

(No Model.)

3 Sheets—Sheet 2.

M. McCARTHY & J. H. WEHMHOFF.

PORTABLE ELEVATOR.

No. 558,829.

Patented Apr. 21, 1896.

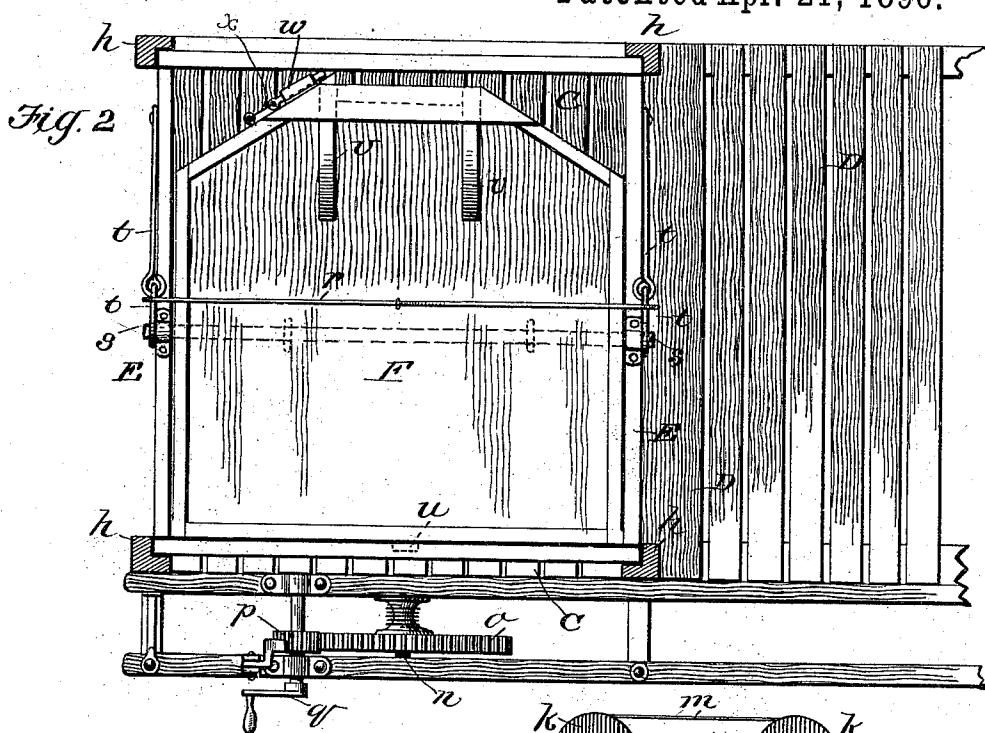
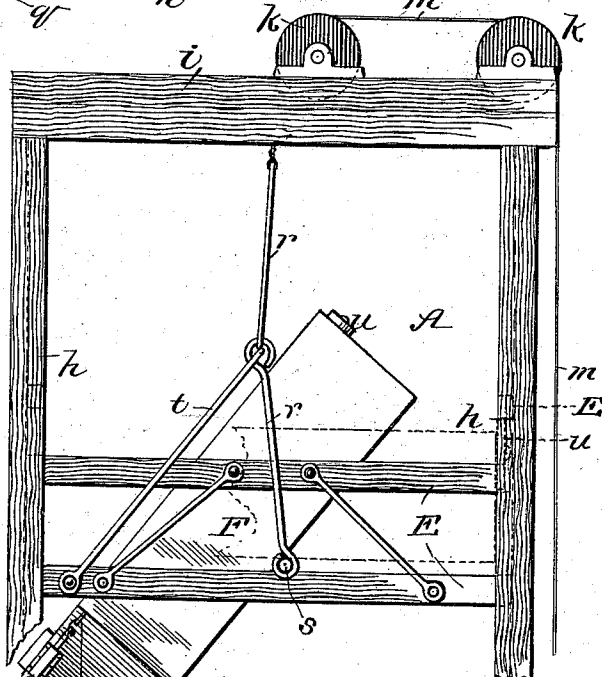


Fig. 3



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(No Model.)

