L. J. DITTMAR.

CHANGE MAKING MACHINE.

APPLICATION FILED MAY 27, 1908.

920,281.

Patented May 4, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

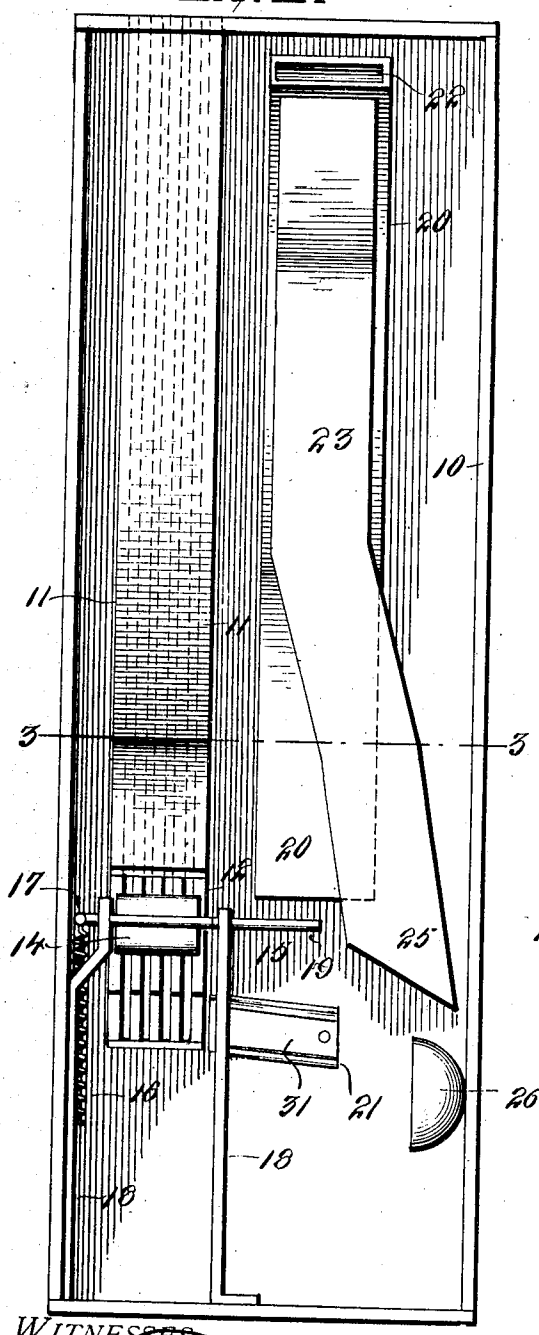
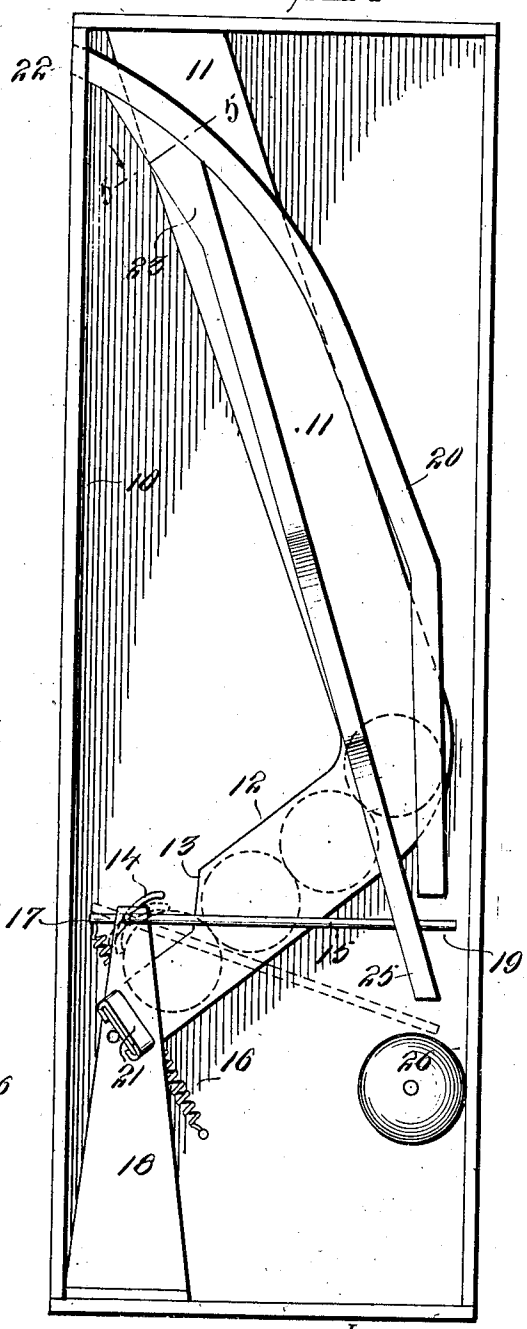


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 4.

