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Patented Apr. 16, 1901.

J. E. PENICK.
ELEVATING TRUCK.

(Application filed Sept. 14, 1900.)

(No Model.)

2 Sheets—Sheet 1.

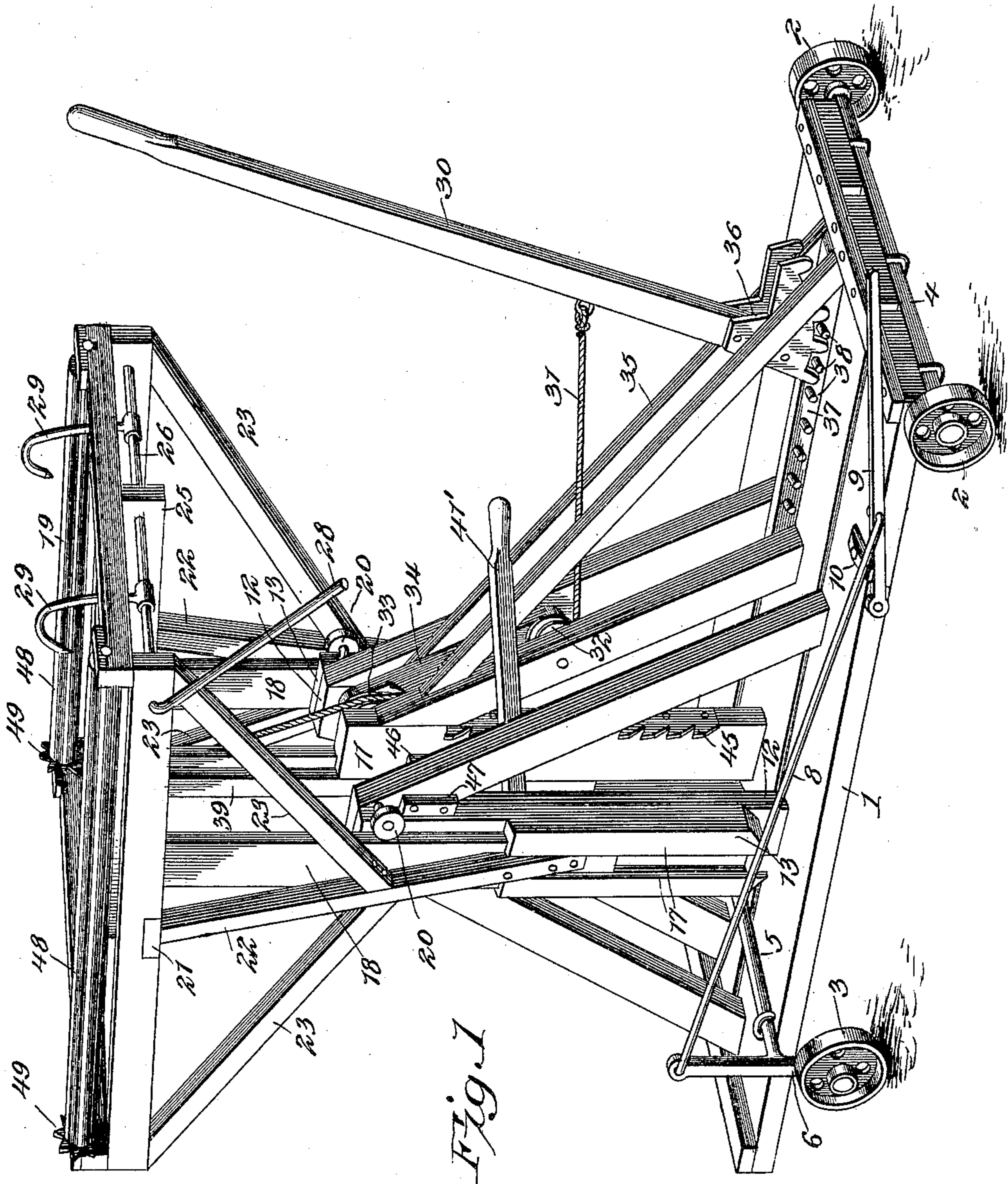


Fig. 1

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2 Sheets—Sheet 2.

