• 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 944. To receive this Gadget Bulletin without special request each week, remit $1.50 for one year's subscription.

WOOD-CUTTING UNIT can be used in all forms of woodworking and pattern-making. The unit has three high-speed steel cutters that eliminate any "grab" or "kick-back." It will operate at 5,000 revolutions per minute or slower speeds, and can be used in any drill press with a one-half inch capacity chuck.

Science News Letter, July 19, 1958

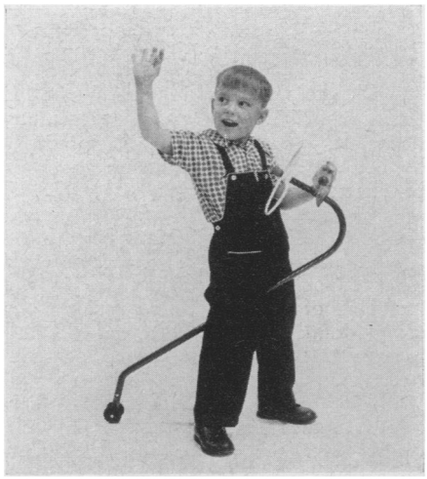
GLASS VALET holds eyeglasses when owner is showering, shaving, working or sleeping. The stand is made of plastic and can be put on a desk, table or dresser, or mounted on a wall. It is available in three colors and stands two and one-half inches high.

Science News Letter, July 19, 1958

SWEATER HANGER is designed to hold a sweater, baby's clothes or hosiery flat and out of the way on the clothes line. The swing is lightweight and made of a fabric. The hanger, which folds for storage, can also be used indoors on a shower rod or against a wall on a hook.

Science News Letter, July 19, 1958

SPACE HORSE for junior is a variation on a theme. It substitutes a gear shift that moves, a horn that beeps and a wheel that steers, for the static stick horse's head.



The toy, shown in the photograph, has an eight-inch adjustment in length to suit children from three to nine. The rear wheels click, too.

Science News Letter, July 19, 1958

GOLF RACK holds nine clubs in rubber-lined openings. Made of aluminum and weighing only three pounds, the rack is open on all sides. It is pushed into the ground to stand on three spikes. Space is provided for balls, tees and a pencil; cigarette and lighter holders are optional.

Science News Letter, July 19, 1958

POCKET RECORD-PLAYER can handle a normal 12-inch long-playing record. A British development, the miniature player does away with the turntable and provides a drive at the center of the record, a pick-up, a transistorized amplifier and a speaker sandwiched into a four-by-eight-inch package. It is battery-driven.

Science News Letter, July 19, 1958

DUAL-KEYBOARD TYPEWRITER is designed for scientific and mathematical formulae typing. The two keyboards of this British machine have a total of 180 characters. They are synchronized so that the scientific symbols on one fall accurately into place on the script typed by the other.

Science News Letter, July 19, 1958

PORTABLE SEAT, that fits into a golf bag, can support a 350-pound man. The three-legged rest, weighing two pounds, has a canvas seat. When folded, its overall length is 23 inches; when set up, it is 21 inches off the ground. The seat is also useful for picnics, parades, or fishing.

Science News Letter, July 19, 1958

Nature Ramblings

By HORACE LOFTIN

Nature's Net

➤ WHAT IS a "species" of plants or animals?

To many people, including many scientists, a species, phrased in simple terms, is a group of similar-appearing creatures that can interbreed to produce fertile offspring but which does not cross with other groups to yield fertile hybrids.

Actually, such a hard and fast definition does not hold true. Too many well-established "species" are known to cross with other species for this rule to be generally used. A striking example of genuine species breeding with other unlike species to produce strong and fertile hybrids can be seen in the wheat plants.

Through a series of investigations and deductions worthy of a Sherlock Holmes, plant scientists have unraveled much of the history of the origin of our wheat plants.

Among the earliest traces of man's primitive agriculture are charred bits of wheat of a species found even today both as a wild and as a domestic plant. This wheat of primitive man, called einkorn, is itself primitive in its characteristics.

Then among later sites, for example ruins of classical Greek times, another kind of wheat is found, called emmer. For man's purposes as food it is a step above einkorn. Many qualities set it apart from the primitive wheat. Modern spaghetti wheat is closely related to this emmer.

Then another kind of wheat appears, the group that includes our present-day bread wheats, with features distinct from the einkorn and emmer types.

By a study of the cell structure of these different wheats, scientists were able to piece together their story.

First, the ancient einkorn crossed with an unknown species of wild grass to give rise to the emmer-type wheat. This new wheat was, in turn, crossed with another unrelated species of wild grass to produce our modern bread-type wheats.

A bread wheat has actually been made experimentally by crossing emmer with a well-known wild grass, *Aegilops squarrosa*, found in the areas where our modern wheat is thought to have originated. As a test, this man-made hybrid was bred with a naturally occurring bread wheat. The cross produced offspring in all visible respects like the natural bread wheat.

When species as unlike as well-known wheats and wild grasses can cross to produce "new" species, our old definitions vanish. What, then, are species? They have been likened to the knots in a net whose web represents the continuous connection between all living things. In the study of nature, it is the whole net of life that is important, not the knots.

Science News Letter, July 19, 1958