

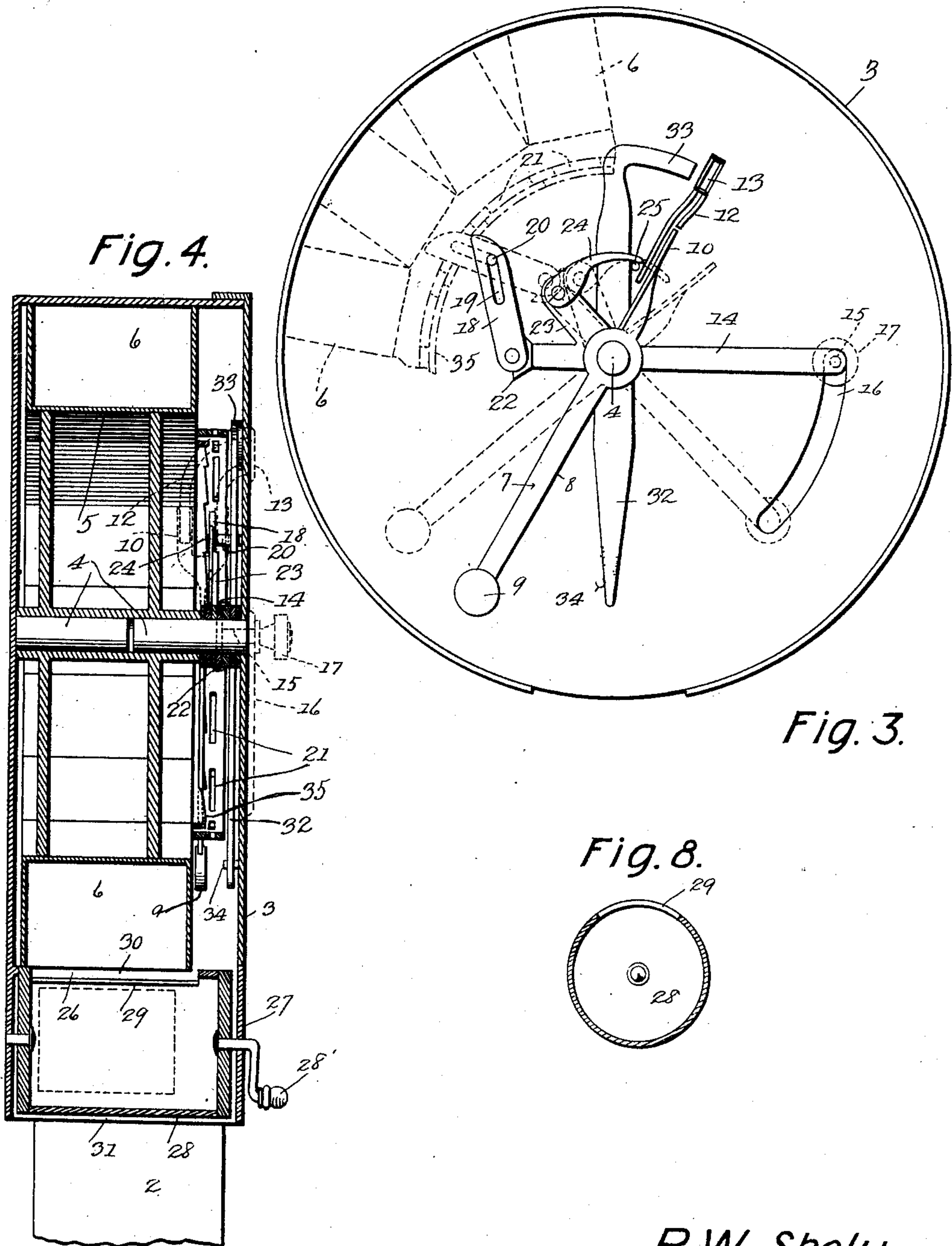
No. 827,043.

PATENTED JULY 24, 1906.

R. W. SHELLEY.
VENDING MACHINE.

APPLICATION FILED JUNE 22, 1905.

3 SHEETS—SHEET 2.



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Fig. 5.

