

No. 771,265.

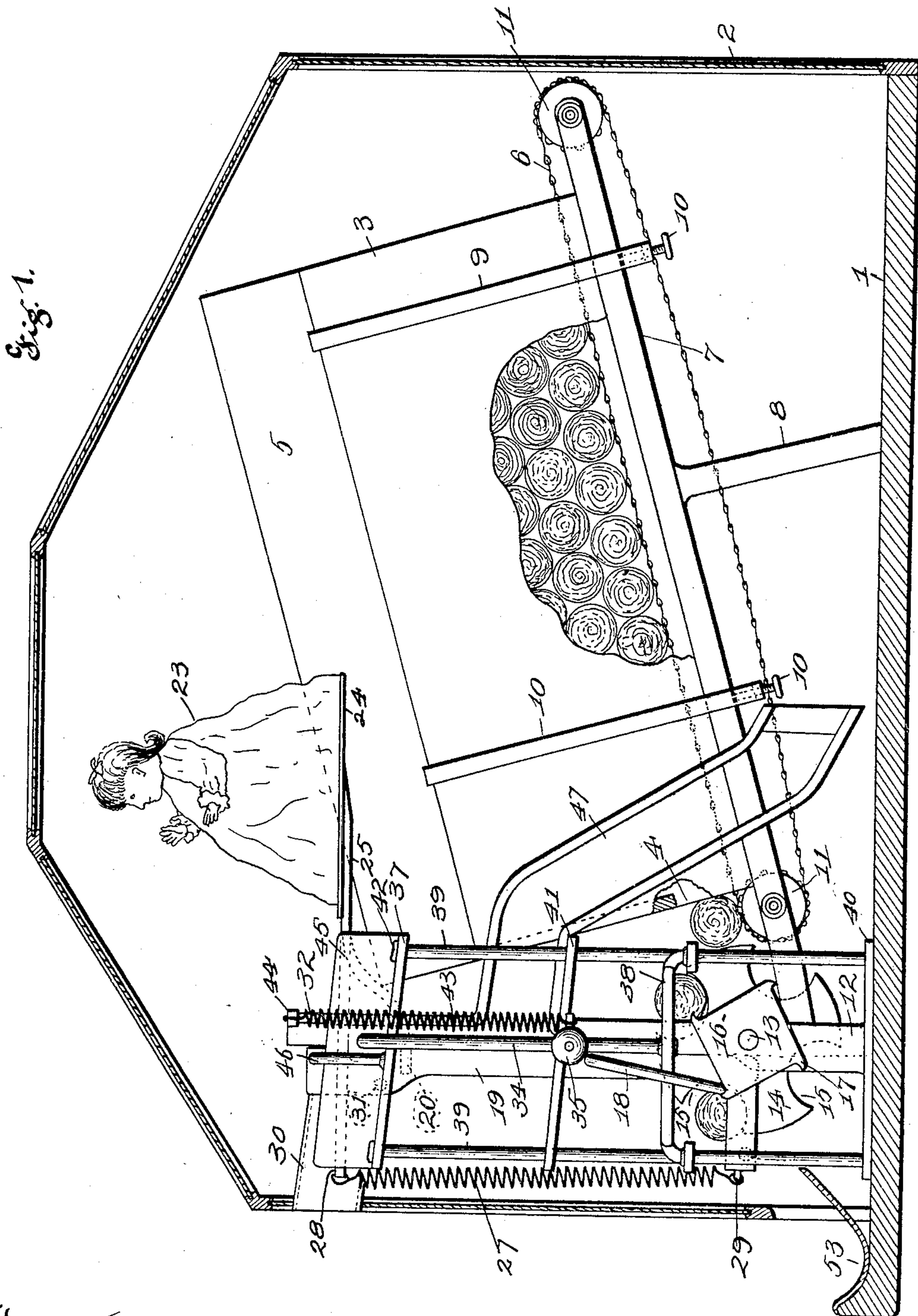
PATENTED OCT. 4, 1904.

M. E. PATTON.
CIGAR VENDING MACHINE.

APPLICATION FILED AUG. 28, 1903.

NO MODEL.

