

A. K. COLLINS.
 COIN CHANGING MACHINE.
 APPLICATION FILED AUG. 26, 1911.

1,055,138.

Patented Mar. 4, 1913.

2 SHEETS—SHEET 1.

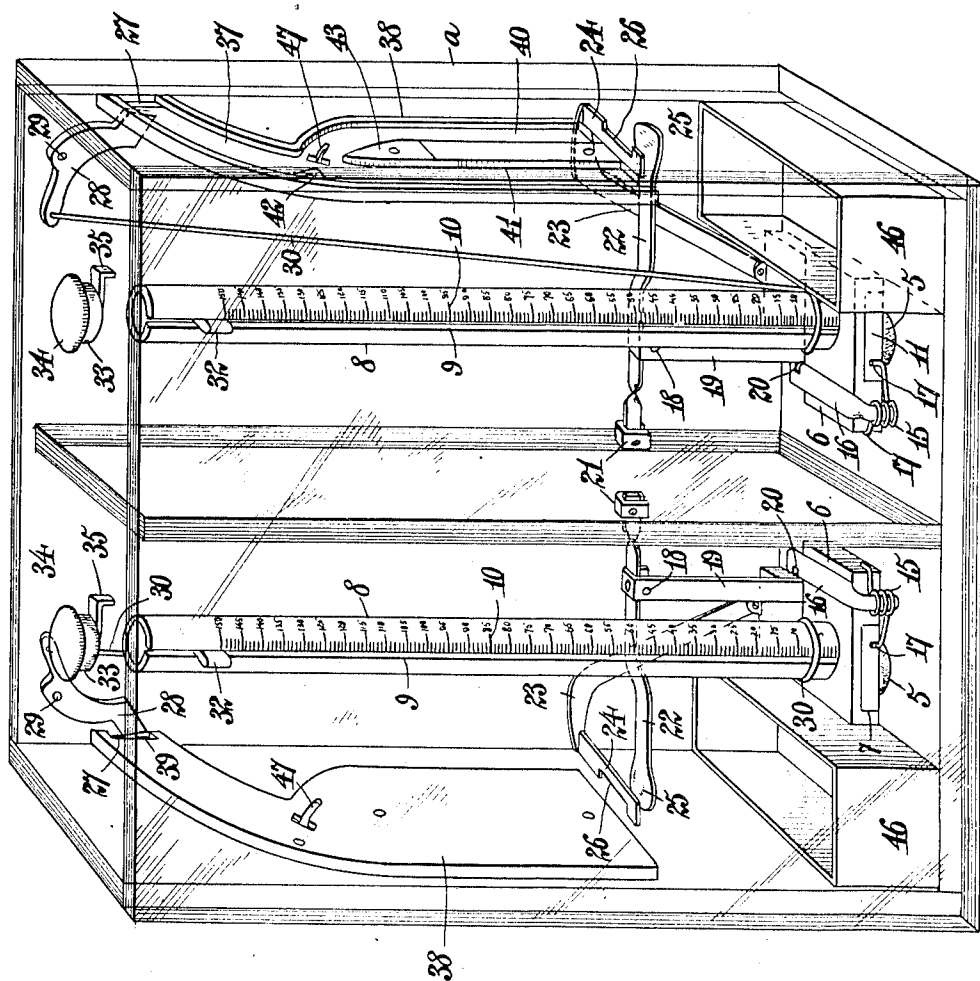


Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 2.

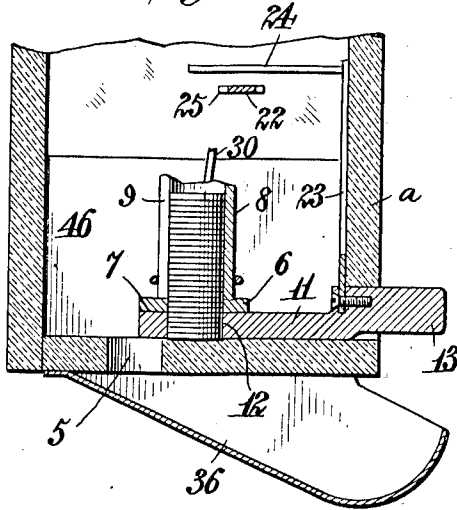


Fig. 3.

