

No. 751,774.

PATENTED FEB. 9, 1904.

C. H. BALSLEY.  
VENDING MACHINE.

APPLICATION FILED MAR. 10, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

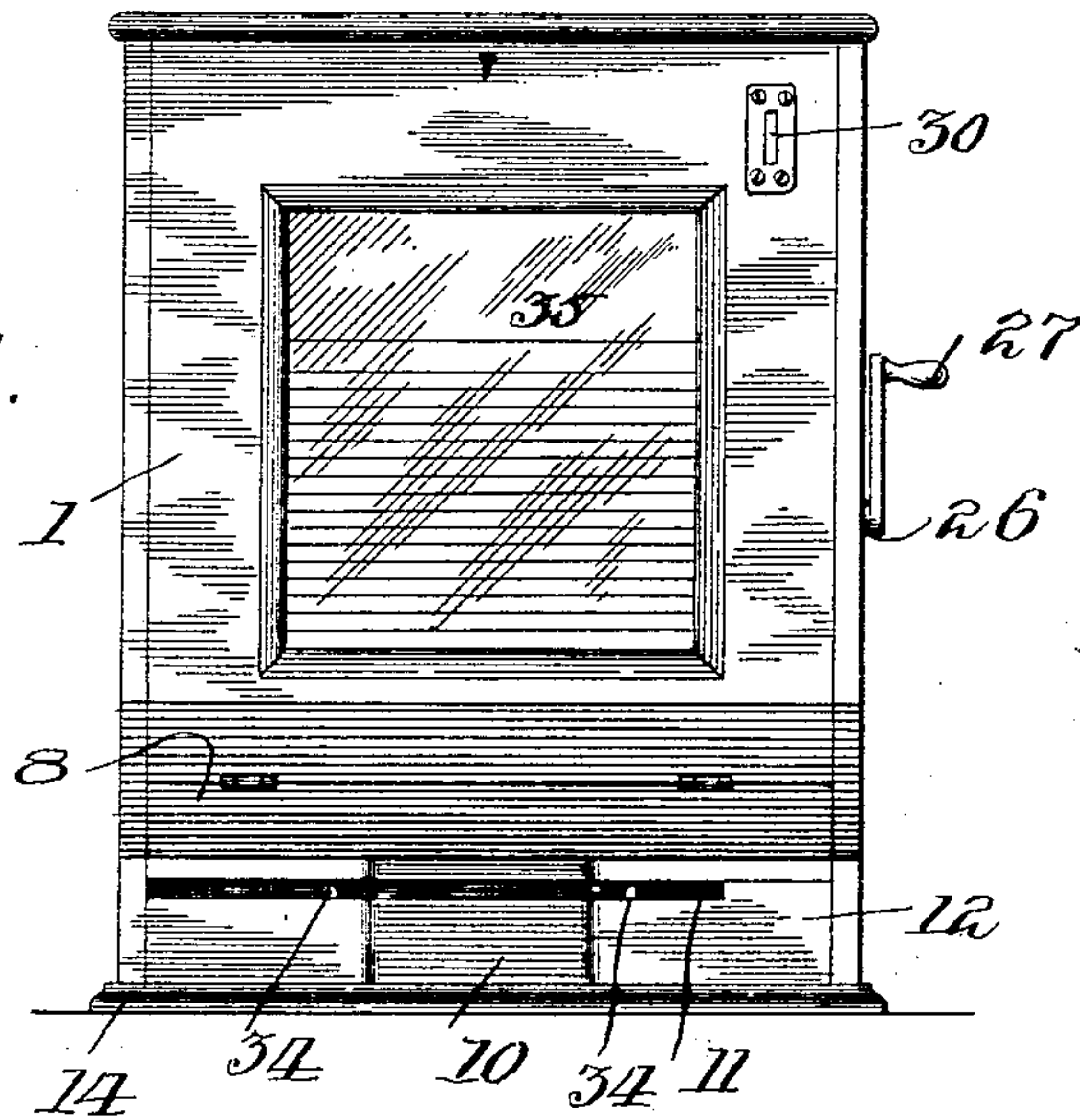


Fig. 2.

