

(No Model.)

E. CLARK & A. F. OGREN.
TRACK CLEANER FOR STREET RAILWAYS.

No. 498,622.

Patented May 30, 1893.

Fig. 1.

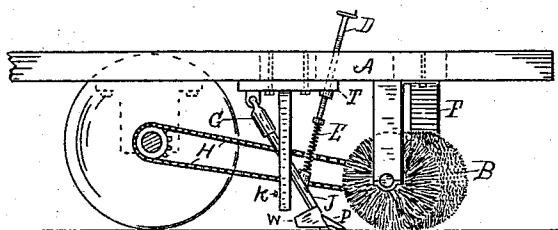


Fig. 2.

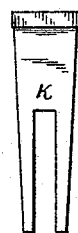


Fig. 3.

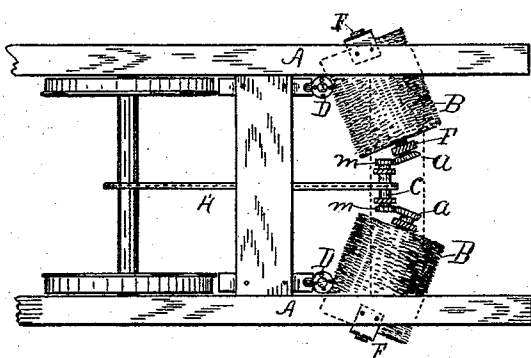


Fig. 4.

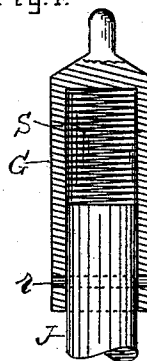


Fig. 6.

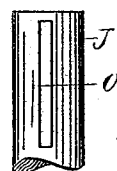


Fig. 5.

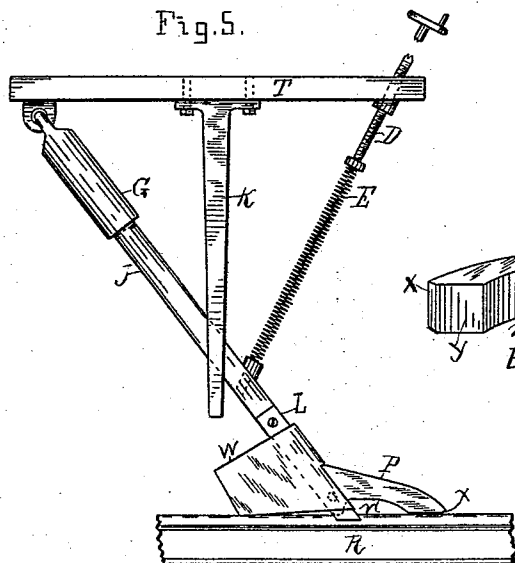
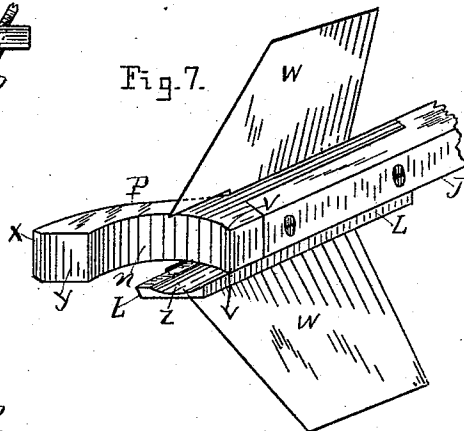


Fig. 7.



Witnesses:

Ray Hutchins
Herbert Corwell.

Inventors

Edward Clark
Andrew J. Ogren By
Thor Hutchins their
Attorney.

UNITED STATES PATENT OFFICE.

EDWARD CLARK AND ANDROV F. OGREN, OF LOCKPORT, ILLINOIS.

TRACK-CLEANER FOR STREET-RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 498,622, dated May 30, 1893.

Application filed February 25, 1893. Serial No. 463,690. (No model.)

To all whom it may concern:

Be it known that we, EDWARD CLARK and ANDROV F. OGREN, citizens of the United States of America, residing at Lockport, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Track-Cleaners for Street-Railways, of which the following is a specification, reference being had therein to the accompanying drawings, and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a side elevation of the track cleaner shown as applied to the frame of a car on its under side. Fig. 2 is a face view of a forked arm for giving lateral support to the standard of the track cleaner. Fig. 3 is a plan view showing the wire brushes and the means for driving the same. Fig. 4 is a central longitudinal section of a barrel containing a coil spring, and a side view of a section of the plow standard arranged in said barrel and held therein against the coil spring by means of a pin passing through said barrel and standard. Fig. 5 is a side elevation of the track cleaner shown in position on a street railroad rail as it would appear in operation, and showing its frame for attaching it to the under side of a car. Fig. 6, is a side view of the upper end of the plow standard showing a slot for receiving a pin to secure it in the said barrel, and Fig. 7, is a perspective view of the plow of the track cleaner with its wings attached.