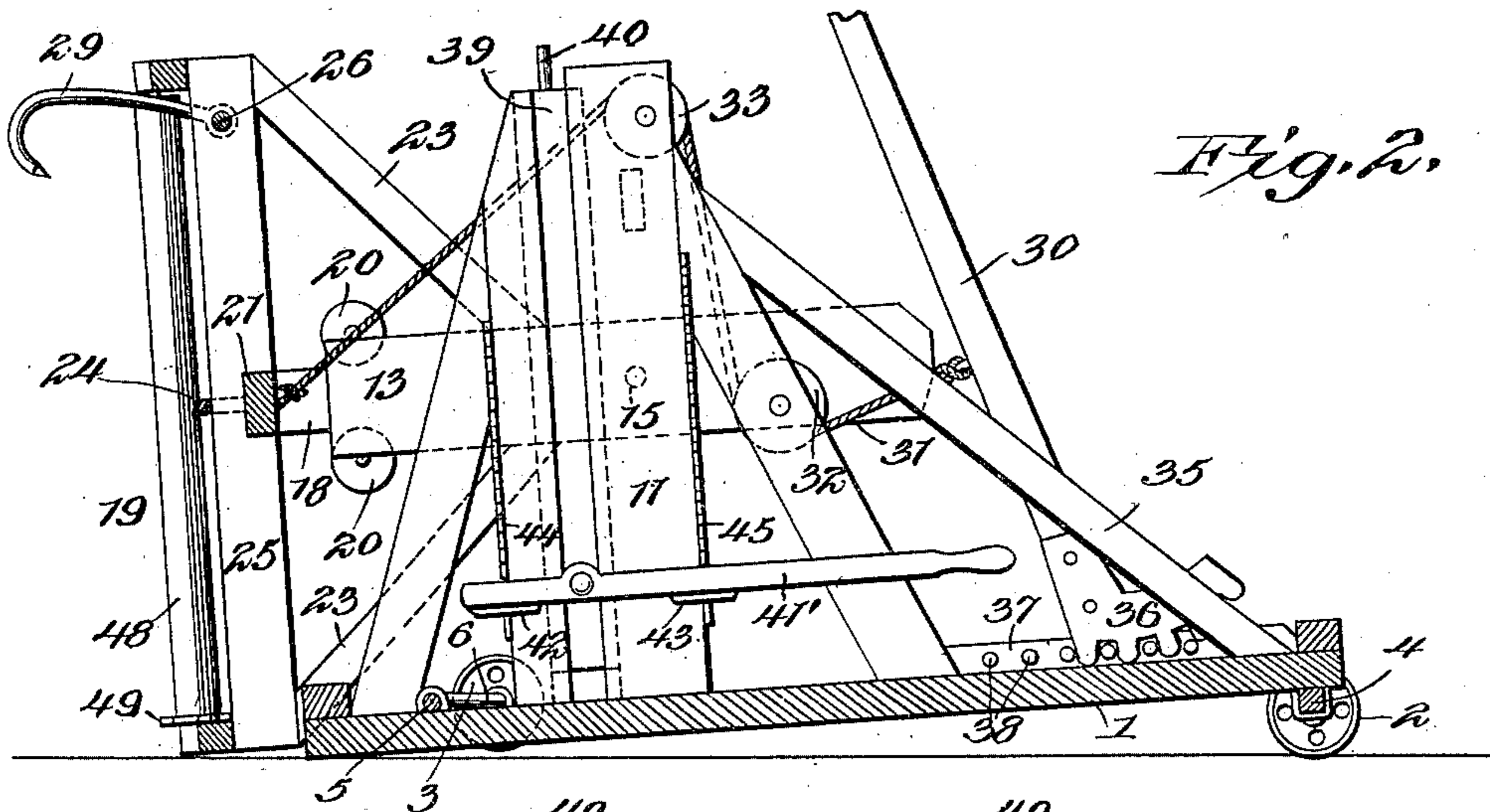


Fig. 2.

