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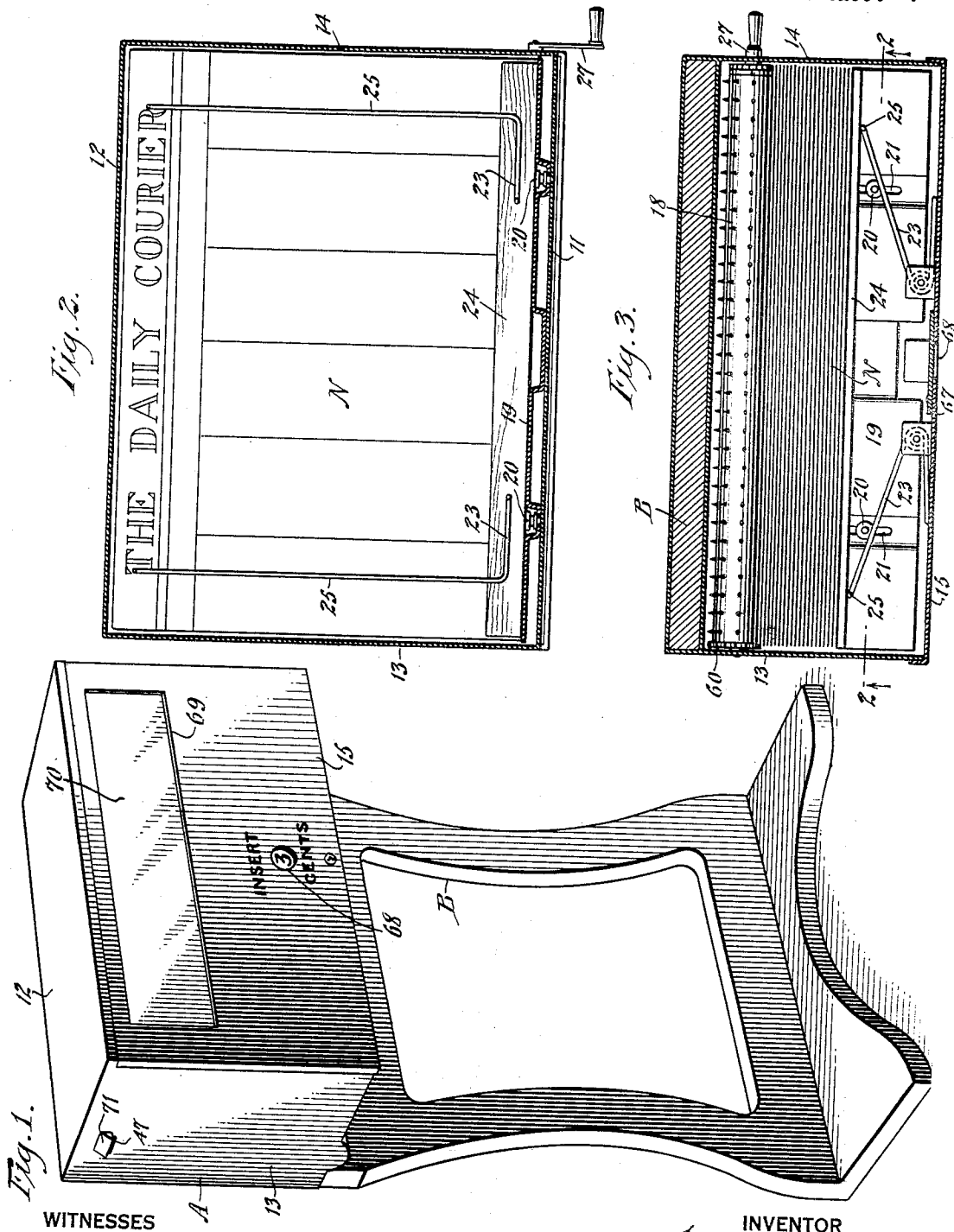
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1,926,931

