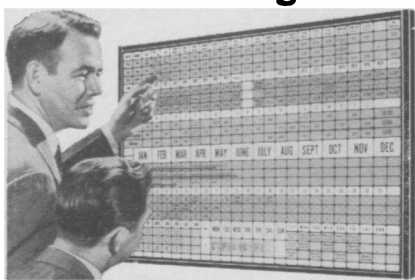


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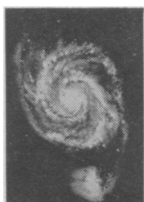
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## INVENTION

# Patents of the Week

A synthetic Christmas tree that can be assembled without any fasteners by slipping circular rings of decreasing size over the base stand has been patented.

► AN ARTIFICIAL Christmas tree being test-marketed this Christmas season won a patent.

The synthetic tree is assembled without any fasteners by slipping circular rings of decreasing size over the base stand. The rings are brush-like to simulate actual foliage. The brushes can be made of plastic or metal.

Ira Hertzberg of Goshen, N. Y., who won patent 3,064,379 for the artificial tree, assigned rights to H. Hertzberg & Son, Inc., Middletown, N. Y. Mr. Hertzberg said that the tree would be available nationally next year.

The tree will be sold in green as well as such colors as blue, gold and pink. Among its advantages are the facts that the tree is flameproof and easily stored.

### Nuclear Fission Use

The use of nuclear fission to synthesize organic compounds was granted patent 3,065,159. Willard P. Conner Jr. of Chadds Ford, Pa., and William E. Davis of Wilmington, Del., assigned rights to Hercules Powder Company, Wilmington.

Their method consists of combining the organic compound with fissionable uranium, then exposing the mixture in a suitable container to the radiation of a nuclear reactor. The uranium in the mixture fissions, causing the organic compound to break up, then combine to form a different organic compound.

The inventors say their method increases the output of chemical product per unit of fissionable fuel by a factor of ten over processes in which only the reactor's radiation is used.

### Light-Sensitive Proximity Fuze

Nearly 18 years to the day after application was made, three scientists received a patent, 3,064,578, for a light-sensitive proximity fuze, the delay being due to the need for secrecy concerning the device.

Drs. Joseph E. Henderson, then of Seattle, Lawrence R. Hafstad, now a vice-president of General Motors, and Richard B. Roberts, now at the Carnegie Institution of Washington, assigned rights to the Government through the Secretary of the Navy.

A change in the quantity of light received by a photoelectric cell in the fuze causes the projectile to explode in the immediate vicinity of the target, thus producing maximum damage.

### Significant Patents Include:

A chamber simulating conditions in space for training personnel and testing equip-

ment, which won patent 3,064,364. Otto Schueller of Dayton, Ohio, assigned rights to the Government through the Secretary of the Air Force.

A rocket powered by the sun's radiation, which heats a bed of refractory particles such as hafnium carbide, with the propellant fluid picking up heat from the particles, then escaping through a nozzle to create thrust. John C. Sanders of Strongsville, Ohio, granted the Government royalty-free use of patent 3,064,418.

A sound-producing device for toys, particularly for imitating birds. Fritz Colischan of Nurnberg, Germany, assigned rights to patent 3,064,388 to The Firm Georg Kohler, also of Nurnberg.

A variable sweep-wing aircraft for supersonic airplanes. Thomas A. Toll of Lancaster, Calif., assigned rights to the Government through the National Aeronautics and Space Administration of patent 3,064,928.

A process for making cream-style corn, for which Ellsworth W. Eue of Le Sueur, Minn., was awarded patent 3,065,082. Rights were assigned to Green Giant Company, also of Le Sueur.

A finger mitten that is worn over conventional gloves or mittens to give the fingers added cold protection, for which Henry Veghte Jr., Stage, Rutland, Vt., received patent 3,064,266.

A method of launching the sound devices dropped from ships to divert torpedoes from the ship, granted patent 3,064,537. Maurice H. Baller of Washington, D.C., Robert K. Bole of Bethesda, Md., Sidney Hersh of Silver Spring, Md., and Marvin H. Meekins of Falls Church, Va., assigned rights to the Government through the Secretary of the Navy.

For space vehicles, a reflector that can be collapsed for easy transportation, granted patent 3,064,534. Julius W. Tumavicus of Old Saybrook, Conn., assigned rights to United Aircraft Corporation, East Hartford, Conn.

• Science News Letter, 82:374 December 8, 1962

## TECHNOLOGY

# Oxygen-Enriched Air by Device Replacing Masks

► A NEW DEVICE that provides oxygen-enriched air for chronic lung and heart cases by taking out nitrogen chemically instead of adding oxygen has been developed.

Use of unhandy and expensive face masks and tents for oxygen therapy is eliminated by oxygen conditioning the whole room so that its atmosphere contains 45 percent oxygen. Two affiliates of Standard Oil Company (New Jersey) made the development.

• Science News Letter, 82:374 December 8, 1962