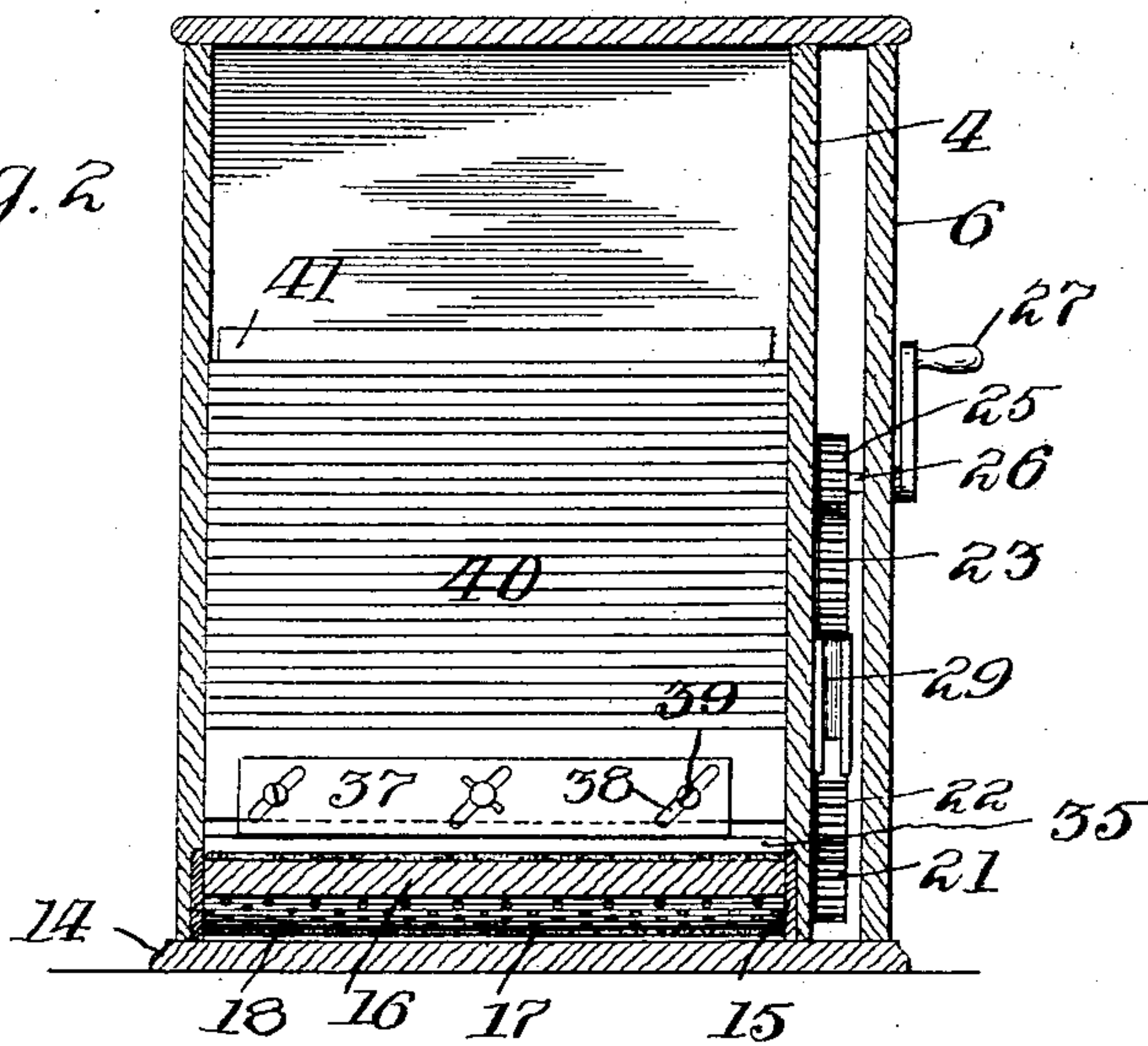
