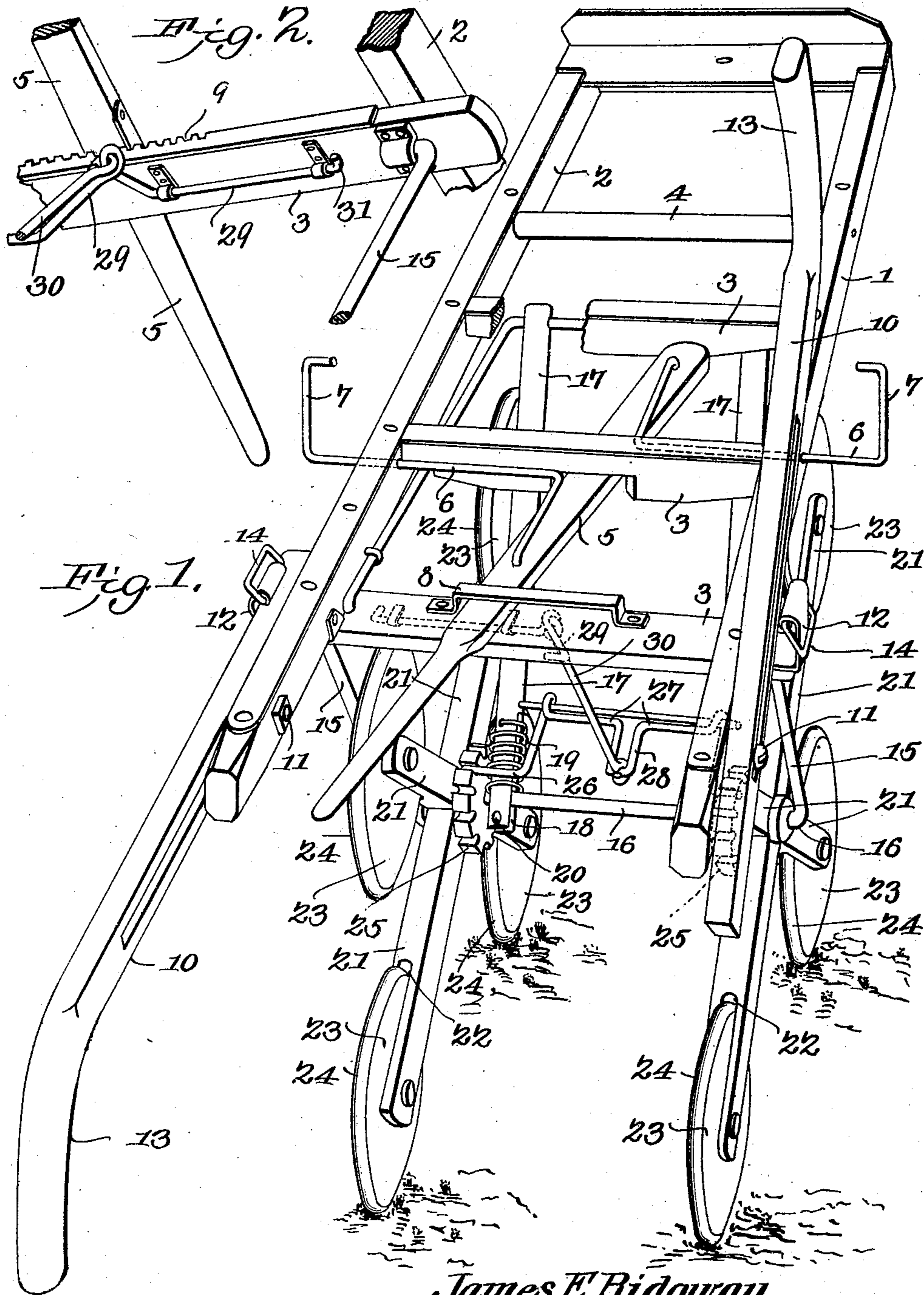


No. 843,034.

PATENTED FEB. 5, 1907.

J. E. & W. R. RIDGWAY.
HAND TRUCK FOR CARRYING BAGGAGE, &c.
APPLICATION FILED MAR. 21, 1906.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JAMES EDGAR RIDGWAY AND WILLIAM REDMON RIDGWAY, OF ATCHISON,
KANSAS.

HAND-TRUCK FOR CARRYING BAGGAGE, &c.

No. 843,034.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed March 21, 1906. Serial No. 307,223.

To all whom it may concern:

Be it known that we, JAMES EDGAR RIDGWAY and WILLIAM REDMON RIDGWAY, citizens of the United States, residing at Atchison, in the county of Atchison and State of Kansas, have invented a new and useful Hand-Truck for Carrying Baggage, &c., of which the following is a specification.