4 SHEETS—SHEET 1.



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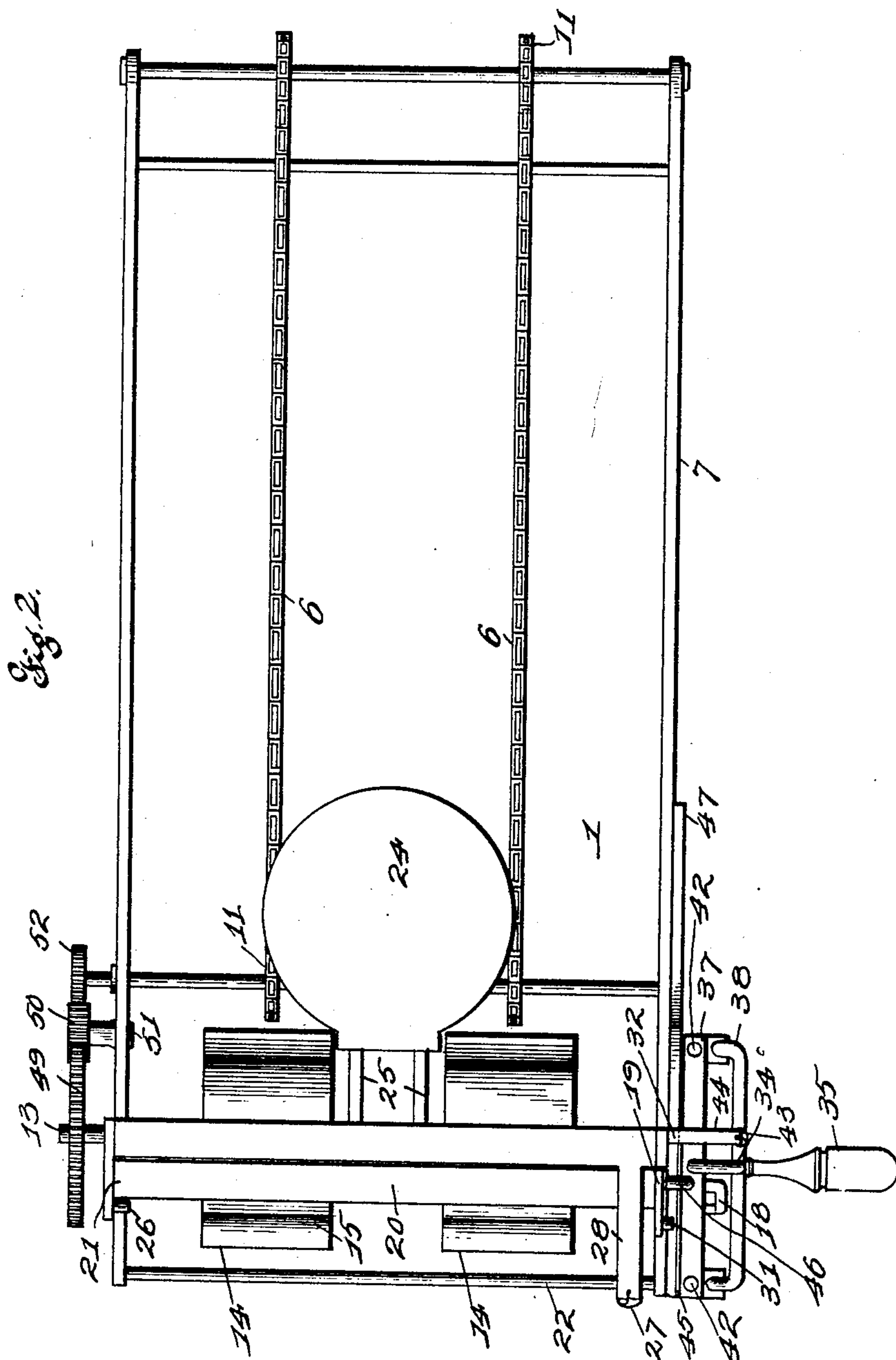
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4 SHEETS—SHEET 2.



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4 SHEETS—SHEET 3.