NEWSPAPER VENDING MACHINE

Filed April 17, 1931

3 Sheets-Sheet 1



WITNESSES

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3 Sheets-Sheet 2

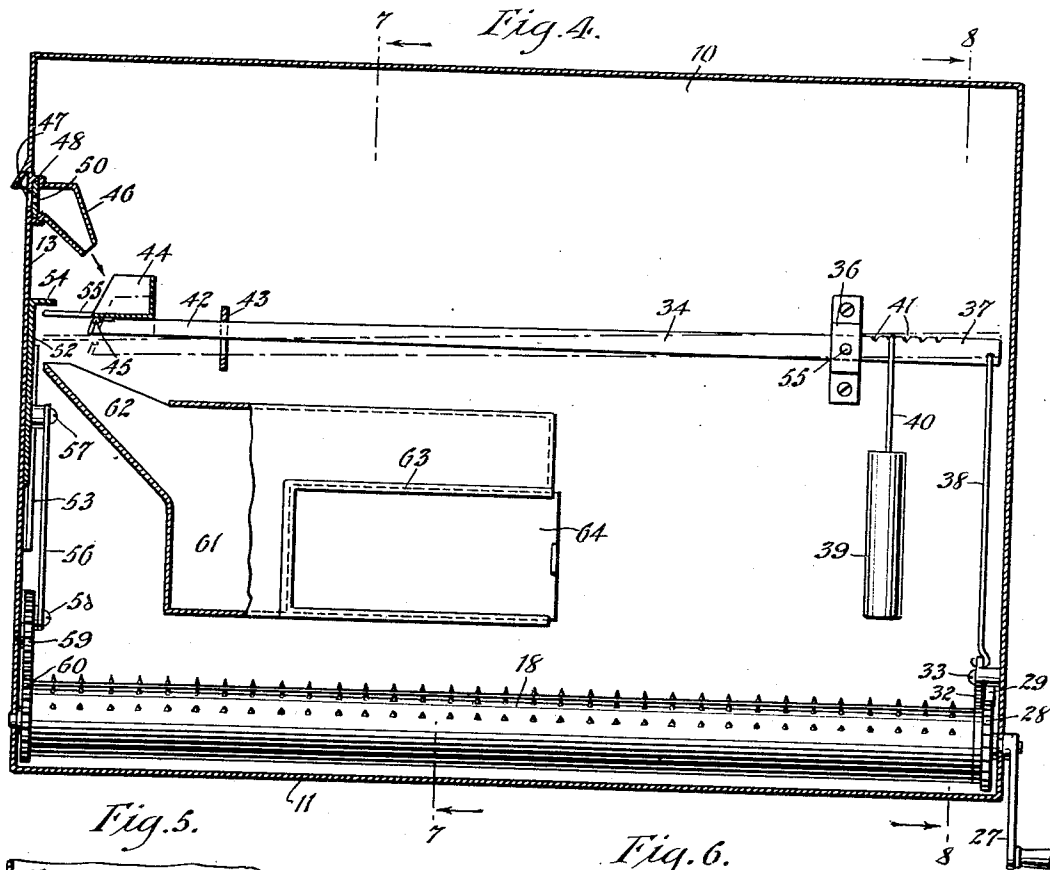


Fig. 5.

Fig. 6.

