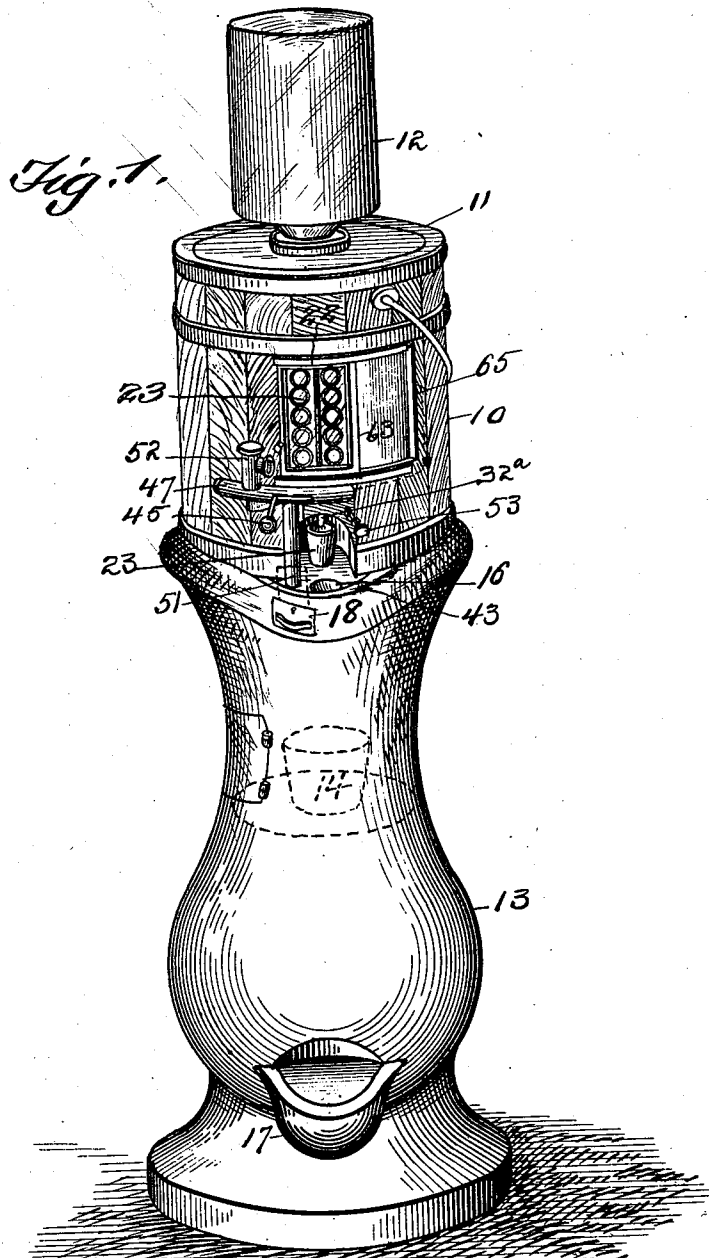


M. P. HENVIS.
 VENDING APPARATUS.
 APPLICATION FILED DEC. 17, 1909.

Patented Dec. 27, 1910.

4 SHEETS-SHEET 1.

979,854.



Inventor

Maurice P. Hervis.

Witnesses

R. A. Howell
W. M. Miller.

By

Alfred T. Sage.

