E. & R. S. FOX.

COIN TRAY AND LOCK MECHANISM.

APPLICATION FILED MAR. 12, 1913.

1,171,185.

Patented Feb. 8, 1916.

3 SHEETS—SHEET 1.

Fig. 1.

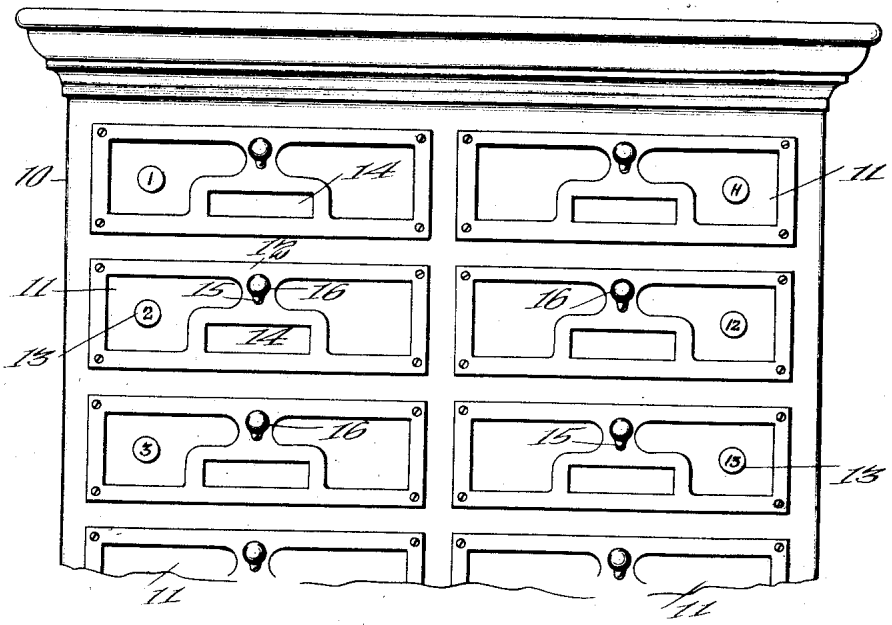


Fig. 2.

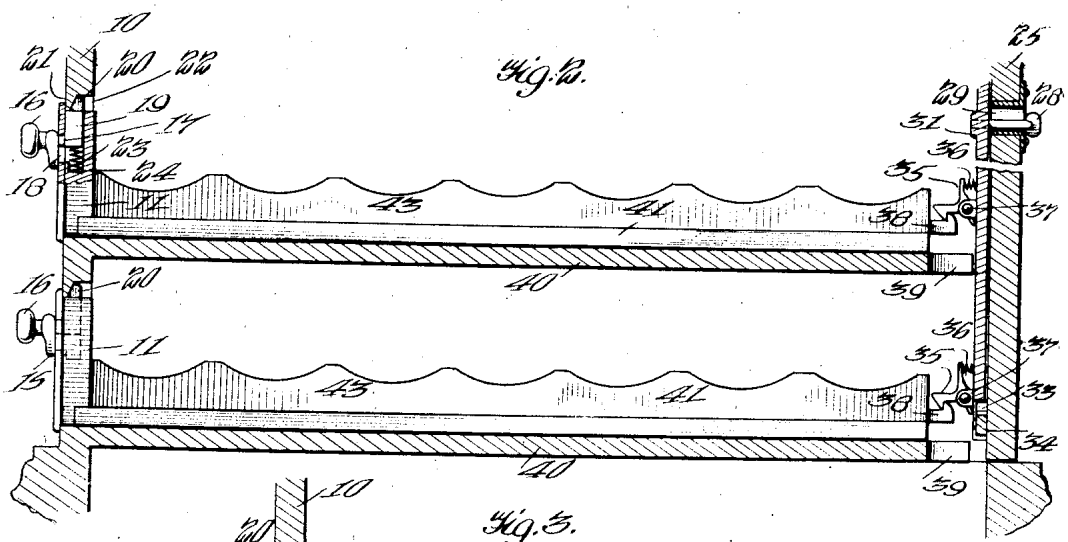
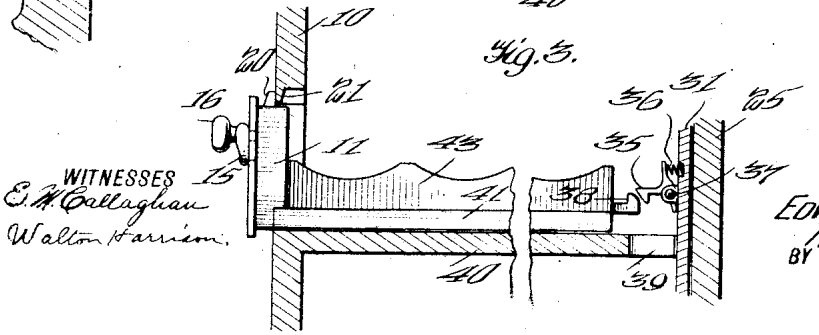


