G. & S. ISAACS.

Rail-Cleaner for Cars.

No. 196,150. Patented Oct. 16, 1877.

Fig: 1.

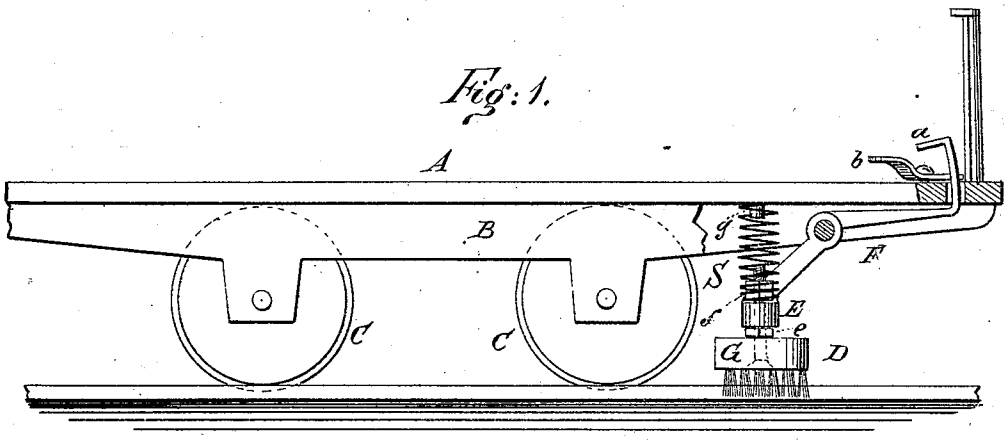


Fig: 2.

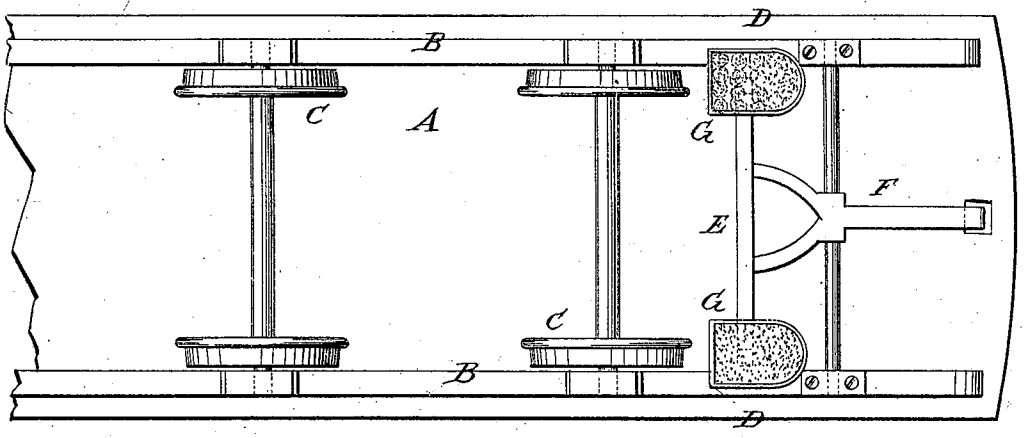


Fig: 3.

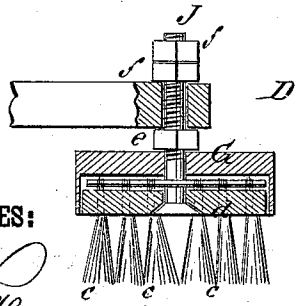
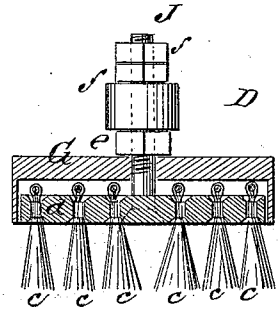


Fig: 4.



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GEORGE ISAACS AND SAMUEL ISAACS, OF NEW YORK, N. Y.,

IMPROVEMENT IN RAIL-CLEANERS FOR CARS.

Specification forming part of Letters Patent No. **196,150**, dated October 16, 1877; application filed August 11, 1877.

To all whom it may concern:

Be it known that we, GEORGE ISAACS and SAMUEL ISAACS, of New York city, in the county and State of New York, have invented a new and Improved Rail-Cleaner for Cars, of which the following is a specification:

This invention relates to means for cleaning the rails of street-cars and steam-cars; and the nature of our invention consists, first, in attaching the brush-clearers to a foot-lever which has its fulcrum beneath the car-bed, and which is acted on by helical springs, and provided with a turn-button, arranged so that when the brushes are raised they can be held in this position, as will be hereinafter explained; second, in constructing each brush-head of two metallic or wooden sections, to one section of which the bristles are secured, in combination with a flange which is formed on the upper section, and with a bolt which has a prismatic head that will prevent the brush-head from turning out of true, as will be hereinafter explained; third, in countersinking the lower ends of the holes into which the tufts of the brushes are fixed, for the purpose of preventing the bristles from being cut or broken, as will be hereinafter explained.

In the annexed drawings, Figure 1 is a side elevation of a part of a car-bed having our improvement applied to it. Fig. 2 is a bottom view of Fig. 1. Figs. 3 and 4 are sectional views of one of the brushes.

Similar letters of reference indicate corresponding parts.

The letter A designates the bed of a street-car, and B the sills thereof. C are the wheels, which are mounted on rails of ordinary or well-known construction. D D designate brushes, which are designed for cleaning the rails, and which are secured, as will be hereinafter explained, to a horizontal transverse bar, E, which is rigidly secured to the bifurcated end of a lever, F. This lever F has its fulcrum on a rod which has its bearings in the sills B, and the front turned up-end passes through the car-bed, and has a step, *a*, formed on it. The step *a* is alongside of the driver standing on the platform of the car; and in close relation to this step is a turn-button, *b*, which can be moved over the step *a* when the driver depresses the lever F and raises the brushes free from the rails. The driver can depress the front end of lever F and move the turn-button over it with one foot.

When the turn-button *b* is moved from the step *a*, two helical springs, S, applied above each brush-head will instantly throw the brushes down upon the rails. The tufts *c* of the brushes are secured to a metal plate, *d*, in the usual manner of securing tufts to brush-backs, with this exception: the holes which receive the tufts are countersunk, or made flaring at their lower ends, for the purpose of preventing the bristles from being cut by contact with sharp edges. The brush-back *d* is fitted into a case, G, composed of a plate and a surrounding flange.

The plate *d* is held inside of the metallic case G by means of a bolt, J, the head of which is square and countersunk into said plate. This bolt J passes loosely through the top of case G, and is drawn tight by means of a nut, *e*. The bolt J also passes loosely through the transverse bar E, and receives two long nuts, *f f*, on it, which securely holds the brush to this bar. The nuts *f* receive around them the springs S, and, with the aid of pins *g* or the equivalent thereof, keep the springs in their places.

In practice we shall leave the ends of the brush-tufts of an even length, as they will in a very short time wear so as to fit the rails. We shall also form the tufts of wire, although any other suitable substance may be used.

At crossings and short curves it is necessary to raise the brushes free from the track; hence the adoption of the lever F, as above described.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The lever F, arranged as shown, in combination with the turn-button *b*, track-cleaning brushes D D, and springs S, substantially as and for the purposes described.

2. Brushes D D, having metal backs and cases therefor, in combination with the square-headed bolts J, lever F, and springs S, as shown and described.

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