W. P. MOSELY.

SAFE DEPOSIT LOCK.

APPLICATION FILED DEC. 22, 1921.

1,432,720. Patented Oct. 17, 1922.

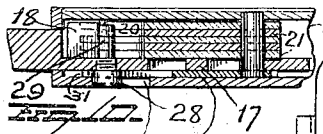
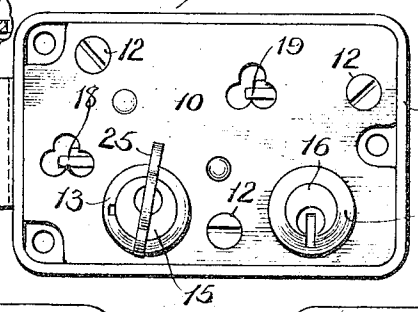


Fig. 1.



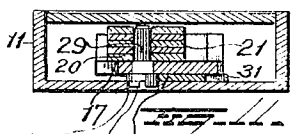


Fig. 2.

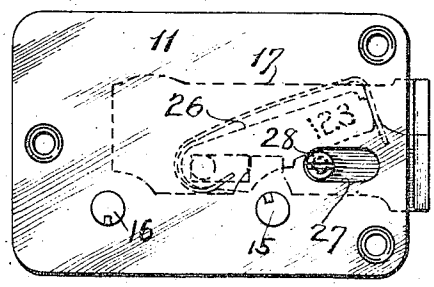


Fig. 3.

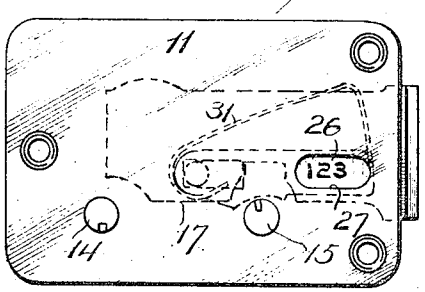


Fig. 4.

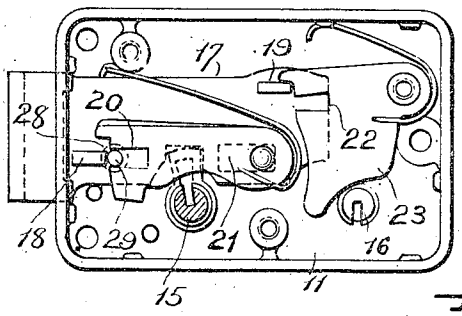


Fig. 5.

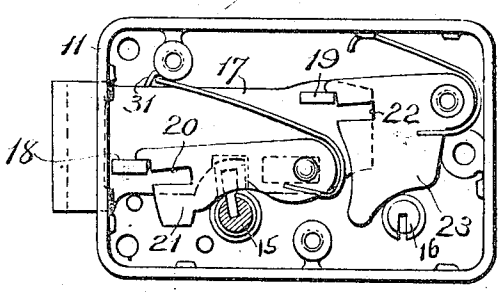


Fig. 6.

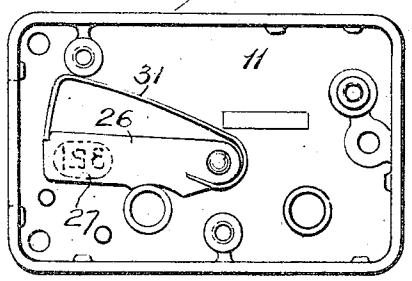


Fig. 8.

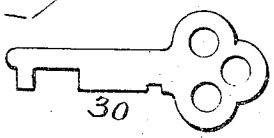


Fig. 9.

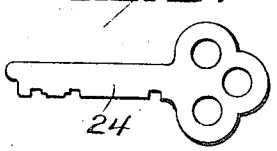
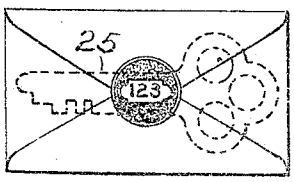


Fig. 7.



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Patented Oct. 17, 1922. 1,432,720

UNITED STATES PATENT OFFICE.

WILLIAM P. MOSELY, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE & TOWNE MANUFACTURING COMPANY, OF STAMFORD, CONNECTICUT.

SAFE-DEPOSIT LOCK.

Application filed December 22, 1921. Serial No. 524,179.

To all whom it may concern:

Be it known that I, WILLIAM P. MOSELY, a citizen of the United States, and a resident of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Safe-Deposit Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in safe deposit locks, and system of safe-guarding safety deposit boxes.

The lock illustrated by the drawing is a well known type, requiring the use of a guard or preparatory key before the change or box renter's key can be used. When furnishing the locks to a bank, or safe deposit company, the present practice is to have each lock accompanied by its own key until the lock is attached to its door. Each change key either has a number thereon corresponding to its box, or else is in some other way designated so that when a box is rented the proper change key is turned over to the customer or renter of the box. Thus, anyone having possession of the change keys knows what box the key, or keys, will open.

