W. H. SIGLEY.

PACKAGE VENDING MACHINE.

APPLICATION FILED APR. 7, 1911.

1,004,094.

Patented Sept. 26, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

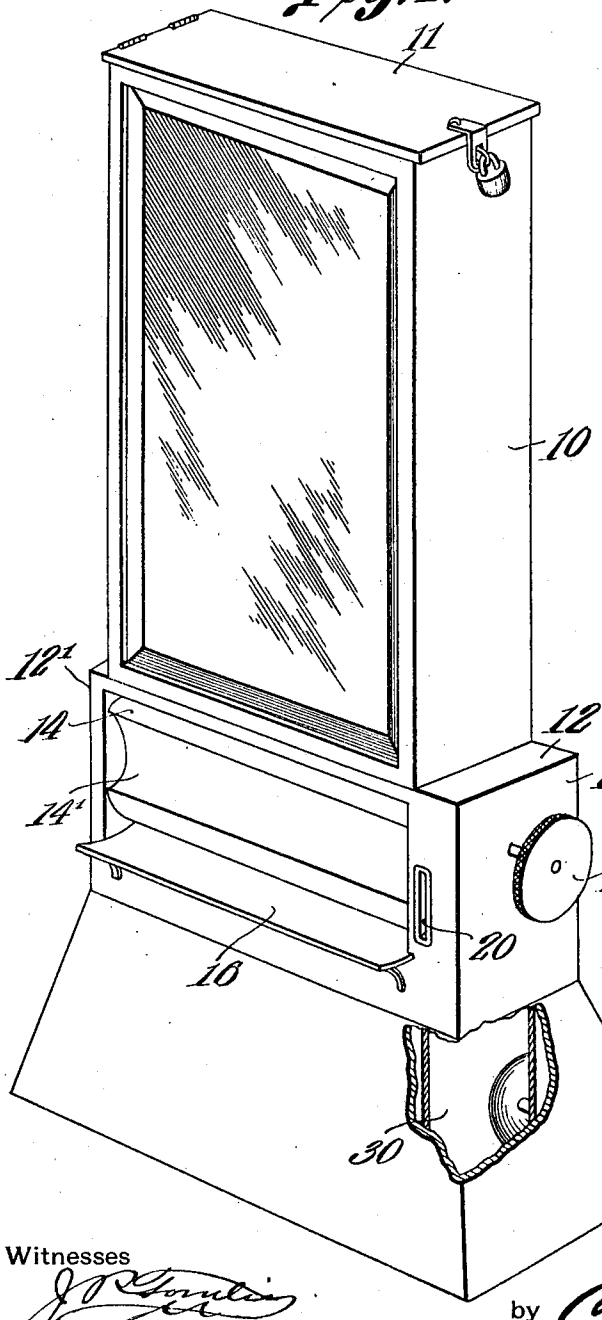


Fig. 8.

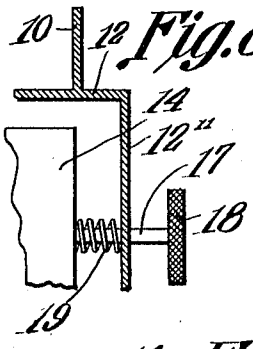


Fig. 5.

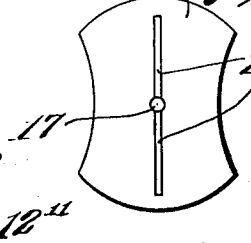
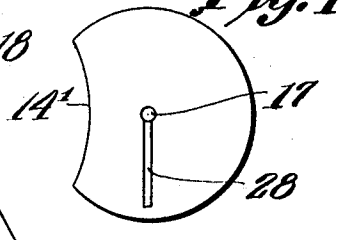


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 2.