Fig. 3.



WITNESSES

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3 SHEETS—SHEET 2.

Fig. 4.

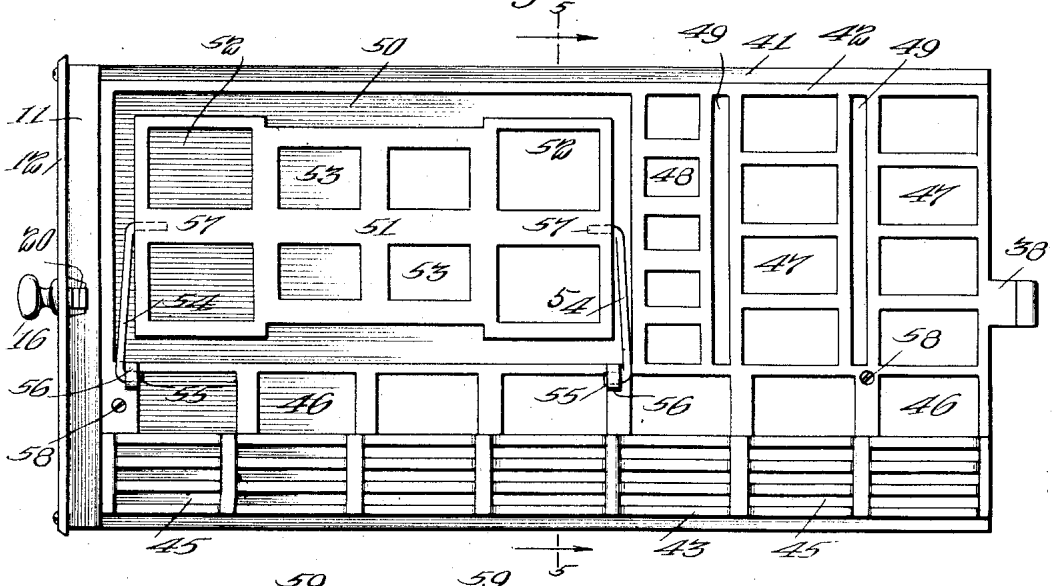


Fig. 5.

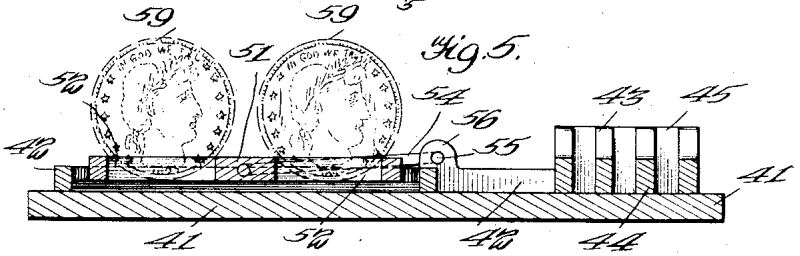


Fig. 6.

