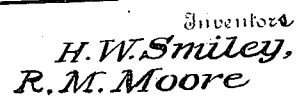


950,081.

2 SHEETS—SHEET 1.



Witnesses
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H. W. SMILEY & R. M. MOORE.
CIGAR VENDING MACHINE.
APPLICATION FILED MAR. 17, 1909.

950,081.

Patented Feb. 22, 1910.
2 SHEETS—SHEET 2.

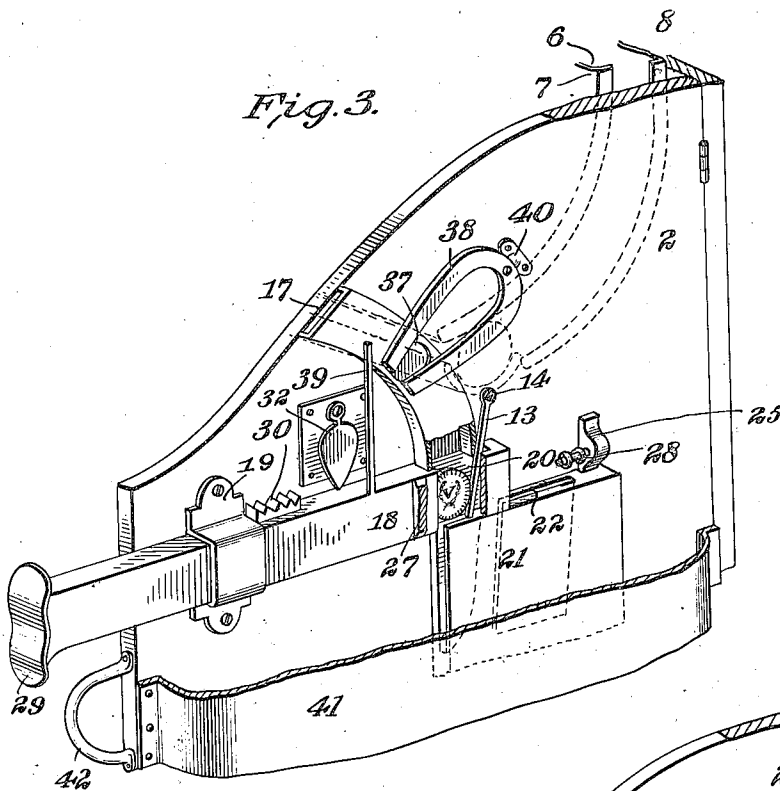
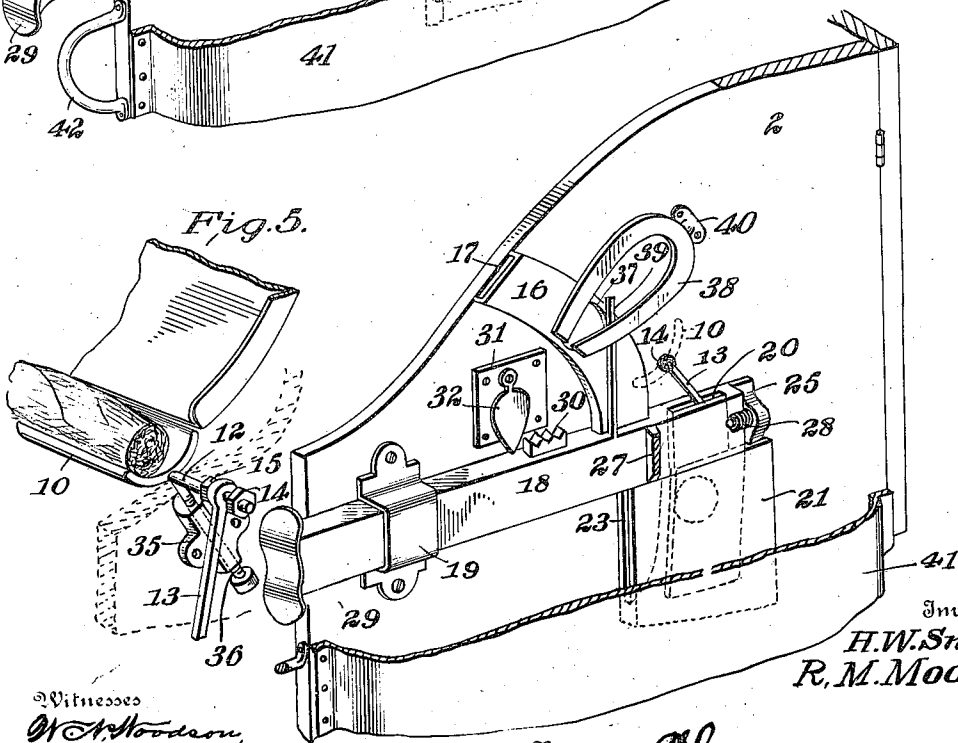


Fig. 4.



