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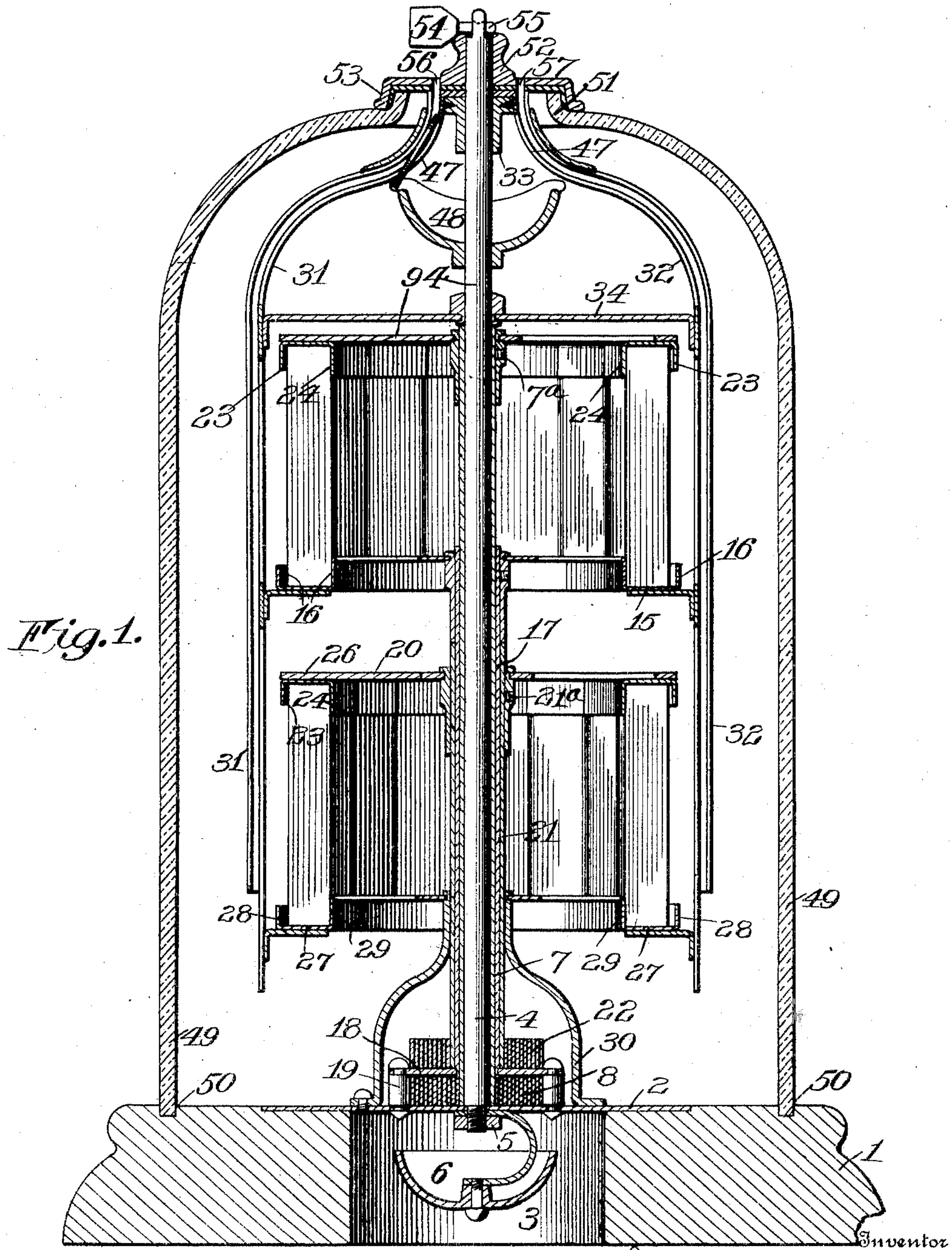
PATENTED DEC. 13, 1904.

J. HEBERLING.  
VENDING MACHINE.

APPLICATION FILED OCT. 20, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses

Walter B. Payne.

