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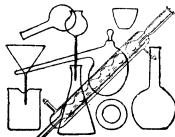
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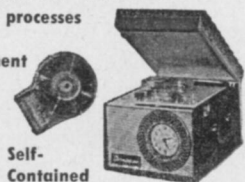
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INVENTION

Patents of the Week

Underwater barges especially suited for transporting liquids or powdered products, a new accelerator and a method of conditioning polyethylene surfaces have been patented.

► DEVICES for transporting freight using one or more underwater barges have been granted a patent.

The underwater method is particularly useful for transporting liquid or powdered products. The devices are very light when empty and are said to be easily, rapidly and cheaply mass produced.

They were invented by Louis Denis, Pierre Benjamin Wolff and Joseph Jean Marie Rodolphe Brocard of Paris, France, who were awarded patent No. 3,018,748 for the method. Rights were assigned to the Societe d'Etudes pour le Stockage et le Transport sousmarins des Fluides (S.O.M.A.F.), also of Paris.

The French inventors' method for underwater transportation consists of placing the cargo in secondary containers that are transported within a hull shaped so as to have the least possible resistance to displacing water. Since the hull is underwater, it has to withstand only a minimum of storms and other forces and therefore can be made from a relatively thin, flexible sheath. The secondary containers can be in the form of simple cylinders, cones or truncated cones.

A charged particle accelerator developed by Dr. Willard H. Bennett of the U.S. Naval Research Laboratory was awarded patent No. 3,019,394. The Government can manufacture or use the device without payment of royalties.

The intense ion streams produced within a tube by Dr. Bennett's method are of the magnetic, self-focusing type. The high-velocity ions follow nearly circular paths.

A control system for doorways closed

by air curtains won patent No. 3,018,712 for Robert J. Wacker of Bloomington, Minn., who assigned rights to Minneapolis-Honeywell Regulator Company, Minneapolis. The direction of air flow across the open doorway can be varied in one direction or the other, depending on the temperature difference between inside and outside. The control system also counteracts the effect of wind blowing through the doorway.

The complicated title of patent No. 3,018,189, a method of conditioning polyethylene surfaces for the adhesion of materials coated thereon and resulting product, translates to mean that polyethylene plastic products can be made in bright prints or with other decorations instead of only in plain colors. The patent was awarded to George W. Traver of Chicago, who assigned rights to Traver Investments, Inc., Skokie, Ill.

The invention is particularly useful in treating the surfaces of plastics upon which coating materials normally do not readily adhere, Mr. Traver claims. The uses of polyethylene plastic products have previously been limited because the plastics will not take print and cannot be decorated or laminated.

Mr. Traver found that polyethylene products could be so treated by exposing the surface to the action of electrical discharge. Although the appearance and the texture of the material is not perceptibly altered, the surface after exposure to electrical discharge is modified for the "firm adhesion of inks, pigments or other coating materials."

The electrical treatment can be done at a relatively high and therefore economical rate of speed, Mr. Traver claims.

Graduating seniors and others who wear mortar board caps for ceremonial occasions should welcome the invention of Edward J. O'Reilly of New London, Ohio. He devised an improved method of making mortar boards, awarded patent No. 3,018,487. Rights were assigned to The C. E. Ward Company, also of New London, Ohio.

By making the crown and stiffener cover of a heat-weldable plastic material, Mr. O'Reilly solved the problems associated with cleaning cardboard-stiffened caps after one-time use.

An artificial mastoid to be used in testing hearing aids of the bone conduction type won patent No. 3,019,307 for Erwin M. Weiss of Chicago, who assigned rights to Beltone Hearing Aid Company. The instrument can also be used for measuring hearing loss due to failing of bone conduction, Mr. Weiss claims.

• Science News Letter, 81:110 February 17, 1962

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