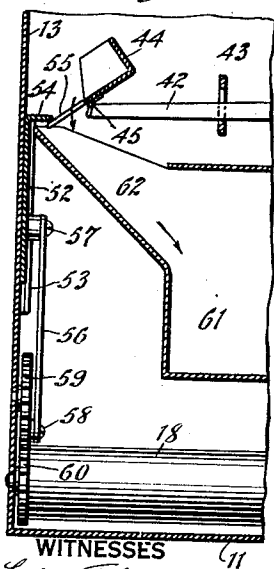
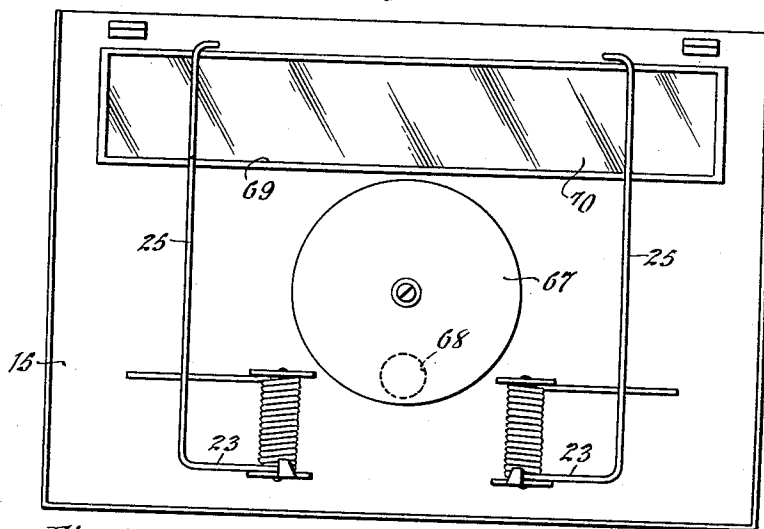
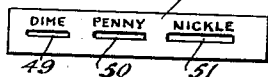


Fig. 9.



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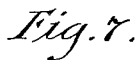
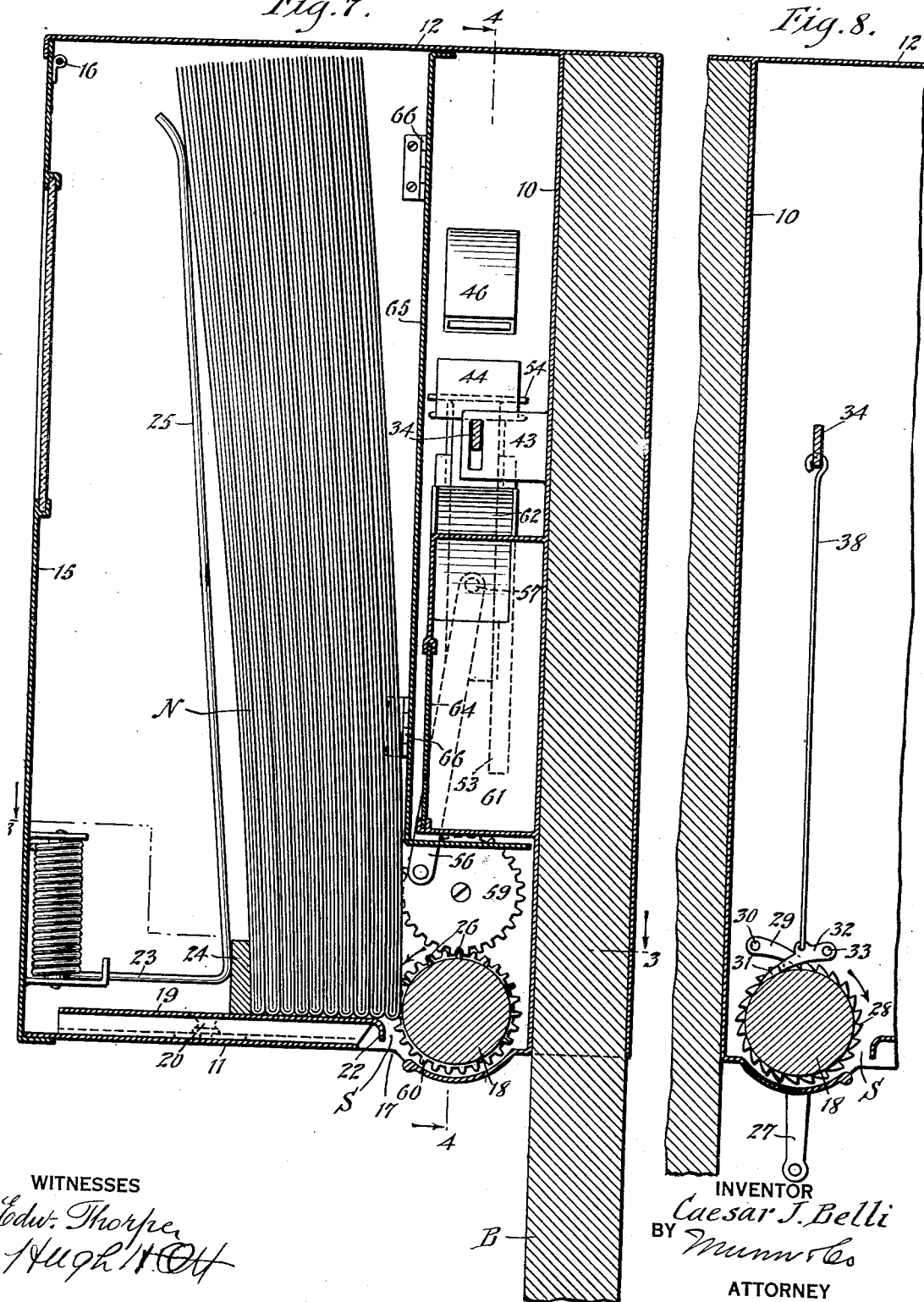
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