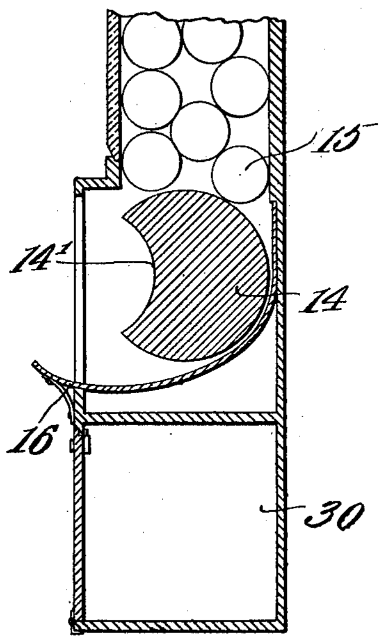
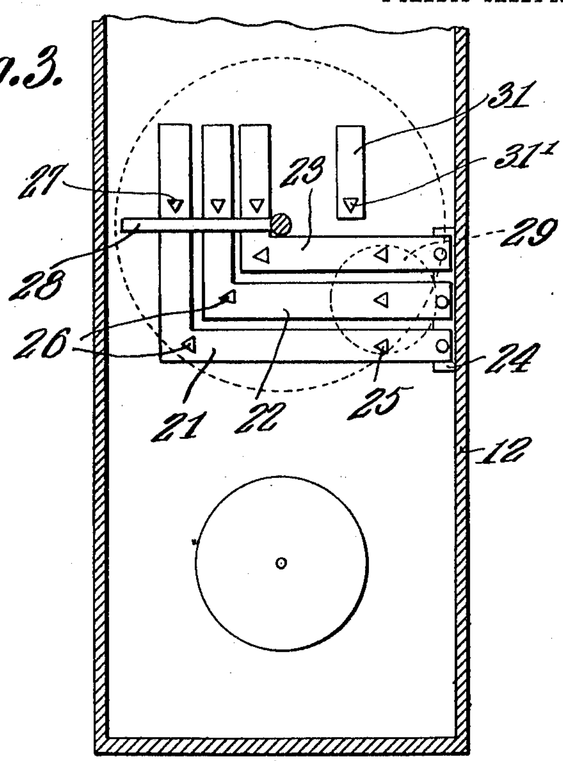


Fig. 3.



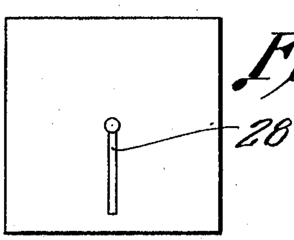


Fig. 6.

Fig. 7.

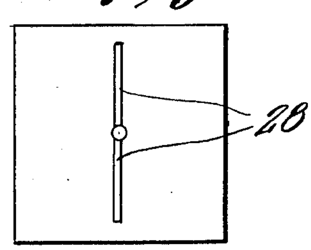
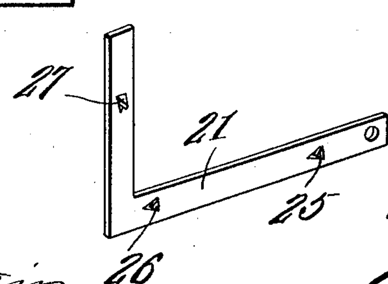


Fig. 9.



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UNITED STATES PATENT OFFICE.

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PACKAGE-VENDING MACHINE.

1,004,094. Specification of Letters Patent. Patented Sept. 26, 1911.

Application filed April 7, 1911. Serial No. 619,596.

To all whom it may concern:

Be it known that I, WILLIAM H. SIGLEY, a citizen of the United States, residing at Sylvan Grove, in the county of Lincoln and State of Kansas, have invented a new and useful Package-Vending Machine, of which the following is a specification.

This invention relates to an improvement in check-controlled vending machines.

