Feb. 24, 1942. L. B. LOVE 2,273,971

APPARATUS FOR SAFE COLLECTION, DELIVERY, AND TRANSPORTATION OF VALUABLES

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FIG. 2.

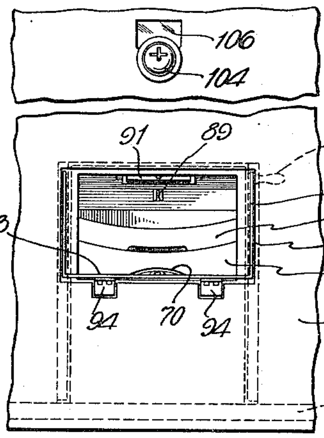


FIG. 3.

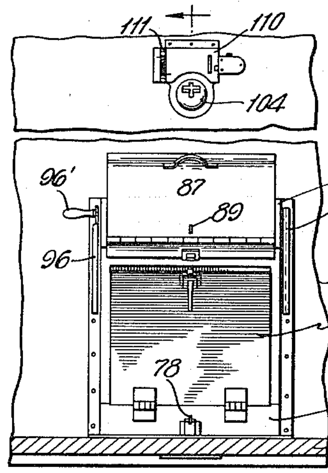


FIG. 5.

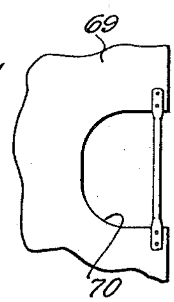
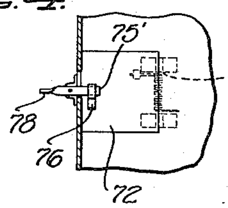
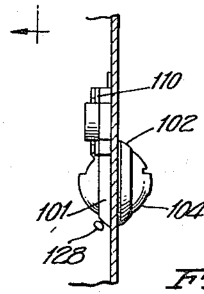


FIG. 4.





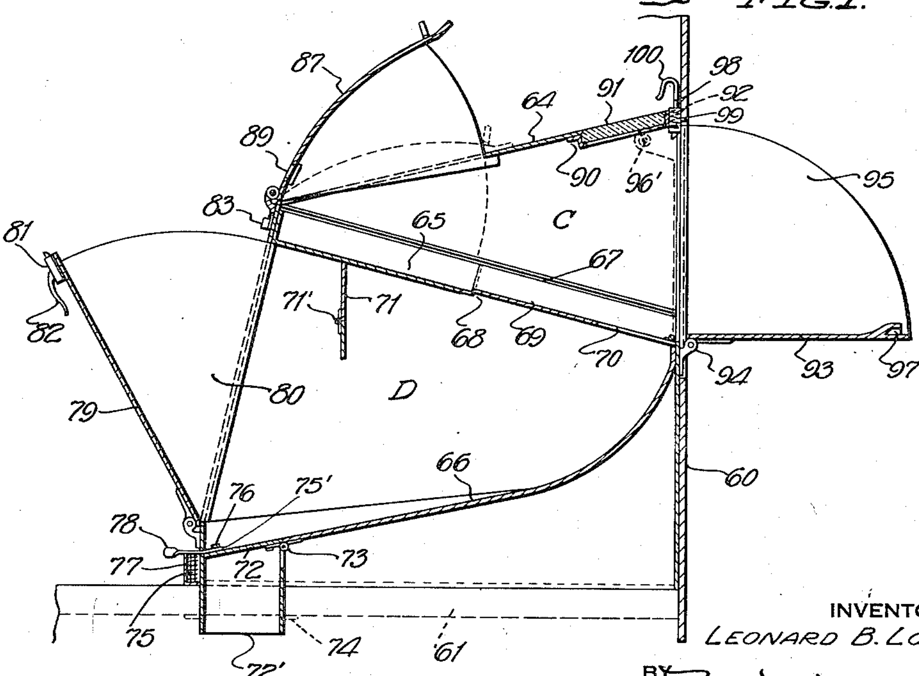


FIG. 1.

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FIG. 6.

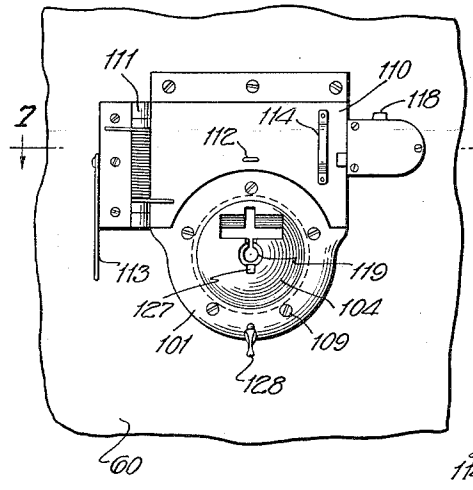


FIG. 7.

