

## INVENTION

# Patents of the Week

An inflatable device that could be stored as the payload of a rocket, and become a saucer-like space laboratory once in orbit, has earned a patent.

► AN "INSTANT" SPACE STATION that could be inflated while in orbit has earned a patent.

This device is one of the first patents issued for a space station. Rights have been assigned to the National Aeronautics and Space Administration by its inventor, Emanuel Schnitzer, Manned Space Center, Houston, Texas.

The invention, which earned patent 3,144,219, consists of a space laboratory that can be folded and stored in the payload stage of a launch vehicle. Once placed into orbit, the laboratory would be inflated to provide an operational satellite.

The inflatable device is still under considerable study and could be used either as a space station, for long distance missions or as a kind of "pressurized tent" on the surface of a planet, Mr. Schnitzer told SCIENCE SERVICE.

The saucer-like station, which would contain several compartments, would be made of a combination of Dacron or glass filaments embedded in one of several types of rubber.

Combinations of such materials would have strength to weight ratios equivalent to those of metals, Mr. Schnitzer reported.

A model of the space station, 24 feet in diameter, has been built at Langley Field, Hampton, Va.

## Device Checks Turn Signals

A device that will let a driver know whether or not his turn signals and brake lights are working properly has been awarded patent 3,144,561.

The device consists of a self-generating photoelectric cell next to each turn signal light. Each photocell is connected by transistors to a light on the instrument panel. When the turn indicator is on, the light on the dashboard brightens. When the indicator is off, the light dims.

The inventor, Christopher W. Farrell, Lantana, Fla., said the dashboard light serves as both an alarm system and a turn indicating light.

## Scarf-Like Life Preserver

A life preserver that is worn around the neck like a scarf and inflates automatically when it touches the water earned patent 3,143,751.

The preserver is an arch-shaped bag that fits around the neck and shoulders and is fastened to a person by a chest strap. A water-sensitive gas capsule on the side of the bag automatically inflates it upon contact with water.

The inventor, Frank L. Davis, Northport, Long Island, N. Y., said in his patent that the small, lightweight and flexible pre-

server can be a handy device for bridge builders, loggers, sportsmen, longshoremen and others who may work near the water.

## Outer Space 'Air Conditioner'

A device for removing carbon dioxide from the air in the cabin of a space vehicle earned a patent for Walter E. Arnoldi, West Hartford, Conn.

This system is advanced equipment that may be used in space projects following the Apollo man-on-the-moon shot, Mr. Arnoldi told SCIENCE SERVICE.

The process removes carbon dioxide at a rate equal to that produced by occupants of the cabin. The carbon dioxide must be removed from the air so that the occupants are not harmed mentally or physically, Mr. Arnoldi said.

The process is essentially in three steps: the equipment separates moisture from the air, freezes the carbon dioxide out of the dry air, and rehumidifies the air, minus the carbon dioxide, for circulation.

The frozen carbon dioxide, or dry ice, is then collected in a heat exchanger and discharged into space.

The system can be used for space projects lasting between two weeks and three months. It has been designed for minimum weight and power consumption, Mr. Arnoldi said.

This space "air conditioner" was awarded patent 3,144,317. Rights were assigned to United Aircraft Corporation, East Hartford.

## One-Man Band Device

One person playing a harmonica can become an entire band with the flip of a switch.

A new device, which translates a note of one instrument into the notes of a number of other instruments simultaneously by a solenoid switch, makes one person become a musical band by remote control.

The switch translates the notes from a harmonica-like instrument to those of other instruments such as an accordion, piano or organ, which are attached to the switch by wires.

Inventor George P. Smith, Petersburg, Va., told SCIENCE SERVICE he learned to play the harmonica, but never learned how to read music. He explained that this invention was his way of figuring out how to play other instruments through his knowledge of the harmonica.

The invention, which earned patent 3,143,027, is a simple switch device that may even be used as a toy, Mr. Smith said.

The original model was made out of a doorbell, which had one note.

• Science News Letter, 86:141 August 29, 1964

## SPACE TECHNOLOGY

### 'Eye' Sees Four Ways To Scan Skies

► AN "ELECTRIC EYE" that can "see" in four directions at once has been developed for use as a tracking device. Stars and laser images could be tracked by this multiplier phototube. It was built at the International Telephone and Telegraph industrial laboratories for the Army Missile Command at Redstone Arsenal, Ala.

• Science News Letter, 86:141 August 29, 1964

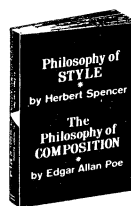
## TECHNOLOGY

### Underwater Chutes Help Lay Ocean Cables

► PARACHUTES are aiding in laying cables at great ocean depths.

Used at depths of up to four miles, they make the heavier portions of undersea telephone cables sink at the same speed as the lighter parts, preventing the cable from forming damaging loops.

• Science News Letter, 86:141 August 29, 1964



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