• New Machines and Gadgets •

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PERSONAL CARD FILE can be mounted on wall or phone, or placed on desk. It contains letter guides and 300 cards, three by two inches, that cannot get out of order and are easily inserted. When used on a phone, the file does not interfere with normal use of phone hand piece.

Science News Letter, November 29, 1958

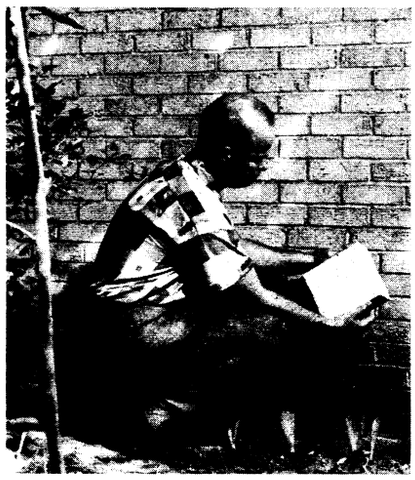
CORRUGATED STEEL ROLL ROOFING has instructions for making a tight roof printed right on the metal. It comes in 31-foot-long rolls and can be rolled on the roof purlins by two men. A printed gauge line assures that the right lap is made for each strip. A scored groove in the crimped edge impresses itself into the mastic sealer when nailed.

Science News Letter, November 29, 1958

WIRE-FORMING TOOL bends, straightens and cuts any size wire up to 5/32-inch diameter in any metal material. Made of cold rolled steel, the tool will make various wire items. Pressure of one finger on the plastic handle bends the average wire smoothly and to accurate dimensions.

Science News Letter, November 29, 1958

BRICK TREATMENT controls unsightly green or white stains appearing on masonry walls. Immediately after leaving the kiln, each brick, such as the one shown



in the photograph, is dipped or sprayed with an alkaline salt solution of an organo-silanol compound. This bonds an invisible silicone deposit to the pore surfaces of the brick which causes the brick to shed water instead of absorbing it.

Science News Letter, November 29, 1958

ALUMINUM RADAR TARGET for small craft reflects radar beams seven miles directly back to the transmitter, regardless of direction. Even small wooden boats, which otherwise do not reflect radar waves, acquire bright radar visibility with the two-and-a-half-pound target.

Science News Letter, November 29, 1958

DISTILLATION UNIT produces sterile, pyrogen-free water from ordinary boiler steam. Operation is continuous and completely automatic; no flushing or deconcentration is necessary. The process includes steam reception, centrifugal separation, vapor-liquid separation, condensation, degassing and discharge.

Science News Letter, November 29, 1958

THERMAL RIBBON for temperature measurement and control applications to 260 degrees centigrade is flexible and less than .02 inch thick. It has a pressure-sensitive tape for installation to flat, curved or irregular surfaces. A calibration curve converts resistance measurements to temperature.

Science News Letter, November 29, 1958

PLEXIGLAS STRING MODELS, used as visual aids in mathematics, science and engineering, facilitate instruction in geometrical relationships and space configurations. The models average about seven to nine inches in height. Some of the models have movable cutting planes.

Science News Letter, November 29, 1958

Nature Ramblings

By BENITA TALL

Hear Ye! Hear Ye!

➤ IT IS TOO bad that the town crier still does not walk through the town or city, telling the news and urging the neighbors to "Hear ye! Hear ye!" His cry would remind us of something we tend simply to accept without full appreciation: the sense of hearing.

Some sounds give us pleasure, the enjoyment of conversation or of music. Other sounds warn of danger. Thousands of others fit in a kind of neutral ground of sounds that is part of a person's daily life.

We know something about the mechanics of hearing. Man and other mammals, including the whales, all birds and the crocodiles, have a three-part ear: the outer, middle and inner ear. Hearing is achieved through a complicated transmission involving bones, liquid in the inner ear, sensory hairs and nerve pathways.

We also know something of the immense range of hearing sensitivity. A dog will respond to sounds considerably higher than a

man can hear. Other animals have a greater or lesser degree of sensitivity, responding to a wider or narrower range of sound frequencies and intensities than man. Yet for the scientist there is much about hearing that is unknown.

When studies of hearing in animals are mentioned, bats are probably the first animal that comes to mind.

Because of the bat's unusual use of sound to avoid obstacles, scientists have been able to test the bat's responses to sound and correlate them with the animal's physical characteristics, its environment and so on. Horseshoe bats are even said to use their ear flaps to help detect objects. The flaps apparently are in constant motion in a complicated pattern of movement that seems to scan the area "illuminated" by the beam of sound the bat emits.

To complicate the scientist's investigations of the ear and hearing further, there are other kinds of "ears." Insects have what are called chordotonal organs. Some of these sense organs have the unique function of helping the insect in its egg-laying. Some parasitic wasps that can plant their eggs in a saw-fly larva through half an inch of wood apparently are aided by the sound-sensitive organs located in their legs.

How these many sound organs function, the role of sound in encouraging or barring inter-species mating, in animal communication or in various warning and survival mechanisms, and the immense variation in hearing sensitivity from individual to individual are but a few of the "hearing problems" facing the scientist.

Science News Letter, November 29, 1958

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