Carroll A. Bateman

By

John Heberling  
Frederick F. Kiesel  
His Attorney



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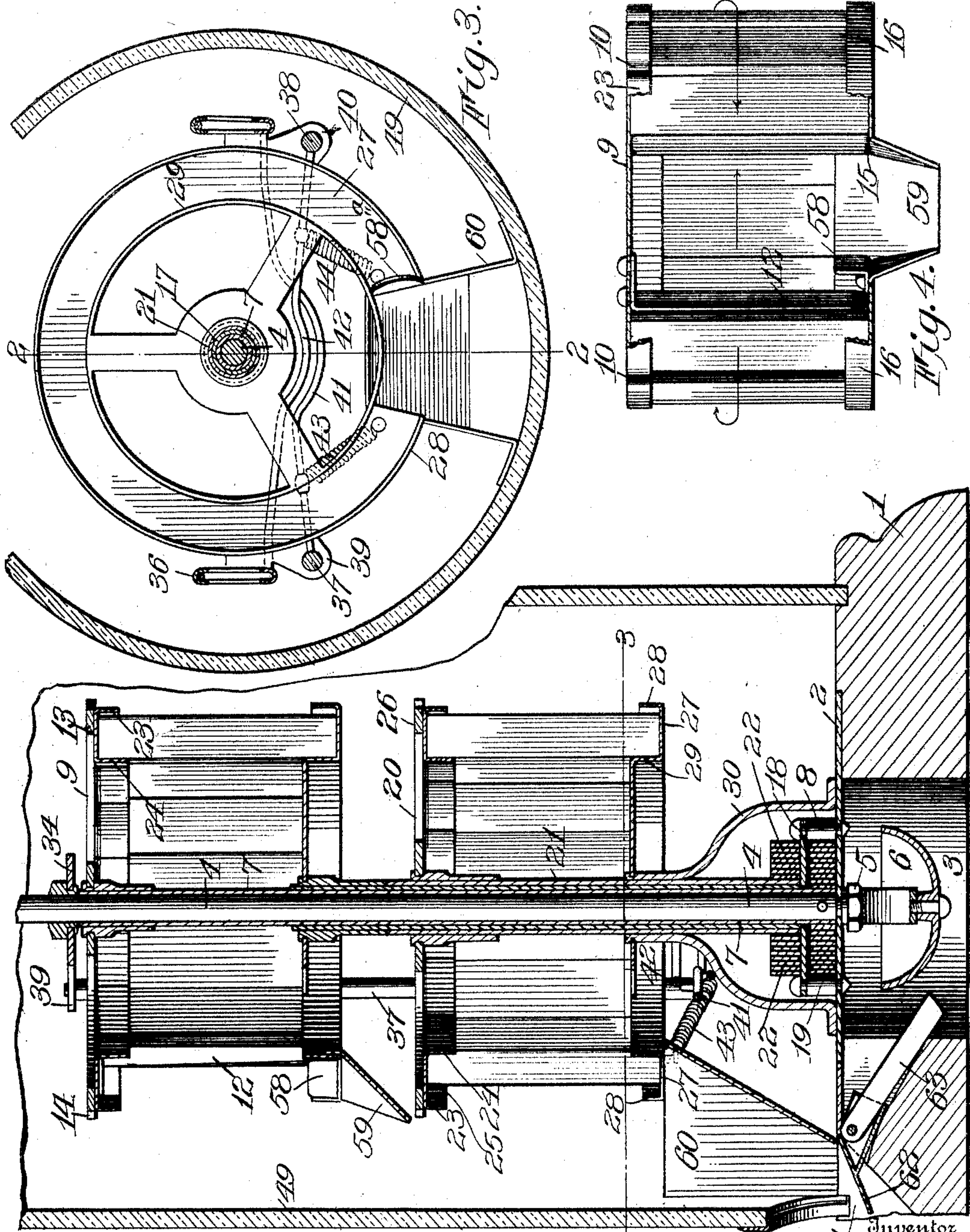
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3 SHEETS—SHEET 2.



Witnesses

Walter D. Payne.

Clarence A. Bateman.

Fig. 2.

