MEDICINE

Cancer Hospital Opens

Ewing Hospital in New York will be devoted to the research task of better treatment of cancer. Patients will be treated, and the search for a cure will continue.

➤ THERE is new promise that there will be fewer incurable, hopeless so-called "terminal" cases of cancer in the years to come.

A $6,000,000-pile of bricks, concrete, tile and stainless steel, paid for by the people of New York City, was dedicated in New York to the research task of better treatment of the disease that takes the lives of one out of every five New Yorkers. This new 275-bed hospital is named for Dr. James Ewing, a pioneer in cancer research at the famous Memorial Center in which the new Ewing Hospital is integrated.

Although the new Ewing Hospital is owned and operated by the city, it will function as a part of the group of research hospitals and institutions which include the Memorial Hospital, Sloan-Kettering Institute, Cornell Medical College and the New York Hospital.

Suffering will be eased within these bright new walls. But more important, the great fight to learn more about malignant diseases and their treatment will be advanced.

Dr. C. P. Rhoads, director of the new hospital and of Memorial Center, is confident that many of the cancer patients now called hopeless will be checked by new techniques and even "cured" in the sense of staying alive for five years or more.

In the past three years techniques have been developed at Memorial Hospital that promise 15% to 20% such "cures" in pelvic cancer that previously would have been labeled incurable. One of the tasks of Memorial Center, including the new Ewing Hospital, is to give scores of physicians experience in new methods so that they may treat cancer in general hospitals and private practice throughout the world.

The more extensive peaceful use of atomic energy, Dr. Rhoads said at the dedication, is to destroy cancer. Suitable patients are being sent regularly for certain forms of atomic treatment from the Memorial group of hospitals to Brookhaven National Laboratories, where a new atomic reactor has just been put into operation.

Even some of the poisons developed for chemical warfare are now employed in the control of cancer. The improvement and extension of methods of warfare are related to cancer research.

"The training of disease-producing viruses to pursue and to destroy cancer," said Dr. Rhoads, "is in principle and method their training to destroy our enemy, his animals or his food crop. To develop for peaceful purposes these weapons of war, and the protection against them, is the function of our Memorial Cancer Center."

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CANCER CENTER—A view of the new James Ewing Hospital, First Avenue and 68th Street, dedicated and opened by Mayor O'Dwyer on August 23, 1950. The hospital represents a cooperative undertaking between the Department of Hospitals, City of New York, and Memorial Center for Cancer and Allied Diseases.

CHEMISTRY

Electrical Fields Distort Atoms in Catalytic Action

➤ SOME of the mystery of catalytic action has been solved by Dr. W. A. Weyl of the department of mineral technology of Pennsylvania State College.

Catalysts speed up chemical processes by their mere presence, without taking any part in the reaction, and are widely used in oil refining and other industries.

Electrical fields inside the atoms, which pull and distort the shape of atoms near the surface, and so make them act in an unusual way, are responsible for the catalytic effect, according to Dr. Weyl's interpretation. Some of the unusual colors of crystals and certain trade secret processes can be explained by the same action of warping and crowding of surface atoms.

One such is the process of swabbing the glass in mirror manufacture with a solution of tin salt, which is thoroughly washed off before the silver is applied. According to Dr. Weyl's theory, enough deformed tin atoms cling to the surface of the glass to present on their free side a metallic film to which the silver will become attached.

The new theory also accounts for the so-called poisoning of catalysts by certain types of compounds. Poor materials can be improved and good ones made better for catalytic purposes as the theory of their action becomes better known. Dr. Weyl presented his theory at a recent meeting of the New York Academy of Sciences. His work is sponsored by the Material Branch of the Office of Naval Research.

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AERONAUTICS

Plane's Detachable Cargo Compartment Is Versatile

➤ THE detachable box-car-size cargo compartment of the new Fairchild military plane, which has now made its maiden flight, is suitable for many uses.

It might be fitted out as a surgical operating room to be landed all ready for use in advanced combat areas. Air Force medical men consider this feasible but say it would be costly because all the equipment and instruments would have to be specially designed and made. Although some light weight equipment is now on

hand, no budget planning for an airborne operating room has yet been done.

With proper equipment, it could serve also as a forward photographic laboratory to give combat units quick information from aerial photographs. Outfitted as a kitchen, it could provide hot food for fighting men.

The advantage of this new airplane is that it can deposit its cargo compartment, which is bigger in bulk than the plane itself, wherever needed and then take off to pick up another compartment to carry it where wanted.

In its functions the plane is somewhat like the powered units that haul giant trailers on highways. When the tractor unit reaches its destination for loading or unloading, it is transferred to another trailer to start on another highway trip.

In general appearances while in flight, this new plane, built in Hagerstown, Md., by Fairchild Engine and Airplane Corporation for the U. S. Air Force, is similar to the well-known Fairchild Packet. Its cargo compartment fits snugly to the belly of the long slim plane itself, appearing as an integrated unit.

