

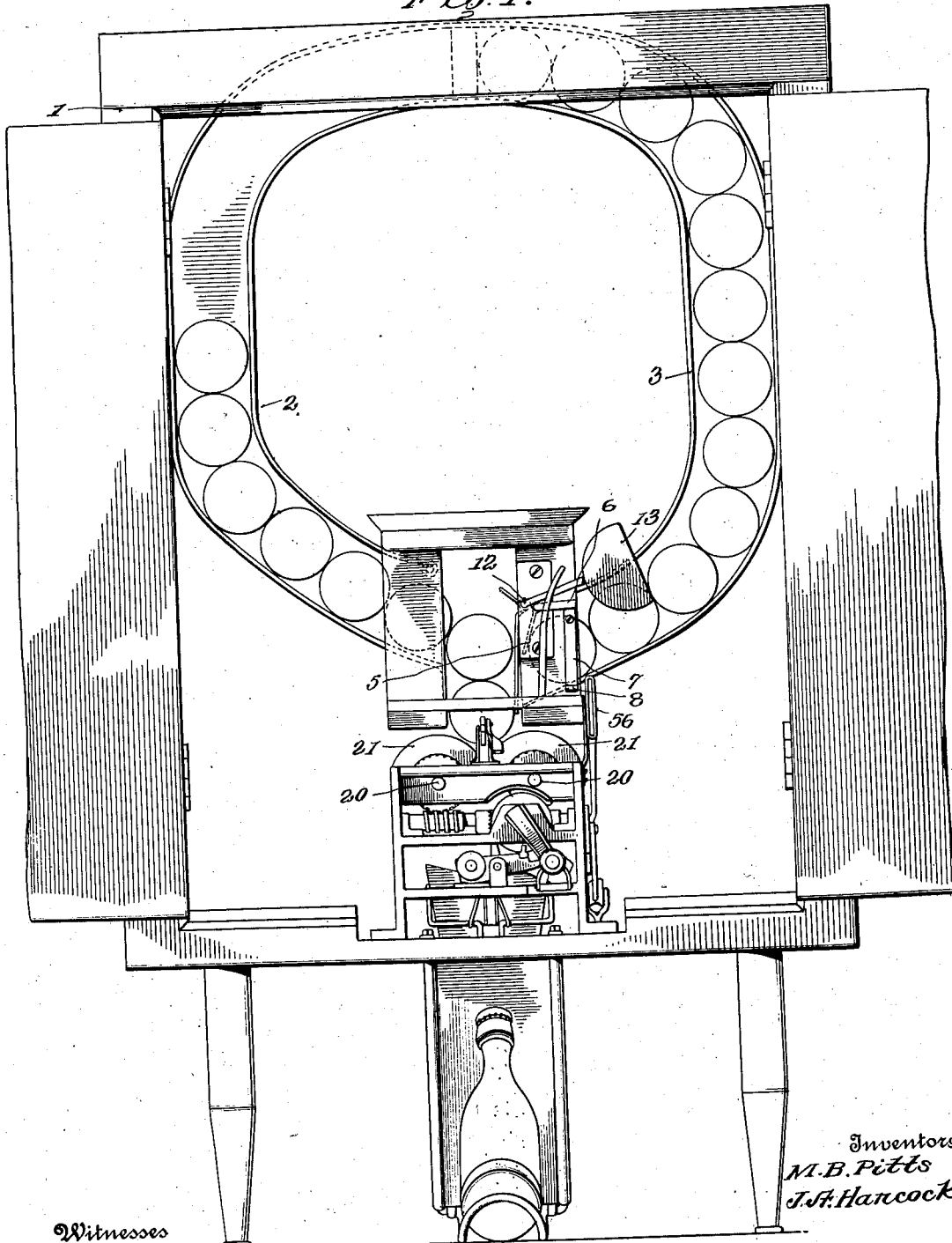
M. B. PITTS & J. A. HANCOCK.
 VENDING APPARATUS.
 APPLICATION FILED AUG. 8, 1910.