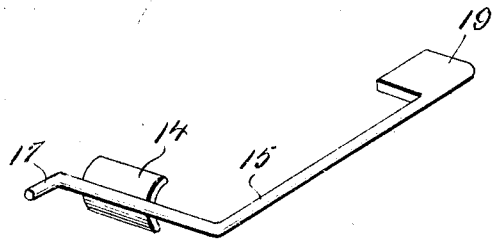


Fig. 5.

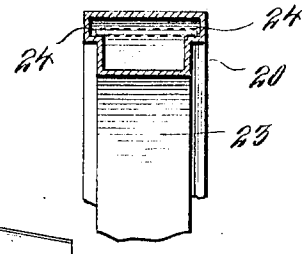
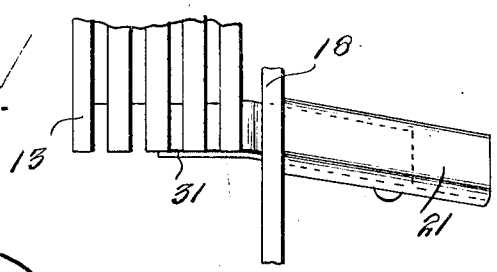
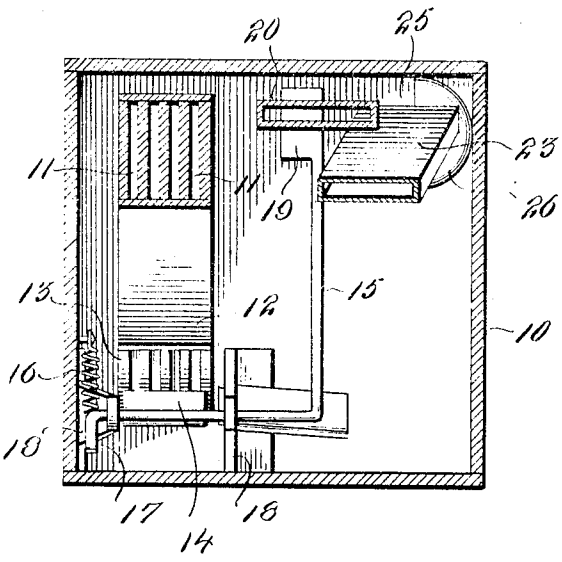


Fig. 6.





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UNITED STATES PATENT OFFICE.

LOUIS J. DITTMAR, OF LOUISVILLE, KENTUCKY.

CHANGE-MAKING MACHINE.

No. 920,281. Specification of Letters Patent. Patented May 4, 1909.

Application filed May 27, 1908. Serial No. 435,361.

To all whom it may concern:

Be it known that I, LOUIS J. DITTMAR, citizen of the United States, residing at Louisville, county of Jefferson, and State of Kentucky, have invented certain new and useful Improvements in Change-Making Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a change making machine, and particularly to a structure adapted to deliver a plurality of coins automatically operated by the introduction of a coin of greater value.

The invention has for an object to provide a plurality of delivery chutes adapted to be controlled by a unitary device which is disposed in the path of the coin inlet chute to be operated by a coin passing therethrough for the simultaneous delivery of a number of coins from the delivery chute and to be automatically restored to its initial position.

A further object of the invention is to provide means for controlling the delivery of one or more of the delivery chutes so that upon the introduction of a coin of fixed value a greater or smaller number of coins may be delivered therefrom.

Other and further objects and advantages of the invention will be hereinafter fully set forth and the novel features thereof defined by the appended claims.

In the drawing:—Figure 1 is a front elevation with the casing removed; Fig. 2 is a side elevation with the casing removed; Fig. 3 is a horizontal section on the line 3—3, Fig. 1; Fig. 4 is a detail perspective of the delivery lever and retaining plate carried thereby; Fig. 5 is a section on line 5—5, Fig. 2; and Fig. 6 is a detail plan of the chute controlling device.

Like numerals refer to like parts in the several views of the drawing.

The numeral 10 designates a casing which may be of any desired material or configuration adapted to receive the mechanism carried thereby. This casing is provided with a series of parallel delivery chutes 11, any desired number thereof being provided and disposed so as to deliver at the front of the machine. This may be advantageously effected and the coins or articles in the chutes removed from the lower ends thereof by means of the angularly deflected portion 12 at the lower end of the chutes, this portion being cut away or recessed at 13 to permit the free operation of the retaining plate 14 carried by the delivery lever 15. The plate 14 is normally in engagement with the coins in each of the series of chutes, and when the inner end thereof is disposed in the dotted line position shown in Fig. 2, the lower series of coins is released and the plate thrown into the path of travel of the next series thereof which are thus held until the lever is restored to its initial position by means of the tension spring 16 which extends from the angular arm 17 thereof to a fixed point upon the casing. This lever is supported in any desired manner, for instance by means of the standards 18 which form a pivot bearing therefor, and the angularly disposed operating end of the lever is provided with a contact plate 19 disposed beneath the coin inlet chute 20.

