

ENGINEERING

Navy Explores New Engine For Trucks, Ships, Subs

➤ A REVOLUTIONARY engine for small trucks may result from research work currently being conducted by the U. S. Navy on free-piston engines.

The Navy, of course, hopes to apply the power plant eventually to its small surface ships and to its submarines. During World War II, the Germans successfully used it to drive auxiliary equipment on submarines.

The machine is sort of a diesel engine with a built-in air compressor. It differs from conventional engines, however, in that it has two pistons enclosed in opposite ends of a cylinder. Fuel is injected in the middle of the cylinder and the following explosion "knocks" the pistons into their respective cylinder ends.

Compressed air in the cylinder ends bounces the pistons back to the starting point as the spent fuel is expelled. Air compressed in a different part of the same cylinder is delivered to the load. Prof. A. L. London, mechanical engineer at Stanford University, is supervising the work being conducted there under a Navy contract on the heat aspects of the machine.

Science News Letter, May 31, 1952

CHEMISTRY

Germ Warfare Charges "Ridiculous," General Says

➤ "THE COMMUNIST propaganda about our use of BW (germ warfare) in Korea is ridiculous," Maj. Gen. E. F. Bullene, Chief Chemical Officer, Department of the Army, said at the meeting of the Armed Forces Chemical Association in Chicago.

Poison gas, however, may be used against us in "the next war" and, Gen. Bullene strongly hinted, we might use it ourselves.

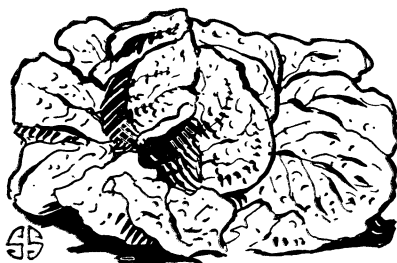
Reasons for use of poison gas in war are that it is relatively cheap and knocks out troops and personnel without destroying material, factories, buildings and the like.

In World War II a 100-pound general purpose, high explosive bomb cost almost a third more than a 100-pound mustard gas bomb. The victories of World War II in which whole cities were destroyed put a heavy strain on us as well as our former enemies in terms of postwar economic reconstruction. Any nation that starts another war is going to consider this factor.

We must therefore be prepared to have poison gas used against both our troops and our civilian industrial workers, Gen. Bullene declared.

The size and capabilities of our chemical industry and the potential of poison gas in warfare, Gen. Bullene said, "make up one of our bulwarks to prevent war and, if a conflict unfortunately does come, is our principal means of insuring victory."

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From Many Lands

➤ ALL QUARTERS of the globe meet at the crossroads of our garden paths. Contributions from the Old World predominate, for the majority of us are, after all, transplanted Europeans, but the Americas make substantial offerings as well.

The triad that every home gardener sets out, no matter how tiny his plot—lettuce, radishes and onions—all seem to have started somewhere near the eastern end of the Mediterranean.

At any rate, they were there at the dawn of history, for we find them mentioned in ancient Egyptian inscriptions. There is one document about the earliest strike on record: laborers in some pharaoh's monumental project refused to go back to work

MEDICINE

Babies Get Ulcers, Too

➤ YOUNG CHILDREN and even babies get stomach ulcers. Nervous tension, worry and anxiety can cause them just as in grown-ups.

Symptoms are the same as in grown-ups, too. The only difference is that the ulcer pain may hit children without relation to meals, while in grown-ups this pain characteristically comes two or three hours after a meal.

Parents and pediatricians (baby doctors) should therefore realize that not all "tummy aches" are just digestive upsets, Drs. W. Warwick Cardozo, R. Kelly Brown and T. Wilkins Davis of Howard University School of Medicine and Freedmen's Hospital, Washington, warned at the meeting of the American Academy of Pediatrics in Washington.

The child whose parents are over-anxious for him to be a star pupil at school, to excel in dancing or music and who pres-

sure him all the time is the one likely to become so tense that he develops ulcers.

In some cases these child ulcer victims are only children of older parents. In their pleasure at having a baby the parents may be too watchful, jumping up several times at night to listen for the new baby's breathing, waking him several times to change his diapers, and in all of this creating an anxious, tense atmosphere.

Treatment for small ulcer victims as given by the Washington doctors is much the same as for grown-ups: an anti-spasmodic medicine to quiet the digestive tract and stomach and a modified Sippy diet. A sedative is also given for the first two weeks of treatment.

Carrots and beets are of Eurasian origin also. Although carrots have run wild in this country as a weed, called Queen-Anne's-lace, beets have shown no tendency to do so. Peas, too, are from the Old World, as are cucumbers and cantaloupes. Watermelons are African in origin.

New World vegetables include potatoes, tomatoes, green peppers, pumpkins, small squashes, and all beans except the little-used Windsor or broad bean and the table soybean which is now coming into real popularity. Sweet corn, too, is American, though the Indians made little use of it before arrival of white men.

Some of these American vegetables reached our gardens by round-about paths. Potatoes, for example, were carried to continental Europe from South America, thence to England and Ireland, from there to Bermuda, and finally to the colony of Virginia.

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You may smoke while you cultivate your garden. You may also use a nicotine spray to combat certain insect pests. In either, you are making use of another American plant: tobacco was used by most of the Indians of both continents when Columbus landed, and was not known before then in other parts of the world.

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Ethylene gas added to *citrus* storage atmospheres in small amounts causes the fruit to lose its green color and develop a natural mature color within a few days.