

may be looked for in more complete treatises on the subject. To those having electric bells, telephones, or electric lights in their houses, and who are not practical electricians, the volume will be found a convenient reference-book, containing many valuable suggestions.

Among the subjects discussed in the book are electrical connections, alarms, batteries, bells, carbons; induction, intensity, and resistance coils; dynamo-electric machinery; fire risks; electrical measurements; microphones; electric motors; phonographs; photophones; accumulators; and telephones. A sufficient number of illustrations are introduced to make clear every point touched upon.

AMONG THE PUBLISHERS.

A NEW book by Dr. J. G. Fitch, entitled "Notes on American Schools and Training Colleges," has been issued recently by the Macmillans. The well-known "Lectures on Teaching," by the same author, has passed through many editions, having been adopted for use by the Teachers' Reading Circles throughout the country.

—Ward, Lock, & Co. will publish early in May Lane's "Manners and Customs of the Modern Egyptians."

—The J. B. Lippincott Company have in press "Economic Basis of Protection," by Professor Simon N. Patten of the University of Pennsylvania.

—Macmillan & Co. will publish at once a timely book on the silver question, to be entitled "Silver in Europe," by S. Dana Horton, a delegate of the United States to the International Monetary Conference held in Europe in 1878 and 1881.

—D. C. Heath & Co. of Boston issued last week "Deutsche Literaturgeschichte," Vol. I., by Professor Carla Wenckebach of Wellesley College. The purpose of this work, which is to be in three volumes, is to offer students a history, in the German language, of the growth of German literature.

—Pictures of fifteen representative houses built through the agency of building and loan associations will appear in W. A. Linn's article in the May *Scribner*, with the story of how each one was built told by the owner. Brooklyn, Rochester, Pittsburgh, Reading (Penn.), Cincinnati, St. Paul, New Orleans, and San Francisco are among the cities represented.

—De Wolfe, Fiske, & Co. have published "Lake Champlain and its Shores," by W. H. H. Murray, a narrative of the traditions and history of Lake Champlain, with a description of yachting, camping, and fishing. Mr. Murray's chapter on the great national park is included in the volume.

—Professors Lewis M. Haupt and Edmund J. James, of the University of Pennsylvania, have just completed a monograph on "Canals and their Economic Relation to Transportation." The former deals with the technical side of the question, while the latter discusses its economic aspects.

—Clarence Deming has found, in the manuscript diary of William Brisbane of South Carolina, some pen-pictures of the First Napoleon, as he appeared to Mr. Brisband when he visited Paris in 1804. The most interesting of these, describing the coronation procession, the presentation of colors on the Champ de Mars, etc., will be published in *Scribner's* for May.

—The *Annals of Gynecology*, formerly published in Boston, has been enlarged and a new department added, the name being changed to *Annals of Gynecology and Paediatrics*. The latter department is under the editorship of Dr. Louis Starr of Philadelphia, formerly professor of diseases of children at the University of Pennsylvania. The journal appeals with more than ordinary interest to the mass of the profession, in that it deals exclusively with the diseases of women and children. It is now published by the University of Pennsylvania Press.

—The leading article in *Garden and Forest* for last week is dedicated to the memory of Dr. George Thurber, in whose recent death America has lost her most accomplished horticultural

writer. Professor Beal, in the same number, writes of the methods of botanical study; Mr. Sereno Watson describes a new *amaryllis*, which is also figured; Secretary Williams discusses the best grapes for home use; and much timely horticultural matter is given, including a description of the Easter flowers in New York. Besides the plant portrait, there is a view of The Parterre, Fontainebleau, with explanatory text.

—In the article on Millet in *Scribner's* for May, T. H. Bartlett tells of the meetings in Millet's house in Barbizon of "the most illustrious company of artists that ever sat around a table together,"—Corot, Daumier, Barye, Rousseau, and Diaz. The following anecdote is related: "At all these gatherings, when Diaz was present, there was an accustomed break in the ceremony. He had a wooden leg, and hated, above all things, talk on art; and whenever the moment of exhausted patience came, he would pound the table with his hands, imitate a trumpet with his mouth, bring the end of his stump up against the under side of the table with a fearful thump, and cry out like a wild man, 'Thunder of all the Gods, give us peace! Can't you content yourself by making art all day without gabbling about it all night? Close up!' For each and every one he had some special designation: of Rousseau, whenever he began to speak, 'Oh, there! Rousseau is going to unscrew his chair.' When his own opinion was sought, he would always reply, 'Oh, yes! oh, yes!' no matter what the question was or subject discussed. As they did not 'close up,' Diaz would get up and leave in high indignation, hearing as he passed out of the room this comforting assurance, 'Blessed is the door that hides you.'"

