

No. 828,971.

PATENTED AUG. 21, 1906.

O. B. ROSS.
CIGAR VENDING MACHINE.
APPLICATION FILED APR. 6, 1905.

2 SHEETS—SHEET 1.

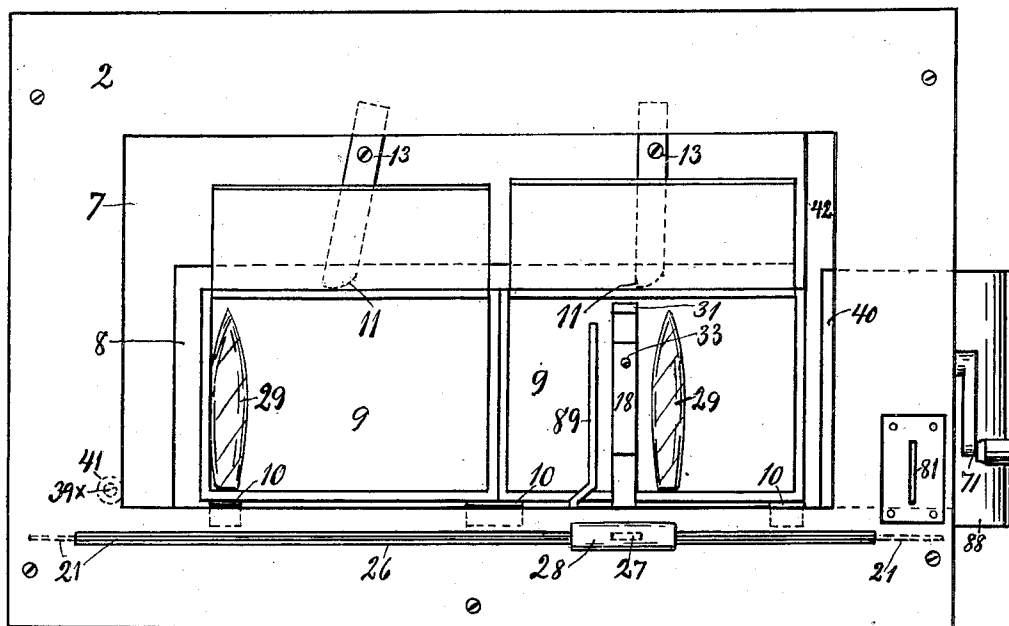


FIG. 1.

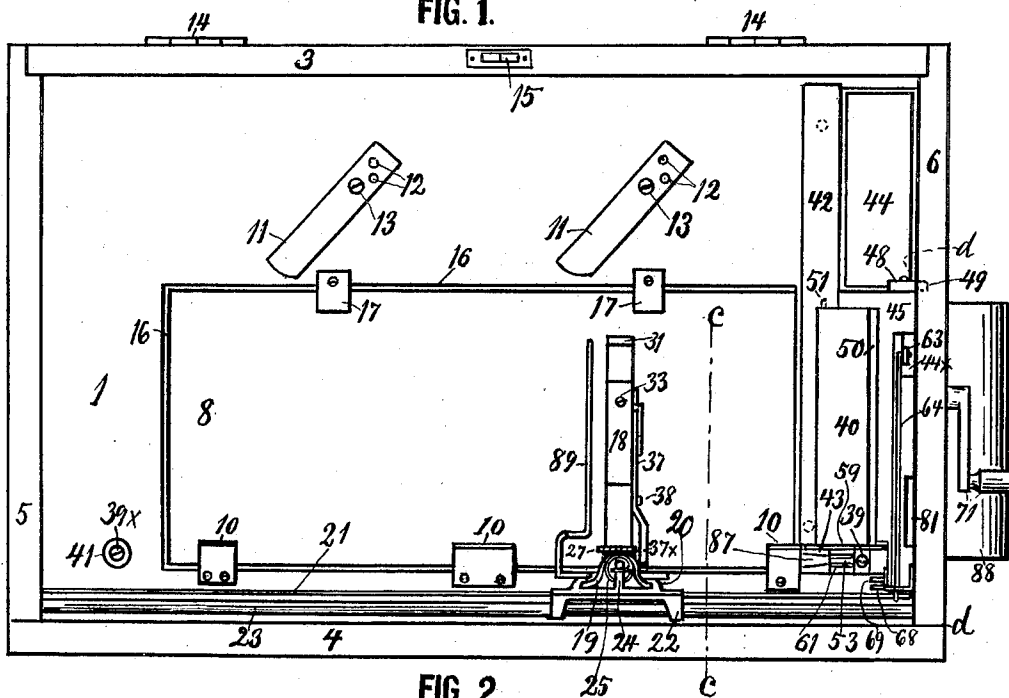


FIG. 2.