Fig. 3

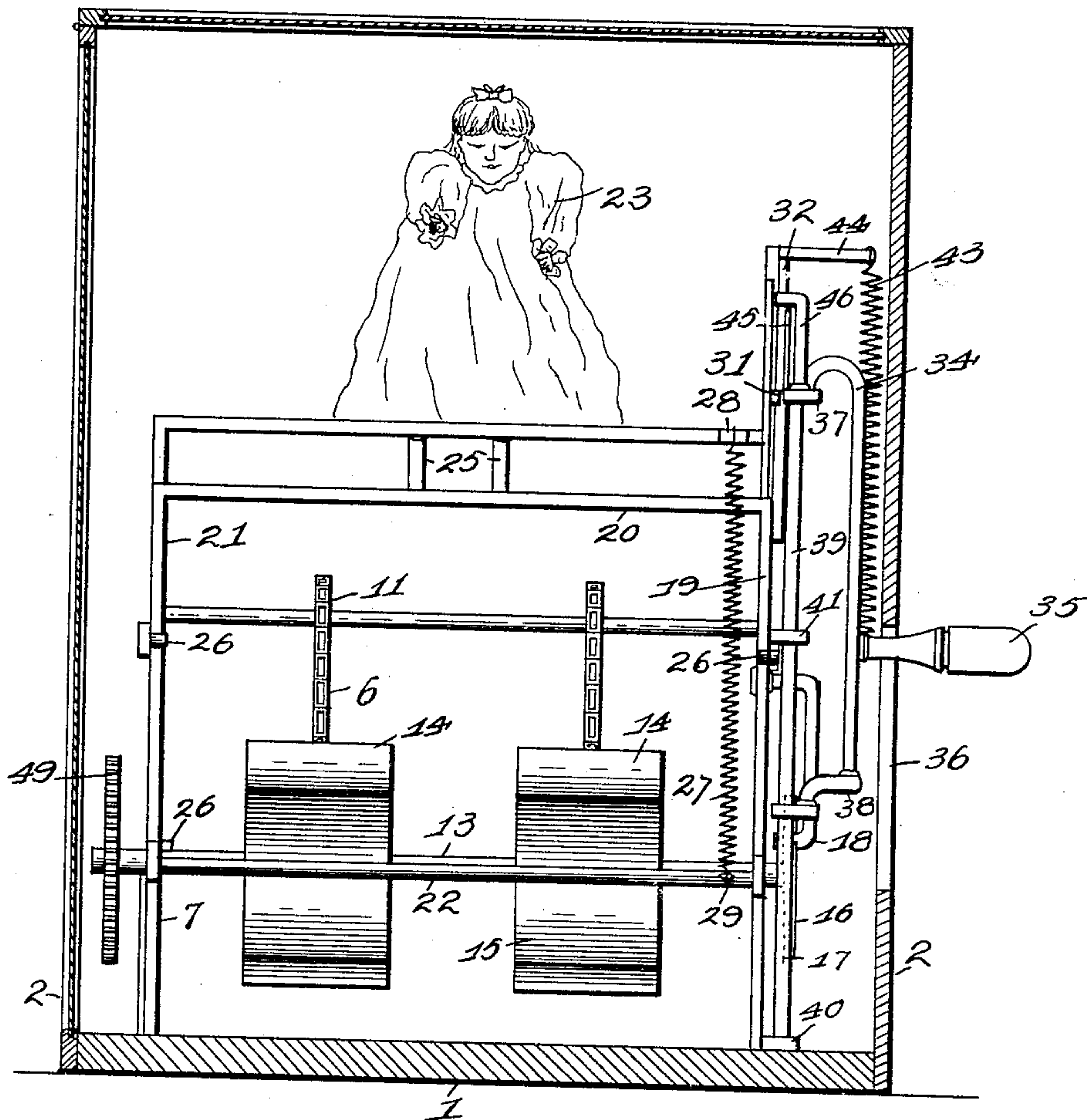
