

into an air reservoir where aeration will take place and air and water together will be pumped through the pipes to the aquaria, thus differing from the Princeton system where a column of air is forced against the water in the pipes and the water does not enter the pump. The tanks may be converted immediately into fresh-water tanks, whenever this is desired.

THE subjects and dates of the lectures to be delivered before Easter at the Friday evening meetings of the Royal Institution of Great Britain are as follows: January 20, Sir J. Dewar, "Chemical Change at Low Temperatures"; January 27, Professor W. H. Bragg, "Radioactivity as a Kinetic Theory of a Fourth State of Matter"; February 3, Mr. A. E. Shipley, "Grouse Disease"; February 10, Mr. S. Colvin, "Stevenson"; February 17, Professor H. E. Armstrong, "Digestive Activity"; February 24, Professor Jean Perrin, "Mouvement Brownien et Réalité Moléculaire" (in French); March 3, Professor Karl Pearson, "The Inadequacy of Causation in Modern Science"; March 17, Mr. J. H. Balfour-Browne, K.C., "Water Supply"; March 24, Sir D. Gill, "The Sidereal Universe"; March 31, Professor H. S. Heleshaw, "Traveling at High Speeds on the Surface of the Earth and Above It"; April 7, Sir J. J. Thomson, "A New Method of Chemical Analysis." A course of Christmas lectures on "Sound: Musical and Non-musical" will be given by Professor Silvanus P. Thompson in the afternoons of December 29 and 31 and January 3, 5, 7 and 10.

UNIVERSITY AND EDUCATIONAL NEWS

COMMEMORATIVE exercises in celebration of the completion of the first twenty-five years of the work of the Carnegie Laboratory of New York University, and of the opening of the Carnegie laboratory extension, will be held on the afternoon of January 10. Addresses will be made by Mr. Andrew Carnegie, Dr. William H. Welch, Dr. Henry S. Pritchett, Dr. Hermann M. Biggs and Mr. Jerome D. Greene.

THE fifth congress of the American School Hygiene Association will be held at the Acad-

emy of Medicine in New York City on the second, third and fourth of February. A tentative program includes papers by Lyman A. Best, William H. Allen, Dr. S. W. Newmayer, Dr. Myles Standish, Dr. Woods Hutchinson, Dr. Thomas F. Harrington, Dr. W. S. Cornell, W. E. Watt, Dr. Arthur T. Cabot, Dr. Luther H. Gulick, Leonard P. Ayres, Dr. Helen MacMurchy, Professor William H. Burnham and Dr. John J. Croner.

DURING the thanksgiving recess at the University of Illinois, a party of electrical engineering students and of architectural students took a trip of inspection to various points in the vicinity which are of especial interest to engineers. The electrical students visited the Quarry Street power station, the steel works at Gary and the works of the Allis-Chalmers Company at Milwaukee. The architectural students visited various buildings in Chicago and inspected the plant of the Northwestern Terra Cotta and Tile Company.

Professor C. S. Sherrington, F.R.S., of Liverpool, and Dr. William Bulloch, director of the Bacteriological Laboratory of the London Hospital Medical School, were appointed members of the advisory board of the Beit Memorial Fellowships for Medical Research. The next election of fellows will be held in December, 1911. The last date for receiving applications from the colonies and abroad is October 1, 1911, from Great Britain and Ireland November 1, 1911. Communications should be addressed to the Hon. Secretary, Beit Memorial Fellowships for Medical Research, 35, Clarges Street, London, W.

IN behalf of a donor who withholds his name, Mr. George L. Rives, chairman of the trustees of Columbia University, and Mr. Robert W. DeForest, president of the board of managers of the Presbyterian Hospital, announce that \$1,300,000 has been pledged for the perfection of an affiliation between the hospital and the College of Physicians and Surgeons of the University. The gift comes through Mr. Edward S. Harkness, of New York and Cleveland, who gives \$300,000 for a surgical pavilion and a laboratory for research work. Several conditions are named, the two

most important being: (1) That the hospital shall admit to the wards students of the medical schools to the extent and in the manner permitted by the most approved practise. (2) That the educational institution concerned may make nominations to all positions on the hospital staff, medical, surgical and special.

THE completion of the fund of \$750,000 for the Johns Hopkins University is announced. This insures the payment to the fund of a further \$250,000 offered conditionally in February of last year by the General Education Board.

By the will of Mrs. Martin Kellogg, Yale University receives a bequest of \$50,000 from the estate of the late Martin Kellogg, who was formerly president of the University of California.

MR. H. J. PRIESTLEY, M.A., assistant lecturer in mathematics at the University of Manchester, has been appointed professor of mathematics and physics in the newly-constituted University of Queensland.

DISCUSSION AND CORRESPONDENCE

SYMBOLS IN ZOOLOGICAL NOMENCLATURE

PROFESSOR NEEDHAM'S proposal¹ of a plan for practical nomenclature deserves more attention than has yet been given it publicly. To be sure, our energetic friend Professor Cockerell has published a brief destructive critique² based on personal opinion as to what can be most easily retained by the memory, and on sentiment. As to the former, one might differ from him in individual cases, or might justly observe that memory is not the only factor involved in Professor Needham's proposal. So far as sentiment goes the incongruity and falsity of many names will make as good an argument on the other side of the question, while the colorless number adapts itself far better to changing interpretations with the progress of science than any word with its fixed relation to ideas. Nor can I believe that it is any part of scientific

nomenclature to "call up pleasanter [philological] thoughts." It certainly is worth while to have the great names of the past brought to our attention, but such men are in our thoughts constantly not because they have named a few species more or less, but because they have made real contributions to the progress of science. And what shall one say of the constant burdensome recurrence in systematic work of the names of the unknown, of those who have torn down the good work of their associates and have left the roadway of science rocky with synonyms, errors in determination and description, false statements and careless records, misspellings and misquotations. It is these rocks in the way that make the pilgrim to-day toil wearily up the height more conscious of the obstacles such men have left than of the substantial roadway the real workers have constructed.

But to my mind all of this fails to reach the heart of the problem or in any way to affect the fundamental contentions urged by Professor Needham. For this reason I am anxious to aid if possible in directing attention to the real questions at issue and the probable lines for their successful solution.

The history of all science shows intercurrent tendencies towards simplification and complication. The data already established are reduced to greater simplicity in expression and the new relations that are demonstrated involve them at the same time in constantly increasing complexity. That simplification in terminology is a real tendency is apparent to every one who studies the history of zoology and compares the long and involved circumlocutions of early writers with the more precise designations of to-day. Hand in hand with this simplification in form goes a movement towards standardization in use and meaning which finds its expression in modern terminology. The term becomes more precise as it becomes more limited and because its use is limited.

The history of zoology does not in this respect differ from the past of other sciences and yet the comparison shows that some other sciences have progressed further along this

¹ SCIENCE, September 2, 1910, pp. 295-300.

² SCIENCE, September 30, 1910, p. 428.