

Nov. 25, 1930.

A. S. ROSS

1,782,666

MONEY CHANGER

Filed Aug. 6, 1928

3 Sheets-Sheet 1

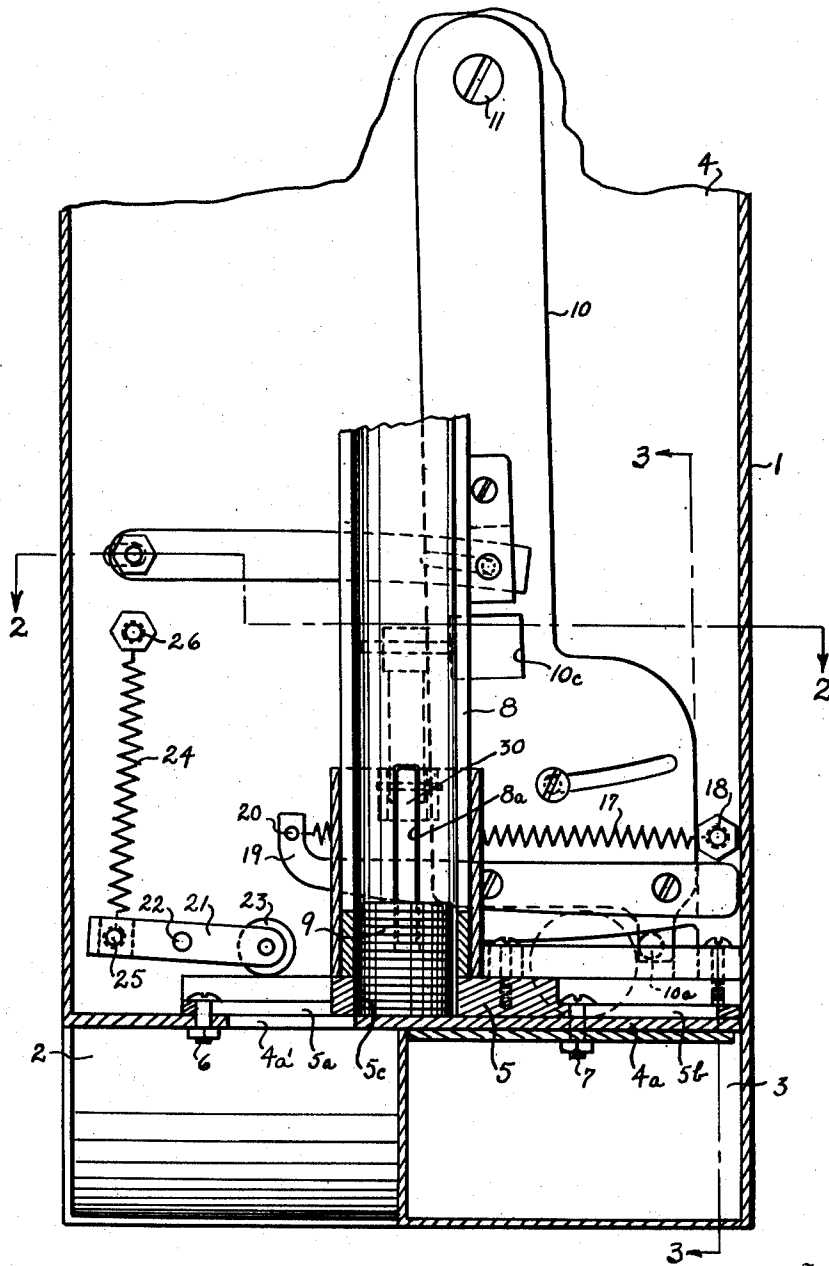


Fig. 1.

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3 Sheets-Sheet 2

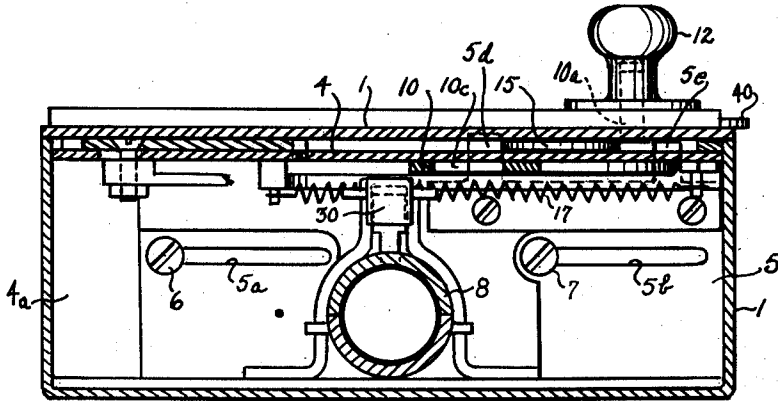


Fig. 2.