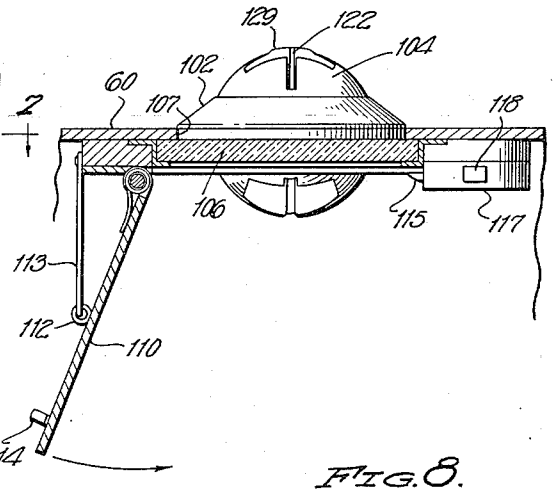


FIG. 8.

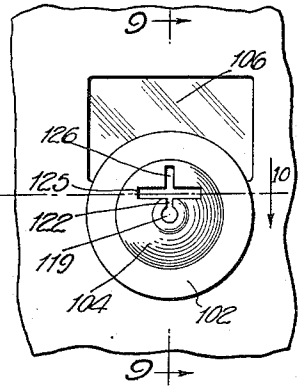


FIG. 9.

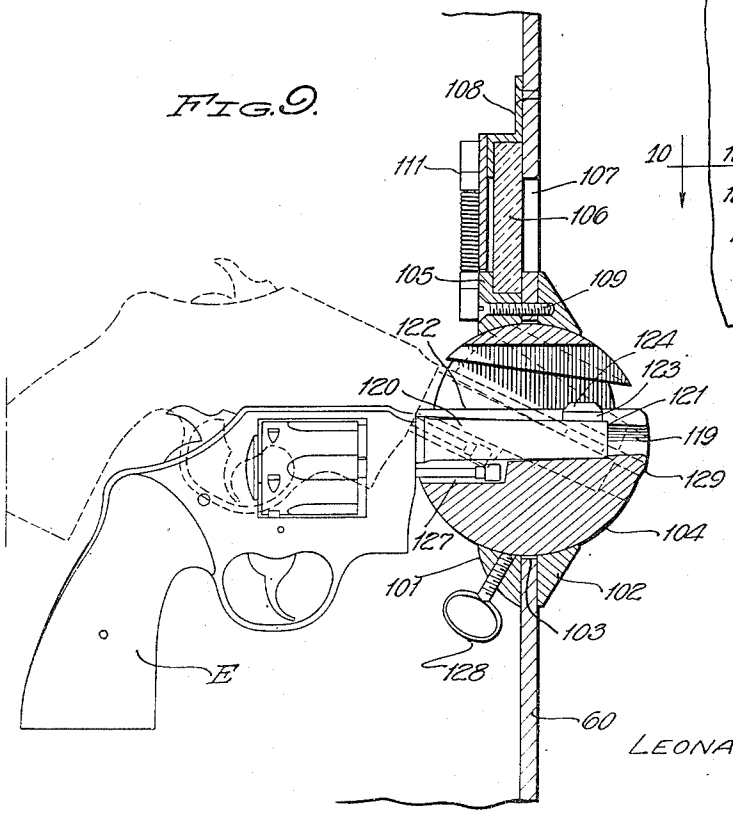
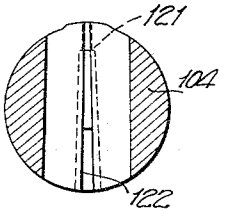


FIG. 10.



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Patented Feb. 24, 1942 2,273,971

UNITED STATES PATENT OFFICE

2,273,971

APPARATUS FOR SAFE COLLECTION, DELIVERY, AND TRANSPORTATION OF VALUABLES

Leonard B. Love, New York, N. Y.

