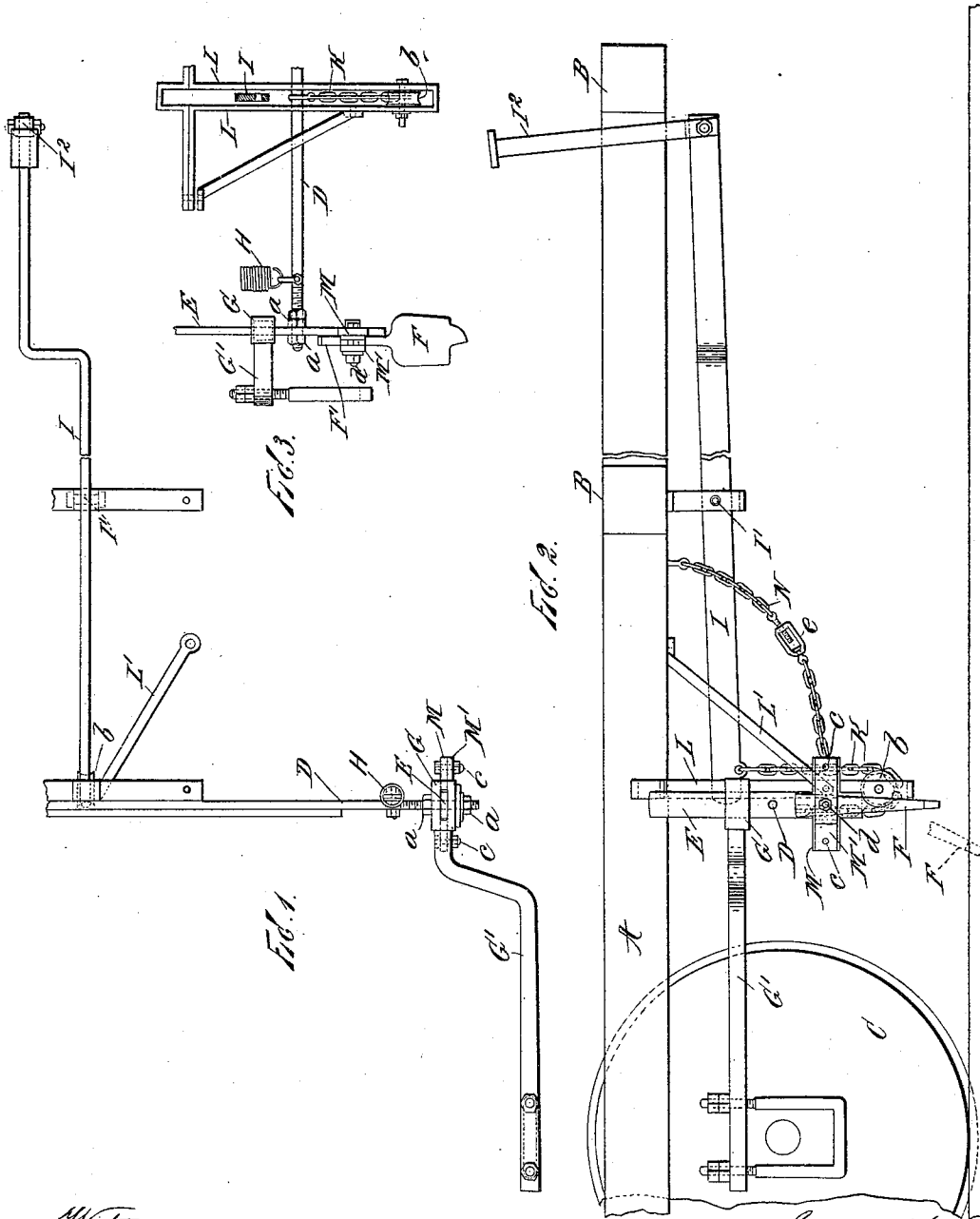


(No Model.)

J. GOODFELLOW & H. A. NEWELL.
STREET CAR TRACK SCRAPER.

No. 495,968.

Patented Apr. 25, 1893.



Witnesses:
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L. H. Osgood

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UNITED STATES PATENT OFFICE.

JAMES GOODFELLOW AND HENRY A. NEWELL, OF NEW YORK, N. Y.; SAID
NEWELL ASSIGNOR TO SAID GOODFELLOW.

STREET-CAR-TRACK SCRAPER.

SPECIFICATION forming part of Letters Patent No. 495,968, dated April 25, 1893.

Application filed December 23, 1892. Serial No. 456,129. (No model.)

To all whom it may concern:

Be it known that we, JAMES GOODFELLOW and HENRY A. NEWELL, of New York city, county and State of New York, have invented certain new and useful Improvements in Street-Car-Track Scrapers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Our invention relates to means for cleaning the surface of the tracks or rails of street railways from dirt, snow, ice or other obstructions which interfere with the smooth and proper riding of the car wheels upon the tracks.

