

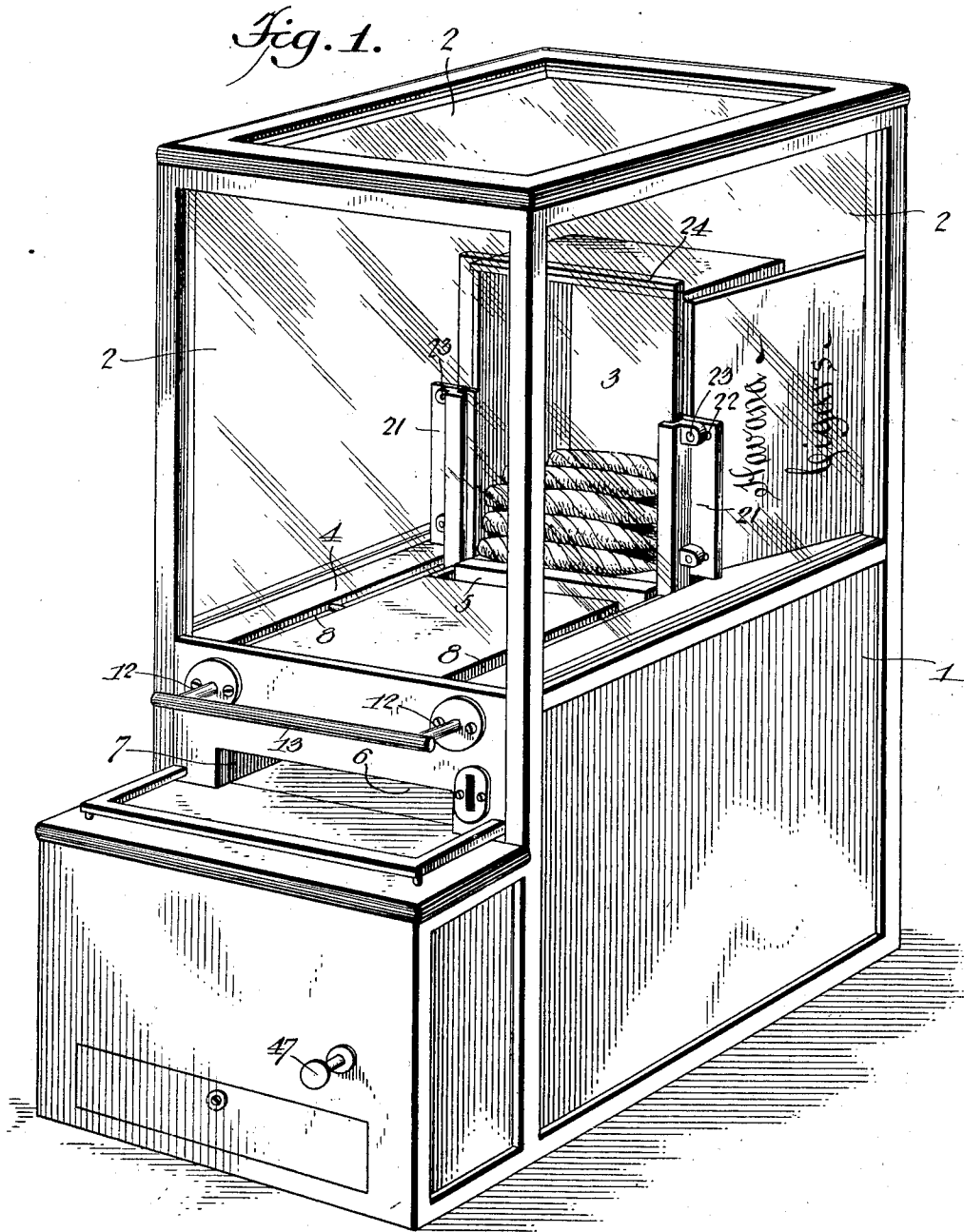
No. 758,007.

PATENTED APR. 19, 1904.

