

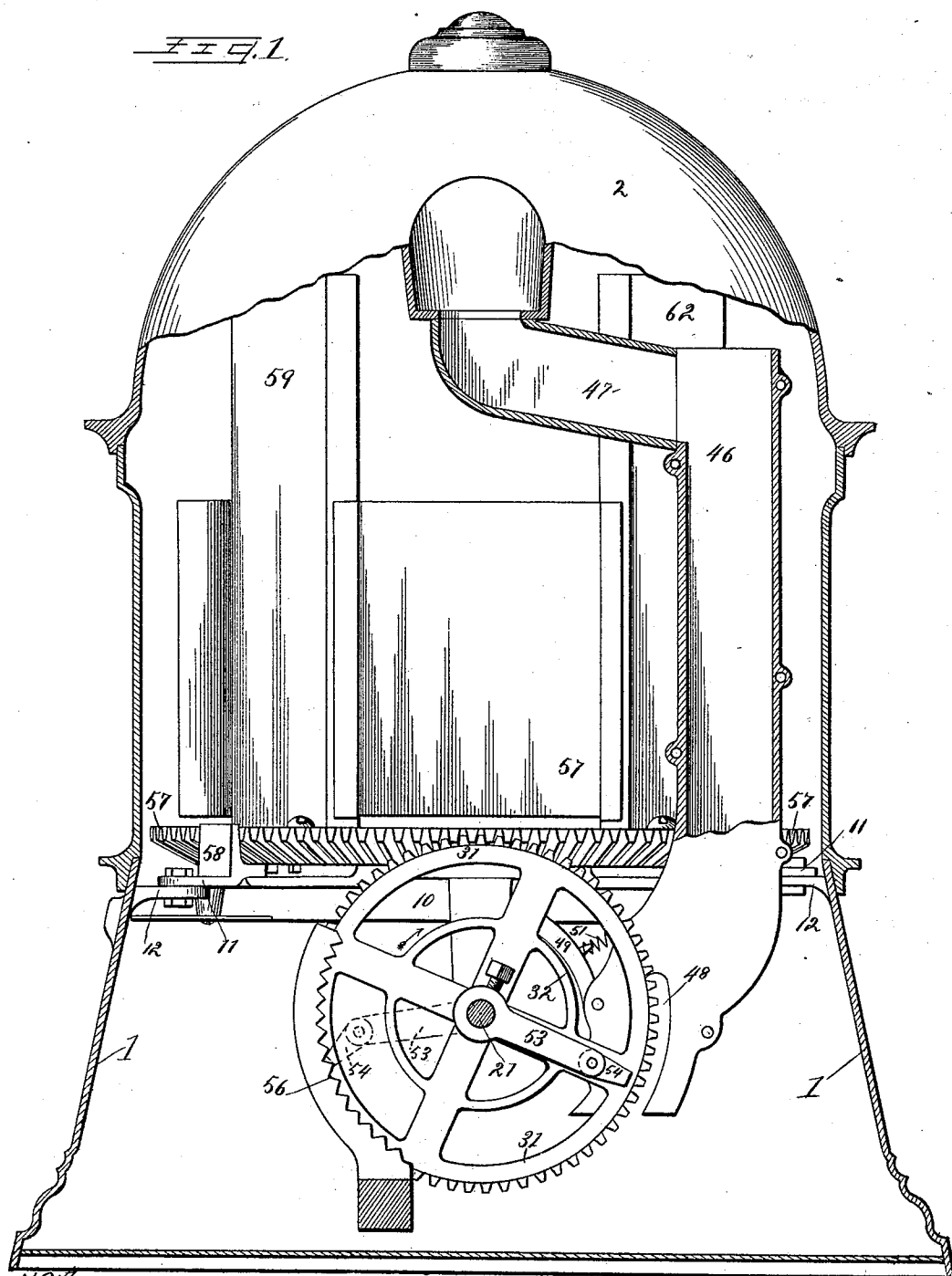
(No Model.)

6 Sheets—Sheet 1.

C. A. BRAUN.
AUTOMATIC VENDING MACHINE.

No. 495,241.

Patented Apr. 11, 1893.



Witnesses:

Wm. M. Pheasant
Wm. J. Fleming

Inventor:

Charles A. Braun
by Bond, Hunsicker &
his Atty.

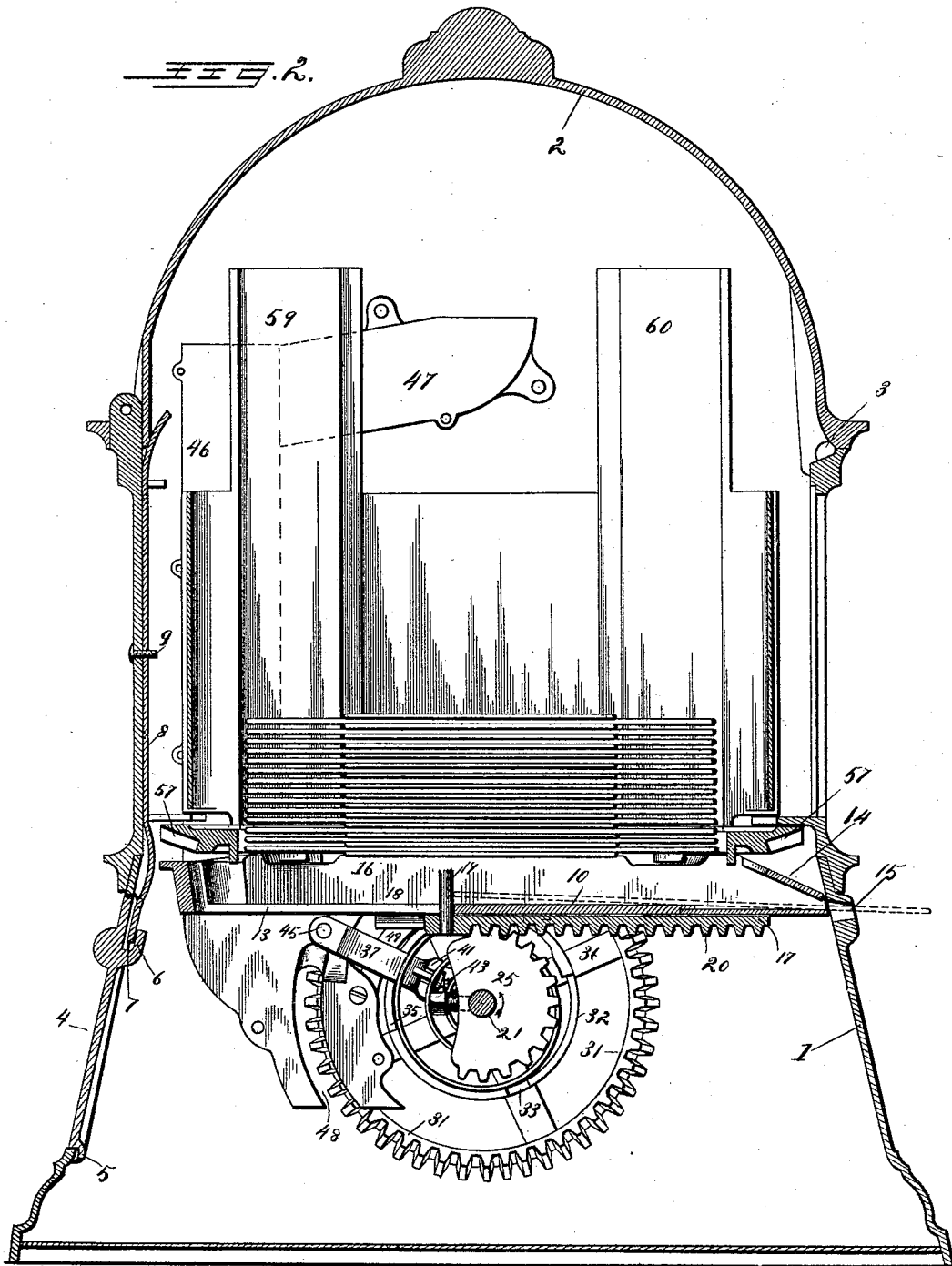
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6 Sheets—Sheet 2.

