No. 896,965. PATENTED AUG. 25, 1908.

H. J. WISSING.

COIN WAY FOR VENDING MACHINES.

APPLICATION FILED FEB. 13, 1907.

Fig. 1.

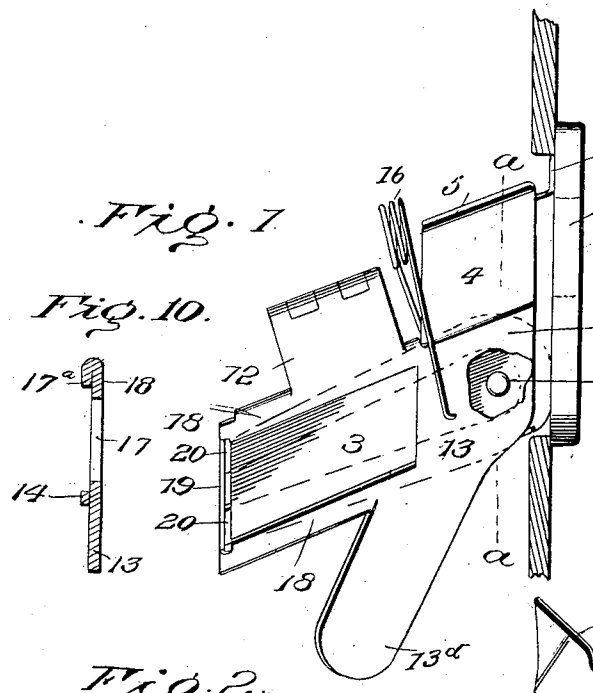


Fig. 11.

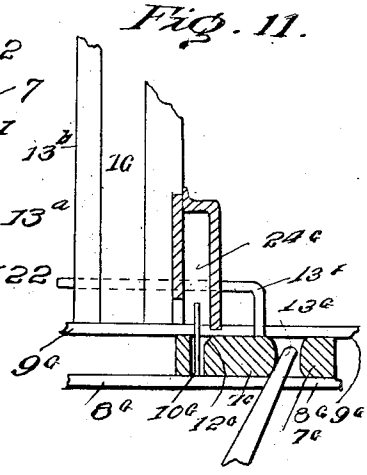


Fig. 10.

Fig. 2.

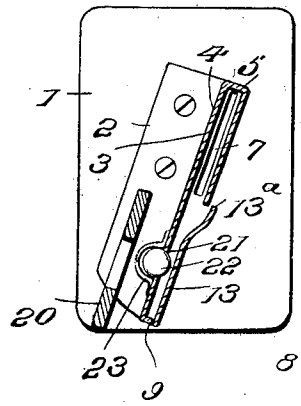


Fig. 3.

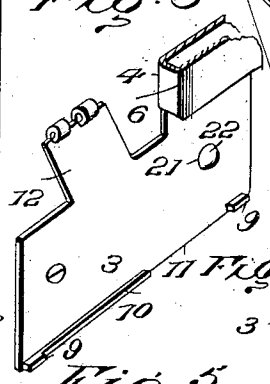


Fig. 4.

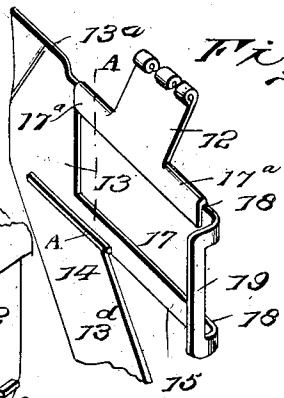


Fig. 5.

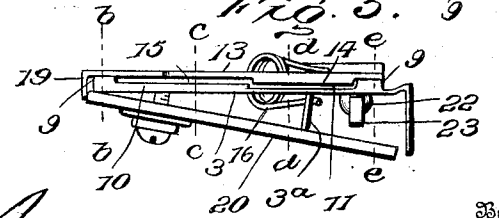


Fig. 6.

Fig. 7.

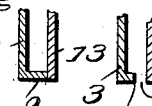


Fig. 8.

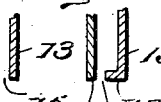
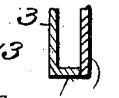


Fig. 9.



