J. H. SEARS & B. MERRITT.

BRICK ELEVATOR.

No. 31,728. Patented Mar. 19, 1861.

Fig. 1.

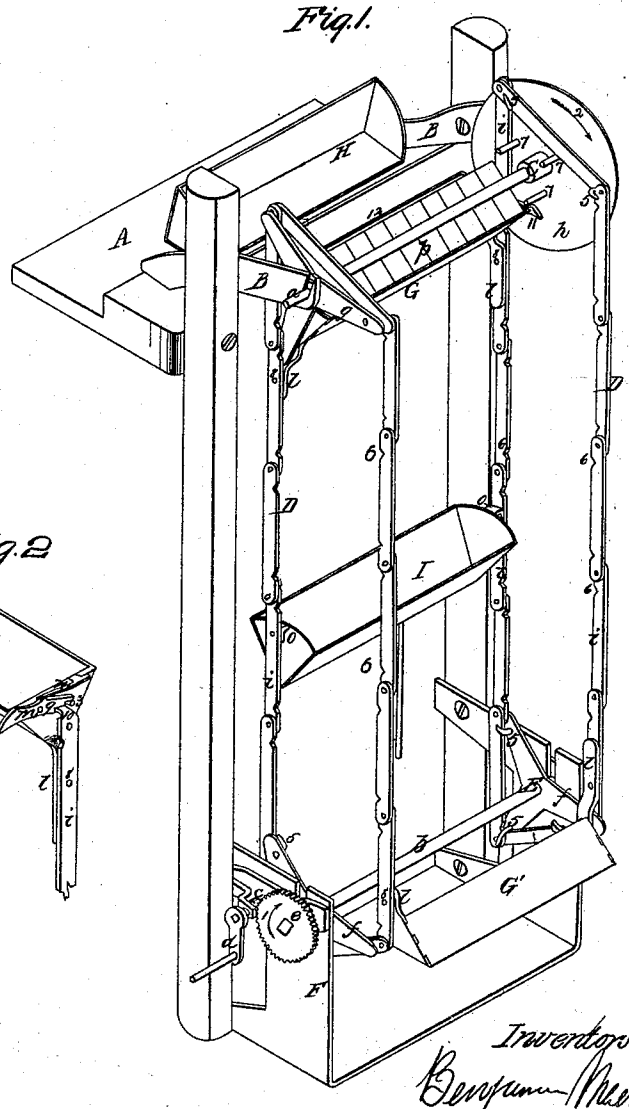
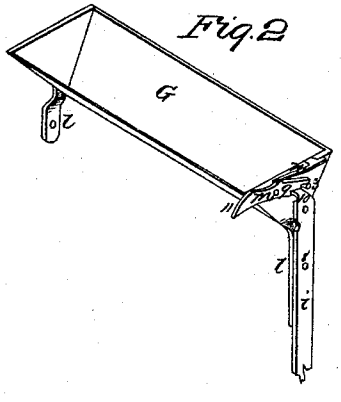


Fig. 2



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UNITED STATES PATENT OFFICE.

B. MERRITT, OF CHELSEA, AND J. H. SEARS, OF BOSTON, MASSACHUSETTS.

BRICK-ELEVATOR.

Specification of Letters Patent No. 31,728, dated March 19, 1861.

To all whom it may concern:

Be it known that we, BENJAMIN MERRITT, of Chelsea, and JABEZ H. SEARS, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improved Brick-Elevator, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of the elevator. Fig. 2 a view of one of the hods.

We are aware that bricks and other materials have been raised by an elevator consisting of endless chains carried over drums or windlasses, the chains carrying buckets or hods in which the article to be raised was placed. In these the bricks when raised to the required height, were either removed by hand from the hod or were emptied in a confused heap onto a platform or into a box placed to receive them. This either necessitated repeated handling of the bricks, or risked breaking them.

The object of our present invention is to produce an elevator, which after raising the bricks to the required height, will discharge them nicely packed into the ordinary shoulder hod or other receptacle, without breaking them, and without the necessity of again handling them to pack them.

