Jan. 28, 1964 M. KAMINSKY 3,119,248

RECEPTACLE FOR VALUABLES

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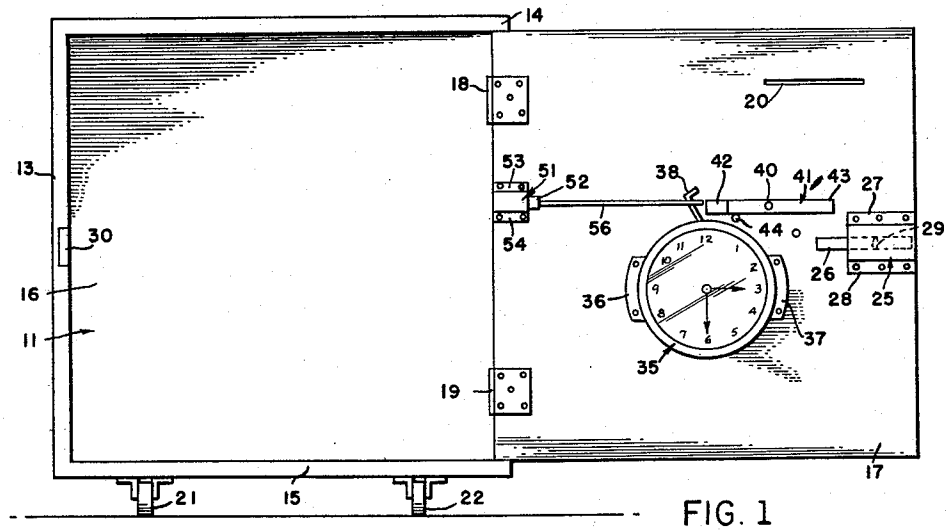


FIG. 1

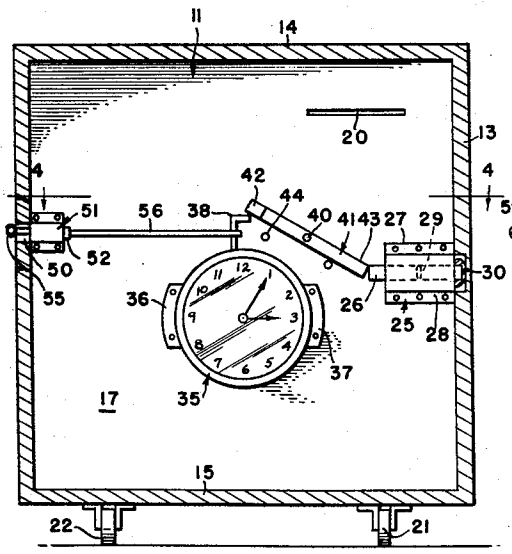


FIG. 2.

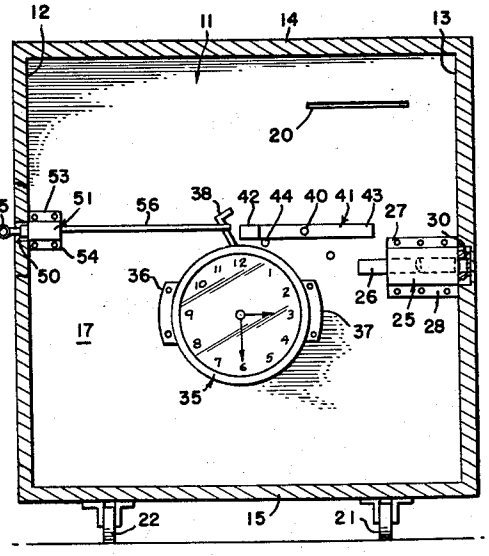


FIG. 3.

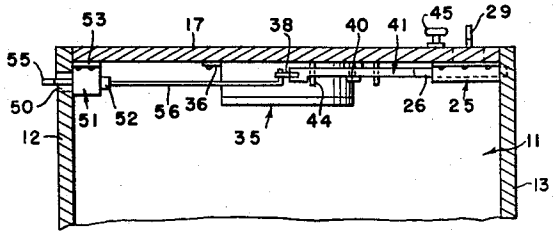


FIG. 4.

Meyer Kaminsky

MEYER KAMINSKY

INVENTOR

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FIG. 5.

