

gation of the lumber needs of the warring nations for reconstruction purposes. Early in May, the trade commissioners met at Washington for the purpose of organization. There they gathered data concerning tariffs, freight rates, probable future shipping facilities and other information bearing on the matter of lumber exports after peace has been declared. They will spend two or three months in visiting lumber-producing centers in this country, interviewing lumbermen. This preliminary work will be for the purpose of obtaining exact knowledge as to how much lumber the European countries now at war can purchase here and in what particular markets. Professor Brown and his associates expect to sail for Europe in August or September.

THE Johns Hopkins *Alumni News* states that it has lately become known that two of the most successful devices introduced by the allies in the present war are due to Dr. Robert W. Wood, professor of experimental physics. They are the lachrymose or "tear" gas, used to render the enemy temporarily blind, and a photographic screen of a special type, which is especially well suited to the requirements of modern warfare. Dr. Wood sent the formula for the former to a friend in Paris soon after the outbreak of the war. Several weeks after submitting his plan, Dr. Wood received word that it had been turned over to the proper authorities. Nothing was done, however, until three months later when the Germans began the use of poisonous gases; since then the tear gas proposed by Dr. Wood has been used on both sides. The gas has a powerful effect on the eyes, the slightest trace closing them and starting the tears. It is benzyl-bromide, or choracetone, vapor and produces temporary blindness but not permanent injury. Its use was in no way a violation of The Hague conventions or the usages of civilization. It was Dr. Wood's idea that the gas might be used in a single great drive, being released over the whole battle front simultaneously. The other of Professor Wood's inventions being used extensively in the fighting on the west front is the infra-red screen for the panchromatic plates for photography. By the use of the screen the Allied airmen are enabled

to obtain accurate photographs of the enemy's position, batteries, etc., right through the thick pall of smoke which hides them from view.

UNIVERSITY AND EDUCATIONAL NEWS

YALE UNIVERSITY has received from Mrs. Edward H. Harriman, of New York, bonds yielding \$4,600 a year for the purpose of establishing the Harriman Fund for Orthopedics.

THE late J. T. Apperson, member of the board of regents of the Oregon Agricultural College since its founding and at one time president of the board, left the residue of his estate to the trustees of the college as a permanent loan fund to worthy students who make their own way through school. The benefaction will amount to from \$25,000 to \$40,000, and will be invested by the State Land Board.

THE new building of the dental school of Western Reserve University is nearing completion and will be occupied in the fall of 1917. The building is situated alongside the university campus and near the site for the new medical school plant. The dental school, formerly affiliated, is now an integral department of the university. An extensive revision of the curriculum and an increase in entrance requirements are contemplated.

SIR CHARLES HOLCROFT bequeathed to the University of Birmingham the sum of £5,000 for research work in science. Sir Charles Holcroft contributed, during his lifetime, about £100,000 to the university.

THE board of trustees of the Long Island College Hospital announces the appointment of Dr. James C. Egbert, director of extension teaching, Columbia University, as president of the medical college. Dr. Otto V. Huffman has been appointed dean; Dr. Wade W. Oliver, formerly of the University of Cincinnati, has been called to the chair of bacteriology and Dr. Carl H. Laws, formerly of the department of pediatrics in the University of Michigan, has been appointed professor of pediatrics.

DR. J. BRONSENBRENNER has resigned the position of director of research laboratories of the Western Pennsylvania Hospital in Pittsburgh to accept the appointment of associate

professor in the department of hygiene at the Harvard Medical School.

DR. GEORGE D. LOUDERBACK has been advanced from associate professor to professor of geology at the University of California.

PROFESSOR D. L. CRAWFORD, of Pomona College, Claremont, Cal., has been appointed professor of entomology in the College of Hawaii, Honolulu, for a term of three years, beginning in September, 1917.

DISCUSSION AND CORRESPONDENCE

A TOPOGRAPHIC MAP OF WISCONSIN

THE movement to expedite the completion of the topographic map of the United States by the U. S. Geological Survey, of which some account was given in *SCIENCE* a year ago, is to-day greatly promoted by the increased interest in topographic preparedness on the part of army officers. Doubtless at their instance the sum of \$200,000, in addition to the usual large appropriation for topographic maps under the Geological Survey, has lately been voted by Congress to be expended for geodetic and topographic surveys at the discretion of the Secretary of War. Members of the Coast and Geodetic Survey and of the Geological Survey have already taken the field, chiefly in the Southern States, in areas designated by the war department, and a much desired increase in topographic output will be the result. It is interesting to note in this connection that, although the additional sum thus appropriated is spent under military direction, the work for which the sum is spent is performed by the experts of the two civilian surveys, who are all listed in the reserve corps.

In the meantime the civil uses of topographic maps must not be forgotten, and among these the educational uses are by no means the least important. An excellent statement of them follows with respect to the needs of a single state in a letter by Professor Lawrence Martin, of the University of Wisconsin, to the state engineer at Madison. Educators and engineers elsewhere would do well to organize a similar movement for promoting the topographic survey of their states also.

W. M. DAVIS

LETTER, DATED MAY, 1917, FROM PROFESSOR LAWRENCE MARTIN, OF THE UNIVERSITY OF WISCONSIN, TO THE STATE ENGINEER
AT MADISON

My Dear Sir: In support of the proposed state appropriation for topographic maps I am writing to explain the need of these maps for educational purposes. This is only one of the many uses for which I regard these maps as desirable, but it is the one to which I am giving especial attention as a member of our committee.

Topographic maps are an admitted need for school and college use, as explained later. Let us compare Wisconsin with Ohio, states not dissimilar in area, topography and educational system. We are proposing to ask the legislature for \$20,000 a year for twenty years to complete the topographic map of Wisconsin in the next two decades. Twenty years ago there was not a single topographic map of any part of Ohio. Mapping was started nineteen years ago, and to-day the topographic maps cover the entire state. Every college, normal school, high school, grade school and other educational institution in Ohio has a topographic map of the home area for use by its students.

Twenty years ago Wisconsin had twenty-seven topographic maps. In these two decades we have added seventeen maps, while Ohio has added more than two hundred.

The states of Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Maryland and West Virginia are completely mapped. More than half of Kansas, Oklahoma, Utah, Arizona, California, Vermont, Virginia, Colorado, Tennessee and Pennsylvania are covered by topographic sheets. Only about a fifth of Wisconsin is mapped.

There are 413,000 school children in Wisconsin who live outside the area covered by topographic maps. Five of our nine normal schools have no topographic maps of their home area. Twenty-two of the county training schools for teachers and the county schools of agriculture are outside the mapped area. For fourteen of the cities which maintain continuation schools there are no maps. There is no topographic map covering the area about the Stout Institute at Menomonie. There are none for the colleges at Appleton (Lawrence University), at Plymouth (Mission House College), at Ashland (Northland College), at Beaver Dam (Wayland Academy), or for a number of the Catholic colleges and some of the private schools. There are no maps for the Indian schools near