

PHYSICS-MEDICINE

# New Cancer Weapon

X-Ray telescope will give physicians a 500-times clearer view of internal organs. Will aid greatly in diagnosis of stomach cancer and heart ills.

➤ A NEW weapon for fighting stomach cancer, cause of nearly half the cancer deaths in the nation, has been developed by Dr. John W. Coltman, physicist at the Westinghouse Research Laboratories, Pittsburgh.

The new anti-cancer weapon is an "X-ray telescope." Used with standard X-ray fluoroscopic equipment now in hospitals and doctors' offices, it will give doctors a 500 times clearer view than ever before of their patients' internal organs.

One of the biggest blocks to the conquest of stomach cancer is the difficulty of diagnosing it in time for successful treatment. The new "X-ray telescope" is expected to aid in this important field.

Better diagnosis of heart ailments and other diseases may also come with the aid of the new instrument.

The X-ray telescope consists essentially of an electronic tube with a chain-

like reaction going on inside it. In the chain-like reaction, the X-rays passing through the patient's body first produce light rays. These in turn create electrons within the new tube. Then with the aid of powerful electrical forces the electrons are hurled across the tube at a speed of 5,000 miles per second and strike a fluorescent screen producing the image viewed by the physician. The speed-up of the electrons is the chief factor in brightening the final image.

"Greatly increased brightness will make possible a movie-like viewing of all internal organs and movements from any angle, a sharp contrast to the very dim view now possible with the best available equipment," Dr. Coltman explained. "No longer will the physician need long periods to adapt his eyes to darkness before viewing the X-ray screen, and even more important, he will be able to make rapid, accurate diagnosis of internal de-

tail never clearly visible before by fluoroscopic means.

"The 500-fold increase in brightness should put the image well within the range of present-day television pick-up tubes. This means that the fluoroscopic image may be transmitted and duplicated at different points for observation by more than one person or group. It is even conceivable that some day medical specialists hundred of miles from the patient can be consulted and aid in the instant diagnosis of an internal ailment."

The new instrument does not expose the patient or the physician to any greater amount of X-rays than are now used in diagnosis. This is an important safety advantage.

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PSYCHIATRY

## Histamine Used to Aid Some Mental Patients

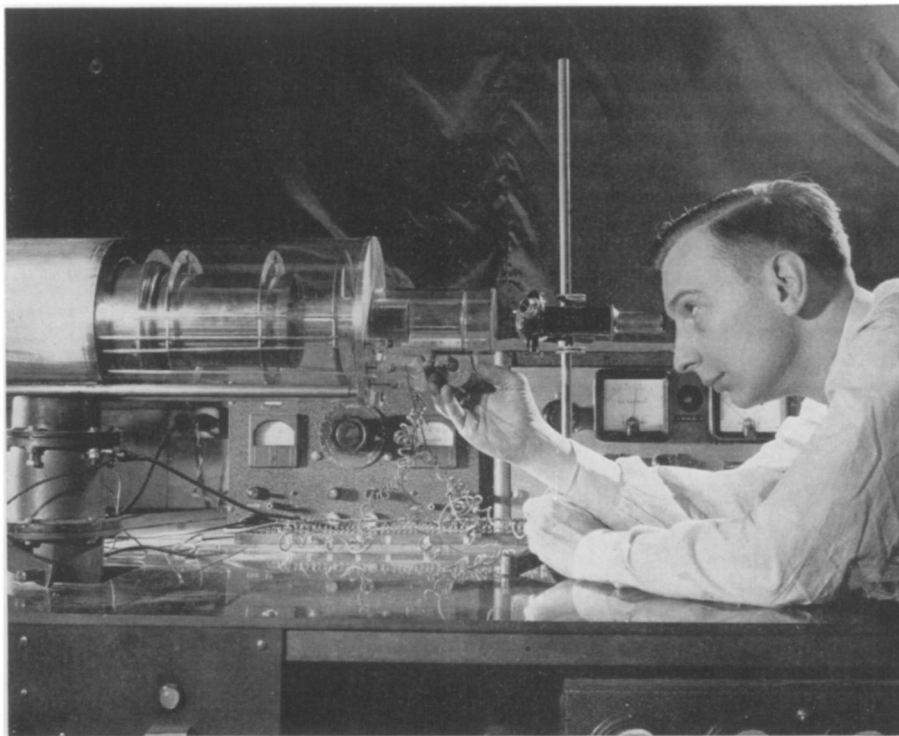
➤ DELUSIONS can be banished and some mental patients can be helped to recovery by histamine, a chemical believed to play a part in hayfever suffering, the American Psychiatric Association was told at its meeting in Washington.

Dr. E. O. Niver of Eau Claire, Wis., described the dramatic recovery from delusions of a 26-year-old man.

The patient had been depressed for some time. His father had committed suicide and the young man was convinced that he suffered from a hopeless condition. He had the delusion that part of his digestive tract was "dead and his food was wasted." This delusion showed immediate improvement when histamine treatment was started and within one week it had cleared up entirely. The patient's judgment, however, was still defective, so that he refused further voluntary treatment.

A stocky, mildly paranoid woman who was beset by suspicions that her husband was unfaithful was also helped by histamine treatment. Her suspicions made her agitated and her inner sense of hostility at times reached a dangerous pitch. After five injections of histamine with psychotherapy she became calmer, gained insight into her problems, and for several months has gotten along very well.

A 45-year-old woman with some tendency to depression came to the hospital because of excruciating, knifelike headaches. These were not due to nervous and muscular tension, nor to migraine. Sedatives failed to relieve them.



**IMAGE BRIGHTENER**—This device demonstrates that with a 500 amplification tube it would be possible to brighten X-ray images 500 times.