C. A. BRAUN.
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Witnesses:

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Inventor:

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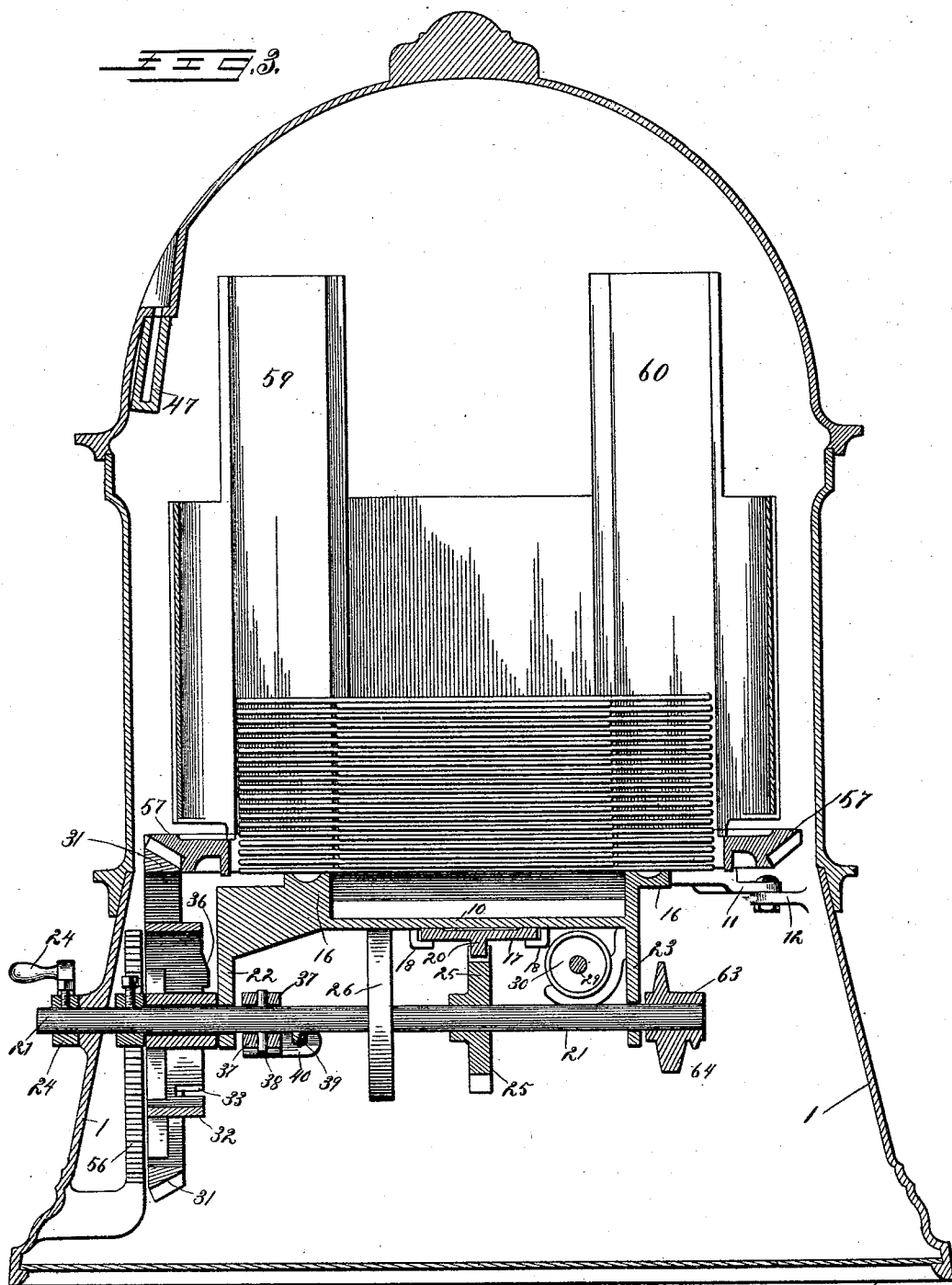
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6 Sheets—Sheet 3.

