

INVENTION

Patents of the Week

A device to control the hydrogen bomb to produce peaceful power, and a grenade and a delayed action fuse to detonate it were granted patents.

► A DEVICE to aid in controlling the hydrogen bomb reactions to produce peaceful power was granted a patent.

Fusion is the joining together of two lightweight atoms to make a heavier one, causing the release of tremendous amounts of energy. It is the main way in which stars are stoked. Key to achieving such reactions on earth is to confine a plasma for sufficient time at a very high temperature. Magnetic fields are the only known means of containment.

In a plasma, or gas, the atoms are partially ionized, or separated into positive ions and negative electrons. Although a plasma is electrically neutral as a whole, it can conduct an electric current.

A method for injecting high-energy atoms into the reacting plasma was granted patent 3,052,617. The inventor, Dr. Richard F. Post of the University of California Radiation Laboratory, assigned rights to the Government as represented by the Atomic Energy Commission.

The injector is for use with the stellarator, one of the four basic methods or combination of methods being tested for confining a plasma.

Grenade and Delayed Fuse

A grenade and a delayed action fuse for detonating it were granted two patents, nearly 18 years after application was made. Both were assigned to the Government through the Secretary of War, now the Secretary of the Army.

Patent 3,052,186, for the grenade, was won by Herman L. Thwaites of Clark Township in Union County, N. J., and George L. Matheson of Union, N. J. Patent 3,052,187 for the delayed action fuse was granted to Mr. Thwaites and Garland H. B. Davis of Elizabeth, N. J.

The grenade is designed to fire at a set time after it has been immersed in gasoline or water. The safety device is self-arming when placed in contact with a liquid.

Wine Without Alcohol

A method of making wine from which most of the water and all of the alcohol has been removed won patent 3,052,546 for James L. Riddell and Massud S. Nury of Fresno, Calif., who assigned rights to Vie-Del Grape Products Company.

The product would be used as a food or beverage flavoring, where the "bouquet, aroma and taste" of wine is of prime importance. The de-alcoholized and partially dehydrated wine could also be added to natural wines to accentuate their flavor, the inventors note.

Other Significant Patents

An adjustable bed for supporting the driver or gunner in a battle tank. Jerome C. Szemplak of Cleveland, Raymond M. Ekstrom of Shrewsbury, Mass., William W. von Uffel Jr. of Newtown Square, Pa., Gary L. Horley of Aberdeen, Md., and Benjamin F. Wood Jr. of Bel Air, Md., assigned rights to patent 3,051,965 to the Government through the Secretary of the Army.

A radiation dosimeter to measure very high dose rates within a few thousandths of a millionth of a second, known also as a "Semirad" for "Secondary Electron Mixed Radiation Dosimeter." Rights to patent 3,052,797 were also assigned to the Secretary of the Army by Stanley Kronenberg of Skillman, N. J.

A combination table seat and automobile seat for babies or small children. The collapsible seat won patent 3,052,500 for Robert D. Hyde of Wichita Falls, Texas.

A class of chemical compounds closely related to the material now being used to help control the sea lamprey, which has slaughtered so many fish in the Great Lakes. For the use of chlorinated phenols to kill lamprey larvae, William J. Pyne of Painesville, Ohio, received patent 3,052,601. Rights were assigned to Diamond Alkali Company of Cleveland. The very effective chemical now used in controlling the sea lamprey is 3-trifluoromethyl-4-nitrophenol.

A coin holder for coin collectors, to protect rare coins from mechanical damage and the elements, yet allow clear display. Charles Frank of Brooklyn, N. Y., was granted patent 3,052,344 for the device.

A television tube for use at low light levels. Radames K. H. Gebel of Dayton, Ohio, assigned rights to patent 3,052,807 to the Government through the Secretary of the Air Force.

• Science News Letter, 82:199 September 22, 1962

Questions

ASTRONOMY—In what constellation will Mars appear at the beginning of October? p. 194.

CHEMISTRY—In what part of the eye is melanin found? p. 187.

MEDICINE—How many pounds of water may be retained by a person before swelling becomes apparent? p. 190.

ORNITHOLOGY—What is perhaps the greatest mystery of bird migration? p. 191.

PUBLIC SAFETY—What country seems to be the hardest hit by earthquakes and storms? p. 189.

Photographs: Cover, P. J. Van Huizen, U. S. Fish and Wildlife Service; p. 187, Westinghouse; p. 189, National Science Foundation; p. 198 (top), Resistance Products Company; p. 198 (bottom), Frank Dufresne, U. S. Fish and Wildlife Service.

SCIENCE SPECIALS

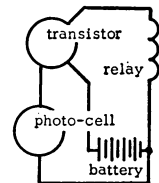
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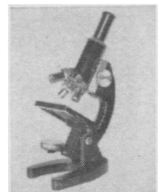
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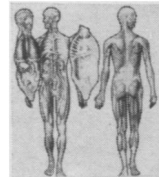
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