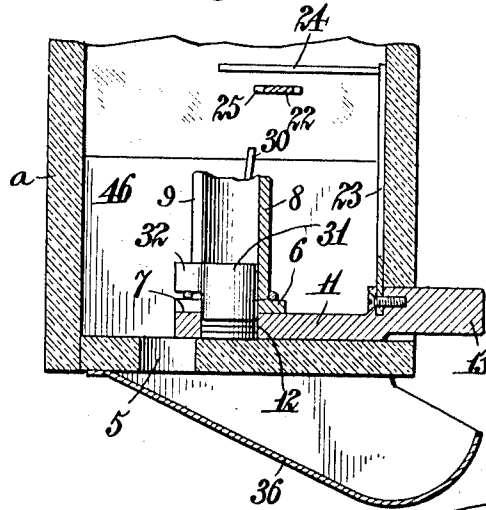


Fig. 5.

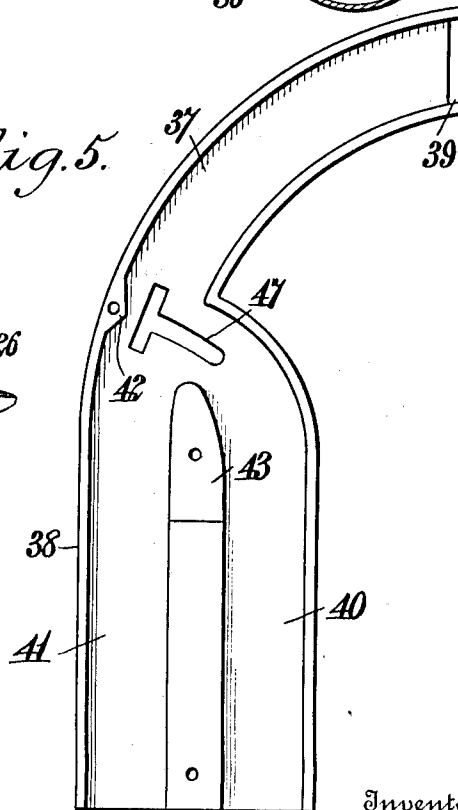
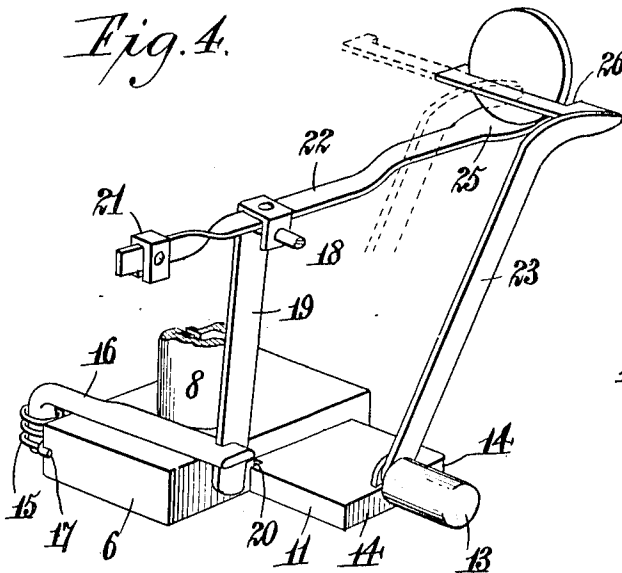


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALBERT K. COLLINS, OF ROCK HILL, SOUTH CAROLINA.

COIN-CHANGING MACHINE.

1,055,138.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed August 26, 1911. Serial No. 646,093.

To all whom it may concern:

Be it known that I, ALBERT K. COLLINS, a citizen of the United States, residing at Rock Hill, in the county of York and State of South Carolina, have invented new and useful Improvements in Coin-Changing Machines, of which the following is a specification.

The general object of the invention is to save the time and labor usually required to make change or give the equivalent for a coin of relatively large denomination in coins of relatively small denominations; and to this end the invention consists in a device adapted for containing a number of coins for exchange and receiving the coins to be exchanged, and having means controlled by the coin received, or to be exchanged, for removing a predetermined number of coins whose combined values are the equivalent of the coin received.

