

INVENTION

Patents of The Week

A method of building a supersonic airplane with wings that change position and a roof for a station wagon that can be raised were granted patents.

► A METHOD for building a supersonic airplane with wings that change position for flying at slow speeds has been patented.

Such an airplane flying at supersonic speeds about 100 feet above enemy territory could inflict extensive shock wave damage on buildings near its path. Very low altitude flight also reduces the chances of an airplane being detected by radar or being attacked by enemy aircraft.

However, for non-military uses, supersonic airplanes should be flown at low altitudes for as short a time as possible. The wing shape that gives best flight performance for supersonic speeds does not provide the desired characteristics for the relatively slow speeds necessary for landing and take-off in a reasonable space.

To remedy this, several ideas have been investigated, including aircraft that can hover or have variable sweep wings. For one method of changing the wings' position without upsetting the plane's control and stability characteristics, patent 3,053,484 was awarded to two National Aeronautics and Space Administration (NASA) scientists.

William J. Alford Jr. and Edward C. Polhamus of NASA's Langley Research Center, Langley Field, Va., assigned rights to the Government through NASA. Their method provides for changing the wings' sweep angle from 25 degrees to 75 degrees.

Radiation Shielding Materials

Dr. Lyle B. Borst of New York University was granted patent 3,053,776 for compounds he has found give good shielding from radiation. He assigned rights to The Dow Chemical Company, Midland, Mich.

The compounds can be used alone or with such other materials as iron, lead or stainless steel to provide shielding from an atomic reactor such as might be used in an airplane, ship or locomotive.

The materials include cobalt hexamine trichloride, cobalt chloropentamine trichloride or other compounds containing heavy metal elements, nitrogen and hydrogen for absorbing high-energy radiation from nuclear reactors.

Expandable Station Wagon

A roof for a station wagon that can be raised to give more room if needed won patent 3,053,562 for Harry Farber of Philadelphia. The extensible roof looks normal when not in use.

Mr. Farber said his invention will help prevent camping trips and picnics from being spoiled due to bad weather conditions. Canvas side walls go up automatically when the roof is raised by a reversible motor.

The apparatus for raising and lowering

the roof can be operated from inside the station wagon so that persons need not get wet to picnic or camp out. The panels of the side walls are provided with windows.

Other Significant Patents

An instrument for locating any selected star or constellation, having an equatorial mount. It is sufficiently simple and convenient to use so that even beginners can master its operation. Patent 3,052,986 to Charles J. Merchant, Cleveland, who assigned rights to A. C. Gilbert Company, New Haven, Conn.

A teaching globe that shows the apparent orbits of earth satellites and can also be used to demonstrate basic earth-sun relationships. Patent 3,052,993, granted to Keith M. Olson of Wilmette, Ill., who assigned rights to Denoyer-Geppert Company, Chicago.

A device for fishing poles to tell the fisherman when a fish has bitten by a ratchety sound. The small device can be applied to poles without modification, Emmett A. Barnes and Robert B. Withington of Cincinnati claimed in patent 3,053,003.

A hand covering for volleyball players that allows freedom of movement, yet gives a reinforced ball-striking surface on the front of a fist. Lawrence M. Furey of Newport News, Va., was awarded patent 3,052,889.

A system for controlling and guiding missiles such as the "buzz" bomb used in World War II, for which patent 3,053,478 was granted 17 years after application was made. Lee L. Davenport, then of Cambridge, Mass., and Ivan A. Getting, then of Belmont, Mass., assigned rights to the Government through the Secretary of the Navy.

• Science News Letter, 82:215 September 29, 1962

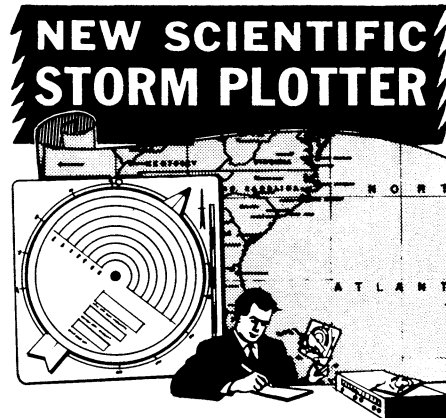
TECHNOLOGY

Generate Electricity On G.I. Back

► CARRIED on a G.I. back, a new 30-pound thermoelectric generator that supplies 150 watts without moving parts is in production by Atomics International, Canoga Park, Calif., for the U.S. Army. Fueled with gasoline, it is silent and does not give off revealing light at night. A jet flame warms a lead-telluride material that provides the electrical power.

The generator is mounted on a back pack base and is designed for ruggedness. It will operate at high altitudes, at extreme high and low temperatures and withstand rigorous field conditions including parachute drops.

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