H. W. ROELING, E. H. WILLIAMS, AND J. G. BAUER.

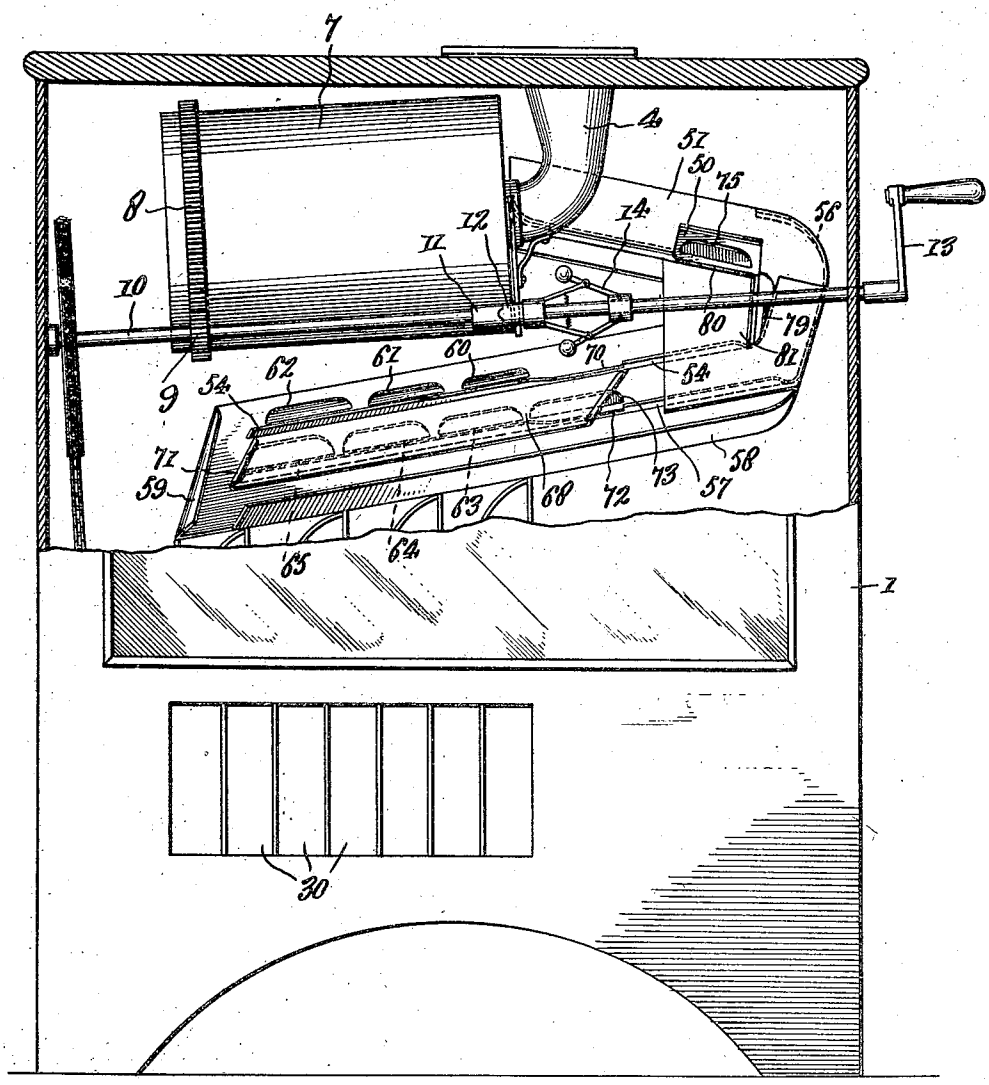
AUTOMATIC COIN SEPARATING AND COUNTING DEVICE.

APPLICATION FILED MAR. 21, 1921.

