

- [54] **SAFE**
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- [51] **Int. Cl. ....**E05g 1/00
- [58] **Field of Search.....**109/30, 32, 55, 56, 57, 66, 109/67; 70/269; 232/15, 43.2

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[57] **ABSTRACT**

A mechanically time-controlled compartmentized safe

is provided having first and second compartments, each of which has a door with a lock thereon and a separate key for unlocking each compartment. The first compartment contains a one-way access opening therein which receives and deposits valuables in the first compartment. The second compartment contains the key for opening the first compartment, and also a mechanical time-controlled blocker which prevents positioning the key in the lock of the second compartment to open it until the blocker is removed. The blocker is mounted on one end of a lever which is pivoted in the center and has on the other end thereof a container in which sand is released from the time control, consisting of a box of sand which is released by a push rod on the outside of the second compartment. When enough sand is deposited in the container, the lever pivots, raising the blocker from the lock of the second compartment and allowing the insertion of the key thereto in the opening of the second compartment to obtain the key and thus open the first compartment. Accordingly, only authorized persons would have access to the valuables deposited in the first compartment, but only after a time delay in accordance with the sand timer.

**4 Claims, 3 Drawing Figures**

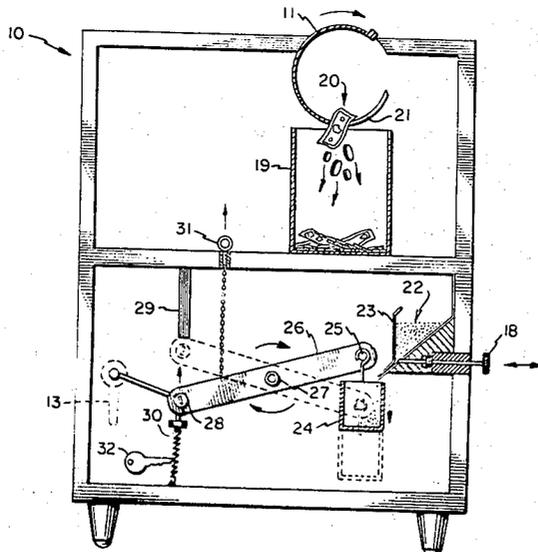


FIG. 1

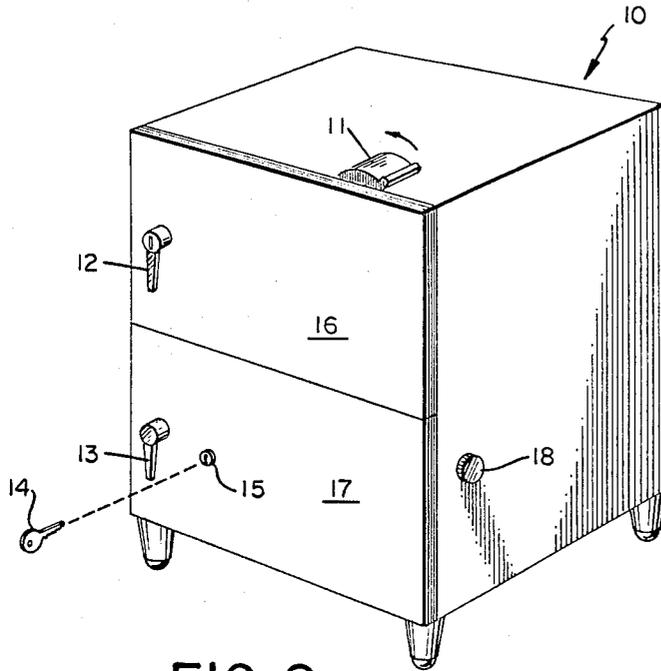


FIG. 2

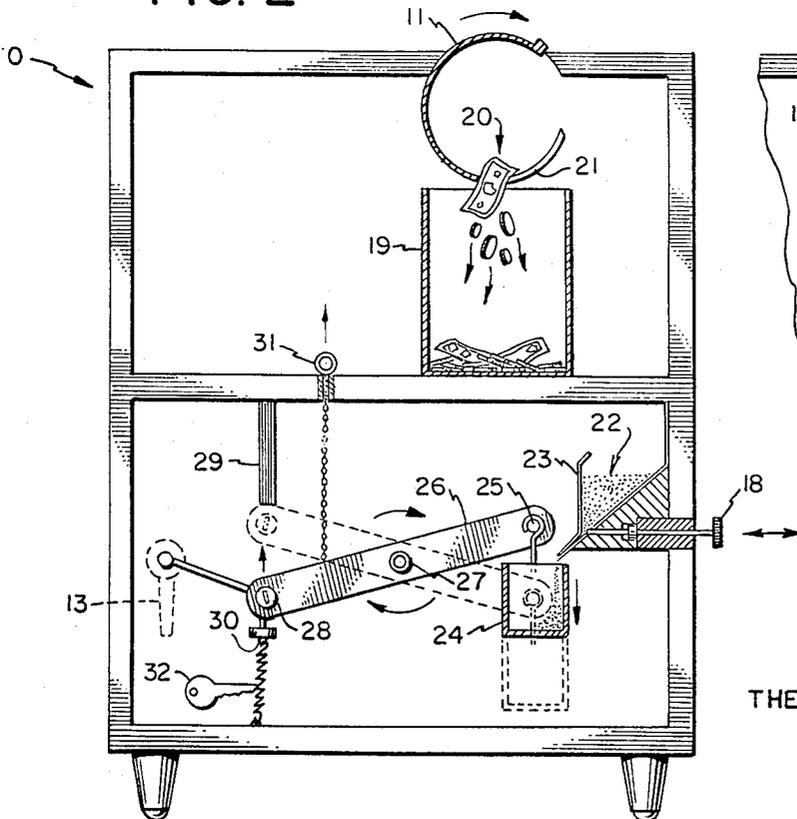
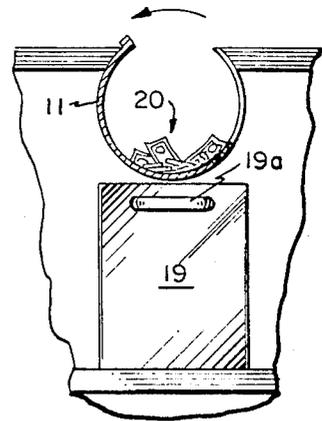


FIG. 3



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BACKGROUND OF THE INVENTION

This invention relates to a safe, and more particularly to a simple, mechanically time-controlled safe which permits only authorized persons to obtain access thereto after a predetermined, mechanically actuated time delay.

Rising crime rates have businessmen clamoring for ways to protect the day's receipts and to foil holdup attempts. More and more businesses, such as groceries, service stations, liquor stores, etc. are doing business over longer hour periods or around the clock, making them prime prospects for robberies. A number of approaches have been tried in an attempt to stem the tide of such robberies, for example, the requiring of exact change for making the desired purchases. However, unless some means is provided to protect the day's receipts, even with the use of exact change the robber cannot be foiled. Expensive alarm systems provide some deterrent, but in general the robber leaves with the funds, either before an alarm is sounded or before the police arrive on the scene to investigate. An ordinary safe under the control of the clerk which he refuses to open may put his life in jeopardy.

SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to provide a relatively inexpensive and simple mechanically time-controlled safe which cannot be opened until a predetermined time after it has been actuated, in order to discourage robberies.

In carrying out this invention in one illustrative embodiment thereof, a compartmentized safe having first and second compartments with a door and a lock on each compartment and a separate key to each, is provided. The first compartment has a separate, one-way access in which valuables may be deposited but not removed therefrom, and the second compartment is provided with a time-control means which controls a blocking means on the second compartment to prevent the full insertion of the key in the lock on the second compartment and prevent its opening until after the time-control means has been actuated and a predetermined time elapsed. At this time the second compartment is opened, which contains the key to the first compartment, which is then opened and the day's receipts may be removed for deposit or other safekeeping.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of an illustrative embodiment of the safe in accordance with this invention.

FIG. 2 is a partial sectional view of the safe of FIG. 1 showing the inside of the safe of FIG. 1.

FIG. 3 is a partial view of FIG. 2 showing a one-way opening in the safe in its open position.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIG. 1, a safe 10 is provided having an upper compartment 16 with an upper door having a handle 12 thereon which is provided with a lock and key, and a lower compartment 17 having a door with a handle 13 thereon and a lock 15 with a key 14 therefor,

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for unlocking the lower compartment. The upper compartment 16 also has a one-way slidable door 11 therein.

As will best be seen in FIGS. 2 and 3, an arcuate door 11 is provided having an opening 21 therein which, in its open position as shown in FIG. 3, has the day's receipts 20 deposited therein, and when closed as shown in FIG. 2, the valuables or receipts 20 drop through the arcuate opening 21 into a container 19 having a handle 19A thereon for easy removal from the compartment 16 when that compartment is opened. The clerk or attendant who is employed on the premises containing the safe will normally deposit money 20 from time to time while keeping in his possession or in the cash register small amounts for making change, and accumulating the bulk of his receipts in the container 19 in locked compartment 16.

