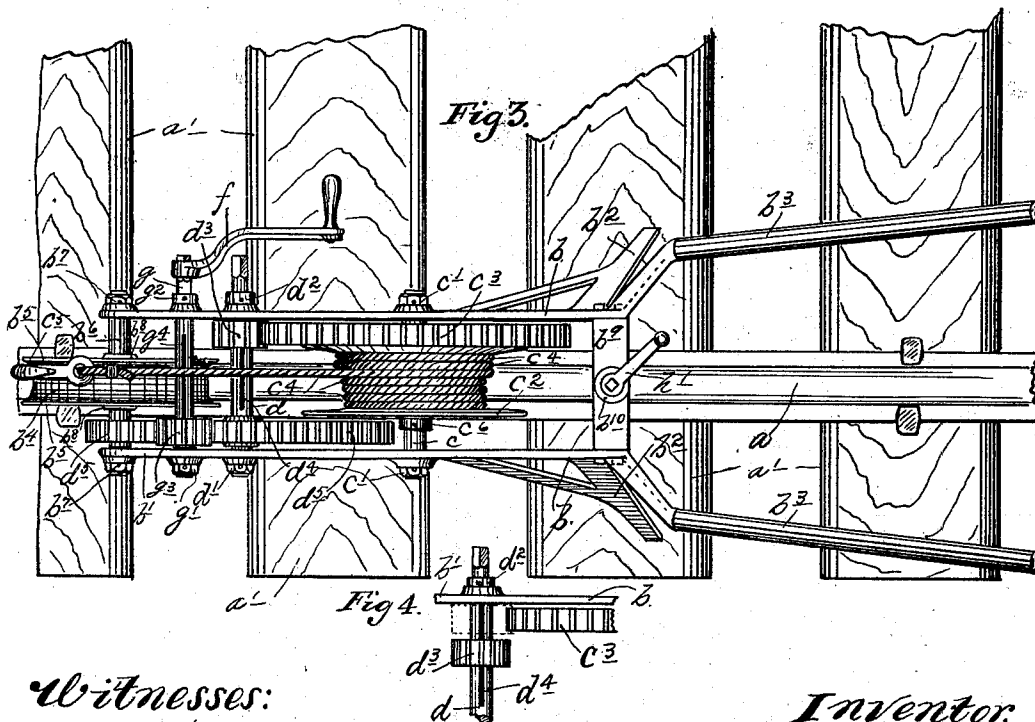
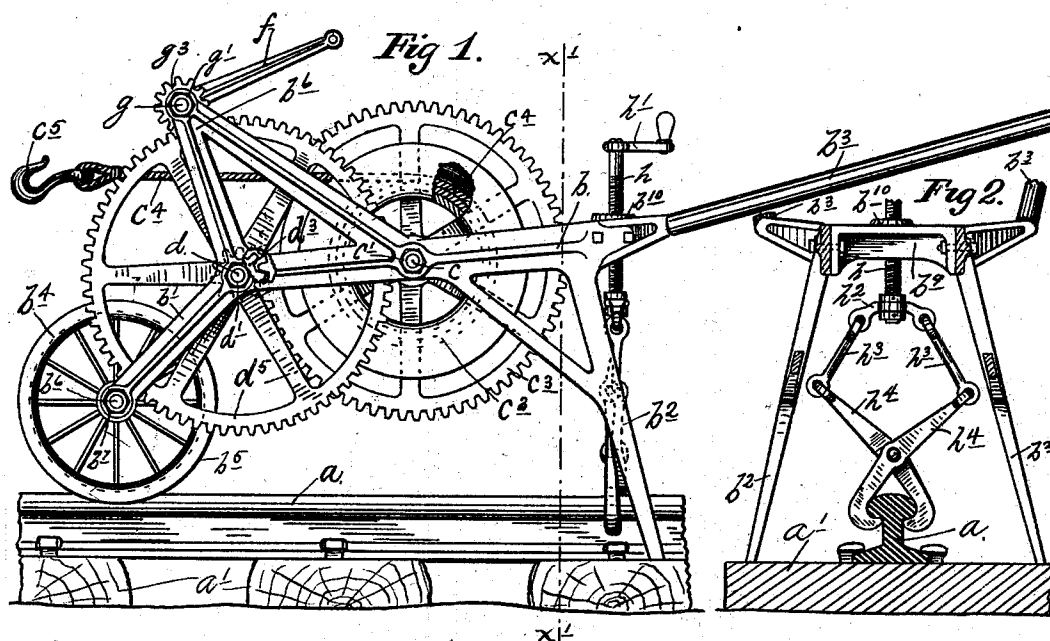


(No Model.)

H. L. MARLETT.
CAR MOVER.

No. 552,537.

Patented Jan. 7, 1896.



Witnesses:
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CAR-MOVER.

