

• New Machines and Gadgets •

For addresses where you can get more information on the new things described here, send a three-cent stamp to SCIENCE NEWS LETTER, 1719 N ST., Washington 6, D. C. and ask for Gadget Bulletin 629. To receive this Gadget Bulletin without special request each week, remit \$1.50 for one year's subscription.

⚙️ **REVERSIBLE RAINCOAT** for women is made of a vinyl plastic finished to resemble somewhat a soft taffeta of gay, plain-color combinations, and of pin-dot patterns. The seams of the coat are electronically sealed, and snaps substitute for buttons.

Science News Letter, July 5, 1952

⚙️ **PORTABLE GRILL** is about the size of a brief-case when folded, but has over two square feet of cooking space when open. Weighing only nine pounds, the grill burns either charcoal or wood and has three cooking levels which permit coffee to be made while meat is being prepared.

Science News Letter, July 5, 1952

⚙️ **OIL-FIELD OUTFIT** is a technically accurate, educational model kit for children in grade school to build. When assembled, it graphically illustrates with model derrick, airplane, trucks and little men how the petroleum industry explores and drills for oil.

Science News Letter, July 5, 1952



⚙️ **DRAPERY TAPE** and hooks make straight-hanging, pleated drapes easier to achieve, as shown in the photograph. Sewn

right to the drape, the tape has pockets spaced evenly along its length. When the drapery material is gathered so that the pockets fit over prongs of the drapery hooks, the drapes become pleated automatically.

Science News Letter, July 5, 1952

⚙️ **POURING SPOUT** made of special acid-resisting rubber and plastic tubing fits any size carboy and permits acid to be poured from the bottle in an even, splashless stream without removing the stopper.

Science News Letter, July 5, 1952

⚙️ **HEATING SYSTEM** for homes blows hot air into rooms through a decorative, circular vent in the ceiling. Cooled-off air is drawn from the rooms through grilles in the baseboard and is circulated to the furnace for reheating. In the summer, the ventilating system can be used to distribute cooled air through the house if an air-conditioning unit is attached to it.

Science News Letter, July 5, 1952

⚙️ **HEATING TAPES**, designed to be wound around tubes, pipes and odd-shaped vessels in the laboratory, are regulated by a small variable transformer. Consisting of electrically heated resistance wire, the tapes are capable of maintaining temperatures of 400 degrees Centigrade in glass tubes having walls two millimeters thick.

Science News Letter, July 5, 1952

⚙️ **TRAFFIC LIGHT**, designed to be seen easily even if the sun is shining directly on its face, combines high signal brilliancy with long light bulb life, thus reducing maintenance costs as well as traffic tie-ups.

Science News Letter, July 5, 1952

ASTRONOMY

Gas Cloud Structure

➤ **NOVA AQUILAE**, an exploding star in the constellation of Aquila, the eagle, in 1918 had such a violent outburst that it temporarily became one of the brightest stars in the heavens. Within four days its light increased 40,000 times. Astronomers are still discovering what the star is like.

"It is at the secondary minimum of brightness as this puzzling star faded that we can learn most about how its erupted gases are distributed," Dr. Dean B. McLaughlin of the University of Michigan's Observatory told members of the American Astronomical Society and the Astronomical Society of the Pacific meeting in Victoria, B. C.

Expanding rings of gaseous clouds around the star's equator and thick knots of gases moving outward from its poles distinguish this star, Dr. Walter Baade of Mt. Wilson and Palomar Observatories believes. Dr. McLaughlin believes that only at secondary minimum light were all these details revealed in the star's spectrum or prismatic light pattern.

Nova Aquilae, in 1918 brighter than all stars in the heavens except Sirius and of negative one magnitude, is now of the 11th magnitude and not visible with the naked eye or binoculars. These July evenings it is in the southeast.

"By the time the star's light had fallen to

minimum, all of the opaque matter surrounding the star had cleared away and the small, hot star in the center showed up," Dr. McLaughlin pointed out.

This bright central star at minimum excited all the gases in the principal shell surrounding the star. Even the thick knots of material ejected at the star's poles when it first exploded shine at this time, he reasons.

When the star brightened again, however, its light excited chiefly knots of gas located inside the main part of the shell and illuminated only the inner surface of the large polar gas knots. A cloud of the newly ejected gases surrounding the star and closer to it than most of the gases screened out most of the high-frequency radiation which would have made the outer gases shine. Even the little radiation that did get through was just able to penetrate the thinner parts of the star's gaseous shell and cause them to glow.

At maximum, Dr. McLaughlin figures, we here on earth saw light that originated from clouds of gases surrounding the star and from the inner sides of the polar knots of gases. The ring or knots inside the main shell shone to full advantage and stood out above all else.

Science News Letter, July 5, 1952

Do You Know?

If a fox or raccoon fails to run when you approach it, the animal may have rabies; if it scratches or bites you, see a doctor at once.

To drive a golf ball about 250 yards, the head of the club must move at a speed of about 175 feet a second, or about 120 miles an hour.

The nutria, an animal introduced from Brazil resembling a large muskrat or woodchuck, has greatly multiplied after its escape from captivity and now is the most abundant animal in a large section of the southwest Louisiana marshes.