Nov. 16, 1926. 1,607,361

C. G. POLAND ET AL

SAFE LOCK

Filed Jan. 9, 1922 2 Sheets-Sheet 1

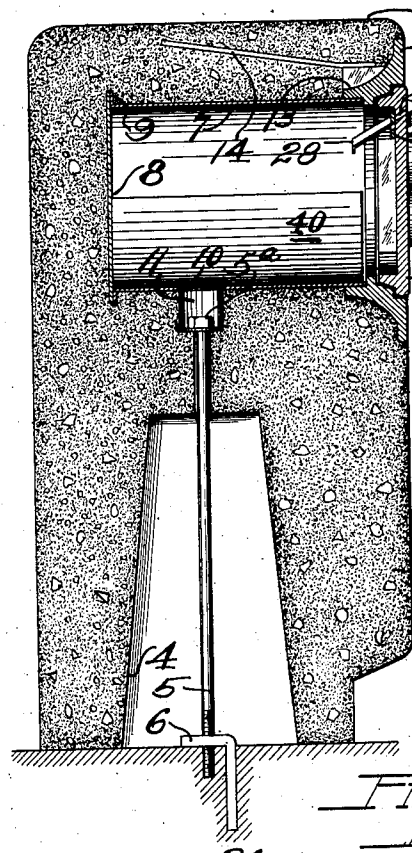


Fig. 2

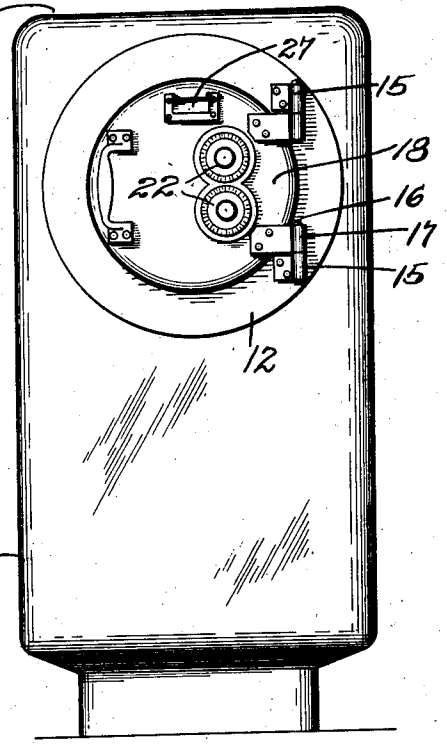


Fig. 1

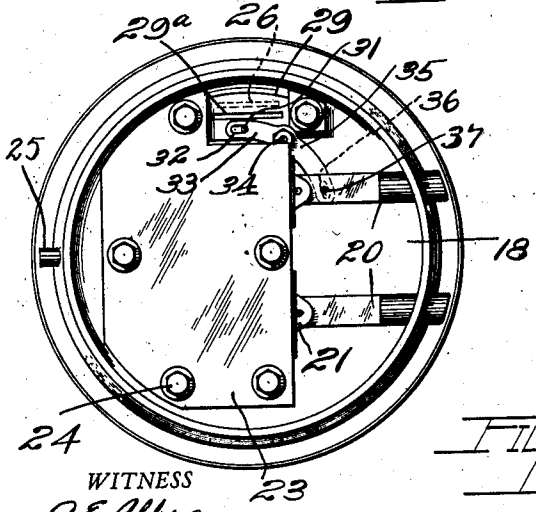


Fig. 3

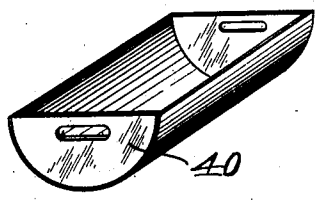


Fig. 5

WITNESS
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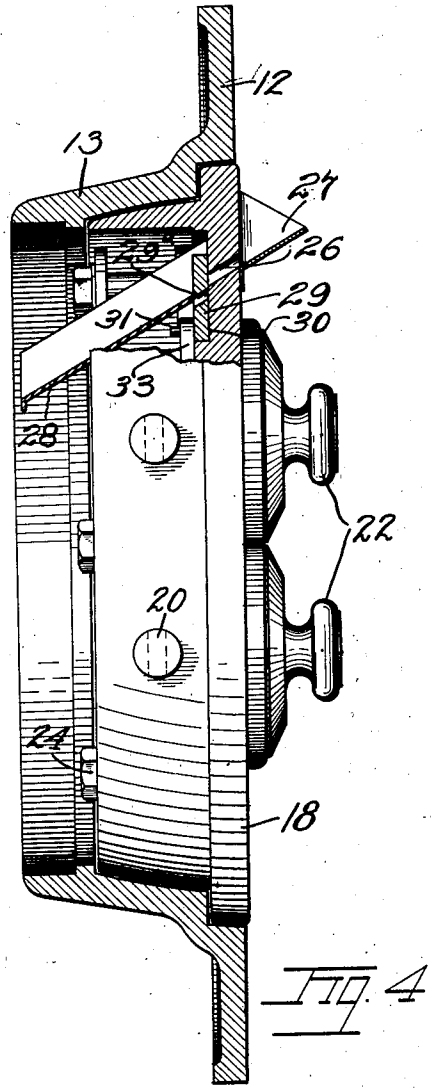


Fig. 4

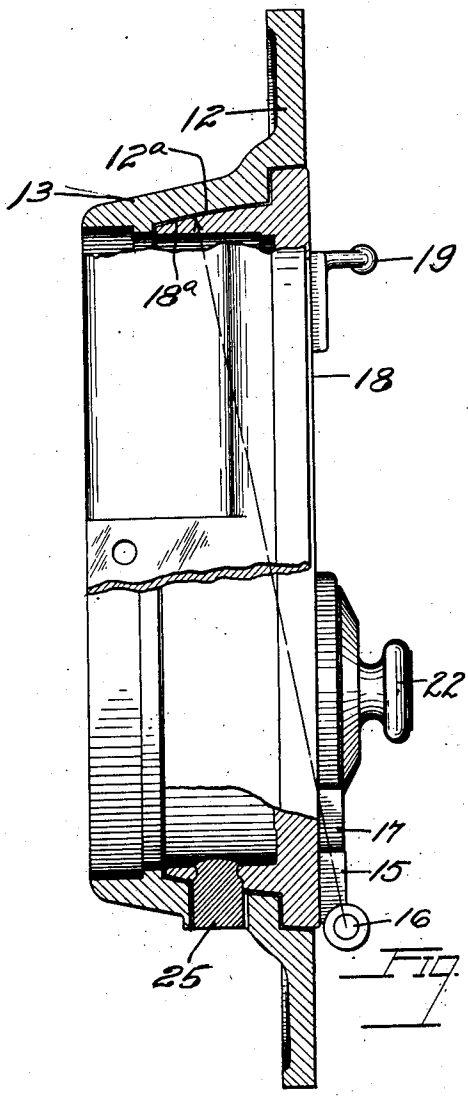


Fig. 5

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UNITED STATES PATENT OFFICE.

CHARLES G. POLAND AND ROSS R. WEST, OF SAN FRANCISCO, CALIFORNIA; SAID POLAND ASSIGNOR TO SAID WEST.

SAFE LOCK.

Application filed January 9, 1922. Serial No. 528,021.

The present invention relates to receptacles for valuables and more particularly to a safe for containing money.

As is well known, there is at present a large number of robberies committed upon isolated institutions, such as gasoline service stations, post offices, small banks, stores and attacks are also made upon paymasters during the transportation of funds, and it is an object of the present invention to provide an extremely simple, compact and inexpensive form of receptacle or safe which, while providing for a material measure of temporary protection, is, at the same time, of such construction and design that the desired strength is secured by the utilization of a concrete monolith provided with a chamber having a substantial door frame and door, and lock means therefor.

An object of the invention is to provide a safe with a door and to control the opening of the door by means of multiple and independent locks, each having separate controlling devices, as combination sets, so that the door cannot be opened through the usual means of the lock mechanism, except by the release of the locks by properly authorized persons, each being provided with the necessary key or combination to the exclusion of others for his respective lock. In other words it is an object to provide a safe having a door with multiple locks so that, while the immediate attendant of the safe may be in possession of a key or combination for one of the locks, he cannot open the door without the presence of a properly authorized person, as an auditor or collector having a knowledge of the combination, for the other lock in the door. This, therefore, provides that an auditor or collector cannot open the door in the absence of the regular attendant so that he is protected in an accounting for the funds, as is also the auditor with respect to the attendant. The advantage of a plurality of locks having different control means and requiring the presence of different operatives, is that of a very large tendency to reduce robbery or threatened robbery, as the criminal class becomes advised of the protective form of safe in use in any given institution.

