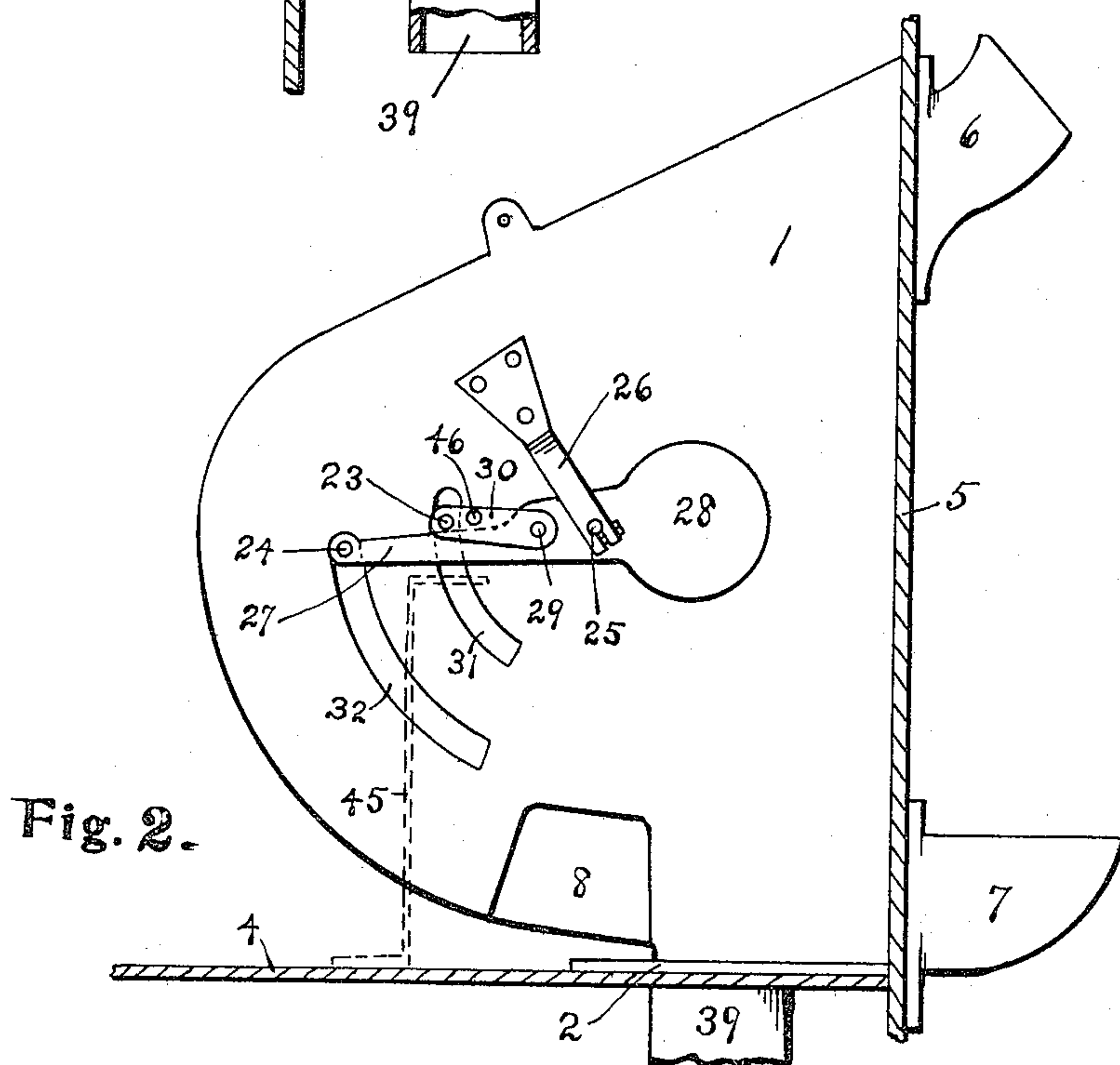
