

Sept. 1, 1931.

J. E. OLVIS

1,821,233

REJECTION MEANS FOR PERFORATED COINS

Filed Feb. 7, 1930

2 Sheets-Sheet 1

Fig. 1

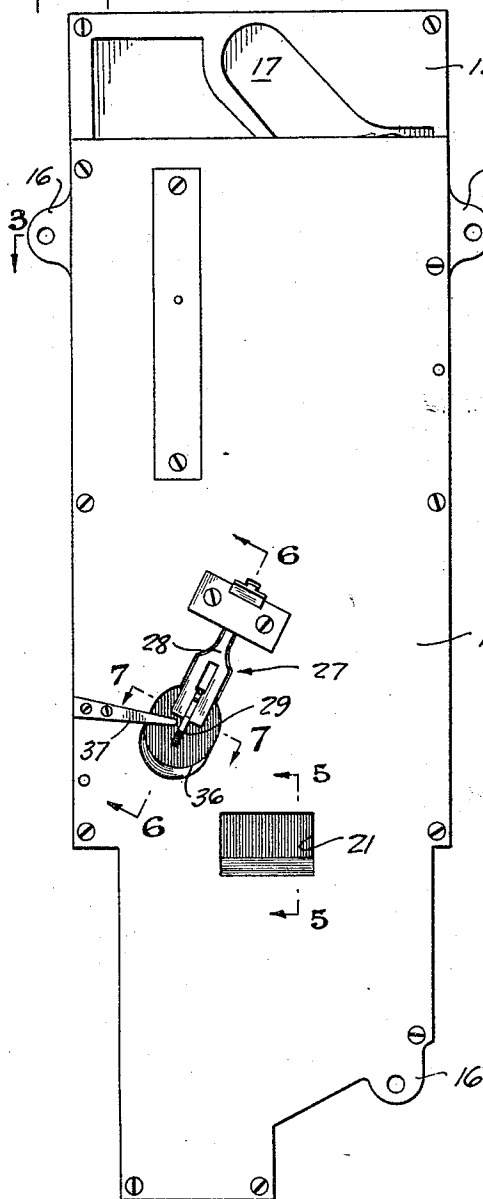
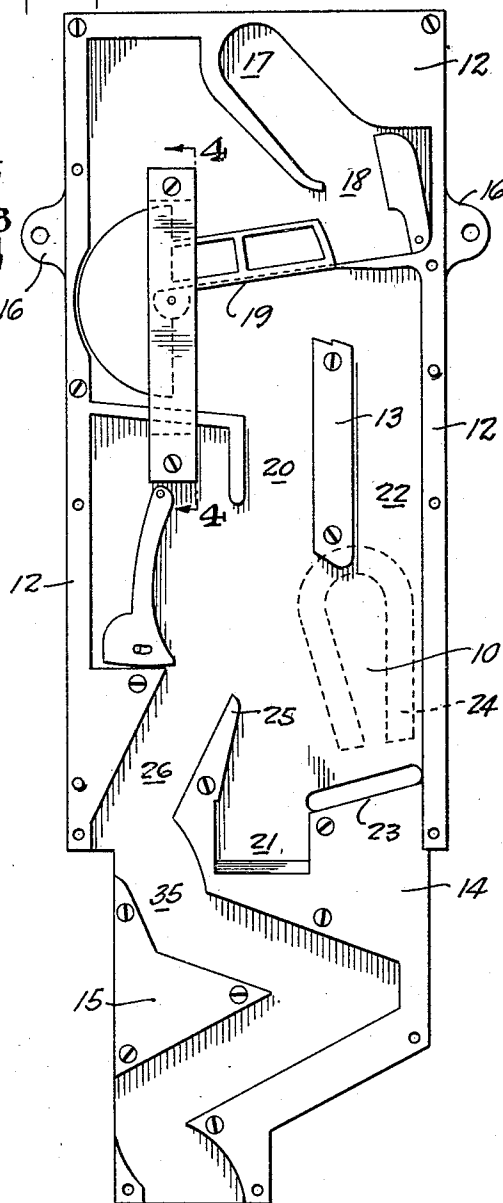


