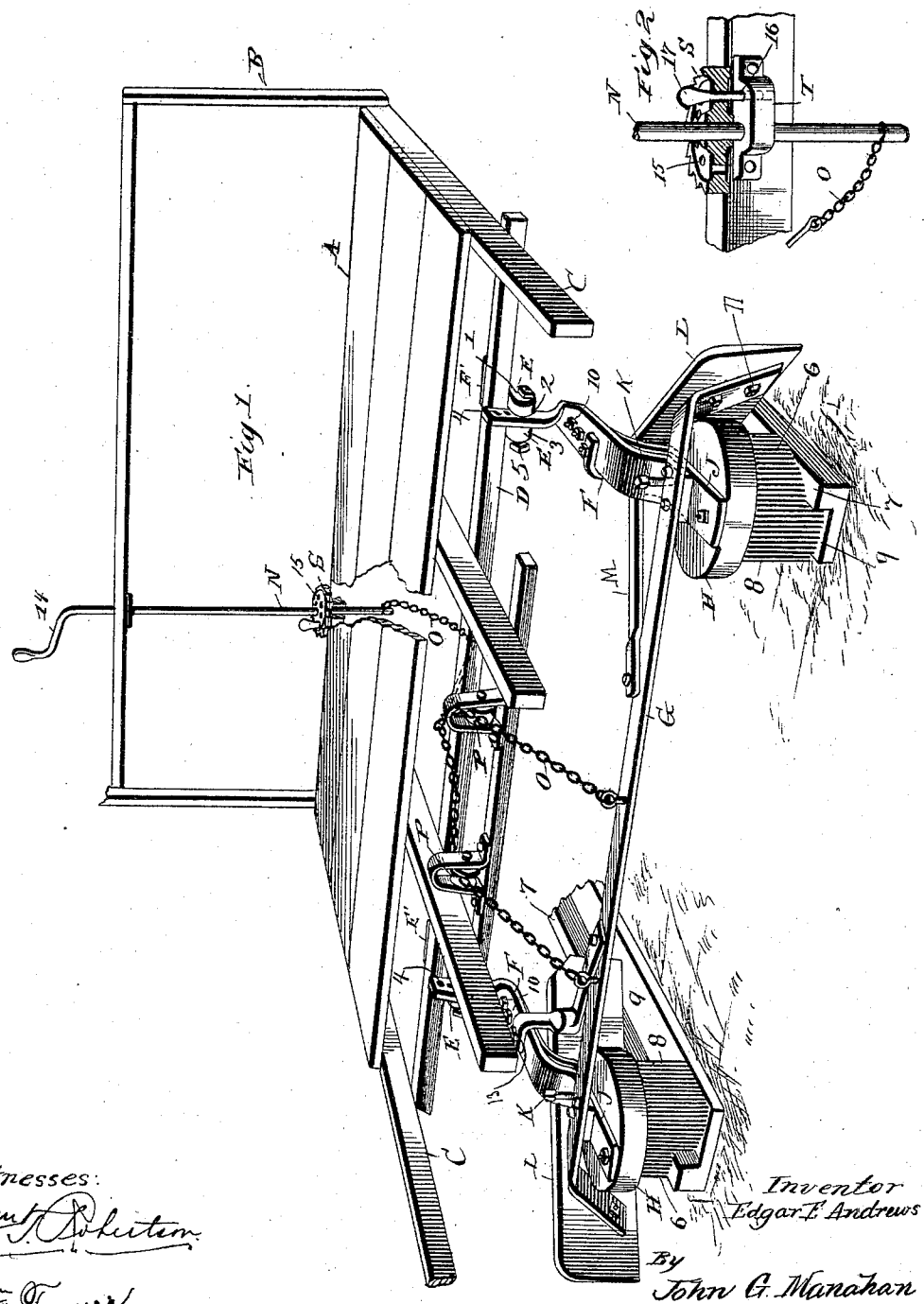
(No Model.)

E. E. ANDREWS.

RAILWAY TRACK CLEANER.

No. 433,433. Patented Aug. 5, 1890.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDGAR E. ANDREWS, OF STERLING, ILLINOIS.

RAILWAY-TRACK CLEANER.

SPECIFICATION forming part of Letters Patent No. 433,433, dated August 5, 1890.

Application filed November 12, 1889. Serial No. 329,972. (No model.)

To all whom it may concern:

Be it known that I, EDGAR E. ANDREWS, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented a new and useful Railway-Track Cleaner, of which the following is a specification.

My invention relates to improvements in railway-track cleaners in which a steel-wire brush is preceded and protected by a diagonally-placed steel guard operating in conjunction therewith to clean the track; and the objects of my improvement are, first, to precede a steel-wire brush with a steel plate to protect said brush, and to preliminarily clear the track of heavy or strongly-resisting obstacles; second, to so attach the same to the car-frame as that they may automatically yield in a vertical plane against undue resistance, and, third, to afford facilities for raising or suspending the cleaners from the track. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective from the rear, exhibiting the construction, attachment, and operation of my invention. Fig. 2 is a perspective detail, partly in section

My invention is adapted to be attached to the front end of the car under the platform thereof, and is more specifically applicable to street-cars, and is herein described and exhibited in the latter situation.

As my invention is susceptible of use with any of the usual forms of railway-cars, I do not deem it essential to show or describe more of the car than is requisite to make intelligible the construction, mode of attachment, and operation of my invention.

A is the usual platform, projecting from each end of the ordinary street-car.

B is the dash-board or outer guard or railing.

C C are the longitudinal joists, which form the substructure and support of the platform A.

