

# • New Machines and Gadgets •

For sources of more information on new things described, send a self-addressed stamped envelope to SCIENCE NEWS LETTER, 1719 N St., N.W., Washington 6, D. C., and ask for Gadget Bulletin 1008. To receive this Gadget Bulletin without special request each week, remit \$1.50 for one year's subscription.

**LATEX PAINT** is said to give a 50% increase in the number of days you can paint outside. The paint can be applied directly to previously painted surfaces, or to new wood after using the latex primer, and dries in an hour. It spreads smoothly on dewy surfaces, and can be applied to surfaces immediately before or after a rain-fall. In 15 minutes, the paint surface has hardened so that bugs are no longer a problem.

Science News Letter, October 10, 1959

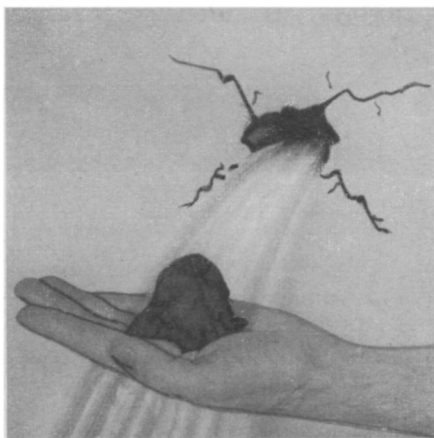
**ROTARY FEATHER DUSTER** whirls as the housewife squeezes the handle. Designed for homes, stores, offices, and factories, the mechanical duster can be detached from its handle, washed, or replaced with a refill duster.

Science News Letter, October 10, 1959

**FLOATING FIRST-AID KIT** is especially adapted for boatmen and fishermen. The waterproof kit contains the usual bandages, adhesive rolls and strips, ammonia inhalants, scissors, and salves for burns among its 13 items. A smaller size contains nine items.

Science News Letter, October 10, 1959

**LEAK-STOPPER**, for masonry walls or floors, consists of rubber-silicone liquid and



special dry hydraulic cement which can be mixed for use in three minutes. The user forms a cone-shaped plug, as shown in the photograph, and rams it into the hole, holding it about five minutes. The material expands as it sets and forms a water-tight seal. The material also may be used for sealing pipe joints and caulking around windows.

Science News Letter, October 10, 1959

**LABORATORY LOTION** is for chemists who work with acetone, methanol, ether,

and glassware detergents, or other persons who must wash their hands frequently. Its high lanolin content is designed to prevent hands from chapping and cracking. The scented, non-greasy formulation comes in 16-ounce bottle with pump dispenser.

Science News Letter, October 10, 1959

**PLASTIC MARKING INK**, for use on treated or untreated polyethylene, grips the plastic firmly and does not chip when flexed. The ink is good for decorating toys or for labeling squeeze containers.

Science News Letter, October 10, 1959

**LAYOUT DEVICE** for home craftsmen, as well as professional bricklayers, excavators and contractors, allows the user to stake out quickly and accurately the 90-degree angles of construction and plotting. Made of hard-alloy aluminum, the device is useful in the building of patios, sidewalks, fences and walls, and in landscaping.

Science News Letter, October 10, 1959

**HOME MOSAIC SET** lets the hobbyist paint by the numbers with special "liquid tile" paint, creating a mosaic picture that resembles one actually made of little tiles. Set has two tile boards, 28 paints, thinner, three brushes, cleaner, mosaic grout and instructions.

Science News Letter, October 10, 1959



## Nature Ramblings



By HORACE LOFTIN

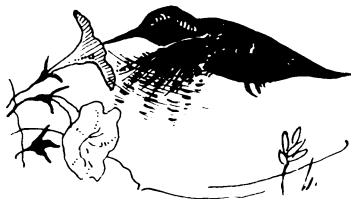
POISED DELICATELY over a blossom, its bill probed deeply within the petals in search of nectar and tiny insects, the hummingbird seems to be standing motionless in mid-air. But bright glints of color appearing as a blur by its side reveal its rapidly moving wings.

Indeed the hummingbird is far from being an idle creature. Considering its size, it consumes a tremendous amount of energy.

Scientists are able to calculate the amount of energy used by an animal in its life activities per unit weight: this is called the metabolic rate. Of all animals, the resting hummingbird has the highest known metabolic rate. When flying, the hummingbird's metabolic rate is about six times greater than when at rest!

Anything that consumes energy must of course take in fuel, or food, to produce this energy. The faster the organism or the

Deep Sleepers



engine runs, the more fuel will be used. Thus, if a hummingbird were to maintain this high expenditure of energy all day long, the bird could scarcely find food as fast as it would be burned up. In other words, it would have to eat for 24 hours a day just to keep alive.

This certainly is not the case. How, then, does the hummingbird manage to reduce its "fuel consumption"?

Sleeping hummingbirds enter a torpid

state, almost like the winter sleep of hibernating animals. The metabolic rate (energy consumption) is only about a twelfth of the rate of the resting bird. In this deep sleep, the hummingbird has a reduced body temperature and feels cold to the touch. It is motionless. If suddenly startled awake, it could not fly away immediately.

It is by this deep sleep that the hummingbird manages to conserve energy for its life processes. There is energy to spare for courtship, mating, incubating and raising the young. There is energy to spare for the accumulation of a great store of body fat in preparation for the long migration flight.

Interestingly enough, the hummingbird is close kin to two other groups of birds which show some disposition to a hibernation-like sleep. Nestling swifts become torpid when for reasons of bad weather their parents are unable to feed them well. At least one nightjar, Nuttall's poorwill, is known to be a true hibernator in winter.

Science News Letter, October 10, 1959