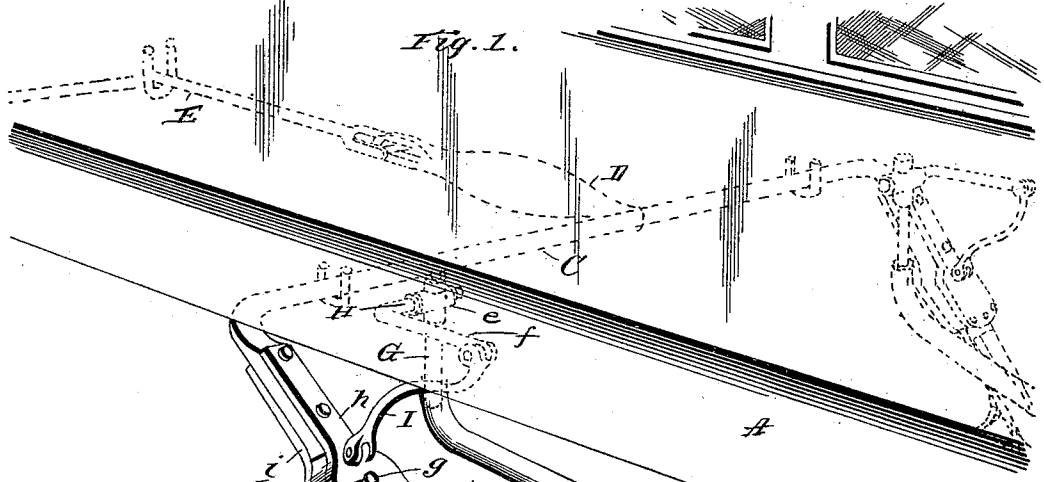
(No Model.)

T. J. KING.

TRACK CLEARER AND LUBRICATOR.

No. 449,856. Patented Apr. 7, 1891.

Fig. 1.



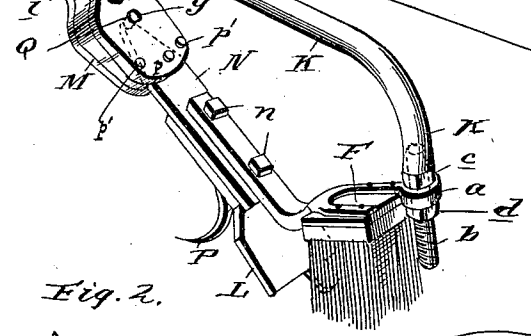


Fig. 2.

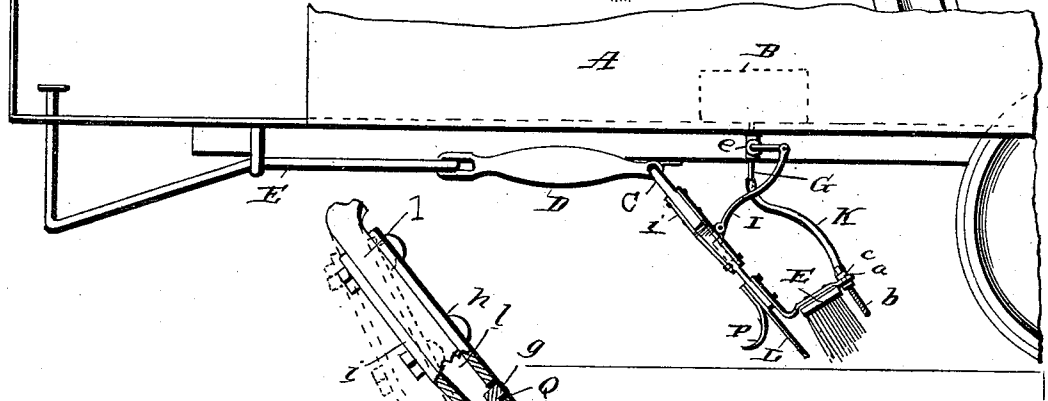
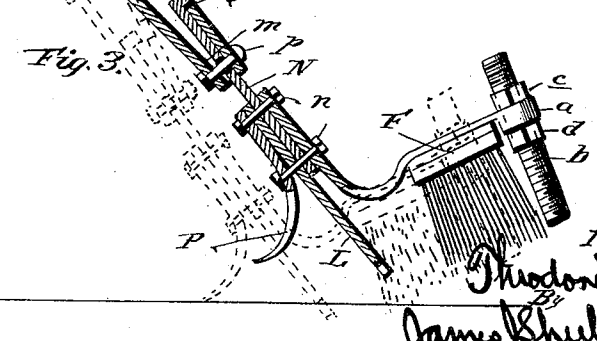