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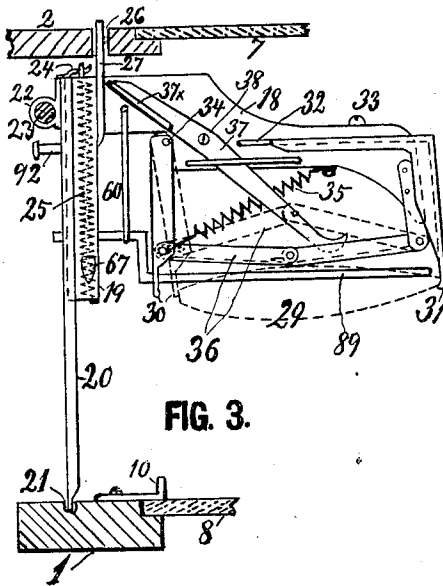


FIG. 3.

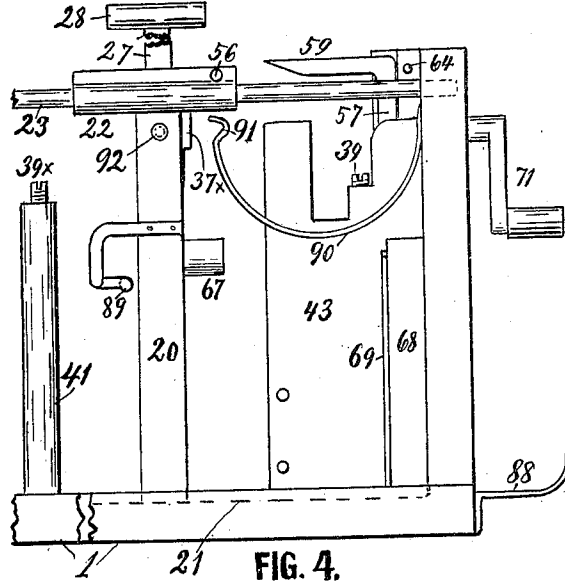


FIG. 4.

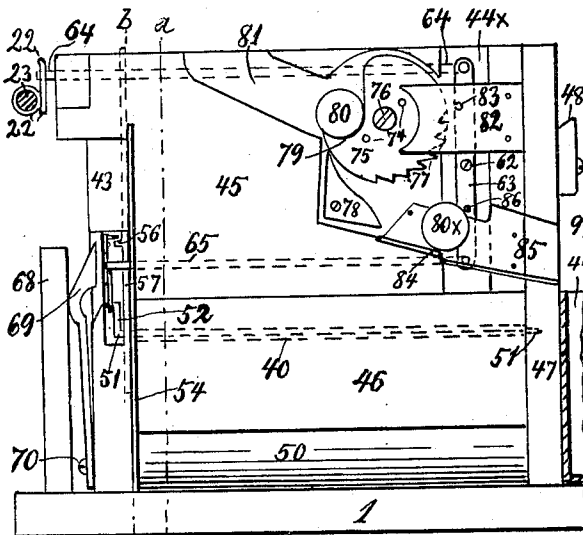


FIG. 5.

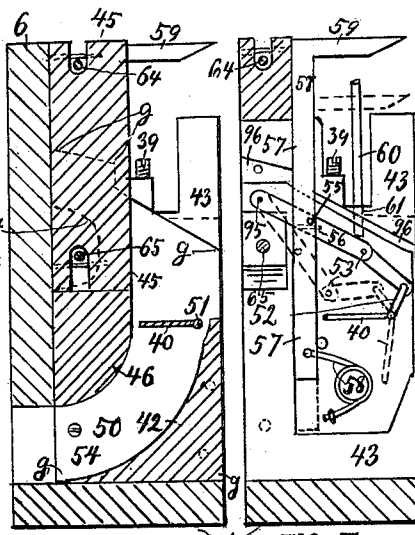


FIG. 6.

