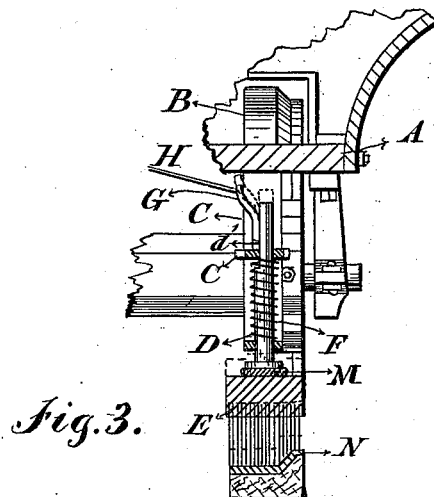
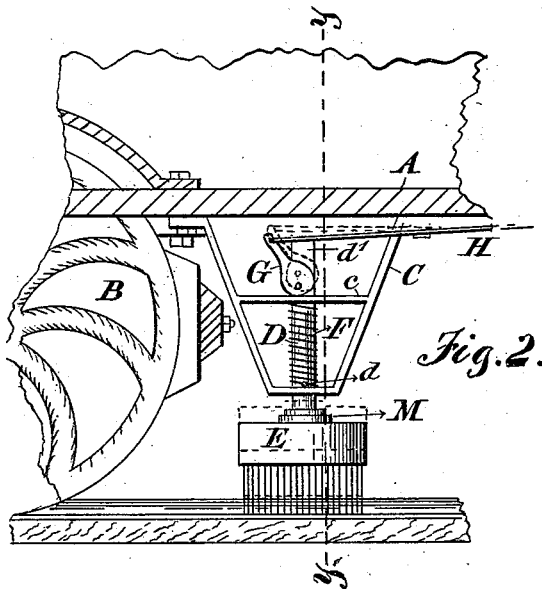
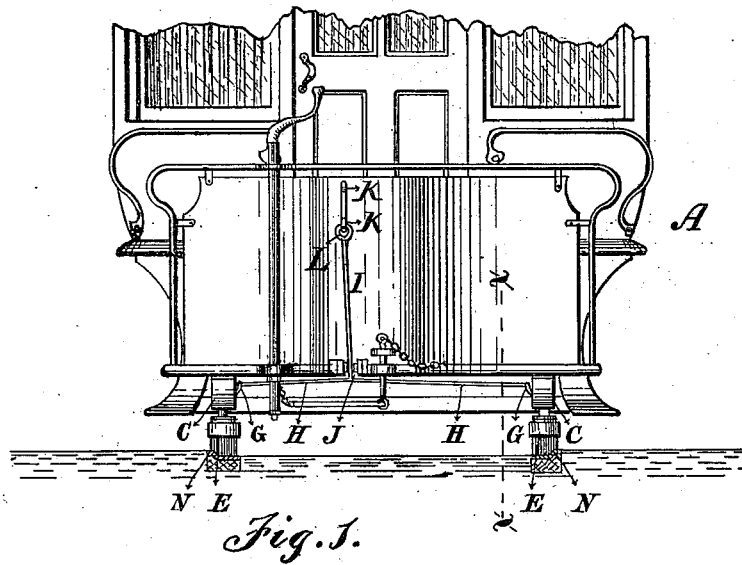


M. C. ISAACS.
RAILWAY-TRACK CLEARERS.

No. 195.217.

Patented Sept. 18, 1877.



Attest:

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UNITED STATES PATENT OFFICE.

MARCUS C. ISAACS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN RAILWAY-TRACK CLEARERS.

Specification forming part of Letters Patent No. 195,217, dated September 18, 1877; application filed July 11, 1877.

To all whom it may concern:

Be it known that I, MARCUS C. ISAACS, of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Railway-Track Brooms, which is fully described in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents an end elevation of a street-car with my improvement attached; Fig. 2, a sectional view, showing the broom and part of the car, taken on the line *xx*, Fig. 1; and Fig. 3, a transverse section of the same, taken on the line *yy*, Fig. 2.

The object of my invention is to apply the brooms, especially wire-brooms, which have heretofore been used on locomotives, to street-cars.

The difficulty heretofore experienced in the application of track-cleaning brooms to street-cars is due to the fact that the track is always more or less uneven, and the motion of the car more or less unsteady, and therefore the broom, rigidly attached to the car, will soon be destroyed, or rendered practically worthless.

I attach the brooms to the cars by a yielding device, so that while they are held firmly to the track they will also yield to conform to the irregularities therein.