Fig. 3.



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UNITED STATES PATENT OFFICE.

THEODORE J. KING, OF WASHINGTON, DISTRICT OF COLUMBIA.

TRACK CLEARER AND LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 449,856, dated April 7, 1891.

Application filed July 19, 1890. Serial No. 359,271. (No model.)

To all whom it may concern:

Be it known that I, THEODORE J. KING, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Track Clearers and Lubricators; and I do 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.

This invention has relation to improvements in track clearing and lubricating devices, and while it is more particularly adapted for use on street-cars to serve in cleaning and lubricating grooved rails, yet it may be used for cleaning and lubricating side and center bearing rails.

In my application filed February 25, 1890, Serial No. 341,729, I have shown and described the angular lever or rock-shaft, the weighted or gravitating arm, and the angular lever connected therewith, the same being here shown for the purpose of illustrating my improvements.

The invention and its advantages will be fully understood from the following description and claims, when taken in connection with the annexed drawings, in which—

Figure 1 is a perspective view of a portion of a car, showing also in perspective my improvements attached thereto. Fig. 2 is a side elevation of the same, showing the clearing devices depressed to engage the track; and Fig. 3 is a sectional detail view of my improvements removed from the car.

Referring by letter to said drawings, A indicates a portion of a car-body, and B indicates a receptacle designed to contain the lubricating agent, although in some cases it may contain sand or the like.

C indicates the angular lever or rock-shaft, D the weighted or gravitating arm fixed to said shaft, and E the angular pedal-lever connected with the weighted arm, all of which are of a construction substantially the same as that shown in my application for Letters Patent above referred to.

F indicates a brush-head carrying bristles or like devices for clearing the track. Extending from one end of this head is a guide-eye *a*, which is designed to receive a short metallic tube *b*, which is externally threaded and adjustably secured with respect to said head and eye by means of nuts *c* and *d*, arranged, respectively, above and below the eye and taking into the threads of the tube. By this means it will be seen that the tube may be adjusted with respect to the bristles of the brush, so that it may approach or recede from the track to any suitable point desired.

G indicates a tube, which may be metal or other rigid material. This tube depends from the floor of the receptacle B, which is preferably provided with a hopper-shaped bottom and carries a valve-seat *e*, within which is arranged a valve-key or plug H, having an angular branch *f*, which is connected with the angular or depending branches of the lever C by means of a suitably-shaped connection I, so that as said lever has been rocked in its bearing it may open and close the valve or key and thereby stop and start the flow of lubricant from the receptacle to the track. The tubes *b* and G are connected by means of a flexible tubing K, as shown.

L indicates a scraper, which has its lower end shaped to conform to the bearing-surface of the rail and, in grooved rails this scraper has a tongue, as better shown in Fig. 1, to enter the groove in the rail. This scraper is pivoted in a boxing of a peculiar construction, as will be presently referred to, and the arm carrying the same has its upper end provided with a lug or stud *g*, adapted to enter a hole or recess in the boxing, when the clearing devices are raised from the track or thrown out of an operative position.

M indicates the boxing, which is preferably composed of an upper and a lower plate *h* and *i*, having inclosed sides and their upper ends bolted or otherwise secured to the angular branches of the shaft C. This boxing, as will be better seen from Fig. 3, is of a greater depth at its upper end, as at *l*, than at its lower end, as at *m*; or, in other words, the internal area of the boxing increases from its mouth upwardly, the object of which will be presently explained.