SPECIFICATION forming part of Letters Patent No. 552,537, dated January 7, 1896.

Application filed August 15, 1895. Serial No. 559,329. (No model.)

To all whom it may concern:

Be it known that I, HARVEY L. MARLETT, a citizen of the United States, residing at Alpena, in the county of Jerauld and State of South Dakota, have invented certain new and useful Improvements in Car-Movers; and I 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.

My invention has for its object to provide an improved machine especially adapted for moving cars, but also capable of use for moving other objects.

To this end my invention consists of the novel devices and combination of devices hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like notations refer to like parts throughout the several views.

Figure 1 is a left side elevation of the machine in working position with some parts broken away. Fig. 2 is a vertical section on the line $x'x'$ of Fig. 1, looking from the left. Fig. 3 is a plan view of the machine in working position, and Fig. 4 is a detail in plan view.

a represents one of the rails, and a' the ties of a railway-track.

b b' b^2 b^3 represent a strong wheelbarrow-like frame or support, of which parts b represents the body portion, b' the forward and downward extensions therefrom to serve as the bearings for the wheel b^4 , b^2 the legs, and b^3 the handles of the said frame or support. The said frame is made of metal throughout and of the requisite strength for the heavy strain to which it is liable to be subject in the service. The wheel b^4 is a broad-faced wheel with double flanges b^5 , adapting the wheel to ride on a track-rail and prevent lateral displacement of the machine.

On the main or body portion b of the frame and serving to space apart and rigidly hold together the side bars composing the same is located a fixed shaft or bearing-rod c , clamped to the frame-bars by nuts c' and suitably shouldered for holding the side bars of the frame at the proper distances apart. On the said fixed shaft or rod c is loosely mounted

the combined drum c^2 and large gear-wheel c^3 . The drum c^2 , as shown, is assumed to be cast integral with the large gear-wheel c^3 or to be otherwise rigidly secured thereto, so that the drum c^2 and the gear-wheel c^3 will turn together. The drum c^2 is provided with a suitable cable c^4 , having hooks c^5 for attachment to the car or other object to be moved. The shaft c has a spacing-collar c^6 for holding the drum in proper position.

At the junction of the parts b and b' of the frame is mounted a shaft d , the right end of which extends through the frame and is angular-ended for the purpose of applying thereto a crank-handle f . The said shaft d is a shouldered shaft and is held by an outside nut d' and collar d^2 . On the said shaft d is mounted a loose pinion d^3 , which is held thereto for rotary motion therewith by a key or spline d^4 , but is free to slide lengthwise of the shaft, so as to throw the same into or out of engagement with the large gear-wheel c^3 at will. Near its left end said shaft d is provided with a large gear-wheel d^5 , which is fixed to the shaft.

The side bars b of the main frame are provided with bracket-like extensions b^6 , of triangular form, which extend forward and upward to a point above the level of the gear-wheel d^5 . In the said brackets b^6 is mounted a shaft g , which is also a shouldered shaft, and is secured in the said brackets by an outside nut g' and a collar g^2 . The right end of the shaft g extends beyond the brackets b^6 and is of angular form in cross-section, the same as the shaft d , for the application thereto of the crank-handle f . On the said shaft g is loosely mounted a pinion g^3 , which is held to rotate therewith by a key or spline g^4 , but is free for sliding motion thereon, so as to throw the same into or out of engagement with the gear-wheel d^5 .

The side bars b of the main frame are suitably spaced apart, and rigidly tied together at their rear ends or points of junction with the handles b^3 by a cross-bar b^9 . In the said cross-bar b^9 is formed a screw-threaded nut b^{10} , in which nut works a screw h with hand-crank h' . To the lower end of the screw h is attached the head-bar h^2 of a toggle-lever grapple h^3 h^4 , which is adapted to engage with the rail a or other fixed support as a suit-

able base of resistance. The said hand-screw h h' , in co-operation with the said toggle-lever grapple h^2 h^3 h^4 , therefore constitutes a power-device anchor for securing the machine in

5 working position, properly anchored to the rail or other suitable base of resistance.

