LITERARY NOTICES.

EVOLUTION AND ITS RELATION TO RELIGIOUS THOUGHT. By JOSEPH LE CONTE. New York: D. Appleton & Co. Pp. 344. Price, $1.50.

THIS volume, by the Professor of Geology and Natural History in the University of California, is a notable contribution to a discussion perennial in its interest. No question to-day more profoundly stirs the minds of thoughtful Christians than how the philosophy of evolution shall modify their convictions. With every passing year it is becoming better understood that it is not with religion, but with theology, that science has had conflict. By a necessity, purely and simply historical, theology has united elements very diverse in value. Its core and essence, religion, has been presented in tenet and dogma always plainly limited by the time, place, and knowledge of creed-makers. With religion have been

associated primitive ideas of the divine mind and will—crude cosmogonies current at the beginning of recorded human observation. Conceptions, transient in character, have had alliance with religious sentiments, essentially permanent. When a traditional cosmogony, such as the Mosaic, is transmitted as of equal sacredness with religion, there is grave danger that science, in discrediting the cosmogony, may do hurt to religion. This danger is avoided when we discriminate between the transient and permanent elements in theology. There is not, and never was, any necessary connection between any theory of Nature's history and the kernel of religion—the sense of a supreme mystery behind Nature, the sense of moral obligation transcending utility, and the hope of everlasting life. The conflict which so many suppose to be between religion and science is more and more seen to be really between new science and old—if by stretch of courtesy primitive observation and theorizing can be called science at all. Timidity, half informed and careless in discrimination, imagines science to be intent on destroying the temple of religion, whereas its chiefest mission is to broaden and heighten it. The more intelligible Nature becomes to the student, the profounder his reverence for the Intelligence manifested in Nature. Evolution, as a philosophy, deals only with the history of Nature, not its origin; with its transformations, not its essence.

That evolution is truth, and axiomatic truth, Prof. Le Conte firmly maintains. His presentation of its proofs, though rapid, is masterly, and brought down to date. He sets forth the important and little appreciated work of Agassiz in this connection—his proof that the laws of embryonic development are also the laws of geological succession. Agassiz, however, holding as he did the doctrine of permanency of specific types, rejected the theory of the derivative origin of species. Prof. Le Conte then presents the factors of evolution tersely and concisely—the effects of physical environment, of the use and disuse of organs, of natural, sexual, and physiological selection. He brings forward evidence for evolution from the general laws of animal structure, incidentally discriminating between analogies and homologies. He compares the forelimbs of mammals, birds, reptiles, and fishes, part for part, in a specially able manner. Embryology is next summarized in proof of the derivative origin of specific forms, and the parallel between the development of an individual and of the species to which the individual belongs is brought out very forcibly. The significance of rudimentary organs—teeth in whales, the cæcum in man—is shown to depend solely on descent from forms wherein such organs were useful. Unexercised, they have dwindled, and tend to disappear. Evolution is next shown to be supported by the facts of geographical distribution. Isolation of the Australian continent at a remote geological era explains the primitive characteristics of its fauna and flora. The peculiarities of island-life, the rapid changes in organic forms during the last glacial epoch, and the recession of arctic species to the snow-line of the Alps and the high mountains of Colorado and California, are shown to be intelligible on no other hypothesis but that of evolution. Prof. Le Conte next surveys the testimony drawn from the artificial production of varieties, and presents with graphic illustration the law of cross-breeding.

While maintaining that the fact of evolution is certain, our author points out that all its laws are not yet fully understood. Among the difficulties which he considers are those of the uselessness in incipient stages of organs afterward developing into usefulness. In such stages, for example, fins probably commenced as buds from a trunk; it is difficult to see how as buds they could be of any use, and therefore how they could be improved by natural selection until they grew to efficient size, and especially until muscles were developed to move them. Again, in the case of a variety in a new and useful direction making its appearance, what has prevented its obliteration by cross-breeding with the parental form? Thus, while he holds the law of evolution to be even more surely demonstrated than the law of gravitation, Prof. Le Conte points out problems to which students may most profitably direct their powers of observation and generalization.