The primary object of said invention is to provide means which will normally prevent the distribution of the article to be vended, said means being acted upon by a coin of a certain diameter and thickness to permit the dispensing of said article.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings,—Figure 1 is a perspective view of the complete apparatus, Fig. 2 is a sectional view of the lower portion of the same, Fig. 3 is a detail view of the locking mechanism, Fig. 4 is an end view of the preferred form of distributer or drum, Fig. 5 is an end view of a modified form of drum, Figs. 6 and 7 are further modifications of said drum, Fig. 8 is a fragmentary sectional view showing the manner of supporting one end of the drum; and Fig. 9 is a detail view of one of the resilient locking members.

The device consists in a delivery cabinet 10 which is of the usual construction, being provided with a lid 11 which permits the articles to be vended to be placed within the cabinet, an enlargement 12 being positioned below the casing 10, a rotary distributer 14 being positioned within said enlarged portion of the casing, said distributer in the preferred form as shown in Fig. 4 being provided with a cut-away portion 14′ which receives one of the packages 15 at each revolution and delivers the same in the curved tray 16 which projects beyond the enlargement 12 in order that the package may be conveniently removed by the purchaser.

The distributing drum 14 is provided with a suitable trunnion which extends within the end portion 12′ of the casing 12, the other end of said drum being provided with the extending shaft 17, the end portion of which is provided with a knurled disk 18 by which the shaft and drum is rotated, the drum 14′ being spaced from the wall 12″ of the casing by a coiled spring 19. Thus it will be seen that by rotating the disk 18, the articles which are arranged within the cabinet 10 will be distributed to the tray 16. The wall 12″ of the casing 12 is spaced to a greater extent from the casing 10 than the wall 12′ and in the space between the casing 10 and the wall 12″ is arranged the locking mechanism, a coin slot 20 being positioned adjacent the wall 12″.

The locking mechanism which is shown in Fig. 3 consists of a plurality of resilient L shaped members 21, 22 and 23, the end portions of which are secured to a bracket 24 which is secured to the wall of the casing 12, these members, one of which is shown in detail in Fig. 9, lying one above the other, the member 21 being of greater length than the member 22, and the member 22 being of greater length than the member 23. The shank portions as well as the angular extensions of the members lying parallel, all of the members being arranged with their edges in alinement. Each of said members are provided at a space removed from the slot 20 with a projection 25, said projections being in vertical alinement, the projections extending toward the rear of the casing. A second series of projections 26 are arranged on each of the members at a point intermediate their ends, that is at the "elbow" of each of the members, these projections 26, extending in the same direction as the projections 25. A third series of projections 27 are arranged adjacent the free ends of the members, said projections 27 being oppositely disposed to the projections 25 and 26.

The shaft 17 rests within the elbow of the member 23, and in the preferred form of device, this shaft is provided with an arm or extension 28 which is of a length slightly in excess of the combined width of the three members 21, 22 and 23, said arm 28 being arranged to rotate across the face of said members.

In operating the machine, a coin 29 is inserted in the slot 20, the coin contacting with the projections 25 and with the wall of the casing and provided said coin is of a proper thickness, the members 21, 22 and 23 which as before stated are resilient, will be moved laterally to permit the rotation

