

SCIENTIFIC EVENTS

THE ASPHALT INDUSTRY IN 1917

THE war has stimulated activity in the domestic markets for asphaltic material derived from crude petroleum and for imported asphalt, but the relative abundance and adaptability of those materials has lessened the demand for the native bitumens and for the various types of bituminous rock produced in this country, according to statistics just completed under the supervision of J. D. Northrop, of the United States Geological Survey, Department of the Interior.

The native bitumen, including maltha, gilsonite, elaterite and grahamite, bituminous rock and ozokerite, marketed from mines and quarries in the United States in 1917 was 80,904 short tons, a loss of 17,573 tons, or 18 per cent., compared with 1916. The market value of the output in 1917 was \$735,924, a loss of \$187,357, or 20 per cent., compared with 1916.

The production of gilsonite, bituminous sandstone, bituminous (elaterite) shale, and ozokerite was increased considerably in 1917, but the gain credited to these varieties was insufficient to offset the loss in the production of elaterite, grahamite and bituminous limestone.

The quantity of manufactured asphalt (including road oils and flux) produced in 1917 from petroleum of domestic origin increased about 2 per cent. compared with 1916, and the quantity of corresponding material manufactured in this country from Mexican petroleum increased about 13 per cent., as a consequence of which the net gain over the production in 1916 was nearly 7 per cent.

The total sales in 1917 of manufactured asphalt derived from domestic petroleum amounted to 701,809 short tons, valued at \$7,734,691. This total includes 327,142 tons, valued at \$4,011,980, of solid and semisolid products used in the paving and roofing industries, and 374,667 tons, valued at \$3,722,711, of liquid products, including road oils, flux and asphaltic paints.

California maintained its supremacy in the production of oil asphalt. Its output from 14 petroleum refineries in 1917 aggregated 220,-

294 tons, valued at \$2,100,252, and included 135,160 tons of solid and semisolid products, valued at \$1,486,609, and 85,134 tons of liquid products, valued at \$613,643. Refiners handling oil from the Oklahoma-Kansas field produced 206,223 tons of oil asphalt, valued at \$1,957,493, including 73,410 tons of solid and semisolid products, valued at \$747,651, and 132,813 tons of liquid products, valued at \$1,227,842.

The total sales in 1917 of manufactured asphalt derived from Mexican petroleum amounted to 645,613 short tons, valued at \$7,441,813, and included 338,485 tons of solid and semisolid products, valued at \$4,657,152, and 307,128 tons of liquid products, valued at \$2,784,661.

The imports of native asphalt, oil asphalt, and bituminous rock for consumption in the United States in 1916 aggregated 187,886 short tons, valued at \$993,115, a gain in quantity of 40,173 tons, or 28 per cent., over 1916. The exports of unmanufactured asphalt in 1917 amounted to 30,107 short tons, valued at \$587,256, a loss of 10,709 tons, or 35 per cent., compared with 1916. In addition asphalt products to the value of \$585,472, compared with \$494,895 in 1916, were exported in 1917.

TRAINING CAMPS FOR INSTRUCTORS TO PREPARE COLLEGE MEN FOR MILITARY SERVICE

THE War Department authorizes the following statement from the Adjutant General's office.

Training camps to fit men to act as assistant instructors in the new Students' Training Corps will be held at Plattsburg, N. Y., Fort Sheridan and Presidio, Calif., from July 18 to September 16. Colleges have been invited to send a limited number of picked students and members of the faculties to these camps.

The camps will be conducted with a view to teaching the attendants to give military instruction to students, and it is believed that satisfactory results can be obtained from an intensive 60-day course.

Further instructions relative to the new corps have just been issued. These are being sent to all colleges that have signified their

willingness to establish corps among their students.

The purpose of the new plan, as shown in the new instructions, is to develop as a great military asset the large body of young men in the colleges. This will be accomplished by providing efficient military instruction under the supervision of the War Department for students in all colleges enrolling the required minimum of students. In order to receive this instruction, all students over eighteen years of age must volunteer and enlist in the army of the United States.

Only colleges which can provide an enrollment of 100 or more able-bodied students over eighteen years will be entitled to the course. The intention is to extend the system of instruction for college students to the largest practicable extent in view of the available supply of officers and equipment. To be classified as one of the institutions of college grade to which the privilege of maintaining a Students' Army Training Corps unit is extended, an institution must require for admission to its regular curricula graduation from a standard secondary school or an equivalent; must provide general collegiate or professional curricula covering at least two years of not less than 33 weeks each; and must be carried in the lists of higher institutions prepared by the United States Commissioner of Education.

Institutions of college grade will include, providing all other conditions are met: Colleges of arts and sciences; engineering schools; schools of mines; agricultural colleges; colleges of pharmacy, veterinary, medicine; teachers' colleges, and law, medical, dental, graduate and normal schools; junior colleges and technical institutions. Students enrolled in preparatory departments of these schools and colleges can not at present be considered eligible for enlistment in the units, and such students can not be counted by college authorities in reckoning the 100 able-bodied students for a military training unit.

The character of the training will depend on the kind of training unit which is organized in the particular institution. The standard time to be allotted to military work will be 10 hours

per week during the college year supplemented by six weeks of intensive training in a summer camp. The 10 hours a week will not involve the hours of outdoor work in drill.

The summer camps will be an important feature of the system. These will be active for six weeks, and there will be an intensive and rigid course of instruction under experienced officers.

The plan will provide approximately 650 hours of military work per annum. It is expected that this will qualify a considerable percentage of the students to enter officers' training camps on being called to the colors, and a large percentage of the remainder to serve as noncommissioned officers.

Officer instructors and noncommissioned officer instructors will be provided by the War Department when available. Officers returning from overseas and unfit for further field service will be utilized. The government will supply the uniforms and equipment whenever available.

The Students' Army Training Corps will be supervised and controlled by the training and instruction branch, war plans division of the General Staff, in accordance with the instructions of the Chief of Staff. An advisory board to this committee, representing educational interests, has already been appointed by the Secretary of War. This will insure the closest cooperation between the War Department and the colleges.

GUARDING SOLDIERS' CAMPS AGAINST FLIES AND MOSQUITOES

THE following statement is authorized by the War Department from the Surgeon General's office:

To guard troops stationed in camps and cantonments from disease carried by mosquitoes and flies, the medical department of the Army has installed a system of prevention which is safeguarding not only the soldiers but also civilians living in the neighborhood of training camps.

There is attached to each camp a division surgeon who is responsible for the health of the camp. Assisting him is a sanitary inspector who has the assistance of a sanitary