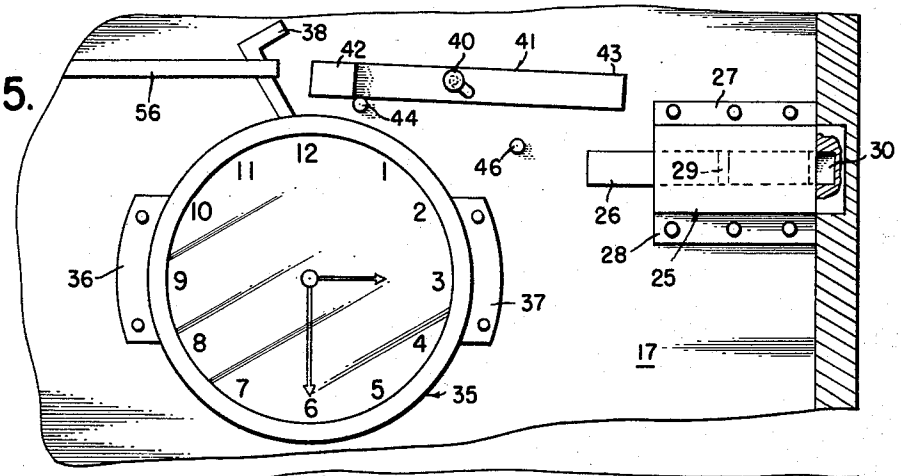


FIG. 6.

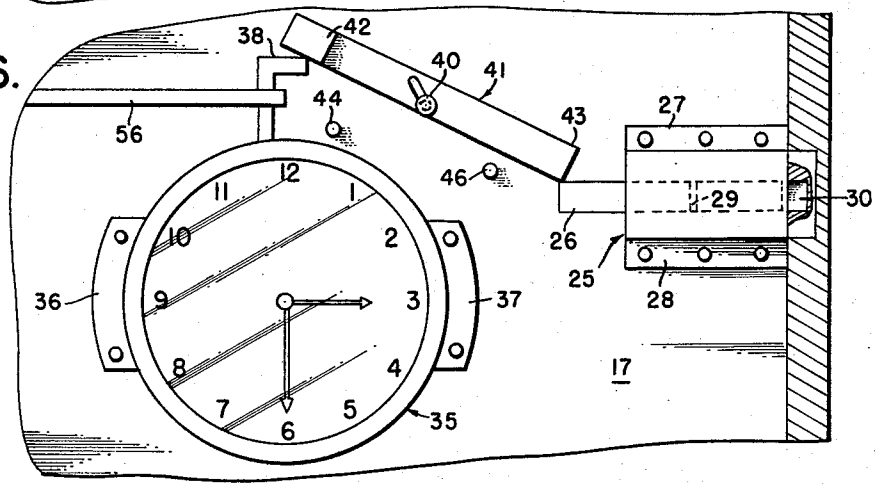
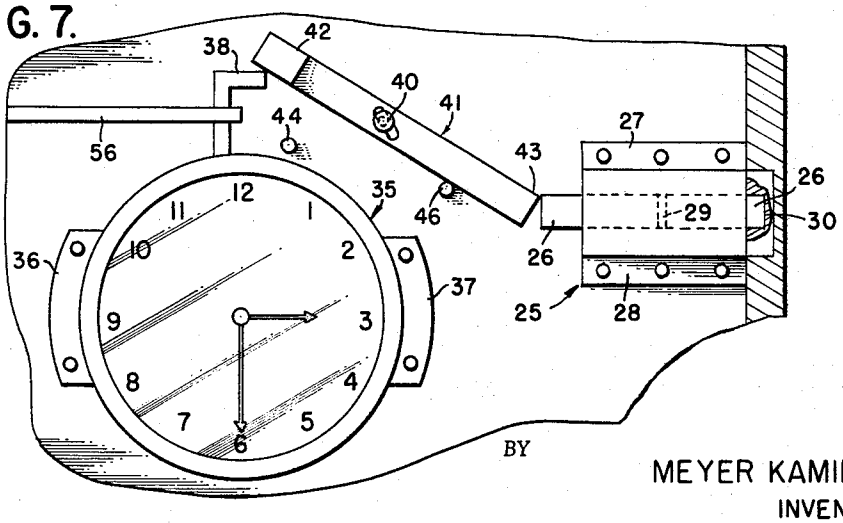


FIG. 7.



