2 Sheets--Sheet 1.

WILLIAM STARK, JOSEPH G. FISHER, & SIMEON FITCH.

Improvement in Railway Stock Cars.

No. 121,212. Patented Nov. 21, 1871.

Fig. 1.

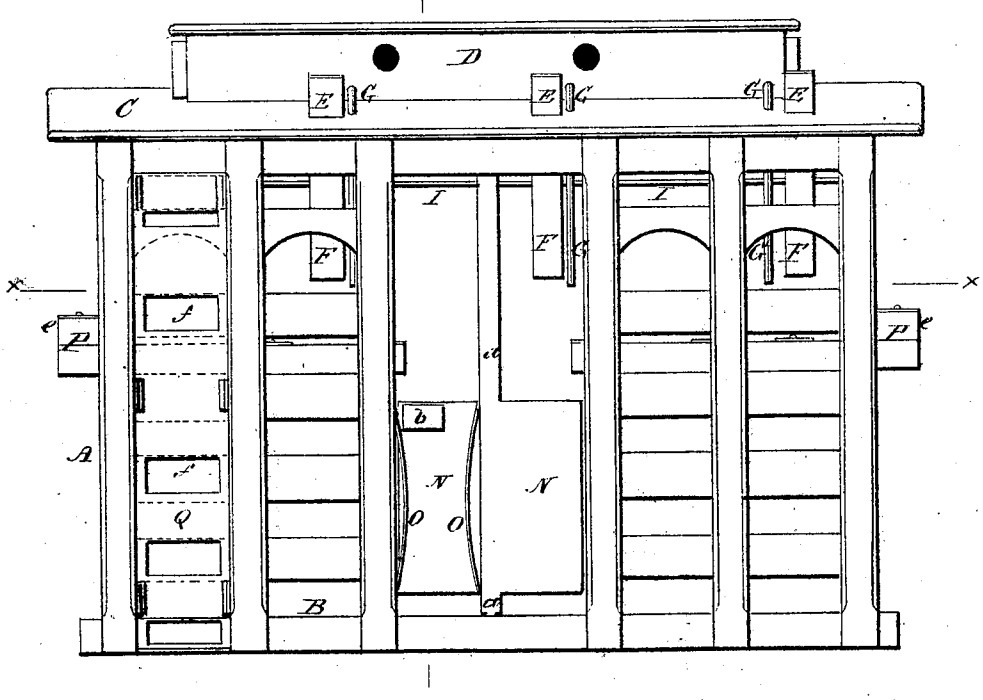
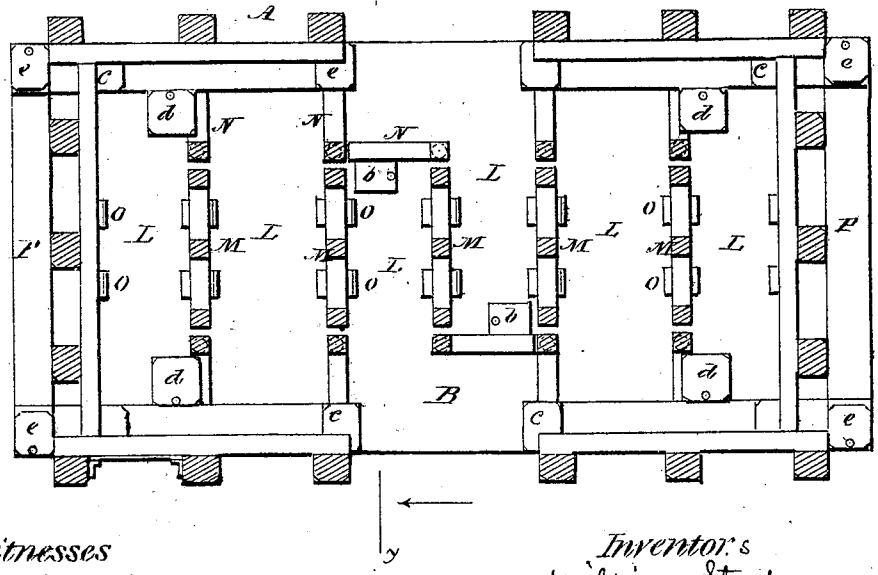


Fig. 2.



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WILLIAM STARK, JOSEPH G. FISHER, & SIMEON FITCH.

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Fig. 3.

