

April 9, 1929.

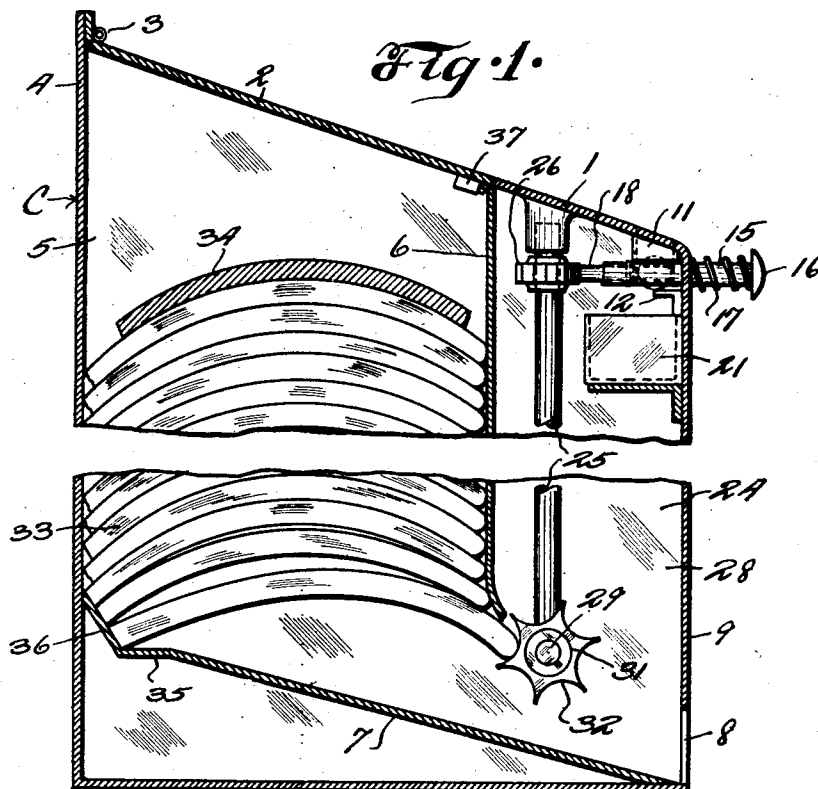
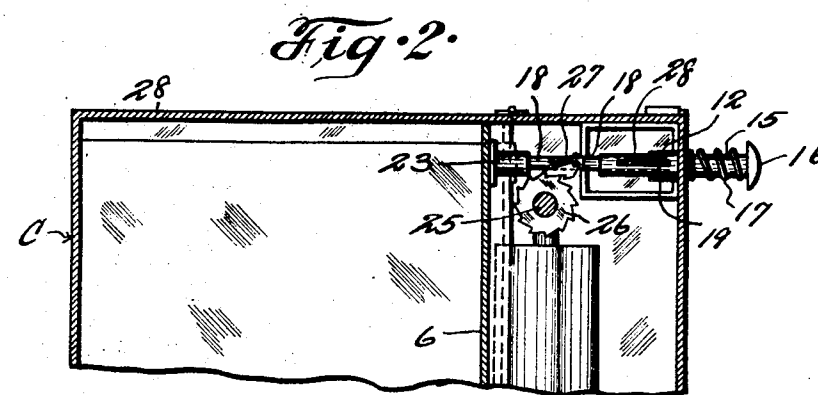
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1,708,441

