(No Model.) 4 Sheets—Sheet 1.

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AUTOMATIC ELECTRIC CHANGE MAKER AND CHECK RECEIVER.

No. 478,011. Patented June 28, 1892.

Fig. 2.

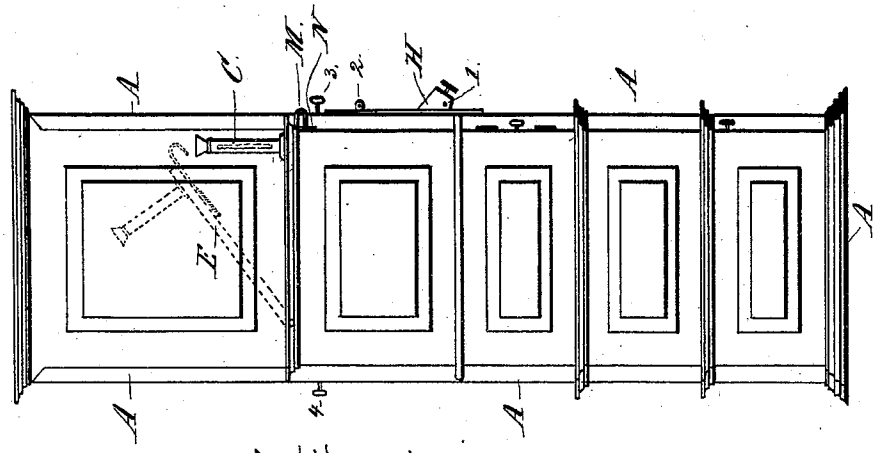

Fig. 1.

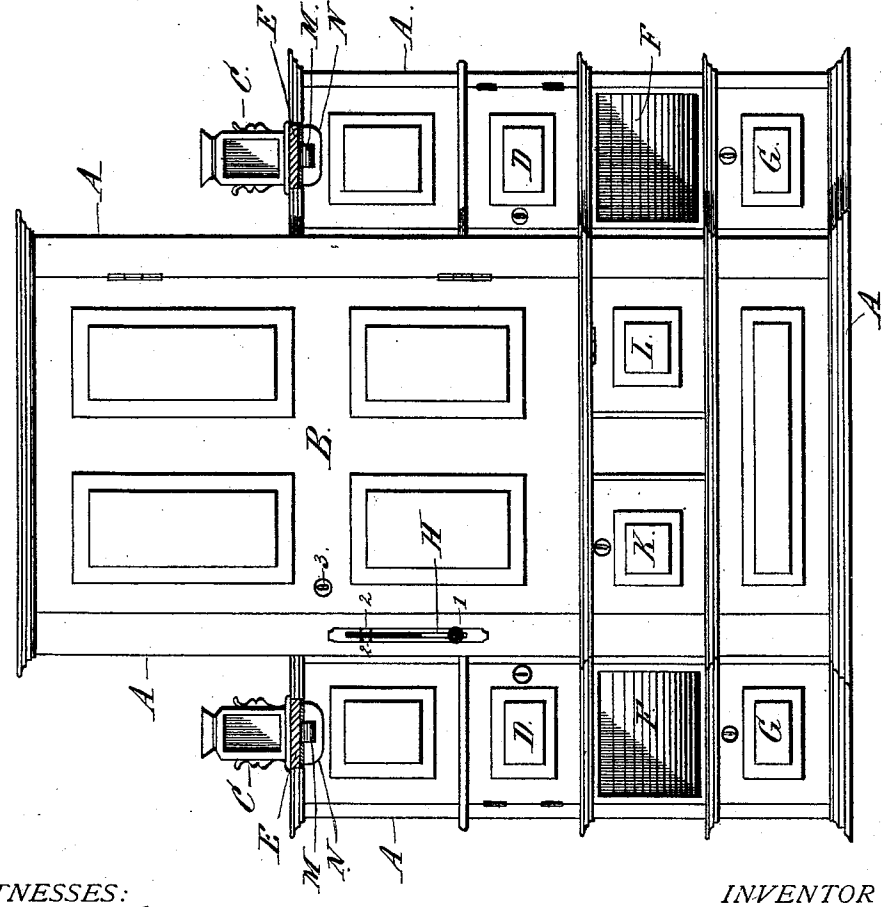

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Fig. 4.

