

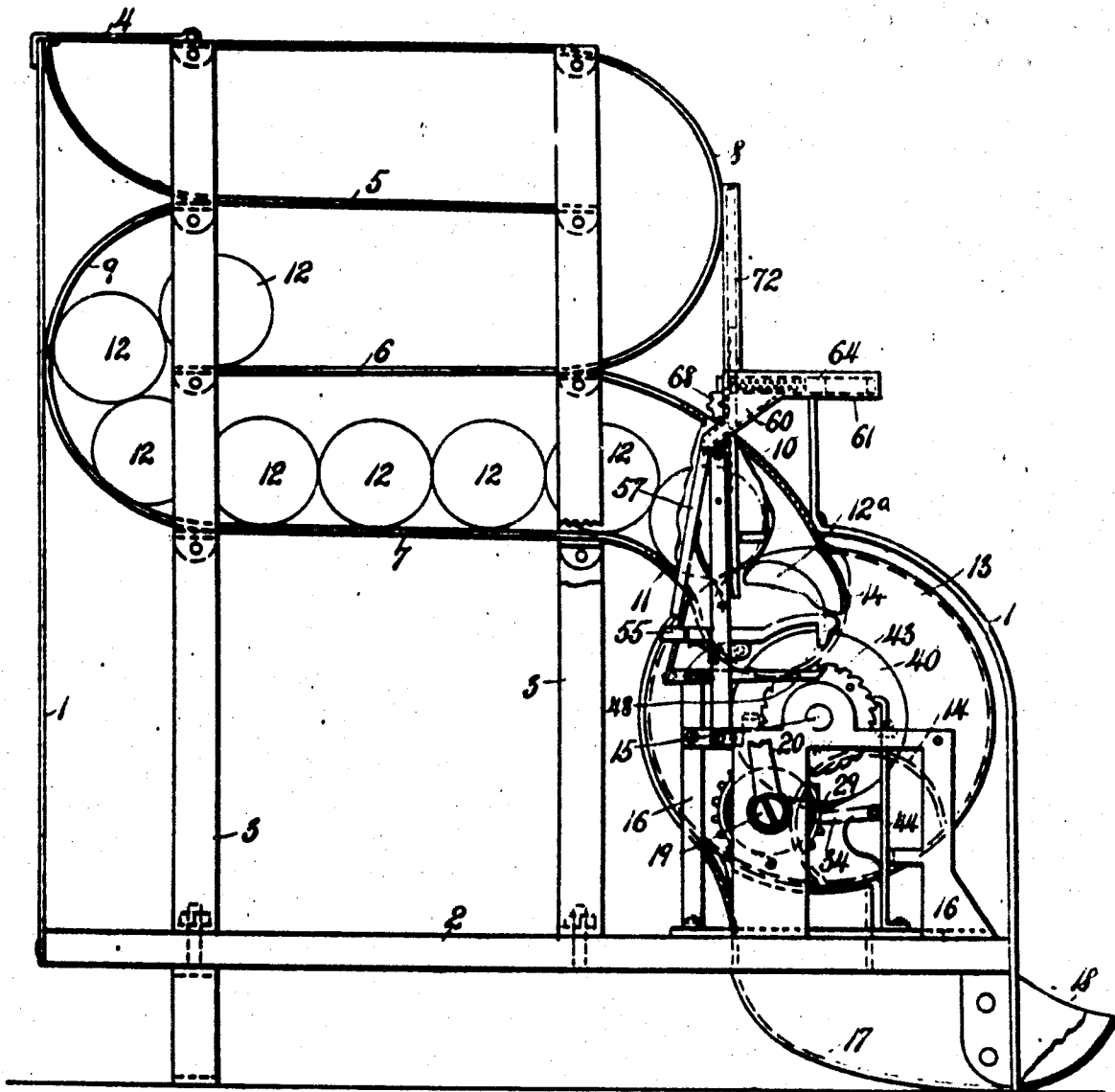
J. H. CARROLL.
VENDING MACHINE.
APPLICATION FILED AUG. 4, 1898.

948,660.

Patented Feb. 8, 1910.

4 SHEETS—SHEET 1

Fig. 1.



