

Three Convertibles Receive Patents; Ice Creeper Listed

Washington—(Science Service)—Three new convertibles were patented here this week: a convertiplane that rises as a helicopter but travels as a supersonic jet, an open-aisle railroad coach that quickly converts to provide sleeping compartments, and a tire with an insert that makes it an ice and snow tire.

The convertiplane is propelled by a jet engine that drives a compressor. When the plane is covering distance, the compressed air discharges from the rear of the plane.

But when the plane is rising or descending, the compressed air is directed by a valve into the mast that holds the helicopter rotor. The air is channeled into the longer of the two rotor blades and discharges from nozzles at the tip of the blade. This discharge whirls the helicopter rotor.

Little Air Drag

During forward flight, the tip of the rotor's long blade is held at the plane's tail. In this position, it causes little air drag.

The inventor of the plane is Eugene M. Gluhareff of Manhattan Beach, Calif. He assigned the patent to the United Aircraft corporation.

The convertible coach patent was assigned to the Pullman company by the inventors, George W. Bohannon of Oak Park, Ill., and Walter Scowcroft of Palos Heights, Ill.

This patent is for a car that may be used with compartments on some runs or as a regular coach, when this is needed. To provide the open-aisle effect of a coach, the compartments' doors can be held open so that they close off the private toilets and prevent the lowering of the beds.

May Remove Panels

Panels in the remaining walls may be removed if the privacy of a compartment is not desired.

A major requirement for such a convertible—plenty of seats for coach use but plenty of usable, private room for the compartments—is fulfilled by the skillful use of the height of the railway car.

Every other compartment (or row of coach seats) is higher than the others and has a floor which must be stepped up to form the center aisle. Thus room below the higher seats may be used for storage of the lower compartment's bed. At the same time, a higher compartment's bed is stored above the lower seats.

When all the beds are down, they overlap so that an "upper" sleeper's feet might be over another sleeper's head and his head over another sleeper's feet. But each sleeper is in his own compartment with a reasonable amount of room and complete privacy.

Pirelli of Italy, famous for racing tires, recently introduced a passenger-car tire with a separate casing with removable tread bands so that when the tread is worn, the whole tire need not be replaced.

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Removable Tread Ring

Pirelli was assigned a patent for another tire innovation, by Carlo Barassi of Milan, Italy. The patent covers a tire with a removable tread ring in the tire's center. This tread ring may be slipped off when the tire is deflated and replaced with another especially designed for traction in ice and snow. This ring has mental projections for high traction.

Thus, a motorist would not need to buy, at considerable expense one set of tires for winter and another for summer and to store the bulky tires when not in use.

An ice creeper, a metallic spur that may be mounted in the arch of an overshoe, was also patented here this week. The patent was granted Frank Gau of Detroit, Mich.

Wilbur E. Walters of Yucaipa, Calif., received a patent for a device for playing selected passages from a phonograph record.

Protective Coating

Earl K. Hann of Penn Township, Pa., was granted a patent for an application of protective metal coatings on molybdenum. This metal can



SEEKS PLAYING RECORD—Chicago dentist Marvin Berman is shown at the keyboard of a piano in the window of a Chicago store. He has been playing the piano for two days without sleep in an attempt to break the world's non-stop piano playing record of just over 73 hours, held by Joe Niland of New York. Shown with Berman is his wife, Joyce. (UPI Telephoto)

Plasma Project To Help Keep Radio Contact

Los Angeles, (Science Service)—A plasma research project at the University of California, Los Angeles, promises to help keep open radio contact with earth, the lifeline of future astronauts.

When a missile or spaceship leaves and enters the atmosphere, it cooks up the air to a point where the atoms break up into ions and electrons, forming layers of ionized gas, or plasma.

The plasma surrounds the space vehicle like an insulating envelope, which can block or distort radio signals to the ground.

Dr. Warren Flock, a UCLA associate engineer doing research for his Ph.D., simulated the spaceship's plasma problem in the laboratory.

Can Change Direction

He found that the electrons in the plasma layer can change the direction of radio waves sent to the ground, and that the degree of distortion depends on the number of electrons and the thickness of the plasma layer.

Using a higher radio-wave frequency might be one way of overcoming the difficulty.

AT TOP OF CLASS

Stoddard, N.H. — (UPI)—Charles C. Eaton Jr., 13, was the valedictorian of Stoddard Grammar school. He couldn't miss. He was the only pupil in the class graduating from the one-room school.

but this, in turn, can raise a number of new problems. Dr. Flock believes that his research helps to define what the problem is, which is a necessary first step in finding a solution.

This month Dr. Flock will join the University of Alaska as associate professor of geophysics, where he hopes to continue his research.

Conciliation Service Director Elected

Salem—(UPI)—Paul P. Tinning, director of the Oregon State Conciliation Service, has been elected to the board of directors of the Association of State Mediation Agencies.