C. A. BRAUN.
AUTOMATIC VENDING MACHINE.

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Witnesses:

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Inventor:
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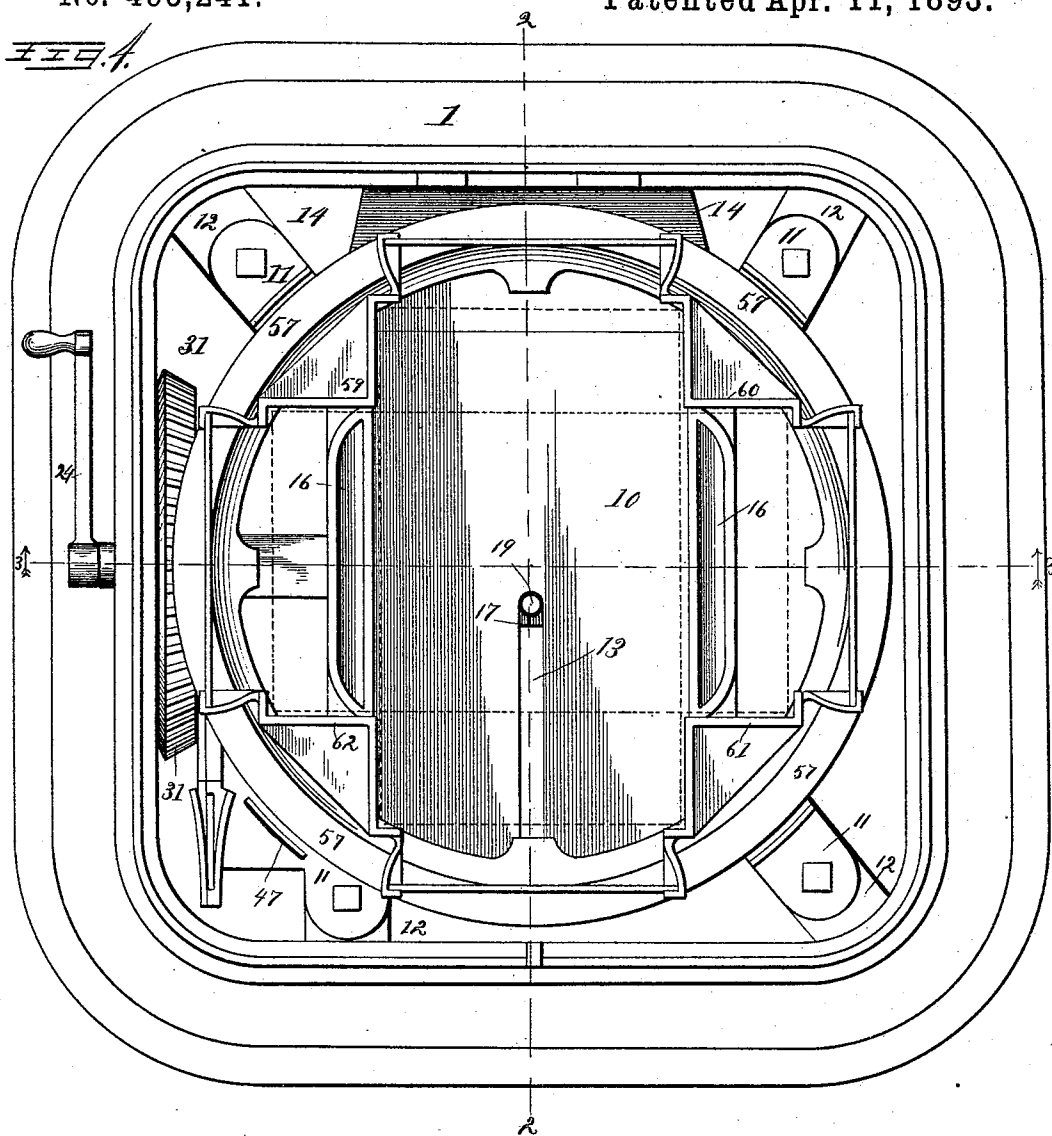
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Witnesses:
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J. L. Heming.

Inventor:
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(No Model.)

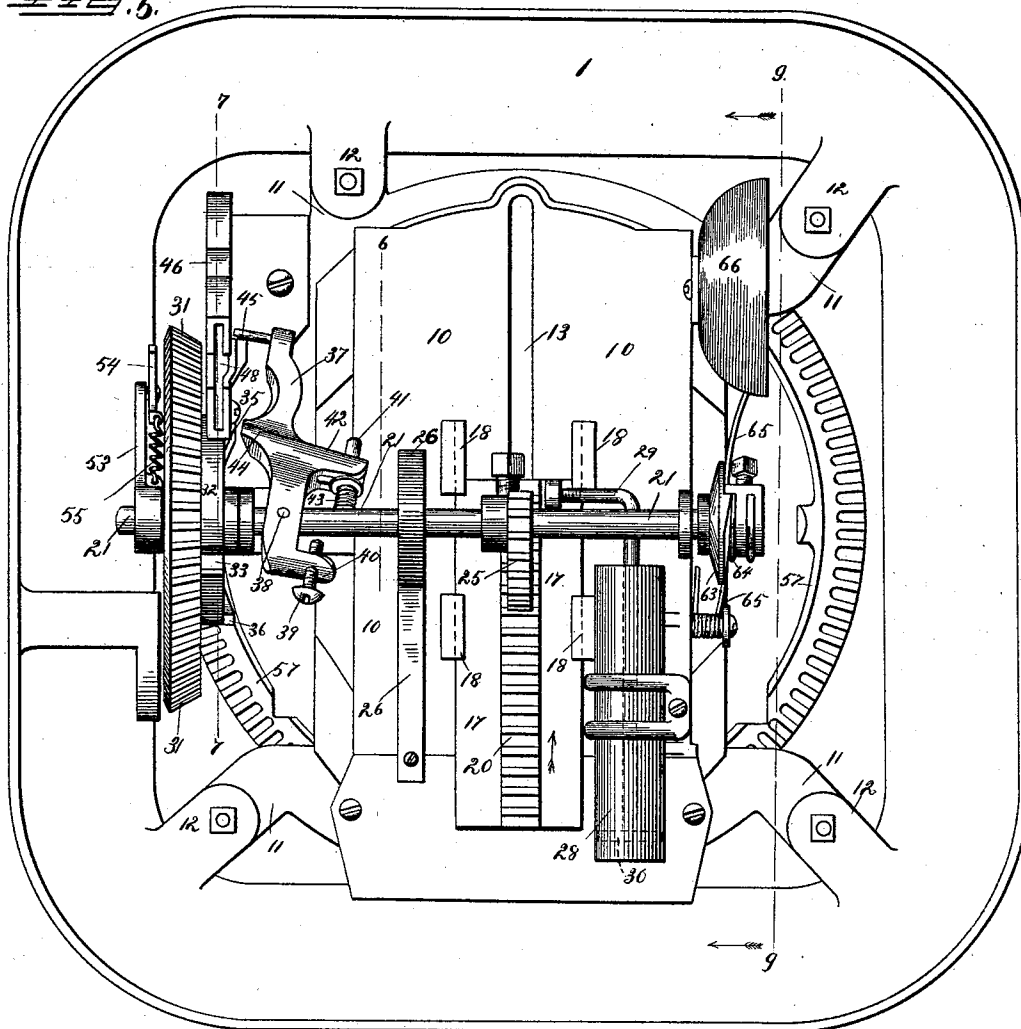
6 Sheets—Sheet 5.

