No. 799,103. PATENTED SEPT. 12, 1905.

L. C. SPOONER.

VENDING MACHINE.

APPLICATION FILED SEPT. 8, 1904.

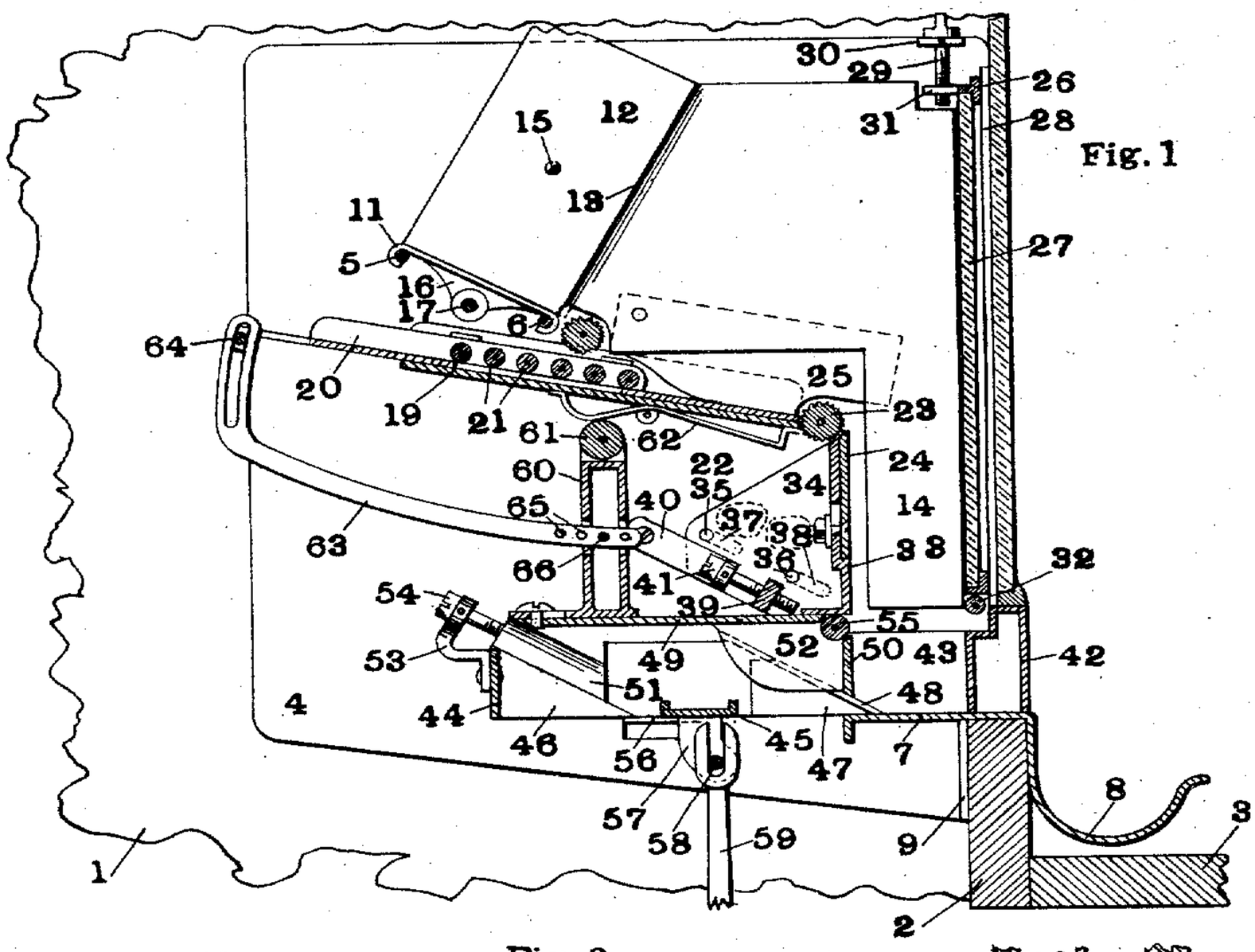
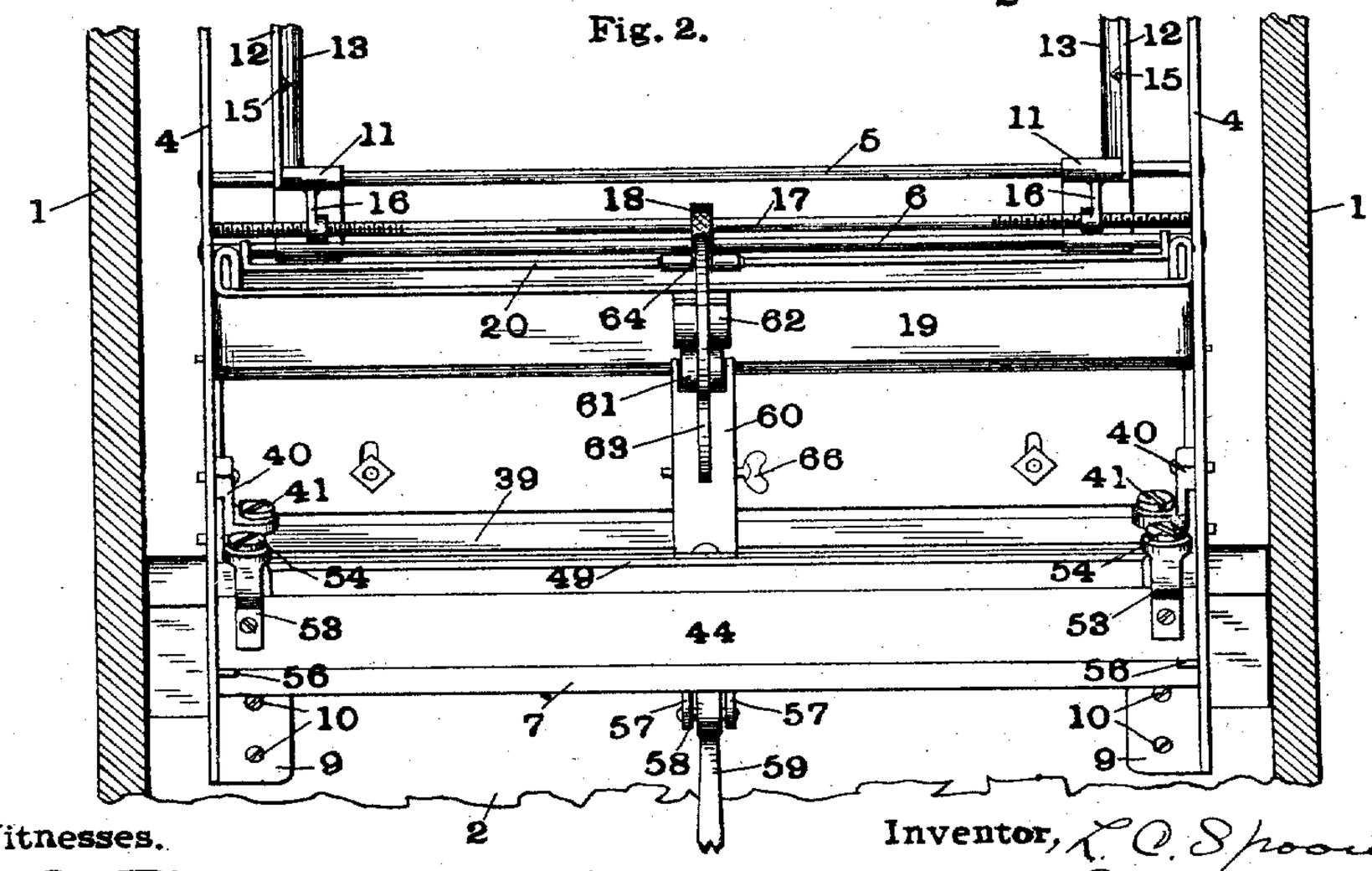


Fig. 1

Fig. 2.