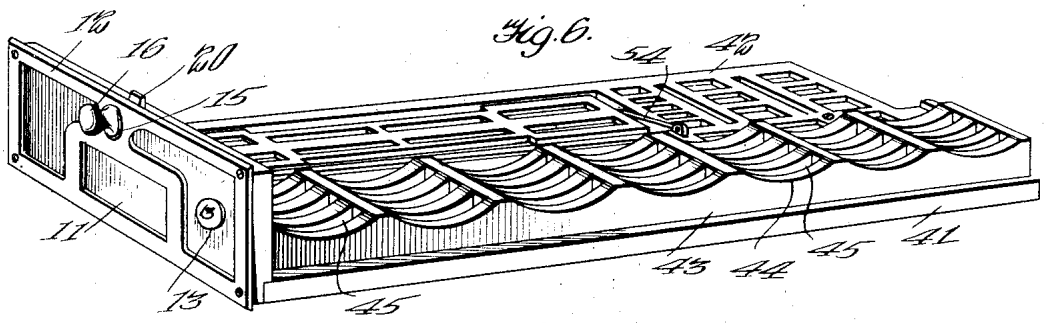
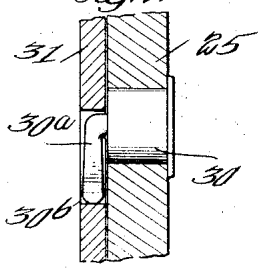


Fig. 7.



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3 SHEETS—SHEET 3.

Fig. 8.

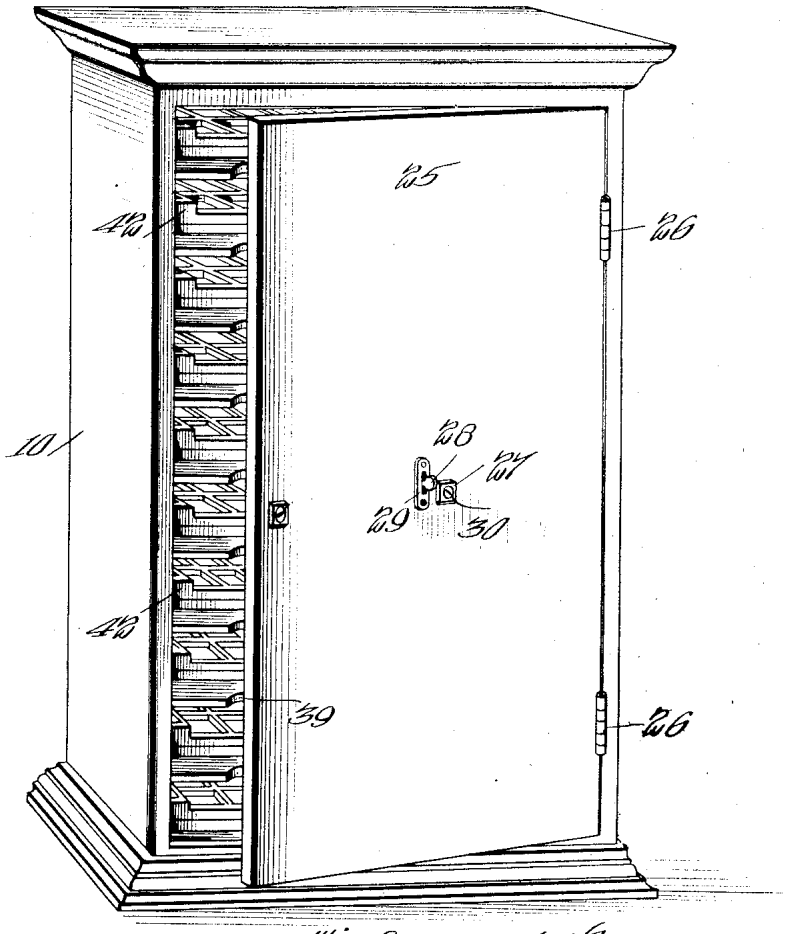
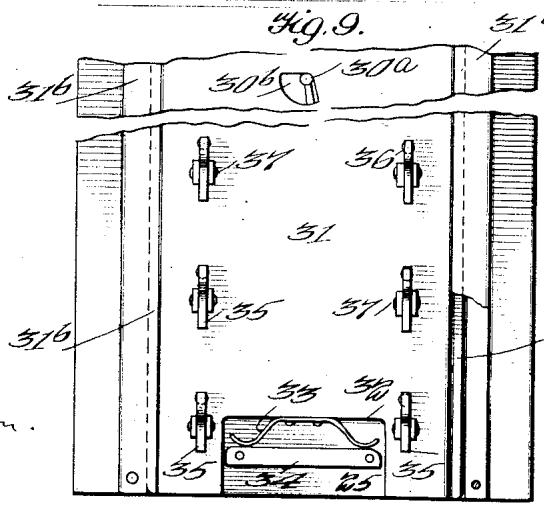


Fig. 9.



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UNITED STATES PATENT OFFICE.

