

• New Ideas and Gadgets •

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☼ **SUN STILL KIT** provides up to a quart of water a day to campers, prospectors, rock hounds, pilots or anyone who may become stranded in the desert or on the beach. To produce water, all that is needed is a bright sun, a hole in the ground and the plastic materials in the 5½-ounce kit. The water contained in the desert soil or polluted water is evaporated and distilled and caught in the plastic container provided. Instructions are included.

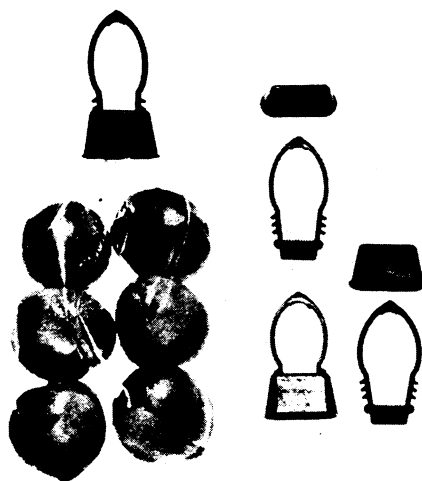
• Science News Letter, 89:143 February 26, 1966

☼ **DOG COTTAGE** has double walls and floor to provide a warm and dry place for a pet. Made of smooth hardboard that is strong and rigid, it has a hinged roof that opens upward for easy cleaning, while its raised swinging door eliminates drafts. The ready-to-paint dog house comes complete with necessary hardware and is easily assembled. It is available in small, medium and large sizes.

• Science News Letter, 89:143 February 26, 1966

☼ **COMPACT MEGOHMMETER** for field or shop allows quick, accurate insulation resistance tests of motors, wiring, appliances and other electrical equipment. Weighing only 36 ounces and 5¾ x 4 x 2¾ inches in size, it is a one-hand push-button operated instrument that indicates resistance to 100 megohms at 500 volts DC. It is operated by readily available penlight cells. Instructions are enclosed.

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☼ **REUSABLE BAG LOCKS**, shown in photograph, to reseal used or new plastic, fabric or paper bags, is a small simple device consisting of a loop-shaped plastic ring and cap. The end of the bag to be sealed is slipped through the ring and the cap then slipped over the ring and locked to form an airtight seal. Useful for packaging food for freezer, refrigerator or picnic, its loop makes it convenient also for hanging towels and other items.

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☼ **COMPOSTER** allows a home gardener to make his own compost easily and economically. Kitchen leftovers, damaged fruit and vegetables, grass, leaves, weeds and other organic materials are placed in the unit and a little activator is added. The unit builds humus to provide food for vegetables and other plants and is odor- and fly-proof. Made of rust resisting galvanized iron, it is 52 x 28 x 28 inches and weighs 75 pounds.

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☼ **TINY LAMP** no larger than a grain of wheat is useful to mechanics, engineers, farmers, handymen as well as housewives. Attached to a flexible cord with socket that screws into a standard two-cell, three-volt flashlight, the lamp will light up small openings and crevices where a flashlight cannot be used conveniently. The lamp is powerful enough to illuminate an entire room.

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☼ **LIQUID LEVEL INDICATOR** for quickly checking car batteries has no moving parts. To use, the rod-shaped indicator, made of chemically resistant plastic, is immersed in the battery liquid. When the battery has sufficient liquid the top of the rod looks dark, when the liquid level has fallen below the bottom of the indicator, at the point when water should be added, it appears to light up. Other applications include measure of liquid in lawn mowers, beverage dispensers and room humidifiers.

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• Doctors Are Reading •

New Lotion for Swimmers

► A **SUNBURN LOTION** that builds protection into a swimmer's skin is being perfected. It will not wash off.

An editorial in the *Journal of the American Medical Association*, 195:577, 1966, calls attention to the research of a group of University of Minnesota Hospital physicians who have tested the mixture on volunteers able to remain in strong sunlight without noticeable reddening of the skin.

The lotion does not provide immediate protection, requires at least 12 hours to take effect on the skin. By that time, however, sweating, swimming or rubbing will not change the effect. Two chemicals are used: dihydroxyacetone (DMA) and naphthoquinone, or lawsone. They are mixed with water and isopropyl alcohol.

Drs. Ramon S. Fusaro, Walter J. Runge, Francis W. Lynch and C. J. Watson, all of the Minneapolis hospital staff, reported the research in the *Archives of Dermatology*, January 1966. Still to be perfected is a way to keep the chemicals stable when mixed and stored at room temperature.

Fluoride Applications Cut Tooth Decay

Children living in areas with unfluoridated water can still reduce tooth decay by having twice-a-year treatments with a stannous fluoride paste and a topical, or applied, solution in their dentists' offices. They must continue brushing after meals, of course, dental

scientists said in the *Journal of the American Dental Association*, February 1966.

Drs. David Bixler and Joseph C. Muhler, both of Indiana University Medical Center, Indianapolis, reported a study involving 1,250 children between the ages of five and 18 years. They found that after two years the group receiving the office treatments plus their own brushing had a 70% reduction in cavities.

Diabetes Clues in Animal Experiments

Why adults can become diabetic even though their bodies produce ample amounts of insulin has been partly explained through animal experiments.

A symptom of diabetes was produced in normal animals by injecting a material derived from insulin, researchers from Wyeth Laboratories reported in *Biochemistry*, February 1966.

The material is a combination of the "B-chains" from insulin molecules with molecules of albumin, the major blood protein, and it produces a rise in the level of sugar in the blood, apparently by inhibiting the action of insulin. Drs. Richard L. Fenichel, William H. Bechman and Harvey E. Alburn, who reported the study, said that the exact role of insulin itself is not known yet. A current theory is that insulin increases the permeability of the cell so that the sugar and other nutrients can enter the cell and be metabolized to yield energy.

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