

Phantom limb sensations are being used to work an electrical arm under development in Germany.

Encouraging results in preliminary trials of a new antibiotic medicine for germ diseases, erythromycin or ilotycin, from the organism *Streptomyces erythreus*, was reported.

Mass testing to detect drunken drivers was promised by a 25-minute, two-step test.

A new test to tell whether a person died of drowning or was dead before his body was thrown or fell into the water was announced.

Significant chemical and clotting differences in blood and in kidney secretions of multiple sclerosis patients from normal patients were discovered.

A plastic artificial kidney performed outstandingly in trial on several patients suffering from acute kidney failure.

Starting Aug. 13, all bread in interstate commerce in the U. S. was standardized legally for the first time in the nation's history.

Resistance to a virus is inherited as a dominant in accordance with the Mendelian laws of inheritance, it was reported.

The 1952 Nobel prize in medicine and physiology was awarded to Dr. Selman A. Waksman of Rutgers University, discoverer of streptomycin and other antibiotics.

#### PSYCHIATRY-PSYCHOLOGY

### Chemical Injection Brings Patients From Trance

Injection of a body chemical, cholinesterase, into the brain brought patients out of the catatonic trance of schizophrenia, a discovery promising new knowledge of what goes wrong chemically in mental illness.

Photoshock, treatment with an intermittently flashing light in combination with a sensitizing drug, and electrostimulation, treatment with a non-convulsive dosage of electric current, were tried out with some success on the mentally ill.

Removal of the adrenal glands was found, in a few cases, to give temporary improvement to mental patients.

Anguish felt by mental patients was attributed to a substance in the blood which sensitizes some of the brain tissue of susceptible persons.

Metrazol given by mouth caused improvement in mentally ill old persons with arteriosclerosis.

Mental illness, and especially schizophrenia, is more prevalent as the social level goes down, a survey showed.

A systematic study of children's responses to the Rorschach test demonstrated distinctive developmental patterns for all ages from two through ten years.

A kind of homesickness in reverse, termed "nostopathy," was found to affect persons returning home after military service or other prolonged absence.

Quarrelsome tendencies can be influenced more by inheritance than by learning, experiments with mice indicated.

Chronic fear, or anxiety, was found to have an effect on the stomach just opposite to that of acute fear—secretion of hydrochloric acid in the gastric juice is increased.

The chemical steps that make vision possible—bleaching of light-sensitive pigments in the retina and restoration of the pigment—were duplicated in the laboratory.

That previous experience in seeing is important to perception was shown by an experiment in which ring doves hooded from birth required more time to learn to distinguish geometric forms than normally raised birds.

Mesopic vision tests made in a cloudy moonlight illumination were found to correlate so closely with night vision tests that they can be

#### PUBLIC HEALTH

# Nerve Gas As Food Poison

**Contamination of food with nerve gases could kill hundreds of people before discovery. Simple chemical kit for detecting chemical warfare agents being developed.**

► EXTREMELY DEADLY nerve gases may be used to poison wartime food supplies, Dr. Thomas H. Alphin, chemical warfare consultant of the Federal Civil Defense Administration, warned the National Food and Nutrition Institute meeting in Washington.

A few drops of the liquid form of nerve gases on the skin, if sufficiently concentrated, can cause death in a few seconds.

The highly toxic nerve gases are almost odorless, colorless and tasteless, and cannot be detected by the ordinary human senses until their deadly effects are felt. Contamination of food with nerve gases could kill hundreds of people before it is discovered, and make great quantities of provisions unusable.

Nerve gases can be spread by mortar shells, artillery shells, rockets or aerial bombs. Besides direct attack, nerve gas bombs could be planted by saboteurs for contaminating stores of food and other goods, as well as for anti-personnel purposes.

The Federal Civil Defense Administration is developing a simple testing kit for use in detecting nerve gases and other chemical warfare agents, Dr. Alphin said.

Atomic and biological warfare may also be waged against food supply, the National Food and Nutrition Institute was told.

Dr. Vincent B. Lamoureaux, radiological defense consultant of the Civil Defense Administration, said atomic warfare will cause greatest damage to food supply in the initial blast and fire of the explosion. The tendency in American cities to concentrate warehouses and processing plants in the same area increases the danger here, he said.

substituted for them in testing service personnel.

When gradually increasing electric currents were passed through the amalgam filling in teeth, a new sensation was experienced before the threshold of pain was reached.

Study of a wide variety of animals showed that all are sensitive to sweets.

What you experience with the sense of touch was found to interfere with your judgment of what you perceive visually.

The waking mechanism of the brain was located in the central core of the brain stem at the top of the spinal column.

A white rat is much more intelligent than has been thought and can be used instead of men in tests of the hazards of future flying, a new method of testing showed.

Tiny, one-celled paramecia can be trained, it was discovered, and their capacity for learning is related to heredity.

Science News Letter, December 20, 1952

Radioactive contamination, however, is the new, unfamiliar result of atomic attack, he said, and may make otherwise unharmed foods completely unusable and possibly dangerous.

Biological attack, using insect pests and plant and animal diseases, may be used against our total food supply, said F. K. Erickson, acting chief of the emergency sanitation branch of the Civil Defense Administration.

But bacteriological contamination of prepared foods as a weapon of war may be an even greater danger, he said. It is not unlikely, for instance, that saboteurs could place infectious disease germs in the food supply of large numbers of people, resulting in their sickness or death and the spread of disease.

Science News Letter, December 20, 1952

#### AERONAUTICS

### Cheaper Troop Transport By Air Than by Water

► IT IS cheaper to transport troops from England to overseas bases by British merchant airliners than by troopships on the ocean, according to a statement in London accredited to the British Secretary of State for Air. It would cost about \$11 less to fly a serviceman from England to the Middle East than to take him by boat.

As new jet and turboprop airliners come along, costs will be reduced substantially, it is claimed. The chief of air staff is reported to have said recently that two long-range, four-engined jet transports, with two in reserve, could lift in a year, between the United Kingdom and the Middle East, more troops cheaper than two of the latest troopships.

For troop transportation a fleet of Britannias, powered by turboprops, is proposed. On a non-stop flight between Britain and the Middle East, each of them could carry 130 to 140 fully equipped men at a cost of about \$42 per man per journey. The flight would take about seven hours. This cost is considerably below those on conventional aircraft and far less than surface costs.

The advantages of air trooping do not stop with the lower cost, it is stated. The speed of air transport also brings with it far greater mobility, because troops are not tied up in transit and can go rapidly to where needed. As mobility improves, a greater area can be covered with the same number of troops, or fewer troops can cover a particular geographic area.

Science News Letter, December 20, 1952