W. O. AMSLER.

COIN CONTROLLED VENDING MACHINE.

APPLICATION FILED MAR. 7, 1909.

1,083,515.

Patented Jan. 6, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

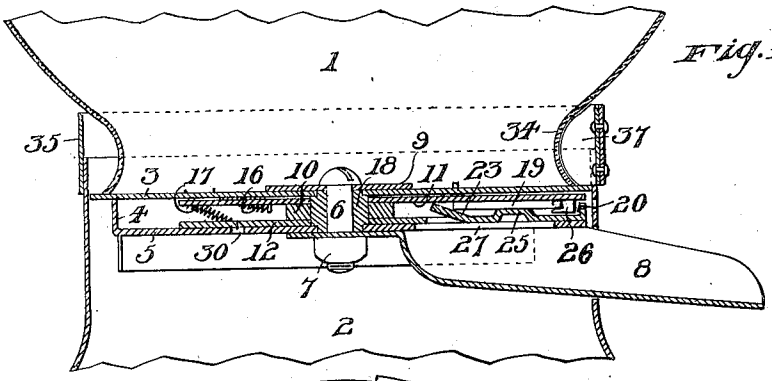


Fig. 2.

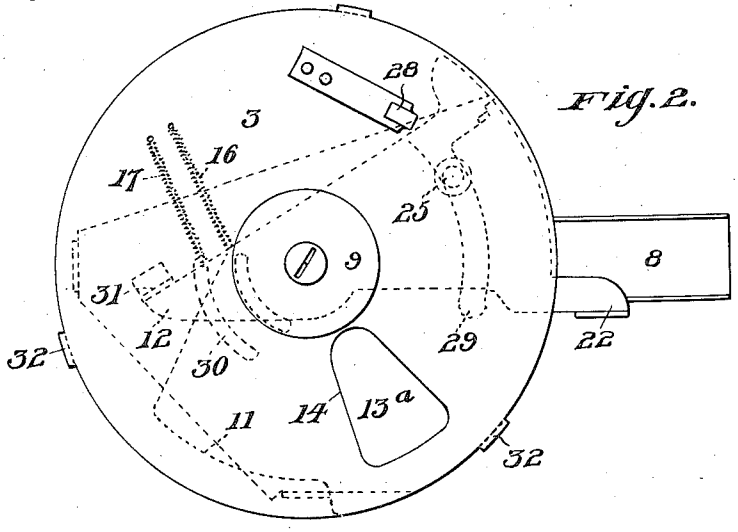
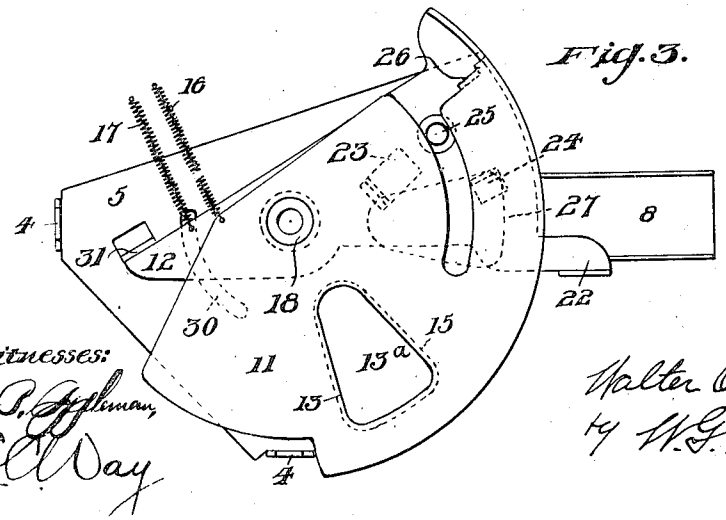


Fig. 3.



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COIN CONTROLLED VENDING MACHINE.

APPLICATION FILED MAR. 17, 1909.

1,083,515.

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2 SHEETS—SHEET 2.

Fig. 4.