A further object is to provide means for the introduction of funds and valuables into the safe chamber, while the door is still locked and, therefore, while it is impossible for the attendant to withdraw the funds, if the same have been inserted in the safe. In this connection it is an object of the invention to provide means for controlling the money opening or slot in the door by a device which can only be operated through the utilization of a proper key or other controlling means and further, it is an object to provide for the combination of the slot controlling means and one of the regular locks of the door, thus providing for economy and simplicity in the construction.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be made manifest in the following description of the preferred form of the invention, which is illustrated in the drawings accompanying and forming part of the specification. It is to be understood that it is not intended to limit the invention to the embodiment shown by the said drawings and description, as variations may be adopted within the scope of the invention as set forth in the claims.

Figure 1 is a front elevation of the improved safe.

Fig. 2 is a vertical, central section from front to back of the safe.

Fig. 3 is a detail view on a larger scale of inside of the door in elevation, showing the bolts thrown, and omitting the inside chute.

Fig. 4 is a vertical, central section from front to back through the door, showing parts of the bolt mechanisms in end elevation.

Fig. 5 is a perspective of the withdrawn money drawer.

Fig. 6 is a diagrammatic section showing the curvature of the door jamb struck on the axis of the hinge.

The device of the present invention embodies a monolithic casing or body structure preferably of reinforced concrete and which body may be of any desirable dimensions and shape or form, but preferably consists of a substantial block of square, horizontal, transverse section and of such height that the top of the block 2 may be utilized as a supporting plane for a cash register, the top of the block 2 therefore, preferably being flat, as shown at 3, thus enabling the use of the device as a pedestal. The monolithic structure may either be manufactured in suitable numbers at a manufacturing plant

or the concrete block may be formed immediately upon the grounds or place where it is to be utilized, depending upon the circumstances in each case. The block may be substantially solid or may be cored out in its lower portion, as at 4, so that the bottom end of the block can be erected upon a substantial foundation to which it may be permanently secured by suitable anchoring means provided in the foundation or to which it may be detachably secured, as for instance, by means of a bolt or bolts, one of which is shown at 5, extending centrally through the block 2 and the lower threaded end of which may be screwed into a permanent anchor 6.

Adjacent the head of the block, there is formed therein a chamber produced by the setting of the concrete about a metallic or other box, shown in the present case, as comprising a cylinder 7, arranged with its axis transverse to the length of the block 2. The rear end of the box 7 is provided with a head 8, which may be secured to projecting flanges 9 of the box 7, this construction providing for the thorough interlocking of the box within the concrete mass. The bottom portion of the box is provided with an aperture 10, below which is provided a cavity 11, in which may be exposed the head 5^a of the fastening bolt 5, so that the safe can only be removed by the insertion of a tool into the box 7 to engage the head of the bolt.

The safe chamber formed by the box 7 has, at its front end, a suitable and substantial frame having a front flange 12, substantially flush with the front face of the block 2 and having a rearwardly extending flange 13 in which the forward end of the box 7 is mounted. To secure the thorough attachment of the door frame 11 in the embodying concrete block, a suitable number of rearwardly extending reinforcing strips or anchors 14, are attached at suitable points about the frame.

The frame is shown as of annular form in front elevation, though it may be of other suitable shape, and is provided with vertically spaced hinged lugs 15 to receive coaxial pivot pins 16, mounted in the contiguous ends of hinge plates 17, provided on the face of a door 18. The door is preferably of circular form with the axis of its hinges 15—17 well to one side, and for the purpose of securing a tight fit of the periphery of the door 18 in the door frame, the edge 18^a of the door and the complementary seat 12^a therefor formed by the opening of the frame, are curved on an arc struck from the axis of the hinge mounting. Adjacent the swinging side of the door, it is provided with any suitable handle, to facilitate its opening and closing.

The door is preferably provided at its swinging side with a plurality of bolts 20 individually and separately operative by a suitable form of lock structure, indicated diagrammatically at 21, each lock structure being controlled by a separate key or preferably, combination 22, Figure 1; proper manipulations of the separate combinations being known exclusively to different anthorized persons.

