

MEDICINE

Hospital for Research

Patients in unique Public Health Service hospital will be members of research team. Cornerstone laid by President Truman.

► **TOTAL WAR** against every major disease in the world will be speeded with the help of a new hospital under construction in Bethesda, Md.

President Truman laid the cornerstone for it because this special and rather unique hospital is expected to stand as a symbol of our national effort in the unending warfare against disease, disability and premature death.

The hospital's official name is the Clinical Center of the National Institutes of Health. These National Institutes, seven in number, make up the research arm of the Public Health Service, Federal Security Agency.

Patients will come to this new hospital from all over the nation. The patients will not come to have an appendix or gallbladder removed or to get treatment for pneumonia. They will come because they have some as yet unconquered disease for which the researchers at the National Institutes are trying to find a remedy or a preventive.

The patients themselves will become members of the research team of doctors, surgeons, chemists, physicists, epidemiologists and others. Their ticket of admission will be a precise diagnosis according to a standard established for a particular disease study.

Brain and nervous and mental diseases, cancer, arthritis, heart and blood vessel diseases are the kinds under investigation at the National Institutes. These chronic diseases and diseases of aging have replaced pneumonia, typhoid fever, smallpox and other infections as our greatest disease enemies.

When the researchers at the National Institutes have worked out in the laboratories and with animals a new treatment or possible cure for some chronic, disabling disease, they need human patients for a positive, yes-or-no answer as to results the new treatment will give. These patients must be as nearly alike as possible in age, weight, sex, type and even stage of the disease under study. And there must be enough of them so that the results are numerically significant.

Few hospitals anywhere have more than a handful of almost peas-in-a-pod patients suffering from the same ailment. Development and final evaluation of new treatments therefore go slowly. When each handful of patients from hospitals around the nation can be gathered in this new research hospital, answers on new treatments are expected to come much faster.

Care of the patients of course will be

of primary importance. Dr. W. H. Sebrell, Jr., director of the National Institutes, and Dr. Leonard A. Scheele, Surgeon General of the Public Health Service, pledge the best available in personnel and facilities for patient care. And for their greater comfort there will also be a theater, library, chapel and on every floor a dining room and solarium. Each room will be air-conditioned and have bedside telephones, radio and television outlets.

The new hospital will be the largest of its kind in the world. It will rise 14 stories, have beds for 500 patients with twice as much space for laboratories as for patient care. Opening date for receiving patients is now set for January, 1953.

Science News Letter, July 7, 1951

ASTRONOMY

Nautical Tables Accurate

► **NAVIGATORS** OF ships and planes traveling near the North and South Poles, and those who must use the sun and moon, stars and planets near the horizon for their calculations, can now rely with confidence upon the refraction tables in their nautical and air almanacs.

Within the past year navigators of 33 ships have made 315 test observations that confirm the accuracy of standard values adopted for the refraction of light passing through the earth's atmosphere, G. M. Clemence, director of the U. S. Nautical Almanac Office at the Naval Observatory reported to the American Astronomical Society meeting in Washington.

If there is any error in the theory of refraction at great zenith distances, it is so little that the calculated position of a ship would be only a few tenths of a nautical mile off, Mr. Clemence said.

Light from the sun, moon, planets and stars is often bent so much by the earth's atmosphere that we see these celestial bodies slightly displaced from their true position in the sky. Overhead light enters the atmosphere almost perpendicularly and so it is refracted little if any. It is high in the sky that navigators prefer to make their celestial observations.

At the horizon, however, the light enters the atmosphere at an angle and passes through much atmosphere, thus here the apparent displacement is great. The sun, for instance, actually is visible shortly before it reaches the true horizon in the

● RADIO

Saturday, July 14, 1951, 3:15-3:30 p.m. EDT
"Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. Howard A. Meyerhoff, administrative secretary, American Association for the Advancement of Science, will discuss "Loyalty and Scientific Secrecy."

TECHNOLOGY

New Oil Well Pipe Good 20,000 Feet Down

► **SEAMLESS STEEL** pipe that can withstand the tremendous pressures in oil wells over 20,000 feet deep has been developed commercially. Exceeding American Petroleum Institute specifications, it is a quenched and drawn carbon-manganese steel casing of seven-inch outside diameter just produced by new equipment of U. S. Steel's National Tube Company at McKeesport, Pa.

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morning, and a star can be seen when it really is below the true horizon. Thus close to the horizon, the apparent change in position must be taken into account in fixing the location of a ship or plane.

To make the test observations, each navigator at dawn or dusk determined his ship's position by observing stars at least moderately high in the heavens and thus little affected by refraction. Then with his sextant the navigator measured the actual and uncorrected altitude of the rising or setting sun. Back at the Nautical Almanac Office this measurement was compared with the sun's calculated altitude based on the position of the ship, and the figures were found to agree admirably.

Science News Letter, July 7, 1951

INVENTION

Soil Fertilizer Treatment Made Easy by Injection

► **TREATMENT** OF the soil with anhydrous ammonia as a fertilizer is made easy by a vaporizing and injection system which is dedicated to the free use of the American people. Inventor is Battle B. Ewing, Leland, Miss., and the patent received by him is 2,557,955.

The system includes a pressure tank for liquid ammonia, a heater in the outlet to convert the liquid to a gas, a metering device to regulate the discharge, and injection nozzles to deliver the gas into the soil.

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