S. E. L. Croghan,

Elevator.

No. 37,026. Patented Nov. 25, 1862.

Fig: 1.

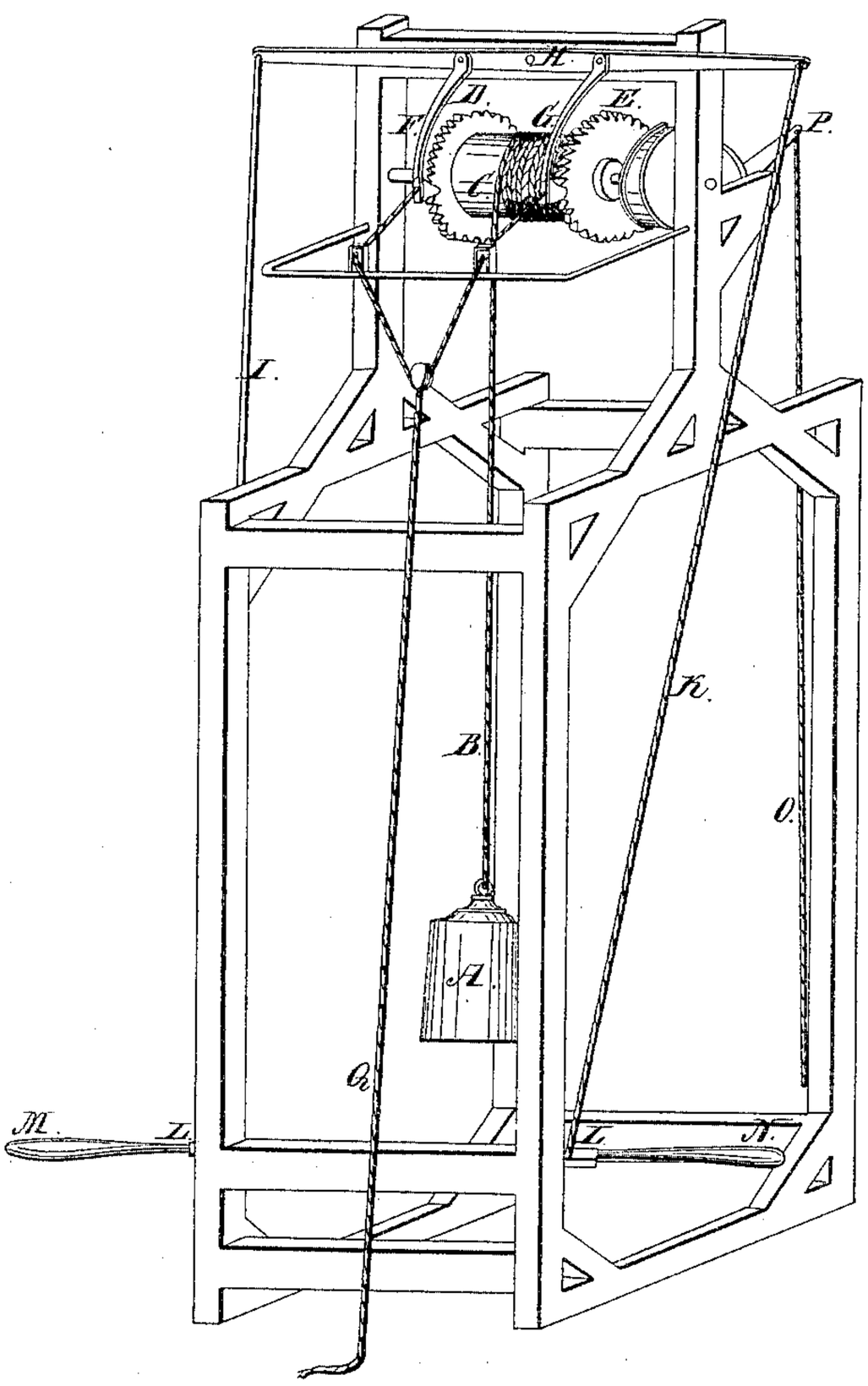
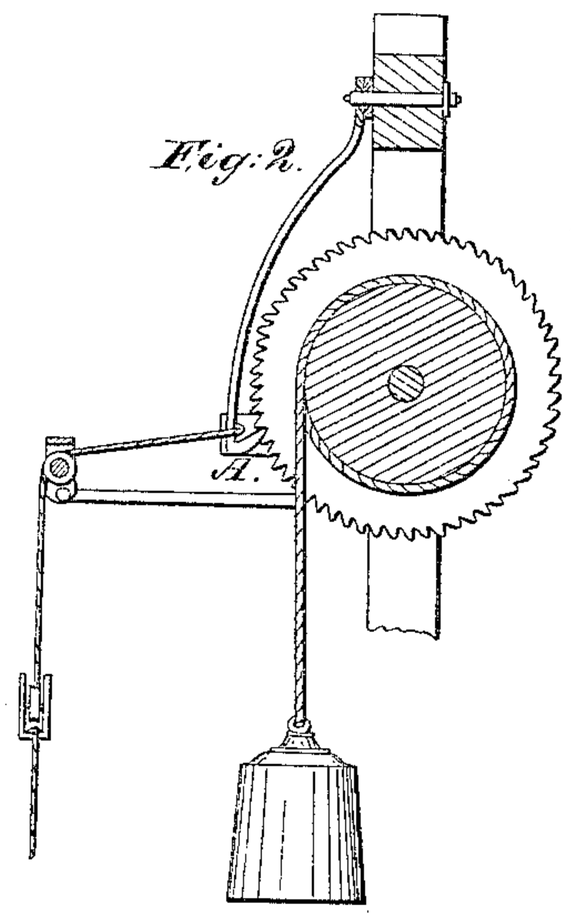