The invention consists in the combination of the brooms, attached to the car by a yielding or spring connection, and a device whereby they may be raised bodily from the track whenever desired; and it further consists in the special devices and combinations of devices whereby these results are obtained, all as will be hereinafter more fully set forth.

In the drawings, A represents the bottom frame-work of an ordinary street-car, and B the wheels on which it is mounted. Just in front of the wheels, at each end of the car, and on each side thereof, a pendent bracket, C, is attached to the frame-work A. This bracket is provided with a cross-plate or brace, *c*, which is perforated, as well as the bottom plate, at the lower end of the bracket, and through the holes in these two pieces is thrust the spindle D of a track-broom, E, as shown in Figs. 2 and 3 of the drawings, which slides therein, and is secured from descending below a cer-

tain point by means of a pin, *d*, passing through it just above the lower plate of the bracket. A spiral spring, F, is wound around the broom-spindle, between the lower plate of the bracket and the cross-plate *c*, which is compressed sufficiently to always hold the broom down in working position, while at the same time it permits it to yield in an upward direction to conform to irregularities in the track. The upper end of the spindle is cut away on one side, so as to make a plain surface, *d'*, on that portion of the spindle which passes through the plate *c*, the hole in which is shaped like this part of the spindle, and thereby the latter, with its broom, is held from turning. A cam-lever, G, is pivoted to the upper end of the spindle, in such position at the side thereof as to find a seat upon the upper side of the plate *c*, and so arranged that when pulled forward it will raise the spindle and broom bodily, as shown in dotted lines in Fig. 2 of the drawings. A cord or rod, H, is attached to the upper end of this lever, and carried forward to the front end of the car, where, in connection with a similar rod or cord attached to the cam-lever on the other side of the car, it is fastened to a cord or chain, I, passing up over a pulley, J, on the forward end of the car, within reach of the driver.

Hooks K may be arranged on the front of the dash-board of the car, one above the other, to which the upper end of the cord I may be fastened by means of a link or hook, L, attached thereto.

It is evident that whenever the driver pulls upon the cord I the cam-levers G will be vibrated and the brooms lifted from the track, in which position they may be held by fastening the cord to the upper hook K, the lower hook K being arranged so that when the cord is secured thereto the brooms are let down in free working condition upon the track.

If desired, an elastic washer, M, may be placed between the broom-head and the lower end of the bracket, in which the broom is mounted. This washer may be rubber, or a spring, as desired, and assists in giving elasticity to the broom.

I prefer a wire broom similar to that for which Letters Patent No. 180,717 were granted to me August 8, 1876; but any construction of

broom suitable for cleaning the track may be used. The broom should, however, be shaped upon its face something like the track N, as it will be more efficient.

It is evident that the special devices for attaching the brooms to the car and for raising them bodily may be changed or modified without effecting the result; and I therefore do not limit myself to the special devices shown and described. It is also evident that the invention may be used on locomotives as well as cars.

The brooms are arranged at each end of the car, in front of the wheels, and the pair on the end, which, for the time being, is the forward end, should be let down into working position, while the pair at the rear of the wheels should be raised up and secured, so as to be carried along above the track, without touching it. Whenever the car is drawn in an opposite direction the relative position of the pairs of brooms should be reversed; but in cases where the cars are turned around at the termini, so that they are always drawn in the same direction, only one pair of brooms is necessary. The brooms are held forcibly to their work by the springs, and will follow the irregularities of the track, so as to clean the trams thoroughly, without danger of breaking or tearing them off.

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

1. The track-brooms attached to the car so as to be free to slide up and down, in combination with independent springs which hold the brooms to work, but permit them to yield, and mechanism, to be operated from the driver's stand or platform, whereby the brooms may be raised bodily and held from contact with the track, substantially as and for the purpose set forth.

2. The car-frame A, in combination with the bracket C, attached thereto, the broom-spindle D, mounted in the bracket so as to slide up and down, the track-broom E, and the springs F, substantially as and for the purpose set forth.

3. The bracket C, provided with the cross-plate c, in combination with the broom-spindle D, spring F, and cam-lever G, substantially as and for the purpose set forth.

4. The pendent bracket C, constructed as described, in combination with the sliding broom-spindles D, holding-springs F, cam-lever G, and cords or rods H, extending forward and upward, so as to be within reach of the driver, substantially as and for the purpose set forth.

MARCUS C. ISAACS.

Witnesses:

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