W. H. McCARTHY.

HAND TRUCK.

APPLICATION FILED MAY 18, 1914.

1,137,993.

Patented May 4, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

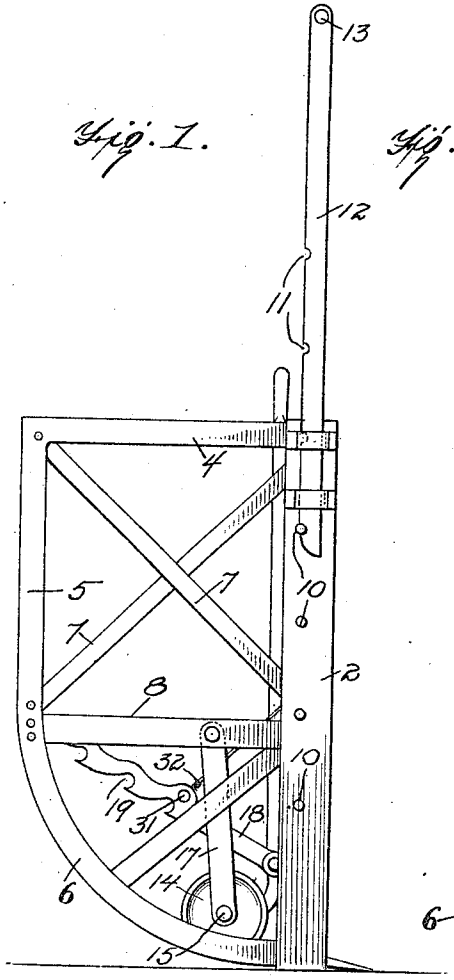


Fig. 2.

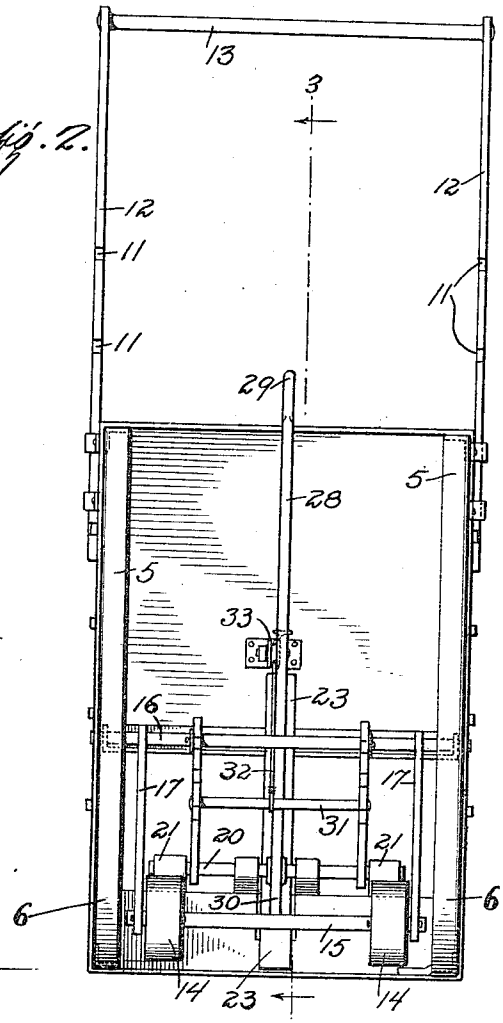
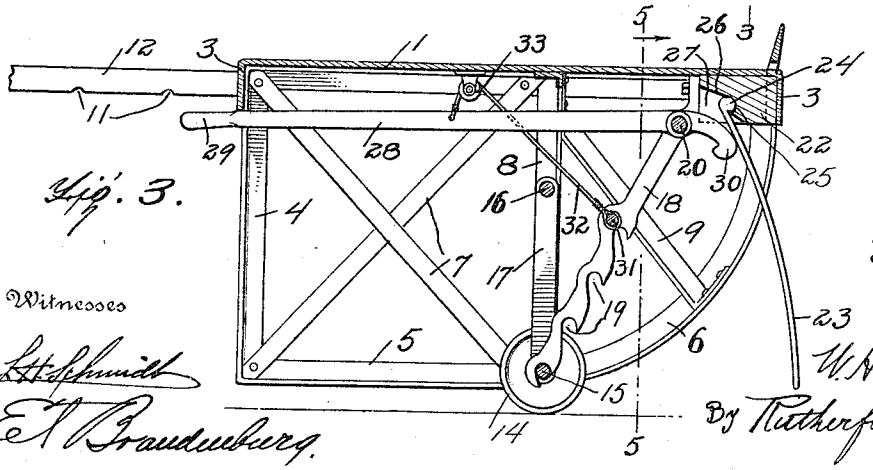


