

(No Model.)

4 Sheets—Sheet 1.

O. SCHIESS.
VENDING APPARATUS.

No. 381,428.

Patented Apr. 17, 1888.

Fig. 2.

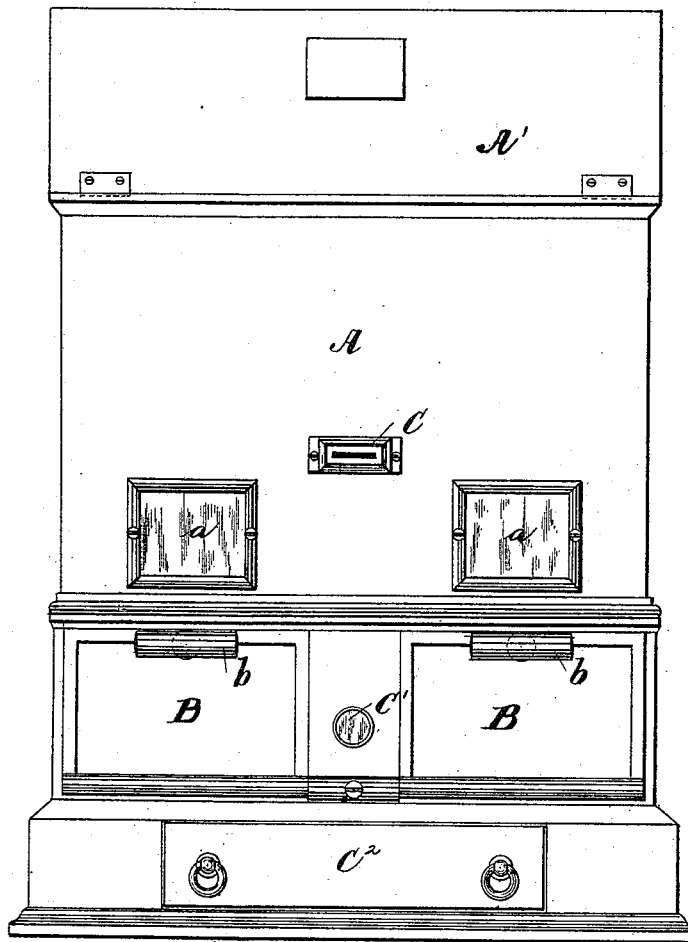
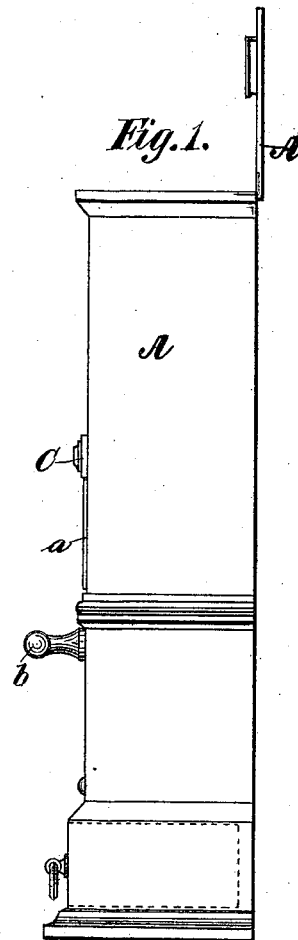


Fig. 1.