FIG. 7.

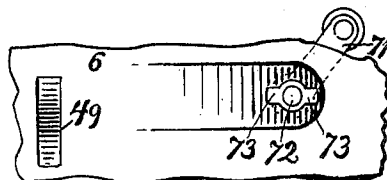


FIG. 8.

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UNITED STATES PATENT OFFICE.

OLIVER B. ROSS, OF SPENCER, IOWA.

CIGAR-VENDING MACHINE.

No. 828,971.

Specification of Letters Patent.

Patented Aug. 21, 1906.

Application filed April 6, 1905. Serial No. 254,077.

To all whom it may concern:

Be it known that I, OLIVER B. ROSS, a citizen of the United States, residing at Spencer, in the county of Clay and State of Iowa, have
5 invented certain new and useful Improvements in Cigar-Vending Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which
10 it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

15 My invention relates to machines for vending cigars and similar articles; and the objects of the invention are to provide a novel, simple, yet efficient coin-controlled cigar-vending machine which may hold several
20 boxes of cigars at a time all in full view of the buyer, as well as of the examiner or collector of revenue. This and other objects I attain by the novel construction and arrangement of parts illustrated in the accompanying
25 drawings, in which it will be seen that the machine involves a show-case or casing with mechanisms in one end and cigar-boxes upon the bottom of the casing.

In said drawings, Figure 1 is a top view of
30 my complete cigar-vending machine. Fig. 2 is also a top view of the machine, but with the cover of the casing and the cigar-boxes removed. Fig. 3 is a cross-section on the line *c c* in Fig. 2 with most of the casing omitted, but showing clearly the carrying device
35 by which the cigar is picked up and delivered into a chute for conveyance out of the casing. Fig. 4 is a rear elevation of the right-hand end or part of the machine in Fig. 2 with the
40 rear wall of the casing removed. Fig. 5 is an end elevation of the machine between the points *d d* in Fig. 2 with the end wall of the casing removed, so as to expose the coin-controlled mechanism and its frame. Fig. 6 is a
45 sectional view on the line *a a* in Fig. 5 with the end wall of the casing restored. Fig. 7 is a sectional view on the line *b b* in Fig. 5, and Fig. 8 is an inner side elevation of the portion of the end wall of the casing in which a hand-
50 crank and shaft is arranged for operating the coin mechanism.

Referring to the drawings by reference characters it will be seen that the machine involves a main chamber or elongated casing,
55 of which 1 is the bottom; 2, the cover; 3, the front side; 4, the rear side, and 5 and 6 the

end walls. The side walls are provided with large glass panels. (Not shown.) The cover has the large glass 7, and the bottom has a smaller glass panel 8, upon which common
60 cigar-boxes 9 are supported and firmly held between the brackets 10 and the thumb-cams 11, which have a plurality of holes 12, adapted to go upon the pivot-screw 13 if the cigar-boxes are extra wide or narrow.

65 The front side 3 serves as the door to the casing and is therefore hinged at 14 and provided with a suitable lock 15. The bottom glass 8 may be held in the recess 16 of the bottom by the brackets 10 and the keepers 17,
70 which are thin and let down flush with the bottom, so that the cams 11 swing over them.

The carrier by which the cigar is picked up and delivered is best shown in Fig. 3. Its
75 frame 18 projects horizontally out over the cigar-boxes from a head 19, sliding vertically in a guide 20, whose lower end is guided in a groove 21 in the bottom of the casing, while the upper end has a sleeve or frame 22 sliding on a horizontal bar 23, supported by its
80 ends in the ends of the casing. The head 19 of the carrier is suspended from an arm 24 on the frame 22 by a coil-spring 25, placed in a vertical groove in the rear of said head and secured to the lower end thereof. From said
85 head extends upwardly through a slit 26 in the cover 2 a handle-bar 27, having a handle or head 28, of which the operator takes hold and pushes the carrier downward into the cigar-box, and then after allowing the spring
90 25 to raise it he moves the carrier and the cigar to the end of the casing, as will presently be more fully described.

