(illustrated), Captain James L. Bevans, Medical Corps, U. S. Army.

April 4—"Some Skin Diseases We Need not Have" (illustrated), Dr. H. E. Alderson.

April 18—"The Work and the Aims of Our Health Department" (illustrated), Dr. R. G. Brodrick, Health Officer of San Francisco.

THE provision of satisfactory municipal and domestic water supplies constitutes one of the most important problems that is presented to our cities and towns. The municipalities that are situated within easy reach of upland country can as a rule obtain pure water from the uninhabited highland drainage areas. Those located in the flatter portions of the country must depend on the local rivers or on underground sources. With increase in population the rivers inevitably become so polluted that it is necessary to purify the water before it can be devoted to domestic use. Such conditions prevail in the prairie region along the Ohio Valley and especially in the states of Ohio, Indiana and Illinois. Most of the larger cities in this region resort to purification of polluted river water. Cincinnati, Columbus, Indianapolis, Louisville and many smaller cities maintain filtration systems. For small cities and towns it is frequently possible to procure underground water supplies that will be sufficiently constant to warrant development. Some years ago the United States Geological Survey started investigations of ground-water supplies in the Ohio Valley. As a result two reports have already been published. The survey now announces the publication of a third, entitled "The Underground Waters of Southwestern Ohio," by M. L. Fuller, F. G. Clapp and R. B. Dole. The area covered by this report comprises about 5,600 square miles, or about one seventh of the state. The region receives abundant rainfall, but the streams are rather far apart and the springs are few and of small volume. This portion of Ohio is densely populated, the average population being about 150 to the square mile in the area as a whole and 50 in the rural districts, and as it contains many paper mills, distilleries and other manufacturing establishments the river waters are in many places badly polluted by sewage and industrial wastes, which render them unfit for drinking. For this reason carefully protected ground-water supplies are highly desirable for domestic purposes, especially in the cities and crowded villages, where the nearness of houses, barns and cesspools may make wells unsafe sources of drinking water. In this portion of Ohio immense quantities of water are also required in the industries, and as the waters of the streams are generally too muddy and too uncertain in quantity for this purpose, wells are largely used, and the need of more specific information concerning ground-water supplies is urgent. Limestones predominate in this region, extending in some places to depths of hundreds of feet, and the lack of sandy water-bearing beds makes the ground-water problem especially difficult. Fortunately, however, the surface is covered with a sheet of unconsolidated pebbly clay, underlain locally by some sand and gravel, and nearly all the larger valleys are deeply filled with sand, gravel or unconsolidated glacial material. These deposits contain much underground water, largely of local origin. Many of the wells on low ground, both those in rock and those in the alluvial fillings of the valley, yield flowing water, and nearly everywhere the water is under artesian pressure, rising very materially when encountered. In general, deep wells give no promise in this region, for, though water can be obtained from such wells in most places, it will generally be either salty or highly charged with sulphur.

UNIVERSITY AND EDUCATIONAL NEWS

GIFTS aggregating more than $1,000,000 to Washington and Lee University, Lexington, Va., are provided for in the will of Robert P. Doremus, member of a New York Stock Exchange firm, who died on February 1 last. Mr. Doremus was a graduate of Washington and Lee University.

AN increase of $12,800 in the annual state appropriation for Middlebury College has been made by the legislature of Vermont.

Miss Emily Southmayd, of New York City, has presented Yale University with $125,000 to found a chair of equity jurisprudence in the Yale Law School in memory of her brother, the late Charles F. Southmayd.

The American Telegraph and Telephone Company has given the Massachusetts Institute of Technology $5,000 a year for five years to catalogue and maintain the electrical library recently given to the institution. It is also reported that the American Telegraph and Telephone Company will support research work in electricity at the institute.

Mr. G. A. Wills and Mr. H. H. Wills have given £150,000 for the extension of the buildings of Bristol University, in memory of their father, who was the first chancellor. Their brother, Mr. W. M. Wills, has offered £20,000 for the general endowment fund of the university.

In the *President's Report,* issued this month by the University of Chicago Press, President Harry Pratt Judson says: "It is of course well understood as a distinct policy of some educational institutions to spend what is necessary regardless of resources, depending upon alumni and friends of the institution to provide the resulting deficit. It is not the belief of the University of Chicago that deficit financing is safe from any point of view." The report shows that there was a surplus for last year of $17,270.29. It also shows that about forty-three per cent. of the total income of the university for the year was derived from students, that the sum of $107,441.14 was returned to them in the form of fellowships and scholarships, and that fifty-six per cent. of the total expenditures was paid for instruction. During the year the sum of $1,087,178.92 was paid in in the form of gifts. The total gifts paid in from the founding of the university to June 30, 1912, amounts to $33,784,523.81.

At Yale University Dr. William Ernest Hocking has been promoted to be professor of philosophy, and Dr. Frederick Rogers Fairchild to be professor of political economy.

DISCUSSION AND CORRESPONDENCE

THE MEMORIAL TO ANTON DOHRN

In the issue of Science for November 10, 1911, was printed a statement concerning the memorial to Anton Dohrn, with an appeal from the executive committee of the American subcommittee for subscriptions to a fund to be established for this purpose. The subscription is to be closed May 1, 1913, and it is hoped that additional contributions may be received before that date. The American subscription is still far short of what the committee had hoped for, and should be increased if this country is to be creditably represented in the general fund. Checks should be drawn to the order of the Anton Dohrn Memorial and sent to Mr. Isaac N. Seligman, care of J. and W. Seligman and Co., No. 1 William St., New York City.

Edmund B. Wilson,
Chairman of the American Subcommittee
Columbia University,
New York, N. Y.

A SUGGESTED FORMULA FOR BIOLOGISTS

It is a well known fact of observation that the smaller creatures are ever the more vigorous. A flea is proportionately vastly more powerful than a cat; and the cat than an elephant. While in paleontology giantism is, I think, recognized as a stigma of degeneracy, preceding racial extinction.

Now, may not these observations be embodied in the following single mathematical form.

The weight of any two similar animals is plainly proportionate to the *cube* of their heights. While their muscular power may surely be taken as proportionate to the area of the similar cross sections of corresponding muscles; and thus proportionate to the *square* of their heights. So that, of 2 cats say, if B be n times higher than A, then it is n^3 times heavier; but has only n^2 times more muscular strength. And is thus really $1/n$ proportionally weaker. For, plainly, during any corresponding exertion, it must move n^3 more weight, with but n^2 more strength.

Alan S. Hawkesworth