

(No Model.)

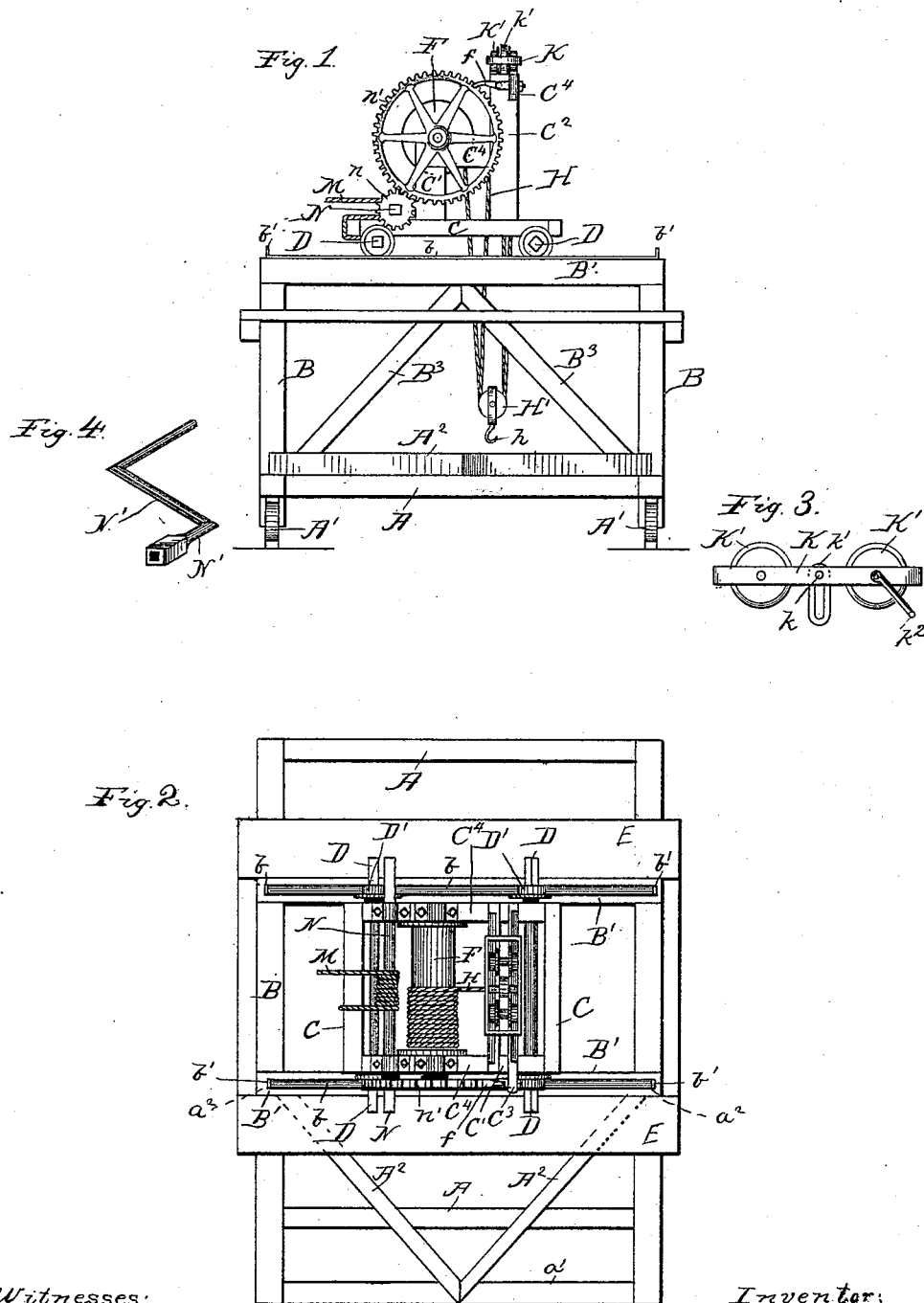
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G. HUNTER.

APPARATUS FOR HOISTING STONE.

No. 346,850.

Patented Aug. 3, 1886.



