

Body-Like Dummy Used To Test Pilot-Ejections

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WASHINGTON, Jan. 29 — Two Maryland engineers were awarded a patent this week for an anthropomorphic dummy named "Dynamic Dan." The man-sized figure has already been put to work at the Wright-Patterson Air Force Base in Ohio, testing the effects of pilot-ejection from aircraft. Peter R. Payne and Stephen J. Chris assigned Patent 3,557,471 to Wyle Laboratories, El Segundo, Calif. The prototype of Dan, the only one delivered so far, is built to simulate the major dynamic characteristics of the human body.

The movable joints are adjustable to imitate the tightening of a man's muscles. Similarly, the spring rate of the torso and the stiffness of the limbs reflect human characteristics.

The rubber flesh has been tinted bright red for advantage in photography against a blue sky. The bones, made of fiber glass impregnated

with epoxy resin, show in a light beige color where they are exposed at the joints.

Dynamic Dan is being used in drop tests to check the course taken by men's bodies when thrown out of aircraft by various types of ejection seats.

The inventors did their research under an Air Force contract in a division at Rockville, Md., headed by Mr. Payne since his company was acquired by Wyle three years ago. Mr. Chris is now a partner in Newhouse and Chris, a consulting concern in Gaithersburg, Md. Mr. Payne is leaving Monday to re-establish his own business.

Sonic Riot Control

A riot-control device, patented this week by two Missourians, relies on sonic waves to disperse crowds.

Edward G. Longinette and Charles W. Porter, both of St. Louis, were granted Patent 3,557,899. They say the only effective devices now available to law-enforcement officers are the nightstick, the riot gun and the cattle prod.

In the patented instrument, which can be portable or attached to a police car, waves from a speaker called a "tweeter" are directed by parabolic reflectors at a crowd. The waves are said to be so offensive and repugnant that hearers leave the scene, but no permanent injury is caused.

The frequency of the stimulus is a modulated multiple of the human "brain resting frequency," which in most people is 10 or 11 cycles per second. The actual frequency

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Wide Variety of Ideas Covered By Patents Issued During Week

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used, which may be a thousand times those figures, does not interfere with speech.

Nuclear Blasts Charted

By a system invented for the Atomic Energy Commission, the probable effects of above-ground nuclear explosions can be calculated and displayed on a map.

Patent 3,558,865 was granted this week to three staff members of the Lawrence Radiation Laboratory, Livermore, Calif.: Carl W. Berndt, Frederick Reinecker Jr. and William G. Downing Jr.

Variables including the type and size of the bomb, its manner of detonation, the height above ground, and the terrain and weather are fed into computers. The computer output is employed through a plotter to project the magnitude and range onto a map, showing the geographical area affected. The equipment has been built and operated at Livermore.

3-Dimensional Puzzles

Jigsaw puzzles can now be made in three-dimensional plastic blocks instead of in flat cardboard. A child can fit the blocks together edge-wise to form a picture or, if he prefers, can pile one on another to construct a toy building or bridge.

Jerome H. Lemelson of the Licensing Management Corp-

oration, New York, was granted Patent 3,558,138 this week for the method of molding and decoration. Colorforms, a toy manufacturer in Norwood, N. J., is considering introducing the puzzle to the market next year. Mr. Lemelson got six other patents in January, and now has more than 250 in many fields.

Firearm in a Shoe Heel

A Florida inventor was granted a patent this week for a firearm mounted in a shoe heel. According to Patent 3,557,481, which was received by Fred E. Stuart Sr. of Daytona Beach, a tube pointed forward through the heel constitutes the barrel. A rim fire cartridge is inserted at the back.

The wearer of the firearm raises the toe of his shoe, aims it, and strikes the back of his heel against a curb or rock to detonate the cartridge.

Mr. Stuart, who specializes in the development of equipment for water purification, has a number of other patents.

Patent Office records rarely show whether an invention is in production. To get a copy of a patent, send the number and 50 cents to the Commissioner of Patents, Washington, D. C. 20231. Design patents are 20 cents each. To reach an inventor or assignee, if the address given is insufficient, write him care of the Commissioner of Patents, being sure to cite the patent number.