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UNITED STATES PATENT OFFICE.

HERSCHEL W. SMILEY AND RICHARD M. MOORE, OF ODON, INDIANA, ASSIGNORS OF
ONE-HALF TO ODON REALTY CO., OF ODON, INDIANA.

CIGAR-VENDING MACHINE.

950,081.

Specification of Letters Patent.

Patented Feb. 22, 1910.

Application filed March 17, 1909. Serial No. 483,906.

To all whom it may concern:

Be it known that we, HERSCHEL W. SMILEY and RICHARD M. MOORE, citizens of the United States, residing at Odon, in the county of Daviess and State of Indiana, have invented certain new and useful Improvements in Cigar-Vending Machines, of which the following is a specification.

My invention relates to coin-operated mechanisms, and particularly to a machine for vending cigars, and to the coin-actuated operating mechanism therefor, the object of the invention being to provide a machine which, upon the deposit of a suitable coin, will operate a lever to deliver a cigar to the operator, the device being provided with means for preventing the actuation of the cigar-delivering devices unless a coin is placed in the coin slot; to provide means whereby a complete actuation of the operating push rod is compelled, and means to permit the actuation of the cigar-delivering devices, once a coin has been deposited.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of our machine, the covering casing for the end being broken away; Fig. 2 is an enlarged detail of the end of the operating rod and the gate-operating lever, a coin being in place; Fig. 3 is a perspective view of the operating mechanism detached from the vending casing and showing the parts in their normal position before actuation; Fig. 4 is a like view to Fig. 3, showing the position of the parts after actuation and deposit of the coin; and, Fig. 5 is a detail perspective view of the trunnion-engaging devices.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Our mechanism in general consists of a casing having therein a guideway formed of two spaced plates or chutes between which the cigars are carried, the cigars lying across the guideway, one superposed upon the other at the lower end of the guideway, and crossing the same is a tipping bucket or gate the length of a cigar and slightly curved so as to support a cigar

properly thereon. This tipping bucket is pivoted and at its end is connected to an arm, whereby it may be tipped. A push rod normally holds the bucket in its non-delivering position, this arm being held out by a spring. The coin, after it has been deposited, is guided to a slot in the push rod, and in this position, contacts with the tipping bucket arm and forms the means whereby, upon the actuation of the push rod, the bucket arm is turned to turn the bucket upon its pivot and deliver a cigar to the delivery chute of the machine.

In the drawings, 2 designates the side of any suitable casing having an inclined front portion 3 and a downwardly extending vertical shield 4. The upwardly extending front 5 of the cigar-containing department is preferably of glass, so that the cigars may be seen. The cigar-containing department 6 is vertical, has a depth equal to the average diameter of the cigars to be vended, and a width equal to the width of the cigars. Thus the cigars will lie across the cigar-containing cabinet and be superposed one upon the other. Extending downward from the lower end of the cabinet 6, are the downwardly and forwardly curved guiding chutes 7 and 8. The lower end of the space defined by these chutes is open, except for a tipping plate or delivery plate, to be later described. The lower ends of the chutes 7 and 8 are outwardly turned, and immediately below them is the downwardly and outwardly curved plate 9 that extends beneath and is spaced from the lower edge of the guard plate 4. This plate 9 therefore forms a delivering tray from which the cigar may be easily taken, the plate 4 forming a guard preventing the insertion of any instrument which would act upon the tipping delivery plate. The delivery gate 10 extends across the casing between the two side-pieces 2, and in its normal position, closes the space between the chutes 7 and 8. The ends of the delivery plate 10 are provided with the outwardly extending trunnions which are pivotally supported in the sides 2. The trunnion 12 projects through one of the side-pieces 2 and is provided with a radial arm 13 which normally extends vertically downward. This arm is held in position by opposed nuts 14 and 15.

