

Jan. 6. 1925.

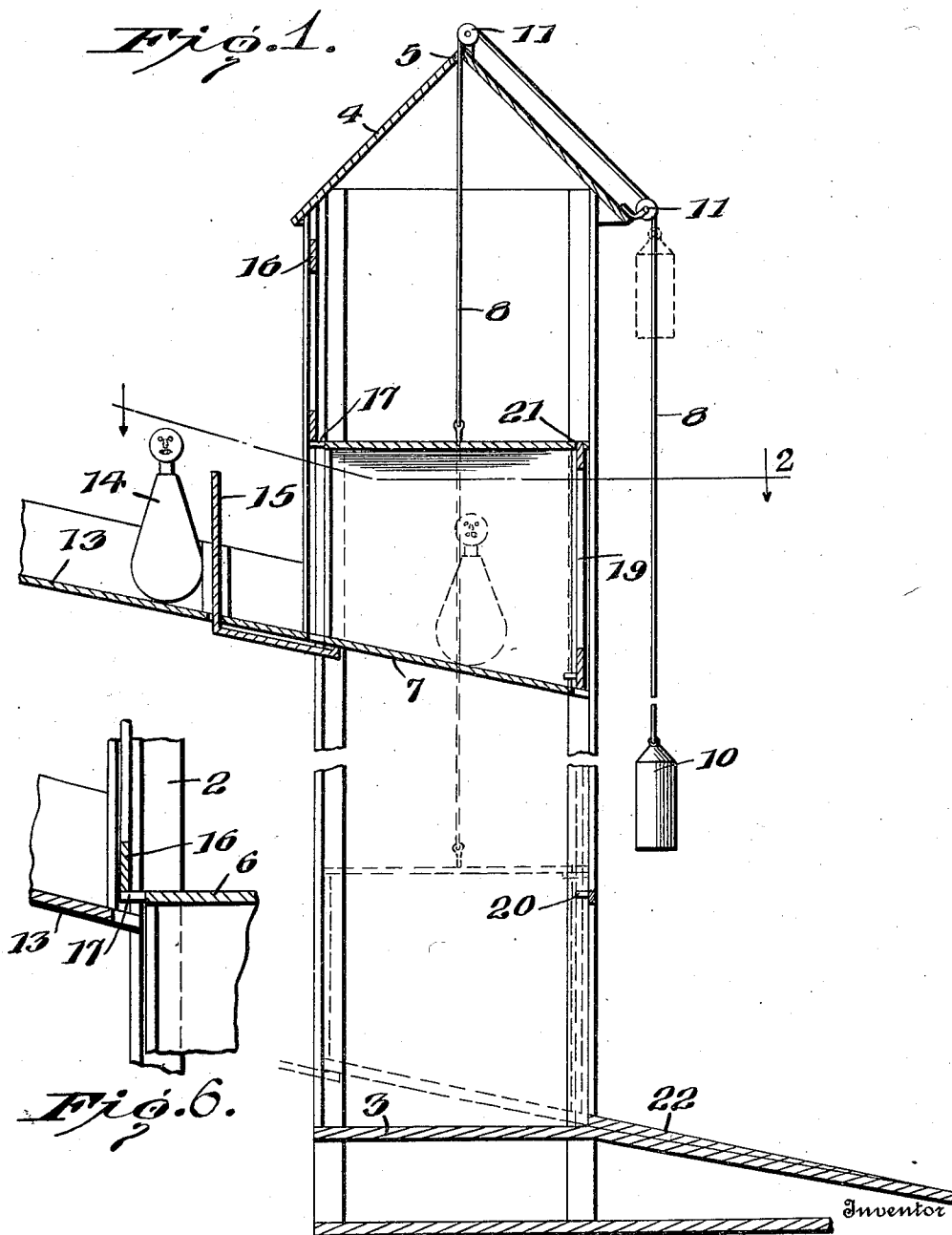
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H. J. MITCHELL

TOY ELEVATOR

Filed April 25, 1923

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 2.

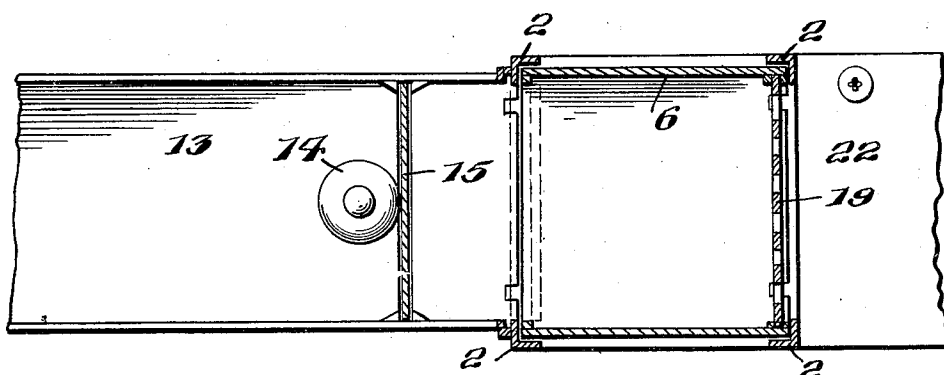


Fig. 3.