Our invention consists in so combining the elevating hod, the endless chains, and a series of pins on the elevating drum, that when the hod has been raised to the required height, it shall be carried over laterally toward the floor or platform on which the receiving hod is placed, and be tilted or turned over in such a manner as to empty its load of bricks into the receiving hod, without disturbing their regular order; so as not to require their repacking in the shoulder hod, and without danger of breaking them.

That others skilled in the art may understand and use our invention we will proceed to describe the manner in which we have carried out the same.

In the said drawings A represents the floor of the building, to which the bricks are to be elevated; B, B, two heavy braces or arms, which are secured in any suitable manner to the floor, and project over its edge (or over a hatch way or opening left in the several floors of the building to accommodate the elevator). These braces B serve as bearings for the axle *a* of a drum C which carries on each of its heads an endless chain D of sufficient length to reach the lower floor or the level from which the bricks are to be raised, where each chain passes around the head of another drum or windlass E, the axle *b* of which has its bearings in the sides of a frame F. Power is applied to the windlass E from a crank *d* on a short shaft which carries a pinion *c*, which engages with a cog wheel *e* on the end of the axle *b*. The heads *f* of the windlass E as well as the head *g* of the drum C are composed of three arms set in a triangular position, and each of which is furnished at its outer end with a hook 5, over which the endless chain D is distended, the links *i* of the chain being of the proper length to fold around the hooks, which engage with notches 6 in the chain and prevents its slipping.

The head *h* of the drum C is a disk, in which the hooks 5 are set in a triangular position, and at distances corresponding with the hooks in the other heads, and over which the chain passes in a similar manner. This disk also has projecting from its face, three pins 7 set in a smaller triangle than the pins 5.

An elevating box or hod G (shown detached in Fig. 2) has attached to it at each end a leg or bar *l* which is pivoted at 8 to one of the links *i* of the chain D. There is also attached to one end of this hod by a pivot 9, a latch *m* which is held down by a spring *n*. A notch in one end of this latch engages with the end of the link *i*, which is bent over at 10 for this purpose. This prevents the hod from turning on the pivot 8. The other end of this latch is beveled off as shown at 11. H is an ordinary shoulder hod placed in an inclined position on the floor A, to receive the bricks *p* which have been regularly packed in the elevating hod.

Any convenient number of elevating hods G may be attached to the chains D; and these chains may be lengthened as required by adding more links *i*.

The following is the operation of this elevator: The hod G being packed with bricks *p*, the windlass is turned in the direction of the arrow 1, until the hod has been raised to the drum C, when the latch *m* strikes one of the pins 7 and unlatches the hod from the chain, the inclined end 11 of the latch at the same time throws the hod toward the floor A, the hod turning on its pivots 8. As the drum

C continues to revolve, the hod G is tilted over still farther until it empties the bricks *p* into the hod H, placing them in the same regular order which they occupied in the hod G. A further revolution of the drum C lifts the hod G clear of the hod H and carries it over the drum, when the bar *l* striking one of the pins 7 brings the hod back to its normal position, and the latch *m* locks it with the link *i*. A pin 3 on the hod strikes the link *i* and stops the hod, which is then carried down in a reversed position as shown at G′ to pass under the windlass and be again filled.

It will be perceived that by the combination and arrangement in triangular positions of the pins 5 and 7, a considerable lateral motion is given to the hod G to carry it over the edge of the floor A as required.

Mortar or other materials may in the same way be elevated in the hods G and be emptied into a suitable receptacle on the floor A.

At I is shown the manner in which an ordinary shoulder hod may be sent up on the chains D—a small hook *o* at each end of it, hooking over pins projecting from the inner side of the opposite links *i*.

In some cases we propose to apply the hoisting power to the upper drum or windlass C.

What we claim as of our invention, and desire to secure by Letters Patent, is—

1. The combination of the swiveling hods G, latch *m*, and pins 7, with the endless chain D, the whole arranged and operating as described for the purposes set forth.

2. The arrangement of the pins 5, and 7, in triangular positions for the purpose of giving the greatest amount of lateral throw to the hod G, as and for the purpose described.

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