Because our author is thoroughly a man of science, he finds his knowledge in con-

cord with his religion. He sees that the theory of development demands a reconstruction of theology, and frankly says so. His own conceptions of the reconstruction necessary are modestly and clearly stated. His idea of Deity is that of a Being resident and immanent in Nature, who creates by means of natural law in a perfectly intelligible order. At the point in evolution where man became a morally responsible being, he deems the human soul to have been born. As physical evil has been the means, through the pain and struggle it has involved, of racial elevation, so he holds moral evil to be equally necessary for the growth of character. How, otherwise, he asks, than by the possibility of fall, could man have gained the strength to rise? Prof. Le Conte is instructive, suggestive, and candid throughout every chapter of his book. It will be fruitful and helpful to many who fear that the progress of science means the abolition of religion; that Darwin and Spencer have come to uproot sentiments which Galileo, Kepler, and Newton only elevated and deepened.

WEALTH AND PROGRESS: A CRITICAL EXAMINATION OF THE LABOR PROBLEM. By GEORGE GUNTON. New York: D. Appleton & Co. Pp. 382. Price, $1.

IN this book the author undertakes to establish a natural basis for industrial reform; to show how to increase wages without reducing profits or lowering rents; and to expound the economic philosophy of the eight-hour movement. Whatever may be thought of the sufficiency of his conclusions, the critic must admit that his doctrines and proofs are well thought out and clearly stated, without passion and without prejudice. The book really has a duplex origin, for its central thought was conceived and the first effort to state it was made by the late Ira Steward, the leader of the labor-reform movement in Massachusetts. Just before his death, in 1883, he made a request that Mr. Gunton should complete his unfinished work. This author had the advantage of extensive experience and exceptional opportunities for observation with industrial affairs, and had been a close student of economic questions. He perceived the magnitude and perplexity of the task imposed upon him, and has met it in the fashion of a manly thinker. This book contains about half of what he has to say, the presentation of the principles of social economics being reserved for another volume. The precise points considered in the present volume are the definition of the law and cause of increasing production, and the theoretical statement and historical establishment of the law of wages. Under the former head, the socialistic postulate, that "labor is the creator of all wealth," is shown to be fallacious, and it is maintained that—inversely to the general conception—the prosperity of the laborer is the basis of the capitalist's success. The "wages fund," Francis A. Walker's, and Mr. George's theories of the law of wages, are all dismissed as unsound, and the true theory is defined to be that "the chief determining influence in the general rate of wages in any country, class, or industry is the standard of living of the most expensive families furnishing a necessary part of the supply of labor in that country, class, or industry." This law is illustrated and enforced by a review of the conditions of workingmen's wages and modes of living in Asia and in Europe in the thirteenth and fourteenth centuries, and down to the nineteenth century. The standard of living is determined by the daily wants of the people concerned—not what they have vague desires to have, but what they will struggle to get. These wants regulate consumption, and that regulates production, and thus the prosperity of the capitalist and the community is determined. The standard of the wants is elevated by enlarging the social opportunities of the masses, but not by enlarging them faster than the capacity for enjoying them is augmented. The first step toward this end is a reduction of the hours of labor, for, without time to improve them, other means for promoting the same object —education, free lectures, public libraries, parks, museums, and art-galleries—are necessarily ineffectual. Yet this must be done wisely, and commensurably with the enlargement of other facilities; for, to give idle hours to a man who does not know how to use them aright, is only a curse. With this reduction, which it is proposed to make to eight hours a day, should go half-time schools for children at work under sixteen years of age. Among the immediate effects

of the measure proposed would be the employment of a great number of laborers who are now idle. The permanent effects would be most quickly seen in the younger laborers; for, by the application of half-time, "within a single decade every laborer of twenty years of age . . . would have had five, and many of them seven or eight years' daily contact with the educational, moral, and social influences of school life. It is clear, therefore, that the necessary consequence of the general adoption of the half-time school system alone would be not only to greatly improve and elevate the home, but to almost revolutionize the domestic and social atmosphere of the masses within a single generation." The effects of this system upon wages, production, and prices, on profits, and on rent, are next considered, and declared to be all beneficial. The feasibility of short-hour legislation is shown from the history of the measures in that direction that have been taken in England. The lessons which they teach are drawn from comparative reviews of industrial progress in England, continental countries, and the United States; the eight-hour and half-time system is presented as a social and political necessity; and the conclusion is expressed that if such a system could be uniformly adopted in the principal manufacturing countries, "its effect upon emigration, enforced idleness, business depressions, and upon real wages, together with the growth of intelligence and social character, would in twenty-five years change the face of the industrial and social institutions of Christendom."

We have received from Macmillan an *Elementary Chemistry*, by *Muir and Slater* ($1.25), and a *Practical Chemistry*, by *Muir and Carnegie* (80 cents), two books, adapted to university students, which are designed to be used together in learning the elements of chemical science. The former volume deals mainly with chemical philosophy, using descriptive matter to show the basis on which the principles of chemistry rest. Its companion embodies a course of laboratory work.

