June 10, 1924. 1,496,939

C. L. MARTIN

CHANGE DISPENSING DEVICE

Filed May 22, 1923 2 Sheets-Sheet 1

Fig. 1

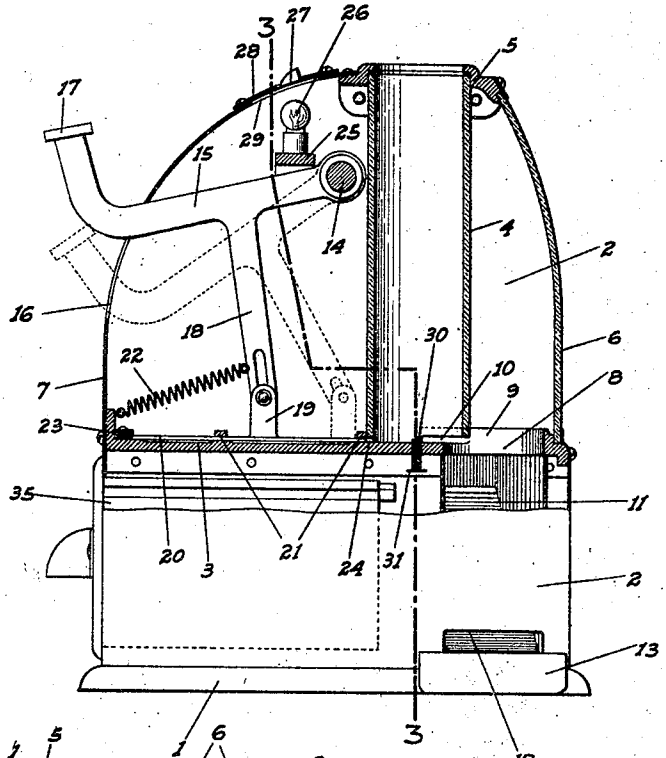
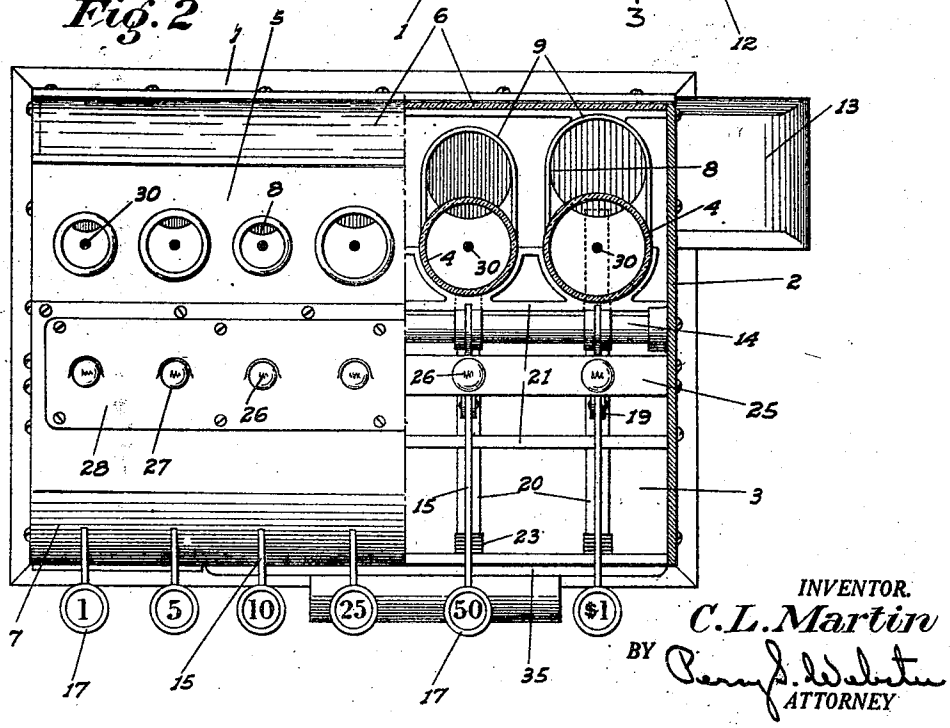


