(No Model.)

W. C. FISHER.

SANDING DEVICE FOR STREET CARS.

No. 531,613. Patented Dec. 25, 1894.

Fig. 1.

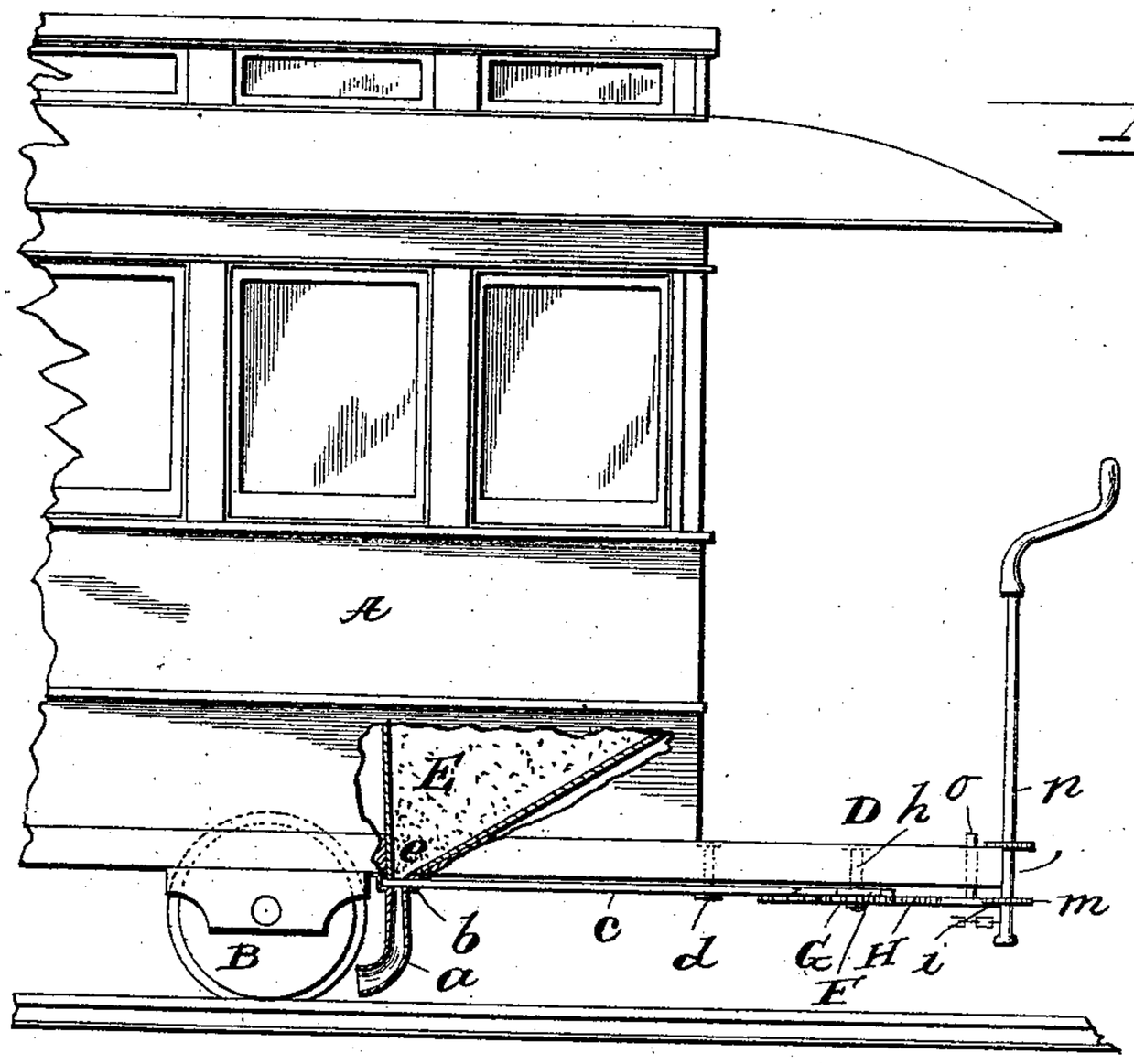
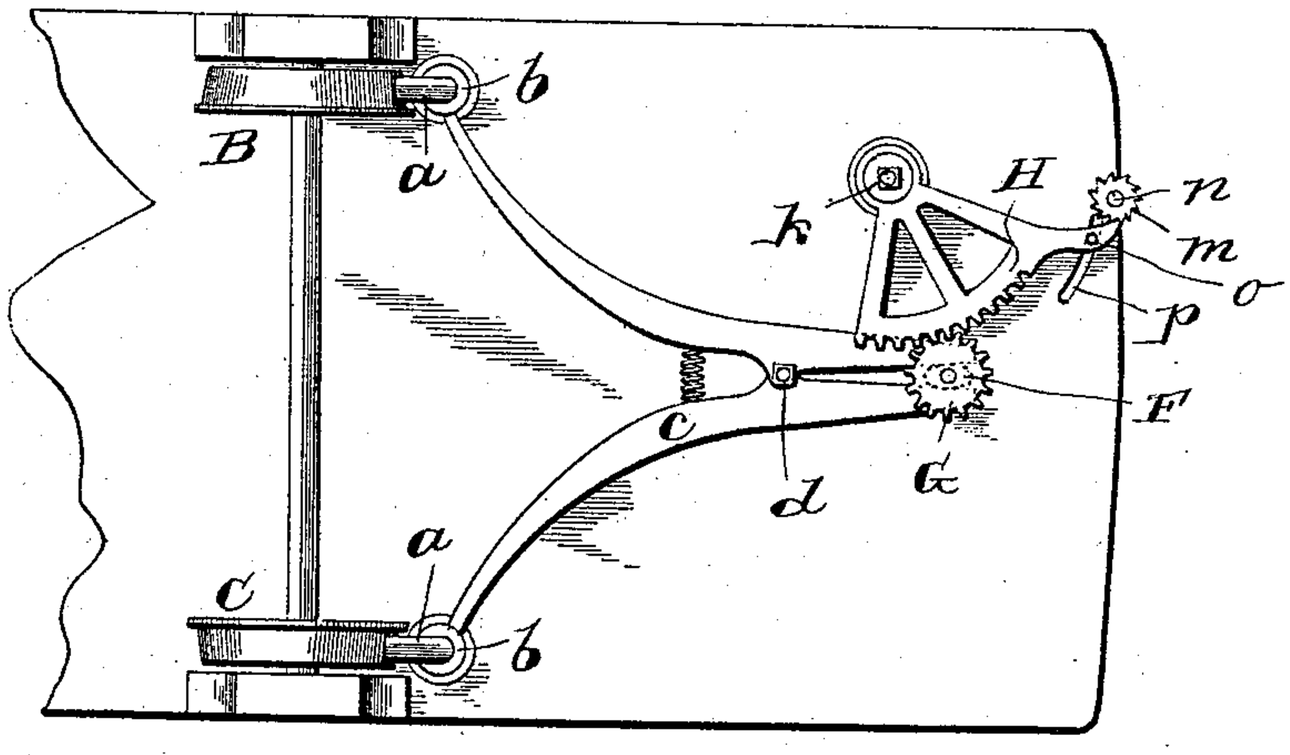


