

• New Ideas and Gadgets •

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⚙️ **CAR TESTER** makes any car into a rolling research laboratory for certain engine performance details and also is a driving tachometer. The device, called the Uni-Tach, can be installed on dashboard or console. It permits the driver to keep a constant check, no matter what his speed, on such operating conditions as voltage charge, battery voltage and many more pertinent factors affecting automobile performance.

• Science News Letter, 88:223 October 2, 1965

⚙️ **MAGNET VARIETY KIT** has many practical uses around the home or office. Magnetic bulletin boards, magnetic games and other magnetic items can be created by the do-it-yourselfer or hobbyist. The kit includes 16 magnets in nine different shapes and in several compositions including a rubber strip impregnated with thousands of tiny individual magnets, making many types of experimentation possible.

• Science News Letter, 88:223 October 2, 1965

⚙️ **MAGNETIC-BASE LIGHT** is useful in workshop, home or industry. The base, which has an adjustable clamp for holding the light has 45 pounds of pull and can be used in any position on any ferrous metal surface. The work light has a five-inch spun aluminum reflector and 100-watt capacity. Suitable for use when working with drill presses, lathes, jig saws or grinders, the unit is equipped with an eight-foot oil-resistant cord.

• Science News Letter, 88:223 October 2, 1965



⚙️ **PICK-UP DEVICE**, shown in photograph, is a time saver useful in office or industry for turning pages, small parts assembly work, sorting cards and papers. The device consists of a plastic mount, shaped to fit a pencil top or like a ring to slip over the finger, to which reusable adhesive is affixed. The user presses the adhesive against the paper or item to be lifted. A light touch releases the item.

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⚙️ **WATER HARDNESS KIT**, useful to home service representatives and manufacturers as well as the housewife, provides accurate determination of the hardness of water in any area. The unit, just a little larger than a pack of cigarettes, contains two reagents to give a simple colorimetric test for hardness. It contains enough reagent for up to 60 tests.

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⚙️ **POLYPROPYLENE ROPE** that floats is wound on a wire frame that is small enough to fit in the palm of the hand. Resistant to rot, alkali and salt water, the strong orange-colored rope is suitable for towing and anchoring and as a lifeline or a clothesline. The entire line of 18 feet pays out in less than four seconds, the frame serving as a grip to prevent the rope from slipping through the hands.

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⚙️ **GANG NAILS** for connecting lumber sections are easily applied with only a hammer. Consisting of a series of spikes protruding from a metal backing, the gang nails lie flush against the wood to which they are applied, forming secure seams and joints. Useful to hobbyists as well as builders, the gang nails are suitable for joining corners of picture frames as well as beams in certain construction projects. The nails are available in a variety of widths and lengths.

• Science News Letter, 88:223 October 2, 1965

• Doctors Are Reading •

Nuclear Mitochondria Seen for First Time

► A TEAM of Johns Hopkins University pathologists has made the first discovery of mitochondria in any cell nucleus.

"Why we should have found them in leukemia cells, the only ones to have them in the nucleus anywhere in the world, is significant," said Dr. David Brandes.

Just how leukemia cells may use the mitochondria is uncertain.

The report by Dr. Brandes with Dr. Brian Henry Schofield and Elsa Anton appeared in *Science*, 149:1373, 1965. They conclude that at telophase, the last stage of mitosis, or division, in which two new cells are produced, the mitochondria became trapped within the nuclear "envelope" as it formed. This could be considered as "an aberration of cell division which may be expected in malignant cells," they explained.

Heart Disease Kills Boy Following Mumps

A 17-year-old boy died of congestive heart failure eight months after he had mumps, scientists of the U.S. Public Health Service reported in Washington, D.C. The rare medical case is the second in which the mumps virus was a factor in causing the heart ailment.

The boy had had no previous record of mumps or exposure to mumps, nor had he ever had rheumatic fever or scarlet fever,

either one of which might have contributed to his heart failure.

Dr. William C. Roberts, chief of the Pathology Laboratory of the National Heart Institute's surgery branch, and Dr. Samuel M. Fox III, chief of the Heart Disease Control Program, Public Health Service, reported the rare case in *Circulation*, Sept. 1965.

Dentures and Bridges Wear Out

Dentures and bridges are worn by nearly one-half of persons over age 21 in the United States, and because the tissues of the mouth change, it is necessary to make changes in the dental material.

Relining of dentures is usually required within three years after they are first worn because of changes in the mouth tissue, a study reported in the *Technical News Bulletin* of the National Bureau of Standards, 49:114, 1965, stated.

The widely held belief that dentures themselves change their dimensions to a significant degree is incorrect, the researchers said.

Changes in the mouth tissues, however, were apparent during several years of use, causing a decrease in retention and stability, as well as in the misalignment of upper and lower dentures.

Drs. Julian B. Woelfel and George C. Paffenbarger, American Dental Association Research Associates at the NBS, conducted the research with the assistance of William T. Sweeney of the NBS Institute for Materials Research.

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