Witnesses

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UNITED STATES PATENT OFFICE.

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COIN-WAY FOR VENDING-MACHINES.

No. 896,965. Specification of Letters Patent. Patented Aug. 25, 1908.

Application filed February 13, 1907. Serial No. 357,227.

To all whom it may concern:

Be it known that I, HENRY J. WISSING, citizen of the United States, residing at Jeffersonville, in the county of Clark and State of Indiana, have invented certain new and useful Improvements in Coin-Ways for Vending-Machines, of which the following is a specification.

This invention contemplates certain new and useful improvements in coin-ways designed to prevent the fraudulent working of coin controlled vending apparatus, and the invention consists in certain constructions, arrangements and combinations of the parts which I shall first describe hereinafter and then point out the novel features thereof in the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of my improved coin-way for coin controlled vending machines, a part of one plate being broken out; Fig. 2 is a vertical sectional view on the line *a*—*a* of Fig. 1; Fig. 3 is a detail perspective view of the stationary plate of the coin-way; Fig. 4 is a detail perspective view of the movable plate; Fig. 5 is a bottom plan view of the coin-way; and, Figs. 6, 7, 8 and 9 are fragmentary sectional views, in the nature of diagrams, taken substantially on the lines *b*—*b*, *c*—*c*, *d*—*d* and *e*—*e*, respectively, of Fig. 5. Fig. 10 is a fragmentary sectional view on line A—A of Fig. 4. Fig. 11 is a fragmentary elevation view of a well known article ejecting or vending mechanism to which is attached the rod for operating the movable member of the coin-way.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawing, the numeral 1 designates the face plate of the coin-way and 2 a flange which is formed on one end of the stationary plate 3 of the coin-way and is so formed and secured to the face plate 1, or other stationary support of the vending machine, as to hold said stationary plate 3 and the opposite plate of the coin-way (when in normal position) in an inclined position, considered both longitudinally and transversely, so that a coin inserted through the slit 7 of the face plate will roll downwardly on its edge while it is held at an inclination to the vertical.

4 designates a hood which is secured to the entrance end or portion of the stationary plate 3 and is provided with a closed top 5, a closed rear end 6, and a front opening in registry with the coin slit 7 in the face plate 1. The remaining portion 8 of the stationary plate 3 is in a lower plane than the hood 4 and is provided at its bottom edge and at each end thereof with a laterally projecting lug 9. The said edge of the plate is also formed with a longitudinally extending ledge 10 which extends from the rearmost lug 9 towards the opposite lug, but terminates short thereof, whereby to form a bottom shunt opening 11 which is underneath and in alinement with the bottom of the hood 4. The ledge, is, as clearly shown, of less width than the lugs 9.

Hinged members 12 are secured one to the upper edge of the stationary plate 3 and the other to a movable or swinging plate 13 of the coin-way. This latter plate is adapted to swing towards and away from the stationary plate and is pressed towards the latter by means of the spring 16 secured to the stationary plate at one end and extending around a lug 3^a on the stationary plate 3. The movable or swinging plate 13 is provided with a ledge 14 adapted to face and substantially coextensive with the bottom shunt opening 11. It is to be understood, however, that the ledge 14 does not close the opening 11, but is held in proper relation thereto by the contact of the plate 13 with the lugs 9. The space between the ledge 10 of the stationary plate and the movable plate 13 provides a second bottom shunt opening 15 at the ledge 10 of the stationary plate. Hence it will be seen that when the swinging plate is in normal position, a raceway for the coin is formed, said raceway being provided in its bottom with a split or zigzag passage, the two portions of which are in parallel relation to each other, but offset from each other and are constituted by the bottom shunt openings 11 and 15. It is also to be noted that the sum of the widths of the two staggered bottom shunt openings is coextensive with the full bottom width of the coin-way.

