

R. MILLER.
CAR MOVER.

APPLICATION FILED DEC. 9, 1902.

NO MODEL.

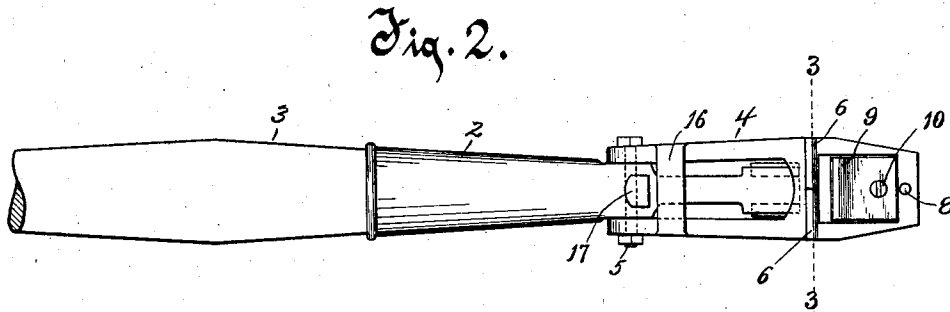
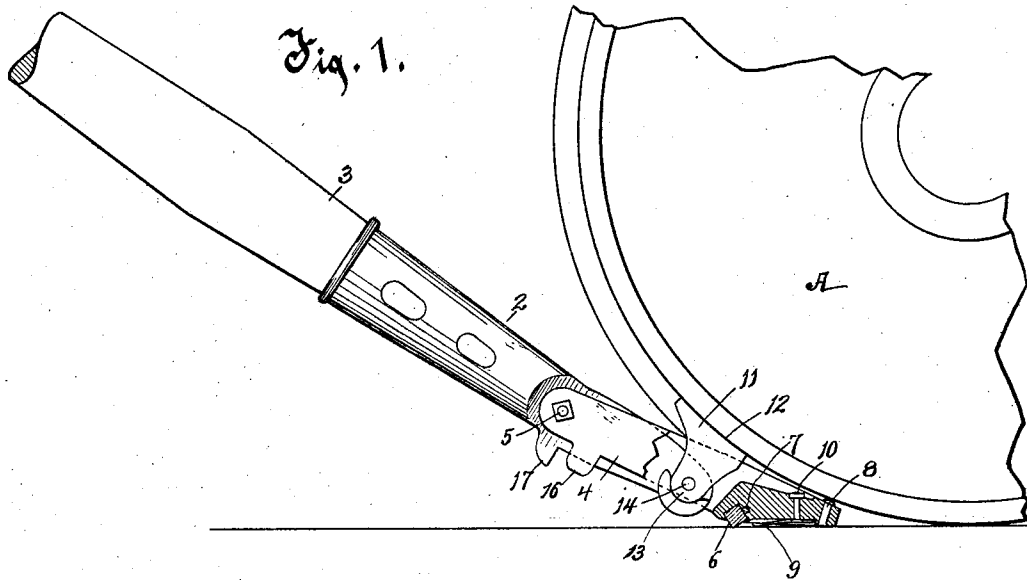
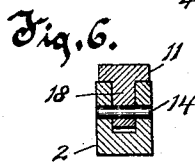
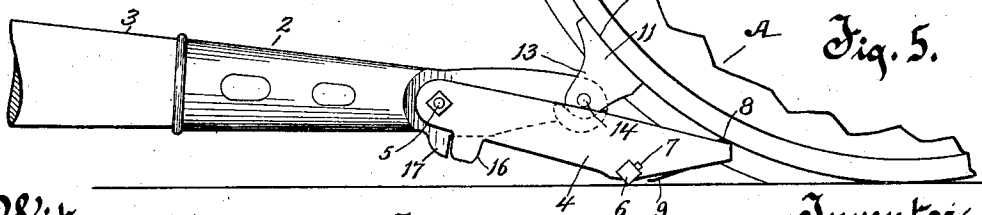
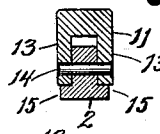


Fig. 2a.



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UNITED STATES PATENT OFFICE.

RICHARD MILLER, OF APPLETON, WISCONSIN.

CAR-MOVER.

SPECIFICATION forming part of Letters Patent No. 739,017, dated September 15, 1903.

Application filed December 9, 1902. Serial No. 134,593. (No model.)

To all whom it may concern:

Be it known that I, RICHARD MILLER, residing at Appleton, in the county of Outagamie and State of Wisconsin, have invented a new and useful Improvement in Car-Movers, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

The object of my invention is to provide a novel pinch-bar or car-mover especially adapted for use for starting and moving limited cars on a track.

By my novel construction I secure certain advantages in the construction of the car-mover and also obtain benefits in securing the implement in place against slipping on the track, on which it is supported when used, and also advantages in the method of applying force to the car-wheel and in securing with the same power greater effort on the car-wheel in the direction of moving the car ahead than have heretofore been obtained.

My invention consists of the car-mover, its parts and combinations of parts, as herein described and claimed, or the equivalents thereof.