1,421,992. Patented July 4, 1922.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

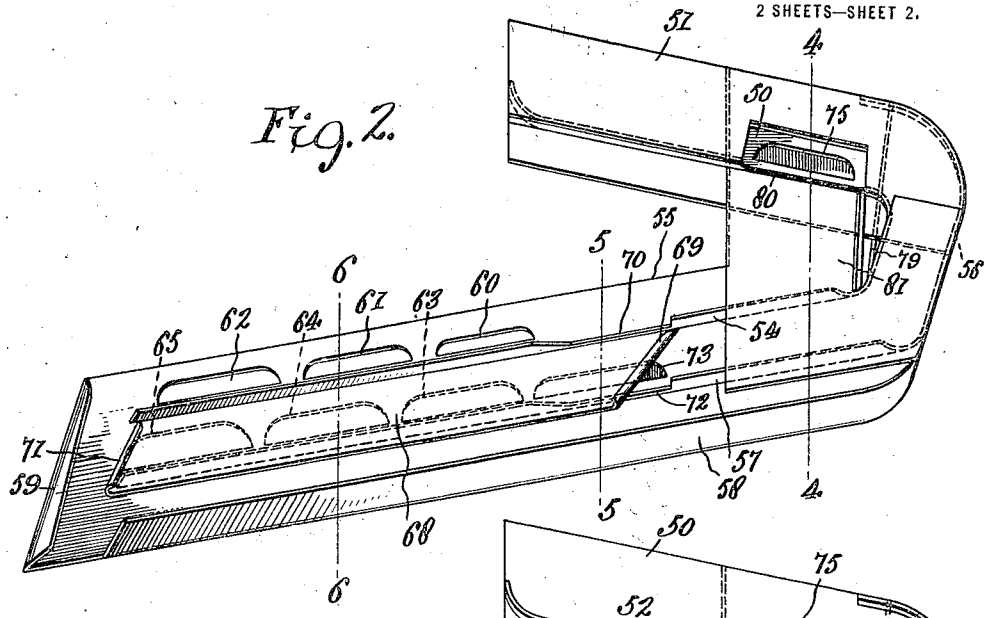


Fig. 3.

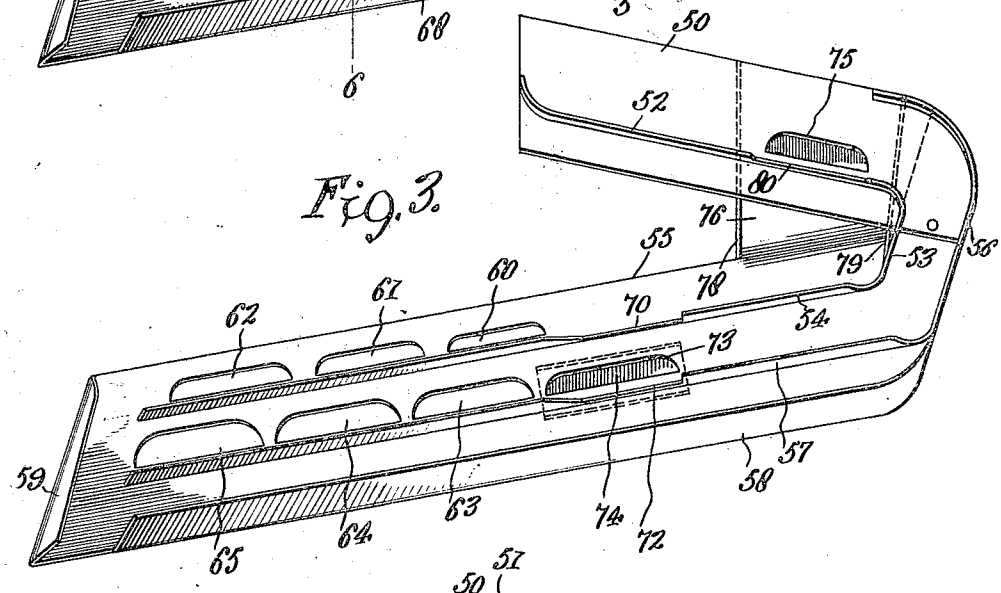


Fig. 6.

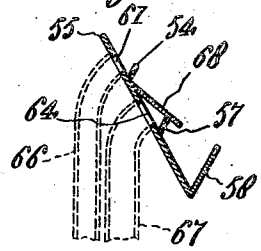


Fig. 5.

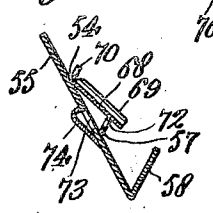
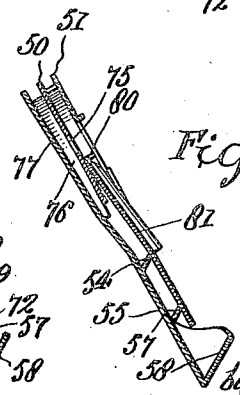


Fig. 4.