F. G. HARTELL.
VENDING MACHINE.
APPLICATION FILED JUNE 1, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



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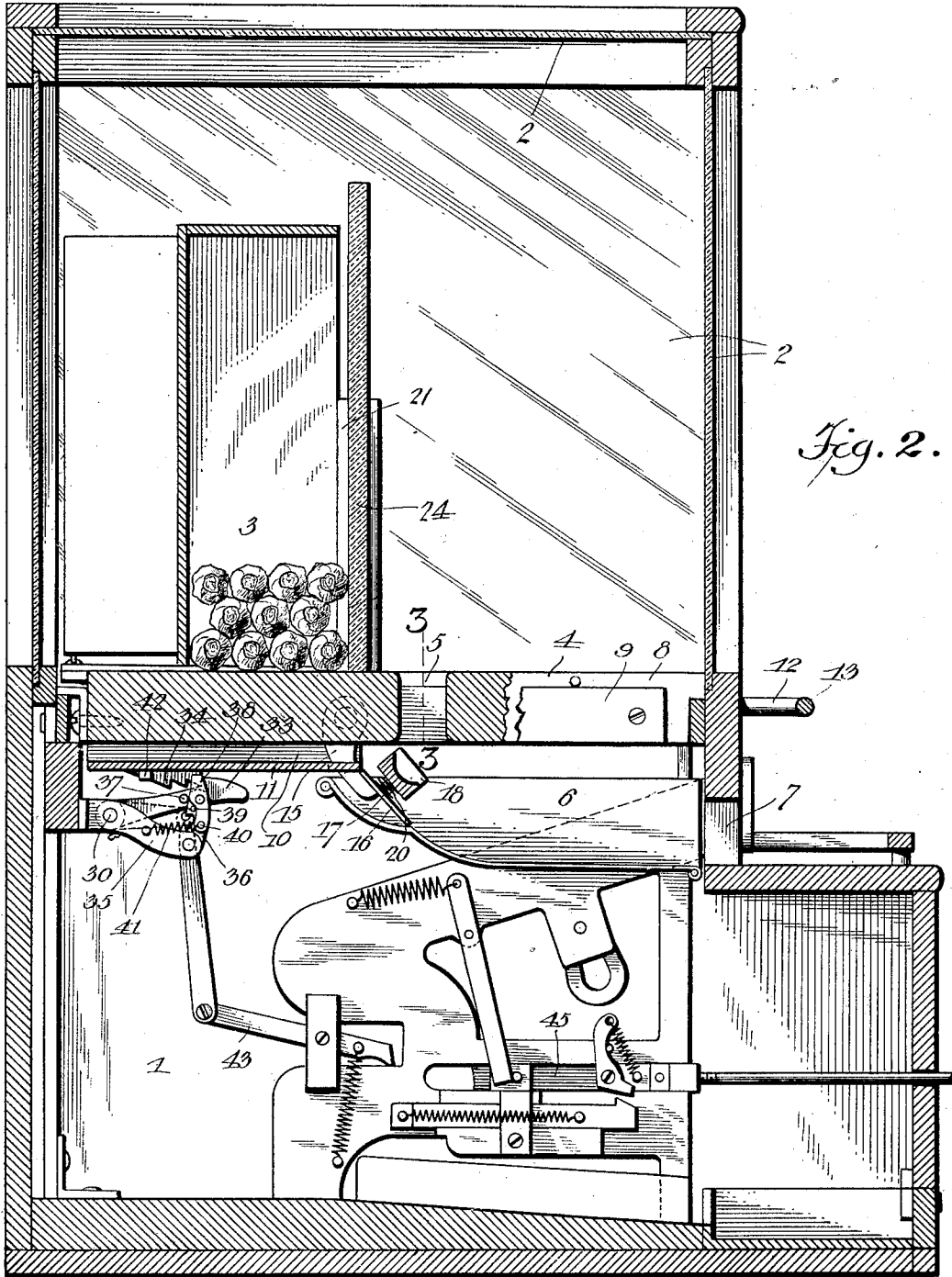
