H. E. HUNTER.

MERCHANDISE VENDING MACHINE.

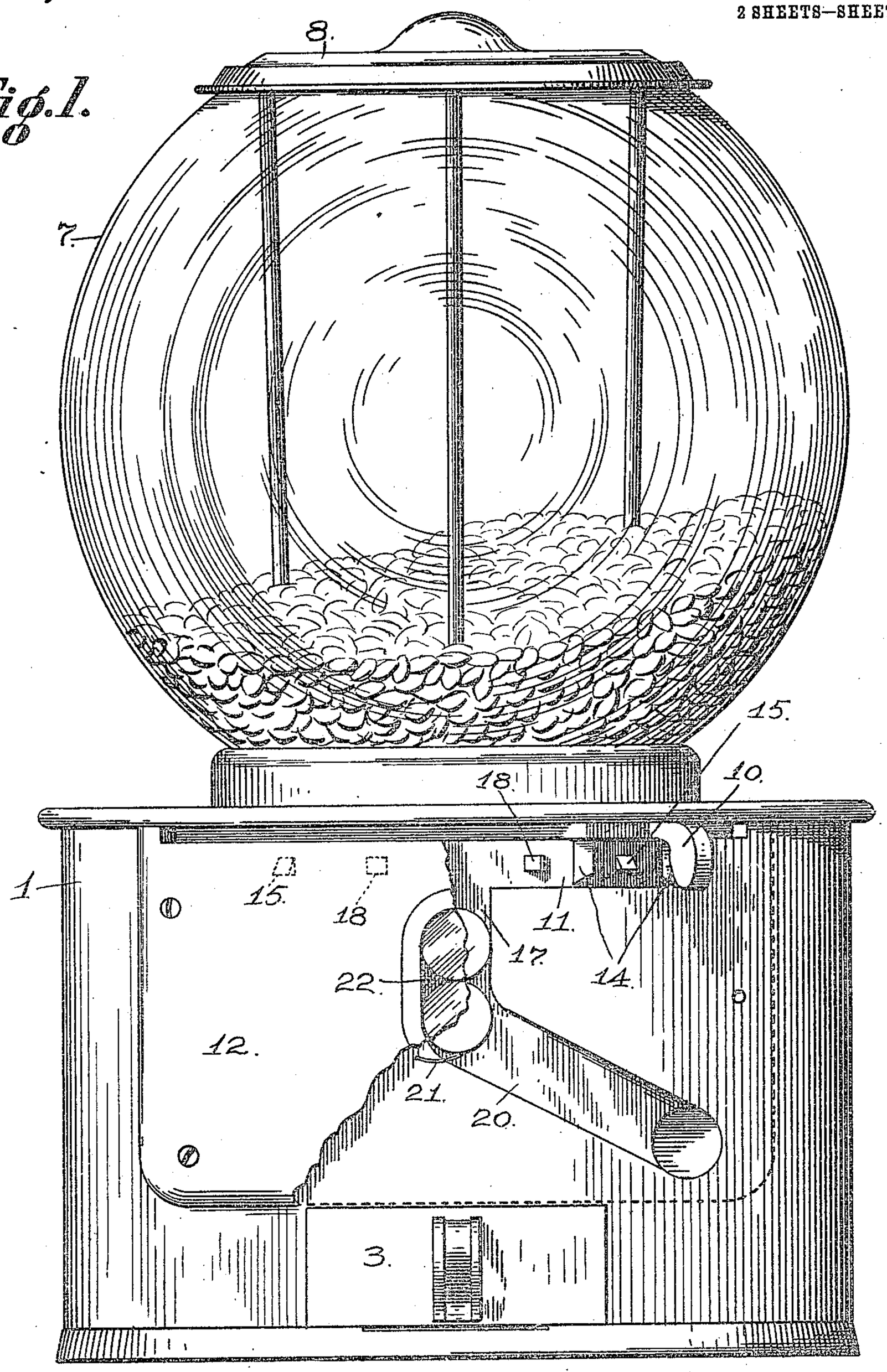
APPLICATION FILED JAN. 14, 1909.

