

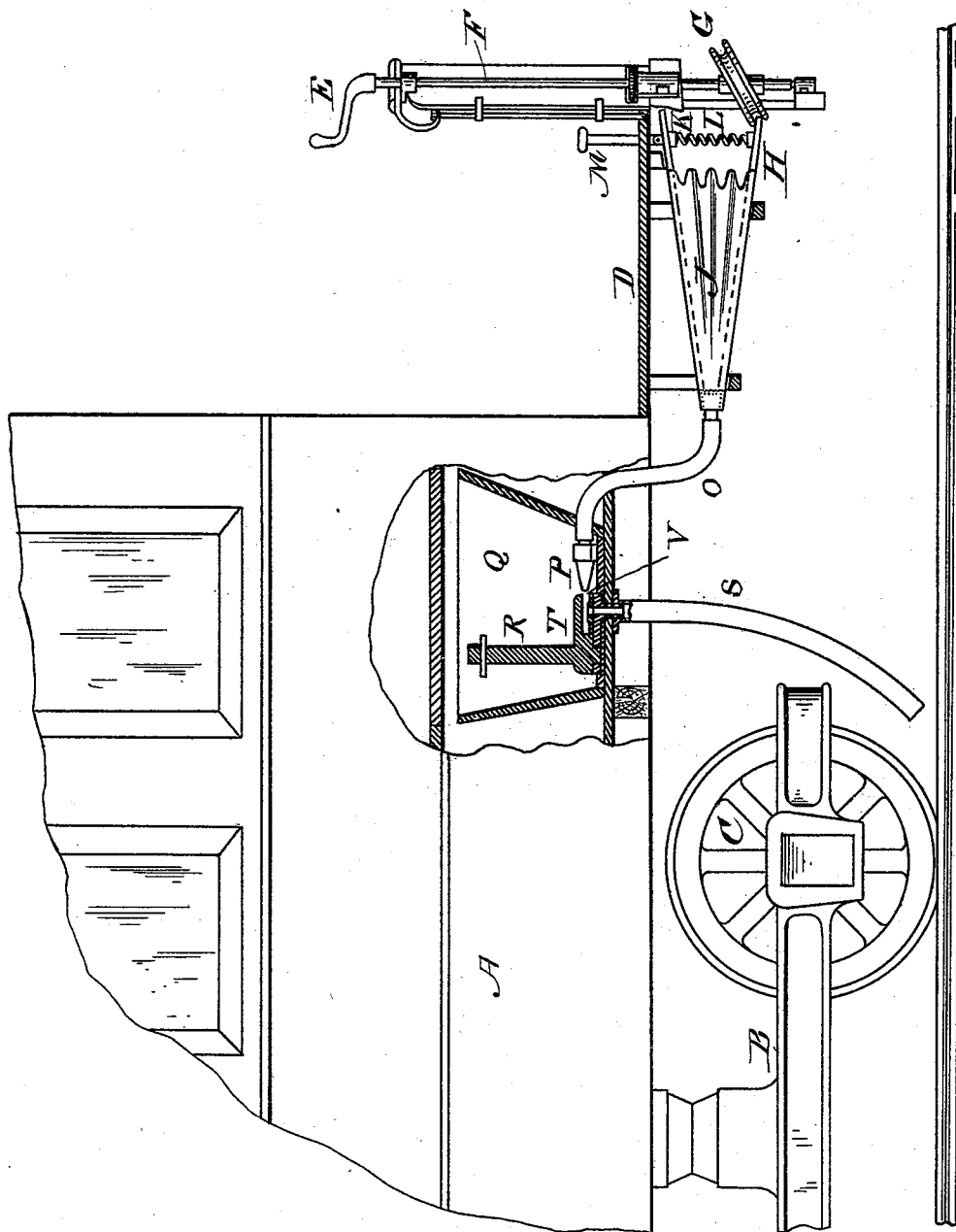
(No Model.)

C. W. SHERBURNE.

TRACK SANDING DEVICE FOR STREET CARS.

No. 494,283.

Patented Mar. 28, 1893.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES W. SHERBURNE, OF BOSTON, MASSACHUSETTS.

TRACK-SANDING DEVICE FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 494,283, dated March 28, 1893.

Application filed November 14, 1892. Serial No. 451,897. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. SHERBURNE, of Boston, in the county of Suffolk, Commonwealth of Massachusetts, have invented a new and useful Improvement in Track-Sanding Apparatus for Street-Railway Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, sufficient to enable others skilled in the art to make and use my invention.

In the drawing A represents the body of the car.

B represents the truck beneath the body of the car. C represents one of the wheels of said truck.

D represents the platform of a street railway car, A.

