

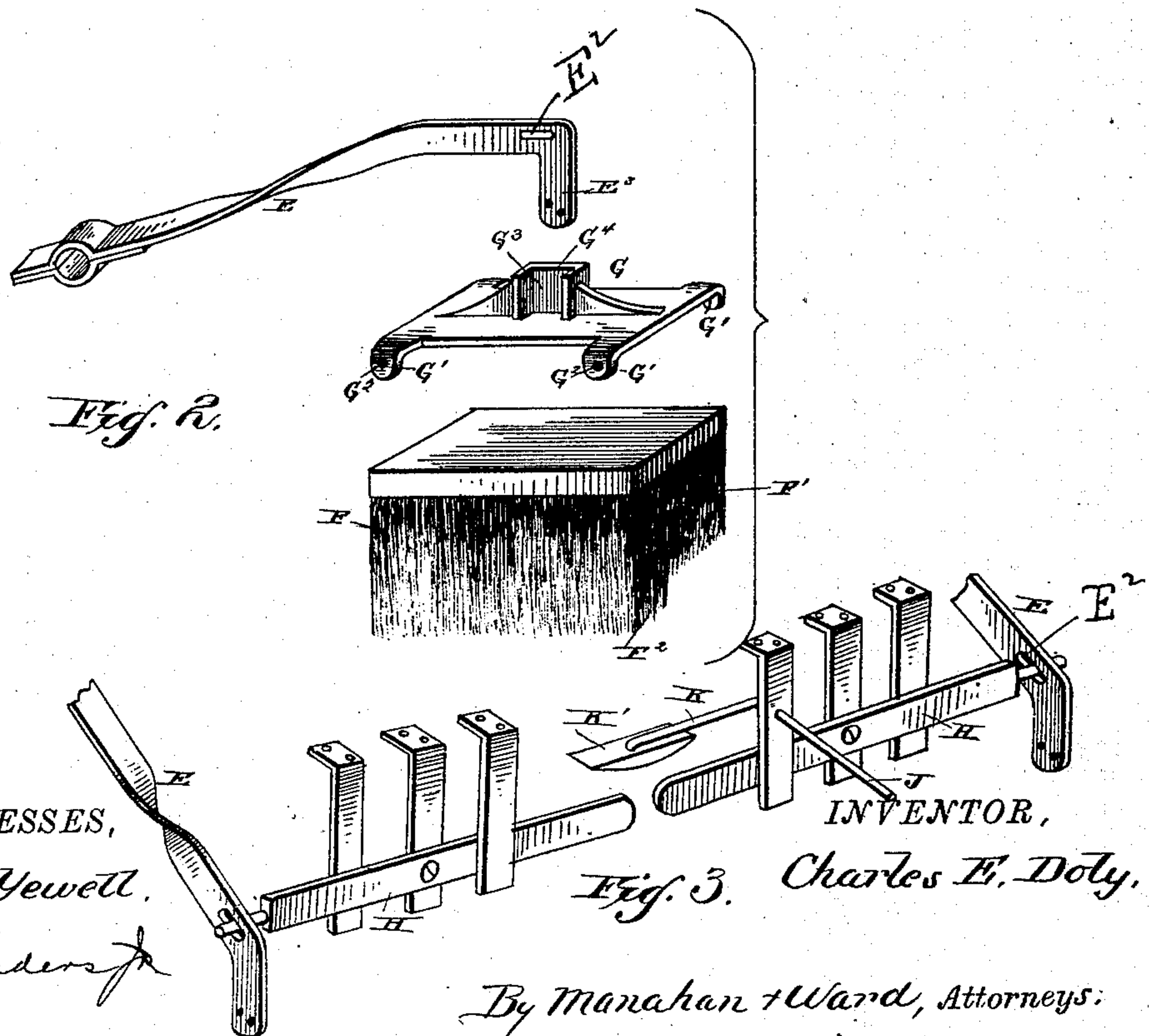
