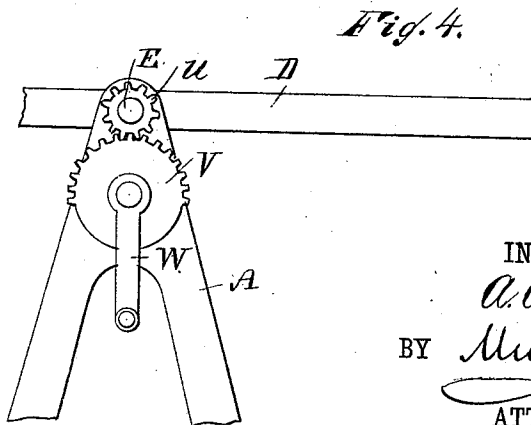
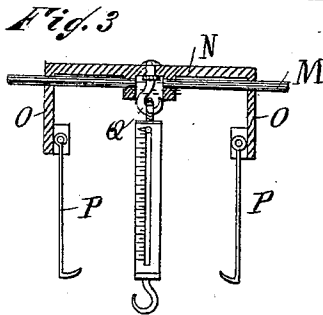
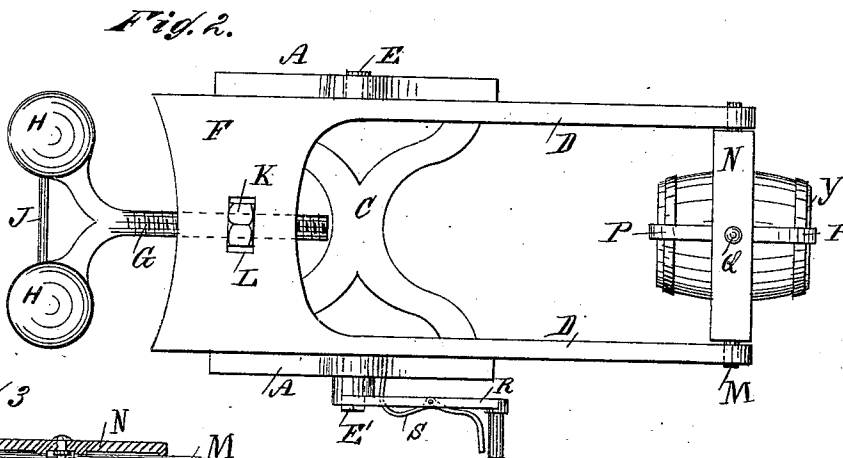
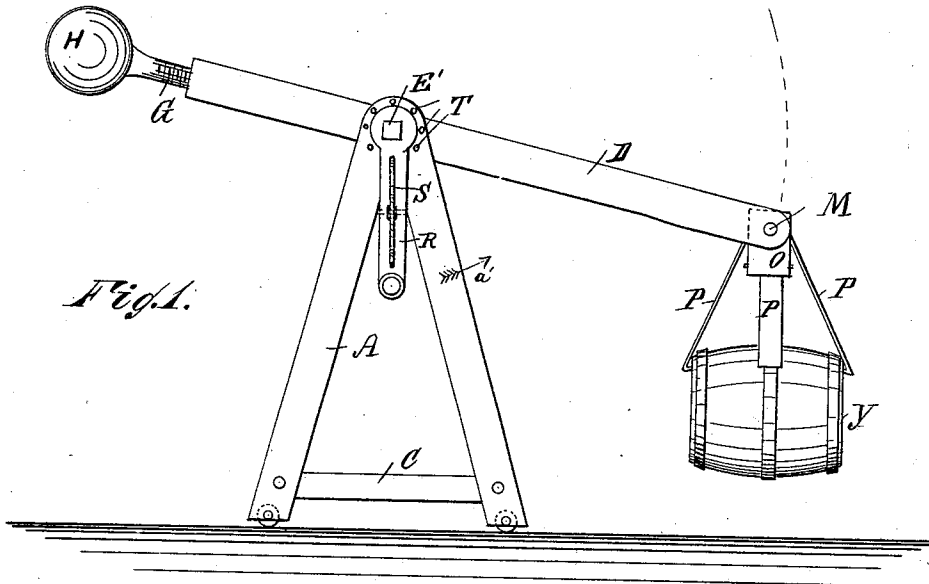


(No Model.)

A. ARNOT.
LIFTING AND WEIGHING DEVICE.

No. 250,183.

Patented Nov. 29, 1881.



WITNESSES:
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UNITED STATES PATENT OFFICE.

ALEXANDER ARNOT, OF LEXINGTON, ASSIGNOR TO HIMSELF AND WARREN WINTERSTEIN, OF PECK, MICHIGAN.

LIFTING AND WEIGHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 250,183, dated November 29, 1881.

Application filed October 6, 1881. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER ARNOT, of Lexington, in the county of Sanilac and State of Michigan, have invented a new and Improved Lifting and Weighing Device, of which the following is a full, clear, and exact description.

