

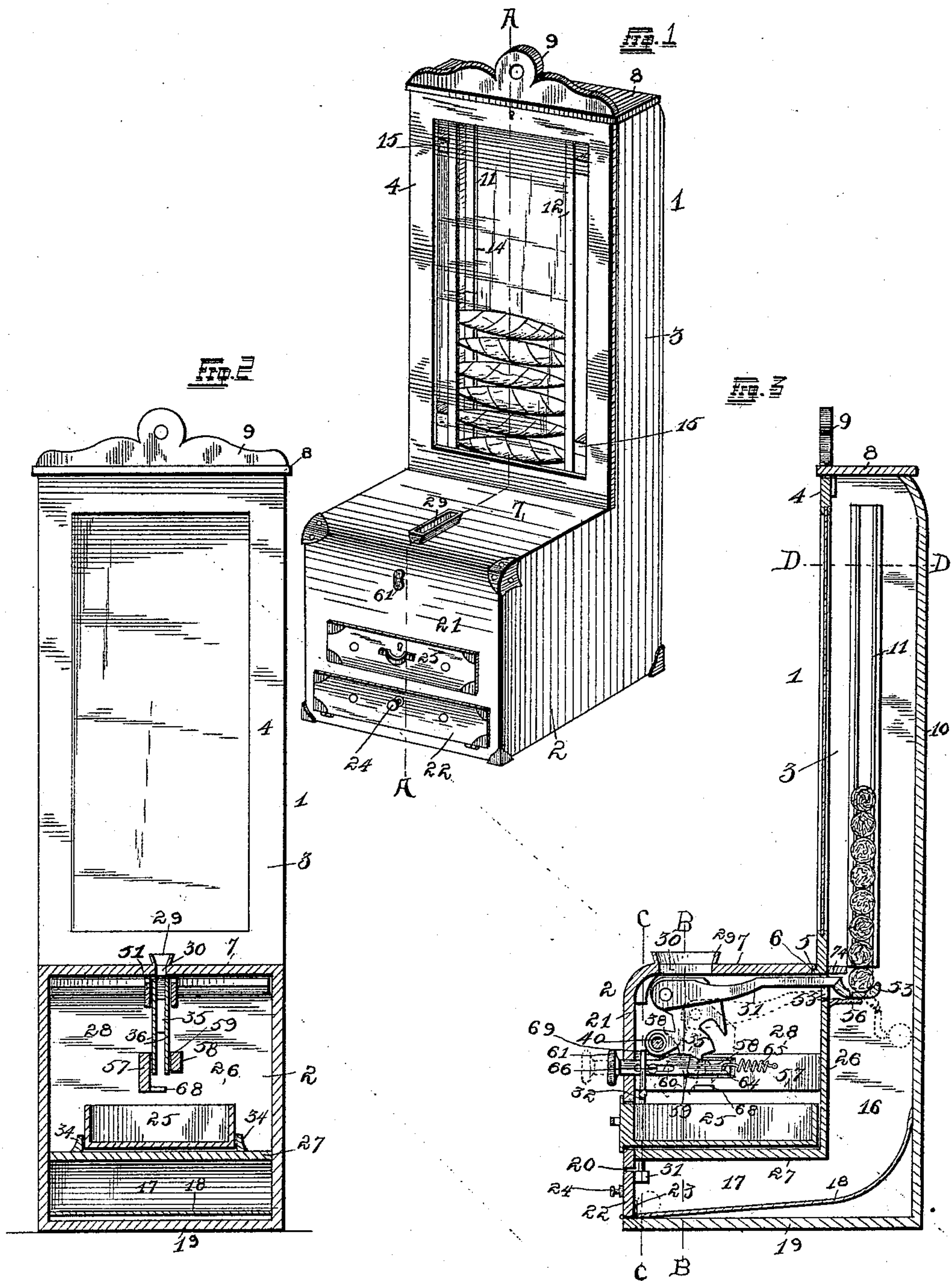
(No Model.)

2 Sheets—Sheet 1.

A. BERG.
CIGAR VENDING MACHINE.

No. 497,623.

Patented May 16, 1893.