John Heberling  
By Frederick F. Chas. Esq.  
His Attorney



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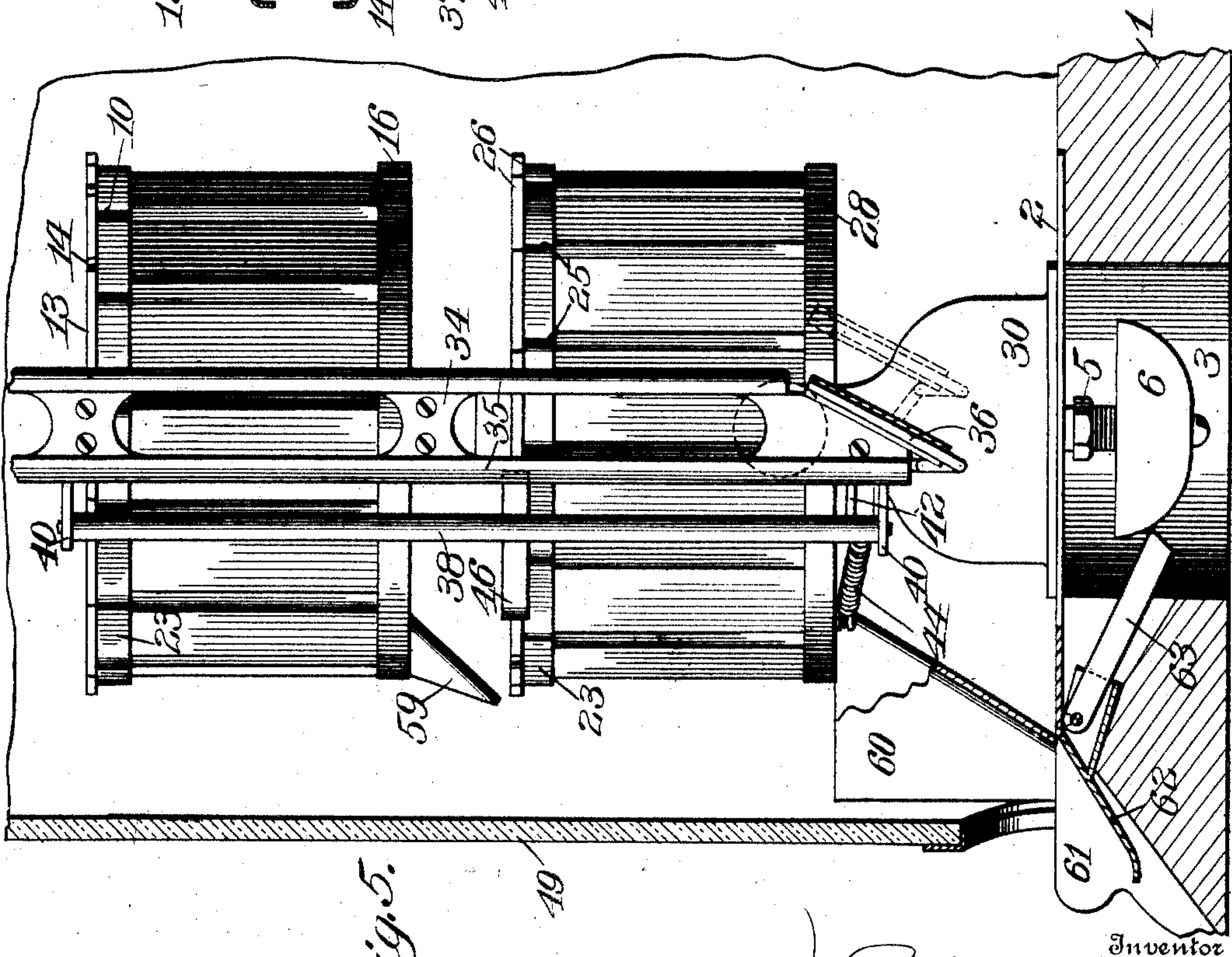