VENDING MACHINE

Filed Oct. 11, 1927

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

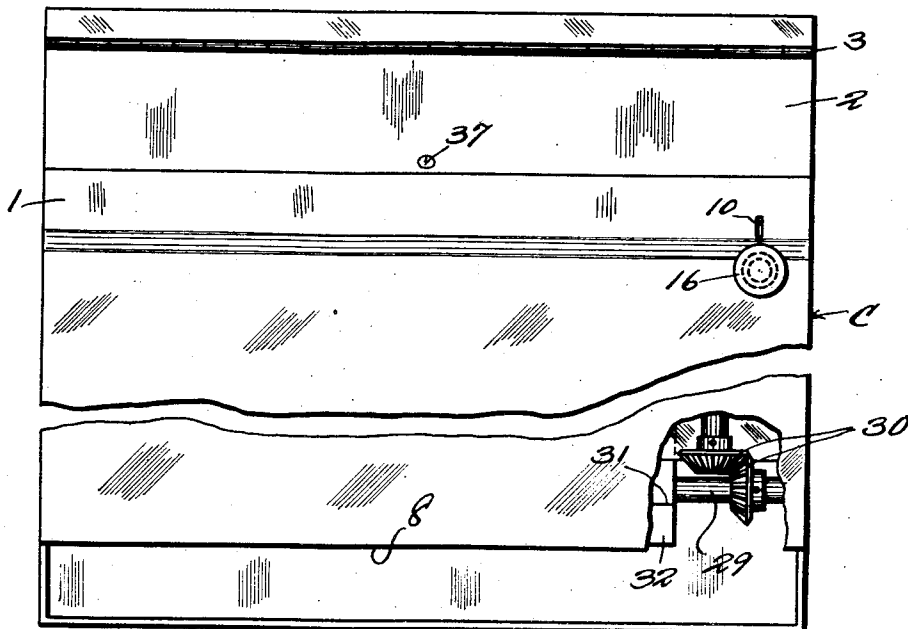


Fig. 3.

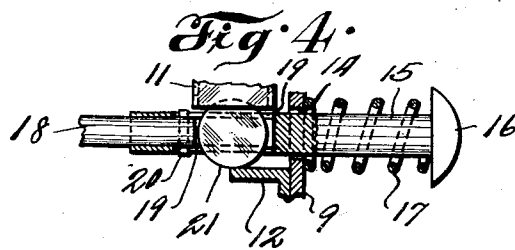


Fig. 4.

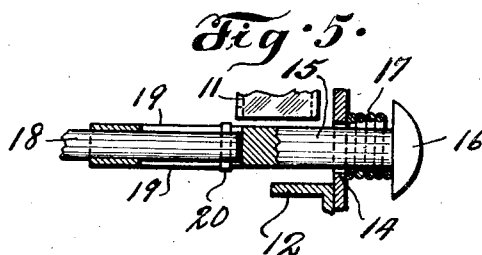


Fig. 5.

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VENDING MACHINE.

Application filed October 11, 1927. Serial No. 225,514.

This invention relates to vending machines and has relation more particularly to a device of this kind especially designed and adapted for use in connection with newspapers and kindred articles, and it is an object of the invention to provide a device of this character operating under check control to deliver a single article.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved vending machine whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a view partly in vertical section and partly in side elevation illustrating a vending machine constructed in accordance with an embodiment of my invention;

Figure 2 is a fragmentary horizontal sectional view taken through the upper portion of the structure as illustrated in Figure 1, illustrating details comprised in the operating mechanism;

Figure 3 is a fragmentary view in front elevation of the machine as herein disclosed with a portion broken away;

Figure 4 is a fragmentary view partly in section and partly in elevation with a portion of the check controlled mechanism herein employed;

Figure 5 is a view similar to Figure 4 with certain of the parts in a second position.

As disclosed in the accompanying drawings, C denotes a cabinet of desired configuration and dimensions having the front portion of its top permanently closed by a top wall 1, the rear portion of the top being normally closed by a cover member 2 hingedly connected, as at 3, with the rear wall 4 of the cabinet. When the cover member 2 is raised the supply chamber 5 may be readily loaded with newspapers or kindred articles. The forward wall of the chamber 5 comprises a partition 6 extending from side to

side of the cabinet C and depending from the rear marginal portion of the top wall 1 to a desired point above the downwardly and forwardly inclined bottom 7 for the chamber 5. This inclined bottom 7 extends to the lower portion of a delivery opening or slot 8 provided in the lower portion of the front wall 9 of the cabinet C.

