

B. COAKLEY.
Machine for Hoisting and Transferring Heavy Weights.

No. 215,209.

Patented May 13, 1879.

Fig. 1.

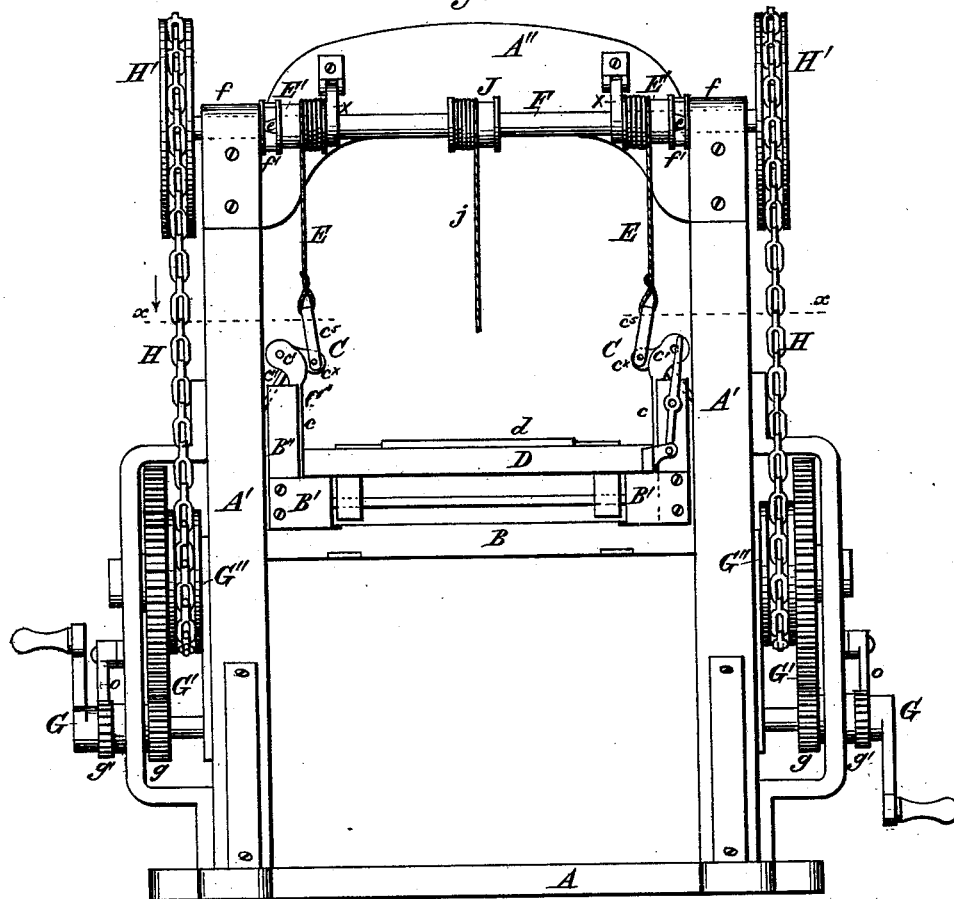


Fig. 2.

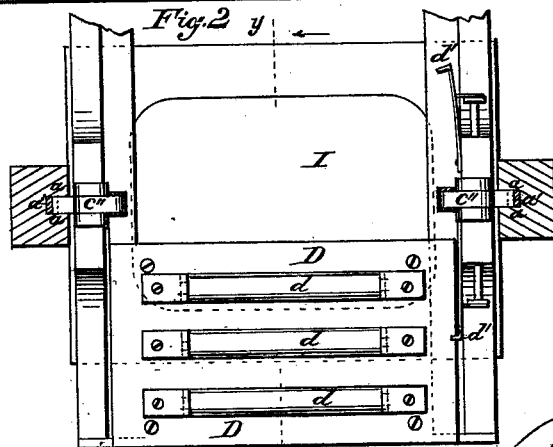


Fig. 4.

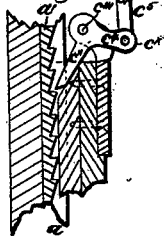
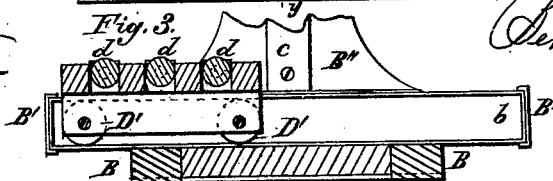


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE

BENJAMIN COAKLEY, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN MACHINES FOR HOISTING AND TRANSFERRING HEAVY WEIGHTS.

Specification forming part of Letters Patent No. **215,209**, dated May 13, 1879; application filed April 12, 1879.

To all whom it may concern:

Be it known that I, BENJAMIN COAKLEY, of Washington city, District of Columbia, have made certain Improvements in Machines for Hoisting and Transferring Heavy Weights, of which the following is a specification.

