

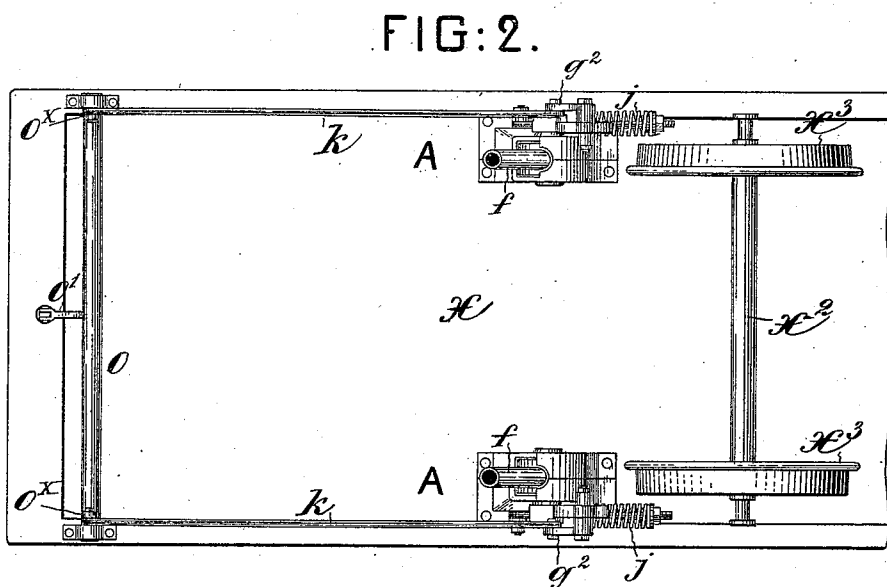
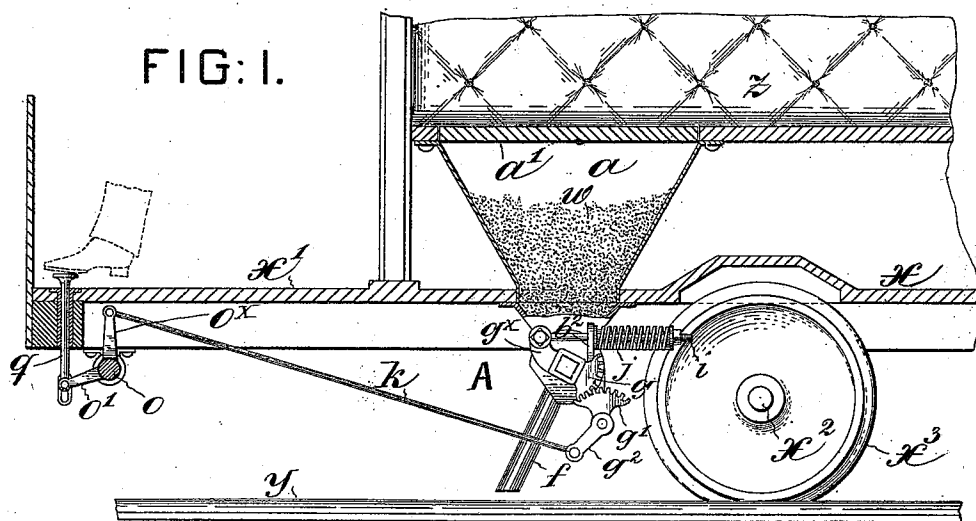
(No Model.)

2 Sheets—Sheet 1.

J. J. KENNELLY.
DEVICE FOR SANDING TRACKS.

No. 532,968.

Patented Jan. 22, 1895.