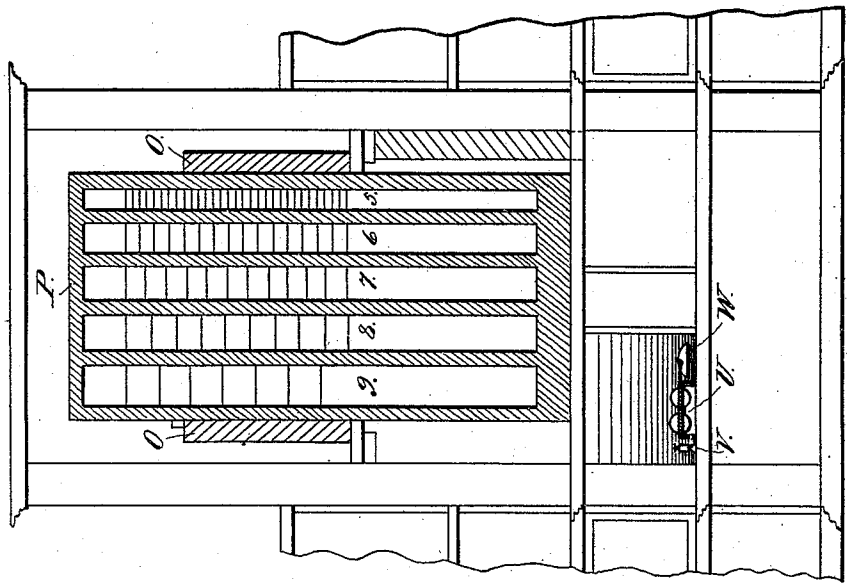

Fig. 3.

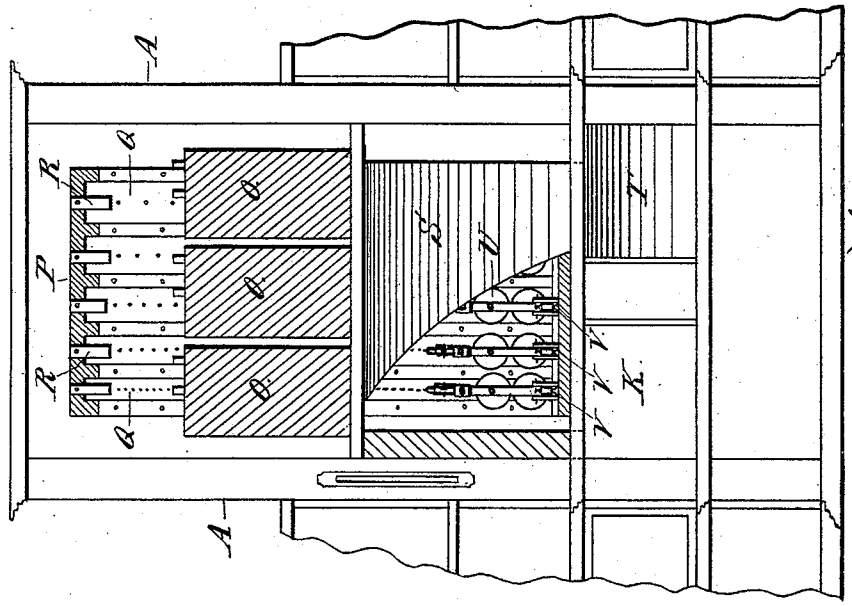

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Fig. 6.

