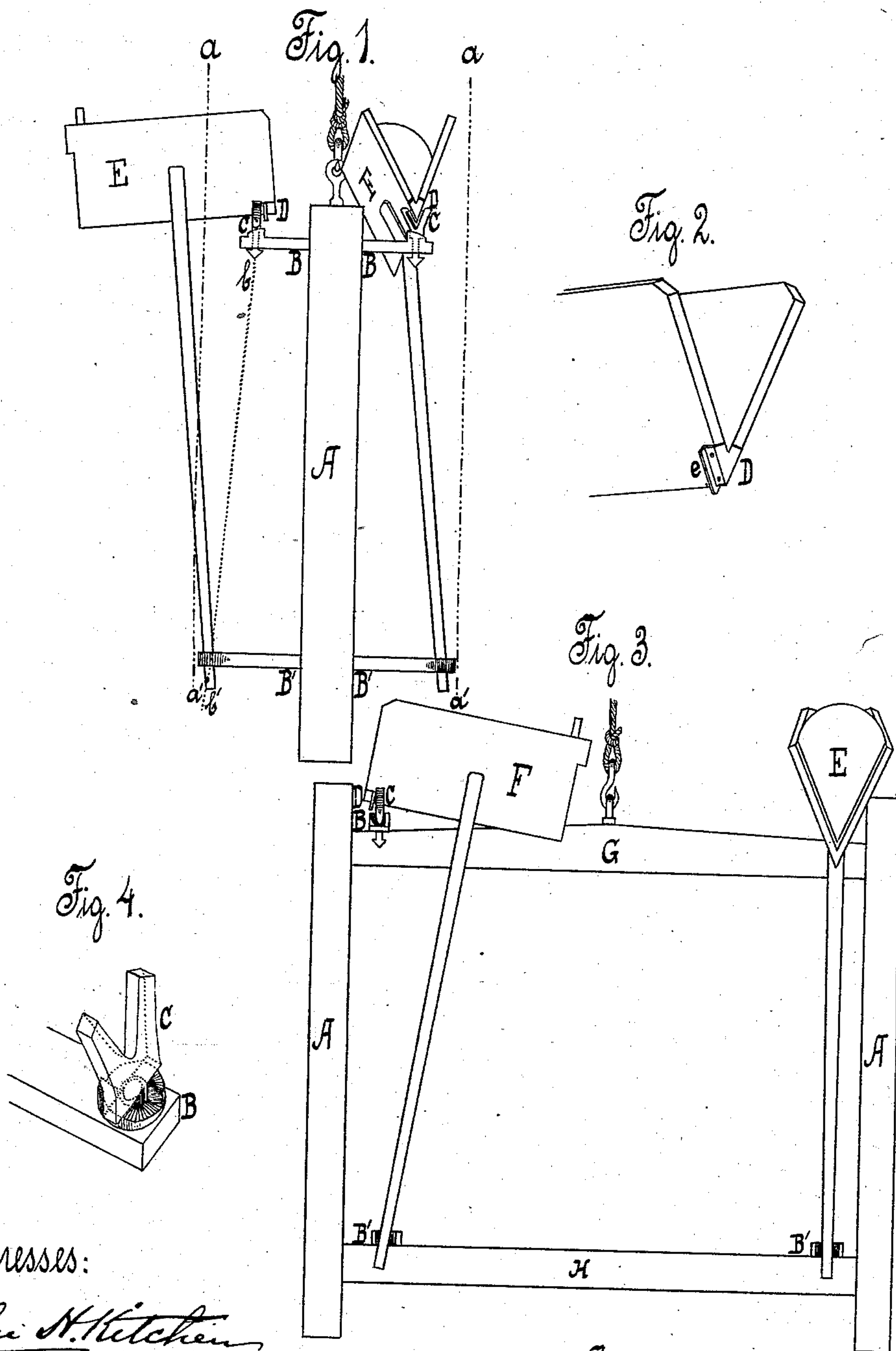


(No Model.)

G. W. BROWN.
Hod Elevator.

No. 239,646.

Patented April 5, 1881.



Witnesses:

John H. Kitchen
George W. Brown Jr.

Inventor:

G. W. Brown

UNITED STATES PATENT OFFICE.

GEORGE W. BROWN, OF NEW YORK, N. Y.

HOD-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 239,646, dated April 5, 1881.

Application filed February 1, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BROWN, a citizen of the United States, and resident of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Safety Hod-Elevators, of which the following is a specification.

