Aug. 25, 1931. J. R. SHOWERS 1,820,400

CASH DRAWER MECHANISM

Filed March 7, 1927

FIG. 1

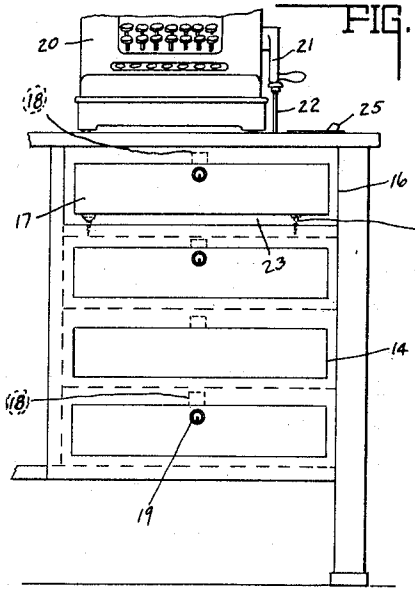


FIG. 2

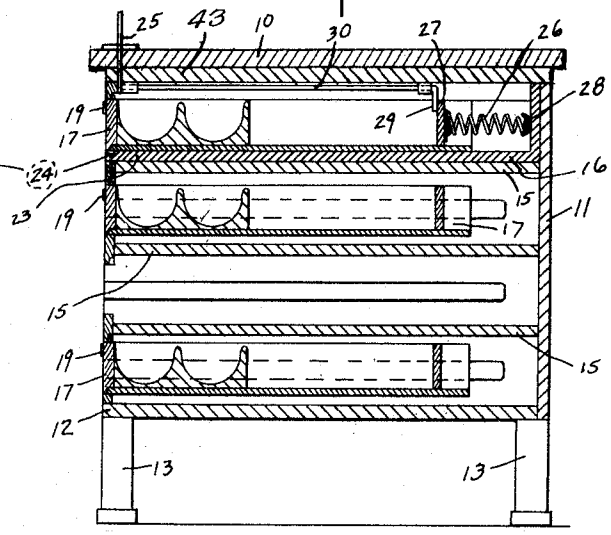


FIG. 3

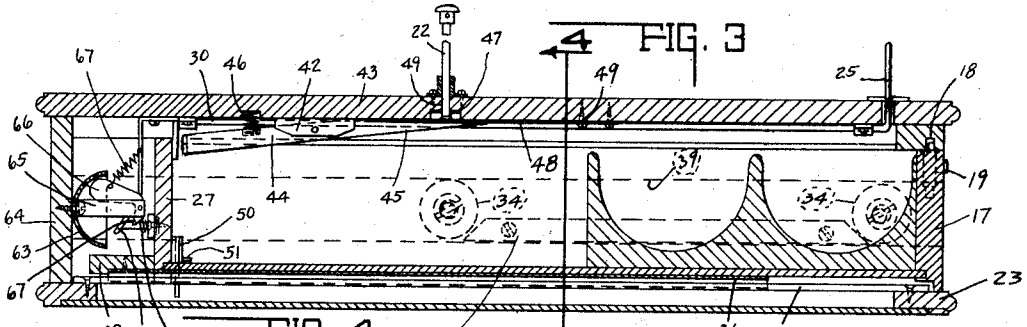


FIG. 4

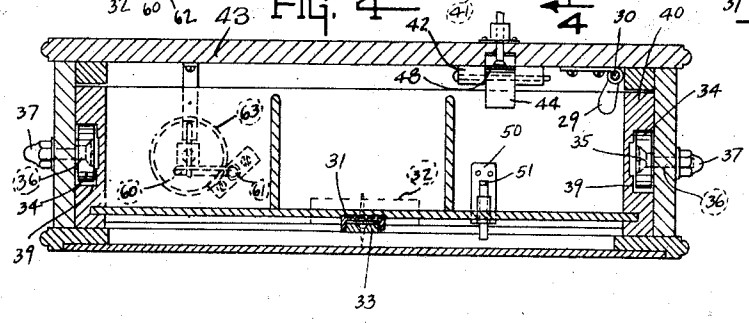
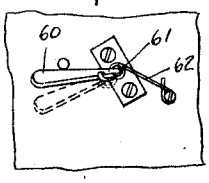


FIG. 5



INVENTOR.
JOSEPH R. SHOWERS.