Fig. 2



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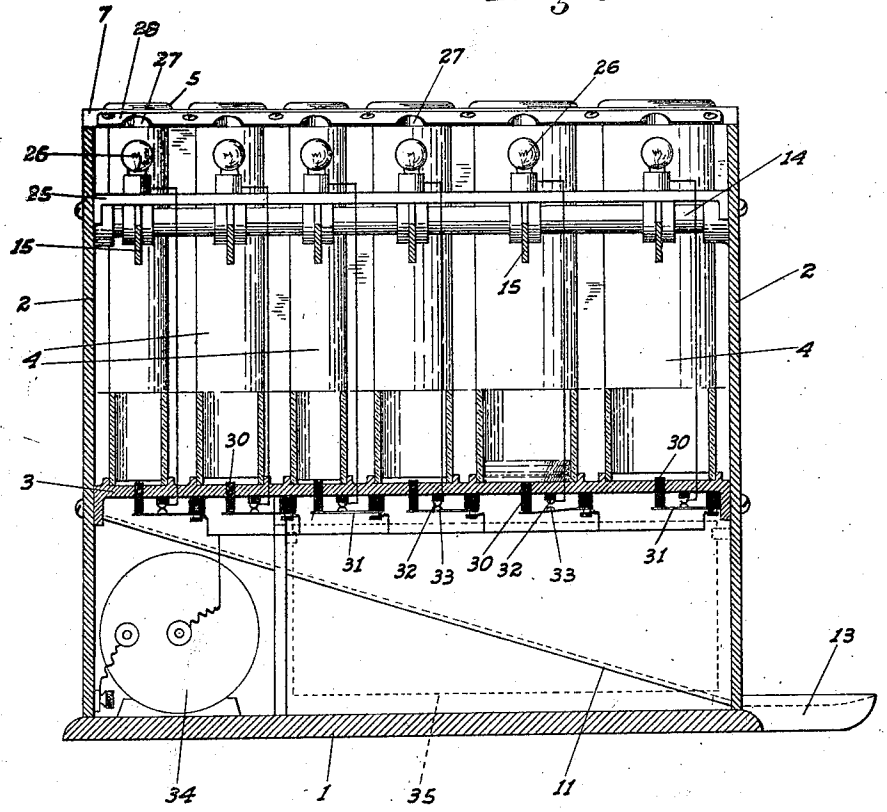
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Fig. 3



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UNITED STATES PATENT OFFICE.

CHARLES L. MARTIN, OF STOCKTON, CALIFORNIA.

CHANGE-DISPENSING DEVICE.

Application filed May 22, 1923. Serial No. 640,641.

To all whom it may concern:

Be it known that I, CHARLES L. MARTIN, a citizen of the United States, residing at Stockton, county of San Joaquin, State of California, have invented certain new and useful Improvements in Change-Dispensing Devices; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in coin dispensing devices, and particularly to one especially adapted for use in the ticket-selling booths of theaters, and other places of amusement, in cafeterias and the like, and in fact any place where a cash business is done with the public which necessitates frequent dispensing of change on the amount handed in, and direct contact with the buyer is had.

The principal object of my invention is to provide a device of this character by means of which any desired amount of change can be quickly dispensed and delivered to the purchaser or other party, without the necessity of the cashier or operator handling or counting out the coins.

Another object is to construct the device in such a manner that it will, if loaded with coin, positively dispense the amount intended by the operator, provided the latter makes no mistakes in depressing the control keys.

A further and important object is to provide means for giving a warning signal to the operator when any certain kind of coin is exhausted, so that he will know that the particular coin chamber must be refilled, and also for preventing the full depression of the key corresponding to that chamber if there is no coin therein.

In this manner, if in a rush of business the operator should fail to notice the signal, and should attempt to dispense change from the empty chamber, he would be unable to operate the key, and would immediately realize that no coins are being dispensed from that chamber, and could then act accordingly.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Fig. 1 is an end section of the device, taken through one of the coin chambers.

Fig. 2 is a top plan, partly in section.

Fig. 3 is a longitudinal section, taken on a line 3—3 of Fig. 1.

Referring now more particularly to the characters of reference on the drawings, the numeral 1 denotes a base, supporting vertical end frames 2.

Extending between and attached to these frames is a transverse and horizontal plate 3, positioned intermediate the top and bottom of the frames.

Mounted on the plate 3 in longitudinally spaced relation are coin chamber or receptacles 4, in the form of vertical cylinders of different sizes preferably of glass, to receive vertical stacks of coin of different denominations, such as from 1¢ to $1.00 in this country, and in other countries to suit the particular size and number of coins in use therein. The upper ends of the tubes are connected by a plate 5 extending thereover and attached to the tops of the frames 2, the plate 5 being suitably orificed to enable the coins to be placed in the tubes.

From the back edge of the plate 5, that is the edge to face away from the operator, to the corresponding edge of the plate 3, and between the frames 2, a glass cover or pane 6 extends, while between the opposite edges of the plates 3 and 5 an opaque cover 7, preferably of sheet metal, extends.

Cut through the plate 3, between the rear edge of said plate and the tubes and in transverse alinement with the latter are orifices 8, not smaller in diameter than the corresponding tubes, which have raised edgings 9 extending around that portion of the same opposite to the tubes and to the latter diametrally thereof.

The tubes are cut away at their lower ends as at 10 to form slots with the plate 3 of sufficient width to enable the coins to pass therethrough and of a height sufficient to enable only one coin at a time to so pass.

Below the orifices 8 is a suitably angled chute 11, leading to one of the plates 2, the

latter having an opening 12 cut therethrough to enable the coins coming down the chute to be deposited in a form of cup 13 positioned outside the frame, and from which the coins may be taken by the party for whom the change is intended.