EDWARD FOX AND ROY S. FOX, OF YORK, PENNSYLVANIA.

COIN-TRAY AND LOCK MECHANISM.

1,171,185. Specification of Letters Patent. Patented Feb. 8, 1916.

Application filed March 12, 1913. Serial No. 753,736.

To all whom it may concern:

Be it known that we, EDWARD FOX and ROY S. FOX, citizens of the United States, and residents of York, in the county of York and State of Pennsylvania, have made certain new and useful Improvements in Coin-Tray and Lock Mechanism, of which the following is a specification.

Our invention relates to coin tray and lock mechanism of the kind suitable for enabling a number of persons to severally produce different amounts they have collected, readily count the same and place the amounts thus counted in convenient shape to be counted subsequently by another person and in the meanwhile to keep the money fully protected.

More particularly stated, our invention contemplates a cabinet provided with a plurality of money trays each adapted to hold bills and also coins of different dimensions and to keep the money when once classified and arranged in the same condition in which it is thus placed, the money trays being accessible from both the front and rear of the cabinet except when the trays are locked in position and then being accessible from only one side of the cabinet.

Our invention further relates to various improvements in coin trays and locking mechanism associated with the same for the purpose of protection and safety of the moneys thus handled.

Reference is made to the accompanying drawings forming part of this specification and in which like letters indicate like parts and in which—

Figure 1 is a fragmentary front elevation showing a cabinet made in accordance with our invention. Fig. 2 is a fragmentary vertical section through the cabinet showing the coin trays as locked. Fig. 3 is a fragmentary section somewhat similar to Fig. 2, but showing a single coin tray as unlocked. Fig. 4 is a plan view of one of the coin trays. Fig. 5 is a cross section through the coin tray and is taken upon the line 5—5 of Fig. 4, looking in the direction of the arrow. Fig. 6 is a perspective of the coin tray complete. Fig. 7 is a detail showing in section the locking mechanism for protecting all of the coin trays. Fig. 8 is a perspective of the cabinet complete showing it from the rear with the door partly open. Fig. 9 is a fragmentary elevation showing the inside of the door.

The cabinet case or frame is shown at 10 and at 11 are a number of heads each forming a part of a coin tray. Each head is provided with an indicating button 13. The indicating buttons are provided with various numerical legends as indicated in Fig. 1. Each head 11 is further provided with a metallic panel 12 made preferably in skeleton form as shown and carrying a label slot 14 for holding a label.

Mounted upon each head 11 is a knob 16 which is provided with a foot piece 15 serving as a brace and also as a guide for the knob which is provided with a pin 17. This pin extends through a slot 18 and is secured to a bolt 19. This bolt is provided with a beveled end 20 which extends upwardly and is adapted to move laterally into connection with a tongue 21 with which the casing 10 is provided. The casing is also provided with a recess 22 partially bounding each tongue 21, there being as many of these tongues and recesses as there are heads 11. Engaging each bolt 19 is a spring 23 which rests in a slot 24 within the head 11.

The frame 10 is provided with a door 25 mounted upon hinges 26 and normally closing the rear of the casing as will be understood from Fig. 8. Mounted upon the door 25 is a lock 27 and adjacent to this lock is a thumb-bolt 28 which extends through a slot 29 and is secured rigidly upon a movable panel 31. The lock 27 is provided with a revoluble guard 30 controllable by a key and is further provided with a tumbler 30^a which extends into a slot 30^b having a sector-like form as indicated in Fig. 9. When a key is inserted in the guard 30 and turned, the tumbler 30^a after moving to one of its limits within the slot 30^b, moves the panel 31 in the general direction of the length thereof.

The panel 31 is shown in Fig. 9 as occupying its normal or lowermost position. The panel is provided with an opening 32 and with leaf springs 33 which extend into this opening and engage a bar 34, the latter being mounted rigidly upon the door 25. The tendency of the spring 33 is to keep the panel 31 normally raised. The panel 31 is provided with comparatively thin edges 31^a which extend into slideways 31^b.