Witnesses

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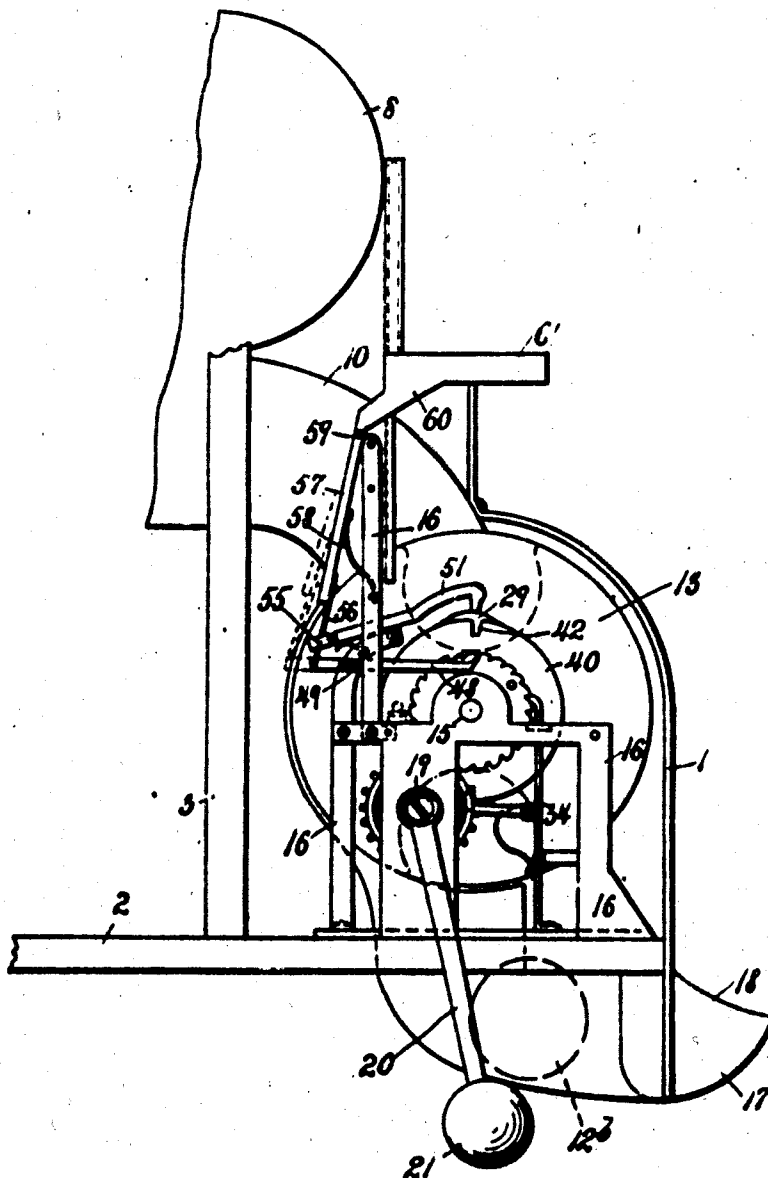
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Fig. 2.