Fig. 3.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

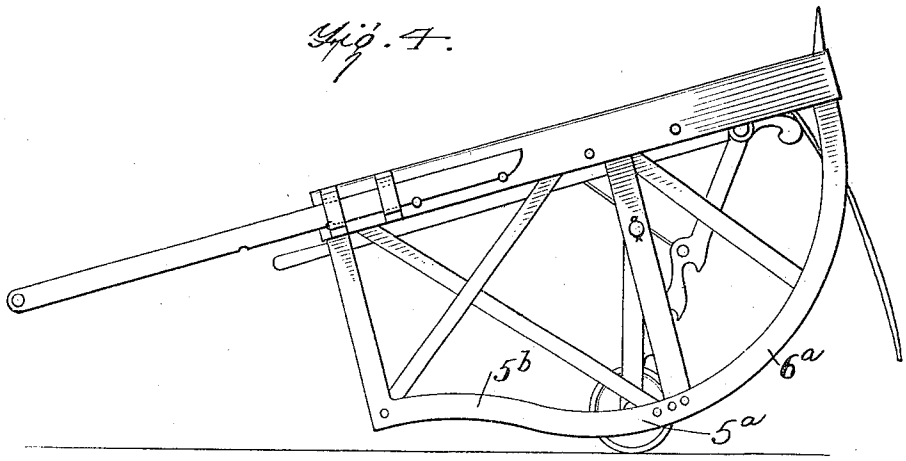


Fig. 5.

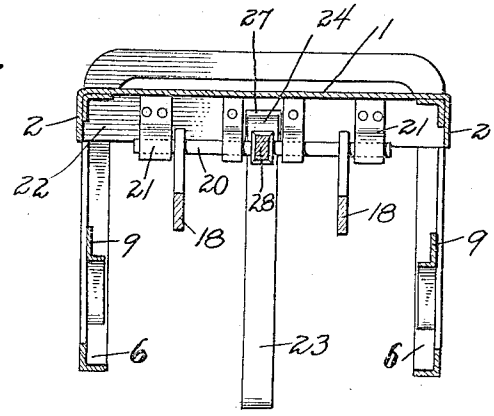
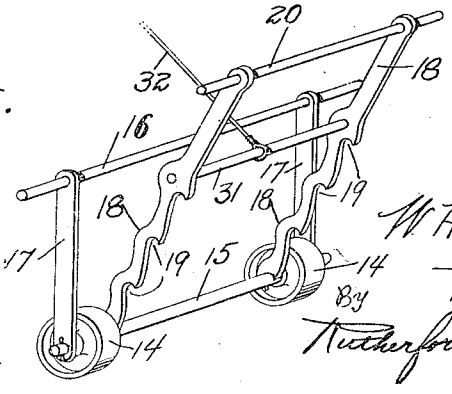


Fig. 6.



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UNITED STATES PATENT OFFICE.

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HAND-TRUCK.

1,137,993. Specification of Letters Patent. Patented May 4, 1915.

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To all whom it may concern:

Be it known that I, WILLIAM H. McCARTHY, a citizen of the United States, residing at Melrose, in the county of Stearns and State of Minnesota, have invented certain new and useful Improvements in Hand-Trucks, of which the following is a specification.

The object, in general, of my invention is to provide a hand truck which shall embody novel brake mechanism for preventing the forward end of the truck tilting under the weight of a load thereon.

Another object is to provide a device of the character specified which shall embody novel means for elevating the wheels of the truck, when it is desired to dump the load.

Another object is to provide a hand-truck wherein the wheel-elevating mechanism is operatively associated with the brake-mechanism, whereby actuation of the former will simultaneously actuate the latter, to release the brake.

Another object is to provide the truck with handles which are adjustable with relation to the truck.

Subsidiary objects, going to make up the ultimate perfection of the whole device, will appear as the specification proceeds and the nature of the invention more fully appears.