962,639.

Patented June 28, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES.

Arthur L. Slee.

S. Constine.

INVENTOR.

Harry Elwood Hunter

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2 SHEETS—SHEET 2.

Fig. 2.

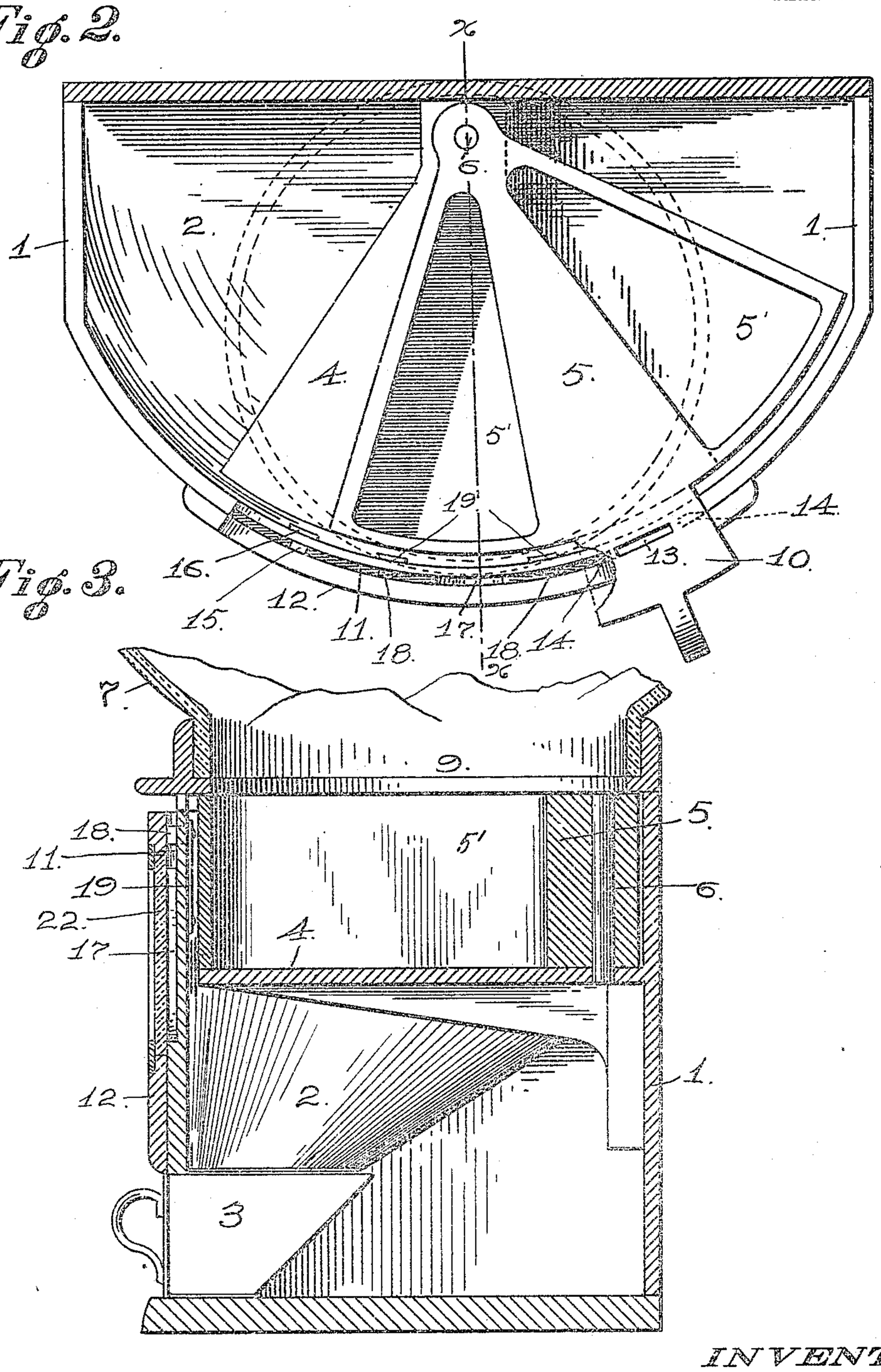

Fig. 3.