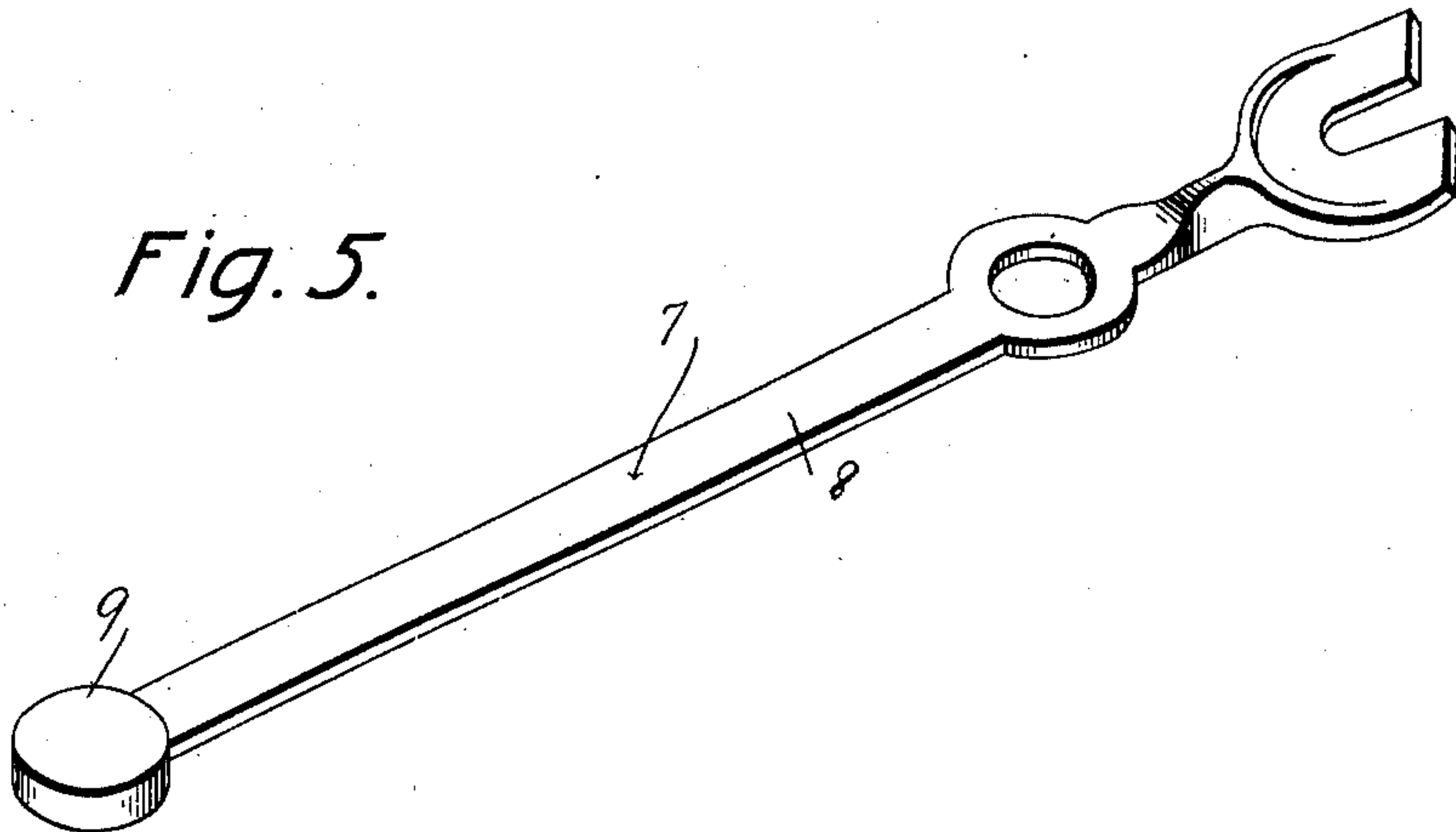


Fig. 6.