Hitherto it has generally been necessary for the laborer to step upon the platform of the hod-elevator in attaching and detaching the hod. Therefore, when four or more hods are attached or detached at the same time, the aggregate weight of as many laborers is added to that of the load of hods, and numerous fatal accidents occur from the breaking of the hoisting-cable consequent upon the increased strain, or from the slipping of the brakes, whereby the elevator is held suspended, from the same cause. The danger is further aggravated by the fact that the laborer must step within the line of hoistway, and so lessen the chances of recovering balance in event of the elevator giving way.

It is the object of my invention to provide a hod-elevator which shall be safe, convenient, and compact, and which shall sustain the hod thereon alternatively in position, compact for elevation, and safely without the line of hoistway, convenient for removal. To this end I do away with a platform entirely, and so remove all temptation, even to step thereon. When, however, it is desired to raise stone lintels or other bulky material, a suitable platform may be temporarily attached by any of the known proper mechanical devices. The hod-bowls, when in a position of rest during ascent or descent, are supported parallel with the cross-head of the elevator, so that the width of the hod-bowl, and not its length, is the unit of width for the hoistway. When a platform is used the position of the full hod attached to the elevator is such as to permit the empty hod to be inverted on such platform for return before the full hod is detached by the laborer—an item in economizing his exertion. The full-hod, when in a position for removal, is so held that that portion of the hod-bowl received upon the laborer's shoulder shall be outside of the line of hoisting, convenient and safe to be detached. I attain these objects by mechanism which is illustrated in the accompanying drawings, similar letters referring to similar parts throughout the several views, in which—

Figure 1 is a cross-section, and Fig. 3 is a front-side view, of an elevator fitted and constructed according to my invention. Fig. 2 is an enlarged perspective view of what I term the "nose-piece," hereinafter more fully described; and Fig. 4 is a like view of my device for holding the hod and allowing the desired movement thereof, with the details of its construction and operation.

A A are the uprights of the elevator.

G is the cross-head or rest-bar, to which is secured by ordinary means the hoisting-cable.

H is a cross-bar to preserve the shape and rigidity of the frame-work, and may give place to an ordinary platform when desirable. The elevator itself is intended to be operated in the usual way.

C C are Y-shaped pieces of metal or other suitable material, affording a seat for the angular part of the hod-bowl, and situated at such a distance from the cross-head or rest-bar G as will allow the hod-bowl to revolve thereabout to and from a position of rest parallel to such rest-bar. The standard of this Y turns in a suitable opening in the extremity of the arm B, which is of metal or other suitable material, and affixed to the cross-head or the uprights of the elevator, and extending at right angles therefrom a distance suitable to the desired revolution of the hod-bowl. This revolution may be made automatic by the proper application of surface-cams to the bearings on the arms, as detailed in Fig. 4. The weight of the full hod seated in the crotch of the Y, when in the position depicted in Fig. 4, and the hod E in Figs. 1 and 3, tends to cause the bearings to descend the inclined planes presented by the surface-cams, and the hod consequently revolves until the bearings reach the ends of the inclines and are stopped by the adjacent heights, where the hod is held parallel to the rest-bar G, as shown by the hod F in Figs. 1 and 3.

D is a metallic nose-piece, of obvious construction and application, and serving the double purpose of preventing the damage done to the wooden nose of the hod in the common practice of jarring it against an obstacle to empty the hod of mortar, and of presenting the edge or ledge (*vide* Fig. 2) whereby the hod firmly holds its seat. When the contact between this edge or ledge and the

arms of the Y is sufficiently prolonged the hod retains the desired position without further support.

The surface-cams above described may be omitted, and the desired revolution obtained by means of a second arm, B', provided at its outer extremity with a jaw suited to receive the lower portion of the hod-shank and eccentric to the point of support in the arm B. The points of support in the arms B and B', relatively to each other, are to lie in the imaginary line indicated by the dotted line *b b'*. When these two sets of arms are used the Y and nose-piece also may be omitted, and a suitable hook and eye allowing the same revolution substituted. The hook or equivalent pin may be affixed to the hod-bowl at the angular juncture of its sides, near their end, and fitted to turn in the eye or hole in the extremity of the upper arm, or the relative positions of the hook and eye may be reversed. The desired results may be easily reached in this manner.