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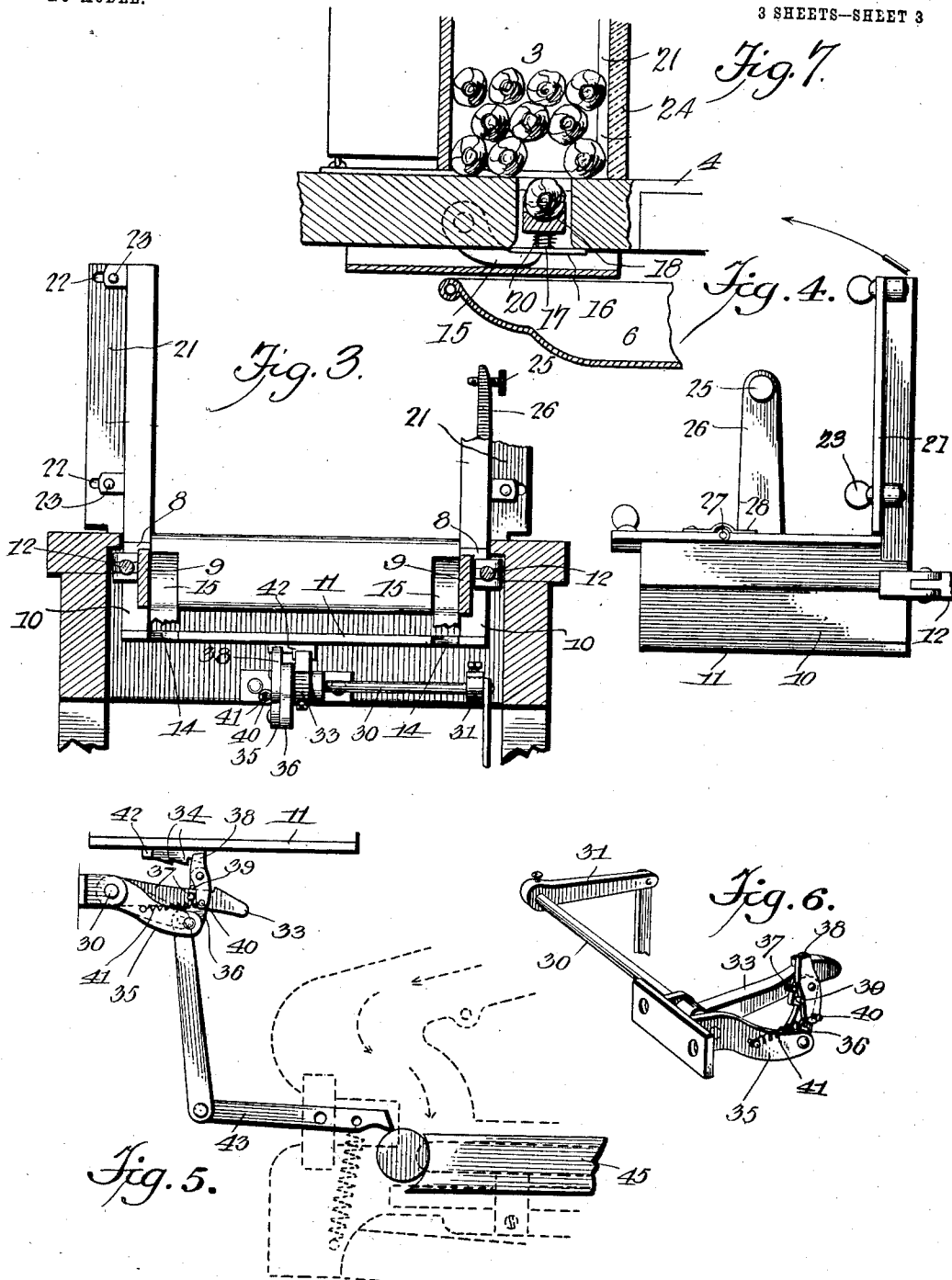
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3 SHEETS—SHEET 3