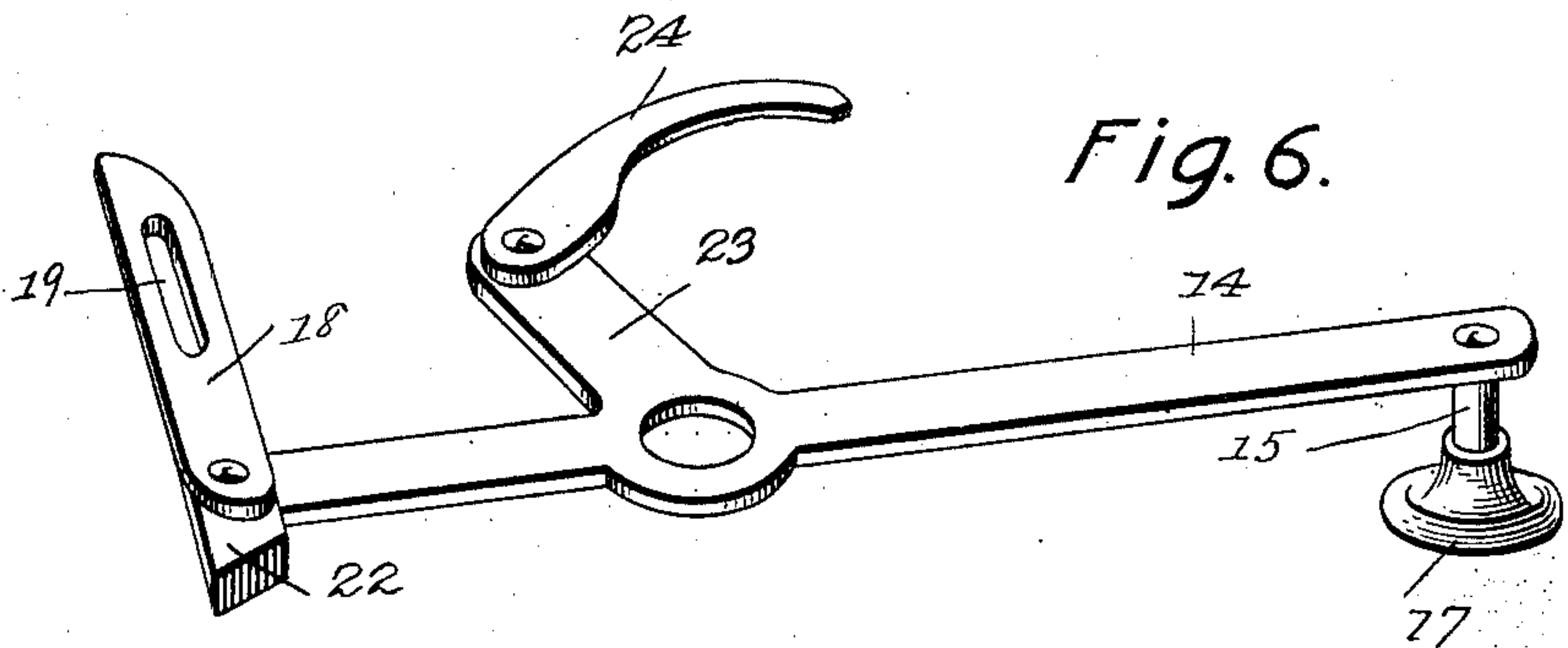
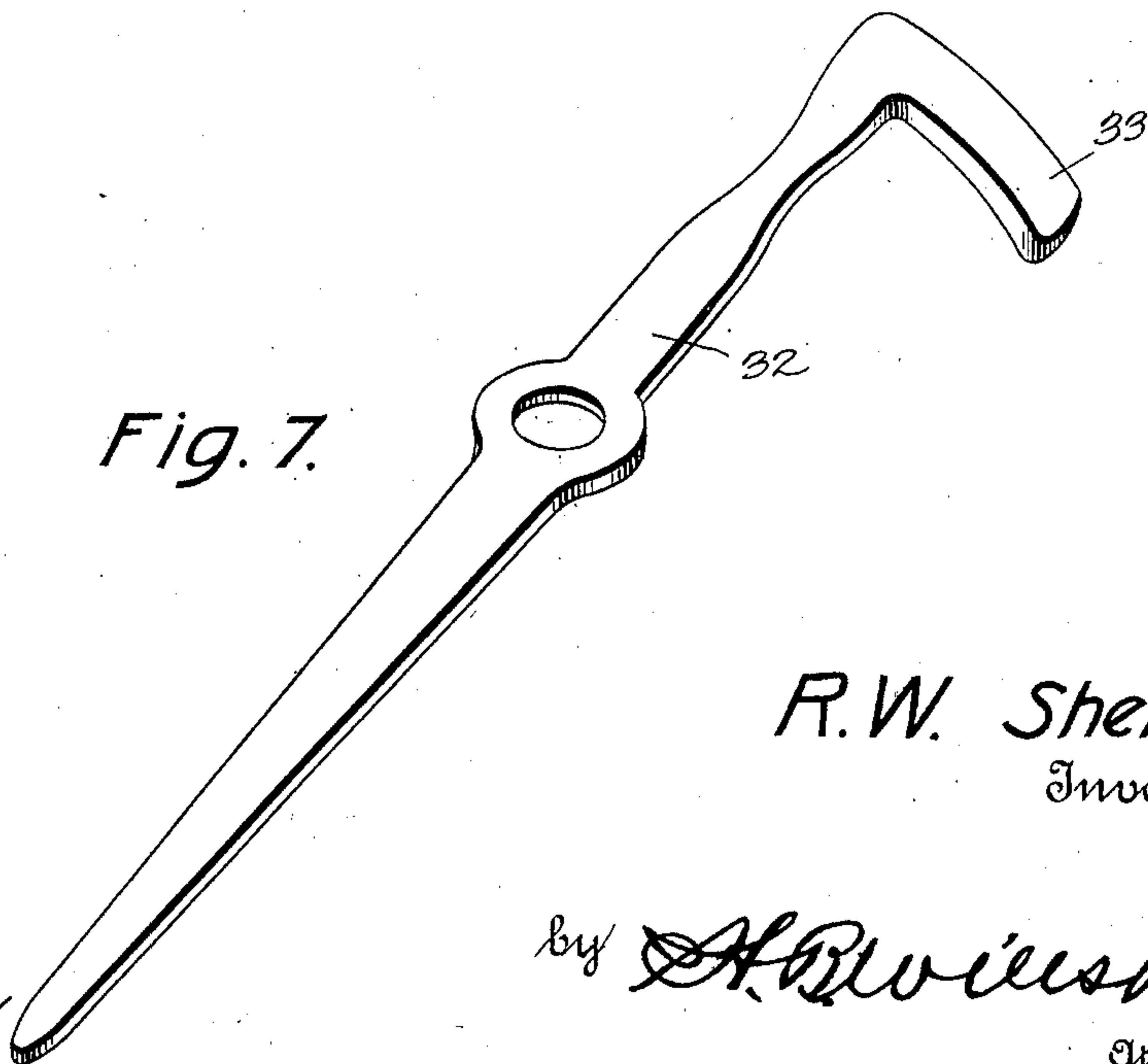


