

MEDICINE

Fungi Fight Disease

Germ-stopping chemicals obtained from organisms living in earth and manure. Clavacin is germicidal and particularly active against gram-negative germs.

► THE GERM vs. germ fight on disease is advanced by two discoveries recently announced (*Science*, Aug. 28).

From a fungus or mold living in the earth and from a fungus in stable manure, two new germ-stopping chemicals have been isolated by Dr. Selman A. Waksman, Dr. Elizabeth S. Horning and Dr. Ernest L. Spencer, of the New Jersey Agricultural Experiment Station and Rutgers University.

The earth fungus chemical is called fumigacin and can be obtained in long, fine needle shaped crystals. The manure fungus chemical is called clavacin. It is particularly active against gram-negative bacteria. Important characteristic of clavacin is its ability not merely to check the growth of bacteria or germs, as other germ chemicals do, but also to kill the bacteria.

Hope of treating diphtheria, tetanus (lockjaw) and other diseases in which the poisons of the germs endanger the patient's life is raised by studies reported by Dr. Erwin Neter, of Children's Hospital and the University of Buffalo School of Medicine.

He tested the action on germ toxins or poisons of a number of germ-stopping chemicals from germs, such as pyocyanase, penicillin, tyrothricin and actinomycin. Pyocyanase, which is brownish black, salve-like material, and Zephiran, a synthetic chemical, he found, inactivate or neutralize the poison of tetanus. Mice given tetanus toxin that has been treated with pyocyanase or Zephiran do not develop lockjaw and die.

Further studies, Dr. Neter says, are needed to determine whether the anti-toxic properties of these and other germ-chemicals can be used in treatment of disease.

Science News Letter, September 5, 1942

MEDICINE

Sex Hormone "Banks" Used For Relief of Nasal Disease

► FEMALE SEX hormone "banks," established by burying pills of sex hormones in the fat over the abdomen, are the latest method of treating the very distressing nasal disease, ozena or

atrophic rhinitis. Definite improvement following this treatment in 13 out of 20 women and one of four men is reported by Dr. Lloyd K. Rosenvold, of College of Medical Evangelists (*Archives of Otolaryngology*, June).

Wasting of the lining of the nose with discharge, crusting and foul odor are the symptoms of this disease. Female sex hormone treatment in which the hormone preparation is sprayed or blown into the nose has been used with some success for the past five years, following experiments by scientists in this country, Canada and France.

Applying the hormone preparation directly to the nasal membranes, however, has the disadvantage of requiring frequent and much attention. So when the "bank" method of giving hormone treatment for other diseases was introduced, Dr. Rosenvold saw the possibility of applying it to hormone treatment of ozena. Advantage of the "bank" method is that enough hormone to last for many months can be given at a

single operation. Improvement in the ozena patients, Dr. Rosenvold reports, seems to last from four months to almost two years.

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PUBLIC HEALTH

Health Service Checks Twice as Many Diseases

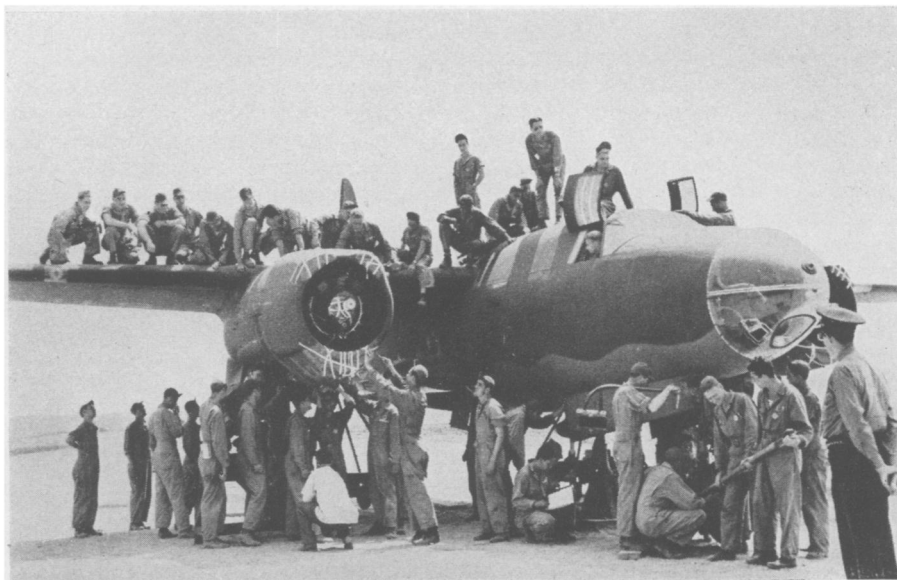
► THE U. S. PUBLIC Health Service has doubled the number of communicable diseases on which it keeps tab so as to have an accurate picture of the nation's health each week.

Weekly telegraphic reports from state health officers now include the number of cases of anthrax, amebic dysentery, bacillary dysentery, other unspecified dysenteries, infectious encephalitis (so-called sleeping sickness), leprosy (see p. 151), Rocky Mountain spotted fever, tularemia, and endemic typhus fever.

These nine have been added during the current year to the reports which already included: diphtheria, influenza, measles, meningococcus meningitis, infantile paralysis, scarlet fever, smallpox, typhoid fever and whooping cough.

Previously, reports on the nine newly added weekly reportable diseases had been on a monthly basis and sometimes the reports were considerably late in reaching the federal health service.

Science News Letter, September 5, 1942



"COLLEGE OF AIRPLANE KNOWLEDGE" at the Glenn L. Martin Company teaches plane maintenance to these fledgling grease monkeys. Part of the current class of 500 mechanical doctors to the air forces, are shown learning the intricacies of the Martin B-26 bomber.