W. S. KAUFFMAN.

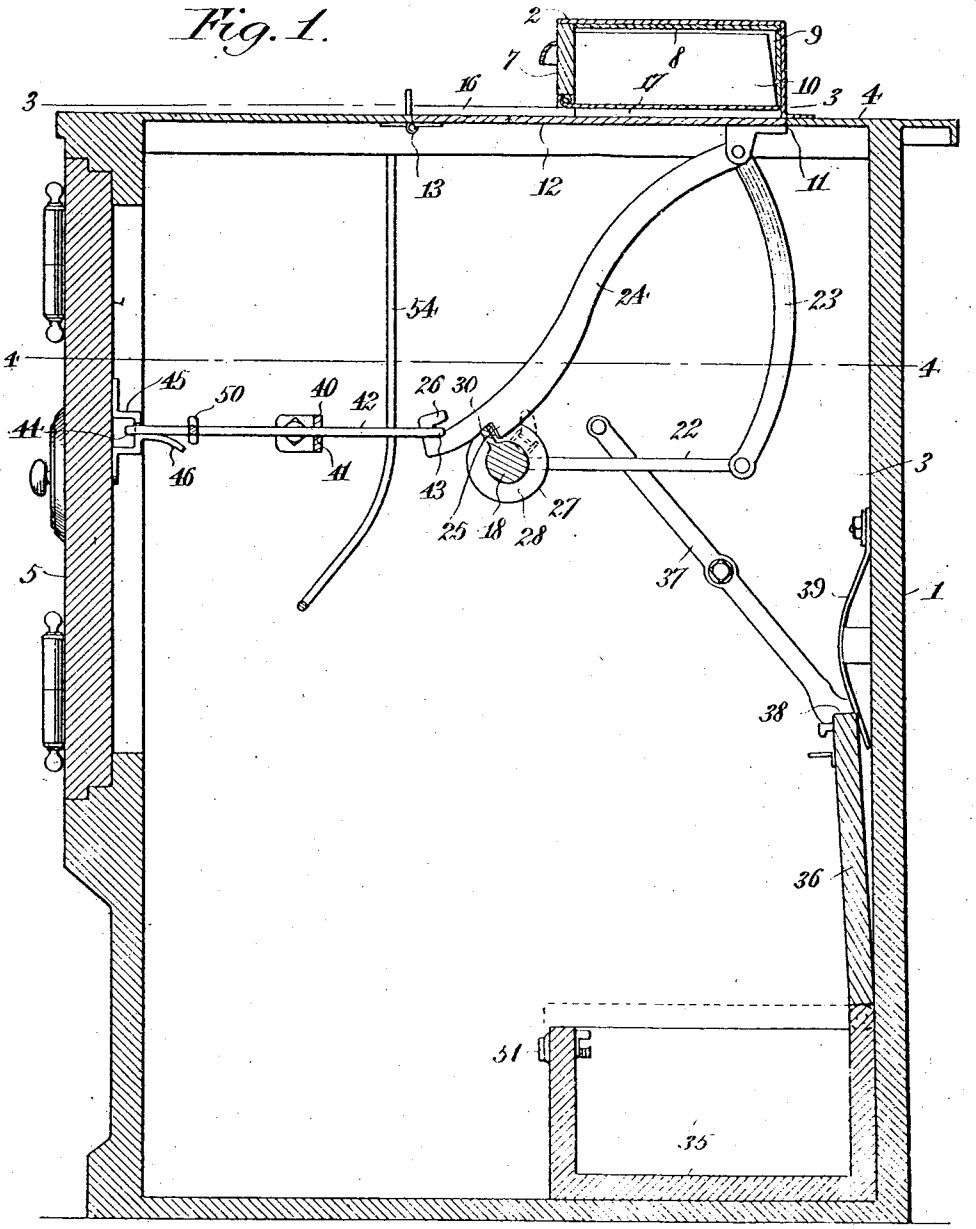
SAFETY DEPOSIT APPARATUS.

APPLICATION FILED JUNE 29, 1915.

1164,097. Patented Dec. 14, 1915.

3 SHEETS—SHEET 1.

Fig. 1.



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SAFETY DEPOSIT APPARATUS.