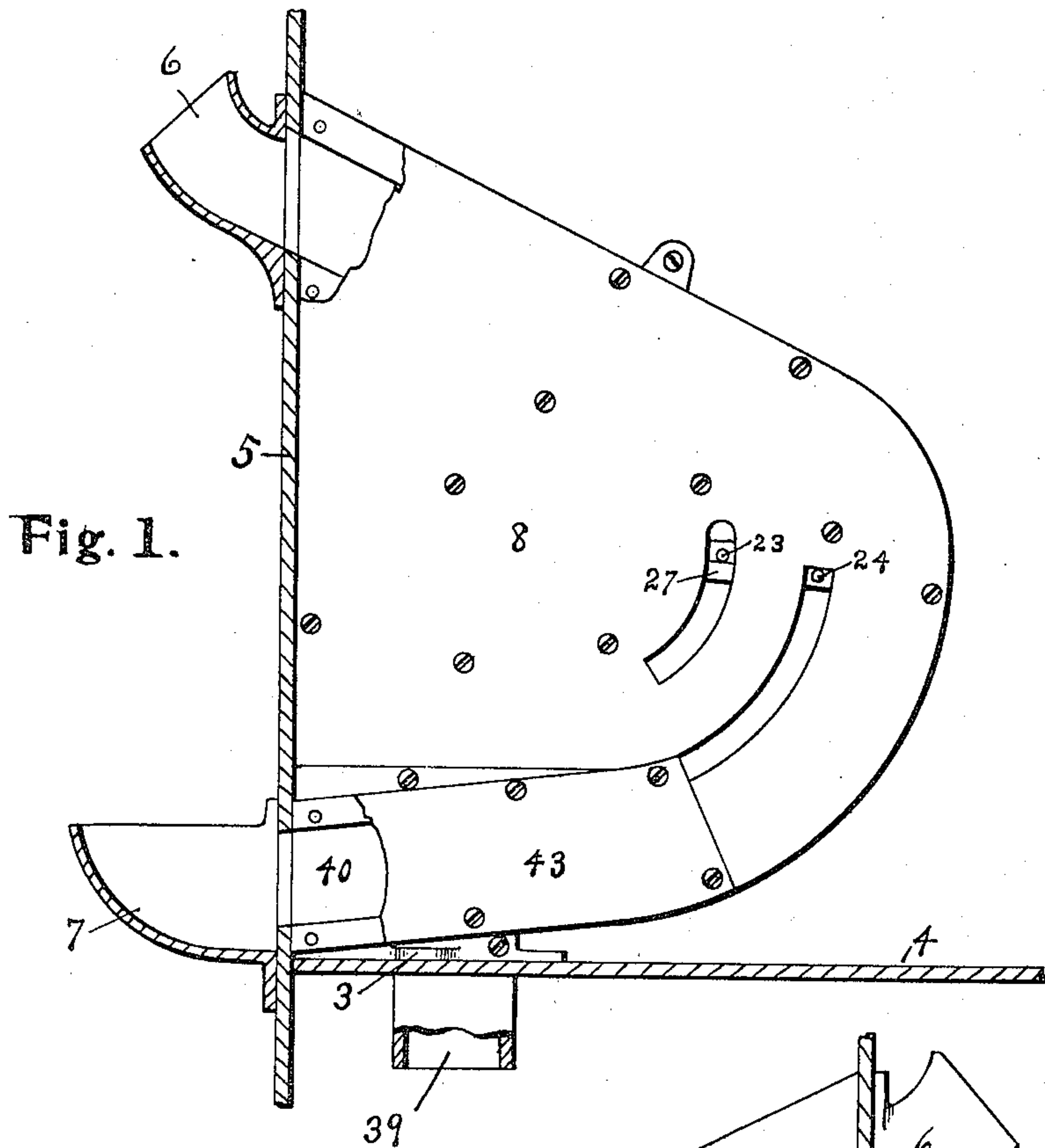