1,022,753.

Patented Apr. 9, 1912.

4 SHEETS—SHEET 1.

Fig. 1.



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Fig. 2.

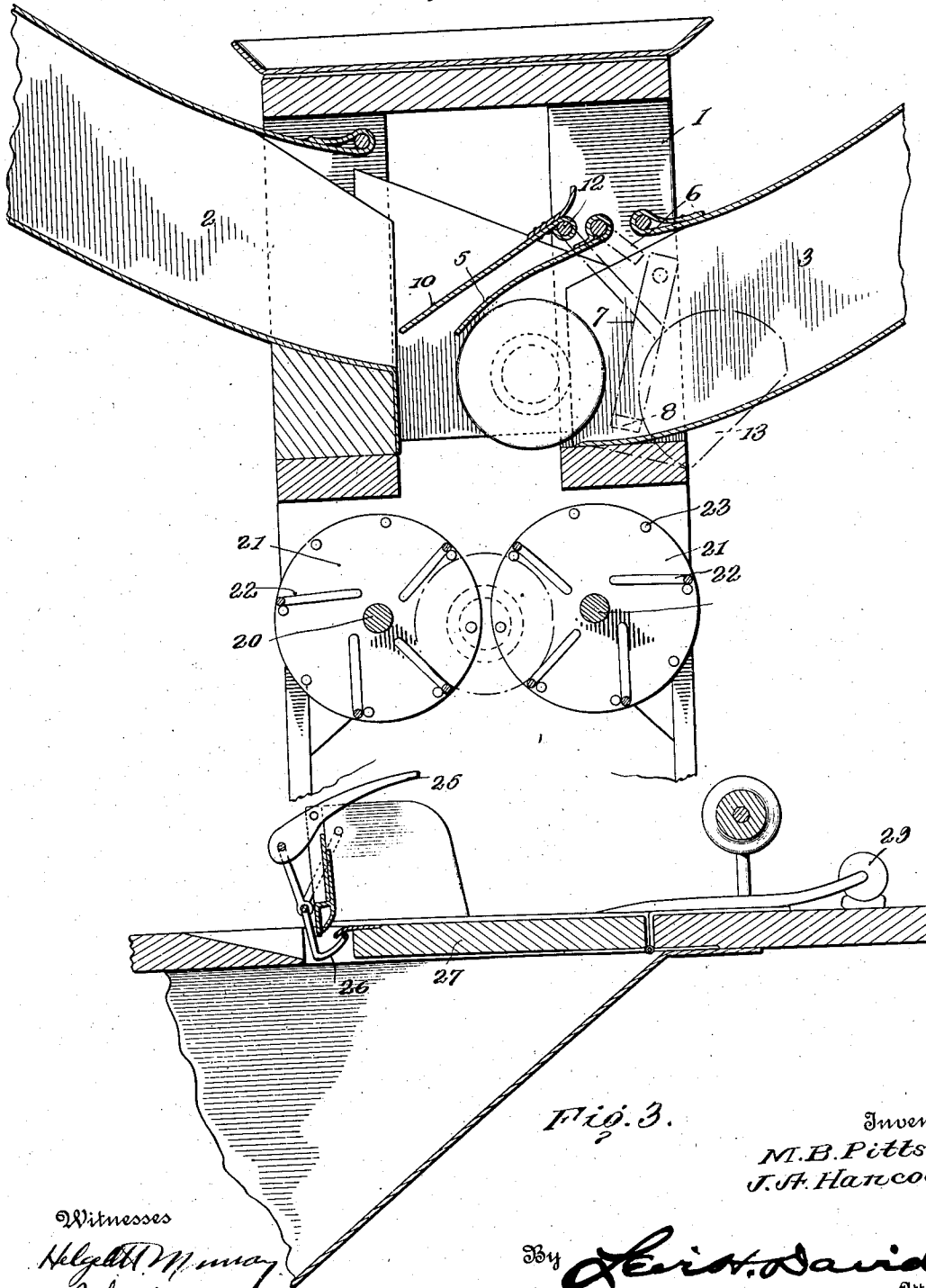


Fig. 3.