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UNITED STATES PATENT OFFICE.

HARRY ELWOOD HUNTER, OF SAN JOSE, CALIFORNIA.

MERCHANDISE-VENDING MACHINE.

962,639. Specification of Letters Patent. Patented June 28, 1910.

Application filed January 14, 1909. Serial No. 472,234.

To all whom it may concern:

Be it known that I, HARRY ELWOOD HUNTER, a citizen of the United States, residing at San Jose, in the county of Santa Clara and State of California, have invented certain new and useful Improvements in Merchandise-Vending Machines, of which the following is a specification.

My invention relates to that class of vending machines in which a gravity-filled measuring cup is capable of being moved by the purchaser, between its filling and discharging positions, upon the deposit of the purchase price, the effect of which is to release said cup from its controlling locks.

The object of my invention is to provide a machine of this type, simple and economical in its construction, capable of accurate operation, and effective in its safeguards against improper use.

To these ends, my invention consists in the novel construction of the coin-control of the machine; and in the safety locks and other details of construction and arrangement, all of which I shall hereinafter fully describe, by reference to the accompanying drawings in which—

Figure 1 is an elevation of my machine, partly broken. Fig. 2 is a top view of the base, the cover being removed. Fig. 3 is a vertical section on line *x*—*x* of Fig. 2.

1 is a hollow base of any suitable contour. Within the base is the delivery funnel 2 (Fig. 3) which leads down to a drawer 3 fitted to slide into and out of the base. Crossing the base, just above the funnel, Fig. 3, is a sector-shaped fixed platform 4, Fig. 2, over which plays the measuring cup 5. This cup is a sector-shaped piece, having two separate compartments 5′, without top or bottom, but bounded laterally by the arcs of the cup-circumference and their radii, as seen in Fig. 2. The cup 5 is pivoted on a pin 6, so that it may swing from one side to the other of the base, and in doing so, it carries its compartments either directly over the platform 4, or clear thereof to one side or the other.

7 is a merchandise holder of any suitable pattern, Fig. 1. It is provided with a properly locked filling cover 8, and it is suitably bolted down on top of the base 1. Through the top plate of the base 1, Fig. 3, is made an opening 9, alined vertically with the platform 4, and adapted to deliver to the cup-compartments.

While the parts thus far described form no part of the claims which I seek by this application to secure, their novel features being claimed by me in a divisional application now pending, it will be well to describe their operation, in order that the coin-control, which I shall presently describe, and which forms the subject matter of this application, may be fully understood.

The goods to be sold, say, pea-nuts, are placed in the holder 7. When the measuring cup 5 is over to its limit on one side, say, to the right, as shown, one of its compartments 5′ is clear of the platform 4, while the other compartment is directly over said platform, which thus forms a bottom for it. This compartment is also directly below the opening 9 from the holder; wherefore, the pea-nuts, by gravity, pass through said opening and fill the said compartment. Now, when the measuring cup is thrown over to its other limit, the filled compartment passes off the platform, and being now open, its contents drop down into the funnel 2, by which they are directed to the drawer 3, which being withdrawn by the purchaser, yields the commodity. In this same movement of the measuring cup, its other compartment has passed upon the platform, and while the first compartment is delivering its contents, the other compartment is being filled from the holder above. A like operation takes place upon a reversal of the cup-movement. To make this movement of the cup possible only upon the deposit of the proper coin, representing the purchase price, and to provide various safeguards against dishonesty, I have the following constructions.