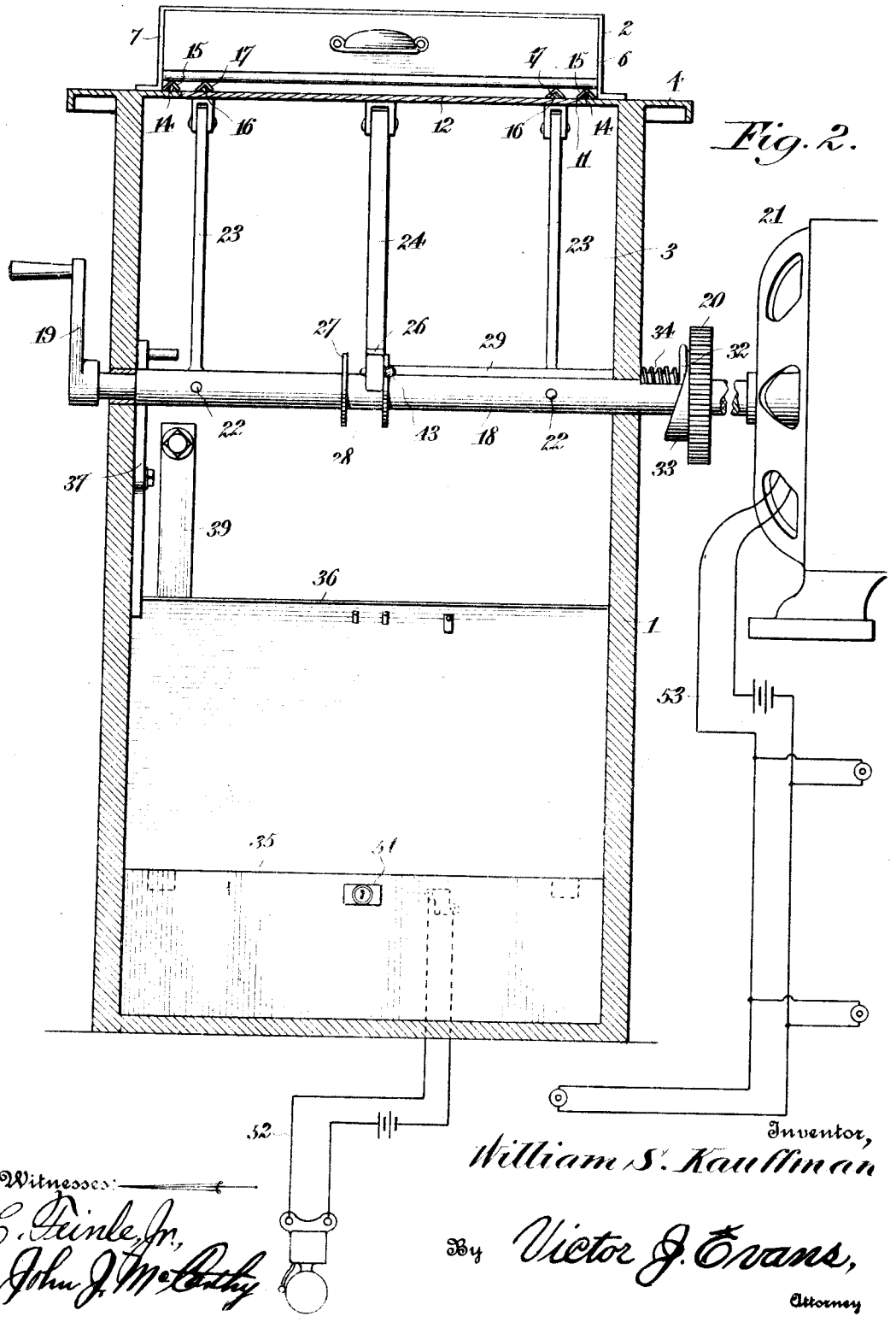
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1,164,097.

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3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

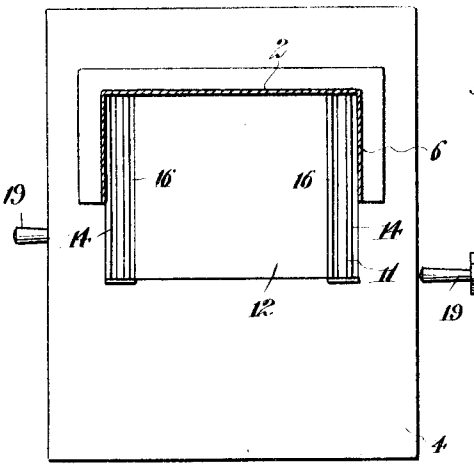


Fig. 4.