Fig. 3.

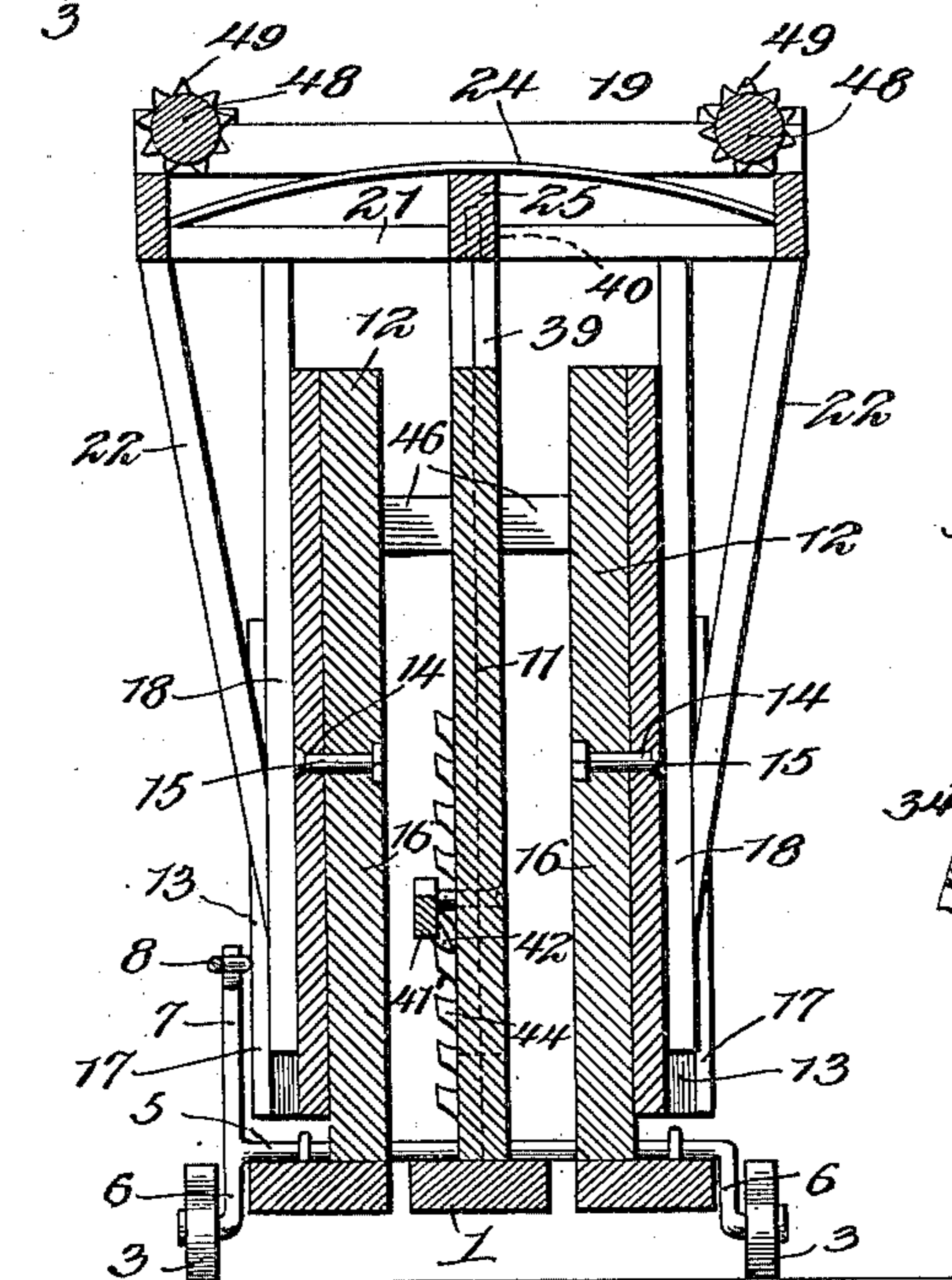


Fig. 5.