In Fig. 3 it will be seen that the cigar, which is indicated by the dotted line 29, is grasped
95 at its ends by two jaws 30 31, of which the latter is adjustably held in a slit 32 of the frame 18 by means of a clamping-screw 33, while the former is pivoted at 34 to the carrier-frame and is normally impelled toward
100 the fixed jaw 31 by the coil-spring 35 and thereby hold the cigar between the jaws. The jaws are spread by a toggle-joint 36, which is swung upwardly to its limit by being pressed downwardly upon the thick middle
105 portion of the cigar as the jaws pass down over the ends of it preparatory to picking it up, and when the cigar is to be released from the jaws the toggle-joint is forced downward to its limit by the lower end of the lever 37,
110 pivoted at 38 to the carrier-frame and having its rear end tilted upward by being pressed

downward upon the top end of the screw 39 (see Figs. 2 and 4) when the cigar is dropped upon the lid 40 of the chute, which at the same moment is opened downward by a mechanism which will presently be fully described. If a cigar should accidentally become disengaged before reaching the chute, the toggle-joint is brought downward again and the jaws opened for another cigar by simply moving the carrier to its limit in the opposite direction and pressing downward on the handle, so that the arm 37^x of the lever is pushed upward by the screw 39^x in the top of the post 41. This will in such an event be necessary, because if the screw 39 was used the carrier would become interlocked until a new deposit of coin released it.

In the end of the casing where the cigar-chute is disposed a strip 42 is secured upon the bottom of the casing, and at the rear end of same stands a flat post 43. Between the front end of the strip 42 and the end wall 6 is loosely placed the coin-receptacle 44, and rearward of same is slidably inserted the mechanism frame or block 45, which rests upon a block 46, fixed to the end wall 6, and has a downward-projecting leg 47, held firmly against the block 46 by a thumb-latch 48, secured on the leg and engaging in a cavity 49 in the end wall, so that the mechanism frame may easily be detached for repair if it should get out of order.

The chute 50, through which the cigars are dropped out of the machine, (see Figs. 5 and 6,) is at its top provided with a tilting lid 40, secured with one edge to a rock-shaft 51, journaled near its ends in the frame and having at one end a rocker-arm 52, rocked by a toggle-joint 53. (Best shown in Fig. 7, where the metallic plate or cover 54 in Figs. 5 and 6 is removed.) This toggle-joint is normally held in its upper position with the lid 40 horizontal by having its pin 55 supported on a catch or wing 56 of a vertically-slidable bar 57, normally held elevated by the spring 58, and having at its upper end a horizontal arm 59, under which the carrier-frame 18 passes when a cigar is to be dropped into the chute. From this it will be understood that when the cigar is above the lid 40 and the handle-bar 27 is pushed downward the plunger 60, depending downwardly from the carrier-frame, descends through a hole 61 in the flat post 43 and pushes the toggle-joint 53 downward, so it drops to the position shown in dotted lines, with the lid 40 into a hanging position, so that the cigar drops freely down the chute, it being released by the action of the screw 39 on the lever 37, as already described. As the pressure upon the handle 28 is now relaxed the spring 25 elevates the handle and the carrier, and the latter in its ascension engages the arm 59 and elevates the slide 57, the toggle-joint, and the lid 40 to normal position, where said parts

are held partly by the spring 58 and partly by the weight of the lid 40, which tends to hold the toggle-joint elevated after it is first brought above a straight line through its three pivots. The carrier is now ready to go back to any of the cigar-boxes and pick up another cigar as soon as a coin has released it from its interlocked position with the coin-operated mechanism, which will now be described.

In a suitable recess 44^x in the mechanism frame 45 is pivoted at 62 a two-armed lever 63, to the ends of which are pivotally secured two bars 64 65, sliding in grooves in the frame. The free end of the upper bar enters the hole 56 in the sliding piece 22 and locks it as soon as the descending carrier forces its arm 67 down between the post 68 and the presser-arm 69, which is loosely secured at its lower end at 70, so that its upper end will swing against the free end of the rod 65, and thereby push the upper rod 64 into locking position.

