

INVENTION

Patents of the Week

Removing proteins from fresh fish and extracting natural magnesium and potassium salts from the sea are two methods which have been patented.

➤ A METHOD of extracting valuable mineral salts from sea water has been patented by the U.S. Patent Office.

The natural magnesium and potassium salts and other valuable materials from the natural salt water of the sea or the Great Salt Lake can be recovered by using this method.

After removing sodium chloride, the only salt now recovered commercially from sea water, a complex combination of salts is left. In the Great Salt Lake approximately 100 to 130 million tons of potassium salts and the equivalent of from 140 to 180 million tons of magnesium metal are left after the salt is removed.

Pablo Hadzeriga of Salt Lake City assigned rights to patent 3,099,528 to the Standard Magnesium Corporation of Tulsa, Okla., for his method of recovering these salts.

After the sodium chloride is eliminated, sulfate is removed by an ion-exchange procedure, sulfuric acid being produced as a by-product. The sulfate-free water is then treated to produce potassium chloride, magnesium oxide, magnesium metal and other products, while hydrochloric acid is obtained as another by-product.

Proteins From Fish

General Foods Corporation of White Plains, N. Y., received rights to patent 3,099,562 for extracting proteins from fish to be used in baking.

The fish protein could be substituted for the egg white proteins commonly used in toppings for desserts and angel food cakes. After being whipped into foam, the proteins must coagulate or harden when baked in an oven, forming a skeleton support for the other food substances.

Invented by William I. Rogers of Carlisle, Mass., the process first shreds the fish and then disperses it in water from zero to 35 degrees Centigrade. The albumin and globulin proteins, which are soluble in pure water, dissolve and are then converted into the desired form through the use of enzymes.

If a salt water solution is used to extract the proteins, actomyosin as well as albumin and globulin is extracted. Up to 65% of all protein found in the fish is recovered using salt water.

Other Significant Patents

Other patents include:

A spacesuit for astronauts, operated by cables which hold the body in restraint during periods of stress. The cables can be relaxed during periods of weightlessness. Joseph H. Doss of Kirkland, Wash., and Gary A. Graham of Seattle assigned rights

to patent 3,099,261 to Boeing Airplane Company, Seattle.

A way to remove organs such as kidneys and lungs from poultry by a suction tube combined with a nozzle that simultaneously ruptures the organ from its cavity by a jet stream of water or air. Frank H. Ine of Milwaukee assigned rights to patent 3,099,039 to John Mohr and Sons of Chicago.

A mock chicken leg machine that wraps a certain amount of meat around a skewer or stick to be used for convenience at picnics and outdoor meals. Frederick H. Blake of Bellevue, Wash., and Frederick M. Thorburn of Redmond, Wash., assigned rights to patent 3,099,037 to the Sunnee Brand Meat Company of Seattle.

A lightweight portable seat to be used primarily in boats, for which Ralph S. Woodruff Sr. of Point Pleasant, N. J., received patent 3,099,482. The seat is a combination ice chest, seat, life preserver and the back can be turned around to face the opposite direction. Rights were assigned to R. S. Woodruff and Company of Point Pleasant, N. J.

An ear dewaxer for which Girolama Palazzolo of Grand Rapids, Mich., received

patent 3,099,263. The dewaxer consists of a linen tube a foot long that is dipped in beeswax and inserted in the ear where there is a large accumulation of wax.

The other end of the tube is then lighted and the smoke from the beeswax melts the wax in the ear. The user may depress the tube at one point, allowing the smoke to accumulate, and then release it, the suction removing the wax from the ear.

• Science News Letter, 84:102 Aug. 17, 1963

TECHNOLOGY

Dumbwaiter to Deliver Mail in High-Rise Offices

➤ OFFICES in high-rise buildings of the future will have their mail delivered by "dumbwaiter." The new delivery system is being put into effect by the U.S. Post Office Department under the Vertical Improved Mail (VIM) Program.

It consists of having a postal worker stationed at a permanent mailroom on the ground floor of the building. He sends and receives the mail for each floor by "dumbwaiter" system. He spends the entire day there and is the only mailman for that building. Several times each day, a mail truck stops by to pick up and deliver mail.

Savings in manpower are expected to be considerable, since several letter carriers are now necessary to cover a large building. Efficiency is expected to increase also.

The first building to use the system is the 20-story Crown Zellerbach building in San Francisco.

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INVENTION

First Patent Issued U. S.

➤ THE FIRST PATENT ever issued directly to the U.S. Government has been granted by the U.S. Patent Office.

Until now, Government agencies could be assigned rights to a patent, but the patent itself was issued to the inventor or his executor in case of death.

The patent number itself, 3,100,294, was issued to Dr. Hugh L. Dryden in his capacity as deputy administrator of the National Aeronautics and Space Administration.

The Congressional "language" that gives this Government agency the right to apply directly for a patent is part of the Space Act or Public Law 85-568 (42 U.S. Code 2457), passed by Congress on July 29, 1958. This act allows the Administrator of NASA or his deputy to apply for a patent, if the original inventor's company is under contract to NASA.

The patent, which was for a time-division multiplexer used in space data computers, was granted to the deputy administrator of NASA, although he was not the inventor.

John F. Meyer of Pasadena, Calif., who works for Jet Propulsion Laboratory of the California Institute of Technology, was the actual inventor of the multiplexer. However, except for being mentioned as a refer-

ence on the printed patent, he receives no credit for his invention.

NASA and other Government agency employees receive automatic awards, as well as credit for their inventions.

NASA is the only Government agency and its Administrator the only Government official that have the right to apply directly to the Patent Office for a patent, NASA patent attorney G. T. McCoy told SCIENCE SERVICE.

The Administrator takes the oath and personally applies for the patent which then becomes the exclusive property of NASA. It is not "assigned" to any agency as is usually the case.

Approximately 45 inventions that fall in this same category are now pending at the Patent Office.

In only one other case was an exception made in the patent laws for NASA. A company under contract to the space agency applied for a patent without notifying NASA.

Officials checking the applications discovered the oversight. The patent, which was for a valve actuator, was still issued to the inventor but "granted" to NASA's Administrator.

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