Other objects will appear and be better understood from the following description taken in connection with the accompanying drawings, in which,

Figure 1 is a perspective of one embodiment of the invention. Fig. 2 is a detail vertical section of the lower end portion of the device showing the coin carrier partly in section and also the hopper or container. Fig. 3 is a detail vertical section showing the position of the parts when the hopper is empty or the carrier partially filled with coins. Fig. 4 is a detail elevation partly in section of the coin controlled device showing by full lines how the coin is retained until the device is operated and further showing by dotted lines how the coin is removed from the lock. Fig. 5 is a fragmentary detail elevation of the coin chute.

a indicates a suitable casing which is herein shown as transparent and formed of glass. It is to be understood, however, that I am not to be limited to the employment of glass since other material may be employed, such as wood or metal.

In the embodiment shown the device is adapted for changing coins of different denominations, such as nickels and quarters and is so constructed as to deliver five one cent pieces when a nickel is deposited in one of the compartments, or to deliver five nickles when a quarter is deposited in the other compartment. It will, however, be understood that this particular construction is merely illustrative of one embodiment of

the invention and if desired a third compartment with the mechanism herein shown as arranged in either of the compartments may be provided and adapted to receive half-dollars and give in exchange therefor, two quarters. Or, if further desired only one compartment need be provided and the parts constructed so as to give change for either a nickel, dime, etc.

5 indicates the delivery or outlet opening and 6 a suitable base having a suitable channel or guide 7, a portion of which overlies the delivery opening.

8 indicates the container or coin hopper let into an opening in the base 6 and out of alinement with the delivery opening 5.

9 indicates a longitudinal slot in the hopper 8, one purpose of which is to provide an opening through which the contents of the hopper may be observed, and the quantity of coins therein ascertained by means of the graduations of a scale 10. The graduations in said scale extending from one side of the slot and being spaced apart for a distance corresponding to one dimension of a coin which the hopper is adapted to receive.

11 indicates the plunger or coin carrier arranged in the guide 7 and 12 an opening in the plunger or coin carrier which alines alternately with the hopper 8 and delivery opening 5 and corresponds in diameter to the diameters of the hopper and delivery opening, whereby, a coin falling into the said opening from the hopper and when the carrier is in one position, will fall through the delivery opening when the carrier is moved into another position.

13 indicates an operating rod extending from one end of the plunger through an opening in the front of the casing a and 14, 14 represent shoulders on the carrier 11 which abut the wall of the casing and limit the outward movement of the carrier under the action of a spring 15 connected to any convenient portion of the device, such as an arm 16 carried by the base. The end portions 17 of the spring bearing on one end of the plunger and base, (said spring being adapted to return the carrier to its normal position after the same has been pressed inwardly to eject the change.)

18 indicates an arbor which supports the coin actuated lock mechanism. This lock mechanism may be constructed in any preferred manner and in the embodiment shown, comprises a gravity latch bar 19

adapted to be received by a notch 20 in the carrier 11 and actuated to do so automatically when the carrier moves outwardly under the action of its spring by a weight 21 on one end of a cross arm 22, the opposite end of said cross arm being adapted to receive the coin for exchange in a manner hereinafter described.

23 indicates an upright connected so as to move with the carrier 11 and having an angular-shaped upper end, one side 24 of which overlies the coin receiving end 25 of the cross arm and has a notch 26 adapted to receive the coin to be exchanged and is so arranged as to support the said coin against tipping or displacement on the end portion 25 of the cross arm 22.

27 indicates the coin receiving opening in either of the compartments shown in Fig. 1 and 28 a closure for said opening which is connected and supported in any preferred manner such as by a pivot 29 passing there-through and connected to the casing *a*. The closure 28 is overbalanced and is held by gravity in the position shown so as not to seal the opening 27.

30 indicates an operating rod connected at one end to the closure 28 and having its opposite end portion adapted to extend transversely of the slot 9 in the hopper 8. In the embodiment shown the lower end portion of the operating rod is curved so as to embrace the hopper, whereby, the latter acts as a guide for the operating rod.

