

noon session will be devoted to "The Relation of Education to Industrial Efficiency" and "The Effect of Inheritance and Income Taxes on the Distribution of Wealth." The concluding session on December 31 will be a joint meeting with the American Sociological Society on "The Public Regulation of Wages."

At a meeting of Yale University men interested in engineering at the Yale Club, on December 4, a constitution was adopted forming a Yale Engineering Association. Discussion of this project has been under way for a year, and a committee, consisting of E. G. Williams, '87S.; Calvert Townley, '86S.; Bradley Stoughton, '93S.; W. C. Tucker, '88S., and Professor L. P. Breckenridge, '81S., of the Scientific School, has been at work drawing up the organization papers. The main purpose of the association will be "to advance the interests of engineering education at Yale and to promote the better acquaintance and fellowship of Yale engineers."

THE *Bulletin* of the American Geographical Society states that for two years past the Department of Historical Research at the Carnegie Institution has given a considerable amount of time to planning an atlas of the historical geography of the United States and collecting materials for its construction. Several specialists, including Professor Frank H. Hodder, of the University of Kansas; Professor O. G. Libby, of the University of North Dakota; Professor Max Farrand, of Yale University, and Professor Jesse S. Reeves, of the University of Michigan, each proficient in one or more subjects to be covered by the atlas, have been called to Washington to conduct investigations for the proposed work. The department of historical research wishes to make the atlas of the greatest possible use to the teachers and writers of American history and is seeking all the helpful cooperation that can be secured. According to present plans the completed atlas, exclusive of text, will contain 200 pages measuring about 22 by 14 inches. The largest maps will be approximately full-page maps, many others will be about one fourth that size and many still smaller. The area covered will be generally

the whole or a part of continental United States. It may occasionally be found desirable, however, to represent our detached possessions, adjacent parts of Canada and Mexico, the West Indies and parts of the north Atlantic and north Pacific oceans. Excepting maps illustrating the geology of the country and its early aborigines, all the maps will fall within the period from the discovery of America in 1492 to the present time. The general headings are expected to include physical geography, aborigines, early maps of America, routes of explorers and colonizers, boundaries and divisions, industrial and social maps, and political, city and military maps. A considerable portion of the atlas will be devoted to political statistics, which will be treated somewhat after the method of Professor Turner and his students. It is to be hoped that the specialists in charge will have all the collaboration that can add to the value of the proposed atlas.

A CONFERENCE of Pacific coast horticulturists was called by Governor West, of Oregon, to meet at the Agricultural College early in December to secure better and uniform fruit inspection throughout the western fruit-growing states. After hearing reports and recommendations from the horticultural commissioners of Oregon, California and Washington, a joint committee of producers and distributors was appointed to prepare a bill embodying the features endorsed by the conference, to be presented to the state legislatures with the recommendation that it be enacted into law. The joint committee called in as advisory members Professor H. F. Wilson and Professor H. S. Jackson, entomologist and plant pathologist, respectively, of the Oregon Station. The measure as framed by the committee provides effective inspection both within the states and from other states, with as little restriction as is consistent with efficiency. The ultimate aim of the conference is to secure uniform horticultural laws throughout the entire country.

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#### UNIVERSITY AND EDUCATIONAL NEWS

Two gifts of \$100,000 each for the development of a graduate course in preparation for

business and business administration at the Sheffield Scientific School of Yale University, are announced. The donors are Frederick W. Vanderbilt, of the class of 1876, S., and a graduate of the class of 1887, S., whose name is not made public. The new course will be for one year, and, if possible, two years. It is expected that it will be open to students at the beginning of the next academic year.

A GIFT of \$10,000 to Smith College has been made by Mr. and Mrs. A. J. White, of Brooklyn. Half of the money is to be applied toward payment for recent improvements on the Lyman Plant House. The remainder will constitute a permanent endowment fund for repairs to the house, purchase of new materials, and encouragement of botanical study.

A BEQUEST of \$10,000 to St. Lawrence University at Canton, N. Y., is made under the will of Mrs. Kate A. L. Chapin, of Meriden, Conn.

At its last session, the council of the Université de Paris unanimously resolved that Belgian students who before the war had been matriculated in one of the universities of their own country might become matriculated in the schools of the Université de Paris without having to pay the matriculation, inscription and library fees. Young Belgians from the Belgian establishments of secondary education will likewise be received if they fulfill the conditions exacted by the Belgian universities. In default of diplomas and certificates, the young people may prove their qualifications by such means as are possible, for instance, certificates of French or Belgian diplomatic or consular agents.

PROFESSOR and Mrs. Frederic S. Lee have given to Columbia University the sum of \$20,000 to establish a fund for the use of the department of physiology. It is intended that for the present the income shall be used for the maintenance of the library of the department. The university is about to acquire the valuable collection of books belonging to the late Professor John G. Curtis and consisting of ancient and medieval works on the history of physiology.

DR. ROBERT BENNETT BEAN, of the department of anatomy in Tulane University, has been advanced from the rank of associate professor of anatomy to that of professor of gross anatomy in the department of anatomy, and Dr. Sidney S. Schochet and Mr. Charles W. Barrier have been appointed instructors in anatomy.

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## DISCUSSION AND CORRESPONDENCE

### TEACHING AND RESEARCH

THE suggestive article by Professor Cattell in *SCIENCE* of October 30, p. 628, leads me to offer a few observations growing out of my own experience. One who is wholly a teacher tends to organize his work on a more or less permanent basis, with definite limitations. If he possesses good natural ability, he becomes very efficient, teaching clearly and logically what appear to him to be the more important things. He tends more and more to fixed opinions, and to arbitrary divisions between the things which should be known and those which need not be known. Such a man will be tremendously indignant because *X* does not know *a*, but feel no shame on account of his own ignorance of the analogous facts *b*, *c*, etc.

One who is primarily interested in research finds his mind much occupied with various trains of thought, and his interest tends to center about *uncertainties* rather than *certainities*. Even as he teaches, things assume new aspects to his mind. Much has been made of the saying that Kelvin made discoveries while lecturing, but (in a small way) this is probably a common experience.

The teacher who does no research tends to become increasingly confident of his own knowledge, and conveys this feeling to his class. One who is primarily an investigator, unless he works in a very small field which he has thoroughly in hand, is continually reminded of his own limitations and of the vastness of the unknown. He is humbled by the mistakes he can not help making, and feels and appears more ignorant.