

inconvenient to have to send the container back to the company for recharging.

In late 1946 the government authorized lower pressures for the spray bombs, and opened the way for light "beer can" containers which could be thrown away when empty. The aerosol industry was on its way.

New mixtures of "Freon," and other chemicals for special uses were developed which could deliver pressures ranging anywhere from one to 70 pounds per square inch. Companies could pick their own pressure, depending upon the material to be sprayed. The usual low-pressure bomb uses 35 to 40 pounds.

There are three main types of bombs today. One is the space spray, producing the tiniest of droplets. Insecticides and room deodorants, designed to fill a given space with a chemical fog, make up about 95% of all aerosols sold in the last few years.

Residual sprays, which coat a surface with a liquid, a plastic film or a paint, are the second type.

The third is the foam or lather bomb, delivering anything from whipped cream to shaving soap and shampoo.

Drug and cosmetic manufacturers are just beginning to scratch the surface of

potential uses. In 1951, however, you may be able to get windshield antifreeze, home permanent waves, mildew-proofing for your clothing, dyes or poison ivy lotions in pressure cans.

Aerosol-sprayed paint has already proven practical. With a wave of one of these wonderous cans, you can now paint a wicker chair in a matter of minutes. The chore by paint-brush can make a home handyman tear out his hair at the end of a tedious, frustrating day's work.

You can apply shampoo to your hair, cold cream to your face, tannic acid to a burn on your hand, sunburn lotion to your legs, and "tired shopper's" salve to your feet with spray cans.

Car owners can apply a "no-rub" wax as an aerosol; for ignition systems, there is a spray-on plastic which waterproofs electrical wires; for fires, a handy push-button extinguisher.

From sales managers of aerosol companies, you may hear something like this: "Anything that must now be brushed on, squeezed on, sprayed on, or dispersed in the air—we can put in an aerosol can!"

All the housewife has to do is press the button.

Science News Letter, April 7, 1951

PHYSICS

Pressure and Cold Freeze Helium 3 for First Time

➤ A RARE form of the element helium—one that can not be frozen simply by cooling it to a low temperature, has finally been solidified for the first time. Pressure plus a low temperature of 457 degrees below zero Fahrenheit did the job of solidifying helium 3. D. W. Osborne, B. M. Abraham and B. Weinstock of the Atomic Energy Commission's Argonne National Laboratory, Chicago, reported this achievement to the Symposium on Low Temperature held in Washington, D. C.

The helium 3 was put under a pressure of 600 pounds per square inch before it solidified at the low temperature. Small quantities of the material were frozen in a tubing about the thickness of a human hair. The helium 3 is available as a decay product of radioactive hydrogen, or tritium, one of the materials mentioned for the H-bomb. Research on helium 3 is handicapped because of its scarcity in nature, where it exists as only one part in a million of ordinary helium.

Science News Letter, April 7, 1951

GENERAL SCIENCE

Military Experience Credit

➤ DRAFTEES and others in the Armed Forces can get credit in high school and college for their educational experience while in service. Even basic training is worth something.

The American Council on Education has recommended to schools and colleges a revised method of giving credit for what the serviceman has learned. This was first done after World War II when the council successfully evaluated Armed Forces experiences.

Now that thousands of young men will once more have their education interrupted, the council has brought its methods of evaluation up to date. Most schools and colleges are expected to accept them.

High schools and colleges are advised to give academic credit for basic or recruit training in lieu of mandatory requirements

for physical education, health or military training courses.

At the high school level, young servicemen may get their diplomas if they pass a group of five high school general educational development tests. However, the council recommends that state departments of education do not grant diplomas merely on the basis of tests before the ages of 20 or 21. This is to encourage younger men to return to high school where they may get the benefit of systematic education.

The council also recommends that college credits may be given on the passing of tougher general educational development tests in five broad subject areas of learning.

In addition, credits have been worked out for most United States Armed Forces Institute, Marine Corps Institute and Coast Guard Institute courses. Service school training, too, has been evaluated.

No system has been worked out for giving school credits for combat service.

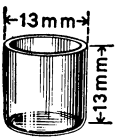
Science News Letter, April 7, 1951

On This Week's Cover

➤ AMERICA'S first airliner of the turbo-prop type, the kind powered by a gas turbine engine operating conventional propellers, is shown on the cover of this week's SCIENCE NEWS LETTER in a shakedown test flight near San Diego, Calif. This type of propulsion is expected to be widely used in the near future.

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