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UNITED STATES PATENT OFFICE.

FREDERICK G. HARTELL, OF CHICAGO, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO YANCEY Q. CALDWELL, OF PARIS, TENNESSEE, AND LOUIS M. MARTIN, OF MARTIN, TENNESSEE.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 758,007, dated April 19, 1904.

Application filed June 1, 1903. Serial No. 159,692. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK G. HARTELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Vending-Machines, of which the following is a specification.

This invention relates to certain improvements in vending-machines.

One object of the invention is to provide a device of this character in which the goods-receptacle is movable toward and from the point of delivery.

A further object of the invention is to provide a device of this character in which the delivery slot, slide, or other opening is so arranged with respect to the reservoir or receptacle that such reservoir or receptacle must be moved toward and from the slot or slide to effect the delivery of the goods.

A still further object of the invention is to provide a support for the article or articles to be delivered, such support being so arranged and disposed as to move to releasing or discharging position only after the goods receptacle or reservoir has been moved to closed or inoperative position.

A still further object of the invention is to provide a support yieldable under the weight or variation in size of the articles to be delivered.

With these and other objects in view, as will hereinafter more fully appear, the invention consists in the novel construction and arrangement of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a perspective view of a coin-controlled machine constructed in accordance with the invention. Fig. 2 is a transverse sectional elevation of the same. Fig. 3 is a transverse sectional view of a portion of the device on the

line 3 3 of Fig. 2. Fig. 4 is an elevation of a portion of one of the clamping and holding devices for the cigar-box or other receptacle in which the goods are contained. Fig. 5 is an elevation of a portion of the mechanism for controlling the operation of the delivery mechanism. Fig. 6 is a detail perspective view of the locking catch and trip for holding the goods-receptacle from movement until after the insertion of a coin. Fig. 7 is a view of a portion of the mechanism shown in Fig. 2, the parts being illustrated in different position.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The device forming the subject of the present invention is designed for the vending of articles of any kind and while in the present instance is illustrated as employed in connection with the vending of cigars it is to be understood that it may be employed in connection with machines for vending articles of any character by a suitable alteration in the shape of the delivery device or that it may be used in connection with other machines—such as those used for weighing, testing-machines, or the like—without departing from the invention.

In the drawings, 1 designates a suitable casing, formed of wood or metal, the upper portion of said casing being preferably provided with glass panels 2 in order that the character of the goods may be displayed. As the machine in the present instance is designed for the sale of cigars, there is shown a cigar-box 3, the cover of which is turned in such manner as to display the label or the name of the cigar at one side of the machine.

The lower portion of the casing contains the mechanism for controlling the movement of the delivery device, while the upper portion is utilized for the display of the goods. These two portions of the casing are separated from each other by a horizontal flooring 4, having a transversely-disposed slot 5, through which the goods are discharged and roll or slide through a chute 6 to a discharge-opening 7, arranged at the front of the machine. In the

flooring or partition 4 are two longitudinally-disposed slots 8, extending from the front to the rear of the machine, and in these slots are guiding-bars 9, fitting in slotted bars 10, that carry standards to which the cigar-box or other goods-receptacle is secured. The bars 10 are rigidly secured together by a transversely-disposed plate 11, and to the front ends of said bars are secured rods 12, extending out through suitable guiding-openings in the front portion of the casing and connected by a cross-bar 13, which forms a handle or pull for actuating the delivery mechanism. In the front end of the plate are arranged two slots or recesses 14 for the reception of pivoted arms 15, the lower or front ends of which are rigidly secured to a transversely-disposed strip 16, having openings for the reception of pins 17, depending from a goods-supporting bar 18. The rear ends of the arms 15 are pivoted to the floor or horizontal partition 4. The bar 18 in the present instance is shown as slightly concaved in order to adapt it for the reception of a cigar; but its shape may be varied in any manner in accordance with the size or shape of the articles to be sold. This bar is adapted to enter the slot 5 and to receive a single article or a plurality of articles from the goods-receptacle as the latter is moved across the slot, and after or during the return of the goods-receptacle to its initial position the bar is allowed to fall in order to open the slot and permit the discharge of the goods through the chute 6. As there is necessarily some slight variation in the size of the article, it is desirable to employ a bar capable of yielding movement, and in the present instance this bar is shown as supported by small compression-springs 20, which would yield if the article should project above the face of the flooring or partition during the movement of the goods-receptacle. During the operation of this portion of the mechanism the outward movement of bar 13 causes the walls of the recesses 14 to engage the arms 15 and effect movement of the bar 18 into the slot 5, the bar remaining in this position during outward movement of the cigar-box or other receptacle and receiving therefrom a cigar or other article to be sold, and after the return movement of the receptacle the bar will fall by gravity to the discharge-mouth.

The lower bars 10 are provided with integral standards, and to these and to the upper faces of the base-bars 10 are secured right-angled frames 21, the frames being provided with slots 22 for the passage of securing-screws 23, which extend into threaded openings in the standards and base-bars and permit the necessary adjustment for receptacles of different width. Between the standards and the vertical members of the frames 21 is placed a sheet of glass 24, which forms the front of a receptacle 3, and said receptacle is confined in place by pointed set-screws 25, ex-

tending through arms 26, carried by the frames. Inasmuch as the casing is not of sufficient height to permit the introduction of the cigar-boxes or similar receptacles in a vertical direction, the horizontal portions of the frames are made in two sections and connected by a pivot-pin 27, (see Fig. 4,) so as to permit the turning of the front portion of the frame to a horizontal position for convenience in placing the box in position. To prevent accidental movement of the receptacle, the frames are locked by pivoted strips 28, carried by one portion of the frame and adapted to extend across the hinge or pivot point.