C. A. BRAUN.
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~~Fig. 5.~~



Witnesses:
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Wm. L. Hanning

Inventor:
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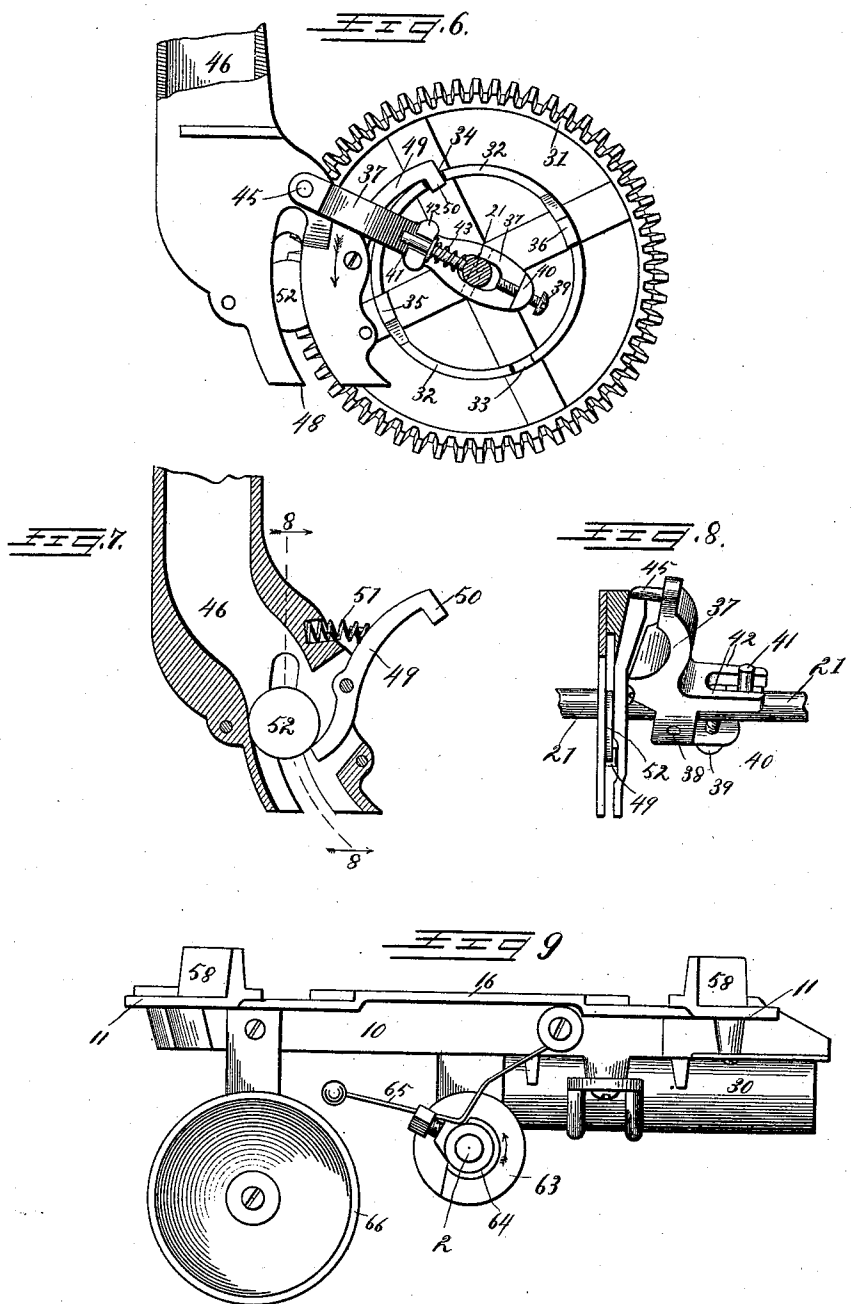
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6 Sheets—Sheet 6.

C. A. BRAUN.
AUTOMATIC VENDING MACHINE.

No. 495,241.

Patented Apr. 11, 1893.



Witnesses:
Wm. M. Rheem.
Wm. J. Fleming

Inventor:
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by Bond, Francis & Pickard
his Atty.

UNITED STATES PATENT OFFICE.

CHARLES A. BRAUN, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ENVELOPE AND STAMP MACHINE COMPANY, OF SAME PLACE.

AUTOMATIC VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 495,241, dated April 11, 1893.

Application filed September 19, 1892. Serial No. 446,338. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. BRAUN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Vending-Machines, of which the following is a specification, reference being had to the accompanying drawings, in which—

10 Figure 1 is a side elevation, one side being broken away. Fig. 2 is a central vertical section on line 2—2 of Fig. 4, looking to the left. Fig. 3 is a central vertical section on line 3—3 of Fig. 4, looking in the direction indicated
15 by the arrow. Fig. 4 is a top or plan view, the top of the casing being removed. Fig. 5 is an under side view, the bottom of the casing being removed. Fig. 6 is a detail, being a partial section on line 6—6 of Fig. 5. Fig.
20 7 is a detail, being a partial section on line 7—7 of Fig. 5. Fig. 8 is a section on line 8—8 of Fig. 7, looking in the direction indicated by the arrows; and Fig. 9 is a detail, being a partial section on line 9—9 of Fig. 5, looking
25 in the direction indicated by the arrows.

My invention relates to machines for automatically vending articles of various kinds, and is particularly designed to be used in vending envelopes and similar articles.

30 The object of my invention is to provide a new and improved machine which will be particularly adapted for such use, and to improve the construction of automatic vending machines in general. I accomplish this object
35 as hereinafter specified and as illustrated in the drawings.

That which I regard as new will be pointed out in the claims.