The top wall 1 at a point in close proximity to a side of the cabinet C and closely adjacent to the front wall 9 of the cabinet is provided with a coin slot 10 continued by a depending coin chute 11. Secured to the front wall 9 below the chute 11 and partially underlying the same is a shelf or ledge 12.

The front wall 9 of the cabinet C at a point between the lower end of the chute 11 and the ledge or shelf 12 is provided with an opening 14 through which is freely insertible a plunger 15 provided at its outer end with a head or button 16. This plunger 15 is normally maintained at the limit of its outward movement through the medium of a coil spring 17 encircling the plunger 15 and interposed between the head or button 16 and the front wall 9.

The inner end portion of the plunger 15 is tubular to telescopically receive the forward end portion of a forwardly directed rod 18 carried by the upper portion of the partition 6. The inner part of the tubular portion of the plunger 15 has provided in the walls thereof the longitudinally disposed slots 19 through which extend the extremities of a cross pin 20 inserted through the outer end of the rod 18. By means of the rod 18 the plunger 15 is supported for movement in substantially a fixed path of travel and the pin 20 by contact with the extremities of the slots 19 has its movement limited in either direction.

The slots 19 are normally positioned below the chute 11 so that upon deposit of a check or coin 21 the same will extend through the inner tubular portion of the plunger 15 and contact with the shelf or ledge 12 whereby upon pressure being exerted upon the button or head 16 the plunger 15 together with the rod 18 will be forced inwardly until the check or coin 21 completely passes beyond the shelf or ledge 12 whereupon said coin will drop within a coin box 22 suitably supported by the front wall 9 below the shelf or ledge 12.

It is to be understood that the rod 18 is adapted to have endwise movement and for which reason its rear end portion is slidably engaged within a tubular member 23 directly engaged with the partition 6 and which tubular member 23 provides an effective support for the rod 18.

Within the upper portion of the compartment 24 provided between the partition 6 and the front wall 9 is supported for rotation a vertically disposed shaft 25 to the upper portion of which is fixed a ratchet wheel 26. The ratchet wheel 26 is engaged by a spring pressed pawl 27 carried by the rod 18 whereupon the ratchet wheel 26 and the shaft 25 are intermittently rotated upon inward movement of the rod 18.

Rotatably supported by the side walls 28 of the cabinet C slightly in advance of and below the lower edge of the partition 6 is a horizontally disposed shaft 29 in driven connection with the shaft 25 through the medium of the intermeshing gears 30. The shaft 29 has fixed thereto and extending along the major portion thereof a feed roller 31 the periphery of which having disposed lengthwise thereof a series of circumferentially spaced grooves 32 parti-circular in cross section with grooves arranged in immediate succession.

The newspapers 33 or the like to be vended are stacked within the chamber 5 and have imposed upon the top of the stack or pile a weighted member 34. The newspapers or the like when flattened out are of a width greater than the distance between the rear wall 4 of the cabinet C and the partition 6 thereby necessitating the papers or the like in the stack or pile to be slightly bowed so that the resultant expansion of the lowermost newspaper or the like as it passes below the lower edge of the partition 6 will engage within a groove 32 so that upon a partial rotation of the feed roller 31 such lowermost paper will be delivered to the inclined bottom 7 and discharged out through the delivery opening 8. During this operation the weight of the pile or stack plus the weight to the member 34 will move said stack or pile downwardly resulting in the next succeeding paper expanding for requisite engagement within the succeeding groove 32.

To facilitate desired release of the lowermost newspaper or the like the upper rear portion of the bottom 7 for a slight distance is horizontally disposed, as at 35, and then continued upwardly, as at 36, on an abrupt angle and with which one of the lowermost newspapers or the like will engage. By this action the desired engagement of the lowermost newspaper or the like within a groove 32 is further facilitated.