Fig. 2



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2 Sheets-Sheet 2

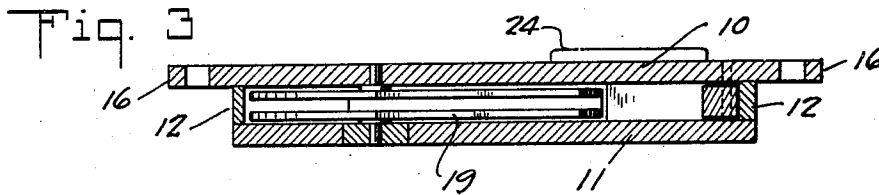


Fig. 5

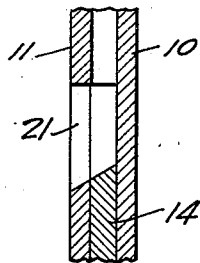


Fig. 4

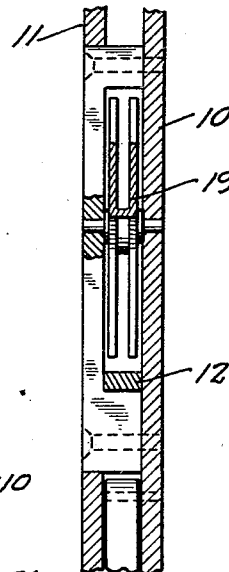


Fig. 6

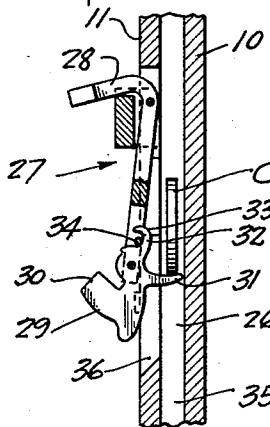


Fig. 6-a

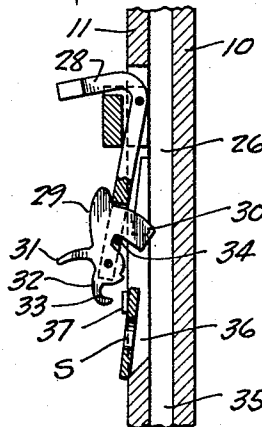
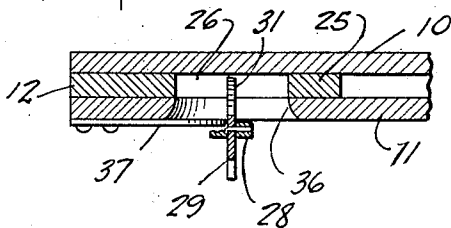


Fig. 7



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UNITED STATES PATENT OFFICE

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REJECTION MEANS FOR PERFORATED COINS

Application filed February 7, 1930. Serial No. 426,531.

This invention relates to a device for detecting spurious coins and separating them from genuine coins. More particularly, it relates to a device applicable to positioning in chute ways of coin receiving apparatus, especially coin control mechanism. The utility of such detecting devices is obvious.

The present invention has for its object to provide a detector with perforated coin classifying means to separate and direct to the proper exits, coins with central holes and genuine coins.

This object together with other objects and corresponding accomplishments is obtained by means of the embodiment of my invention illustrated in the accompanying drawings, in which:—

Fig. 1 is a side elevation of a detector; Fig. 2 is a view similar to Fig. 1, one of the side plates being removed to show the internal structure of the detector; Fig. 3 is a section on an enlarged scale, as taken substantially on line 3—3 of Fig. 1; Fig. 4 is a section on an enlarged scale as seen on line 4—4 of Fig. 2; Figs. 5 and 6 are sections on an enlarged scale taken on corresponding numbered lines of Fig. 1; Fig. 6a is a section similar to Fig. 6, showing the mechanism in another position; and Fig. 7 is a section on an enlarged scale as seen on line 7—7 of Fig. 1.

Referring with more particularity to the drawings, a coin detector is shown which, it will be understood, may be mechanically varied to adapt it to building into a coin control mechanism, such as a coin operated machine of the vending type. The device is built with a coin receiving opening through which coins are introduced into the detector. There are exits for spurious coins, the genuine coins passing to a selected receptor, such as a coin control mechanism. It will be understood that some spurious coins may have the qualities which will permit their passage through the machine, but these would be relatively small in number.

The detector as shown herein, comprises side plates 10 and 11 secured to spacers 12, 13, 14 and 15 forming a frame for the various elements of devices and providing

coin passages. The side plates may have lugs 16 as a means for securing the detector in the desired place. Spacer plate has an opening 17 for coins, it being of exact size, to prevent insertion of spurious or incorrect coins of too large a diameter. A passageway 18 connects it with a tiltable classifier, indicated by 19 and forming no part of the present invention. If the coin is under weight, it will pass through a channel in the classifier without tilting it, into passageway 20 and be discharged through opening 21. If it is of the correct weight or over, the classifier will tilt and discharge it into passageway 22, whence it descends and strikes an anvil 23, formed integral with spacer 14. If the coin is spurious and of magnetic material its fall will be retarded as it passes magnet 24 so that it will not strike the anvil 23 with sufficient force to leap hurdle 25. Similarly, if the slug is not of material having the correct resiliency, it will fail to leap the hurdle. When this happens, it falls through opening 21, provided for spurious coins. If the coin is of correct resiliency, it will leap the hurdle and reach chute 26. The foregoing is fully shown and described in my application for coin selectors, Ser. No. 335,501 filed January 28, 1929.