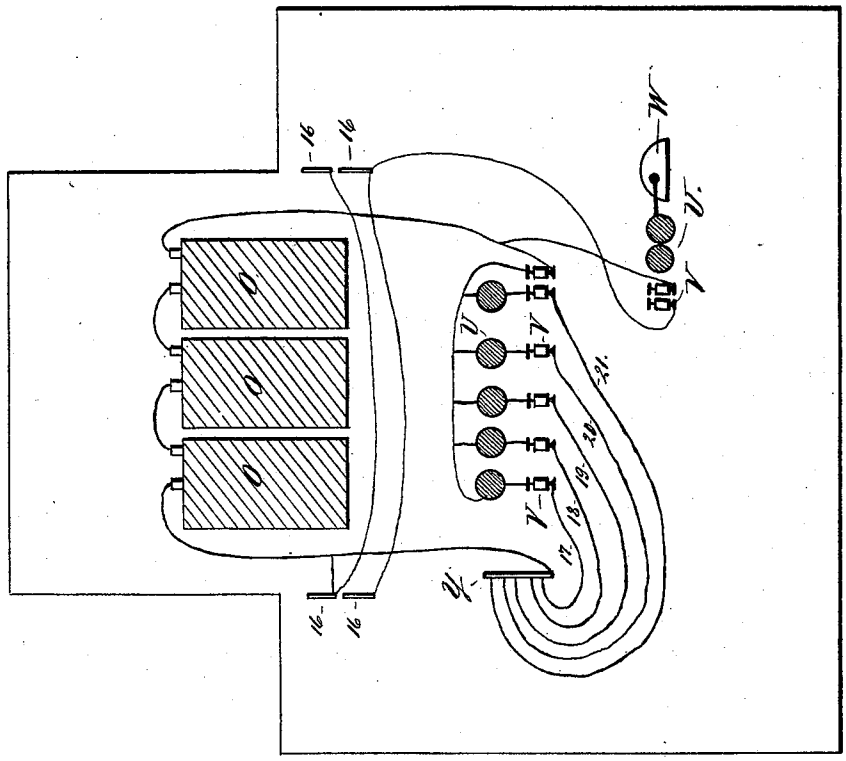
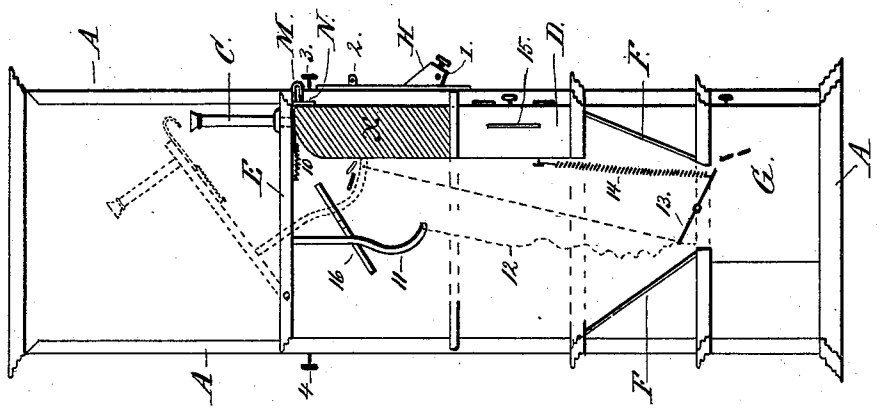


Fig. 5.



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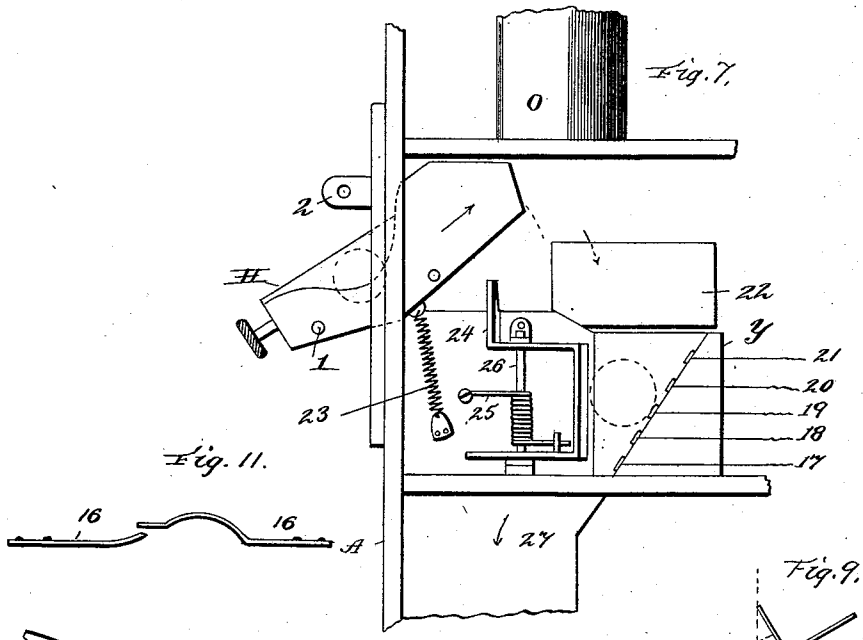

Fig. 7.