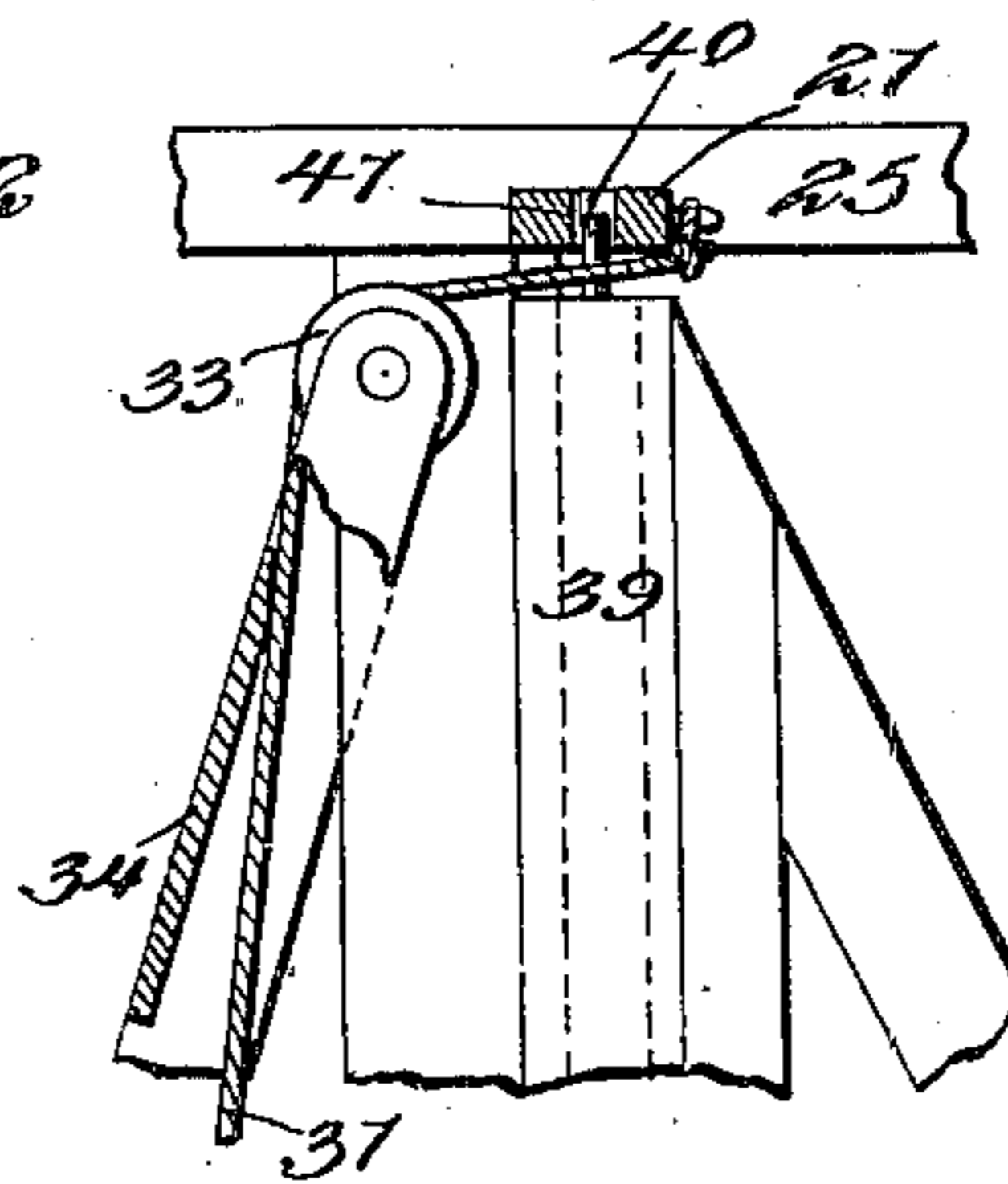
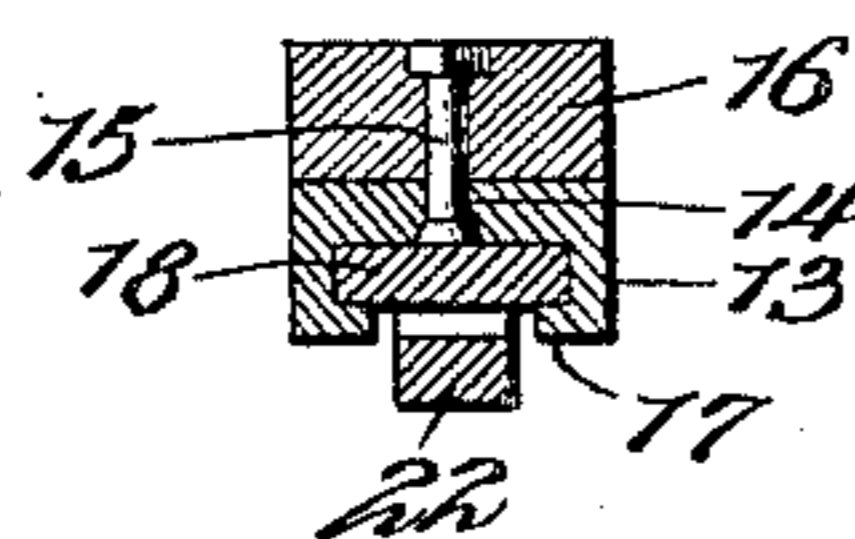