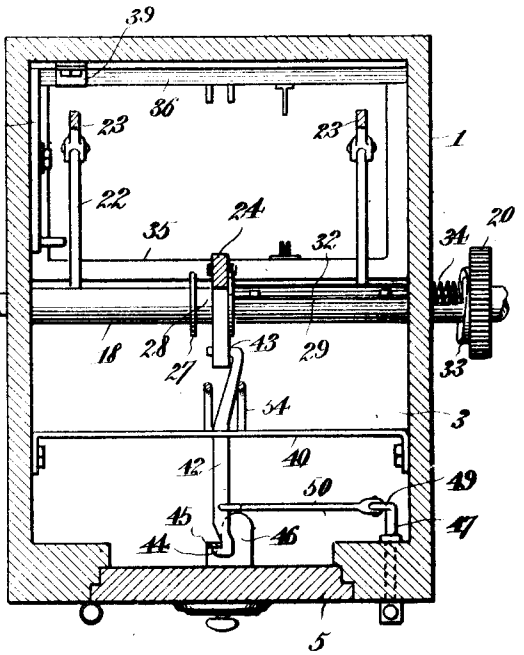


Fig. 6.

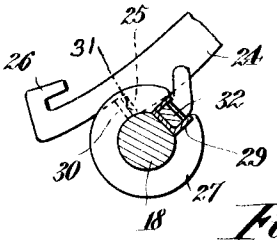


Fig. 5.

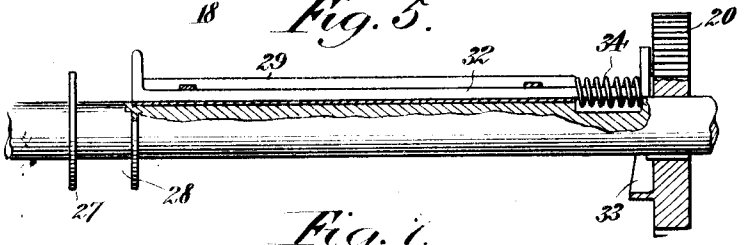
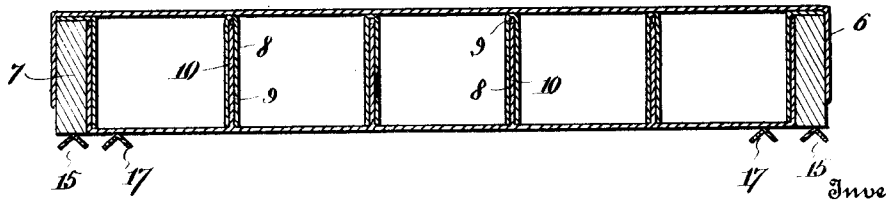


Fig. 7.



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UNITED STATES PATENT OFFICE.

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SAFETY-DEPOSIT APPARATUS.

1,164,097. Specification of Letters Patent. Patented Dec. 14, 1915.

Application filed June 29, 1915. Serial No. 37,064.

To all whom it may concern:

Be it known that I, WILLIAM S. KAUFFMAN, a citizen of the United States, residing at Lewisburg, in the county of Union and State of Pennsylvania, have invented new and useful Improvements in Safety-Deposit Apparatus, of which the following is a specification.

This invention relates to improvements in safety deposit apparatus for money, jewelry and other valuables.

In carrying out the present invention, it is my purpose to provide a safety deposit apparatus which will embody in its construction, among other features, a primary receptacle adapted to contain valuables and capable of discharging the same, and a secondary receptacle or strong box adapted to receive the valuables discharged from the primary receptacle and equipped with a cover normally held in open position and automatically released immediately succeeding the discharge of the valuables into the strong box.

It is also my purpose to provide safety deposit apparatus wherein the component parts will be so arranged and constructed as to reduce the possibility of derangement to a minimum, which will operate efficiently and effectively in the event of an attempted burglary and wherein the discharge of the valuables from the primary receptacle to the secondary receptacle or strong box will be controlled both manually and automatically.

With the above recited objects in view and others of a similar nature, the invention consists in the construction, combination and arrangement of parts set forth in and falling within the scope of the appended claims.