With these specifically-stated objects in view, the invention resides in the novel construction, combination and arrangement of parts of a hand-truck, as will be hereinafter fully described in the specification, summed up in the claims, and illustrated in the drawings.

In the accompanying drawings, in which like reference characters denote corresponding parts throughout the several views, I have illustrated an embodiment of my invention capable of carrying out the underlying principles thereof; and, in these drawings, the different views may be briefly described as follows:

Figure 1 is a side elevation of the truck in dumping position and the brake released; Fig. 2 is a bottom plan view of the truck; Fig. 3 is a section on the line 3—3, Fig. 2, looking in the direction of the arrows, showing the truck in normal position, with the brake in operative position; Fig. 4 is a side elevation of a slightly modified form of truck, in respect, only, to the lower curved frame-bars; Fig. 5 is a transverse section, on the line 5—5, Fig. 3, looking in the direction of the arrow; Fig. 6 is a detached, detail, perspective view of the truck-wheels, their pivotal supporting-means, and the releasable mechanism for normally maintaining the wheels against movement on their pivots.

Referring, now, in detail to the drawings, and, first, to Figs. 1, 2, 3, 5 and 6 thereof: 1 designates the platform of my truck, which may be provided with the depending edge flanges 2, 2 and 3, 3. The platform may be supported by any suitable form of frame, in this instance, the rear vertical members 4, 4; the lower members 5, having their forward portions 6, 6 curved on the arc of a circle; the crossed braces 7, 7; the vertical braces 8; and the braces 9, 9. The frame may be made of angle-iron, as shown. Carried by each of the flanges 2, 2 is a longitudinally-arranged series of pins 10, coöperable with a correspondingly-longitudinally-arranged series of notches 11 in each of the bars 12 connected at their rear ends by the handle-bar 13. It will be noted that, by this construction, the handle-bar 13 may be adjusted, as desired, with reference to the truck, so as to be nearer thereto, or farther away therefrom.

The truck is mounted, so as to be trundled, on wheels 14, 14, which are sustained upon an axle 15.

The invention comprehends means for elevating the wheels from their normal position, and it, also, necessarily comprehends means for locking the wheels in normal position.

The wheel-elevating mechanism may involve various instrumentalities; but, in the present instance, the preferable arrangement is exemplified in the drawings: Pivoted on a rod 16 connecting the braces 8 are depending arms 17, 17 secured, at their lower ends, to the axle 15. Therefore, it will be seen that, by rocking the arms 17, 17 on their pivots, the wheels 14, 14 will be elevated. The mechanism for locking the arms 17, 17 in normal position, against movement on their pivots, may take various forms; but, in this instance, it comprises two arms 18, 18, each provided, along one longitudinal edge thereof, with a series of notches 19, constituting hooks, any one of which may operatively engage and hold the axle 15. A connecting rod 20 is disposed at the top of the arms 18, 18, and is journaled, for pivotal movement, in suitable bearings 21 carried

by a beam or block 22 disposed beneath the platform 1 and engaging said platform and the front flange 3. Thus, by rocking the arms 18, 18 out of engagement with the axle 15, the arms 17, 17 are free to be tilted on their pivots. Any suitable mechanism may be provided for effecting the rocking of the arms 17, 17 and for releasing the same from locked position; but I have illustrated in the drawing, as an example, my preferred form, which is, also, by preference, operatively associated with the mechanism for actuating the brake, whereby release of the brake from locked position is effected simultaneously with the unlocking of the wheels and the elevation thereof.

23 designates the brake, which may take the form of a curved, normally depending bar, or elongated plate, having, at one end thereof, a head or boss 24, engageable, when the brake is in locked position, with a correspondingly-shaped cavity or socket 25 formed in the rear inclined wall 26 of a recess 27 in the beam or block 22. As shown, when the brake is in locked position (Fig. 3), its lower end is then a short distance above the ground, so that, should the load on the truck tend to tilt the forward end thereof, the brake 23 will engage the ground and limit such tilting movement and prevent dumping of the load.

28 designates a brake-lever, which has a handle 29 at one end and a downward-curved or cam portion 30 at the other end thereof, which cam portion is engageable with the brake 23. The lever is fulcrumed toward the cam end 30 on the rod 20. Intermediate the ends of the arms 18, 18 is a connecting-rod 31, to which is secured one end of a flexible member, such as a cord 32, which passes up over a pulley 33, and the other end secured to the lever 28.

