

No. 650,233.

Patented May 22, 1900.

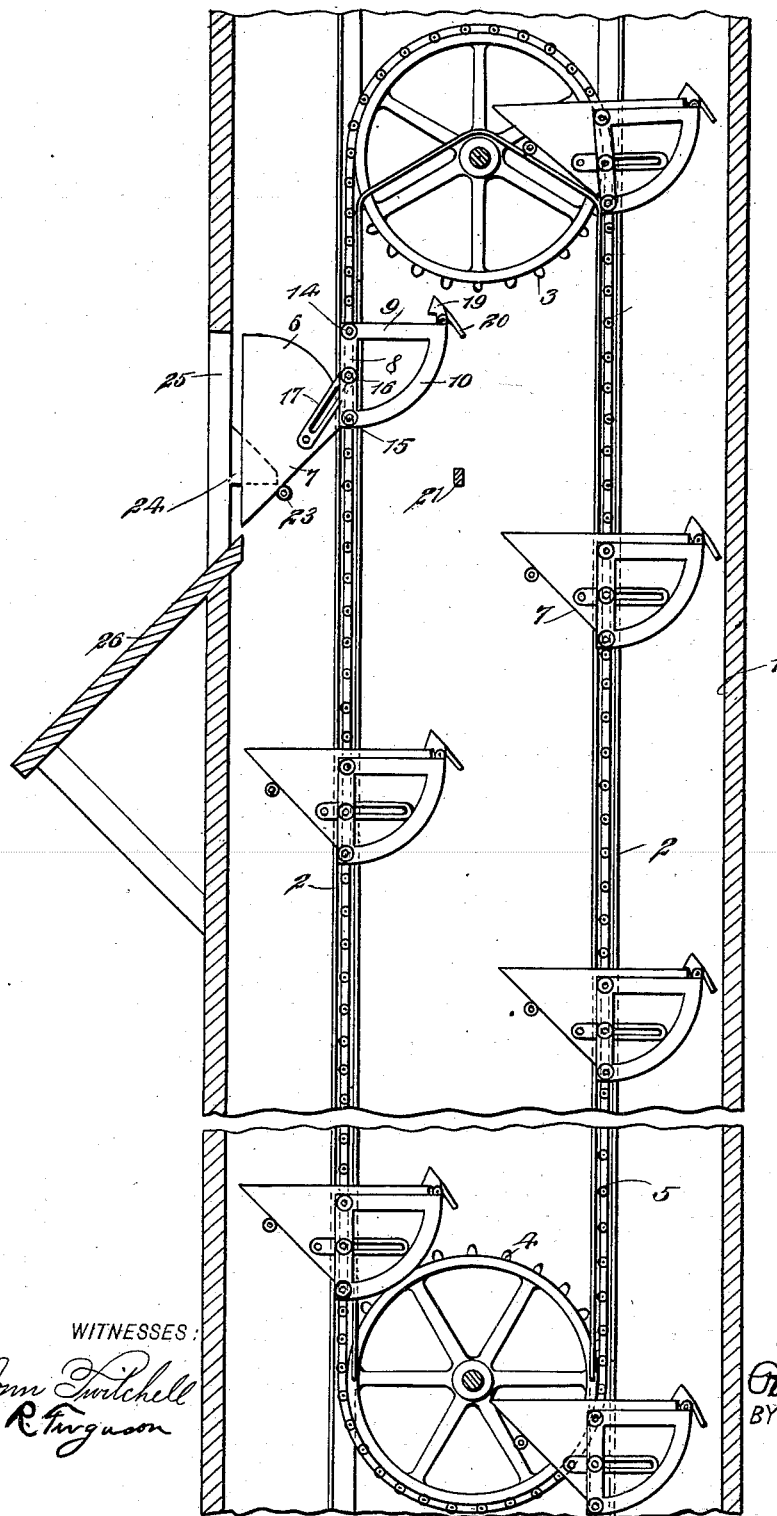
P. S. EBBERT.

ELEVATOR:

(Application filed Jan. 25, 1900.)

(No Model.)

2 Sheets--Sheet 1.



WITNESSES.