Application July 2, 1938, Serial No. 217,163

5 Claims. (Cl. 109—11)

This invention relates to apparatus for safe collection, delivery and transportation of valuables and is adapted for the collection and delivery of currency, jewelry, securities, mail, and bullion to and from banking and commercial institutions, post-offices, express offices, railway cars and the like. The present application is a continuation in part of my application for Letters Patent of the United States, Ser. No. 129,288, filed March 5, 1937, and in connection with which a complete vehicle of the type referred to herein is described and which matured into Patent No. 2,185,209 issued January 2, 1940.

The present invention has for one of its features an arrangement of the duplex safe or chamber of the previous application within the vehicle body or other enclosure in such a manner as to facilitate collection and delivery with adequate protection by firearms during such operations.

In the invention as illustrated in the accompanying drawings:

Fig. 1 is a transverse section through the side wall and floor of a vehicle body or other enclosure in which the duplex safe or compartment has been embodied.

Fig. 2 is a side elevation exteriorly showing the collection and delivery door in the open position.

Fig. 3 is a side elevation partly in section from within the body or other enclosure showing the safe closures in partially open condition.

Fig. 4 is a top plan view of the gas bomb release opening.

Fig. 5 is a detail plan view of a portion of the slide.

Fig. 6 is an enlarged plan from within the vehicle body or other enclosures showing the safety gun mounting and observation window.

Fig. 7 is a sectional view on the line 7—7 of Fig. 6.

Fig. 8 is a plan view exteriorly of the vehicle body or other enclosure of that portion of the side wall containing a safety gun mounting.

Fig. 9 is a sectional side elevation on the line 9—9 of Fig. 8.

Fig. 10 is a sectional view on the line 10—10 of Fig. 8.

In detail:

The side wall of a vehicle body or other enclosure of armor plate is indicated at 60, while the floor of the same is shown at 61; this side wall is provided with an opening 62 for purposes to be hereinafter set forth. The duplex safe unit is comprised of the side wall 60 of the vehicle body or other enclosure, the bottom or floor 61 thereof, a back wall 63, a top wall 64 and opposite side walls; the top wall 64 is inclined upwardly with respect to the floor. Within the interior of the duplex safe unit thus formed are two chambers C and D, as in the case of my previously filed application hereinbefore referred to. These chambers are formed, or provided, by inclined partitions of armor plate as indicated at 65 and 66 mounted in any suitable manner. The partition 65 in addition to being inclined is concaved as shown clearly in Fig. 2, and is provided with guideways 67 in which there slides, over an opening 68, the closure member 69 which is movable in the guideways 67 to open or close the aperture 68 in the partition 65. This closure member 69 has a handhole 70 cut therethrough in which the hand may be inserted for opening or closing the closure with respect to the opening 68 which it serves and which, at the same time, provides a slot through which envelopes or other small packages may be inserted into the lower compartment D; large packages are placed in the lower compartment by opening the closure member 69. On the underside of the diagonal partition 65 is a dependent guard 71 with a hinged lower portion 71' the purpose of which will be later set forth.

As stated, the bottom 66 of the lower compartment D is also inclined so that packages or other material inserted through the openings 68 and 70 will travel by gravity to the rear of the lower compartment. At the rear of the lower compartment and directly above the opening 72' is a trap door 72 spring-hinged as at 73 so that it may move downwardy against the stop 74, but is locked in an upward position by a spring actuated detent 75 engaging under a stop 76, the spring 77 serving to always maintain the latch in a closed position until released by manual pressure against the lever 78.

The rear partition 63 of the duplex safe unit has an opening which is closed by the door 79 having side pieces 80 which are shaped to engage the rear wall 63 and limit the extent of movement of the door 79. A suitable latch 81 at the top and spring operated, closing and releasing by the lever 82 engages under a lug 83 so as to maintain this door in the closed position.

In the upper wall or top of the compartment C is a frame 90 mounting an observation window 91 which is in a position so as to command a view of operations through the outside opening 62 in the side wall 60 of the vehicle body or other suitable enclosure. This opening 62 is

closed by a door 93 hinged as at 94 and having side shields 95 which have limit stops 96 and handle 96', for opening and closing the door 93 from inside of vehicle body. These side shields pass through slots in the flanges on the side walls of the safe so as to permit the complete closing of the outside access door 93 which has in its upper edge a socket 97 which is engaged, when the door is closed, by a bolt 98 operating in a guideway 99 on the interior side of the outside wall 60 and which is held under tension in its downward position by a spring 92 so that once the outside access door 93 is pushed to the closed position it becomes locked and may only be opened from within the interior of the vehicle body or other enclosure by the driver or occupant raising the bolt through the medium of the handle 100.

