ment. All present agreed that the disease is the most serious one known to the rubber industry, that treatment alone was too expensive, and that methods of prevention should be discovered if possible.

Later at a special meeting an experiment was planned by Messrs. Rands, Maas, Keuchenius and La Rue to test more fully whether or not the disease may have a physiological cause. After visiting a number of rubber estates on the east coast of Sumatra and in Atjeh, Drs. van Hall and Rands returned to Java.

The first technical meeting of the personnel of the experiment stations for the rubber culture was held in Buitenzorg, Java, on November 1, 1919. Representatives of the Central Rubber Proefstation, the West-Java Proefstation, the Malang Proefstation, the Besoeki Proefstation, the Laboratorium voor Plantenziekten, and the research department of the Holland Plantations Company.

Among the subjects discussed were brown bast disease, mildew-diseases of leaves, borers, thinning out of trees on estates, and selection. The last topic is only now beginning to be a matter of concern to rubber planters, although experiment station workers have been interested in it for several years.

EXPERIMENT STATIONS OF THE BUREAU OF MINES

IN connection with the work of the Bureau of Mines, Department of the Interior, the bureau is now conducting eleven mining experiment stations, located in the various mining centers of the country, and bending their energies toward the special mining problems that are local to their part of the country. So great has been the demand for knowledge concerning the character of the work undertaken at these various mining stations and its general relation to the mining industry, the bureau has issued a bulletin describing the work of the stations. Dr. Van H. Manning, director of the bureau, sketches the work of the different stations as follows:

The station at Columbus, Ohio, situated at a clay-working center is employed mostly on ceramic problems. In this country there are about 4,000 firms manufacturing clay products, including brick, tile, sewer pipe, conduits, hollow blocks, architectural terra cotta, porcelain, earthenware, china and art pottery. The amount invested in these industries is approximately $375,000,000 and the value of the products exceeds $208,000,000 annually.

The station at Bartlesville, Okla., is investigating problems that arise in the proper utilization of oil and gas resources, such as elimination of waste of oil and natural gas, improvements in drilling and casing wells, prevention of water troubles at wells, and of waste in storing and refining petroleum, and the recovery of gasoline from natural gas.

What the Bureau of Mines has done for the great coal-mining industry, chiefly through investigations at the experiment station at Pittsburgh, Pa., has been published in numerous reports issued by the bureau. Some of the more important accomplishments have been the development and introduction of permissible explosives for use in gaseous mines, the training of thousands of coal miners in mine-rescue and first-aid work, and the conducting of combustion investigations, aimed at increased efficiency in the burning of coal and the effective utilization of our vast deposits of lignite and low-grade coal.

The Salt Lake City station has devised novel methods of treating certain low-grade and complex ores of lead and zinc. These methods show a large saving of metal over methods hitherto employed, and have made available ores that other methods could not treat profitably.

The Seattle station is busy with the beneficiation of the low-grade ores of the Northwest, and the mining and utilization of the coals of the Pacific states; the Tucson station is working on the beneficiation of low-grade copper ores; and the Berkeley station has shown how losses may be reduced at quicksilver plants and how methods at those plants can be improved.

In the conduct of these investigations the bureau seeks and is obtaining the cooperation of the mine operators. At more than a dozen mills in the west engineers from the stations are working directly with the mill men on various problems, and the results they already have obtained more than warrant the existence of the stations. Success in solving one problem may easily be worth millions to the country. Mining men are using these stations more and more freely as they realize that the government maintains these stations to help them, and that the difficulties of the operators, both large and small, will receive sympathetic consideration and such aid as the stations can give.

GRANTS FOR RESEARCH OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

AT the St. Louis meeting of the association, the council assigned the sum of $4,500 to be expended by the Committee on Grants for