In the working of street railway cars, particularly since the application of power to the same, the business of sanding the track in order that the cars may be readily stopped has been of much greater importance than it ever was before. One may frequently see now on the electric cars a motor man who has abandoned the use of his brake and his switch handle and holds in one hand a dish containing sand which he throws to the right and left with the other hand upon the tracks in order that the necessary adhesion shall take place. It is to combine the sanding of the track with the braking system and also with the power system if necessary that this invention is directed.

E is the brake handle, and F the brake rod. Upon this brake rod is put an inclined wheel G, which takes hold of the lower handle H of a bellows J. Any other form of cam or motive power actuated by the brake handle E may be substituted for the inclined wheel without departing from the principle of this invention.

The bellows J is an ordinary blacksmith's bellows. It may be made of course in the form herein shown, which is the ancient form of blacksmith and hearth bellows, or it may be in the cylindrical form of bellows familiar to all who have studied the blowing of fires. This form of bellows may be actuated as well by the lower handle H, as by the upper handle K, which is depressed by the treadle M coming through the platform and returned to

its place by the spring L shown. This spring L keeps the two handles of the bellows apart, except when the upper handle K is depressed by the treadle M, or the lower handle H is lifted by the cam G. Whether the bellows is depressed by stepping on the treadle M or the lower handle is lifted by the cam G and the revolution of the brake handle E there will be a puff of air from the bellows J through the pipe O delivered by the nozzle P into the interior of the sand box. The sand box is under the seat of the car A, and of course there are two sand boxes, one on each side.

There may be two sets of bellows J with their attachments or there may be only one set of bellows, and the pipe O with its nozzle P may be duplicated or branched from the bellows J. The sand box is lettered Q. A valve and a valve stem R is provided in this sand box Q to cover the hole leading to the pipe S.

S, is the sand pipe which leads from the sand box in front of the wheels C of the motor.

I have already said there can be one of these machines on the right side and one of them on the left side of the car; and I now say that there can be one of these machines in front of the wheels C delivering its sand at that place, or two of them, one in front and one behind the wheels to be used as the discretion of the engineer shall require. The valve stem R with its attached valve is capable of rotation upon its axis, and the valve attached to the stem R will cover or uncover the orifice of the pipe S into the sand box Q. This valve is lettered T. It is attached to the valve stem R, and is rotatable with it. It is made in two tiers separated by a slot which slot is marked V. The sand in the sand box Q cannot readily escape from the sand box except the blast pipe P is worked and throws a blast into the slot of the valve slot V of the valve T, in which case the blast of air goes through the sand from the sand box Q, through the slot V into the pipe S and so in front of the wheels C.

The form of the valve in this apparatus has been already patented in Letters Patent No. 487,486 of December 6, 1892, but the blowing apparatus connected with the said valve has not hitherto been brought to the attention of the Patent Office, so far as I know.

In case the car A is required to be stopped as suddenly as possible, the brakes must be thrown on, and it would be well if the tracks were sanded at this time. In case brakes are not applied the treadle will furnish a means for actuating the bellows.

It is important that a railroad train, particularly one run by electricity shall be stopped as speedily as possible, and the sanding of the track in front of the wheels gives us that opportunity, whatever may be the motive power.

The motive power of this apparatus consists either of the handle E with the rod F working a cam wheel G, or it consists of the treadle M worked from the foot board of the platform, and the whole apparatus is a new attachment to a street railway car.

A reservoir of compressed air might be carried instead of the bellows attachment for blowing sand, but this would be a different combination of sand box with air blast.

The intermittent character of the bellows actuated blast requires a back seating check valve in the nozzle to prevent clogging the bellows.

In using a storage reservoir the air-cock would be opened from the brake handle.

The valve T may be turned by means of the cross-piece in the stem R, or, if desired, by means of the usual cog gearing beneath the sand box as illustrated in said Letters Patent No. 487,486, which cog gearing is not illustrated here, because it has long been familiar

in the art. The valve T need not be turned away from its position over the sand pipe S except when it is desired to dump the sand from the sand box.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In combination with the sand box Q, and a chambered valve T, introduced into the said sand box, and a delivery pipe S, also introduced into said sand pipe and governed by the arrangement necessary for said sand box, the air nozzle P adapted to deliver a blast of air into the cavity of the valve T, substantially as and for the purposes described.

2. The combination between the valve T, the air nozzle P, the sand box Q and independent sources of air supply J, substantially as and for the purposes described.

3. The combination of the handle E, the stem R, and the wheel G in combination with the lower handle A of the bellows J, substantially as and for the purposes described.

4. The combination of the stem R, the valve T, chambered at V, the sand box Q, the pipe O, the nozzle P, and the bellows J adapted to deliver automatically sand through the pipe S in front of the wheel, substantially as and for the purposes described.

CHARLES W. SHERBURNE.

In presence of—

F. F. RAYMOND, 2d,
J. M. DOLAN.