

INVENTION

Current U.S. Patents

A method for marking fish by which scales are transplanted painlessly from one part of the body to another has been patented—By Ann Ewing

► A WAY BY WHICH one can decorate goldfish or guppies to distinguish them from other fish in the tank, for fun or research, was recognized by a patent from the U.S. Patent Office.

The method consists of replacing scales of one color with those of a contrasting color from a different part of the fish in the desired pattern. The fish must be anesthetized during transplantation.

The process does not hurt the fish. The transplanted scales become firmly set within 24 hours and remain in their new position for the life of the fish, a permanent way of identifying individual specimens.

The method offers great possibilities of decorating fish in various ways for sales appeal. However, the scale transplant technique was worked out in order to identify fish used in research on new drug compounds.

Dr. Louis Levy and Miss Carol A. De Fusco of Rexall Drug and Chemical Company's Riker Laboratories, Northridge, Calif., were awarded patent 3,174,458 for their method of identifying scaly teleosts, which include the goldfish, carp, blue acara, blackspot barb and guppy.

They assigned patent rights to Rexall Drug and Chemical Company, Los Angeles.

A fish is anesthetized by being placed in a container of tricaine methanesulfonate solution having a concentration of 50 to 100 milligrams per liter of water. The anesthetized fish is then placed on one side in a shallow dish partially filled with the same solution.

The operator, looking through a magnifying glass, then removes the scales in the desired pattern. Each scale-receiving socket so made should be surrounded by scales that are not removed.

The scales of contrasting color, taken from another part of the fish, are inserted one by one into the sockets, being trimmed to fit if necessary. The scales used for transplantation are regenerated naturally.

Dr. Levy and his co-workers use the marked fish in a research program to determine the effects of various drugs on delaying the time when transplants between fish of the same kind are rejected. The reaction of a fish to drugs has been found comparable to the rejection of skin transplants among mammals, including humans, Dr. Levy told SCIENCE SERVICE.

Since fish blood clots extremely fast, the preferred method of scale transplant is one-by-one.

Other Patents of Interest

To foil bank robbers, James Lamar Martin of Atlanta, Ga., has devised a packet of fake currency that serves as a camouflage for tear

gas. The device, which was awarded patent 2,174,245, can also be equipped with a time-delay mechanism to deter the get-away, according to patent 3,174,246. Patent rights were assigned to Currency Protection, Inc.

Two "way-out" ideas still in the development stage were granted patents that are assigned to the Government through the National Aeronautics and Space Administration.

One patent is for a continuously operating "induction gas plasma accelerator." The principle on which it operates could be the basis for a low-thrust power plant for space probes of the future. The plasma accelerator earned patent 3,174,278 for Raymond L. Barger, Joseph D. Brooks and William D. Beasley of Langley Research Center, Langley Field, Va.

Another NASA patent is for a rocket thrust chamber having a large area-ratio nozzle, for which Edward F. Baehr of Lewis Research Center, Cleveland, was awarded patent 3,174,279.

An air curtain shoots jets of warm air across an open doorway to keep out rain, snow, cold winds or drafts. Graham Arthur Charles Courtier, Colchester, Essex, England, was awarded patent 3,172,349 for the curtain and patent rights were assigned to Woods of Colchester Limited, Colchester.

For a list of registered patent attorneys and agents and other Patent Office information, write the Commissioner of Patents, Washington, D.C. 20231, or call 202-967-4058 for specific data.

• Science News Letter, 87:228 April 10, 1965

CHEMISTRY

New Family of Plastics Conducts Electricity

► A NEW FAMILY of plastics with the unexpected ability to conduct electricity is now being investigated in laboratories around the world.

The usual synthetic plastics are widely used because they are excellent insulators, virtually incapable of conducting electricity.

One form of the new charge-carrying plastics, developed at the General Electric Research Laboratory in Schenectady, N.Y., can be applied as a liquid. When painted on the surface of an ordinary plastic, it would be possible to make printed circuits like those often used in portable radios.

Two GE scientists, Drs. Charles M. Huggins and John H. Lupinski, reported research details on the new family of plastics to the American Physical Society meeting in Kansas City, Mo. They said the polymers do not rival metals in their ability to carry large currents with low electrical losses.

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Questions

ANTHROPOLOGY—How do guppies control their population? p. 231.

BIOCHEMISTRY—What accounts for the strength of the collagen molecule? p. 227.

CHEMISTRY—What is a possible use of a liquid form of a new family of plastics which conducts electricity? p. 228.

GENERAL SCIENCE—How does one president say that a foundation should be run? p. 233.

GEOLOGY—What constructive observations have been made from the aftermath of the Alaskan earthquake? p. 230.

MEDICINE—What is the most probable reason that hospital workers and patients spread more germs just after a shower? p. 239.

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