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4 SHEETS—SHEET 3.

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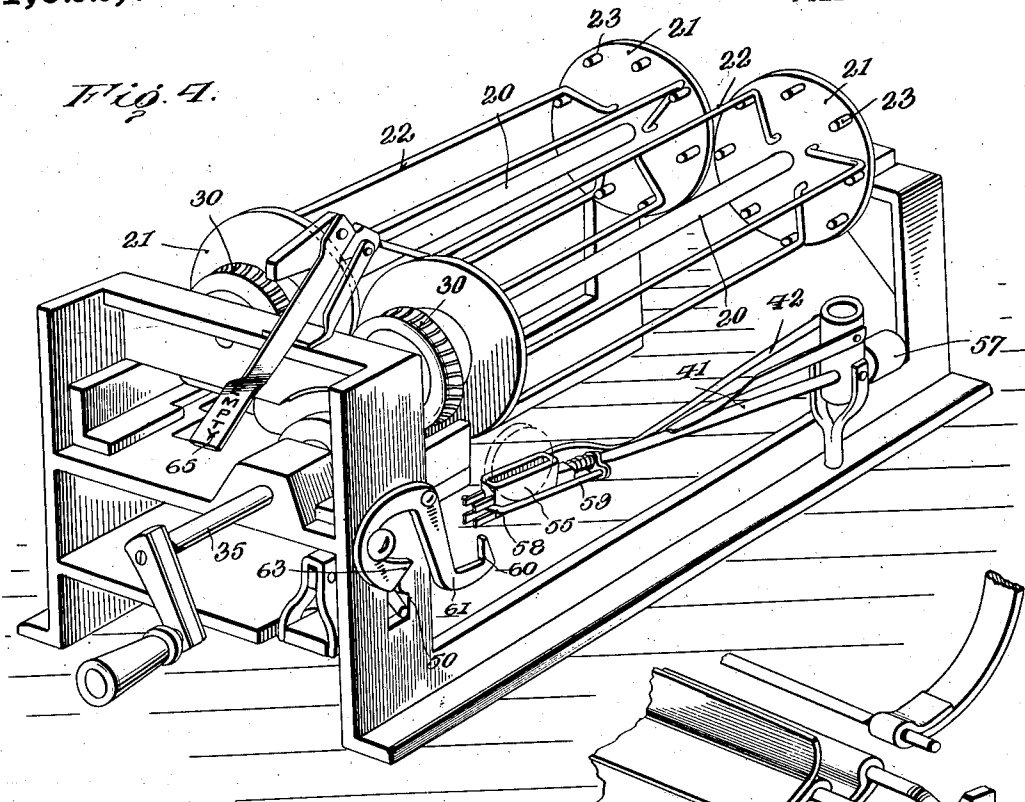


Fig. 10.