In the drawings,—1 indicates the outer casing of the machine, which is made of suitable shape to receive the different parts. The casing 1 is provided at the top with a cover 2, which is provided with a hinge 3 at one side and with suitable devices at the other side
45 for locking the cover shut.

4 indicates a door, which is fitted into an opening in the lower part of the casing 1. The door 4 consists of a metal plate provided at its lower edge with a flange 5 adapted to fit upon the inner edge of the opening in the casing, as best shown in Fig. 2. The upper

end of the plate 4 is adapted to fit closely against the upper portion of the opening formed in the casing.

6 indicates a flange formed on the inside of the plate 4, and turned upward to form a recess 7.

8 indicates a pivoted bar, which is mounted upon a pivot 9 carried by the casing 1, which bar is adapted to be moved laterally upon its pivot to throw its lower end into and out of the recess 7. The upper end of the bar 8 extends upward to the cover 2, as shown in Fig. 2; by which arrangement the bar 8 may be easily operated when the cover 2 is raised.
65 When the cover is closed, access cannot be had to the bar 8.

The door 4 is designed to permit of access to a money-drawer which is contained in the lower part of the casing 1 in suitable position to receive the coin after it has passed through the machine.

10 indicates a bed plate, which is supported in the casing 1 at a short distance from the bottom of the casing. I preferably support the bed plate 10 by means of lugs 11, which are adapted to be secured to lugs 12 which project from the walls of the casing, as shown in Fig. 4. Any other suitable means, however, may be used to secure the bed plate in position. The bed plate 10 is substantially rectangular in shape, and is provided centrally with a slot 13, which extends from about the center of the plate longitudinally along the central line of the plate, and terminates near the end of said plate, as best shown in Fig. 2. At the opposite end of the plate 10 from that at which the slot 13 terminates, is provided a cross-bar 14, which extends across the plate 10 in an inclined position and at a short distance above the body of the plate, as best shown in Fig. 2. The cross-bar 14 serves to direct the envelopes as they pass from the plate 10, as will be hereinafter more fully set forth. Opposite the cross-bar 14 a slot 15 is provided in the side of the casing, through which the envelopes are adapted to pass.

16 indicates shoulders formed on the sides of the plate 10, parallel to the slot 13, as best shown in Fig. 3. The shoulders 16 are of equal height, and are slightly farther apart than the width of the envelope which the ma-

chine is designed to contain. The length of the plate 10 is also somewhat greater than that of the envelope to be sold, as indicated in Fig. 2.

5 17 indicates a plate, which is mounted upon the under side of the plate 10, and is adapted to move longitudinally of said plate. The plate 17 is held in position by guides 18, as best shown in Fig. 5.

10 19 indicates a pin carried by the plate 17, which pin projects upward through the slot 13 in the plate 10, and terminates a short distance above said plate.

20 indicates a rack, which is formed on the under side of the plate 17, and extends longitudinally thereof. I prefer to form the rack 20 and plate 17 integral with each other, but they may be separate if desired.

21 indicates a shaft, which is mounted in suitable bearings formed in hangers 22 and 23. The hangers 22 and 23 are shown as depending from the plate 10, but any other suitable construction may be used for supporting the shaft 21. The shaft 21 extends transversely of the machine, as shown in Figs. 3 and 4, and extends to the outside of the machine, as best shown in Fig. 3.

24 indicates a handle or crank, which is mounted upon the outer end of the shaft 21, as best shown in Figs. 3 and 4.

25 indicates a gear, preferably a mutilated gear, which is mounted upon the shaft 21 immediately under the rack 20, with which its teeth intermesh. The arrangement is such that by rotating the shaft 21 in the direction indicated by the arrow in Fig. 2, the gear 25 will cause the rack 20 and plate 17 to move in the direction indicated by the arrow in Fig. 2, thereby moving the pin 19 in the slot 13 away from the center of the plate 10. A reverse rotation of the shaft 21 will cause the pin to move in the opposite direction.

26 indicates a spring, preferably a coiled spring, which is adapted to cause the shaft 21 to rotate in the direction opposite to that indicated by the arrow in Fig. 2, thereby acting to hold the parts in the position shown in Fig. 2. One end of the spring 26 is secured to the plate 10, while the other end is secured to the shaft in such manner that by the rotation of the shaft in the direction indicated by the arrow in Fig. 2, the spring will be coiled up.

28 indicates a cylinder, which is secured to the under side of the plate 10, in a position parallel to the slot 13. The end of the cylinder 28 which lies nearer the center of the plate 10, is open, as shown in Fig. 3.

29 indicates a piston rod, which carries a piston head 30 adapted to move in the cylinder 28, as shown in Fig. 5. The outer end of the rod 29 is attached to the plate 17, as shown in Fig. 5. By this construction, when the plate 17 is moved in the direction indicated by the arrow in Fig. 5, the piston head 30 will move toward the open end of the cylinder 28. When the plate 17 returns from its former

position under the action of the spring 26, as above described, the piston 30 will compress the air in the cylinder and serve as a check to prevent the too rapid return of the plate 17.

31 indicates a bevel gear, which is loosely mounted upon the shaft 21 at one side of the plate 10, as shown in Figs. 3 and 5. The object of the gear 31 will be more fully herein- after set forth.

32 indicates a wheel, which is preferably mounted upon the gear 31 and is concentric therewith. Instead of mounting the wheel 32 upon the gear 31, it may be mounted upon the shaft 21, if desired, and connected to the gear 31. The wheel 32 is provided at diametrically opposite points on its periphery, with slots or depressions 33 and 34, as shown in Fig. 6.

35 and 36 indicate lugs, which project from the side of the periphery of the wheel 32, at points ninety degrees from the depressions 33 and 34, as also shown in Fig. 6. The lugs 35 and 36 project abruptly from the wheel 32 on one side, and on the other side they slant gradually to the surface of the wheel.

37 indicates a dog, which is pivotally mounted upon the shaft 21 at a point near the wheel 32, as best shown in Fig. 5. The dog 37 is mounted upon a pin 38, which passes through the dog and the shaft 21; the dog being pivotally mounted in such manner that it may be rocked in a plane parallel to the axis of the shaft 21.

39 indicates a screw, or adjustable pin, which passes through a lug 40 carried by the dog 37, and is adapted to engage the shaft 21. By adjusting the position of the screw 39, the distance which the dog 37 may be rocked may be regulated as desired.