The coin-delivering chute is designated 16 and has an opening 17 at the upper edge of

the side-piece 2. The chute is downwardly and rearwardly curved, and its lower end extends downward to a point adjacent to the arm 13. Mounted immediately beneath the lower end of the chute 16 is a push rod 18 which, at its forward end, is supported for a sliding movement in a strap 19 attached to the outer face of the side-piece 2. At its rear end, the push rod 18 is supported on the upper edge of a coin-receiving plate to be hereinafter described. The rod 18 is rectangular in formation and at its rear end has a slot 20 which passes entirely through the rod from top to bottom, and which, when the rod is in its normal position, registers with the lower end of the coin chute 16. The slot 20 is long enough to register with the coin chute 16 and also provide space to receive the arm 13 at the inner end of the slot 20. When no coin is in the slot 20, it will be obvious that the push rod 18 may be forced rearward without engaging with or acting upon the arm 13, the arm remaining in its vertical position and merely riding in the slot 20 as the rod 18 moves backward. But when a coin is deposited in the chute 16, it passes downward and into the slot 20. Under these circumstances, the rearward movement of the push rod 18, through the coin, will engage the arm 13 to move it rearward and turn the tipping bucket upon its trunnions, to deliver the cigar.

Immediately below the rear end of the rod 18, and supporting the same, is a coin-guiding or receiving plate 21. This is slotted on its upper face, as at 22, the slot registering with the slot 20 in the push rod 18. This slot 22 extends downward into the plate 21, and then opens on the inside face of the plate into a coin drawer forming the lower portion of the casing. The forward edge of the plate 21 is also vertically slotted as at 23, the slot extending downward from the upper edge of the plate 21 and opening at the side, as shown in the perspective view. This slot is for the purpose of receiving small coins which, when dropped into the slot 20, fall directly downward, and passing through the slot 23, are ejected at the lower end of the plate 21. The plate 21 has a lug 24 at its lower end, whereby it is attached to the casing, and its upper end is provided with the outwardly projecting lug 25 which forms a means of attachment for the plate 21 and also a means for supporting the rear end of a guide rod 26 which, at its forward end, passes freely through an ear 27 which projects outwardly from the face of the push rod 18. Between the ear 27 and the lug 25, and surrounding the rod 26, is a compression spring 28 which acts to normally hold the rod 18 in its outward position. The front end of the rod 18, where it projects beyond the casing, is provided with an enlarged head 29, afford-

ing a convenient means for operating the rod.

In order to compel the operator to move the bar 18 through one complete actuating movement, upon the deposit of one coin, and so prevent the bar 18 from being manually held inward and the delivery of a plurality of cigars for one coin, we form the upper face of the push rod 18 with a ratchet 30, and attach to the side 2, immediately above the bar 18, a plate 31 having pivoted thereto the pawl 32 whose lower end is adapted to engage with the ratchet 30 in either direction of movement of the rod 18. Thus, when the rod 18 is pushed inward, the detent 32 will be moved slightly rearwardly as the end of the ratchet section 30 strikes it. This will incline the detent tooth 32 rearward and permit the bar 18 to be moved rearward. Until the bar 18 has moved far enough, however, so that the ratchet teeth entirely clear the detent 32, the detent will prevent the return of the bar 29, and likewise, upon a return movement of the bar 18, the detent tooth will prevent a reverse movement of the bar 18 toward the rear, until the bar has moved fully to its forward position. There can thus be no half-way actuation of the bar which would be sufficient to operate the tipping bucket or plate 10 to deliver one cigar after another upon the deposit of one coin. In order to additionally prevent this, we provide as adjustable friction contact which engages with the trunnion 12 to prevent the too easy turning of the delivering plate 10 upon its trunnion. This friction contact consists of a support 35 attached by any suitable means to the inside face of the side-piece 2 through which passes a screw pin 36 having a head at one end, whereby it may be turned, and having its other end formed so as to frictionally engage with the trunnion 12. It will be obvious, now, that by turning this screw pin in one direction or the other, the tipping delivering plate will work with more or less ease on its bearings, and that the more the screw pin 36 is turned inwardly, the greater will be the fractional contact between this screw pin and the bearing, and the less easily will the tipping plate operate. When properly adjusted, even when the tipping rod is pushed back to its farthest position, yet the delivering plate or bucket 10 will not turn upon its axis by the mere weight of the cigar.