From the description of the parts, as above set forth, it must be obvious that the side bars or side portions of the main frame or support are rigidly secured together and spaced apart by the shouldered shafts c d g and the rear end spacing-bar b^9 . The track-wheel b^4 is also preferably loose on the cross-shaft or axle, which is preferably made as a shouldered shaft and rigidly secured to the lower ends of the parts b' of the main frame by outside nuts b^7 , and is provided with suitable spacing-collars b^8 for holding the wheel b^4 in its proper or central position. Hence the shaft will co-operate with the other shafts c , d and g and the rear-end cross-bar b^9 to brace the parts of the main frame. It is also obvious from the foregoing statements that the machine may be moved from one

15 position to another like an ordinary wheelbarrow; that the machine is especially well adapted to be moved on a rail of the track, and to be anchored thereto by the power-device anchor in proper working position for the pull required. The double flanges b^5 on the wheel b^4 serve not only to hold the machine from lateral displacement in either direction, when moving the same lengthwise of the rail, but serve the same function against lateral strain under the pull on the windlass. Hence the said flanged wheel, together with the power-device anchor, will securely hold the machine to the rail, or in its anchored position, under any pull to which it may be subjected. It is also obvious from the foregoing statements that the windlass is equipped with interchangeable power and speed gearing. With the parts as shown in Fig. 3 the windlass would be capable of its greatest

45 pull under power applied to the crank-handle f , but in the slowest time; but by shifting the crank-handle f to the intermediate shaft d , either with or without shifting the pinion g^3 out of engagement with the gear-wheel d^5 , increased speed may be readily obtained with the corresponding loss of power.

For unwinding the drum or running out the cable the pinion d^3 may be shifted on its shaft d out of gear with the wheel c^3 , so as to leave the drum free to turn easily on its axle c under the outward movement of the cable.

The relative proportions of the different members making up the train g^3 d^5 d^3 c^3 of gearing for operating the windlass may be varied at the will of the maker of the machine.

I prefer to make the members g^3 and d^5 as one to six, and the members d^3 and c^3 as one to six, and to make the drum-gear c^3 as two to one with respect to the drum. This will give a pull of seventy-two to one, with the crank-handle f applied to the shaft g , as shown in Fig. 3. This will afford an abundance of

power to enable an ordinary workman to move the heaviest car on the level or any ordinary grade such as would appear in an ordinary yard. When the crank-handle is applied to the shaft d , the power is of course reduced six times, with a corresponding increase in speed.

A car-mover constructed as herein described is a great convenience in railway-yards. It can be readily moved to any point desired, always find a solid anchorage, and be easily operated by one man to move a car. Hitherto, so far as I am aware, no such convenient or efficient device has been provided for this purpose.

It will of course be understood that some of the details of the construction shown could be varied without departing from the spirit of my invention. For example, while the hand-screw and toggle-lever grapple is the most convenient and desirable form of power-device anchor, it will be understood that other forms of power-device anchors might be substituted instead. It should also be noted that the flanged wheel b^4 b^5 , together with the wheelbarrow-frame and windlass, would be a serviceable device even without the power-device anchor, and, on the other hand, that the wheelbarrow-like frame and power-device anchor could be made to co-operate with a broad-faced wheel without flanges, provided the strain on the windlass was substantially in line with the rail or the center line of the machine. Both the power-device anchor and the double-flanged wheel b^4 b^5 are, however, desirable for all work, and are a necessity for rendering the machine adapted to sidewise strain—such, for example, as pulling a car on a laterally-adjacent track instead of on the same track.

Of course it will be understood that this machine will operate to pull a car in either direction without changing or shifting the machine end to end.

It is of course obvious that this machine is portable on the ground, although not quite so well as on the track, and that the same might be applied to move any other object as well as cars. It may also be noted that the head of the hand-screw h might be made of the same size as the heads of the shafts d and g , which would make it possible to use the single crank-handle f to operate the hand-screw h as well as the windlass. The separate crank-handle h' for the hand-screw h is shown in the drawings for the sake of distinctness of illustration.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A car mover, involving the combination with a windlass, of a wheelbarrow like frame or support for the same, bearing a double flanged wheel adapted to ride a track rail and prevent lateral displacement of the machine in either direction, substantially as described.
2. A car mover, involving the combination with a windlass, of a wheelbarrow like frame

or support therefor, having a double flanged wheel adapted to ride a track rail and resist lateral displacement of the machine, and an anchor for rigidly securing said support to said track rail or other fixed base of resistance, substantially as described.

3. A car mover, involving the combination with a windlass, of a wheelbarrow like frame or support therefor, having a double flanged wheel adapted to ride the track rail and prevent lateral displacement of the machine, and a power device anchor carried by said support and engageable with the track rail to secure the machine in working position, substantially as described.

4. A machine for moving cars or other objects, involving the combination with a windlass, of a wheelbarrow like support for the same, and an anchor comprising a hand screw on said support, and a grapple carried by said

hand screw and engageable with a track rail or other fixed base of resistance, substantially as described.

5. The car mover described, comprising the wheelbarrow like support or frame, having the double flanged wheel for riding the rail and preventing lateral displacement of the machine, the windlass thereon equipped with interchangeable speed and power gearing, and the anchor consisting of the hand screw working through a nut on said support, and the toggle action grapple carried by said screw for engagement with the track rail, substantially as described.

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

HARVEY L. MARLETT.

Witnesses:

L. N. LOOMIS,
DALE WALLACE.