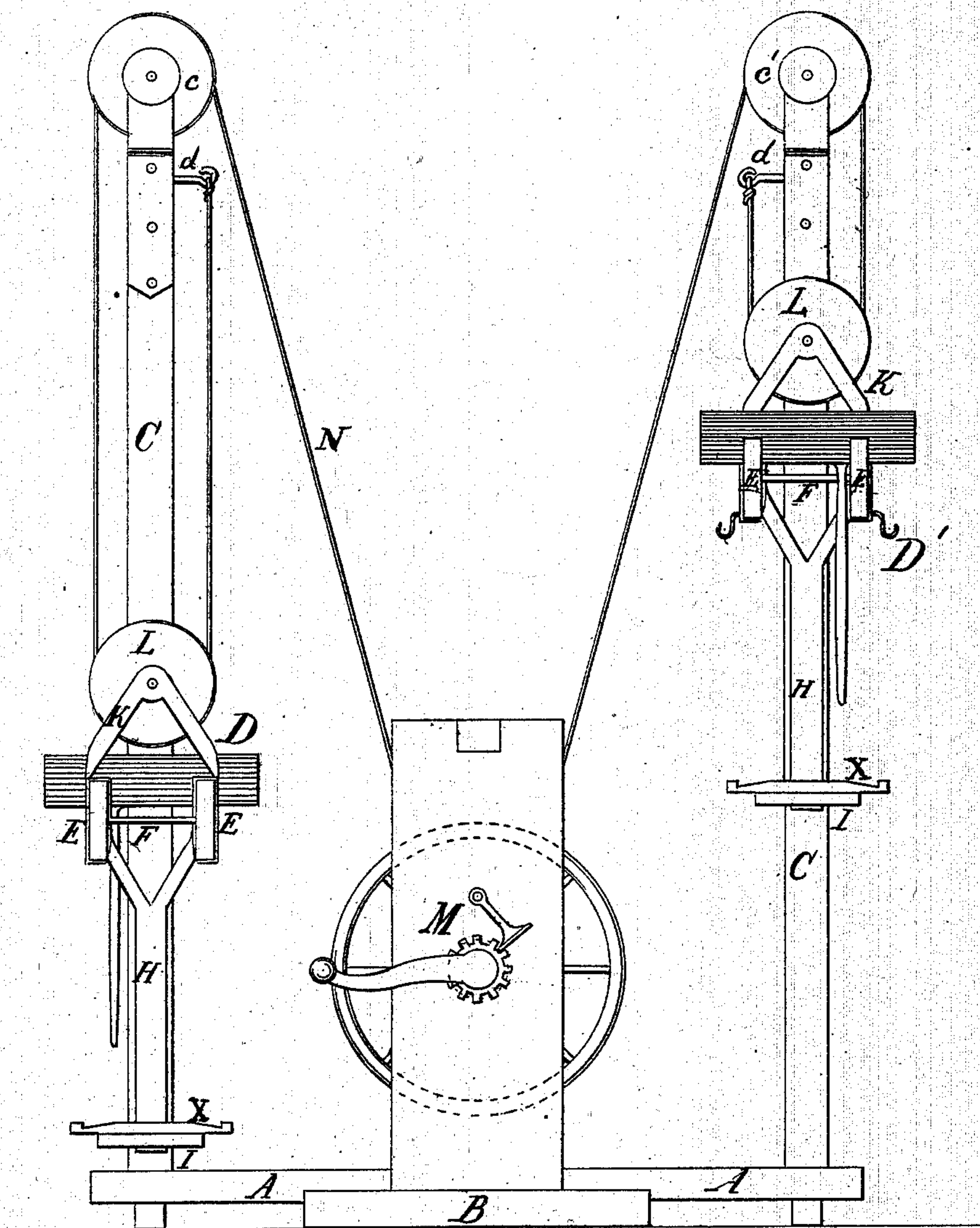


**J. KING.**  
**Machines for Elevating Building Materials.**  
 No. 139,161. Patented May 20, 1873.

*Fig 1.*



Witnesses:

*W. Harkness*  
*Chas. C. Wilson*

Inventor:

