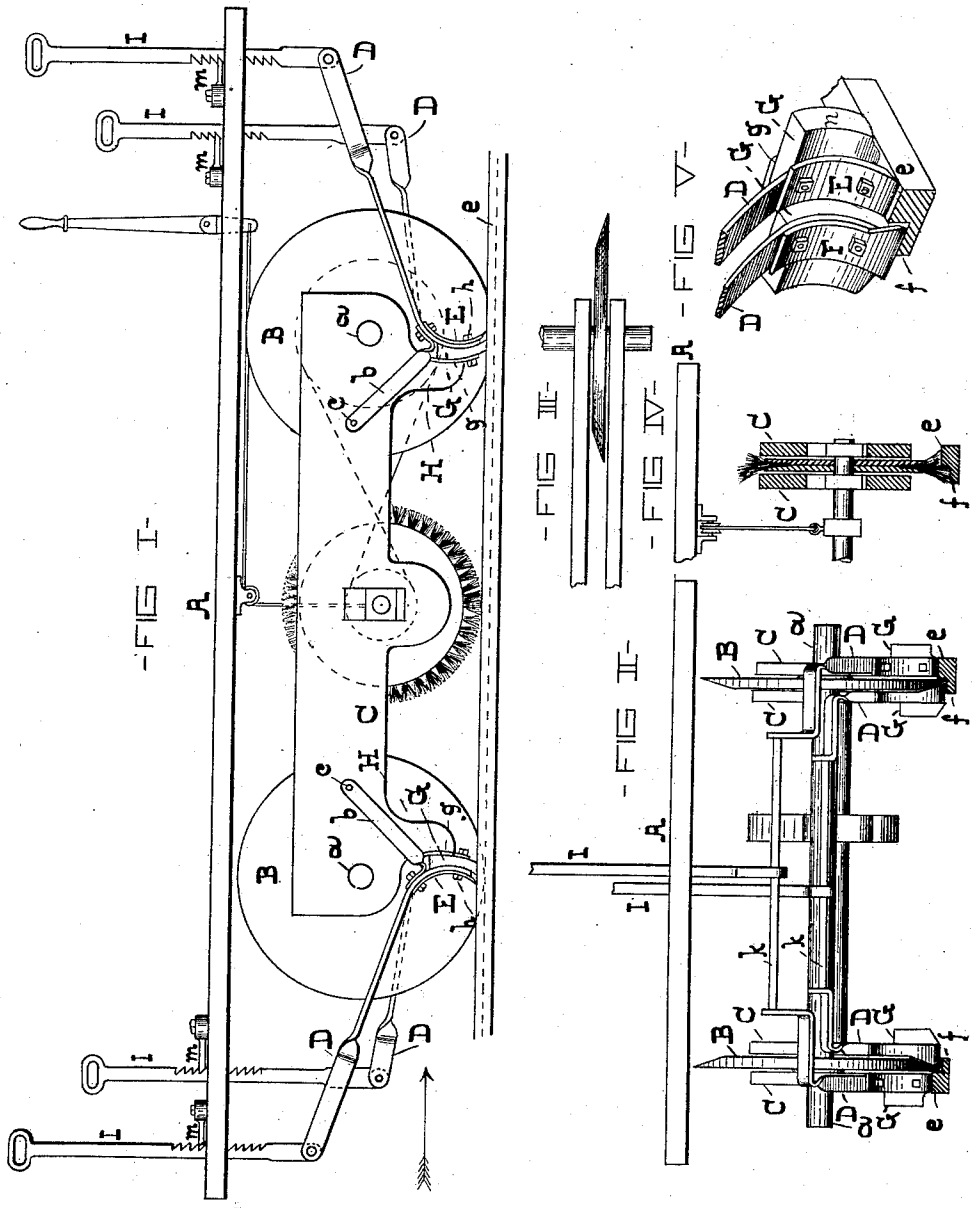
(No Model.)

J. M. CHRISTOPHER.

TRACK CLEARER.

No. 371,032. Patented Oct. 4, 1887.



-FIG. I-

-FIG. III-

-FIG. IV-

-FIG. V-

-FIG. II-

-WITNESSES-

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UNITED STATES PATENT OFFICE.

JOHN M. CHRISTOPHER, OF CLIFTON, MARYLAND.

TRACK-CLEARER.