In the third edition of the *Manual of Analytical Chemistry*, by *John Muter* (Blakiston, $2), a considerable amount of special matter has been introduced, but, by means of a change in the style of printing, the bulk of the volume has been diminished instead of increased. This manual embraces both qualitative and quantitative analysis, and deals with organic as well as inorganic substances.

Sir *William Aitken's* little book on the *Animal Alkaloids* (Blakiston, $1) embodies a lecture delivered before the British Army Medical School, in which he summarizes the recent researches as to the poisonous effect of the leucomaines, and other substances formed within the body by the physiological processes.

The sixth edition of *Bloxam's Chemistry* has been issued (Blakiston, $4.50). This work includes both organic and inorganic chemistry, and its distinguishing features are its comprehensiveness and the large space it gives to technological applications of chemical principles. The number of experiments introduced is also large. The work has been carefully revised, and a large part of it has been rewritten for this edition. The first edition having appeared when metallurgy was still treated as a branch of chemistry, more space is devoted to it than is usual in modern chemical works. As the author had been for many years before his death, which occurred just after the present book had passed through the press, a professor in the Military Academy at Woolwich, England, the chemistry of the various substances employed in war-like stores is quite fully treated.

Prof. *Victor von Richter's Inorganic Chemistry* (Blakiston, $2) has reached a third American edition. The present edition contains a rather extended section upon the thermal behavior of bodies, and throughout the work frequent occasion is taken to call attention to the dynamical side of chemical reactions. The sections upon the pressure and condensation of gases, and that upon the dissociation phenomena, have also been considerably increased, while new facts relating to the elements and their derivatives have been introduced.

First Steps in Geometry, by *Richard A. Proctor* (Longmans, $1.25), differs from the common text-books on this subject in dealing mainly with the methods which the student should follow in finding out for himself solutions to geometrical problems. The

volume includes, also, notes to the first two books of Euclid, and added propositions.

Prof. *Proctor* has published, also, *Easy Lessons in the Differential Calculus* (Longmans, 90 cents), suggested, like the preceding book, by his own experience when a student under clumsy and unpractical teaching. In his treatment of the subject, he aims to show the need of a method of calculation dealing with variable quantities, and how such a method is to be used in practice. The integral calculus he has treated as a department of the differential.

Prof. *W. G. Peck* has added to his mathematical series an *Elementary Treatise on Analytical Mechanics* (Barnes, $1.65), which is intended to embrace all the principles of this science that are needed by the student of engineering, architecture, and geodesy. The methods and arrangement of the book are based on the author's long experience in teaching at the School of Mines, Columbia College.

The nineteenth edition of *Nystrom's Pocket-book of Mechanics and Engineering* (Lippincott, $3.50) has been revised and corrected by Prof. *William D. Marks*, who has added an elementary article on dynamic electricity, and one on the expansion of steam. In the form of notes, the reviser has stated some opinions of his own which differ from those of the author, and has given references to the literature of certain topics.

Higher Ground, by *Augustus Jacobson* (McClurg, $1), suggests a means of settling the labor question, which has become so troublesome. The author states the difficulty in a few pages, and then names as the remedy the extension of manual training to all the public schools of the country. He would meet the expense by a graduated succession tax. The latter half of the volume contains much information in regard to the courses and results of the training-schools in St. Louis, Chicago, Toledo, and elsewhere.

Another book which claims to solve the same problem is *Labor, Capital, and Money: Their Just Relations*, by *C. C. Camp* (D. W. Lerch, Bradford, Pa.). The author maintains that "the theory of Ricardo's law of distribution, and its modern renovation by Mr. George," are entirely fallacious. He charges the current commercial disturbances to the wrong use of money, and prescribes as a remedy the issuing of money in such volume as to reduce interest to the percentage of advancing wealth.

The Old South and the New, by *William D. Kelley* (Putnam, $1.25), consists of a series of letters describing the industrial and social condition of the people of the Southern States in 1887, as contrasted with their condition in 1867. The general tone of the book confirms the recent reports of wonderful enlivenment in the farm and garden districts of Florida, in the coal and iron country, and the new manufacturing cities of the South, while some mistakes that have been made are also pointed out.

