

W. J. GOUDEAU,
 VENDING MACHINE FOR GROCERY COMMODITIES AND THE LIKE,
 APPLICATION FILED APR. 9, 1921.

1,390,031.

Patented Sept. 6, 1921.
 2 SHEETS—SHEET 1.

Fig. 1.

Fig. 2.

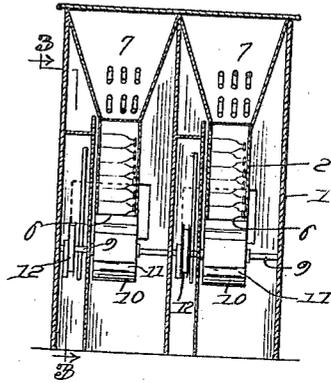
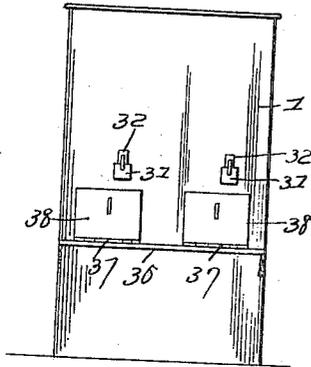
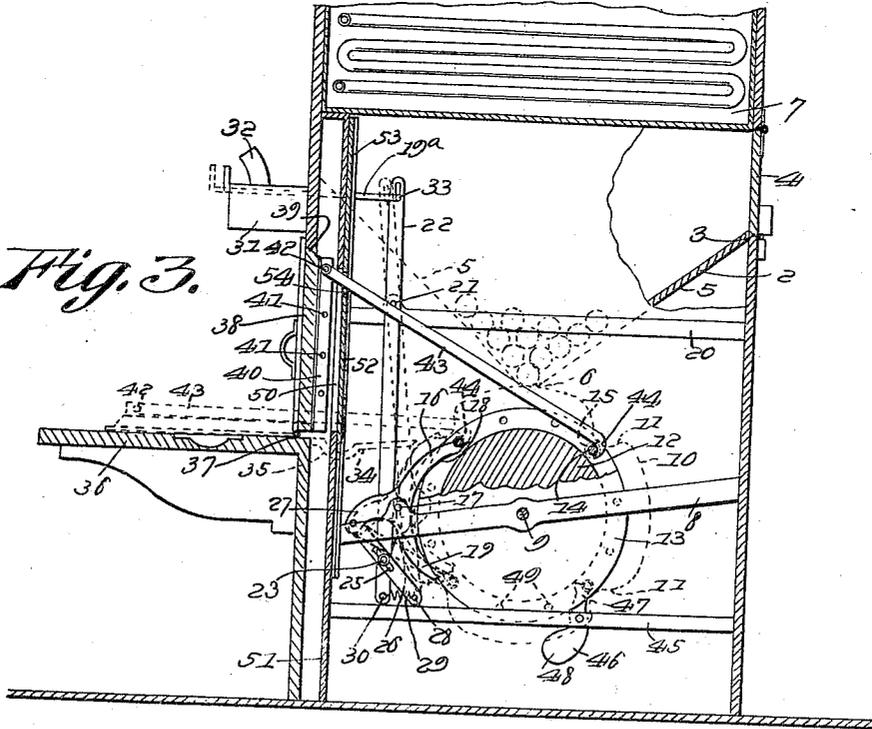


Fig. 3.