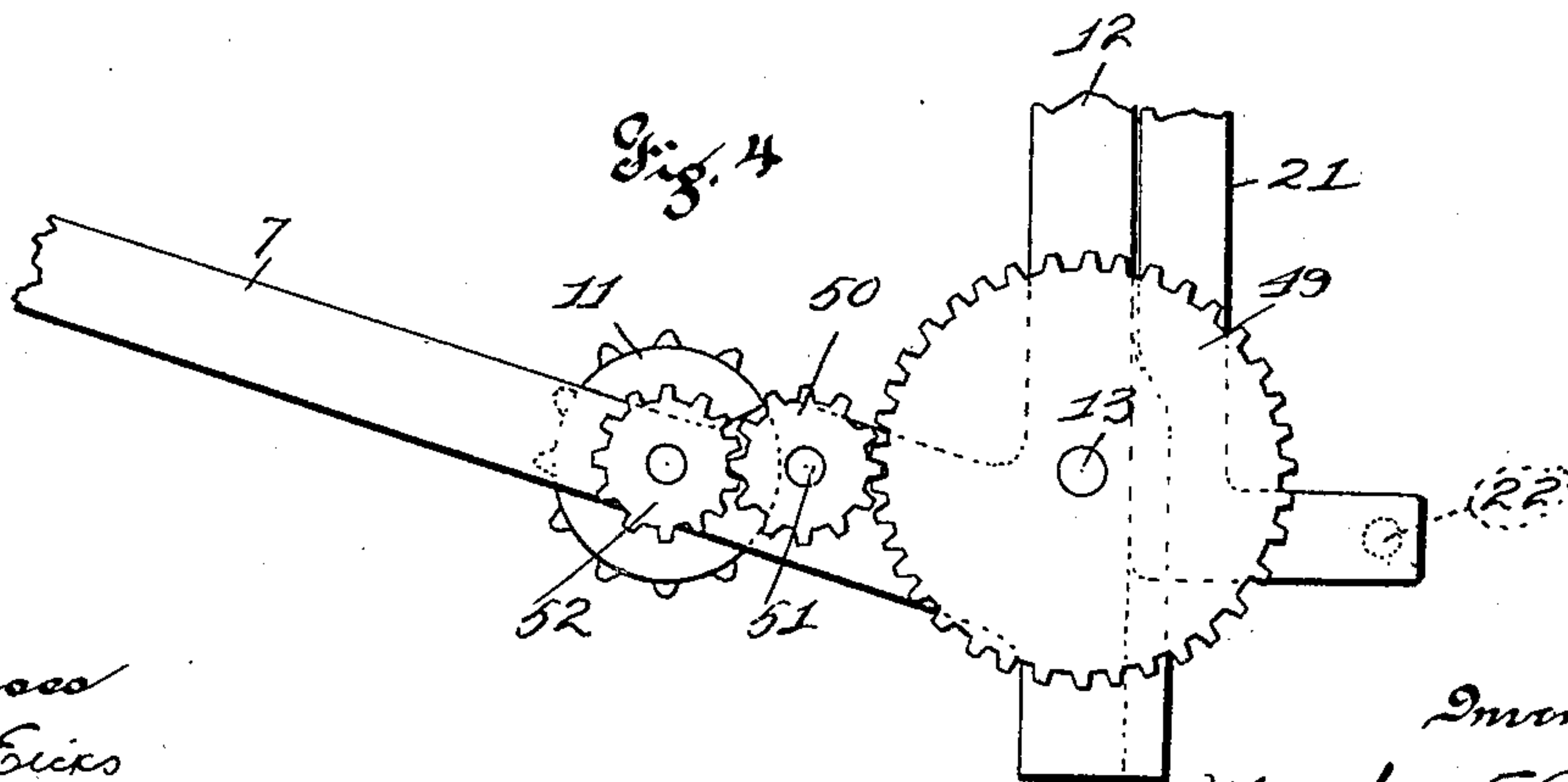