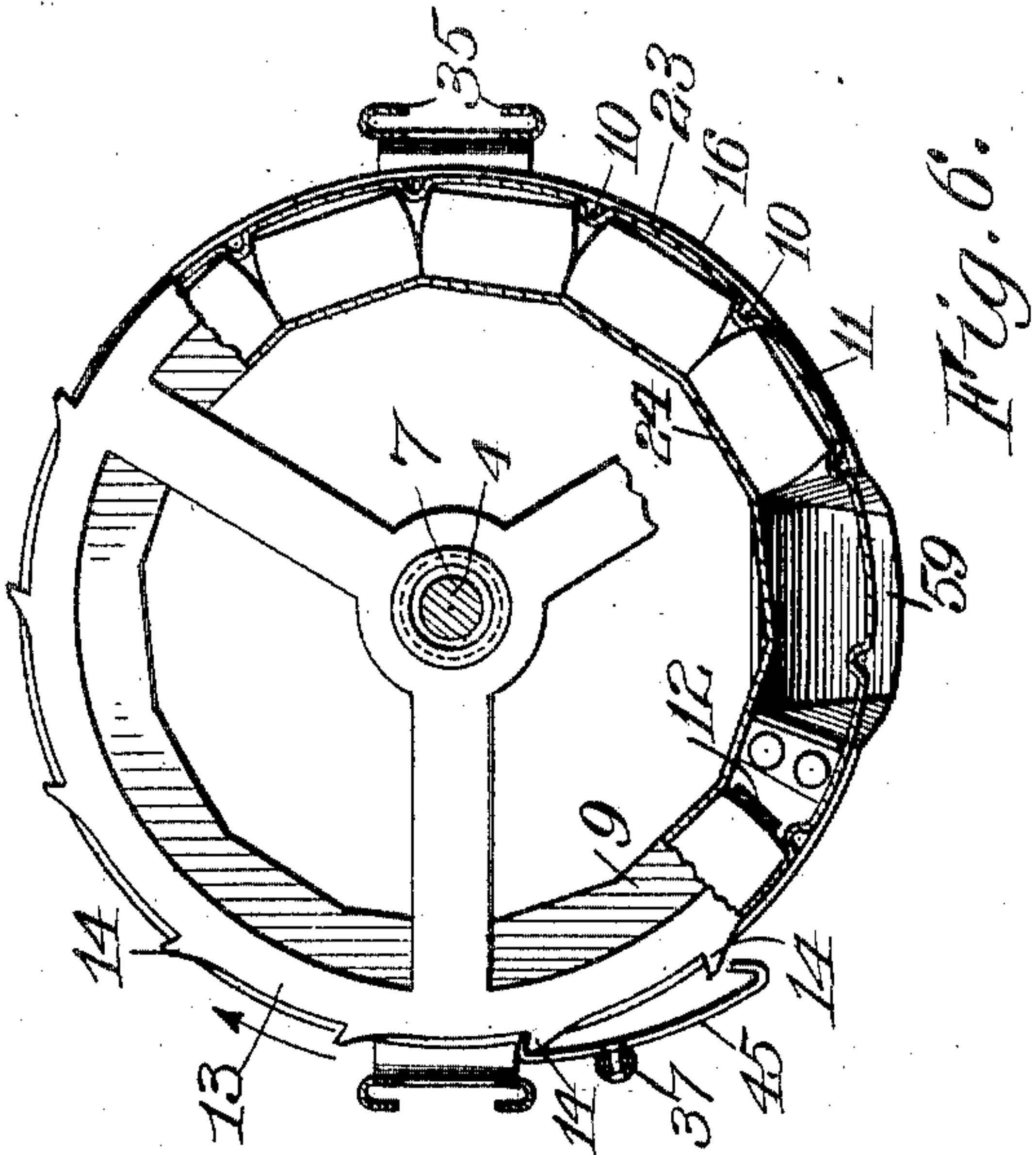
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3 SHEETS—SHEET 3.



