

(No Model.)

A. BORNS.
LIFTING DEVICE.

No. 257,281.

Patented May 2, 1882.

Fig. 1.

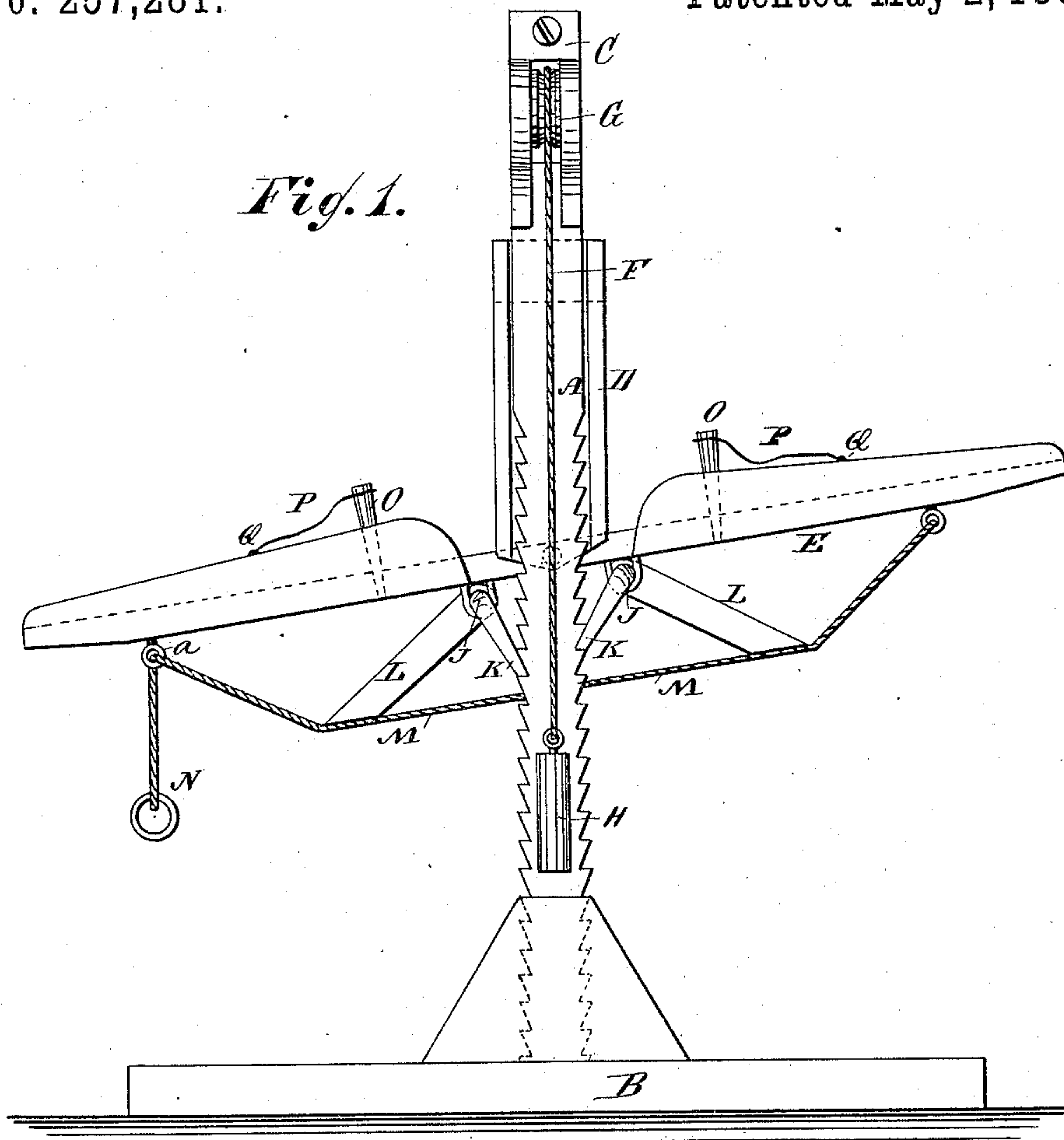
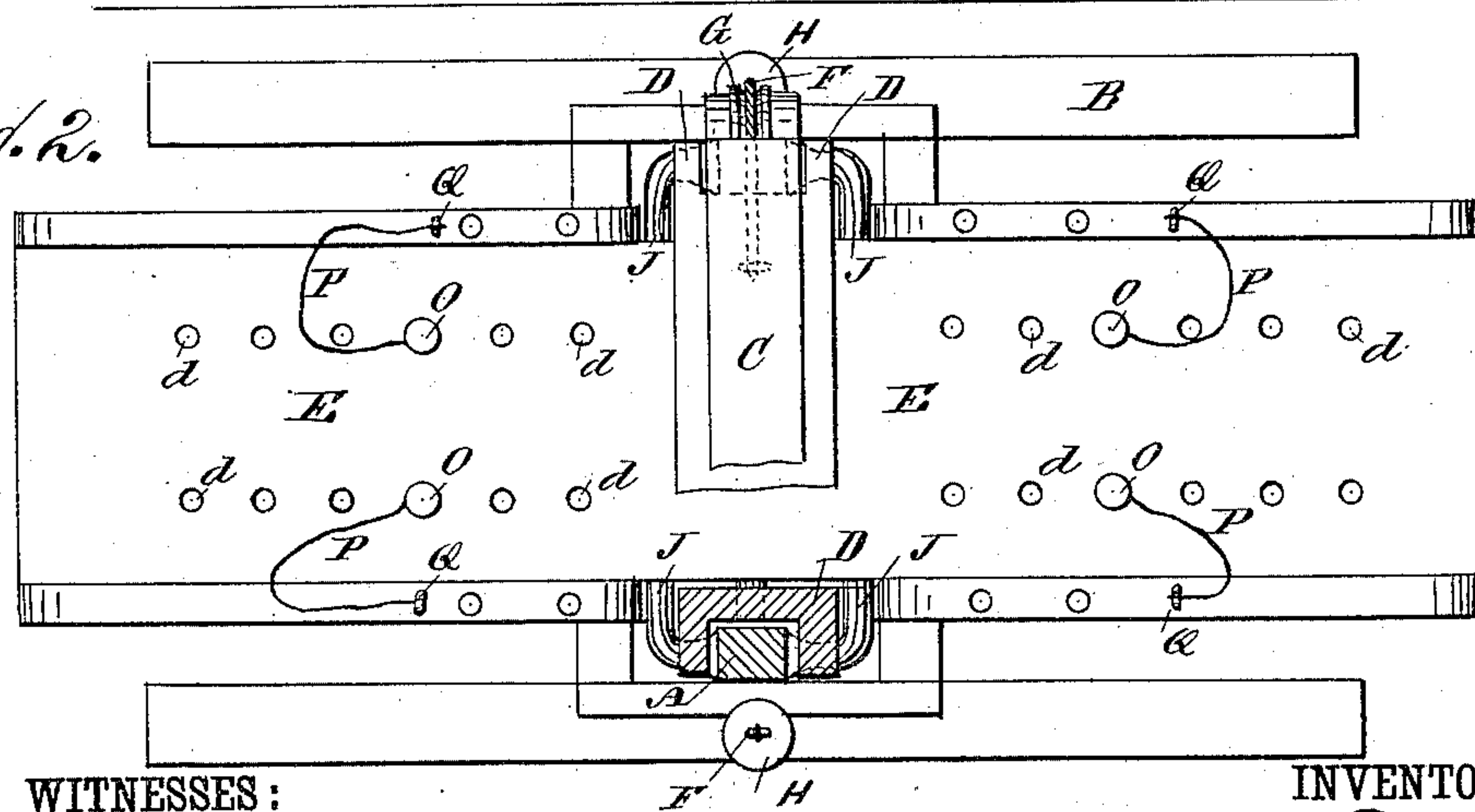