Free Rum on the Congo: What it is doing, by *William T. Hornaday* (Women's Temperance Publishing Association, Chicago), concerns a question of vital interest to the friends of humanity, which is occupying a large degree of attention in all civilized nations. It is that of the unrestricted importation of liquors into Africa, which, under the license allowed by the Berlin agreement constituting the Congo Free State, has grown into a business of enormous proportions. The extent of it is shown by the grand total of 10,377,160 gallons—most of it adulterations of the vilest character—which were shipped thither in 1885 from five countries. The evils inevitable under such a traffic do not need to be described or named. Their magnitude is incalculable, and their effects are likely to endure through many centuries.

Slav or Saxon, by *William D. Foulke* (Putnam, $1.25), is a study of the growth and tendencies of Russian civilization, in which are briefly described the territory and the people of Russia, and the military autocracy, with sketches of Russian conquests, the history of Russia, the reforms of Alexander II, and the present despotism. The author urges Americans to give their moral support to England in the collision with Russia which is prophesied to take place in Asia.

The first number of a journal named *Congress* (The Congress Publishing Company, $1 a year) comes to us from Washington. Its purpose in life seems to be the dissipation of that troublesome surplus in the United States Treasury, for nearly everything which it proposes to advocate involves

heavy expenditures of public money, while it appears to have no interest in anything which tends to decrease taxation.

China: Travels and Investigations in the "Middle Kingdom," with a Glance at Japan, by General *James H. Wilson* (Appleton, $1.75), is an attractive book of travel, especially to the business man. It is the outcome of a trip to gather information as to the desirability of investing American capital in the building of railroads, and supplying other modern improvements in China. The natural features and resources of the country, the volume and methods of business, the bearing of government regulations and social customs on commercial affairs, and the attitude of the government toward alien enterprises, are all discussed. The book contains also sketches of Chinese and Japanese history, with entertaining descriptions of scenery, family life, amusements, and superstitions in both countries. A map of China accompanies the volume.

A great deal of information about a fascinating part of our own land is contained in *California of the South*, by Drs. *Walter Lindley* and *J. P. Widney* (Appleton, $2). The questions that would be asked by the tourist, invalid, settler, and investor here find full and definite answers. A description of the climatology of the Pacific coast comes first in the volume, and is accompanied by a colored climatic map of Southern California. In the second part of the book the overland trip to California, and the natural features, points of interest, hotels, trade, wine and fruit production, and mineral springs of the five southern counties are described, with statistics, maps, and illustrations. Short papers are added on "Comparative Valuation of Lands and Products," by General Nelson A. Miles; "Trees, Shrubs, and Wild Flowers," "Petroleum and Asphaltum," "Orange-Culture," "Public Schools," "Profits and Methods of Fruit-Raising," and "Ten Acres Enough," by other writers familiar with these special topics.

Under the Southern Cross, by *M. M. Ballou* (Ticknor, $1.50), is a gossipy account of the author's travels in Hawaii, Australia, Tasmania, and New Zealand. The purpose of the book is evidently to entertain rather than to instruct; not to furnish statistics for the merchant or student, but to contribute to the pastime of "fireside" traveling, which has so many devotees.

Section II of the special report on "The Fisheries and Fishery Industries of the United States" is *A Geographical Review of the Fisheries Industries and Fishing Communities for the Year 1880*, and is prepared by *George Brown Goode* and a staff of associates (United States Commission of Fish and Fisheries). The contents comprise separate papers on the fisheries of each of the Atlantic States, with accounts of the fisheries of the Gulf of Mexico, the Pacific coast, and the Great Lakes, and an appendix of "Historical References to the Fisheries of New England." The methods and results of these industries are described by towns and counties, and numerous tables of statistics are inserted.

The Bulletin of the United States Fish Commission, Vol. VI, for 1886, contains a very large number of letters from American and foreign correspondents of the Fish Commission relating to special topics in its department.

Geology and Mining Industry of Leadville, Colorado, with Atlas, by *Samuel F. Emmons* (United States Geological Survey, $8.40), forms Volume XII of the monographs of the Geological Survey. The investigation of this field was undertaken in 1879, and the report was practically completed in the fall of 1881, when an abstract of it was made, which has been published. The information is less timely now than it would have been immediately after it was gathered; for the thousands of persons who, a few years ago, were eager to know about the mines of Leadville, have either got the knowledge by experience—in many cases dearly bought—or have turned their attention in other directions. The development of the mines, too, has gone on rapidly, and the ores have begun to change from carbonates and chlorides to sulphides. Still, the thorough manner in which the work of the geologist in charge and his assistants has been done, and the liberal style in which it has been illustrated with lithographic and heliotype plates, make the mon-

ograph of permanent value. The first part of the report deals with the geology of Leadville, and of the Mosquito Range, to which is appended an account of the petrography of the district. Part II deals with the mining industry, and is followed by appendices on the chemical constitution of the ores and other rocks, and on smelting operations.

