

sity over two million dollars during her history as a State, not counting the colonial bounty to William and Mary. Since the war, Virginia has given her university \$40,000 a year. Before the war, she gave \$15,000 a year. The original university establishment cost the State about \$400,000. The State of South Carolina was Jefferson's model for generous appropriations to the cause of sound learning. She has given two million and eight hundred thousand dollars to that object. Georgia has given \$938,000 for the same purpose. Louisiana has given \$794,000 from her State treasury for the higher education in recent years, and, according to the testimony of her own authorities, has distributed over two millions among schools, academies, and colleges. Texas has spent upon college education \$382,000, and has given for higher education two and one-quarter million acres of land. The educational foundations, both academic and popular, in the Lone Star State, are among the richest in America.

Turning now to the Great West, we find that Michigan has given over two million dollars to higher education. She supports a university which is as conspicuous in the North-west as the University of Virginia is in the South, upon one-twentieth of a mill tax on every dollar of taxable property in the State. That means half a cent on every hundred dollars. This university tax-rate yielded last year \$47,272. Wisconsin pays one-eighth of a mill tax for her university, and that yields \$74,000 per annum. Wisconsin has given for higher education \$1,200,000. Nebraska is even more generous to her State university: she grants three-eighths of a mill tax, yielding about \$60,000 a year. The State of California grants one-tenth of a mill tax, which yielded last year over \$76,000. Besides this, the University of California has a permanent State endowment of \$811,000, yielding an annual income of \$52,000, making a total of \$128,000 which the State gives annually to its highest institution of learning. Altogether California has expended upon higher education two and one-half million dollars.

It is needless to give further illustrations of State aid to American universities. These statistics have been carefully collected from original documents by one of our historical students, who are making important contributions to American educational history, to be published by the United States Bureau of Education. The principle of State aid to at least one leading university in each commonwealth is established in every one of the Southern and Western States. In New England, Harvard and Yale and other higher institutions of learning appear now to flourish upon individual endowments and private philanthropy; but almost every one of these collegiate institutions, at one time or another, has received State aid. Harvard was really a State institution. She inherited only £800 and 320 books from John Harvard. The towns were taxed in her interest, and every family paid its peck of corn to make, as it were, hoecake for President Dunster and his faculty. Harvard College has had more than half a million dollars from the treasury of Massachusetts. Yale has had about \$200,000 from the State of Connecticut. While undoubtedly the most generous gifts have come to New England colleges from private sources, yet every one of them, in time of emergency, has come boldly before representatives of the people, and stated the want. They have always obtained State aid when it was needed. Last year the Massachusetts Institute of Technology became somewhat embarrassed financially, and asked the Legislature for \$100,000. The institution got \$200,000, twice what it asked for, upon conditions that were easy to meet.

Can the State of Maryland and the friends of the Johns Hopkins ignore the abundant testimony in favor of the encouragement of university education, not only by exemption from burdensome taxation, but by positive appropriations? If occasion arises, it will be proper and legitimate for the friends of this institution to go before the people of Maryland and say what is needed. Private philanthropy will do all it can, but public interest demands that the State should do its part by throwing off needless taxes, and settling for what it has already taken away.

Do you say that all this would lead to meddlesome interference by the politicians? That is what everybody said when a university was founded by the Prussian Government in Berlin. That is the stock argument against all State universities. But there stand today Berlin and all the German universities firm and untroubled

upon state foundations. The whole South and the entire West are full of educational establishments by the State. Some of them, like the Universities of Virginia, Michigan, and Wisconsin, are beacon lights of intelligent and non-partisan administration. Have Washington politicians done any harm to the Smithsonian Institution? On the contrary, they have indirectly increased its economic power by appropriations amounting to nearly two million dollars. They allow the secretary of the Smithsonian to direct the expenditure of \$220,000 a year. Congress allows the Smithsonian to be managed by a board of regents composed of distinguished college presidents and public men of spotless integrity. Amid all the changes in the civil service, no man has ever been displaced for political reasons from either the Smithsonian Institution or the National Museum. These facts are stated upon good authority.

What are the serious thoughts that have been emphasized in this address?

1. The Johns Hopkins is now a truly national university upon local and individual foundations.

2. This noble institution which benefits Baltimore, Maryland, and the whole country, especially the South and West, can be strengthened most efficiently by further local and individual endowments.

3. The examples of history at home as well as abroad show that States encourage universities by wise exemption from burdensome taxation and by generous appropriations, if original endowments and private philanthropy prove inadequate.

