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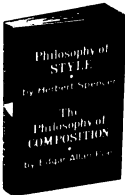


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NATIONAL GEOGRAPHIC MAGAZINES. 1888-1961, any issue. Periodical Service, Box 465-SN, Wilmington, Delaware.

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INVENTION

Patents of the Week

An air conditioning system for space vehicles, a "flying saucer" type of aircraft, a method for injecting animals with drugs from a distance and a helicopter kite awarded patents.

➤ AN AIR CONDITIONING system for space vehicles has been patented.

The system makes use of the vacuum of space to help the cooling. It was devised by Otto Schueller of Dayton, Ohio, who assigned rights to patent No. 3,022,643 to the U.S. Government.

The parts of the system, such as carbon dioxide and odor absorbers, dust filter, circulating pump, oxygen container, and pressure regulator, are in an insulated container. Their surfaces are exposed to the coolant so that they act as precoolers in the system and are isolated from external high temperature.

The entire package is swivel-mounted in the vehicle so that it turns automatically in the direction of acceleration.

Disc Aircraft

A "flying saucer" type of aircraft, with an improved jet method of propulsion and control, won patent No. 3,022,963. Canadian inventors John Carver Meadows Frost of Georgetown, Ontario, and Thomas Desmond Earl of Glen Williams, Ontario, assigned rights to Avro Aircraft Limited, Malton, Ontario, a Canadian corporation.

The circular aircraft is propelled by the thrust from a stream of high-speed gases flowing outward in a radial direction and discharged from the outer edge. By selective adjustment of the discharging gases, the pilot can control the aircraft.

Injecting Drugs

A method of injecting animals with drugs from a distance won patent No. 3,022,785 for Jack A. Crockford of Chamblee, Ga., and Frank A. Hayes, James H. Jenkins and Seldon D. Feurt, all of Athens, Ga. The injection action is triggered at the time the "bullet" containing the drug is fired. However, there is a time delay provided within the projectile so that the drug is not expelled until after sufficient time has elapsed to ensure that the "bullet" has entered the animal.

The inventors recommend an air gun for firing the projectile. Injecting drugs from a distance eliminates the possibility of injury because of the animal's resistance.

Pistachio Nut Splitter

A process to split the shells of pistachio nuts won patent 3,022,807 for Felix Bloch of Oakland, Calif., who assigned rights to the U.S. Government as represented by the Secretary of Agriculture.

His simple method, Mr. Bloch says, is to cause the splitting merely by placing the

nuts in a container with water and subjecting them to pressures much higher than normal atmospheric pressure. Usually a pressure of about 150 pounds per square inch is used.

The nuts are held under this pressure from five minutes to three hours, depending on the time needed to cause the desired shell splitting. Following the pressure step, the nuts are drained and dried in a current of warm air.

Pistachio nuts already partially split are preferred by consumers because they are easier to open than unsplit nuts, Mr. Bloch says. Salt may be used in the water during the pressure process if a salted product is desired.

Helicopter Kite

John Romeo of Wyckoff, N. J., was awarded patent No. 3,022,967 for a kite that simulates a helicopter. It has rotating rotors at the midsection and on the tail, as well as a bridle for controlling flight from the ground. Such a kite can be efficiently manufactured in large quantities at a relatively low cost, Mr. Romeo claims. It is simple to assemble and sturdy.

Bone-Preserving Method

For his method of preserving bone and other tissues, Eli Jordan Tucker Jr. of Houston, Texas, was awarded patent No. 3,022,783. He assigned rights to the National Bone and Tissue Laboratories, Inc., also of Houston.

Bones preserved by his method may be transplanted at later times to other living bodies without side effects, Mr. Tucker claims.

• Science News Letter, 81:174 March 17, 1962

Questions

CONSERVATION—Where is Sleeping Bear Dunes National Lakeshore? p. 164.

GEOPHYSICS—What are two possible methods of forming the diamonds found in meteorites? p. 168.

PSYCHOLOGY—Why should a person not be awakened during light sleep? p. 169.

SPACE—What are the advantages of land recovery of space vehicles over water recovery? p. 1963.

Photographs: Cover, United Press International; p. 163, National Aeronautics and Space Administration; p. 165, Lockheed Missiles and Space Company; p. 167, Fremont Davis and U. S. Army; p. 176, Twin Minnow Bait Co.