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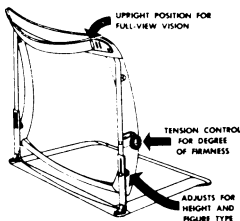
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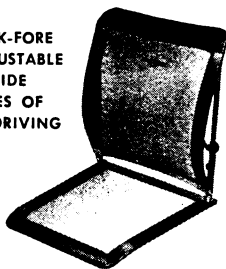
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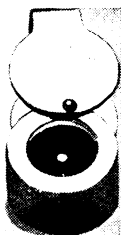
## Questions

**EVOLUTION**—How has weeping contributed to the evolution of man, according to one anthropologist? p. 412.

**MEDICINE**—What two compounds are used in a new cancer treatment? p. 410.

**TECHNOLOGY**—How high a temperature can Pyrographite withstand? p. 422.

Photographs: Cover, Raytheon Company; p. 410 and 411, U. S. Army; p. 414, Princeton University; p. 415, Columbia University; p. 419, U. S. Air Force; p. 424, Westinghouse Electric Company.



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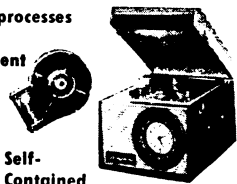
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## 1959 Patents Reviewed

(Continued from page 421)

ble of generating large amounts of heat when connected to an electric circuit. Patent 2,883,307.

An aircraft engine that operates as a rocket on take-off and converts into a ramjet for sustained flight, designed for use in piloted aircraft and medium- and long-range ground-to-ground missiles. Patent 2,883,829.

An electrical device for detecting hidden crevasses in glacier ice. Patent 2,885,633.

A packaged, inflatable airplane, with a two-cylinder, 40-horsepower engine, that can be parachuted to pilots downed behind enemy lines. Patent 2,886,265.

A method, using hydraulic resonators, for inducing the waves of the sea to calm themselves with their own energy. Patent 2,886,951.

A navigation system, involving measuring magnetic inclination and declination, that enables a person to determine his position above, on, or under the surface of the earth without the aid of radio signals or astronomical readings. Patent 2,888,752.

An inflatable radar antenna that can be easily transported and assembled in a matter of minutes. Patent 2,913,726.

A method of laboratory isolation of elusive free radicals, opening the way for probing the basic atomic structure of solids. Patent 2,892,766.

A boat for navigating Arctic waters that can hop up on an ice floe, travel across the ice, and return to the water. Patent 2,894,476.

An improvement in electroluminescent lighting, increasing the light output fourfold. Patent 2,901,651.

A way of coating metallic aluminum with an aluminum benzoate film to protect it from oxidation. Patent 2,901,821.

A plastic explosive consisting of nitric esters, nitrocellulose, nitrostarch, crystalline explosives and a silicone gel. Patent 2,902,355.

Application of zinc oxide and small amounts of manganese dioxide to unfired bricks to produce unusual final colors in the bricks. Patent 2,903,785.

An improved method of prospecting for minerals from the air, involving the use of at least two radiation detectors flown simultaneously at different altitudes and at substantial distances from one another. Patent 2,904,691.

A method of forging pure titanium and alloys containing at least 80% titanium without the fear of forming contaminated surface layers of brittle oxygen-nitrogen compounds. Patent 2,903,785.

A recovery process for extracting oil from oil-bearing sands and shales using a combination of hydraulic mining and aerobic bacteria. Patent 2,907,389.

A universal clock that tells the correct time and date, the hours of daylight and darkness, and the hours of sunset and sunrise of any place on the globe. Patent 2,907,166.

A way to determine the relative speed and direction of a plane in flight, using the well-known Doppler effect. Patent 2,908,903.

An eraser attachment incorporated into the mechanism of any conventional typewriter. Patent 2,908,372.

An Arctic life raft for use on water, land, snow or ice that also serves as an insulated shelter. Patent 2,908,919.

A method of cladding steel with corrosion-resistant metals, such as titanium and zirconium, by using an intermediate layer of a bonding metal such as chromium, cobalt or molybdenum. Patent 2,908,969.

Science News Letter, December 19, 1959

### TECHNOLOGY

## Unusual Form of Carbon New Material for Missiles

### See Front Cover

A NEW form of carbon, Pyrographite, has been developed by the Raytheon Company, Waltham, Mass., sponsored by the Navy Bureau of Ordnance, as a possible answer to some of the problems in missile construction.

The material, a high purity form of graphite, withstands temperatures up to 6,700 degrees Fahrenheit, higher than any other known element, and remains strong, chemically inert, and impervious to gases.

The secret of its great heat stability is that heat is conducted along its surface 500 times better than through it, thus preventing any excessive build-up of heat.

The photograph on the cover of this week's SCIENCE NEWS LETTER shows Pyrographite material (left) withstanding the blast from a butane torch while the same blast burns through asbestos (right).

Science News Letter, December 19, 1959