Witnesses

Walter B. Payne.  
Charles A. Bateman.

John Heberling  
Frederick F. Shul  
Inventor  
His Attorney



# UNITED STATES PATENT OFFICE.

JOHN HEBERLING, OF ROCHESTER, NEW YORK.

## VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 777,414, dated December 13, 1904.

Application filed October 20, 1903. Serial No. 177,819. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HEBERLING, of Rochester, in the county of Monroe and State of New York, have invented new and useful  
5 Improvements in Vending-Machines; and I do hereby declare the following to be a clear, full, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the  
10 reference-numerals marked thereon.

My present invention has for its object to produce a novel form of coin-controlled vending-machine that embodies an improved method of containing the packages or articles  
15 to be vended and novel mechanism that is controlled in its operation by the deposit of a coin of the proper denomination for delivering the packages or articles successively from their containers or holders.

20 It is also an object of my invention to construct a device of this character that shall present a neat and attractive appearance and one in which the entire mechanism may be visually observed.

25 To these and other ends my invention consists in the combinations of parts to be hereinafter more fully explained, the features of novelty being pointed out in the claims hereunto annexed.

30 In the drawings, Figure 1 is a central vertical sectional view of a vending-machine embodying my invention. Fig. 2 is a fragmentary sectional view taken on the line 2 2, Fig. 3. Fig. 3 is a transverse sectional view on the line 3 3, Fig. 2. Fig. 4 is a detail view of  
35 one of the holders, showing the method of feeding and delivering the articles. Fig. 5 is a vertical section of the device, showing the coin-controlled mechanism in elevation; and  
40 Fig. 6 is a top plan view of Fig. 5, parts being broken away for clearness in illustration.

Similar parts are designated by the same numerals of reference in the several views.

In order that a clear understanding may be  
45 had of my said invention, reference will be had to the herein-shown embodiment thereof, wherein 1 designates a supporting-base that may be of any suitable character, to the upper side of which is secured a plate 2, bridging  
50 the aperture 3, that is preferably formed in

the base, and through this plate extends the lower extremity of the standard 4, fastened in position by the nut 5, that may be also utilized for holding in position a bell or other signal device 6, which may be found useful  
55 for a purpose that will hereinafter more fully appear. Over the relatively fixed standard 4 is revolvably fitted a sleeve 7, resting at its lower extremity upon the plate 2 and having attached thereto one end of the spiral spring  
60 8, arranged in such a manner as to exert a force upon said sleeve, normally tending to rotate it in a predetermined direction, and at the upper end of this sleeve is fixedly mounted a carrier 9, divided at predetermined intervals  
65 by the indentations 10 into a plurality of compartments 11, preferably of such a configuration as to receive one end of the packages or articles to be contained, a depending fol-  
70 lower 12 being provided upon said carrier and arranged to bear against the adjacent package or article in a manner to be hereinafter more fully explained. This rotary carrier is also  
75 provided with a ring 13, having a plurality of teeth or projections 14 disposed at predetermined intervals around its periphery.

Below the carrier 9 is provided an annular track or support 15, upon which the packages or articles to be delivered rest, the upper  
80 end of each package resting in its corresponding compartment in the rotary carrier 9, and in order to guide the packages in their motion around this support upturned flanges  
85 16 16 may be provided to form a channel through which the lower ends of said packages pass while moving around the relatively fixed support. This support may be advantageously retained in its fixed position by the  
90 tube 17, loosely fitted over the sleeve 7 and supported at its lower end by the plate 18, secured to the plate 2 by the studs 19.

A supplemental or additional holder similar to that hereinbefore described is also illustrated in the present embodiment, the rotary  
95 carrier 20 thereof being adjustably mounted upon the rotary sleeve 21, that is loosely fitted over the tube 17 and connected at its lower end to the spiral spring 22, which may be conveniently mounted above the spring 8  
100 and is arranged to exert a force upon the sleeve



21 and its carrier, tending to rotate them in a predetermined direction. This carrier is also provided with a pair of oppositely-disposed concentric flanges 23 24, either or both of which may be provided with indentations 25 to form a plurality of separated compartments, a notched or toothed ring 26 being also provided upon the carrier of the supplemental holder, that is arranged in the present embodiment to operate in a similar manner, but independently of the upper carrier 9. Below the carrier 20 is located the relatively stationary annular support 27, having the parallel upturned flanges 28 29 arranged thereon to form an annular channel through which the packages or articles to be delivered may freely move, a casing 30, secured to the plate 2 and inclosing the springs 8 and 22, being utilized also to hold the support 27 in position. In connection with these independently-operable package-delivery holders above described I employ a pair of coin-chutes 31 32, respectively, shown in the present embodiment as extending from the relatively fixed support 33 upon the standard outwardly in opposite directions and thence downwardly upon opposite sides of the upper and lower holders, terminating at a point preferably below the annular support of the lower holder, and in order to securely retain these chutes in their fixed positions a spacing member 34, rigidly secured to the standard 4 and suitably attached at each end to said chutes, may be provided, connections being made preferably with the relatively stationary supports of the upper and lower holders to firmly retain said parts rigidly in fixed relation. Each chute is provided with a pair of oppositely-disposed overhanging flanges 35 to form a channel for the coin, and a portion of one of these flanges is removed in proximity to the lower extremity of the chute, leaving a cut-away portion into which is adapted to rest the coin-actuated member 36, extending diagonally across the path of the coin while descending the coin-chute. Such a device is provided for each coin-chute for controlling the operation of the upper and lower holders independently, and for accomplishing this purpose I have employed a novel form of releasing mechanism comprising a pair of rods 37 38, respectively, pivotally mounted in the lugs 39 40 and connected to their corresponding coin-actuated devices 36 by the levers 41 42, respectively, springs 43 44 being provided for normally retaining the coin-actuated members in their normal position across the path of the coin-chutes. Upon each rod above mentioned is carried a releasing device or escapement 45 46, one of which engages the notched or toothed ring of the upper and the other the lower rotary carrier 9 and 20, respectively, in such a manner that operation of one of the release-rods connected to its corresponding coin-actuated device will move