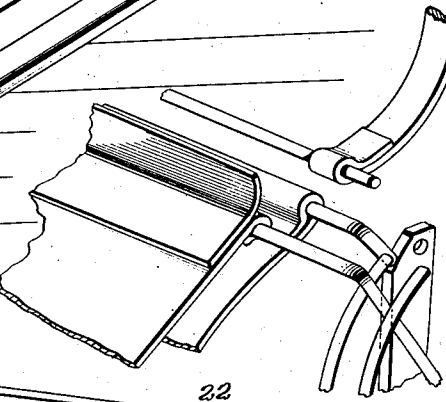
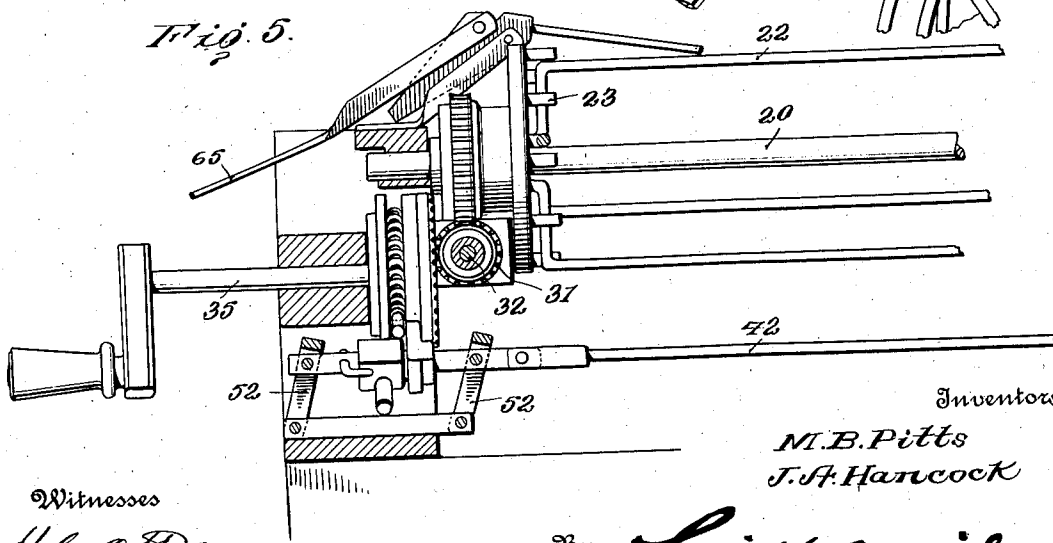


Fig. 5.



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4 SHEETS—SHEET 4.

Fig. 6.

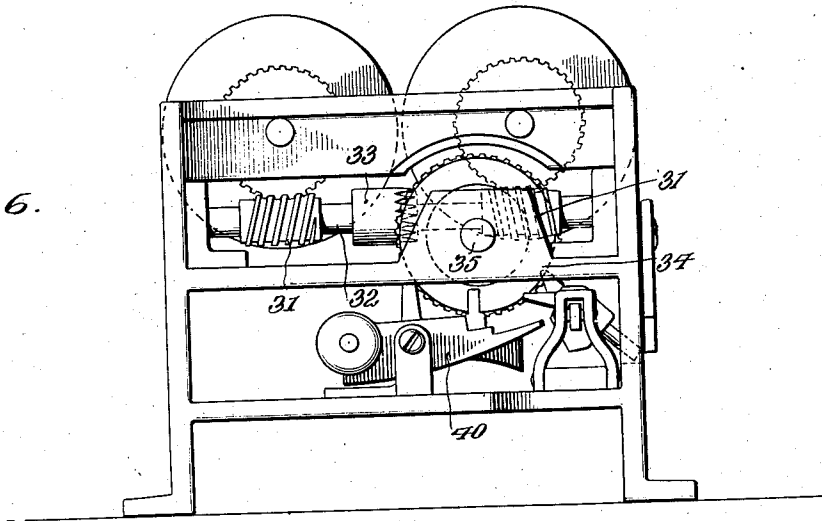


Fig. 7.

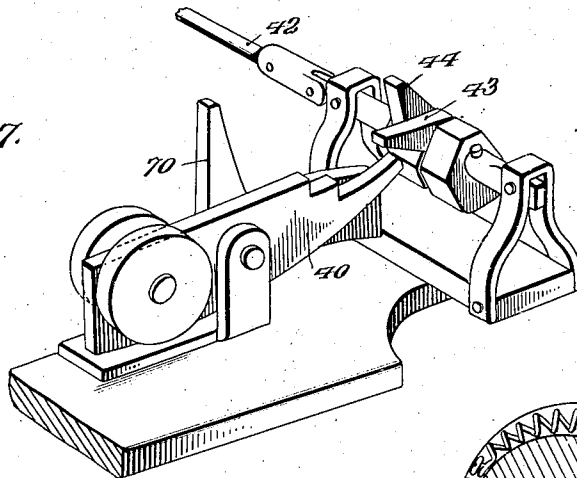


Fig. 8.