In the drawings, Figure 1 represents my improved car-mover, parts being broken away and parts being shown in section for clear illustration of its construction in connection with a fragment of a car-wheel to illustrate the method of using the implement. Fig. 2 is a top plan view of my improved car-mover, a portion of the handle being broken away and omitted. Fig. 3 is a cross-section on line 3 3 of Fig. 2. Fig. 4 is a transverse section of the front end of the main bar and of the nose-piece or pusher thereon. Fig. 5 represents my improved car-mover in connection with a fragment of a wheel of a car, the car-mover being in a position which it has when the main bar has been moved down at its outer end in the act of moving a car; and Fig. 6 is a cross-section similar to Fig. 4, showing a different form of construction of the two parts shown.

In the drawings, A represents a fragment of a car-wheel, shown in the drawings for illustrating the method of using my improved car-mover. In the car-mover 2 represents the main bar, which is advisably constructed

with a socket in its outer end, into which a wood handle 3 is inserted, and thereby made a part of the main bar. To the front part of the main bar 2 a fulcrum member 4 is pivoted. For securing these two members together properly the member 4 is slotted longitudinally from its rear end forwardly, and at its rear end the two side pieces of the fulcrum member 4 are pivoted to the bar 2 at a distance rearwardly from its front end by a transverse pivot-pin 5. The front end of the main bar is thus made free to swing in the fulcrum member. This fulcrum member 4 in use is fulcrumed on the rail on which the wheel of the car travels, and in order to furnish a strong and holding fulcrum-bearing on the rail and a fulcrum-bearing that shall securely take hold of the rail, which is usually lightly convex on its top surface and also after use is surface-hardened, I provide a fulcrum consisting of square blocks 6 6, which are fitted transversely of the fulcrum member in a recess therefor diagonally in its under surface at a distance rearwardly from its front end. These fulcrum-blocks consist, advisably, of two members 6 6, Fig. 3, fitted into the transverse recess therefor in the fulcrum member at an angle to each other, so that the lower fulcrum edge of these blocks is raised slightly centrally of the fulcrum member, whereby these fulcrum-blocks are adapted to rest on or bear against the somewhat convex surface of the rail at two points at least at a little distance away from the longitudinal central and raised line of such curved surface of the rail. By this means I am able to get a more extended bearing for the fulcrum-block transversely on the rail, thereby better holding it in position on the rail than is obtained when a fulcrum-block having a straight-edge is employed, which bears only at a single point on the transversely-curved surface of the rail. These fulcrum-blocks are conveniently secured in place in the fulcrum member by being locked thereto by wedging-keys 7. A steel horn 8 may be inserted in the front end of the fulcrum member 4, which, projecting slightly above the surface of the member, furnishes a hard and enduring bearing adapted to contact with the car-wheel and prevent wear of

the front extremity or nose of the fulcrum member. A flat spring 9 may be placed under the front end of the fulcrum member and secured thereto by a bolt 10. This spring is adapted to lift the front end of the fulcrum member from the rail when the car-wheel moves away from the fulcrum member.

On the front end of the main bar 2 I provide a nose-piece or pusher 11. This pusher is provided with a curved outer surface 12, adapted to fit against and thereby to adhere to the peripheral surface or tread of a car-wheel and so pivoted on the bar 2 that it is adapted to take the initial position shown in Fig. 1, and as the main bar is swung down in the act of pushing against and starting the car-wheel the pusher swings to the position shown in Fig. 5. I preferably construct this pusher with rearwardly-extending furcate arms 13 13, which near their extremities are pivoted by a pin 14 to the front end of the bar 2. For strengthening the movable connection between the pusher and the bar I advisably provide curved shoulders 15 15 on the bar 2, against which the correspondingly-curved extremities of the arms 13 13 fit, whereby the strain of pushing the car-wheel comes not only on the pivot 14, but also on the shoulders 15.

It will be observed that by reason of the length of the arms 13 the radial distance from the pivot 14 to the surface 12 of the pusher is such that when it swings on the bar 2 from the position shown in Fig. 1 to the position in Fig. 5, while the fulcrum remains in constant position on the rail, the pusher exerts a forwardly-pushing strain on the car-wheel in the nature of a toggle-joint action, whereby the wheel is compelled to move ahead if the main bar of the car-mover is forced down.

A cross-strap 16 on the fulcrum member 4 is adapted to engage stop 17 on the bar 2 when the parts come to the position shown in Fig. 5, and thereby prevent further swing of

the fulcrum member on the main bar in this direction.

In Fig. 6 I have shown a form of construction in which the pusher 11 is mounted on the bar 2 in a slightly-different form from that shown in the other figures, in that the pusher 11 is provided with a tongue 18, that fits into a socket therefor in the front end of the main bar and is pivoted to the bar. In this form of construction the tongue may bear movably against the bar at the bottom of the socket, thus securing the additional strength required in this connection.

What I claim as my invention is—

1. A car-mover, comprising a main bar, an elongated fulcrum member pivoted at its rear end on the main bar near its front end and provided medially with a fulcrum-bearing, and a pusher member pivoted on the front extremity of the main bar and adapted by its front surface to engage a car-wheel and when the long arm of the main bar is depressed at its rear end to be lifted and permitted to swing forwardly about the front end of the main bar.

2. A car-mover, comprising a main bar, a fulcrum member pivoted on the main bar at a distance rearwardly from its front end and provided medially with a fulcrum-bearing, and a pusher member pivoted in front of the pivot of the fulcrum member on the main bar and having a surface distant radially from its pivotal connection with the main bar adapted to bear against and engage a car-wheel and on depressing the rear end of the main bar to swing toward a right line with the main bar exerting a toggle-joint action therewith.

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

RICHARD MILLER.

Witnesses:

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