1,926,931

NEWSPAPER VENDING MACHINE

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Application April 17, 1931. Serial No. 530,968

2 Claims. (Cl. 194—26)

This invention relates to vending machines, and has particular reference to a machine which, while not necessarily restricted to such use, is especially designed for vending newspapers, magazines, periodicals or other articles of this same general character.

The invention broadly aims to provide an improved vending machine of the indicated character, by virtue of which a supply of newspapers, magazines or other similar articles may be properly housed, protected and vended through the medium of a coin controlled mechanism.

Due to the fact that different issues of newspapers, magazines or the like vary as to their thickness and also as to the price, the present invention further aims to provide a vending machine therefor which includes means to render the same adjustable to compensate for variation in the thickness and price.

More specifically, the invention resides in the provision of a vending machine cabinet having an outlet opening and a delivery roller and gauge plate mounted adjacent said opening for relative adjustment with respect to each other, to define between an edge of the gauge plate and the periphery of the delivery roller, a delivery space to coincide with the thickness of the articles to be vended whereby variation in the thickness of said articles may be compensated for.

The invention further embodies in a vending machine of the character set forth, delivery mechanism for partially projecting the articles from the cabinet and for permitting of the grasping and complete manual withdrawal of the same therefrom when so projected.

As a still further object, the invention contemplates in a vending machine having a rotary delivery element, coin controlled mechanism which releases a detent normally functioning to lock the delivery element against rotation and in which said mechanism makes use of a tiltable coin receiver operatively connected with the detent and operable upon reception of coins of the proper weight to release the detent, together with means operable by and upon rotation of the delivery element to discharge the coins from the coin receiver coincident with the completion of rotation of the delivery element whereby the detent is again permitted to function to lock the delivery element.

Other objects of the invention reside in the comparative simplicity of construction of the machine, the economy with which it may be produced and maintained in working condition and the general efficiency derived therefrom.

With the above recited and other objects in view, reference is had to the following description and accompanying drawings, in which there is exhibited one example or embodiment of the invention, while the claims define the actual scope of the same.

In the drawings:

Figure 1 is a perspective view of the vending machine.

Figure 2 is a vertical sectional view through the cabinet thereof taken approximately on a plane indicated by the line 2—2 of Figure 3.

Figure 3 is a sectional plan view taken approximately on the line indicated at 3—3 in Figure 7, and on a reduced scale with respect to Figure 8.

Figure 4 is a vertical sectional view through the cabinet taken approximately on the line indicated at 4—4 in Figure 7.

Figure 5 is a fragmentary vertical sectional view similar to Figure 4 illustrating the discharge position of the coin receiver.

Figure 6 is an inside view of the front wall of the cabinet.

Figure 7 is an enlarged vertical sectional view through the cabinet taken approximately on the line indicated at 7—7 in Figure 4.

Figure 8 is a similar fragmentary view taken approximately on the line 8—8 of Figure 4.

Figure 9 is a detail face view of the adjustable coin slot plate.