In the accompanying drawings: Figure 1 is a vertical sectional view through safety deposit apparatus constructed in accordance with the present invention; Fig. 2 is a similar view taken at right angles to Fig. 1; Fig. 3 is a horizontal sectional view on the line 3—3 of Fig. 1; Fig. 4 is a like view on the line 4—4 of Fig. 1; Fig. 5 is a fragmentary longitudinal sectional view taken through the controlling shaft and associated parts; Fig. 6 is an enlarged cross sectional view through the same; and Fig. 7 is an enlarged longitudinal sectional view through the primary receptacle.

In the present instance I have shown my invention as embodied in a safe 1 divided into upper and lower compartments 2 and 3, respectively, by means of a horizontal partition 4. The front wall of the safe 1 is formed with a door opening, and closing such opening is a door 5 capable of movement to open position so that access may be had to the upper and lower compartments 2 and 3.

Suitably secured to the upper surface of the partition 4 is a casing 6 embodying top and end walls and a back wall, and the top, end and back walls of the casing coöperate with the adjacent portion of the partition to form a drawer receiving compartment having the front end open and slidably mounted within the compartment thus formed is a drawer 7 constituting a receptacle adapted to receive money, jewelry and other valuables. In the present instance, the bottom of the drawer has the forward edge thereof hinged to the lower edge of the front wall of the drawer and such bottom is capable of swinging movement to discharge the contents from the drawer, and arranged within the drawer 7 are transverse partitions 8 spaced apart equal distances to divide the drawer into separate chambers and each partition is formed with a longitudinally extending vertical slot 9 opening on to the lower edge thereof and adapted to receive a transverse rib 10 formed on the hinged bottom of the drawer, the ribs 10 entering the respective slots 9 when the bottom is in horizontal position and coöperating with the partition 8 to prevent the articles in one chamber from entering an adjacent chamber. Formed in the partition 4 immediately below the drawer 7 is a substantially rectangular opening 11 of a length substantially equal to the similar dimension of the drawer and of a width greater than that of the drawer, and disposed within the opening 11 is a rectangular plate 12 having the forward edge thereof hinged to the forward edge wall of the opening 11 by means of hinges 13. Formed on the upper surface of the partition 4 adjacent to the respective end walls of the opening 11 are guide rails 14 lying parallel with each other and each of a length equal to the width of the opening. Secured to the lower edges of the end walls of the drawer are shoes 15 engaging the guide rails 14, respectively, and designed to facilitate the movement of the drawer into and out of the compartment. Fastened to the upper surface of the plate 12 adjacent to the end edges thereof are guide rails 16 dis-

posed in parallelism, while fastened to the under surface of the swinging bottom of the drawer are shoes 17 engaging the respective rails 16 and acting to hold the bottom normally in closed position in the normal operation of the drawer.

Journaled in the opposite side wall of the lower compartment 3 of the safe and extending transversely of such compartment is a controlling shaft 18 and fixed upon one end of the shaft 18 is a crank handle 19, while loosely mounted upon the remaining end of the shaft is a driving wheel 20 connected up through some suitable mechanism with an electric motor 21. Secured to the controlling shaft 18 and projecting toward the back wall of the safe are arms 22, 22, while pivotally connected with the plate 12 adjacent to the rear edge thereof and at opposite sides of the transverse center line of the plate are depending links 23, 23 having their lower ends connected with the rear extremities of the respective arms 22, 22. Pivotally connected to the under surface of the plate 12 adjacent to the rear edge of the plate and on the approximate transverse center line is an arm 24 depending from the plate and having the bottom edge adjacent to the lower end formed to provide a heel 25 and the lower end curved upon itself to form a hook 26. Surrounding the controlling shaft 18 at a point approximately central of such shaft is a collar 27 formed with a circumferential groove 28, and formed integral with one wall of the groove 28 and projecting outwardly therefrom along the shaft is a channeled bar 29 opening into the groove 28 in the collar, while formed on the inner wall of the groove at a point in advance of the channeled bar is a radial lug 30 normally engaged by the heel 25 on the arm 24. In this instance the heel is equipped with a ball bearing 31 that engages the lug 30 and eliminates friction between the heel and the lug when the heel rides off of the lug. This lug radiates from the shaft in a direction opposite from the arms 22 and as the heel 25 engages the lug at the side of the shaft opposite from the arm 22, the plate 12 is held against downward swinging movement under the action of gravity. Extending longitudinally of the controlling shaft 18 is a rod 32 having one end portion lying within the channeled bar 29 and the opposite end portion terminating in proximity to the inner face of the driving wheel 20, while secured to the inner face of the driving wheel 20 is a cam ring 33. The ends of the rod 32 are bent outwardly at right angles to the controlling shaft and the outer bent end of the rod is disposed within the influence of the cam ring 33, while the inner bent end is arranged immediately adjacent to the lower end of the arm 24. Surrounding the outer end portion of the rod 32 is a coiled expansion spring 34 having one end abutting the outer bent end of the rod and the other extremity in engagement with the adjacent side wall of the safe, such arrangement acting to hold the inner bent end of the rod out of engagement with the lower end of the arm 24. The lug 30 is of less width than the groove 28 in the collar 27 so that the arm 24 may be shifted laterally to disengage the heel from the lug. Arranged upon the lower wall of the compartment 3 below the opening 11 in the partition 4 is a secondary receptacle or strong box 35 equipped with a hinged lid 36 connected to the top edge of the back wall of the strong box. Pivoted to the inner surface of one side wall of the lower compartment 3 of the safe is a trip lever 37 having one end disposed in the path of movement of the plate 12 and the remaining end formed with a notch 38 designed to engage the lid 36 to hold the latter in open position.