Mineral Resources of the United States for 1886, prepared by *David T. Day* (United States Geological Survey, 50 cents), is the fourth volume of a series devoted to the statistics of the mining industries. It appears that there has been a notable increase in the value of mineral products over 1885, the chief item in this gain being pig-iron. The volume contains a paper, by E. R. L. Gould, presenting the leading provisions of the mining laws of States east of the Mississippi River.

In his *Exercises in English Syntax* (C. W. Bardeen, Syracuse, N. Y.), Mr. *A. G. Bugbee* seeks to furnish a manual which shall give a large amount of drill and test work, without introducing any examples of false syntax. The last he regards as object-lessons in incorrect use, and of more than doubtful utility when employed in exercises for correction.

The Outline of Anglo-Saxon Grammar of Prof. *W. M. Baskerville*, of Vanderbilt University (A. S. Barnes & Co.), appears to be a well-composed work, clear and concise in its statements, and leaving no point without an intelligent endeavor to give it a satisfactory explanation—a thing which, in a language of the dark ages only, it is not always easy to do. A list of irregular verbs is added by Prof. James A. Harrison, of Washington and Lee University.

C. N. Caspar and H. H. Zahn, of Milwaukee, send us *Volapük: An Easy Method of acquiring the Universal Language, constructed by Johann Martin Schleyer*, prepared for English-speaking students by *Klas August Linderfelt*, Librarian of the Milwaukee Public Library (128 pages, 50 cents, paper; flexible cloth, 75 cents). Volapük is, so far as we know, the only serious extensive attempt that has been made to impose upon the public a language that has been deliberately manufactured in a scholar's study. As a novel experiment, and as a matter that may possibly throw some light on the way languages come into being and grow, we shall watch its fate with much interest. It is satisfactory to learn from Mr. Linderfelt that Volapük is not regarded as yet perfect; that Prof. Kirchhoff, of Paris, has already made some acceptable and accepted improvements in it; and that there is an authorized Volapük academy for the suitable regulation of these matters. This work is composed on the basis of Alfred Kirchhoff's *Hilfsbuch;* it has a key to the exercises and vocabularies, and it bears the marks of being the work of a competent hand.

We have sometimes wondered, if a universal language had to be imposed on mankind, why Italian, which is living and ready made, could not be chosen. Though not perfect, it fulfills most of the requisitions of the American Philosophical Society. It is absolutely phonetic; its word-roots are familiar to all European languages; its vocabulary, while ample, is modest in its proportions; its pronunciation is musical, and its structure is simple. Most of these points appear in Mr. *C. H. Grandgent's Italian Grammar*, (D. C. Heath & Co., Boston), which is the "result of an attempt to put into convenient form and the smallest possible compass all the grammar that the ordinary student in Italian will need." It is all contained, vocabularies included, in 124 pages; and the work is well done.

Prof. *Edward S. Joyne's German Grammar for Schools and Colleges* (Boston, D. C. Heath & Co.) is based on the "Public-School German Grammar" of Prof. Meissner, of Queen's College, Belfast, which is very popular in the United Kingdom. Some extension has been given to the scope of the work, with a view of fitting it to the wants of students of every grade, up to the point where the demand arises for the higher study of historical and scientific grammar. A college professor, who has examined the book carefully, describes it as characterized by a fullness of light everywhere, "and a fullness of matter that will in most cases suffice," and as demonstrating "how superior scientific methods are to the so-called practical methods."

Memoirs of an Arabian Princess, by *Emily Reute* (D. Appleton & Co., 75 cents),

is the autobiography of a princess of the house of Zanzibar who became the wife of a German gentleman and made her home in Hamburg. The lady was a sister of the Sultans Madjid and Bargash; and her book is of interest as giving a representation of family life in Eastern courts. A darkly shadowed portrait is drawn of Sultan Bargash.

