

## INVENTION

# Current U. S. Patents

An "electronic cryogenic thermometer" has been designed that can be used to measure the extremely low temperatures needed to launch space rockets.

➤ A DEVICE TO measure the very low temperatures necessary for launching space rockets powered by liquid hydrogen was awarded a patent by the U.S. Patent Office.

The thermometer works well from temperatures of 25 degrees Kelvin down to only one-fourth of a degree above zero Kelvin, which is 459.72 degrees below zero F.

Dr. John G. Daunt, of Stevens Institute of Technology, Hoboken, N.J., Dr. Stephen F. Malaker of Mountainside, N. J., and Edward W. O'Hanlon of Union, N.J., invented the "electronic cryogenic thermometer." They assigned rights to patent 3,233,460 to Malaker Laboratories, Inc., Mountainside, N.J.

Dr. Malaker told SCIENCE SERVICE that about 100 of the low-temperature measuring devices are now in use in many countries around the world.

## Hollow Bowling Pin

A bowling pin that has a hollow core, yet reacts in the same way as one made of maple when struck, was granted patent 3,233,903. Fred E. Satchell of Grand Haven, Mich., and Louis J. Trier and John J. Weisz of Muskegon, Mich., assigned rights to Brunswick Corporation, Muskegon.

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## Automatic Heart Massage

An electronic device for massaging a heart that has stopped earned patent 3,233,607 for Dr. Victor W. Bolie of Ames, Iowa, who assigned rights to Iowa State University of Science and Technology. The heart helper, which is said to be small and durable, can be placed inside the body near the ventricle.

## Other Interesting Patents

A toy satellite that sends radio signals and can be easily made from a "do-it-yourself" kit earned patent 3,233,362 for Ralph R. Chapman of Lansing, Mich. The radio waves broadcast by the toy can be picked up by a conventional home or car radio. In addition to its value as a toy, the miniature satellite's radio transmitter can help youngsters learn how electromagnetic waves are emitted and received.

Columbia Broadcasting System was granted rights to two patents for recording visual information on film. One of the patents, 3,234,327, awarded to Dr. Renville H. McMann Jr. of Stamford, Conn., involves reproducing such information as would be obtained from photographic reconnaissance, side-looking radar or infrared scanners. Dr. McMann was also granted patent 3,234,326, with Dr. Peter C. Goldmark, director of research for CBS Laboratories, for a method of recording on a film strip either black and white or color television signals.

Dr. Edwin H. Land of Cambridge, Mass., inventor of the Polaroid camera, was granted a patent for a process of transferring a photographic image into a print. Meroe M. Morse of Boston, Mass., was co-recipient of patent 3,234,022, rights to which were assigned to Polaroid Corporation, also of Cambridge.

• Science News Letter, 89:141 February 26, 1966

## Do You Know?

*Sensicall*, a device that will enable totally deaf people to communicate by telephone using prearranged code, converts long and short sounds into long and short blinks of light.

A very high percentage of *cyclists* killed in accidents die from head injuries which could have been prevented by wearing safety helmets.

Scientists have built a radio *transmitter* that can be strapped to an animal as small as a pigeon or as large as a cow to obtain information about the animal's health.

• Science News Letter, 89:141 February 26, 1966

## TECHNOLOGY

## Hydrogen Takes 'Crude' Out of Crude Shale Oil

➤ SOME KINDS of crude oil are just too crude.

Shale oil, for instance, which is burned out of rocks instead of being pumped out of the ground, is of such a low grade that it is not worth refining by conventional methods unless it is first upgraded.

One of several methods of doing this is the H-Oil process in which hydrogen gas is bubbled up into the crude oil through holes in a tank lined with some catalytic material. This technique replaces other methods in which the hydrogen is troublesome because it forms pockets in the oil, leaving some parts unexposed to the gas.

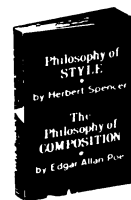
The H-Oil process was described to the American Institute of Chemical Engineers meeting in Dallas, Texas, by Mrs. K. C. Hellwig of Hydrocarbon Research, Inc., Trenton, N.J.

A plant using the process is under construction in the tiny, oil-rich country of Kuwait, and another is already in operation near Lake Charles, La.

• Science News Letter, 89:141 February 26, 1966

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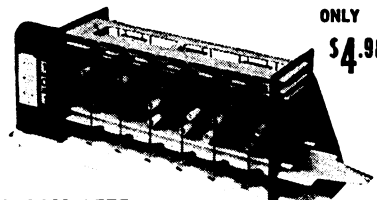
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