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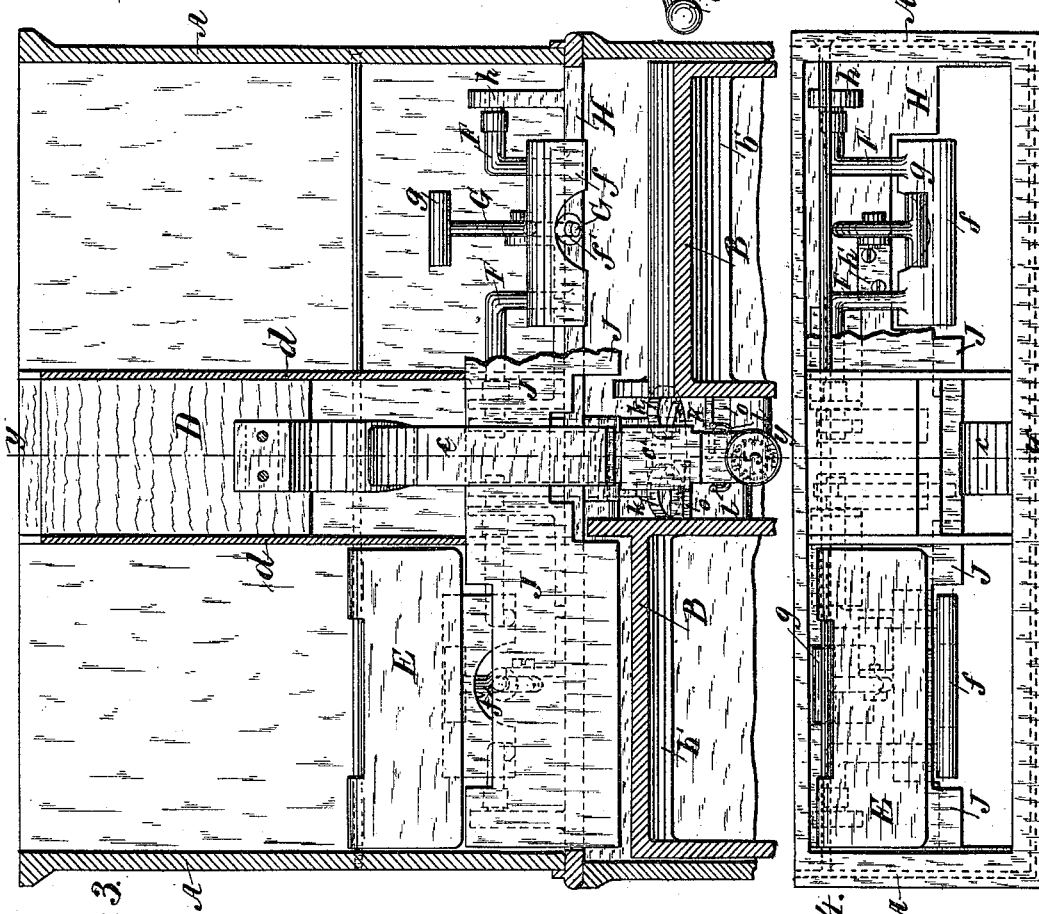
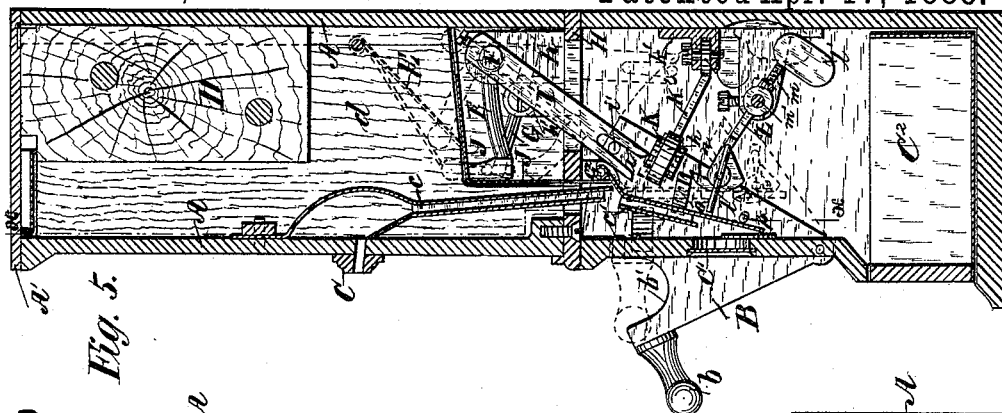
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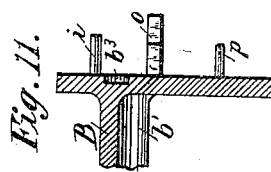
