

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-

nents. In the present volume the author attempts to study the history of the British Isles. Although the available material is far from being complete, the long-continued and thorough researches in this narrow field enable the student to trace the more recent history with comparative exactness, while, on account of the incompleteness of the geological record and the difficulties of explaining the observed facts, the history of the ancient periods appears in many instances hypothetical. The author traces the history of the British Isles through all periods successively. Each chapter is illustrated by an interesting map showing the restored geography of that period, thus giving a clear insight into the probable history of development of this part of the globe. In each period first the physical conditions are discussed under which the rocks were formed, while the latter are described only so far as is necessary for ascertaining whence their component materials were derived, in order to form some conception of the relative positions of land and water during each of the successive periods of geological time. The maps of the more recent periods are based on the theory that the alternate rising and sinking of the area of western Europe was comparatively uniform, and therefore the present contour-lines appear as boundaries of the continent of those periods. The author's representation of pliocene geography differs from previous restorations in extending the area of land in Scotland and around the Faroe Islands. For the early pleistocene time the author assumes the eighty-fathom line to be the coast-line, while the land from that time on continues to sink. He favors throughout the theory that the oceanic basins are not absolutely permanent, and his conclusions are based on his studies of the history of the British Isles, which he has so comprehensively represented in the present volume. He thinks that the absence of deep oceanic deposits among the paleozoic rocks may be taken as indicative of a great difference in the general relations and proportional areas of land and sea, the probability being that there were neither oceans nor continents like those which now exist, but an irregular distribution of comparatively shallow seas among land-tracts of moderate elevation. In neozoic times proof of the existence of oceans is found, though these do not seem to have been so deep as those of the present day. That there were also large tracts of continental land is proved by the traces of large rivers and large inland lakes; but, so far as we know, these land-tracts did not form the nuclei of the modern continents of Europe, Asia, and Africa, or bear any definite relation to these continents. From this he concludes that the deep oceanic basins and lofty mountain-ranges of the modern world have been formed by a long process of evolution, the tendency of all recent geographical changes having been to deepen the ocean-basins, and to raise the mountain-peaks to higher and higher elevations. In the discussion he dwells on the theory of the formation of the English chalk, and against other authorities maintains that it has probably been formed in a deep sea.

American Commonwealths. Indiana. By J. P. DUNN, jun. New York, Houghton, Mifflin, & Co. 16°. \$1.25.

THE author of this work has seen fit to close it with the admission of Indiana into the Union as a State in 1816, but for what reason we are unable to see. The history of the State, and of its share in national affairs, is surely as important as that of the Territory; and the account that Mr. Dunn here gives us has the appearance of a fragment. It is true that it fills a volume as large as the others of the series to which it belongs; but this is only effected by diffuseness of style, and prolixity of narrative, — faults that we have noticed in some other volumes of the series. Then the map at the beginning of the book is singularly inappropriate to this work; since it shows Indiana as it is now, while the narrative relates entirely to the territorial period. Notwithstanding these defects, however, the work has considerable merit. The author shows familiarity with his subject, carefulness in collecting facts, and an evident desire to be just to all persons and parties; and he evinces a patriotic interest in his State without undue partiality.

The history of Indiana, as far as it is related by Mr. Dunn, naturally divides itself into two periods: the first embracing the early exploration and settlement of the country; the second, the later colonization from the Eastern States and the political contests among the people. The first settlements were those of the French,

who passed down the Wabash on their way from Canada to the Mississippi and New Orleans. The most important of their posts, and for a long time the capital of the whole region, was Vincennes, which Mr. Dunn thinks was founded in 1727, though the date is uncertain. The growth of population was for a long time so slow, that in 1800 the white people of what is now Indiana numbered only about twenty-five hundred, and the extent of the immigration from the East and South is shown by the fact that in 1815 the number was over sixty-three thousand. Mr. Dunn's account of the early French inhabitants brings before us a state of society that has long since passed away, and is one of the most pleasing features of the book. The most important part, however, as the author clearly perceives, is the struggle over the admission of slavery into the Territory. The famous ordinance enacted by Congress in 1787 forbade slavery in all the region north and west of the Ohio; but this was construed to apply only to persons born in or immigrating into the Territory after the ordinance was passed; and those who were slaves at the time of its passage remained so. The French settlers, however, and some of those from the Southern States, wanted to re-establish slavery, and repeatedly petitioned Congress to repeal the slavery proviso, which Congress steadily refused to do. But at length the anti-slavery men became a majority in Indiana; and when the State entered the Union its Constitution contained a provision prohibiting slavery forever. Besides these leading themes, Mr. Dunn's pages convey a good deal of information on minor matters; and particular attention is given to men like La Salle, Vincennes, Governor Harrison, and others, who were prominent in Indiana's early history.

PUBLISHERS' FALL ANNOUNCEMENTS.

Ginn & Co.

'A Pamphlet of Parallel References,' prepared by John Williams White of Harvard College, to adapt his 'First Lessons in Greek' to the Hadley-Allen 'Greek Grammar,' will be published the latter part of October. A new edition of Allen & Greenough's 'Latin Grammar' will be published in November. The book has been entirely re-written; but the sections of the new edition will correspond with those in the old, so that the two can be used together. 'The Brutus of Cicero,' edited in the College Series of Latin Authors, by Prof. Martin Kellogg of the University of California, will be published in December. A new edition of Professor Byerly's 'Integral Calculus' may be expected in November. 'The History of Greek Philosophy,' by B. C. Burt, formerly fellow and fellow by courtesy in the Johns Hopkins University, will be published the 1st of November. 'A General Astronomy,' by Prof. C. A. Young of Princeton College, will be published the latter part of December. It is a college-book, and will be fully illustrated with cuts and diagrams. 'Footprints of Travel, or Journeyings in Many Lands,' by M. M. Ballou, author of 'Due West,' 'Due East,' etc., will be published early in November. This is a volume of geographical readings, presenting vivid pictures of countries visited by the author. *The London Classical Review* has enlisted the co-operation of leading American scholars, and Ginn & Co. are to be the American publishers. 'Voices of Children,' by W. H. Leib of Kansas City, will be published in November. 'Teacher's Handbook of Arithmetic,' by G. C. Shutts of the Whitewater (Wis.) Normal School, will be published early in December. A new edition of Lanman's 'Sanskrit Reader' may be expected the latter part of October. This will include the long-promised notes, and the notes will also be put in a separate volume. 'The Beginner's Book in German,' by Miss Sophie Doriot, will be issued in December. This is to be a companion volume to Miss Doriot's 'Beginner's Book in French,' which has been so highly commended. An edition of 'Tom Brown at Rugby,' authorized by Mr. Hughes, will be published in the series of Classics for Children in about two months.

E. L. Kellogg & Co.

The list of books for teachers now embraces fifty titles. The new ones now ready are, 'Gardner's Town and Country School Buildings,' containing twenty-five designs of schools of all grades, but specially of country schoolhouses, with 150 illustrations;