C. H. SKEEN.

SERVING APPARATUS.

APPLICATION FILED JAN. 31, 1914.

1,249,221.

Patented Dec. 4, 1917.

3 SHEETS—SHEET 1.

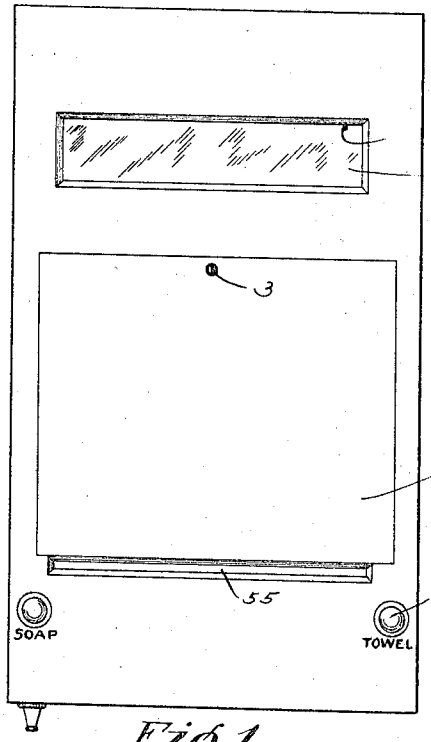


Fig. 1.

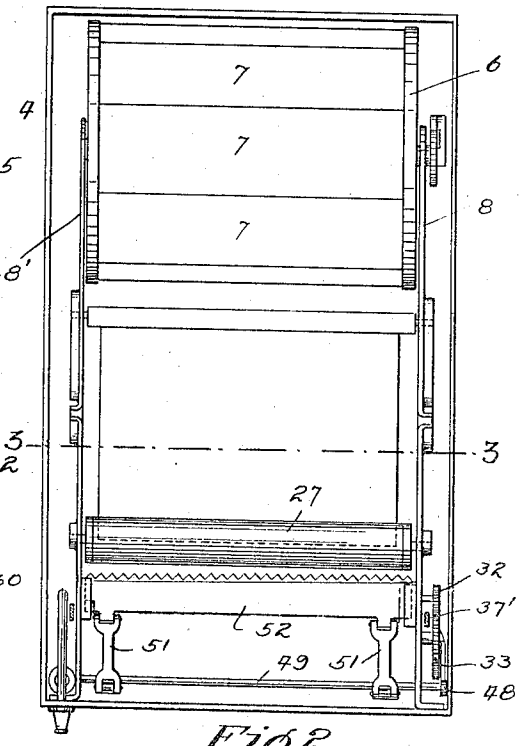


Fig. 2.

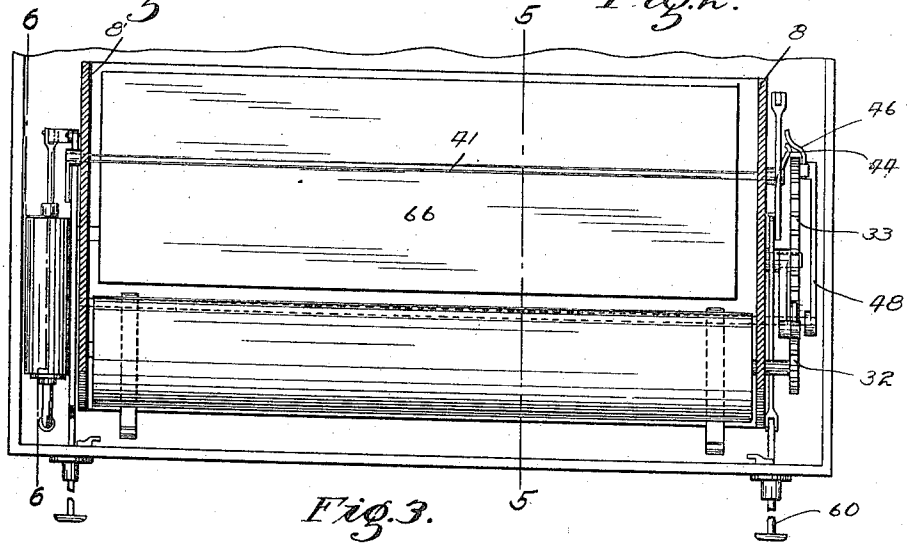


Fig. 3.

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3 SHEETS—SHEET 2.