Fig. 4



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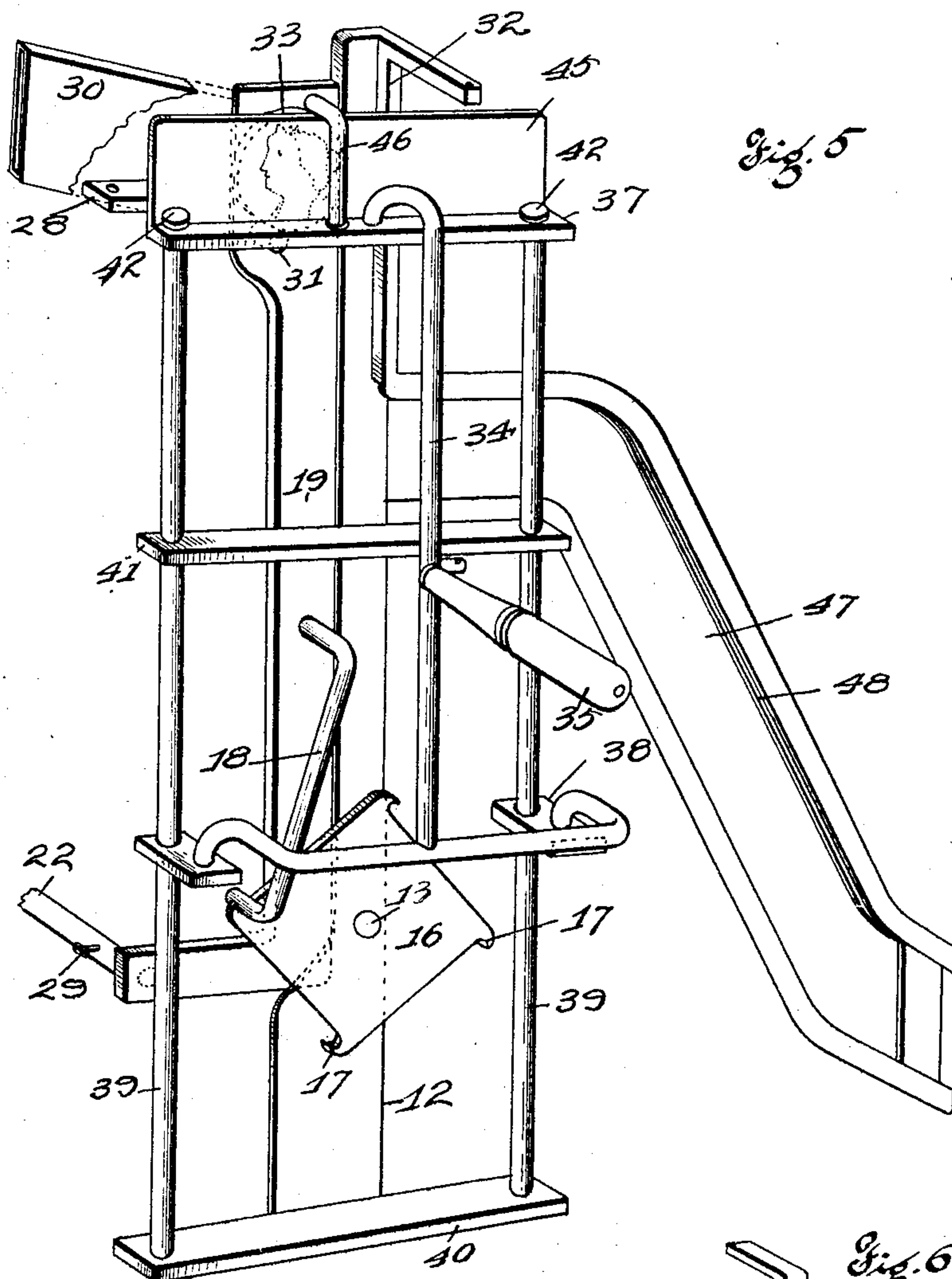