In the lower compartment 17 of the safe 10 will normally be stored a key 32 for opening the upper compartment 16 and gaining access to the money stored in the container 19. The lower compartment 17 contains a blocking means in the form of a bar 26 which is pivoted about point 27. Thus, the bar 26 acts as a lever pivoted about point 27. On one end of the bar 26 is a blocker 28 which blocks the insertion of key 14 properly in the lock 15 so that it cannot be opened. A pin 25 positioned on the other end of the bar 26 from the blocker 28 holds a cup 24 for pivoting the bar 26 about pivot point 27 to remove the blocker 28 from the lock 15 to allow the opening of the compartment 17 using the key 14.

A mechanical time-control means in the form of a sandbox 23, filled with sand 22 and capable of being released by push rod 18, is mounted in the lower compartment 17 to cooperate with the blocker 28. When the rod 18 is pulled out, sand 22 from the sandbox 23 runs into the cup 24, the weight of which eventually pivots the bar 26 around pivot point 27 to lift the blocker 28 in the position indicated by the dotted lines in FIG. 2. The amount of time which elapses before the lock 15 is unblocked by the blocker 28 will depend on the amount of sand required to provide the pivot function and the time it takes for that amount of sand to be deposited in the cup 24 once the push rod 18 is actuated. This may be preferably on the order of 1 hour, or any other desired time. A rod 30 is connected to the bar 26, on the inside of the handle 13 to provide stability and prevent jiggling of the safe to actuate and release the blocker 28. A post 29 is also provided to restrict the upward movement of the bar 26 and a ring-chain 31 extending into the upper chamber restricts the lower movement of the bar 26, again to provide stability and insure the proper operation of the blocker 28. The ring and chain 31 also provide a means, by using a spare key to the upper compartment, of opening the lower compartment 17 in the case of malfunction, to repair the blocking or mechanical time-actuating mechanism.

In operation, the key 32 to the upper compartment 16 is locked in the lower compartment 17, utilizing the key 14. The possession of the key 14 would normally be limited to a person or persons who are not employed on the premises containing the safe, such as a district manager, or other such person. The day's receipts are accumulated in container 19 through the arcuate door 11 which allows deposit but not access to the container

19. When it is desired to remove such receipts, the push rod 18 is pulled out, allowing the sand 22 to drop into the cup 24, which pivots the bar 26 about the pivot point 27 after a predetermined time, on the order of an hour, which removes the blocker 28 from the lock 15, 5 allowing the full insertion of the key 14 therein, and thus allowing the opening of the compartment 17. The key 32 is then removed, and the upper compartment 16 is opened for the authorized removal of the receipts in the container 19. Would-be robbers would be foiled, 10 since the attendant does not have a key to the safe, and even if he did, access to the receipts in the upper compartment would not be possible until a predetermined time after the mechanical time-control means is actuated, thus requiring a would-be robber to wait around 15 to achieve success. Since the success of robberies generally requires a quick get-away, the safe embodied in this invention is not conducive to such a mode of operation.

Since other modifications and changes, varied to fit particular operating requirements and environments, will be apparent to those skilled in the art, the invention is not considered limited to the examples chosen for purposes of disclosure, and covers all modifications and changes which do not constitute departures from the true spirit and scope of this invention. 25

I claim:

- 1. A safe which is mechanically time-controlled to discourage robberies of businesses, comprising
  - a. a compartmentized safe having at least first and 30 second compartments therein each of which has a door, a lock thereon, and a separate key for unlocking each compartment,
  - b. a separate one-way opening in said first compart-

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- ment for receiving and depositing valuables in said first compartment and providing no access to the valuables so deposited from said opening,
- c. blocking means in said second compartment for blocking the opening of said second compartment with the key to said second compartment, said second compartment having the key to said first compartment locked therein, and
- d. a mechanical time-controlled means mounted in said second compartment coupling to said blocking means for actuating said blocking means after a predetermined time interval to unblock the lock on said second compartment, thereby allowing the opening of said second compartment, the removal of the key to and thus the opening of said first compartment.

2. The safe set forth in claim 2 wherein said blocking means comprises a pivoted bar having one end thereof blocking the lock of said second compartment and the other end cooperating with said mechanical time-control means for pivoting said bar to remove the end thereof from blocking said lock.

3. The safe set forth in claim 3 wherein said time control means comprises a sand box having sand therein which is released by said mechanical actuation means, a cup positioned on said other end of said pivoted bar and arranged to receive sand from said sandbox which pivots said bar after a predetermined time interval based on the accumulation of sand in said cup.

4. The safe set forth in claim 4 wherein said mechanical actuation means comprises a push rod which unblocks the passage of sand from said sand box to said cup.

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