In addition to the bottom shunt openings, a side shunt opening 17 is formed in the mov-

able plate 13, said opening being of a height slightly less than the diameter of the proper coin to be inserted in the machine, so that any coin less than the proper diameter will fall sidewise out of the opening 17 before it reaches a point where it would be directed to the actuating mechanism for the vending portion of the apparatus. The top portion of plate 13 is doubled back upon itself forming an upper ledge 17[a] (Figs. 4 and 10) which, in conjunction with the ledges 9, 10 and 14, forms a gage for preventing the passage through the coin-way of coins that are of the proper or greater thickness, but which are too large in diameter. These larger coins are freed from the coin-way by the article ejector swinging the plate or movable member 13 upon its hinge 12 at each operation. The upper and lower members 18 formed by the openings 17 are connected together at the rear end of the movable plate 13 by means of a cross bar 19 which is angularly disposed and which, in the normal position of the parts, is at the back end and to one side of the raceway. The movable plate 13 is provided with a depending finger 13[a] adapted to be engaged by an actuating rod 13[b] of the article ejecting mechanism, so that at each proper operation of the machine, the movable plate will be swung away from the stationary plate and allow all coins that might be caught therein to drop down and prevent the clogging of the raceway.

The article ejecting or vending means shown in Fig. 11 is that shown in the Letters Patent to C. A. Gunder, No. 817,912, dated April 17, 1906, and the same reference numerals therein employed to designate the parts are herein used with the addition of the letter "G" to designate the same parts. The cross bar 19 will manifestly pass transversely across the rear end of the coin-way when the movable plate is swung away from the stationary plate and thereby tend to clear all coins that might be stuck at the rear lower end of the coin-way and at the same time said cross bar 19 stops the discharge end of the coin-way and precludes the possibility of a coin or slug being thrown or conveyed by wire or otherwise through the discharge end of the coin-way and render operative the ejecting or vending means at any time when said ejecting or vending means was partially operated. In addition to this function, the cross bar 19 serves as a stripper for a magnet 20 which is secured to the stationary plate 3 at the back face thereof and projecting beyond the rear of said plate 3, so as to attract only at its exposed end and hold all iron or similar washers that may be influenced by the magnetic force, the plate 3 being of brass or other non-magnetic material and throughout its extent acting as a sort of magnetic shield. The bar 19 being also of brass or other non-magnetic material and extending across the rear end of magnet 20 strikes from said magnet all articles attracted thereto each time the ejecting or vending means is operated.

The stationary plate 3 is provided underneath and in alinement with the bottom discharge opening of the hood 4 with an aperture 21 through which a weight 22 is adapted to protrude, said weight being loosely held in proper relation to the opening 21 by means of a cage 23, the plate 3, weight 22 and the bottom of cage 23 being of such relative position and shape that said weight 22 yieldingly projects through said opening 21. In the specific instance shown in the drawings, the weight 22 is in the form of a ball, and the bottom of cage 23 inclines downwardly toward plate 3.

In practical use, if a coin of proper size is inserted through the slit 7 of the face plate 1, it will first enter the hood 4 and then drop downwardly and be guided towards the weight or ball 22 by the inclined adjacent portion 13[b] of the movable plate 13. If the coin lacks weight, that is, is aluminium or some other light metal or substance of less weight than the requisite coin, it is obvious that it will be caught by the ball 22 and prevented from entering and rolling along the coin-way, even though it should be of the proper dimensions. Consequently, upon the actuation of the article ejecting mechanism, the movable plate or wall 13 will be swung outwardly and allow such lighter metal or substance to be released by the weight or ball 22 and drop down through the first bottom shunt opening 11. If the coin inserted be of a less diameter than the required coin, although of the requisite thickness, it is obvious that when it drops from the hood 4 on to the ledges 10 and 14, it will roll down such ledges on its edge, one face resting against the movable plate 13. Hence, as it reaches the side shunt opening 17, it will tilt out of the latter before it reaches the coin-way and thus be discharged, before it shall have had an opportunity to set the article ejecting mechanism. Again, if the coin inserted be of less thickness than the requisite coin, even though it should be of the proper diameter, it is obvious that as it falls from the hood 4, it will either pass directly through the first bottom shunt opening 11 and thus be discharged, or even if it should be caught upon the ledge 14 and commence to roll down the coin-way, it will roll off the ledge 14 into the coinciding second bottom shunt opening 15 and thus be discharged from the coin-way without any possibility of its rolling along the ledges, which might happen if a continuous ledge were employed, or the possibility of coins lodging if an opening through the bottom of the coin-way be made as wide as the coin-way, in which case thin slugs of the diameter of the proper coin would be as likely as proper coins to pass such wide