Witnesses.

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LEE C. SPOONER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE PETER MANUFACTURING COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

VENDING-MACHINE.

No. 799,103. Specification of Letters Patent. Patented Sept. 12, 1905.

Application filed September 8, 1904. Serial No. 223,675.

To all whom it may concern:

Be it known that I, LEE C. SPOONER, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented a new and useful Improvement in Vending-Machines, of which the following is a specification.

My invention relates to vending-machines, and particularly to cigar-vending machines.

It has for its principal objects to provide improved means for supporting a cigar-box in the machine without unduly enlarging the frame thereof, to provide positive actuation of the oscillating platform for oscillating it in both directions, to provide means for adjusting the position of the feed-slide on the platform, and other objects hereinafter more fully appearing.

My invention consists in the parts and in the arrangements and combinations of parts hereinafter described and claimed.

In the accompanying drawings, which form a part of this specification, and wherein like symbols refer to like parts wherever they occur, Figure 1 is a vertical sectional view of my machine, and Fig. 2 is a rear view thereof.

The present invention relates to the delivery mechanism of vending-machines. The improvements are especially applicable to delivery mechanisms of the type set forth in my copending application for patent, filed August 6, 1904, Serial No. 219,934, though their application is not limited thereto.

The case for the machine may be of any desired shape. A broken portion of the walls 1, bar 2, and shelf 3 of an L-shaped case is shown. The delivery mechanism is mounted in a frame secured to the bar 2. The frame consists of side plates 4, rigidly connected by rods 5 6 and a plate 7. The latter plate is wide enough to serve as a bottom for the recess in the ejecting-slide when the latter is in its rearward position. It is bent vertically downwardly at its outer edge and is then gently rebent to form a receptacle 8. At their front lower corners the side plates 4 are provided with inwardly-turned ears 9, parallel with the vertical portion of the plate 7 and separated therefrom a distance equal to the thickness of the bar 2. Thus the frame may be secured in place by slipping it over the bar 2 and inserting screws 10 through the ears 9 into the bar. All the moving parts of the mechanism are mounted in the frame described. A chamber with an oscillating bottom is formed in the upper part of the mechanism, into which the cigars are discharged from a cigar-box having one end broken out. A chute leads from the chamber to the cigar-receiving recess of an ejecting-slide.

Upon the rods 5 6 two slides 11 are mounted. They are shown as snap-slides, though they may be of any desired type. Integral with the slides are upwardly-extending guide-plates 12, which are offset near the front edges of the slides to form shoulders 13 perpendicular to the plane of the rods 5 6. The guide-plates then extend forwardly to the front of the machine and are provided with lugs 14, extending downwardly into the chute. The portions of the guide-plates back of the shoulders 13 are equipped with pointed projections 15, of which there may be more than one on each guide-plate. Ears 16, provided with tapped holes, depend from the bottoms of the slides 11. An adjusting and clamping screw 17, provided with right-and-left threads at its opposite ends, passes through the ears 16 and is journaled in the side plates 4 of the frame. A knurled finger-piece 18 is provided near the center of the screw. The thickness of the shoulder 13 is the same as the thickness of the sides of a cigar-box. A cigar-box is seated between the guide-plates. Then the adjusting and clamping screw 17 is actuated to draw the guide-plates together. The projections 15 on the guide-plates are driven into the sides of the box, and thus hold it securely in place. At the same time the inner faces of the front portions of the guide-plates are brought into the same plane as the inner faces of the sides of the box. Thus the cigars will be guided throughout their travel from the box to the ejecting-slide and will be held against endwise movement.