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UNITED STATES PATENT OFFICE.

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AUTOMATIC COIN SEPARATING AND COUNTING DEVICE.

1,421,992. Specification of Letters Patent. Patented July 4, 1922.

Application filed March 21, 1921. Serial No. 454,014.

To all whom it may concern:

Be it known that we, HENRY WILLIAM ROELING, EDWARD HUGH WILLIAMS, and JOHN GEORGE BAUER, citizens of the United States, and all residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Automatic Coin Separating and Counting Devices; 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.

The present invention relates to improvements in automatic coin separating and counting devices, and has for an object to provide certain improvements over the subject matter of our Patent No. 1,378,720, granted May 17, 1921.

The improvements herein reside more particularly in the provision of an improved coin chute in which a more condensed and compact arrangement is had, and in which the length of the chute, shown and described in our co-pending application above referred to, is shortened and made to accommodate coins of the same range or denominations by an arrangement of double coin rails placed one above the other, and receiving coins from the distributing drum in the usual manner.

Another object of the invention is to provide a simple and inexpensive construction of coin chute which will more effectively separate the coins of various denominations, and which will act to reject mutilated or spurious coins.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Fig. 1 is a front elevational view with the upper part shown in section, of an improved coin separating device constructed according to the present invention;

Fig. 2 is an enlarged front elevational view of the improved coin chute;

Fig. 3 is a similar view with certain plates of the chute removed;

Fig. 4 is a curved sectional view taken on the line 4—4 in Fig. 2;

Fig. 5 is a similar view taken on the line 5—5 also in Fig. 2; and

Fig. 6 is a transverse section taken on the line 6—6 in Fig. 2.

Referring more particularly to the drawings, 1 designates the cabinet which may be of the same construction as illustrated and described in our patent aforesaid, and in accordance with such patent, the cabinet is provided with a coin receiving hopper 4 for delivering the coins to a distributing drum 7, which receives motion through the gear 8, carried thereby, and a pinion 9 from a shaft 10 journaled within the cabinet.

The shaft is provided with clutch elements 11 and 12, the latter of which is slidably mounted on the shaft, and connected to a centrifugal governor 14. The shaft is provided with a crank handle 13 on the exterior of the cabinet, by which it may be manually rotated, the centrifugal governor providing for disconnecting the drum in case the speed of rotation is made to exceed a predetermined maximum. The drum 7 distributes the coins into the improved coin chute which is disclosed to better advantage in Figs. 2 to 6 inclusive.

Referring more particularly to these figures, the coin chute is made up of a coin receiving portion composed of a back plate 50 and a front plate 51 spaced apart slightly wider than the thickness of a silver dollar so as to provide for the receiving of coins of all denominations therethrough. These coins roll along on a rail 52 which receives them from the drum 7. This rail 52 extends downwardly as indicated at 53, and is returned upon itself as a flange 54 formed on the distributing plate 55 which constitutes the lower portion of the coin chute.

This plate 55, as likewise the plates 50 and 51, are arranged at an inclination, and also at an angle from the vertical so that the coins, in descending, lie against the plate 55. A confining rail 56 is secured about the vertical portion 53 of the guide rail 52 and extends into a supporting flange 57, beneath the rail 54. The plate 55 is also provided with a flange 58, extending in parallelism with the flange 57 and beneath the same. The lower left hand end of the plate 55 extends beyond the ends of the rails 54, 57 and

58, and is turned upwardly to provide an abutment 59 to check coins that strike thereagainst and direct them downwardly into a safety receptacle or compartment, provided to receive them.

In the plate 55 above the rail 54, are formed three slots 60, 61 and 62 being graduated in size in order to receive respectively dimes, pennies, and nickels. In like manner, similar though larger slots 63, 64 and 65 are made in the plate 55 above the flange 57 to receive quarters, half-dollars and dollars respectively.

These various slots communicate with tubes 66 and 67 which carry the coins to the compartments 30 in the lower part of the cabinet 1. A plate 68 preferably has its upper longitudinal edge lying beneath the rail 54, and inclining downwardly and outwardly away from the plate 55, its lower portion lying against the outer edge of the flange 57. This plate 68 is formed with a curled edge 69 made diagonally and beneath the forward end of a gap 70, made in the rail 54 just preceding the dime slot 60. The other end 71 of the plate 68 is also curled outwardly to provide an abutment or stop.