BY Fitzsimmons & Fitzsimmons
Goldsmith & Galt
ATTORNEYS.

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UNITED STATES PATENT OFFICE

JOSEPH R. SHOWERS, OF SHELBYVILLE, INDIANA

CASH DRAWER MECHANISM

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This invention relates to a money drawer construction.

One object of the invention is to provide a money drawer and a container therefor which may be associated with a supporting stand, counter or desk such that several compartments therein are each adapted to receive the money drawer and retain the same therein and yet be interchangeably associated with a common actuating container.

Another object of the invention is to construct a drawer and its container in a simple manner.

Several features of the invention will be pointed out hereinafter more in detail.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims:

In the drawings Fig. 1 is a front elevational view of a portion of a counter showing the invention associated therewith and with an adding machine mounted on top. Fig. 2 is a transverse sectional view through the counter. Fig. 3 is a longitudinal sectional view through the money drawer and a drawer container or cabinet arranged for use independent of counter mounting. Fig. 4 is a transverse sectional view therethrough taken on line 4—4 of Fig. 3 and in the direction of the arrows. Fig. 5 is a detailed view of a portion of the operating mechanism.

In the drawings 10 indicates the top of a counter or table, 11 the back, 12 the front and 13 the legs. The counter, table or the like is provided with a plurality of compartments 14 separated by partitions 15. The upper compartment preferably is enlarged to receive a drawer container or cabinet 16 which interchangeably receives any one of the several drawers 17. To prevent unauthorized removal of the cabinet or drawer container from its compartment the lower rail 23 is secured by the counter sunk screws 24 to the partition rail of the counter. Thus when a money drawer is secured in the cabinet the screws 24 are covered so that the cabinet cannot be removed from its opening. The upper compartment is utilized for cabinet reception, since it is more nearly at a satisfactory operating height. Likewise an adding machine upon the counter may operate counter supported mechanism for automatically operating cabinet supported mechanism for releasing anyone of the drawers positioned in the cabinet.

Adjacent each compartment 14 is a catch 18 with which the locking bolt of the key operated lock 19 carried by each drawer may be associated for locking the drawer in either its designated compartment 14 or in the cabinet 16.

Mounted on the counter, see Fig. 1, there is illustrated an adding machine 20 including an actuating handle 21 for engagement with a drawer releasing pin or plunger. Actuation of the handle depresses the plunger 22 to actuate the releasing mechanism for releasing the latch holding the money drawer. Also mounted on the counter and extending therethrough is a manual control 25, the purpose of which will be hereinafter pointed out.

The means for moving the drawer in its cabinet after release of suitable latching mechanism consists in a coil spring 26 secured to the end 27 of the drawer 17 and said spring is adapted to bear upon a spring retainer 28 carried by the back of the cabinet. The spring is normally compressed by the closing movement of the drawer and is retained in compressed condition when the drawer is latched in the closed position. Release of the latch permits the spring 26 to project the drawer outwardly and thus open the same. A stop 29 is provided and is actuated by a rod 30 connected to the finger piece 25 and constitutes a manual lock for the drawer. The same in Fig. 2 is shown independently associated with the drawer but may be so arranged that it locks the latching mechanism in the drawer retaining position instead of directly locking the drawer. Herein to secure better drawer movement the drawer is shown provided with a channel shaped guide 31 which is extended beyond the end of the drawer 27 and is supported by the rearward extension 32 thereof. Said guide travels on a rail 33 and thus side sway of the drawer in its opening

and closing movements is prevented. To further assist in securing predetermined drawer movement and ease of operation as well, there is provided a plurality of pairs of rollers 34, each of which is slidably mounted upon a spindle portion 35 of a bolt 36, the same having relative eccentricity therebetween so that when the bolt is secured in adjusted position the axis of roller rotation may be adjusted for height and may be secured in such position by the ornamental nut 37. The rollers ride in a groove 39 formed in the drawer sides 40 and herein to insure positioning of the rear roller in the groove 39 upon return movement of the drawer, a stationary guide member 41 is positioned intermediate and extends between the rollers. The same lies in the groove 39 when the drawer is in the closed position. By the aforesaid arrangement, the drawer has a confined predetermined movement and is prevented from cocking sidewards or upward down in the cabinet.