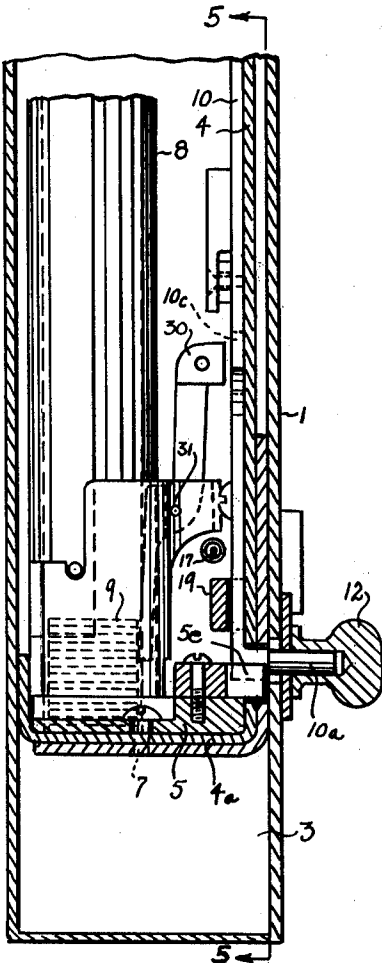


Fig. 3

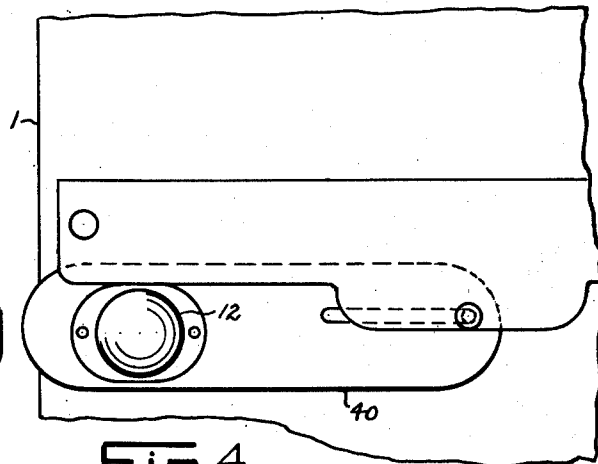


Fig. 4.