Fig. 7.



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VENDING-MACHINE.

No. 827,043.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RICHARD W. SHELY, 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 Vending-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in vending-machines.

The object of the invention is to provide a vending apparatus the operation of which is dependent upon the insertion of a coin, said coin when inserted forming a part of the operating mechanism.

Another object is to provide a vending-machine having a revolving package-bearing wheel which is adapted to be turned to discharge a package upon each insertion of a coin, means being provided to stop the wheel at the proper position for discharging the package.

A further object is to provide means whereby the coin-slot of the machine will be closed simultaneously with the discharge of the last package from the package-carrying wheel.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a front elevation of the machine. Fig. 2 is a similar view with the front cover-plate removed. Fig. 3 is an inner side view of the front cover-plate or door. Fig. 4 is a vertical sectional view taken on a line with the shaft of the package-carrying wheel. Fig. 5 is a detail perspective view of the wheel-engaging lever. Fig. 6 is a similar view of the coin-engaging lever and pawl. Fig. 7 is a similar view of the slot-closing lever, and Fig. 8 is a detail cross-sectional view through the delivery drawer or box which receives the package when discharged from the package-carrying wheel.

Referring more particularly to the drawings, 1 denotes the casing of the machine, which may be of any suitable shape, but which is here shown and is preferably cylindrical and is supported upon a suitable base 2. The casing 1 is provided with a removable front plate or cover 3. In the casing 1

is arranged a centrally-disposed bearing-shaft 4, on which is revolvably mounted a package-carrying wheel 5, said wheel comprising a central hub portion and an outer package-carrying portion, which is divided into radial compartments 6 for holding packages of goods to be vended.

On the shaft 4 adjacent to the inner face of the cover-plate 3 is pivotally mounted a wheel-operating lever 7, said lever consisting of a spring-metal bar 8, which projects on one side of the shaft 4 and is provided on its outer end with a weight 9. The opposite end of the lever on the other side of the shaft 4 is bifurcated and is provided with a coin-seat 10, which is adapted to receive a coin from a coin-chute 12, arranged on the inner face of the cover-plate 3 and communicating at its upper end with a coin-slot 13.

