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 1012. To receive this Gadget Bulletin without special request each week, remit $1.50 for one year's subscription.

AUTOMATIC-SUSPENSION SCALES are calibrated with certified test weights to an accuracy of one-tenth of one percent. They have a 16-inch-diameter dial and are available in eight maximum capacities ranging from 250 pounds to 10,000 pounds. Operation is based on compound levers.

Science News Letter, November 7, 1959

SUN LAMP KIT includes an improved type bulb, holder and metal reflector. The bulb starts tanning in one minute after it is turned on. The lamp produces a combination of infrared, ultraviolet and white light. The reflector is also suitable for use with infrared heat lamps and photoflood bulbs.

Science News Letter, November 7, 1959

INDELIBLE MARKER writes on difficult surfaces including rough lumber, abrasive metals, machinery, wiring, wall materials and fiber boards. It has a stainless steel, ball-type head on an unbreakable and refillable plastic squeeze-bottle container.

Science News Letter, November 7, 1959

TELEPHONE-DIAL LAMP shown in photograph, is made of clear plastic with a colorful glass-fiber shade. It uses as a base

any table telephone which has a rear finger-grip pick-up. Easily installed or removed without tools, the lamp illuminates the entire telephone area and dial.

Science News Letter, November 7, 1959

TOASTER INSERTS of metal may be placed in the bread slot of a toaster to aid in recovering small broken bread pieces that may be stuck. They also make it easier to toast sliced muffins, doughnuts, biscuits and bagels, as well as pound cake and waffles.

Science News Letter, November 7, 1959

TILE WALL PLAQUE records the baby's name, birthplace, exact hour and date of arrival, and the weight at birth. The tile, imported from Holland, is hand painted in soft pastel colors.

Science News Letter, November 7, 1959

SOLDERING TOOL enables the do-it-yourselfer to solder aluminum quickly and easily. The tool is a long-handled holder for a glass-fiber brush insert. When rubbed through molten solder on the metal surfaces to be joined, the brush abrades the metal, removing oxide for a firm, smooth joint.

Science News Letter, November 7, 1959

SCREEN FOR CHAIN LINK FENCE is made by using strips of brightly colored vinyl-coated aluminum, snapped into place between the chain links. Tie-in slats, woven diagonally through the links at intervals, anchor the strips in place. An attractive screen is thus formed, giving privacy and wind protection for pools, patios, etc.

Science News Letter, November 7, 1959

Nature Ramblings

By HORACE LOFTIN

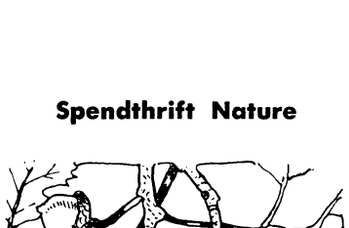
Spendthrift Nature

HOW MANY acorns on an oak tree?

It may be an odd question, but it is a fair one and an important one. Taking a first guess for a large old tree, you know that hundreds would be too few. Several thousand would not be enough, either. Probably a massive, ancient oak bears many, many thousands of acorns each season, each potentially a new oak tree.

Let us say, then, that such an oak would bear conservatively 100,000 acorns. Now this hypothetical oak is in the midst of a hypothetical forest of mighty oaks, each of which may bear at least that same number of acorns. It is obvious that if each acorn were to flourish, soon the earth would be crowded with nothing but oaks—no room, certainly, for human beings!

The same is true with insects, or with oysters, or fish, or rodents. All living organisms have a reproductive rate vastly in excess of the numbers of individuals "needed" to replenish their kind. Actually,



in all its many years of life, the mighty oak must only produce one oak offspring to reach maturity in order to replace itself. A male and female codfish need only produce two individuals which will mate and reproduce, in order to replenish themselves. Yet each female codfish may lay hundreds of thousands of eggs each year of a long life.

Why this prodigious rate of reproduction then? Consider these questions: Of the thousands of acorns borne by the oak, how many furnish food for squirrels, birds and other animals? How many are damaged by boring insects?

Of the relatively few acorns that manage to germinate and begin to grow, how many then escape the destructive work of insects? How many are browsed away by deer and cattle? How many die in fire or drought? How many fail to compete with larger and older oaks in a struggle for available food, moisture and sunlight?

Over many generations, it will be seen that each oak, or each plant or animal, produces enough offspring (that in turn come to have young) to reproduce itself under given conditions of life.

If for some reason more land, more food, fewer predators or other causes make it possible for a species to maintain larger numbers, additional animals will survive to the limit that conditions will allow. It takes the great number of acorns, eggs or young to insure that the minimum number survive the hazards of just living.

Nature is prodigious but harsh.

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