of the member 28. In describing the operation we will assume that the arm 28 is in the position shown in Fig. 3, the projections 27 lying above said arm overhanging the same and preventing its upward movement. It will be noted that the projections 26 which are oppositely disposed to the projections 27 will likewise prevent the movement of the member 28 in the other direction, the amount of play which is allowed the member 28 between the projections 26 and 27 not being sufficient to rotate the drum 14′ to an extent which will dispense one of the packages 15. With the member 28 in this position a check 29 is inserted. This check must be of a thickness sufficient to space the projections 27 from the member 28 in order to allow said member to clear the projections, thus permitting the drum to rotate. It will thus be noted that the spacing of the members 21, 22 and 23 from the wall of the casing may be regulated in order to determine the size coin which will actuate the mechanism, thus if the article to be vended may be sold for a penny, the members 21, 22 and 23 are so spaced with relation to the wall of the casing that the insertion of a penny will move said members sufficient to allow the rotation of the arm 28, but on the other hand, should the article to be vended be intended to sell for five cents, the members may be so spaced that it will require the insertion of a nickel to depress the members sufficient to permit the rotation of the arm 28, thus it will be noted that the device forms a size tester which may be easily and conveniently adjusted and yet which will effectually prevent coins smaller than the coin which is intended, to operate the device. It will also be noted that all three of the members 21, 22 and 23 must be moved in order to release the member 28, thus the diameter of the coin must be sufficient to allow the coin to move all of the members. It will be noted that should a washer be inserted, the central opening in said washer would prevent the depression of the member 22, thus the arm 28 would be held against movement by the projection 27 on the member 22. It will thus be noted that the diameter of the coin may be regulated either by the spacing of the members 21, 22 and 23 or in cases where a larger coin is used say for instance, a twenty-five cent piece, three or more members may be employed thus effectually preventing a coin of less diameter than a twenty-five cent piece from operating the mechanism. It will therefore be seen that the denomination of the coin which is intended to operate the mechanism may be simply and easily determined. After the coin has been inserted, as shown in dotted lines in Fig. 3, the disk 18 is rotated and the arm 28 carried in the direction indicated by the arrow, said arm contacting with the coin forcing the same within a coin receptacle 30 arranged below the casing, the entire rotation of the arm permitting a sufficient rotation of the drum 14′ to deliver the article within the tray 16. In order that the arm 28 after the coin has been forced within the coin receptacle may not be returned, a depending member 31 is secured to the side wall of the casing and arranged in alinement with the end portions with the members 21, 22 and 23, the member 31 being provided with a projection 31′ which is disposed in the same direction as the projections 27, thus contacting with the arm 28 and preventing its upward movement. Thus the arm must be returned to the position shown in Fig. 4, the same in assuming this position feathering the projections 26 and being limited as before stated in its upward movement by the projections 27. Thus it will be seen that the locking mechanism absolutely prevents the dispensing of the article to be vended unless a coin of a certain size and thickness be inserted, the construction being such that it is impossible for the purchaser to receive but one of the articles 15 upon the insertion of each coin.

Particular attention is called to the fact that the drum does not deliver the article until the member 28 has kicked the coin within the coin receptacle. Thus it will be impossible to insert a flat instrument such for instance as a knife blade to depress the members 21, 22 and 23 and rotate the drum, the spacing of the members 21, 22 and 23 from the side wall of the casing being such as to absolutely prevent the rotation of the member 28 past the projections 25 should there be an obstacle of any sort between said projections and said wall, the diameter of the member 28 being increased as coins of increased thickness are employed, thus it will be seen that it would be impossible to pass the member 28 between said obstruction, say for instance a knife blade, and said side wall even were the members 21, 22 and 23 so spaced from said side wall as if actuated upon the insertion of a nickle, the member 28 being increased in diameter to take up for the spacing of the members with respect to the wall.

In the modification shown in Fig. 5 the drum 14 is formed with a double concaved surface which permits the device to discharge at each half turn, the shaft 17 in this instance being formed with a plurality of arms 28, the operation of said arms with respect to the members 21, 22 and 23 being the same as in the preferred form. In Figs. 6 and 7 rectangular drums are provided, the drum in Fig. 6 being formed with an arm 28, delivering at each full revolution, and the drum in Fig. 7 being provided with a plurality of said arms delivering at each

half revolution. Thus it will be noted that drums may be provided within the casing which will dispense at either a full or a half turn, the movement of the drum being restricted by the resilient members 21, 22 and 23 in each instance.

The many advantages of a construction of this character will be clearly apparent, and it will be seen that a check-controlled apparatus is provided which will be simple and economical to manufacture and which at the same time will be efficient in practice, the construction being one which may be easily and conveniently regulated in order to take coins which vary in diameter and thickness.

What is claimed is:—

1. In a vending machine, a rotary distributer, a plurality of resilient members, said members being formed with oppositely disposed projections, and an arm carried by said distributer, said arm contacting with said projections to prevent the movement of said distributer.