Fig. 5

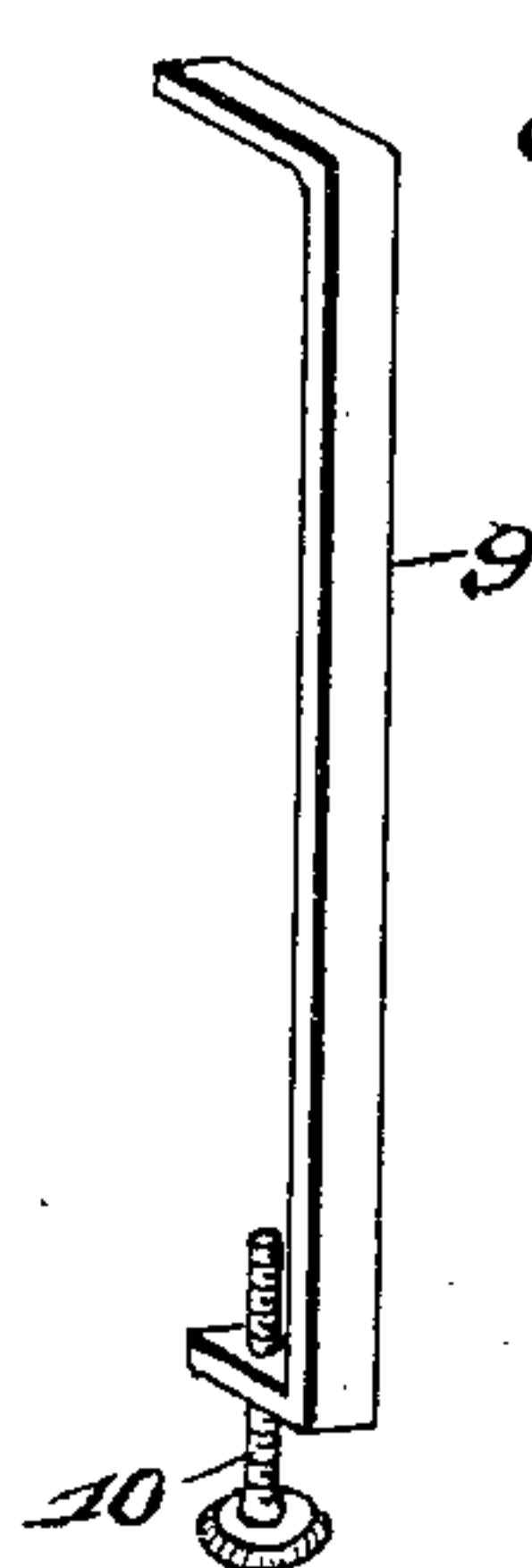


Fig. 6

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UNITED STATES PATENT OFFICE.

MATTHEW E. PATTON, OF ST. LOUIS, MISSOURI, ASSIGNOR OF TWO-THIRDS TO WILLIAM P. STEWART AND WILLIAM B. SULLIVAN, OF ST. LOUIS, MISSOURI.

CIGAR-VENDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 771,265, dated October 4, 1904.

Application filed August 28, 1903. Serial No. 171,114. (No model.)

To all whom it may concern:

Be it known that I, MATTHEW E. PATTON, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Cigar-Vending Machines, of which the following is a specification, containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to cigar-vending machines; and it consists in the novel construction, combination, and arrangement of elements hereinafter described and claimed.

The object of my invention is to provide an improved cigar-vending machine of the "coin-in-the-slot" class and which shall be adapted to deliver a single cigar from a box or bundle of cigars upon the insertion of a coin.

In the drawings, Figure 1 is a side elevation of a cigar-vending machine embodying my invention with the glass casing in section. Fig. 2 is a plan view of the mechanism removed from the casing. Fig. 3 is a front elevation of the machine with the glass casing in section. Fig. 4 is a detail view of a portion of the machine-frame, showing the gear-wheels for operating the endless carrier. Fig. 5 is a perspective view of the parts adjacent the coin-chute. Fig. 6 is a perspective view of one of the clamps used in holding the cigar-box in position.

1 indicates the base, and 2 the glass sides, of the casing, which is sufficiently large to contain all the mechanism, together with the original box 3 in which the cigars were packed and sealed. The cigar-box shown is of the well-known "flat" form adapted to contain, say, fifty cigars, and it is prepared for use in the machine in the following manner: A portion of the inner end of the box is first broken away or otherwise removed, as shown at 4, Fig. 1, and then the box-lid 5 is turned back until it occupies a position in contact with the side of the box, and the box is then inverted, so that the contained cigars will rest upon an inclined endless carrier 6 and be thereby supported and retained within the box until removed in a manner hereinafter described. The carrier 6 and its frame 7 are preferably inclined, so that the cigars may more readily

be carried along by the carrier. The said frame 7 is supported by means of suitable feet or posts 8, resting upon the base 1.

The cigar-box 3 is clamped in place upon the carrier-frame 7 by means of common screw-clamps 9, a detail view of which latter is shown at Fig. 6. One end of the clamps 9 engages the upturned bottom of the box, and the oppositely-located screw 10 of each clamp engages beneath the longitudinal bars of the carrier-frame.