Fig: 2.



Witnesses:

D. Sprigg Hall

C. H. B. Thyatt

Inventor:

Serena E. L. Croghan

UNITED STATES PATENT OFFICE.

SERENA E. L. CROGHAN, OF FLATBUSH, NEW YORK, ADMINISTRATRIX OF ST. GEORGE CROGHAN, DECEASED.

IMPROVEMENT IN HOISTING-MACHINES.

Specification forming part of Letters Patent No. **37,026**, dated November 25, 1862.

To all whom it may concern:

Be it known that ST. GEORGE CROGHAN, deceased, of Flatbush, in the county of Ulster, in the State of New York, did invent a new and useful Hoisting-Machine for Raising and Lowering Weights of All Kinds; and I, the administratrix of the said deceased, do hereby declare that the following is a full, clear, and exact description of the construction and operation of the machine, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view, and Fig. 2 a transverse section.

The nature of the invention consists in applying the power of a double lever by spring-arms to the peripheries of two wheels—one at either end of a revolving drum whereon the hoisting-rope winds—thus by simple combinations uniting the advantages of economy of force, quickness, of movement, and facility of management to the operator.

This machine is designed to be adapted to any situation where weights are hoisted and lowered, stationary in warehouses, mills, depots, hotels, &c., or upon movable derricks, for elevating stone materials to new buildings, for loading and unloading vessels, or for any like purposes, and in all such positions it may serve its proper purpose for every kind of weight, great and small. The weight to be raised, A, Fig. 1, may therefore be any kind of package or goods, a barrel of flour, or a ton of marble, attached to the hoisting-rope B, which winds upon the drum C. At each end of this drum is permanently secured a wheel, D and E, of greater diameter than the drum, (the diameter varying according to circumstances,) with strong metal cogs or teeth. Between these teeth fit the hooks or detents on the ends of the arms F and G, guided by a flange on each side, as seen in A, Fig. 2. These arms F and G are made of iron, so tempered and so bolted to the lever H as to spring promptly and firmly with their hooks between the teeth of the wheels D and E. The lever H is moved by the connecting ropes or rods I and K, which communicate motion from the lever L. This lever L, which, for convenience in position, has a shifting hand-piece at each end, M and N, may be placed at any elevation between the ground and the drum C. In a warehouse there may be such a lever on each or any floor.

To hoist weights, a single operator works up and down either of the handles M or N, and will be able to effect in a given time as much as several men can with the fall-tackle or windlass in common use, and (a point deserving especial notice) the operator may pause in his labor as occasion requires without danger of the weight lowering, because the arms F and G will hold securely the revolving drum C at every degree of revolution. To let go or to lower, the operator, holding the rope O, which commands the brake P, and the rope Q, which disengages the arms F and G, has only to strain, first, O, thus taking entire control of the drum C by means of the powerful brake, and then Q, which, lifting the hooks or detents out of the teeth of the wheels D and E, permits the drum to reverse motion, by the force of the pendent weight, as fast or as slow as the operator holding the brake may wish.

What I claim for the deceased inventor, and, as his administratrix, desire to secure by Letters Patent, is—

The combination of handles M N, lever H, spring-arms F G, ratchet-wheels D E, drum C, operated by ropes, in manner and for the purpose herein described.

SERENA E. L. CROGHAN.

Witnesses:

D. SPRIGG HALL,

CHS. B. WYATT.