Referring to the usual practice of shipping locks with their change keys, referred to above, it is apparent that with this practice there is ample opportunity for anyone having access to the keys to obtain, not only a duplicate of a key, but also to know the box which the key will open.

In the manner hereinafter set forth, I conceal or safe-guard each and every change or renter's key so that the key for a box will not be known or accessible to anyone until the box has been rented, and then known only to the box renter.

To accomplish this I construct my lock so it may be applied to its door without the use of its change or box renter's key so that, therefore, after the lock has been made, the change key or keys for each lock are kept in a sealed package until they are shipped to the bank or safe deposit company, and then delivered to the renter of the box. The locks are delivered without change keys to the maker of said boxes, or to whoever applies the locks to the boxes. They are applied indiscriminately, and are without visible designation as to the keys which fit the tumblers of each lock.

One of the principal objects of this invention, viz.; to guard the keys and their bittings from everyone except the ultimate user, is already attained by a class of locks known as "changeable-combination key locks;" as for example, a lock set forth in Patent No. 814,335, issued to Warren H. Taylor on March 6, 1906.

But this type of lock is very intricate and of expensive construction, involving as it does, in the setting of the lock, the separation of every tumbler into two parts and bringing it together again in a new relation, which new relation is fixed by the bitting of the particular change key used. My invention accomplishes the object above set forth in connection with locks which have a one-piece tumbler, the bitting of which is not changed in use.

Although the drawing shows a particular type of safe deposit lock, it is clear that my invention can be easily and with equally good results, applied to other types of safe deposit locks, and indeed to many other types of locks not provided with a guard or preparatory key as, for example, locker locks or any style of locks intended for a series of doors or receptacles, there being many cases where, for convenience and safety, it will be desirable that all the keys and their bittings shall not be known or accessible until said keys are handed over to the final user.

The locks here shown are provided with means for holding the change key tumblers in unlocking position so that, for purpose of application to the box and demonstration of the box to renters, the bolt of the lock may

be actuated by a blank or work key. Each lock is also provided with a movable, numbered plate, said plate, when the tumblers are held in unlocking position, as above, is also held in position so that its number is concealed. But when the means for holding the tumblers in the unlocking position is removed, said tumblers automatically move into position to dog their bolt, and at the same time the plate moves so that its number may be seen; and then, the package bearing the corresponding number will be found to contain the proper change keys to operate the lock, and these are then delivered to the box renter.

It is clear, therefore, that the illicit duplication of keys is prevented because they are sealed and inaccessible, and if by chance any package of keys should come into the hands of an evil disposed person, he could not tell to what box they belonged.

It is clear also that, by the method above outlined, I have accomplished many of the advantages of the changeable-combination key lock, above referred to, by a method which is effective and at the same time much simpler and more economical in manufacture.

In the accompanying drawings; Figure 1 is a view in front elevation of the lock; Figure 2 is a view in rear elevation of the same, with the number plate concealed; Figure 3 is a similar view showing number plate exposed through an opening in the rear face of the lock; Figure 4 is a view in front elevation of the lock showing the screw for holding the change key tumblers in unlocking or inoperative position and the number plate in elevated position to conceal the number thereon; Figure 5 is a similar view showing the screw removed and the change key tumblers in their operative position; Figure 6 is a view of the lock, the bolt and change key tumblers being removed to show the number plate; Figure 7 is a view of a change key in dotted lines in a sealed envelope; Figure 8 is a view of working or skeleton key; Figure 9 a view of the guard's key; Figure 10 is a sectional view on the line 10—10 of Figure 4 and Figure 11 is a sectional view on the line 11 of Figure 4.

The lock is adapted to be secured to the inner face of the door of a safety deposit box, the front face plate 10 thereof being secured to the lock casing 11 by screws 12, which are concealed when the lock is applied to the inner face of a door. This front face of the lock is provided with two cylinders 13 and 14 respectively, which latter receive the key plugs 15 and 16. The cylinders 13 and 14 project from the face plate 10 and pass through openings in the door, so that both key plugs will be accessible at the front of the door in the usual and well known manner.

17 is the bolt mounted in the lock casing and provided with two fences 18 and 19 the former of which is adapted to coact with the gatings 20 in the change key tumblers 21, and the latter fence with the gatings 22 in the guard tumblers 23.

The two sets of tumblers are independent of each other and are actuated by independent keys, the guard tumblers 23 being actuated by the guard or custodian's key 24 and the change key tumblers 21 by the change key 25, all of which tumblers may be of any of the usual well known types.