The invention consists in a frame provided with two side pivots journaled in suitable standards, which frame is provided at one end with a counterbalancing-block, into which a screw passes having balls or weights attached to one end, the other end of this pivoted frame carrying a bar provided with a series of grapples and a hook for holding steelyards or spring-balance weights and the object to be raised or weighed. The frame is swung by means of a crank-handle fitting on one of the pivots, and provided with a pivoted latch-rod adapted to catch in apertures in one of the standards and surrounding the bearing of the pivot on which the crank-handle fits.

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

Figure 1 is a longitudinal elevation of my improved lifting and weighing device. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal sectional elevation of the bar to which the grapples are pivoted. Fig. 4 is a longitudinal elevation of a modification of the crank arrangement.

Two triangular frames, A, resting on rollers or wheels B, are united by braces C and form the base or supporting frame for the lifting and weighing device. The lifting and weighing frame D is provided with trunnions or pivots E, which are journaled in the upper ends of the frames A. The short ends of the side bars of the frame D are connected by a solid balancing-block, F, through which a screw-rod, G, passes longitudinally, which rod carries two balls, H, at its forked outer end, these balls being united by a rod, J. This screw-rod G also passes through a nut, K, located in a slot, L, of the block F. A shaft, M, is journaled in the opposite ends of the side bars of the frame D, and on this shaft M a bar, N, provided with downwardly-bent end arms, O, is loosely mount-

ed. A grapple, P, is pivoted to each arm O, and grapples P are pivoted to the middle of the bar N. A downwardly-projecting hook, Q, is also swiveled to the middle of the bar N.

A crank-handle, R, fits on the squared end E' of one of the pivots E, and this crank-handle is provided with a pivoted latch-rod, S, the upper bent end of which passes through a slot or aperture in the crank and is adapted to enter any one of a series of apertures, T, arranged in one of the standards or frames A around the bearing or journal of the pivot E, provided with the squared end E'.

If desired, a pinion, U, can be rigidly mounted on one of the pivots E, this pinion engaging with a cog-wheel, V, mounted on a shaft projecting from one of the frames A and provided with a crank-handle, W.

The operation is as follows: The barrel Y or other object to be raised is held by or suspended from two or more grapples, P, or from the hook Q by steelyards or spring-balance weights. The crank R is unlocked by pressing on the lower end of the latch S, and the frame D is swung on its pivots, and the end from which the load is suspended is raised by turning the crank R in the direction of the arrow a'. To counterbalance the load the screw G is adjusted to project more or less from the end of the block F. By noting the distance the screw G must project from the block F in order to counterbalance the load the weight of the load can be ascertained. Additional weights can be suspended from the rod J. It is evident that the frame D can also be swung on the pivots by means of the crank W, the cog-wheel V, and the pinion U. If the latch S is used the frame D can be locked in any desired position, for as soon as this latch is released its upper bent end will pass into one of the apertures T, thereby locking the crank in position.

By means of the above-described device barrels, milk-cans, boxes, bundles, and other loads can be raised and lowered very rapidly and conveniently, and can be weighed at the same time.

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

1. A lifting and weighing device made sub-

stantially as herein shown and described, and consisting of a pivoted frame having devices for holding the load at one end, and an adjustable counterbalance at the opposite end, and
5 provided with devices for oscillating it, as set forth.

2. In a device for lifting and weighing, the combination, with the standards or frames A, of the pivoted frame D, the grapples P, the
o block F, the screw G, and the balls H, substantially as herein shown and described, and for the purpose set forth.

3. In a device for lifting and weighing, the combination, with the standards or frames A,
5 of the pivoted frame D, the grapples P, the block F, the screw G, the balls H, and the rod J, connecting these balls, substantially as herein shown and described.

4. In a device for lifting and weighing, the combination, with the standards or frames A,
o of the pivoted frame D, the grapples P, the block F, provided with a slot, L, the screw G, the balls H, and the nut K, substantially as herein shown and described, and for the purpose set forth.
5

5. In a device for lifting and weighing, the combination, with the standards or frames A, of the pivoted frame D, the shaft M, the bar
N, the grapples P, and of devices for oscillating the frame D, substantially as herein shown
o and described, and for the purpose set forth.

6. In a device for lifting and weighing, the

combination, with the standards or frames A, of the pivoted frame D, the shaft M, the bar
N, arms O, the grapples P, and devices for oscillating the frame D, substantially as herein
35 shown and described, and for the purpose set forth.

7. In a device for lifting and weighing, the combination, with the standards or frames A,
40 of the pivoted frame D, the shaft M, the bar N, the grapples P, the hook Q, and devices for oscillating the frame D, substantially as herein shown and described, and for the purpose set forth.

8. In a device for lifting and weighing, the combination, with the standards or frames A,
45 one of which has apertures T in its upper part around the bearing, of the frame D, the pivots E, the crank-handle R, and the pivoted latch-rod S, substantially as herein shown and described, and for the purpose set forth.
50

9. In a device for lifting and weighing, the combination, with the standards or frames A,
of the pivoted frame D, the block F, the screw
55 G, the balls H, the shaft M, the bar N, the grapples P, and the hook Q, substantially as herein shown and described, and for the purpose set forth.

ALEXANDER ARNOT.

Witnesses:

W. T. LEE,

SAML. BURGESS.