4. The development of public opinion, based upon a knowledge of present facts and upon existing relations of this university to Baltimore and Maryland, is the best way to encourage higher education in this city, in this State, and in this country.

BOOK-REVIEWS.

The Government of the People of the United States. By FRANCIS NEWTON THORPE. Philadelphia, Eldredge & Brother. 12°. 90 cents.

WORKS on the American system of government multiply apace; and, if their quality was always good, our young people would have superabundant means of information about their public duties. Candor compels us to say, however, that the treatise now before us is defective in some very important respects. Its chief fault is that it attempts too much. It undertakes to describe not only the Federal Government, but also those of the States, towns, and counties, and in addition to relate the history of constitutional government from the landing of the Anglo-Saxons in England to the present time, all in the space of little more than two hundred pages. The necessary consequence is, that, in spite of condensation and brevity of expression, no part of the work is thoroughly done. The least satisfactory part, as might be expected, is that relating to local affairs; the town and county governments differing so widely in different States, that no single description will apply to them all. For instance: Mr. Thorpe says that the school directors of the town levy the school taxes, that the selectmen make the local laws and ordinances, that the county has the care and support of the poor, and that there is a county superintendent of schools; but, though these statements may be true of his own State of Pennsylvania, they are wholly untrue of Massachusetts. As for the history of constitutional government, which occupies the introductory part of this book, that obviously requires a separate work; and the chapters here given to it are altogether inadequate. We may add that the book contains a facsimile of the Declaration of Independence, several fancy pictures of historical events, and a gaudy spread eagle for frontispiece, none of which are likely to contribute much to political education.

A Text-Book of Elementary Biology. By R. J. HARVEY GIBSON. London and New York, Longmans, Green, & Co. 16°. \$1.75.

MR. GIBSON'S experience as a teacher of biology has satisfied him, that, in order to instruct the student in this most important department, the beaten track must be left, and a new departure taken. To properly appreciate it, and to benefit by its study, a student must first undergo a preliminary training in the facts and

conclusions of physics and chemistry, and, in addition, must devote not a little time and labor to studying the application of the more general laws of these sciences to the special phenomena of plant and animal life. In this text-book the author has summarized briefly the principal conclusions of the inorganic sciences, devoting special attention to those laws on which the higher science of biology is founded, and has endeavored to keep prominently in the foreground the dependence of biology on physics and chemistry, and the relationship of morphological and physiological details to general principles.

Matter, energy, the classification of chemical compounds, and the laws of chemical change, are discussed in the first chapter; and the author then proceeds to consider protoplasm in its many and varied aspects. Individual and tribal life, with distribution and classification, are thoroughly treated.

The *Proteita*, *Protophyta*, *Protozoa*, *Metaphyta*, and *Metazoa* are described in most minute detail. The illustrations are excellent, and are to a great extent original. The typography and general execution of the book leave nothing to be desired. As a text-book of elementary biology, it is one of the best that have ever been published.

Chemical Lecture Notes. By PETER T. AUSTEN. New York, Wiley. 12°. \$1.

THIS book is not intended as a text-book, but is simply a collection of notes and observations on certain topics, which, experience as a teacher of chemistry in Rutgers College and the New Jersey State Scientific School has shown Professor Austen, give the student more or less trouble. While no attempt has been made to include all the rocks and shoals on which chemical students suffer shipwreck, still the author has succeeded in making lucid many of the topics which are not rendered sufficiently intelligible by the average text-book. Valence, atomicity, the laws of Boyle, Charles, and Mariotte, can no longer be a mystery to a student of these lecture-notes. We recommend them to those who have found difficulty in comprehending the intricacies of modern chemistry, and equally to those who would escape the hard places in this science, so numerous even when studied with the best of helps and teachers.

AMONG THE PUBLISHERS.

WE have received from A. Lovell & Co. "Greene's Language Half-Blanks, No. 1," by H. R. Greene, a pamphlet designed to teach the elements of English grammar by means of exercises and diagrams. Examples are given of the parts of speech, and the construction of the sentence is duly explained, and the pupil is then to write short sentences, the principal words being furnished him to illustrate what has been told him. These sentences are to be arranged in tables, and the different elements of the sentence indicated by certain marks written under the words. What the precise value of Mr. Greene's system may be, experience must decide; but marks and diagrams have no connection with language as such, and can at best be nothing more than very slight helps. The book is one of a series ending with a full grammar.