On the shaft 4 adjacent to the wheel-operating lever 7 is pivotally mounted a hand-lever 14, said lever being extended on each side of its pivotal connection with the shaft 4, and on the lower arm of the same is formed a pin or bolt 15, which projects through a centrally-disposed segmental slot 16, formed in the cover-plate 3. On said pin or bolt is arranged a handle or knob 17. On the opposite or short end of the lever is pivotally connected a stop-arm 18. Said arm is provided with a longitudinally-disposed guide-slot 19 to engage a head or pin 20, which projects inwardly from the cover-plate 3, whereby when the hand-lever 14 is operated said stop-arm will be caused to project radially by means of the guide-slot 19 and the pin 20 to cause the outer end of the same to be engaged with stop-loops 21, formed on the side of the package-carrying wheel, as shown. The short end of the operating-lever is provided with a weight 22, whereby said lever is restored to its normal position after being actuated to operate the machine.

Formed integral with or rigidly connected to the hand-lever 14 is an obliquely-disposed arm 23, to the outer end of which is pivotally connected a curved pawl 24. The free end of the pawl 24 is supported and guided by means of a pin 25, which projects laterally from the inner side of the cover-plate 3.

In the lower side of the cylindrical casing 1 is formed a discharge-opening 26, below which is arranged a cylindrical casing 27. In this casing 27 is disposed a cylindrical drawer or box 28, in one side of which is formed an aperture or opening 29. The box

or drawer 28 is adapted to be turned within the casing 27 to bring the aperture or opening 29 therein into alinement with the openings 30 or 31, formed in the upper and lower sides of the casing 27. When the box or drawer 28 is arranged to bring the opening 29 into alinement with the opening 30 in the upper side of the casing 27, the parts are in position to receive a package of goods discharged from the package-carrying wheel 5, which is discharged through the opening 26 in the casing 1. After the package has been received by the drawer or box 28 said box will be turned in the casing 27 to bring the opening 29 therein opposite the discharge-opening 31 in the casing 27, thus permitting the package to drop out upon a suitable delivery-shelf formed in the base of the machine. The box or drawer 28 is adapted to be turned in the casing 27 by means of a crank-handle 28', which projects through the end of the casing 27, as shown.

Pivotally mounted upon the shaft 4 is a coin-slot-closing lever 32, the ends of said lever being provided with a right-angularly-projecting arm or blade 33, adapted to be moved across the coin-slot in the cover-plate of the machine, thereby closing the said slot and preventing the insertion of a coin therein. The opposite end of the lever 32 is adapted to be engaged by a pin 34, which projects laterally from the outer face of the package-carrying wheel, whereby when said wheel has been entirely revolved and simultaneously with the discharge of the last package carried thereby said pin 34 will be engaged with the adjacent end of the lever 34 to turn said lever and move the arm 33 across the coin-slot, thereby closing the same and preventing the insertion of a coin into the machine after the goods have been discharged therefrom.

In operation, when it is desired to work the machine, a coin is first deposited into the coin-slot 13. Said coin, falling through the chute 12, will rest in the coin-seat formed on the upper end of the wheel-operating lever, thus closing the bifurcation or slot in the upper end of the same. The hand-lever 14 is now depressed by means of the knob 17, which will cause the pawl 24 to engage the coin and to thereby turn the lever 7 upon its axis, which will cause the spring-bar forming the opposite end of the same to engage one of a series of inclined lugs 35, formed on the adjacent face of the package-carrying wheel, and thereby turn said wheel sufficiently to bring one of the radial package-compartments formed therein opposite the discharge-opening in the casing, thus permitting the package in said compartment to drop out of the same and into the box or drawer 28. When the package-carrying wheel has been thus moved to the proper point to discharge said package, a further