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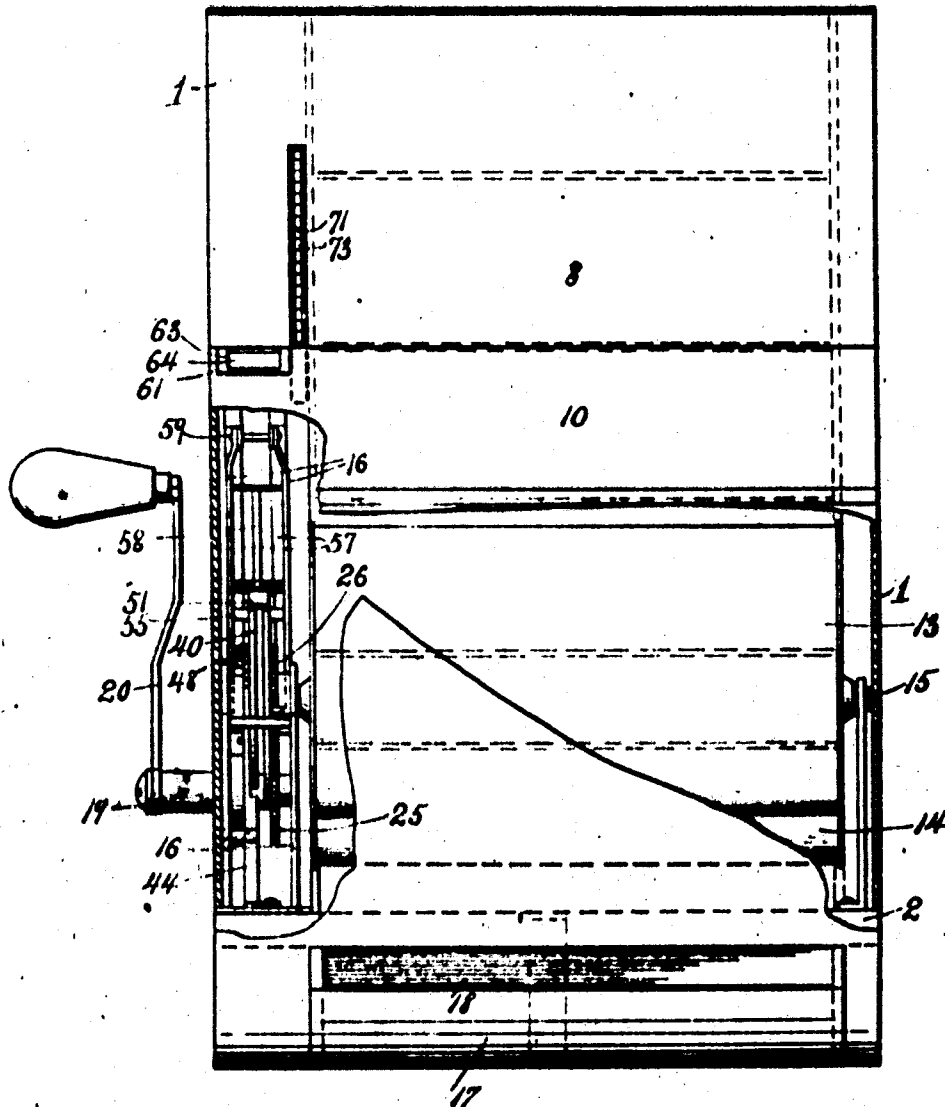
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4 SHEETS—SHEET 3.

Fig. 3.

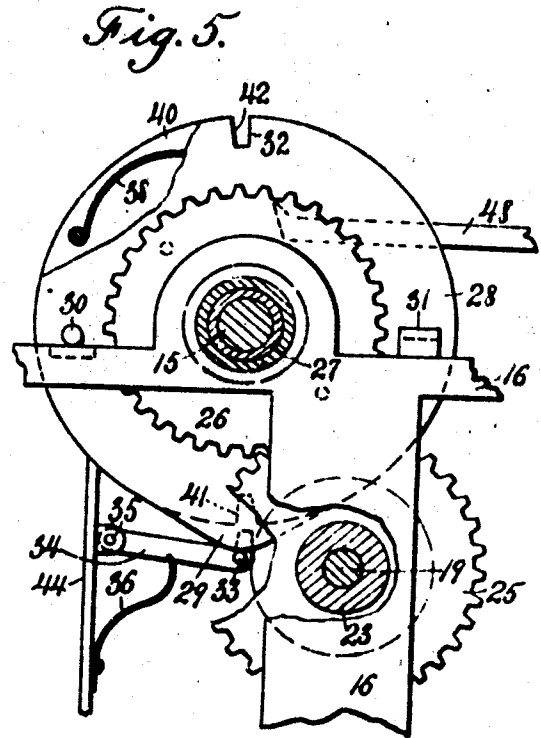
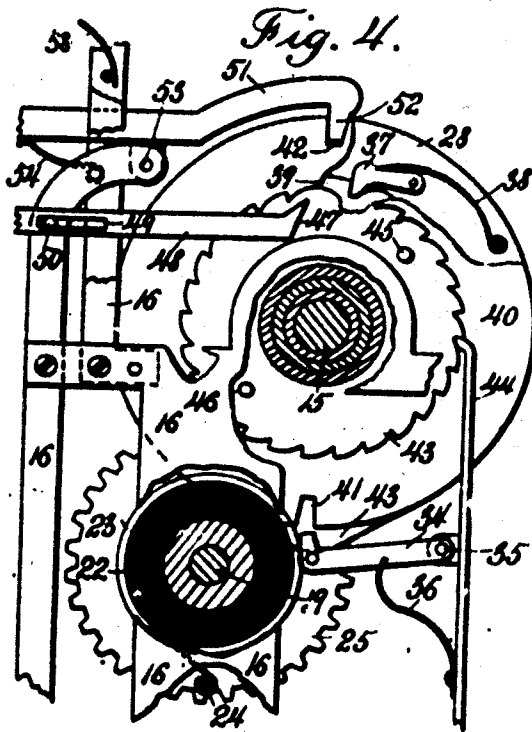


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UNITED STATES PATENT OFFICE.