WITNESSES

Alfred W. Eichs
Herbert H. Robinson

INVENTOR

Alexander Berg,
By Higdon & Higdon, Longan, Attorneys

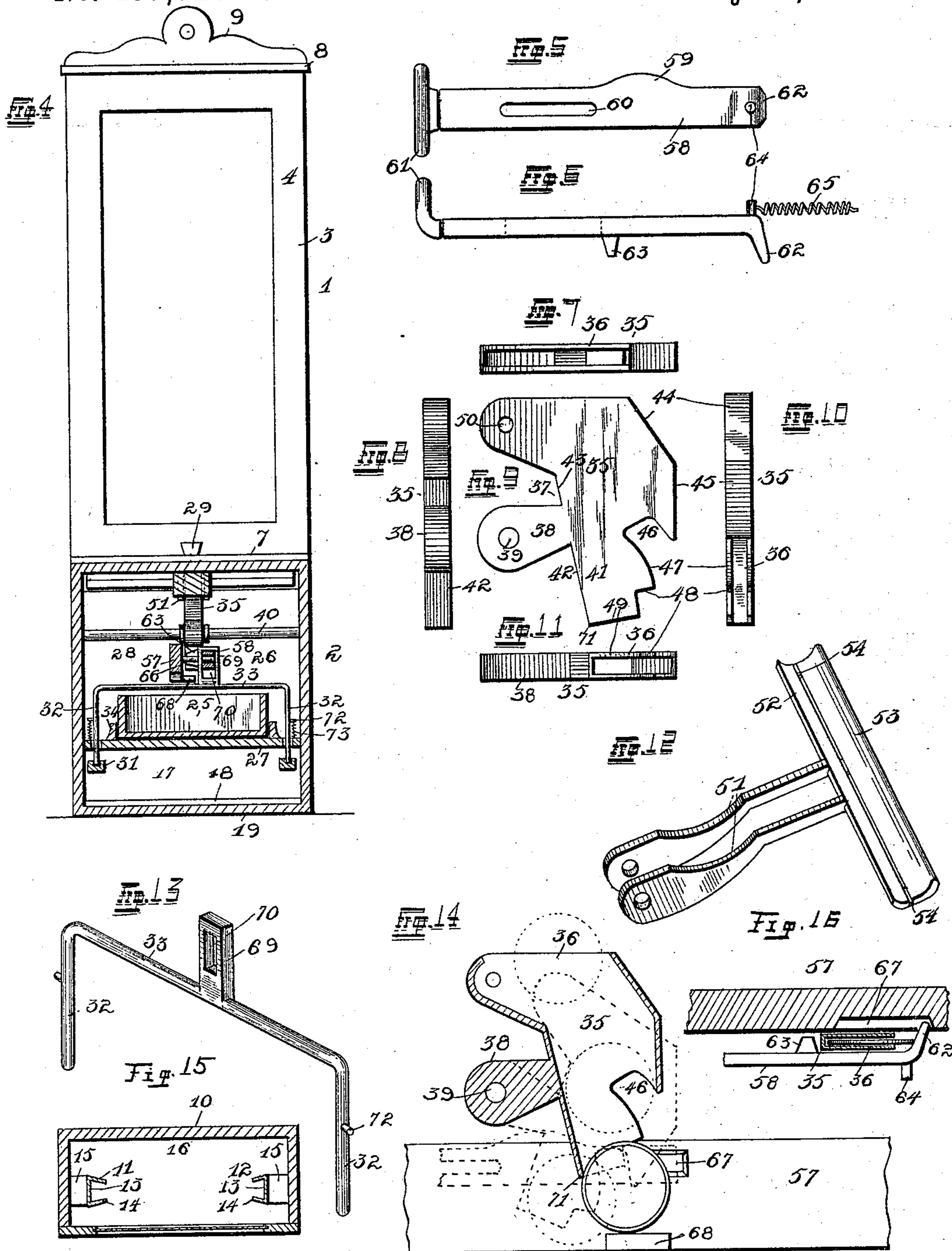
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UNITED STATES PATENT OFFICE.

ALEXANDER BERG, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-FOURTH
TO SOLOMON LOEWENSTEIN, OF SAME PLACE.

CIGAR-VENDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 497,623, dated May 16, 1893.