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COIN TESTER.
APPLICATION FILED MAR. 25, 1909.

953,363.

Patented Mar. 29, 1910.

2 SHEETS—SHEET 1.



Witnesses

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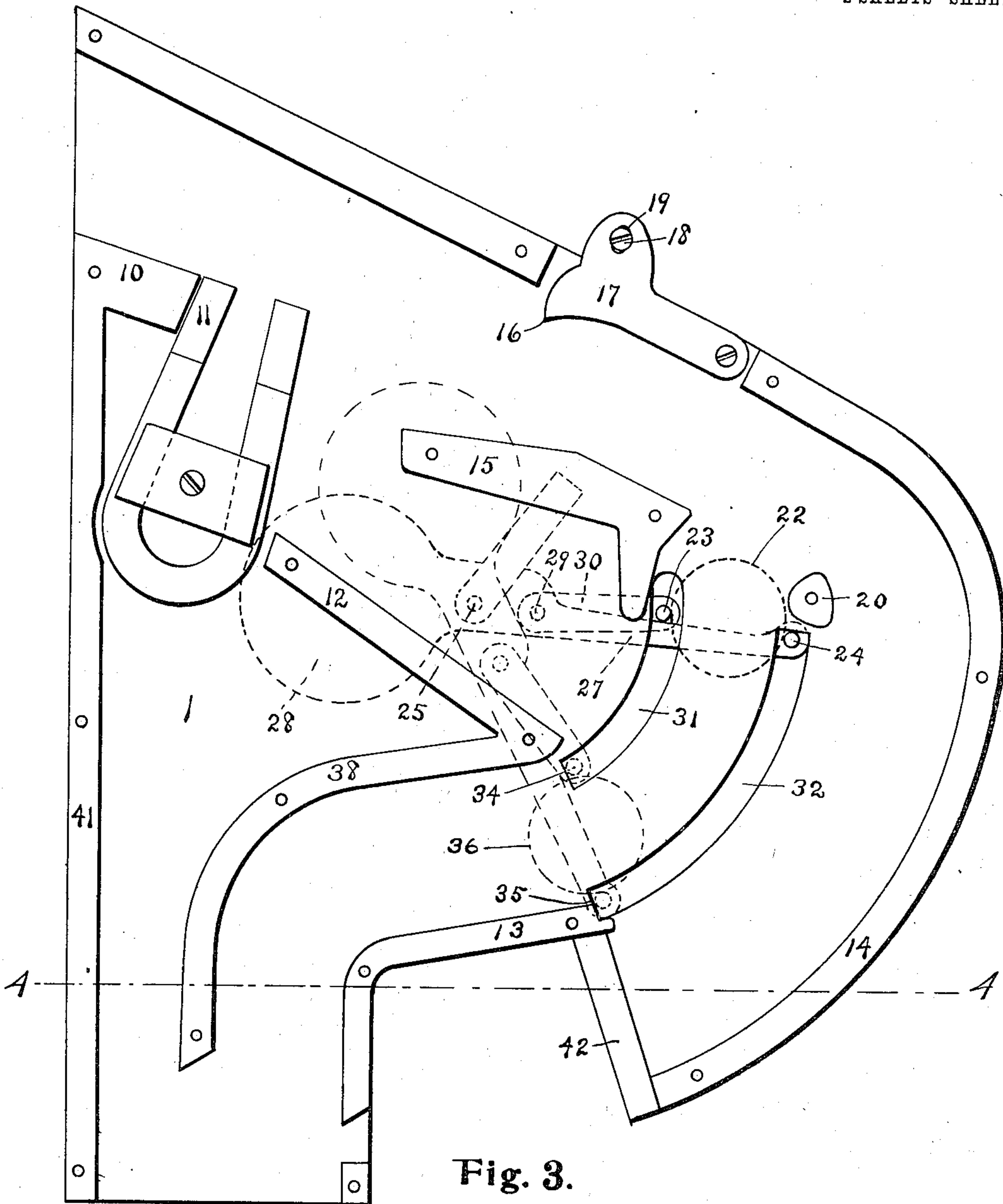


Fig. 3.