41 indicates a pin, which is carried by the shaft 21 on the side opposite to that on which is placed the screw 39, and projects upward therefrom through a recess in a lug 42 projecting from the dog 37, which pin is also adapted to engage the shaft 21.

43 indicates a spring, which is mounted upon the pin 41 between the lug 42 and the shaft 21. The tension of the spring 43 tends to move the dog 37 toward the wheel 32.

44 indicates a shoulder which is formed on the side of the dog 37 at right angles to the wheel 32. The shoulder 44 is adapted to engage the lugs 35 and 36 on the wheel 32 when the dog 37 is moved toward the wheel 32, as will be hereinafter more fully set forth.

45 indicates a tooth, which is carried by the dog 37 and projects at right angles therefrom toward the wheel 32; the object of which tooth will be more fully hereinafter set forth.

46 indicates a coin chute, the upper end of which coincides with a second chute 47 formed in the cover 2 of the casing. A slot is formed in the cover to permit of access to the chute 47. The lower end of the chute 46 terminates near the periphery of the wheel 31, as shown in Fig. 1, and is provided with a curved slot 48. The slot 48 is formed on the arc of a cir-

cle of which the radius is equal to the distance of the tooth 45 of the dog 37 from the center of the shaft 21, and the arc of the circle upon which the slot 48 is struck is concentric with the wheels 31 and 32. The plate which forms the inner wall of the chute 46 is inclined at the upper end of the slot 48, as shown in Figs. 6 and 8, the object of which will be hereinafter set forth.

49 indicates a dog, which is pivotally mounted in the lower end of the chute 46, as shown in Fig. 7. The inner end of the dog 49 projects into the chute a short distance, and its outer end projects over the periphery of the wheel 32.

50 indicates a tooth formed on the outer end of the dog 49, which tooth is adapted to enter the recesses or slots 33 and 34.

51 indicates a spring, which is located between the outer end of the dog 49 and the adjacent portion of the plates which form the chute 46; the tension of which spring acts to hold the tooth 50 of the dog 49 in contact with the periphery of the wheel 32. When the tooth 50 is in any one of the recesses or slots of the wheel 32, the wheels 31 and 32 will be locked in position. The tension of the spring 51 is sufficient to prevent the weight of a coin upon the inner end of the dog 49 from throwing the tooth 50 out of the slots 33—34. When a coin, as 52, is dropped in the chute 47, it will pass downward to the lower end of the chute 46, where it will rest upon the inner end of the dog 49, as shown in Fig. 7. The various parts will at this time be in the position shown in Figs. 5 and 6. By slightly rotating the shaft 21 in the direction indicated by the arrow in Fig. 6, the dog 37 will be moved in a similar direction, and the tension of the spring 43 will move the outer end of the dog 37 toward the wheels 31 and 32, the incline at the upper end of the slot 48 permitting of such inward motion. The tooth 45 will then pass into the slot 48 above the coin 52, as the dog 49 is so located as to arrest the coin at a point slightly below the upper end of the slot 48. By continuing the rotation of the shaft 21, the tooth 45 will engage the upper edge of the coin 52, and will press it downward, causing a downward pressure to be brought upon the inner end of the dog 49, and thereby overcoming the tension of the spring 51 and withdrawing the tooth 50 from the slot 34. This will leave the wheel 32, and consequently the wheel 31, free to rotate. By rotating the shaft 21 still farther, the shoulder 44 will come in contact with the lug 35 on the wheel 32, and will rotate the wheels 31 and 32. The rotation of the shaft may then be continued until the slot 33 arrives opposite the tooth 50, when said tooth will enter the slot and prevent further rotation of the wheel, and consequently of the shaft 21. As the slots 33 and 34 are placed diametrically opposite each other, only half a complete rotation of the shaft may be given at any one time. When the dog 49 is tilted, as above described, the coin will pass

down through the lower end of the chute and into the receiver. The tension of the spring 26 will return the parts to the position shown in Figs. 5 and 6, as soon as the half rotation is completed, as above described. At the time the above operation takes place, the rotation of the shaft 21 will have caused the gear 25 to move the rack 20, as hereinbefore described, and the pin 19 will be moved in the slot 13 away from the center of the plate 10.

In order to prevent the return of the shaft 21 and the various parts to their normal position before a full half rotation of the shaft is completed, a lever 53 is provided, which is mounted upon the shaft 21 immediately outside of the gear wheel 31, as best shown in Fig. 5.

54 indicates a pawl which is pivotally mounted upon the outer end of the lever 53, and is normally held in a position parallel thereto by a spring 55, which is connected at one end to the rear end of the pawl 54, and at the other end to the base of the lever 53. The outer end of the pawl 54 is squared, as shown in dotted lines in Fig. 1, and is adapted to engage the teeth of a curved rack 56, which extends through an arc of a little more than ninety degrees, and is suitably secured near the periphery of the wheel 32, and at a point distant from the shaft 21 slightly less than the combined length of the lever 53 and pawl 54. The arrangement is such that as the shaft 21 is rotated in the direction indicated by the arrow in Fig. 1, as the pawl comes in contact with the teeth of the rack 56, it will be turned backward, as shown by dotted lines in Fig. 1, and will thereby serve as a lock to prevent the reverse movement of the shaft 21. As soon as the shaft 21 has been rotated sufficiently to carry the pawl 54 beyond the upper end of the rack 56, the motion of the shaft may be reversed, as the pawl will be turned in the opposite direction.

57 indicates a beveled cogged ring, the diameter of which is slightly less than that of the interior of the casing 1. The ring 57 is adapted to rest upon the four corners of the plate 10, and it is held in place by means of lugs 58, which project upward, as shown in Figs. 1 and 9. The gear 31 is so placed as to intermesh with the cogs of the ring 57, as best shown in Fig. 3. By this construction, when the gear 31 is rotated, the ring 57 will be rotated in a horizontal plane. The relation of the gear 31 and ring 57 to each other is such that by giving the gear 31 half a revolution, the ring 57 will be given a quarter of a revolution; the object of which arrangement will be more fully hereinafter set forth.