39 indicates a leaf spring having one end fastened to the back wall of the lower compartment of the safe and the other end designed to engage the lid 36 of the strong box and when the lid 36 of the strong box is held in open position through the action of the trip lever 37, the spring 39 is under tension and as soon as the lid of the strong box is relieved of the influence of the trip lever the spring reacts to swing the lid to closed position.

Extending transversely of the lower compartment 3 is a supporting rod 40 having the ends thereof secured to the respective side walls of the compartment. This supporting rod is centrally disposed in advance of the controlling shaft 18 and slidably mounted within a slot 41 formed in the rod 40 is a link 42 having the inner end thereof formed to provide a hook 43 engaging the hook 26 on the lower end of the arm 24, and the outer end formed to provide a hook 44 adapted to engage the yoke 45 carried by the inner surface of the door 5 of the safe. The lower limb of the yoke 45 is formed with an outwardly projecting guide lip 46 designed to guide the hook 44 into engagement with the yoke 45. Mounted within an opening formed in the front wall of the safe adjacent to one side wall of the door opening is a shaft 47 having the outer end equipped with a handle 48 and the inner end provided with an arm 49. This arm 49 is connected through the medium of a rod 50 with the outer end portion of the link 42 and when the door is in closed position and the shaft 47 rotated in one direction through the action of the handle 48, the arm 49 actuates the rod 50 to move the hook 44 into engagement with the yoke 45, thereby connecting the door to the lower end of the supporting arm 24.

The strong box 35 is equipped with an automatic lock 51 that locks the lid in closed position when such lid drops, while the lid controls a signal circuit 52 including suitable alarm devices located at a central station or other point. The motor 21 is connected in an electric circuit 53 including a suitable source of energy, and connected across the circuit 53 are push buttons located upon desks and other places where they may be quickly operated to close the control circuit.

In practice, the valuables are placed in the primary receptacle or drawer 7 and the latter moved to closed position. The door of the safe is now closed and the bolts slid to locking position, and after the door has been locked the shaft 47 is actuated to engage the hook 44 on the link 42 with the yoke 45. Should a burglar open the door of the safe the link 42 will slide within the slot in the supporting rod 40 and in the movement of the link 42 under the action of the door the supporting arm 24 is swung about in pivotal connection with the plate 12 and the heel 25 disengaged from the lug 30 in the groove 28, thereby releasing the plate 12. Upon the release of the plate 12 the latter swings downwardly and so releases the movable bottom of the drawer 7. In the movement of the bottom of the drawer 7 the articles are discharged from the drawer and fall into the strong box 35 and as soon as the bottom of the drawer has swung to fully open position the plate 12 strikes the adjacent end of the trip lever 37, thereby disengaging the notch 38 from the lid 36 so that the spring 39 may react to throw the lid to closed position. The strong box is suitably anchored to the bottom wall of the safe so as to prevent the removal thereof from the safe.