Application filed December 28, 1892. Serial No. 456,543. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER BERG, of the city of St. Louis, State of Missouri, have invented certain new and useful Improve-
5 ments in Cigar-Vending Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in
10 "cigar vending machines" and consists in the novel arrangement and combination of parts, as will be more fully hereinafter described and designated in the claims.

The object of my invention is to improve
15 upon vending machines for the sale and automatic distribution of cigars and it embodies many new and novel features which assist its perfect operation.

In the drawings:—Figure 1 is a perspective
20 view of my complete invention. Fig. 2 is a front sectional elevation taken on a line B—B in Fig. 3. Fig. 3 is a side vertical sectional elevation taken on a line A—A in Fig. 1. Fig. 4 is a front sectional elevation taken on a line
25 C—C in Fig. 3. Fig. 5 is a side view of a slotted slide made use of in carrying out my invention. Fig. 6 is a top plan view of the same. Fig. 7 is a view looking at the top of an operating mechanism shown in Fig. 9.
30 Fig. 8 is a view looking at one end of the same. Fig. 9 is a detail side elevation of the operating part. Fig. 10 is an end view of the parts shown in Fig. 9. Fig. 11 is a view looking at the bottom of same. Fig. 12 is a per-
35 spective view of a part which directly engages the cigar to be released, and releases the same when a movement is imparted thereto. Fig. 13 is a view in perspective of a door releasing mechanism to allow the withdrawal
40 of the cigar. Fig. 14 is a side sectional elevation of the operating mechanism, showing in dotted lines the manner in which the coin is admitted and showing the parts in alternate position. Fig. 15 is a horizontal sectional view of a machine casing, showing in
45 detail the dove-tail guides for the cigars. Fig. 16 is a plan sectional view with parts broken away, showing the relative position of the coin and pull-lever.

50 The scope of my invention can be extended to the vending of cigarettes, tobacco, candy

or any articles which are put up in small packages or which in themselves are in such a form as to facilitate such a handling, without in any way changing the material idea of
55 my invention.

Referring to the drawings: 1 indicates the casing, comprising a rectangular portion 2 at the bottom and surmounted at the rear side by a sight casing 3. The front of the casing
60 3 is provided with a removable frame 4 having a glass located therein, by means of which the contents of the casing can be examined. The front 4 is removable as above stated, and provided along its lower edge and upon the
65 front with a projecting strip 5 adapted to engage in a cut-out portion 6 in the under side of the rear edge of the top 7 forming the cover of the lower rectangular portion 2 (see Fig. 3 for illustration). The upper end of the frame
70 4 is provided with a lock and key by means of which it is normally secured.

The top 8 of the casing 3 is surmounted by a fancy head piece 9. The back 10 closes the rear of the casing 3 and the portion 2 and is
75 fixedly secured thereto. Vertical guides 11 and 12 are located within the casing 3 and as shown in Fig. 15 are in the form of a "dove-tail," the narrowed portion of each being toward the other. The guides are adapted for the recep-
80 tion of the cigars which are held therein as shown in Figs. 1 and 3 and the object of constructing the guides in this form is to prevent any friction in the movement of the cigars downwardly. The guides consist of upright
85 pieces 13 having inwardly projecting strips 14 which project slightly toward each other and are secured to the sides of said strip 13.

The guides 11 and 12 are secured in the casing 3 by means of blocks 15 secured to the
90 inner sides of the casing 3 as shown in Fig. 1.

By reference to Fig. 3 it will be seen that the space between the guides and the back 10 is open and leads into a chamber 16 located in the portion 2 and directly in the rear of
95 the operating parts.

The cigar when released from the guides drops into the chamber 16 and passes from the same through a space 17 under the operating mechanisms. A slanting bottom to the
100 chamber 16 and 17 is provided by a curvilinear plate 18 which is secured to the back 10

at a point some distance from the bottom 19 of the entire casing and is joined at the front of the casing to said bottom 19. A rectangular opening 20 in the front 21 is provided adjacent to the bottom 19 of the casing 2 and provided with a mechanically operated door 22 which when released is thrown outwardly by springs 23 which also serve to prevent the cigar from rolling out upon the floor. The door 22 is hinged to the casing and provided with a knob 24 by means of which it is manipulated.

