

INVENTION

Patents of the Week

A gritty mixture for better gripping power of tires, a self-propelled ski tow and a remote control device for car doors have been patented.

► **WEARY COMMUTERS** who frequently get stuck traveling when unexpected snowstorms create hazardous road conditions will probably welcome an invention just patented.

The invention is a gritty mixture that can be applied to tires, providing more gripping power. Expensive snow tires or chains are not needed, claim Glen and Dale Peterson of Tulsa, Okla., and Salt Lake City, Utah, respectively, who are brothers.

The mixture is housed in a can pressurized with inert liquefied gas. The can contains two separate compartments, one for a glue mixture, the other for a gripping material such as sand or pulverized pecan shells.

By pressing a button on the container, the highly pressurized materials combine and emerge from a spout onto the tire. The gritty material provides good traction, especially over short distances traveled by commuters. For this invention, the brothers received patent No. 2,971,793.

Another winter invention is a self-propelled ski tow for taking skiers quickly up the slopes. For the timid few who change their mind when they reach the top, the ski tow is also arranged for safe travel back down the slope.

The invention, given patent No. 2,971,475,

consists of a trackway powered by an electric motor. Grasping bars, spaced at convenient distances on the trackway, provide a good grip for the skier. When the skier reaches the top, he merely lets go of the grasping bar.

Because the ski tow is only a few feet off the ground, there is no danger of falling in case of an accident, John M. Weber of Marenisco, Mich., claims in his patent. The inventor operates a ski resort in Michigan where his invention is used during the winter months.

Needless accidents caused when children accidentally unlock car doors while the car is in motion are intended to be prevented by an invention of William H. M. Green of Washington, D.C. His device, which received patent No. 2,971,755, permits drivers to lock and unlock car doors without using any control mechanism generally found on conventional doors.

The system operates by remote control. When the driver presses a button on the dashboard, a motor powers a cable system that moves a lever up or down, unlocking or locking the door.

The invention comes in kits and is said to be easily installed. The patent rights were assigned to Systems Control, Inc.

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been on guard during the ice season.

The Patrol is subsidized by 16 countries, representing major users of the North Atlantic shipping lanes.

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ROCKETS AND MISSILES

U. S. Space Successes Were Many in February

► **FEBRUARY, 1961**, was a month of space achievements beginning with the successful firing of the Air Force's solid-fuel Minuteman rocket.

But this and all other space accomplishments by the United States were overshadowed by the Soviet launch of a satellite to Venus, now almost one-third of the way to its destination.

Although the Venus shot was the most sensational, the United States also scored substantially in the space race with the launch by the Air Force of a Samos (spy-in-the-sky) satellite, and the Discoverer XX and XXI satellites, one carrying a scientific package and the other having a guidance system by which the orbit could be redirected from earth.

The National Aeronautics and Space Administration set in orbit its solid-fuel Scout satellite.

A Department of Defense attempt to launch two satellites, a Transit III-B on top of a Thor-Able rocket, into separate orbits was only a partial success. The satellites went into orbit, but joined like Siamese twins. However, their signals have been received.

This shot followed the successful test of NASA's Mercury capsule under the most severe survival conditions. The capsule, designed to take a man into sub-orbital flight this spring, was launched from an Atlas rocket. Its recovery was cheered by the three astronauts selected for final training for the coming launch.

The trio included Marine Lt. Col. John H. Glenn Jr., Air Force Capt. Virgil L. Grisson and Navy Cmdr. Alan B. Shepard Jr.

Which of these three men will be the first to pioneer on the space frontier will be known at the time of the launch, still not definitely scheduled.

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ROCKETS AND MISSILES

Testing of Missile Parts Is Part of Space Race

► **SCIENTIFIC TESTING** of missile and satellite components must keep pace with space achievements. As manned space travel crystallizes into reality, higher and higher standards of safety will be needed.

Keeping pace with advances in rocket and missile technology, scientists are continually devising a host of new engineering testing equipment.

Included in this group are ultrasonic and radiation tests reported to a symposium in San Antonio, Tex., on non-destructive testing of aircraft and missile components.

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OCEANOGRAPHY

1961 Ice Patrol Begins

See Front Cover

► **THE INTERNATIONAL Ice Patrol** broadcast its first iceberg warning of the year Feb. 22 to ships using the North Atlantic shipping lanes, the U.S. Coast Guard reported.

Although the Patrol started officially near the end of February, preliminary aerial observations have been under way since the first of the year.

A new ice-detecting method will be used experimentally this year in an attempt to increase the accuracy of spotting icebergs and floating ice. An expanded oceanographic survey program will also form an important part of the Patrol's activities.

For the first time, the Patrol will broadcast radio facsimile charts of ice conditions in the North Atlantic. This system provides the mariner directly with a chart of observed ice conditions, and has already proved valuable in routing ships through the Gulf of St. Lawrence and Arctic regions.

The new ice-detecting instrument is a "microwave radiometer," which measures

the natural electromagnetic or radar waves given off by physical bodies. By comparing the strength of the different waves registered by the instrument, Patrol authorities can determine, even in the heaviest fog, whether the target is ice or a ship.

On the cover of this week's SCIENCE NEWS LETTER a UF-G2 Coast Guard plane is seen circling an iceberg off the coast of Newfoundland, checking its position. The iceberg is 150 feet high above the surface, 300 feet long and weighs about one million tons.

In addition to observing ice movement, the Coast Guard conducts studies of ocean currents and temperatures. These data, collected by its own oceanographic vessel Evergreen, enables scientists to predict iceberg drifting and rate of melting. The information is also important for long term studies of the little known ocean's functions.

The International Ice Patrol, which is conducted entirely by the U. S. Coast Guard, was formed in 1914 after the tragic sinking of the Titanic following an iceberg collision. Except for intervals during World War I and II, the Patrol has constantly