The construction is such however that the bolt cannot be retracted until both sets of tumblers have been actuated to bring their gatings in line with their respective fence on the bolt, hence to actuate the bolt after the lock has been applied to a box and the latter rented, the guard tumblers 23 must be first actuated to bring their gatings into line with guard fence 19 on the bolt, after which the bolt may be retracted by entering the change key 25 in its key plug 15 and turning the same in a direction to retract the bolt, the change key plug having a cam engaging the bolt for actuating the latter.

26 represents a plate located within the lock casing and provided with a number, which after the lock has been applied to a safety deposit box and the latter rented, is released as hereinafter explained and moves to a position to expose the number thereon through the opening in the rear face of the lock casing. This number plate 26 is, in the present instance, pivoted within the casing 11 and between the latter and the bolt, and prior to the installation of the lock to a door, and also up to the time of rental of the box, is held in a position where the number thereon is not visible through the opening 27 in the rear face of the lock casing, by the screw 28. This screw is screwed into the bolt through the opening 27, with its head resting in said opening which is elongated to permit of the bolt to be freely projected and retracted, and is provided with a shank or unthreaded extension 29 which rests in the gatings of the change key tumblers 21. This extension 29 of the screw 28 is located in line with and adjacent the inner end of the change key fence 18 on the bolt 17, thus rendering these tumblers inoperative while the screw remains in its position, and permitting the bolt to be actuated by the guard key 24 and a skeleton or work key, which latter is constructed to shift the bolts of all the locks, and is used in assembling the boxes. The guard key tumblers for the locks may be, and preferably are alike, so

that a single key retained by the guard or custodian of the boxes can set the guard tumblers and thus permit the bolt to be actuated by the renter's or change key.

With my improvement the change or renter's key is not needed for actuating the bolt until the screw 28 has been removed thus releasing the change key tumblers 21 and permitting them to dog the bolt, and so hold it until actuated by a change key that will shift them so as to bring their gatings into line with the fence 18 on the bolt.

With my improvement, when an order of locks is shipped, the change keys do not accompany the locks, but are shipped separately, each in a sealed envelope having thereon a number which corresponds to the number on the number plate 26 of a lock, so that the key for any lock of the series cannot become known to any one until the screw 28 has been removed, thus releasing the number plate and permitting the latter to move to a position to expose the number thereon, which number corresponds to the number on one of the sealed envelopes. All details of the change or renter's key for each box are therefore completely safeguarded from the time they leave the manufacturer, up to the time they are delivered in sealed envelopes to the box renters.

In applying the locks, the mechanic, in addition to the guard key, is given a skeleton or work key which will operate the charge key plugs 15 of all the locks. This is made possible by reason of the fact that the change key tumblers are all held up in unlocking position by the screw 28, which as previously stated, is screwed into the bolt so that its inner end stands in the gatings of the tumblers, the gatings being in line with the fence 18 on the bolt, hence any key, or even a screw driver inserted in the key hole of the plug 15, can be used to throw the bolt in or out after the guard tumblers have been actuated by the proper key.

After the lock has been applied, the door is locked by a work or skeleton key and so left until the box has been rented, at which time the custodian opens the box with a work or skeleton key and then removes the tumblers retaining screw 28. Upon the removal of the screw, all the tumblers 21 drop onto the tumbler fence into active locking position and at the same time the number plate 26 turns into position so that the number thereon will be visible through the opening 27. The turning of this number plate then indicates to the custodian the number of the sealed envelope containing the key which must thereafter be used to shift the bolt.

After the number plate drops into position to expose the number thereon, the bent end of spring 31, which throws the plate into operative position, engages the free end of the latter, and absolutely prevents the said plate from being moved to its initial position without disassembling the lock, and removing the bolt, hence when the number plate has been once shifted to expose its number it cannot be restored to its initial position, except as above stated by removing the lock from the door and reassembling the parts.

It will therefore be seen that no opportunity is given for any one to get possession of the change key for a particular box, from the time it leaves the factory until it is delivered to the box renter, and no one can locate the proper key for any lock without having first obtained the plate number, which can be obtained only at the time of renting the box. If the screw 28 be removed to expose the number on the plate it cannot be replaced, hence its absence and disclosure of the number on the number slide will indicate to the custodian, guard or officials of the bank that the lock has been tampered with. In order to prevent the opening of the lock for the purpose of ascertaining its slide number the cover or face plate 10 is so attached or protected by any well known means that it cannot be removed without leaving evidence of its having been tampered with.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention. Hence I would have it understood that I do not wish to confine myself to the exact construction and arrangement of parts shown and described but,

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is:—

1. A system of safe-guarding safety deposit boxes, comprising locking means, a change key, removable means for rendering the locking means inoperable, a key designating member maintained invisible by said removable means and adapted to be exposed to view by removal of said last-mentioned means, means normally concealing the change key from the custodian of the box, and key concealing means having a designation thereon corresponding to the designation on said key designating member.