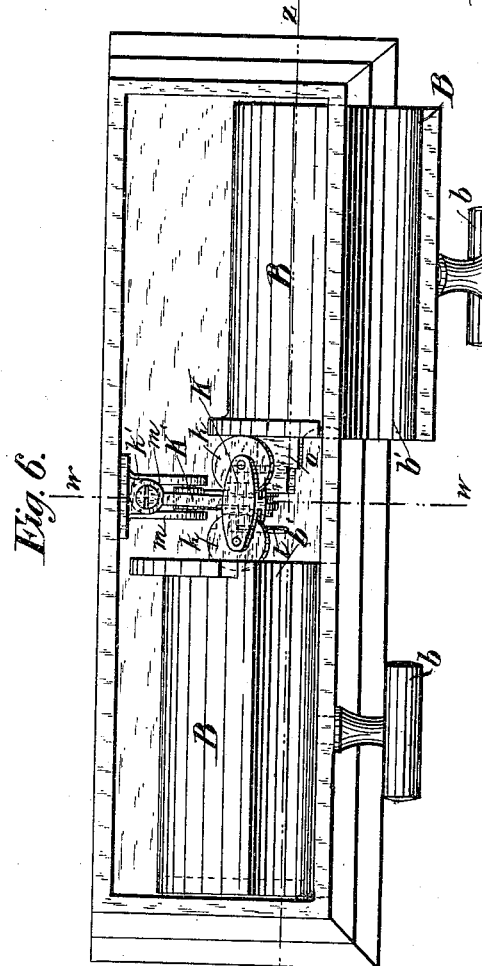
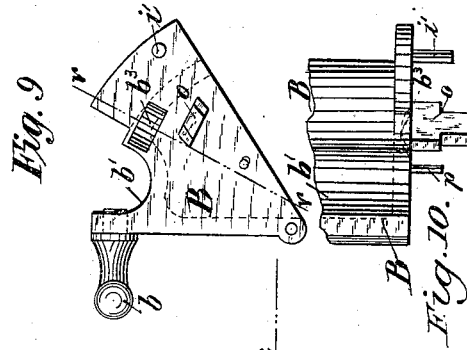
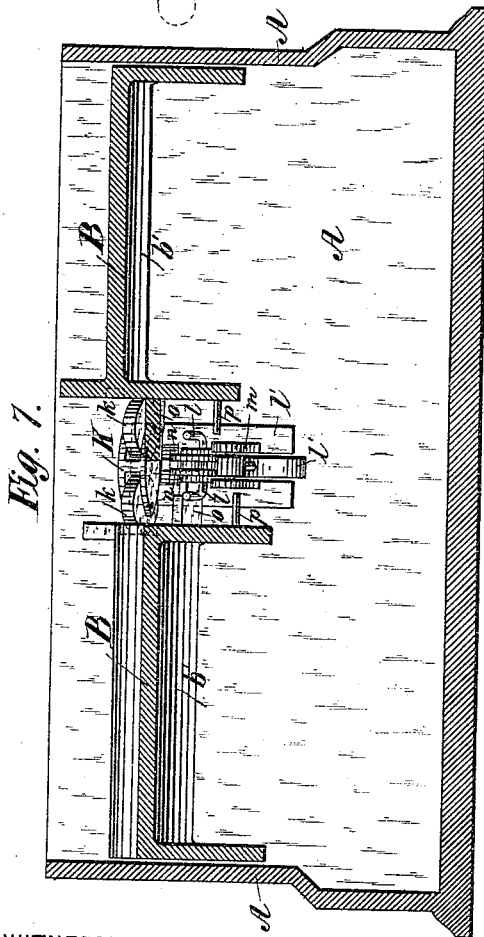
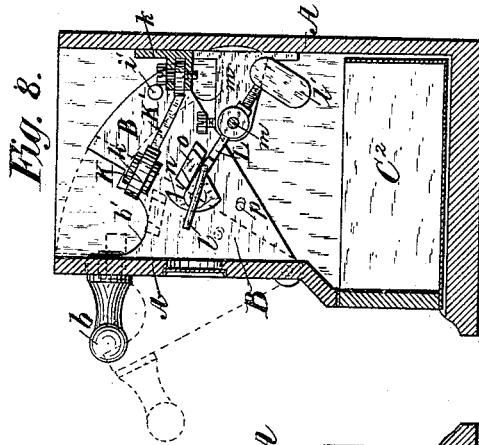
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4 Sheets—Sheet 3.