—The opening article of *The Chautauquan* for May is by the English historian, Edward A. Freeman, and is the first of a two part paper on "The Making of Italy;" James A. Harrison, LL.D., of Washington and Lee University, takes "The Archaeological Club in Italy" through the period of the renaissance in architecture and sculpture; Bella H. Stillman continues her studies of "Life in Modern Italy;" Professor Adolfo Bartoli contributes a paper on "Italian Literature;" Professor Henry A. Beers of Yale University takes for his theme Browning's drama of "King Victor and King Charles;" Principal James Donaldson, LL.D., of the University of St. Andrews, Scotland, writes on "Roman Morals;" the "Map Quiz" this month is on the present Kingdom of Italy; Albert Shaw, Ph.D., contributes a study of "The Sardinian Kingdom;" some facts about color-blindness will be found in the article by Professor Edward L. Nichols of Cornell University; Arabella B. Buckley considers the moral teachings of science; John R. Spears writes of "The American Navy;" a sketch of the life of Salmon P. Chase is given by his private secretary, Eugene L. Didier; "Woman's Work in Archaeology" is a translation from the *Deutsche Rundschau*; Thomas Bertrand Bronson of Michigan Military Academy gives the status of the present political parties in Germany; an interesting paper on "The Literature of the Irish," by John Hull, follows; and J. W. Hamilton, D.D., asks and answers some questions about the faith-cure.

—The long-promised article by Henry George appears in the April *New Review*. The same number contains a timely paper on "The Fall of Prince Bismarck."

—E & F. N. Spon have just published "A Practical Treatise on the Manufacture of Vinegar and Acetates, Cider and Fruit-Wines," edited from various sources by William T. Brannt. It is an octavo volume of 479 pages, illustrated by 79 engravings. Besides the subjects mentioned in the title, it treats of the preservation of fruits and vegetables by canning and evaporation; the preparation of fruit-butters, jellies, marmalades, catchups, pickles, mustards, etc.

—In *The Ladies' Home Journal* for April, "How to Act before the Camera" is told by A. Bogardus, the pioneer of New York photographers; Henry Ward Beecher's love for gems and rare stones is told by himself in several unpublished letters; and Mrs. Moses P. Handy has a timely article on "How to Move Easily and Well."

—Messrs. Ginn & Co. announce to be published next month "The Nine Worlds: Stories from Norse Mythology," by Mary E.

Litchfield. This book tells in a simple way the story of the old Norse gods, and is calculated to awaken an interest in the religion of our Teutonic ancestors. It is based chiefly upon the Eddas. The introductory chapter gives a clear idea of the relative position of the "Nine Worlds" of the mythology, and tells in a few words the relation of the gods and giants to objects in nature. The book is suited to children of any age, and will possess equal interest for general readers.

—Longmans, Green, & Co. will shortly publish, both in London and New York, "The House of the Wolf," a romance by Stanley J. Weyman. It tells the perils and bravery of three young brothers in the fortnight before and after the massacre of St. Bartholomew's Day.

—Messrs. Ginn & Co. announce to be ready in May or June "Elements of the Calculus; Method of Rates," by A. S. Hardy, professor of mathematics in Dartmouth College. This text-book is based upon the method of rates. The object of the differential calculus is the measurement and comparison of rates of change when the change is not uniform. Whether a quantity is or is not changing uniformly, however, its rate at any instant is determined essentially in the same manner: viz., by letting it change at the rate it had at the instant in question, and observing what this change is. It is this change which the calculus enables us to determine, however complicated the law of variation may be. From the author's experience in presenting the calculus to beginners, the method of rates gives the student a more intelligent, that is, a less mechanical, grasp of the problems within its scope than any other. No comparison has been made between this method and those of limits and of infinitesimals. This larger view of the calculus is for special or advanced students, for which this work is not intended; the space and time which would be required by such general comparison being devoted to the applications of the method adopted.