Journaled in the frames 2 and extending in front of the tubes 4 a certain distance below the plate 5 is a horizontal shaft 14, on which are turnably mounted levers 15 to the same number as there are tubes, and in central alinement with the tubes and the corresponding orifices 8. These levers project through slots 16 cut in the cover plate 7 and are then bent upwardly to terminate in substantially horizontal keys 17, on which are marked the denominations of the coins which the manipulation of the levers causes to be dispensed.

Arms 18 depend from the levers 15 and have flexible connection with vertical lugs 19 projecting upwardly from flat slide strips 20 supported on the plate 3 and slidably mounted in guides 21 thereon arranged to maintain said strips always in central alinement with the tubes and orifices 8 while permitting them to move lengthwise.

Tension springs 22 extend between the arms 18 and plate 3, and act to hold the strips 20 away from the tubes and the keys 17 and levers 15 in their uppermost position.

Rubber or similar sound and shock absorbing pads 23 are placed at the front end of the strips 20 so as to form stops against which the strips abut upon their return to normal position.

The thickness or height of the slide strips 20 is not greater than that of one of the coins which they are to engage, such engagement being rendered possible by means of openings 24 in the lower ends of the tubes, opposite to the openings 10.

The possible movement of the key levers is such that if fully depressed, as they should be to dispense change, the slides will push coins engaged thereby entirely from the tubes and over the orifices 8, when they will of course drop by gravity into the chute 11 and thence into the cup 13.

To give a warning signal when any tube is empty and at the same time prevent full depression of the corresponding key-lever, I employ the following structure:

Mounted between the frames 2 above the shaft 14 is a support 25 for electric lamps 26, one for each tube and preferably red, the light from each showing through a vertically alined hole 27 in a plate 28 removably mounted over a slot 29 in the plate 7 of sufficient size to enable any lamp being removed and replaced when burnt out, upon the removal of the cover plate 28.

Projecting through the plate 3 centrally of each tube is a pin 30, of insulation material, mounted on one end of a spring strip 31 itself mounted on and under the plate 3 and insulated therefrom.

A contact 32 mounted on and insulated from the plate 3 is connected to the corresponding lamp, while another contact 33 on the strip 31 is connected to a source of current such as a dry cell 34 supported on the base 1, or to ordinary lighting wires.

As is commonly done with low voltage electric circuits, the metal framework of the device forms one lead of the circuit.

The strips 31 normally cause the pins 30 to project above the plate 3, thus acting as positive stops for the slides 20, and preventing the keys being properly depressed. In this position of the pins, the contacts 32 and 33 are engaged, closing the circuits to the lamps, it being evident and understood of course that the lighting of any lamp is independent of the lighting of the others.

The pins 30, however, only project above the plate 3 when the tubes are empty, the strips 31 being designed so as to give, and thus cause the pins 30 to be lowered to the level of the plate 3, with the weight of a single coin thereon. With the consequent depression of the strips, the contacts 32 and 33 are broken, and the pins are of course out of the path of full and normal movement of the slides 20.

A currency drawer 35, openable from the front of the device, is preferably mounted under the plate 3.

Although I have shown the chute 11 as discharging at the right hand end of the device, the point of discharge, and the particular shape of the chute, may of course be varied at will.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. A coin-dispensing device including coin holding tubes, means for each tube for ejecting coin therefrom, electric signal means for each tube actuated when the corresponding tube becomes empty, and means actuated by the weight of a coin in any tube for holding the corresponding signal means inactive.

2. A coin-dispensing device including coin holding tubes, hand actuated means for each tube for ejecting one coin at a time therefrom, mechanical stop means preventing the actuation of said hand means when the cor-

responding tube is empty, and electric signal means actuated in connection with the stop means for denoting an empty tube.

3. A structure as in claim 2, in which the weight of a coin in any tube holds the stop means inactive and the signal circuit broken.

4. A coin dispensing device including a plurality of coin-holding tubes, and an electric signal for each tube positioned adjacent the same and automatically actuated when the corresponding tube is empty.

5. A coin dispensing device including a plurality of coin-holding tubes, means for ejecting coin from the tubes, an electric signal means for denoting an empty tube, and a common means whereby the signal is caused to be actuated and the ejecting means prevented from actuation when a tube is empty.

6. A coin dispensing device including a plate, a coin tube supported thereon, means for dispensing coin from the tube including a slide movable across the plate at the bottom of the tube, an electric signal for the tube, a circuit for the signal, a pin of insulation material projecting up through the plate inside the tube in the path of the slide, a spring strip fixed at one end and supporting the pin at the other end, said spring acting to raise the pin above the plate but being overcome with the weight of a coin on the pin, and contacts in the circuit arranged on the plate and strip and engaged only when the pin is projecting above the plate.

In testimony whereof I affix my signature.

CHARLES L. MARTIN.