—Messrs. Ginn & Co. of Boston have issued "An Introduction to the Poetry of Robert Browning," by Professor William J. Alexander of Halifax, N.S. The author remarks on the difficulty experienced in understanding any new writer, and on the special difficulty of understanding Browning because of his obscurity; and he has prepared this work with the object of clearing up some of these difficulties, and making his author more comprehensible to the mass of readers. He finds the chief motive of Browning's work in his belief in the central doctrines of Christianity, which he has endeavored to illustrate and enforce. One chapter is given to Browning's philosophy, and another to his theory of art; and the remainder of the book is devoted to an account of his mental development as exhibited in his various works.

—D. Appleton & Co. will publish immediately a treatise by the Hon. Seymour Dexter of Elmira, N.Y., on "Co-operative Savings and Loan Associations," which will include an examination of building and loan associations, mutual savings and loan associations, accumulating fund associations, co-operative banks, etc.

The appendix will contain laws of New York, Pennsylvania, and Massachusetts, forms for Articles of associations, by-laws, account-books, and other useful information on the subject. The author, who is judge probate of Chemung County, has been president of the Chemung Valley Mutual Association for fourteen years, and is high authority on the subject of which he treats. They also announce "A Manual of Instruction in the Principles of Prompt Aid to the Injured," designed for military and civil use, by Dr. Alvah H. Doty; and a new book by Mr. O. B. Bunce, entitled "The Story of Happinoland and other Legends," which is to be issued in the Gainsborough Series. The latter consists of four slight sketches, — "The Story of Happinoland" (which, being translated, is "Happy-no-land"), "A Millionaire's Millions," "The City Beautiful," and "John's Attic;" all of which, the latter, however, only slightly, involve questions in social science.

—Harper & Brothers have ready this week a concise instructive work on "Constitutional Government in Spain," by J. L. M. Curry, LL.D., predecessor of Mr. Perry Belmont as minister of the United States in Spain. It is the result of some years of close study of the subject, and of actual observation of Spanish political and social life during the author's official residence in the country. Valuable appendices are added, summarizing the careers of aspirants to the Spanish throne, — Fernando, Leopold, Duke of Montpensier, and Amadeo; giving sketches of Christina, Isabel, Alfonso XII., the Infantas, the Queen Regent, and Alfonso XIII.; describing the present condition of Spain in its political, social, and industrial aspects; and, lastly, explaining briefly the acquisition of Florida by the United States. They have also just ready "Choice Cookery," by Catherine Owen, author of "Ten Dollars Enough," etc., the object of which is to help those who wish to know at a glance what is newest and best in modern cookery.

—David McKay, Philadelphia, will shortly publish a new edition of Joel Cook's "Holiday Tour in Europe," formerly published by Porter & Coates.

—The *American Magazine* suspended publication last December.

—*The Index*, published by E. R. Walker, Chicago, is a little four-page monthly paper that will attempt to take "a glance at the leading features of the forthcoming periodicals."

—*Once a Week* has been enlarged, and includes a greater variety of contents. The most noticeable thing in the current number is the first instalment of a Stockton story, called after its heroine, "Ardis Claverden."

—*The Advance Sheet*, published by C. A. Watson, New York, will attempt to give a monthly survey of periodical literature, indexing the contents of the leading periodicals for the next month, with such comments as will make the announcements as attractive as possible.

—The two new volumes of "Letters of Carlyle" which Professor C. E. Norton has edited are mostly addressed to the various members of Carlyle's family, and afford a tolerably continuous account of his life from his marriage to the period when his fame was about to be established by the publication of his "French Revolution." Messrs. Macmillan are to publish them speedily.

—The new edition of Queen & Co.'s "Chemical Apparatus Catalogue" is now published. It contains 368 pages, with about 1,200 illustrations, and will be mailed to any address on receipt of fifty cents, which sum will be deducted from the first purchase made from it amounting to ten dollars or more. This is a very elaborate work, containing the most useful apparatus, and the firm feels confident that it will be considered by chemists a standard for reference. While the quality of the apparatus is maintained, most of the prices have been reduced.

—In the *Contemporary Review* for March (New York, Leonard Scott Publication Company), interest centres in the paper on the "Panama Canal," by Edward Whymper, with its intelligent diagrams and maps; Archibald Forbes criticises some of Lord Wolseley's recent utterances; Dr. Dale continues his interesting papers on Australia; Canon Wilberforce treats of Ireland's demands; and Mr. Clerke describes the observatory at the Cape of Good Hope.