Referring to the drawings by characters of reference, A designates generally the cabinet of the vending machine, which may be supported by a stand B or in any other desired manner. The cabinet A includes a rear wall 10, a bottom wall 11, a top wall 12 and side walls 13 and 14. The open front of the cabinet is closed by a front cover wall 15, which is preferably hinged at its upper end as at 16, whereby the same may be swung upwardly to introduce the articles to be vended and to remove the coins. Any suitable means may be employed for locking the front cover wall 15 in its closed relation to the cabinet. The bottom wall 11 is formed with an outlet opening 17, which is in the nature of a slot extending throughout the width of the cabinet. A delivery roller 18 is journaled for rotation within the cabinet adjacent the outlet opening or slot 17 and a gauge plate 19 is mounted for adjustment toward and away from the periphery of the delivery roller, upon the bottom wall 11, the adjustment thereof being secured by the screw and slot connection 20 and 21. The rear edge of the gauge plate 19 is formed with a downturned extremity 22, between which and the roll-

er periphery, a delivery space S is provided, the width of which may be varied to coincide with the thickness of the newspapers or articles N to be vended. The gauge plate 19 also serves as a support for the lower ends of the articles N, which articles are arranged in parallel relation and in a plane substantially parallel to the front wall of the cabinet. In order to feed or advance the articles N toward the delivery roller, a pair of spring arms 23 are carried by the front cover wall 15, and said arms engage with and urge a transverse strip 24 against the lower ends of the articles, while the upturned extremities 25 of the arms act as a support for the upper portions of the articles. With the gauge plate properly adjusted to coincide with the thickness of the articles, it will be apparent that the rear-most article will be urged to a position engaging with the periphery of the delivery roller and in alignment with the delivery space S.

In order to effect positive delivery of the rear-most article through the delivery space and outlet opening 17 when the delivery roller is turned in the direction indicated by the arrow in Figure 7, the roller periphery is formed with suitable means at its leading portion, such as the radial pins 26, the remaining or trailing portion of the roller periphery being smooth to permit of the manual withdrawal of the delivered articles from between the smooth portion of the periphery and the downturned terminal edge 22 of the gauge plate. Any suitable exteriorly disposed handle may be provided for imparting rotation to the delivery roller 18, such as the hand crank 27. The delivery roller 18 is limited to turning movement in the direction indicated in the drawings by a ratchet 28 with which a gravity dog 29 engages, said ratchet being disposed adjacent one of the side walls and said dog being fulcrumed as at 30 on the side wall.

In order to provide means for controlling the operation of the delivery mechanism, the delivery roller is formed adjacent one end with a single tooth 31, with which a gravity detent pawl 32 normally engages, said pawl being fulcrumed as at 33 on the side wall 14. A scale beam lever 34 is fulcrumed as at 35 to a bracket 36 carried by the rear wall 10 of the cabinet, and the end 37 of said scale beam lever is connected by a link 38 to the ratchet pawl 32. Between the end 37 and the fulcrum 35, a weight 39 is suspended by a shank 40 which is selectively engaged in one of a plurality of notches 41. The opposite free end 42 of the scale beam arm extends through a slotted limiting guide 43, and the terminal of said free end 42 carries a coin receiver 44 which is fulcrumed thereto as at 45 and is normally maintained by gravity in a receiving position directly underlying a coin chute 46 leading from a coin slot 47 which is formed in the side wall 13 of the cabinet A. Obviously, when the weight 39 is adjusted away from its fulcrum, a greater coin weight will be necessary to raise the end 37 of the scale beam lever and, conversely, when the weight 39 is adjusted toward the fulcrum, a lesser coin weight will be required to release the detent for operation of the machine. For instance, for daily newspapers, the common price is three cents and, hence, in this instance, the weight 39 will be adjusted away from the fulcrum until the scale beam is so counterbalanced that it will require the weight of three pennies to release the detent. The common charge now for Sunday papers is 10 cents and, hence, the weight in this instance is adjusted closer to the fulcrum so that the weight of a

dime will be sufficient to release the detent. It is, however, apparent that some means must be provided to control the size of the coin slot 47 when the machine is to be operated by coins of various denominations. This is accomplished by the use of an adjustable plate 48 having variously sized coin slot openings 49, 50 and 51. The plate 48 is mounted to slide laterally within the upper end of the coin chute 46 and adjacent the slotted portion of the wall 13.