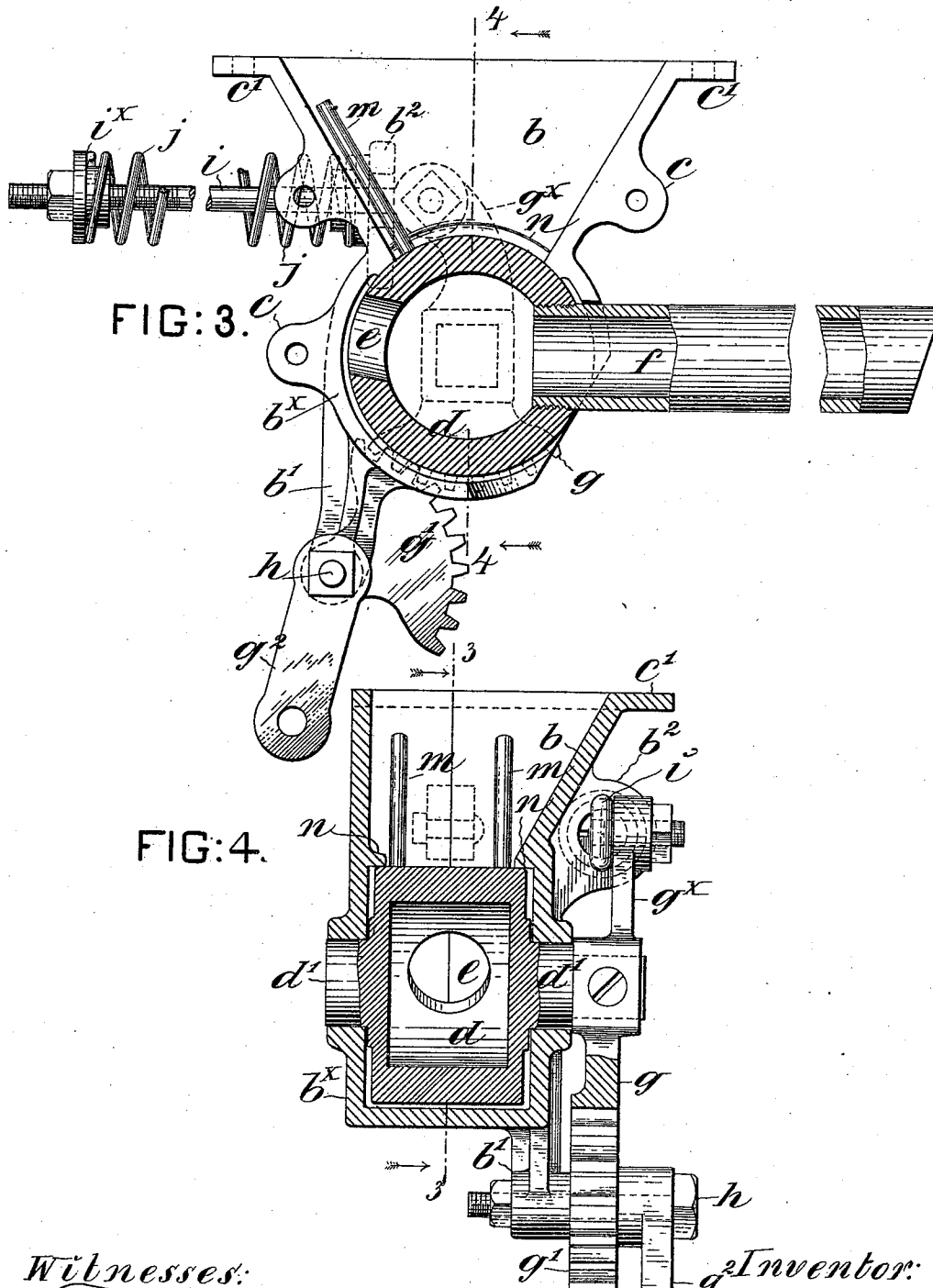
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J. W. Whiman
Peter H. Ross

Inventor:
John J. Kennelly
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his Attorney

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UNITED STATES PATENT OFFICE.

JOHN J. KENNELLY, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO JOHN B. BENTON, OF SAME PLACE.

DEVICE FOR SANDING TRACKS.

SPECIFICATION forming part of Letters Patent No. 532,968, dated January 22, 1895.

Application filed April 11, 1894. Serial No. 507,094. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. KENNELLY, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Devices for Sanding Tracks, of which the following is a specification.

My invention relates to the class of devices employed on street railway cars for applying sand to the tracks, the device being under the control of the driver; and the object is, in the main, to produce a simple, inexpensive and efficient device which will not be liable to abrasion and consequent deterioration by the sand getting into the joints of the working parts. As each car must be supplied with four of these devices, it will be obvious that economy and durability in the construction are important items.

The invention will be described with reference to the accompanying drawings, wherein—

Figure 1 is a vertical longitudinal section of a part of a car provided with a sanding device embodying my invention; and Fig. 2 is an under side view of the car. These views show the device on a comparatively small scale. Fig. 3 is a vertical section of the sanding device on a large scale, the plane of the section being designated by line 3, 3, in Fig. 4; and Fig. 4 is a vertical section of the device in the plane indicated by line 4, 4, in Fig. 3.

In Figs. 1 and 2, x represents the floor of a car, x' is the platform at one end of the car, x^2 is one of the axles, x^3 are the wheels and y is the rail. These are, or may be, of the usual kind. Under the seat, z , of the car, is arranged a hopper-like box, a , to contain sand, w . This box has a removable cover, a' , and its lower, contracted end projects down through a delivery aperture in the bottom of the car.

In Figs. 1 and 2, A represents the sanding device as a whole, the construction of which will be best understood from an inspection of Figs. 3 and 4.

The shell of the device is made in two sections which are provided with apertured lugs, c , to receive bolts for securing the sections firmly together. At the upper part of the

shell is formed the sand-receiving hopper, b , provided with lugs, c' , for securing the shell to the under side of the car-bottom at the delivery aperture for the sand. At the lower part of the shell is formed a housing, b^x , for the oscillating or rocking valve, d . This valve is in the form of a short cylinder with journals, d' , d' , which find bearings in the sides of the housing. The valve has an inlet port, e , at one side, for the sand, and an outlet port on the opposite side in which is screwed a delivery pipe or tube, f , long enough to extend down to a point near the track-rail y .