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C. R. Ferguson

INVENTOR

Oster S. Ebbert

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ATTORNEYS

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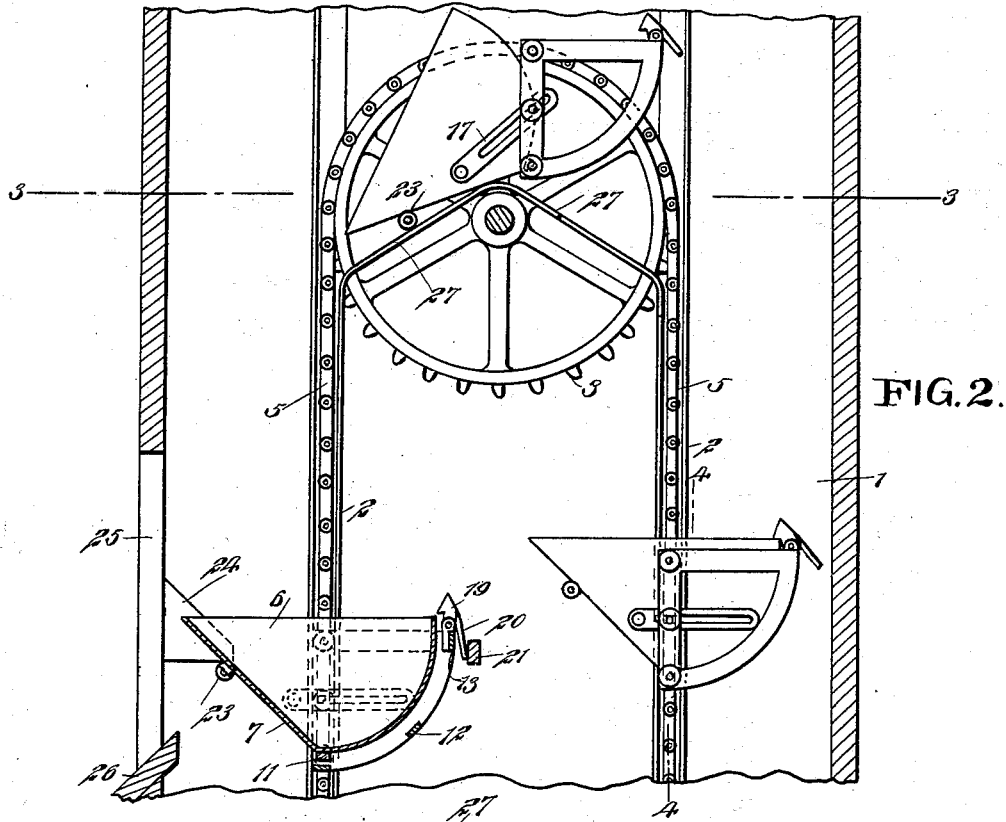


FIG. 2.

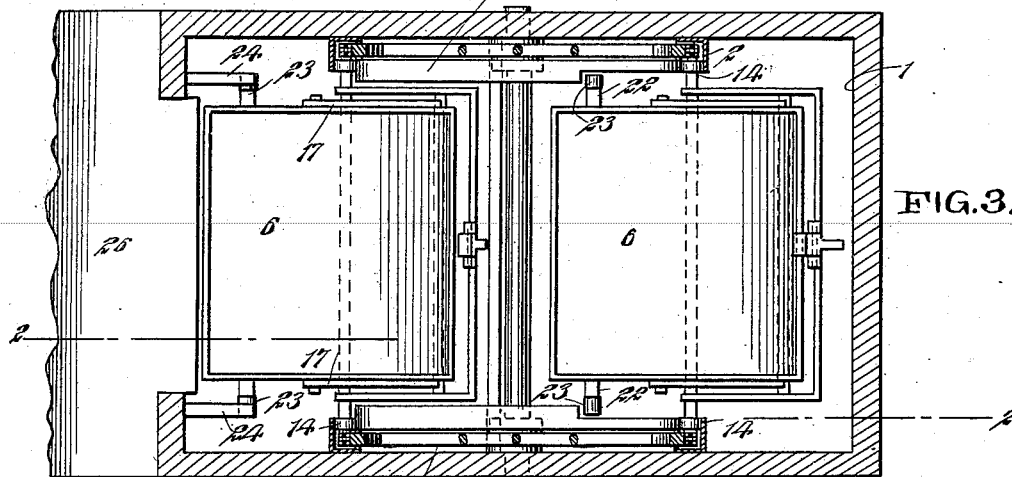


FIG. 3.

