(No Model.)

G. R. & W. H. PERRY.

TRACK CLEARING ATTACHMENT FOR RAILWAY CARS.

No. 457,540. Patented Aug. 11, 1891.

Fig. 1

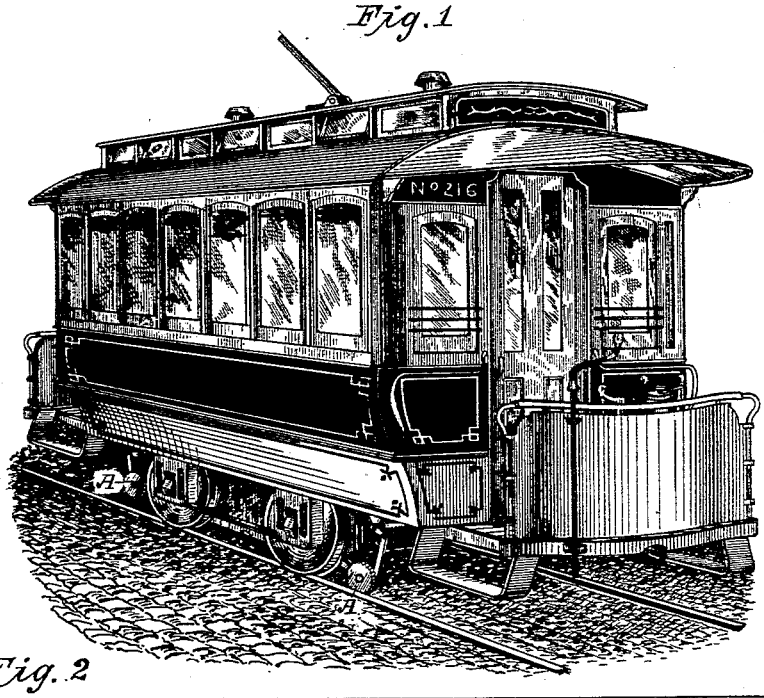


Fig. 2

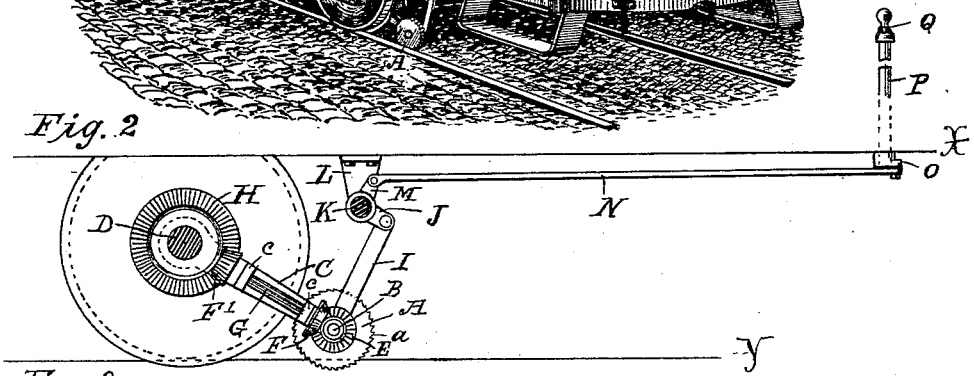
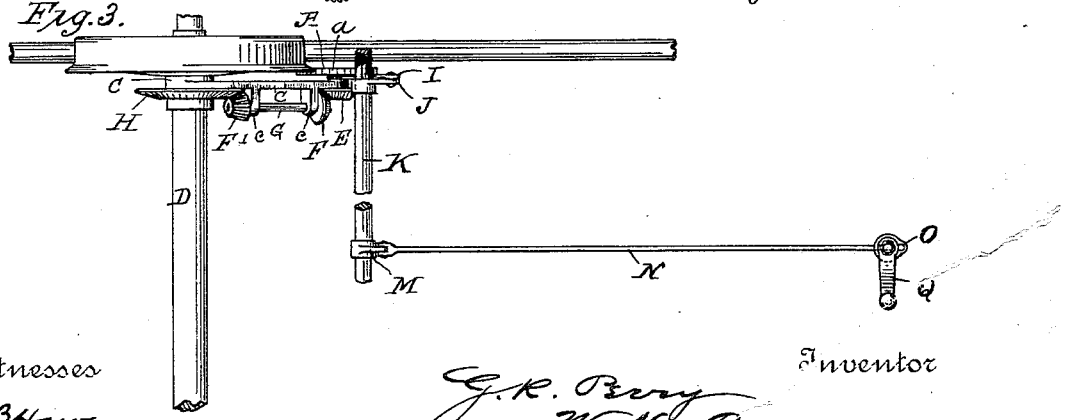


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE R. PERRY AND WILLIAM H. PERRY, OF CONCORD, NEW HAMPSHIRE.