This invention relates to hand-trucks for carrying baggage, &c., and its object is to provide a device of this character which can be readily pushed over obstructions and which can be moved up and down stairways without jolting and with nearly as much ease as along smooth surfaces.

Another object is to provide a truck which can be locked to its supporting-wheels, so as to be held at a desired angle to the ground.

Another object is to provide means for holding baggage, &c., upon the truck, so as to prevent it from slipping out of position thereon.

With the above and other objects in view the invention consists of rotatable supporting members each of which consists of radiating arms rigidly connected and having wheels journaled in their free or outer ends. These supporting members are so disposed that when the truck is moved over a smooth surface the radiating arms will remain stationary in relation to their axis; but should the wheels be brought into contact with obstructions the arms will swing or rotate upon their axis, so as to bridge or step over the obstruction. The truck-frame is pivotally connected to the centers of the rotatable supports, and means are carried by the said frame for the purpose of locking it to the support, whereby it can be held at a desired angle to the ground.

The invention also consists of certain other novel features of construction and combination of parts, which will be hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings, Figure 1 is a perspective view of the truck, one of the handles thereof being raised out of operative position. Fig. 2 is a bottom perspective view looking in the direction of the handles and showing one of the cross-strips and the locking-lever connected thereto.

Referring to the figures by numerals of reference, 1 and 2 are the side beams of the frame of the truck, the said beams being connected at suitable intervals by cross-strips 3, the tops of said strips and beams being preferably reinforced by metal straps. One or more rollers 4 may be disposed between the side beams to facilitate the placing of baggage, &c., upon the frame. A lever 5 is pivotally connected to one of the cross-strips adjacent the center thereof, and extending in opposite directions from this lever at opposite sides of its fulcrum are sliding rods 6, which are mounted within the side beams 1 and 2 and terminate in upstanding extensions 7, which are hooked, as shown, and are adapted to engage and hold baggage, &c., upon the truck. The lever 5 is preferably movably mounted beneath a guide-strap 8, which serves to limit its movement and at the same time keep it in proper relation to a rack-bar 9, located under the lever in adjusted position. Longitudinally-slotted handle-bars 10 are connected to the side beams 1 and 2 by means of guide-pins 11, which extend through the slots, and angular brackets 12 are adapted to receive the ends of the handle-bars, so as to support said bars substantially in alinement with the side beams. By pulling the handle-bars longitudinally they will be withdrawn from these brackets and can then be swung on the guide-pins 11, so that the grips 13 on the bars 10 will swing downward into position opposite the beams 1 and 2 and be supported by the brackets 12. Each of these brackets is preferably provided with a loop 14, adapted to receive a strap (not shown) which may be extended over the baggage on the truck for the purpose of fastening it.

Standards 15 extend downward from the side beams of the truck and are formed with or secured to the ends of an axle 16. Brace-rods 17 are pivoted at their upper ends to the truck-frame, and their lower ends are slotted longitudinally, as shown at 18, and embrace the axle 16. These rods are slidably mounted on the axle, and springs 19 are secured at one end to the rods and bear upon the axle, so as to hold it normally pressed against stop-pins 20, which extend across the lower ends of the slots 18 to prevent the withdrawal of the rods 17 from the axle. In view of this arrangement of springs and brace-rods the

truck-frame is resiliently supported on the axle, and baggage, &c., carried upon the frame will not, therefore, be jolted while the truck is passing over uneven surfaces.

5 Rotatably mounted on the axle 16, between each standard 15 and the adjoining brace-rod 17, is a rotatable supporting member consisting of radiating arms 21, disposed at equal angles to each other and each having
10 its free end forked, as shown at 22. Rotatably mounted within the forked end of each arm is a wheel 23, which may be provided with a resilient tire 24, formed of rubber or other desired material. The arms 21 are rigidly connected at their points of intersection,
15 and fastened to these arms and rotatable with them are notched wheels 25. These wheels are adapted to be simultaneously engaged by or released from fingers 26, extending in opposite directions from arms 27, which are pivoted upon the inner or adjoining faces of the brace-rods 17. These arms are angular in form and fulcrumed between their ends, and the two arms are connected by a cross-rod 28.
25 A lever 29 is pivoted to and extends downward from one of the cross-strips 3 of the frame, and a connecting-rod 30 is pivoted at one end to the cross-rod 28 and at its other end to the lever 29. By swinging the lever
30 upward the cross-rods 28 will be carried therewith and cause the fingers 26 to swing out of engagement with the notched wheels 25. By pressing the lever 29 downward, however, the said fingers will be forced into engagement
35 with the notched wheels, and the brace-rods 17 will thereby be locked to the wheels, and the frame of the truck will be held at a desired angle to the rotatable supporting devices. The fingers 26 are preferably held in
40 engagement with the notched wheels by the lever 29, which is adapted to swing the upper pivot of the rod 30 past the fulcrum of the lever 29, where said lever will be held by a stop 31, which bears against the adjoining
45 cross-strip 3, as shown particularly in Fig. 2.