2. In a lock, the combination of a lock casing having an opening therein, a bolt having a fence, a tumbler, movable means for holding said tumbler in inoperative position, and a number plate held in inoperative position and adapted when said movable means is withdrawn to permit the number plate to move to a position where the number thereon will be visible through the opening in the lock casing.

3. In a lock, the combination of a bolt having a fence, a tumbler having a gating and a removable device engaging the tumbler for holding the tumbler in unlocking position.

4. In a lock, the combination of a bolt having a fence, a tumbler having a gating for the fence, a number plate and movable means for initially holding the number plate concealed and the gating in the tumbler in line with the fence on the bolt.

5. In a lock, the combination of a bolt having a fence, a tumbler having a gating for said fence, a movable number plate, and means removably secured to the bolt for initially holding the number plate concealed and the tumbler in its unlocking position.

6. In a lock, the combination of a bolt having a fence, a tumbler having a gating for said fence, a movable number plate connected with the locking casing and removable means secured to the bolt adjacent to the inner end of the fence and in line with the latter for initially holding the number plate concealed and the gating of the tumbler in line with the fence.

7. In a lock, the combination of a lock casing having an opening in its rear face, a movable number plate within the lock casing and adapted to be moved to expose the number thereon through said opening, a bolt having a fence, a tumbler, and means removably secured to the bolt and removable from the outside of the lock for initially holding the number plate concealed and the tumbler in position to permit the bolt to be retracted.

8. In a lock, the combination of a lock casing having an opening in its rear face, a movable number plate secured within the casing, removable means for holding the number on said plate in a concealed position, and means for locking said number plate over said opening after it has been released.

9. In a lock, the combination of a casing having an opening therein, a movable number plate secured within the casing, said plate tending to move into a position whereby it may be seen through the opening in the casing, means to engage said plate for locking it in said last mentioned position, a bolt having a fence, a tumbler having a gating and a screw detachably secured to the bolt for initially holding the numbers on the plate out of sight and for holding the gating in the tumbler in line with the fence on the bolt, the screw being removable through said opening in the lock casing.

10. In a lock, the combination of a casing having an opening in its rear face, a bolt, guard key tumblers and change key tumblers for dogging said bolt in its locking position, a number plate pivoted within said casing and adapted to be moved over said opening, and a screw secured to the bolt and initially holding the number plate in a position to conceal the number thereon and also hold the change key tumblers in inoperative position, the said screw being removable through the opening in the lock casing.

11. In a lock, the combination of a casing having an opening in its rear face, a bolt having two fences, guard key tumblers coacting with one fence and change key tumblers coacting with the other fence, a number plate movable to a position to expose the number thereon through said opening in the lock casing, and a screw removably secured to the bolt and adapted to initially hold the number plate in position whereby the number thereon will be concealed and also hold the change key tumblers in operative position, the said screw being removable through the opening in the lock casing.

12. In a lock, the combination of a casing having an opening in its rear face, a bolt having a fence, change key tumblers coacting with said fence for normally dogging the bolt in its projected position, a number plate pivoted within the lock casing, a spring tending to move said plate to a position to expose the number thereon through the opening in the lock casing, means for locking said plate in said latter position and a screw removably secured to the bolt and engaging the change key tumblers and the number plate for holding both in their inoperative positions, the said screw being removable through the opening in the lock casing.

13. In a lock, the combination of a key controlled bolt, a tumbler, means for initially holding the tumbler in inoperative position, and a designating character adapted to be concealed when the tumbler holding means is in engagement with the tumbler, and move into a position to be seen when said tumbler has been released and free to move to deadlock and release the bolt.

14. In a lock, the combination of a bolt having a fence, a tumbler having a gating, the said tumbler adapted to be initially held in position to permit of free movement of the fence, and a designating character initially concealed and adapted to be exposed to view from the outside of the lock casing after the tumbler has been released to coact with the bolt.

15. In a lock, the combination of a bolt having a fence, a tumbler having a gating and a device removably secured to the bolt and engaging the tumbler for holding the gating in the latter in line with the fence on the bolt.

16. In a lock, the combination of a bolt having a fence, a tumbler having a gating for said fence, a movable number plate, and means removably secured to the bolt for in-

itially holding the number plate concealed and the tumbler in its unlocking position.

17. In a lock, the combination of a lock casing having an opening in its rear face, a movable plate within the lock casing and adapted to be moved to expose a number through said opening, a bolt having a fence, a tumbler, and means removably secured to the bolt, and removable from the outside of the lock for initially holding the number plate concealed and the tumbler in position to permit the bolt to be retracted.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

WILLIAM P. MOSELY.

Witnesses:

CHARLES A. BERRY,

LOUIS H. DEUBNER.