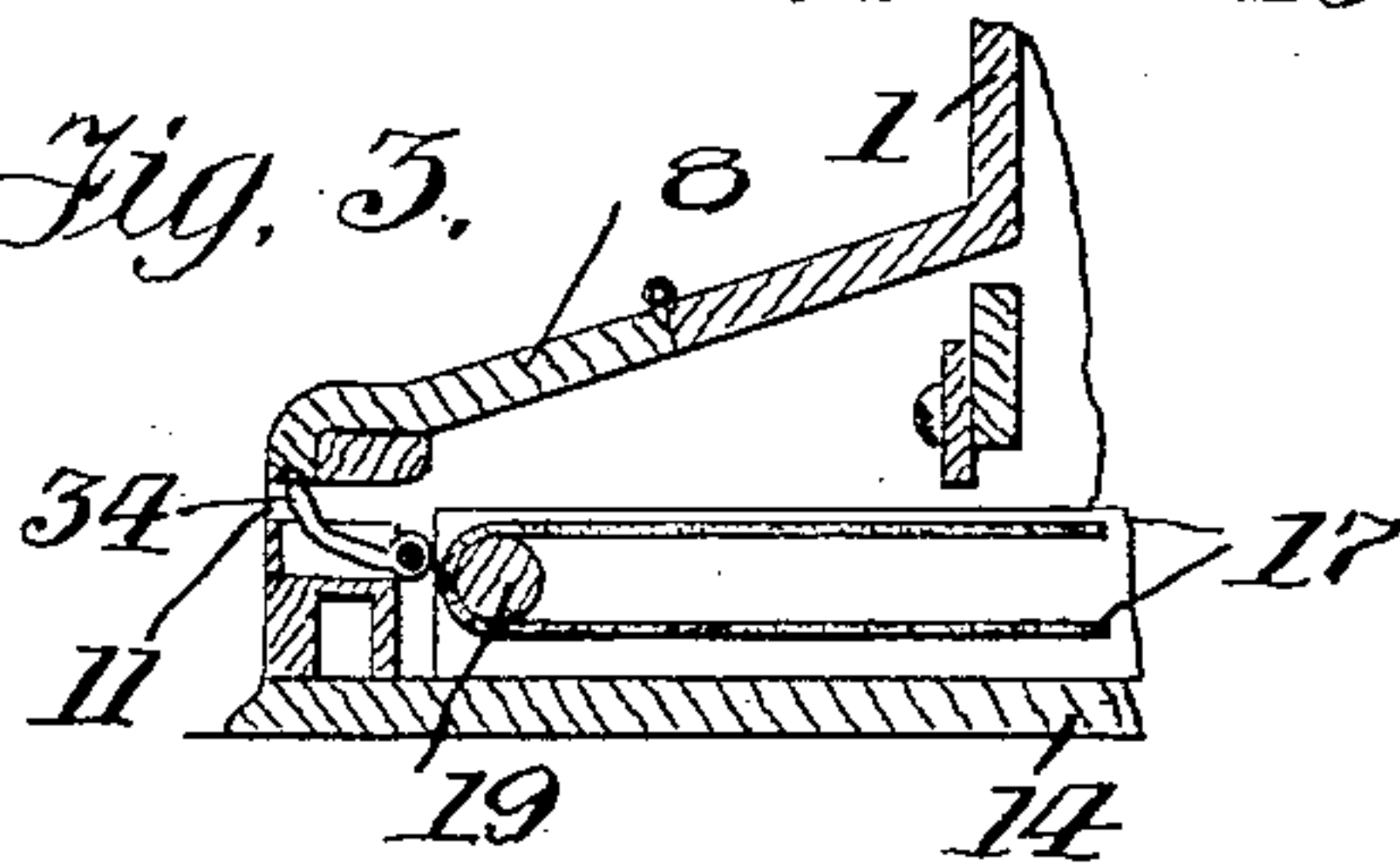