opening. These staggering thin slots 11 and 15 through the bottom of the coin-way are a very important feature, as it insures that a thin coin shall be discharged from the coin-way without danger of actuating the mechanism, and that a proper coin will be uninterrupted in its travel through the coin-way, no matter how it happens to strike the bottom of the coin way as it falls from the hood. The hood is of advantage in itself in that its top is closed as well as its rear end and thereby prevents the direct insertion of a wire or other instrument, while in connection with the tapered or inclined portion 13^a below it, it serves to direct the coin into the contracted throat of the coin-way where it will be sure to engage the ball 22 and be arrested thereby if it be of insufficient weight.

Proper coins are led from the lower end of the coin-way (at which is located the bar 19) through opening or way 24^G to which the coin receiving pocket 12^G of ejector portion 7^G, in which position of the coin an article will be ejected from the magazine 1^G, and at each operation, whether or not an article is ejected, the rod 13^b of ejector portion 7^G engages with portion 13^d of plate 13 and moves plate 13 about its pivot point and away from plate 3, clearing all articles that may be lodged in the coin-way and separating the sides of each of the staggered openings 11 and 15, so that articles lodged therein will thereby be removed.

Having thus described the invention, what is claimed as new is:

1. A coin-way for coin released mechanism having a plurality of staggered openings extending in the direction of the travel of the coins and passing through the surface of the coin-way upon which the coins rest while traveling through said coin-way, a plurality of said staggered openings being of lesser width than the thickness of the acceptable coins; whereby coins of lesser width than acceptable coins will pass through one of said staggered openings and will not reach the destination provided for acceptable coins.

2. A vending means comprising operating means, a coin-way having a plurality of staggered openings extending in the direction of the travel of the coins and passing through that surface of the coin-way upon which the coins rest while traveling through said coin-way, a plurality of said openings being normally of lesser width than the thickness of the acceptable coins, a member forming one side of said openings, and means whereby the operation of said operating means moves said member to enlarge said openings, substantially as specified.

3. A vending means comprising a member having a deposit slot for coins, a coin-way for deposited coins in a different plane from said slot, a hooded portion extending from said slot and conducting coins to said different plane of said coin-way, the lower surface of said coin-way having a plurality of staggered slots passing therethrough and of lesser width than the thickness of acceptable coins, where by thin portions are prevented from being thrown through said coin-way and jumping over said staggered slots, substantially as specified.

4. A vending means comprising a member having a deposit slot for coins, a coin-way for deposited coins in a different plane from said slot, a hooded portion extending from said slot and conducting coins to said different plane of said coin-way, the lower surface of said coin-way having a plurality of staggered slots passing therethrough and of lesser width than the thickness of acceptable coins; a movable member forming one side of said staggered slots, operating means, and means whereby the operation of said operating means moves said movable member to enlarge said staggered slots, substantially as specified.

5. In a coin-way for coin controlled vending machines, the combination of a relatively stationary plate formed with bottom laterally extending lugs, and a relatively narrower ledge intermediate of said lugs and terminating short of one of said lugs whereby to form a bottom shunt opening, a plate hinged to the stationary plate, means for pressing said hinged plate towards said stationary plate, the hinged plate being formed with a longitudinally extending ledge facing the bottom shunt opening and substantially coextensive with the latter, said plate being adapted to abut against the said lugs whereby to form a second bottom shunt opening with the lug of the stationary plate, said two bottom shunt openings being offset one from the other, and means for directing a coin down upon the ledge of the hinged plate, whereby a thin coin will either pass directly through the first bottom shunt opening or roll along the ledge of the hinged plate, and drop through the second shunt opening, substantially as shown and described.