Fig. 4.



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JAMES E. PENICK, OF TEMPLE, TEXAS.

ELEVATING-TRUCK.

SPECIFICATION forming part of Letters Patent No. 672,218; dated April 16, 1901.

Application filed September 14, 1900. Serial No. 30,058. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. PENICK, a citizen of the United States, residing at Temple, in the county of Bell and State of Texas, have
5 invented a new and useful Elevating-Truck, of which the following is a specification.

The invention relates to improvements in elevating-trucks.

The object of the present invention is to
10 improve the construction of elevating-trucks and to provide a simple and comparatively inexpensive apparatus adapted to be readily moved from one place to another and capable of enabling bales, boxes, and the like to
15 be readily lifted from the ground or other supporting-surface and raised to a convenient position for loading such freight upon a wagon or other conveyance.

The invention consists in the construction
20 and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective
25 view of an elevating-truck constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view, the freight-platform being lowered and arranged for receiving freight. Fig. 3 is a transverse sectional view,
30 the freight-platform being in an upright position. Fig. 4 is a detail sectional view illustrating the construction of the pivoted guides. Fig. 5 is a detail view illustrating the manner of interlocking the vertically-movable bar
35 with the platform.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a truck-frame mounted upon
40 front and rear wheels 2 and 3. The front axle 4 is straight, and the rear axle 5 consists of a crank-shaft journaled in suitable bearings and provided at its ends with depending L-shaped arms 6 to receive the wheels
45 3 and having an upwardly-extending arm 7, which is connected by a longitudinal rod 8 with an operating-lever 9. The operating-lever is adapted to be oscillated to rock the rear axle or shaft 5 to lower the rear end of
50 the truck-frame to the ground or other supporting-surface to provide a firm support for the hoisting mechanism hereinafter ex-

plained. The operating-lever is swung forward to the position shown in Fig. 1 to raise the rear end of the truck-frame, and it is
55 locked in such position by a pivoted button 10 or other suitable fastening device.

Mounted upon the truck-frame are central and side standards or supports 11 and 12, each consisting of a central vertical bar and in-
60 clined braces arranged in advance and in rear of the vertical bars. The side standards or supports have pivotally mounted on them a pair of tilting guides 13, provided with approximately centrally arranged bearing-open-
65 ings 14 for the reception of horizontal pivots 15, which extend laterally from the vertical bars 16 of the standards or supports 12. The guides are provided with ways extending upward from their lower ends and consisting of
70 bars or flanges 17, L-shaped in cross-section, as clearly illustrated in Fig. 4 of the accompanying drawings. The ways receive arms
or bars 18 of a freight-platform 19, and the upper portions of the pivoted guides are pro-
75 vided with antifriction-rollers 20, located above the ways and arranged to be engaged by the side edges of the bars or arms of the freight-platform 19.

