(No Model.)

W. T. BUTLER & G. H. HATHAWAY.

TRACK SANDING APPARATUS FOR STREET CARS.

No. 342,729. Patented May 25, 1886.

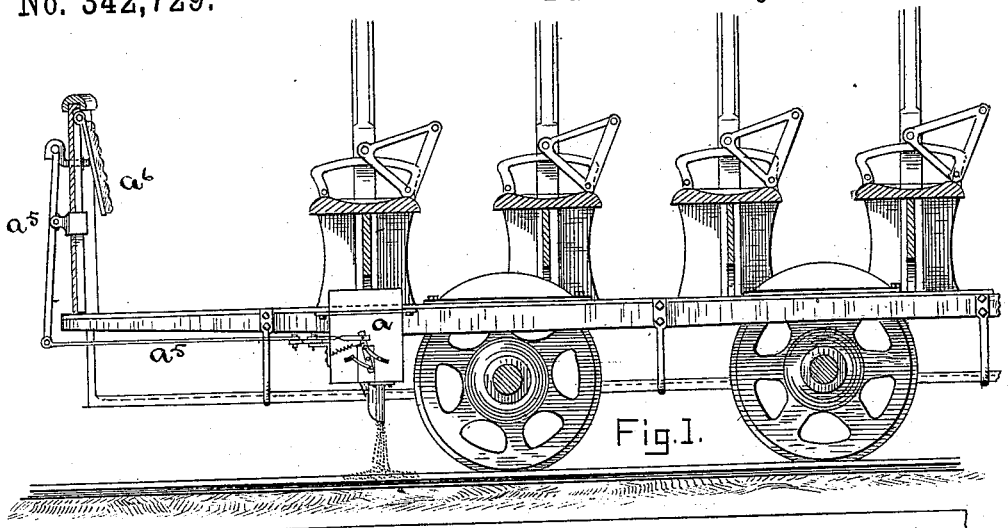

Fig. 1.

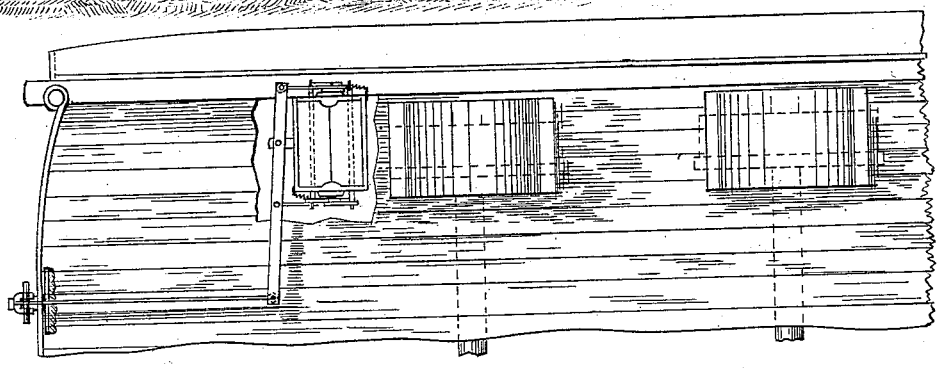

Fig. 2.

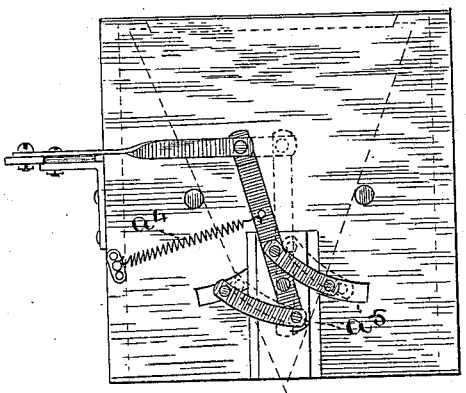

Fig. 3.

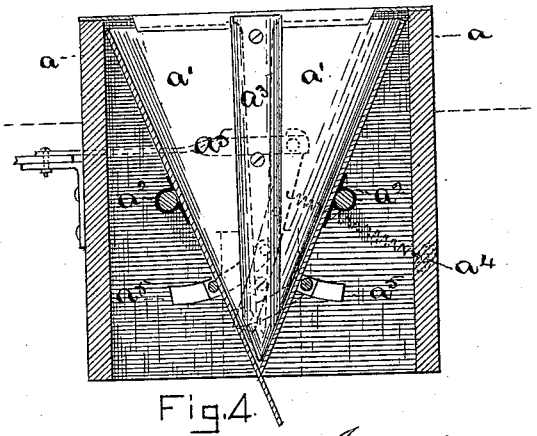

Fig. 4.