The carrier-frame 7 is preferably rectangular, as shown, and provided at both ends with suitable wheels 11, upon which the carrier runs. These wheels are preferably in sprocket form, and the carrier is in the form of two endless chains, upon which the cigars are supported while in the inverted box. It will thus be seen that the carrier performs the function of a box-bottom in addition to its function of delivering the cigars from said box.

The lowermost end of the carrier-frame 7 is attached to a vertical frame 12, in the lower part of which latter is mounted a revoluble shaft 13 and which I will term the "delivery-wheel" shaft. Fixed upon said shaft 13 are preferably two delivery-wheels 14, provided with a series of peripheral pockets 15 for receiving the cigars from the carrier and for delivering them one at a time. Said delivery-wheels and the carrier 6 are moved intermittently. One means of moving them will now be described. Both ends of the delivery-wheel shaft 13 project beyond the vertical frame 12, and upon one of its projecting ends is fixed a ratchet-wheel 16, having teeth 17. The ratchet 16 is preferably rectangular in contour and provided with four teeth, the same corresponding in number with the pockets 15, formed in the delivery-wheel 14. The pockets of both delivery-wheels are alined, so that said wheels practically form one solid wheel. In fact a single wheel would accomplish the purpose fully as well as two, and I only use two wheels to avoid weight. Motion is imparted to the delivery-wheels by means of a gravity-pawl 18, pivoted at its upper end to one of the vertical end bars 19 of a reciprocating coin-carrying frame, which is preferably rectangular in form

and extends across the front of the machine. It has an upper horizontal bar 20, which unites the upper ends of the vertical bars 19 and 21, and the latter are shown in L shape, with a horizontal bar 22 connecting the outer ends of the short arms of the L-shaped bars. The figure of an infant 23 or other representation of animal life is preferably mounted upon a platform 24, and said platform is attached to the said upper horizontal bar 20 of said reciprocating coin-carrying frame by means of arms 25, so that said figure will move up and down with said frame. Said frame is provided with suitable guiding-lugs 26, projecting from the said vertical bars of the fixed vertical frame 12. Said coin-carrying frame and its figure 23 are normally retained at the limit of their upward movement by a spring 27, the upper end of which is connected to a horizontal arm 28, projecting laterally from the top horizontal bar of the fixed vertical frame 12, (see Fig. 2,) and the lower end of said spring is attached to a hook 29, projecting from the lower horizontal bar 22 of said coin-carrying frame.

30 indicates the coin-tube, which is fixed near the upper part of the coin-carrying frame, with the inner end of said tube adjacent the edge of the vertical bar 19, and the outer end of said tube projects to the exterior of the casing-front and forms the "slot" for the reception of coins. 31 indicates a pin projecting from the side of said bar 19 below but across the path of the entering coin as it emerges from the inner end of said coin-tube, and this pin forms a coin-support upon said bar.

32 indicates a flange on the adjacent vertical bar of the fixed frame 12, and this flange is directly in the path of the inserted coin and forms a stop therefor and retains the coin in position upon the coin-supporting pin 31 of the coin-carrying frame until said frame has been depressed by the operator. Depression of the coin-carrying frame is accomplished through the medium of a suitable coin, as 33, which when in position upon the coin-support 31 forms a temporary connection between the coin-frame and a handled frame now to be described. Said handled frame is shown with a vertical bar 34, to which the handle 35 is affixed and projects outwardly through a slot 36 in the side of the casing. Said vertical bar 34 is retained and guided in a vertical position by means of upper and lower cross-bars 37 and 38, respectively, which have perforations at their ends through which pass the vertical guide-bars 39, and the lower ends of the latter are connected by a fixed cross-bar 40, and the upper portion of which guide-bars are spaced apart and supported by a fixed horizontal bar 41, that is rigidly secured midway of its length to the adjacent vertical bar of the fixed frame 12. The upper ends of the vertical guide-bars 39 are provided with heads 42, which act as stops for the upper cross-bar 37 and prevent the latter from running off of said

guide-bars. They also limit the upward movement of the handled frame. Said handled frame is normally retained at the limit of its upward movement by means of a suitable spring 43, the upper end of which is secured to the overhanging arm 44 at the upper end of the central vertical bar of the frame 12. Secured to the inner edge of the upper horizontal bar 37 of the said handled frame is a vertical plate 45, which forms a lateral support for the actuating-coin 33 and retains the same in a vertical position when said coin is in place upon the coin-support 31. 45 indicates a vertical pin, the lower end of which is fixed to the said horizontal bar 37 and the upper end of which is bent at a right angle and projects inwardly above the upper edge of the said plate 45 and forms a connection between the handled frame and the coin when the latter is in position upon the coin-support.