In using the truck herein described the frame 1 is placed at a desired angle to the ground, and the lever 29 is swung downward, so as to force the fingers 26 into engagement
50 with the notched wheels 25, whereupon the truck-frame will be locked to its rotatable supporting-beams. The objects to be hauled are then placed on the truck-frame and will be fastened thereto by the swinging lever 5,
55 so as to draw the extensions 7 toward each other and into contact with opposite faces of the objects on the truck. The truck can now be rolled forward over a smooth surface, and the rotatable arms 21 will remain at all
60 times in the same relation to the truck-frame. Should it be desired to push the truck up a stairway or over any obstructions or uneven surface, the lever 29 is pulled upward, so as to raise the fingers 26 from engagement with
65 the notched wheels 25. When the forward

pair of the lower wheels 23 is moved in contact with an upstanding projection, such as a step, they will of course be brought to a standstill; but the continued forward pressure upon the truck will cause the arms 21 to
70 rotate on the axle 16 until the upper forward pair of wheels 23 swing downward into contact with the upper surface of the projection or into position at the other side thereof. The arms 21 will therefore step over the
75 obstructions without to any extent retarding the forward movement of the truck.

It is obvious that a truck of this construction can be used in numerous places where the ordinary truck cannot be employed, and
80 as baggage, &c., can be carried thereon over uneven surfaces without jolting the construction is of course rendered very desirable and is particularly useful in carrying baggage up
85 or down stairways.

All of the wheels can be provided with roller or ball bearings, so as to reduce friction to the minimum. These bearings may be of any ordinary construction, and it is therefore
90 deemed unnecessary to illustrate them.

We claim—

1. The combination with rotatable supporting-arms rigidly connected and a traction-wheel carried by each arm; of a frame supported by said arms and means for positively locking the frame in fixed relation with
95 the arms.

2. The combination with a frame and an axle carried thereby; of rotatable supporting-arms mounted upon the axle and rigidly
100 connected and a traction-wheel carried by each arm and means for positively locking the frame in fixed relation with the arms.

3. The combination with a frame and an axle carried thereby, of supporting-arms rotatably mounted upon and radiating from
105 the axle, said arms being rigidly connected, and a traction-wheel carried by each arm and means for positively locking the frame in fixed relation with the arms.

4. The combination with a frame and an axle carried thereby; of supporting devices rotatably mounted upon the axle, each of said devices comprising radiating arms rigidly connected, and a traction-wheel carried
115 by each arm and means for positively locking the frame in fixed relation with the arms.

5. The combination with a frame and an axle carried thereby; of radiating arms rotatably mounted upon the axle and rigidly
120 connected, a traction-wheel carried by each arm, and means for positively locking the frame in fixed relation with the arms.

6. The combination with a frame and an axle carried thereby; of arms radiating from
125 the axle and rotatably mounted thereon, said arms being rigidly connected, a traction-wheel carried by each arm, a rotatable locking member movable with the arms, and another locking member carried by the frame,
130

said locking members adapted to coöperate to hold the frame in fixed relation with the arms.

7. The combination with a frame and an axle carried thereby; of rigidly-connected arms radiating from and rotatably mounted upon the axle, a traction-wheel carried by each arm, a notched wheel rotatable with the arms, and locking-fingers carried by the frame and adapted to engage the wheels.

8. The combination with a frame having standards extending downward therefrom, an axle connecting the standards, and braces pivotally connected to the frame and resiliently supported upon the axle; of rotatable supporting devices mounted between the braces and the adjoining standards, each of said supporting devices comprising rigidly-connected arms radiating from and rotatably mounted upon the axle, and a traction-wheel carried by each arm.

9. The combination with a frame having standards extending downward therefrom, an axle connecting the standards, and braces pivotally connected to the frame and resiliently supported upon the axle; of rotatable supporting devices mounted between the braces and the adjoining standards, each of said supporting devices comprising rigidly-connected arms radiating from and rotatably mounted upon the axle, and a traction-wheel carried by each arm, and means carried by the frame and arms for locking the frame in fixed relation to the arms.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

JAMES EDGAR RIDGWAY.

WILLIAM REDMON RIDGWAY.

Witnesses:

HOUSEN P. ARMSTRONG,
ALBERT N. ARMSTRONG.