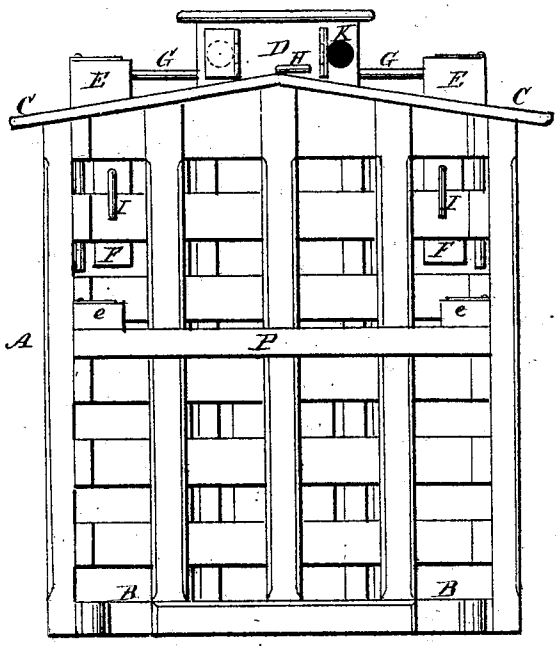
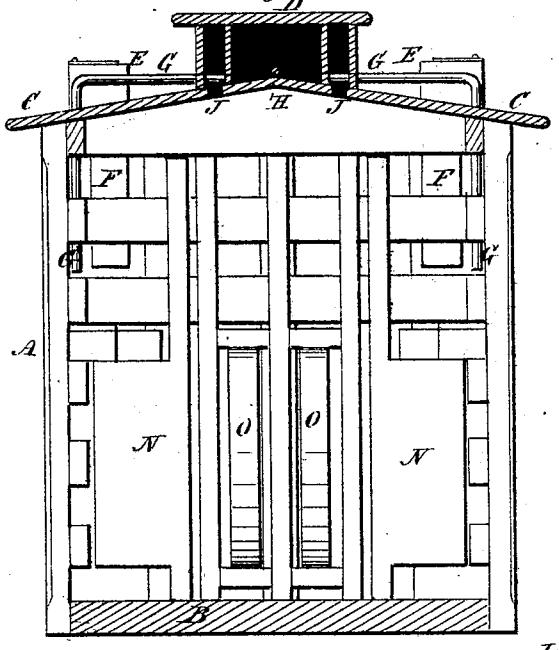


Fig. 4.



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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

WILLIAM STARK, OF WHITE PIGEON, MICHIGAN, AND JOSEPH G. FISHER AND SIMEON FITCH, OF TOLEDO, OHIO.

IMPROVEMENT IN RAILWAY STOCK-CARS.

Specification forming part of Letters Patent No. 121,212, dated November 21, 1871.

To all whom it may concern:

Be it known that we, WILLIAM STARK, of White Pigeon, St. Joseph county, Michigan, and JOSEPH G. FISHER and SIMEON FITCH, of Toledo, in the county of Lucas and in the State of Ohio, have invented certain new and useful Improvements in Stock-Cars; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side elevation of our stock-car; Fig. 2, a horizontal cross-section on the line *x x* of Fig. 1; Fig. 3, an end elevation of the stock-car; and Fig. 4, a vertical cross-section of the same on the lines *y y* of Figs. 1 and 2.

Like letters of like kinds denote corresponding parts in each figure.

The object of our device is the construction of a car for the conveyance of cattle upon railways in a safe and convenient manner, in which car the cattle may be watered and fed while the train is in motion, and may be delivered in good, healthy, and uninjured condition; and the invention consists particularly in the employment of spring-buffers; in the construction and arrangement of the partition-doors; in the construction and arrangement of the devices for feeding and watering; in movable and adjustable panels for the purpose of closing either or all the sides of the car in cold and stormy weather; and in the combination and arrangement of its several parts, all as more fully hereinafter described.