This invention relates to certain improvements in track cleaners, for street railroad tracks, which improvements are fully set forth and explained in the following specification and claims.

Referring to the drawings, P represents the plow of the track cleaner, detachably secured by means of bolts or screws to the plow standard J having its upper end contained in a barrel G, against a coil spring S, and held in said barrel by means of a pin *r*, passing through said barrel and through the slot O in said standard so that said standard can have end movement in said barrel against said spring, within the limits of said slot, the barrel being connected to the beam T by means of a swivel joint and said beam being bolted to the car frame A above.

E is a coil spring for connecting the forward lower end of the plow standard J with the lower end of the screw threaded rod D having a hand wheel on its upper end and passing through a nut in the beam T which furnish means for elevating and lowering the plow P to permit the plow P to engage the track R, and for elevating the plow when not in use. The spring E is intended to be connected with rod D in such manner that said rod can turn without turning said spring. Said spring is intended to be very strong but holds the standard yieldingly so as to permit some backward movement of the plow in case it meets some obstruction, in which case the standard J would be forced upward against the coil spring S, and thereby prevent the parts from getting broken, and the two springs permit some vertical movement of the plow in case it met with a bad obstruction, such as the end of a rail, and thereby permit it to pass over the obstruction without injury.

K, is a forked arm having its upper end bolted to the beam T and has its forks astride the plow standard for the purpose of preventing lateral movement of the standard and plow. The plow P is formed as shown particularly in Fig. 7. The point of the plow is slightly curved upward as shown at X. The under side of the plow is arched as shown at *n*, so as to cause the plow to rest on the rail at *y* at its toe and at V at its heel, the toe doing the plowing up of ice or other material on the rail, and the heel V acting as a scraper to clean the rail, the said arch *n* permitting the discharge of the scrapings which are carried away to either side by the side wings W, secured on the plow standard immediately above the plow, and extending down at each side of the arch *n* to near the track so as to catch about all the scrapings as well as the material loosened up by the toe of the plow. The plow is shown as detachably connected to the standard so that in case it is broken or worn out a new one can be attached to the standard quickly.

There is a great advantage in constructing the plow so as to have the arch *n* forming the heel scraper V as whatever material the toe *y* fails to remove from the rail is removed by the heel V and there is no chance of the plow

sliding over material that the toe failed to remove and it is in thus forming the plow with such arch *n* to form a toe and heel contact with the rail that the principal improvement consists.

L is a plane bit secured to the side of the plow shank and standard and is intended to extend down by the side of the rail tread to plow a channel for the wheel flanges. The inner side of said bit is formed with a longitudinal concaved channel as shown at Z for the purpose of reducing friction with the side of the rail tread.

B, B, are a pair of rotating wire brushes having their shafts journaled in boxes in the depending frame F, secured to the under side of the car frame forward of the plow. These brushes are set at an angle with the tracks as shown in Fig. 3 so that when they rotate they will brush material off the tracks to one side in advance of the plow. These brushes are driven from a sprocket wheel on the axle of the car through the medium of the sprocket chain H connecting said sprocket wheel with a sprocket wheel on the short shaft *c* properly journaled in boxes in a depending frame secured to the under side of the car frame and having pinions *m* on each end that mesh respectively with the gears *a* on the inner ends of the brush shafts as shown in Fig. 3.

This track cleaner is intended for use on street railroad tracks more than for other tracks, but can be applied to the track of any railroad.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is as follows, to wit:

1. In a track cleaner, the combination of the plow P having the arch *n*, forming the toe *y* having its toe slightly curved upward, and

the heel scraper V, concaved bit L secured to the side of the plow shank and extending below the rail tread, wings W, secured to the front of the plow shank and extending below the upper part of arch *n*, standard J having slot O, barrel G, swiveled to the car frame, coil spring S located in said barrel above standard J, pin *r*, passing through said barrel and slot O of standard J, coil spring E, screw threaded rod D, and forked arm K, all arranged to operate substantially as and for the purpose set forth.

2. In a track cleaner a plow formed to have the arch *n*, the toe *y* having its point slightly curved upward, and heel scraper V all arranged to operate substantially as and for the purpose set forth.

3. In a track cleaner the combination of the standard J, plow P having the arch *n*, the toe *y* slightly curved upward at its point, and the heel scraper V, plane bit L, and laterally extending side wings W, W, all arranged to operate substantially as and for the purpose set forth.

4. In a track cleaner the combination of the plow P having the arch *n*, toe *y*, slightly curved upward at its point heel scraper V, plane bit L, side wings W, standard J, having slot O, barrel G, coil spring S, arranged in said barrel coil spring E, screw threaded rod D, and the diagonally arranged wire brushes B, and the means for driving said brushes all arranged to operate substantially as and for the purpose set forth.

EDWARD CLARK.
ANDROV F. OGREN.

Witnesses:

THOS. H. HUTCHINS,
RAY HUTCHINS.