

Current Patents

Subminiature Welder

A device to connect subminiature electronic units by laser was patented last week by James G. Harper, who assigned patent No. 3,304,403 to Texas Instruments, Inc.

With electronic components such as transistors and integrated circuits getting smaller all the time, connecting them to other components has become a problem. Conventional soldering guns are too large and too hot for use on microscopic items.

The system patented uses a laser in the infrared range to join lead wires from two thousandths to seven ten-thousandths of an inch thick. The joining technique is suitable for microscoping welding sites, the patent claims.

Schoolbus Noise Killer

A signal that tells a schoolbus operator when the noise level is too high received patent No. 3,304,368 last week. Joseph L. Ford and Richard L. Rounder, of Brownsburg, Ind., received the patent.

The noise-level system is designed to take some of the pressure off the harried schoolbus driver by protecting his eardrums. When the children's voices reach a certain level—adjustable by the operator—a light goes on at the front of the bus. As a supplement to the system, the driver is supplied with a microphone and loud-speaker. The patent application suggests that the driver could engage the children in a game to keep the light from going on.

Blast Furnace Control

An automatic fuel control for steel blast furnaces received patent No. 3,304,171. George H. McCleskey assigned the patent to United States Steel Corp.

U.S. Steel spokesmen said the system has been in operation for several years in the company's Homestead, Pa., furnace. It works by sensing the blast pressure, the temperature of the gas leaving the top of the furnace, the wind rate and the moisture in the wind, and adjusting the flow of fuel according to those four variables. The system appears to save some coke compared with similar furnaces operated manually.

New Ideas and Gadgets

New Ideas and Gadgets is an editorial service to readers; more information on items can be secured from the manufacturers.

Blood Glucose Test Kit

Designed for clinical chemistry laboratories, this test kit provides a simplified manual method for making quantitative blood glucose determinations. The test is based on the formation of a green-colored complex of blood serum glucose and ortho-toluidine in glacial acetic acid. The intensity of the green color, compared with a known glucose standard included, indicates the amount of glucose present in the blood.

Pfizer Diagnostics Department, Chas. Pfizer & Co. Inc.,
300 West 43rd St., New York, N.Y. 10036

Step-On Pump

Inflating air mattresses, rubber boats and other inflatables is less of a chore with this all-rubber pump that is manipulated by the foot to create air pressure. Shaped like a hemisphere, it comes in two sizes—5½ inches and 7 inches in diameter. The unit which includes a 22-inch-long connecting hose is useful also for rekindling a campfire or blowing dirt or water out of hard-to-reach places.

Gloys Inc., 11 Addison St., Larchmont, N.Y.

Underwater Thermometer

Fitting on the wrist with a heavy-duty black strap like a wristwatch, this circular thermometer allows the scuba

diver to keep constant watch on the water temperature while under water. The leak and shock proof thermometer, two inches in diameter, has an easy-to-read dial with distinct numerals. It has a range of 30 to 130 degrees F. and has been tested to the depth of 250 feet.

Lamb Engineering Associates, 66 King St., Hillside, N.J. 07205

Rock Tumblers

School laboratories will find this heavy-duty electric rock tumbler helpful in studies of mineralogy, metallurgy and other earth sciences. The tumbler which polishes rocks, gemstones, metal and plastic parts, can handle up to six pounds of material at a time. Also useful to hobbyists, the unit comes with complete instructions.

Edmund Scientific Co., 104 E. Gloucester Pike, Barrington, N.J. 08007

Power Converter

The voltage of any automobile, foreign or domestic, using a 6-volt power system, can be converted to the 12 volts required to operate solid state citizen's band two-way radios and other transistorized equipment by using the power and polarity converter. The heavy duty transformer, only 4½ by 3½ by 2 inches in size and one pound, nine ounces in weight, can be quickly and easily installed. It can also convert 12-volt systems to 24 volts.

Pearce-Simpson Inc., Box 800, Biscayne Annex, Miami, Fla. 33152

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