Attorney

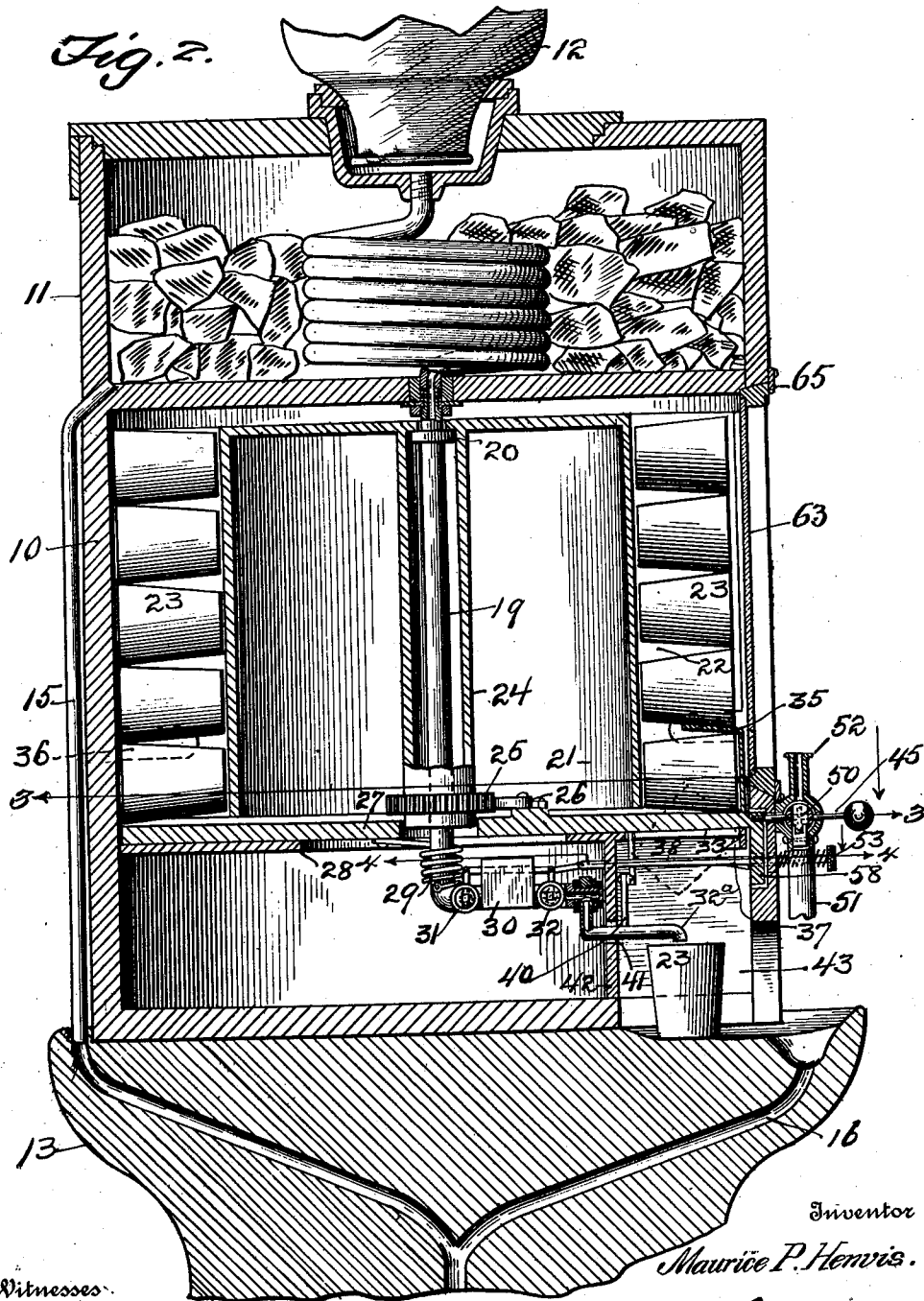
M. P. HENVIS.
 VENDING APPARATUS.
 APPLICATION FILED DEC. 17, 1909.

979,854.

Patented Dec. 27, 1910.

4 SHEETS—SHEET 2.

Fig. 2.



Inventor

Maurice P. Hervis.

Witnesses

R. B. Conwell.
 W. M. Miller.

By

Alfred V. Sage.

