

[Translation.]

**PACHALY'S CAR FOR TRANSPORTING FISH.\***

[From "Deutsche Fischeri-Zeitung," No. 43, Stettin, October 25, 1881.]

Some time ago we informed our readers that a joint-stock company had been formed for transporting fresh salt-water fish from Cuxhaven to Berlin, in specially constructed cars. The originator of this plan, and, as it seems, the soul of the enterprise, is the inventor of the car, Mr. Arno Gustav Pachaly, from Mittelgrund, in Bohemia. His invention has been patented in the German Empire, March 20, 1880, and the letter granting the patent says the following regarding it:

"The transporting car is a railroad car, which can be taken off the wheels, the walls of which are double, the spaces between the walls being filled with non-conductors of heat. The top and lateral walls have a threefold covering.

"In the interior of the car, and resting on the double bottom, there is a shallow tank of forged iron with a vaulted roof, on which a stove-pipe is fastened, similar to the stove-pipe frequently seen in the cabins in fishing vessels. This stove-pipe has slanting sides, and can be closed airtight with a lid. Along the inside walls of the car there are shelves for dead fish. Ice-boxes fastened to the ceiling serve to keep the car cool.

"In order to supply the live fish in the tank with fresh air, the air is from the top of the car led through pipes into the ice-boxes, kept there until it is sufficiently cool, and thence, by means of an air-pump fastened to the lower side of the bottom of the car, forced into the tank. The necessary power is, during the journey, supplied by the motion of the car, the axis of one of its wheels being connected with the disk of the air-pump by means of belts. In order to protect the fish against the danger of suffocation during long stoppages, the disk of the air-pump is so arranged that it can be turned by means of a crank. Each car has, for cases of emergency, an extra air-pump, which is placed in a line with and to the right of the one in general use.

"In order to prevent superfluous air from entering the ice-box, and also with a view of keeping the air above the water in the tank at a slight tension, so as to prevent any violent motion of the water, the stove-pipe of the tank has a lid at the top, composed of four parts, and fastened by screws. To this lid a rubber-tube can be screwed, after the car has been loaded, the other end of the tube being fastened to the ceiling of the car.

"For letting the water off from the tank, it has an opening in the bottom, with a stop-cock, and with an arrangement for fastening a tube to it.

"At one end of the car there is a compartment for the person in charge of the fish. A double door leads from this compartment into the one where the fish are kept; and a person can, therefore, even during the journey, easily pass from one compartment to the other.

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\* "Der Fischtransportwagen von Pachaly." Translated by HERMAN JACOBSON.

“The invention, about to be patented, is the construction of a car for the transportation of fresh salt-water fish, by employing a tank, by introducing into this tank fresh air, which is absolutely necessary to the well-being of fish, the air having previously been cooled, and the superfluous air having been shut off from the ice-box, with a view of keeping the air in the tank at a slight tension, so as to prevent any violent motion of the water.

“This car is to serve for the wholesale transportation of salt-water fish from the coast to some central point in the interior.”

If this invention fulfills all it promises to do—and it is to be supposed that the capitalists who have made it possible to carry out its theory in practice have thoroughly convinced themselves of its usefulness—Mr. Pachaly deserves the gratitude of all fish-dealers. A beginning has been made, and circumstances will finally compel the disobliging railroad companies to be far more accommodating in the matter of transporting fish than they have hitherto been accustomed or willing to be.

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**MEMORANDUM OF SOME RESULTS OF THE ARTIFICIAL PROPAGATION AND PLANTING OF FISH, DUE MAINLY TO THE EFFORTS OF THE UNITED STATES FISH COMMISSION.**

The following chronological sketch shows some of the work accomplished within the last decade by the United States Fish Commission, either directly by its own efforts or indirectly by its co-operation with State commissions. It is, however, very far from complete, and the object of publishing it is only to place on record some scattering items preliminary to a more elaborate and complete article on the subject. The United States National Museum now has many specimens illustrating successful introduction of important species, and these are recorded in this article. The fishes from which returns have been received are as follows:

1. German whitefish (*Coregonus lavaretus*).
2. Maine salmon (*Salmo salar*).
3. Quinnet salmon (*Oncorhynchus chowicha*).
4. Rainbow trout (*Salmo irideus*).
5. Shad (*Alosa sapidissima*).
6. Carp (*Cyprinus carpio*).
7. Catfish (*Amiurus catus*).

GERMAN WHITEFISH (*Coregonus lavaretus* L. *vide* Günther, which equals *C. marana* Nilsson).

April 28, 1877.—Geo. H. Jerome, superintendent, writes:

“My overseer, Mr. Chase, informs me that but 409 of the 1,700 German whitefish lived to be planted in Michigan waters. The number which survived were very active and healthy, and were placed, on the 14th of April, in Gardner Lake, Otsego County, a small deep lake, where no whitefish had ever been planted, and free from all predaceous fish. The eggs were a little larger than our whitefish eggs. The fish had a larger sac and carried it longer than our whitefish.”