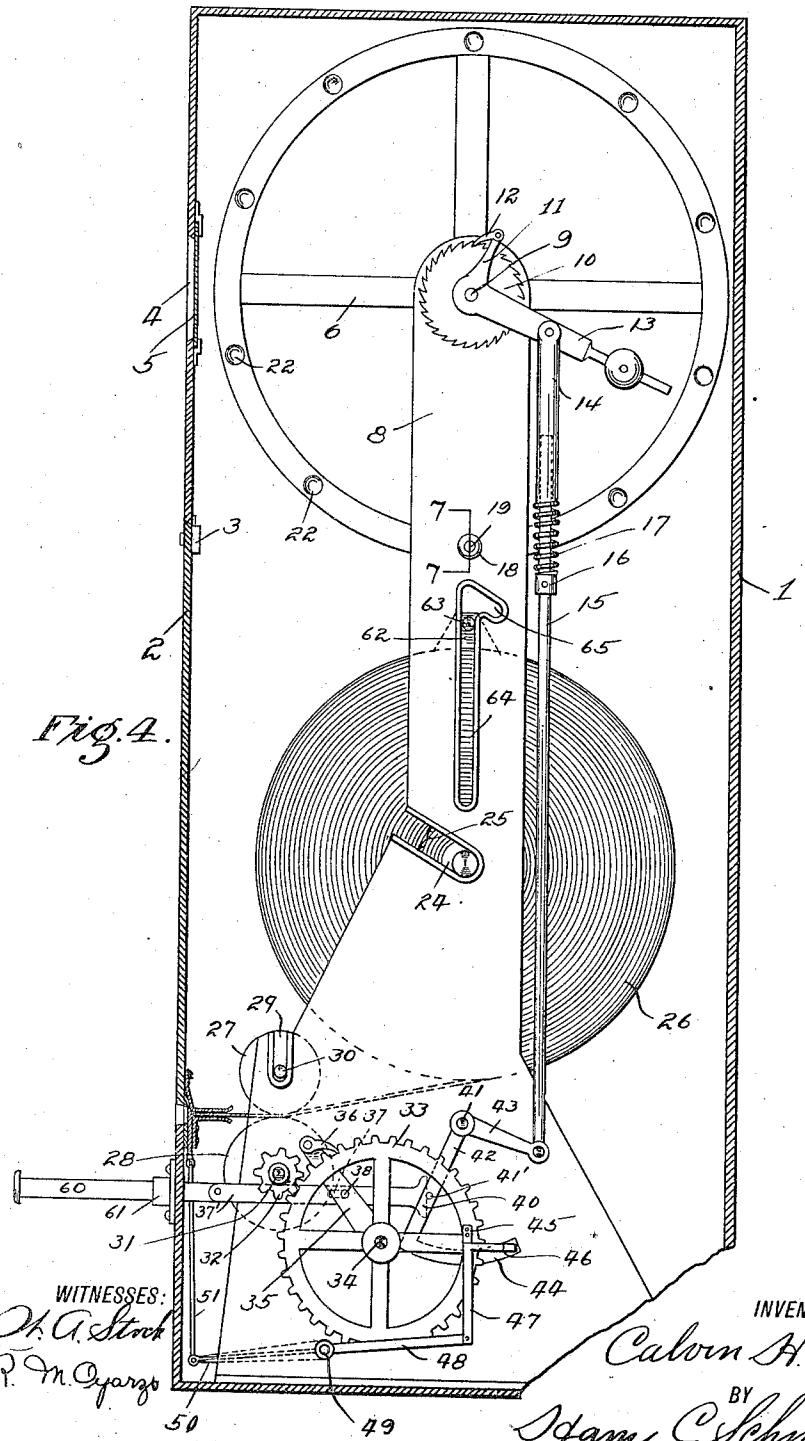


Fig. 4.

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3 SHEETS—SHEET 3.

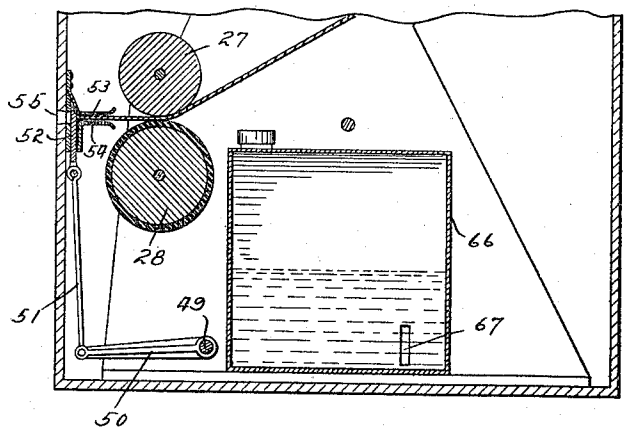


Fig. 5.