Witnesses:
Lew. C. Curtis
H. M. Munday

Inventor:
Griffith Hunter.
By Munday Everett & Adams
his Attorneys:

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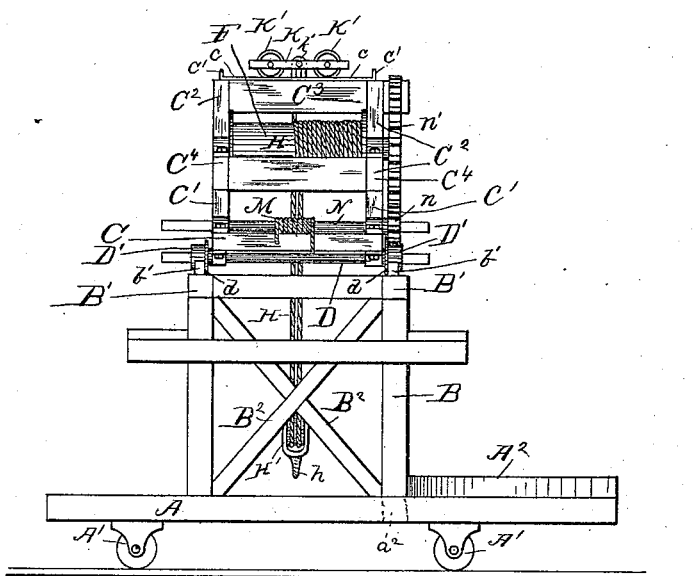
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Fig 5.



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Inventor
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UNITED STATES PATENT OFFICE.

GRIFFITH HUNTER, OF CHICAGO, ILLINOIS, ASSIGNOR TO S. A. HUNTER, OF
SAME PLACE.

APPARATUS FOR HOISTING STONE.

SPECIFICATION forming part of Letters Patent No. 346,850, dated August 3, 1886.

Application filed March 20, 1886. Serial No. 195,931. (No model.)

To all whom it may concern:

Be it known that I, GRIFFITH HUNTER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Apparatus for Hoisting and Laying Stone, of which the following is a specification.

My invention relates to apparatus for hoisting and laying heavy foundation-stones, and more particularly to certain improvements upon the apparatus or invention heretofore patented to me in Letters Patent of the United States, No. 270,675, under date of January 16, 1883.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is an end view; Fig. 2, a plan view. Fig. 3 is a detail elevation of the secondary adjustable carriage to which one end of the hoisting rope or chain is secured. Fig. 4 is a detail view of the crank; and Fig. 5 is a side elevation.

In said drawings, A represents the horizontal frame-work of the truck, A' its wheels, and A² diagonal braces.

B is an upright frame upon which the windlass-frame C travels transversely to the truck. The upper or horizontal timbers, B', of the windlass-frame C are furnished with tracks b, preferably consisting of smooth flat bars or strips of iron. The tracks b are provided with stops b' at each end, preferably formed by bending up the ends of the bars constituting said tracks.

The windlass-frame is composed of a horizontal frame-work, C, upon which the axles D of the wheels D' are journaled, and an upright frame-work, C' C², upon which the windlass F is journaled. The wheels or rollers D' are secured rigidly to the axles D; but they are preferably not made integral with the axles, as the wheels can best be of cast metal. The wheels or rollers D' rest directly upon the tracks or ways b, and they should be provided with flanges d to fit said tracks, and thus keep the windlass-carriage in place. The axles D, one or both, are provided with cranks N', which fit upon the ends of said axles, where-

by the windlass carriage may be easily propelled or adjusted in position along the tracks b b, in order to move the stone into the desired position transversely to the truck-frame.

H is the hoisting rope or chain; H', the block or blocks, and h the hooks or grappling devices. One end of the rope or chain is secured to the windlass F, and its other end is secured to a longitudinally-movable carriage, K, mounted upon the windlass-carriage, so that by adjusting said carriage K the position of the stone may be accurately and easily adjusted longitudinally without moving the truck A on its track.

The upper horizontal frame-pieces, C³, of the windlass frame or carriage are furnished with tracks c, having stops or turned-up ends c', similar to the tracks b on the truck, and the carriage or frame K is furnished with flanged wheels or rollers K'. The carriage K may preferably consist of a rectangular iron frame having suitable journals for the axles of the wheels K', and provided with a cross-bar, k, upon which the link k' is suspended, the end of the rope or chain H being attached to this link.

The windlass F is operated from a crank-shaft, N, journaled on the windlass-frame, and having a gear, n, which meshes with a gear, n', on the windlass-shaft. The cranks N' should, for convenience, fit upon either end of the crank-shaft N, and also upon each end of the roller-shaft D D, so that the same cranks may be used for raising the stone or adjusting the windlass-carriage transversely. A pawl, f, pivoted to the windlass-frame engages the teeth of the wheel n', and serves to hold the windlass in any desired position. A rope or chain friction-brake, M, having one end secured to the windlass-frame and wrapped several times around the crank-shaft N, will, by a slight pull on its free end, serve to hold the stone supported by the windlass in any desired position, and at the same time affords an easy and expeditious means of lowering the stone to its place, slowly or rapidly, as may be desired.