Fig. 11.

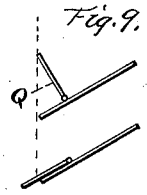

Fig. 9.

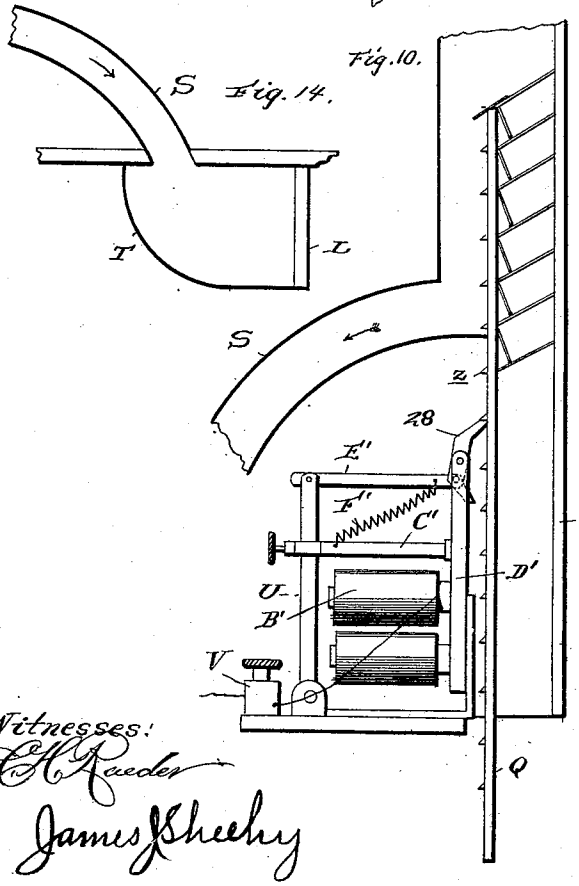

Fig. 10.

Fig. 14.

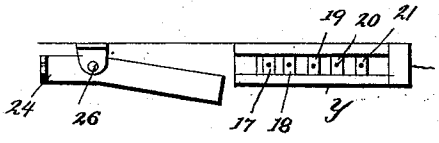

Fig. 8.

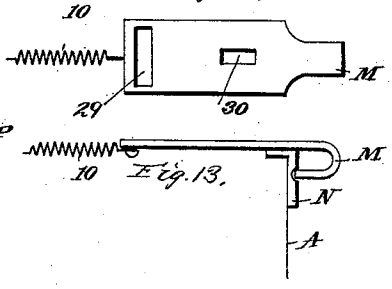

Fig. 12.

Fig. 13.

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UNITED STATES PATENT OFFICE.

THOMAS MANGAN, OF NEW ORLEANS, LOUISIANA.

AUTOMATIC ELECTRIC CHANGE-MAKER AND CHECK-RECEIVER.

SPECIFICATION forming part of Letters Patent No. 478,011, dated June 28, 1892.

Application filed September 26, 1891. Serial No. 406,970. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MANGAN, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in an Automatic Electric Change-Maker and Cash-Register; and I do 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.

My invention relates to an improvement in an automatic change-maker and cash-register; and its novelty will be fully understood from the following description and claims, when taken in connection with the annexed drawings; and the objects of my invention are to provide a device that will enable a person to make change by means of a coin forming an electric contact, receives coin when a sale is made, and check deposited by salesman showing amount of sales and enabling an accurate account to be kept of all money deposited. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view. Fig. 2 is a side view. Fig. 3 is a sectional front view showing main door detached. Fig. 4 is a sectional rear view showing rear door detached. Fig. 5 is a sectional side view showing interior of box. Fig. 6 is a view of batteries, magnets, wire connections, spring, and bell. Fig. 7 is an interior side view with parts of the casing broken away and illustrating a coin as held in an electrical circuit. Fig. 8 is a top plan view of the contact-plate block and the pivoted or hinged frame between which the coin to be changed rests and closes an electrical circuit, whereby the change-making apparatus is actuated. Fig. 9 is a sectional side view of parts of money-slide, showing one closed and the other open. Fig. 10 is a sectional side view showing magnets, change-receptacle, chute, and slide. Fig. 11 are contact-plates for ringing bell when money is placed in change-maker by cashier or salesman. Fig. 12 is a top view of plate, with spiral spring attached to same, and forms part of handle of money-door. Fig. 13 is a sectional side view of Fig. 12. Fig. 14 is a sectional side view of change-receptacle.