31 indicates a follower adapted to be loosely received by the hopper 8 and 32 indicates an arm suitably connected to the follower so as to extend through the slot 9, and contact with the bent lower end portion of the operating rod, whereby, to move the same downwardly and tilt the closure so as to seal the opening 27.

When the closure is moved in the manner just described by means of the follower the lower end of the latter will extend into the opening 12 of the carrier and, since the upper end of the follower is contained in the hopper, it will be evident that the carrier cannot be moved to discharging position even though the latch bar be disengaged therefrom. This is of importance, since it prevents complaint against the machine's not delivering change or short changing which the machine might be made to do in the following manner:—Ordinarily the whole number of coins contained in the hopper at any one time will be divisible by the number which is to be given in exchange. Now, if it were intended to deposit one hundred coins in the hopper and through inadvertence only ninety-seven were placed therein, it is manifest that only three coins will be delivered when the plunger is moved inwardly for the twentieth time. This, of course, would cause complaint as before

stated. By the provision of the follower, however, this will be obviated, since it can be seen that the follower will move into the opening of the carrier when a number of coins less than should be delivered falls thereinto. Moreover this structure prevents claiming that a coin for exchange had been deposited in the machine which claim might be made by one who held that he forced a coin through the coin slot 27 and jammed the closure thereof to open position. If such claim were false it would be easily detected upon opening or observing the casing, since the coin if such had been deposited would be held on the receiving end 25.

33 indicates an opening in the top of the casing which aligns with the hopper 8 and is adapted to receive a suitable funnel or the like for directing a supply of coins into the hopper.

34 indicates a closure plug for the opening 33 and 35 a latch pivoted to one side of the center of one end of the plug so that when the latter is inserted into the opening and the latch turned into one position, the plug will be locked.

36 indicates a delivery chute which may be constructed in any preferred manner so as to convey the coins from the delivery opening 5 to a point within easy reach of the hand of the operator.

37 indicates the coin passage or chute which is formed in one face of a plate 38 arranged on one side of the compartment or casing as the case may be. The outer end of the passage 37 aligns with one side of the opening 27 and a notch 39 is formed to receive the closure 28 when the latter is moved as previously described.

40 and 41 indicate coin passages communicating at their upper ends and converging into the passage 37.

42 indicates a deflector on one side of the passage 37 and 43 a cooperating deflector at the juncture of the passages 40 and 41. The deflectors are so positioned that a coin of proper size entering the passage 37 will strike the deflector 42 from which it will rebound onto one side of the deflector 43 and be directed thereby into the passage 40 and finally onto the coin receiving end 25, from whence it will fall into a suitable compartment in the receptacle 46. When a smaller coin than that just described is inserted into the passage 37 it will not strike the deflector 42 and its velocity will enable it to pass the upper end of the passage 40, whereby, it will move into the passage 41 and fall therefrom into another compartment in the receptacle 46. The deflectors 42 and 43 are preferably of magnetized metal so that in the event of a blank of magnetic material and of proper size being inserted into the passage 37, it will be held by either of the de-

flectors or wedged between the same in which event, of course, the passage will be choked but may be readily liberated by extracting the coin through a slot 47 in the side of the plate 38 or placing a suitable implement in the slot and forcing the coin from contact with the magnets.

Although I have shown and described one embodiment of my invention it is to be understood that I am not to be limited to the specific arrangement and construction of parts since various changes will be made, within the scope of the appended claim without departing from the spirit or sacrificing any advantages of the invention.

What I claim as new is:

In a device of the class described, the combination with a casing for a coin receiving opening and a delivery opening; of a base partially overhanging said delivery opening,

a coin hopper carried by said base, a reciprocating carrier having a notch therein mounted in said base and adapted to receive a predetermined number of coins from said hopper and discharge the same into said delivery opening, means engaging the notch in said carrier for maintaining the latter in a normal position, additional means controlled by the contents of the hopper for locking said carrier in its normal position, and an operating rod adapted for contact with the last named means for closing said coin receiving opening.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT K. COLLINS.

Witnesses:

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