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UNITED STATES PATENT OFFICE.

WARREN T. BUTLER, OF CHELSEA, AND GEORGE H. HATHAWAY, OF BOSTON, MASSACHUSETTS, ASSIGNORS TO THE CAR TRACK FRICTION APPLIANCE COMPANY, OF PORTLAND, MAINE.

TRACK-SANDING APPARATUS FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 342,729, dated May 25, 1886.

Application filed April 3, 1886. Serial No. 197,669. (No model.)

To all whom it may concern:

Be it known that we, WARREN T. BUTLER, of Chelsea, in the county of Suffolk and Commonwealth of Massachusetts, and GEORGE H. HATHAWAY, of Boston, in said county and State, have jointly invented a new and useful Improvement in Track-Sanding Apparatus for Street-Cars, of which the following is a specification.

This invention is an improvement upon that patented to the same applicants March 2, 1886, No. 336,891, and relates to the mechanism of the hopper from which the sand is discharged and the means for discharging sand from it, the object of the invention being to make the discharge of sand from the hopper more prompt and certain than by the means described in the patent referred to; and it consists of a hopper having both sides movable from and toward each other to open and close, to discharge and retain sand.

Under the construction described in the patent referred to, in which only one side of the hopper vibrated and performed the functions of a gate, the sand in the hopper might under some circumstances be slow to move, and require several movements of the actuating-levers to start the flow, but when sand is needed on the track it is of the utmost importance that the flow should follow the first motion of the lever instantaneously.

Our improvement herein described secures an instantaneous flow of sand upon the first motion of the levers.

In the drawings annexed, Figure 1 is a side view of a portion of an open horse-car, showing the sand-box, hopper, and actuating-levers. Fig. 2 is a top plan of the same. Fig. 3 is a side elevation of the sand-box, showing the arrangement of levers to open the lower end of the hopper and close it by a spring, dotted lines showing it open for discharge. Fig. 4 is a vertical section of the sand-box, showing the hopper and the fulcrums on which the two sides of the hopper are suspended and vibrate; also, in dotted lines, the actuating levers and springs.

a marks the sand-box. This is placed in the bottom of the car forward of the wheel under a seat projecting below the floor about two-thirds of its depth, and one may be placed on each side and at both ends of a car, if desirable.

a' marks the hopper in the sand-box. This is made of sheet or cast metal in two parts, each part being hung on and supported by a fulcrum-journal on the outside of it extending across the box, the ends of which rest in suitable supporting devices on the wall of the box.

a^2 marks the two fulcrum-journals on which the two parts of the hopper, respectively, are hung by socket-bearings at each end on both sides of it. The two parts of the hopper being free to vibrate each on its own fulcrum-journal, they may be drawn away from each other at the lower end, making an opening between them, through which sand falls into a conducting-chute below.

a^3 marks a metallic shield, secured to the middle of each end of the box *a* on the inside in a vertical position, having a recess on both sides between it and the wall of the box, into which the edges of the two parts of the hopper extend a part of the depth of the recess, and in which recess the edges of the hopper move when the lower part of the hopper is opened to discharge sand. The purpose of this shield is to keep the edges of the hopper free from sand, so that the parts may vibrate without danger of being choked by sand.

a^4 marks a spring, which, acting on the system of levers by which the sides of the hopper are moved away from each other, closes the opening at the lower end of the hopper whenever the force by which they are opened is withdrawn.

a^5 marks the system of levers by which the lower end of the hopper is opened and closed.

a^6 marks a short padded lever hung loosely upon the dash-board of the street-car at a point where it can be pressed by the driver with his knee. The back of this padded lever is against the working end of the system of levers a^5, and when the driver of a car wishes to sand the track he presses the padded lever a^6, with his knee and moves the whole system of levers a^5, and opens the lower end of the hopper, both sides of which moving away from the central vertical line make it certain that the sand will be loosened and fall. When

he withdraws the pressure, the spring a^4 reverses the motion of the levers and closes the hopper so that no more sand will escape.

These sand-boxes, hoppers, and system of levers may be used at both ends of a car, and the padded lever may be loosely hung on the dashboard, and removed and carried from one end of the car to the other.

We claim as new and our invention—

In a car-track-sanding apparatus, a funnel-shaped hopper, a', made in two parts, both capable of a vibrating motion from and toward each other, suspended upon the fulcrum-journals a^2, in combination with the system of levers a^5, all substantially as described, for the purposes specified.

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