47 indicates the coin-chute for receiving the coins upon their discharge by the coin-carrying frame. The upper end of said chute is horizontal for a slight distance, and the inner end of the horizontal portion terminates at a point some distance beneath the normal plane of the coin-support 31 and in the path of the coins discharged from the said coin-support. Said coin-chute is composed in the present instance of upper and lower members having a slot 48, whose sides form guides for the coins moving therein. Said coin-chute leads the coins downwardly to a space adapted to receive them at a point just above the base 1, whence said coins may be removed from time to time through a suitable locked door. (Not shown.)

The intermittent motion of the delivery-wheel shaft 13 is communicated to the endless carrier 6 by means of a large gear-wheel 49, meshing with a pinion 50, mounted upon a stud 51 and engaging a smaller gear-wheel 52, which latter is fixed upon the projecting adjacent end of the carrier-shaft.

The operation is as follows: With the parts in the position in which they are shown in Figs. 1 and 5 when a coin is inserted in the coin-tube 30 the same gravitates within the slightly-inclined tube until it rolls upon and its center of gravity passes slightly beyond the coin-support 31, and its further movement is arrested by contact with the vertical flange 32 of the fixed frame 12. If the handled frame be now depressed by means of the handle 35, the said frame will be moved downwardly until its upper horizontal bar 37 comes in contact with the fixed horizontal bar 41, and of course the coin will be carried downwardly with said handled frame by reason of the vertical pin 46 engaging the upper edge of the coin, (see Fig. 5,) and as soon as said handled frame reaches the limit of its downward movement the coin will immediately roll into the coin-chute 47 and be discharged into the receiving space. The coin is started into the

chute 47 by reason of the fact that its center of gravity lies at a point between the supporting-pin 31 and the chute-opening, with the result that as soon as the coin is depressed
5 opposite said opening gravity causes it to immediately roll into said opening. Meanwhile the downward movement of said handled frame has caused the vertical end bar 19 of the coin-carrying frame to be also moved downwardly
10 a corresponding distance and has caused its gravity-pawl 18 to move the ratchet-wheel 16 and the delivery-wheels 14 one step, and the cigar contained within the pockets of the delivery-wheels next adjacent the delivery-re-
15 ceptacle 53 will be discharged into said receptacle and may be removed therefrom by the person who placed the coin in the coin-tube. Also by the movement of the parts thus described another cigar will be taken from the
20 number within the inverted cigar-box 3 and deposited within the adjacent upwardly-moving pockets of the delivery-wheels. The handled frame and the coin-carrying frame will be returned to their normal positions by means
25 of their respective springs 27 and 43, and as the gravity-pawl 18 approaches its normal position it will pass over and rest upon the next succeeding tooth 17 of the ratchet-wheel 16, and thus the coin-carrying frame will be again

connected to said ratchet-wheel ready to turn 30 the delivery-wheels and connected parts another step.

What I claim is—

1. The improved vending-machine, comprising a casing, a delivery-wheel mounted in the casing, means arranged to support an inverted and bottomless cigar-box, an endless carrier acting as a bottom for said inverted box, and means for imparting movement to said delivery-wheel and endless carrier, substantially 40 as described.

2. The improved vending-machine, comprising a casing, a delivery-wheel mounted in the casing, means arranged to support an inverted and bottomless cigar-box, an endless carrier 45 acting as a bottom for said inverted box, means for imparting movement to said delivery-wheel and endless carrier, and clamps for detachably securing the inverted box to the endless-carrier frame, substantially as described. 50

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

MATTHEW E. PATTON.

Witnesses:

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