A handle portion 10 projects from the face of the cup 5, to the exterior, in convenient position for the purchaser to grasp, so that he may swing said cup. This handle portion crosses and plays over the top of a coin-groove 11, formed in the face of the base, in some suitable manner, as, for example, by the recessed face of the base and a covering front plate 12. This coin groove has a width just sufficient to receive the thickness of the proper coin, and a depth to receive its diameter. A slit 13 through the handle portion 10 admits the coin to the coin-groove, Fig. 2. Projecting downwardly from the under side of the handle-portion 10, into the coin groove, are two lock-lugs 14 which are separated by a space sufficient to receive the

coin between them, and have a thickness to nicely fill the coin-groove. These lock-lugs have their vertical edges which are farthest removed from each other, beveled, while their opposing edges are square. See Fig. 2. Projecting and playing through the inner wall of the coin-groove, one near each end thereof, is a lock-latch 15, which is normally held extended into the coin-groove, by a spring 16, Fig. 2, bearing on its inner end. This lock-latch is beveled vertically, as shown. Its position, as well as its bevel are such as to provide for the following operation.

Suppose the measuring-cup to be over to one of its limits. The coin slit 13 of its handle-portion 10 is then directly above the lock-latch 15; and the outer lock-lug 14 of said handle-portion is beyond or behind said lock-latch. The unbeveled edges of the two locks are presented to each other, and this opposition effectually prevents the measuring cup from being moved. It is thus locked in place and the machine is inoperative. If, now, the proper coin be pressed down through the slit 13 in the handle portion 10, it will, by contact with the vertically beveled face of the lock-latch 15, press said latch back and hold it flush with the inner wall of the coin-groove. Thereupon, while the coin is holding the latch back, the measuring cup can be moved, for the outer lock-lug 14, pushing the coin ahead of it and immediately following it, passes over the lock-latch, which will spring out to normal position behind it.

At the middle of the coin-groove is a descending channel 17 into which the coin drops, Fig. 1, while the cup proceeds on its way. When the other lock-lug 14, that is, the one in advance, reaches the lock-latch 15 at the other end of the coin-groove, its beveled edge forces back the latch, and passes it; whereupon the latch springs out behind it, and presents the proper obstruction to a return movement. A second coin, now inserted, will have the same effect as I have just described, and the cup may be swung back to its first position. The commodity is, of course, delivered, on each stroke of the cup.

It is possible, with the devices, thus far described, to use the machine dishonestly if the operator should be very observant and skillful. The filled compartment of the cup passes partially off the platform, before the lock-lug passes the lock-latch, as the handle is approaching the end of its stroke. The operator knowing the pea-nuts to be falling into the drawer, may stop the cup before the locking against return takes place, and may, thereupon, without depositing another coin, move the cup back again, and receive a second supply, and so on. This is not likely to happen, but to prevent its occurrence, I have the following safety-locks. At a point on each side is a safety-latch 18, projecting into the coin-groove, and held normally therein by a spring 19, at its inner end. These are beveled on their inner faces. Their position is such as to affect the following operation. Suppose the filled compartment of the measuring cup to be just passing off the platform. At this time, though its limit is not reached, the lock-lug 14 in advance, has reached and with its beveled edge has pushed back the safety-latch 18, which springs out behind it and locks it, even at this stage, against return. Further movement, to complete the stroke must be had, and in this movement the second or following lock-lug, acting on the beveled face of the safety-latch 18, presses it back and both lugs are then beyond it. On the return movement, the lug which is now in advance, presses back the safety-latch with its beveled edge, and the following coin will hold it back and cause the rear lug to pass also. In like manner the safety-latch at the other side, operates. The coin-channel 17, is succeeded, at an angle, by a channel 20, Fig. 1, which delivers the coin into the interior of the hollow base. Into the angle between channels 17 and 20 projects a light spring abutment 21, of sufficient strength to sustain the weight of the coin, but adapted to yield to a pressure, which is obtained by inclining the lower edges of the lock-lugs 14. A coin dropping into the channel 17 is temporarily arrested by the spring abutment 21. A second coin, may drop upon the first and both be held there. A third coin dropping partially into the channel top rests on the second coin, but by the passing lower inclined edge of the following lock-lug is forced down further into the channel; and this pressure is sufficient to liberate the first coin, causing it to pass the abutment and proceed to the base interior; and so on. The object of this is to hold one or more coins in sight through a front window 22, so that a spurious disk may be detected.

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

1. In a merchandise-vending machine, a swinging measuring device, having a handle by which it is operated, in combination with a fixed part provided with a coin-receiving groove, which said handle traverses and along the length of which it plays, and automatic locking devices in said groove, acting to hold said handle and depending for their release on the deposit of the coin, whereby the movement of the handle is controlled.