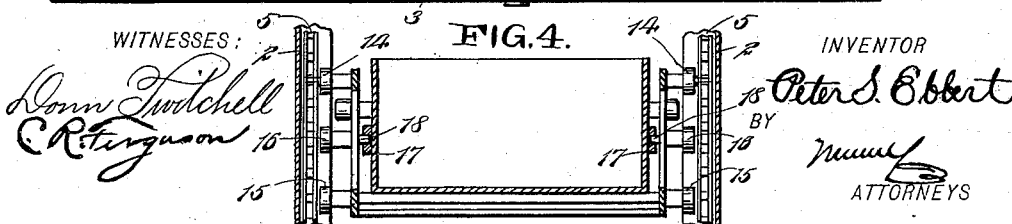


FIG. 4.

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UNITED STATES PATENT OFFICE.

PETER SHAFER EBBERT, OF NEW YORK, N. Y., ASSIGNOR TO JAMES A. HEARN & SON, OF SAME PLACE.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 650,233, dated May 22, 1900.

Application filed January 25, 1900. Serial No. 2,766. (No model.)

To all whom it may concern:

Be it known that I, PETER SHAFER EBBERT, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Elevator, of which the following is a full, clear, and exact description.

This invention relates to improvements in devices particularly adapted for elevating and discharging packages at a distributing floor or room of a building, the packages having been received at other rooms or floors.

In large stores goods sold in the several departments and designed to be delivered to the customers are generally sent to the top floor to be distributed for the several routes covered by the several wagons. It is the usual practice to send the goods to the top floor or to the delivery-room in baskets carried by porters, consuming considerable time and labor.

It is the object of my device to provide a simple elevator by means of which goods deposited in it at any floor will be automatically discharged at the distributing floor or room, thus saving time and manual labor.

I will describe an elevator embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of a package-elevator embodying my invention, showing a bucket as discharging. Fig. 2 is a sectional elevation on the line 2 2 of Fig. 3, showing a bucket as about to discharge its load. Fig. 3 is a section on the line 3 3 of Fig. 2, and Fig. 4 is a section on the line 4 4 of Fig. 2.

While I have shown the device as arranged for automatically discharging packages at an upper floor or room, it is to be understood that it may be arranged to dump at any desired floor.

Referring to the drawings, 1 designates the elevator-shaft arranged in a building, on the opposite sides of which are channel-guides 2. Arranged at the upper portion of the elevator-shaft are sprocket-wheels 3 and in the lower portion are sprocket-wheels 4. Engaging

with these sprocket-wheels 3 and 4 and running in the guides 2 are endless chains 5. Supported on these chains or carried thereby is a series of buckets 6, the forward wall of each of which is inclined forward and upward, as at 7. Each bucket is supported in a frame consisting of vertical side pieces 8, horizontal top pieces 9, and curved rear pieces 10, the opposite sides of the frame being connected by cross-bars 11, 12, and 13. At the upper end of the vertical portions 8 of the frame are rollers 14, and at the lower portions thereof are rollers 15, and between the rollers 14 and 15 are rollers 16. The upper rollers have their shafts connected to the chain. These several rollers are adapted to engage with and be guided by the side walls of the channel-guides 2, as plainly indicated in the drawings, so that at all times while passing along the vertical guides the frame will be held in its position relatively to the chains. The bucket 6 is connected at opposite sides to the opposite sides of the vertical pieces of the frame by means of links 17, which are pivoted to the bucket near its lower side and substantially midway of the length of the wall 7. These links are longitudinally slotted, so as to slide on lugs 18, extended inward from the vertical portions 8 of the frame.

