June 28, 1938. A. F. CHOUINARD 2,122,024

COIN DIVIDER

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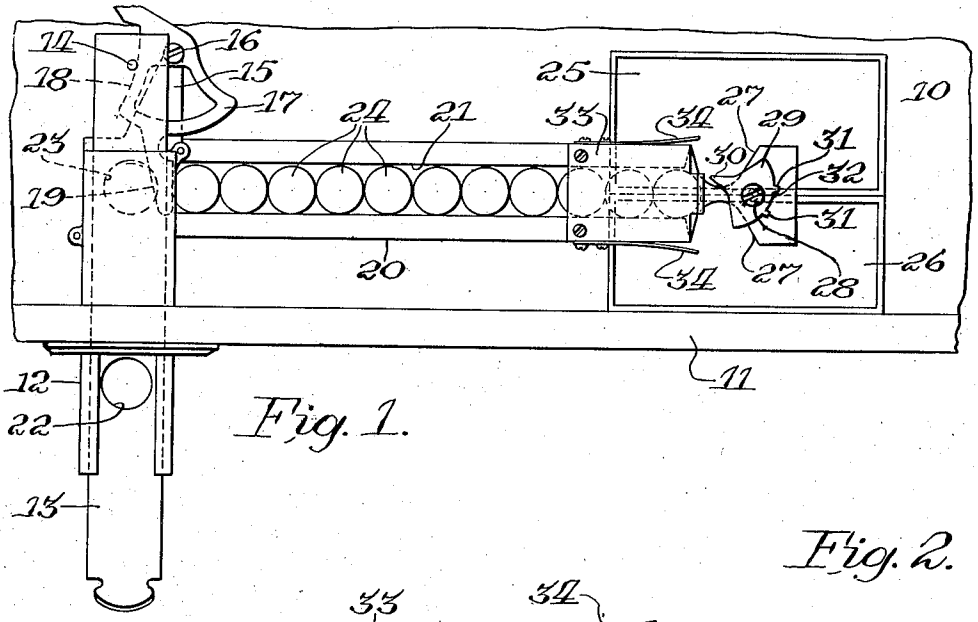


Fig. 1.

Fig. 2.

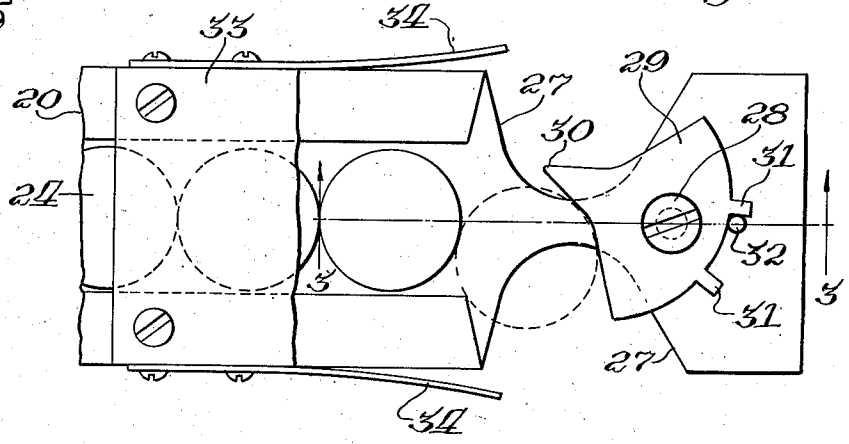
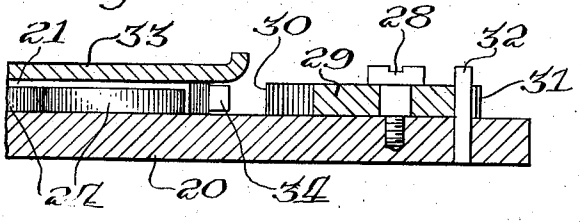


Fig. 3.



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COIN DIVIDER

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8 Claims. (Cl. 193—31)

The invention relates to a coin divider for use with coin or check handling apparatus such as coin slides or chutes.

These coin slides are commonly employed wherever it is desirable to coin release a vending machine, or amusement apparatus. Sometimes these slides include an auxiliary slide or conveyer for carrying a number of coins in a visible position, before they are discharged into a cash box, or other receptacle. When discharging the coins, either from the main, or auxiliary slide (where the latter is used) it is sometimes desirable to divide the discharging coins evenly between two cash boxes or receptacles located to receive the coins.