Mounted upon the inner face of the panel 31 are a number of latches 35 and engaging each latch is a spring 36. The several latches are mounted upon pins 37 and are adapted to rock. Adjacent to each latch 35 and adapted to be moved partly into the path of travel thereof is a hook 38 carried by a coin tray as will be hereinafter described. The cabinet is provided with a number of floors or partitions 40, each having a recess 39 upon its rear edge for facilitating access to the trays. Each head 11 is mounted upon a plate 41 constituting the bottom of the coin tray. Mounted upon the plate 41 is a grid 42 made of metal and cast preferably in a single integral piece. This grid is provided with thickened portions 43, that is portions of greater depth than the other portions of the grid. The thickened portions are in turn provided with concave surfaces 44 and provided with groups of slots 45 as will be understood from Figs. 2 and 6 transverse ribs intervene the groups of slots.

The grid 42 is further provided with a number of slots 46, 47 and 48 of different sizes, each slot having a coin compartment for holding coins when placed upon their edges and stacked together. The compartments 46 are adapted to hold nickels, the compartments 47 being suitable for cents or pennies, and the compartments 48 being of proper size to accommodate dimes. The grid is further provided with longitudinal slots 49 which serve to space the latter and also serve to some extent as markers for assisting the operator in determining the various relative positions of the groups of coin. The grid 42 is further provided with an opening 50 of adequate size to accommodate paper money or currency of conventional size and also to hold checks, due bills and the like. A clamping plate 51 having generally the form of a grid is made of a size to fit loosely into the opening 50 and is provided with slots 52, 53 constituting coin compartments. The slots 52 are of proper size to accommodate half dollars, the slots 53 being proportioned for quarter dollars.

The clamping plate 51 is provided with links 54, the latter having inturned portions 55 serving as journals and fitting into lugs 56 which are cast upon the grid 42 and integral therewith. The rods 54 are further provided with bent portions 57 which are fitted into opposite ends of the clamping plate 51.

The clamping plate may be grasped by hand and swung upwardly and sidewise out of the opening 50 so as to allow the bills, checks, due bills and the like to be inserted in the opening 50 or removed therefrom as the case may be, after which the clamping plate 51 may be swung back into its normal position as indicated in Fig. 4.

Any coins which may be deposited in the coin compartments 52—53 serve to add their weight to that of the clamping plate 51, thus rendering the latter heavy and enabling it to hold the money below it.

The grid 42 is held upon the plate 41 by screws 58. The manner in which coins are placed in the compartments of the grid 51 is indicated at 59 in Fig. 5. The compartments 45 are especially adapted for each holding a dollar, which may be in the form of a single coin, two half dollars or even a half dollar and two quarters, or four quarters. It will be understood, however, that the precise denominations of coin suitable for the various compartments, and within the proportions and relative locations of the various compartments, may be varied to suit the particular business for which the device is used.

The various coin compartments are of proper length measured in a direction crossing the planes of the coins to hold a definite number of the coins, so as to facilitate the counting of the latter. We prefer to have the compartments 47 of such length as to each hold twenty-five coins each representing a cent. The compartments 46 each hold twenty coins of the denomination of five cents, their capacity being therefore a dollar for each compartment. Since the compartments 47 are arranged in groups of four separated by a slot 49, the number of cents necessary to fill one group of four compartments is one hundred. This enables the amount of one dollar in cents to be readily determined and indicated. Similarly the various other compartments hold some definite number of coins preferably relating directly to a dollar in value.

The operation of our device is as follows: We will assume as an instance that the invention is used in connection with some business in which there are a large number of separate collections made from individual customers by collectors employed for this purpose. The various collectors in making their returns arrive generally one at a time and bring with them the money which they have collected. Such money is often carried loosely in bags and consists of coins of various denominations interspersed here and there with currency, bills or paper money and sometimes even including checks and due bills. If now each collector takes the time to count his money he must necessarily arrange or classify it with some degree of system. He generally stacks all of the silver dollars together, all of the silver half-dollars, then the quarters, nickels, dimes, cents, etc., and after counting the money if he puts it back into the bag for somebody else to count, the entire operation must be gone over again. By aid of our device, however, much of the time thus

