SCIENTIFIC EVENTS

THE FIRST HIGH-POWERED RADIO STATION WITHOUT STATIC

THE first high-powered radio station without static, employing an improved system of transmission and reception which, if widely adopted, will take the place of radios now in use, will be put into operation next spring, according to an announcement made by Major Edwin H. Armstrong, professor of electrical engineering in Columbia University, who designed and built the broadcasting equipment.

The new system will greatly relieve the danger of the air waves being monopolized, which has given so much concern to the Congress, by making available a service on the ultra-high frequency channels that are comparatively unused at present.

Arrangements have been made with station WQXR for the new station to receive and transmit the programs now broadcast from New York's "High Fidelity" station. John V. Hogan, radio engineer and owner of WQXR, has filed a petition with the Federal Communications Commission for permission to build a frequency modulated station in New York City. The studios and programs of WQXR will be used by W2XMN until such a time as Mr. Hogan's own station is erected.

Construction of frequency modulated receiving sets of the new type, which were at first labeled an "impractical dream" by radio corporations, has already been started on a commercial basis by the General Electric Company. The new sets, when produced on a quantity basis, will cost no more than the ordinary good set of to-day and will be able to receive both the old and the new kinds of broadcasting much the same as sets now receive both the short and long-wave programs. Arrangements are being made for the manufacture and sale of transmitters by the Radio Engineering Laboratories of Long Island City. Patents on the system have been granted to Major Armstrong in the important countries of the world.

The invention was publicly demonstrated before the Institute of Radio Engineers in 1935. At that time a sound reel recording was played comparing the reception during a thunder-storm of the old and new types of broadcasting. The recording was made from broadcasts received at a distance of 85 miles from the 2-kilowatt station in the Empire State Building, using the new method, and from WEAF, a 50-kilowatt station. While WEAF came through strongly, its program was made unintelligible by crashes of static. In contrast, the frequency modulated signals from the Empire State Building provided an uninterrupted, clear program, free from static, despite the fact that its power was only 4 per cent. that of the larger station.

Major Armstrong states that great credit for the development work necessary to perfect the high quality of the transmission must go to John Bose and James Day, two of his assistants. Apparatus for the station was designed in the Hartley research laboratories at Columbia University, where the most delicate parts were made. The remainder of the equipment was constructed at the Radio Engineers Laboratory in Long Island City and the RCA Manufacturing Company of Camden. Major Armstrong paid the highest tribute to the engineering skill of John Evans, of the RCA Company, who designed the high-power equipment and to Perry H. Osborn, who assisted in the construction.

The new station, built at a cost of several hundred thousand dollars, is owned by Major Armstrong. He first started to work on the problem of eliminating static from radio broadcasts in 1914 in collaboration with Professor Michael I. Pupin, after whom the Pupin laboratories at Columbia are named. Both men gave up the problem in 1922, convinced that there was no solution. A year or two later Major Armstrong started to look for a solution from a new angle that eventually led to the present discovery.

GRANTS OF THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

THE National Foundation for Infantile Paralysis has announced grants of $140,990 to universities and hospitals. They are as follows:

For Scientific Research

Department of Internal Medicine, Yale University Medical School, $6,500.

Long Island College of Medicine, Brooklyn, $15,000.

Department of Bacteriology, University of California Medical School, Los Angeles, $5,000.

Department of Bacteriology, University of Southern California Medical School, $10,000.

Department of Bacteriology, Stanford University, California, $12,000.

University of Michigan, Ann Arbor, $2,000.

University of Wisconsin, Medical School, Madison, $3,300.

Department of Bacteriology, Ohio State University, Columbus, $3,060.

Western Reserve University, Cleveland, $4,800.

Washington University, School of Medicine, St. Louis, $6,800.

Grasslands Hospital, Valhalla, N. Y., $7,500.

For Prevention and Treatment of After Effects

Orthopedic Hospital-School, Los Angeles, $7,800.

Children's Hospital-School, Baltimore, $7,500.

St. John's Hospital, Springfield, Ill., $2,500.

Michael Reese Hospital; Samuel Deutsch Serum Center, Chicago, $4,600.