

No. 724,479.

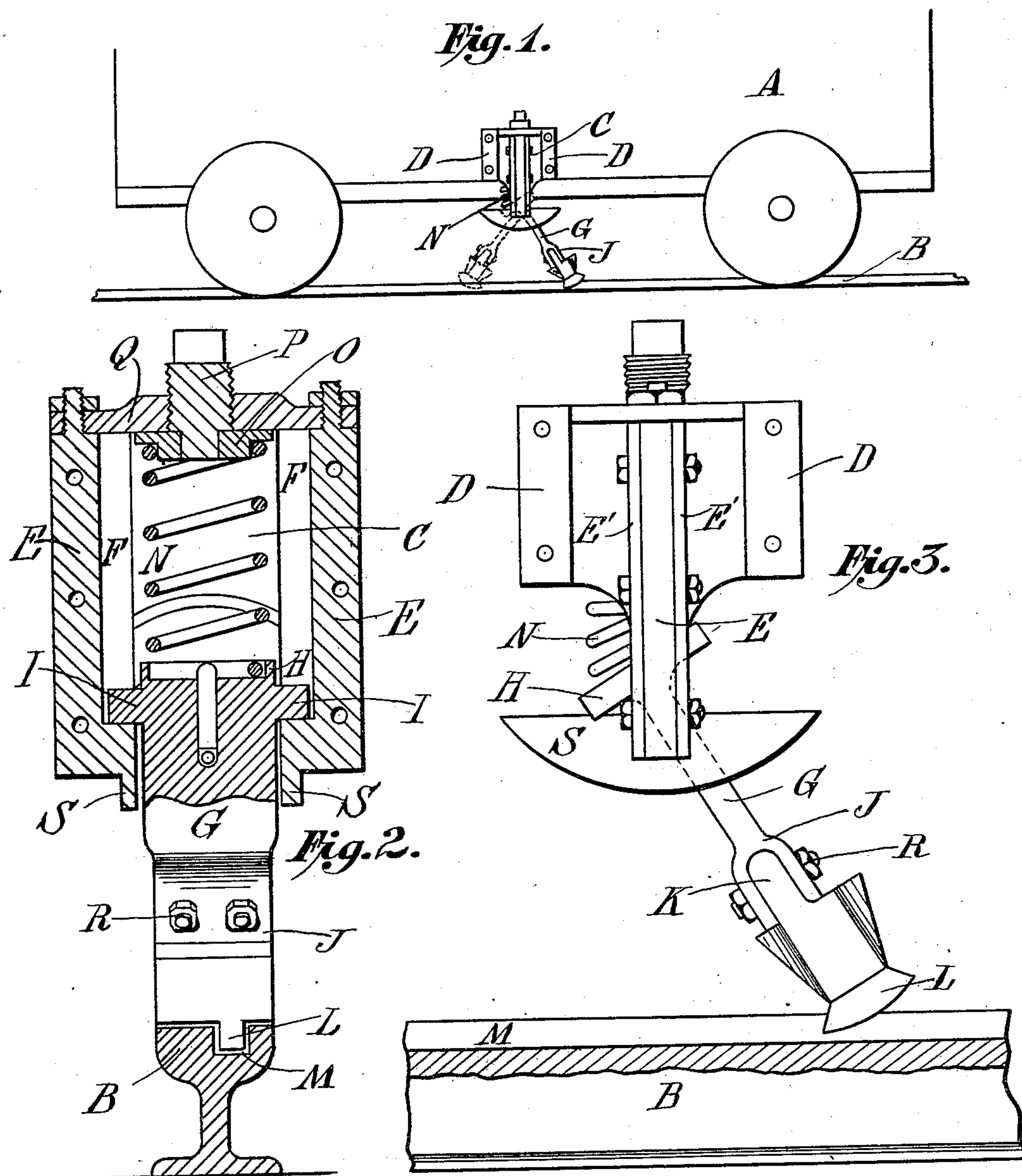
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C. H. JERRARD.

APPARATUS FOR CLEANSING TRAM RAILS OR THE LIKE.

APPLICATION FILED MAR. 4, 1902.