Fig. 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 751,774, dated February 9, 1904.

Application filed March 10, 1903. Serial No. 147,061. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. BALSLEY, a citizen of the United States of America, residing at Newhaven, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in vending-machines; and it relates more particularly to coin-controlled machines for vending newspapers, magazines, and the like, the object of the invention being to construct a machine with means adapted upon the depositing of a coin to be released whereby they may be operated or actuated in such a manner as to move one of the newspapers or magazines within the case or casing outwardly, where it may be engaged for withdrawal from said case or casing.

The invention resides in the novel construction, combination, and arrangement of parts to be hereinafter more specifically described, and then particularly pointed out in the claims; and in describing the invention in detail reference will be had to the accompanying drawings, forming a part of this application, and wherein like numerals of reference will be employed to designate like parts throughout the different views of the drawings, in which—

Figure 1 is a front elevation of my improved coin-controlled newspaper and magazine vending machine. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a transverse vertical sectional view of a part of the machine. Fig. 4 is a side elevation of the machine, showing the doors in the open position. Fig. 5 is a horizontal sectional view of the machine, showing the front partly broken away. Fig. 6 is a detail perspective view of a part of the delivery apron or belt and a part of its support and actuating mechanism.

To put my invention into practice, I provide a box or casing to receive the newspapers, magazines, or other articles to be vended. I employ an endless delivery apron or belt with actuating means therefor for delivering the

underneath newspaper or magazine through a slot provided therefor in the front of the machine in such position that the same may be grasped or engaged by the operator and withdrawn from the box or casing. Means is employed whereby the coin after being deposited into the receiving-cup provided therefor, and thereby releasing the mechanism whereby to permit the actuating of the same to operate the delivery apron or belt, is temporarily held until such time as the newspaper or magazine is projected through the slot in position that the operator may grasp the same, the newspaper or magazine serving to actuate a member to release the coin prior to the newspaper or magazine being extracted from the box or casing, thus permitting the receiving-cup for the coin to return to its normal position and lock the actuating mechanism of the endless apron or belt against further operation until another coin is deposited. Means is also provided for varying or regulating the width of the discharge-slot, whereby to conform to the thickness of the articles being discharged.

The box or casing to receive the articles to be vended I have in practice made substantially rectangular in shape, the front and rear walls 1 and 2, respectively, meeting with the side wall 3 at one side of the box or casing and at the opposite side thereof extending beyond the side wall 4, whereby to form a space 5, in which the gears of the actuating mechanism operate, this space being closed by means of a pair of hinged doors 6, having notches 7 in their outer edges, so as to fit the drive-shaft. The front wall 1 of the box or casing is sloped at its lower end and is hinged to the top or cover plate 8 of the extension 9, extending out in front of the box or casing proper. The front of this extension is cut away, as shown at 10, in order to permit the operator to readily grasp the paper or magazine when the same is projected through the delivery-slot 11, which is made in the front wall 12 of the extension. The side walls 3 and 4 of the box or casing rest upon the bottom 14, and recessed in the inner face of these side walls at the base thereof are side



rails 15, connected together by a supporting-plate 16, which serves as a support for the endless apron or delivery-belt 17. This delivery apron or belt travels over a toothed or  
 5 roughened roller 18, journaled in the side rails at the rear end thereof, and over a roller 19, journaled in said rails at the forward ends thereof. The roller 18 is positively driven, while the roller 19 is driven merely by the  
 10 friction of the delivery apron or belt, and to this end the shaft 20 of the roller 18 is extended through the side wall 4 and has mounted thereon a pinion 21. This pinion meshes with an idler 22, mounted on a stub-shaft that  
 15 is carried in the side wall 4, and the idler in turn meshes with the larger sprocket or gear wheel 23—that is, like the idler 22, mounted on a stub-shaft carried by the side wall 4. This sprocket or gear wheel 23 meshes also  
 20 with a drive-pinion 25, carried on the drive shaft or axle 26, that is journaled in the side wall 4, and is provided on its outer end with a suitable operating-crank 27. To hold the sprocket-wheel against backward movement,  
 25 I provide a pawl 24, which is pivoted to the side wall 4 and engages with said sprocket or gear wheel 23 at the opposite side to that which is engaged by the coin-receiving cup 28. This coin-receiving cup 28 is also pivoted  
 30 to the side wall 4, and besides serving to receive and temporarily hold the coin it acts as a pawl for engagement with the sprocket or gear wheel 23 when no coin has been deposited to prevent actuation of the operating  
 35 mechanism. This coin-receiving cup is located directly below a coin-receiving chute 29, into which chute the coin is deposited through coin-receiving slot 30 in the front of the box or casing near the upper end thereof.  
 40 The coin-receiving cup 28 is so pivoted that its greatest weight lies between the pivotal point and the sprocket or gear wheel 23, and consequently this coin-receiving cup normally lies in the position as shown in  
 45 Fig. 4 of the drawings, in which position it is in engagement with the sprocket or gear wheel to act as a pawl therefor. When the coin is dropped into the cup, however, the weight of the coin overbalances the pawl end  
 50 of the cup, whereby to disengage the same from the sprocket or gear wheel, and thus release the same, so as to be free to operate. When the cup tilts, however, the coin is still temporarily held from being deposited into  
 55 the receiving-box 31 by means of an arm 32, projecting upward in close proximity to and directly in front of the slot through which the coin is discharged from the cup. This arm 32 is carried upon a rock-shaft 33, journaled in  
 60 the sides of the extension in front of the box or casing proper, and this rock-shaft 33 carries thereon, one at each side of the cut-away portion 10, a pair of fingers 34, turned upwardly at their outer ends, whereby to be en-  
 65 gaged by the article being delivered, thereby