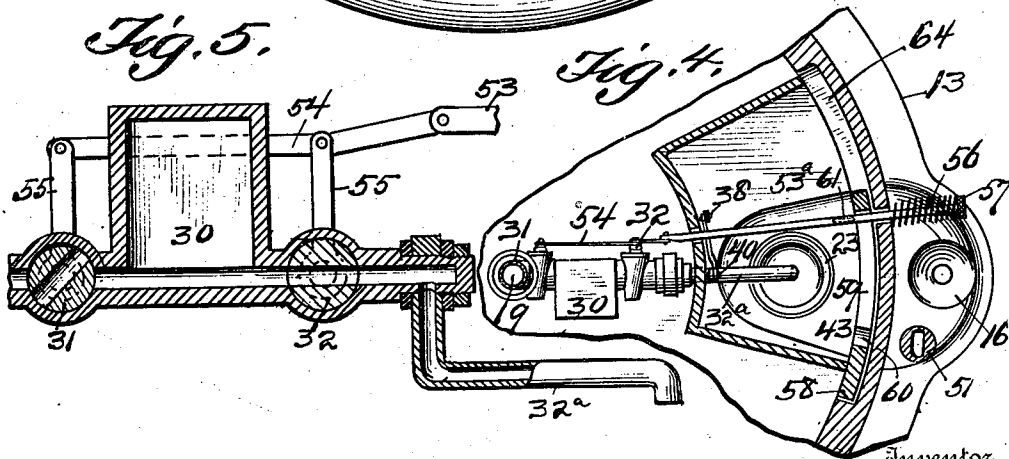
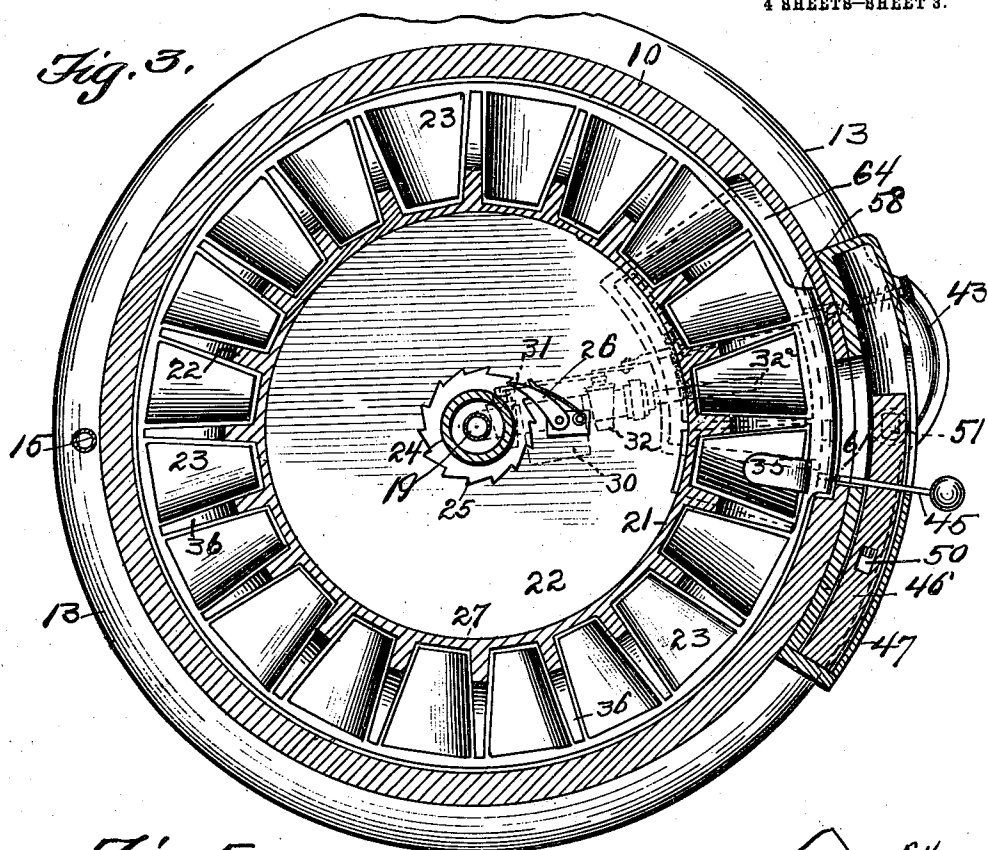
Attorney

M. P. HENVIS.
VENDING APPARATUS.
APPLICATION FILED DEC. 17, 1909.

979,854.

Patented Dec. 27, 1910.

4 SHEETS—SHEET 3.



Witnesses

R. A. Foswell.
W. M. Miller.

Maurice P. Hervis.