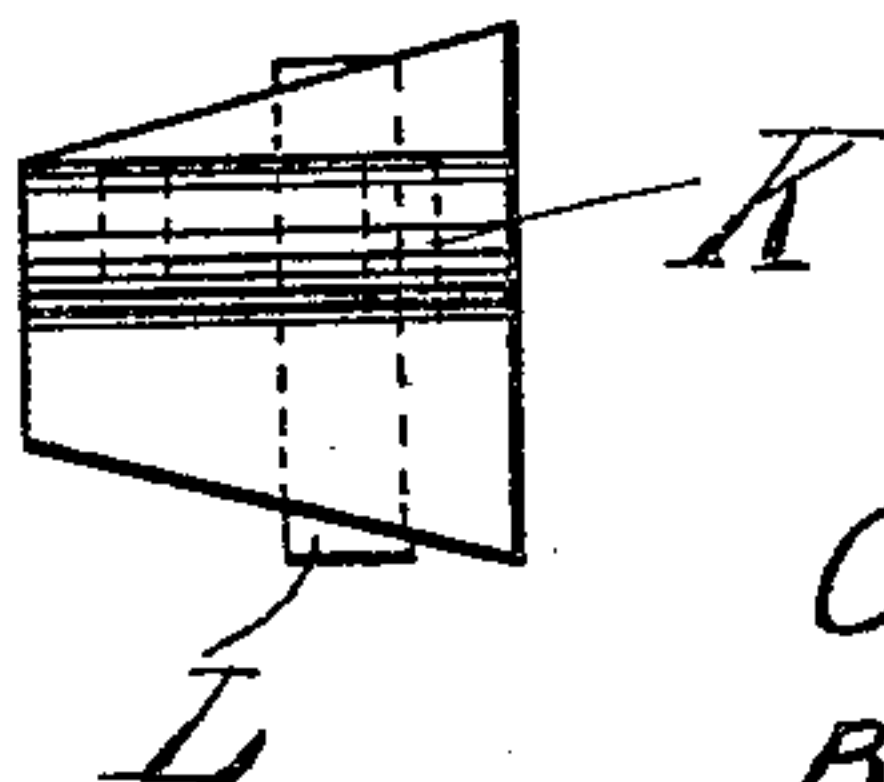
NO MODEL.



WITNESSES:

Comitchee,  
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Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## APPARATUS FOR CLEANSING TRAM-RAILS OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 724,479, dated April 7, 1903.

Application filed March 4, 1902. Serial No. 96,676. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES HENRY JERRARD, wine and spirit merchant, a subject of the King of Great Britain and Ireland, and a resident of 23 High street, East Ham, Essex, England, have invented certain new and useful Improvements in Apparatus for Cleansing Tram-Rails or the Like, of which the following is a specification.

10 This invention relates to improvements in apparatus for cleansing tram-rails or rails used for a similar purpose, the object of the invention being to provide an apparatus that can be easily attached to or detached from the body of the tram or similar vehicle and that when attached shall effectively and automatically cleanse the said rails from any dirt or foreign matter accumulating on their surface.

20 I provide a metal frame consisting of two guides, at the upper part of which is also provided a hollow cylinder. This frame and cylinder are attached to the body of the tram-car by means of an angle-bracket or in any convenient manner. Inside the said hollow cylinder is placed a strong helical spring, controlled at the upper part by a screwed metal plug, which can be regulated at the top of the cylinder to increase or adjust the pressure to be exerted by the said helical spring upon the tongue or scraper herein described. This said tongue or scraper consists of an upper metal plate of any convenient size and shape, provided at its upper end with a circular disk, with a recessed upper surface to receive the bottom of the helical spring. Lugs are provided also at the top of the said metal plate, which are free to slide up and down grooves in the aforesaid guides of the metal frame.