movement of the same is prevented by means of the stop-arm 18, which is actuated by the weighted end of the hand-lever to cause the same to engage one of the stop-loops 21, formed on said wheel, thus holding the same against further movement. Upon the release of the hand-lever 14 said lever and the wheel-operating lever 27 will be restored to their normal positions by means of the weighted ends of the same. After the package-wheel has made a complete revolution and all the packages carried thereby have been discharged, as herein described, the pin 34 on said wheel will be brought into engagement with the lower end of the coin-slot-closing lever, which will actuate the same and cause the arm 3 on the upper end thereof to be moved across the coin-slot, thereby closing the same and preventing the insertion of a coin, as hereinbefore described. After the coin has been acted upon by the pawl 24 to operate the package-wheel the same will be pushed off from the bifurcated upper end of the wheel-operating lever 27 by said pawl and due to the engagement of the latter with the pin 25, which causes the pawl to swing outwardly upon its pivot, thus pushing the coin off from the end of the lever, said coin then dropping to a receptacle which may be arranged at any suitable point in the casing or base of the machine. When there has been no coin deposited into the machine, the operation of the package-wheel will be prevented owing to the fact that should the hand-lever be depressed the pawl 24 will simply pass through the bifurcated upper end of the operating-lever 7 without operating the same, thus the turning of the package-carrying wheel is dependent upon a coin being deposited upon the upper end of the wheel-operating lever 7.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In a vending-machine, the combination with a suitable casing, of a package-carrying wheel revolvably mounted in said casing, a coin-controlled wheel-operating lever, provided with a bifurcated end and a coin-stop, a pivotally-mounted hand-lever, means connected to said hand-lever to engage the coin on said wheel-operating lever to actuate the same thereby turning said wheel and causing the same to discharge a package, and a stop-arm actuated by said hand-lever to hold said pack-

age-wheel in position to discharge a package of goods, substantially as described.

2. In a vending-machine, the combination with a casing having a removable front plate, 5 of a package-carrying wheel revolubly mounted in said casing, a wheel-operating lever having a bifurcated upper end constructed to receive a coin, a hand-lever, a pawl carried by said hand-lever to engage the coin on said 10 wheel-operating lever to turn said hand-wheel, and means actuated by said hand-lever to stop said wheel at its proper points of delivery, substantially as described.

3. In a vending-machine, the combination 15 with a casing, of a revolubly-mounted package-carrying wheel, inclined operating-lugs arranged on said wheel, a wheel-operating lever, one end of which is bifurcated and has formed thereon a coin-seat, a weighted spring- 20 bar forming the opposite end of said lever, said bar being adapted to engage said lugs when turned in one direction and to spring over the same when moved in an opposite direction, a pivotally-mounted hand-lever, a 25 pawl carried by said hand-lever to engage the coin on said wheel-operating lever, a weighted arm formed on said lever, stop-loops on said wheel, a stop-arm pivotally mounted on said weighted arm to engage said stop-loops, 30 a coin-chute, and means whereby said chute is closed simultaneously with the discharge of the last package from said package-wheel, substantially as described.

4. In a vending-machine, the combination 35 with a casing, of a revolubly-mounted package-carrying wheel, inclined operating-lugs arranged on said wheel, a wheel-operating lever, one end of which is bifurcated and has formed thereon a coin-seat, a weighted spring- 40 bar forming the opposite end of said lever, said bar being adapted to engage said lugs when turned in one direction and to spring over the same when moved in an opposite di-

rection, a pivotally-mounted hand-lever, a pawl carried by said hand-lever to engage the 45 coin on said wheel-operating lever, a weighted arm formed on said lever, a stop-arm pivotally mounted on said weighted arm to engage stop-loops arranged on said wheel, a 50 coin-chute to conduct coins to said wheel-operating lever, a lever having on one end an arm or blade to close said chute, and a pin on said wheel to engage the opposite end of said lever simultaneously with the discharge of 55 the last package of goods to move said arm or blade across said coin-chute thereby closing the same, substantially as described.

5. In a vending-machine, the combination with a main casing having a discharge-open- 60 ing in its lower side, of a cylindrical drawer-casing provided with an opening in its lower side, and arranged below said discharge-open- 65 ing, a cylindrical drawer or box revolubly mounted in said drawer-casing to receive a package of goods from the discharge-opening in said casing, said drawer or box being adapt- 70 ed to be turned to discharge said package through the discharge-opening in the lower side of said drawer-casing, a package-carry- 75 ing wheel revolubly mounted in said main casing, a wheel-operating lever constructed to receive a coin on one end thereof, a hand-lever having means to engage said coin and 80 actuate said wheel-operating lever to turn said wheel and cause the same to discharge a package, and means whereby said wheel is stopped at the proper time, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit- 80 nesses.

RICHARD W. SHELLEY.

Witnesses:

R. F. MUNSELL,
GEO. H. SCHAFFNER.