

INVENTION

Patents of the Week

► AN IMPROVED nuclear reactor that produces more fissionable fuel than it uses has been patented.

A modification of the core portion for a fast neutron reactor won patent No. 3,011,962 for Leonard J. Koch, Clarendon Hills, Ill., Ralph E. Rice Jr. and Meyer Novick of Idaho Falls, Idaho, Alexander A. Denst, Chicago, and Anthony J. Rogers, Lisle, Ill. They assigned rights to the U. S. Atomic Energy Commission.

The Experimental Breeder Reactor-I first produced power in 1951 and proved that fissionable fuel could be produced at a greater rate than fissionable material was used in operating the reactor. When operating conditions were made severe, however, a fluctuation in power occurred.

To remedy, this the five AEC scientists changed the shape of the rods containing the fissionable materials so as to reduce the temperature changes causing the power fluctuations.

A new semi-automatic way of calculating how much radiation a specific part of the body will receive during radiotherapy won patent No. 3,011,700 for Cecil P. Barnard, Campbell, Calif., and James O. Beaumont, Los Gatos, Calif., who assigned rights to Vernon J. Pick, Saratoga, Calif.

For radiation treatments, it is often desirable to have a high-intensity radiation field throughout a specific but limited internal part of the body while maintaining a relatively low dosage in surrounding tissue. This is accomplished either by using many beams or by rotating either the patient or the beam source.

Until Mr. Barnard and Mr. Beaumont devised their method, plotting the radiation dosage was a time-consuming job of some 100 steps done by hand. Their invention provides a computer for semi-automatically plotting the radiation dose pattern corresponding to any selected beam source, only a few minutes being required for the calculation.

A movable sea platform particularly useful for off-shore oil exploration, drilling and producing operations won patent No. 3,011,467 for Robert G. LeTourneau of Longview, Texas.

It has the general shape of an isosceles triangle with a spud well located in each corner. The principal parts of the hull are sidewalls, bottom, upper or main deck, lower or inner deck, upper deck support beams, upper deck support columns, and lower deck support columns, and lower deck support bulkheads.

A cryogenic (very low temperature) computing device invented by Dudley A. Buck of North Wilmington, Mass., was awarded patent No. 3,011,711, rights of which were assigned to Research Corporation, New York.

Cyclones, not the kind that swirl in the earth's atmosphere but the kind used in industry to concentrate the solid particles of a slurry, are the subject of patent No.

3,011,638, awarded to Sidney Thomas Glover, of Widnes, England. He assigned patent rights to Imperial Chemical Industries Limited, London.

A combination altar and bookcase won patent No. 3,011,848 for Don G. Hasson of Le Roy, Minn. The bookcase can be easily converted into an altar that includes a kneeler, together with a panel on which to support a sacramental object such as a crucifix.

A batting practice device whereby a "baseball can be delivered to a batter standing in a simulated batter's box with speed and control comparable to that of a major league pitcher" was awarded patent No. 3,011,784. The inventor, Angelo Segretto of San Jose, Calif., assigned one-half rights to Joaquin E. Furtado, San Jose.

Another invention was a molded poultry nest and a process for making it, which won patent No. 3,011,477 for Glenn O. Bressler of State College, Pa., and Arthur G. Perry of Worcester, Mass. The nest has an opening at the rear to allow the egg, immediately after the hen has laid it, to roll into a collecting tray. Use of the device tends to prevent egg breakage and to keep the eggs clean. The nest can be made from vegetable or synthetic fibers, bonded together in a mold by natural rubber latex, neoprene or a suitable synthetic resin.

To help pre-school children learn arithmetic, Carl C. Hosbach of Rockwood, Mich., devised an educational toy that will help teach them to count. The objects to be counted, the number of objects as a numeral and the number of objects spelled out are displayed simultaneously on a base. A variety of masks can then be used to cover much of the base except the objects, number and word. The toy received patent No. 3,011,270.

• Science News Letter, 80:423 December 23, 1961

Questions

ASTRONOMY—What is the chemical composition of the star 3 Centauri A? p. 411.

GEOLOGY—Where was the new mineral, stishovite, found in a natural state? p. 413.

SPACE—How many years may man have to wait for intelligent signals from space? p. 414.

Photographs: Cover and p. 411, General Electric Company; p. 413, U. S. Geological Survey; p. 415, National Aeronautics and Space Administration; p. 424, Devcon Corp.

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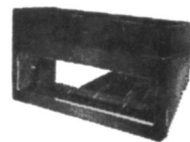
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