40 The lower end of the metal plate is made jaw-shaped for receiving the hardened-steel tongue or scraper, which is fitted into the groove of the jaw and is bolted to it. This said tongue or scraper has a flat under surface, which when in use bears on the surface of the tram-rail and effectually clears away dirt and refuse. This said tongue or scraper is further provided with a special-shaped projection made convex on its under surface, which fits into the groove of the tram-rail. Flange-plates are provided at the bottom of

the frame to keep the metal plate and tongue from getting out of place. When the apparatus is in use, the steel tongue with its convex-shaped projection bears on the tram-rail 55 by the action of the helical spring, which bears against the disk on the upper part of the metal plate, and so forces the tram-rail cleaner down on the surface of the rail, the spring, however, accommodating itself to any resistance or jolting occasioned by an obstruction on the tram-rail and relieves the apparatus of any undue strain. When the apparatus is traveling with the car or the like, the tongue will present a slight angle to the line of motion, and when the motion of the car is reversed the tongue will reverse itself automatically and present the same angle in whatever direction the car is traveling. In like manner the apparatus will accommodate itself 70 to any inequalities of motion due to curves or other causes.

In the accompanying drawings, illustrating the apparatus, Figure 1 represents the apparatus affixed to a car or such like vehicle. 75 Fig. 2 is a cross-sectional elevation of the said apparatus; Fig. 3, a front elevation of the same, and Fig. 4 a plan of the tongue or scraper.

In the several views, A is the car or other 80 vehicle to which the apparatus is attached.

B is the tram-car rail.

C is the metal frame, having the bracket-flanges D D for attaching to the car-frame, or the frame can be attached in any other convenient manner. The metal frame C can be 85 made in halves and bolted to the flanges E E by means of plates E' E', thus forming the grooves F F.

The metal tongue or scraper G is in two 90 parts and is provided at its upper end with a circular disk and ring H and with guide-pins I I, which slide up and down the grooves F F and keep the tongue G in position. The upper part of this said tongue or scraper has at its lower end a jaw-piece J to receive the upper part K of the lower portion of the tongue or scraper, this said portion terminating in the convex tongue L, which is made of hardened steel or other metal and which fits into 100 the tram-rail groove M.

N is the helical spring, which bears upon



the disk H and presses the tongue or scraper L hard down upon the surface of the tram-rail B.

O is a circular disk for adjusting the pressure to be exerted by the helical spring N, which is effected by the set-screw P in the cover-plate Q of the frame C.

The lower portion of the tongue or scraper is fixed to the upper portion by means of bolts R R, so that this said lower portion can be easily removed and replaced as required by the wear and tear of the scraper-tongue L.

S S are flange-plates to keep the tongue G from getting out of place sidewise.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An apparatus for automatically cleansing the surfaces of tram-rails and the like, consisting of a metal frame fixed to the body of the tram, or other vehicle; a metal tongue or scraper in two parts, the upper part adapted to slide in grooves in the said frame, and lower part having the tongue or scraper proper adapted to fit into the groove or on the surface of the tram-rail; a helical spring bearing upon said tongue or scraper, said spring being adjusted by a disk, and set-screw; all substantially as and for the purpose herein set forth and described and illustrated by the accompanying drawings.

2. An apparatus for cleansing tram-rails and the like, comprising a frame adapted to be carried by a car having a central chamber and vertical guides therein, a scraper, trunnions thereon moving in said guides whereby said scraper is adapted to move vertically and to oscillate longitudinally of the frame to reverse its position with the reversal of the

movement of the car, a spring seated in said chamber and acting on said scraper whereby said scraper is held yieldingly in contact with a rail and means whereby the tension of said spring may be regulated.

3. An apparatus for cleansing tram-rails and the like comprising a frame adapted to be carried by a car having a central chamber, vertical guides therein and longitudinal guide-plates, a scraper, trunnions thereon adapted to move in said vertical guides whereby said scraper is adapted to move vertically and to oscillate longitudinally between said guide-plates, a spring seated in said chamber and acting on said scraper whereby said scraper is held yieldingly in contact with a rail and means whereby the tension of said spring may be regulated.

4. An apparatus for cleansing tram-rails and the like comprising a frame adapted to be carried by a car, having a central chamber and vertical guides therein, a scraper provided with trunnions moving in said guides whereby it is adapted to move vertically and to oscillate longitudinally of the frame to reverse its position with the reversal of the movement of the car, a spring-seat formed in the top of said scraper and a spring in said seat and acting against the opposite end of said chamber whereby said scraper is held yieldingly in contact with a rail and is permitted to move vertically and oscillate.

In witness whereof I have hereunto set my hand in presence of two witnesses.

CHARLES HENRY JERRARD.

Witnesses:

ARTHUR CARRICK,  
WALTER ALBERT GREEN.