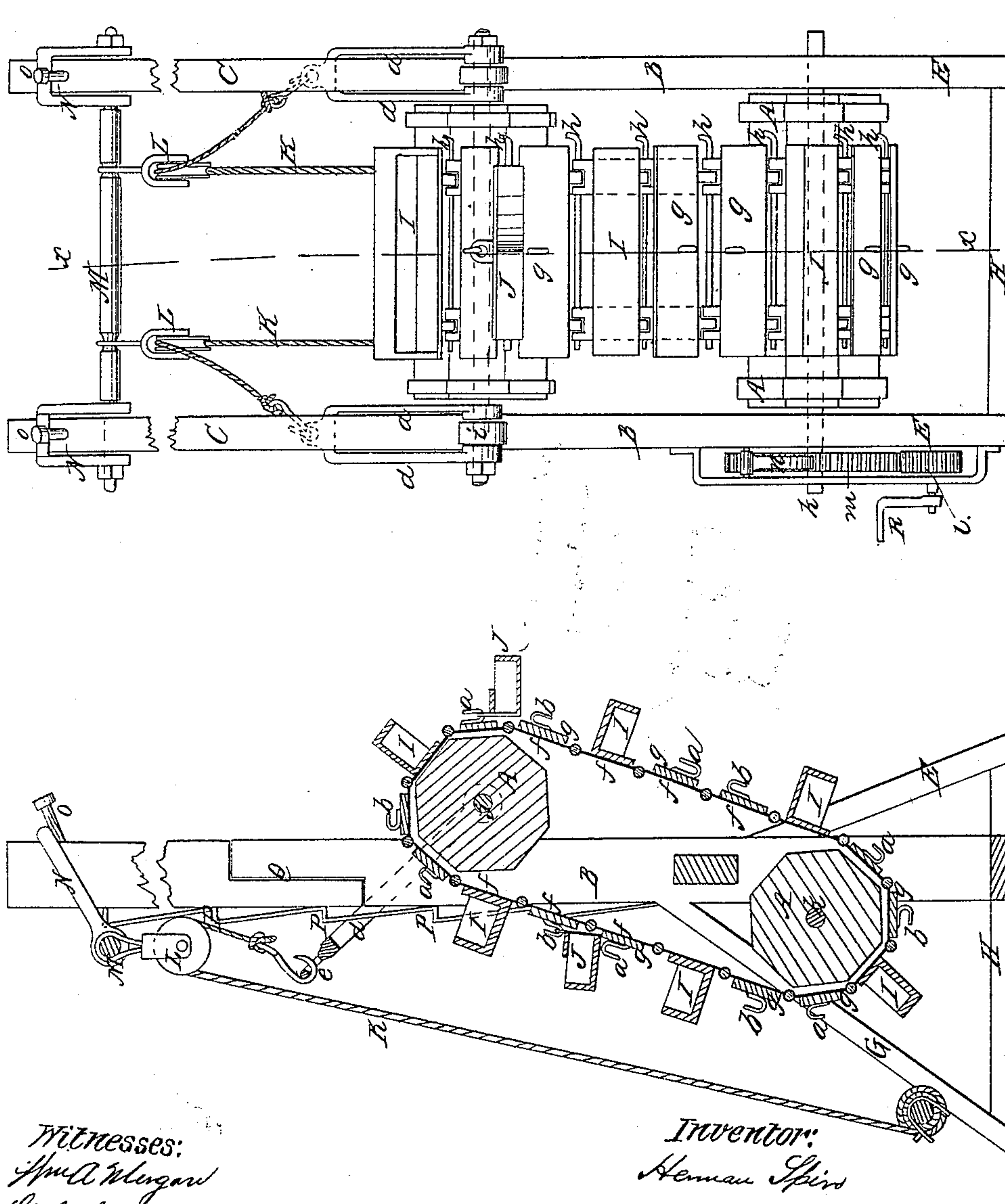


H. Spiro,

Elevator,

N^o 79,697,

Patented July 7, 1868.



Witnesses:
 Anna Morgan
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United States Patent Office.

HERMAN SPIRO, OF KNOXVILLE, TENNESSEE.

