

## INVENTION

# Patents of the Week

A method for setting off underwater mines has been patented 23 years after the application was made because the invention was kept under security wraps.

► A METHOD for setting off underwater mines guarding the entrance to harbors and bays was granted a patent nearly 23 years after application was made.

This is one of the longest delays of record in making a patent public. Reason is that the device, used extensively during World War II, has been kept under security wraps until this year.

One famous invention, kept secret until the patent was granted in 1955, was the Norden bombsight. Developed in 1923 by Carl L. Norden of New York, the bombsight was considered so secret that a patent was not even applied for until 1945, and Mr. Norden was known as "Mr. X" until 1940.

The Norden bombsight was so jealously guarded that pilots forced down behind enemy lines were ordered to destroy the device even at the risk of their lives.

The mine control system was developed by Alva F. Englehart, then of the Coast Artillery Corps, Fort Shafter, Hawaii, and Theodore Gunther, then of the Submarine Mine Depot, Fort Monroe, Va. The inventors assigned rights to the Government, as then represented by the Secretary of War. The U. S. Navy's Office of Naval Research has handled recent details on patent No. 3,031,962.

According to the invention, a group of mines submerged off-shore is connected through a single electrical circuit to a shore station. The mines are thus remotely controlled, and can be fired either from the station by selection or by impact.

## Gage Blocks Tested

An instrument to test whether or not gage blocks, vital to many industrial operations from automobiles to washing machines, are actually parallel was awarded patent No. 3,031,914. Inventor James B. Saunders of Alexandria, Va., assigned rights to the Government through the Secretary of Commerce.

The apparatus is completely optical, thus eliminating the need for having the two surfaces to be measured touching each other. The angle between the gage block surfaces can be read directly from a calibrated scale by a relatively unskilled operator.

Gage blocks are small hardened steel blocks of definite thickness, held to a tolerance of a few millionths of an inch. They are widely used in industrial machine shops for measurement and reference purposes. Two or more blocks may be assembled by "wringing" their surfaces together, since these are so nearly perfect planes they will resist separation.

The instrument is based on the principle

of an interferometer. In an interferometer, two beams of light from the same source travel along different paths and then come together again, forming a pattern of interference fringes. The number of fringes depends on the difference in length of path the two beams have covered.

Mr. Saunders' adaptation of this principle allows measuring the parallelism of the two faces without direct contact between them.

## Other Patents of Interest

Other interesting patents were:

A method of making a rocket visible over its operational range to help guide it, using the rocket's own exhaust gases for this purpose, given patent No. 3,031,843. Inventors Kenneth Gordon Reed and William Hugh Nicolson of Kidderminster, England, assigned rights to Imperial Chemical Industries Limited, Millbank, London, England.

A device for destroying neutral particles in a machine for producing high density plasma, which won patent No. 3,032,490 for Albert Simon of Oak Ridge, Tenn. Rights were given to the Government through the Atomic Energy Commission.

Patent No. 3,031,778, also assigned to the Government, through the Secretary of the Air Force. James F. Nicholson and Don W. Naas of Dayton, Ohio, devised magnetic attachments for shoes that may be attached or easily released from metal surfaces.

• Science News Letter, 81:315 May 19, 1962

## Do You Know?

The addition of magnesium chloride to oral live-virus polio vaccine makes it possible to keep the vaccine at room temperature for as long as four weeks without loss of potency.

Studies have shown that *girls* are more critical of their parents than are boys.

*Phosphon*, a growth-retarding chemical, is being used for the first time this year on Easter lilies to form compact plants ideal for potting.

High fat content is not essential to produce good eating quality in cooked *lamb* and lean cuts can be tender, juicy and flavorful.

The study of variable *stars* is based on the science of photometry, the measurement of the brightness of light.

• Science News Letter, 81:315 May 19, 1962

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