To facilitate the winding up of the tackle after the stone is released, the windlass-shaft

F' is furnished with square or angular ends, (not shown,) like the crank-shaft N and wheel-shafts D D, to fit the cranks N'.

To give the truck-frame a requisite strength and stiffness, horizontal braces A² extend from near the middle of the front cross-beam, a', to the cross-beams a² at the point where the uprights or posts B B are attached; and for the purpose of affording place for these braces, the side beams of the frame are extended about three feet in front of the front wheels and posts, B B. Braces B² B² and B³ B³ also extend between the posts or uprights B B, to give the requisite strength and rigidity to the upright frame of the truck.

The uprights or posts C² of the windlass-frame, which support the adjustable link carriage or frame K, are considerably taller or longer than the other pair of posts, C', so that the link carriage K may be supported above the windlass and out of the way of the windlass-wheel n'. The transverse upper horizontal frame-pieces, C³, of the windlass-frame rest on the end of the posts C², and are mortised into the posts C² at one end. The windlass-shaft F' is journaled upon the horizontal frame-pieces C³; but there is little transverse strain upon these frame-pieces, as the windlass is located nearly directly above the posts C'. The strain from the other end of the rope or chain attached to the carriage K comes directly upon the ends of the other pair of posts C².

In operation, as the stone is lowered and the chain or rope unwinds from the windlass F, the unwinding of the rope or chain tends to slightly alter the longitudinal position of the stone, and it is sometimes very inconvenient to move the whole truck A on its track to give a slight adjustment to the stone longitudinally. For these reasons the longitudinally-movable carriage K, to which one end of the rope is attached, is of great advantage in the practical use of the apparatus. The link k' or the end of the rope H may, however, be fixed in a stationary position on the windlass-frame. Unless the horizontal timbers B' B' are furnished with an iron or metal rail, as b, the track for the wheels or rollers D' D' would speedily become worn, owing to the enormous weights supported on said wheels or rollers in moving large foundation-stones. The crank shafts or axles D of the wheels or rollers D', in connection with the smooth rails or tracks b, afford a durable, as well as cheap and simple, device for adjusting the windlass-carriage transversely.

E E are platforms at each end of the windlass-frame, upon which the workmen stand in operating the windlass, &c.

The wheels or rollers K' of the link-carriage K are furnished with cranks K², for adjusting the position of the link-carriage.

I claim—

1. The combination, with a truck-frame provided with wheels, of a windlass-frame and windlass adjustable transversely on said truck-frame, and a secondary frame or carriage, K, adjustable longitudinally on said windlass-frame, and to which one end of the rope or chain is attached, substantially as specified.

2. The combination, with a truck-frame furnished with wheels, of a windlass and windlass-frame adjustable transversely on said truck-frame, rollers or wheels on said windlass-frame, tracks for the same, and a crank for turning said rollers or wheels to adjust said windlass-frame, substantially as specified.

3. The combination, with a truck-frame furnished with wheels, of tracks or rails b b, a windlass, a windlass-frame adjustable transversely on said truck-frame and having axles D D, furnished with wheels or rollers D' D', and a crank, N', fitting on one of said axles, substantially as specified.

4. The combination, with a truck-frame furnished with wheels, of a windlass and windlass-frame, tracks b b, having stops b' b' at each end, axles D D, and flanged wheels or rollers D' D', substantially as specified.

5. The combination, with horizontal frame A, wheels A', braces A², posts B, horizontal timbers B', furnished with smooth rails b, horizontal frame C, having axles D and wheels D', posts C' and C², the latter longer than the former, horizontal timbers C⁴, and windlass F, substantially as specified.

6. The combination, with horizontal frame A, of wheels A', braces A², posts B, horizontal timbers B', furnished with rails b, horizontal frame C, having axles D and wheels D', posts C' and C², the latter longer than the former, horizontal timbers C⁴, windlass F, horizontal timbers C³, having rails c, frame K, having wheels or rollers K', substantially as specified.

7. The combination of windlass F with crank-shaft N and friction brake M, wrapped around said crank-shaft, substantially as specified.

GRIFFITH HUNTER.

Witnesses:

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