

# New Machines And Gadgets

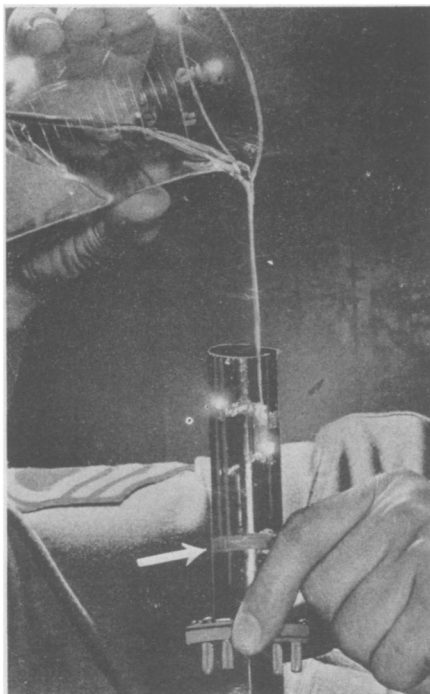
## Novel Things for Wartime Living

A muzzle for the ferocious rooster that pecks others of its species and sometimes kills them is provided by an invention recently patented. It is a simple device consisting of a single piece of wire something like a paper clip. This is threaded through the nostrils of the bird and folded around under the upper beak, thereby preventing the fowl from entirely closing the beak. According to the claims of the inventor, the muzzle prevents the barnyard bully from fighting, picking and pulling the feathers of other birds but does not interfere with breathing, eating and drinking.

Concrete floors can at last be painted with a paint that does not peel or wear off. The new product is essentially a dye which penetrates below the surface and retains its color as the concrete wears down.

You can shatterproof your own windows by painting on the inside a newly developed transparent coating which forms an elastic film and prevents flying splinters. The coating dries in an hour and can be removed when no longer wanted with a razor blade. In case you wish to blackout at the same time, a black opaque coating of similar nature is offered. It will last for a year and can be washed off with water.

Water is being poured into gasoline in the illustration, and the water is running right through the tube and out at the bottom, leaving the gasoline behind. This surprising result is obtained by a float, indicated by an arrow, which sinks in gasoline and floats in water. Water, being heavier than gasoline, lifts the float and runs out through the hole at the bottom. When all the water is gone, the float sinks and stops the



hole. This principle is applied in a device to separate water from gasoline as it is being pumped into an airplane, thus assuring the aviator gasoline free of water. The device is the invention of an army sergeant but is not as yet available to the public.

For filtering water in army or construction camps, or in summer camps, where water pressure is not available, a filter and hand pump are provided which can be carried on the back in a knapsack. The entire filter including pump and hose weighs 19½ pounds. It can filter two gallons per minute and one cartridge is good for from 100 to 500 gallons according to the condition of the water.

*If you want more information on the new things described here, send a three-cent stamp to SCIENCE NEWS LETTER, 1719 N St., N. W., Washington, D. C., and ask for Gadget Bulletin 113.*

*Science News Letter, July 18, 1942*

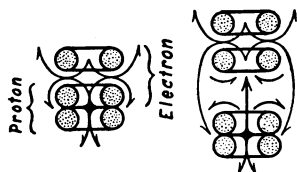
### ENGINEERING

## Transparent Plastics Bring Safety to Workers

TRANSPARENT sheets of plastic are used to guard workers at dangerous production machinery from flying sparks, molten and solid metal whirled into the air. In some cases safety goggles on the machine operators have been replaced by housings of cellulose acetate sheets around the machine. This method of protection is not only more comfortable and safer, but need not be renewed so frequently

*Science News Letter, July 18, 1942*

### ESSAYS ON THE NEW VORTEX ATOM



Neutron and Hydrogen Atom. Copyright 1937 by Carl F. Krafft.

The existence of two neutral particles of atomic weight 1 but with totally different properties is just one of the many things which the nuclear theory cannot explain. Free upon request.

C. F. Krafft, 1322 Amherst Ave., Richmond, Va.

## Some ferns made fossils some ferns made

# COAL

THIS UNIT OF "THINGS of science" contains a specimen of a fossil fern leaf from the Coal Age, 250,000,000 years ago. Flowers as we know them evolved millions of years later. The era was so early that shallow seas from time to time washed over great tropical forests extending from the Arctic to Antarctica.

Many ferns and other plant forms were compressed into layers of coal, but the fern fossil was formed in the mud or silt of a river delta in that prehistoric time.

Out of this Coal Age came not only this fern fossil, but the source of the industrial productivity of the United States. Our country has half of the known coal supplies of the entire world. Coal makes possible not only fuel, but steel, nylon, sulfa drugs, TNT and many another useful product.

As in all units of THINGS of science, this unit contains a specimen of scientific material to be examined, studied, and enjoyed. A museum-style legend card is supplied; a brief, clear explanation is included. This service is under the sponsorship of Science Service, the non-profit institution for the distribution of scientific information.

Just enclose 50c, sign and send in the coupon below; and we will mail this Unit of THINGS of science to you postpaid.

To THINGS of science  
1719 N Street, N.W.  
Washington, D. C.

Please send me postpaid, on receipt of the 50c enclosed, your Unit on Fern Fossils.

Name \_\_\_\_\_  
Street \_\_\_\_\_  
Address \_\_\_\_\_  
City and \_\_\_\_\_  
State \_\_\_\_\_

Th-5