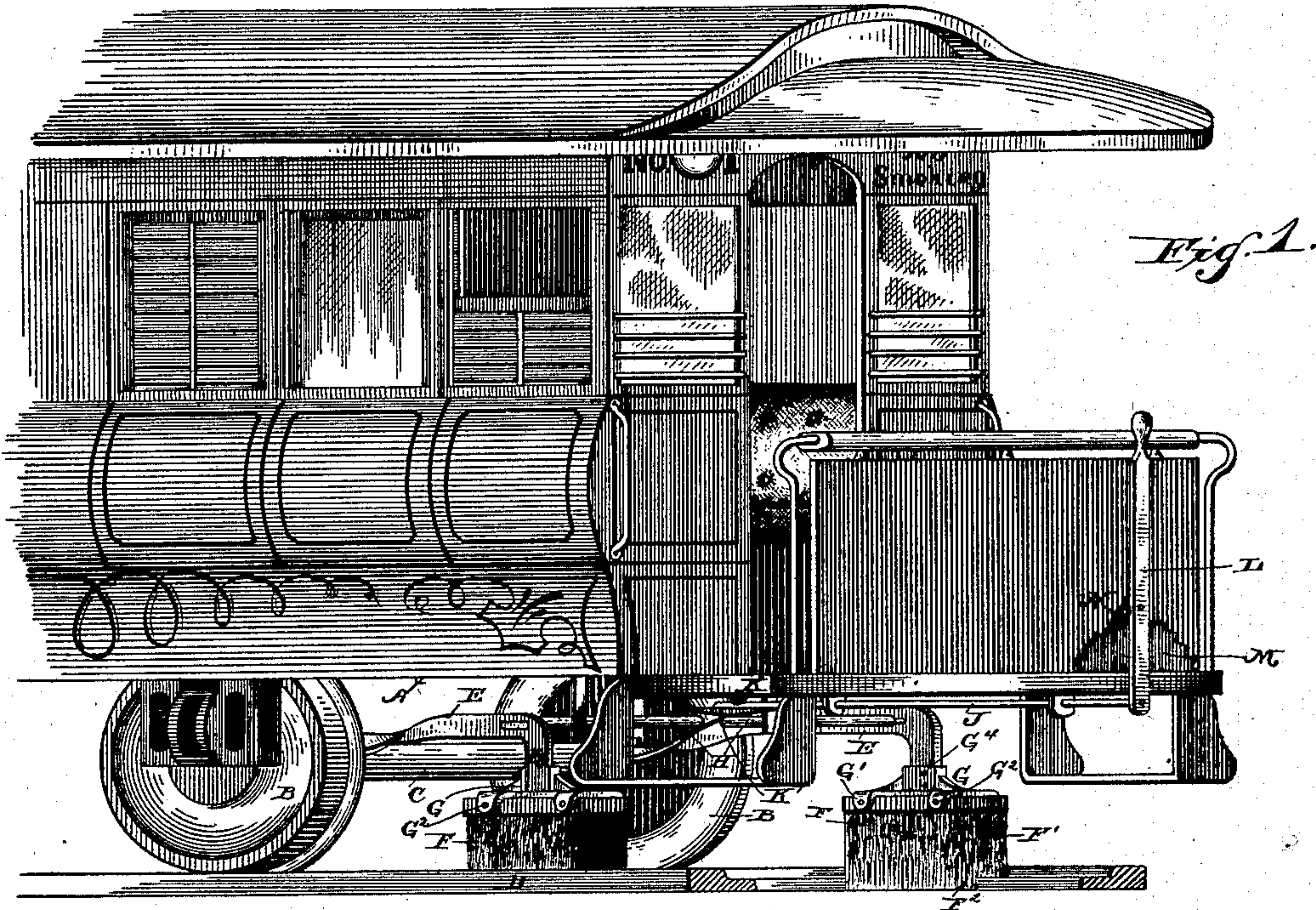
(No Model.)