Immediately above the door 22 and projecting inwardly into the casing 2 is a cash drawer 25 which is independent of any movement by the operating mechanism and is provided with a lock and key by means of which it is kept closed. The inward movement of the drawer is limited by a vertical partition 26, which depends from the top 7 of the casing 3 and in alignment with the front 4 of the casing 3 and which acts as the front wall of the chamber 16.

The guide for the drawer 25 comprises a horizontal partition 27 connecting with the front 21 and with the partition 26 and forming a rectangular chamber 28 in which the operating parts are located and said partition 27 defines the upper end of the chamber 17.

Intermediate of the sides of the casing 2 and upon the top 7 adjacent to the front is located an upwardly projecting rectangular guide 29, the opening in which corresponds with an opening 30 in the top 7 and through which the coin is adapted to pass.

Located upon the inner sides of the door 22 and adjacent to the upper edge of same are two projections 31 provided with circular openings in their upper sides adapted for the reception of the ends 32 of a horizontal lever 33, hereinafter described.

Guides 34 are located upon the upper side of the partition 27, to assist in the guidance of the drawer 25.

I will now proceed with a description of the operating parts. The coin when dropped through the opening 30 enters a casing 35 which consists of two plates 36 and which really forms what might be termed an irregularly outlined box with portions of the sides and ends open. The upper edges of the plates 36 are horizontal when the same are in their normal position, and not connected together as they are adapted for the passage and guidance of the coin. The forward upper corner of the box 35 is rounded and adjacent to same is a cut out portion 37 extending about midway into the box. Next below the cut out portion 37 is a projecting curvilinear portion 38 provided with circular apertures 39 through which a shaft 40 is placed and which forms the axis for the movement of the part. The box 35 upon the forward side terminates in a downwardly projecting portion 41, the edge 42 of which is in alignment with the inner face 43 of the cut out portion 37. Upon the upper rear edge of the box is a slanting por-

tion 44 terminating in a downwardly projecting vertical portion 45 said portions 44 and 45 being closed. From the downward point of the portion 45 extends an upwardly projecting substantially rectangular cut out portion 46 which is open and which has its forward side curvilinear and projecting downwardly, said curvilinear portion 47 connecting with a rectangular cut out portion 48 which connects with the lower edges 49, said portions 46, 47, 48 and 49, all being open to allow the passage of the coin. The entire front portions of the casing 35 are closed as shown in Fig. 8 and the edges 42 and 43 form the incline down which the coin is adapted to slide. The shaft 40 is held by the sides of the casings 2 in a horizontal position as shown in Fig. 4 and is fixed, the parts moving upon the same. Adjacent to the forward corner of the box 35, are provided circular apertures 50 through both of the plates 36, through which a shaft is located, upon the projecting ends of which and adjacent to the plates 36, are pivoted two rearwardly projecting bars 51, upon the ends of which are secured a horizontal strip 52 curvilinear in cross section, and to which is longitudinally hinged, a strip 53 by hinges 54, said strip 53 also being curvilinear in cross section, the two complete being substantially U-shaped in end elevation. The bars 51 project through a slot 55 in the upper end of the partition 26 and into the chamber 16. Secured upon the back of said partition 26 and under said slot 55 is a horizontal strip 56 upon which the curvilinear strips 52 and 53 normally rest, said strip 53 allowing the release of the cigar from the vertical guides 11 and 12 when said bars 51 are pushed far enough back to allow said hinged strip 53 to drop in a depending vertical position along the edge of the bracket 56. A little to one side of the center between the sides of the casing 2 and running from the front to the partition 26 is a vertical strip 57 adapted to support parts of the working mechanism.

An operating slide 58 detailed in Figs. 5 and 6 consists of a longitudinal bar having a curvilinear raised portion 59 upon one edge and to one side of the center of same, a slot 60 being located upon the other side of the center. On the forward end of the slide 58 is provided a removable screw threaded finger-piece 61 and upon the opposite end is provided an outwardly projecting ear 62, while upon one side of said slide, the same being the side upon which the ear 62 is located, projects a lug 63. Upon the opposite side of said slide is provided a projecting pin 64 through which one end of a coil spring 65 is secured, the other end of same being secured to the strip 57. A removable bolt 66 projects horizontally from the strip 57 and is adapted to engage in the slot 60 in the slide and control its movement. The strip 57 is provided with a horizontal depression 67 which is a little in the rear of the pin 66, and in which the projecting ear 62 and the lug 63 are adapted

to operate. A projection 68 along the lower edge of the strip 57 is provided immediately under said slot 67 and is adapted to engage the coin and hold it in a position to act as a cam when the slide 58 is pulled outwardly.

