No. 771,469. PATENTED OCT. 4, 1904.

H. FRITSCHE.

FISH TRANSPORT WAGON.

APPLICATION FILED JUNE 22, 1904.

NO MODEL.

Fig. 1

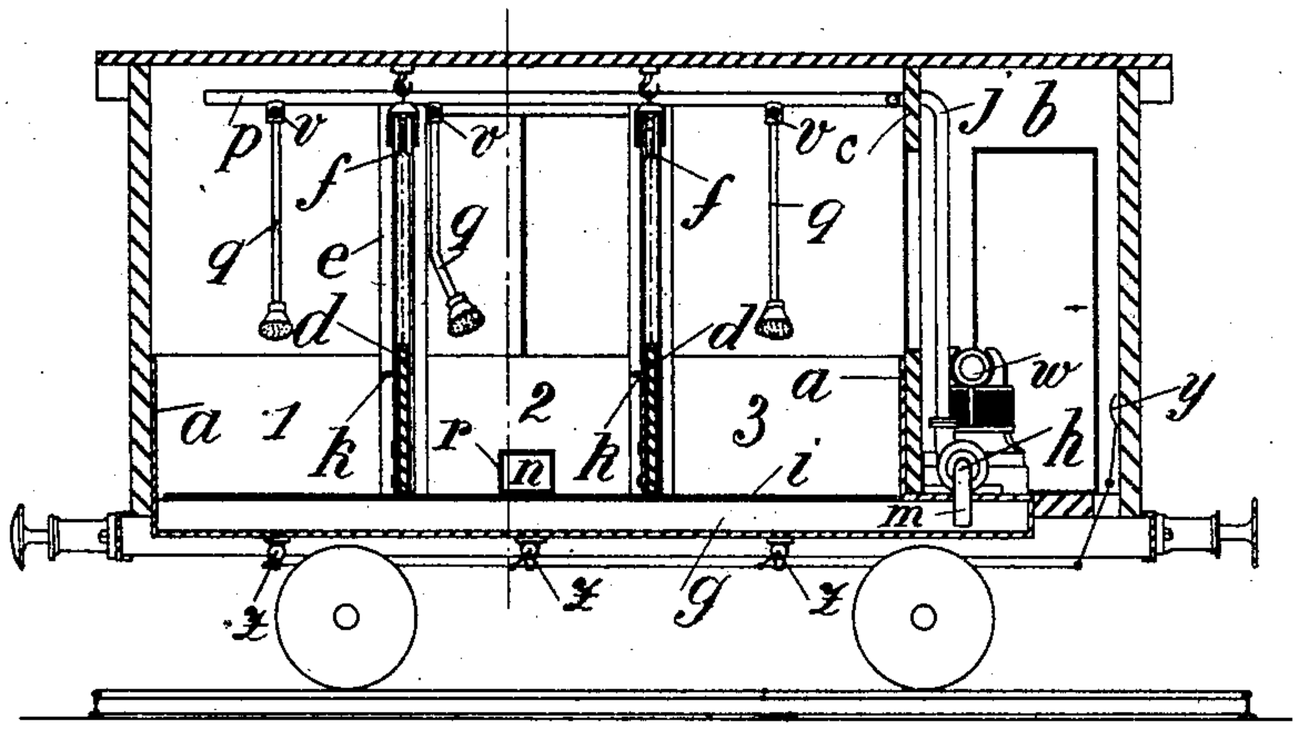
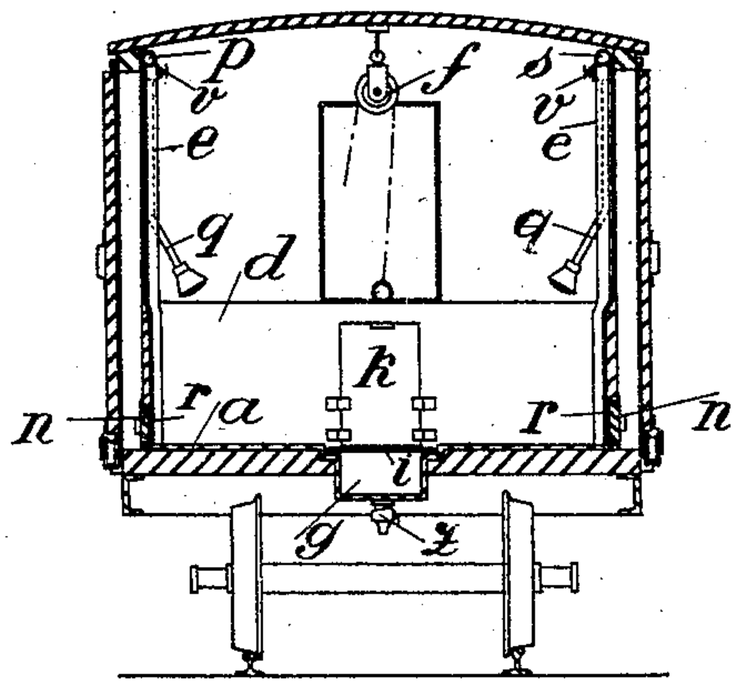


Fig. 2



Witnesses

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No. 771,469. Patented October 4, 1904.

UNITED STATES PATENT OFFICE.

HERMANN FRITSCHE, OF BERLIN, GERMANY.

FISH-TRANSPORT WAGON.

SPECIFICATION forming part of Letters Patent No. 771,469, dated October 4, 1904.

Application filed June 22, 1904. Serial No. 213,697. (No model.)

To all whom it may concern:

Be it known that I, HERMANN FRITSCHE, merchant, a subject of the Emperor of Germany, residing at Berlin, in the Empire of Germany, (whose full postal address is 4 Neue Friedrichstrasse, Berlin, aforesaid,) have invented certain new and useful Improvements in Fish-Transport Wagons, of which the following is a specification.

