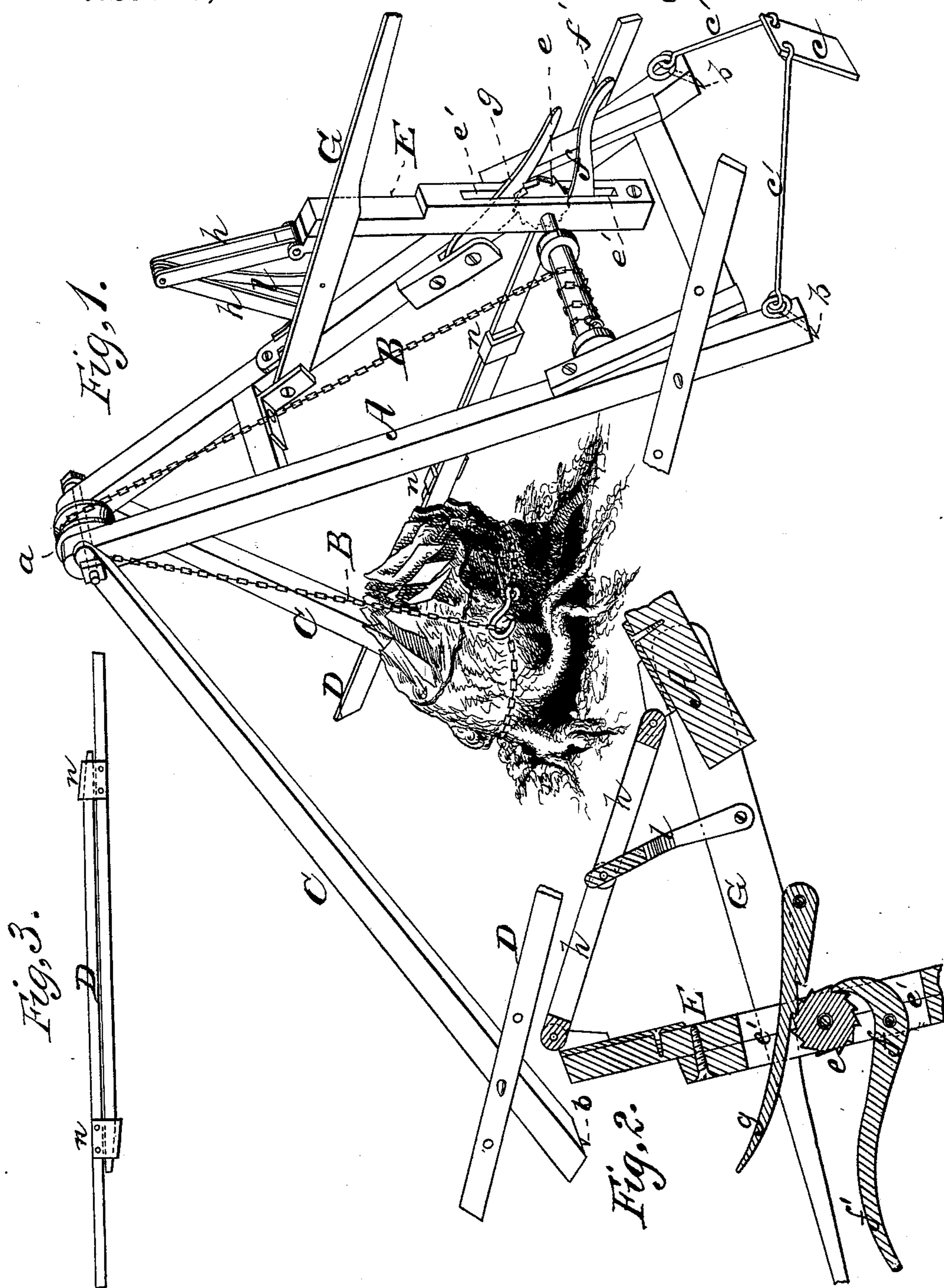


T. THAYER.  
Machine for Raising and Moving Heavy Bodies.

No. 218,598.

Patented Aug. 12, 1879.



WITNESSES  
Villette Anderson  
Francis J. Chas.

INVENTOR  
Thaddeus Thayer.  
by E. W. Anderson  
his ATTORNEY

# UNITED STATES PATENT OFFICE.

THADDEUS THAYER, OF NORWOOD, NEW YORK.