JAMES H. CARROLL, OF ATLANTA, GEORGIA.

VENDING-MACHINE.

948,600.

Specification of Letters Patent.

Patented Feb. 8, 1910.

Application filed August 4, 1908. Serial No. 446,847.

To all whom it may concern:

Be it known that I, JAMES H. CARROLL, citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

My invention relates to vending machines, and more particularly to machines of this type adapted for selling bottles, or other round articles.

The invention will be found especially useful in dispensing bottled beverages, but is not limited to such use, as it may be employed readily for handling other classes of merchandise.

In some of its aspects my invention relates to coin controlled vending machines for delivering any class of articles whatever.

Another object of the invention is to provide an operating handle having automatic means to return it to normal position, and having such connection with the delivery mechanism that it may be manipulated at will, independent of said mechanism.

A further object is to provide an improved rack or frame for holding the bottles or other articles and feeding them to the delivery mechanism.

With the above and other objects in view, and to improve generally upon the details of such machines, my invention consists in the construction and arrangement of parts hereinafter described, and illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of the complete machine, the side plate being removed to show the mechanism. Fig. 2 is a similar view of the front portion of the machine, the parts being shown in a different position. Fig. 3 is a front elevation of the machine, parts being broken away for clearness. Fig. 4 is a detailed elevation on an enlarged scale, of the delivery mechanism, some parts being in section, and others broken away and Fig. 5 is a similar view showing the reverse side of this mechanism.

Referring to the drawings in detail, the casing of the machine is indicated by 1. This may be of any suitable or ornamental design, and may be formed of sheet metal or the like.

2 designates the base on which the mechanism is mounted; and 3, the supporting frame work. At the top of the machine is

a pivoted door 4, for the insertion of the bottles or other articles.

My improved rack or frame for the bottles comprises plates 5, 6, 7, having their opposite ends alternately curved around one another, as shown at 8, 9, and spaced apart to form a way down which the bottles will roll by gravity. At the lower, forward end of the rack I provide a curved delivery or feed chute formed of the plates 10, 11 as shown in Fig. 1.

12 designates the articles to be sold, which I will hereinafter refer to as "bottles".

Beneath the lower end of the feed or delivery chute I arrange the delivery drum 13, having, at diametrically opposite points, a pair of longitudinally extending pockets 14 adapted to receive the bottles, one at a time. This drum is mounted for rotation on a shaft 15, journaled in frame-work which I shall designate in its entirety by the numeral 16. Immediately below the delivery drum is arranged the receiver 17, having the open front end 18, as shown.

Secured to the end of a shaft 19, also journaled in the supporting framework 16, is the operating crank 20, having a handle 21. A coil spring 22 is wound around and secured at one end to a drum 23, secured to the shaft 19, and is fastened at its other end to a pin 24, set into the frame 16. Also mounted rigidly on this shaft is a pinion or gear wheel 25. This pinion meshes with a similar pinion 26, secured to a sleeve 27, mounted loosely on the shaft 15. This gear wheel 26 is also rigidly secured to a cam disk 28, having a projecting cam 29, the purpose of which will be hereinafter described.

Set into the cam disk 28 is a stop 30, which acts against abutments 31, carried by the frame 16, to limit the movement of the disk in either direction. At a point diametrically opposite the cam 29, the disk 28 is provided with a locking notch 32, which is normally engaged by a coin-controlled latch. Said cam 29 normally rests against a pin 33, carried by a lock 34, pivoted at 35 to a spring pawl 44. A leaf spring 36 normally urges said lock toward said cam. On the other side of the cam disk 28 is pivotally mounted a pawl 37, pressed by means of a spring 38 into engagement with a notch in a ratchet wheel 39. This ratchet is loosely mounted on the shaft 15, and is rigidly se-

cured to a locking disk 40, of substantially the same size as the cam disk 28, and located very near thereto. This mechanism just described constitutes a pawl and ratchet connection between the cam disk 28 and locking disk 40, which locking disk is rigidly connected with the delivery drum 18 by being keyed to the shaft 15. At diametrically opposite points, the locking disk 40 is provided with notches 41, 42, the notch 42 being normally co-incident with the notch 32 in the cam disk, as clearly shown in Figs. 4 and 5.