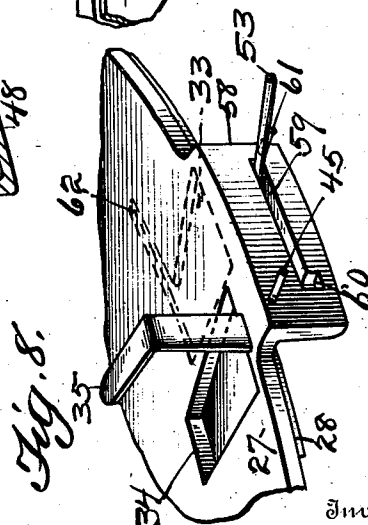
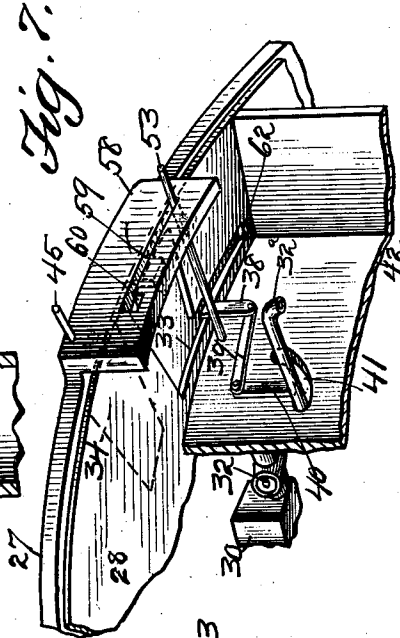
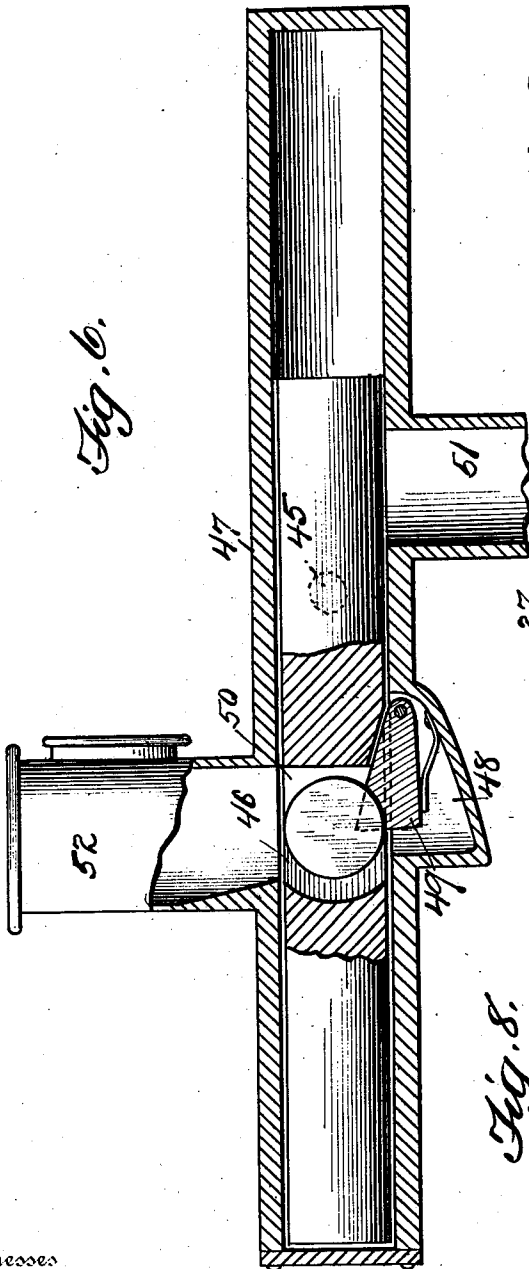
By

Alfred T. Gaye
Attorney

M. P. HENVIS.
 VENDING APPARATUS.
 APPLICATION FILED DEC. 17, 1909.

979,854.

Patented Dec. 27, 1910.
 4 SHEETS—SHEET 4.



Witnesses

R. A. Foswell.
W. M. Miller.

By

Inventor
Maurice P. Hervis.
Alfred T. Sage.
 Attorney

UNITED STATES PATENT OFFICE.

MAURICE P. HENVIS, OF WASHINGTON, DISTRICT OF COLUMBIA.

VENDING APPARATUS.

979,854.

Specification of Letters Patent.

Patented Dec. 27, 1910.

Application filed December 17, 1909. Serial No. 533,598.

To all whom it may concern:

Be it known that I, MAURICE P. HENVIS, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Vending Apparatus, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a vending apparatus and particularly to a construction adapted to deliver a cup, upon the insertion of a coin, in position to be filled with liquid by a subsequently operated device.