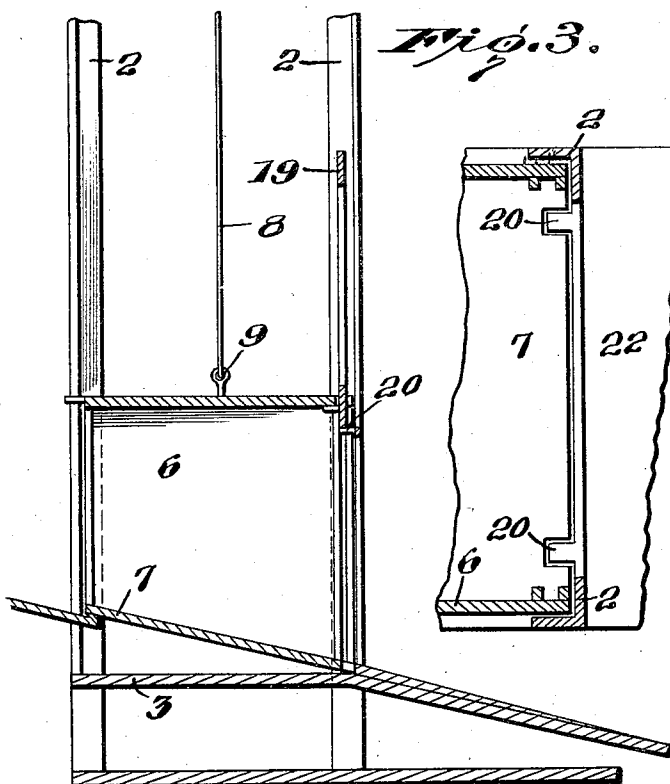


Fig. 4.

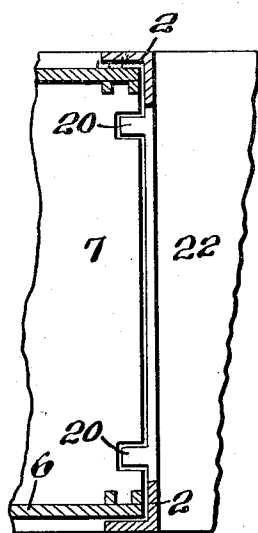
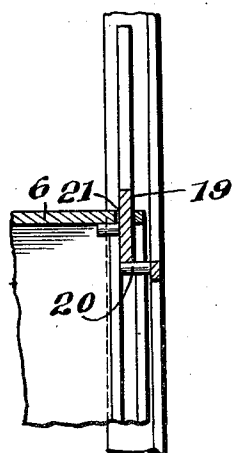


Fig. 5.



Inventor

Harry J. Mitchell

UNITED STATES PATENT OFFICE.

HARRY J. MITCHELL, OF WILMERDING, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO
EDWARD TAYLOR, OF EAST McKEESPORT, PENNSYLVANIA.

TOY ELEVATOR.

Application filed April 25, 1923. Serial No. 634,513.

To all whom it may concern:

Be it known that I, HARRY J. MITCHELL, a citizen of the United States, residing at Wilmerding, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in a Toy Elevator, of which the following is a specification.

This invention relates to improvements in toys, particularly to a toy constructed to represent a moving elevator.

The prime object of the invention is to provide a toy elevator which is operated by a weight causing the elevator cage to ascend and descend as the weight is discharged from the cage.

A further object of my invention is to provide a toy elevator whereby a weight in the form of a human figure is automatically permitted to enter the elevator cage when same ascends to its highest point.

A still further object of my invention is to provide a toy elevator whereby the weight of an object constructed to resemble a human figure will cause the elevator cage to descend and upon reaching the lowest point the weighted figure will be automatically discharged from the cage, thus permitting the cage to ascend for receiving another load.

And a still further object of my invention is to provide a toy elevator of the above indicated character with means limiting the entrance of only one weighted figure into the cage at one time.

Another object of my invention is to provide a toy elevator with means for automatically opening a door at the base of the elevator shaft for permitting discharge of the weighted figure from the elevator cage.

An additional object of my invention is to provide a toy of the character indicated, which is simple in construction and operation, durable, efficient for the purpose intended, and one that can be manufactured and placed on sale at a relatively low cost.

These and like objects of the invention will be better understood as the description follows and as is specifically pointed out in the appended claims.

Referring to the accompanying drawings which form a part of this specification,

Figure 1 is a vertical section of a toy constructed in accordance with my invention,

Figure 2 is a section taken on line 2—2 of Figure 1, looking in the direction of the arrows.

Figure 3 is an enlarged fragmentary section showing means for permitting entrance into the elevator cage.

Figure 4 is a vertical section through a lower portion of the elevator shaft and cage showing means for automatically opening the door for discharge from the cage.