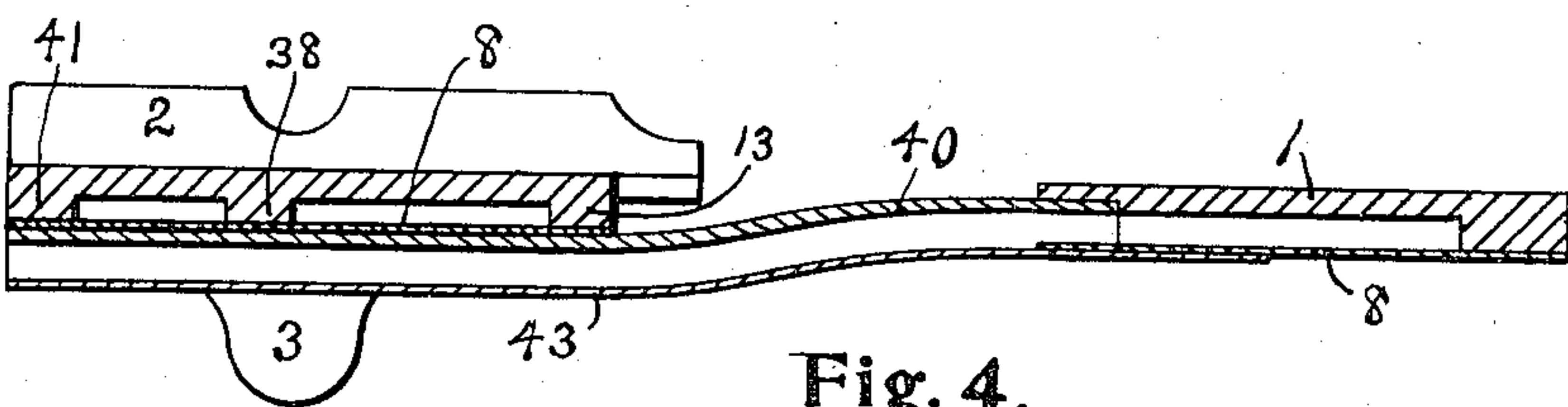


Fig. 4.

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COIN-TESTER.

953,363.

Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed March 25, 1909. Serial No. 485,617.

To all whom it may concern:

Be it known that I, WILLIAM F. TRIPPENSEE, a citizen of the United States, and a resident of Detroit, in the county of Wayne and State of Michigan, have invented a new and Improved Coin-Tester, of which the following is a specification.

This invention relates to means for preventing fraudulent operation of coin controlled mechanisms, and the object of these improvements is to provide a construction whereby good coins will be separated from those which are light or heavy in weight and from disks of improper materials.

This invention consists in a frame having a series of run-ways through which coins and checks may pass and means for causing the proper coins to travel in one direction and the improper coins and disks to travel in another direction, together with a device for testing the diameters of the coins.

In the accompanying drawings Figures 1 and 2 are side elevations of the improved device. Fig. 3 is a view of the frame and run-ways on a larger scale. Fig. 4 is a cross section on the line 4—4 of Fig. 3.

Similar reference characters refer to like parts throughout the several views.

This testing device may be used with any type or style of coin controlled machine and is constructed on the principle that coins or checks of different sizes and materials will describe different arcs when jumping gaps. In connection with the application of this principle a permanent magnet is employed for the purpose of altering the course of checks made of iron or steel.

In the drawings, 1 is a plate provided with feet 2 and 3 whereby it may be secured to any horizontal plate 4 of any check controlled machine. To the front plate 5 of such machine a receiving spout 6 and a cup 7 to receive the rejected disks or coins may be attached. The plate 1 is provided with a series of ridges or ribs which form the run-ways and furnish a support for a sheet metal cover plate 8. This plate is omitted in Fig. 3 but will be understood in the description.

When the coin or check is introduced by way of the spout, it first contacts with the rib 10 and then rolls over the ends of the magnet 11. If the check is of iron or steel it will follow closely around the magnet and pass down to the rib 12, run along the same

to its lower end and fall across the space between the ribs 12 and 13 until it strikes the rib 14, whence it will pass out of the machine to the cup 7 as hereinafter described. If the coin or check is of another metal it will roll quickly over the ends of the magnet 11 and jump across the gap between the magnet and the rib 15. If the machine is constructed for nickels and the coin is of nickel, it will have sufficient inertia to travel through such an arc that its upper edge will engage the point 16 of the adjustable retarder 17. A screw 18 passes through a slot 19 in the retarder, thus permitting the same to be positioned properly. Lighter coins or checks will not have sufficient inertia to jump high enough to engage the point 16, but will travel along the rib 15 to its end and then jump the spaces between this rib and the abutment 20 passing over the same and rolling down along the rib 14. If the check is of heavier metal than nickel, it will attain sufficient momentum to jump across the gap while rolling down the rib 15.

