

read before the Engineers' Club of Philadelphia, December 4, 1897, and now in type. The method adopted is described and the statement above confirmed. As the English editor says, after reading it and frankly admitting its truth: "It is the old story of Columbus's egg; the thing is very simple when you know how to do it, and American engineers deserve credit for knowing how."

MR. J. G. JACK is conducting a series of lectures and field meetings at the Arnold Arboretum, Jamaica Plains, during May and June, for the purpose of supplying popular instruction about the trees and shrubs which grow in New England. The lectures are held on Saturday mornings at ten o'clock and on Wednesday afternoons at three o'clock, beginning on Saturday, May 7th, and closing June 25th. The class assembles each day in the lecture-room of the Bussey Institution, where a review is given of certain groups of trees and shrubs. It then adjourns to the Arboretum for an informal out-door study of the plants.

THE bill before the Massachusetts Legislature for the promotion of anatomical science, a measure amending the present law relative to the disposal of bodies for dissection, so that the four leading colleges of the State shall have the bodies of paupers from State institutions, unless the pauper requests an ordinary burial, during his last illness, or the same request is made by one of his friends, has been ordered for a third reading by a vote of eighty-three to forty.

THE Governor of Hong Kong has reported to the Secretary of State for the Colonies that there have been 609 cases of plague in that colony during the current year. The return is complete up to April 25th, and in the last week which it embraces there were 127 cases, or over one-fifth of the total for the four months. Cultures of bacilli from suspicious cases of illness in Calcutta have been sent to Bombay to be subjected to Professor Haffkine's examination and have been pronounced to be those of true bubonic plague.

It is stated in *Nature* that the Liverpool Marine Biology Committee's Easter party, at the Port Erin Biological Station, included Mr.

Isaac C. Thompson, Mr. Frank J. Cole, Mr. R. A. Dawson, Mr. H. C. Chadwick, Professor Herdman, and several students from University College, Liverpool. The Lancashire Sea Fisheries steamer is also at Port Erin, and several dredging and trawling expeditions are taking place. Spawn of several fishes has been obtained and fertilized, and is now developing in the tanks. Under the care of Mr. Chadwick, Curator of the Station, the aquarium is in a flourishing condition, and contains a number of interesting animals, some of which are spawning. A recent addition to the laboratory accommodation at the Station has been completed, which gives five additional work windows for students, so that there is now plenty of room for other workers.

THE will of the late Mr. Oliver A. Judson, of Philadelphia, has bequeathed to the College of Physicians of that city \$1,000, the interest, whenever it amounts to \$100, to be offered as a prize for the best original essay on 'The Practical Prevention of Disease.' The essay must be written in English, but the competition is open to foreigners.

MR. BERNARD QUARITCH, London, offers for sale a complete set of the transactions of the Zoological Society, London, beginning in 1833, for £52 10s. The set is very rare and being sold much below the cost of publication would be a valuable addition to many American libraries. A copy of the first edition of Izaak Walton's *Compleat Angler* was sold recently in New York for \$240.

THE arrangements for laying the cable from Iceland by way of the Farøe Islands have been completed, and the cable will be laid during the summer.

#### UNIVERSITY AND EDUCATIONAL NEWS.

OWING to demonstrations upon the part of the students, the Universities of Naples, Bologna and Rome have been closed.

THE next meeting of the Association of Colleges and Preparatory Schools of the Middle States and Maryland will be held at Columbia University, New York City, N. Y., on Friday and Saturday November 25 and 26, 1898.

PLANS have been completed for a new build-

ing for the Jefferson Medical College, of Philadelphia, which will be erected at the corner of Walnut and 10th streets, occupying a space of 118 feet by 107 feet. It appears, from the plans, that very complete arrangements have been made for laboratories, lecture rooms and dissecting rooms.

A DONOR, whose name is withheld, has subscribed \$25,000 for Barnard College in case the \$100,000 needed to liquidate the debt on the College is subscribed by October 3d. \$23,000 had previously been subscribed.

PROFESSOR JAMES SETH, who now holds the chair of moral philosophy at Cornell University, has been elected professor of moral philosophy in the University of Edinburgh, to fill the chair vacant by the death of Professor Calderwood.

DR. CHARLES H. JUDD, Wesleyan University, has been called to a chair of psychology in New York University.

#### DISCUSSION AND CORRESPONDENCE.

##### REMARKS ON THE METHOD OF THE 'NEW PSYCHOLOGY' WITH MEMORY.

TO THE EDITOR OF SCIENCE: Dr. Scripture's 'The New Psychology' is an interesting and useful résumé of the results of a certain order of investigation whose value and significance seems at present, however, debatable. The author wishes, and wishes rightly, to reduce psychology to an exact science, but does not science mean a complete and special investigation of the circumstances affecting any phenomenon? Take thus the phenomenon of memory: Does not a scientific study of it require a thorough and special investigation of all factors psychical that affect it, to show their interrelation, and by isolation to show their relative values? Is not this method required of the biologist who studies the phenomenon of cross-fertilization or of the physicist who studies crystallization, and shall we be less rigid for the psychologist who studies memory? Now Mr. Scripture starts out with the assumption that a memory is a function of one element, physical time, and interprets wholly by this factor, lumping all other elements under a mere general reference to 'circumstances' and the 'individual.' It is not to be denied that

physical time by pendulum beats has some relation to memory, but Mr. Scripture certainly fails to make clear that he has isolated this phenomenon, which is, moreover, of minor importance. Memory is far more a function of interest than of time, either physical or psychological. For instance, in the experiment detailed (p. 189) the matter of seconds and minutes is not the main determinant of decreasing memory with the experimenter. On the contrary, interest, his interest in accuracy, in success, etc., is the main factor to be investigated, and to study memory without definitely studying interest is like testing speed of locomotives without reference to motive power. That a locomotive moves at certain reduced velocities after certain lapses of time does not imply that time *per se* has reduced velocity in given ratio, but that this ratio is dependent on the initial head of steam, lubricity of parts, etc. Now the motive power of memory is interest, and mere lapse of time operates mainly, at least, merely as allowing room for conflicting interest. It is plain that if in the experiment referred to the agent was influenced by life and death motive, or even by some greatly desired prize, the memory power would be indefinitely strengthened. What very intensely interests us we always remember, and often with increasing vividness, for memories becoming cumulative in effect may reinforce each other so as to more than offset lapse of time. We also note that the aged man recalls the scenes of youth much more accurately and freshly than when he was middle aged. We know also that interest quite reverses the time law in the case of one who after some years absence returns to his former dwelling place, when events and places concerned with his life some time before his absence are recalled with accuracy far greater than if he had had continued residence.

It is certainly very desirable that we should attain to some scientific understanding of the relation of interest to memory, but first we must devise some method of measuring interest. But any real science of memory cannot neglect that by which memory has been originated and developed, namely, interest.

But the whole standpoint of 'the New Psy-