TRACK-CLEARING ATTACHMENT FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 457,540, dated August 11, 1891.

Application filed January 24, 1891. Serial No. 378,903. (No model.)

To all whom it may concern:

Be it known that we, GEORGE R. PERRY and WILLIAM H. PERRY, citizens of the United States, residing at Concord, in the county of Merrimac and State of New Hampshire, have invented certain new and useful Improvements in Track-Clearing Attachments for Railway-Cars; and we 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.

This invention relates to all surface railways, and is adapted for use upon steam-locomotives, electric motors, as well as ordinary horse-cars and snow-plows.

All surface railways experience more or less difficulty in maintaining schedule time in winter, caused by obstructions of snow and ice. Of all roads, however, the electric street-railways experience by far the greater difficulty from this cause, for with them direct contact between the wheels and rails is absolutely necessary for their successful operation. With teams constantly crossing the street-railway tracks, snow, which may have been piled up on either side by snow-plows, is gradually thrown back, and if it does not actually cover the tracks the tendency is toward filling the groove in which the flanges of the car-wheels run, and in a short time this will become packed quite solid, so much so in fact that the flanges of the wheels will pack it still harder, and finally by riding upon the snow or ice prevent contact between the wheels and the rails, thus rendering the car inoperative.

The object of the present invention is to keep the "tread" of the wheels on the "iron" by means of rotary cutters, which shall clear a channel in the proper groove for the flanges of the wheels, and thus avoid the above-mentioned difficulty.

Our invention consists in rotary cutters, as fully explained in the following specification and claims, and clearly illustrated in the accompanying drawings, forming a part thereof, of which—

Figure 1 is a perspective view of an electric street-car to which our improvements are applied. Fig. 2 represents a side elevation of the cutter and one means by which it may be operated, as well as raising and lowering mechanism, Fig. 3 being a broken plan view of those parts shown in Fig. 2.

Similar letters designate corresponding parts.

In the drawings we show but one method for mounting and driving our cutters, as it is not our purpose to claim in the present instance any particular driving mechanism, numerous methods being feasible, as, for instance, the common belt and belt-pulleys or sprocket-wheels and chain-belts.

As speed forms an important factor in the successful work of the cutters, it is probable that some system of gearing, as a driving mechanism, is preferable.

The lines X Y, seen in Fig. 2, represent respectively the bottom of a car and the rail.

A represents our improved rotary cutter, which should be something under a foot in diameter and about one inch or less in thickness. The peripheries of these cutters are serrated, as at *a*, and they are mounted on an arbor B, carried in bearings formed at one end of the arms C, mounted, as shown, upon the car-axle D. These arbors B may extend from one to the other side of a car and carry a cutter for each rail, in which case a single train of gears might connect it with the car-axle at or near the center of the car; but in the drawings we show an independent arbor B for each cutter, carrying on the opposite side of the arms C a bevel-gear E, meshing with a bevel-gear F, mounted upon the lower end of a shaft G, carried in bearings *c*, formed upon each arm C, and having at its upper end a bevel-gear F′, meshing with a gear H, mounted upon the car-axle.

The vertical adjustment of the cutters may be accomplished by means of a rod I, connecting each of the arms C with a crank J, mounted near each end of a shaft K, supported by hangers L, which shaft is provided with a crank M, connected by means of a rod N with a short crank O, mounted on a vertical rod P, which passes upward through the platform of a car and terminates in a hand-crank Q, and by turning the latter one-half a revolution to

the left or to the right both the cutters at one end of a car are either raised or lowered, as required.

In Fig. 2 the cutter A is shown as when lowered sufficiently deep to clear a deeper groove than is actually required by the wheel-flange. These cutters A are driven in the opposite direction to that in which the car or its wheels are moving. Hence the ice is thrown ahead.

Having described our invention, what we claim is—

1. In a track-cleaning device, the combination, with the axle of a car, of a gear-wheel mounted thereon and an arm pivotally secured at one end to the axle and having bearings upon one side, a cleaning-wheel journaled at the free end of the arm provided with a gear-wheel, a shaft journaled in the bearings, having a wheel at each end, engaging with the said gear-wheels, and means for adjusting the free end of the arm, substantially as described.

2. In a track-cleaning device, the combination, with an arm pivotally connected at one end to the car and having a cleaning-wheel at the opposite end, adapted to be driven from the axle of the car, of a shaft journaled to the car, provided with two cranks, a handle at the front of the car, a rod connecting one of the cranks to the free end of the arm, and another rod connecting the other crank to the handle, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

GEORGE R. PERRY.
WILLIAM H. PERRY.

Witnesses:
J. B. THURSTON,
NATHANIEL E. MARTIN.