BY

MEYER KAMINSKY
INVENTOR

United States Patent Office 3,119,248 Patented Jan. 28, 1964

3,119,248

RECEPTACLE FOR VALUABLES

Meyer Kaminsky, 451 Vermont St., Brooklyn, N.Y.

Filed Mar. 16, 1962, Ser. No. 180,298
3 Claims. (Cl. 70—272)

This invention relates to a receptacle for receiving and holding valuables and provides means, including a timing device, for activating a lock mechanism to render the door of the receptacle openable. The invention further provides a secondary release mechanism for rendering the door openable from outside the receptacle in the event of mechanical failure of the timing device.

This application is a continuation-in-part of application bearing Serial No. 799,256, filed March 13, 1959, now abandoned.

The invention has among its objects the provision of such a receptacle which can be used as a safe, can function as a component of other devices, such as a cash register, and in general, has utility in any situation in which it is desired to confine valuables for a definite length of time at the end of which time the receptacle is automatically rendered openable. Other objects will be apparent from the description of the invention.

In general, according to the invention, the receptacle for holding valuables comprises a sealed compartment having walls and having an openable door with a free, lateral end, a timing device carrying a resilient lever arm, preferably constructed of resilient metal, and being adapted to be preset to a specific time to cause the lever arm to oscillate at the preset time, and a lock mechanism capable of being set in a condition whereby the door is locked and comprising a slidable bolt the forward end of which is projectable into an associated groove in the compartment wall adjacent to the free, lateral end of the door in which projected position of the bolt the door is locked. Means are also provided for maintaining the door in such locked position which comprise a pivot pin, a pivot bar loosely pivotally mounted on the pivot pin to permit movement in all directions, one end of the pivot bar being bottom-heavy and adapted to engage the lever arm by resting thereon in which position the other end of the pivot bar rests against the rear end of the bolt, when projected, thus precluding longitudinal movement of the bolt and thereby maintaining the door in locked position by holding the forward end of the bolt in said associated groove, the bottom-heavy end of the pivot bar being adapted to move downwardly when the lever arm is oscillated out of engagement therewith, means for arresting the downward movement of the bottom-heavy end of the pivot bar being also included. The door is rendered openable when the timing device oscillates the lever arm at the preset time to disengage it from the said bottom-heavy end of the pivot bar causing the bottom-heavy end to drop downwardly until it is halted by said arresting means, the other end of the pivot bar simultaneously pivoting upwardly and out of contact with the rear end of the projected bolt whereupon the bolt can be activated to slide rearwardly and withdrawn from the associated groove thereby rendering the door openable. The timing device, lock mechanism, and means for maintaining the door in locked position are positioned within the compartment, preferably on the inner wall of the door.

The receptacle also includes a secondary release mechanism for externally rendering the door openable in the event of mechanical failure of the timing device to oscillate the lever arm at the preset time to disengage the lever arm from the bottom-heavy end of the pivot bar. This mechanism comprises an opening in the wall of the compartment through which communication may be

effected with the lever arm and means associated with said opening adapted to disengage the lever arm from the bottom-heavy end of the pivot bar, resting thereon, when activated from outside the compartment, to cause the bottom-heavy end to drop downwardly until halted by the arresting means, the other end of the pivot bar simultaneously pivoting upwardly and out of contact with the rear end of the projected bolt whereupon the bolt can be activated to slide rearwardly and withdrawn from said associated groove thereby rendering the door openable.

The receptacle is preferably also provided with a slot in a wall of the compartment through which valuables can be deposited into the compartment at any time.

In the accompanying drawing which represents an embodiment of the invention

FIG. 1 is a front elevation of the receptacle with the door open;

FIG. 2 is a cross-sectional elevation of the receptacle looking from the rear to the front with the door in locked position;

FIG. 3 is a cross-sectional elevation of the receptacle looking from the rear to the front and depicting the secondary release mechanism in an unlocked position;

FIG. 4 is a view along the line 4—4 of FIG. 2;

FIG. 5 is an enlarged fragmentary detail view illustrating means for maintaining the door in locked position, the door of the receptacle being in open position in this view;

FIG. 6 is an enlarged fragmentary detail view illustrating the means of FIG. 5 in a cocked position just prior to locking the door; and

FIG. 7 is an enlarged fragmentary detail view illustrating the means of FIG. 5 and FIG. 6 with the door in locked position.