DRYING REPORT

New York—(UPI)—More than \$32 million worth of towels and washcloths were sold through variety stores during 1959, the Variety Store Merchandiser, a trade publication, reports. Total sales exceeded \$180 million. About 80 per cent of towels sold were terry cloth, with the balance in assorted linens, blends and synthetics.

Balloon Satellite Echo Said To Be Still in Top Shape

Washington—(Science Service)—The balloon satellite Echo has now been in orbit for more than six weeks. And all that travel has left it with a few wrinkles but still in good shape.

Radio beams are still being bounced off it. People are still craning their necks looking at it. Scientists are still studying slight changes in its orbit.

These changes are caused by the pressure of sunlight on the large but light structure.

Scientists on the East and West coasts and even in England and France have sent or received messages via Echo.

It is, however, no longer as frequently seen as earlier. On many of its passes at night it is eclipsed by the earth, just as the moon sometimes is, and therefore it reflects no light.

To Enter Another Phase

Echo will stay in the earth's shadow for long periods until late December when it will enter another phase in which it orbits in the sun's light for longer and longer periods and will again be visible several times each night.

Scientists had thought that when Echo first entered the earth's shadow it might collapse—the gases inside would cool and exert no pressure to keep the satellite expanded.

But Echo did not collapse, apparently because the pressure from outside the satellite is almost non-existent. The 100-foot balloon, made of aluminized plastic film, also survived the annual Perseid meteor shower. The shower hit the week end following Echo's launching on Aug. 12.

May Stay for Year

Passing these tests, Echo now may stay in its 1,000-mile altitude orbit for as long as a year before gravity pulls it low enough to burn from the friction of the earth's atmosphere.

Where does NASA go from here?

Proposals and preliminary design studies for future inflatable structures include:

1. A great structure with shiny reflectors for focusing the sun's heat for conversion to electricity. Such a device could greatly increase the power supplies now available to satellites.
2. An inflatable glider or auxiliary wings for slowing a space ship's re-entry into the earth's atmosphere.
3. A sailplane that would move through space using the pressure of the sun's light in the way a sailboat uses the pressure of the wind. One expert believes a sailplane could get to Mars in 118 days—less than half the time he estimates a chemical rocket would take.
4. An inflatable laboratory or repair station in space.

These and other concepts are being designed and tested in wind tunnels by NASA and by leading firms.

But before such structures are practical, more Echo tests will be made. Scientists working with Echo hope to devise means to make future Echos more rigid and strong.

Amateur Rocket Expert Undaunted

China Lake, Calif.—(UPI)—Missileman who know something about disappointments had a new soulmate today, Marshall Kriesel, 20. His rocket failed too.

The countdown at this Naval ordnance test base Wednesday was as dramatic as any at Cape Canaveral.

Kriesel's 11-foot rocket which the Owatonna, Minn., youth spent five years building stood poised for its thrust into the heavens. "5-4-3-2-1," went the countdown. Kriesel pushed home the firing button. Flames roared out of the base of the rocket. The slender missile vibrated, strained

against gravity—and failed to leave the ground.

A disappointed young man did what all professional missilemen do in such cases. He checked to see what went wrong. It was a faulty fuel tank.

Then he found new hope, just like a pro must.

"The bird's still all right," said Kriesel. "I can fix it for another try."

And back to work he went. He had spent 60 months designing and constructing the missile since getting the "missile bug" at Owatonna High school in a general science class.



Lifeguard Acquitted For Carrying Pistol

New York—A county court jury acquitted Mervin Stellman, 31, a lifeguard, although he admitted carrying a loaded, concealed pistol during an argument with his employer.

The gun taken from Stellman was a fully loaded water pistol.

Police Take Dim View Of Husband's Method

Buffalo, N. Y. — Police objected to the way a Buffalo man let his wife know he was outside waiting to drive her home from work.

The man was handed a summons for ringing a gong on his car.

ARMY MAN DIES

Crestline, Calif.—(UPI)—Final rites will be held today for Maj. Gen. Harry F. Hazlett, 76, retired World War II commander in the Army's basic training program.

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ONIONS

Yellow No. 1 Medium

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APPLESAUCE Mariani	6-oz.	33c
APRICOTS Del Monte	11-oz.	69c
PEACHES Del Monte	11-oz.	37c
Minute POTATOES		29c
RAISINS Del Monte	1-lb., 14-oz.	49c

SALT Morton's Shaker	10c
PREM	12-oz. can 39c
SYRUP Lumberjack	22-oz. bottle 29c
OIL Best Foods	qt. 39c
MARGARINE Delich, lb. pkg.	5 for \$1.00
PANCAKE FLOUR Hungry Jack	10 lb. sack 89c
DRIED BEEF Swift's Premium	2 1/2-oz. 49c
PEPPER	4-oz. can 39c
CHILI CON CARNE AND BEANS	4 15-oz. cans \$1.00
COFFEE Folger's	1 lb. 49c 2 lbs. 97c
BAKED BEANS B&M, 28-oz. can	3 for \$1.00
BROWN BREAD B&M Canned	3 for 97c

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Made with pure spices and rubbed sage.

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