This handle 100 is positioned adjacent the observation window 91 so that at all times when the access door is open the driver of the vehicle or other occupant is in a position to observe everything which takes place.

The doors 79 and 93 are so related with respect to each other and the drop shield 71 with its hinged lower portion 71' that any direct firing into the compartment D through the slide 69 having been left open would have to be substantially at right angles to the surface of the door 79 and yet large packages are easily accommodated, consequently no bullets could ricochet upwardly into the interior of the vehicle body. Likewise the same is true of the relationship between the outside access door 93 and the aperture which it closes and the inside access door 87 of the upper compartment C. At the same time the gunport opening 89 is positioned so that when the access door 87 to the upper compartment C is opened it affords a shield for the party within the vehicle in the event that he wishes to cover someone outside the vehicle body through gunport 89.

At this point it is to be noted that due to the side shields 95 on the outside access door 93 any party unauthorizedly approaching the vehicle with the object of seizing any valuables placed on the access door 93 which forms a shelf in its open position, would necessarily be within range of the gunport 89 and at the same time would stand at a fair distance from the side wall of the vehicle body, the access door 93 being of considerable dimension, say of the order of 12 inches.

Embodied within the side wall 60 of the enclosure and centrally above the access door 93 is a safety gun mounting. This gun mounting is constituted of an inside and outside frame member 101 and 102 respectively, which serve to frame a circular aperture 103 in the side wall 60, and each of which is an annulus having a spherically curved inner surface which mounts the universally movable sphere 104. In addition the inside frame member 101 is so shaped or slotted as at 105 to accommodate the lower edge of an observation window 106 closing an aperture 107, an upper frame member 108 acting as the top support.

The frame members 101 and 102 are secured together by screw members 109 flush on the inside and facing through the inner frame member 101 and threaded into the outer frame member 102. A projecting door 110 is spring-hinged for automatic closure as at 111 and is provided with an eye 112 into which a hook 113 may be engaged as shown in Fig. 6 for holding this projecting door in the opened position. A handle 114 provides means for opening the door. A latch 115 mounted in a lock casing 117 at the opposite side of the door from the spring-hinge 111 maintains the door in the closed position until actually opened by depressing the member 118. This lock may be of any suitable commercial construction.

Within the socket created by the frame members 101 and 102 is the sphere 104 which, as will be obvious, is universally movable. Centrally of the sphere 104 is a door 119 counterbored back from its outer end to accurately accommodate, without more than necessary clearance, the barrel 120 of a pistol E. Pistols of this type have a tapered barrel and this counterbore is also tapered so that when the end of the barrel is firmly positioned up to its limit at the end of the counterbore, as indicated at 121, the barrel is held firmly in position without any play and thus becomes rigid with the sphere 104. A sight slot 122 milled as shown accommodates the base 123 of the forward sight 124 on the pistol barrel and is surmounted by a transverse milled sight opening 125 of only sufficient width and height to permit proper use of the sight, an extension 126 aligning with the milled slot 122, forming a cross through which the eye may obtain a proper sight along the barrel and the forward sight opening. The sides of the slot 122 are on a taper so that the movement of the gun barrel 120 into its final position brings the pistol into vertical alignment and thus, when seated, the sight 124 forms a division of the horizontal sight opening 125 into right and left hand slots with a vertical slot above. The door in the sphere 104 is relieved at the bottom as indicated at 127 to provide for the ejector rod of the revolver. It is also to be noted that the top surface of the transverse sight slot 125 is on an angle towards the outside so that the outside opening is smaller than the inside opening.

It is to be noted that with the pistol in the position shown in Fig. 9, with the end of the pistol barrel against the counterbore 121, the wall of the door 119 in the sphere 104 protects the end of the pistol barrel from damage in case of a direct hit by a projectile from the outside, and thus the pistol remains undamaged.

The location of the safety gun mounting and its dimensions are such that the range of movement of the pistol will take in the greatest possible amount of side swing giving a maximum range, and at the same time it may be elevated as shown by dotted lines in Fig. 9. The degree of elevation which the pistol may have is such that the user has within his range any person standing at the end of the outside access door 93 when the same is open, it always being necessary on account of the side guards 95 that a person unauthorizedly trying to obtain something from the shelf formed by the outside access door 93, or from within the compartment C or D, must stand at the front of this door where he necessarily comes within range of the pistol E when moved to its uppermost position. The sphere 104 and its machining is such that it will fit the standard weapons adopted by those operating the vehicle. The present "Colt Police Special" has, for instance, a four inch barrel which the sphere 104 may be machined for.