said releasing device in such a manner as to permit its corresponding carrier to rotate a predetermined degree at each successive operation. The passage of a coin through either chute will cause the movable device 36, extending diagonally across the path of the coin, to be momentarily displaced by it, causing the corresponding release-rod connected to it to be oscillated, which motion will be communicated to the corresponding releasing device 45 or 46, causing it to disengage from one tooth and permit the carrier to rotate to the next succeeding tooth, and as the coin after striking the device 36 immediately drops from the chute said device will be immediately returned to its normal position by the striking of the next succeeding tooth against the adjacent projection of the releasing device supplemental to the action of the spring 43 or 44, as the case may be. In order to prevent operation of the device by undersized coins or slugs, the chute may be so constructed that the under side thereof at 47 will be so formed as to permit a genuine coin of the proper denomination or dimensions to pass, but to allow an undersized object to drop through into the receptacle 48.

I have devised a novel form of casing that is adapted for inclosing a device of this character in such a manner as to permit a visual observation to be made of the entire mechanism, consisting in the present embodiment of a hollow dome or globe 49, preferably of glass or other transparent material, having its lower edge seated in an annular groove 50, formed in the base, its upper portion terminating in a smaller annular flange 51, defining an aperture through which passes the standard 4, and with it the upper ends of the chutes 31 and 32, connected to the support 33 upon the standard, and over the top of this flange 51 of the casing is adapted to fit an annular cover 52, apertured centrally to fit over the standard 4 and having a peripheral flange 53 encircling the outer side of the flange 51 to hold said casing firmly in place, a lock 54, having a hasp 55, adapted to enter an aperture formed in the standard immediately above the removable cover 52, being provided to prevent access to the device by unauthorized persons. Coinciding with the apertures of the chutes 31 32 are slots 56 57, respectively, formed in the removable cover to permit the insertion of the proper coin from the exterior of the casing.

When it is necessary to fill the holders with packages, the casing is removed by unlocking the lock 54 and removing the cover 51, which will permit the casing to be freely lifted, allowing free access to the holders. In filling the holders any method may be employed, the packages being successively inserted into position with their upper ends extending into the individual compartments formed in the carriers 9 and 20 for the purpose, the car-



riers being rotated until they are full, and their followers 12 rest against the stops 58 58<sup>a</sup> upon the relatively stationary supports beneath, the teeth or projections upon said carriers being so arranged as to cause the releasing devices 45 46 to ride over them while the holders are being filled. In the present embodiment the carriers are rotated in reverse directions in filling against the action of their respective springs, the reaction of which tends to rotate the carriers in an opposite direction, causing the followers 12 to exert a pressure against the adjacent packages in the holder. Under normal conditions motion of the carriers under the influence of their respective springs will be prevented by the engagement of the releasing devices 45 46 with the corresponding teeth of their respective carriers; but when a coin of the proper denomination is inserted in either chute it will drop to the bottom thereof, striking the movable member 36 and displacing it from its normal position across the chute to permit the passage of said coin, and as each movable member is connected to its corresponding rod carrying the releasing device the latter will be momentarily rocked to disengage itself from the adjacent notch or tooth of its carrier, permitting it to rotate under the action of its spring to the next succeeding notch, the follower 12 pushing the annular row of packages around the holder a sufficient distance to cause the first package in the row to move forward into the package-chute 59, disengaging itself from its holder and dropping by gravity into the delivery-chute 60, leading to the discharge-passage 61. In the meantime the releasing device will have returned immediately to its normal position to engage the next succeeding tooth or notch of the carrier under the action of its corresponding spring 43 or 44, thereby immediately returning the parts into position to be operated by the next coin and causing only one package to be delivered for each coin that is deposited.