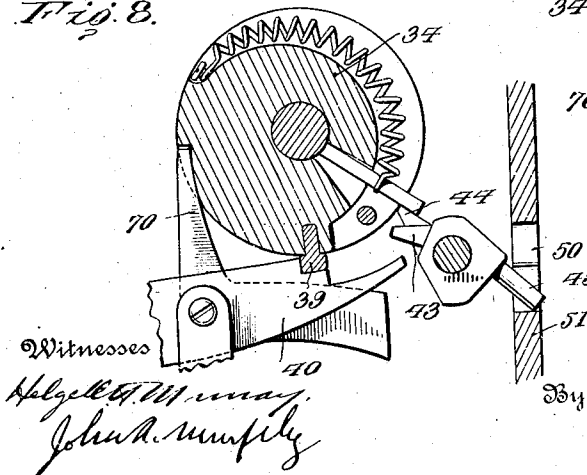
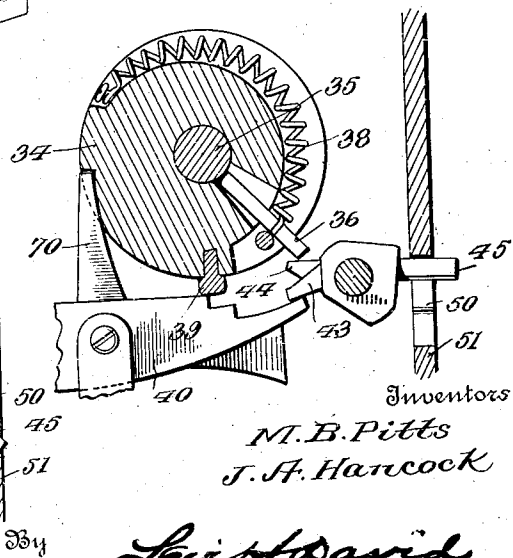


Fig. 9.



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UNITED STATES PATENT OFFICE.

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VENDING APPARATUS.

1,022,753.

Specification of Letters Patent.

Patented Apr. 9, 1912.

Application filed August 8, 1910. Serial No. 576,254.

To all whom it may concern:

Be it known that we, MATTHEW B. PITTS, of Toccoa, in the county of Stephens, State of Georgia, and JOHN A. HANCOCK, of Columbia, in the county of Richland and State of South Carolina, have invented certain new and useful Improvements in Vending Apparatus; and we do hereby 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.

The primary object of this invention is to simplify and cheapen the cost of construction of that class of vending machines particularly adapted for handling bottled goods. And further objects of our present invention are to enable a comparatively large number of bottles to be stored and delivered one at a time; and, in some instances, to enable bottles differing in contents to be handled in the same machine; and also to provide improved means for controlling the discharge of the bottles.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation. Fig. 2 is an enlarged vertical sectional view through the lower end of the raceways. Fig. 3 is a view of the trap-door. Fig. 4 is a view of the bottle discharger. Fig. 5 is a sectional view thereof. Fig. 6 is a view of the coin controlled mechanism. Figs. 7, 8 and 9 are details thereof. Fig. 10 is a fragmentary view in perspective of a stop and wing and parts acting in conjunction therewith.

Referring to the drawings, 1 designates a casing which is preferably in the form of a cabinet. Within this casing are raceways 2 and 3 which conjointly are of approximately scroll formation. The two raceways which are divided into two parts by a cross piece at the top, are composed of any suitable material, preferably sheet metal and have inner and outer approximately parallel portions. The lower or discharge end of the raceway 2 terminates a short distance above the lower or discharge end of raceway 3. The discharge of bottles from the latter cannot occur until all of the bottles have been discharged from raceway 2. For this purpose various means may be employed, but that shown comprises a stop plate 5 which

normally depends across raceway 3 and its pivot rod is cranked at 6 and normally locked by a pivoted bar 7 having a forwardly projecting portion 8 at its lower end. When the last bottle has been delivered from raceway 2 lock bar 7 is automatically disengaged to permit stop plate 5 to turn and allow bottles to be discharged from raceway 3. For this purpose we employ a wing 10 carried by a pivoted rod 12, which latter is cranked at one end and equipped with a weight 13 for engaging portion 8 of bar 7. The wing 10 normally occupies a vertical position across raceway 3 as long as there is a supply of bottles in raceway 2. When the last bottle from the latter has cleared such wing the latter will be thrown outwardly under the action of the weight, which in turn will release lock bar 7 so that stop plate 5 will permit bottles to be discharged from raceway 3.

