(No Model.)

N. CAMPBELL.

RAILWAY RAIL SWEEPER.

No. 427,834. Patented May 13, 1890.

Fig: 1.

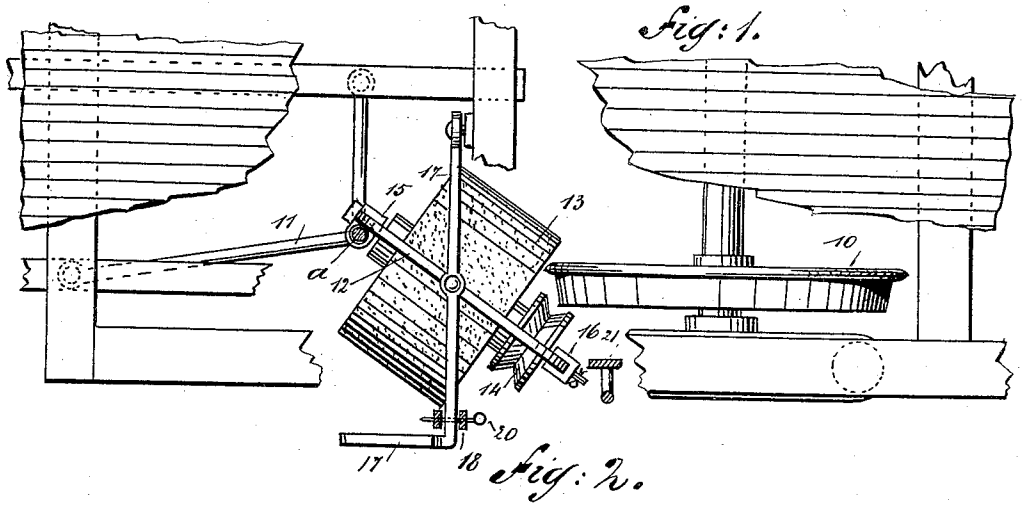


Fig: 2.

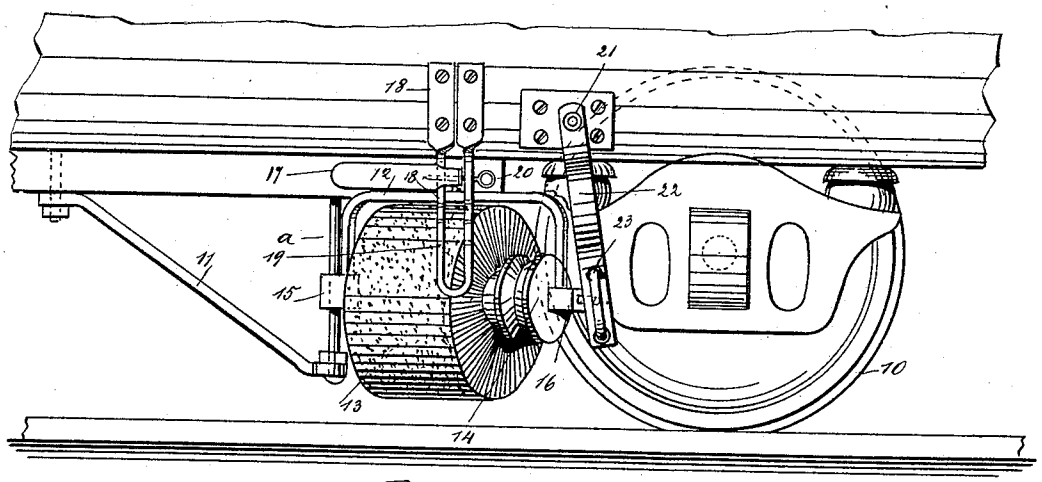
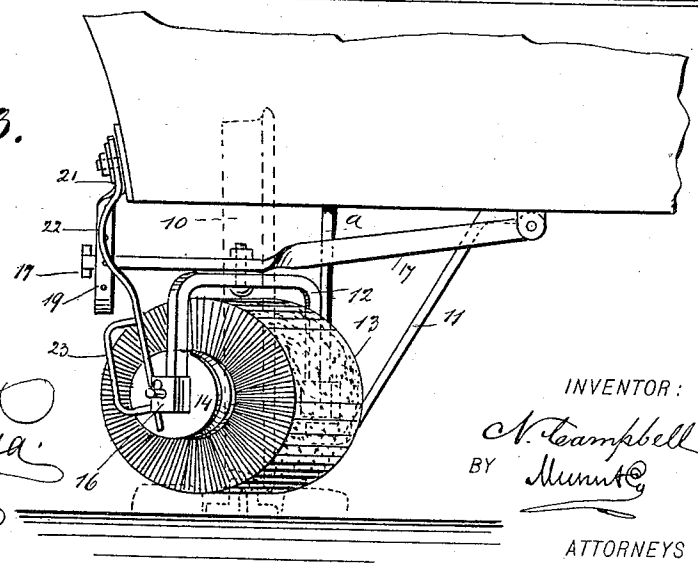


Fig: 3.



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NEIL CAMPBELL, OF NEW YORK, N. Y.

RAILWAY-RAIL SWEEPER.

SPECIFICATION forming part of Letters Patent No. 427,834, dated May 13, 1890.