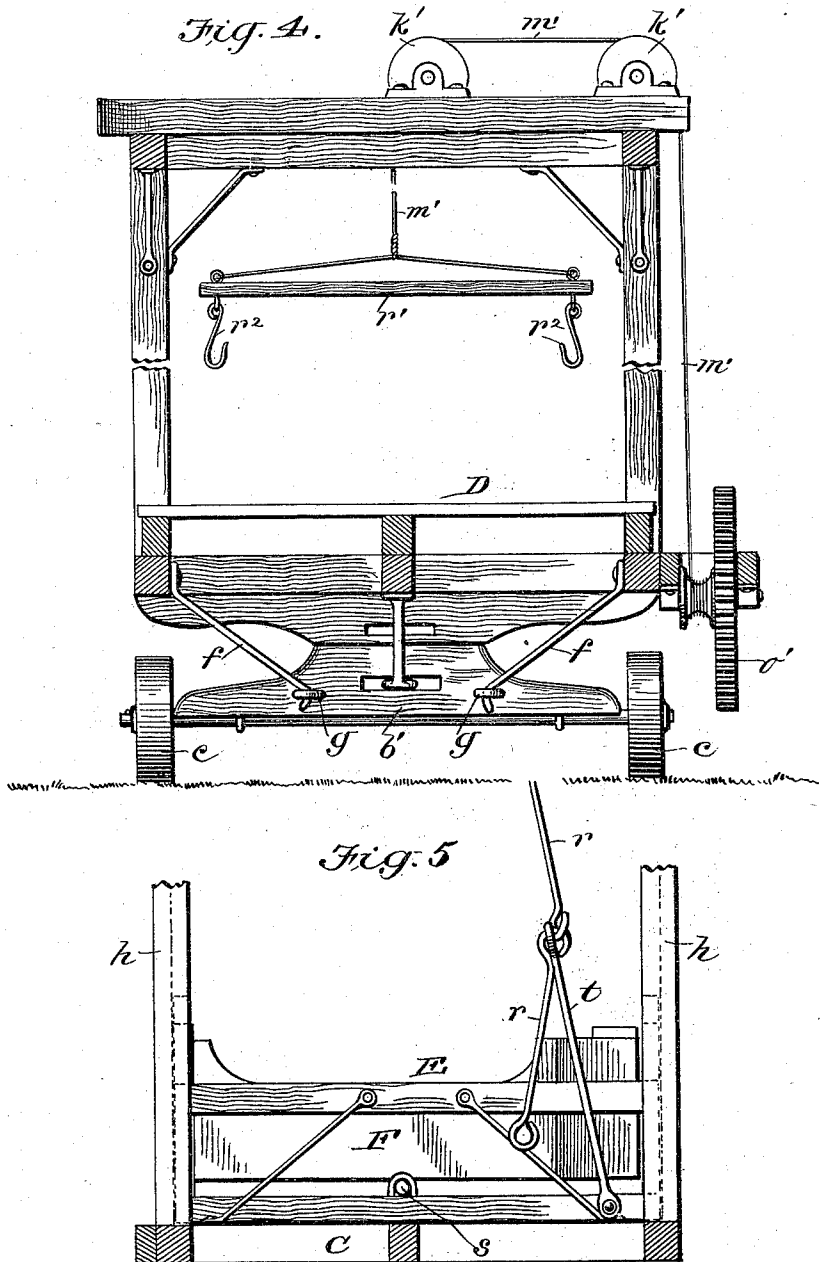
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UNITED STATES PATENT OFFICE.

MICHEAL MCCARTHY AND JOHN H. WEHMHOF, OF DALTON CITY, ILLINOIS.

PORTABLE ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 558,829, dated April 21, 1896.

Application filed November 11, 1895. Serial No. 568,529. (No model.)

To all whom it may concern:

Be it known that we, MICHEAL MCCARTHY and JOHN H. WEHMHOF, of Dalton City, in the county of Moultrie and State of Illinois, have invented a new and useful Improvement in Portable Elevators, of which the following is a specification.

Our invention is an improvement in that class of portable elevators that are provided with transporting-wheels and a platform, onto which loaded wagons may be driven and then hoisted at one end for dumping their load into a box that slides vertically and is adapted to be tilted to discharge its contents.

In accompanying drawings, three sheets, Figure 1 is a side view of our apparatus. Fig. 2 is a horizontal section, enlarged, of the main portion of the apparatus. Fig. 3 is a side view, enlarged, of the top portion of the apparatus. Fig. 4 is a vertical section of the apparatus. Fig. 5 is a horizontal detail section. Fig. 6 is a perspective view, enlarged, of a portion of the hopper, showing the hinged discharge-spout open. Fig. 7 is a perspective view of the same parts, showing the spout closed.