wasted is saved. Each employee classifies the various coins he has collected and places them in the particular coin tray over which he has control or at least with which he is associated. We will assume that a particular collector's tray is the top one at the upper left hand corner of Fig. 1 and designated by the legend 1, also by his name if the latter appears in a label in the coin slot 14. The collector finds his tray unlocked and empty. He slides it out and arranges his various denominations of money, placing them in the respective compartments for them. If he has any bills or checks he lifts the clamping plate and places them below it and lets it down upon them. Any coins which he may place in the coin compartments 52—53 serve to weight down the clamping plate 51 as above described. The collector having sorted out the various kinds of money, such as dollars, half-dollars, quarters, nickels, dimes and cents and having placed them in the various compartments suited for the sizes of the coins, now readily counts them which he does almost at a glance. This is particularly the case if the compartments are filled, because the size of the compartments being adapted for accommodating a particular number of coins readily facilitates the counting. The collector may, if he so desires, write a memorandum of the amount of the total collection and place the same underneath the clamping plate 51. It may happen, while the collector is handling the coin tray or counting his money that he may inadvertently push the tray inward. In this event he does not desire it to become locked as he has not yet done with the coin tray. If, therefore, the coin tray be pushed in accidentally it is stopped in its travel and assumes the position indicated in Fig. 3. The beveled portion 20 of the bolt 19 rests against the tongue 21 and the coin tray cannot for the moment be moved inwardly. The hook 38 is not now in connection with the corresponding latch 35. The operator therefore may by grasping the knob 16 readily pull the coin tray out again. Having finished depositing his money in the coin tray however, and wishing now to leave the coin tray, he pushes it in until it assumes the position indicated in Fig. 3 as above described and by depressing the knob 16 he slides the bolt 19 downwardly so that the beveled portion 20 of the bolt readily passes underneath the tongue 21. This being done and the coin tray being pushed to its limit and the knob 16 released, the collector is unable to open or slide the tray outwardly, the latch 35 now holding the hook 38.

The proprietor or treasurer or other person authorized to open the cabinet may by aid of his key actuate the lock 27 so as to swing the door 25 open upon its hinges. In doing this, the panel 31 is moved upwardly so that each latch 35 is lifted out of engagement with its corresponding hook 38. The cabinet is thus opened at its rear and the officer or employee thus authorized to do so may examine the various coin trays and see that nothing is wrong with them. Moreover, the person in question can now turn the cabinet around or walk around to the front side and may remove each and all of the various coin trays.

If desired the coin trays, loaded up as above described, may be removed bodily from the cabinet and placed in an appropriate receptacle just as they stand and in this condition carried to a bank for the purpose of transferring and depositing the money. In this event there is a further saving of time upon the part of the receiving tellers of the bank. In fact nowadays very many banks will not accept deposits of coin or paper money unless the latter is classified and arranged in proper condition for counting.

While our improvement in the tray is not intended primarily for measuring or counting money by filling the coin compartments and causing the same to serve as meters, it has to some extent this function. The main purpose of the coin tray is not to count the money but to classify it and render it readily accessible as thus classified, in order that its counting or checking may be facilitated and its handling rendered comparatively easy.

We do not limit ourselves to the precise construction shown as variations may be made without departing from the spirit of our invention, the scope of which is commensurate with our claims.

We claim:

1. A device of the character described comprising a case, a plurality of coin trays slidably fitted into said case, a hook mounted upon each coin tray at the inner end thereof, a door connected with said case and adapted to be swung open, a panel which slides in the case and carried by said door and movable bodily in relation thereof, latches mounted upon said panel, for the purpose of preventing the withdrawal of said coin trays when said hooks are engaged by said latches, and means controllable at the will of the operator for shifting said panel vertically in relation to the said door, in order to release the coin trays, as described.

2. A coin tray comprising a plate, a grid mounted thereon and provided with an opening of suitable size to hold paper, currency, and checks, a gripping plate adapted to close into said opening and provided with compartments for receiving and holding coins for weighting the gripping plate, and links pivotally connecting the ends of the gripping plate with the adjacent frame,

whereby said plate is adapted to be swung upward out of the opening in the grid so as to maintain it in horizontal position and thus avoid dislodgment of the coins, as described.

3. A coin tray comprising a grid provided with an opening for holding paper money and the like, said grid being further provided with lugs disposed adjacent to said opening, rods provided with bent portions extending into said lugs, a gripping plate journaled upon said rods and adapted to be shifted as said rods are swung upon said lugs as centers, said gripping plate being provided with coin compartments each of a size to hold coins of a number and denomination related to a dollar, said gripping plate being so arranged that when said coins carried by it are in position said coins assist in weighting said gripping plate.

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Witnesses:
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