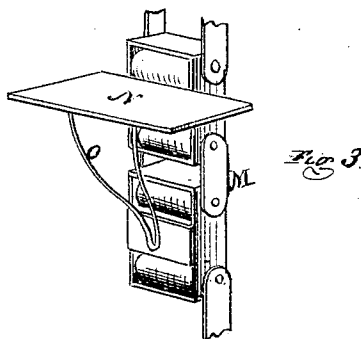
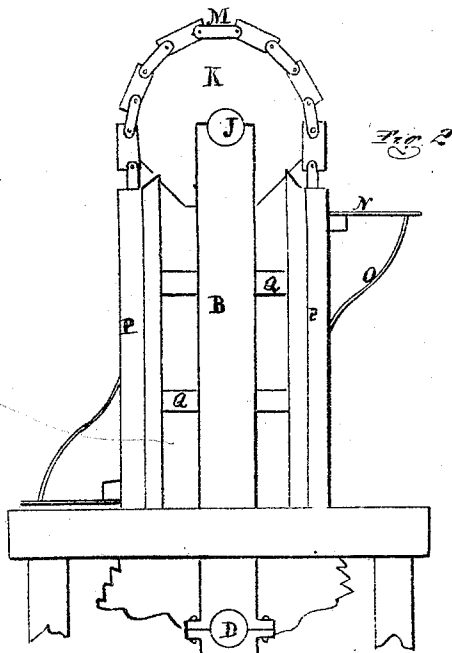
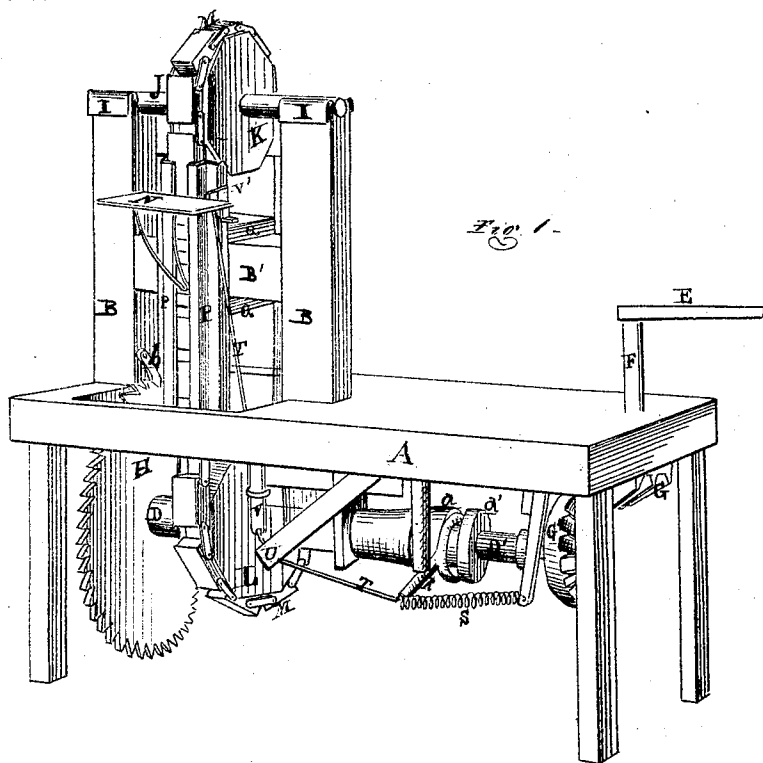


WILLIAM BOSWELL.

Improvement in Brick and Mortar Elevators.

No. 118,783.

Patented Sep. 12, 1871.



ATTEST:

W. T. Eberts
 Myron H. Church

INVENTOR.