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3 Sheets-Sheet 3

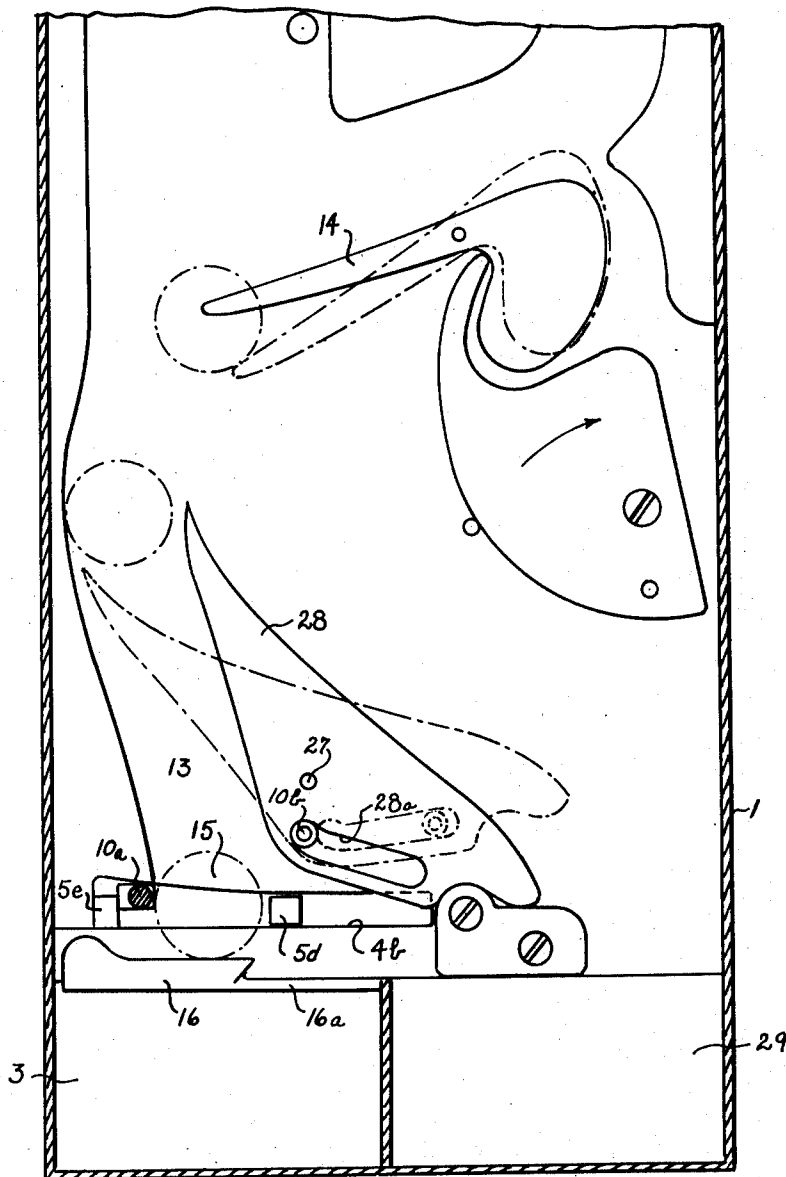


Fig. 5.

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UNITED STATES PATENT OFFICE

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MONEY CHANGER

Application filed August 6, 1928. Serial No. 297,786.

This invention relates generally to coin-actuated machines and specifically to money changers.

One of its objects is to provide for machines of the type wherein the deposited coin serves to operatively connect the actuator and the change injector, new and improved means whereby to insure the release of the deposited coin by the actuator and ejector after the coin has performed its proper function.

Another object is the provision of a money changer embodying new and useful means for returning to the operator all coins deposited after the supply of coins of a lesser denomination in the machine is insufficient to make change.

Various other objects will hereinafter appear.

In the accompanying drawings, which are illustrative of the preferred embodiment of the invention, Fig. 1 is a sectional fragmentary rear elevation of an assembled money changer; Fig. 2, a horizontal section on the line 2—2 of Fig. 1; Fig. 3, a vertical section on the line 3—3 of Fig. 1; Fig. 4, a fragmentary front elevation of the operating handle and associated parts; Fig. 5, a sectional front elevation on the line 5—5 of Fig. 3.

The operative parts of the money changer are shown mounted within a suitable casing 1 provided with a coin deposit slot (not shown), a change tray 2, and a coin receptacle 3.

The partition plate 4 extends parallel with the front wall of the casing and adjacent thereto, and may be extended transversely of the casing, as indicated at 4^a, to form a floor to support the change ejector 5, which is reciprocable immediately under the change magazine 8 and is longitudinally slotted as indicated at 5^a and 5^b for the reception of the guide bolts 6 and 7.

Each figure of the drawings illustrates the change ejector 5 in its normal inactive position. When it is moved from its inactive position into an active position (that is, to the left in Figs. 1 and 2) a predetermined number of change coins 9 are moved from under the stack and permitted to fall through

the outlet opening 4^a into the coin tray 2. The ejector 5 is then returned to its normal position (to be re-charged with change) by means hereinafter described, provided the magazine 8 contains sufficient change. If there is insufficient change the ejector 5 will be locked in its active position in a manner which will hereinafter appear.

A pin 10^a carried by the lever 10, which is pivoted on the rear side of plate 4, extends forwardly through the slot 4^b and the front wall of the casing 1 into the actuating handle 12. The handle 12 may be carried by a suitable sliding member 40 on the front of the casing 1. The change ejector 5 is provided with a lug 5^d which also extends forwardly through the slot 4^b.

Deposited coins pass downwardly between the partition plate 4 and the front wall of the casing 1 and may be directed to the coin passageway 13 by any suitable means. The coin-selecting beam 14 and associated parts will form the subject matter of another application which I am about to file.