The coins of the proper metal, as they strike the point 16, are checked in speed and fall down on the rib 15, along which they slowly travel. As they come to the lower end of this rib they do not have sufficient momentum to jump over the abutment 20 and so will roll back to the position indicated by the circle 22. If of sufficient diameter they are held between the pins 23 and 24 and travel through an arc of which the pin 25 is the center. (Fig. 2). If not of sufficient diameter they will fall through between these pins to the rib 14 and pass out to the cup 7.

The pin 25 is supported by an arm 26 carried by the plate 1, as shown in Fig. 2 and loosely mounted on the pin is an arm 27 which carries the pin 24 at its outer end, and has a counterweight 28. A pin 29 carried by the arm 27 supports a link 30 which carries the pin 23 at its free end. The pin 23 moves through the slot 31 while the pin 24 moves through the slot 32.

It will be understood that the opening in the spout 6 is of such size that no disk or coin larger than the proper coin can be inserted. The diameter of the checks or coins which will engage the pins 23 and 24 is thus limited. When a coin rests on the pins 23 and 24, as indicated by the circle 22, its weight will overbalance the counterweight

28 and the coin together with the two pins will travel around to the second position indicated by the dotted lines in Fig. 3. The shoulder 34 at the lower end of the slot 31 will engage the pin 23 before the shoulder 35 at the lower end of the slot 32 engages the pin 24. The result is that the pins separate and the coin, indicated by the circle 36, is released and because of its momentum will roll to the left (Fig. 3) on the rib 13 until it strikes the rib 38 which will guide it so that it will pass down the chute 39. From this point the coin may be employed to control any desired kind of mechanism.

To convey the coins from their resting place on the rib 14 to the cup 7 the following construction is employed. Secured against the plate 8 is a shallow upright trough 40, one end of which is flush with the outer edge of the rib 41 on the plate 1, and the other rests in a groove 42 which extends between the ribs 13 and 14. A cover plate 43 laps over a portion of the plate 8 and covers the trough, thus forming a continuous conduit for the coins from between the ribs 13 and 14 to the cup 7.

It will thus be seen that checks and coins of any weight and of any size less than the capacity of the spout 6 will roll down the rib 10. Iron washers will roll around and down the side of the magnet 11 until they strike the rib 12, then down the same to the rib 14 and to the cup 7. If of improper momentum, the checks will roll down the rib 15 and over the abutment 20 and down and out to the cup. Proper coins only will be carried to the chute 39.

It is often desirable to cut off the supply of coins from the mechanism controlled thereby. In the construction shown it is a simple matter to return the good coins in the same manner as the objectionable disks. A bracket 45 may be moved into the path of the pin 46 on the link 30 as shown in dotted lines in Fig. 2. This may be done by any proper mechanism, or any other device may be employed to engage the pin 46. When a coin is inserted, it will move down with the pins 23 and 24 as before stated until the pin 46 engages the bracket 45. This will retard the pin 23, separating it from the pin 24, permitting the coin to fall, which then drops to the rib 14 and rolls out to the cup 7.

The different ridges must be properly designed for each individual coin, those shown being for a nickel five cent piece.

The retarder 17 must be carefully adjusted on each selecting device.

Having now explained my construction, what I claim as my invention and desire to secure by Letters Patent is:—

1. In a coin testing device, the combination of parallel vertical plates having spacing ribs between their edges, a short rib

between said plates to form a run-way for coins, an abutment 20 positioned opposite one end of said short rib between which abutment and the rib and between which abutment and the outer rib a coin may fall, and a magnet positioned opposite the other end of the short rib between which the coin may also fall.

2. In a coin testing device, the combination of parallel vertical plates having spacing ribs between them, a magnet mounted between said plates, the ribs on said plates forming passages for coins, and a coin conveying device pivoted to one of said plates.