The construction as herein shown is adapted for operation by an ordinary United States coin of the denomination of ten cents; but in this connection I desire to state that the size of the openings in the box 35 and the position of the slot 67 and projection 68 could be changed to accommodate any size of coin.

The construction hereinbefore referred to as a box or casing was in order that it will be understood that the same embraced the coin, providing a means in itself for the passage of the coin without the assistance of any other parts, but as I am now about to detail the operation of the improvement, I will refer to the same as a lever, as it acts as such to actuate the bars 51, and attendant parts.

The horizontal arm 33 has an upwardly projecting portion 69 provided with a vertical slot 70, said projection 69 being located adjacent to the outer side of the lever 35 and through the slot 70 is located the slide 58. When said slide 58 is pulled outwardly as shown by the dotted lines in Fig. 3 the raised curvilinear portion upon its upper edge engages the upper end of the slot 70 and raises the projection 69 and consequently the horizontal arm 33 connected thereto, thus also lifting the ends of the downwardly depending arms 32 out of the openings in the blocks 31, allowing the springs 23 to throw the door 22 outwardly, exposing the cigar which has been released, said springs 23 also serving to stop the cigar at the front of the machine to prevent the same from being dropped upon the floor.

When the coin passes downwardly through the lever 35 the same engages the projection 68 and also the projection 62 upon the slide 58 and the lower forward corner 71 of said lever 35. The lug 63 upon the side of the slide 58 engages the face 42 of the lever 35 and when said slide 58 is pulled outwardly the coin acts as a fulcrum or cam and causes said lever 35 to assume the position as shown by dotted lines in Fig. 14, and the coin then drops through into the money drawer 25 between the corner 71 of the lever 35 and the projection 68 as is shown by the dotted lines in Fig. 14. This movement causes the lever 35 to move downwardly and its upper end rearwardly, thus bringing down the forward ends of the bars 51 and also projecting them backwardly so that the strips 52 and 53 are down and behind the bracket 56. This movement allows the cigar to be released and at the same time prevents the next cigar in the guide from following the first as it drops upon the bars 51 adjacent the point where the strip 52 is secured on, said strip 52 acting as a shoulder to give the cigar an impetus. The spring 35 causes the return of the slide 58 and consequently the engagement of the said lever 35 by the lugs 63 causes said

lever 35 to assume its normal position, drawing the bars 51 back into their normal position and the hinge strip 53 up onto the top of the bracket 56, and forming a receiver for the next cigar.

The arms 32 have projecting lugs 72 above the partition wall 27 and are connected with said wall by means of springs 73, the normal tendency of which is to keep said arms 32 down in the openings in the projections 31 upon the back of the door 22, and when said slide 58 returns to its normal position, the springs force said arms downwardly into the openings and thereby hold the door in a locked position until the next person places a coin in the slot.

In Fig. 14 will be seen the detailed construction of the lever 35, showing particularly its solid and open edges. A particular feature of this construction lies in the fact that it provides in itself a guide for the passage of the coin and is not dependent upon other parts for said guidance and passage.

The construction and location of the curvilinear strips 52 and 53 absolutely prevent the releasing of more than one cigar at a time, the sudden drop of the hinged strip 53 over the edge of the bracket 56, giving to the cigar an impetus, which causes it to appear at the opening 20 behind the springs 23.

In operation the coin acts as a cam or fulcrum, as by the movement of the slide 58, the same causes the lever 35 and attendant parts to assume the position as indicated in the various figures by dotted lines.

In order to place the cigars in the guide provided for their reception the front 4 is unlocked and removed and the cigars placed in same.

A strip 74 connects the two sides of the casing in the rear of the lower end of the frame 4 and prevents any backward movement of the same.