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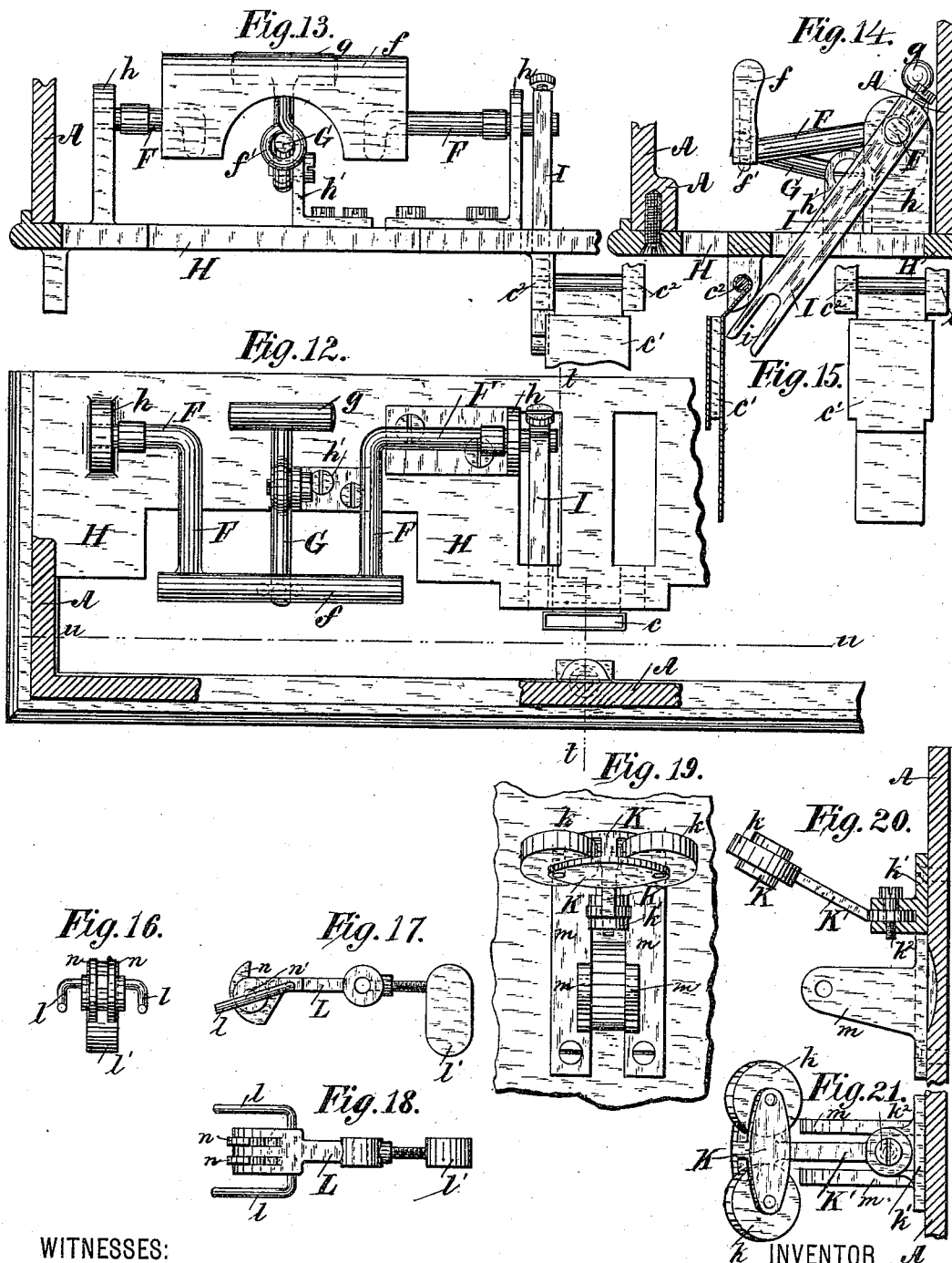
(No Model.)