In the present embodiment the holders employed are practically duplicates and may be arranged to contain packages either of the same kind or of different kinds and dimensions, and in order that both holders may accommodate packages of various kinds and dimensions their respective carriers 9 and 20 are locked upon their respective sleeves 7 and 21 by the set-screws 7<sup>a</sup> and 21<sup>a</sup>, thereby permitting the relative distances between the rotary carriers 9 and 20 and their respective supports 15 and 27 to be adjusted, such a construction also rendering it possible to adjust the tension of the respective springs to the desired degree by adjusting the carrier in the proper relation with its sleeve.

It may be found desirable to employ a signal device in connection with such a vending-machine that will be automatically actuated

while a package is being discharged, and in the present embodiment I have illustrated such a device that is adapted to be actuated by the striking of the package during its passage from the machine upon the pivoted plate 62, depressing it and bringing it into engagement with the pivoted clapper or tongue 63, which in turn strikes the bell 6 to produce an audible signal, indicating that a package has been delivered. Such a signal will also serve as a detector to prevent malicious parties from secretly tampering with the machine.

A coin or check controlled vending-machine of this character is particularly adapted to be exposed to view upon counters of stores or in other convenient and accessible places, and when exhibited in such a manner it will present a very neat and attractive appearance, the transparent casing inclosing the mechanism enabling an observation to be made of the parts at all times.

The embodiment herein shown is designed for vending small packages of chewing-gum, candy, and various other articles that are usually packed in wrappers of a convenient size; but it will be readily understood that modifications may be made in the structure to adapt it to the accommodation of articles of various shapes, sizes, and characteristics, which adaptations would come within the scope of my invention.

I claim as my invention—

1. In a vending-machine, the combination with the base, of a package receiver or holder embodying a pair of spaced disks having correspondingly-arranged annular channels thereon adapted to receive the ends of the packages and thereby support them in an annular row, and a chute formed in one of the disks through which the packages are adapted to be discharged.

2. In a vending-machine, the combination with the base, of a package receiver or holder embodying a relatively fixed support having an annular track thereon around which the packages are adapted to be advanced and provided with a package-discharge aperture, and a revoluble member having a channel thereon adapted to receive the packages to support them in an annular row between the movable member and the support, and provided with a follower for engaging the packages to advance them around the track.

3. In a vending-machine, the combination with a base having a standard thereon, of a relatively fixed support adapted to receive the articles to be vended, a carrier revolubly mounted at a predetermined distance from the support having a follower thereon adapted to engage the articles and thereby advance them around the support in a continuous annular row, a stop at one end of the track to limit the movement of the articles in one direction and a delivery chute or aperture at the other



end of the track through which the articles are adapted to be delivered, and operating means for the carrier.

4. In a vending-machine, the combination with a base having a standard thereon, of a sleeve having a relatively fixed support mounted thereon and provided with an annular track encircling the standard, a sleeve revolubly mounted within the sleeve of the support, 10 having a carrier mounted thereon and provided with a follower adapted to engage the articles and thereby advance them around the track of the support, and operating means connected to the revoluble sleeve for actuat- 15 ing the carrier.

5. In a vending-machine, the combination with a base having a standard thereon, of a relatively fixed sleeve inclosing the standard having a support mounted thereon adapted to 20 receive the articles to be vended, a revoluble sleeve loosely fitted between the relatively fixed sleeve and the standard having a carrier mounted thereon adapted to engage the arti- 25 cles to advance them over the support, and a spring connected to the revoluble sleeve for operating the carrier.

6. In a vending-machine, the combination with the base having the standard thereon, of a support for receiving the articles to be vend- 30 ed, a sleeve revolubly mounted upon the stand- ard, a carrier loosely fitted upon said sleeve for advancing the articles over the support, a carrier-operating spring connected to said sleeve, and means for securing the carrier and 35 sleeve together in any desired relation to enable the tension of the spring to be adjusted.