The main object of the invention is to provide a simple attachment for a coin slide or chute to divide the discharging coins and direct them alternately into two coin receiving cash boxes.

Another object of the invention is to provide such a coin divider which will be simple and fool proof in operation.

Still another object is to provide such a divider which may readily be attached to standard types of coin slides or chutes without interfering with the proper operation thereof, nor to necessitate any material change in the structure thereof.

Another object is to provide such a divider comprising a simple coin operated switch which will act automatically to divide or separate the coins evenly so that each of the two cash boxes will receive the same number of coins.

Other important objects will become apparent to those skilled in this art as the disclosure is more fully made.

Briefly, such objects may be attained by providing at the discharge end of a coin slide or chute, a pivoted switch member engageable by successive coins pushed thereagainst to move the switch from one side to the other, within limits, thereby causing the switch which acts as a cam or wedge, to deflect the coins alternately from one side to the other successively. Thus, the coins are divided, to be discharged alternately into two cash receiving boxes conveniently placed to receive the discharged coins by gravity.

The improved coin divider structure in an illustrative embodiment is shown in the accompanying sheet of drawings wherein:

Figure 1 is a general plan view of a coin chute including an auxiliary discharge slide or conveyer to which is attached the coin divider of this invention, said coin slide being shown mounted in a suitable cabinet;

Figure 2 is an enlarged, detail plan view of the discharge end of the conveyer with the coin divider mounted thereon; and,

Figure 3 is a longitudinal, sectional view through the same structure, taken along the line 3—3 of Figure 2, looking in the direction of the arrows.

A vending machine or amusement device cabinet 10 is generally depicted, the same having a front vertical wall 11 in which for sake of illustration, the coin slide may be mounted in the usual manner.

Said coin slide, or coin chute, as it is sometimes called, embodies a horizontal, longitudinally disposed guide frame 12 in which is slidable, manually, the coin moving slide 13 which at its inner, or rear end carries a downwardly extending pin 14. The rear end of the frame 12 includes an extension 15 carrying a pivot 16, for pivotally mounting below the slide 13, a swingable member 17 having a cam, or wedge edge 18 and a forward lever projection 19.

The frame 12 includes, or carries in a suitable manner, at the discharge end of the slide 13, a right angularly disposed extension slide or conveyer 20, the same embodying a lengthwise depressed passage 21 to guide coins therealong in a visible position since the cabinet at this point will be glass covered to expose the coins. The purpose of making this slide structure and the coins thereon visible, is to discourage unscrupulous persons from employing improper slugs, and the like.

The slide 13 has an opening 22 to move a coin over the bottom of the horizontal frame 12 until said coin reaches a drop opening 23 at which point the coin transfers onto the auxiliary slide 20 and is pushed thereonto when the slide 13 is retracted causing the pin 14 to cam along the edge 18 to move the member 17 in a manner whereby its lever projection 19 will engage the dropped coin and push it onto the slide 20.

Eventually a series of coins, numbered 24 will be successively pushed along the slide 20 to its free end for discharge therefrom. As the coins discharge in this manner it is desirable sometimes to divide them by alternately discharging successive coins first to one side in a box 25 carried in the cabinet 10, and then to the other side, into another box 26 also carried in the cabinet, as indicated in Figure 1. Accordingly, a coin divider switch structure is operatively associated with the discharge end of the slide 20 to accomplish this result.

Slightly inwardly from the extreme end of the slide 20 the passage 21 terminates, said

slide at each side edge at the point mentioned being cut out to provide opposite coin drop notches 27. The extreme end of the slide 20 carries a vertical hinge pin 28 on which is pivotally mounted a sector shaped switch 29, having its apex 30 facing the discharging coins, as shown. The opposite or base end of the switch is formed with two spaced bosses 31, cooperating with a pin 32 on the slide 20 in an obvious manner to limit the pivotal or swinging movement of the switch 29. Said switch 29 has opposite sides adjacent the angle or apex 30 formed in a curve best adapted to be engaged by a coin to aid in the deflection thereof in the most effective manner.

The terminal end of the coin passageway 21 is covered by a cover plate 33 so that the last few coins cannot cock up or be forced upwardly out of the passage 21, because of the resistance which might occur from the switch 29 as the coins in turn engage it. At each side of the cover 33 is located a flat resilient spring member 34, the free ends of which project slightly across the notches 27, respectively yieldingly to bear against the edge of a discharging coin to hold it against the adjacent cam edge of the switch 29 to insure proper deflection of the coin.