*John King*  
 by his attys.  
*Cox and Cox*



J. KING.

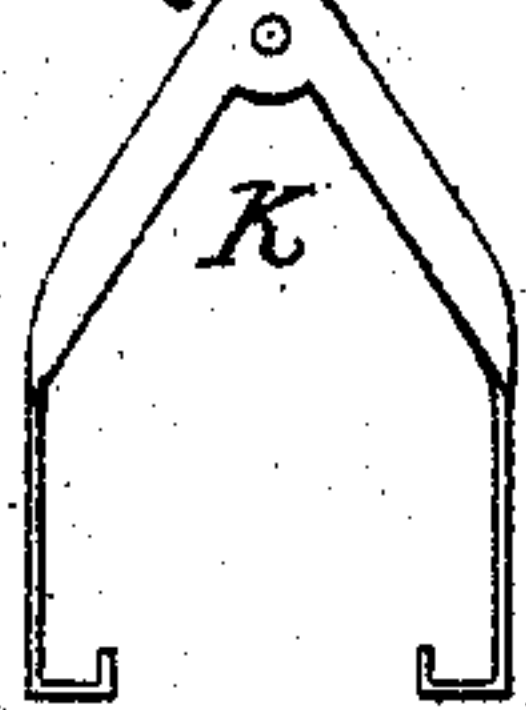
Machines for Elevating Building Materials.

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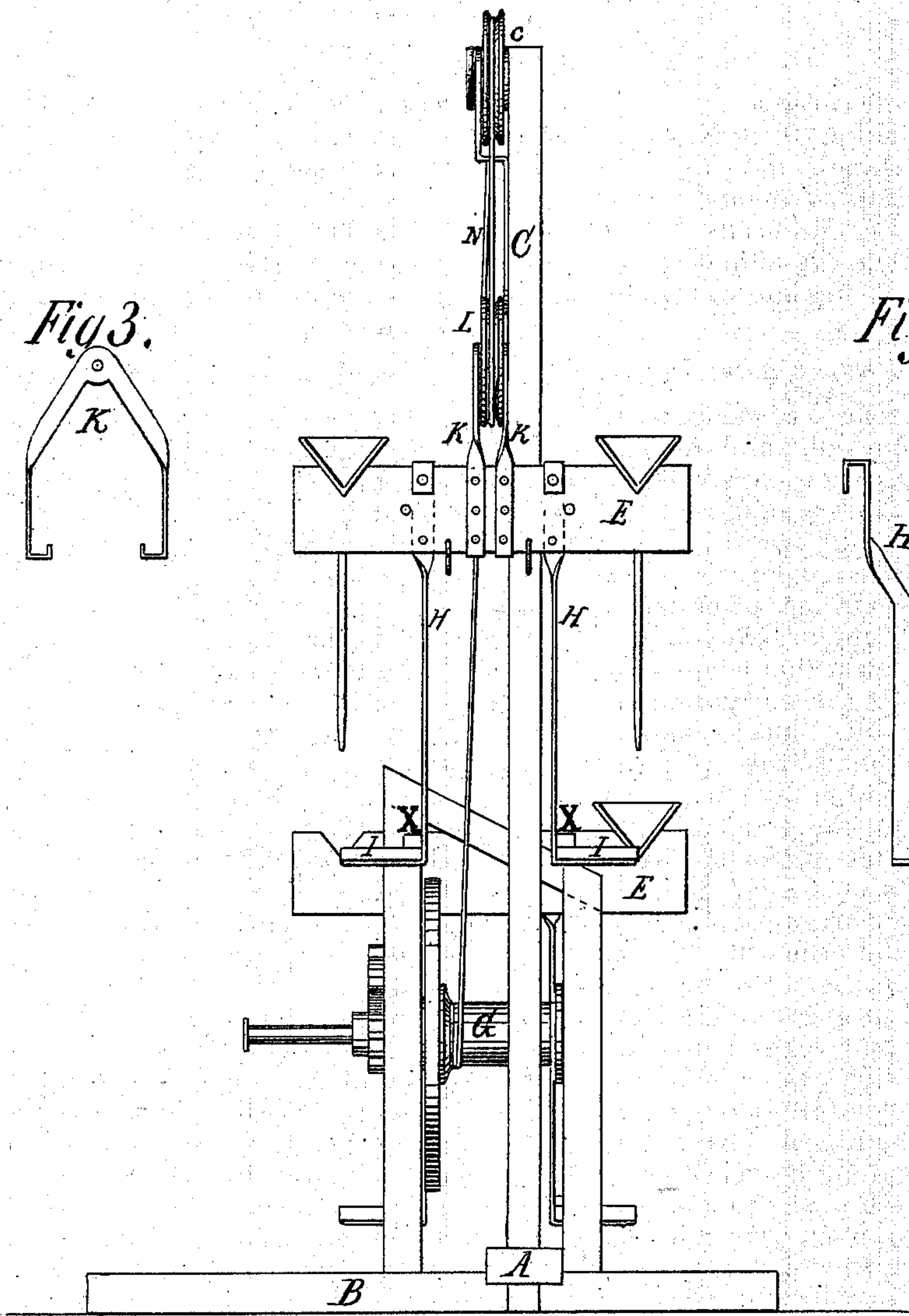
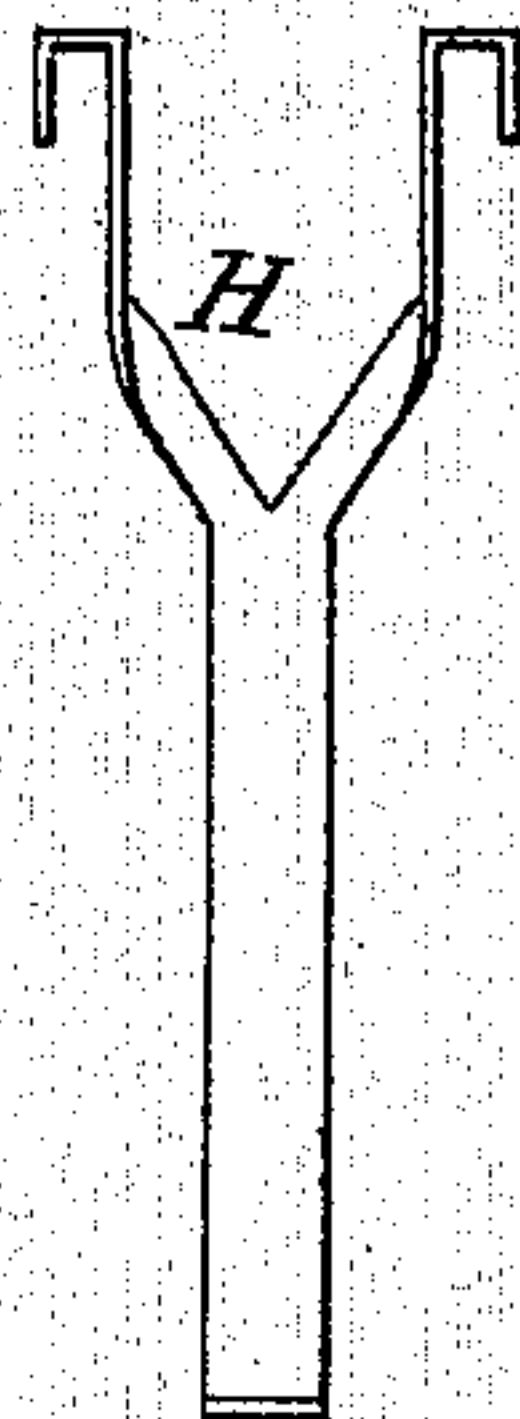
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*Fig 2.*

