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INVENTIONS

Patents of the Week

A rocket launching method for delivery of mail and freight, that could be used with small rockets preset for a particular destination has been invented—By Ann Ewing

➤ A NEW, inexpensive method of launching rockets that could carry mail and freight from coast to coast was patented by the U.S. Patent Office.

The method uses a rocket sled zooming on rails down an incline and then up a slope to give added push to the missile's own thrust. This is similar to the system reportedly used by the Russians to launch some of their satellites.

The system is not designed for the giant rockets that will make manned trips to the moon. It is, rather, suitable for missiles about the size of today's large commercial transport planes.

One advantage of the method is that it saves money by eliminating the need for in-flight guidance by man. This is because the missile, as it leaves the rocket sled, is aimed in the precise direction desired and guidance can be pre-set.

Another advantage is that the system is cheaper than vertical launch because fewer persons are needed and the required equipment is not as expensive.

The missile would be recovered at its destination by parachute and so could be reused.

Mr. Bernard E. Shlesinger Jr. of Annandale, Va., earned patent 3,134,300 for this method of rocket launching.

Ten-Year Patent Contest

A ten-year patent contest ended with the assignment of patent 3,134,718 for the steroid compounds prednisone and prednisolone, widely used to treat arthritis and other diseases, to the Schering Corporation, Bloomfield, N. J.

Synthesis of the two drugs, sold by Schering under the name "Meticorten" and "Meticortelone," was reported in 1954. Their discovery showed that altering in the laboratory the chemical structure of a compound occurring naturally in the body could result in materials more beneficial for treatment than those produced by the body.

Prednisone is related to cortisone and hydrocortisone but has two less hydrogen atoms, making it about five times as active. The patent was awarded to Arthur Nobile of Roseland, N. J.

All-Weather Landing System

An all-weather landing system for use by commercial airlines earned patent 3,134,975 for David M. Goodman of New York University's College of Engineering. It would use the same kind of weather radar system now carried on jet airplanes.

The invention calls for modifying these radars so that a rapidly scanning beam from the antenna is directed toward a series of

reflectors outlining the runway. The reflected signals are electronically processed to give the pilot a three-dimensional picture on his radar screen.

This picture of the runway makes it possible for the pilot to land the plane even when visibility is zero. The distances to the runway markers are shown in different colors on the radar screen.

Mr. Goodman states that the cockpit radar display can be modified during flight so that the radar system can also be used for navigation and collision warning. The multicolor radar screen is now under development by the U.S. Air Force.

Other Significant Patents

Two improvements in the self-developing cameras pioneered by Edwin H. Land—patent 3,134,317 to Edwin H. Land of Cambridge, Mass., for a method of treating the exposed photosensitive sheet with a fluid; patent 3,134,313 to Nicholas Gold, Arlington, Mass., and Arthur J. Sable, Boston, Mass., for a system that gives not only a positive print but a recoverable negative from which further prints can be made. Rights to both patents were assigned to Polaroid Corporation, Cambridge.

Semiconducting devices using tunnel, or Esaki, diodes—patent 3,134,905 to Dr. William G. Pfann of Far Hills, N. J., for a photosensitive junction combined with a tunnel diode, rights to which were assigned to Bell Telephone Laboratories, New York; patent 3,134,963, assigned by its inventors to International Business Machines Corporation, New York, for a memory system for computers using tunnel diodes. The inventors are: Robert A. Henle, Hyde Park, N. Y., William W. Lawrence Jr. and Hermann P. Wolf, Poughkeepsie, N. Y., and J. B. Pace, Hopewell Junction, N. Y.

Just in time for graduation season, Thomas E. Kelly of Huntington Valley, Pa., has designed a "mortarboard" with separate parts that are easily detached either for laundering or for souvenirs—patent 3,134,107; rights assigned to Louis E. Stilz Company of Philadelphia by the inventor.

A cavity resonator for use in optical masers that allows only a few of the relatively preferred wavelengths desired for communications purposes—patent 3,134,837 to Paul P. Kisliuk of Morristown, N. J., and David A. Kleinman of Plainfield, N. J.; rights assigned to Bell Telephone Laboratories, New York.

An amphibious helicopter with a detachable, lightweight hull for use when landing on water—patent 3,131,888 to James R. Jensen and Donald R. Jacoby, both of Los Altos, Calif.; assigned to Eltra Corporation, Brooklyn, N. Y.

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