

• New Ideas and Gadgets •

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⚙️ **VERSATILE SLIDE SPRAYER** has many uses for homeowners, boat owners or farmers. Made of lightweight aluminum alloy, the sprayer is equipped with a five-foot flexible oil and chemical resistant hose that is placed directly into the container of insecticide, weed killer, whitewash, creosote or other liquid. To spray, the handle of the device is simply pushed up and down. The nozzle adjusts from a fine mist to a 30-foot stream.

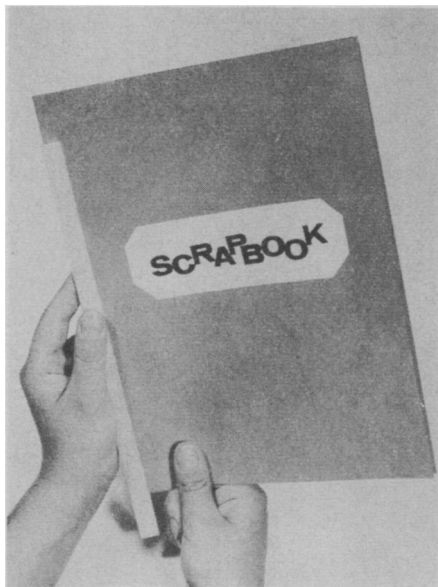
• Science News Letter, 89:64 January 22, 1966

⚙️ **NEW CLASP** for garments is suitable for use in most closures where hooks and eyes or snaps are used. The closures, made of nylon, consist of two parts that slide together to form a secure lock. Made primarily for use on the back of a dress or blouse, the new clasp is also suitable for skirts, slacks, jackets and many children's garments. The device is available in several sizes.

• Science News Letter, 89:64 January 22, 1966

⚙️ **AUTOMATIC DISPENSER** for paper towels unrolls clean dry towels with a push of a button. The dispenser which stops automatically when one towel is unrolled locks in place as the towel is torn off, eliminating waste. The unit which operates on two standard flashlight batteries is easy to install. Lightweight, it is useful in kitchen, bathroom, workshop or playroom.

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⚙️ **PLASTIC LOOSE-LEAF HOLDER**, shown in photograph, for home, school or office serves as a functional binder for papers, reports, loose-leaf catalogs and other multiple-page materials. The binder, which requires no holes, slips over the edge of the papers holding up to 25 single sheets in a secure grip. Easily removable, they can be reused many times. The holders come in colors and in 11-inch and 13-inch lengths.

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⚙️ **HAND REFRACTOMETER** provides a simple means for measuring sugar concentration in light or dark liquids. Easy to use, it will provide sharp readings even with dark products such as chocolate. Only one or two drops of the product, to be examined are needed and placed in the refractometer. The unit is held towards any light source and the sugar content is read directly on a calibrated scale.

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⚙️ **PORTABLE WATER PURIFIER** provides water at the touch of a finger. Useful to campers, farmers, travelers in foreign lands or in areas where water may be polluted, the purifier uses water locally available. The water as it is pumped from the quart-size unbreakable plastic container passes through a filter treated with ionized silver which sterilizes and makes the water drinkable.

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⚙️ **CRACK SEALER** for repairing leaky cracks in foundation walls provides a waterproof seal quickly and easily. The product is a liquid and cement compound which are mixed together for use on dry surfaces. The mixture is painted over the cracked area and a strip of glass fabric material included is placed over this surface. A second coat is applied to form a waterproof seal. Its gray color blends with that of concrete.

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• Doctors Are Reading •

Ions Help Nerve Cell Contact

➤ **THE IONS, OR FREE ELECTRONS**, from the element calcium help maintain electrical connections and hence communications between nerve cells.

By removing calcium ions from the nerve tissue of leeches, Drs. Richard D. Penn and Werner R. Loewenstein of Columbia University, College of Physicians and Surgeons of New York, were able to interrupt the electrical connection or communication.

At a certain level of calcium ion withdrawal from the cell system, the scientists reported in *Science*, Jan. 7, 1966, communication reaches a critical low point at which the cells become functionally disconnected. When the ions were completely removed, the cells became "uncoupled," sealed themselves off and actually increased their total surface resistance.

Ulcer Freezing Has Some Value

The new technique of freezing stomach ulcers has more value emotionally than physically.

A dramatic therapeutic experience such as gastric freezing can improve a person's state of mind and relieve painful symptoms for a time even though ulcer-causing secretions of hydrochloric acid remain high.

Although freezing actually does reduce the secretion of hydrochloric acid and pepsin in the stomach for a limited time, within

six weeks to two months these secretions are as high or higher than they were before the technique was used.

Drs. Claude R. Hitchcock, Ernest Ruiz, R. Duncan Sutherland and James E. Bitter, all of the University Medical School and Hennepin County General Hospital, Minneapolis, reported in the *Journal of the American Medical Association*, 195:71, 1966.

An 18-month follow-up of 173 cases indicated that gastric freezing is no better than earlier forms of ulcer treatment.

Medical Heroes Replaced

The modern doctor's effectiveness in treating his patients has declined with the disappearance of his "hero" image on the television screen, a study at the University of Southern California reveals. In his place are miracle drugs and medical machines.

The tendency is for TV, newspapers, radio and magazines to reveal doctors as recognizably human and more nearly like everyone else with the exception of training in technology, say two social scientists, Mrs. Barbara Myerhoff, social anthropologist, and Dr. William R. Larson, sociologist, who have collaborated on the study titled, *The Doctor as a Cultural Hero*.

They say science has taken on the glory the doctor has lost, and in his loss of his patients' absolute confidence, he is losing an essential ingredient of success. He has become a popular figure like the cowboy.

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