The invention has for an object to provide a novel and improved construction by which a number of cups may be stored and separately delivered in upright position to receive liquid upon the operation of a separate mechanism and thus insure a positive delivery of a single cup in proper position to be filled.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawings Figure 1 is a perspective of the apparatus; Fig. 2 is an enlarged vertical section; Fig. 3 is a section on line 3—3 of Fig. 2; Fig. 4 is a section on line 4—4 of Fig. 2; Fig. 5 is a detail section of the measuring chamber and delivery spout; Fig. 6 is a section of the coin controlled mechanism; Fig. 7 is a detail perspective of the front of the delivery plate; and Fig. 8 is a similar view of the under face of this plate.

Like numerals of reference refer to like parts in the several figures of the drawing.

The numeral 10 designates the casing of the vendor which may be of any desired construction or configuration, for instance that of a bucket as shown in Fig. 1. This casing is formed at its upper portion with a refrigerating chamber 11 adapted to receive a bottle 12 or other suitable liquid receptacle. The casing may be supported in any preferred manner, for instance by a standard 13 provided with a waste liquid chamber 14 which communicates with the refrigerating chamber by a drain pipe 15, while the front of the standard at the delivery opening has a drain passage 16 extending to said waste chamber. The lower part of the standard is provided with a receptacle 17 for used cups and at the upper portion thereof a coin drawer 18 is formed,

to communicate with the coin controlling mechanism.

The conducting pipe 19 from the refrigerating chamber is provided with a collar 20 upon which the cup drum or barrel 21 is pivotally supported. This drum is formed with a series of radial guides 22 between which cups 23 are disposed upon their sides one upon another as shown in Fig. 2. This drum is provided with a tubular central shaft 24 surrounding the pipe 19 and having at its lower portion a ratchet feed 25 adapted to cooperate with a pawl 26 spring pressed and carried by the oscillating delivery plate 27 which is mounted upon the base 28 and is connected to the spring 29 disposed at its pivot as shown in Fig. 2, to restore it to its initial position after being shifted toward the right for delivering a cup. The conducting pipe 19 is provided below the base 28 with a measuring chamber 30 having an inlet cock or valve 31 at one side thereof and a discharge cock or valve 32 at the opposite side thereof. Beyond the discharge cock a pivoted or swiveled spout 32^a is attached to the valve connection and adapted to deliver the liquid to a cup when in position beneath it. The base plate has an aperture 33 adapted to cooperate with an aperture 34 in the delivery plate and above the latter a retaining finger 35 extends to support cups above the one being delivered through the apertures. The drum is fed forward intermittently or step by step so that the lowermost cups from the different radial guides are successively delivered and the remaining cups feed downward by gravity. This finger operates through a recess 36 in the guide walls 22 and the cup as it falls through the apertures is guided into upright position by the inclined face 37 at the front of the casing as shown by dotted lines in Fig. 2. For the purpose of removing the delivery spout from contact with the falling cup as it is delivered, the plate is formed with a depending arm 38 extending through slot 62 in the base 28 and connected with spout arms or links 39 and 40 so that as the plate is moved toward the right the spout is swung upward within the curved slot 41 in the front wall 42 of the delivery chamber 43 and when the spring 29 returns this plate to its initial position the spout is again swung above a delivered cup to discharge liquid thereto. The delivery plate is provided with an oper-

ating arm or handle 45 extending through a slot 66 at the front of the casing 10 and may be controlled by any desired coin mechanism, for instance as shown in Fig. 6, where the arm 45 carries a plunger disposed within a casing 47 and provided with a coin recess 50. This recess when in locked position is in alinement with the inlet chute 52. Beneath this chute the casing 47 is formed with a chamber 48 within which a spring actuated detent 49 is pivoted so that its free end will enter the coin recess 50 and engage an end wall thereof to prevent movement of the plunger until a coin is inserted therein to depress the detent and permit free movement of the plunger toward the right of the casing. This carries the coin into alinement with a chute 51 through which it is discharged into the money drawer 18, as shown in Fig. 1.