*Fig 3.*



*Fig 4.*



Witnesses:

*W. H. Harkness,*  
*Chas. C. Wilson*

Inventor:

*John King*  
*by his attys.*  
*Cox and Cox*



# UNITED STATES PATENT OFFICE.

JOHN KING, OF QUINCY, ILLINOIS.

## IMPROVEMENT IN MACHINES FOR ELEVATING BUILDING MATERIALS.

Specification forming part of Letters Patent No. **139,161**, dated May 20, 1873; application filed April 11, 1873.

*To all whom it may concern:*

Be it known that I, JOHN KING, of Quincy, Adams county, Illinois, have invented certain new and useful Improvements in Machines for Elevating Building Materials and analogous purposes, of which the following is a specification, reference being had to the accompanying drawing.

### *Nature and Object of the Invention.*

My invention relates to machines for elevating building materials and analogous purposes; and consists of a horizontal base-beam, at each end of which is an upright of suitable strength, that extends upward above the point at which it is desired to deliver the material to be elevated. Two frames of convenient form, one for either upright, are provided, consisting of two horizontal parallel beams, which hang at right angles to the uprights, and through which pass two bolts, thus forming a parallelogram to accommodate the uprights and other parts; as will more fully appear hereinafter. Depending below the frames, and attached thereto upon either side of the uprights, are metallic supports or pendants, to which are secured platforms, arranged so that mortar, as well as lumber and other material, may be securely placed thereon. Projecting above either frame, and properly secured thereto, are two suitable metallic yokes, between which revolves a pulley-wheel, the axle of which, with the yokes, is sufficiently strong to support the entire load to be raised. At the top of the upright a second pulley-wheel of sufficient strength is secured in any proper manner, and adjacent thereto, upon the inner side of the upright, is a pin, to which is attached a rope that, passing under the wheel first mentioned, is carried over that at the top of the upright; thence downward and around the roller of a windlass; thence over the top pulley of the other upright, under that beneath, and terminating at the pin in the second upright, which, as well as the other parts, is placed in a position corresponding to that first described. Thus an endless belt is formed, which is operated by means of a windlass that is suitably placed between the two uprights upon a platform or otherwise, as may appear to be desirable. As the windlass is turned one of the

frames with its load is raised, the other descending, and thus there is a reciprocal action which assists in the ready operation of the machine.