By means of the push button switches located in the circuit 53 of the motor 21, the latter may be energized to rotate the driving wheel 20 and in the rotation of the driving wheel 20 the cam ring 33 engages the adjacent bent end of the rod 32 and slides the latter along the controlling shaft 18 against the action of the spring 34, thereby engaging the inner bent end of the rod 32 with the adjacent end of the holding arm 24 and in the continued movement of the rod under the action of the cam ring the holding arm is shifted to disengage the heel from the lug 30. As the heel is relieved of the influence of the lug 30 the plate 12 and the bottom of the drawer gravitate to lowered position so as to discharge the valuables into the strong box. This mechanism for releasing the plate 12 and bottom of the drawer will be found especially useful in banks and analogous places so that the money or other valuables may be thrown into the strong box in the event of an attempted "hold-up." To restore the parts to normal position the shaft 18 is rotated in the reverse direction under the action of the crank handle 19 and as the shaft approaches normal position the heel 25 reëngages the lug 30 to hold the plate and the bottom of the drawer elevated. The supporting arm 24 works within a guide 54 suspended from the partition 4 and this guide insures the proper engagement of the heel with the lug in the rotation of the shaft 18 under the action of the crank handle.

While I have herein shown and described the preferred form of my invention by way of illustration, I wish it to be understood that I do not limit or confine myself to the precise details of construction herein described, as modifications and various improvements may be made within the scope of the claims without departing from the spirit of the invention.

Having thus described my invention, I claim:

1. In safety deposit apparatus, a receptacle adapted to contain valuables and having a hinged bottom, a normally open strong box below said receptacle, means holding said bottom normally in closed position and adapted to release the same to discharge the valuables into said strong box, a lid for said strong box, and means holding said lid open and operable in the swinging movement of said bottom to release said lid.

2. In safety deposit apparatus, a receptacle adapted to contain valuables and having a hinged bottom, a hinged plate below said bottom and holding the latter normally in closed position, a normally open strong box below said plate, means holding said plate normally elevated and adapted to release the same so that said bottom may swing downwardly to discharge the valuables into said strong box, and a lid for said strong box.

3. In safety deposit apparatus, a receptacle adapted to contain valuables and having a hinged bottom, a normally open strong box below said receptacle, means holding said bottom normally in elevated position and adapted to release the same so that the valuables may be discharged into said strong box, and manually controlled means for releasing said holding means.

4. In safety deposit apparatus, a receptacle adapted to contain valuables and having a hinged bottom, a normally open strong box below said receptacle, means holding said bottom normally in elevated position and adapted to release the same to discharge the valuables into the said strong box, a rod controlling said holding means, and a motor for operating said rod to release said holding means.

5. In safety deposit apparatus, a safe, a horizontal partition dividing said safe into upper and lower compartments and formed

with an opening, a plate in said opening and capable of swinging movement out of the opening, a drawer upon said partition over said plate and having a hinged bottom and adapted to contain valuables, a normally open strong box in said lower compartment below the opening in said partition, and means holding said plate normally elevated and adapted to release the plate and said bottom to discharge the valuables into said strong box.

6. In safety deposit apparatus, a safe, a horizontal partition dividing said safe into upper and lower compartments and formed with an opening, a plate in said opening and capable of swinging movement out of the opening, a drawer upon said partition over said plate and having a hinged bottom and adapted to contain valuables, a normally open strong box in said lower compartment below the opening in said partition, means holding said plate normally elevated and adapted to release the plate and said bottom to discharge the valuables into said strong box, a lid for said strong box, and means holding said lid normally in open position and operable from said plate in the swinging thereof to release said lid.

7. In safety deposit apparatus, a safe, a horizontal partition dividing said safe into upper and lower compartments and formed with an opening, a plate in said opening and capable of swinging movement out of the opening, a drawer upon said partition over said plate and having a hinged bottom and adapted to contain valuables, a normally open strong box in said lower compartment below the opening in said partition, means holding said plate normally elevated and adapted to release the plate and said bottom to discharge the valuables into said strong box, a lid for said strong box, means holding said lid normally in open position and operable from said plate in the swinging thereof to release said lid, and means controlled by the door of the safe for releasing said holding means.

8. In safety deposit apparatus, a safe, a horizontal partition dividing said safe into upper and lower compartments and formed with an opening, a plate in said opening and capable of swinging movement out of the opening, a drawer upon said partition over said plate and having a hinged bottom and adapted to contain valuables, a normally open strong box in said lower compartment below the opening in said partition, means holding said plate normally elevated and adapted to release the plate and said bottom to discharge the valuables into said strong box, a lid for said strong box, means holding said lid normally in open position and operable from said plate in the swinging thereof to release said lid, means controlled by the door of the safe for releasing said holding means, and manually controlled means operable to release said holding means independently of said door controlled means.

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

WILLIAM S. KAUFFMAN.

Witnesses:

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WM. R. FOLLMER.