In order to provide means for tilting the coin receiver 44 to discharge the coins therefrom after the detent has been released and the delivery roller turned, a trip element 52 is provided which is in the nature of a plate mounted for vertical reciprocation in the guides 53 on the inner surface of the wall 13. The trip element has an inwardly projecting terminal 54 at its upper end which is designed to engage with fingers 55 which protrude from the coin receiver into the path of movement of the terminal 54. The trip element 52 is reciprocated once during each operation of the delivery roller and by the delivery roller through the medium of a link or pitman 56 which is fulcrumed at one end as at 57 to the element 52 and pivotally attached by an eccentric or crank pin 58 at its opposite end to a pinion 59, which pinion meshes with a gear 60 secured to the delivery roller 18. After the manipulating crank 27 has been initially turned upon release of the detent 32 from the tooth 31 to partially feed the article N through the delivery opening 17 and prior to the disengagement of the teeth 26 with the article N, the terminal 54 engages the fingers 55 and discharges the coins from the coin receiver, thereby permitting the detent to again gravitate to its active position in engagement with the periphery of the delivery roller. Continued turning movement of the delivery roller until the smooth portion of the same is brought into engagement with the article N disposes the tooth 31 again into engagement with the detent pawl 32. Due to the fact that the coins have been discharged from the coin receiver, it is apparent that a subsequent operation of the machine is precluded until the proper coin weight has been deposited in the coin receiver through the coin slot and chute.

In order to collect the coins which are discharged from the coin receiver, a coin box 61 is mounted on the rear wall 10 of the cabinet and is provided with an intake hopper 62 disposed directly under the coin receiver. The coin box is provided with an outlet 63 provided with a sliding closure plate 64.

In order to protect the mechanism from contact with and interference by the articles N, a partition 65 is hinged as at 66 to the wall 13 and normally overlies the scale beam, coin receiver and weight 39. After the front cover wall 15 has been opened and the remaining articles removed access may be gained to the coin receiver and other parts in the rear of the partition 65 by swinging said partition forwardly.

In order to indicate the amount of the purchase price of the articles being vended, a price plate 67 is movably mounted in rear of a display aperture 68 in the front wall 15 of the cabinet. The front cover wall 15 may also be provided with a window opening 69 closed by a transparent panel 70 whereby the filled or empty condition of the cabinet may be observed. The coin slot 47 may also be protected against the entrance of the elements by a vizer 71.

While there has been illustrated and described 150

a preferred embodiment of the invention, no limitation is necessarily intended to the precise structural details, as it is to be understood that variations and modifications which properly fall within the scope of the claims may be resorted to when desired.

What is claimed is:

1. In a vending machine having a delivery element operable upon each complete revolution to vend a single article; a coin controlled mechanism including a detent normally acting to lock the delivery element, a release lever connected with the detent, a tiltable coin receiver pivoted to said lever at one end thereof and operable upon reception of coins of the proper weight to release the detent thereby permitting the rotation of said delivery element to effect a discharge of said article and means operable by turning of the delivery element and prior to the completion of each revolution thereof for tilting the coin receiver to discharge the coin therefrom.

2. In a vending machine having a delivery element operable upon each complete revolution to vend a single article; a coin controlled mechanism including a detent normally acting to lock the delivery element, a release lever connected with the detent, a tiltable coin receiver pivoted to said lever at one end thereof and operable upon reception of coins of the proper weight to release the detent and means operable by turning of the delivery element and prior to the completion of each revolution thereof for tilting the coin receiver to discharge the contents therefrom, said coin receiver dumping means consisting of a reciprocatory trip, a connection between said trip and the delivery element for effecting a single reciprocation of the trip upon each rotation of said delivery element.

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