

operation, a complete description is given, with diagrams of the machinery and tools used.

The transportation and uses of gas, its value as a fuel, the measurement of the wells, and the methods of piping, are described in detail.

The remaining pages of the report are devoted to the two principal coal-fields of the State, the manufacture of salt and bromine, cements, land-plaster, lime, etc.

Few of the States so thickly burdened with drift as is Ohio have so thorough a record of its depth over extended portions of their territory. Here it has been obtained by the drilling of the numerous oil-wells so fully, that a fair knowledge of the relief of the ancient preglacial surface of the State now exists. While in the northern counties the drift is of little thickness, in the western and central sections it at times reaches extraordinary depths, being in one case no less than five hundred and thirty feet thick.

Chambers's Encyclopædia. New ed. Vol. II. Beaugency to Cataract. Philadelphia, Lippincott. 8°.

ABOUT half a year has elapsed since the issue of the first volume of this new edition of Chambers's well-known Encyclopædia. Among the contributors we notice the names of many prominent scientists and literary men, and therefore we feel assured that the articles are in every respect a source of trustworthy information, and that they are up to date. The volume is profusely illustrated, and the illustrations are well selected. The maps have been made by Bartholomew and Johnston, and are up to the standard of the maps of their institutes. The present volume contains many interesting articles, among which we mention one on 'Bees,' by J. Arthur Thomson; 'Bimetallism,' by J. S. Nicholson; 'Blindness,' by F. J. Campbell; 'Bulgaria,' by A. Silva White; 'Robert Burns,' by Andrew Lang; 'Carboniferous,' by J. Geikie; and several military articles by Major Dunlop, R.A. The encyclopædia is well edited, the articles being carefully selected, and a judicious amount of space being allotted to the various subjects, according to their importance. The interests of the English and American public receive equal attention in this encyclopædia. Numerous articles might be quoted on account of the large amount of information conveyed in a small compass, and still well written. Among these we mention the article 'Bokhara,' which is principally founded on Vambéry's book of that country. Of special interest to the American public is the long article on 'Canada,' by J. G. Colmer, which is accompanied by two elaborate maps, — one of the Dominion, and the other of the eastern provinces. The article gives a brief review of the geography, commerce, and history of the province. The article 'California,' which is also accompanied by a map, has been written by Charles W. Greene. This, as well as other articles on subjects of special interest to America, has been copyrighted by the publishers. Among these are an interesting sketch of the Beecher family, and sketches of the cities of Boston, Brooklyn, Buffalo, and Cambridge. The remarkable career of John Brown the abolitionist is sketched. Other American men whose life and work are described in this volume are Artemus Ward (C. F. Browne), W. C. Bryant, Buchanan, Benjamin Franklin Butler, and John Caldwell Calhoun.

The National Revenues: A Collection of Papers by American Economists. Ed. by ALBERT SHAW. Chicago, A. C. McClurg & Co. 16°. \$1.

Is Protection a Benefit? A Plea for the Negative. By EDWARD TAYLOR. Chicago, A. C. McClurg & Co. 16°. \$1.

THE tariff question has now become the leading issue in American politics, and bids fair to remain so until it is definitely settled. The dispute between free-traders and protectionists has been in abeyance for some years past, owing to the greater prominence of the slavery question and the difficulties that grew out of it; but it has now arisen again, and in a more decisive form than ever. It presents itself, too, in a different form from that which it bore in the early part of the century. Then the protectionists advocated a high tariff only as a means of establishing manufactures, with the avowed intention of reducing it to a revenue basis at a later time; but now they desire to retain it as a permanent policy. What will be the ultimate outcome of the dispute that has now begun is a

question with which we have here no concern, but there can be no doubt as to the importance of a correct understanding of the problem itself. Nor is it sufficient that the leaders of the people alone should understand it; for the appeal of both the parties in controversy is to the mass of voters, and by them it must be decided.

Under these circumstances, every book or essay that really teaches any thing on the subject is to be welcomed, and such works are already beginning to appear in considerable numbers. The titles of two of them stand at the head of this article; and both works have considerable merit, while at the same time neither can be called quite satisfactory. The first is a collection of twenty brief essays — some of them very brief — dealing with all aspects of the revenue question, and not with the tariff alone. The editor is a young student and writer on economic subjects, and the authors of the essays are mostly recognized authorities on the subjects of which they treat. The principal fault of the book is the extreme shortness of some of the articles, which hardly allows room for an intelligent expression of opinion, and wholly precludes reasoning. It would have been far better, in our opinion, to have had a much smaller number of longer and more argumentative papers. However, there is a good deal that is suggestive in the book, and it may stimulate the reader to further investigation. The majority of the writers favor a reduction of the tariff, and all of them oppose the repeal of the liquor and tobacco taxes; Professor Thompson of Pennsylvania, though an ardent protectionist, agreeing on this point with the free-traders. Another noticeable feature of some of these essays is the favor with which the writers regard schemes for spending the surplus revenue for internal improvements, and even for distributing it among the States, this last being a measure of very doubtful constitutionality, and of equally doubtful expediency. We have no space to speak of particular articles; but the names of Professors Walker, Ely, Adams, Laughlin, and others, Carroll D. Wright of the National Labor Bureau, and many competent writers besides, are a sufficient guaranty that the book is of real value in spite of its scrappy character.

The second book on our table is an argument for free trade by an ardent and well-informed writer. The reasoning is not so close and thorough as we find in the best English writers on the subject, — a remark that applies to most American works on economic themes, — but it presents the arguments for free trade quite fully, and in a plain and simple style. The author opens his work with a brief history of the protective system both in Europe and in America, but the greater part of the volume is devoted to a discussion of the question as it presents itself to-day.

In a few cases Mr. Taylor presses his conclusions, perhaps, a little farther than the premises warrant; but, as a rule, his reasoning is sound, and his answers to the protectionist arguments are in the main apt and conclusive. With regard to the contention that our national prosperity is due to the tariff, he shows that we were never more prosperous than under the low tariff prevailing from 1846 to 1860, and that our great prosperity is really due to other causes, with which neither protection nor free trade has any thing to do. Again, the protectionists have long maintained that protection raises wages, and that the high wages prevailing in this country are due to it. In reply to this, Mr. Taylor shows, that, although wages are lower in free-trade England than in the United States, they are much lower still in the protected nations of the European continent; and that Russia, which has the highest tariff of all, has also the lowest rate of wages; and his inference is that high wages are due to great natural resources and high efficiency of labor. The author gives chapters to the effect of the tariff on our foreign trade and shipping, to its bearing on the agricultural interest, and, indeed, to nearly all the aspects which the question presents. Such works as these two, notwithstanding some defects, can hardly fail to stimulate thought and discussion among the people, which alone can lead to the prevalence of right views, and to a final and satisfactory settlement of the controversy.

The Building of the British Isles. By A. J. JUKES-BROWNE. New York, Scribner & Welford. 12°.

THE restoration of the geography of past periods is a problem of peculiar interest; and one of the great aims of the science of geology is to reconstruct the history of development of the conti-