In the drawing, A represents the entire car; B, the floor; C, the roof; D, the reservoir upon the roof, provided with a central longitudinal water-chamber, and with side air-chambers; E, the grain-bins upon the roof, upon each side of the reservoir; F, the spouts leading from the grain-bins; G, the water-pipes; H, the valve-rod for the water; I, the valve-rods for the grain; J, the slots in the roof for ventilation; K, the openings in the air-chamber, provided with doors, all of which, except the car A, are constructed, arranged, and operated as described particularly in our application for Letters Patent for stock-car for swine of this date, to the specification in which application reference is made. Our car is divided into a suitable number of compartments, L, by means of fixed cross-partitions M extending from the floor to the roof, and occupying so much of the center as leaves room on each side for doors N to each compartment. These partitions are arranged at such a distance apart as will enable them to accommodate two store cattle or one fat ox, which distance is the same as the width of the doors to the partitions. Spring-buffers O, preferably elliptic steel springs, suitably covered, are secured into each partition in such a manner as to project into each compartment, and in such a position above the floor as will conveniently receive the impact of the body of the standing animal and yet be out of the way of the animal when lying down. The doors N are constructed with a post, *a*, which rotates in the roof and the floor of the car, and extends vertically a proper distance above the floor, so that cattle would not attempt to leap over them, and may be provided with suitable latches so as to fasten them in position between the partitions, or between the partitions and the sides of the car; and to the inner sides of the doors which belong to the central partitions are attached feed-boxes *b*. A frame, P, is arranged so as to slide between the slats of the car at a convenient distance above the floor, and is removable for the purpose of cleaning the boxes connected with said frame. These boxes, (provided with suitable covers,) of which those marked *c* are for water, and are situated immediately beneath the outlets of the water-pipes G, and those marked *d* are for grain, and situated immediately below the grain-spouts F, are arranged in any convenient manner upon or within any proper part of the frame. Other boxes *e* upon the outside of the car are intended for receiving a supply of water from the outside, and for this purpose have a pipe forming a connection with the water-boxes *c*. Sliding-panels Q, provided with orifices *f* to correspond with the openings between the slats of the car, are arranged between the upright car-posts so as to be readily moved by hand, and remain in position in a manner to cover said openings or leave them uncovered.

In operation the car may be loaded or unloaded with fat oxen equally well from either side, one end at a time, both sides being similar in construction and arrangement. The doors being turned in one direction, at right angles with the partitions, a passage-way is left open to one of the end compartments, into which the beast is driven and the door of his compartment closed in line with the partition. The other compart-

ments are filled in succession in like manner until that end of the car is filled. The other end is filled in the same way, and the central compartments last of all. When store cattle are carried, of which it is intended to have two in each compartment, one half may be driven in from each side, or all from the same side, one half crossing the car through the central compartments, so that the beasts shall stand head and tail. When the car is loaded and the doors closed in the proper direction the compartments will be continuous across the cars, and a feed-box and water-box will be within convenient reach of each animal. The unloading is performed in the same manner as the loading. This car, without change, will be found equally convenient for transportation of horses and mules.

The principal advantages of the construction of our stock-car are as follows, viz.: By the employment of the narrow compartments not more than two animals are placed in one room and then in such a position that they cannot crowd or gore one another, which rooms are provided with water and food within reach of each animal, so that he does not get injured or discontented, and thereby shrink in weight. This arrangement is particularly adapted to the wild and broad-horned oxen of Texas, who furnish now so large a proportion of the beef consumed in this country. By the use of the spring-buffers, which are so arranged as to be no hindrance to the beast in lying down or getting up, the cattle are prevented from injury by collision with the sides of the partition, and may be marketed in a smoother and more valuable condition than otherwise. By the arrangement of the partitions and doors the cattle may be loaded, unloaded, and carried very conveniently, as already described. By the use of the movable feed and water-frame the boxes belonging to it may be readily, frequently, and thoroughly cleansed, which is a matter of consequence with cattle, who thrive best with cleanly treatment. By the use of the sliding panels, in windy or stormy weather the exposed side may be closed entirely, and in severely cold weather the whole car inclosed completely, in which case ventilation is provided for by the openings in the roof into the air-chambers. The whole car as constructed is intended to be in reality a palace stock-car, so constructed as to carry animals in the speediest manner, and to deliver them to their market in the best and most valuable condition.

Having thus described the construction of our car and enumerated some of its advantages, what we claim as new therein and our own invention, is—

1. In stock-cars the spring-buffers O, substantially as described and shown, for the purposes set forth.

2. In stock-cars the sliding panels Q, constructed and arranged substantially as described and shown, for the purposes set forth.

3. In stock-cars the movable frame P, substantially as described and shown, for the purposes set forth.

4. The combination of the partitions M and the doors N N, substantially as described and shown, for the purposes set forth.

5. The combination of the compartments L, the partitions M, doors N N, and the separate feed and water boxes *e* and *d*, all constructed and arranged substantially as described and shown, for the purposes set forth.

In testimony that we claim the foregoing we have hereunto set our hands.

WILLIAM STARK.
JOSEPH G. FISHER.
SIMEON FITCH.

Witnesses:
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JOHN R. YOUNG,
MORRIS FITCH,
E. P. RAYMOND.

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