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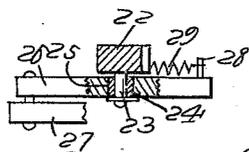
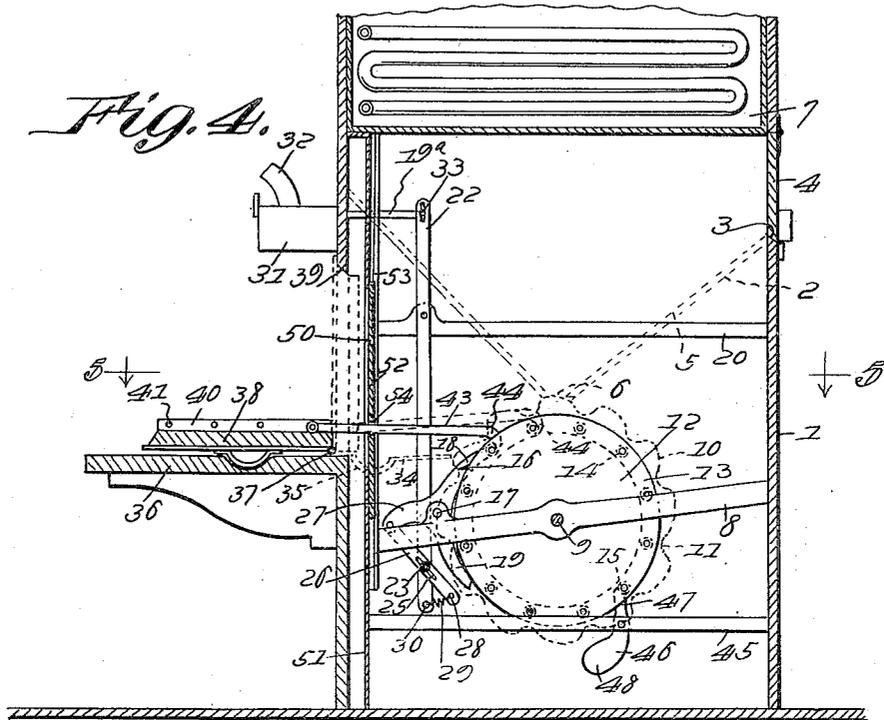
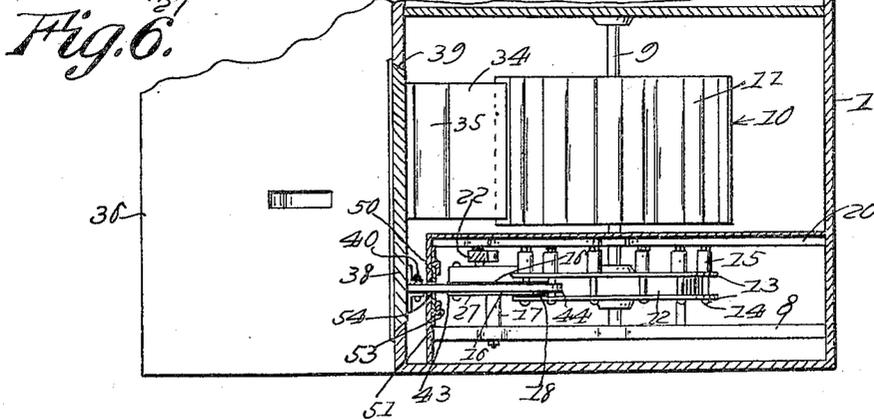


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILTON J. GOUDEAU, OF GRIDER, ARKANSAS.

VENDING-MACHINE FOR GROCERY COMMODITIES AND THE LIKE.

1,390,031.

Specification of Letters Patent.

Patented Sept. 6, 1921.

Application filed April 9, 1921. Serial No. 459,879.

To all whom it may concern:

Be it known that I, WILTON J. GOUDEAU, a citizen of the United States, residing at Grider, in the county of Mississippi and State of Arkansas, have invented certain new and useful Improvements in Vending-Machines for Grocery Commodities and the like, of which the following is a specification, reference being had to the accompanying drawings.

The present invention has for its purpose the provision of a machine of this general character, wherein means is afforded for dispensing various articles, such as can, box and bottle goods, and the like, and including means, door operated, for imparting movements intermittently to the dispensing means, there being a coin controlled device to be manually actuated for releasing the dispensing means, whereby the door operated means may move the dispensing mechanism.

It is another purpose to provide a mechanism of this kind particularly adapted for vending articles from a bin, hopper or the like, in lieu of vending articles from receptacles on an endless carrier, though the endless carrier with receptacles may be employed in connection with such dispensing mechanism.

