RAY GUNS

Handheld laser weapons may be commonplace in galaxies far, far away. **Here on Earth, however, they are still works in progress.**

The idea of a laser weapon pervades science fiction, but lately our military has become seriously interested in such weapons. Northrop Grumman, Textron, Raytheon, and others are busy working on high power (in the 100 kW range) laser weapons. Challenges include the high power required, cooling, and size constraints.

Will we ever see a hand-held laser gun? Probably not for a while.

There are, however, some early patents for toy ray guns (yes, toys are patentable). Examples include Nos. 2,783,588 (1957), a translucent gun with a row of runner lights in the barrel; 4,175,353 (1979), "a gun-like toy device for producing controllable audio and visual effects"; and 4,365,439 (1982), "reminiscent of an outer space laser gun." None includes an actual laser.

In more recent times, published application No. 2012/0300803 (November 29, 2012) purports to enable a handheld laser small arm. And, LaserMax Inc. holds a few patents on chemically explosive handheld laser weapons. One example is No. 8,322,263 awarded December 4, 2012.

There are a lot of early patents where lasers are used as marksmanship training devices. One example is No. 3,847,396 (1974), in which a narrow beam of electromagnetic radiation is used to simulate the line of fire from a gun on an attacking vehicle.

In 1976, the German company Messerschmitt-Bolkow-Blohm won patent No. 3,946,233 for a laser weapon purported to have 10 MW of power. According to the Description, "The invention relates to a weapon system for the detection and fighting of either stationary or moving objects, particularly missiles flying at supersonic speed." Alas, steam turbines or a magnetohydrodynamic generator was required to provide the necessary power.

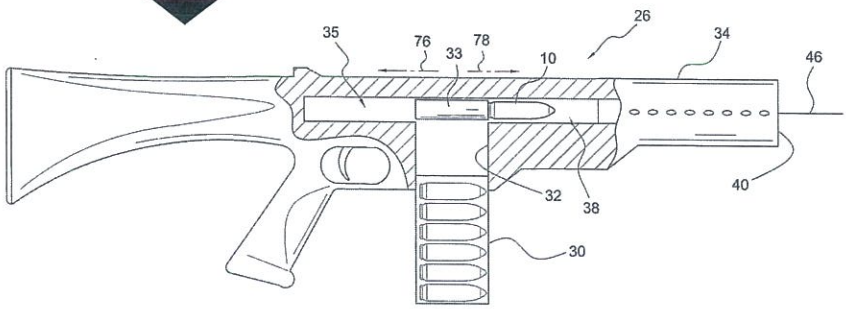
In 1986, the U.S. Army won patent No. 4,614,913 for a laser weapon providing a "killer-power laser pulse."

Boeing patent No. 8,396,090 discloses an improvement in the airborne ballistic laser mounted in a Boeing 747-400F airplane. Lockheed patent No. 8,526,110 discloses the idea of spectral beam combining to produce a high power (around 100 kW) laser. Raytheon patent No. 8,203,109 is for a high energy laser (HEL) beam director. Northrop Grumman Corp. patent No. 6,785,315 discloses a mobile tactical high energy laser (MTHEL) transportable on a large truck.

Now, if someone would just start working on a light saber. ME

LASER BULLETS

LaserMax's Patent No. 8,322,263 describes the function of its hand-held explosive laser gun this way: "A laser weapon system includes a chamber configured to direct a post-detonation gas flow between a first mirror and a second mirror, and an ejectable ammunition cartridge containing a first gas and a second gas. The cartridge is fluidly connected to the chamber."



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