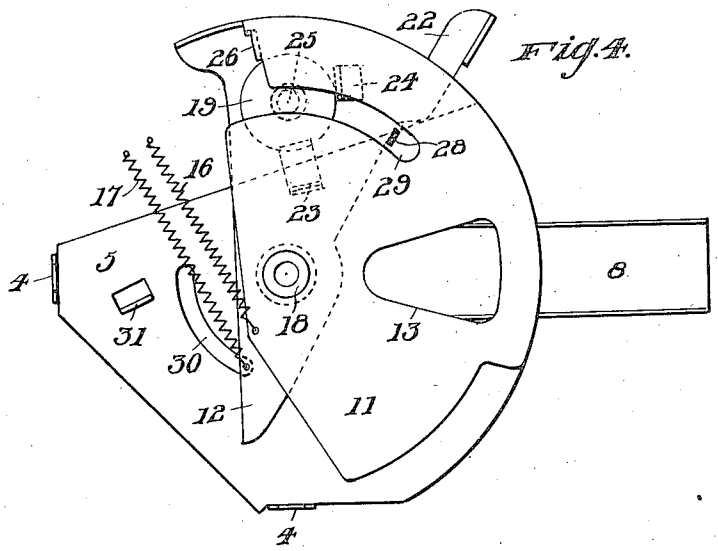


Fig. 5.

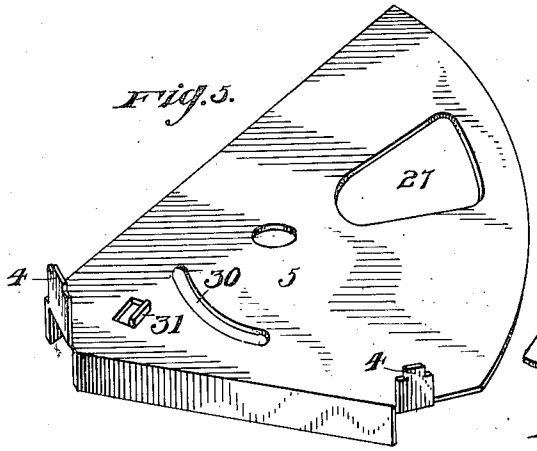


Fig. 6.

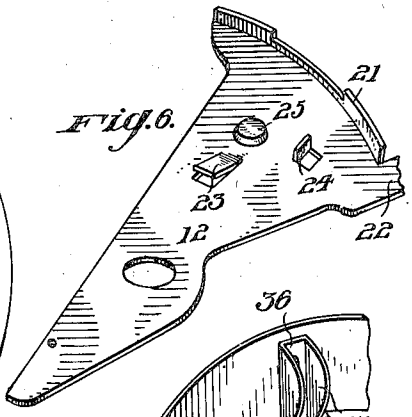


Fig. 9.

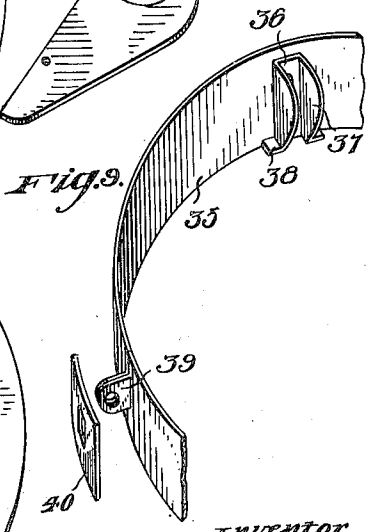


Fig. 8.

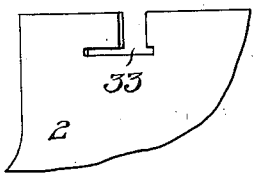
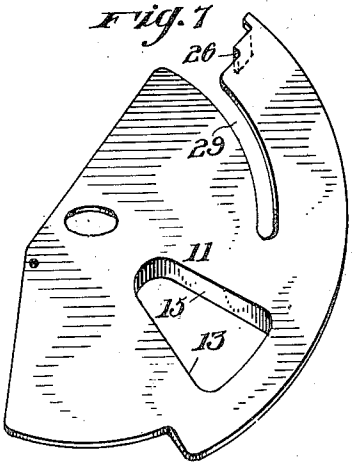


Fig. 7.



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UNITED STATES PATENT OFFICE.

WALTER O. AMSLER, OF PITTSBURGH, PENNSYLVANIA.

COIN-CONTROLLED VENDING-MACHINE.

1,083,515. Specification of Letters Patent. Patented Jan. 6, 1914.