59—60—61—62 indicate uprights, rectangular in shape, which rise from the ring 57 at points ninety degrees from each other. These uprights are preferably secured upon the ring 57 by screws, but they may be secured thereto in any other suitable manner. The angles of the uprights are placed nearest the center of the plate 10, and one edge of each

of the uprights is placed parallel to the shoulders 16, as shown in Fig. 4. The uprights are designed to hold the envelopes and to feed them to the apparatus which carries them out of the machine. In placing the envelopes in position they are arranged criss-cross; that is, being placed alternately at right angles to each other in two piles, as shown in Figs. 2 and 3 and as indicated by dotted lines in Fig. 4. When the lowermost envelope lies parallel with the shoulders 16, it will rest upon the bottom of the plate 10, and one end will be opposite the slot 15. The pin 19 will at this time be at the outer end of the slot 13. The envelope next to the bottom will be at right angles to the lowermost one, and will rest upon the shoulders 16, as indicated by dotted lines in Fig. 4 and shown in Fig. 2.

To deliver an envelope, a coin of suitable size is dropped into the chutes 47 and 46, and will finally come to rest upon the inner end of the dog 49, as shown in Fig. 7. By rotating the shaft 21 in the direction indicated by the arrow in Fig. 1, by means of the crank 24, the dog 37 will move in the direction indicated by the arrow in Fig. 6, and the tooth 45 will enter the slot 48 at a point above the coin, as indicated in Fig. 6. By continuing the rotation of the shaft 21, the tooth 45 will press the coin downward out of the slot, thereby raising the outer end of the dog 49 and releasing the wheel 32. The shoulder 44 will then engage a lug 35 and will give the wheels 31 and 32 half a complete rotation. As soon as the slot 33 arrives opposite the tooth 50 of the dog 49, said tooth will enter the slot and prevent further rotation of the gear 31 and wheel 32. By rotating the gear 31 as above described, the ring 57 will be given a quarter of a revolution, thereby moving the uprights an equal distance and moving the next envelope parallel to the shoulders 16 and permitting it to rest upon the plate 10. When the shaft 21 is rotated, as above described, the pin 19 will be moved away from the center in the slot 13, as has been hereinbefore described, until it reaches the outer edge of the plate 10 and passes beyond the edge of the lowermost envelope. The envelope will then be dropped between the pin 19 and the slot 15. When the shaft 21 returns to its former position, by the action of the spring 26, the pin 19 will bear against the envelope and will move it along the plate 10, as indicated by the arrow in Fig. 2, thereby moving the end of it a short distance through the slot 15, as indicated by dotted lines in Fig. 2. The envelope may then be easily grasped by the purchaser and removed.

63 indicates a hub, which is mounted upon the inner end of the shaft 21, as shown in Fig. 5. The hub 63 is provided with an eccentric flange 64 on its face, the outer portion of which gradually narrows until it becomes even with the face of the hub, as shown in Fig. 5.

65 indicates a spring bell striker, or hammer, which is adapted to engage the flange 64

when the shaft 21 rotates. The arrangement is such that as the shaft 21 rotates, the striker will move upon the flange until it reaches the narrow portion of the flange, when it will be thrown off, and will return suddenly to its former level under the spring of the striker.

66 indicates a bell, which is mounted in suitable position to be struck by the striker 65 when it slips off the flange 64. By this arrangement, at each semi-rotation of the shaft 21 in the direction indicated by the arrow in Fig. 9, the bell will be struck.

I have shown a single slot 13 in the plate 10 and a single pin 19, but it is evident that any desired number of slots and pins may be provided.

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

1. The combination with a receptacle adapted to contain articles to be delivered therefrom, arranged in contact with each other, each article being placed at an angle to the adjacent articles, of means for delivering said articles adapted to deliver them only when they lie at a certain angle, and means for manipulating said articles to bring them singly into position to be delivered, substantially as described.

2. The combination with a receptacle adapted to contain articles to be delivered therefrom, said articles being arranged in a vertical pile rotatable on its vertical axis and each article being placed at an angle to the adjacent articles, and means for rotating the pile on its vertical axis of delivering devices adapted to deliver said articles only when they are in a certain position with reference thereto, and means for bringing said articles and delivering devices into position for the delivery of said articles, substantially as described.

3. The combination with a receptacle adapted to contain articles to be delivered therefrom, arranged in a vertical pile each article being placed at an angle to the adjacent articles, of means for delivering said articles adapted to deliver them only when they lie at a certain angle, and means for turning said articles to bring them singly into position to be delivered, substantially as described.

4. The combination with a receptacle adapted to contain articles to be delivered therefrom, said articles being arranged in a vertical pile, each article being placed at an angle to the adjacent articles, of a delivery opening, mechanism operating to deliver the lowermost article only when it assumes a certain position with reference to said opening, and means for turning said lowermost article to bring it into position to be delivered, substantially as described.

5. The combination with a receptacle adapted to contain articles to be delivered therefrom, of a supporting device adapted to rotate about a vertical axis and to hold said articles arranged in a pile, each article lying at an angle to the adjacent articles, and means

for delivering said articles adapted to deliver the lowermost article only when it assumes a certain position, of means for rotating said supporting device to bring the lowermost article into position to be delivered, substantially as described.

6. The combination with a receptacle adapted to contain articles to be delivered therefrom, arranged in contact with each other, each article being placed at an angle to the adjacent articles, of means for delivering said articles adapted to deliver them only when they lie at a certain angle, means for manipulating said articles to bring them singly into position to be delivered, and a coin operating lock controlling said delivery devices, substantially as described.

7. The combination with a receptacle adapted to contain articles to be delivered therefrom, arranged in a vertical pile, of means for rotating said pile about its vertical axis, and means for delivering said articles singly when they assume a certain point in their rotation, substantially as described.

8. The combination with a receptacle adapted to contain articles to be delivered therefrom arranged in a vertical pile, of means for rotating said pile about its vertical axis, devices operated from the exterior of said receptacle for delivering the lowermost of said articles when it assumes a certain position in its rotation, and a coin operated lock for said delivery devices, substantially as described.

9. The combination with an envelope receptacle, and a rotary support for supporting the envelopes when arranged in a vertical pile, successively at an angle to each other, said receptacle having a substantially horizontal delivery slot for the delivery of said envelopes, of means for rotating said support to bring the envelopes into position for delivery through said slot, and means for delivering envelopes through said slot when said support assumes a certain point in its rotation, substantially as described.