The valves controlling the measuring chamber are manually operated independent of the cup delivery and subsequently thereto. This may be accomplished by a push rod 53 pivoted to a connecting rod 54 which couples the valve levers 55 for simultaneous movement of both valves (Fig. 5). The rod 53 is forced outward by a coiled spring 56 disposed between the front of the casing and the head 57 on the rod. When in outward position the valve 31 is opened to fill the measuring chamber and the valve 32 closed, and when the rod is pushed inward a reverse operation of the valves occurs to deliver the water from said chamber. Under some conditions it is desirable to hold this rod 53 against movement until a cup has been delivered and this may be done by a depending plate 58 upon the front of the delivery plate and having a longitudinal slot 59 through which the rod passes and an enlarged opening 60 at the left end of said slot. The rod is provided with a spring catch 61 which is retracted as the rod is pressed inward and springs out to engage the inner face of the depending plate 58. This holds the push rod inward and the measuring chamber empty until the travel of the delivery plate toward the right brings the opening 60 into alinement with the rod which then springs outward to fill the measuring chamber. In order to deliver the liquid the rod is again pushed inward by hand while the delivery plate and coin plunger are immediately restored to their position at the left. The delivery plate is limited in its travel by the plate 58 which carries the handle 45 and is disposed in the recess 64 in the casing. The drum may be refilled in any desired manner, for instance, through a slide door 63 mounted in ways 65 at the front of the casing. When this slide is opened the cups are successively inserted in the drum guides upon their sides by turning the drum away from the feed

pawl upon the delivery plate. This avoids nesting the cups and provides a large storage capacity while maintaining the cups separated for accurate delivery. The cups are thus protected against injury and dust.

When it is desired to operate the machine for the delivery of a cup a coin is inserted in the chute Fig. 6 and enters the slot in the coin plunger which is carried by the handle of the delivery plate. This coin depresses the holding detent and permits the plate to be swung from left to right during which movement a cup falls through the opening therein Fig. 8 and is guided into upright position to receive liquid by the inclined face as shown by dotted lines in Fig. 2. The superposed cups are held in position by the finger above the apertures Figs. 2 and 8. The movement of the plate turns the cup drum one step forward through the pawl and ratchet Fig. 3. The plate is also connected to the delivery spout from the measuring chamber in order to swing it to one side while a cup is being delivered and it is immediately restored to position above the cup by the spring which returns the plate to the left. The cups are successively delivered from the lower series in the drum and those above feed down the guides by gravity.

The delivery of water is manually controlled by the push rod connected to the valves at opposite sides of the measuring chamber as shown in Fig. 5. When the rod is pushed inward the chamber is discharged and when forced outward by the spring the chamber is refilled. If desired this rod may be locked when once pushed inward by the spring catch thereon which engages behind the front wall of the delivery plate. When the plate reaches its extreme right of travel the rod springs outward through the enlarged opening thus refilling the empty chamber which is discharged into a cup by subsequently pushing the rod inward.

The invention is not confined to the joint delivery of cups and liquid and may be used for the delivery of cups alone by omitting the liquid controlling parts and means for supplying liquid thereto. It will therefore be seen that this invention provides a simple, efficient and economically constructed apparatus adapted for the delivery of either cup or cups and water.

Having described my invention and set forth its merits, what I claim and desire to secure by Letters Patent is—

1. In a vending apparatus, a drum having upon its periphery a series of guide ways adapted to retain a plurality of superposed articles in horizontal position, a movable delivery device disposed beneath said guide ways, and means for supporting one end of an article to cause it to assume a vertical position as delivered.

2. In a vending apparatus, a vertically

disposed drum having upon its periphery a series of parallel guide ways adapted to contain superposed articles in horizontal position, an oscillating delivery plate disposed
5 beneath said guide ways and connected to rotate the drum, and means for supporting one end of an article during its delivery to cause it to assume a vertical position.

3. In a vending apparatus, a drum having
10 upon its periphery a series of vertical guide ways adapted to retain superposed articles in horizontal position, an oscillating plate beneath said guide way and movable in one direction to impart an intermittent move-
15 ment to said drum, means for automatically restoring said plate to its initial position, and means for supporting one end of an article during its delivery to cause it to assume a vertical position.

20 4. In a vending apparatus, a drum having upon its periphery a series of vertical guide ways adapted to retain superposed articles in horizontal position, an oscillating plate beneath said guide ways and connected to
25 intermittently move said drum, means for automatically restoring said plate to its initial position, means for latching said plate in restored position, and means for supporting one end of an article during its
30 delivery to cause it to assume a vertical position.

5. In a vending apparatus, a drum having upon its periphery a series of parallel vertical guide ways adapted to retain a series
35 of cups in horizontal position, a delivery plate disposed beneath said drum and connected to rotate the same, and means for guiding said cups into upright position as delivered.

