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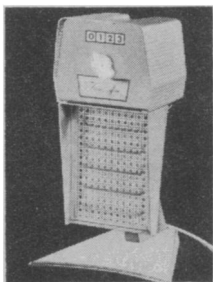
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INVENTION

Current U.S. Patents

► A DEVICE USING lightweight solar cells to turn sunlight into electricity on space vehicles was granted a patent by the U.S. Patent Office.

The solar energy converter has not yet been used in space, but is being considered as the source of electricity for one of the future unmanned probes to Mars. About 20 test panels using the patented method have been built.

They are about 15 inches wide and four feet long, Roger B. Gillette, one of the three inventors, told SCIENCE SERVICE. Mr. Gillette, Howard E. Snyder and Ralph J. Tallent, all of the Boeing Company, Seattle, assigned rights to patent 3,232,795 to Boeing.

In effect, the invention produces about twice the usual power from the same number of cells by increasing the light gathering area of the converter. This is accomplished by mounting the solar cells on a sheet of aluminum or some other heat conducting material that not only reflects the sunlight to the cells but also radiates into space the heat generated by the light.

Spacecraft Control Method

To keep a large manned spacecraft pointed in the desired direction despite the movements of humans or objects within, Guy E. Adams of Golden Valley, Minn., has devised an attitude control system for earth-orbiting vehicles.

He assigned rights to patent 3,232,561 to Honeywell, Inc., Minneapolis. The system detects changes from the desired orientation of the satellite's spin axis and provides correcting forces in order to keep the spacecraft accurately oriented.

The changes are determined by comparing the earth's magnetic field with a magnetic field set up on the spacecraft by conductors carrying an electric current. The design for Mr. Adams' spacecraft looks like the drawings made for years in science fiction magazines, showing a tubular rim connected to a center structure by spokes. Application of his device may come before large manned vehicles, however, since his method is now being considered for more immediate orbiting craft.

Other Interesting Patents

Another patent with possible space application was granted to Dr. Rudolf X. Meyer of Pacific Palisades, Calif., who assigned rights to patent 3,232,046 to the Aerospace Corporation, Los Angeles. Dr. Meyer developed a method of harnessing the energy of a gas plasma, by using magnetic "mirrors," to produce the high velocities necessary for space propulsion.

For earthbound use, Bela Barenyi of Stuttgart-Vaihingen, Germany, has patented an automobile frame for passenger cars in which the top is supported by a beam extending forward from the rear end. He

assigned rights to patent 3,232,660 to Daimler-Benz Aktiengesellschaft of Stuttgart-Unterturkheim, Germany, the firm for which he is chief of the advanced development section.

A method of preventing plant growth by using a combination of tin and organic chemicals now undergoing tests was patented by Gustav Weissenberger of Zurich, Switzerland, who assigned rights to patent 3,232,735 to Monsanto Company.

Earth-based telescopes equipped with the device developed by Dr. James Dwyer McGee of London will be able to photograph stars much fainter than now possible. Dr. McGee assigned rights to patent 3,232,781 for using electrons to intensify a photographic image to National Development Corporation, London.

For a way of attaining very high magnetic fields by using the supercold temperatures near absolute zero, which is 459.7 degrees below zero Fahrenheit, David L. Atherton of Ferranti-Packard Electric Limited was granted patent 3,233,155. He assigned rights to that firm.

• Science News Letter, 89:126 February 19, 1966

Nature Note**Worms of Many Legs**

► SOME CREATURES just seem to need a lot of feet for creeping around—the thousand-legged worms or millipedes, and the hundred-legged worms or centipedes.

Some hundred-leggers may have more than a 100 legs, but most of the common species have only 30. These belong to the order Chilopoda and have one pair of legs attached to each segment of their long crawling bodies.

The 1,500 different kinds of centipedes are all carnivorous, their preferred meals consisting of insects, spiders and earthworms. In certain parts of Polynesia, large fat centipedes are roasted over a small fire by the local inhabitants and their middle portions are eaten with relish.

There are about 200 species of centipedes in the United States, usually found in damp places in homes, especially in cellars or in bathrooms. These creatures may seem an ugly nuisance, but they help the household by feeding on cockroaches, flies and mosquitoes.

The thousand-leggers or millipedes never have as many as a thousand legs. These have two pairs of legs attached to each segment of their bodies. Depending on the species, millipedes may have from 30 to 70 segments—a count of about 120 to 280 legs that move in rhythmic cadence as they ripple over the ground.

Millipedes are harmless to human beings and contain no venom, although some include hydrocyanic acid in their scent glands.

• Science News Letter, 89:126 February 19, 1966