2. In a merchandise-vending machine, a swinging measuring device having a projecting handle by which it is operated, in combination with a fixed part provided with

a coin-receiving groove having a length substantially equal to the length of travel of the handle, said handle traversing and playing throughout the length of the groove, and automatic locking devices in said groove, near each extremity thereof, acting to hold the handle at the limits of its movement, and depending for their release on the deposit of the coin, whereby the movement of the handle is controlled.

3. In a merchandise-vending machine, and in combination with its commodity holder and delivery base, a swinging measuring device for transferring by its movement, the commodity from the holder to the base, said measuring device having a projecting handle by which it is swung; a coin-groove in the arc of movement of the handle, automatic locking devices in said groove for holding the handle, and means for releasing said devices through the medium of a deposited coin.

4. In a merchandise-vending machine, and in combination with its commodity holder and delivery base, a swinging measuring device within the base, adapted by its movement to receive and deliver a charge of merchandise, and the coin-controlled locking means for said measuring device comprising a coin-groove in the front of the base, a spring-controlled lock-latch projecting into said groove, and having a beveled face adapted to receive the pressure of the inserted coin, to force said latch back, a handle of the measuring device crossing said coin groove, and a lock-lug on said handle playing in the groove to engage with the latch, and to pass it by forcing forward and following the coin.

5. In a merchandise-vending machine, and in combination with its commodity holder and delivery base, a swinging measuring device within the base, adapted to receive and deliver a charge of merchandise, and the coin-controlled locking means for said measuring device, comprising a coin groove extending across the front of the base, with a descending coin-passage at its middle, a spring-controlled lock-latch projecting into said groove near each end thereof, and having a beveled face adapted to receive the pressure of the inserted coin, to force said latch back, a handle of the measuring device crossing said coin groove, and having a coin receiving slit in line with the groove, and a pair of spaced lock-lugs on said handle playing in the groove to alternately engage the latches, and to pass them by forcing forward and following the coin.

6. In a merchandise-vending machine, and in combination with its commodity holder and delivery base, a swinging measuring device to receive and deliver a charge of merchandise and the coin-controlled locking means for the measuring device, comprising a coin groove extending across the front of the base, with a descending coin-passage at its middle, a spring-controlled lock-latch projecting into said groove near each end thereof, and having a beveled face adapted to receive the pressure of the inserted coin, to force said latch back, a handle of the measuring device crossing said coin groove, and having a coin receiving slit in line with the groove, and a pair of spaced lock-lugs on said handle playing in the groove to alternately engage the latches, and to pass them by forcing forward and following the coin, and the spring-controlled safety-latches in said coin groove, disposed to lock the handle against return movement at a point before it reaches the limit of its stroke.

7. In a merchandise-vending machine, the combination of a commodity holder, a delivery base, a swinging measuring device in the base, having a handle portion with a coin-receiving slit and lock-lug having an inclined lower end, a coin-groove in which said lock-lug plays, a spring-latch in the coin-groove to lock the lug, and adapted to release it by the pressure of the coin, a coin-channel into which the lock-lug forces the coin from the coin-groove, and a yielding abutment in said channel to temporarily arrest the passing coin.

8. In a merchandise-vending machine, and in combination with its commodity holder and delivery base, a measuring device to receive and deliver a charge of merchandise and suitable automatic locking devices, depending for their release on the deposit of the purchase price, for controlling the movement of said measuring device, consisting of a coin-groove extending across the front of the base, with a descending coin-passage at its middle, a spring-controlled lock-latch projecting into said groove near each end thereof, and having a beveled face adapted to receive the pressure of the inserted coin, to force said latch back, a handle of the measuring device crossing said coin groove, and having a coin receiving slit in line with the groove, and a pair of spaced lock-lugs on said handle playing in the groove to alternately engage the latches, and to pass them by forcing forward and following the coin.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRY ELWOOD HUNTER.

Witnesses:
WM. F. BOOTH,
D. B. RICHARDS.