The object of the invention is to provide a convenient and practicable machine of simple construction for the elevation of building materials and similar purposes.

### *Description of the Accompanying Drawing.*

Figure 1 is a front elevation of device embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a view of one of the strips or yokes K. Fig. 4 is a view of one of the supports or pendants H.

### *General Description.*

A is the horizontal base-beam, which may be suitably secured to the platform B in such manner as to support whatever weight or strain may be necessary. Near the ends of the beam A are two uprights, C, which are of similar construction and of any required strength, that extend upward to a point above that at which it is desired to deliver the material to be elevated. At the top of either upright are pivoted the pulley-wheels *c c*, and adjacent thereto, on the inner sides of the uprights, are the pins *d d*, which are properly secured in any convenient manner. D D' are the two frames of similar construction, which hang at right angles to the beam A, one pertaining to either upright, in which E E are two substantial beams, that are held parallel to each other by means of the bolts F, which, with the beams, are separated, thus forming a parallelogram. When the frame D is hung in position the upright C occupies the central portion of this parallelogram, and the different parts of the frame are arranged and attached so as to permit the frame to be elevated and lowered without coming in contact with the upright. In the beams E I cut V-shaped notches to afford seats for hods, or arrange them otherwise at pleasure. Attached to the beams E, and depending below the same, are the pendants H, which are metallic strips split at the top and formed to resemble a fork, the prongs of which are turned, as shown in Fig. 4, and carried over the upper edges of the beams E and securely bolted there-



to, as shown in Fig. 2. Two of these pendants are provided for each frame and depend below it, being secured in the relative positions shown in Fig. 2. Each of the said pendants H is bent near its lower extremity to form a right angle, and upon its horizontal part is firmly attached the platform I, extending outward from the upright C. Attached to each of the platforms I are the beams X, which are placed against and at right angles to the vertical parts of the pendants H, and which extend beyond the edge of the platform, and, being provided with notches, form, in combination with each other, a convenient means of raising timbers, boards, and analogous things. Projecting above the beams E are the metallic inverted V-shaped strips K, the ends of which are turned, substantially as shown in Figs. 2 and 3, and carried under the beams E, and bolted or otherwise fastened thereto, so that the strips extend upward parallel to each other, having a sufficient space between them to permit of the proper action of the pulley-wheel L, which is pivoted to them at the apex of the inverted V upon an axle of sufficient strength to support the frame and its load. To the platform B is secured the windlass M, which is of any desired construction, and which is operated by the usual crank, provided with cog-wheel and brake, or otherwise, as may appear desirable. A rope or chain, N, one end of which is attached to the pin *d*, passes under the pulley-wheel L; thence over the wheel C; thence downward and around the roller of the windlass; thence over the pulley-wheel *c* upon the other upright; thence under the wheel L beneath, and upward to the pin *d* upon the upright last named, where the other end is fastened, whereby an endless belt is formed and reciprocal action by the frames D D' effected.

In the construction of the machine care should be taken to insure sufficient strength in all the parts, and the frames D D' should be made of as nearly equal weight as may be practicable.

#### *Operation.*

The machine, having been arranged for operation, is placed so as to carry the uprights as

near as practicable to the point at which the delivery is to be made, the wheels C *c* extending above. One of the frames will be elevated and the other lowered. Any desired load is placed upon the latter, and power being applied at the windlass, assisted by the descent of the frame first mentioned, the load is raised at pleasure.

The method of erection and its converse I have not thought necessary to describe, as suitable and convenient means will suggest themselves to any one having occasion to use the machine.

I am aware that elevators have been constructed in which platforms have been reciprocally raised and lowered by means of pulleys and ropes, and I do not claim broadly a machine embodying these features. Neither do I claim generically a frame consisting of a hod-rack and platform, as I am aware that such frame is not new; but

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

1. The frame D, consisting of the beams E, bolts F, strips K, pulley-wheel L, pendants H, platforms I, and beams X, substantially as shown and described, and for the purposes specified.

2. The frame D, consisting of the beams E, bolts F, strips K, pulley-wheel L, pendants H, platform I, and beams X, in combination with the rope N, windlass M, pulley-wheel *c*, upright C, and pin *d*, when arranged and operated substantially as shown and described.

3. The beams X, when arranged relatively, one to the other, substantially as shown and described.

4. The parallel inverted V-shaped strips K, for the uses and purposes shown and described.

5. The supports H, when constructed and attached substantially as shown and described.

In testimony that I claim the foregoing improvement in machines for elevating building materials and analogous purposes, as above described, I have hereunto set my hand and seal this 27th day of March, 1873.

JOHN KING. [L. S.]

Witnesses:

BERNARD ARNTZEN,  
J. H. RICHARDSON.