Sept. 18, 1923. 1,468,245

L. L. McDERMOTT

LOCK OF SAFES AND STRONG ROOMS

Filed Oct. 22, 1920 2 Sheets-Sheet 1

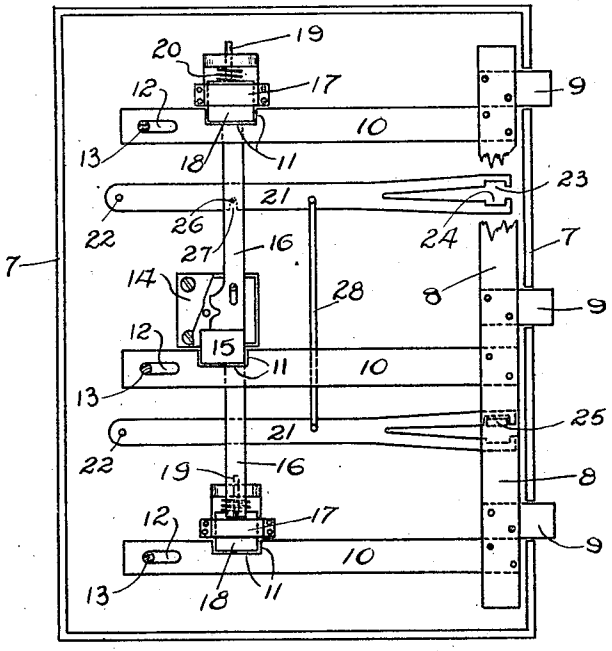

FIG. 1.

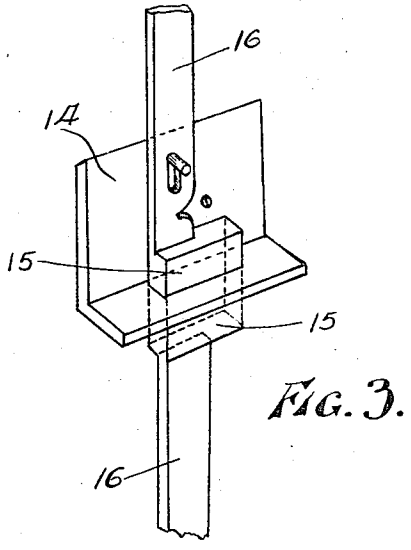

FIG. 3.

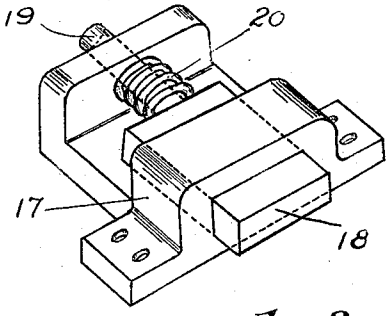

FIG. 2.

Inventor-
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By- B. Singer,
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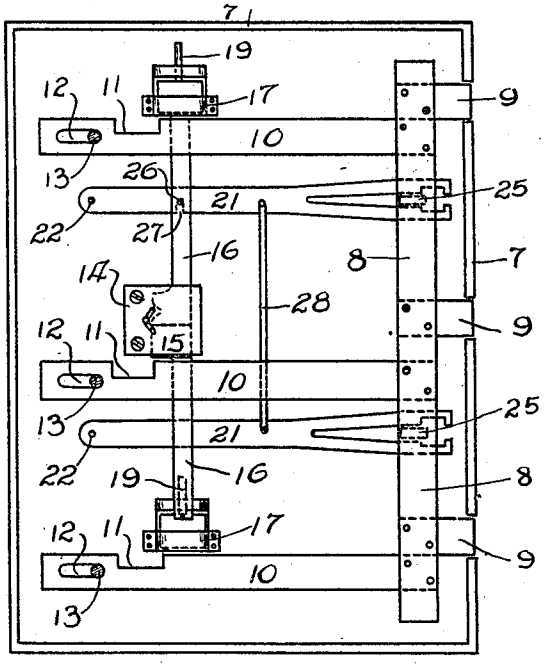

FIG. 4.

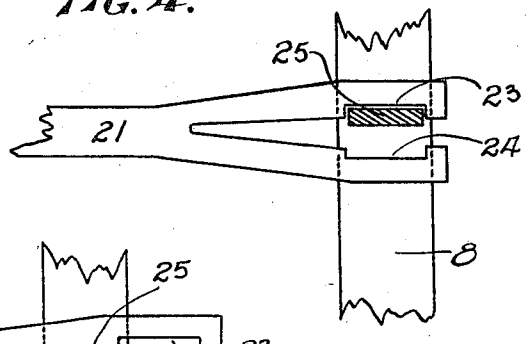

FIG. 5.

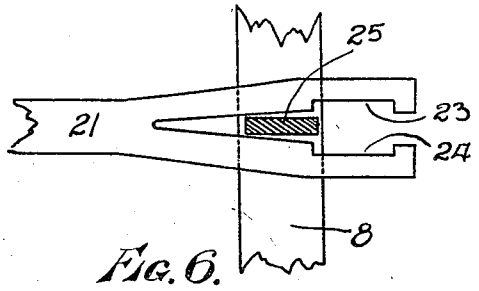

FIG. 6.

Inventor-
Louis Leslie Mc Dermott,
By - B. Singer, Atty.