Latching means for releasing the drawer to the operation of spring 26 comprises a bearing member 42 secured to the underside of the top 43 of the container. Pivotally supported thereby is a wooden latch member 44 having a tapered or bevelled edge 45 for drawer clearance in closing movement of the drawer. A small spring 46 normally maintains the latch and the locking lever 44 in the position shown in Fig. 3. The opposite end of the latching lever is shown positioned immediately beneath the upset end 47 of pin 22 and the same may actuate directly the lever, compressing the spring 46 for releasing the back end of the drawer from the latch or end of the lever 44 and to the spring 26.

Inasmuch as quite a hammer blow is imparted to pin or plunger 22 by the handle 21, or manually if the adding machine is not desired, and since the actuating mechanism is of metal and the lever is of wood, said lever will be subjected to considerable wear and therefore there is interposed a protective member 48 which comprises a sheet of metal, herein not carried by the member 45, but hingedly mounted at 49 to the underside of the top 43 and interposed between the member 44 and the pin 22 so that it constitutes a return spring for the pin. The enlargement 47 prevents the throwing of the pin from its socket 49 upon return of spring 48. Also spring 48 when seated prevents actuation of pin 22 upon actuation of lever 44 in return movement of said lever upon the closing movement of the drawer.

Mounted upon the back 27 of the money drawer is a plate 50 slidably supporting an angular member 51 and when said member is projected downwardly, as shown in Figs. 3 and 4, the same is adapted to engage the end rail 23 of the cabinet and thus prevent complete throw of the drawer from the container or cabinet upon release to the spring 26. When it is desired to remove the money drawer from the cabinet the angular member 51 is retracted and the drawer then completely released. In normal operation the lock 19 is only locked when the several money drawers are positioned in their proper compartments 14, or in the cabinet 16 when the attendant temporarily leaves the counter. In common with many money drawers, the same is provided with an audible warning signal which indicates when the drawer is being opened. Herein the rear of each drawer is provided with a member which is of angular formation, 60 indicating the actuating portion and 61 a pivotal portion. A spring 62 normally maintains the actuating portion 60 in operative position. A bell 63 is mounted upon the back 64 of the cabinet and supported adjacent thereto is a frame or bracket 65 pivotally supporting a striker 66 having an engageable end or tooth 67 which normally is caught by the angular portion 60 of the tripping member in the opening movement of the drawer to tilt the lever or striker 66 on its pivot. Thereafter release of said lever to the actuating spring 67 causes the striker 66 to engage the bell 63 and ring the same. In the closing movement of the drawer the angular portion 60 engages the end 67 of the stroker 66 and since they are complementarily formed for camming operation, tripping member 60 will ride over the lever tilting the same sufficiently for such purpose but will not cause striking of the bell.

A manual release is preferably so arranged, as shown in Fig. 3, that when the handle portion 25 is tilted so that the drawer locking portion 29 engages the back 27 of the drawer to lock the same and prevent withdrawal, it simultaneously moves the drawer rearwardly a slight distance so as to slidably clear the locking lever 44. The reason for this is that when the handle 21 of the adding machine 20 is actuated for obtaining a total and it is not desired to have the drawer open, then the manual locking member will release the locking lever from drawer engagement by shifting the drawer rearwardly a slight distance, as set forth. This relieves all strain from the locking lever and permits the locking lever to freely tilt under the actuation of the adding machine handle. When the adding machine operation is completed the handle 25 may be returned to the non-locking position, whereupon the drawer will move forwardly under the influence of spring 26 to engage the end of the lever 44 which may be suitably protected as by a metal plate.

The invention claimed is:

1. In combination a counter having a plurality identical money drawer receiving

compartments therein, a plurality of identical money drawers interchangeably receivable by said compartments, cooperating means in each compartment and on each drawer for individually and independently locking each drawer in any compartment, a money drawer receiving cabinet supported by the counter and adapted to receive any one of the money drawers, and means cooperating with the cabinet contained drawer to control drawer movement.

2. In combination, a counter having a plurality of identical money drawer receiving compartments therein, a plurality of identical money drawer members interchangeably receivable by said compartments, cooperating means in each compartment and on each drawer member for individually and independently locking each drawer member in any compartment, a money drawer receiving cabinet member supported by the counter and adapted to receive any one of the many drawer members, and means cooperating with the cabinet contained drawer member to control drawer member movement, comprising a spring carried by one of said cooperating cabinet and drawer members for engaging the other of said cooperating cabinet and drawer members for projecting the cabinet contained drawer member from the cabinet when released, and other means supported by the cabinet for releasing the drawer member to spring action.