In some instances it may be desired to provide a machine having double capacity, by duplicating the raceways and the discharge controlling mechanism. This, it will be understood, is within the scope of our invention.

The means for controlling the discharge of the bottles will now be described. It is shown as comprising two reels consisting of parallel shafts 20, disks 21 fast thereon and wire bails 22 carried by the disks, each bail being loosely pivoted at its opposite ends to the disks and capable of swinging freely between stop pins 23 carried by the disks. Each bail has, in consequence, a limited range of movement. The opposite bails at the tops of the two reels form the support for each bottle as it is dropped onto them from the raceway, and as the bottle is carried through and downwardly between the two reels until the spreading of the bails allows it to be dropped, the reels being turned in opposite directions, that is, toward each other. The discharged bottle will then strike against a lever 25, disengaging a catch 26 of a trap door 27 and be delivered through an outlet chute 28, the trap door being automatically returned by a weight 29 and reengaged by the catch. The two shafts 20 carry worm wheels 30 which engage worms 31 on a transverse shaft 32 which in turn carries a gear 33 which meshes with a toothed disk 34 loose on an operating crank-shaft 35, the handle

of the latter projecting through the front of the casing.

The crank disk 34 is loose on crank-shaft 35, which latter carries a rigid arm 36 which projects through a radial slot in the disk and is yieldingly connected to the latter by a spring 38. An outwardly projecting lug 39 of the disk is arrested, at the end of each operation, by a catch lever 40, the disengagement of which is necessary to permit the disk to be turned by arm 36 of the crank-shaft. When the proper coin has been deposited it will lower one end of a lever 41, the turning of which on its fulcrum effects the forward shifting of a rod 42 upon which are loosely mounted two laterally projecting fingers 43, 44. The longitudinal movement of rod 42 places the finger 44 in the path of arm 36, and as such finger is turned by said arm it will carry with it the finger 43 which is moved into the plane of catch-lever 40 by a projection 45 engaging an inclined wall 50 in an opening in the fixed frame 51. The finger 43 moves lever 40 out of the path of lug 39. The forward end of rod 41 is pivotally supported and carried by two yokes 52.

Although it is obvious that various coin-controlled mechanisms may be employed in connection with our apparatus, yet we prefer to equip the lever 41 with a coin-receiving pocket 55 which is normally held against the lower end of the coin chute 56 by weight 57. The coin when first dropped into the pocket is prevented from falling therefrom by the laterally extended finger 58 of a spring-pressed bar 59, which finger projects through slots in the walls of the pocket, and is projected beyond the opposite or inner wall so that when the pocket is lowered, under the weight of a coin, the projecting end of the finger will engage the hooked end 60 of a lever 61, which latter will be operated so as to move the coin retaining bar 59 to permit the coin to be discharged. This movement of the coin-releasing lever is effected simultaneously with the release of catch lever 40. We have shown the end of the long arm of this lever 61 as being inclined at 63 in opposite direction to the inclination of wall 50, so that the two inclined portions present a V-space into which the projection 45 will enter and turn lever 61 on its fulcrum.

65 is an indicator for making known when the last bottle has been delivered. It is shown in the form of an arm pivoted to a weighted lever 66 against one arm of which the bottle on the reels will always bear, thereby holding the indicator arm retracted, but when the last bottle has been delivered the weighted end of the lever will project the indicator arm through an opening in the front of the cabinet.