The scraper-arm N is pivoted near its upper end adjacent to the mouth of the boxing by means of a bolt *p*, so that said arm may have a lateral movement within the boxing and to some extent a universal movement. This arm N also carries a clearing or advanc-

ing point P and has secured to it the brush-head, as shown, so that the advancing point, the scraper, the brush, and the discharge end of the lubricating-tube will be governed in their movements according to the movements of said arm. The boxing is also provided with transverse studs or bolts p', which assist in securing the plates together and may to some extent serve as lateral stops for the arm N. The boxing has a hole Q in its upper side and centrally therein, so as to receive the lug or stud g on the upper end of the arm N.

From the construction illustrated it will be seen that the boxing will permit an upward or lifting motion of the broom and scraper and also a lateral movement thereof, and that when the scraping devices have been raised out of use they will be prevented from lateral or sidewise motion by means of the shape of the boxing, the hole therein, and the lug or stop on the upper end of the arm carrying said devices.

While I have described the parts in the exact construction here shown, yet I do not wish to be confined to the precise construction and exact arrangement of the devices illustrated. So far as I am aware, I am the first to ever provide a track clearing or lubricating device that upon coming in contact with the rail will be given a freedom of motion laterally and upon being thrown out of engagement with the rail will be prevented from lateral motion.

In operation it will be seen that when the driver or attendant of a car depresses the vertical branch of the angular lever E the outer end of the weighted arm D will be lifted and the angular lever or shaft C will be rocked in its bearings, so as to bring down the angular branches thereof, and consequently the scraper and brush, in contact with the track. As thus brought down, the arm N, by reason of its being pivoted, as shown, will cause its stud or lug g to withdraw from the hole or recess in the boxing, and thereby allow the clearing devices a free lateral motion. This movement will simultaneously cause the key or valve in the pipe G to open through the medium of the connection I, and thereby allow the lubricant to flow through the tube K and deposit upon the track. As the driver removes pressure from said vertical branch the weighted arm will rock the shaft C in an opposite direction, so as to lift the depending branches of said shaft, and consequently the brush, scraper, and lubricating device, which will momentarily cause the stud or lug on the upper end of the arm N, by reason of gravity, to enter the eye or hole in the boxing and thereby hold the abrading parts from lateral motion.

Having described my invention, what I claim is—

1. In a track-clearing device, the combination, with a pivoted brush-holder, of a boxing to sustain the same, said boxing being adapted to allow a lateral movement of the holder, and provided with a recess to serve in fixing the position of the holder.

2. A laterally-movable arm adapted to carry a track-clearing device and provided at its upper end with a stop, in combination with a sustaining-boxing pivotally receiving said arm and provided with means for receiving the stop, substantially as specified.

3. The combination, with a boxing increasing in internal area from its mouth, of an arm for the attachment of track-clearing devices, said arm being pivoted in the boxing and provided at one end with a stop adapted to engage one of the walls of the boxing at a predetermined point, so as to stay the lateral movement thereof.

4. In a track-clearing device, the combination, with the angular lever or rock-shaft, of the boxing secured to the angular branches thereof and having an aperture in one of the walls, the arm provided with a stop to engage said aperture and pivoted in the boxing, and track-clearing devices secured to the lower end of the arm, substantially as specified.

5. In a track-clearing device, substantially as described, the combination, with the brush having the guide-eye, of the externally-threaded tube arranged in said eye, the nuts for adjustably securing the tube to the eye, and a flexible tube leading from a lubricant-receptacle, substantially as specified.

6. In a track-clearing device, the combination, with the angular lever or rock-shaft, of the lubricant-receptacle, the conveyer leading therefrom, the valve-key, and the arm connecting the depending branches of the rock-shaft with the key, substantially as specified.

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

THEODORE J. KING.

Witnesses:
C. H. RAEDER,
T. E. TURPIN.