The lock structures 21 are preferably of that well known type involving a tumbler operating knob having the additional function of throwing the bolt of its lock after the proper combination has been set. The locks 21 may be securely attached to the inside of the door in any approved manner, as for instance, being retained by a cover plate 23, secured by bolts 24 on the inside of the door.

In order to render the locking of the door independent of the hinge connection, a supplemental locking stud 25 is provided at the hinged side of the door to enter a complementary recess provided therefor in the frame 11, so that in the event of the destruction of the hinges, the door will still be retained by the manually operated bolts 20 and the safety stud 25.

An important feature of the invention consists of means providing for the introduction of valuables and funds into the safe box 7 without necessitating the opening of the safe door 18, and to that end this door is provided, as for instance, at its upper portion, with a slot 26 of desired dimensions and here shown as inclining inwardly and downwardly from the bottom of a hopper piece 27 provided on the front of the door. Extending inwardly from over the top of the upper lock 21 is a chute 28 directing objects inserted into the slot 26, into the interior of the safe box. The money slot 26 is preferably normally closed by suitable means so as to prevent the extraction of objects from within the safe and preferably the closing means is lock controlled. For simplification of construction and economy of cost the slot closing means is preferably controlled by the lock of one of the bolts 20 of the safe, thus giving the said lock, not only the function of throwing its bolt 20, but also of throwing the closing means to cover the money slot 26. Such closing means may consist of a simple plate 29 disposed flatwise in a seat 30 across the back of the door; the plate 29 being provided with a slot 29^a to register with the money slot 26 when the plate is shifted into the necessary position. As here shown, the plate is shifted vertically to open the slot 26 and is provided with a pin 31 entering a slot 32 in the contiguous end 33 of a lever pivoted on a stud 34; the lever being provided with a downwardly extending arm 35 having a slot, as at 36, to receive a pin 37 arranged in the upper bolt 20.

From this it will be seen that when the door is closed the lower lock bolt 20 can be thrown and can be opened only by a person having the proper combination or key, as the case may be. The upper bolt 20 is controlled by the upper lock and this is preferably in the control of the attendant or attendants usually in charge of the station, store or other institution at which the safe may be installed, so that the local attendant can throw and retract the bolt 20 at pleasure to open and close the money slot 26 in the door by the manipulation of the guard plate 29. It will be necessary to open the money slot 26 only at such occasions as when it may be desired to introduce valuables or money into the safe, whereupon the guard plate is again closed. It will be seen that the retracting of the upper bolt 20 does not result in the unlocking of the door, since it is still retained in locked position by the wholly independent lower lock bolt 20.

Therefore we have provided an extremely simple and quite inexpensive metallic organization including a money box, its door frame and a door therefor; these being adapted to be imbedded in a substantial monolithic block which can be poured and tamped in a mold of any suitable character in which the safe box and frame is properly adjusted. This enables the transportation of the metallic parts to isolated and remote points where the cost of transportation of the completed monolithic safe would be impractical or prohibitive. Yet in certain cases, as for instance in large cities having a considerable number of remotely scattered service stations, it may be possible and preferable to completely erect a safe including the monolith and to transport each safe thus, as a unit, to its destination where it can be readily set up.

For convenience in the withdrawal of the valuables or funds from the safe, a simple drawer 40, may be provided. Such a drawer is clearly shown in Fig. 5, as being of semi-cylindrical form to rest in the box 7, when it is of cylindrical form.

What is claimed is:

1. A safe including a money receptacle, a door for said receptacle, and lock controlled means on the door for opening and closing a money slot in the door; said means including a door locking bolt.

2. A safe door having a money slot, means for locking the door closed, lock controlled means for covering and uncovering the slot for the insertion of money while the door is closed and locked, and another locking means for the door and which is combined with the said covering means, so that the door remains locked by at least one lock when the covering means is in open position.

3. A safe door having a money slot therein, means movable to cover and uncover said slot, a bolt for the door, a lock controlling the movement of said bolt, a second bolt for the door, a lock for controlling the movement of the second bolt and means connecting the second bolt with the slot covering means whereby movement of the second bolt to door securing position moves said slot covering means to cover said slot.

In testimony whereof, we have hereunto set our hands.

CHARLES G. POLAND.
ROSS R. WEST.