and commercial aspect of the work, the quarries are described under the name of the owner wherever possible. The general plan adopted for the description of individual properties is: (a) quarry observations; (b) description of the stone, with tests; (c) economic remarks and statistics; (d) examples of the use of the stone. Sketch maps are given showing the geology and location of quarries in important districts; special mention must be made of the excellent colour-photo plates which show in an admirable manner the colour and appearance of the stones, a feature which should be appreciated by architects.

The Canadian Department of Mines is to be congratulated on the wisdom of undertaking a comprehensive and businesslike statement of the country's quarry resources, and not least, for carrying out a series of systematic tests on the quarry products. Whatever opinion may be held as to the value of such tests, there can be no doubt that when they are made under uniform conditions, and as nearly as possible at one time, their utility is enormously increased. The existence of this monograph should result in a great saving of time, energy, and money on the part of all users of stone in the Dominion.

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