The cover member 2 is adapted to be normally held in closed position by a suitable

lock mechanism 37 to prevent unauthorized access to the stack or pile within the chamber 5.

I claim:—

1. A vending machine comprising a cabinet, a partition dividing the cabinet into two compartments arranged side by side, one of said compartments constituting a magazine, a wall of the cabinet having a discharge opening, a bottom for the magazine inclined downwardly to said discharge opening, said partition terminating above the bottom, a horizontally disposed feed member rotatably supported within the second compartment closely adjacent to the bottom of the partition, said feed member being provided therealong with a series of circumferentially spaced grooves, and means within the second compartment for intermittently rotating said feed member.

2. A vending machine comprising a cabinet a partition dividing the cabinet into two compartments arranged side by side, one of said compartments constituting a magazine, a wall of the cabinet having a discharge opening, a bottom for the magazine inclined downwardly to said discharge opening, said partition terminating above the bottom, a horizontally disposed feed member rotatably supported within the second compartment closely adjacent to the bottom of the partition, said feed member being provided therealong with a series of circumferentially spaced grooves, and means for intermittently rotating said feed member, the high portion of the bottom of the magazine being disposed upwardly on an abrupt angle.

3. A vending machine comprising a cabinet, a partition dividing the cabinet into two compartments arranged side by side, one of said compartments constituting a magazine, a wall of the cabinet having a discharge opening, a bottom for the magazine inclined downwardly to said discharge opening, said partition terminating above the bottom, a horizontally disposed feed member rotatably supported closely adjacent to the partition, said feed member being provided therealong with a series of circumferentially spaced grooves, and means for intermittently rotating said feed member, the high portion of the bottom of the magazine being disposed upwardly on an abrupt angle, the portion of said bottom immediately adjacent to said abrupt inclined portion being substantially horizontal.

4. A vending machine comprising a cabinet, a partition dividing the cabinet into two compartments arranged side by side, one of said compartments constituting a magazine, a wall of the cabinet having a discharge opening, a bottom for the magazine inclined downwardly to said discharge opening, said partition terminating above the

bottom, a horizontally disposed feed member rotatably supported closely adjacent to the partition, said feed member being provided therealong with a series of circumferentially spaced grooves, said feed member being arranged within the second compartment, a vertically disposed shaft mounted within said second compartment and in driving connection with the feed member, and means operable exteriorly of the cabinet and coacting with the shaft for intermittently rotating the feed member.

5. A vending machine comprising a cabinet, a partition dividing the cabinet into two compartments arranged side by side, one of said compartments constituting a magazine, a wall of the cabinet having a discharge opening, a bottom for the magazine inclined downwardly to said discharge opening, said partition terminating above the bottom, a horizontally disposed feed member rotatably supported closely adjacent to the partition, said feed member being provided therealong with a series of circumferentially spaced grooves, said feed member being arranged within the second compartment, a vertically disposed shaft

mounted within said second compartment and in driving connection with the feed member, a ratchet wheel fixed to said shaft, a rod supported for endwise movement to one side of the shaft, a spring pressed pawl carried by said rod engaging the ratchet wheel for rotating the shaft upon movement of the rod in one direction, means for normally maintaining the rod at the limit of its movement in the opposite direction, and means for moving the rod in a direction to cause rotation of the shaft.

6. A vending machine comprising a cabinet having a magazine, a wall of the cabinet being provided with a discharge opening, a bottom for the magazine inclined downwardly to said discharge opening, the high portion of the bottom of the magazine being disposed upwardly on an abrupt angle, a feed roller supported within the cabinet above the inclined bottom of the magazine and substantially horizontally aligned with the abrupt angular portion of said bottom, and means for rotating the feed roller.

In testimony whereof I hereunto affix my signature.

WILLIAM T. COLE.