2. In a vending machine, a rotary distributer, a plurality of L-shaped members secured adjacent one end of said distributer, said members being arranged one above the other the edge portion of each being in alinement, an arm carried by said distributer, and adapted to move across the face of said L-shaped members, said members being provided with projections adapted to normally hold said arm against movement.

3. In a vending machine, a rotary distributer, a plurality of L-shaped resilient members arranged adjacent one end of said distributer, said members being arranged one above the other to form a continuous surface, an arm carried by said distributer, and means carried by said member to limit the movement of said arm.

4. In a vending machine, a rotary distributer, a plurality of L-shaped resilient members arranged adjacent one end of said distributer, said members being arranged one above the other to form a continuous surface, an arm carried by said distributer, and means carried by said member to limit the movement of said arm, and a member adapted to prevent the movement of said arm in one direction.

5. In a vending machine, a rotary distributer, a plurality of L-shaped flexible members secured adjacent one end of said distributer, a projection arranged on each member at a point adjacent its secured end, a projection arranged on each member at a point intermediate its ends, and a projection arranged on each member at a point adjacent its free ends, an arm carried by said distributer, the movement of said arm being normally restricted by said projections.

6. In a vending machine, a rotary distributer, a plurality of flexible members secured adjacent one end of said distributer, said members being formed adjacent their secured ends with projections, said members being formed with projections intermediate their ends, both sets of projections extending in the same direction, and a projection formed adjacent the free end of each member, said projection being oppositely disposed to the first mentioned projections, and an arm carried by said distributer.

7. In a vending machine, a rotary distributer, a plurality of laterally movable flexible members secured adjacent one end of said distributer, a shaft forming an extension of said distributer, an arm carried by said shaft, and means carried by said members for normally limiting the movement of said arm.

8. In a vending machine, a rotary distributer, a shaft forming a continuation of said distributer, a plurality of arms carried by said shaft, a plurality of laterally movable flexible members secured adjacent one end of said distributer, and means carried by said members for contacting with said arms to restrict the movement of said distributer.

9. In a vending machine, a rotary distributer, a plurality of laterally movable members positioned adjacent one end of said distributer, said members being provided with oppositely disposed projections adapted to limit the rotation of said distributer, said members being formed with projections arranged for contact with a releasing member to move said members laterally.

10. In a vending machine, a rotary distributer, a plurality of laterally movable flexible members arranged adjacent one end of said distributer, said members normally preventing the rotation of said distributer, and means carried by said members adapted to contact with a releasing member to move said members laterally.

11. In a vending machine, a rotary distributer, a plurality of laterally movable members arranged adjacent one end of said distributer, an arm carried by said distributer, said members being provided with projections adapted to restrict the movement of said arm, and a depending member provided with a projection, said projection preventing the movement of said arm in one direction.

12. In a vending machine, a rotary distributer, a plurality of independently movable flexible members positioned adjacent one end of said distributer, a projection arranged adjacent the secured end of each of said members, a projection arranged intermediate the ends of each member, a projection arranged adjacent the free end of each member, the last mentioned projections being oppositely disposed to the first mentioned projection, an arm carried by said distributer, said arm normally resting between the oppositely disposed projections, the first

mentioned projections being adapted to move said members as a unit to free said arm, and means for preventing a return movement of said arm.

13. In a vending machine, a rotary distributer, a plurality of laterally movable flexible members positioned adjacent one end of said distributer, an arm carried by the distributer, means carried by said members to contact with said arm to prevent the rotation of said distributer, means for moving said members as a unit to release said arm, said members returning to their normal position before said distributer has made a complete revolution.

14. In a vending machine, a rotary distributer, a plurality of laterally movable flexible members positioned adjacent one end of said distributer, an arm carried by said distributer, means carried by said members, said means contacting with said arm to limit the movement of said distributer, and means for moving said members laterally, said members being moved as a unit to allow said arm to rotate.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM HENRY SIGLEY.

Witnesses:
O. L. MADDEN,
CHAS. SNIDER.