The elevator-frame consists of two connected upright portions A and B, which are of unequal height, and a horizontal rectangular base composed of two parts C and D, which are arranged at different heights. The base C D is supported at its ends on pivoted axles *b b'*, having truck-wheels *c*. Each axle is provided with staples or clips *d* for attachment of a pole or tongue *e* for use in guiding the elevator while moving it from place to place. The tongue *e* is provided with hooks *e'*, and thus adapted to be easily detached from one axle *b* and attached to the other *b'*, as required for hauling the elevator with either end forward. One or both axles must be locked in position when the elevator is being hauled, and for this purpose we employ stay-rods *f*, Fig. 4, which are pivoted to the base-frame and whose free ends engage staples or eyes *g*, attached to the axles near their ends. The part A of the upright framework is formed of parallel posts *h* and top cross-bars *i*, on which two pulleys *k* are mounted. A rope *m* runs on said pulleys and extends down to a shaft *n*, hung in bearings on the

side of the base, and having a cog-gear *o*, that meshes with a pinion *p* on a crank-shaft *q*. A pivoted locking-pawl engages said gear, as shown.

The rope *m* connects with the hinged bail *r* of a skeleton cage E, that slides on and between the four posts of the frame part A. Within said cage E is arranged a tilting box F, the same being supported and eccentrically hinged on a shaft *s*, that extends transversely of the lower portion of the cage E, and is fixed thereto, Figs. 2 and 3. The afore-said bail *r* is detachably connected with the ends of this shaft *s* and is held normally in vertical position by means of diagonal braces *t*, Fig. 3, pivoted to opposite sides of the cage and engaging the bail at its joints, as shown. It is apparent that if the lower ends of the jointed bail-pieces be detached from the shaft *s* it may be swung back out of the way, for a purpose hereinafter stated.

The box F is held in normal horizontal position in the cage E by means of a catch or locking device. The latter consists of a bar or button *u*, pivoted to the rear side of the box F and adapted to engage the horizontal bars forming the adjacent portion of the cage E. When adjusted in vertical position, the device *u* holds or locks the box F in horizontal position, and when turned it allows the box to tilt or dump by gravity and thus discharge its contents. The box F is provided with a hinged discharge-spout *v*, which, when in raised position, forms also a portion of its side—that is to say, spout *v* is hinged to the bottom of the box F, and when raised fits in the opening in the side of the same and closes it.

A locking device *w*, operated by a pull-cord *x*, holds the spout in its closed position. The sides of the box adjacent to the spout are inclined outward to facilitate discharge of the load, as will be readily understood.

A slatted removable incline *y* is provided at one end of the base C D and a hinged and foldable incline *z* at the other end. The hinged portion of the latter, *z*, is supported when in use by blocks or other form of stay. On the side of the base of the elevator, opposite the raised platform D, are arranged a cog-gear *o'*, pinion *p'*, and crank-shaft *q'*, simi-

lar to those before described, for use in elevating and lowering the box F. A rope m' runs on pulleys k' , mounted on cross-bars of the upright frame part B. The said rope m' suspends a bar r' , having hooks r^2 , as shown.

The elevator is used as follows: The cage E and box F being elevated, as shown by dotted lines in Fig. 1, a loaded wagon is driven up the incline y , beneath the cage E, and drawn onto the higher portion D of the platform, the team proper being advanced so as to stand on the hinged incline z . The cage E is then lowered, and the bail r detached from its shaft s and swung back out of the way, as shown. (See Fig. 5.) The hooks r^2 of the grapple and hoisting apparatus are then attached to the fellys of the front wheels of the wagon, and, the gearing $o' p' q'$ being rotated, the front end of the wagon is elevated, thus causing its contents to discharge into the box F. The cage E is then elevated and the spout unlocked, and the box released to allow it to tilt and dump its load into a granary or other receptacle.

It is apparent that the elevator may be easily hauled from place to place and used for elevating grain or other commodity, whether received from a wagon or otherwise.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The portable elevator having a wheeled axle pivoted at each end thereof and provided with staples, or eyes, on their inner sides, and

hooks pivoted on the sides of the base-frame, and adapted to engage said staples, as shown and described.

2. In a portable elevator, the combination, with the vertical guide-frame h , and a cage, E, which is slidable therein, of the box F, an axle supporting said box, which is eccentrically mounted thereon, and a button pivoted to the back of the box and arranged as shown and described, whereby it is adapted to engage the frame of the cage, when adjusted vertically, and thus holds the box in horizontal position, as specified.

3. In a portable elevator, the combination, with the vertical guide-frame, a cage which is slidable therein, an axle arranged in the cage, a box mounted eccentrically on the axle, a bail adapted for detachable connection with the ends of the axle, and braces pivoted to the cage, and their free ends being jointed to the vertical side portions of the bail, and means connected with the latter for hoisting the cage, as shown and described.

4. In an elevator, the combination, with vertical guides, of a slidable cage, a box hinged therein, a bail which is detachable from the cage, and pivoted diagonal braces for supporting said bail in normal position, as shown and described.

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Witnesses:

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