3. In a coin testing device, the combination of parallel vertical side plates, ribs extending along between edges of the plates and having gaps for the entrance and discharge of coins, a magnet adjacent the inlet gap, an inclined rib near the lower end of the magnet to conduct selected coins to discharging position, an inclined rib spaced from the upper end of the magnet, an abutment spaced from the opposite end of said rib, a coin carrier pivotally mounted for reciprocatory movement below the space between the rib and abutment, and a rib near the lower limit of movement of the carrier to receive the selected coins.

4. In a coin tester, the combination of parallel slotted plates, spacing ribs between their edges, a rib 10 to receive disks, a magnet adjacent said rib, a rib 12 near the lower end of the magnet to conduct rejected disks to discharging position, a rib 15 spaced from said magnet, an abutment 20 spaced from one end of the rib 15, an arm pivotally mounted on one of said plates, pins carried by said arm and passing through slots in the plate, said pins normally positioned to receive coins retarded by said abutment, and a rib 13 to receive the coins from said pins.

5. In a coin tester, the combination of upright plates separated by ribs which form tracks for coins, said ribs being formed with gaps to permit the coins to travel different paths, and a retarding device mounted on the plates and extending downward into the path of the coins to engage the upper edges of such coins as rebound a certain distance to check their speed and thus predetermine the path to be traveled.

6. In a coin tester, the combination of upright parallel plates, ribs extending along between edges of the same, the rib along one edge having a gap to admit coins, a magnet adjacent said gap, a coin-retarding device projecting downward from the upper rib, an inclined rib extending from the lower end of said magnet to convey rejected coins, a rib spaced above the same in line with the upper end of the magnet, and means to receive coins from said rib.

7. In a coin testing device, the combina-

tion of parallel vertical plates, intermediate ribs 13, 14 and 15 on said plates forming passages for the coins, a retarder 17 mounted above the rib 15 to engage certain coins, a magnet, and a rib 12 upon which disks attracted by said magnet may fall.

8. In a coin testing device, a coin passage, a magnet forming a portion of the bottom of said passage, and a coin conveying device to receive the coins from said passage.

9. In a coin testing device, the combination of parallel slotted plates, spacing ribs between their edges, and between the plates to form tracks for coins, and a coin-carrier pivotally mounted for reciprocatory movement to receive the coin when leaving one of said ribs to convey the same to a rib near the lower limit of movement of the carrier.

10. In a coin testing device, the combination of parallel vertical plates having spacing ribs between them forming passages for coins, and a coin conveying device pivoted to one of said plates.

11. In a coin testing device, the combination of parallel vertical plates having spacing ribs between them forming passages for the coins and also having curved slots, and a coin conveying device pivoted to one of said plates and having pins extending through the slots in the plates.

12. In a coin testing device, the combination of slotted vertical plates having spacing ribs between them forming passages for coins, and a coin conveying device comprising an arm pivoted to one of said plates, a pin extending therefrom through a slot in the plates, a link pivoted to said arm, and a pin extending therefrom through another slot in the plates, said arm having a counter-

weight to hold the conveyer in coin-receiving position.

13. In a coin testing device, the combination of slotted vertical plates having spacing ribs between them forming passages for coins, and a coin-conveyer comprising an arm pivoted to one of said plates, a pin extending therefrom through a slot in the plates, a link pivoted to said arm intermediate its pivot and said pin, a second pin extending from said link through another slot in said plates, the length of the slots being such that when the conveyer is swung about its pivot by the weight of a coin, one of the pins will be stopped first and thereby release the coin.

14. In a coin testing device, the combination of parallel vertical plates having spacing ribs between them, and a coin-conveying device pivoted on one of the plates to swing through a vertical arc and having laterally extending pins, said plates having curved slots through which said pins may extend during their swing.

15. In a coin testing device, the combination of vertical plates, spacing ribs between them, a coin conveying device pivoted adjacent said plates, coin-supporting pins mounted on the same, and means to move one pin relative to the other to release the coin.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM F. TRIPPENSEE.

Witnesses:

FRANK J. TRIPPENSEE,
EMIL W. SNYDER.