Still another purpose is to provide a machine of this kind involving improvements on the structure of a similar mechanism or machine, which is set forth, claimed and illustrated in the copending application of Wilton J. Goudeau, filed September 18, 1920, Serial No. 411,185.

While the design and construction at present illustrated and set forth is deemed preferable, it is obvious that as a result of a reduction of the invention to a more practical form for commercial purposes, the invention may be susceptible of changes, and the right to these changes is claimed, provided they are comprehended within the scope of what is claimed.

The invention comprises further features and combination of parts, as will be hereinafter set forth, shown in the drawings and claimed.

In the drawings—

Figure 1 is a view in front elevation of the vending machine constructed in accordance with the invention.

Fig. 2 is a rear sectional view of the same.

Fig. 3 is a vertical sectional view on line 3—3 of Fig. 2, showing a bin or trough in elevation and partly in section, and illustrating the improved dispensing mechanism, door operated, coin controlled as applied.

Fig. 4 is a view similar to Fig. 3 showing a modified structure wherein the dispensing means may dispense a greater number of articles during a single rotation of the disk 12, than is possible with the structure in Fig. 3.

Fig. 5 is a horizontal sectional plan view on line 5—5 of Fig. 4.

Fig. 6 is an enlarged detail view showing the construction of the wrist pin and the collar 24 as connecting the link 26 to the actuating lever 22.

Referring to the drawings, 1 designates a frame, which may be any suitable proportion, or any suitable construction, either like herein shown, or similar to the casing or frame disclosed in the drawings of the copending application, or otherwise constructed. The frame or casing includes a bin or trough 2, in which the can, bottle or box goods or the like may be deposited, through the opening 3, there being a door 4 for permitting the articles to be placed in the bin. Preferably the bin is provided with converging bottom walls 5, which are disposed in order to provide an outlet or discharge opening 6. A suitable cooling or ice chamber 7 is located above the bin or trough, in order to keep the articles from spoiling, and also to keep the bottle goods, if deposited in the bin, cool.

Journalled in suitable braces or supports 8 is a shaft 9, on which is journalled a dispensing cylinder 10, capable of intermittent movements. This cylinder is provided with cavities 11, each of which may receive a single article from the discharge or outlet opening of the bin, said recess or cavity registers with the outlet opening.

Also mounted on the shaft 9 is a disk 12, which is provided with annular radial flanges 13. Extending through the flanges transversely across the edge of the disk are pins or bolts 14, of which there may be any number employed, either as shown in Fig. 3, or as shown in Fig. 4. Owing to the pro-

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 vision of transverse pins or bolts, and the fact that they are individually engaged by a member to impart movements intermittently to the disk, the disk may be preferably termed a ratchet. Loosely mounted on one end of each pin or bolt is a roller or collar 15, which, as hereinafter stated, is designed for returning the main operating lever (which is coin controlled) to its normal position.

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 An arcuate escapement dog 16 is mounted on a shaft 17, which is also carried by the transversely disposed supports 8. One arm 18 of the escapement dog engages between the flanges of the ratchet and in the path of one of the pins or bolts 14, to prevent movement of the ratchet, until it is actuated by a member connected to a door. The other arm 19 of the escapement dog assumes a position normally out of the path of the pins or bolts 14.

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 A supporting bar 20 extends transversely of the frame or casing, and pivoted thereon by means of a stub shaft 21 is a main actuating lever 22. The lower end of the lever 22 carries a wrist pin 23, provided with a collar 24, which rides in a slot 25 of a link 26. One end of the link 26 is pivotally connected to the arm 27 of the escapement dog, while its other end is connected as at 28 to one end of a coiled spring 29, which in turn is connected at 30 to the lower end of the actuating lever 22. This coiled spring pulls the link 26, in such wise that the collar or sleeve on the wrist pin may assume a position normally nearer the lower end of the slot 25, then adjacent the other end of the slot. The spring 29 also serves to pull upwardly on the link, and thereby retain the arm 18 of the escapement dog normally in the path of one of the transverse pins or bolts of the ratchet, at least until the actuating lever 22 is tilted.