Similar letters and numerals refer to similar parts throughout the several views.

In the drawings, A refers to frame of device, B showing main front door.

C is a tube, through which check of salesman is deposited.

D are doors of check-receptacle.

E are doors, which can be raised when money is deposited in box when a sale is made, and which work on a pivot, as shown in Fig. 5.

F are glass plates for inspecting amount of cash sale deposited.

G shows position of cash sales, boxes, or drawers.

H is a receptacle in which money is placed when desired to be changed, and is simply raised upward and a coin placed therein is deposited in pocket Y, and each coin of a given denomination forms a contact with a metal piece therein which is connected with its particular connection, and this in turn actuates an electro-magnet, releasing the vertical piece which closes the compartment holding the amount of change represented by the coin, thus allowing the change to drop in a receptacle L, while the original coin deposited in H descends into receptacle K.

Where double compartments are used for depositing money, as shown in Fig. 1, two sets of doors, as shown by E, are provided, and each door has a handle M for raising door. These doors E have a slot just beneath the check-tube C.

A′ indicates a slide. This slide is arranged upon the under side of the doors E and is provided with a handle M, whereby said slide may be manipulated, and is also provided with a transverse slot 29, as better shown in Fig. 12, which is designed to permit the check dropped in the tube to fall into the passage X, and from thence to the receptacle D. This slide has attached to it one end of a spring 10, the opposite end of which is attached to the under side of the door, so that the lower end of the tube may be kept normally closed. The plate A′ may be limited in its movements by having a slot 30 to re-

ceive a stud or lug on the door, although in some cases the handle M may be bent, as shown in Fig. 13, and the plate N employed, with a notch to receive the end of the handle and serve as a stop for said slide.

Numeral 1, as shown in Figs. 5 and 7, is an opening in H, which can be raised until it rests between eyes 2, when a fastening can be made by a suitable lock when change-maker is not used.

3 is a key for front door, and 4 for rear door.

O designates batteries.

Mounted upon a suitable frame in rear of the change-frame is a series of pairs of electro-magnets B′, arranged, respectively, at right angles to the change-releasing strips and in alignment with the face thereof. Pivotally mounted in rear of the series of electro-magnets and in alignment with the poles of each pair of magnets are upright armatures U, which are retained in such upright position by means of horizontal keepers-bar C′, which are slotted adjacent to their rear ends to allow a play of the armatures and are provided with adjusting-screws to regulate the extent of such play, said horizontal bars C′ being preferably formed integral with the magnet-frame and extending rearwardly from the front uprights thereof. The upper ends of the respective uprights D′ of the magnet-frame are slotted vertically to receive lever-escapement latches 28, which are pivotally mounted therein, the pivotal points of said latches being preferably above their middle. These latches, which are provided at their ends with forwardly-directed teeth adapted to engage the studs z on the respective change-releasing strips, are slotted longitudinally in their rear sides to receive pitmen E′, which pitmen are pivotally connected to said latches below their pivotal points and are adapted to impart motion thereto, they being pivotally connected at their opposite or rear ends to the upper ends of the respective armatures.

F′ indicates retracting-springs, one end of which is connected to keeper-bars C′, while their opposite ends are connected to the pitmen E′, whereby the upper teeth of the latches 28, connected to said pitmen, are normally held in engagement with the studs upon the change-releasing strips.

V indicates a binding-post, arranged preferably at the side of the magnet-frame adjacent to the contact plate, block, or receptacle Y of the coin-receiving apparatus, and this binding-post V, which receives a circuit-wire G, is electrically connected, as better illustrated in Fig. 6 of the drawings.

R, as shown in Fig. 3, are arms for controlling slides, S showing a chute through which change descends.

T, as shown in Fig. 14, is a concave change-receptacle.

W is a bell.

5 designates a compartment for dimes; 6, compartment for quarter-dollars; 7, for half-dollars; 8, for dollars; 9, a compartment where silver dollars are placed when sums of five dollars are required for change.