The numeral 15 (Fig. 5) indicates the operative disposition of the deposited coin between the pin 10^a and the lug 5^d which is carried by the change ejector 5. In this position, the coin may rest upon a suitable support 16.

It will be obvious that when the pin 10^a is moved into engagement with the coin 15, (to the right in Fig. 5; the left in Figs. 1 and 2) the coin will be moved into engagement with the lug 5^d, and the change ejector 5 will be moved into an active position. The number of change coins 9 necessary to make change will thereby be moved from under the stack, and over the outlet opening 4^a, through which they will drop into the change tray 2.

The means whereby to insure release of the coin when it has been moved over the opening 16^a by the pin 10^a and lug 5^d will now be described.

As above stated, the pin 10^a is carried by the lever 10. This lever is normally held in an inactive position by the spring 17 which is secured to the partition plate 4, as indicated at 18, and to the arm 19 carried by the lever 10, as indicated at 20. It will be obvious that when the pin 10^a is moved into an active po-

sition, (to the left in Figs. 1 and 2; to the right, Fig. 5) the spring 17 will be energized and will serve to return said pin to its normally inactive position. The lug 5^c carried by the change ejector 5 is engaged by the pin 10^a to effect the return of said ejector 5 to its normal position, but such engagement does not occur during the initial part of the return movement of the pin 10^a, because the distance between the lug 5^d and the lug 5^c is greater than the width of the pin 10^a plus the diameter of the coin. But should the machine be tilted, or otherwise tampered with, to cause the change ejector 5 to immediately return to its normal position, the lug 5^d will accompany the pin 10^a on the initial part of the return movement of said pin, and the coin 15 will not be released. Consequently, an additional supply of change could be obtained from the machine with the same coin.

To prevent the foregoing, this invention provides a change ejector brake comprising a lever 21 pivoted to the plate 4 as indicated at 22 and having a roller 23 which is held in contact with the change ejector 5 by the spring 24. The spring 24 is connected to the lever 21 as indicated at 25 and to the partition plate 4 as indicated at 26. When the coin 15 has been carried over the opening 16^a, and the change conveyed to the tray 2, as above described, the brake 21 will resist the return movement of the coin ejector 5 and its lug 5^d, so that when the pin 10^a is retracted, the lug 5^d will not immediately follow it, and the consequent separation of said pin and lug results in the release of the coin 15.

The invention also provides means whereby, when the supply of change coins in the magazine 8 is insufficient to make change, all subsequently inserted coins are ejected.

Pivoted at 27 on the front side of partition plate 4 is a coin passageway gate 28. See Fig. 5. This gate is provided with a slot 28^a for the reception of a pin 10^b carried by the gate-actuating lever 10 and extending forwardly through a suitable slot in the plate 4. When the lever 10 is in its inactive position, the gate is in the position shown by solid lines. When said lever is moved into its active position, the gate is moved into the position indicated by dotted lines to obstruct the coin passageway 13. Should a coin be inserted when the gate 28 is in the position shown by the dotted lines, it will roll on the upper surface of said gate down into the tray 29 which may be made accessible to the operator.

The invention provides means whereby to lock the actuating lever 10 in its active position when the supply of change coins in the magazine 8 is insufficient to make change, and to thus hold the gate 28 closed and direct subsequently inserted coins to the tray 29. This means may comprise the locking lever 30 which is pivotally supported at 31 adjacent

the change magazine 8 and has a lower end extending through a slot 8^a in said magazine into contact with the stack of change coins 9. The lower extremity of this locking lever is a pre-determined distance above the lower extremity of the magazine 8 so that when the magazine contains less than the number of coins required to make change, the lower end of the lever is permitted to swing through the slot 8^a into the magazine 8 and the upper end of the lever into the opening 10^c in the actuating lever 10.

The device is thus made inoperative and deposited coins are returned when it is incapable of supplying proper change.

The invention is not limited to the particular form herein shown and described, and various changes may be made without departure from the scope of the following claim.

I claim:

A money changer having a coin passageway, a gate for said passageway, a manually movable coin actuator operatively connected to said gate, a change coin magazine, a lever pivoted adjacent said magazine and extending into said magazine to be supported in an inactive position by the coins therein, said lever moving into an active position to lock said actuator to hold said gate closed when the number of coins in said magazine is insufficient to make change.

In testimony whereof, I hereunto affix my signature.

ALBERT S. ROSS.