Referring with particularly to the drawing, the receptacle comprises a sealed compartment 11 having side walls 12 and 13, top 14, bottom 15, rear wall 16, and door 17, the door being pivotally attached to the forward end of side wall 12 by hinges 18 and 19. The receptacle is preferably provided with a slot 20 in a wall of the compartment, e.g., in door 17, for depositing valuables therethrough into the compartment at any time. When it is desired to utilize the receptacle as a mobile safe, attached movable means, such as rollers 21 and 22, are included.

A lock mechanism capable of being set in a condition whereby the door is locked is also provided. This lock mechanism comprises a conventional latch-type lock 25, having a slidable bolt 26, mounted on the inner wall of the door and supported by brackets 27 and 28. The lock can be activated, as for example, by a proper key 29, to cause the forward end of the bolt to slide forwardly to be projected into an associated groove 30 in the compartment wall adjacent to the free, lateral end of the door, that is, in wall 13, thereby to lock the door. When the forward end of the bolt is held in this associated groove, the door is maintained in locked position and cannot be opened. When the key 29 is able to activate the bolt so that it can slide rearwardly and withdrawn from the associated groove, the door is rendered openable.

The receptacle also provides a timing device, such as time clock 35, mounted on the inner wall of the door, and supported by brackets 36 and 37. The time clock carries a resilient lever arm 38, preferably constructed of resilient metal, and is adapted to be preset to a specific time to cause the lever arm to oscillate at the preset time and thereby render the door openable, as will be explained hereinafter. The time clock 35 is of the conventional alarm clock type utilizing a lever arm to oscillate and strike a gong at the preset time for which the alarm was set, and has been modified for use in the instant invention by eliminating the gong.

Means are also provided for maintaining the door in the locked position described above. Such means, illustrated in FIGS. 5, 6 and 7, comprise a pivot pin 40, mounted on the inner wall of the door and positioned between the lever arm 38 and the rear end of bolt 26, and a pivot bar 41, pivotally mounted on the pivot pin in a loose manner so as to permit movement or some slight play of the pivot bar in all directions as required for its functions. Preferably, pivot pin 40 is set in a slot in pivot bar 41 at an angle of about from 10° to the horizontal, as shown in FIGS. 5, 6, and 7, thereby permitting the pivot bar to move upwardly, downwardly, and slightly to the right as desired. One end 42 of the pivot bar is bottom-heavy and is adapted to engage the lever arm by resting thereon in which position the other, light end 43 of the pivot bar rests against the rear end of the bolt 26 when in projected position thus precluding longitudinal movement of the bolt and thereby maintaining the door in locked position by holding the forward end of the bolt in associated groove 30. The bottom-heavy end 42 of the pivot bar is adapted to move downwardly when the lever arm is oscillated out of engagement therewith. Means are also included for arresting the downward movement of the bottom-heavy end 42 of the pivot bar, such as stop 44, which is mounted on the inner wall of the door and positioned between pivot pin 40 and lever arm 38. The door is rendered openable when the timing device oscillates the lever arm at the preset time to disengage it from the bottom-heavy end 42 of the pivot bar causing the bottom-heavy end to drop downwardly until it is halted by stop 44, the other end of the pivot bar (end 43) simultaneously pivoting upwardly and out of contact with the rear end of the projected bolt whereupon the bolt can be activated by key 29 to slide rearwardly and withdrawn from associated groove 30 thus rendering the door openable. It is opened by pulling handle 45.