The freight-platform 19 consists of a rec-
80 tangular frame composed of side and end bars and central cross-bars, and the depending arms 18, which extend downward from the central transverse bar 21, are supported by braces 22 and 23. The braces 22 extend
85 downward from the ends of the bar 21 and are secured to the lower portions of the arms 18, and the braces 23 extend from the ends of the side bars of the freight-platform to the braces 22, which are slightly inclined, as
90 clearly shown in Fig. 3. The freight-platform is also supported by a transverse rod 24, located above the bar 21 and secured at its ends to the side bars of the platform-frame. This rod 24 is bowed to form a truss,
95 and it is centrally supported by the longitudinal cross-bar 25.

The pivoted guides are adapted to swing to lower the freight-platform from a horizontal position above the standards or supports to
100 an approximately vertical position at the rear end of the truck to position it for receiving the load to be hoisted, and it is provided at its front end, which is arranged at the top

when the parts are in the position shown in Fig. 2, with a rock-shaft 26, having hooks 29 and provided with an operating-arm 28, by means of which the hooks are oscillated to engage them with and disengage them from a bale or other package. These hooks are adapted to hold the load on the freight-platform while the latter is being swung upward to a horizontal position above the standards, and this return movement is effected by means of a lever 30 and a cable 31 or other flexible connection extending from the lever under a lower guide-pulley 32 to an upper guide-pulley 33, and it passes over the latter and is secured to the freight-platform near the center thereof. The pulleys 32 and 33 are mounted on the central standard or support, and the intermediate portion of the rope or cable is arranged within a guide 34, extending from the lower pulley to the upper one and arranged at an inclination. The operating-lever 30 for swinging the freight-platform upward is mounted in an inclined guide 35 and is provided at its lower end with approximately sector-shaped plates 36, spaced apart to receive a rack-bar 37 and provided with teeth for engaging the same. The inclined guide consists of a pair of inclined bars arranged at opposite sides of the lever 30, and the rack-bar 37, which is arranged between the bars of the guide 35, is provided at intervals with pins 38, projecting laterally from each side of the rack-bar and meshing with the teeth of the plates 36, which constitute the head of the hoisting-lever 30.

When the freight-platform has been swung upward to a horizontal position, it is adapted to be moved vertically to elevate the freight to the height of the wagon or other vehicle upon which it is to be loaded, and the depending arms of the freight-platform slide in the pivoted guides 13 for this purpose. The vertical movement of the freight-platform is effected by a vertically-movable lifting-bar 39, mounted in a vertical way of the central standard or support 11 and provided at its upper end with a projection or pin 40, adapted to fit in a recess 41 at the bottom of the freight-platform, at the center thereof, where by the lifting-bar is interlocked with the said freight-platform and is adapted to retain the same in a horizontal position while it is being raised and lowered. The lifting-bar, which is provided with flanges to fit in grooves of the central support or standard, has a lifting-lever 41' fulcrumed on it at its lower portion. The lifting-lever is provided with projecting flanges 42 and 43, which are arranged to engage alternately vertical ratchet-bars 44 and 45, located at the front and rear of the vertical portion of the central standard or support. The lifting-lever is oscillated, and its flanges are alternately engaged with the vertical ratchets to raise the lifting-bar 39, and the said lever 41' is adapted to lock the freight-platform in an elevated position while the load is being removed. The central and

side supports or standards are connected near their tops by transverse pieces 46 to form a supporting-frame, and the side standards or supports 12 are provided with blocks 47, forming stops for limiting the forward swing of the upper portions of the pivoted guides.

The freight-platform is provided at opposite sides of its upper portion with rolls 48, journaled in suitable bearings and adapted to assist in the removal of the load. These rolls are provided at their rear ends with projections 49, preferably formed by notched disks and adapted to engage the load and assist in holding the same on the freight-platform while the latter is being swung upward.

