INVENTION

Patents of the Week

A chemical compound that retards evaporation of large open bodies of water by forming a monomolecular film on their surfaces earned a patent—By Elizabeth Hall

➤ AN OLD CHEMICAL compound has a new use—retarding evaporation from large bodies of water in dry lands. This compound, although only laboratory-tested as yet, is a potential key to solving one of the world's most vital problems, a decreasing water supply.

The U.S. Patent Office awarded patent 3,112,167 to Allen F. Millikan of Crystal Lake, Ill., and Walter E. Kramer of Niles, Ill., for their method of spreading a chemical film that retards evaporation on the surface of open bodies of water. The monomolecular film (one molecule thick) consists of a polyhydorxymethylated compound.

In contrast to other tests with cetyl alcohol, a compound that may cut evaporation loss in half in calm weather, this compound of complex aromatic polyols does not breed bacteria and is not harmful to fish and water plants.

The patent describes the chemical process for forming the compound and the methods of application in either powdered form or a solvent. The process has proved successful in laboratory tests, Mr. Edward H. Lang, a patent attorney with the Pure Oil Company, Chicago, to whom rights were assigned, told SCIENCE SERVICE. However, its commercial future has not yet been decided.

Use for Peelings

A process for turning citrus peelings, now fed to cattle, into a flavor paste suitable for ice cream, jams, jellies, soft drinks and cake icings earned patent 3,112,202 for a Florida inventor.

A hot, syrupy sugar solution and the citrus peel (a discarded by-product of the juice and canning industries) are mixed together, ground up and "homogenized" to form a paste. There is no loss of flavor or any large quantities of vitamins A and C during the operation.

The process was developed by Daniel V. Wadsworth of Vero Beach, Fla., a retired employee and part-time consultant to Corn Products Company, New York, to whom rights were assigned. The paste is now being supplied as an individual ingredient on a limited basis, a company official told SCIENCE SERVICE.

Harvesting Wild Rice

A method of increasing wild rice yields won patent 3,111,799 for Justin M. Schmit, Duluth, Minn., and Harold L. Andrews, Zim, Minn. Polyethylene bags are drawn down over many wild rice stalks in an area while the heads of wild rice are still immature. The bag is tied and a few air holes punched to allow ripening and drying of the grain.

At harvest, the stalks are cut off below the bag and carried to the threshing center for separation of grain and stalk. The old way of harvesting wild rice is to bend the ripe heads of grain over a boat, beating with a stick to cause the grain to fall into the boat. This yields about 10% of the total crop. Patent rights were assigned to the Chun King Corporation, also of Duluth.

Other Significant Patents

Other patents included:

A molecularly distilled edible monoglyceride that keeps bread fresh for many days after baking—patent 3,111,409 to George R. Jackson and James M. Livingston, both of Louisville, Ky., assigned to Top-Scor Products Corporation of Kansas City, Kans.

An evacuation chamber for simulating the effects of high altitudes—patent 3,111,074 to Dwight C. Kennard Jr. and Carl W. Gerhardt of Dayton, Ohio; assigned to the U.S. Air Force.

A shoelace that resists slipping and untying by a series of knots inside the shoelace—patent 3,110,945 to Arthur J. Howe Jr. of Santa Monica, Calif.

A mechanical heartbeat mechanism for enhancing the lifelike characteristics of children's dolls and other toys—patent 3,110,980 to Helmuth Moormann of Elmont, N. Y.; assigned to the Ideal Toy Corporation of Hollis, N. Y.

An aquarium plant pruner that you can operate without getting your hand wet—patent 3,110,963 to Adolph Lewandowski of Brooklyn, N. Y.

A water cycle for swimmers that can replace fins—patent 3,111,109 to Aristide Nicolaie of New York City.

A diving watch that shows the diver the decompression times necessary at various levels for surfacing—patent 3,111,003 to Arthur Droz of Geneva, Switzerland.

A method of producing an endless typewriter ribbon—patent 3,111,441 to Willy Grundel of Hannover, Germany; assigned to Gunther Wagner, a corporation also of Hannover.

• Science News Letter, 84:383 Dec. 14, 1963

Do You Know?

A unit capable of producing *water* that is more than 99.9999% pure is now commercially available.

Boron nitride is the only available material that is readily machinable, a good thermal conductor and an excellent electrical insulator.

A device known as an *"Eggatron"* is being used by Australian farmers to keep an automatic tally of which hens are laying eggs and which are not.

• Science News Letter, 84:383 Dec. 14, 1963