3. In combination, a counter having a plurality of identical money drawer receiving compartments therein, a plurality of identical money drawer members interchangeably receivable by said compartments, cooperating means in each compartment and on each drawer member for individually and independently locking each drawer member in any compartment, a money drawer receiving cabinet member supported by the counter and adapted to receive any one of the many drawer members, means cooperating with the cabinet contained drawer member to control drawer member movement, comprising a spring carried by one of said cooperating cabinet and drawer members for engaging the other of said cooperating cabinet and drawer members for projecting the cabinet contained drawer member from the cabinet when released, manually operable means normally restraining said drawer member in cabinet retaining position and movable to release said drawer member for spring action, and other means carried by said cabinet member cooperating with the cooperating means carried by the drawer member for permanently retaining the drawer member in the cabinet member.

4. In combination, a counter having a plurality of identical money drawer receiving compartments therein, a plurality of identical money drawer members interchangeably receivable by said compartments, cooperating means in each compartment and on each drawer member for individually and independently locking each drawer member in any compartment, a money drawer receiving cabinet member supported by the counter and adapted to receive any one of the many drawer members, means cooperating with the cabinet contained drawer member to control drawer member movement, comprising a spring carried by one of said cooperating cabinet and drawer members for engaging the other of said cooperating cabinet and drawer members for projecting the cabinet contained drawer member from the cabinet when released, an adding machine carried by the counter and arranged for adding machine operation, and other means operatively associated with said adding machine and said drawer member for automatically releasing said cabinet contained drawer member for spring action when the adding machine is operated.

5. In combination, a counter having a plurality of identical money drawer receiving compartments therein, a plurality of identical money drawer members interchangeably receivable by said compartments, cooperating means in each compartment and on each drawer member for individually and independently locking each drawer member in any compartment, a money drawer receiving cabinet member supported by the counter and adapted to receive any one of the many drawer members, means cooperating with the cabinet contained drawer member to control drawer member movement, comprising a spring carried by one of said cooperating cabinet and drawer members for engaging the other of said cooperating cabinet and drawer members for projecting the cabinet contained drawer member from the cabinet when released, an adding machine carried by the counter and arranged for adding machine operation, other means operatively associated with said adding machine and said drawer member for automatically releasing said cabinet contained drawer member for spring action when the adding machine is operated, and means carried by said cabinet member and cooperating with the drawer supported cooperating means for locking said drawer member in the cabinet member.

6. In combination, a counter having a plurality of identical money drawer receiving compartments therein, a plurality of identical money drawer members interchangeably receivable by said compartments, cooperating means in each compartment and on each drawer member for individually and independently locking each drawer member in any compartment, a money drawer receiving cabinet member supported by the counter and adapted to receive any one of

the many drawer members, means cooperating with the cabinet contained drawer member to control drawer member movement, comprising a spring carried by one of said cooperating cabinet and drawer members for engaging the other of said cooperating cabinet and drawer members for projecting the cabinet contained drawer member from the cabinet when released, an adding machine carried by the counter and arranged for adding machine operation, other means operatively associated with said adding machine and said drawer member for automatically releasing said cabinet contained drawer member for spring action when the adding machine is operated, and manually operable means carried by said cabinet member and operatively associated with said drawer member to retain the drawer member in the cabinet member in opposition to said spring.

7. In combination, a counter having a plurality of identical money drawer receiving compartments therein, a plurality of identical money drawer members interchangeably receivable by said compartments, cooperating means in each compartment and on each drawer member for individually and independently locking each drawer member in any compartment, a money drawer receiving cabinet member supported by the counter and adapted to receive any one of the many drawer members, means cooperating with the cabinet contained drawer member to control drawer member movement, comprising a spring carried by one of said cooperating cabinet and drawer members for engaging the other of said cooperating cabinet and drawer members for projecting the cabinet contained drawer member from the cabinet when released, an adding machine carried by the counter and arranged for adding machine operation, other means operatively associated with said adding machine and said drawer member for automatically releasing said cabinet member and operatively associated with said drawer member to retain the drawer member in the cabinet member in opposition to said spring, and means carried by said cabinet member and arranged for cooperation with the cooperating means carried by said drawer member for locking the drawer member in said cabinet member.

In witness whereof, I have hereunto affixed my signature.

JOSEPH R. SHOWERS.