As shown in Fig. 8, the crank 71 carries on its shaft 72 two arms 73, which engage the two pins 74 of the coin-wheel 75, which revolves on a central screw 76 and is formed with ratchet-teeth 77, engaging a pawl 78 to prevent turning of the wheel in the wrong direction. In one edge of the wheel is a large notch 79, into which a coin 80 dropped down the coin-slot 81 lodges and is carried by the wheel around back of the shielding-plate 82, where it pushes against the pin 83 of the lever 63, and thereby retracts the locking-bar 64 from engagement with the frame 22. After the coin has passed the pin 83 it drops to the position 80^x, resting upon the eminence 84 of the lower side of the coin-chute 85 and against the pin 86 in the lower arm of the lever 63, where the coin remains while the carrier is moved away to pick up a cigar from either of the several boxes and qualities the casing may contain. When the carrier is returned to drop out the cigar by pressing it downward with the lever 37 upon the screw 39, the arm 67 again presses laterally on the presser-arm 69, thereby releasing the coin so it rolls into the receptacle 44 and pushing the rod 64 into locking engagement with the frame 22.

In Fig. 2, 87 is a V-shaped gap in the post 43 to help guide the arm 60 into the hole 61 in the post. 88 is the usual pan receiving the cigar ejected from the machine. 89 is a guarding-arm on the carrier to prevent cigars from being in any way worked into the chute 50 before the coin has been deposited, so that the carrier can be removed from the chute. 90 is a spring secured to the casing and adapted to engage by its hook 91 a pin 92 or other point of the carrier and push it away from its locked position as soon as it is unlocked. The curved dotted line 94 in Fig. 6 designates a notch in the plate 50 as a clearing for

the rod 65. The plate 50 is otherwise clearly indicated by the outline *g g g g g*. It is secured to the flat post 43 flush with the upper part of the post in a recess extending from the line 96 in Fig. 7 to the bottom end of the post.

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

1. In a cigar-vending machine a vertically and horizontally movable cigar-carrier the same comprising a horizontal frame-arm and two vertically-disposed jaw-arms extending downwardly therefrom and adapted to grasp over the ends of the cigar, one of said jaw-arms being spring-actuated against the one end of the cigar, the other arm being adjustably fixed so as to resist the other end of the cigar, a horizontally-disposed toggle-joint intermediate the jaws and having one end pivoted to the pivoted jaw so that any cigar between the jaws will swing the toggle-joint upward and allow the jaws to close, a two-armed lever pivoted to the carrier-frame and adapted to force the toggle-joint downward with one end when the other end of the lever is raised, and means for raising said end of the lever when the jaws are to be opened, substantially as set forth.

2. A cigar-vending machine comprising a casing having transparent cover with a slit in it, a handle-bar projecting upward through the slit, a vertically and horizontally slidable cigar-carrier at the lower end of the handle, a cigar-chute with outlet in one end of the casing, a tilting lid in the top of the chute, means operated by the carrier for locking the car-

rier with the cigar over the chute, and means for opening the lid and releasing the cigar from the carrier, all by a downward push on the handle-bar, substantially as set forth.

3. A cigar-vending machine comprising a casing having transparent cover with a slit in it, a handle-bar projecting upward through the slit, a vertically and horizontally slidable cigar-carrier at the lower end of the handle, a cigar-chute with outlet in one end of the casing, a tilting lid in the top of the chute, means operated by the carrier for locking the carrier with the cigar over the chute and means for opening the lid and releasing the cigar from the carrier, all by a downward push on the handle-bar, and a guard to prevent inserting of cigars in the chute while the carrier is locked.

4. In a cigar-vending machine, the combination with a cigar-carrier of spring-closed jaws adapted to engage the very ends of the cigar, and means for holding the jaws spread, said means being so positioned as to release the jaws when coming in contact with a cigar between the jaws.

5. A cigar-vending machine having a cigar-carrier with jaws adapted to grasp the cigar endwise, and the lateral arm 89 carried by the carrier and adapted to bring the cigar into line for engagement by the jaws.

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

OLIVER B. ROSS.

Witnesses:

CHAS. R. HOWE

K. V. MITCHELL