11 is an arm or plate attached to E and which retains money deposited on said lever-arm during the period which E is open. Connected to 11 is a chain 12, which is also connected to trap-door 13, leading into cash-sales box, and 14 is a spring, 15 designating a salesman's check, X showing a passage inside frame A and through which salesman's check descends to receptacle D.

16 are contact-plates, which cause bell W to ring when E is raised or lowered. Wires 18, 19, 20, and 21 connect with the pocket Y and the money-change compartment of the various denominations.

22 is a receiving-box for money desired to be changed when discharged from H and is placed over pocket Y.

23 is a spring for retaining H in position, as shown in Fig. 7.

24 is a metal arm for holding coin in position and at same time forms a contact with coin and metal plate of pocket Y when H is raised.

25 is a spring for regulating the movement of 24, while 26 is a metal rod, which operates in conjunction with 24 and 25, while 27 is a chute that leads to K, 29 showing an opening through which check passes.

In practice the change is kept in the compartments, as shown in Figs. 3, 4, and 10. These compartments are closed by a number of vertical strips which drop when the electric contact is made by the coin-piece. Each coin makes a contact with its particular connection, and this in turn actuates an electro-magnet, releasing the vertical piece, which closes the compartment holding the amount of change represented by the coin, thus allowing the change to drop into a receptacle, already described. The change is made by the cashier or salesman in this case, who, after returning the change to the purchaser, puts the amount of the purchase in a place provided for it. This amount remains in full view, as shown by trap 13 in Fig. 5, until another purchase is made, and the amount is automatically dropped out of view into cash-drawer G, provided for the purpose, and the last amount deposited rests upon trap 18, where it can be seen through glass F. In order to obtain a correct amount of all sums deposited from sales, the salesman is required to deposit a check through tube C, giving amount of sale made by him, and when this is done before a cash deposit of the amount of purchase can be made it is necessary to open a door or lid E, upon which the glass tube C is attached and in which the first salesman had dropped a sales-check showing amount of the sale by him. When this door or lid E is attempted to be opened, the sales-check descends through hollow frame X into drawer D, provided for that purpose, and

thus the sales-checks register exactly the amount of money deposited in the change-maker.

Where it is desired to make change in sums of five dollars, I use a metal ring or washer which represents cash to the amount of five dollars and is placed in the pocket Y in the same manner as a coin, and thus I form a contact with the change-compartments in the same manner as where a coin is deposited, except that I am enabled to release from the slides change amounting to five dollars.

An accurate account of the money deposited for making change is kept, and at the end of the day's use the amount left in slides added to the amount in drawer L will give the total amount as placed in the change-maker, while the sales-checks placed in drawer D show exactly amount of sales during the day, while the amount of cash deposited in drawer G tallies with the sales-checks, and in this manner an accurate account of the cash sales are kept.

Having described my invention and the manner in which the same is or may be carried into effect, would say in conclusion that I do not limit myself to the precise details herein described, as the same may be varied to some extent; but

I declare that what I claim is—

1. The combination, with the main frame, of a check-receptacle arranged therein, a passage arranged above the receptacle, a door pivoted above the passage and adapted to close the top of the same, a check-tube on the door adapted to open into the passage, and a slotted slide on the door held by a spring and having a slot, whereby said tube may be placed in communication with the passage and also cut out of communication therewith, substantially as specified.

2. The combination, with a money drawer or receptacle, of a box arranged above the same and in an electrical circuit, a bell arranged in the circuit, a pivoted plate arranged in an opening between the money-box and the box above the same, a pivoted door, and a curved coin-receiving arm secured to the door and connected to the pivoted plate and adapted to close the electric circuit when the door has been raised and simultaneously therewith discharge any coins which may be on the pivoted plate into the box or receptacle beneath, substantially as specified.

3. The combination, with the box G, of the box above the same and having the sight-glasses therein, the plate 13, pivoted in the opening in the top of the box G, the spring 14, secured to one end of said plate and adapted to keep the same normally closed, the door E, the curved metallic arm 11, secured to said door, the chain 12, secured at one end to the pivoted plate 13 and its opposite end to said arm 11, and the strips 16, secured to the side walls of the box above the money-box, said strips being arranged in an electric circuit, whereby the arm 11 may make and break the circuit to sound an alarm at the opening and closing of the door E, substantially as specified.

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

THOMAS MANGAN.

Witnesses:

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PERCY D. PARKS.