Fixed on the squared extremity of one of the journals, d' , of the valve, is a cog-segment, g , which gears with a similar segment, g' , mounted to rock on a stud or bolt, h , in a bracket, b' , on the housing, b^x . On the boss of the segment g , is an arm, g^x , which is loosely coupled to a spring-rod, i , about which is a coil spring, j , which abuts at one end against an adjustable collar, i^x , on the spring-rod and at the other end against an apertured bracket, b^2 , on the shell, through which the spring-rod plays. On the segment g' , is an arm, g^2 , which is coupled to an operating rod, k (Figs. 1 and 2), whereby the valve is oscillated or rocked by the driver, gripman, or motorman of the car.

Normally the spring j , holds the valve in the position seen in Figs. 3 and 4; that is, with the inlet port e , out of register with the hopper b , so that no sand can enter or pass through the valve. When in this position the delivery tube f , occupies a nearly horizontal position, as seen in Fig. 3; but when the valve is rocked by drawing on the rod k , the tube f , will be turned down to the position seen in Fig. 1, so as to deliver the sand onto the crown of the rail y , and the inlet port e , will be brought to a position to receive sand from the hopper. When the parts are in the position seen in Fig. 1 the spring j , will be compressed and under tension, and when the pull on the rod k , is relaxed, the spring will again return the parts to the position seen in Fig. 3.

The valve d , is represented as hollow, but this is only to reduce the weight. It might be solid and the inlet port e , would in that

case extend through it diametrically to the outlet where the delivery tube f , is screwed in. The housing b^x , is cut away or slotted at one side to permit of the play of the delivery tube. In order to agitate the sand and prevent it from packing in the hopper b , pins, m , may be set in the valve d , in such a position as to play to and fro in the hopper when the valve oscillates.

For the sake of economy in fitting up the castings and also to lessen as much as possible the number and extent of the wearing surfaces exposed to the abrading action of the sand, the valve is made to fit loosely in the housing except about the outlet of the hopper b , where a chipping piece or ledge, n , is provided, this piece being dressed to fit snugly to the convex surface of the valve and prevent the sand from escaping from the hopper b , into the housing about the valve.

Any suitable means for enabling the driver, gripman or motorman to operate the two standing devices at one end of the car through the medium of the rods k , may be employed. As shown in Figs. 1 and 2, there is a rock-shaft, o , arranged under the car-platform and extending transversely thereof. This shaft has two arms, o^x , o^x , to which the respective rods k , are coupled, and another arm, o' , at about a right-angle to the arms o^x , to which is coupled a pin, q , which projects up through the platform and has on its upper end a head to receive the foot of the operator. By pressing down the push-pin q , both of the standing devices are operated.

The sand-delivery pipe or tube in this class of devices often becomes choked with mud, dirt, ice, &c., owing to its end being down close to the track, and to avoid this difficulty I so mount this tube that it is elevated, as described, except at the moment it is in use. The delivery tube may be of any suitable material.

I have shown two sanding devices at the same end of the car, but this is not essential. In some cases only one at each end of the car will be employed. This is a matter which will be within the judgment of the company controlling the cars.

Having thus described my invention, I claim—

1. In a sanding device for cars, the combi-

nation with the shell, comprising the hopper b , and housing b^x , of the ported, oscillating valve d , mounted in bearings in the housing and provided with a delivery tube f , fitted to the outlet port of the valve, and attached to the latter a spring which holds the valve in its normal, inoperative position, and mechanism for rotating the valve into its operative position, substantially as set forth.

2. In a sanding device for cars, the combination with a shell, having a hopper b , provided with a chipping piece or ledge n , and a housing b^x , below the hopper, of the ported valve d , mounted rotatively in said housing and fitting closely only to the ledge n , and means for oscillating or rocking said valve, substantially as set forth.

3. In a sanding device for cars, the combination with the shell made in two sections and comprising a hopper b , and housing b^x for the valve, of the ported valve d , rotatively mounted in the said housing, the tube f , secured to the valve at the outlet port, the pins m , in the upper face of the valve, and mechanism for oscillating or rocking the valve, substantially as set forth.

4. In a sanding device for cars, the combination with the shell, comprising the hopper b and housing b^x , of the ported valve d , rotatively mounted in said housing, the segment g , on the journal of the valve, the segment g' , mounted on the shell and gearing with the segment g , the spring-rod connected with the arm of the segment g , the spring j on said rod, and the operating rod k , coupled to the arm on the segment g' , substantially as set forth.

5. A sanding device for cars comprising a hopper for the sand, an oscillating or rocking valve arranged under said hopper and having opposite inlet and outlet ports, means for rocking said valve, and a delivery tube fixed to and moving with said valve, whereby the said tube is held up out of the way when not delivering sand, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN J. KENNELLY.

Witnesses:

HENRY CONNETT,
JAS. KING DUFFY.