When it is desired to set the receptacle from the open door position of FIGS. 1 and 5 to the corresponding locked positions of FIGS. 2 and 7, the time clock 35 is manually adjusted to the desired preset time at which the lever arm is to oscillate, and the pivot bar, because of its loose positioning on the pivot pin, is raised above the highest point to which the lever arm would reach when erect. The lever arm is then manually adjusted to a substantially erect position parallel to side walls 12 and 13 and the pivot bar then manually adjusted so that its heavy end 42 rests on the top of the lever arm while its light end 43 rests on the upper surface of the retracted bolt, as shown in FIG. 6. The door, by virtue of this cocked position of the pivot bar, is now ready to be locked, and maintained in such locked position. The door is then closed and key 29 inserted into lock 25 and turned therein whereupon bolt 26 is projected into associated groove 30 locking the door. Simultaneously therewith, as bolt 26 slides out from under the light end 43 into its projected position, the said light end 43 drops until arrested by restraining pin 46 so that the pivot bar assumes the positions shown in FIGS. 2 and 7, that is, the light end 43 rests against the rear end of the bolt in its projected position thus precluding longitudinal movement of the bolt and thereby maintaining the door in locked position by holding the forward end of the bolt in associated groove 30. The door is rendered openable when the timing device oscillates the lever arm at the preset time to disengage it from the bottom-heavy end 42 of the pivot bar, as described above.

Although the timing device (time clock 35), the lock mechanism (bolt 26 etc.), and the means for maintaining the door in locked condition (pivot pin 40, pivot bar 41, etc.) have been described as being mounted on the door, which is the preferred construction, they may be positioned within the compartment in various ways, the only requirement being that they be associated with the door in such a manner that the door is rendered openable when the time clock oscillates the lever arm at the preset time.

The receptacle further provides a secondary release mechanism for externally rendering the door openable in the event of mechanical failure of the timing device to oscillate the lever arm at the preset time to disengage the lever arm from the bottom-heavy end 42 of the pivot bar. This secondary release mechanism comprises an opening in the wall of the compartment, as, for example, aperture 50 in wall 12, through which communication may be effected with the lever arm, and means associated with aperture 50 adapted to disengage the lever arm from the bottom-heavy end of the pivot bar, resting thereon, when activated by external means from outside the compartment to cause the bottom-heavy end to drop downwardly until halted by the arresting means, e.g., stop 44, the other end 43 of the pivot bar simultaneously pivoting upwardly and out of contact with the rear end of the projected bolt whereupon the bolt can be activated to slide rearwardly and withdrawn from the associated groove 30 thereby rendering the door openable.

The means associated with aperture 50 comprise a pull action lock 51 having a frontwardly-moving pullbolt 52 with a sharp pull action when activated, mounted on the inner wall of the door, supported thereon by brackets 53 and 54, and positioned near the end of the door opposite the free, lateral end thereof. The lock 51 is provided with a keyhole, not shown, with which communication is effected through aperture 50, and which is adapted to receive a key 55 through aperture 50, which, when applied thereto, e.g., turned therein, will activate the pullbolt 52 causing it to move frontwardly with a sharp pull action. A pullrod 56 is also included, one end of which is attached to the rear of pullbolt 52 and the other end of which is positioned relative to the lever arm, e.g., hooked around the lever arm, so that the pull action of the pullbolt, when activated, will also pull the lever arm frontwardly to disengage it from the bottom-heavy end 42 of the pivot bar, resting thereon, to render the door openable as described above.

In the operation of the secondary release mechanism, key 55, from outside the compartment, is inserted through aperture 50 into the keyhole of lock 51. As the key is applied, e.g., turned therein, pullbolt 52 is released with a frontwardly-moving sharp pull action simultaneously pulling the attached pullrod 56 in the same frontwardly-moving direction causing it to disengage the resilient lever arm 38 from the bottom-heavy end 42 of the pivot bar 41 which thereupon drops downwardly until arrested by stop 44. As the bottom-heavy end moves downwardly, the light end 43 moves upwardly so that the projected bolt can now be activated by key 29 to slide rearwardly and withdrawn from associated groove 30 to render the door openable. The pullbolt 52 may then be moved back to the position it occupied before being activated by key 55 and this key then removed from the keyhole. The door is now openable and can be opened by pulling handle 45.

Although the means associated with the aperture 50 have been described as being mounted on the door within the compartment, it is apparent that they may be mounted in many equivalent positions either inside or outside the compartment. Thus, for example, the pull action lock 51 may readily be positioned within aperture 50 rather than on the door. Also, while the said associated means have been depicted as a pull action lock and pullrod, it is believed apparent that many other structures utilizing pull chains, push rods, etc., for disengaging the lever arm from the bottom-heavy end of the pivot bar, resting thereon, are conceivable. The only criteria for the said associated means is that they be adapted to disengage the lever arm from the bottom-heavy end of the pivot bar.