It will be seen that the elevating-truck is simple and comparatively inexpensive in construction, that it is adapted to be readily operated to lower the freight-platform to a position for receiving a load, and that it is capable of swinging such platform and a load upward to a horizontal position and of then elevating the platform and load to enable the latter to be readily placed in a wagon or other conveyance. It will also be apparent that the hooks of the shaft 26 are adapted to engage and hold a load on the platform while the latter is being swung upward and that the hooks may be readily disengaged from the load.

What I claim is—

1. In an apparatus of the class described, the combination of a supporting-frame, a pivoted guide mounted thereon, a vertically-movable freight-platform having an arm arranged in said guide, said platform being adapted to swing with the guide to lower it to a position for receiving a load, means for swinging the platform upward to a horizontal position, and hoisting mechanism for raising and lowering the platform, substantially as and for the purpose described.

2. In an apparatus of the class described, the combination of a truck having a supporting-frame, pivoted guides mounted on the supporting-frame, a freight-platform having arms or slides arranged in the guides and adapted to swing with the latter to arrange it in position for receiving a load, means for swinging the platform upward to a horizontal position, and a vertically-movable lifting-bar arranged to engage the platform and adapted to raise and lower the same and locking the platform in a horizontal position, substantially as described.

3. In an apparatus of the class described, the combination of a supporting-frame, a pivoted guide, and a vertically-movable weight-platform slidably connected with the guide and adapted to be swung downward by the same to receive a load from the ground or other supporting-surface, substantially as described.

4. In an apparatus of the class described, the combination of a supporting-frame, a vertically-movable platform pivotally mounted on the supporting-frame and adapted to swing

downward from a horizontal position at the top of the same to receive a load, a flexible connection secured at one end to the platform, a lever fulcrumed on the supporting-frame and secured to the other end of the flexible connection, guide-pulleys mounted on the supporting-frame and receiving the flexible connection, and means for moving the platform vertically, substantially as described.

5. In an apparatus of the class described, the combination of a supporting-frame, the vertically-movable platform pivotally connected with the supporting-frame and arranged to swing downward to the base thereof, a rack-bar arranged horizontally on the platform and provided with lateral projections, a lever having two plates meshing with the projections of the rack-bar, a flexible connection extending from the lever to the platform, guide-pulleys mounted on the supporting-frame and receiving the flexible connection, and means for moving the platform vertically, substantially as described.

6. In an apparatus of the class described, the combination of a supporting-frame, having a vertical guide, a platform slidingly and pivotally connected with the supporting-frame and adapted to swing downward to the base thereof to receive a load, a vertically-movable lifting-bar mounted in the vertical guide of the supporting-frame and arranged to engage the platform, vertical ratchets located at opposite sides of the vertically-movable bar, a lever connected with the latter and arranged to engage the ratchets, and means for swinging the platform, substantially as described.

7. In an apparatus of the class described,

the combination of a supporting-frame, a platform slidingly and pivotally connected with the supporting-frame and capable of vertical movement and adapted to swing downward to the base of the frame, means for operating the platform, and a shaft mounted on the platform and provided with hooks for engaging the load, substantially as described.

8. In an apparatus of the class described, the combination of a supporting-frame, a platform slidingly and pivotally connected with the supporting-frame and capable of vertical movement and adapted to swing downward to the base of the frame, means for operating the platform, a shaft mounted on the platform and provided with means for engaging a load, and rolls journaled on the platform at opposite sides thereof and provided with projections, substantially as described.

9. In an apparatus of the class described, the combination of a supporting-frame, the pivoted guides mounted on the supporting-frame and provided with lower ways and having upper antifriction-wheels, a freight-platform provided with depending arms arranged in said ways, braces supporting the arms, and means for moving the platform vertically and for swinging it upward and downward, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES E. PENICK.

Witnesses:

W. A. VAUGHN, Jr.,
E. F. ELLIS.