to be depressed, and consequently to rock the shaft 33 and elevate the arm 32, whereby the coin is free to be discharged into the coin-receiving box 31. These projecting fingers lie  
 70 directly in front of the delivery-slot 35, which is formed between the delivery apron or belt 17 and a cross-bar 36. The width of this delivery-slot is made to conform to the article being delivered by means of an adjustable  
 75 gage-bar 37, having inclined slots 38 to receive set-screws 39, carried by the cross-bar 36. Thus by merely loosening these set-screws and adjusting the gage-bar up or down the width of the delivery-slot may be made to conform to the thickness of the article being  
 80 delivered. The papers or other articles 40 to be delivered are placed in the box or casing, and a weight 41 is preferably placed on top of the pile in order that they may be held down firmly, whereby the underneath one may be  
 85 carried out by the delivery apron or belt on each actuation of the mechanism.

In operation the articles to be delivered are placed within the box or casing, to which access is had by swinging down the front there-  
 90 of. The articles are placed direct upon the delivery apron or belt, and the gage-bar 37 is adjusted so as to give a delivery-slot conforming to the thickness of the article to be delivered. A coin is dropped into the chute 29  
 95 through the slot 30 and falls into the receiving-cup 28, causing the cup to tilt and be disengaged from the sprocket or gear wheel 23. Should, however, this cup (which is also acting as a pawl) be so engaged with the wheel  
 100 that it would not disengage from the weight of the coin, the slight actuating of the wheel through the medium of the crank by the operator will serve to permit the cup to disengage and tilt. As the cup tilts the coin drops  
 105 into engagement with the end of the retaining-arm 32 and is there temporarily held. The operator now turns the crank, thus causing the belt or delivery-apron to be moved forward and carrying therewith the underneath  
 110 paper or magazine of the pile in the box or casing, and as the front edge of this paper or magazine comes into engagement with the fingers 34 it forces the same downwardly, thus rocking the shaft 33, and thereby ele-  
 115 vating the arm 32, thus permitting the coin to drop away from and out of the receiving-cup 28 into the receiving-box 31. The coin being discharged from the cup, the latter falls back into its normal position and engages with  
 120 the sprocket or gear wheel to prevent further rotation of the latter and of the other parts of the operating mechanism. The newspaper or magazine has by this operation been moved out over the opening 10 and is consequently  
 125 in position where it may be engaged by the operator and withdrawn from the box or casing. The succeeding newspaper or magazine is prevented from being withdrawn at the same time by reason of its engagement with  
 130



the gage-bar 37, and as soon as the underneath newspaper or magazine is withdrawn the pile falls, so that the succeeding one is in position for the next operation.

5 While I have herein shown and described in detail a preferable embodiment of my invention as it is practiced by me, yet it will be evident that in the construction of the same various changes may be made in many of the  
10 details without departing from the general spirit of the invention.

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

15 1. In a coin-controlled vending-machine for newspapers, magazines and the like, the combination with a box or casing to receive the articles to be vended, an endless delivery apron or belt mounted in said box or casing and supporting the articles to be vended, coin-controlled means for actuating said belt or apron,  
20 a coin-receiving cup normally locking said actuating means, a chute for delivering a coin to said cup, a rock-shaft mounted in the casing, means on said rock-shaft for temporarily  
25

retaining the coin in the cup after it is deposited therein, and fingers on said shaft to be engaged by the article being delivered to rock the shaft and permit the coin to be discharged from the cup, substantially as described. 30

2. In a coin-controlled vending-machine for newspapers, magazines and the like, the combination with a box or casing to receive the articles to be vended, of an endless delivery  
35 apron or belt for delivering the articles and upon which they rest while in the box or casing, actuating means for said delivery-belt, a coin-receiving cup normally locking said means against actuation, a chute for deliver-  
40 ing a coin to said cup, and means temporarily retaining the coin in said cup and actuated by the delivered article to release the coin from the cup, substantially as described.

In testimony whereof I affix my signature in  
45 the presence of two witnesses.

CHARLES H. BALSLEY.

Witnesses:

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