Application filed March 17, 1909. Serial No. 483,966.

To all whom it may concern:

Be it known that I, WALTER O. AMSLER, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Coin-Controlled Vending-Machines, of which the following is a specification.

My invention relates to a new and improved coin controlled vending-machine, designed to be operated to deliver articles by the insertion of a coin of predetermined denomination.

The embodiment of my invention as illustrated by the accompanying drawings, relates more particularly to a vending-machine designed to deliver small quantities of bulk materials, such for example as candy, from a magazine supplied therewith. My invention, however, is not limited to a machine for vending small quantities of material in bulk, for it is within the scope of the invention to provide a machine capable of delivering articles in packages or boxes and articles of considerable size.

An object of the present invention is to provide an efficient and simple vending machine particularly free of a complicated mechanism for preventing the operation of the machine when an improper coin or other article is introduced into the apparatus.

A further object of my invention is to provide means for coupling certain parts by the action of a proper coin whereby the articles may be delivered to the discharge opening of the machine.

A still further object is to provide a construction in which the article-delivery-member of the machine and the coin-carrier-member coact in sizing a coin.

In the accompanying drawings, which illustrate an application of my invention, Figure 1, is a vertical sectional view of a vending-machine constructed in accordance with my invention, having its base and magazine broken away; Fig. 2 a plan with the magazine removed; Fig. 3 a view similar to Fig. 2, with upper plate removed; Fig. 4 a plan similar to Fig. 3, but showing some of the parts in a different position; Fig. 5 a perspective view of bottom-plate; Fig. 6, a perspective view of coin carrier member; Fig. 7, a similar view of article delivery member; Fig. 8, a detail view of a portion of the base; and Fig. 9, a perspective view of a portion of a band employed for locking the parts.

Referring to the drawings, 1 designates a magazine designed to contain the materials or articles to be vended, and 2 a base. These parts may be of any desired form and construction.

Located below and designed to support the magazine is a stationary circular plate 3. Plate 3 is mounted on two upright members 4 projecting upwardly from a bottom plate or member 5. Each of the plates or members 3 and 5 is provided with a centrally disposed opening through which a small threaded axial bolt 6 is passed. Secured to the lower end of bolt 6 by means of a nut 7 is an article delivery chute 8, and located between the head of bolt 6 and the upper face of plate 3 is a ring 9.

Interposed between the upper and lower stationary plates and separated from each other by a ring or washer 10, I employ two rotary plates or members 11 and 12. Plate or member 11 is designed to pass or deliver a measured amount of the contents of the magazine to the discharge chute and will be hereinafter referred to as the article-delivery-plate or member. This article-delivery-member or plate is formed with an opening 13 adapted to normally register with an opening 14 formed in the plate 3. Opening 13 is bounded by a depending flange 15 and forms, with said flange and the stationary plate 5, a pocket 13^a of just sufficient size to contain the desired quantity of the material to be vended.

Plates 11 and 12 are each respectively connected with plate 3 by coiled springs 16 and 17 and are each provided with holes enabling them to be journaled on the stud or hub 18. Both of the plates 11 and 12 are designed to be moved in a curvilinear direction against the tension of said springs, in the operation of discharging the article or material.

To effect the delivery of the contents of the pocket 13^a the purchaser inserts a coin 19 of the proper denomination through a slot formed in the casing of the base portion of the machine, which slot registers with a coin receiving opening or slot 20 located between the two movable plates and partly formed by cutting away a portion of an upwardly extending flange 21 located on