The collection of Mr. *Beecher's Patriotic Addresses*, published by Fords, Howard & Hulbert, contains the more important addresses and contributions to periodicals made by Mr. Beecher in America and England, from 1850 to 1865, on slavery, the civil war, and the development of civil liberty in the United States. The list begins with the article "Shall we compromise?" written in 1850, during the pending of Mr. Clay's "Omnibus Bill," when the issue on which the country was to divide politically was for the first time clearly defined and set forth, and closes with the eulogy on Grant. The intervening addresses—even though we may not agree with the editor in giving Mr. Beecher prominence after Lincoln and Grant, to the exclusion of others, in influencing the destinies of the country—are as essentially a part of the history of the times as any other single series of events. Mr. John R. Howard, the editor of the papers, who was a close personal friend of the author, introduces them with a well-balanced review of Mr. Beecher's remarkable personality and his influence on public affairs. Excellent portraits are given of Mr. Beecher in his mature manhood, at sixty-five, and a year before his death; and portraits, which ought to have been better ones, of the prominent men of the anti-slavery controversy.

The latest volume of Mr. *Bancroft's History of the Pacific States* (The History Company, San Francisco) is marked the ninth, and is the sixth and concluding volume of the *History of Mexico*. It gives the story from 1861 to 1887, with accounts of the invasion by the three powers and the setting up of Maximilian as emperor; the struggle of the Mexicans against the usurpation, ending in its final overthrow and the execution of Maximilian; and the presidencies of Juarez, Lerdo de Tejada, Gonzalez, and Porfirio Diaz. The general progress and present condition of the country are summed up in Chapters XIX to XXVI, under the heads of "Government, Finances, and Military"; "Mining, Manufactures, and Fisheries"; "Commerce and Railroads"; "Agricultural Resources;" "Ecclesiastical Affairs"; "Society"; and "Education, Science, Arts, and Literature." Of the condition of science in Mexico, we learn that the National Observatory, established in 1878, includes a meteorological and magnetic observatory, and maintains relations with the chief observatories of foreign nations and with many scientific associations. The Central Meteorological Observatory was established in 1877. A geological society was established in 1875. The Geographical and Statistical Society has contributed to the diffusion of knowledge on many subjects, particularly in connection with Mexico. "The conclusion arrived at, after a fair investigation of facts, is that many sons of Mexico have made great strides in the acquisition of science, and that a number of them have excelled in its several branches, and are doing their part well in the transmission to others of the knowledge they possess."

Except in the reduction of the pages to crown octavo size, *The First Edition of Shakespeare*, published by Funk & Wagnalls, is an exact photographic reproduction of the first folio edition of 1623. This edition is very rare, and of great value, principally because it is the only authority for the texts of "The Tempest," "Macbeth," "Twelfth Night," "Measure for Measure," "Coriolanus," "Julius Cæsar," "Timon of Athens," "Anthony and Cleopatra," "Cymbeline," "As You Like It," and "A Winter's Tale." It possesses an additional temporary value in view of Mr. Donnelly's Bacon-Shakespeare speculations, which are derived wholly from the peculiarities of this text. These peculiarities being given here in exact fac-simile, those interested in the questions raised by Mr. Donnelly can by its aid make their own comparison of his deductions with his evidence.

The magazine entitled *Woman* (Woman Publishing Company, New York, $2.75 a year), whose first number was that for December, 1887, is largely literary in character, and devotes considerable space also to the religious, temperance, and political efforts of women. Household economy receives a moderate share of attention.

The National Sin of Literary Piracy, by *Henry Van Dyke*, D. D. (Scribner, 5 cents), is a clear and vigorous statement of the moral position of the American people with respect to the intellectual property of foreign authors. It is an excellent document for the campaign for international copyright.

Madam *Emma Seiler's* treatise on *The Voice in Singing* (Lippincott) comprises the chief scientific facts, many of them the discoveries of the author, which lie at the basis of the art of singing. At the outset of her career as a teacher of vocal music, Madame Seiler perceived the need of a scientific foundation for her art, but the best instructors in Europe were ignorant of the laws which she sought. Applying to Helmholtz, who was prosecuting an inquiry into this subject, she was permitted to take part in his investigations, and also made important discoveries by herself. Later she received further assistance in her studies from Du Bois-Reymond. This book opens with a brief sketch of the history of vocal music, and the subject is then treated successively on the physiological, physical, and æsthetic sides. The structure of the vocal organs is described in an appendix.

Canadian Leaves (N. Thompson & Co., New York) is the title of a series of papers on the history, art, science, literature, and commerce of Canada, read before the Canadian Club of New York. Among the contributors are Prof. Goldwin Smith, Hon. Benjamin Butterworth, Rev. George Grant, and Mr. Erastus Wiman. Mr. *G. M. Fairchild*, jr., is the editor. The volume is handsomely made, and is illustrated with portraits of the contributors, head-pieces, initials, and tail-pieces, by Thomson Willing.