SPECIFICATION forming part of Letters Patent No. 371,032, dated October 4, 1887.

Application filed April 22, 1887. Serial No. 235,742. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. CHRISTOPHER, of Clifton, in the county of Baltimore and State of Maryland, have invented certain Improvements in Track-Cleaners for Street-Railways, of which the following is a specification.

This invention relates to an improved apparatus for cleaning ice and snow, as well as dirt, from the tracks of street-railways.

Figure I is a side elevation of the invention, and Fig. II an end view looking in the direction indicated by the arrow. Figs. III, IV, and V are details of the invention, the last named being shown in perspective.

Similar letters of reference indicate similar parts in all the figures.

A is the truck, having the axles *a a*, which revolve in boxes, (not shown,) as is common.

B B are disks or wheels secured to the axles *a a* in the same manner as ordinary car-wheels. These wheels have sharpened edges, and the wheels on each axle are so spaced that the flat sides thereof come closely in contact with the sides of the elevated portion of the rails on which the car-wheels run.

C C are plates, of wood or metal, four of which are employed, as shown in the drawings. These plates have holes therein, through which the axles extend and in which they turn loosely.

D D are bars, having extensions *b b*, which are pivoted at *c* to the plates C, and these bars are provided with curved scrapers E and F, which are designed to scrape the two parts of the track represented by *f* and *e*.

By reference to the drawings it will be seen that the scrapers E are directly over the elevated portion of the rails *e*, while the ones F are adapted to bear on the flanges *f* of the same, and it is to admit of the latter scrapers bearing on practically the whole flange that the wheels B are sharpened and the scrapers F flared at their lower ends, as shown in the drawings. (See particularly Fig. V.) At the back of each scraper is secured a block, G, of rubber or some other similar material, which, as the scraper is lowered, bears against the surface of the rail and rubs off any ice, snow, or dirt left thereon in a loose condition by the scrapers. The rubber blocks are backed by plates *g g* and held in place by means of bolts *h h*.

H H are stops to limit the downward movement of the scrapers and rubber blocks, and these stops preferably consist of extensions from the plates C.

The bars D D are connected in pairs by means of rods *k*, and are operated by means of handles I from the truck A, and in order that they may be held at any required height the said handles are notched and pawls *m m* employed, which are fitted to enter the notches, as will be readily understood. I do not, however, confine myself to the use of the handles shown, as other devices could be employed in place of them without affecting the result. While it is preferred to have the scrapers directly under the axles *a* in order that they may be effective as the track-cleaner is rounding curves, they could be situated between the axles or in front of the axles, if desired.

The rubber blocks G have lateral extensions *n*, with recessed, curved, or beveled lower surfaces, (see Figs. II and V,) to clean the pavement immediately adjacent to the track.

It will be understood that in suspending the scrapers from the plates C, or any equivalent device connected directly with the axles, a constant pressure of the scrapers can be maintained on the track—a result that could not be easily accomplished if they were hung from the truck.

K K are circular brushes on the axle *o*, which turn loosely in boxes *p p*, adapted to have a vertical motion in the plates C C. The said brushes are revolved by means of the pulleys L and M, the former being on one of the axles *a* and the latter on the brush-axle *o*, and a suitable belt, *q*, which is crossed to make the brushes revolve in a direction contrary to that of the car-wheel. The means preferably employed to elevate the brushes and their axle consists of a pair of chains or ropes, *r r*, which lead over sheaves *s s*, and connected to a single chain or rope, *t*, which is attached to a lever, O, operated from the truck. The weight of the brushes is expected to give them sufficient pressure on the track-rails; but springs can be used to increase the pressure, if necessary.

I claim as my invention—

1. In a track-cleaner, the combination of pendent scrapers adapted to fit the surface of the track-rails, pivoted to supports hung from

the axles, and means to elevate and depress the said scrapers, substantially as and for the purpose specified.

2. In a track-cleaner, the combination of wheels with sharpened edges, and pivoted scrapers arranged on both sides of the said wheels and adapted to fit the surface of the track-rails, substantially as and for the purpose specified.

3. In a track-cleaner, pivoted scrapers backed with flexible blocks which rest on and serve to clean the said track in the path of the scrapers, substantially as and for the purpose specified.

JOHN M. CHRISTOPHER.

Witnesses:
WM. T. HOWARD,
FRANK HODGES.