Letters Patent No. 79,697, dated July 7, 1868.

IMPROVEMENT IN ELEVATOR.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HERMAN SPIRO, of Knoxville, in the county of Knox, and State of Tennessee, have invented a new and useful Improvement in Brick and Mortar-Elevators; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional elevation of my invention, the section being taken through the line *x x* of fig. 2.

Figure 2 is a front elevation of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to accomplish the raising of brick and mortar for building purposes, and to present the same in a position conveniently accessible to the builders upon the scaffolding.

It consists of the mechanism set forth in the following.

In the accompanying drawings, *B B* are uprights, rising from the base-frame *G E H*. *D* is a cross-piece, connecting the uprights. *A A* are drums, having an octagonal form, or other equivalent means, for preventing the endless belt of buckets from slipping thereon.

The belt is composed of short boards, *g g g*, affixed to hinge-plates, *f f f*, &c., the said plates being connected by pintle-rods, *h h h*, &c., passing through the eyes of the said plates. These rods are capable of being withdrawn laterally, for the purpose of interpolating other boards, when the belt is to be lengthened, as the building rises.

The uprights *B* are formed of two or more beams of wood, having their ends cut to form a scarf or lapped joint, as shown at *Q*, whereby the uprights may be lengthened to correspond with the increased height of the building, as its erection progresses.

The boxes *I* are affixed to the boards of the belt at suitable intervals, and are for the purpose of containing the bricks to be elevated.

The mortar is borne up in triangular boxes *J*, which are hooked on to hooks *a b* affixed to the belt-boards. Each pair of hooks, *a* and *b*, are turned reversely from each other, as shown, the hooks *b* being for carrying up the mortar-boxes, and the hooks *a* for bringing them down; the boxes being taken from the hooks *b* by an attendant on the scaffold, and emptied into a box upon the scaffold, and hooked on to the hooks *a*, to be sent down for refilling. They are again removed by an attendant at the base of the machine and filled, and hung upon the hooks *b* as the latter are turned upward to ascend.

The brick-boxes are only large enough to contain one brick, and are filled by an attendant as they pass under the lower drum and commence to ascend. As these boxes become inverted in passing over the upper drum, the brick falls out, and is caught by an attendant standing on the scaffold.

A cog-wheel, *m*, on the shaft *k* of the lower drum, engages with a pinion, *l*, the shaft of which bears a hand-crank, *R*, by means of which the machine is operated.

The shaft *j* of the upper drum has its bearings in the links *d d* loosely. The uprights and the cross-part of the said links rest on the shoulders *P*, which latter may be cut in the uprights or formed of a plate of metal, as shown, and affixed to the uprights. These shoulders thus sustain the weight of the upper drum, and the belt of boxes and their contents.

The uprights are originally made of sufficient height for buildings of ordinary or medium height, and as the work progresses, additional boards and buckets are interpolated in the belt, and the upper drum raised correspondingly by ropes or cords *K*, which pass over the pulleys *L L*, suspended from a cross-bar or rod, *M*, which latter is attached to the uprights by loose links *N*, the latter being sustained by the bolts *O O*, or other equivalent devices.

The ropes *K K* terminate in hooks *e*, which are set into the eyes, forming part of the links *d d*, as shown. The ropes are then moved in a windlass or winch, *S*, which operation raises the upper drum and straightens the lengthened belt. *i i* are rollers, on the shaft *j*, for preventing the links from cramping against the uprights.

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

1. The drums A A, belt *g g g, f f f*, boxes I and J, and hooks *a b*, all substantially as shown and described, in combination with the uprights B, all as and for the purpose set forth.

2. The links *d*, having rollers *i i* and eyes, substantially as described, in combination with the drum A and its belt of boxes, all as and for the purpose set forth.

3. The ropes K, pulleys L, links N, and windlass S, substantially as described, in combination with the uprights B, drums A A, and belt of boxes, all as set forth.

4. The shoulders P, substantially as described, in combination with the uprights B, links *d*, drums A, and belt of boxes, all as and for the purpose set forth.

HERMAN SPIRO.

Witnesses:

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