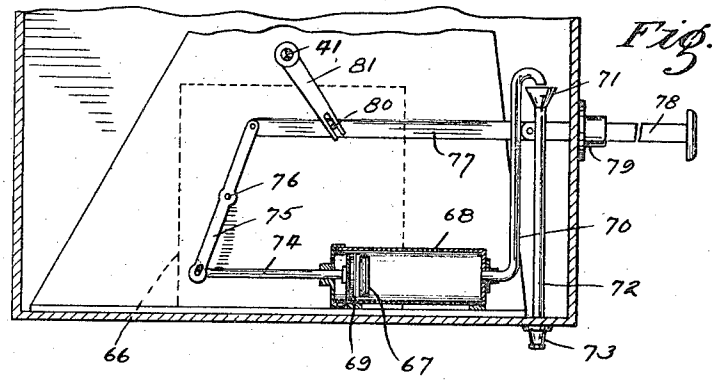


Fig. 6.

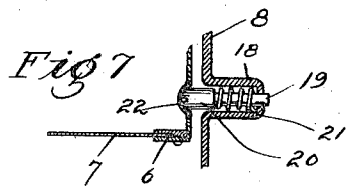


Fig 7

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SERVING APPARATUS.

1,249,221. Specification of Letters Patent. Patented Dec. 4, 1917.

Application filed January 31, 1914. Serial No. 815,636.

To all whom it may concern:

Be it known that I, CALVIN H. SKEEN, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Serving Apparatus, of which the following is a specification.

This invention relates to serving apparatus and consists in general of a drum carrying a plurality of advertisement mounted in a suitable casing.

In the lower part of said casing is mounted a towel and soap dispensing machine, the operation of which is made to actuate a device for displaying advertisement one after the other before a suitable aperture in the front of the casing.

The principal object of my invention is to provide a new and novel mechanism, which by serving towels and soap will cause a change in advertisements displayed and thus from the fees for advertisements pay for the soap and towels which are distributed free.

Another object of my invention is to make the casing dustproof and so keep the contents in a sanitary condition until used. Further objects are to provide mechanisms, which will allow but one towel and a measured amount of soap to be dispensed with one movement of their respective operating mechanisms.

With these and other objects in view my invention consists in the new and novel construction and arrangement of parts as herein described and as more particularly pointed out in the appended claims.

For a full comprehension of the invention reference should be had to the accompanying drawing forming a part of this specification wherein,

Figure 1 is a view in front elevation of the improved device constructed in accordance with my invention showing the aperture for displaying the advertisement, the operating rods for soap and towel, and the discharge openings therefor.

Fig. 2 is a view in elevation of the same with the front removed to show the interior mechanism.

Fig. 3 is a view in section on 3—3 Fig. 2.

Fig. 4 is a view in section through the side of the case showing the operating mechanism in elevation.

Fig. 5 is a view in section on 5—5 Fig. 3.

Fig. 6 is a view in section on 6—6 Fig. 3.

Fig. 7 is an enlarged fragmentary sectional view on 7—7 Fig. 4.

Denoting corresponding parts by the same numerals of reference, 1 is the outer casing made of any suitable material and having in the front thereof a door 2 held in position by a back 3. An aperture 4 is located near the top of this casing having a glass closure 5 through which the advertisements 7 mounted on drum 6 may be viewed.

Standards 8 and 8′ have journaled therein a shaft 9 on which the drum 6 is keyed. On the outside of standard 8 a ratchet wheel 10 is keyed to this shaft and a bell-crank 11 pivotally mounted thereon. The latter comprises; arm 11 having pivotally mounted on the end thereof a pawl 12 adapted to engage the ratchet wheel, an arm 13 carrying a suitable counterweight and having pivotally attached thereto a bifurcated hollow cylindrical member 14.

Sliding within the latter is the end of an operating rod 15 on which is fixed a collar 16 and abutting between this collar and the lower end of sleeve 14 is a compression spring 17.

Formed in the side of standard 8 is a laterally extending pocket 18 in which is slidably mounted a pin 19 having an enlarged end 20. A compression spring abutting between the enlarged head 20 and the inside face of the pocket holds the rounded end of the head in contact with the side of drum 6.

Formed in the side flanges of the drum are a plurality of pockets 22 into which the head 20 is adapted to fit and these pockets are spaced at the same angle as occupied by the advertisement 7 thus causing the drum to stop in such a position that the complete advertisement is displayed.