Riveted or otherwise rigidly secured to the face of the locking disk 40 is a ratchet wheel 43, with which the end of a fixed spring pawl 44 cooperates, so as to prevent the movement of said locking disk and drum in one direction. Pins 45, 46, are set into this ratchet wheel, and adapted to abut against the beveled end 47, of a slide bar 48, having a slot 49, working over a pin 50, as clearly shown in Fig. 4, and the purpose of which will be explained below. At the opposite side of the locking disk from the lock 34 is a coin-controlled latch 51, having a head 52, adapted to normally engage the coincident notches 32, 42, in the cam and locking disks and thus hold the parts against rotation. The latch 51 is pivoted to the frame at 53, and although preferably so hung that the head 52 falls by gravity, may be provided with a light spring 54, to hold it in its locking position. The rear end of the latch 51 is extended and bifurcated as at 55. Just above the bifurcated end of the latch is disposed the nearly vertical coin-chute 57, and the width of the bifurcated portion of said latch is slightly less than that of the coin-chute, and than the diameter of the coin to be used. Between the legs of the fork 55 extends a bar 56, connecting the chute 57 with the rear end of the slide bar 48. The chute is pivoted at 59 to the bottom of a hopper 60, and is provided with a spring 58 for returning it to position after being shifted by means of the bar 48.

It will be noted that the movement of the cam disk 28 results in freeing lock 34 from the restraining action of cam 29, and permits it to assume an aperture position, ready to snap into one of the notches of the locking disk as soon as the drum has been rotated the proper distance. It will also be noted that the handle, when released, will be automatically returned to normal position by means of the spring 22, and in so doing, the cam disk will be turned in a direction opposite to its first movement, and, since the drum and locking disk are held stationary, the pawl 37 will ride back over the ratchet wheel 39. If the handle should be carelessly released before reaching its extreme position, it will be thrown back to

normal, but the drum will remain partly turned. Since, however, neither the lock 34 nor latch 51 can engage the disks in this position, the handle can be again moved, and the shifting of the drum to article delivering position completed.

It will thus be seen that I have provided a very simple and efficient coin-controlled vending mechanism, and it is thought the numerous advantages of my invention will be readily appreciated by those skilled in the art.

What I claim is:—

1. In a vending machine, a rotary delivery drum having pockets for receiving the articles to be sold, a gear wheel having a pawl and ratchet connection with said drum, a second gear wheel meshing with the first, a crank connected with said second gear wheel, means permitting the movement of said crank only through a distance sufficient to drive the drum a space of one pocket, and a spring for automatically returning said crank to normal position, when released.

2. In a vending machine, a delivery drum, a shaft on which it is mounted, a locking disk secured to said shaft, a cam disk loosely mounted on said shaft adjacent the locking disk, a gear wheel secured to said cam disk, a second gear wheel meshing therewith, a crank connected with said second gear wheel, and a spring for returning said crank and cam disk to normal position when displaced therefrom.

3. In a vending machine, a rotary delivery drum, a shaft on which said drum is mounted, a locking disk secured to said drum and provided with notches, a pivoted lock adapted to engage said notches, a cam disk loosely mounted on said shaft adjacent said locking disk and serving to engage and release said lock at times, means for rotating said locking disk and drum in one direction and means for preventing their movement in the other direction.

4. In a vending machine, a delivery drum, a locking disk secured to said drum, a cam disk mounted adjacent said locking disk and capable of independent movement, a lock adapted to engage said locking disk at times, and at other times be held out of such engagement by said cam disk, means for clutching said disks together during movement of the cam disk in one direction, and means for returning said cam disk to normal position, while the locking disk and drum remain in their shifted position.

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

JAMES H. CARROLL.

Witnesses:

WELLS F. HARVEY,
H. H. BYRNE.