10. In an envelope vending machine, the combination with an exterior casing, having a horizontal slot through which the envelopes may pass, and a supporting plate substantially upon a line with said slot, of a rotary envelope carrier adapted to centrally support the envelopes in a vertical pile arranged successively at an angle to each other, means for rotating said carrier to deliver envelopes singly upon said plate in position to pass through said slot, delivering mechanism for carrying the envelopes into said slot, and a coin-operated lock for said delivering mechanism, substantially as described.

11. In an envelope vending machine, the combination with an exterior casing having a horizontal delivery slot, and a supporting plate substantially upon a line with said slot, of a rotary envelope support, devices carried thereby arranged to receive successive envelopes

at right angles to each other, devices for supporting the envelopes above the surface of said plate, and adapted to permit the lowermost envelope to drop upon said plate when it assumes a certain position, mechanism for rotating said envelope carrier, and means for delivering said envelopes through said slot, substantially as described.

12. In an envelope vending machine, the combination with an exterior casing, having a slot through which envelopes may pass, and a supporting plate substantially upon a line with said slot, of a rotary envelope receptacle, four equidistant uprights carried thereby, whereby successive envelopes may be arranged at right angles to each other, devices at each side of the supporting plate for supporting one of the piles of envelopes above the surface of the plate, mechanism for rotating said envelope carrier, delivering mechanism, and a coin-operated lock therefor, substantially as described.

13. In an automatic vending machine, the combination with an exterior casing, having a slot for the delivery of the article to be sold, and a plate 10 mounted in said casing substantially upon a level with said slot, said plate having a longitudinal slot 13, of a rack plate 17 carried by said plate 10 and adapted to move longitudinally thereof, a pin 19 carried by said plate 17, mechanism for reciprocating said plate 17, mechanism for delivering the article to be sold upon said plate 10, and a coin-operated lock for said reciprocating mechanism, substantially as described.

14. The combination with an exterior casing, having a slot 15, a plate 10 mounted therein, said plate having a slot 13, a rack plate 17 adapted to be moved longitudinally of said plate 10, a pin 19 carried by said plate 17 and projecting through the slot 13, a shaft 21 located under and at right angles to the rack plate 17, and a gear 25 mounted upon said shaft and intermeshing with the teeth of said rack plate, of a spring mounted upon said shaft, the tension of said spring being such as to rotate the shaft 21 in such direction as to move the pin 19 toward the slot 15, mechanism for delivering the article to be sold to the plate 10, and a coin-operated lock for preventing the rotation of said shaft, substantially as and for the purpose specified.

15. In an automatic vending machine, the combination with an exterior casing, having a slot 15, a supporting plate 10, having a slot 13, and a reciprocating rack plate 17 carried thereby, said plate 17 having a pin projecting above the level of said plate 10 through the slot 13, of a shaft 21, gear 25 carried thereby and adapted to intermesh with the teeth of said rack plate, a spring for rotating said shaft in such direction as to move the rack plate toward the slot 15, a cylinder 28, a piston head in said cylinder, and a piston rod 29 attached to said rack plate, whereby as the rack plate

moves toward the slot 15, the piston will move into the cylinder, substantially as and for the purpose specified.

16. In an automatic vending machine, the combination with a shaft, and a wheel mounted thereupon, of a coin chute, a pivoted dog adapted to engage the wheel and having one end projecting into the coin chute and upon and by which the coin chute is supported so that the downward movement of the coin depresses the end of the dog projecting into the coin chute, devices acting to prevent the rotation of said shaft when the dog is in engagement with said wheel, and mechanism for acting upon the upper part of the coin to press it downward upon the end of the dog in the coin chute, substantially as described.

17. In an automatic vending machine, the combination with a shaft 21, a wheel 32 mounted thereupon, said wheel having recesses 33 and 34 on its periphery, a coin chute 46, having a curved slot 48, and a pivoted dog 49, one end of which is adapted to enter the recesses 33 and 34 in the wheel 32, the other end of said dog projecting into the coin chute and adapted to intercept the coin, of a spring normally holding said dog in engagement with said wheel 32, devices carried by said shaft for rotating said wheel, and a dog 37 mounted upon said shaft 21, said dog having a tooth 45 adapted to enter the slot 48 and to engage the upper edge of the coin, substantially as described.

18. In an automatic vending machine, the combination with a shaft 21, a wheel 32 mounted thereupon, said wheel having recesses 33 and 34, and lugs 35 and 36 on its periphery, a coin-chute 46, having a curved slot 48, and a pivoted dog 49, one end of which is adapted to enter the recesses 33 and 34 in the wheel 32, the other end of said dog projecting into the coin chute and adapted to intercept the coin, of a spring normally holding said dog in engagement with said wheel 32, a dog 37 pivotally mounted upon said shaft 21, said dog having a shoulder 44 adapted to engage the lugs 35 and 36 and a tooth 45 adapted to enter the slot 48 and to engage the upper edge

of the coin in the slot, and a spring 43, the tension of which acts to throw the tooth 45 into the slot 48, substantially as described.

19. In an automatic vending machine, the combination with an exterior casing, having a slot 15, of a plate 10 supported in said casing substantially upon a level with said slot, a cogged ring 57 supported over said plate, uprights rising from said ring and adapted to carry envelopes and deliver them upon the plate 10, a shaft 21, bevel gear 31 mounted thereupon and intermeshing with said ring, whereby by the rotation of said shaft the ring 57 will be rotated, a coin-operated lock for said shaft, and mechanism operated by the rotation of said shaft for moving said envelopes through the slot 15, substantially as described.

20. In an automatic vending machine, the combination with an exterior casing, having a slot 15, of a plate 10 supported in said casing substantially on a level with said slot, a cogged ring 57 supported over said plate, uprights rising from said ring and adapted to carry envelopes and deliver them upon the plate 10, a shaft 21, bevel gear 31 mounted thereupon and intermeshing with said ring, whereby by the rotation of said shaft the ring 57 will be rotated, a coin-operated lock for said shaft, mechanism operated by the rotation of said shaft for moving said envelopes through the slot 15, and means for preventing the reverse motion of said shaft before it has completed its full stroke, substantially as described.

21. The combination with a casing 1, of a cover 2 therefor, a removable plate 4 in one side of said casing, said plate having a flange 5 at its lower edge and a flange 6, forming a slot 7, near its upper edge, a bar 8 pivoted to said casing on the inside thereof, one end of said bar being adapted to enter the slot 7, and a lock for the said cover, substantially as described.

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Witnesses:

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