Fig. 2.



WITNESSES:

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ADAM BORNS, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR OF ONE-HALF TO
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LIFTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 257,281, dated May 2, 1882.

Application filed February 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, ADAM BORNS, of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and Improved
5 Lifting Device, of which the following is a full, clear, and exact description.

The object of my invention is to facilitate raising and lowering loads.

The invention consists of two rack-stand-
10 ards combined with a rocking load-carrying platform provided with pawls adapted to catch on the racks, and with counter-weights, whereby when the platform is rocked the pawls will alternately catch on the teeth of the op-
15 posite racks and the platform will be raised.

The invention further consists in shafts jour-
naled to the under side of this platform, and provided with pawl-arms, and with arms rest-
20 ing against a strap or rope on the under side of the platform, whereby the arms resting on the rope or strap will be raised when the cord is drawn and the pawls will be disengaged from the racks.

The invention also consists in pegs adapted
25 to be fastened on the platform for holding the load in position, as will be fully described hereinafter.

Reference is to be had to the accompanying
30 drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a longitudinal elevation of my improved lifting device. Fig. 2 is a plan view
35 of the same, parts being broken out and parts being shown in section.

The standards A, provided on each longi-
tudinal edge with a rack having upwardly-
projecting teeth, are secured in a base-frame,
B, and are united on top by a transverse beam,
40 C. A guide box or slide, D, is adapted to slide on each standard A, and to these two boxes or slides a platform, E, is pivoted. A rope, F, chain, or equivalent device is at-
45 tached to each slide or box D, passes up on the inner side of the standard and over a pulley, G, pivoted in the top of the correspond-
ing standard, and then passes downward on the outside of this standard, and has a weight,
H, attached to its outer end. The weight of
50 the platform must be slightly greater than

that of the two weights H. On each side of the central transverse axis of the platform E a transverse shaft, J, is journaled or held loosely, so that it can be turned to the under side of the platform E, and these shafts J are
55 provided at the ends with pawl-arms K, inclined toward the standards and adapted to catch on or engage with the teeth of the racks. Each shaft J is provided with an arm, L, in-
60 clined downward and outward from the mid-
dle of the platform, and the ends of these arms L rest on a rope or strap, M, attached to one end of the bottom of the platform, and passing through a loop, a, projecting from the
65 bottom of the platform at the other end. The
free end of this rope or strap is provided with a loop, handle, or ring, N.

The platform E is provided with a series of apertures, d, adapted to receive pegs O, at-
70 tached to strings or wires P, fastened to ad-
justable hooks or pins Q on the sides of the frame E.

If desired, the guide boxes or slides D can be dispensed with and the ropes or chains F
75 can be attached directly to the platform E.

The within-described device may be made of any desired size, either stationary or movable.

The operation is as follows: If an object is
80 to be raised, the platform E is lowered and
the object placed on the same and held in place by the pegs O, which are placed in the proper apertures d. The weight of the arms L presses the pawl-arms K against the racks. If the platform E is rocked—that is, if the
85 ends are raised up and down—the opposite pawl-arms, K, will alternately catch on the teeth of the opposite racks, whereby the plat-
form E will be raised the distance of two teeth every time the platform is rocked, the weights
90 H descending as the platform is raised. When the platform is raised to the desired height the load is moved from the platform upon a wagon, &c. If the platform E is to be low-
95 ered, the operator draws on the cord M, where-
by the outer ends of the arms L will be raised and the pawl-arms K will be disengaged from the racks and the platform E will descend slowly, the counter-weights H preventing a
100 too rapid descent of the platform.

It is evident that the within-described device can also be used to lower objects as well as to raise them.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a lifting device, the combination, with the rack-standards A, of the rocking platform E, the ropes or chains F, the counter-weights H, and the pawls K on the frame E, substantially as herein shown and described, and for the purpose set forth.

2. In a lifting device, the combination, with the rack-standards A, of the guide boxes or slides D, the rocking platform E, the pawls K, the ropes or chains F, and the counter-weights H, substantially as herein shown and described, and for the purpose set forth.

3. In a lifting device, the combination, with the rack-standards A, of the rocking platform E, the shafts J, provided with pawl-arms K and with arms L, and of the strap or rope M, attached to the platform E and resting against the ends of the arms L, substantially as herein shown and described, and for the purpose set forth.

4. In a lifting device, the combination, with the rack-standards A, of the rocking platform E, provided with a series of apertures, d, the pawls K, and the pegs O, substantially as herein shown and described, and for the purpose set forth.

ADAM BURNS.

Witnesses:

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E. J. SHINKMAN.