Application filed January 27, 1890. Serial No. 338,173. (No model.)

To all whom it may concern:

Be it known that I, NEIL CAMPBELL, of New York city, in the county and State of New York, have invented a new and Improved Railway-Rail Sweeper, of which the following is a full, clear, and exact description.

My invention relates to an improved railway-rail sweeper, and has for its object to provide a sweeper capable of attachment to the bottom of any car and of convenient manipulation to engage or to disengage said sweeper with or from its driving mechanism and the track; and a further object of the invention is to provide a means whereby the sweeper will be driven directly from the wheels of the car or its axle.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the views.

Figure 1 is a partial plan view of the bottom of a car, the said bottom being partially broken away, illustrating the sweeper out of engagement with the wheel of the car. Fig. 2 is a side elevation of the sweeper and a portion of the car-body and the wheel, the said sweeper being out of engagement with the wheel, as in Fig. 1; and Fig. 3 illustrates the sweeper in perspective, the car being viewed from the end and the said sweeper being shown as in engagement with the car-wheel.

Two sweepers are ordinarily employed upon each car, one being located at each end diagonally across the track to engage with diagonally-opposite wheels, and as the arrangement of the sweepers is identical at each end of the car, I will describe and have shown the construction of one sweeper only.

Beneath the car, between the center and the wheels 10, an angle-bracket 11 is secured, the vertical member *a* of which consists, preferably, of a round rod or bar, and between the members of a yoke 12 a broom or brush 13, of any approved construction, is journaled, the axle of the said broom being provided within the yoke, near one end, with a friction-pulley 14, rigidly attached thereto, the said friction-pulley being preferably provided with a V-groove in its periphery. Each member of the yoke 12 is provided at its extremity with an offset or block, (designated, respectively, in the drawings as 15 and 16,) the block or offset 15 having produced therein a vertical bore, whereby it is capable of sliding up and down upon the rod-like vertical member *a* of the bracket 11. The position of the yoke and broom beneath the car is such that the broom extends diagonally across the track, and when the broom contacts with the track the grooved periphery of the friction-pulley 14 engages with the tread of the wheel 10 nearest which it is located. The yoke, and therefore the broom, is raised or lowered through the medium of a lever 17, pivoted at its inner end beneath the car and attached at or near its center to the upper or bow portion of the yoke 12, the outer end of the lever being made to extend through a staple 18, attached to the side of the car, which staple is provided, preferably, with a series of pin-apertures 19, and the lever is also provided with apertures, whereby when the said lever is elevated, carrying the brush or broom from contact with the track and engagement with the wheel, it may be held in its elevated position by passing a pin 20 through one of the apertures in the staple and a registering aperture in the lever, as illustrated in Figs. 1 and 2. Above the outer block 16 of the yoke the upper end of a spring 21 is pivoted to the car-body, which spring, near its upper end, is provided with an outward curved or bow section 22, as shown in Fig. 3, whereby its inner end is normally thrown inward beneath the car, and the said lower end of the spring upon its outer face is provided with a hand-grip or handle 23.

In operation, when the lever 17 is lowered, the brush or broom contacts with the track to sweep the same, and the friction-pulley 14 is brought into engagement with the tread of the wheel 10. The said friction wheel or pulley and the wheel are held in engagement by drawing the lower end of the spring 21 outward, carrying the said end diagonally inward to an engagement with the outer surface of the block 16, whereby a continual pressure

is exerted through said block upon the friction-pulley 14, forcing the same to a firm bearing against the wheel.

If the sweeper is not needed, the spring is carried out of engagement with the yoke-block and the lever 17 elevated, as heretofore described.

It will be readily observed that a track may be kept clean at little expense by means of the device above described, for as soon as the snow commences to fall the driver or conductor may conveniently and expeditiously cause the brooms or brushes to contact with the track, and thus as the car proceeds upon its journey the track is cleared from obstacles, and the cars following one after another keep the track constantly clean, thus avoiding the expense of the ordinary heavy snow plow or sweeper, unless it be in the event of an exceptionally heavy fall of snow.

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

1. The combination, with a railway-coach or tram-car, of a revoluble broom journaled beneath the same, the supporting-bow in which the broom is journaled and on which it has a vertical adjustment, and a lever pivoted to the car and connected with the supporting-bow, substantially as shown and described, for communicating a rotary movement to the axle of the broom from the wheel of the car, and means for raising and lowering the said broom, as and for the purpose specified.

2. The combination, with a railway-coach or tram-car, of a vertically-adjustable broom journaled beneath the same, the axle of said broom being provided with a friction-pulley having a V-shaped groove capable of contact with the tread of the wheel upon two sides, and a spring adapted to bear against the axle of the broom and retain the said friction-pulley in engagement with the said wheel, substantially as shown, and for the purpose specified.

3. The combination, with the body of a railway-coach or tram-car and a bracket secured beneath the same having a vertical member, of a yoke, one member of which is held to slide upon the vertical member of the bracket, a broom having its axle journaled in the members of the yoke and provided near one end with a friction-pulley adapted for contact with the car-wheel, a spring pivoted to the car and adapted for engagement with the axle near the said friction-pulley, and a lifting-lever fulcrumed beneath the car and attached to the said yoke, substantially as and for the purpose specified.

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Witnesses:
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