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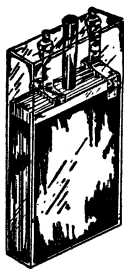
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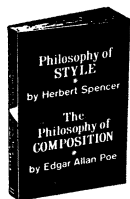
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INVENTION

Patents of the Week

An automobile that quickly converts into a flying machine and uses the same power source for both the removable propellers and wheels has been patented.

➤ A "FLYING AUTOMOBILE" that uses the same power plant for the propellers as well as the wheels, depending upon which are being used, and can be easily converted from one mode of transportation to the other was patented by the U.S. Patent Office.

Removable propellers are located in the front and rear of the vehicle. When the vehicle is being used as an auto, the front and rear hoods, which are raised when the propellers are being used, are dropped down to give a conventional look.

The front propeller is of the pulling type and the rear propeller of the pusher type. Either propeller may be converted into the opposite type.

A pair of stabilizers that can pivot are mounted on the front and back of the car. The wings extend to the sides from the stabilizers.

When used as an airplane, the vehicle's stabilizers and wings are placed on the outside of the vehicle, the road wheels are raised and the propellers are automatically ready to operate. By suitable adjustment of the wings the car can take off. When in the air the wings are further adjusted for cruising speed.

Einar Einarsson, Farmingdale, N. Y., earned patent 3,090,581 for this invention.

New Way to Build Bridges

A simple, speedy and less expensive way to build highway bridges, using suspension cables to shape and support the road when the concrete is poured, was awarded a patent.

The Swedish inventor, Gunnar Thiman, Stockholm, assigned rights to patent 3,088,246 to the Swedish corporation Ingenjorsfirman Invent Aktiebolag, Stockholm.

To build a bridge of reinforced concrete by his method, the suspension cables are anchored to various places throughout the concrete mold so that they support the road itself, once the concrete is poured. The cables remain in the hardened concrete roadway, helping to absorb some of the stresses and strains when the bridge is used.

Pier structures of reinforced concrete are built first. Then steel cables or wires are stretched over the two piers from one shore anchorage to the other, the ends of the cables being anchored in the concrete structures. Next the roadway is built on the supporting cables by placing a mold on top of the cable layer, then pouring the concrete. The cables stay in the hardened concrete as reinforcements for the bridge.

Hydrodynamic Propulsion Device

A device that allows an undersea diver to breathe oxygen always under the correct pressure, so he can change depth more

rapidly than when using other apparatus gained patent 3,090,345 for John K. Hulbert, Grand Island, N. Y.

The device is completely self-contained, and can propel the diver over large distances while supplying him with ample oxygen for a long period of time. The diver is even supplied drinking water.

The overall unit consists of a casing to be strapped against a person's back and holding a propulsion engine. The engine is composed of three cylinders, each having a discharge end located about parallel to the back of the diver's knee.

Elastic Floor

An elastic floor that permits an entire wooden floor to swing uniformly, rather than the conventional way of using two parallel beams to provide elasticity, earned patent 3,090,082 for Paul Baumann, Munster, Westphalia, Germany.

The floor's hardwood boards are connected so as to form elastic supports, by means of wooden pegs that extend vertically through the hardwood boards.

Multiple-purpose halls, such as gymnasiums, are especially suitable for the mechanism, which is able to adjust itself to the pressures imposed on it.

Other Inventions

Other patents awarded were:

A musical swing designed to provide music for children, for which Walter E. Fox, Monroeville, Pa., earned patent 3,090,273.

A life-preserver pillow or cushion that encloses a life preserver for use in an emergency, for which Lawrence F. Moran, Stamford, Conn., was awarded patent 3,090,054.

A yoke-type device that can secure two small boats together so as to form a single boat structure to hold a central power motor, which earned William G. Fletcher, Bogota, N. J., patent 3,090,053.

A portable desk consisting of a strap around the neck that supports two boards, one projecting forward to form a "writing desk" that can be folded in, which earned patent 3,090,330 for Clarence A. Best, New Albany, Ind.

A paper sheet stacker that stacks paper so the sides of the stacks are smooth and there is no "lean" to the pile, which earned patent 3,090,503 for Frederick B. Curtenius, Kalamazoo, Mich.

An exercise machine that allows a child to swing about circularly, supported by a ring at the end of a rod that rotates about in an up-and-down, roller-coaster fashion. The child's weight pushes the device along. George Hjelte and Miles H. Baer, both of Los Angeles, Calif., won patent 3,090,617 for their invention.

• Science News Letter, 83:366 June 8, 1963