Having fully described my invention, what I claim is—

1. An improved cigar vending machine, having a feed chute, a support located below the latter, a reciprocating receiver comprising a hinged section normally supported by said support, and means for operating said receiver to release the hinged section thereof; substantially as and for the purpose set forth.

2. An improved cigar vending machine having a passage leading from the cigar supply guides, the floor of said passage of inclined form, to insure the passage of said cigar to an opening normally closed by a spring-controlled door, the opening of said door adapted to be consummated by the actuation of other parts, substantially as set forth.

3. An improved cigar vending machine having a spring controlled slide adapted in operation to engage a pivoted lever and a coin, and the outward movement of said slide adapted in conjunction with the coin to actuate the said pivoted lever, to allow of the opening of a door, and the operation of a gravity-strip

allowing the release of a single cigar, substantially as set forth.

4. An improved cigar vending machine having a pivoted lever adapted to provide a passage for the coin and to embrace said coin during the operation, horizontal bars pivoted to the upper forward end of said lever, and oscillatory in conjunction therewith, a depending curvilinear longitudinal shoulder strip secured to the free end of said horizontal bars, an upwardly-curved hinged gravitating strip connected to said shoulders, and a downward and rearward movement of said pivoted lever adapted to push said gravitating strip beyond a projection adapted to hold same, thus releasing a single cigar from the guide, substantially as set forth.

5. An improved cigar vending machine having a slide provided with an elongated slot, by means of which it is held in position, a projecting portion upon one end of said slide, a depending lug upon the same side of said projection a removable screw-threaded finger piece upon the outer end of said slide, a raised curvilinear portion upon the upper edge of said slide, said slide adapted to operate in conjunction with a pivoted lever and a coin, to operate said pivoted lever and other parts, said lever adapted to be located in a slot upon a horizontal line having depending end-pieces adapted to engage in a door, and the pulling out of said slide adapted to raise said projection by means of a projecting curvilinear portion upon the upper edge of said slide, to release said door, substantially as set forth.

6. An improved cigar vending machine having a lever pivotally mounted upon a horizontal shaft secured in the casings, said lever comprising two plates equi-distant apart at all points of their surfaces, portions of the sides and ends of said lever open, to admit of the passage of a coin, means provided for stopping said coin at a certain desired point, said coin adapted to be engaged by a projection upon a slide, by the means provided for stopping the downward movement of same, and by a corner of the lever, and the outward movement of said slide adapted in conjunction with the coin to operate said pivotally mounted lever, the same actuating other parts to release a cigar and open a door for the pas-

sage of same to the purchaser, substantially as set forth.

7. An improved cigar vending machine, having a direct cigar releasing mechanism comprising a hinged gravitating strip, curvilinear in cross section and hinged to a longitudinal curved shoulder strip, secured to the ends of two bars pivotally connected with a hollow coin embracing lever adapted to provide an interior passage for the conveying of the coin, means for stopping said coin at a desired point, a slide adapted to engage the coin upon one side by a projection and similarly engage one side of the lever, and the operation of said slide adapted to operate said coin embracing lever and the cigar releasing gravitating strip, substantially as set forth.

8. An improved cigar vending machine having a lever oscillatorily mounted upon a horizontal shaft, secured in the side casing walls, said lever 35 comprising two plates 36 parallel throughout their surface, the upper edges of said plates horizontal when the lever 35 is in a normal position, the front sides of said plate joined by the edge-strip, the front sides comprising a curvilinear corner, an inwardly projecting cut out portion 37, an outwardly projecting solid projection 38, curvilinear in form and provided with an opening 39, by means of which it is mounted upon said horizontal shaft, an inclined face 42 corresponding with the face 43 of the cut out portion 37, the rear sides of said plates inclined at 44 and from thence a downwardly projecting vertical portion 45, said portions also connected by edged strips, an upwardly projecting substantially rectangular cut out portion 46, depending into a curvilinear portion 47, a notched rectangular portion 48 and a portion 49 substantially horizontal, all of said portions 46, 47, 48 and 49 open as well as the upper horizontal portion, and providing a passage within and between said plates for the conveying of the coin, substantially as set forth.

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

ALEXANDER BERG.

Witnesses:

ED. E. LONGAN,
HERBERT S. ROBINSON.