The distance between the discharge ends

of the raceways and the top of the reels is comparatively slight, with the result that the bottles have but a short distance to fall before being arrested by the reels. The bails of the latter have a certain amount of resiliency, being preferably composed of stout wire. The bottles in passing from the raceways to the reel are guided by a vertical passageway, the plane of which is intersected by the reels. Reverse movement of the crank-shaft is prevented by a retaining pawl 70 engaging a notch in disk 34.

In practice, upon deposit of a proper coin the lever 41 will be turned on its fulcrum to overcome the weight 57 and rod 42 will be moved longitudinally forward so that the finger 44 will be in the path of travel of arm 36, and upon crank-shaft 35 being turned such finger will cause the turning of finger 43, and the projection thereof upon engaging the inclined wall 50 will move such finger longitudinally of its axis to cause it to engage the end of catch lever 40 which will be thereupon moved out of the way of lug 39 and permit crank disk 34 to be turned by the arm 36 pulling on spring 38. The revolution of this disk, through the described train of gearing, effects the rotation of the two reels in opposite directions, causing them to carry downwardly between them the bottle which was previously resting on the two topmost bails, and to discharge the same onto the trap door through which it will fall to the delivery chute, such trap door being automatically unlocked by the bottle engaging the lever of the retaining catch.

It will be understood that changes may be made in the construction and arrangement of parts without departing from the spirit of our invention.

We claim as our invention:—

1. A vending apparatus for bottled goods comprising oppositely-extended raceways, a vertically-disposed passageway into which said raceways open, a discharger beneath said passageway, a stop plate projected across the discharge end of one raceway, means for locking such stop plate, and a pivoted trip normally held inoperative by the stock from the other raceway and designed to automatically release said locking means when the supply from the latter raceway is exhausted.

2. A vending apparatus for bottled goods comprising oppositely-extended raceways, a vertically-disposed passageway into which said raceways open, a discharger beneath said passageway, a stop plate projected across the discharge end of one raceway, a pivoted wing also projected across the discharge end of such latter raceway, and a weighted arm operated by said wing for releasing said stop plate when the supply is exhausted from the other raceway.

3. A vending apparatus for bottled goods comprising oppositely-extended raceways, a vertically-disposed passageway into which said raceways open, a discharger beneath said passageway, a stop plate projected across the discharge end of one raceway, means for locking such stop plate, a pivoted wing also projected across the discharge end of such latter raceway, and a weighted arm for releasing said locking means when the supply is exhausted from the other raceway.

4. A vending apparatus for bottled goods comprising oppositely-extended raceways, a vertically-disposed passageway in which said raceways open, a discharger beneath said passageway, a stop plate projected across the discharge end of one raceway, means for locking such stop plate, a pivoted wing also extended across the discharge end of such latter raceway and normally held in closed position by the bottles from the other raceway, a crank rod carrying such wing, and a weight thereon for releasing said locking means.

5. The combination, in a vending apparatus for bottled goods, of oppositely-extended raceways, a vertically-disposed passageway into which said raceways open, a discharger beneath said passageway, a stop plate extended across the discharge end of one raceway and having a crank rod, a pivoted lock-

ing arm designed to engage said crank rod, a pivoted wing plate also extended across the discharge end of said raceway and normally so held by the bottles from the other raceway, a crank rod carrying said wing and having a weight for engaging said locking bar for releasing said stop plate.

6. The combination with two reels for receiving the discharging bottles, one at a time, and comprising two shafts having each two disks, lugs projecting from such disks, and bails pivoted to said disks and limited in their movements by said lugs, of a shaft arranged transversely of the reels, gearing between said shaft and the reel shafts, an operating crank shaft, and a disk thereon geared to said transverse shaft.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

MATTHEW B. PITTS.
JOHN A. HANCOCK.

Witnesses as to signature of Matthew B. Pitts:

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B. F. DAVIS.

Witnesses as to signature of John A. Hancock:

W. M. SHANNON,
S. S. BLACKBURN.