C. E. DOTY.

STREET RAILWAY TRACK CLEANER.

No. 388,403.

Patented Aug. 28, 1888.



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STREET-RAILWAY-TRACK CLEANER.

SPECIFICATION forming part of Letters Patent No. 388,403, dated August 28, 1888.

Application filed December 15, 1887. Serial No. 258,018. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. DOTY, a citizen of the United States, residing at Rock Falls, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Street-Railway-Track Cleaners; and I do hereby 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention has reference to certain improvements in street-railway-track cleaners, and it consists more particularly, first, in a peculiar metallic foot or clamp for removably seating said brush; second, in seating the vertically-oscillating arm or arms which carry the brushes pivotally on the axle of the carrying-wheels of the car, so that said brushes may remain in contact with the track and have their operation independent of the usual vertical oscillation or swinging of the car-body; third, in certain novel mechanism for positively and conveniently elevating and carrying said brush during the intervals when not required to be in operation.

In the drawings, Figure 1 is a partial oblique front elevation of my invention, with sufficient of the car-frame to exhibit the mode of attachment and operation thereof. Fig. 2 exhibits details of the brush, shoe, and the brush-arm; and Fig. 3, a detail view with the parts removed.

As my invention is in no manner contingent upon or limited to the peculiar construction of the car, but is adapted to be attached to any of the well-known constructions thereof, I do not deem it necessary to show or describe any greater portion of the car than will render intelligible the mode of attachment thereto and the operation of my invention.

A is a portion of the frame of the car, which is supported in the usual way upon carrying-wheels B and axles C.

D represents the track.

E E are the arms which carry the brushes F. The arms E are pivotally seated at their rear ends in any suitable manner upon the

axles C, so as to permit said axles to rotate within the seating portion of the arms E.

Street-cars are invariably constructed with their respective ends projected some distance beyond the tread of the carrying-wheels, from which fact, together with the irregularities in the track, there results more or less of a vibratory motion of the car-frame in a vertical plane, and as it is essential that such vibratory motion be not communicated to the brush F, the latter is seated, as aforesaid, upon the carrying-axle C, so as to insure them at all times a fixed relation to the track, the altitude of the axle C remaining continuously substantially unchanged.

To the front end of the arm E is attached, as hereinafter described, the brush F, in such relation to the track D as that when said brush is not supported above the track D it will press upon the latter a degree equal to its own weight and that of the free end of the arms E. The brushes F are constructed of rows of steel wires, in the mode for which Letters Patent of the United States No. 338,719 were granted March 30, 1886, to me. The said wires are of a flat formation, and are arranged with their longest transverse diameter perpendicular to the rail D, by which conformation and position they are enabled to yield sufficiently in the line of movement of the car to prevent breakage. In the lower and operating surface of the brush the portion F' of the wires therein are adapted to rest upon the top of the track D, while the residue of the wires, F², are projected below the crown of the track D and at the inner side thereof, so as to keep clear the interval for the passage of the flange upon the tread of the carrying-wheels B.

G is a metallic shoe or foot having four downwardly-extending ears or lugs, G', in such relation and position as to pass down over the sides of the back of the brush F and to be removably attached thereto by means of the transverse screws G², inserted through said lugs laterally into the side of the back of said brush. The lugs G' fit so snugly over the back of the brush F as to hold the latter firmly with very little strain upon the screws G², and by the use of the latter as a means of attachment to the brush the latter can be readily removed when worn or broken and a new brush substi-

tuted. On the top of the shoe G there is centrally formed a vertical stem, G⁴, provided with the lateral groove G³, into which the forward and depending end E³ of the arm E is snugly fitted and attached by suitable transverse bolts.

H H are levers fulcrumed transversely to the frame A, and having their outer ends respectively inserted in elongated slots E², formed in the arms E, and having their inner ends nearly in contact. The levers H are provided with means for raising and sustaining the brush F when necessary; but in the ordinary operation of said brush said levers hang loose, and by their automatic oscillation upon their pivotal point prevent the vibratory motion above named of the car A from interfering in any degree with the position or operation of said brush. When, however, it is desired to raise or suspend said brush, the same is accomplished in the following manner:

J is a rock shaft journaled longitudinally in the lower portion of the frame A. To the inner end of the shaft J is rigidly attached, integral or otherwise, the lateral inwardly-projecting arm K, the free end of which is provided with the foot K', adapted in the oscillation of the shaft J to press downwardly upon the inner ends of the levers H, and thereby lift the outer ends thereof and the brush F. The shaft J is rocked and held, when desired, by a hand-lever, L, rigidly seated on the front end of said shaft J and within convenient reach of the driver. It is obvious that when the lever L is thrown outward the foot K' is suspended above the inner ends of the levers H and has no effect on said levers. When the lever L is thrown inward, the shoe K' is forced downward upon the in-

ner ends of the levers H, and operates thereby to elevate the brush F. The lever L is held at the two extremes of its arc of oscillation by the ordinary ratcheted quadrant, M, seated on the frame A, and spring-pawl N, seated on said lever.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In combination with the brush F, the holder G, provided with lugs G', and centrally-seated stem G⁴, provided with the groove G³, substantially as shown, and for the purpose described.

2. In combination with the axle C of a street-car, the arms E, pivotally seated at their inner ends on said axle, and the brush F, suitably seated on the depending end E³ of said arm, substantially as shown, and for the purpose described.

3. In combination with the carrying-axle C of a street-car, the arms E, pivotally seated at their inner ends on said axle and provided with the slot E', the brush F, suitably attached to the outer ends of said arms, the lever H, suitably fulcrumed to the frame A, the rock-shaft J, provided with the arm K, adapted to engage the inner ends of the levers H, and means, substantially as shown, for operating and holding said shaft J, for the purpose described.

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

CHARLES E. DOTY.

Witnesses:

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JOHN G. MANAHAN.