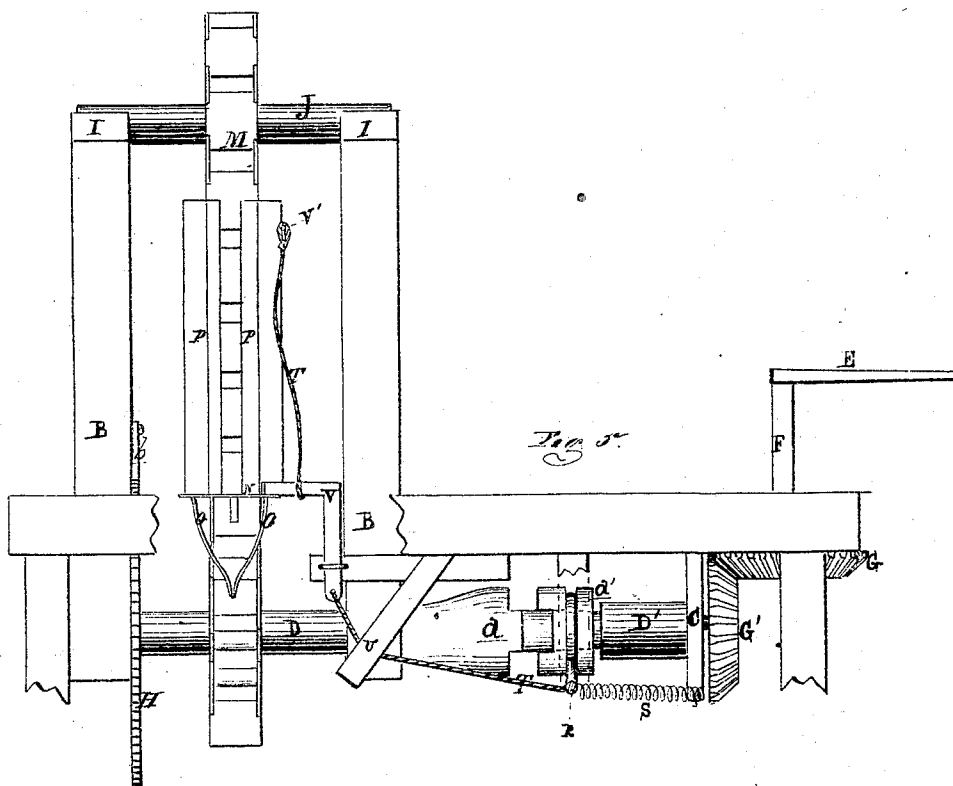
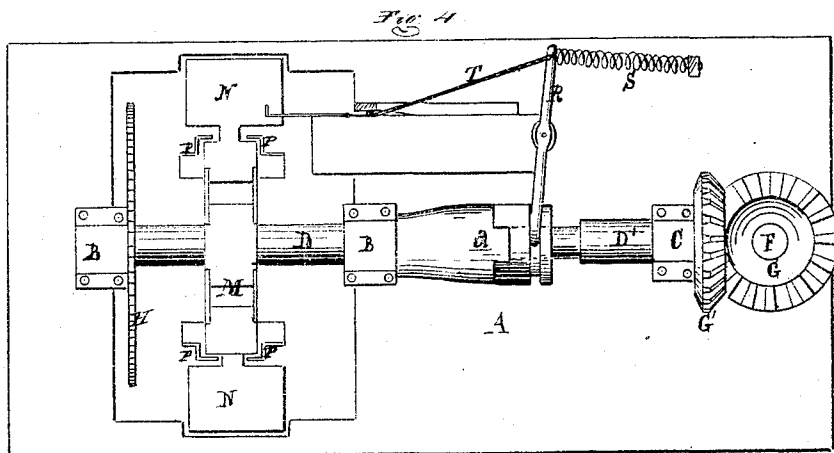
William Boswell
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UNITED STATES PATENT OFFICE.

WILLIAM BOSWELL, OF PONTIAC, MICHIGAN.

IMPROVEMENT IN BRICK AND MORTAR-ELEVATORS.

Specification forming part of Letters Patent No. 118,783, dated September 12, 1871.

To all whom it may concern:

Be it known that I, WILLIAM BOSWELL, of Pontiac, in the county of Oakland and State of Michigan, have invented a new and useful Improvement in Brick and Mortar-Elevators; and I do hereby declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1, Sheet 1, is a perspective view of my apparatus. Fig. 2 is an end elevation of the same. Fig. 3 is a detached perspective view of a platform attached to the endless chain. Fig. 4, Sheet 2, is an inverted plan or bottom view of the machine; and Fig. 5 is a front elevation of the same.

Similar letters of reference indicate corresponding parts in the several figures.

The nature of this invention relates to a device to be used in the erection of brick and stone buildings, by means of which materials can be elevated to the top of the work, as it progresses, with speed, safety, and economy. The invention consists in the peculiar construction of the elevating machinery, and the arrangement of the devices for throwing the same out of gear with the driving-gear, automatically, at any desired point, as more fully hereinafter set forth.