A platform 19 is pivoted intermediate its ends upon the side plates 4 and forms the bottom of the chamber into which the cigars pass from the cigar-box. This platform carries a reciprocating feed-slide 20, provided with rollers 21, and an adjusting-plate 22, carrying a roller 23 and a depending apron 24 at its front end. The details of construction of these parts are described in my above-mentioned copending application, to which reference is made for a further description. The

guide-plates are cut away above the oscillating platform to permit its oscillation. To close the openings thus formed, wings 25 are pivoted upon the guide-plates and rest upon the oscillating platform. Thus they will rise and fall with the platform and will keep the openings in the guide-plates closed at all times.

The chute is formed between a vertically-adjustable front wall and a diagonally-adjustable rear wall. The front wall consists of a frame 26, in which a glass plate 27 is mounted. The frame rests against flanges 28 on the side plates 4. It is supported by screws 29, which pass through ears 30 on the side plates and ears 31 on the frame 26. At its lower edge a roller 32 is pivotally mounted. The discharge-slot of the machine is formed between the roller 32 on the front wall of the chute and the plate 7 of the frame. As the wall can be raised and lowered, the width of the slot may be adjusted. The roller prevents injury to freak cigars which may be slightly larger than the standard size for which the machine is adjusted. The rear wall of the chute consists of a plate 33, which is offset between its ends and is provided with rearwardly-extending flanges 34 at its sides. Pins 35 36 are mounted in the flanges and enter inclined slots 37 38, respectively, in the side plates 4 of the frame. A bar 39 connects the flanges 34 and is provided near its ends with tapped holes. Brackets 40 are mounted upon the side plates 4 of the frame. Adjusting-screws 41 are mounted in the brackets and enter the tapped holes in the bar 39. By operating the screws 41 the wall may be adjusted forwardly to reduce the width of the chute and downwardly to close up the gap caused by adjustment of the ejecting-slide about to be described.

The ejecting-slide comprises two parts. The lower part is a substantially rectangular frame comprising the slot-closing bar 42, side plates 43, a rear connecting-bar 44, and a bottom plate 45. A plate 46, having an edge inclined at the same angle as the slots 37 38, is secured to the inner face of each side plate 43. A second plate 47, having an inwardly-extending flange 48 inclined at the same angle, is also secured upon the inner face of each side plate 43. The upper part comprises a top plate 49, a front plate 50, inclined flanges 51, and lugs 52 in its front corners provided with slots to receive the flanges 48 on the plates 47. The inclined flanges 51 have bosses provided with tapped holes. Brackets 53, mounted on the rear bar 44 of the lower part, carry adjusting-screws 54, which enter the bosses on the flanges 51. The cigar-receiving recess of the ejecting-slide lies between the slot-closing bar 42 of the lower part and the front plate 50 of the upper part. The cross-section of the recess can thus be adjusted by actuating the adjusting-screws 54 and adjusting the upper part of the ejecting-slide downwardly and forwardly. In the front upper corner of the upper part a roller 55 is journaled. As the ejecting-slide moves forward this roller engages the cigar above the one being ejected, and as it is free to turn can raise the cigar and move under it without injuring it. The ejecting-slide is supported by the plate 7 and projections 56, struck up from the side plate 4 of the frame. Hangers 57 project downwardly from the plate 45 of the ejecting-slide and carry a pin 58. To the latter the actuating-arm 59 of any desired actuating mechanism—a coin-controlled mechanism, for example—may be connected.

A standard 60 is secured to the top of the ejecting-slide. At its top it carries a roller 61, which engages a cam 62, secured to the bottom of the oscillating platform 19. This cam extends upon both sides of the pivotal axis of the platform. It is so shaped that as the roller passes rearwardly from the pivotal axis of the platform the latter will have its front end lowered, while as the roller passes forwardly the front end of the platform will be raised. It is to be noted that by using the cam the oscillating platform is positively actuated in both directions. It is to be understood that the cam-surface may be on a part integral with the platform, if desired.