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 Mounted on the face of the casing or frame is a conventional form of coin controlled mechanism 31, such as disclosed in the aforesaid copending application, and which mechanism includes a coin chute 32 and a slide or pull lever 19^a, which is similar to that disclosed in the pending application. This slide or pull lever 19^a is pivotally connected at 33 to the upper end of the actuating lever 22. Obviously when a coin is deposited in the chute 32, the slide or pull lever 19^a is then free to be moved or pulled outwardly, and when so moved, the actuating lever 22 will be tilted on its pivot 21, thereby actuating the link 26, in such wise as to tilt the escapement dog, removing the end of its arm 18 from the path of an adjacent transverse pin or bolt of the ratchet, and when this is accomplished, the ratchet is free to be rotated. The ratchet and the cylinder 10 rotate together, and has one of the recesses or pockets 11 registering with

the outlet or discharge opening of the bin, an article, whatever it may be, will drop into the recess or pocket, and brought forward and delivered on the tray or shelf 34. The shelf or tray 34 has a slot or pocket 35, in which the article, such as bottle or can goods will roll, in order to be in a position to be removed by the purchaser.

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 A shelf or tray 36 projects from the face of the casing or frame in alignment with the tray or shelf 34 and hingedly mounted at 37 is a door 38, adapted for closing an opening 39 in the front wall of the casing or housing. The inner face of the door is provided with a pair of parallel flanges 40 having registering apertures or openings 41, any two registering openings or apertures of which receives a pivot pin 42, for pivotally connecting a pull bar 43 to the door. Obviously the pull bar 43 can be adjusted relatively to the door, so that the bar may be used in imparting variable movements to the ratchet intermittently. The pull bar 43 has its inner end terminating in a hook 44 which slides over the edge of the ratchet between the flanges, and is adapted to engage any one of the transverse pins or bolts 14, for rotating the ratchet and moving the delivery wheel or cylinder or drum to delivery position.

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 Pivotaly mounted upon a transverse supporting bar 45 is a gravity actuated dog 46, the nose 47 of which is held in the path of any one of the transverse pins or bolts, by means of the gravity or weighted end 48 of the dog. When the nose of the dog is so disposed the ratchet is prevented from retrograde movement, when the hook travels over the edge of the ratchet between the flanges, when closing the door.

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 As shown clearly in the drawings the flanges 13 of the ratchet are provided with a plurality of openings 49 for the pins or bolts 14, and it is obvious that the pins or bolts may be disposed in certain of the openings, as in Fig. 3, or in all of the openings as in Fig. 4. Furthermore the number of pins or bolts may be increased or decreased and also it will be noted that the closer the pivoted end of the pull bar is located to the hinge of the door the greater number of pins are necessary on the ratchet, and the farther the pivot or the pull bar is located away from the hinge the fewer of pins or bolts are necessary.

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 When a coin is deposited in the chute 32, and the pull bar 19^a is operated, the actuating lever 22 will disengage the escapement dog 18 from one of the pins or bolts, then the door is free to be opened. When the door is opened the bar 43 will impart an intermittent motion to the ratchet, thereby moving the delivery cylinder around to delivery position. When one of the pins or bolts of the ratchet pass the arm 19^a, it will

tilt the escapement dog and restore it to normal position. Also as the ratchet is rotated, one of the collars or sleeves upon one of the pins or bolts 14 will cam against the actuating lever 22, and restore the same, and the coin controlled lock to their normal positions. As long as the end of the arm 18 of the escapement dog is in the path of one of the pins or bolts of the ratchet, it is impossible to rotate the ratchet.

The pull bar 43 operates through a slot 50 in a partition 51, there being a slide 52 covering the slot, to prevent access to the slot. The slide 52 operates in guide flanges 53. The pull bar 43 operates through an opening 54 in the slide, as the slide moves. When the pins 14 are changed, or increased in number, as in Fig. 4, it is necessary to use a short pull bar 43, as disclosed.