The object of our invention is to provide or produce a simple, efficient and easily operating track scraping device which may be applied upon a car and which may be brought into action at any time desired, in no way interfering with the ordinary uses of the car or any of its appliances and which will thoroughly clear the tracks as rapidly as the car is moved over them and with no additional expense for labor.

To accomplish all of this and to secure other and further advantages in the matters of construction, operation and use our improvements involve certain new and useful arrangements or combinations of parts and particular features of invention, as will be herein first fully described and then pointed out in the claims.

In the drawings Figure 1 is a top or plan view, Fig. 2 a side elevation, and Fig. 3 a front elevation showing the manner of mounting and means of operating our improved scraper.

In all the figures, like letters of reference wherever they occur, indicate corresponding parts.

The longitudinal timbers of the car frame are represented at A and cross timbers at B,— and C is one of the car wheels, all of which may be of any of the usual patterns.

D is a cross bar placed under the car body, carrying at or near its extremities vertically sliding bars as E which are connected to the cross bar in any suitable way as by nuts *a a*.

Upon the lower ends of the sliding bars E are mounted (in a manner to be hereinafter

specified) the scraper blades F which are preferably made of steel. These latter are fashioned at bottom to conform to the contour of the rail. In the example shown the scraper blade is designed to fit a groove upon the inside of the rail as well as to move upon the flat or bearing face, and as this blade wears by long use it continues to conform to the shape of the rail section. The sliding bars E are preferably of flat metal and they are guided in their up and down movements in boxes G sustained by suitable arms G' connected with the car axle housings or from some point so that they may be made sufficiently firm or unyielding, and the guides are located so as to ride over the tracks in order to bring the sliding bars in proper line. Ordinarily, of course, the scrapers will ride clear of the tracks and they are sustained or held clear by suitable springs H connected with the cross bar D.

In order to force the scrapers down to contact with the rails and hold them in working position, we employ a foot lever I fulcrumed as at I' and provided with a foot piece as I² projecting up to a convenient position within easy reach of the driver.

Upon the end of the lever opposite the foot piece is applied a chain K running under a pulley *b* and thence up to its connection with cross bar D. By pressing down upon foot piece I² the cross bar D is drawn down against the action of springs H through the medium of lever I and chain K, as will be understood. The pulley *b* is firmly mounted beneath the axis of the car, as between the pieces LL and these are braced by inclined stays as L'L' so as to hold them rigid. If the scrapers were held rigidly in a vertical position while moving in contact with the rails, they (the scrapers) would be liable to be damaged by projecting rails at the joints in the tracks and sometimes by spikes and other unyielding obstructions, and we therefore provide for allowing the scraper blades to incline backward slightly as soon as they are brought down to contact with the rails.

Upon the lower end of sliding bar E is formed or applied cross arms M upon which is mounted a cap M' secured in place by bolts as *c*. The cap M' is recessed to accommodate

the shank F' of blade F and the recess is wide enough to allow said shank and blade to swing forward and back so that they may incline suitably in the manner desired. A central bolt *d* constitutes the axis upon which the inclination is effected.

When at work the scrapers would naturally tend to bend or carry the sliding bars E backward at bottom and to overcome or counteract this tendency we supply a chain N connected at one end to a convenient point on the car frame and at the other to the cross arm M, the chain being adjusted so that when the scraper is in contact with the rail and inclined in its working position it (the chain) will be drawn taut and thus properly maintain the parts. A turn buckle *e* in the chain N enables it to be easily and quickly changed or regulated as to length, as circumstances may require.

Heretofore the cleaning of the tracks has been done by hand labor,—a slow and expensive process. With our improved appliances they may be effectually cleaned as rapidly as the car can be moved and with no expense for extra labor, the car being employed for the usual carrying purposes. One or two cars with the improved appliances will be found sufficient for the work of any ordinary street railway, and they may be run as often as may be necessary.

The parts are made substantial and durable and the device has been found well adapted for all the uses and purposes of the invention previously indicated. Two scrapers are

provided for each car, their construction and attachments being similar.

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

1. In a track scraper, the combination with the vertically sliding bar carrying the scraper blade, of the cross bar, a foot lever fulcrumed upon the car, a chain connected with said lever and cross bar and a guiding pulley for the chain, the parts being arranged for operation, substantially as shown and described.

2. In a track scraper, the combination with the vertically adjustable bar carrying the scraper blade, of a stay chain connected with said bar and with the car body, to hold the scraper at the time and in the manner explained.

3. In a track scraper, the combination with the vertically sliding bar carrying the scraper blade pivoted thereon, of the cross bar, a foot lever fulcrumed upon the car, a chain connected with said lever and cross bar, a guiding pulley for the chain, and a spring for sustaining the cross bar, the parts being arranged for operation, substantially as shown and described.

In testimony that we claim the foregoing we have hereunto set our hands in the presence of two witnesses.

JAMES GOODFELLOW.
H. A. NEWELL.

Witnesses:

W. J. MORGAN,
WORTH OSGOOD.