—The February number (No. 45) of the Riverside Literature Series (published quarterly during the school year 1889-90 at 15 cents a single number, by Houghton, Mifflin, & Co., Boston) contains "The Lays of Ancient Rome," by Thomas Babington Macaulay, with the author's introductions and historical notes. The old Latin literature of the Romans had entirely disappeared, and the stories and legends about the early history of Rome were incorporated into the writings of the later historians without any written authority for them. These "Lays of Ancient Rome" were written by Macaulay as an attempt to show how these legends and stories about the early history of Rome would have been sung by the old ballad-mongers, as they wandered from village to village, and repeated to an eager crowd of listeners these old songs which all knew so well and yet always loved to hear. The lays have always been liked by children on account of their life, movement, and romantic incidents, and in this new form the publishers hope that they will gain a still greater and more widespread popularity.

—The University of Pennsylvania has published a translation of "The Federal Constitution of Switzerland," by Professor Edmund J. James. The Constitution of Germany had previously been issued in the same series, so that American political students now have the means of comparing those two important federal governments with our own. The principal difference between the Swiss Constitution and ours is in the executive authority, which in Switzerland is vested in a Federal Council of seven members chosen by the two houses of the national legislature. All executive orders are issued in the name of the council, and, though there is a president of the council, he is nothing but a moderator, with no more authority or dignity than any other member. The present Constitution went into effect in May, 1874, and gives to the central government much greater authority than it had before. Nevertheless, there are strong local and democratic elements in the government still, as a perusal of this pamphlet will show.

—Professor John Fiske will open *The Popular Science Monthly* for May with an account of the life of Edward L. Youmans,

including the story of his association with Herbert Spencer. Professor Fiske was a warm friend of the late Professor Youmans, and describes his fruitful labors in popularizing science and the evolution philosophy in America with sympathetic appreciation. Herbert Spencer has decided to publish the opening chapters of one of the uncompleted parts of his system of philosophy, dealing with morality. Three of these chapters, treating respectively of "Animal Ethics," "Sub-human Justice," and "Human Justice," will be printed in the same number under the general title "On Justice." "Sumptuary Laws and their Social Influence" will be discussed by Dr. William A. Hammond. Dr. Hammond shows the absurd failures of laws against fine dress, costly food, and smoking, in Rome, France, Turkey, and England, and against the selling and drinking of alcoholic liquors in some of the United States. A careful comparison of secondary school programmes, French and American, will also appear in the May number. The author, Mr. George W. Beaman, maintains, that, if our high and preparatory schools are to compare well with those of France, the pupils must not only do more work, but they must also work on more distinctly specialized lines.

LETTERS TO THE EDITOR.

Anemometry.

It is generally known that quite recently there have been two independent series of investigations of the relation of cup motion in the Robinson anemometer to wind travel,—the one in England, with an arm twenty-nine feet long, upon which the anemometer was whirled in the open air; and the other in this country, with arms of twenty-eight and thirty-five feet and used in a large closed court. It has been charged that the experiments in this country were modelled after those in England; but this is not the fact, for the experiments in Washington were nearly completed before a word had come over regarding the others. A good proof of this is found in the fact that Professor Marvin was so successful in refining the apparatus and in using electrical contacts, that it required only a few hours to show that no experiments of value could be tried in the open air, while this has been learned in England only after many months. In the January number of the *Quarterly Journal of the Royal Meteorological Society* there has appeared a second series of experiments tried in England, which are quite interesting and in many respects novel.

The earlier results showed that at low velocities there were very great irregularities, though these practically disappeared at fifteen miles per hour. In the open air the free wind would undoubtedly equal a slow motion of the whirler; and as has been shown, under these conditions, the factor would be made twenty-five per cent too small. If we add to this the effect of irregularities from whirls in the air and in the experiments, nearly all the difficulty would be accounted for.

To account for these irregularities, it has been suggested that in the open air the more or less intermittent action of the wind would tend to continually accelerate or retard the cups; and, since they have a momentum, this would tend to carry them faster than the wind during the retard, so that there would be a gain in the total movement recorded by the cups over the motion of the whirler and the free wind. This view loses sight of the very important consideration that during a rising wind the cups would lag behind, and presumably just the amount of the acceleration during a falling wind. This point could only be settled by experiment, and the following facts seem to show that this supposed effect is either inappreciable or just the contrary to what is desired.

1. The weight of a very light set of cups was increased four-fold, and in the open air there was no change in the result.
2. Two sets of cups, which were exactly alike except that one was eight times as heavy as the other, were compared side by side. It was found that in light winds the lighter cups gave two to four per cent more wind, and that they were alike in higher winds.
3. Professor Marvin increased the moment of inertia two to