In the drawing, A represents a portion of the first floor of a building in course of construction, the space below being the basement thereof. Two or three joists should be omitted in laying the floor on this and on each floor above it, in order that the elevator may be placed therein, which joists may be easily put in position when the building is erected. B B are sectional standards of wood, one of which is framed into the lower floor at each side of the opening and pendent below it. These standards are the height of a story, except the lower ones, which are a few feet longer, and are connected at the middle by a cross-girt, B'. C is a hanger pendent from the lower joists, in line with the lower ends of the standards B. D is a shaft journaled in the lower ends of the standards B, and is provided with a stationary clutch-box, *a*. D' is an extension of said shaft, journaled in the hanger C and in said clutch-box, being provided with a sliding clutch-box, *a'*, feathered thereon, so that when in gear the shaft D may be rotated by a horse through

the sweep E, shaft F, and miter-gears G G', as shown. H is a ratchet-wheel at the opposite end of the shaft, and *b* is a pawl on the standard adjacent to hold the shaft stationary, as and for the purpose hereinafter mentioned. The tops of the standard are slotted to receive tenons at the lower ends of others placed above them, or the movable journal-boxes I to receive the shaft J carrying the chain-wheel K, a similar wheel, L, being secured to the shaft D below. M is an endless chain composed of wooden blocks, having pivoted to their ends and sides metallic bars or plates connecting them together and passing around the chain-wheels. N is a platform secured to a metallic block, M', in the chain, which may have friction-rollers pivoted therein, and to a similar metallic block below; or, following it in the chain, are secured bracket braces O, upon which, when the platforms are ascending, their outer edges rest and are supported thereby. P are chain-guides, consisting essentially of a wooden back with a double angle-iron flange at each side, and are secured to and supported by brackets Q from the girts of the standards. These guides should be carried up with the standards, as their office is to prevent the chain from sagging inwardly, keeping the platforms level and their loads in place. The loose clutch-box is moved by a clutch-lever, R, pivoted to a hanger pendent from the lower joists, and to the extremity of which lever a spiral-spring, S, is so attached as to keep the clutches in gear, unless otherwise prevented. T is a cord secured to the other end of the clutch-lever, led to and around a guide-pulley, U, at the opening in the lower floor, where it is attached to an iron, V, having the shape of an inverted L, thence up to the level of the floor above, where it is connected to another iron, V', pivoted to the chain-guide, both of which irons serve as stops in the following manner:

The clutch-boxes being in gear and the shafts in motion, the near side of the chain will ascend until one of the several platforms comes under the arm of the stop V, which it elevates, and thus pulls the loose clutch out of gear, when the pawl prevents the shaft D from turning back, leaving that platform on a plane with the lower floor. A barrow of brick or mortar, or both, may now be placed on that platform, when the chain is again put in motion by the attendant, who kicks the stop off the edge of the platform; or a simple

lever may be provided for that purpose. On arriving at the next floor the chain is again stopped in like manner by the platform coming under the stop V' and disengaging the loose from the fast clutch. The barrow is now wheeled away to where the masons may require and the chain started again. When the chain is stopped to receive a barrow at the loading-floor, the chain will present an inverted platform at the opposite side on a plane with the upper floor, on which an empty barrow may be run, to be sent down for another load. The platform can be stopped at any point from either floor by pulling up on the cord and throwing the clutches out of gear. If a portable steam-engine be used the vertical shaft and gears may be dispensed with. When the walls are up so far that the standards require lengthening the chain is uncoupled, the upper shaft and journal-boxes removed, another section placed and secured on top of each standard, the shaft and journal-boxes placed on the newly-

added sections, the chain lengthened to correspond with two additional platforms, and the device is again ready for use at a few minutes' notice.

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

1. The construction and arrangement of the standards B B, hanger C, shaft D D', clutch-boxes *aa'*, clutch-lever R, spring S, cord T, ratchet H, pawl *b*, movable journal-boxes I I, shaft J, chain-wheels K L, endless chain M, platform N, braces O, and chain-guides P, as and for the purpose set forth.

2. The arrangement of the stops V V' in the cord T with relation to the chain-guide P and platform N, in the manner described, for the purpose specified.

WILLIAM BOSWELL.

Witnesses:

H. F. EBERTS,

MYRON H. CHURCH.

(20.)