The operation of the switch 29 will be readily understood. The coins 24 are pushed along by the lever 19, intermittently, so that each succeeding coin must engage one side of the switch 29 and be deflected thereby to drop through a notch 27 into one of the boxes provided to receive the coins. The pressure of the coin serves to flip or pivot the switch so that the next succeeding coin will be deflected to and discharged at the opposite side in an obvious manner. Thus is provided a simple coin divider attachment for coin slides to achieve the desirable objects of the invention.

It is the intention to cover all changes and modifications of the illustrative example of the structure herein shown for purposes of the disclosure, which do not in material respects constitute departures from the spirit and scope of the invention.

What is claimed is:

1. In a coin handling device having a substantially horizontal slide along which coins may be pushed to discharge from an end thereof, the combination with said slide of a switch pivotally carried on said slide at the discharge end thereof to cause successive coins engaging the switch to be alternately deflected and discharged at opposite sides of the slide, opposite sides of the slide adjacent and below the switch being cut away to provide coin drop notches.

2. In a coin handling device having a substantially horizontal slide along which coins may be pushed to discharge from an end thereof, the combination with said slide of a switch pivotally carried on said slide at the discharge end thereof to cause successive coins engaging the switch to be alternately deflected and discharged at opposite sides of the slide, and resilient means at each side of the slide adjacent the switch yieldably to engage the coins with the switch.

3. In a coin handling device having a substantially horizontal slide along which coins may be pushed to discharge from an end thereof, the combination with said slide of a switch pivotally carried on said slide at the discharge end thereof to cause successive coins engaging the switch to be alternately deflected and discharged at opposite sides of the slide, opposite sides of the slide adjacent and below the switch being cut away to provide coin drop notches, and a flat spring carried by the slide at each side of the switch and respectively adjacent the notches.

4. In a coin handling device having a substantially horizontal slide including a passage along which coins may be pushed to discharge from an end thereof, the combination with said discharge end of the slide, of a pivoted switch carried thereby to be engaged successively by coins to cause their discharge alternately to opposite sides of the slide and through oppositely disposed coin drop notches formed in the slide, and a cover over the discharge end of the passage to hold down the coins for positive engagement with the switch, said switch lying immediately off the end of the cover.

5. In a coin handling device having a substantially horizontal slide including a passage along which coins may be pushed to discharge from an end thereof, the combination with said discharge end of the slide, of a pivoted switch carried thereby to be engaged successively by coins to cause their discharge alternately to opposite sides of the slide, a cover over the discharge end of the passage to hold down the coins for positive engagement with the switch, the sides of the slide between the cover and switch respectively including a leaf spring guide, and said slide having its respective sides in advance of the switch respectively notched.

6. In a coin handling device having a substantially horizontal slide along which coins may be pushed flatwise in abutting relation to discharge one at a time from a portion thereof, the combination with said slide having marginal coin drop notches respectively formed in the slide on opposite sides of the center line thereof at said portion, and a sector-shaped switch carried on the slide for horizontal swinging movement in a position to be abutted by the coins in a manner to cause it to deflect alternate coins oppositely to drop through said notches for discharge from the slide.

7. In a coin handling device having an elongated slide formed with a substantially horizontal depressed passageway open along its top to make visible a series of coins adapted to be pushed in abutting relation therealong, the combination with said slide of an extension at the end of the passageway formed with oppositely disposed marginal coin drop notches, a deflector movably carried on said extension to be engaged by the coins to alternately drop the coins through said notches, and a cover plate disposed over the discharge end of the passageway to hold down the coins for flatwise engagement with the deflector.

8. In a coin handling device having an elongated slide formed with a substantially horizontal depressed passageway open along its top to make visible a series of coins adapted to be pushed in abutting relation therealong, the combination with said slide of an extension at the end of the passageway formed with oppositely disposed marginal coin drop notches, a deflector movably carried on said extension and lying in the plane of the coins to be engaged thereby to drop the coins alternately through said notches, means closing the top of the passageway adjacent its terminal end proximate the notches to maintain the coins flatwise while engaging the deflector, and resilient side members respectively disposed along the sides of the slide and projecting partly across the said notches.

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