## Parawing Patent Issued

Flexible wing glider heads list of patents which includes space booster recovery balloon.

An improvement for a parachutelike flexible wing now being tested by the U.S. Army was awarded a patent by the U.S. Patent Office. The "parawing," an adaptation of the concept of a flexible wing originally designed by Francis M. Rogallo, can be steered over moderate distances to a pinpoint landing at a selected site.

The parawings being tested by the Army are about 400 feet in area, and can be folded, packed and deployed like a parachute. Charles E. Libbey of Newport News, Va., assigned rights to patent 3.286,957 to the government through the National Aeronautics and Space Administration.

Another patent assigned to NASA, 3,286,953, this week was the star sensing system used to orient such planetary probes as the Mariners. The system locks onto a bright star, in this case the second brightest star in the sky, Canopus, to control the roll attitude of an interplanetary vehicle. Pitch and yaw are controlled by aligning a sensor with the sun. The Canopus tracker, which can locate and follow the star through a range of approximately 30 degrees, was devised by Gerald W. Meisenholder.

Also assigned to NASA was patent 3,286,274, issued to James H. O'Kane of Friendswood, Texas, who invented a method of using two movable cords to adjust spacesuits so that they fit the astronaut when inflated. The cords can be either tightened or loosened as necessary merely by pulling on them, thereby keeping the helmet always in correct adjustment.

## **Booster Recovery**

Another space-oriented patent was awarded to Robert T. Kendall of Palos Verdes Estates, Calif., for a method to recover space objects and float them gently to earth. Its most important use would be in the recovery of rocket boosters, a field in which Douglas Aircraft Company, Inc., Santa Monica, Calif., is very active, to which Mr. Kendall assigned rights to patent 3,286,957.

Both the heat shield and the balloon used to float earthward are inflatable and can therefore be easily stored until needed.

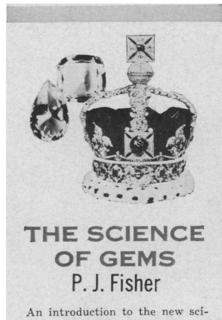
## **Other Interesting Patents**

To protect hospital patients from the danger of air entering their veins and causing air embolism when a container becomes empty during intravenous feeding or blood transfusion, Karl W. Baehr of Middleport, N.Y., has invented an intravenous alarm monitor. The device, awarded patent 3,287,721, is plugged into an electric outlet and gives its signal to alert an attendant both audibly and visually when the container reaches a dangerously low

Airplane pilots who keep track of stormy weather ahead by radar can thank David Atlas of Waban. Mass., for a method of finding the safest available path through turbulent clouds. He has found a method to enhance the radar signals portraying cloud patterns and storm intensity so that the airplane's radar screen gives an accurate picture by which the pilot can thread his way through the storm. The invention, granted patent 3,287.726, can be used by the Government without payment of royalties.

For dog lovers who want to give their pets the best of care, Kenneth A. Warth of North Bergen, N. J., has invented an umbrella under which a dog can take refuge when it rains. The foldable umbrella is driven into the ground on a pole with a skewered end, according to patent 3,286,962.

Two teaching devices to help students learn a subject by answering increasingly difficult questions were awarded patents. Kenneth M. Beach Jr. of Santa Clara, Calif., assigned rights to patent 3,286,371 to Varian Associates, Palo Atlo, Calif. Sam B. Williams of Walled Lake, Mich., John F. Jones of Berkley, Mich., and Lawrence P. Kazyak of Detroit, assigned rights to patent 3,286,372 to Williams Research Corporation, also of Walled Lake.



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