Figure 5 is a vertical section through a portion of the elevator shaft and loading platform, showing means for raising the gate leading to the elevator cage, and

Figure 6 is an enlarged fragmentary section showing the gate leading to the cage in a closed position.

Referring to the accompanying drawings in detail, like characters will be used to designate like parts in the different views.

In the drawings, the numeral 1 indicates an elevator shaft, which comprises four uprights 2 adapted to be fastened at each end of a platform 3. A cover 4 having an opening 5 in the apex of same is mounted on top of the uprights 2.

An elevator cage 6 having an inclined floor 7 is mounted between the uprights 2 so as to provide a guide or shaft for vertical movements of the cage 6. A cable 8 is attached to the top of the cage as at 9 and the opposite end of the cable 8 has a weight 10 attached thereto. The weight 10 is greater than the weight of the cage 6, so that when the cage 6 is empty the same is always positioned near the top of the shaft or uprights 2. The cable 8 passes over pulleys 11 supported by brackets 12 on the cover 4.

A loading chute or platform 13 is attached to two of the uprights 2, as is clearly indicated in Figures 1 and 3 of the accompanying drawings. Manikins 14, are positioned in the chute 13 and the downward movement of same is limited by a sliding partition 15 carried by the cage 6 and which extends within the chute 13 when the cage 6 is in its upward position. A door 16 which is constructed in the form of lattice work to resemble an elevator cage door is slidably supported between the uprights 2 to which the chute 13 is attached. The door 16 when in its normal position closes the entrance from the chute 13 to the elevator shaft formed by the uprights 2. The ele-

vator cage 6 is provided with a pair of projections 17 formed on the top of same. The projections 17 are adapted to engage the lower edge of the door 16 and elevate same to the position indicated in Figure 2, when the cage reaches its utmost limit, at which time the floor 7 of the cage is flush with the floor of the chute 13, and a manikin which has been placed between the partition 15 and the door 16 is permitted to enter the cage 6 as indicated by dotted lines in Figure 2. As soon as the manikin enters the cage, the weight of the manikin in connection with the cage itself, overcomes the weight 10 attached to the cable 8, thus allowing the cage and manikin to descend to the bottom of the shaft formed by the uprights 2. As soon as the cage descends, along with the partition 15 which is connected with the cage or formed integral therewith, the door 16 automatically returns to its original closed position, allowing the manikin to slide down the chute against same so that the latter can automatically enter the cage upon the cage returning to its utmost position. The edge of the floor of the chute 13 is provided with a pair of recesses 18 so that when the elevator moves upwardly, same provide means for permitting the extensions 17 to pass through the floor of the chute.

On the opposite side of the cage 6 to that which communicates with the chute 13, is a second door 19 which is also composed of lattice work. On downward movement of the cage 6, the door engages projections 20 carried by two of the uprights 2 on their inner side, so that the door is permitted to move upwardly through a slot 21 in the top of same, thus allowing the manikin to roll out onto a discharge platform 22.

From the foregoing description of my invention, taken in connection with the accompanying drawings, it can be readily seen that I have provided a toy which is automatic in operation, and which will prove amusing to grown-ups as well as children.

While I have shown and described the preferred form of my toy, I realize that various minor changes may be resorted to, without departing from the spirit and scope of the invention as claimed, and there-

fore, I do not wish to limit myself to the exact details of construction shown, nor to the combination and arrangement of parts.

What I claim as new and desire to secure by Letters Patent is:

1. A toy of the character indicated comprising a shaft, a cage slidable in said shaft, a weight controlled means for moving the cage upwardly in said shaft, an inclined trough secured to said shaft, weight members in said trough adapted to slide into said cage for moving same downwardly in said shaft, and means carried by said cage to separate the first two weight members in said trough to permit only the first one to enter said cage.

2. A toy of the character indicated comprising a shaft, a cage slidable in said shaft, a weight controlled means for moving said cage upwardly in said shaft, a door slidably mounted on said shaft to be raised when said cage is in an upward position, weights adapted to enter said cage when said door is raised to cause said cage to descend in said shaft, a door slidably mounted on said cage, and means upon said shaft for engaging said door on said cage to prevent further downward movement thereof as said cage descends for permitting the discharging of the load from the cage.

3. A toy of the character indicated comprising a shaft, a cage slidable in said shaft, a weight controlled means for moving said cage upwardly in said shaft, doors arranged to be opened and closed when the cage is in its upward and downward position, means carried by said cage for automatically opening one of said doors on upward movement to permit loading of said cage, means carried by the cage for regulating the loading of same, means for allowing a second load to move in position on downward movement of the cage, and means for automatically opening the other of said doors which is on the opposite side of the cage when the said cage descends in the shaft for discharging the load from same.

In testimony whereof, I have affixed my signature in the presence of two witnesses.

HARRY J. MITCHELL.

Witnesses:

A. M. CLEMENTS,
EDWARD TAYLOR.