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM C. FISHER, OF MOUNT VERNON, NEW YORK.

SANDING DEVICE FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 531,613, dated December 25, 1894.

Application filed October 8, 1894. Serial No. 525,269. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. FISHER, a citizen of the United States, residing at Mount Vernon, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Sanding Devices for Street-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to devices for applying sand to the rails in front of the wheels of street cars of all kinds to prevent the wheels from slipping or sliding on the track after the wheels have been set and also to furnish a rough surface for the wheels to grasp in going up and down grades.

The object of my invention is to construct a sanding device that will be under the control of the driver or motorman at all times, so that the sanding of the rails can be accomplished whenever needed by the person most likely to know when sand is wanted.

The invention consists of constructions and combinations, all as will hereinafter be set forth in the specification and pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1, represents an elevation of a street car showing parts thereof in section; and Fig. 2, is a plan showing the under side of the car platform and my device applied thereto.

A, represents the ordinary street car having the usual axles B and wheels C, and a platform D. A sand box E having a hopper bottom and constructed of any suitable material is placed under the seat directly forward of each wheel. The bottom of the sand box preferably terminates at the under side of the platform and has an opening *e* about which is formed a downward projecting discharge spout or tube *a* which has an upper aperture of the same size as the opening in the bottom of the hopper and the bore gradually increases in size until the lower aperture is reached, thus insuring the delivery of the sand as the constantly increasing diameter of the bore of the discharge spout effectually prevents clogging. In each discharge spout or tube *a* and immediately under the car bottom is a slide valve *b* connected by valve rods *c* pivoted to the car platform D. As the valve rods run forward of their pivot *d* they slightly separate to admit of a cam F, between them. This cam is firmly secured to a pinion wheel G, pivoted at *h* to the car platform D. This cam may be operated in any desired manner to act upon the forward ends of the valve rods. The preferred form is that shown in the drawings in which the cam is combined with the pinion wheel G, and operated by a rack H, pivoted at *k* to the platform D. This rack is operated from the platform in any desired way, but preferably by means of a pin *o* which projects through an opening *p* in the bottom of the platform D. The rack H may be provided with a projection or pawl *i* whose forward movement is stopped by a ratchet wheel *m* on the brake rod *n* below the usual brake pawl and ratchet which are not removed.

The operation is as follows: The motorman pushes the pin *o* with his foot until the projection *i* on the rack H is stopped by or engages the ratchet wheel *m* on the brake rod. This movement of the rack rotates the pinion wheel *a* one quarter turn and changes the position of the cam to bring the greatest diameter of said cam at right angles to its former position which was parallel with the length of the levers. This change in the position of the cam separates the front ends of the levers and causes the rear or valve ends of the levers to withdraw the valves from the openings in the bottom of the hopper and allow the sand to escape through the spout to the track. As soon as the pin *o* is released from its engagement with the foot of the operator, the spring *c* acts upon the valve rods to close the valve and return the other parts to their normal position.

As the usual brake pawl and ratchet attached to street cars are not removed the cars can be stopped at any time without using the sanding device.

What I claim as new is—

1. In a sanding apparatus for cars, the combination of a sand box having a discharge spout; valve connected with said sand box;

a pivoted rod connected by one end with said valve and having the other end projecting toward the front of the car, a cam acting upon the front end of said rod; and means for operating said cam.

2. In a sanding apparatus for cars, the combination of a sand box having a discharge pipe or spout, a slide valve, a valve rod connected by one end to said valve, a cam having a pinion wheel, and a rack for operating said cam and valve rod.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM C. FISHER.

Witnesses:
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