7. In a vending-machine, the combination with the base having the standard thereon, of a pair of superposed goods-holders each hav- 40 ing a relatively fixed supporting-sleeve fitted over the standard, and carrying the article-re- ceiving support, and the revoluble sleeves mounted within the relatively fixed sleeves each supporting a carrier for advancing the 45 articles over the support, a supporting-plate connected to one of the relatively fixed sup- porting-sleeves, and an operating-spring lo- cated upon each side of the supporting-plate and connected to its corresponding revoluble 50 sleeve.

8. In a vending-machine, the combination with the base having the standard thereon, of one or more holders wholly supported upon the standard each embodying a relatively fixed 55 annular support, and a revoluble carrier, a brace for each holder attached at its upper portion to the standard and extending down- wardly past the sides of the holders and at- tached to the relatively fixed supports thereof 60 to assist the standard in sustaining the sup- ports in proper position.

9. In a vending-machine, the combination with the base, and the package or article hold- 65 ers adapted to deliver the articles to be vended, of a signal device embodying a pivoted oper-

ating member located in the path of the arti- cles while they are being delivered, a striker coöperating with said member, and a bell or other signal located in the path of the striker and adapted to be sounded thereby when the 70 latter is actuated by the passage of a package over the operating member.

10. In a device of the character described, the combination with a base having a stand- 75 ard mounted thereon, of a package-holder com- prising a relatively stationary member mount- ed on a tube or casing loosely fitted over the standard and supported upon the base form- ing a support around which the packages are 80 arranged to be advanced and discharged suc- cessively, and a relatively movable carrier mounted on a sleeve loosely fitted between said tube and standard and arranged to ad- vance said packages, a supplemental package- 85 holder having a movable carrier mounted on a sleeve loosely fitted over the tube of the first holder, a relatively fixed member supported by a casing loosely fitted over the latter sleeve of the supplemental holder and arranged to be supported upon the base, operating means 90 connected to said sleeves and exerting a force tending to rotate their respective carriers, a releasing device for each carrier normally pre- venting their operation, and devices for oper- 95 ating said releasing devices to permit the op- eration of their respective carriers.

11. In a vending-machine the combination with a package-holder comprising a relatively fixed support having an annular track around 100 which the packages are adapted to move and a cut-away portion in said track through which the packages are adapted to drop, and a relatively movable carrier disposed at a pre- determined distance from the support divided 105 into compartments to receive a portion of the packages, and having a follower to engage the packages to advance them around said track and discharge them successively through said cut-away portion, a plurality of toothed 110 projections arranged at predetermined inter- vals on said carrier, and means normally tend- ing to operate said carrier, of a releasing de- vice having a projection thereon normally in engagement with one of said projections to 115 prevent the operation of said carrier, and a projection also carried by said releasing de- vice and arranged to be struck by the next succeeding projection to return said device to its normal position after being operated to 120 permit the operation of said carrier, and mech- anism controlling the operation of said releas- ing device.

12. In a vending-machine, a package-holder embodying a relatively stationary support 125 having upturned flanges arranged concentric- ally thereon to form an annular track around which the ends of the packages are adapted to move, and a discharge-chute formed in the track through which the packages are adapted 130 to discharge successively as they are moved



around the track, and a relatively movable carrier having a correspondingly-shaped annular portion adapted to receive the opposite ends of the packages and provided with a follower engaging the packages for advancing them in an annular row around the support, means for operating the carrier, and mechanism for controlling the operation of the carrier.

13. In a vending-machine the combination of a package-holder embodying a support and a relatively movable member spaced apart, and each provided with correspondingly-arranged annular channels to receive the ends of the packages that extend between the support and movable member, a discharge-chute communicating with a cut-away portion of the channel of the support, a follower carried by the movable member, means for operating said member to advance the packages successively to the discharge-chute, and mechanism for controlling the operation of said member.

14. In a vending-machine, the combination with a casing having a standard mounted therein, of a plurality of package-holders superposed upon said standard each embodying relatively fixed supports carried by supporting-sleeves loosely fitted over the standard and relatively movable carriers mounted on supporting-sleeves revolubly mounted on the standard between the latter and the sleeves of the relatively fixed supports, an operating-spring attached to the end of each carrier-sleeve, and a brace for each holder the upper ends of which are attached to the standard and extend downwardly beside the package-holders and connect with the relatively fixed supports thereof to reinforce them.

JOHN HEBERLING.

Witnesses:

CLARENCE A. BATEMAN,  
G. WILLARD RICH.