4 Sheets—Sheet 4.

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VENDING APPARATUS.

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VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 381,428, dated April 17, 1888.

Application filed December 24, 1887. Serial No. 258,917. (No model.)

To all whom it may concern:

Be it known that I, OTTO SCHIESS, a citizen of Switzerland, and a resident of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Vending-Machines, of which the following is such a full, clear, concise, and exact description as will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The object of my invention is the construction of a vending-machine which can be operated to deliver the article preferred of the different varieties or kinds contained by it whenever the proper coin is deposited therein; and the invention consists in the devices and combinations of devices hereinafter more fully described, and pointed out in the claims.

In the accompanying drawings is shown a machine embodying the invention and adapted to the sale of two kinds of cigars of a single price, and the purchaser may here be supposed to be allowed the choice of a light or dark colored cigar.

Figure 1 is a side elevation, and Fig. 2 is a front view, of the exterior of such a machine, showing the arrangement of the cigar-holding case provided with windows through which the cigars may be seen, delivery-receptacles with handles for opening the same, a slot for receiving the coin, a small circular window back of which the coin is held in view after it has acted on the locking mechanism, and a drawer at the base, into which the coin is finally received. Fig. 3 is an elevation of the machine with the front plate of the outer casing removed, taken on the line *x x* of Fig. 5, and showing in section both of the delivery-receptacles, one of which is pulled forward or opened and the other closed. As here seen, the cigar-holding case is divided into two compartments for keeping the two varieties of cigars separate, and one of the inclined hinged plates *E* at the base of one of the compartments is removed and a portion of the covering-plate *J* is broken off, exposing to view the shifting mechanism upon one side. Fig. 4 is a plan view of the same, looking from above, but not showing the delivery-boxes or any of the locking mechanism. Fig. 5 is a cross-section

taken on the line *y y* of Figs. 3 and 4, giving an end view of one of the delivery-receptacles, and showing in side elevation the locking and shifting mechanism. The delivery-receptacle here shown is pulled forward or open, the dotted lines indicating the position of the various connections when the same is closed. Fig. 6 is a plan view of the locking devices and delivery-boxes, and Figs. 7 and 8 are sections on the lines *z z* and *w w* of Fig. 6, these views being given to show the locking devices entirely independent of the shifting mechanism. Fig. 9 is an end view of one of the delivery-receptacles detached. Fig. 10 is a plan view of a portion of such receptacle; and Fig. 11 is a section of the same, taken on the line *v v* of Fig. 9. Fig. 12 is an enlarged plan view of the shifting mechanism for one side, and Figs. 13 and 14 are front and side elevations taken on the lines *u u* and *t t* of Fig. 12. Fig. 15 is a view of the lower portion of chute detached. Figs. 16, 17, and 18 are different views of the weighted locking-lever detached. Figs. 19 and 20 are front and side elevations of the intermediary rollers, and Fig. 21 is a plan view thereof.

The cigar-holding case *A* is preferably provided with a hinged lid, *A'*, and divided into two compartments of about the length of a cigar by the block *D* and plates *d* and *d'*, (best shown in Fig. 3,) and at the bottom of each compartment is a plate, *E*, inclined, so that the tendency of the cigars resting thereon may be to roll forward into the adjacent delivery-receptacle, the said plates being preferably hinged, so that they may be lifted and jolted by the shaking devices beneath, thus loosening the cigars in case they should become blocked or entangled. The shaking mechanism, which is the same on both sides, is best shown in Figs. 12, 13, and 14, and consists of the stirrup-shaped shaft *F*, journaled in bearings in the brackets *h* and *h'*, secured to the supporting-plate *H* and provided with an upwardly-extending tongue or plate, *f*. At one end of the shaft *F* is secured a lever-arm, *I*, which arm extends down through an opening in the plate *H* and is provided at its lower extremity with a slot or fork, *i*, adapted to receive the pin *i'*, projecting from the end of one of the delivery-receptacles *B*. To a bracket, *h'*, there is also preferably secured

a lever, G, the front end of which extends into a loop, *f'*, depending from the tongue *f* of the shaft F, while its rear end is provided with an upward extension and cross-bar, *g*.

5 Covering the shaking apparatus is an angle-plate, J, but with openings admitting the passage of the parts *f* and *g*, according to the movements of the shaft F and lever G. As the front end of the lever G rests loosely in
10 loop *f'*, it has sufficient play not to impede the movement of the tongue *f*, but moves back and forth in the loop, as well as up and down, as the said part is raised and lowered, giving its upward extension and cross-bar *g* the di-
15 rectly-opposite movement to that of the tongue *f*; and as the lever arm I is moved back and forth by the opening and closing of the delivery-box, with which it is connected, the parts *f* and *g* are successively brought into contact
20 with the hinged plate E, jarring and shaking the cigars and preventing any block in their movements. Beneath the plate H, which supports the shaking devices, are the delivery-receptacles B and B and the automatic locking
25 and fastening mechanism. Each of the delivery-receptacles is provided with a handle, *b*, and hinged so as to swing out and in, and is formed with a groove or trough, *b'*, large enough to hold a single cigar.

30 Between the delivery-receptacles is a suitably-supported bar, K, which is here shown as mounted upon a tongue or shaft, K', pivoted in the bracket *k'* by a pin, *k*², to allow of slight lateral movement. The bar K is preferably provided with rollers *k k*, arranged to
35 project partially into the grooves *b³ b³* in the adjacent ends of the receptacles, the extreme peripheries of the rollers extending farther than the normal surfaces of the ends, so that
40 while one of the receptacles may be pulled forward, bringing the even surface of its end against the adjacent roller and pressing the opposite roller farther into its groove in the
45 opposite receptacle, the rollers will not allow both receptacles to be drawn out simultaneously. The rollers *k k* may, however, be dispensed with, if desired, and the bar K made to extend into the grooves *b³ b³*; but the rollers
50 reduce the friction and afford a much smoother operation of the parts.