6. In a coin-way for coin controlled means, the combination of a relatively stationary plate provided with a longitudinally extending ledge forming one member of a track along which a coin is adapted to roll on its edge, said ledge terminating short of the front end of said plate and said plate being provided at its front end with an upward extension, a hood secured to said upward extension and formed with a closed top and closed rear and having a bottom opening and also formed with a front opening, a face plate formed with a coin slit facing the front opening of the hood, and a hinged plate connected to the stationary plate, a spring pressing said hinged plate towards the stationary plate, said hinged plate being

provided with a longitudinally extending ledge offset from the ledge of the stationary plate, means for holding said plates slightly spaced from each other whereby the offset lugs produce two longitudinally extending bottom shunt openings, one offset from the other, substantially as shown and described.

7. In a coin-way for coin controlled machines, the combination of a stationary plate forming one wall of the coin-way, said plate being formed with an opening, a ball adapted to loosely rest in said opening, means for retaining said ball in position to drop into said opening, a movable plate adapted to coact with the stationary plate to form the opposite wall of the coin-way, and means for directing a coin so that it will fall upon that portion of said ball projecting into said coin-way.

8. In a coin-way for coin controlled machines, the combination of a stationary plate forming one wall of the coin-way, said plate being formed with an opening, a ball adapted to loosely rest in said opening, means for retaining said ball in position to drop into said opening, a movable plate adapted to coact with the stationary plate to form the opposite wall of the coin-way, the stationary plate being provided with a hood above said ball and formed with a bottom opening, and means for admitting a coin to the hood, said plate being provided with an inclined portion below the hood and adapted to produce a contracted throat for directing coins to that portion of said ball projecting into said coin-way.

9. A coin-way for coin controlled vending machines comprising a relatively stationary plate and a plate hinged to the stationary plate, face to face, and spring pressed toward said stationary plate, said two plates being spaced from each other whereby to provide a passage way for coins and said plates being provided with coin supporting ledges along which a coin is adapted to roll on its edge, the ledges of the respective plates facing the opposite plate, and spaced from said plate, the ledges extending parallel with each other, but offset one from the other and providing two bottom shunt openings that also extend parallel in offset relation to each other.

10. In a coin-way for coin controlled machines, the combination of a stationary plate inclined transversely with one face forming one wall of the coin-way and said face facing slightly in a downward direction, said plate being formed with an opening, a removable plate adapted to coact with the stationary plate to form the opposite wall of the coin-way, the coin-way being provided with a bottom shunt opening and an inlet opening for the coin, and a valve adapted to protrude through the opening in the stationary plate and interposed between the bottom shunt opening and the inlet opening of the coin-way, as and for the purpose set forth.

11. A coin-way for vending machines formed of two relatively movable members, a hooded portion upon one of said members arranged to conduct coins to the coin-way, the hooded portion being located in a different plane from said coin-way and formed with a bottom opening through which the coins are adapted to drop towards the coin-way, the other of said members having a converging throat portion below said hooded portion, and means whereby said members may be relatively moved, substantially as specified.

12. In a vending machine, the combination of a stationary member, a movable member, said members together forming a coin-way, one portion 19 of the movable member projecting at an angle to and across a portion of the other member, a relatively long opening being formed in the side of said movable member and extending along a portion of the length of said portion 19, a bottom for said coin-way contiguous to the lower edge of said opening, a top for said coin-way contiguous to the top of said opening, means whereby articles may be vended, and means whereby the movable member is moved at each operation of said vending means to dislodge over-sized coins from between said top and bottom of said coin-way and said portion 19 to close said coin-way, substantially as specified.

13. A coin-way for coin released mechanism having a plurality of staggered openings extending in the direction of the travel of the coins and passing through that surface of the coin-way upon which the coins rest while traveling through said coin-way, said staggered openings being of less width than the thickness of the acceptable coins, the sum of the width of said openings being substantially equal to the width of the coin-way.

14. A coin-way for coin released mechanism having a plurality of staggered openings extending in the direction of the travel of the coins and passing through that surface of the coin-way upon which the coins rest while traveling through said coin-way, said openings being of less width than the thickness of the acceptable coins and said coin-way being further provided with a side opening, the upper wall of which is located at a distance from the said traveling surface of the coin-way less than the diameter of the acceptable coins.

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

HENRY J. WISSING. [L. S.]

Witnesses:
FRANK HENDERSON,
E. B. CAIN.