A form of slug is extensively used, however, which is of exact diameter and of non-magnetic material, the correct weight and resiliency being attained by forming it with a central hole. I have accordingly provided my detector with mechanism indicated by 27, for rejecting this form of spurious coins. This comprises a counterweighted bar 28 pivotally secured to plate 11 and allowed a very limited movement (see Figs. 1 and 6). Pivoted near the lower end of a slot formed in bar 28 is a pallet 29. This is formed with a counterweight 30, which yieldably holds it in its normal position as shown in Fig. 6. It is provided with a lower finger 31 which normally extends across chute 26 in the path of travel of a coin and finger 32 having a hook 33 arranged to be engaged with a stop pin 34 which extends across the slot in bar 28. When a coin as C (Fig. 6) descends chute 26, it encounters upper finger 31 and

swings pallet 29 about its pivot. As it swings, the back of hook 33 encounters the central portion of the coin and tends to retain it in the chute against plate 10. As the turning continues, finger 31 will be withdrawn from under the coin, and at the same time hook 33 will hold it against plate 10. Thus, the coin will continue on downwardly in the continuation passage 35 of chute 26 to the exit for genuine coins. The limited movement permitted bar 28 will prevent any possibility of the coin jamming. If, however, the coin is spurious or a slug, and has a central opening as S, see Fig. 6a, hook 33 will enter the aperture and engage the marginal edge of the perforation; the downward momentum will swing the hook member as before, but as the marginal edge of the slug is engaged by hook 33 it will be deflected laterally into a rejection exit 36. Here it encounters a release finger 37 which arrests its deflection movement, pushes it off the hook and causes it to drop outside of the detector. Obviously, openings 21 and 36 for spurious or bogus coins may be used as illustrated, merely discharging the rejected tokens to one side of the detector or they may be connected by passages to a rejected coin receptacle.

What I claim is:—

1. In a coin selector, a coin chute having a rejection exit for perforated coins and a passage for genuine coins, said exit and passage being offset, a perforated coin classifier at the offset comprising a pallet having spread fingers and means urging said pallet with one of said fingers across the chute in the path of coins, the other of said fingers being so disposed as to be projected laterally into said chute as the first finger is pushed out, said other finger having a hook to engage the marginal edge of the perforation in a coin and suspend the latter on said hook whereby to swing said pallet and deflect the perforated coin to said rejection exit, and a release finger to arrest the deflection movement of said coin at said exit and cause release of said perforated coin from said hook.

2. In a coin selector, a coin chute having a rejection exit for perforated coins and a passage for genuine coins, said exit and passage being offset, a perforated coin classifier pivotally mounted at the offset comprising a pallet having spread fingers and a counterweight urging said pallet with the lower of said fingers across the chute in the path of coins, the upper of said fingers being so disposed as to be projected laterally into said chute as the lower finger is pushed out, the upper finger having a hook to engage the marginal edge of a perforation in a coin and suspend the latter on said hook whereby to swing said pallet and to deflect the perforated coin to said re-

jection exit, and a release finger to arrest the deflection movement of said coin at said exit and cause release of said coin from said hook.

3. In a coin selector, a coin chute having a rejection exit for perforated coins offset laterally of a continuation passage of said chute, said continuation passage serving for travel of genuine coins past said exit, a perforated coin classifier pivotally mounted at the juncture of said exit and said passage, said classifier comprising a pendent arm pivotally mounted, a pallet pivotally mounted on said arm, said pallet having spread fingers and a counter weight urging said pallet with the lower of said fingers across the chute in the path of coins, the upper of said fingers being so disposed as to be projected laterally into said chute as the lower finger is pushed out, the upper finger having a hook to engage the marginal edge of a perforation in a coin and suspend the latter on said hook whereby to deflect the perforated coin into said rejection exit, and a release finger extending across said exit to arrest the deflection movement of said coin at said exit and cause release of said coin from said hook.

In witness that I claim the foregoing I have hereunto subscribed my name this 27th day of January, 1930.

JAMES E. OLVIS.