Similarly, a gap 72 is made in the lower flange 57, substantially beneath the gap 70 of the upper rail and preferably an opening 73 is made in the plate 55 above this gap 72, in order to allow a mutilated coin to rock sufficiently to permit its lower edge to slide through the gap 72.

If desired, a bulged plate 74 may be provided in rear of the opening 73, to avoid accidental escape of any coins through this opening. The rear plate 50 is provided near its lower part with an opening or slot 75, sufficient to allow the passage therethrough of dimes, pennies and nickels, but too small to allow of the passage of quarters or coins of larger denominations. This slot or opening 75 communicates with a channel 76 in rear thereof, which directs the coins onto the upper rail 54.

This channel 76 is formed by a plate 77 spaced rearwardly back of the base plate 50, said plate 77 being provided with flanges 78 and 79, bent forwardly and taking against the base plate to which they may be soldered or otherwise secured. A gap 80 is provided in the guide rail 52, at the slot or opening 75, in order to permit of the escape of mutilated coins or of the outer of two coins that are moving abreast. These coins are guided by a plate 81 downwardly onto the lower guide rail 58 and thence to the safety compartment heretofore referred to.

In use, coins coming from the drum will be delivered to the rail 52, and will pass down between the plates 50 and 51 until arriving at the slot 75. At this point all dimes, pennies and nickels will escape through such slot 75 and will descend through the channel 76 onto the guide rail 54. Such coins descending along the rail 54 will topple over through their respective slots 60, 61 or 62 and fall through the tubes 66 into their proper compartments.

Coins larger than nickels will pass the slide 75 being led onto the intermediate rail 57 and separated through the slots 63, 64 and 65. Foreign substances and mutilated coins will be caught in the gaps 80, 70 and 72, all of which lead to the lower rail 58 and will be guided by the latter into the safety compartment from which they may be removed from time to time. Should any good coins for any reason go into this compartment, they may be put through the machine a second time.

We do not wish to be restricted to the size, form, and proportions of the various parts, and obviously changes could be made in the construction herein described without departing from the spirit of the invention, it being only necessary that such changes fall within the scope of the appended claims.

What is claimed is:

1. A device of the character described comprising a coin chute comprising means to receive the coins, a plate having rails one above another for receiving the coins from said means, said plate having graduated slots above the rails for separating the coins, and means for diverting the mutilated coins from the rails and slots, substantially as described.

2. In a device of the character described, an improved coin chute comprising a receiving portion, a plate having superposed guide rails in communication with the receiving portion of the chute, said plate having superposed graduated slots respectively above the guide rails, said guide rails provided with safety gaps therein, substantially as described.

3. In a device of the character described, an improved coin chute comprising a receiving portion, a plate having superposed guide rails in connection with the receiving portion of the chute, said plate provided with graduated slots extending in superposed relation above the two guide rails, said guide rails having safety gaps therein, and a flange extending beneath said guide rails on said plate for receiving coins let through said gaps, substantially as described.

4. In a device of the character described, an improved coin chute comprising a coin receiving portion, a plate having guide rails in connection with the receiving portion and provided with graduated slots in superposed relation above the rails, said rails having gaps therein, a flange on the plate below the rails, and a cover plate extending over the lower row of slots, substantially as described.

5. In a device of the character described, an improved coin chute comprising a receiving portion, a plate in connection therewith and having superposed guide rails and superposed rows of graduated slots, said guide rails having gaps therein, a flange on the plate beneath the guide rails, and a cover plate fitted in front of the lower row of slots and lower guide rail and being inclined so as to engage at its forward edge beneath the gap in the upper rail, substantially as described.

6. In a device of the character described, composed of a base plate, a front plate separated therefrom, a receiving rail extending between the base and front plates, said base plate having a slot therein, a channel beneath the slot, a plate having an upper guide rail for receiving coins from said channel and provided with graduated slots therealong, said last mentioned plate having a second guide rail for receiving coins directly from the receiving rail and having graduated slots therealong, and means for removing mutilated coins from the rails, substantially as described.

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