Patented Sept. 18, 1923. 1,468,245

UNITED STATES PATENT OFFICE.

LOUIS LESLIE McDERMOTT, OF CREMORNE, NEAR SYDNEY, NEW SOUTH WALES, AUSTRALIA.

LOCK OF SAFES AND STRONG ROOMS.

Application filed October 22, 1920. Serial No. 418,741.

To all whom it may concern:

Be it known that I, LOUIS LESLIE McDERMOTT, a subject of the King of Great Britain, residing at Cremorne, near Sydney, in the State of New South Wales, Commonwealth of Australia, have invented certain new and useful Improvements in the Locks of Safes and Strong Rooms, of which the following is a specification.

This invention relates to improvements in locks for the doors of safes, strongrooms, and like places for storing valuables, my object being to provide means which will resist the usual methods of safebreaking.

In my invention, the lock bolt is engaged or disengaged from the locking bar by a key in the usual manner, but I construct said lock bolt so that it controls one or more auxiliary lock bolts situated at some distance from the main lock bolt and at a position or positions practically inaccessible to unauthorized persons.

The main lock bolt operated by the key is therefore provided with one or more extensions which engages or engage directly or indirectly with a lock bolt or bolts situated at different levels and adapted to engage with a locking bar or bars. These extensions or connecting pieces are made of material sufficiently strong to carry the auxiliary lock bolts into or out of their respective recesses but are such that, in the event of violent means such as an explosion being employed to force the main lock bolt from its locking bar, they will be broken or disconnected leaving the auxiliary lock bolts in their respective recesses.

The engagement of the auxiliary lock bolts in their locking bars or recesses may be facilitated by a spring or springs.

In the accompanying two sheets of drawings I have illustrated a practical embodiment of the invention.

Figure 1 is an elevation, partly broken away, of a door showing the locking bolts in engagement with their respective locking bars and their bolts projecting so as to take into corresponding recesses in the side of the safe or strongroom.

Figure 2 is a perspective on an enlarged scale of one of the auxiliary locking bolts.

Figure 3 is a similar view of the main lock, with its cover plate and springs removed, showing extension pieces brazed or otherwise secured to the main lock bolt.

Figure 4 is an elevation of a door illustrating the various bolts and bars in the unlocked position.

Figures 5 and 6 are enlarged detailed views of an auxiliary locking bar in the locked and unlocked positions respectively.

The same reference numerals indicate the same or corresponding parts.

7 represents the frame of a door suitably hinged to the opening of a safe or strongroom and 8 is a bolt bar having rigidly connected thereto the bolts 9. 10 are the bolt tails slidable on operating an external handle which may be of the usual form and provided with recesses or slots 11 into which the respective bolts take when the door is locked. In the ends of the tail pieces 10 are slots 12 into which pass the respective pins 13 whereby the movements of the tail pieces are limited. 14 represents the main lock actuated by a key or the like, said lock having the locking bolt 15 and opposed extension pieces 16 rigidly secured or integral therewith. 17 are additional or auxiliary locks each provided with a bolt 18 the bolts being operated on movement of the extension pieces 16 on actuating, by means of a key, the main locking bolt 15. The extension pieces may have a guide 19 and spring 20 whereby their travel may be regulated. I may also provide other auxiliary locking bars 21 loosely pivoted at 22 and recessed at their free ends at 23 and 24 into which is adapted to take respective engaging blocks 25 secured to or integral with the bolt bar 8. The auxiliary locking bars 21 are operated by a stud or pin 26 on the upper extension piece 16 taking in a slot or hole 27 in the upper of said bars, both bars being coupled by a connecting link bar 28 thereby ensuring simultaneous movement, and I may employ a spring or springs to obtain rapidity of movement.

It will be seen that when the main bolt 15 is locked, it engages in the recess 11 in the central or intermediate bolt tail 10 and at the same time the bolts 18 will be in the respective recesses 11 in the top and bottom bars 10, and that the recesses 23 in the auxiliary pivoted bars 21 will be in engagement with the respective blocks 25. Should the

safe when locked be turned over or reversed, in addition to the main bolt 15 the door will be held by the auxiliary bars 21 owing to their being free to drop so that their recesses 24 engage the blocks 25. At the same time the bolts 18 remain engaged in their recesses 11. Therefore, should the main lock 14 be blown out or displaced, the extensions 16 will be forced out of contact with or disconnected from their respective bolts but the door will be securely held by the bolts 18 in the recesses 11 in their tail bolts 10 and by the bars 21. The top bolt 18 may merely rest on the end of the extension and the bottom bolt be connected by a pin taking in a slot in the extension. As the additional locks are positioned at some distance away from the keyhole or opening they will not be so readily affected by an explosion.

I would have it understood that I do not confine my invention to the precise form illustrated, and that I am aware that it has been previously proposed to provide an additional lock for safes to operate after the main lock has been blown off or tampered with.

I claim:—

In a lock for safes and the like, the combination of a bolt provided with an extension arranged to be disconnected therefrom, a bolt bar having a block, a freely pivoted locking bar provided with opposed recesses in its free end, one of the said recesses being arranged to engage said block of the bolt bar, and on reversal of the safe to drop by gravity until the block is engaged by the opposite recess, said locking bar and said extension having means connecting them together.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LOUIS LESLIE McDERMOTT.

Witnesses:

CHARLES E. GRAHAM,

HENRY W. CLARKE.