

• New Ideas and Gadgets •

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Battery Meter

Made for women drivers as well as nontechnical men, the meter shows at a glance whether a car battery is functioning efficiently or is slowly going dead, before starting on a trip. The device, which comes in gray or gold and plugs into the cigarette lighter socket, tells how many starts are left in a battery.

Radio Converter

Any AM car or home radio can be converted immediately into an aircraft communications receiver by a small transistorized device. The unit allows the radio to receive SW-HF-VHF radio frequencies with a turn of a switch and comes complete with cable for connecting to a car radio and antenna.

Space Heater

A compact nine-by-nine-inch heater that also serves as a cook stove is made of salt-water corrosion resistant materials. Suitable for use on boats, the stove uses denatured alcohol or alcohol solvent for fuel and is so designed that no leakage occurs if overturned.

Maximum-Minimum Thermometer

A thermometer with a variety of uses shows maximum and minimum temperatures reached during the day or other desired periods, as well as the present temperature, within a range of minus 40 to plus 120 degrees F. The steel temperature markers of the U-shaped thermometer are reset by a magnet which is included.

Ice and Snow Melter

White pellets of snow melter that generate heat when wet and prevent ice and snow from forming, are useful on parking areas and sidewalks, as well as in gutters and drains. The substance does not injure grass or shrubbery and leaves no residue.

Camera Lens Adjuster

Designed for the Polaroid "Swinger" camera a small metal cap allows a photographer to make 32 quarter-size photos on a regular eight-exposure film roll. A simple twist of the adjuster exposes only a section of the film at a time for photographing.

Current Patents

FUSION

Theta Pinch Patented

A method now being used in efforts to control nuclear fusion was granted a patent by the U.S. Patent Office last week. It could reduce containment time necessary to achieve fusion down to the millisecond range.

The inventor, Dr. Henry Hurwitz Jr., assigned rights to patent 3,290,219 to General Electric Company, Schenectady, N.Y., where the method is being tested. The problem in controlling fusion reactions is to confine the gas for a sufficiently long time and at a sufficiently high temperature—some 100 million degrees—for light atoms to join together to form heavier ones, releasing the difference in mass as energy.

"The main purpose of the invention is to heat the gas by rapidly compressing the magnetic field, yet still be able to maintain the magnetic field for a long time," Dr. Hurwitz said in a telephone interview.

He noted that one advantage of his device, called the "sustained field theta pinch," is that the plasma confinement time is much less than that required by many of the other methods under investigation around the world.

Dr. Hurwitz said that superconducting magnets might be used in the future to produce the very high magnetic fields required to contain the plasma for a sufficient length of time.

For a "theta pinch" device, he said, the time would be measured in milliseconds, instead of the elusive second or so necessary when using many other schemes.

DESALTING

Desalting Water by Condensation

The desalting plants of the future could use gold or silver to coat the condensing tubes that make fresh water from brine, an invention granted patents 3,289,753 and 3,289,754.

Dr. Robert A. Erb of Franklin Institute, Philadelphia, assigned patent rights to the government through the Secretary of the Interior, which funded his research into ways of condensing water by the drop instead of having it form a film on a metal surface.

Such a water film forms a barrier that prevents further condensation on the metal tubes, since water does not readily transmit heat. When the water condenses on the tubes as drops, metal is always available on which other drops can form.

The problem with using either gold or silver to promote drop formation is economic. Dr. Erb is now testing some paraffin materials to see if they give equally efficient drop-wise condensation at a considerable reduction in cost.