At a point below the partition or flooring 4 are arranged brackets or lugs for the reception of a rock-shaft 30, to one end of which is connected a rocker-arm 31, that receives movement after the insertion of a coin of proper denomination and the subsequent movement of the coin-slide. The opposite end of the rock-shaft carries a hook or catch 33, adapted to engage with one or more teeth 34 on the under side of the plate 11 and normally held up in engaging position by a suitable spring. To the bracket is secured a projecting arm 35, at the outer end of which is pivoted a hook 36, adapted to engage a pin 37, projecting from one side of the hook 33, and when so engaged serving to lock the latter hook in inoperative position and permit outward movement of the cigar or other receptacle. To one side of the hook 36 is pivoted a trip 38, movement of which in one direction is prevented by a pin 39, projecting from one side of the hook 36. The upper end of the trip projects for some distance above the outer upper end of the hook 36, and the lower end of the trip is provided with a projecting pin 40, which is connected by a spring 41 to a pin projecting from the bracket-arm 35. This mechanism is so arranged that after the downward movement of the rocker-arm 31 and hook 33 to unlocking position the hook 36 will engage with and hold the pin 37 and retain the hook 33 in unlocked position. This permits outward movement of the plate 11 and the cigar-box or other receptacle, and during such outward movement a pendent lug 42, carried by the plate 11, comes into engagement with the trip 38 and moves the hook 36 from engagement with the pin 37, permitting the latter and the hook 33 to rise and remain in such position that on the return movement of the plate and receptacle the hook will engage with one or other of the teeth 34. While only a single tooth is necessary in the operation of the machine, it is advisable to employ a plurality of teeth in order to prevent the discharge of more than a single article on the insertion of a single coin, it being possible in ordinary machines to obtain more than a single article by manipulating the delivery mechanism in such manner as to prevent its being locked in place.

In order to operate the rocker-arm 31 and hook 33, I employ a pivoted lever 43, having a linked connection with the rocker-arm 31 and the opposite end of said lever being adapted to bear against the upper surface of a coin in the coin-chute, the coin being forced into engagement with said lever by means of a slide 45, having a rod extending out through the front of the casing and provided with a terminal push-knob 47, by which the slide may be manipulated to force a coin into engagement with the lever 43.

It will be observed that during the operation of the machine the cigar-box or other receptacle is moved bodily over the discharge-slot, and one or more of the articles enter such slot and remain therein until the receptacle has about completed its return movement to initial position, after which and during or at the completion of this return movement the bar 18 is allowed to fall to deliver the article or articles which it supports.

Having thus described the invention, what is claimed is—

1. In a device of the class specified, a goods-receptacle, means for moving the same over a delivery-opening, and means for temporarily closing the mouth of the opening during the movement of the goods-receptacle.

2. In a device of the class specified, a slidable goods-receptacle open at its lower end, a support having a delivery-opening, means for moving the goods-receptacle over such opening, and means for temporarily closing the mouth of the opening during the movement of the goods-receptacle.

3. In a device of the class specified, a slidable goods-receptacle having an open bottom, a support having a delivery-opening, means for moving the receptacle to deliver goods to the opening, and means for partly closing said opening during the reciprocating movement of the goods-receptacle.

4. In a device of the class specified, a goods-receptacle having a discharge-opening, a support having a delivery-opening, means for

moving the goods-receptacle, and means for partly closing the opening during the reciprocating movement of the goods-receptacle to thereby limit the quantity discharged.

5. In a device of the class specified, a goods-receptacle having a discharge-opening, a support having a delivery-opening, a bar adapted to enter the opening and limit the area of said opening, a pair of pivoted arms carrying said bar, and means associated with the goods-receptacle for engaging said pivot-arms and moving the bar.

6. In a device of the class specified, a goods-receptacle having a discharge-opening, a support having a delivery-opening, a bar adapted to enter said support and limit the area of said opening, and spring supporting means for said bar, substantially as described.

7. In a device of the class specified, a casing, a movable goods-receptacle, means for discharging the goods therefrom, and a goods-receptacle-supporting device having a pivoted portion.

8. In a device of the class specified, a goods-receptacle having a discharge-opening, means for discharging goods therefrom, a pair of spaced supporting devices for the goods-receptacle, said supporting devices being adjustable laterally for receptacles of different width, means for locking said supporting devices in adjusted position, and means connected to the supporting devices for permitting reciprocating movement thereof.

9. In a device of the class specified, a goods-receptacle, means for discharging goods therefrom, standards for engaging the front of the receptacle and frames supported by the standards and adjustable laterally to accommodate receptacles of different width.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FREDERICK G. HARTELL.

Witnesses:

J. ROSS COLHOUN,
JNO. E. PARKER.