For the purpose of determining how many of the series of the delivery chutes shall be operable upon the introduction of a single coin a controlling device 21 is provided, for instance a flat spring located in a casing 31 which is mounted at an angle to the chutes upon one of the standards 18. The spring is adapted to be extended across the face of one or more of the delivery chutes under tension to prevent the coin therein from being released in the operation of the plate 14.

The coin inlet chute 20 is provided at its upper end with the usual inlet opening 22 and immediately adjacent thereto the central portion of the lower wall of the chute 20 is removed and communicates with a discharge chute 23. At each side of the chute 20 a flange 24 is provided upon which a coin of proper size rests, while a coin of less diameter falls into the discharge chute 23 and is delivered from the lower end 25 thereof into contact with a bell or other alarm as indicated at 26. The discharge chute 23 is deflected laterally from the path of the inlet chute 20 so as to prevent interference with the operating lever 15 and the contact plate 19 thereof.

From the foregoing description the operation of the invention will be clearly understood, and it will be seen therefrom that upon the introduction of a coin of proper denomination the delivery lever will be operated to oscillate the retaining plate permitting the discharge of coins of smaller denomination from all the coin chutes which are not controlled or closed by the slide.

The invention is adapted for use in the sale of papers so that upon the introduction of a five cent piece four pennies may be obtained in change if the price of the paper be one cent, or if the price of the paper be two or three cents a corresponding number of the delivery chutes will be closed by the slide so as to deliver to the purchaser the difference in change between the coin introduced and the cost of the paper or other article sold. While the invention has been described in this connection it is adapted for any desired use either alone or associated with an article delivery device to be operated therewith. If the proper coin is not introduced in to the coin inlet chute it falls to the discharge chute and after sounding the alarm fails to operate the mechanism of the machine, while the weight of the proper coin counterbalances the spring of the delivery lever and operates the plate carried thereby said spring restoring the lever to its initial position immediately that the coin falls therefrom into the base of the receptacle or casing. The construction and arrangement of the series of delivery chutes provides for the movement of the coins on edge thus preventing clogging, while the angular disposition relieves the lowermost coins of the direct weight of those above them in the chutes.

The apparatus may be constructed and arranged for operation by coins of any denomination for the delivery of change or other articles to be delivered from the chutes as before described.

Having described my invention and set forth its merits, what I claim and desire to secure by Letters Patent is:—

1. In a change making machine, an open delivery chute, a member pivotally mounted above said chute to swing toward and from the upper portion of the articles therein and having fixed contacting faces, and a rearwardly extending arm from said member provided with an operating contact at its free end.

2. In a change making machine, the combination with a series of delivery chutes, of a unitary retaining device controlling all of said chutes, means for operating said device, and means movable into the path of one or more of said chutes for preventing delivery therefrom.

3. In a change making machine, the combination with a series of delivery chutes, of a unitary retaining device controlling all of said chutes, means for operating said device, and a plate movable across the delivery from one of said chutes.

4. In a change making machine, the combination with a series of delivery chutes, of a unitary retaining device controlling all of said chutes, means for operating said device, and a slide plate mounted at the delivery end of said chutes for movement transversely across the same.

5. In a change making machine, an open delivery chute, a member pivotally mounted above said chute to swing toward and from the upper portion of the articles therein and having fixed contacting faces, a rearwardly extending arm from said member provided with an operating contact at its free end, and a coin inlet chute adapted to discharge upon the free end of said arm.

6. In a change making machine, an open delivery chute, a member pivotally mounted above said chute to swing toward and from the upper portion of the articles therein and having fixed contacting faces, a rearwardly extending arm from said member provided with an operating contact at its free end, a coin inlet chute adapted to discharge upon the free end of said arm, means to automatically restore said arm to its initial position, and a discharge chute communicating with an aperture in the lower portion of the inlet chute.

7. In a change making machine, an open delivery chute, a member pivotally mounted above said chute to swing toward and from the upper portion of the articles therein and having fixed contacting faces, a rearwardly extending arm from said member provided with an operating contact at its free end, a coin inlet chute adapted to discharge upon the free end of said arm, means to automatically restore said arm to its initial position, and a discharge chute communicating with an aperture in the lower portion of the inlet chute and deflected laterally therefrom at its lower end.

8. In a change making machine, an open delivery chute, a curved retaining plate pivotally mounted above said chute to swing toward and from the upper portion of the articles therein, and a rearwardly extending arm from said plate provided with a coin contact at its free end.

9. In a change making machine, an open delivery chute, a curved retaining plate pivotally mounted above said chute to swing toward and from the upper portion of the articles therein, a rearwardly extending arm from said plate provided with a coin contact at its free end, a crank arm carried by the pivot of

said plate, and a tension spring extending therefrom to a fixed point.

10. In a change making machine, an angularly disposed delivery chute constructed and arranged to support a coin therein on edge, a retaining device pivotally mounted at the lower end of said chute above the coin therein to swing from contact with one coin into contact with the succeeding coin, and means for operating said device.

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

LOUIS J. DITTMAR.

Witnesses:
C. H. SHIELD,
CAMDEN H. MCATEE.