The carrier plane, as the powered unit might be called, has wing-mounted engines, and struts extending to its landing gear long enough to permit it to straddle a cargo compartment on the ground. When the compartment is attached, the plane takes it off through the air.

Wider use of the cargo compartment is promised with a helicopter carrier under development by the Piasecki Helicopter Corporation, Morton, Pa., according to a Fairchild announcement made within the year. The idea is that the helicopter would be able to straddle a compartment deposited on a nearby airfield and carry it into rough country where airplane runways do not exist but where fighting men need equipment and supplies.

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MEDICINE

Anti-Disease Bill Passes

The Omnibus Research Bill which declares total war upon disease has passed. Two new research institutes will be established.

➤ THE U. S. Public Health Service is set to fight total war against disease, now that the so-called Omnibus Research Bill has been signed by President Truman and become law.

As a result, your heart may beat longer, your joints may never stiffen with rheumatism, your children may never know the pain of toothache, you may be spared the anguish of seeing a child or grandchild forced to grope through life with blind eyes or chained to a wheel chair because of some disease like multiple sclerosis.

The new law authorizes the federal health service, through its National Institutes of Health, to attack disease on a broad front ranging from cancer and heart trouble to blindness, deafness and some of the mystery diseases in which nerves, muscles and bones fail to work properly.

The hopes and prayers of millions of sufferers from multiple sclerosis, cerebral palsy, epilepsy, rheumatism and arthritis, are one step nearer fulfillment because of the broadened range of research and training which will become possible if funds are appropriated to put the provisions of this law into effect.

Specifically, two new national research institutes are authorized. These are: 1. National Institute on Arthritis, Rheumatism and Metabolic Diseases, and 2. National Institute of Neurological Diseases and Blindness. But the new law also authorizes the Surgeon General of the Public Health Service to establish one or more additional institutes dealing with other diseases, for example, poliomyelitis and leprosy, whenever he considers these needed to improve further the health of the American people.

At the present the Surgeon General, Dr. Leonard A. Scheele, does not think any additional institutes are needed or will be in the immediate future. The rheumatism institute includes "metabolic diseases" which, he explained, takes in a wide variety of chronic diseases such as diabetes and various glandular disorders. Deafness, he added, might well be included in the field covered by neurological institute.

Each of the two new institutes will have its own advisory council, just as the existing institutes now have. Each of the councils, new and old, will in the future have half its membership made up of lay persons and the other half of doctors or dentists or other scientists.

Before passage of the new law, there were six National Institutes of Health dealing with cancer, heart diseases, dentistry, mental health, experimental biology and medicine, and microbiology.

Research into rehabilitation for patients already afflicted with crippling and disabling diseases will be pushed as part of the program of the new neurological institute.

While the new and old institutes will be primarily devoted to attacks on diseases through research into causes, treatment and prevention, some of their work will be carried on through training of future scientific specialists and some will be devoted to fundamental research of the kind that often does not look immediately practical. The value of this kind of research was shown during World War II and, more recently, in the discovery of cortisone for arthritis.

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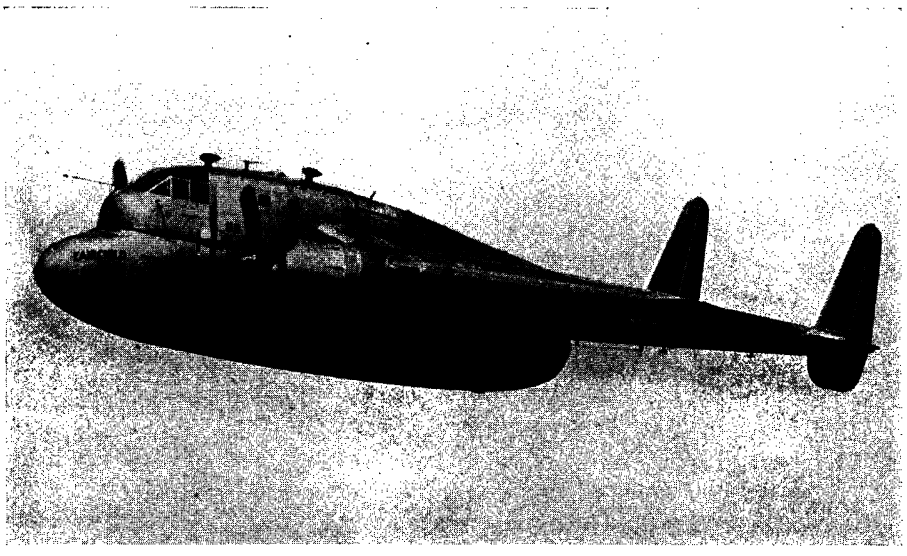

FIRST DETACHABLE FUSELAGE—The giant detachable cargo compartment in a military transport allows for faster ground handling and loading times. The compartment can also be fitted out as a surgical operating room or a forward photographic laboratory for advanced areas.