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INVENTION

Current U. S. Patents

➤ A COMMUNICATIONS CABLE that cannot be "bugged" was granted a patent by the U.S. Patent Office in Washington, D.C.

It consists of three parts, the cable core, which includes a shield to prevent indirect tapping, an inner layer with a spirally ribbed surface, and an outer jacket.

The key to making the communications cable safe against tapping is the spirally ribbed structure of the inner layer and the twisted wires held in the ribs.

The braided wires are completely encased in the outer jacket. The twisted wires carry an electric current designed to sound an alarm when the cable is tapped.

The spiral structure of the ribs and the twists in the wires contained in them make it virtually impossible for anyone to peel the outer covering and unbraid the wire to form a short circuit in the tap-proof communications cable.

A cable of this type has been produced and used, its inventor, Solomon Rubinstein of Fanwood, N.J., said. He assigned patent rights to patent 3,160,871 to General Cable Corporation, New York.

Space Kitchen

Hot and cold running water in a spacecraft would be available to astronauts using a device granted patent 3,157,192.

The device was built at Whirlpool Corporation, St. Joseph, Mich., under contract with the Air Force, and tested at Wright-Patterson Air Force Base, Dayton, Ohio.

George Boswinkle, Lester H. Hinkel and Warren R. Hafstrom assigned rights to patent 3,157,192 to Whirlpool Corporation. Their device is lightweight, has safeguards against the escape of liquid from the system, and provides a way for the water to be pumped directly into an astronaut's mouth or into the container in which it will be used.

Other Patents Issued

An ultrasonic generator that will vibrate at two different frequencies, or both at the same time, depending upon the place at which the disc is struck to induce the high-pitched sound. Robert H. Whittaker and John H. Thompson assigned rights to patent 3,157,151 to Westinghouse Electric Corporation, East Pittsburgh, Pa.

A method to convert heat directly into electricity, which could be used for electrical power generation or for space applications. It consists of adding barium vapor to the cesium vapor usually used in a conventional diode converter, increasing the efficiency. Raymond Fox of Oakland, Calif., assigned rights to patent 3,157,802 to the Government through the Atomic Energy Commission.

The shopping cart with a seat for children, a familiar item in many of today's supermarkets. The collapsible seat is used also for groceries, coats, hats and purses. Ralph G. Hummer of Oklahoma City, Okla.,

assigned rights to patent 3,157,410 to Folding Carrier Corporation, also of Oklahoma City.

A system for analyzing liquids or solids by measuring the angle of rotation they cause in a light beam traversing them. Arthur C. Hardy, Paul J. Fopiano and Milton B. Trageser assigned rights to patent 3,157,727 to Massachusetts Institute of Technology.

For a list of registered patent attorneys and other Patent Office information, write the Commissioner of Patents, Washington, D.C. 20231, or call 202-967-4058.

• Science News Letter, 86:410 December 26, 1964

SPACE

Titan III—Now Available In Large, Economy Size

➤ THE TITAN III ROCKET, whose payloads will include such important "passengers" as Gemini and the Air Force's Manned Orbital Laboratory (MOL), is made all the more versatile by its availability in a large, economy size.

The Titan IIIA can be uprated by the addition of two strap-on, five-segment, solid-propellant boosters, giving it a new name (IIIC) and enough brute strength to put a 15,000-pound payload into a 1,000-nautical-mile orbit around the earth. (See SNL 86:169, Sept. 12, 1964.)

• Science News Letter, 86:410 December 26, 1964

Nature Note

Green Turtle

➤ A DELICIOUS SOUP swims a thousand miles to lay its eggs.

The remarkable green turtle, *Chelonia mydas*, one of the most highly prized and tasty marine turtles, has recently been tracked in a navigational feat of traveling over a thousand miles to find the tiny five-mile island of Ascension, pinpointed in the vast South Atlantic Ocean.

Here the female turtle laboriously digs a two-foot hole in the sand, lays about 100 white eggs and covers them with sand. She then returns to the sea, swims the thousand miles back to the Brazilian coast where she remains for two or three years and then returns to the same tiny rock island to lay more eggs.

The superb navigational instinct of these reptiles is being carefully studied by the U.S. Navy to see how they do it as well as by conservation scientists in an effort to save the species, which used to abound in warm Atlantic waters from Florida down the coast of South America and across the ocean to the Mediterranean Sea and West Africa.

The green turtle, with its massive head and strong sharp beak, is mainly a vegetarian, but sometimes will eat fish. The largest specimen on record weighed 850 pounds and had a shell length of about five feet.

• Science News Letter, 86:410 December 26, 1964