

INVENTION

Patents of the Week

The nose cone of a gun-toting rocket, which could down enemy missiles with deadly accuracy, conceals its weapon until the missile is airborne—By William McCann

► A "PISTOL-PACKING" MISSILE that has a gun cleverly concealed in its nose cone to shoot down enemy missiles and satellites earned a patent from the U.S. Patent Office.

Once the missile is in the air its nose cone folds away, revealing a gun designed to fire an explosive charge, such as an atomic shell, from a stabilized platform.

As the missile comes within about 80,000 feet of an oncoming target, a fire control system inside establishes a line-of-sight detection and takes deadly aim. Thus, rather than aiming itself at an enemy ICMB, the gun-toting missile need only come within "shooting" range.

Co-inventors Dr. Frederick W. Ross, Del Mar, Calif., and Morris Kaswen, San Diego, report a number of advantages of this weapon over conventional anti-missile missiles: 1) increased maneuverability, 2) less weight, 3) high intercept accuracy, and 4) less need of a highly accurate launch.

The inventors claim the missile, which earned patent 3,153,367, will improve defense against high-speed enemy missiles from ground level to altitudes of more than 50 miles.

They assigned patent rights to the U.S. Army. The missile is now under development contract to the Army Materiel Command and the Solar Aircraft Company, San Diego.

Baseball Pitching Aid

Johnny Sain, former Boston Brave and New York Yankee pitching star, was awarded a patent for a device that helps train young baseball players to pitch.

A baseball with a hole drilled in it is attached to a rod and handle. The baseball is mounted on a spindle so it can twirl freely. A youngster can hold the handle in his free hand while practicing various pitches on the rotating ball with his pitching hand.

In addition to teaching a young ball player the proper way to throw curves, sliders, sinkers, screwballs or fast balls by spinning the ball different ways, the device can be used to develop and coordinate arm muscles, Mr. Sain reported in his patent.

Mr. Sain, of Walnut Ridge, Ark., who recently signed a 1965 contract as coach for the Minnesota Twins, earned patent 3,152,803 for his pitching aid.

Artificial Heart

Three pioneers in research on the artificial heart have been awarded a patent for an improved version, which they hope will someday be an adequate substitute for the human heart.

Profs. William J. Fry, his brother, Francis J. Fry and Reginald C. Eggleton, all of

Champaign, Ill., earned patent 3,152,340 for their improvements of the overall design features and pumping apparatus in an artificial heart. The researchers, who assigned patent rights to Interscience Research Institute, Urbana, Ill., have been working on the substitute heart since 1955 and have used it experimentally with dogs in the laboratory.

The ultimate goal of the artificial heart is the complete internal replacement of the human heart, Prof. William Fry told SCIENCE SERVICE. It is designed for long-lasting use.

Other Interesting Patents

A parking garage shaped like a water wheel was awarded patent 3,153,488. This new rotary garage is designed to handle a number of cars and yet take up as little space as possible. It was invented by Kyo-suke Mori of Tokyo, Japan.

A device that counts and measures the size of raindrops earned patent 3,153,727 for Alan M. Nathan, New York City. The rain-drop sizer and counter relays its information to a memory or counter unit which can be placed in a shelter some distance away. Patent rights were assigned to the U.S. Army.

A steering mechanism for a portable dam used on irrigation ditches earned patent 3,153,330 for John E. Melin, Livingston, Mont. The mechanism allows the dam to automatically adjust to the contours of a ditch.

David K. Bosshardt, Berkeley Heights, N.J., Eugene E. Howe, Somerset, N.J., and Jesse W. Huff, Westfield, N.J., were awarded patent 3,153,615 for their method of reducing the cholesterol content in the blood. The method consists of incorporating lithocholic acid or hyodeoxycholic acid in the diet. Patent rights were assigned to Merck & Co., Rahway, N.J.

• Science News Letter, 86:303 November 7, 1964

Do You Know?

Approximately 92% of the money spent in the U.S. space program goes into ground facilities.

Water pollution killed more than an estimated 7.8 million fish in 1963, the U.S. Public Health Service says.

A 1963 survey showed that only 47% of the motorists with seat belts in their cars use them during local travel.

The Alaskan tidal waves last March were caused by the shifting of a piece of the earth's crust larger than Florida.

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