The chute for directing the passage of the coin (clearly shown in Figs. 3 and 5) is preferably formed in two parts, the upper part, *c*, extending from the slot C down through an
55 opening in the plate H, being rigidly secured to the front wall of the case, while the lower portion, *c'*, which forms a continuation of the upper portion, *c*, is loosely hinged between the lugs *c² c²*, projecting from the lower side of the
60 plate H. When the delivery-receptacles are closed, the lower portion, *c'*, of the chute hangs between the prongs *ll* upon the balanced lever L in the position indicated by the dotted lines in Fig. 5, the sides of the chute
65 near the pins being removed or cut away to allow the coin to strike against the prongs on its passage downward. The weighted lever L

(shown in detail in Figs. 16, 17, and 18) is mounted in the bracket *m*, secured to the back of the case, and extends between the delivery-
70 receptacles and beneath the rollers *k k*. One end of the lever L is preferably threaded, so that the weight *l'* may be adjusted out or in and the lever adapted to be tilted by lighter or heavier coins. At the other end of the le-
75 ver L, between the prongs *ll*, are preferably formed grooves, within which are secured swinging segments or pieces *n*, mounted. When the lever is in normal position and the delivery-receptacles closed, the inner sides of
80 the segments *n* extend up to and opposite the lugs *o*, projecting from the ends of the receptacles, thus preventing the latter from being pulled forward and opened; but the segments
85 *n* are so hinged that while stopping the forward motion of the delivery-receptacles, yet each is adapted to turn independently of the other when the lugs *o* upon the adjacent re-
90 ceptacle are brought against its outer rounded side in closing the same, thus allowing either receptacle to be closed singly without tilting the lever so far down as to unlock the other.

The lever L may of course terminate in a fixed ratchet tooth or teeth with outer rounded edges, which, while allowing the lugs *o* tilting
95 the lever to be moved in, will prevent the reverse movement; but the swinging segments or teeth, as shown, are preferable, as avoiding any danger of unlocking one case while closing the other.

100 Upon the inner end of each of the delivery-receptacles is also a pin, *p*, (best shown in Figs. 9, 10, and 11,) which pin strikes against the lower hinged portion of the chute, pressing the coin off the prongs *ll* and against the
105 front of the box, as shown in Fig. 3.

A coin of suitable denomination being inserted in the slot C drops down through the upper portion of the chute, *c*, and lower portion, *c'*, until it comes in contact with the
110 prongs *ll*, and, tilting down the lever L, frees both delivery-receptacles. The rollers *k k* prevent, as before stated, both receptacles from being pulled forward simultaneously; but either may be opened, in which event as the
115 one opened is pulled forward the pin *p*, upon its end striking against the swinging portion of the chute, throws the same forward, pressing the coin off the prongs *ll* and against the
120 front of the box and allowing the lever L to swing up into its normal position, relocking the other case. Upon pushing back the open delivery-receptacle the pressure from the pin
125 *p* is removed, the lower portion, *c'*, of the chute allowed to swing back, and the coin dropped into the box C; also, the lug *o*, pressing against the rounded surface of one of the segments *n*, partially turns the same, which, when the lug has passed over it, rights itself, and the case is again locked. Moreover, in opening and
130 closing either receptacle the shaking mechanism above the same is operated, as hereinbefore described.

It is readily seen that the mechanism de-

scribed may be easily adjusted and the delivery-receptacles adapted for the sale of different articles, and when there is little danger of the articles becoming blocked or entangled
5 the shaking mechanism may be dispensed with.

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

1. In a vending-machine provided with a chute, two delivery-receptacles having projecting lugs upon their adjacent ends, in combination with a lever provided with a ratchet tooth or teeth disposed to engage said lugs and impede the outward movement of said receptacles, while allowing the reverse movement
15 to the same, said lever being balanced to be tipped by a coin deposited in said chute, and thereby to release said lugs and free either of said receptacles, substantially as described.

2. In a vending-machine provided with a chute, two delivery-receptacles having projecting lugs upon their adjacent ends, in combination with a lever balanced to be tipped by a coin deposited in said chute, said lever being provided with loosely-mounted segments or teeth disposed to impede the outward movement of said lugs, either segment being adapted to turn independently, allowing the lug upon the adjacent receptacle to be moved inward
25 and the same closed without tilting the lever so far down as to free the other receptacle, substantially as described.

