



R. Buckminster Fuller

HUGE FLY'S EYE—This is a plastic model of geodesic Monohex $\frac{5}{8}$ -sphere Dome for which Buckminster Fuller has just received a patent. All Monohex geodesic domes can be produced in reinforced concrete, reinforced plastics or other structural materials with or without transparent, opaque or polarized circular manhole covers.

INVENTION

Current U. S. Patents

➤ **TWO PATENTS** were issued for what is believed to be a revolutionary process of making wood resistant to rotting and termites.

Known commercially as the Celson Process, it is a development of Koppers Company, Inc., Pittsburgh, Pa. Koppers researcher Ralph Bescher, Pittsburgh, received patents 3,199,211 and 3,200,003 for the wood-preserving method and process.

In the process the preservative, pentachlorophenol, carried in liquefied petroleum gas, is injected into wood under pressure in closed pressure tanks. The petroleum gas is evaporated after the treatment, leaving the solid crystalline preservative permanently in the wood.

This method is so rapid that it is possible that the long kiln-drying processes which are now being used for preserving wood may be eliminated, Koppers reported. The treated wood has all the properties of untreated wood, but resists both water and insects.

Typical applications for treated lumber and plywood include: fencing, outdoor furniture, boat decks and hulls, patio decking, stadium seating, railroad car decking and poles.

Monohex

R. Buckminster Fuller, inventor of the world famous "Fuller Domes," received a

patent for a spherical building called a Monohex.

The Monohex, a "powerfully built structure" that could be readily adapted for giant fallout shelters, is a big advance in geodesic structures, Mr. Fuller told SCIENCE SERVICE. The "building blocks" of the structure are a series of pentagons and hexagons.

This basic idea has already been used in building a Cinerama theater in Hollywood, Calif., and for a new "Stardome" in Japan, said Mr. Fuller, who earned patent 3,197,927.

Thousands of Fuller domes, based on the geodesic structural system that he invented, are used around the world in a variety of building types. One of his many spectacular proposals was a hemispherical dome two miles in diameter to enclose much of Manhattan.

Auto-Driver

An automatic vehicle guidance system takes over the wheel on a "magnetic" highway while the driver relaxes.

Cables buried in the highway and equipment in the car create a magnetic field that keeps the car on course.

The system, which can be used in either one-direction or two-direction highways, earned patent 3,198,279 for Clark E. Quinn, Rochester, Mich. Patent rights were assigned to General Motors Corporation, Detroit, Mich.

Other Interesting Patents

A pair of night glasses is designed to save drivers' eyes from the glare of oncoming headlights. The glasses, which have a dark tinted area in each lens to block the glare, earned patent 3,199,114 for Pierre Malifaud, Paris, France.

A process for keeping cotton blankets and apparel fluffy and springy even after laundering has earned patent 3,197,790 for Nelson F. Getchell, Great Falls, Va. Patent rights for the process were assigned to the National Cotton Council of America, Memphis, Tenn.

For a list of registered patent attorneys and agents and other Patent Office Information, write the Commissioner of Patents, Washington, D.C. 20231, or call 202-967-4058 for specific information.

• Science News Letter, 88:118 August 21, 1965

TECHNOLOGY

Black Box 'Listens' For Engine Troubles

➤ **A LITTLE BLACK BOX** that "listens" for trouble in a jet engine and could do the same for automobile automatic transmissions or helicopter gear boxes is now being developed.

The system, called a sonic analyzer, is "taught" by sound tapes to recognize the sound patterns of a normal jet engine as well as the various sounds of failure. It is designed to extend the capabilities of aircraft mechanics and reduce premature engine overhauls.

The system, being built by General Electric, will not ever touch an aircraft or engine.

A mechanic will stand near the engine with a microphone and in five seconds the analyzer will indicate whether various parts, such as bearings, burner cans, and turbine, are working well.

A wide variety of applications for the device are expected.

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TECHNOLOGY

Photographic Process Is Self Electrifying

➤ **A NEW** electrophotographic process, Photocharge, requiring no external electrical charges or fields, has been announced.

The plastic photosensitive material produces a voltage in the plastic itself whenever it is exposed to sufficient light. Light and heat alone then receive and record another picture.

The process will faithfully reproduce ten tones between black and white, similar to conventional photographic film.

The material at this particular stage of its development, however, is limited in the range of light to which it is sensitive, requiring brighter light than conventional film.

Photocharge was invented by Dr. Joseph Gaynor and Gordon Sewell of General Electric's Advanced Technology Laboratories in Schenectady, N.Y.

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