

peater on the coaxial cable, however, amplifies 240 telephone messages rather than a mere dozen.

The coaxial pipe owes its advantages to the fact that it can carry at the same time alternating currents of frequencies ranging from zero up to a million or more cycles per second. Ability to carry hundreds of different currents simultaneously has been translated by the communications engineer into the ability to carry hundreds of messages at the same time.

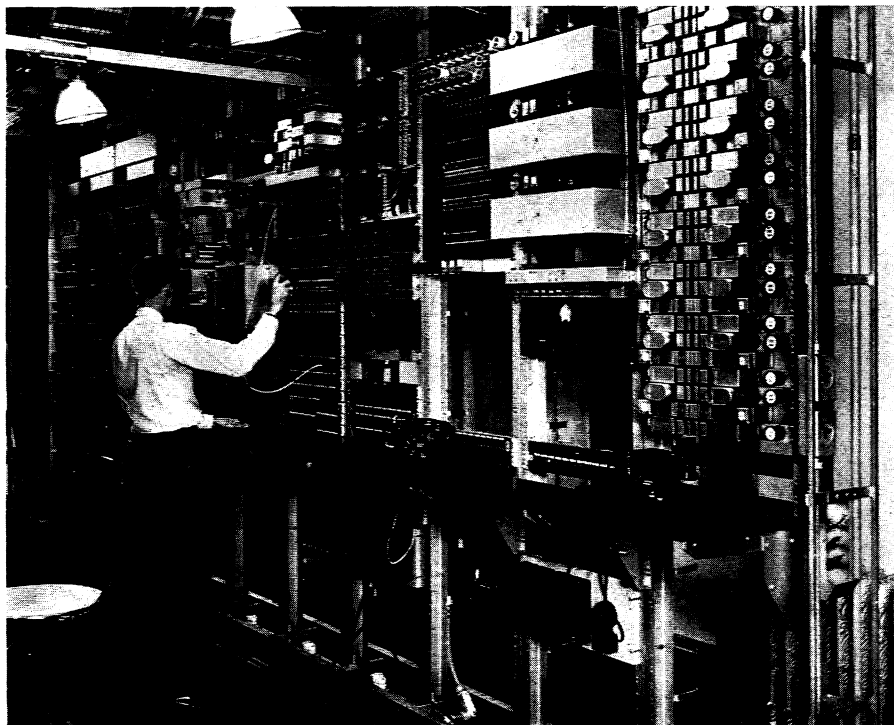
Although neither company is believed to be planning at present a New York to Philadelphia broadcasting hookup, both the Columbia Broadcasting System and the National Broadcasting Company plan to begin regular television broadcasts from New York early in 1938. These experimental "telecasts" will be receivable only in the metropolitan area. Should they expand the service, however, use of the coaxial cable will be required.

The ninety-mile cable between New York and Philadelphia was completed last spring, and preliminary telephone and telegraph transmission tests were then carried out. Terminal difficulties have, however, prevented its use for television purposes until now.

No one engineer, it is believed, can be credited with the development of the coaxial cable. Bell Telephone engineers as a group conducted the experiments leading toward its use.

Machinery for its manufacture was designed by the Western Electric Co., a Bell subsidiary. The installation was carried out by the American Telephone and Telegraph Co.

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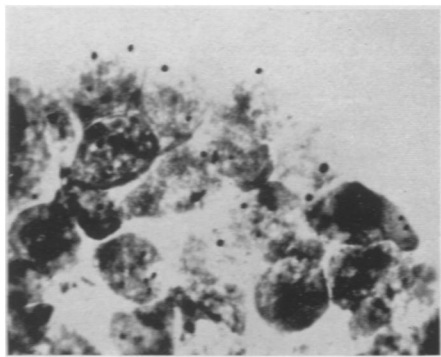
TERMINAL

The Coaxial cable is limited in carrying power only by the nature of the terminal equipment. Here is shown the elaborate apparatus at the Philadelphia terminal.

BACTERIOLOGY

Black Stain Makes Measles Virus Bodies Visible

Discovery Will Make Possible Early Treatment and Isolation of Patients; May Prevent the Epidemics



MEASLES VIRUS BODIES

A black stain shows the measles virus bodies as small dark spots. The large rounded bodies are cells of the nasal membranes which disintegrate under the virus' action, letting the virus escape, as seen in the margin, to reach other parts of the body or, via nasal discharge and saliva, to reach and infect another person. This remarkable photomicrograph is by T. H. Hausmann.

A BLACK, ink-like stain or dye may be the means of conquering measles, dreaded childhood disease, it appears from the discovery by Prof. Jean Broadhurst of Teachers College, Columbia University, announced by the University.

The dye is not a cure or preventive itself but it enables scientists for the first time to see under the microscope the hitherto invisible virus bodies which cause measles. As a result, the disease can be diagnosed 2 or 3 days earlier than is now possible, before the typical rash and fever appear, and the child can be isolated and kept from spreading the disease to others. Not only that, but healthy carriers of the disease virus can be detected and kept from spreading the disease which periodically sweeps the

country in epidemics. Important also is the fact that the early diagnosis means treatment can be started early and this may save the child from mastoiditis, ear infections, pneumonia and other serious ails that commonly follow measles.

The dye is called Nigrosin. Its advantage over other dyes is that it colors the virus bodies but not the other germs that lurk in noses and throats.

Prof. Broadhurst's discovery was made with the assistance of Dr. Margaret Estelle McLean of the College and Vincent Saurino, a student. The experiments, aided by a grant from the Milbank Memorial Fund, included examination of mucus from the throats and noses of over 160 measles patients. Details are reported in the *Journal of Infectious Diseases*.

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