The object of this invention is to put into use a machine that will quickly and safely raise a heavy weight from place of rest to be loaded into a wagon, onto a dray, or other carriage for transportation, or to reverse the operation by taking such weight and lowering it down to the level of the sills of the machine, or by a slight manipulation of parts, change it to a windlass for general hoisting of weights through a hatchway; and it consists in the construction of the parts, as will be hereinafter fully described.

In the drawings, Figure 1 is an upright side view of the machine. Fig. 2 is a plan view of platform and its supports. Fig. 3 is a transverse sectional view of movable platform on line *y y* of Fig. 2, and working back and forth on hoisting-platform; and Fig. 4 is a side view of a safety hoisting device.

A represents the sills of the machine; A' A', the upright posts, in each of which is an upright groove, *a*, to receive a metal toothed rack, *a'*. A'' is a top tie, securing the top of the posts A' firmly in position. B is the vertical hoisting-platform, consisting of a quadrangular frame, with transverse sills B' attached at each end within the posts A', and of considerable length, and having on their inner sides a way or track, *b*, boxed on three sides, but open at their inner side, and in which travel the wheels that carry the transfer or traveling platform. Centrally, and on the top of these transverse sills B', are upward projections B'', to which a device to hoist the platform and a safety-dog are securely attached. C is the device that is secured to projection B'' to hoist or lower the platform, and it is composed of the permanently-attached part C' to the projections B'' by the strap *c*, two eyes *c'*, and a dog or pawl, *c''*, that projects outwardly and is hinged between the two eyes *c'* at *c''*, and then bends inwardly, forming an eye, *c''*, to which the hoisting-loop *c''* is hinged at *c''*.

D is the transverse or traveling platform, and is constructed to rest upon truck-wheels

D' D', that travel in the ways *b* on platform B. *d d d* are rollers permanently journaled in the platform D to project slightly above the face of the platform, so that any heavy weight resting upon them can be easily moved thereon. *d' d'* are spring-catches that catch into notches in the edge of platform D and hold it firmly in place. E E are the two hoisting-cables securely attached to the upper ends of the hinged loops *c''* of hoisting device C. E' E' are sliding clutch-drums around the main hoisting-shaft, and to which the upper ends of the hoisting-cables are attached.

F is a horizontal shaft, freely revolving in journals *f* on the top of posts A', and extends outside of bearings *f* far enough to have secured to each of their ends a driving wheel or pulley. *f' f'* are two toothed clutches permanently fixed to the shaft F, into which gear the teeth *e* on drums E' when the platform B is to be raised or lowered.

G G are the crank-shafts, one on each side of the machine, and each has fixed thereto a gear-wheel, *g*, and a ratchet-wheel, *g'*. G' G' are gear-wheels gearing into driving-wheels *g*, and on the same shaft with them are sprocket-wheels or pin-wheels G'' G'', that revolve with wheels G'. H H are endless driving-chains around wheels G'' G'', thence passing around driving-wheels H' H' on shaft F, and by revolving crank-shafts G motion is given to the endless chains H through the gear-wheels, thence to shaft F by the endless chains and drive-wheels H'.

I is a removable floor to platform B. J is a drum around the center of the length of shaft F, and permanently fixed thereto. *j* is a hoisting-rope attached to drum J, and is used to hoist or lower heavy packages through the opening made by removing the floor I into or out of cellars or store-rooms below where the hoisting-machine is placed through an open hatchway.

This machine, constructed as above described, is a great help in loading heavy packages into wagons, or onto trucks for transporting, or for unloading the same, as one man can, when the platform is down, turn such package over upon the traveling platform D. Then, by releasing the spring-catch *d'*, the platform and its load is pushed into the center of the hoist,

the crank G revolved, and the platform and package thereon raised as high as necessary.

When pawl *o* is turned to catch into ratchet-wheel *g'* the platform is held at its height. Then it is forced over to the opposite side toward the truck, the spring-catch taking into the notch. The platform D is held in place while the package or weight on the platform is rolled or forced onto the truck, wagon, or dray.

If, in hoisting, one or both of the hoisting-cables E should break, the projecting pawl or pawls *c''* would instantly engage with the teeth on rack *a'* and hold the platform in its position and prevent its falling.

When the machine is to be used as a windlass, the latches *x x* are turned up, and the clutch-drum E' can be forced out of gear with the clutches *f''*, when the shaft F and drum J and its hoisting-rope *j* only will operate.

What I claim is—

1. In an elevating or hoisting machine, the traveling platform D, hoisting-platform B, in

combination with the drums E' and operating mechanism, substantially as and for the purposes described.

2. The combination, in a hoisting-machine, of the hoisting-platform B and traveling platform D, constructed and operating substantially as and for the purpose described.

3. The traveling platform D, having the rollers *d* thereon, in combination with the spring-holding catch *d'*, substantially as described.

4. The combination of the upright strap *c*, having the two eyes *c'*, the hinged dog or pawl *c''*, and loop *c⁵*, constructed as described, to form the safety hoisting device C.

5. The combination of the operating train of mechanism G *g* G' G'' H H', shaft F, and drum J, with its hoisting-cable *j*, as and for the purpose described.

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Witnesses:

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