The present invention relates to fish-transport wagons in the interior of which there is arranged a water-tight tank divided into divisions and which when filled with water serves for the reception of the fish. According to the present invention the several divisions, which are separated from each other by walls or partitions which can be raised, are interconnected by a channel provided with cocks, said channel being arranged in the floor. By this arrangement when the well-known circulation of the water from the tank through a filtering apparatus and back to the tank again takes place an equal or uniform removal of the used-up water is effected by the pump from all the divisions at the same time, and consequently an equal or uniform cleansing of the water in all the divisions is obtained. The partition-walls of the separate tank-divisions are provided with slides by means of which the divisions can be shut off from the floor-channel, so that the emptying of the water out of each division can be effected separately.

The accompanying drawings illustrate a railway-wagon arranged according to the present invention.

In the drawings, Figure 1 is a longitudinal section of the wagon. Fig. 2 is a transverse section on the line *x x* of Fig. 1.

The tank *a*, arranged in the interior of the railway-wagon, is only of such a length that at one end of said wagon a free space or room remains. This room *b* is separated from the tank-room by a partition-wall *c* and is accessible from without by means of a special door. The room *b* is likewise connected with the tank-room by means of a door. The tank *a* is in the case represented divided into three divisions 1, 2, and 3, whose plank walls *d*, reinforced at their heads by iron-work, are guided in U-shaped rails fixed on the inner walls of the wagon or by guides formed of angle-irons. At the upper ends of the partition-walls *d* the chains or ropes of the tackle *f* are fastened, by means of which the partition-walls *d* can be raised to nearly the roof of the wagon. Along the middle of the wagon underneath the same a channel *g*, interconnecting the separate divisions, is arranged and is shut off from the divisions by a sieve *i*. In the sieve *i* there is provided a slot under each of the partition-walls *d*, through which a slide-door or slide *k*, one of which is arranged on each of the partition-walls, can be pushed down into the channel. The channel *g* runs forward under the room *b*, provided in the wagon, and receives here the suction-pipe *m* of a pump installed in the room *b*. The delivery-pipe *j* of the pump *h* is divided into two branches, which are conducted along the two sides of the wagon as close as possible to the roof of the same. Pipes *q* lead from the branch pipes *p* and *s* over each division to a suitable distance downward and are provided at their ends with roses or similar distributing devices. Each of the pipes *q* possesses a cock *v*, which is suitably so arranged that when the water flows through the same air is simultaneously drawn in—that is, a mixture of water with air is produced.

In connection with the suction or delivery pipe of the pump *h* a suitable filter (not shown) of any suitable kind is arranged. The pump is driven by means of an electric motor *w*, connected with a battery of accumulators, or by a benzin-motor, petroleum-motor, or the like.

The channel *b* is provided with a discharge-cock *z* under each division of the tank. These cocks are operatively connected together by a rod and can be opened or closed all together by simply turning a hand-lever in the room *b*.

After opening the slide-doors arranged at the sides of the wagon the tank or its separate parts are conveniently accessible and can be filled with water and then with fish. During transport—that is, during the wagon's journey—the slides *k* are open and the pump *h* is set in operation. The pump draws the contaminated water uninterruptedly from the divisions through the channel, forces or draws

it through a suitable filtering apparatus, and sends it through the pipes *p* and *s* and pipes *q* to the separate reservoirs again in a clean condition. The division of the tank into separate reservoirs prevents excessive wave impacts during the journey, so that the fishes are not thrown hither and thither, and consequently they come to no harm. If at the terminus the emptying of the tank is to proceed, the pump *h* is stopped, the sliding door of the wagon is opened, and then after shutting down the slides *k* the opening *r*, which is in the one side wall of the tank and is normally tightly closed by suitable closing means, is opened, so that the contents of the division 2 can be emptied through this into a vessel placed thereunder. By the lowering of the slide-doors *k* the flowing away through the channel of the water from the divisions 1 and 3, which are still filled with fish, is prevented. In order to empty the reservoir 1 or 3, one raises the one or the other of the partition-walls *d* by means of the tackle *f*, whereupon the contents of the one or the other division run out likewise through the opening *r*. The described arrangement of the railway-wagon is such that the transport takes place under the most favorable conditions for the fish, and damage of the same during transport is almost impossible. The channel connecting the separate divisions, moreover, renders it possible to empty the tank quickly after opening the cocks *z*. This possibility is of importance if on account of the length of the journey a renewal of the water is absolutely necessary. The tank can be cleaned conveniently after raising the partition-walls *d* and opening the cocks *z*.

In the case of the presence of a larger number of tank-divisions a second opening for emptying can be usefully provided in one side wall of the tank.

What I claim is—

1. A fish-transport wagon, consisting of the combination of a railway-wagon, a tank having a plurality of divisions, a channel arranged under said tank and connecting said divisions together, a sieve interposed between said channel and said divisions, and means for producing a circulation of the water from the divisions through the channel and back to the divisions again.

2. A fish-transport wagon, consisting of the combination of a railway-wagon, a tank, one or more partition-walls dividing said tank into a plurality of divisions, a slide-door *k* on each of said partition-walls, a channel arranged under said tank and connecting said divisions together, a sieve interposed between said channel and said divisions, slots in said sieve under each of the slide-doors *k*, through which slots the slide-doors can be lowered into the channel, and means for producing a circulation of the water from the divisions through the channel and back to the divisions again.

In witness whereof I have hereunto set my hand in presence of two witnesses.

HERMANN FRITSCHE.

Witnesses:
HENRY HASPER,
WOLDEMAR HAUPT.