A member 128 is threaded into the lower portion of the inside frame member 101 and may be screwed up against the surface of the sphere 104 so that the sphere 104 may be locked in any adjusted position if desired. When the sphere 104 is locked in the downward position the open-

ings therethrough are at such an angle that no moisture from rain or otherwise enters these openings. Preferably the sphere and its frame members are made of stainless steel so that no rust accumulates to interfere with the accurate fit of the pistol barrel within the bore and guides of the sphere 104, other parts of the walls and frames, and so forth, may be constructed of armor plate or steel of suitable thickness or specification.

The sphere 104 carries, concentric with the opening 119, a raised portion 129 above the surface of the sphere 104 so that under no circumstances can the sphere 104 be moved to a position where it will be inaccessible for entrance of the pistol E into position.

While, in the foregoing, I have described the invention as illustrated herein for the purpose of satisfying the patent statutes, it is, nevertheless, to be understood that in carrying the same into practice I may resort to any and all modifications falling within the scope of the appended claims.

I claim:

1. In a vehicle body having armored walls and a floor, a safe against a wall of said body, a diagonal partition dividing said safe into upper and lower compartments, and sloping toward the wall of the vehicle, a door through the body wall affording access to the upper compartment, a door in the partition affording access to the lower compartment, a door in the upper wall of said safe within the body providing access to the upper compartment and shielding the operator from gun fire directed through the body wall door, a door within the vehicle to the lower compartment, and an observation window closing an opening in the top wall of the safe at a location providing a view of the upper compartment and its body wall door from within the body, the door of the upper compartment having an opening therein whereby gunfire may be directed from within the vehicle body toward the body wall door.

2. In a vehicle body having armored walls and a floor, a safe against a wall of said body, a diagonal partition dividing said safe into upper and lower compartments, and sloping toward the wall of the vehicle, a door through the body wall affording access to the upper compartment, a door in the partition affording access to the lower compartment, a door within the body providing access to the upper compartment and shielding the operator from gun fire directed through the body wall door, a door within the vehicle to the lower compartment, an observation window framed in the top wall of the safe to provide a view from within the vehicle body to the upper compartment, the door of the upper compartment having an opening therein whereby gun fire may be directed from within the vehicle body toward the body wall door, and a dependent shield from the diagonal partition extending into the lower compartment.

3. In a vehicle body having armored walls and a floor, a safe against a wall of said body, a diagonal partition dividing said safe into upper and lower compartments, and sloping toward the wall of the vehicle, a door through the body wall affording access to the upper compartment, a door in the partition affording access to the lower compartment, a door within the body providing access to the upper compartment and shielding the operator from gun fire directed through the body wall door, a door within the vehicle to the lower compartment, an observation window framed in the top wall of the safe to provide a view from within the vehicle body to the upper compartment, the door of the upper compartment having an opening therein whereby gun fire may be directed from within the vehicle body toward the body wall door, and a dependent shield from the diagonal portion extending into the lower compartment and having a hinged lower portion.

4. In a vehicle body having armored walls and a floor, a safe against a wall of said body, a diagonal partition dividing said safe into upper and lower compartments, and sloping toward the wall of the vehicle, a door through the body wall affording access to the upper compartment, a door in the partition affording access to the lower compartment, a door within the body providing access to the upper compartment and shielding the operator from gun fire directed through the body wall door, a door within the vehicle to the lower compartment, an observation window framed in the top wall of the safe to provide a view from within the vehicle body to the upper compartment, the door of the upper compartment having an opening therein whereby gun fire may be directed from within the vehicle body toward the body wall door, and a bomb trap door in the lower compartment.

5. In a vehicle body having armored walls and a floor, a safe against a wall of said body, a diagonal partition dividing said safe into upper and lower compartments, and sloping toward the wall of the vehicle, a door through the body wall affording access to the upper compartment, a door in the partition affording access to the lower compartment, a door within the body providing access to the upper compartment and shielding the operator from gun fire directed through the body wall door, a door within the vehicle to the lower compartment, an observation window framed in the top wall of the safe to provide a view from within the vehicle body to the upper compartment, and the door of the upper compartment having an opening therein whereby gun fire may be directed from within the vehicle body toward the body wall door, and a bomb trap door, the bottom of said lower compartment being shaped to guide bombs to said trap door.

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