This present machine may be used in vending any articles, there being no limit as to the kind or character. Furthermore, when the pins 14 are increased in number, the cavities or depressions 11 are likewise increased. Also it is obvious that when the pins 14 and the cavities or depressions 11 are increased, the pull lever 43 herein shown may be replaced by another, which is shorter, so that the lever may operate between the door and the pins 14.

The invention having been set forth, what is claimed as being useful is:

1. In a machine for the purpose indicated, a housing having a commodity receiving bin provided with a discharge opening, a revoluble intermittent movable delivery drum mounted in the housing at a point immediately below the discharge opening, said housing having an opening, a door controlling said opening, and means connecting the door coöperatively with the drum for imparting an intermittent motion thereto when the door is opened.

2. In a machine for the purpose indicated, a housing having a commodity receiving bin provided with a discharge opening, a revoluble intermittent movable delivery drum mounted in the housing at a point immediately below the discharge opening, said housing having an opening, a door controlling said opening and means connecting the door coöperatively with the drum for imparting an intermittent motion thereto when the door is opened, an escapement lock for the delivery drum to prevent the same from being rotated.

3. In a machine for the purpose indicated, a housing having a commodity receiving bin provided with a discharge opening, a revoluble intermittent movable delivery drum mounted in the housing at a point immediately below the discharge opening, said housing having an opening, a door controlling said opening, and means connecting the door coöperatively with the drum for im-

parting an intermittent motion thereto when the door is opened, an escapement lock for the delivery drum, to prevent the same from being rotated, means for releasing said escapement lock, and means for restoring the releasing means and the escapement lock to their normal positions.

4. In a machine for the purpose indicated, a housing having an article receiving bin or trough provided with a discharge opening, a delivery drum intermittently rotated adjacent and below the discharge opening, said housing having an opening, a door controlling said opening, and means adjustably connected to the door and operatively connecting with the drum for imparting variable movements intermittently to the drum.

5. In a machine for the purpose indicated, a housing having an article receiving bin or trough provided with a discharge opening, a delivery drum intermittently rotated adjacent and below the discharge opening, said housing having an opening, a door controlling said opening, and means adjustably connected to the door and operatively connecting with the drum for imparting variable movements intermittently to the drum, means for locking the drum, means for releasing said locking means.

6. In a machine for the purpose indicated, a housing provided with an opening, a door controlling said opening and having an article receiving bin, which is provided with a discharging opening, a delivery drum mounted for intermittent revoluble movement below and adjacent the discharging opening, a ratchet movable with the drum, and means adjustably connected to the door and adapted to engage any one of the ratchet members for imparting variable intermittent movements to the ratchet and the drum.

7. In a machine for the purpose indicated, a housing provided with an opening, a door controlling said opening and having an article receiving bin, which is provided with a discharging opening, a delivery drum mounted for intermittent revoluble movement below and adjacent the discharging opening, a ratchet movable with the drum, and means adjustably connected to the door and adapted to engage any one of the ratchet members for imparting variable intermittent movements to the ratchet and the drum, an escapement lock for the ratchet, means for releasing the escapement lock to permit the ratchet to rotate.

8. In a machine for the purpose indicated, a housing provided with a door opening, a delivery drum mounted in the housing, an escapement lock therefor, means for releasing said escapement lock, a door for said opening, an article receiving bin provided with a discharge opening immedi-

ately above the drum, means connecting the door coöperatively with the drum for imparting an intermittent motion thereto when the door is opened, when the escapement lock is released.

9. In a machine for the purpose indicated, a housing provided with a door opening, a delivery drum mounted in the housing, an escapement lock therefor, means for releasing said escapement lock, a door for said opening, an article receiving bin provided with a discharge opening immediately

above the drum, means connecting the door coöperatively with the drum for imparting an intermittent motion thereto when the door is opened, when the escapement lock is released, and means carried by the drum to coöperatively engage with a part of said escapement lock for restoring the escapement lock to its initial position in engagement with the drum.

In testimony whereof I hereunto affix my signature.

WILTON J. GOUDEAU.