Pivotedly connected to the top cross-bar 13 of the frame is a hook-shaped latch 19, adapted to engage over the top of the rear wall of the bucket, and this latch has an arm 20, adapted to engage with a trip-bar 21, arranged across the elevator-shaft. Extended outward from each side of the bucket is an arm 22, carrying a roller 23, this roller being adapted to engage with tilt-blocks 24, arranged at the opposite sides of an opening 25 in the wall of the elevator-shaft and through which the goods are designed to be dumped onto an inclined chute 26. The bottom edges of the blocks 24 are shown on a horizontal plane, while the upper edges are inclined upward. The inner walls of the channel-guides at each side of the shaft are extended inward at an upward angle over the hub or shaft of the wheel 3, and at this portion the said walls are widened or extended inward, as indicated at 27, to engage the rollers 23 for righting the buckets, as will be hereinafter described.

In practice the endless chain or carrier is to be kept in constant motion by any suitable power, and while the buckets are passing the openings at the several floors packages may be placed therein. As a bucket reaches the discharging station or room the arm 20 of the latch 19 will engage with the trip-bar 21, moving the latch out of engagement with the bucket, and at this time the rollers 23 will engage against the under side of the tilt-blocks 24. As the bucket continues to move upward the rollers will run along the under side of the tilt-blocks toward the front end, of course causing the bucket to gradually tilt, causing the goods to discharge on the chute 26, first at a point below its upper edge, and then as the bucket continues it will be further tilted by the rollers 23, running inward on the under sides of the blocks 24 until the inner end is reached. As it proceeds over the portions 27 and passes on the downwardly-inclined part thereof, the rollers engaging with said part will return the bucket wholly in the frame and the latch will automatically engage it. Of course the several buckets will be successively tilted at the dumping-place.

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

1. In an elevator, an endless carrier movable in a shaft, a series of buckets carried by said carrier, a frame for each bucket attached to the carrier, means whereby the bucket may be swung relatively to the carrier and frame, a latch on the frame for holding the bucket in position in the frame, and means for automatically releasing the latch, substantially as specified.

2. In a parcel-elevator, channel-guides, sprocket-wheels arranged at the upper and lower ends of said guides, sprocket-chains engaging with the wheels and passing through said guides, a bucket-frame having rollers at its sides engaging the inner sides of the said walls of said channel-guides, a bucket, links pivotally connected to the said bucket and having sliding connection with the frame, means for locking the bucket automatically in position in the frame, means for releasing the lock, and means for tilting the bucket when released, substantially as specified.

3. An elevator for the purpose described, comprising endless chains, wheels around which said chains extend, channel-guides through which the chains move, a series of bucket-carrying frames, each frame having vertical portions, rollers on said vertical portions extending into the channel-guides, the shafts of the upper rollers being attached to the chains, buckets connected with the

frames, by means of links having pivotal connection with the buckets and sliding connection with the frames, latches mounted to swing on the frames, and adapted to engage with the edge of the rear walls of the buckets, an arm extended from each latch, a trip-bar arranged on the elevator-shaft for engaging said arm to release the latch from the bucket, tilt-blocks in the sides of openings in a wall of the shaft, and rollers carried by the buckets for engaging with said blocks to tilt the buckets, substantially as specified.

4. In an elevator, a carrier, a frame, the side portions of which consist of vertical portions, a top horizontal portion and rear curved portions, the said portions being connected by cross-bars, rollers on the vertical portions, channel-guides in which the carrier is movable, the upper rollers of the frame being connected to the carrier, a bucket having its front wall inclined forward and upward, links having pivotal connection with the sides of the bucket and sliding connection with the vertical portions of the frame, and a latch on the frame for engaging with the bucket, substantially as specified.

5. In an elevator, endless chains, channel-guides in which the chains move, frames connected to said chains and guided in the channel-guides, a bucket having swinging connection with each frame, rollers on the opposite sides of the bucket, and tilt-blocks arranged at the sides of openings through the elevator-shaft, the said tilt-blocks having horizontal lower edges and inclined upper edges and being adapted for engagement with the rollers on the bucket, substantially as specified.

6. In an elevator for the purpose described, guides arranged in the elevator-shaft, endless chains movable through said guides, wheels at the upper portion of the guides over which the chains pass, and wheels at the lower portion of the guides around which the chains pass, a series of frames having swinging connection with the chains, tilting buckets carried by the frames, means for tilting said buckets, and means for returning and locking said buckets in their normal position with their open sides upward after being tilted whereby material may be placed and held in buckets moving downward, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PETER SHAFER EBBERT.

Witnesses:

E. G. CONNELLY,
M. C. KELLY.