While small coins or slugs will pass directly through the slot 20 and will be delivered at 23, yet in order to prevent the actuation of the machine by steel or iron slugs of proper size, we form the chute 16 with an opening 37 and hinge a magnet 38 so that its poles rest normally across this opening, or rather, separated slightly from the outer face of the chute 16 by a scraping 13

rod or rake 39 which is mounted upon the push rod 18 and extends vertically upwardly therefrom. The upper end of this scraper or rake is beveled so as to enter beneath the poles of the magnet 38. The rear end of the magnet is hinged as at 40. It will be obvious, now, that upon a rearward movement of the rod 18, the scraper 39 will be moved across both poles of the magnet, and that any slug or other metal piece adhering thereto, will be swept off by the scraper 39, and will fall downward. The mechanism we have described is carried upon the upper face of the end-piece 2, and in order to protect the same, we provide the outer wall 41 which is attached to the end-piece 2 and entirely incloses the actuating mechanism. To the front edge of the side-piece 2, we attach the handle 42 immediately beneath the end 29 of the rod 18. This handle permits the easy actuation of the rod 18, the operator taking hold of the handle and placing his thumb upon the rod 18, and pushing inwardly. The cigar-containing cabinet or casing may be provided with a suitable humidor such as shown at 43, containing a sponge or other moistening devices, whereby the cigars may be kept in proper condition at all times.

While we have shown what we believe to be the best form of our invention, we do not wish to be limited thereto, as it is obvious that changes might be made in the arrangement of parts or details of construction, without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new is:—

1. In a coin-operated mechanism, a coin chute, an operating rod shiftable transversely across the end of the chute and having a passage extending downward entirely through the rod and alining with the chute in one position of the rod, said passage extending lengthwise of the rod and being large enough to receive a coin, a delivery mechanism having an actuating arm projecting into said passage and normally located at the rear end thereof, the passage being of such length that a coin when deposited therein will contact with said arm and with the other end of the passage, and a support upon which the operating rod travels having a coin-delivering slot normally out of alinement with the passage in the rod but which alines with the passage when the rod is shifted.

2. In a coin-operated mechanism, a coin chute, an operating rod shiftable transversely across the end of the chute and having a passage therethrough extending longitudinally along the rod and alining with the chute in one position of the rod, said passage being of a length slightly greater than the diameter of a coin to be received, a de-

livery mechanism having an actuating arm projecting downwardly into said passage and normally located at the rearward extremity of the passage, said passage being of such length that a coin deposited therein will engage said rod and the opposite end of the passage, and a support upon which said rod travels having a relatively contracted coin-delivering slot at one end normally alining with the slot in the operating rod when the operating rod is in its unactuating position, said support also having a coin-delivering slot larger than the first named slot extending longitudinally of the support and parallel to the operating rod so disposed as to be out of alinement with the passage through said rod but alining with this passage when the rod is shifted to its actuating position.

3. In a coin-operated mechanism, a casing, a coin chute mounted on said casing and a horizontally moving operating rod mounted in guides, the rear end of said rod extending above the lower end of the coin chute and the forward end of the rod extending out of the casing and forming an actuating handle, said rod having a passage therethrough alining with the chute when the rod is in its unactuated position, said passage extending longitudinally of the rod and being of a size slightly greater than the diameter of the coin to be used, a perforated ear projecting from the rod, a rod attached to the rear of the casing and projecting through said perforated ear, a spring surrounding the last named rod and bearing against the ear, a delivery mechanism, an actuating arm therefor rotatably mounted rearward of the lower end of the chute and projecting into the passage in the rod at the rear end thereof and being thereby engageable by a coin carried in said passage, a support extending beneath the rod from a point beneath the lower end of the coin chute rearward to an extent equal to the length of travel of the operating rod, said support having a coin directing passage, and a slot in the path of movement of the rod, said slot being normally out of alinement with the passage through the rod but being in alinement with the passage when the rod is moved to its actuating position.

4. In a coin-operated mechanism, a casing, a coin chute supported therein, an operating rod supported on the casing for sliding movement and movable transversely across the end of the chute and having a passage therethrough normally alining with the chute, said passage extending longitudinally along the rod, a spring for resisting the shifting of the rod, a delivery mechanism actuating arm extending down into said passage at the rear thereof, said passage being of such extent that it will receive an operating coin between the forward

end of the passage and the said arm, a support upon which the rod travels, a coin delivering slot normally out of alinement with the passage through the rod but alining
5 with the passage when the rod is moved to its actuating position, a ratchet upon the upper face of the actuating rod, said ratchet having double-faced teeth, and a double-faced pawl freely pivoted upon the casing
10 above the actuating rod and engaging with the ratchet upon the movement of the rod in

either direction to prevent the reverse movement of the rod until it has completed its movement in that direction.

In testimony whereof we affix our signatures in presence of two witnesses. 15

HERSCHEL W. SMILEY. [L. S.]

RICHARD M. MOORE. [L. S.]

Witnesses:

HARRY H. COOKE,
JEROME DE MOTTE.