40 6. In a vending apparatus, a vertically disposed cup retaining drum adapted to retain a series of cups in horizontal position, movable means beneath said drum connected to rotate it and for releasing cups therefrom,
45 and means for guiding a released cup into upright position.

7. In a vending apparatus, a vertically disposed cup retaining drum adapted to retain a series of cups in horizontal position,
50 movable means beneath said drum connected to rotate it and for releasing cups therefrom, and an inclined face disposed to guide a released cup into upright position.

8. In a vending apparatus, a vertically
55 disposed cup retaining drum adapted to retain a series of cups in horizontal position, movable means beneath said drum connected to rotate it and for releasing a cup therefrom, and an inclined guide face disposed to
60 engage one end of a released cup.

9. In a vending apparatus, a vertically disposed cup retaining drum adapted to retain a series of cups in horizontal position,
65 an apertured oscillating plate beneath said drum and connected to rotate it, and means

beneath said plate to guide a delivered cup into upright position.

10. In a vending apparatus, a pivoted cup retaining drum adapted to retain a series of cups in horizontal position and provided
70 with a ratchet, and an apertured oscillating delivery plate having a pawl to engage and intermittently feed said drum.

11. In a vending apparatus, a pivoted cup retaining drum adapted to retain a series of
75 cups in horizontal position and provided with a ratchet, an apertured oscillating delivery plate, and a spring actuated pawl upon said plate to engage said ratchet.

12. In a vending apparatus, a pivoted
80 drum having upon its periphery a series of vertical cup retaining guides, a ratchet upon said drum, an apertured delivery plate beneath said drum, a pawl upon said plate to intermittently feed said drum by engage-
85 ment with the ratchet thereon.

13. In a vending apparatus, a pivoted drum having upon its periphery a series of vertical cup retaining guides, a ratchet upon
90 said drum, an apertured delivery plate beneath said drum, a feed pawl upon said plate to engage said ratchet, and a supporting finger spaced above said aperture and adapted to travel through said guides.

14. In a vending apparatus, a pivoted
95 drum having upon its periphery a series of vertical cup retaining guides, a ratchet upon said drum, an apertured delivery plate beneath said drum, a feed pawl upon said plate to engage said ratchet, a supporting
100 finger spaced above said aperture and adapted to travel through said guides, and a restoring spring connected to said plate.

15. In a vending apparatus, a pivoted drum having upon its periphery a series of
105 vertical cup retaining guides, a ratchet upon said drum, an apertured delivery plate beneath said drum, a feed pawl upon said plate to engage said ratchet, a projection from the front of said plate, and a casing
110 having a recess to receive said projection.

16. In a vending apparatus, a casing having a chamber at its upper portion and a supporting means depending therefrom, a
115 drum rotatably mounted upon said means and having vertical cup retaining guides upon its periphery, a ratchet carried by said drum, an apertured delivery plate pivotally supported beneath said drum and provided with an operating handle, and a pawl carried by
120 said plate to engage said ratchet.

17. In a vending apparatus, a casing having a chamber at its upper portion and a supporting means depending therefrom, a
125 drum rotatably mounted upon said means and having vertical cup guides upon its periphery, an apertured delivery plate pivotally supported beneath said drum, means upon said plate for intermittently
130 rotating said drum, and a tension spring

connected to said supporting means and plate for restoring the latter to its initial position.

18. In a vending apparatus, a pivoted
5 drum having upon its periphery a series of vertical cup retaining guides, a ratchet upon said drum, an apertured delivery plate beneath said drum, a pawl upon said plate to intermittently feed said drum by engage-
10 ment with the ratchet thereon, a casing for said drum provided with a filling opening in its side wall, and a closure for said opening.

19. In a vending apparatus, a casing, a
15 drum disposed therein and having upon its

periphery a series of parallel vertical guide ways adapted to retain superposed articles in horizontal position, an apertured base plate beneath said ways, an apertured delivery plate mounted thereon beneath the
20 ways and connected to rotate said drum, and means for supporting one end of an article during its delivery to cause it to assume a vertical position.

In testimony whereof I affix my signature
25 in presence of two witnesses.

MAURICE P. HENVIS.

Witnesses:

ALFRED T. GAGE,

JULIEN E. MATTERN.