

Patents of the Week

An aircraft powered by the sun that will operate indefinitely at altitudes up to 300,000 feet at a speed of 1,000 miles per hour has been patented.

► A SUN-POWERED aircraft that will operate at altitudes of 100,000 to 300,000 feet at speeds of 1,000 miles per hour was patented by the U. S. Patent Office.

Since the aircraft does not require fuel, it can remain in the air indefinitely. This will permit recording and transmitting valuable information on the earth's atmosphere at high altitudes.

The aircraft's wing would be rectangularly shaped, according to patent 3,089,670, granted to Elmer G. Johnson, Fairborn, Ohio. Its upper surface would be substantially transparent to solar radiation and would be made of a material having a high tensile strength and a low specific weight.

A radiation trap, of an accordion-like design, would be located beneath the wing's upper surface. This would be made of V-shaped struts of a thin metallic membrane, which are not transparent to solar radiation and have a mirror-like surface. One way to form this membrane is by coating the plastic "Mylar" with a thin metal film.

Vertical Takeoff Airplane

A design that allows an airplane to rise and descend to the ground vertically but also to fly horizontally earned patent 3,089,666 for Henry H. W. Quenzler of Seattle, Wash., who assigned rights to Boeing Airplane Company, also of Seattle.

The design calls for two or more wings spaced along the airplane so that in normal flight the lift forces balance about the plane's center of gravity. The propellers are distributed on the wings so as to produce equal lifting forces at opposite sides of the airplane's longitudinal axis, as well as equal forces fore and aft of the airplane's center of gravity.

The propellers are mounted in pairs along the leading and trailing edges of the wings.

Artificial Respiration Device

A mouth-to-mouth artificial respiration device that is much less expensive to manufacture than previous devices of this type earned patent 3,089,485 for Louis Hirschhorn, Great Neck, N. Y. His invention claimed to eliminate various problems posed by previous devices of this type.

An oval mouthpiece of thin flexible material is adapted for easy insertion in the patient's mouth, between the upper and lower lips. The tubing in the mouthpiece is so constructed that it can be fitted to the patient's mouth and throat dimensions. This also prevents air leakage without closing the patient's lips.

The device can be made of rubber, and should be long enough to allow the operator to stand or kneel over the subject.

Rocket-Assisted Torpedo

An airborne missile that has an increased likelihood of successfully destroying enemy

submarines gained patent 3,088,403 for James T. Bartling, Orville J. Saholt and Bernard Smith, China Lake, Calif. They assigned rights to the Government through the Navy.

The chief advantage of the airborne torpedo is that it does not require the long "swim-out" time needed by underwater torpedoes, thus greatly reducing delivery time. In addition, malfunctions of conventional underwater torpedoes are eliminated by slowing down the torpedo's entry into the water by using a small parachute. The typical torpedo is often damaged when shot into the water from a ship.

The rocket anti-submarine weapon can be smaller and simpler to manufacture than conventional torpedoes.

Other Patents

Other patents awarded were:

A sun hat made of a polished metal surface to reflect the heat, for which Howard H. Kiefer, New Hartford, N. Y., was granted patent 3,089,145.

A car wash of conventional design but which is completely automated, which earned patent 3,089,168 for George W. Blanford, Cincinnati, Ohio.

A traffic safety belt consisting of shoulder straps and a waist band crossed at the front and back of the wearer. Carl H. Jacobson, Thompson, Conn., assigned rights to patent 3,089,143 to the American Optical Company, Southbridge, Mass.

A medical table, consisting of a top to support the patient, which can be tilted from a horizontal to a vertical position, for which Olle Blomqvist, Stockholm, Sweden, earned patent 3,089,692.

A device that indicates the position of the front wheels of an auto directly on the dashboard. Martin Brownshield, Dobbs Ferry, N. Y., earned patent 3,088,431 for his invention, which will aid a driver in parking his car in "tight quarters."

A novel design for small sailboats that results in higher speed because the hull has a bow that cuts the waves more sharply. Marcello Majnoni, Milan, Italy, was granted patent 3,088,428 for his invention.

• Science News Letter, 83:351 June 1, 1963

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