A roller 24 is pivotally mounted in a downwardly extending open slot 25 and mounted on this roller is a roll of paper towels 26, the outer end of which is threaded between rollers 27 and 28. The former is provided with a shaft 30, which is verti-

cally movable in open slots 29 while the latter is mounted upon a shaft 31 journaled in the two standards 8 and 8'.

Attached to the end of this shaft which projects 8 is a toothed gear wheel 32, which meshes with peripheral teeth formed on an actuator wheel 33 pivotally mounted upon a stub shaft 34 affixed to standard 8.

Pivotally mounted on this same shaft is an arm 35 carrying a pawl 36, which is adapted to engage the teeth of wheel 33 so as to move the same in a clockwise direction. The arm 35 is provided with a pin 38, which extends into a slot 37 in the link 37', which is also provided with an elongated head 40 adapted to contact with a pin 41' in the arm 42 of a bellcrank pivotally mounted as at 41. The other arm 43 of this bellcrank is pivotally connected to the lower end of rod 15 previously described.

The end of arm 42 is provided with an arc shaped extension 44, which is curved to contact with a curved member 46 on the opposite side of gear 33, and disengage the latter from the stop member. Said stop member comprises a spring latch 15, formed on the vertically disposed spring latch 47, which on the lower end is fastened to a lever arm 48, which in turn is keyed to a shaft 49. This shaft is pivotally mounted in standards 8 and 8' and therebetween has attached two lever arms 50 to the outer ends of which is pivotally attached link member 51.

The upper end of the latter are pivotally attached to suitable lugs formed on the lower edge of the cutting knife 52, which is slidably mounted in suitable guides. Back of the knife are suitable guides 53 and 54 adapted to feed the paper toward the discharge opening 55.

The mechanism above described is operated by a push rod 60 slidably mounted in a guide bracket 61 and pivotally connected on the inside of the casing with link 37'. To keep sufficient tension on the roll 26 I provide a weight 62 having pins 63 projecting from each end into a vertical slot 64, which allows it to follow the roll as it decreases in diameter. To hold weight 62 while a new roll is being inserted, this slot is provided with an angular extension 65 in which the pins 63 may rest.

The soap used with my device is in liquid form and contained in a tank 66 located between the standards and communicates through an opening 67 with a measuring cylinder 68. Slidably mounted in the latter is a piston 69 adapted as it moves forward to inclose a given amount of liquid in the front of the cylinder discharging the same through tube 70 into the funnel 71 and then through tube 72 to the discharge nozzle 73.

Piston 69 is mounted on rod 74, which is connected to one end of a lever 75 pivotally mounted at 76 and having its other end pivotally connected to link 77. The other end of this link is pivotally connected to push rod 28 slidably mounted in guide plate 79.

On link 77 is a laterally extending pin 80, which engages the slotted end of lever 81 mounted upon the shaft 41 so that this shaft will be oscillated with the movement of either push rod.

The operation of this device is as follows:—rod 78 being pushed inwardly, piston 68 will be moved forward, discharging the contents of the forward end of the cylinder through tube 70 into funnel 71 where it discharges by gravity through spout 73. The object of providing a funnel is to prevent a constant drip as would be the case with a continuous tube.

This movement through pin 80 and lever 81 causes the rotation of shaft 41, which through arm 43 moves upward the rod 15. This oscillates arms 11 and 13 causing pawl 12 to engage ratchet 10 and move drum 6 around the space of one advertisement or from one pocket 22 to the next.

The object of spring 17 between the rods 14 and 15 is that a considerable force is required to start the drum due to pin 19 engaging the depression 22 but after it leaves the pin the compression of the spring will act to turn the same by the amount lost during the compression of the spring. Then when the next pocket 22 is reached the pin will retain the wheel though the rod may be further moved as such movement unless too great will be taken up by the spring 17.

The inward movement of rod 60 first causes the curved end of 44 to contact with 46 and then to move the latter from under catch 45. When this is accomplished the other end of slot 37 picks up pin 38 and moves arm 35 which through pawl 36 rotates wheels 33 and the latter wheel 32. This rotates roller 28 which is rubber faced and roller 27 is of heavy material so that the paper is carried forward between these rollers. When 46 is released from catch 45 the weight of arm 50 link 51 and knife 52 causes these parts to drop thus opening slot 55 so that the towel may be discharged therethrough. During this movement of the push rod the bell crank composed of arms 42 and 43 have been oscillated and rod 15 pushed upward to rotate the drum in the manner heretofore described.

