

931,847.

Fig.1.

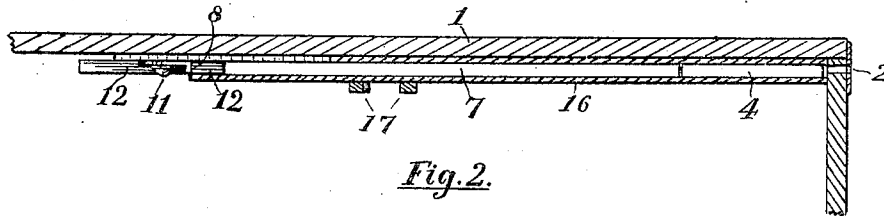


Fig. 2.

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UNITED STATES PATENT OFFICE.

JOHN H. DEAN AND HOMER L. ZIPP, OF GRAND RAPIDS, MICHIGAN; SAID ZIPP ASSIGNOR TO SAID DEAN.

COIN-CHUTE FOR VENDING-MACHINES.

931,847.

Specification of Letters Patent. Patented Aug. 24, 1909.

Application filed January 20, 1906. Serial No. 297,021.

To all whom it may concern:

Be it known that we, JOHN H. DEAN and HOMER L. ZIPP, citizens of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Coin-Chutes for Vending-Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in coin chutes for vending machines and other coin controlled devices; and its object is to provide improved means for preventing the use of spurious coins and other analogous articles; and to provide the device with various new and useful features hereinafter more fully described and particularly pointed out in the claims.

Our device consists essentially of a downwardly inclined chute, a stop spaced apart from the end of the chute and substantially horizontally opposite the same, an inclined receiver substantially below the stop and spaced apart from both the chute and stop, whereby the good coins pass clear of the receiver and the spurious coins and other articles fall on the receiver and are thus separated from the good coins as will more fully appear by reference to the accompanying drawings, in which:

Figure 1. is an elevation of a device embodying our invention with parts broken away; and, Fig. 2. a plan view of the same partially in horizontal section.

Like numbers refer to like parts in both of the figures.

1 represents a portion of the case of an automatic vending machine or other like device, which is provided with a suitable opening 2 to receive the coins to control the operation of the machine. Opposite this opening is the receiving end 3 of the coin chute, directly beneath which is an adjustable inclined portion 4 of the bottom of the chute, which portion is pivoted at its lower end and held in adjustment by a slotted segment 5 and binding screw 6, whereby the initial velocity of the coin may be determined by adjusting the inclination of this portion 4; 7 is a downwardly inclined raceway or chute through which the coin passes and from the lower end of which it is discharged in a nearly horizontal direction, and in the direc-

tion of a stop 8 spaced apart from the chute and substantially horizontally opposite the end thereof and having a slightly concave face opposite the discharge end of the chute. This stop is adjustable both vertically and horizontally by means of a slot 9 in the stop and a slot 10 in the back plate of the chute and held adjusted by means of a bolt 11. Beneath the stop 8 is an inclined receiver 12 also made adjustable by means of a slot 13 therein and a slot 14 in a downward extension of the said back plate. This receiving member is adjusted at substantially the same inclination of the chute 7 and is spaced apart therefrom and also spaced apart from the stop 8.

16 represents the front plate of the chute on the outside of which is secured a magnet 17, the purpose of this magnet being to retard the movement of magnetic slugs or articles, whereby their headway will be reduced, without stopping the same, this being accomplished by placing the magnet on the outside of the plate 16 and spaced apart from the interior of the chute thereby. The magnetism of this magnet is adjusted of such strength as to retard any magnetic article, without stopping the same, which may pass down the chute.

In operation a genuine coin will not be affected by the magnet 17 to any appreciable extent, and by proper adjustment of the portion 4 will receive such headway in passing down the chute that it will be projected across the space between the discharge end thereof and the stop 8 and be deflected thereby in a direction that will carry it backward toward the chute sufficiently to pass between the same and the adjacent end of the receiver 12 where it may enter any suitable mechanism (not shown) for controlling the operation of the machine. Articles that are too light will not gain sufficient headway and will pass beneath the stop 8 and will fall on the inclined surface of the receiver. It will thus be discharged to the left of the receiver and will not enter the controlling mechanism of the device. Articles like brass or lead may gain sufficient headway to strike the stop 8 but will not have sufficient resiliency to be deflected backward far enough to clear the receiver 12 and will thus fall thereon and also be discharged thereby to the left and thus also be prevented from entering the controlling mechanism of the machine.

Magnetic articles like iron or steel will be so retarded in movement by the magnet 17 without being stopped outright thereby that they will fail of sufficient headway to reach the stop 8, and will thus land upon the receiver 12 and be discharged by it. Thus none but genuine coins will be permitted to pass between the receiver 12 and the discharge end of the chute and enter the controlling mechanism of the machine.

By means of the described adjustment of the bottom 4, stop 8 and receiver 12, should the machine be incorrectly leveled, the operation of my device is not thereby prevented, it being merely necessary to suitably adjust the said parts.

What we claim is:

1. The combination of an inclined coin chute having an open lower end, a bottom portion in the upper end of said chute pivoted at its lower end, and vertically adjustable at its upper end, a stop opposite the open end of the chute and spaced apart therefrom in substantially a horizontal direction, an inclined receiver substantially below the stop and spaced apart from both the stop and the lower end of the chute.

2. The combination of an inclined chute having an open lower end and also having a bottom portion pivoted at one end and vertically adjustable at the other end to determine the velocity of the coins, a slotted segment attached to said portion, a binding screw in the slot of the segment, an adjustable stop opposite the lower end of the chute and spaced apart therefrom in substantially a horizontal direction, an inclined receiver substantially below the stop and

spaced apart from both the stop and the lower end of the chute.

3. The combination of an inclined coin chute having a portion of the bottom thereof pivoted at one end and having a fixed vertical adjustment at the other end to determine the velocity of the coins, an adjustable stop arranged substantially in the same horizontal plane of the open end of the chute and spaced apart therefrom, an adjustable inclined receiver substantially below the stop and spaced apart from both the stop and the end of the chute.

4. The combination of a case having a coin receiving opening, a coin chute having its receiving end opposite said opening and its discharge end open and inclined downward, a bottom portion to said chute and beneath the receiving end of the same said portion being pivoted at one end and vertically adjustable at the other end to determine the velocity of the coins, a magnet attached to the outside of said chute and spaced apart from its interior, and adapted to retard magnetic slugs without stopping the same, an adjustable stop arranged opposite the open lower end of the chute and spaced apart therefrom in substantially a horizontal direction, and an inclined receiver substantially below said stop and spaced apart from both the stop and the lower end of the chute.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN H. DEAN.
HOMER L. ZIPP.

Witnesses:

GEORGIANA CHACE,
LUTHER V. MOULTON.