



INTRICATE WEAVING—This machine takes miles of cotton cord from scores of spools and weaves it into a jacket for a fire hose. If laid in a straight line, the cord in a 50-foot section of this jacket would extend 10 miles.

cer Institute funds will go to dental schools. The first signs of cancer in the mouth may often be detected by the dentist when he examines a patient's teeth. The grants to the dental schools will help more dentists learn to recognize cancer in its early, curable stage.

Mice play an essential part in the fight against cancer because in their small bodies and short lifespans scientists learn much that helps human can-

cer patients. One of the world's biggest and most important centers for breeding pedigreed mice was destroyed, with almost 100,000 mice, when the Jackson Memorial Laboratory at Bar Harbor, Me., was burned in a forest fire this fall. For rebuilding the institution and overcoming as fast as possible the bottleneck in cancer research caused by the destruction of the mice, the council has granted \$250,000.

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GENERAL SCIENCE

Industry's Support Needed

Basic research and science education should not be left to government financing for it might mean political control, according to George A. Sloan.

► **INDUSTRY** was challenged to provide major support of scientific research and higher education or suffer the consequences of a decline of the basic new knowledge and manpower upon which its progress is based.

Addressing the New York Academy of Sciences, George A. Sloan, president of the Nutrition Foundation, declared

that if industry does not supply both the push and the money for both basic research and science education, and financing is left to government, "political control may gain a disastrous foothold inside the laboratories where men are and should be simply and sincerely seeking after truth."

Industry's support of scientific investi-

gations will not be closely restricted to the direct interests of industry, Mr. Sloan promised, judging by the experience of the Nutrition Foundation, an organization of large food industries, which spends hundreds of thousands of dollars on fundamental research.

One of the results of this nutrition research has been the appraisal of a new vitamin of the B group that is important in protecting against anemia.

Every discovery of modern science opens many new avenues for continued investigation, Mr. Sloan said, citing "new knowledge which will harness nuclear fission to more productive uses than war."

"Night after night most of us are subjected to the flashings of multitudes of neon signs," he said. "We are apt to consider them as the device of some smart advertising man. We fail to realize that this commercial device is merely the adaptation of scientific studies having to do with the nature of electrical conduction in gases. Had it not been for the basic study of the pressure, volume, temperature relationships of gases, there would be no neon gas available for exploitation.

"The modern vacuum tube is a marvelous device, performing all sorts of services for mankind, contributing in a thousand ways to industrial and social progress. It was perfected by painstaking scientific work in industrial laboratories, but its roots go back to fundamental investigations which were not directed primarily toward commercial application.

"Similarly, our modern systems of mechanical refrigeration owe a great debt to the study of vapor pressure and the long and careful development of the laws of thermodynamics which long preceded the clever adaptations that, in due time, translated these matters into everyday servants."

Science is of political, economic, and social importance due to the fact that it is essential for the prosecution of modern war, Prof. W. A. Noyes, Jr., University of Rochester chemist and past-president of the American Chemical Society, told the Academy.

It is high time that scientists took a greater interest in the cause of peace, Prof. Noyes declared, explaining that UNESCO is the international organization that holds real promise of raising the scientific level throughout the world.

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A railway in Norway now crosses the Arctic Circle,