the curved outer edge of plate or member 12. The coin receiving and coin carrying member 12 is provided with an actuating lever or thumb-piece 22, and in addition thereto, with means for sizing a coin. The sizing means on member 12, which coöperate with the article-delivery-member 11 in sizing an inserted coin or other article, comprise three upwardly projecting members 23, 24 and 25. The article-delivery-member 11 is provided with a coin engaging member 26 designed when the proper coin has been placed on member 12, to engage said coin, thereby effecting a coupling of the two movable members 11 and 12. In practice, the dimensions of the coin receiving opening 20 conform to the corresponding cross sectional dimensions of the proper coin, thereby preventing coins or other objects whose dimensions exceed that of the proper coin from being introduced to the opening. The proper coin is guided into and held in operative coupling position by the members 23, 24 and 25, coacting with the article-delivery-member and after being placed in the desired position it engages the coin engaging-member 26 on member 11 thereby coupling the members 11 and 12 and allowing said members to be moved in unison in the operation of delivering the contents of the pocket 13ª into the discharge chute through an opening 27 formed in the lower stationary plate 5. Should a coin of smaller dimensions than the proper coin be placed in the coin receiving opening, it will fail to come into contact with the engaging-member 26 of member 11 and the said movable members 11 and 12 will not be coupled together. After the insertion of the proper coin, which couples the members 11 and 12 as above described, said members are moved together in a curvilinear direction by means of the lever or thumb-piece and against the tension of their respective springs until the pocket 13ª comes into register with the opening 27. During the travel of the two movable plates the coin is forced under a spring-catch 28 mounted on and projecting through the top-plate 3. The function of said catch 28 is to release the coin from the coin carrier member 12, or from between the two members 11 and 12. In order to accomplish this function the parts are so arranged that upon a return movement of the movable-members, due to the action of their respective springs, catch 28 will strike an edge of the coin and prevent it being carried back with said movable-members. After the release of the coin from between the members it will drop into the base portion of the apparatus.

Member 11 is formed with a curved slot 29 to prevent spring-catch 28 engaging said member 11 and stationary member 5 is formed with a slot 30 in which an end of spring 17 travels. Member 5 is also provided with a stop 31 to arrest the travel of member 12.

Top-plate 3 is supported by the base-portion 2 and for this purpose I provide the top-plate with lugs 32 and form in the base a series of bayonet-like slots 33 adapted to receive the lugs 32.

The magazine as illustrated comprises a lower contracted base portion 34 and is locked in position on its supporting plate by means of a locking-band 35. Locking-band 35 is provided with a number of inwardly projecting members 36, particularly shown in Fig. 9. These members comprise curved portions 37 adapted to project through the slots 33 of the base and engage the contracted base of the magazine, as shown by Fig. 1. Members 36 are also provided with flanges 38 adapted to engage portions of the walls of the slots 33.

The ends of the locking-band are provided with apertured lugs 39 designed to project through a slotted washer 40. After the band is placed in position its ends are locked or secured by a suitable lock, not shown.

To prevent the operation of the machine by a coin or other article of less thickness than the proper coin, I form the sizing member 23 inclined as shown. The inclination of this member together with the member 11 forms a wedge-shaped space, thus preventing a coin of less thickness engaging the member 26 and coupling the parts.

What I claim is:

1. In a coin controlled vending machine, a rotary spring controlled article delivery member, having a depending lug, a rotary spring controlled coin carrying member parallel to the article delivery member and having upwardly projecting lugs coacting with said depending lug to lock the said members together so as to be moved in unison when a coin of the exact diameter and thickness is inserted between them, one of said upwardly projecting lugs coacting with the article delivery member to support said coin and define its thickness, and another of said lugs having an inclined face to permit a thin coin to pass inwardly a greater distance and escape engagement with the depending lug.

2. In a coin controlled vending machine, a rotary spring controlled article delivery member having a depending lug, a rotary spring controlled coin carrying member parallel to the article delivery member having an upwardly projecting lug for defining in connection with the underside of the article delivery member the thickness of an operating coin, a lug having a vertical face for moving said coin into operative position, and a third lug having an inclined face whereby a coin or like disk of the correct diameter but of reduced thickness will be carried by the aforesaid straight faced lug past the depending lug of the article de-

livery member, said lugs when a coin of the proper thickness and diameter is inserted between them lock said rotary members together to cause the delivery of the article to be vended.

3. In a coin controlled vending machine, a coin carrying member having thereon a coin carrying lug, a coin advancing lug, and a lug formed with an inclined face.

4. In a coin controlled vending machine, a rotary spring controlled article delivery member having a depending stop lug thereon, and a rotary spring controlled coin carrying member provided with an upwardly projecting advancing lug, a coin supporting lug adapted to define in connection with the article delivery member the thickness of a coin, and a lug having an inclined face to permit the advancing lug moving a coin of insufficient thickness inserted between said members, out of engagement with the depending stop lug.

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

WALTER O. AMSLER.

Witnesses:
A. C. WAY,
W. G. DOOLITTLE.