

this operation were able as a result to move their toes again three to four months after loss of about an inch of a large nerve in the leg.

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#### MEDICINE

### Empyema Remedy Found In Disinfectant and Detergent

➤ EXCELLENT CLINICAL results in the treatment of empyema (a serious chest infection) have been achieved by a combination of the disinfectant azochloramid, and the synthetic wetting agent, sodium tetradecyl sulfate, Dr. Orville Wyss, of Wallace and Tiernan Products, reported at the meeting of the New York Bacteriologists' War Research Projects Group.

Synthetic wetting agents or detergents are generally known to the layman as soap substitutes. Their effectiveness against bacteria, or germs, is due to their property of concentrating around the bacterial cells and bringing about a disturbance of the electric charge distribution on the cell wall. This disastrously upsets the vital chemical processes of the germs.

The wetting, penetrating and pus-dispersing properties of these soap substitutes or synthetic detergents can be used in the treatment of infected wounds by combining them with antiseptics, Dr. Wyss stated. Many other practical applications of such combinations, he added, suggest themselves in other fields besides medicine.

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#### INVENTION

### Safety Hand Truck Invented For Moving Explosives

➤ A SAFETY hand truck for moving explosives about in arsenals and factories is the subject of patent 2,309,145, granted to J. E. Turnock of Riverton, N. J., and J. E. Kirk of Philadelphia. It mounts an easily and cheaply replaceable wooden box body on a low-slung metal frame, rolling on rubber tires. Except for the shielded steel axle, all metal parts are of brass or other metal that will not strike sparks. Even the hub caps are carefully made of brass. Rights to manufacture and use, without royalty, are ceded to the government.

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Mate (pronounced mah-tay) brewed from the leaves of the mate tree is used by 12,000,000 South Americans instead of Chinese or India tea.

#### AGRICULTURE

## Wallace Visits Institute

Inter-American research program expected to improve production of rubber, cinchona, tropical fruits and other crops. Vice President sees increase in natural rubber.

➤ RUBBER, cinchona, tropical fruits and many other crops of importance to America in both war and peace are expected to benefit by research at the new Inter-American Institute of Agricultural Sciences at Turrialba, Costa Rica, which was dedicated on the occasion of Vice President Henry A. Wallace's visit there.

As Secretary of Agriculture, Mr. Wallace was greatly interested in the promotion of agriculture in the American tropics, as a means for providing the countries to the south with products which would supplement, rather than compete with North American agriculture, and thus afford a substantial basis for the "good neighbor" program.

At Turrialba, the Costa Rican government has provided 1200 acres of the finest upland soil to be found in the American tropics. Formal title was transferred to the Institute late last month, although initial phases of actual field work had already been in progress for some time. This locality, at 2,000 feet above sea level, was chosen because less than two hours' ride by car or train can carry the investigator through an almost complete cross section of tropical American conditions.

Scientific work at the Institute is to be entirely research on the post-graduate level; no undergraduate courses are contemplated. Facilities of research stations in other Latin-American countries have already been made available. Until the war is over, only temporary buildings will be erected; however, plans for the permanent plant are already drawn up, and construction can go forward rapidly once materials and manpower are released.

Research is already in progress at the Institute on rubber, cinchona, foodstuffs and tropical hardwoods. Work will begin soon on plants providing oil, fibers and insecticides.

At a press conference immediately before taking off, Vice President Wallace expressed the liveliest interest in the plant breeding program to be carried on there, especially in the breeding of rubber trees of higher productivity and greater resistance to disease. He expressed the opinion that "Plant breeders have

been making, and can and will make, as rapid progress in increasing production of natural rubber as chemists can make in the production of synthetic."

Director of the new Institute is Dr. Earl N. Bressman, formerly with the Coordinator of Inter-American Affairs. Secretary is José L. Colom, of the Pan American Union.

From Costa Rica the Vice President and his party will proceed to Panama, thence southward for visits in Chile, Bolivia, Peru, Ecuador and Colombia, returning to Washington late in April.

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#### INVENTION

### Dornier Seaplane Design Has No Wing Floats

➤ A SEAPLANE that dispenses with wing floats, source of much trouble, is the subject of newly issued U. S. patent 2,311,161, granted to Claude Dornier of Friedrichshafen, Germany, one of the boldest and most prolific of airplane designers.

Wing floats of present types, Herr Dornier explains in his preamble, are nuisances in the air because of the extra drag which they occasion, and create difficulties on the water by causing disagreeable and sometimes dangerous rocking. He gets rid of them entirely by creating a sharp "elbow" in each wing, and causing the plane to rest on these when it is down, like a huge aquatic bat.

The wings' roots spring from high up on the hull, so that technically the craft is a high-wing monoplane. However, they immediately arch sharply downward, so that at a point about one-third of their length they are practically at a level with the bottom. Here they bend upward again, creating the aforementioned "elbows" which serve as floats. Landing wheels can also be pivoted at this point, folding upward into the wing-roots when the plane is in flight.

Herr Dornier's patent, which was applied for in 1938, is vested in the Alien Property Custodian for the duration.

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