By the time rod 60 has reached its inner position, a sufficient amount of towel has been discharged to enable it to be grasped by the fingers. The protruding end of the paper is in this manner pulled out and the frictional contact of the web on the roller 28 causes the latter to rotate, driving gears 32. The latter in turn drives gear 33 as previously described, the initial movement of rod 60 releasing member 46 on the upper end of

arm 47 from the catch 45, thus gear 33 is free to turn when the paper is pulled out, and when 60 is released to grasp the paper, the arm 44 moves to the left releasing end 46 and allowing the upper end of the arm 47 to move toward the face of gear 33 and contact therewith, then when the web has been pulled out a predetermined distance, catch 45 engages the upper end of arm 47, lever 48 is carried down, due to the further rotation of gear 33. This rotates shaft 49 in a clock wise direction raising arms 50, causing the knife 52 to cut off the length of towel which has been drawn through slot 55. It will be observed that the knife remains in its uppermost position until the next operation of the device thus closing all openings and making an entirely dust proof and sanitary device.

While I have described and illustrated the preferred form of my invention it will be understood that changes may be made in minor details and form without departing from the spirit thereof or sacrificing any of the advantages thereof.

What I claim as new and wish to cover by Letters Patent is:—

1. A dispensing apparatus of the character described comprising a casing having a discharge opening, a web carrying roll mounted within said casing, feed rolls positioned contiguous to said discharge opening, an actuator wheel geared with one of said feed rolls, means for limiting movement of said actuator wheel, a push rod operatively connected with said actuator wheel to impart movement thereto, and means directly engaged by said push rod and independent of the connection of the latter with the actuator wheel, to release the actuator wheel from its movement-limiting means.

2. A dispensing apparatus of the character described comprising a casing having a discharge opening, a web carrying roll mounted within said casing, feed rolls positioned contiguous to said discharge opening, an actuator wheel geared with one of said feed rolls, a stop arm positioned to limit movement of said actuator wheel, a push rod and means operated thereby to impart movement to said actuator wheel, and a movable cam arm positioned to be engaged by said push rod and having means positioned to actuate said stop arm.

3. A dispensing apparatus of the character described comprising a casing having a discharge opening, a web carrying roll mounted within said casing, feed rolls positioned contiguous to said discharge opening, an actuator wheel geared with one of said feed rolls, a pivoted stop member having a spring latch to limit movement of said actuator wheel, a push rod and means operated thereby to impart movement to said actuator wheel, and a movable cam arm positioned to be engaged by said push rod and having means to engage said spring latch.

4. A dispensing apparatus of the character described comprising a casing having a discharge opening, a web carrying roll mounted within said casing, feed rolls positioned contiguous to said discharge opening, an actuator wheel geared with one of said feed rolls, a stop arm positioned to limit movement of said actuator wheel, a push rod and means operated thereby to impart movement to said actuator wheel, and a movable cam arm positioned to be engaged by said push rod and having means positioned to actuate said stop arm, and a cutter bar actuated by movements of said stop member.

5. A towel dispensing apparatus comprising a casing having a discharge slot, a web carrying roll revolubly mounted therein, a pair of friction rolls revolubly mounted back of said slot, a toothed gear carried by one of said rolls, a second gear driven by said first mentioned gear, an operating rod extending through said casing, a pawl engaging said last mentioned gear, means connecting said pawl with said operating rod, a stop adapted to limit the rotative movement of said last mentioned gear, a knife adapted to move across said slot, means for reciprocating said knife, said last mentioned means being movable by said stop and other means operated by said rod for releasing said stop from said last mentioned gear on the initial movement of said rod.

6. A towel dispensing apparatus comprising a casing having a discharge slot, a web carrying roll revolubly mounted therein, a pair of friction rolls revolubly mounted back of said slot, a toothed gear carried by one of said rolls, a second gear driven by said first mentioned gear, an arm oscillatively mounted about the axis of said last mentioned gear, a pawl carried by the outer end of said arm to engage the teeth of said last mentioned gear, an operating rod extending into said casing, said rod having a lost motion connection with said arm, a stop carried by the face of said last mentioned gear, an oscillatively mounted stop arm journaled in said casing, said arm having an end extending in the path of said stop and means carried by said operating rod for lifting said stop arm during the initial movement of said rod.

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

CALVIN H. SKEEN.

Witnesses:
HORTON B. VAN ETTEN,
W. A. STOCK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."