The feed-slide 20 is actuated by the standard 60 through a link 63, having an upturned slotted portion at its rear end. A pin 64 on the slide extends through the slot. A roller or any antifriction member may be mounted on the pin, if desired. The front end of the link is provided with a plurality of holes 65, through any one of which a screw 66, mounted in the standard, may pass. This construction permits the adjustment of the link so as to bring the feed-slide 20 to the proper position on the oscillating platform. This adjustment should be so regulated that when the feed-slide reaches its foremost position its front roller will almost touch the roller 23.

Apart from the operation described above the operation of the machine is the same as that set forth in detail in my above-mentioned copending application.

Obviously my device is capable of modification within the scope of my invention, and therefore I do not wish to be limited to the specific construction shown and described.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A vending-machine comprising a frame having a seat for a box containing articles to be delivered and a chamber in front of said seat to receive said articles as they issue from the end of a box on said seat, a substantially flat bottom for said chamber mounted to oscillate about a substantially horizontal axis, and means for positively actuating said bottom on both its up and down movements.

2. A vending-machine comprising a chamber to receive articles to be delivered, an oscil-

lating platform forming a bottom for said chamber and provided with a cam-surface on its lower side, and an actuating member in engagement with said cam-surface.

3. A vending-machine comprising a chamber to receive articles to be delivered, a platform forming a bottom for said chamber and pivoted intermediate its ends on a horizontal axis, a cam-surface on said platform extending on both sides of the pivot-point of the platform, and an actuating member in engagement with said cam-surface.

4. A vending-machine comprising a chamber to receive articles to be delivered, an oscillating bottom for said chamber provided with a cam-surface, an ejecting-slide provided with an article-receiving recess normally in communication with said chamber, and a standard on said ejecting-slide in engagement with said cam-surface.

5. A vending-machine comprising a frame provided with a discharge-slot bounded on one side by an adjustable plate, a roller mounted on the side of said plate toward said slot, and an ejecting-slide arranged to eject articles through said slot.

6. In a vending-machine an ejecting-slide comprising an upper frame and a lower frame, inwardly-extending inclined flanges on the lower frame, said upper frame resting on said flanges, and means for adjusting said upper frame with respect to said lower frame, an article-receiving recess being formed between the front plates of said frames.

7. A vending-machine comprising a chamber to receive articles to be delivered, an oscillating platform forming a bottom for said chamber, a feed-slide on said platform, an ejecting-slide having an article-receiving recess in communication with said chamber, and means adjustably connecting said feed-slide and said ejecting-slide, whereby said slides may be simultaneously actuated.

8. A vending-machine comprising a chamber to receive the articles to be delivered, an oscillating platform forming a bottom for said chamber and provided with a cam-surface, a feed-slide on said platform, an ejecting-slide having an article-receiving recess in communication with said chamber, a standard on said ejecting-slide in engagement with said cam-surface, and a member connecting said standard and said feed-slide and adjustably connected to said feed-slide.

9. A vending-machine comprising a frame, slides mounted in said frame, guide-plates mounted on said slides and forming two sides of a chamber to receive articles to be delivered, said guide-plates being offset between their ends to form shoulders, inwardly-extending projections on the portions of said guide-plates in the rear of said shoulders, and means to cause said guide-plates to simultaneously approach or recede from each other.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 31st day of August, 1904.

LEE C. SPOONER.

Witnesses:
EDWARD M. WHITE,
CARY W. REID.

Correction in Letters Patent No. 799,103.

It is hereby certified that in Letters Patent No. 799,103, granted September 12, 1905, upon the application of Lee C. Spooner, of St. Louis, Missouri, for an improvement in "Vending-Machines," an error appears in the printed specification requiring correction, as follows: In line 32, page 1, the serial number "219,934" should read *219,734;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 3rd day of October, A. D., 1905.

[SEAL.]

F. I. ALLEN,
Commissioner of Patents.

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