3. In a vending-machine provided with a chute, two delivery-receptacles having projecting lugs upon their adjacent ends, in combination with a lever balanced to be tipped by a coin deposited in said chute, said lever being provided with a weight adjustable for lighter and heavier coins and with loosely-mounted segments or teeth disposed to impede the outward movement of said lugs, either segment being adapted to turn independently, allowing the lug upon the adjacent receptacle to be moved inward and the same closed without
35 tilting the lever so far down as to free the other receptacle, substantially as described.

4. In a vending-machine, two delivery-receptacles provided with grooves upon their adjacent ends, in combination with a bar disposed so as to extend partially into said grooves, a pivoted tongue or shaft supporting said bar, the said bar being adapted to be pressed out of the groove in one receptacle by a movement of such receptacle, and by the same movement to be driven farther into the groove of the other receptacle, locking the latter, whereby either receptacle is allowed to be drawn forth singly, but both receptacles prevented from being opened simultaneously,
45 substantially as described.

5. In a vending-machine, two delivery-receptacles having grooves upon their adjacent ends, in combination with a bar suitably supported between said receptacles and provided with rollers disposed so as to extend into said grooves, either roller being adapted to be pressed out of the groove of the receptacle
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into which it extends by a movement of such receptacle, and by the same movement the other roller to be driven farther into the groove of the other receptacle, locking the latter, whereby either receptacle is free to be drawn forth singly, but both receptacles prevented from being opened simultaneously, substantially as described.
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6. In a vending-machine provided with a chute, two delivery-receptacles having grooves upon their adjacent ends, in combination with a lever having connections with both of said receptacles, said connections being adapted to lock the same, the said lever being balanced to be tipped by a coin deposited in said chute, and thereby to release said receptacles, and a bar suitably supported between said receptacles and disposed to extend partially into said grooves, said bar being adapted to be pressed out of the groove in one receptacle by a movement of such receptacle, and by the same movement to be driven farther into the groove of the other receptacle, locking it, whereby upon the tilting of said lever either receptacle is free to be drawn forth singly, but both prevented from being opened simultaneously, substantially as described.
75

7. In a vending-machine provided with a chute, two delivery-receptacles having grooves upon their adjacent ends, in combination with a lever having connections with both of said receptacles, said connections being adapted to lock the same, the said lever being balanced to be tipped by a coin deposited in said chute, and thereby to release said receptacles, and a bar suitably supported between said receptacles and provided with rollers disposed to extend into said grooves, either roller being adapted to be pressed out of the groove of the receptacle in which it extends by a movement of such receptacle, and by the same movement the other roller to be driven farther into the groove of the other receptacle, locking it, whereby upon the tilting of said lever either receptacle is free to be drawn forth singly, but both prevented from being opened simultaneously, substantially as described.
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8. In a vending-machine provided with a chute, two delivery-receptacles having grooves and lugs upon their adjacent ends, in combination with a bar suitably supported between said receptacles and disposed to extend partially into said grooves, said bar being adapted to be pressed out of the groove in one receptacle by a movement of such receptacle, and by the same movement to be pressed farther into the groove in the other receptacle, locking the latter, and a lever provided with a ratchet tooth or teeth arranged so as to impede the outward movement of said lugs, while allowing the reverse movement to the same, said lever being balanced to be tipped by a coin deposited in said chute, and thereby to release said lugs, substantially as described.
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9. In a vending-machine provided with a chute, two delivery-receptacles having grooves and lugs upon their adjacent ends, in combi-
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nation with a bar suitably supported between said receptacles and provided with rollers disposed to extend partially into said grooves, either roller being adapted to be pressed out of the groove of the receptacle in which it extends by a movement of such receptacle, and by the same movement the other roller to be driven farther into the groove of the other receptacle, locking it, and a lever adapted to be tipped by a coin deposited in said chute, said lever being provided with loosely-mounted segments or teeth arranged to impede the outward movement of said lugs, either segment being adapted to turn independently, allowing the lug upon the adjacent receptacle to be moved inwardly and the same closed without tilting the lever so far down as to free the other receptacle, whereby upon the deposit of the proper coin in said chute either of said receptacles is freed, so that it may be drawn forth singly, but both receptacles prevented from being opened simultaneously, and upon the closing of either receptacle the same is moved back without unlocking the other receptacle, substantially as described.