The hod E is ready for removal with that portion of it usually received upon the laborer's shoulder entirely outside the line of hoistway, (indicated by the broken lines *a a'*.) As shown, both sets of arms B and B' act to sustain the hod in a position convenient and safe for removal; but the same position can be maintained, as above suggested, by sufficiently prolonging the contact of the edge or ledge *e* of the nose-piece D with the arms of the Y, thus doing away with the second or lower set of arms. The hod F is in a position of rest, seated in the Y C, and supported by the arm B, while its shank or handle is retained by the jaw in the arm B' in such a position relative to the point of support that gravitation acts to keep the hod in such position of rest. The hods E and F both show the action of the nose-piece D in maintaining the seat of the hod in the crotch of the Y.

The arms B and B' may be affixed either to the cross-bars or the uprights, as may be preferable, and as many may be supplied as the hods desirable to carry.

In the use of the mechanism the Y's are in the position (depicted in Fig. 4) suited to receive the hod E, having remained so after the previous removal of a hod, their own weight not being sufficient to compel revolution. The laborer approaches with a full hod on his shoulder and seats the angular part of the hod-bowl in the crotch of the Y, and therein rests its weight. The edges or ledges of the nose-piece D in contact with the arms of the Y, if sufficiently prolonged, now not only prevent the falling out of the hod, but, owing to the great friction, sustain and retain it in position; but if the second arm, B', be used, the shank swings naturally into its jaw. In either case the hod is held in position while the laborer withdraws his shoulder. When the surface-cams are used for the bearings on the up-

per arm, the hod will now swing or revolve around toward the rest-bar G until stopped by it or by the arrival of the bearings of the Y at the ends of the inclines and against the adjacent heights. The hod here rests and remains substantially through the agency of gravity. When the hook and eye are used a slight impulse from the laborer will be needed to cause revolution. When the hod-bowl has reached its position of rest, after revolution, parallel with the cross-head or rest-bar, its width has become the unit of width necessary for a hoistway. When the elevator has been hoisted to the desired height another laborer approaches, and, catching hold of the upper part of the shank, swings the hod F outward from the rest-bar, toward himself, into the position of the hod E. There it is steadily held, as aforesaid, outside the hoistway and over the firm beams of the building, in a convenient position for safe removal. Empty hods are returned in the same manner, or, when a platform is used, may be inverted thereon.

Having thus fully described my invention, what I claim as my invention, and desire to secure by Letters Patent, is—

1. A hod-elevating frame-work constructed and fitted to support the hod thereon at the angular juncture of the sides of the hod-bowl, at the end thereof, and at such a distance from the upper cross-bar of such frame-work as to allow the hod-bowl to revolve about such point of support to a position of rest parallel to such cross-bar.

2. A hod-elevating frame-work constructed and fitted as set forth, and further fitted to retain the hod'shank or handle out of plumb, and relative to the aforesaid point of support, so that eccentricity shall tend to revolve the hod to the aforesaid position of rest, and gravity there retain it.

3. A Y-shaped piece, C, constructed and operated and for the purpose substantially as set forth.

4. A Y-shaped piece, C, in combination with the surface-cams, for automatically causing, guiding, and stopping motion, in the manner and for the purpose substantially as set forth.

5. A metallic nose-piece in combination with the open end of a hod-bowl at the juncture of the sides thereof, and presenting an edge or ledge constructed, affixed, and for the purposes substantially as set forth.

6. A lower arm fitted on a hod-elevating frame-work, to retain the hod-shank out of the plumb-line from the point of support, whereby the hod tends to revolve to a position of rest against an obstacle, and is there retained.

7. A Y-shaped nose-piece and upper and lower arms, arranged as aforesaid, in combination with a hod and hod-elevating frame-work.

GEO. W. BROWN.

Witnesses:

JOHN H. KITCHEN,

GEORGE W. BROWN, Jr.

Correction of Letters Patent No. 239,646.

It is hereby certified that in Letters Patent No. 239,646 granted April 5, 1881, to George W. Brown for an improvement in "Hod Elevators," the word, punctuation mark and letter "piece, a," were erroneously omitted after the word "shaped" in line 124, page 2, of the printed specification attached to and forming a part of said Letters Patent; that the proper corrections have been made in the files and records pertaining to the case in the Patent Office, and are hereby made in said Letters Patent.

Signed, countersigned, and sealed this 13th day of April, A. D. 1881.

[SEAL.]

A. BELL,
Acting Secretary of the Interior.

Countersigned:

E. M. MARBLE,
Commissioner of Patents.