It is contemplated that the key of the secondary release mechanism, that is, key 55, will be kept in the custody of a special agent who is not located on the premises where the receptacle is to be kept. Such an arrangement will, it is believed, serve to minimize those types of bur-

glaries and robberies in which the felon attempts to force someone on the premises to open the receptacle. Since the knowledge that the receptacle cannot be opened until the preset time and that the secondary release mechanism cannot be activated since the key 55 is not on the premises, will be available to the public, such knowledge should serve as a deterrent for would-be-felons who might otherwise be inclined to force the owner, or other persons on the premises, to open the receptacle.

Having thus described the invention, what is claimed is:

1. A receptacle for holding valuables comprising a sealed compartment having walls and having an openable door with a free, lateral end, a timing device carrying a resilient lever arm and being adapted to be preset to a specific time to cause the lever arm to oscillate at the preset time, a lock mechanism capable of being set in a condition whereby the door is locked and comprising a slidable bolt the forward end of which is projectable into an associated groove in the compartment wall adjacent to the free, lateral end of the door in which projected position of the bolt the door is locked, means for maintaining the door in such locked position comprising a pivot pin, a pivot bar loosely pivotally mounted on said pivot pin to permit movement in all directions, and a restraining pin, one end of said pivot bar being bottom-heavy and adapted to engage said lever arm by resting thereon in which position the other end of said pivot bar is restrained from downward movement by said restraining pin and rests against the rear end of said bolt when projected thus precluding longitudinal movement of the bolt and thereby maintaining the door in locked position by holding the forward end of the bolt in said associated groove, said bottom-heavy end being adapted to move downwardly when said lever arm is oscillated out of engagement therewith, and means for arresting the downward movement of said bottom-heavy end of the pivot bar, said door being rendered openable when the timing device oscillates the lever arm at the preset time to disengage it from said bottom-heavy end of the pivot bar causing said bottom-heavy end to drop downwardly until it is halted by said arresting means, the other end of the pivot bar simultaneously pivoting upwardly and out of contact with the restraining pin and the rear end of the projected bolt whereupon the bolt can be activated to slide rearwardly and withdrawn from said associated groove thereby rendering the door openable, said timing device, bolt, and means for maintaining the door in locked position being positioned within the compartment, and a secondary release

mechanism for externally rendering the door openable in the event of mechanical failure of the timing device to oscillate the lever arm at the preset time to disengage said lever arm from said bottom-heavy end of the pivot bar, comprising an opening in the wall of the compartment through which communication may be effected with said lever arm and means associated with said opening adapted to disengage said lever arm from said bottom-heavy end of the pivot bar, resting thereon, when activated from outside the compartment to cause said bottom-heavy end to drop downwardly until halted by said arresting means, the other end of the pivot bar simultaneously pivoting upwardly and out of contact with the restraining pin and the rear end of the projected bolt whereupon the bolt can be activated to slide rearwardly and withdrawn from said associated groove thereby rendering the door openable.

2. The receptacle of claim 1 wherein the means of the secondary release mechanism comprises a lock associated with said opening having a frontwardly-moving pullbolt with a sharp pull action when activated, a pullrod one end of which is attached to said pullbolt and the other end of which is positioned relative to the lever arm so that the pull action of the pullbolt, when activated, will pull the lever arm frontwardly to disengage it from said bottom-heavy end of the pivot bar resting thereon.

3. The receptacle of claim 1 wherein the means of the secondary release mechanism comprises a lock associated with said opening having a frontwardly-moving pullbolt with a sharp pull action when activated, mounted on the inner wall of the door and positioned near the end of the door opposite the free, lateral end thereof, said lock being provided with a keyhole adapted to receive a key which, when applied thereto, will activate the pullbolt, and a pullrod one end of which is attached to the rear of said pullbolt and the other end of which is hooked around said lever arm and being capable of pulling said lever arm out of engagement with said bottom-heavy end of the pivot bar, resting thereon, when the pullbolt is activated.

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