10. In a vending-machine, a delivery-receptacle, in combination with a hinged plate arranged adjacent to said receptacle and adapted to support the articles to be sold, a shaft placed beneath said plate and provided with a tongue adapted to be brought in contact therewith, and a crank-arm secured to said shaft, said arm having also connection with said receptacle, whereby upon the moving of the latter said shaft is turned, said tongue is brought in contact with said plate, the same being thereby shaken or tipped, and the articles to be sold impelled forward into said receptacle, substantially as described.

11. In a vending-machine provided with a chute, two delivery-receptacles having projecting lugs upon their adjacent ends, in combination with a lever adapted to be tipped by a coin deposited in said chute, said lever being provided with loosely-mounted segments or teeth disposed to impede the outward movement of said lugs, either segment being adapted to turn independently, allowing the lug upon the adjacent receptacle to be moved inward and the same closed without tilting the lever so far down as to free the other receptacle, and separate shaking mechanisms placed adjacent to said receptacles and having connections therewith, each shaking mechanism being adapted to be operated by a movement of the adjacent receptacle, substantially as described.

12. In a vending-machine provided with a chute having a lower hinged or swinging portion, two delivery-receptacles, in combination with a lever provided with prongs and having connections with both of said receptacles, said connections being adapted to lock the same, the said prongs being disposed to extend about the swinging portion of said chute and support a coin deposited therein, the said lever being adapted to be tilted by such coin, and

thereby to unlock said receptacles, and connections between said receptacles and the swinging portion of said chute, whereby upon the opening of either receptacle the swinging portion of said chute is moved forward, shoving the coin from said prongs and releasing said lever, substantially as described.

13. In a vending-machine provided with a chute having a lower hinged or swinging portion, two delivery-receptacles having lugs upon their adjacent ends, in combination with a lever provided with prongs projecting about the lower portion of said chute and with segments or teeth disposed to impede the outward movement of said lugs, either segment being adapted to turn independently, allowing the lug upon the adjacent receptacle to be moved inward without tilting the lever so far down as to free the lug upon the other receptacle, the said lever being balanced to be tipped by a coin deposited in said chute, and thereby to free both of said lugs, the said prongs being adapted to support such coin, and connections between the hinged or swinging portion of said chute and said receptacles, whereby upon the opening of either receptacle the swinging portion of said chute is moved forward, shoving the coin from said prongs and releasing said lever, and upon the closing of such receptacle the same is moved back without unlocking the other receptacle, substantially as described.

14. In a vending-machine provided with a chute having a lower hinged or swinging portion, two delivery-receptacles, in combination with shaking mechanisms placed adjacent to said receptacles and adapted to impel forward into said receptacles the articles to be sold, a lever provided with prongs and having connections with both of said receptacles, said connections being adapted to lock the same, the said lever being adapted to be tilted by a coin deposited in said chute, and thereby to unlock said receptacles, the said prongs being disposed to extend about the hinged portion of said chute and support a coin deposited therein, and connections between said receptacles and said shaking mechanism and between said receptacles and the hinged portion of said chute, whereby upon the opening of either receptacle the shaking mechanism connected therewith is operated and the swinging portion of said chute is moved forward, shoving the coin from said prongs and releasing said lever, substantially as described.

15. In a vending-machine provided with a chute having a lower hinged or swinging portion, two delivery-receptacles having lugs and grooves upon their adjacent ends, in combination with a bar suitably supported between said receptacles and provided with rollers disposed to extend partially into said grooves, either roller being adapted to be pressed out of the groove of the receptacle in which it extends by a movement of such receptacle, and by the same movement the other roller to be driven farther into the groove of the other

receptacle, locking the latter, a lever provided with prongs projecting about the lower portion of said chute and with segments or teeth disposed to impede the outward movement of
5 said lugs, either segment being adapted to turn independently, allowing the lug upon the adjacent receptacle to be moved inward without tilting the lever so far down as to free the lug upon the other receptacle, the said lever being
10 balanced to be tipped by a coin deposited in said chute, and thereby to free both of said lugs, the said prongs being adapted to support such coin, and connections between the hinged or swinging portion of said chute and said recep-
15 tacles, whereby upon the deposit of the proper

coin in said chute either of said receptacles is freed, so that it may be drawn forth singly, but both receptacles prevented from being opened simultaneously, and upon the opening of either receptacle the swinging or hinged portion of
20 said chute is swung forward, shoving the coin from said prongs, and upon the closing of such receptacle the same is moved back without unlocking the other receptacle, substantially as described.

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