IMPROVEMENT IN MACHINES FOR RAISING AND MOVING HEAVY BODIES.

Specification forming part of Letters Patent No. **218,598**, dated August 12, 1879; application filed July 2, 1879.

*To all whom it may concern:*

Be it known that I, THADDEUS THAYER, of Norwood, in the county of St. Lawrence and State of New York, have invented a new and valuable Improvement in Machines for Raising and Moving Heavy Bodies; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my improved machine. Fig. 2 is a detail sectional view of the operative parts thereof, and Fig. 3 is a detail showing the construction of the braces.

This invention has relation to improvements in means for moving and raising heavy bodies, extracting stumps, and other similar purposes; and the nature of the invention consists in the combination, with a crane or derrick-frame, a winding-drum located thereon, and a ratchet-wheel at the end of the drum, of a holding-pawl pivoted to the frame and engaging said wheel, a lever vibrating on the shaft of said drum, an actuating-pawl on said lever, toggle-jointed rods connecting the lever and frame, and an operating-lever pivoted to the frame and connected to the said rods, as will be hereinafter more fully explained.

In the annexed drawings, the letter A designates a strong triangular frame, suitably braced at intervals, and carrying at its top a grooved pulley, *a*, over which passes the hoisting chain or rope B, that is attached to a winding-drum, having its bearings in the frame A, near its lower portion. This frame is supported by the legs C, pivoted to its apex, and braced to the sides thereof, when moving weights horizontally, by the braces D, the object thereof being to prevent the frame or its legs from folding up.

The foot of the frame and the legs are provided with spurs *b*, that, burying in the soil, greatly assist in holding the apparatus stationary, this result being greatly assisted by means of an anchor-spade, *c*, connected to the lower ends of the frame sides by the rigid rods *c'*.

E indicates a vertically-vibrating lever, made in two sections, that are clamped around the shaft of the drum, and receive the ratchet-wheel *e* on said shaft in a slot, *e'*, made in said sections. This lever extends below the shaft a sufficient distance, and carries in the lower branch of slot *e'*, under said shaft, a vertically-vibrating pawl, *f*, the power-arm *f'* of which overbalances its weight-arm and holds the pawl into engagement with the ratchet-wheel, so that as the lever E or pawl-carrier is vibrated it takes hold and alternately releases the ratchet-wheel in the usual way.

The drum is held against backward rotation by means of a dog, *g*, pivoted at one end to the side bar of the frame, extending through the slot *e'* of lever E, above the ratchet-wheel, and engaging the latter on its up side. The upper end of lever E is connected to the frame by means of the toggle-jointed bars *h*, and these are connected to the vertically-vibrating lever G, pivoted to the frame, by means of a rigid connecting-rod, *l*. This rod is pivoted at one end to the lever G, and at the other to the joint of the toggle-bars *h*.

When lever G is depressed the toggle-jointed bars *h* are straightened out through the medium of the connecting-rod *l*, lever E is vibrated with great power, pawl *f* takes hold upon the ratchet-wheel, the dog *g* releases the same, the drum is vibrated, and the hoisting-chain wound up upon the same, thus raising the weight of stone or other material applied or secured to the other end thereof.

In drawing objects along the ground, the hoisting-chain may pass directly to them instead of passing over the pulley.

When not in use, the legs C may be readily folded upon the frame A, and the whole stowed away in a compact form in a comparatively small space. The braces D, also for the same purpose, are made in two sections, overlapping each other, and the ends of each section fitting into a socket on the other section by a wedging action, so that, while they may be readily taken apart when desired, they will not become casually separated.

What I claim as new, and desire to secure by Letters Patent, is—

In a machine for raising or moving heavy

bodies, the combination, with a derrick or derrick-frame, a winding-drum having its bearings thereon, and a ratchet-wheel on the shaft of said drum, of a holding-pawl pivoted to the frame and engaging said wheel, a lever vibrating on the shaft of said drum, an actuating-pawl pivoted to said lever and engaging said wheel, toggle-jointed rods connecting said lever and frame, a manipulating-lever pivoted to the frame, and a connecting-rod pivoted to

the said lever and to the joint of the toggle-jointed rods, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

THADDEUS THAYER.

Witnesses:

CHAS. N. BIXBY,

H. W. CLARK.