D is a part of my attachments, and is a cross-beam suitably bolted transversely of the platform A to the under side of the joists C.

E E are metallic grips provided at their front ends with the upwardly-extending flange E′, adapted to be clamped against the front side of the cross-beam D. The grips E have central flat portions 1, which extend forward under the beam D, and through which they are suitably bolted upward into the latter. The grips E are projected to the rear of the beam D, and beyond the rear side of the latter are bifurcated and coiled downward, forming the central vertical slot 2 and the ears 3 on each side of said slot.

F is a draw-plate projected vertically at its forward end and inserted within the slot 2. The elevated forward end of the plate F is provided with a vertical series of holes 4, through which there can optionally be inserted the transverse bolt 5, and thereby the adjacent end of the draw-plate F be pivoted and adjusted to cars of different heights. The draw-plates F are intermediately given a quarter-twist, which brings their rear portions into a flat position, and are interconnected by a cross-plate G.

H H are clearing-brushes which are provided on their lower sides with a series of short steel wires 6, adapted to sweep the crown of the rail 7, and a long series of steel wires 8, adapted to coincidently clean out the inner flange 9 of the track to permit the ready passage of the inner flange of the car-wheels. The brushes H H rest upon the crest and inner flange of the rail 7, and are held down adjustably by means of the strong springs J, attached at their rear ends to the upper surface of said brushes, respectively, and passed forward under the plates F and rigidly attached at their front ends to the under surface of said plates by vertical bolts 10. A set-screw K is seated vertically in the plate F in front of the cross-bar G, and has a bearing at its lower end upon the upper surface of the spring J, and by adjusting the screw K the pressure of the brushes H upon the crest and flange of the rail 7 may be regulated, and also by forcing the set-screw K down against the spring J the wear upon the ends of the wires 6 and 8 can be compensated, and thus the said wires be used and worn off their entire length. These wires are preferably of a flat formation and are very strong and durable.

Inasmuch as the brushes H, if not protected, would be likely to come in contact with impediments and obstacles too heavy or rigid for their removal, by reason of the elastic character of the brush-wires, I provide the brush-guards L L, which respectively consist of a heavy steel plate placed diagonally across the rail 7, directly in front of and in contact with the brushes H. The guards L perform the double function of protecting the brushes H from casual injury through contact therewith of unusual obstacles, and also in some degree clear the track externally. The guards L are set to rest slightly upon the rail 7, and the elastic character of the brushes assists the guards to rise over projecting ends of rails, and thereby avoid injury to said guards. The guards L are held in position by the cross-plate G, the outer ends of which are bent downward against the inner wall of said guards near the rear end of the latter and attached thereto by transverse bolts 11, the bent ends of the braces G forming an inner seat for said guards. An additional diagonal brace M is bolted at its rear end intermediately to the braces G, and intermediately bent upward against the inner wall of the guard L near the front end of the latter, and thereby forms a seat for said guard, and is bolted to the latter by cross-bolts 12. The forward end of the brace M is projected still farther upward, bent over outwardly at its upper end, and bolted to the upper side of the plate F by vertical bolts 13. The contact of the brush H serves also to support the guard L.

It will be noticed that my device is adapted to be drawn by the plate F from the platform of the car in front of the first pair of wheels. The reverse motion of the car with the brushes H in the position shown, and without any protection, would be injurious to the latter. Therefore it is desirable that each end of the car be provided with my devices, and that during the use of the forward set thereof the rear ones be suspended from contact with the rail. To accomplish this I pivotally seat a vertical brake-shaft N to the outer side of the platform-guard B and provide the same with handle 14 within convenient reach of the driver or operator of the car. To the lower end of the shaft N is attached the front end of the chain O, which extends to the rear over beam D and one or more friction-pulleys P, suitably seated upon the cross-bar K, suitably affixed to the under surface of two of the joists C and attached at its rear end at one or more points to the cross-plate G. By winding the chain O in the usual mode upon the lower end of the brake-shaft N the cross-plate G and its adjunctive parts may be either temporarily raised to pass over cross-tracks or over immovable prominences, or by the use of the usual pawl and ratchet S, seated on shaft N, the guards L and brushes H may be wholly suspended above the track.

To provide against any mischievous or careless meddling with the apparatus while in a state of suspension, I form a circular series of vertical holes 15 in the the ratchet S and a corresponding hole 16 in the box T under said ratchet, in which the lower end of the shaft N is journaled, and suitably hang a pin 17 to the outside of the guard B, which, when the apparatus is suspended, can be dropped through one of the holes 15 and the hole 16, and thereby lock the brushes and guards in a state of suspension.

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

1. In a railway-track clearer, the combination of the draw-plate F, the brush H, and the guard L, both said brush and said guard being united to said draw-plate and controlled thereby, and the guard L being projected diagonally across the railway-rail and across the front of said brush, substantially as shown, and for the purpose described.

2. In a railway-car, the combination of the brushes H, draw-plates F, attached at their front ends to the platform of said car, springs J, attached at their rear ends to said brushes and at or near their front ends to said plates F, and the set-screws K, seated intermediately of said springs in said plate and adapted to vertically adjust said brushes, substantially as shown, and for the purpose described.

3. In a railway-car, the combination of the brushes H, draw-plates F, cross-plate G, guards L, and braces M, substantially as shown, and for the purpose described.

4. In a railway-car, the combination of the cross-beam D, the draw-plates F, cross-plate G, braces M, brushes H, guards L, springs J, and set-screws K, substantially as shown, and for the purpose described.

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

EDGAR E. ANDREWS.

Witnesses:
JOHN G. MANAHAN,
WINFIELD S. WARD.