In operation, when it is desired to release the brake 23 from normal or locked position (Fig. 3), the operator bears downward upon the handle 29, which depresses the brake lever 28, causing the cam end 30 to ride upward, pressing against and consequently moving the brake 23, so that its head 24 moves out of the socket 25. This movement downward upon the lever 28 will, of course, pull the cord 32, so as to elevate the arms 18, 18 and rock them out of engagement with the axle 15. When the truck has been tilted by the handle 13 to the dumping position shown in Fig. 1, the front flange 3 of the truck strikes the ground. In the dumping position shown in Fig. 1, the brake 23 has been forced in so as to lie beneath and in substantial horizontal alinement with the platform 1. When the truck is brought back toward horizontal position, as shown in Fig. 3, and it is desired to have the brake 23 resume its normal position, as shown in Fig. 3, the lever 28 is elevated, which causes the cam end 30 thereof to be depressed, whereupon the brake 23 slides downward until the head 24 is caught in the recess 25.

Fig. 4 shows a truck almost identical with that of the other views of the drawings, the only difference being that the truck of Fig. 4 has a slightly-different contour of lower frame members 5^a, which have the rear curved portions 5^b, whereby the truck may be permitted to tilt or incline rearward somewhat.

For the purpose of a full disclosure of my invention, I have herein described in some detail a specific embodiment thereof; but it will be apparent that numerous changes might be made in the physical embodiment of my invention, within the scope of the appended claims, without departing from the spirit of the invention, and I do not, therefore, desire to be understood as limiting myself, in the broader aspect of my invention, to the specific construction shown and described.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a hand-truck, a frame; traction-wheels; an axle on which said wheels are mounted; pivoted members connecting said axle with the truck-frame, means for preventing pivotal movement of said members, comprising pivoted arms normally engaging said axle; and means, including a hand-lever, for disengaging said arms from said axle.

2. In a hand-truck, a frame; traction-wheels; an axle on which said wheels are mounted; pivoted members connecting said axle with the truck-frame, means for preventing pivotal movement of said members, comprising pivoted arms normally engaging said axle; and means, comprising a hand-lever and a flexible connection between said hand-lever and said arms, for disengaging said arms from said axle.

3. In a hand-truck, a platform; a frame; a brake, comprising a normally-depending, elongated member, disposed beneath said platform, toward one end thereof; traction-wheels; an axle on which said wheels are mounted; pivoted members connecting said axle with the truck-frame, means for preventing pivotal movement of said members; and means, common to said last-named means and to said brake, for simultaneously rendering inoperative said means for preventing pivotal movement of said members and for moving said brake out of normal, operative position.

4. In a hand-truck, a platform; a frame; a brake, comprising a normally-depending, elongated member, disposed beneath said platform, toward one end thereof; traction-wheels; an axle on which said wheels are mounted; pivoted members connecting said

axle with the truck-frame, means for preventing pivotal movement of said members, comprising pivoted arms normally engaging said axle; and means, common to said arms and to said brake, for releasing said arms from engagement with said axle and for simultaneously moving said brake out of normal, operative position.

5. In a hand-truck, a platform; a frame; a brake, comprising a normally-depending, elongated member, disposed beneath said platform, toward one end thereof; traction-wheels; an axle on which said wheels are mounted; pivoted members connecting said axle with the truck-frame, means for preventing pivotal movement of said members, comprising pivoted arms normally engaging said axle; and means, common to said arms and to said brake, for releasing said arms from engagement with said axle and for simultaneously moving said brake out of normal, operative position, said means including a hand-lever engageable with said brake.

6. In a hand-truck, a platform; a frame; a brake, comprising a normally-depending, elongated member, disposed beneath said platform, toward one end thereof; traction-wheels; an axle on which said wheels are mounted; pivoted members connecting said axle with the truck-frame; means for preventing pivotal movement of said members, comprising pivoted arms normally engaging said axle; and means, common to said arms and to said brake, for releasing said arms from engagement with said axle and for simultaneously moving said brake out of normal, operative position, said means comprising a hand-lever engaging said brake, and a flexible member between said hand-lever and said arms.

In testimony whereof, I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM H. McCARTHY.

Witnesses:
W. F. DONOHUE,
A. J. ZUERCHER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."