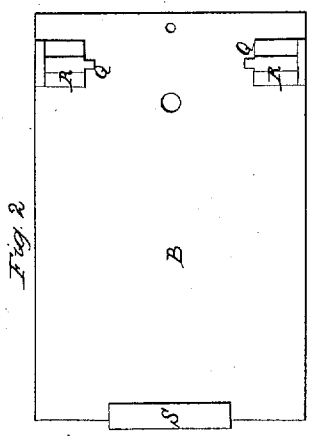
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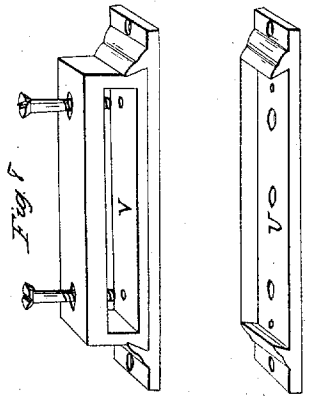
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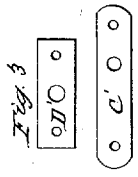
Door Lock,

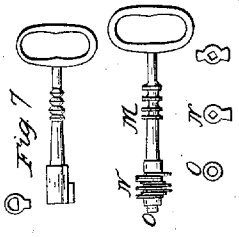
Patented Sep. 16, 1833.

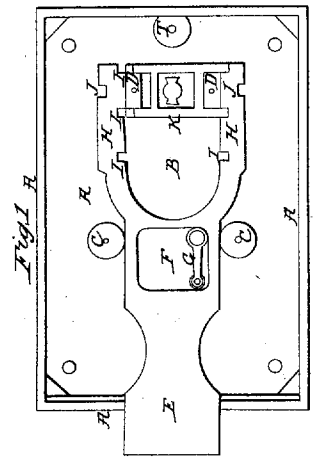


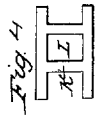


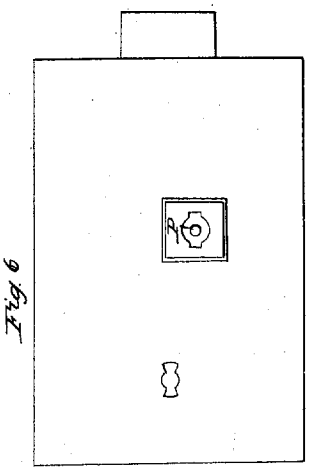












AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

Sept 16 1858 1

James Ryle Ramapo County of Rockland New York

11581X Letters Patent

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said James Ryle himself of his improvement in the door lock in addition to those for which a patent was granted him on the 8th June 1842.

To all whom it may Concern. Be it known that I James Ryle of Ramapo in the County of Rockland and State of New York did make certain improvements in the door lock intended for the doors of Banks and safes where great security is required for which improvements Letters Patent of the United States was granted unto me on the Eighteenth day of June in the Year one thousand eight hundred and thirty two; and that since that period I have further improved the said lock and have thereby rendered it more efficient and certain in its operation and I do hereby declare that the following is a full and exact description of these improvements reference being had to the drawings which accompany this specification and make part thereof. The key or frame of this Lock AA Fig 1 which contains the bolt and its appendages is in one entire piece. The plate B.B. which is the outer plate when the lock is upon the door is in one piece covering the whole of the key or frame. The pins shown C C. and the other shown D D rise from the plate A which they are firmly joined being actually cast in one piece therewith they extend up the whole thickness of the bolt b which they serve as guides and they also receive the cap plate C and D which are subsequently put on them.

The bolt b which may be made to throw out once or more and in the same direction as is hereinafter done is here shown to throw out on two several occasions in opposite directions at E in the manner of any former lock. It is perforated or pierced in sixteen or fourteen or any other number of places with holes of a square form as shown at G by which the bolt is to be moved backward and forward. At the back end the bolt is notched off into FFF leaving an open space between them as seen in the drawing. In the inner side of each of these branches there are three grooves III extending down through the whole depth of the bolt; and there is likewise a single groove or notch JJ or

the notches of each of these the rotten bolt is brought to the proper height which projects one from the top of the bolt, along each of these edges is a distance equal to the depth of the grove or notch, and which may be one fourth of an inch more or less in thickness. These plates will be presently described. Between each of the leaves must be put two pieces of tin plate, which leaves sufficient to hold the bolt inside they leave to stick by the help of a little tallow or any other number of sliding pieces usually made of steel plate in the general form of that letter K in the place of K fig 4 these pieces in their natural Capacity diminishes the width of the lock from top projecting ends when they are placed between the guides d and D D are guarded by staples and fall into or are drawn by the two pins of the guard I according to circumstances. The open space I denominated that part of the key B upon which the cams or lifters are placed in a key much like that described in my first patent. I however usually make the opening in these cams or lifters square or in any other form by which they will be held in proper direction when displayed upon the stem or shank of the key.

These are shown diagonally at N B and the method by which they are fixed at O. The shape of the opening to may be varied in any way so that it admits the key & act properly upon the tick pieces. These pieces will may have but one projection or more than one projection at each end the bolt being fixed accordingly & varied at pleasure, I generally make the cams or lifters N of different lengths and also of different thicknesses and form a tick piece & correspond with each cam or lifter, lettering & numbering the corresponding pieces in order that they may be readily placed so as to harmonize with the combination, the number of permutations of which these pieces are susceptible may in either of them easily be ascertained. Fig 5 is a transverse section of the bolt through the grooves in which the tick pieces play and also through the pieces themselves. This section exhibits also the staples formerly termed projecting from the branches B B of the bolt. Which with a short spring through the staple C may be used to move the bolt, but as this purpose to which it is intended must commonly be applied this lock is employed only when P does projecting through the plate of the lock which is attached to the door Fig 6 The kind of key which may be used is put upon the handle and moves the bolt with the same which may be given by the pins which are put on the stem P on the key & The locks

Claim

to remove it to the door through holes in the plate A Fig 1 when the plate is Fig 2 and in its place. This latter plate is then put on in such a way that it cannot be removed without the application of the key: this I have effected in two ways one of which is the subject of the present claim, and is exemplified in the accompanying drawings, one of the best and most simple of those modes of carrying it out. Fig 1 shows the bolt R which bolt passes through the mortise S in the bottom of the lock and catch under the flanches upon the ends of the slot S in a piece of metal which is fixed upon the plate B which piece is countersunk or grooved at each end and fall into a span corresponding with it over the bolt R in the edges of the key or face of the lock at the front end. When this is displaced into its place, the bolt pieces aa will not fall into them resting where the bolt is shot and is about half its full distance until it would therefore be requisite to withdraw it in order to remove the plate.

I prevent all suction in this plate when in its place a screw is passed through the back end of it into the stud T Fig 1 under this arrangement the lock cannot be removed from the door on the inside without the aid of both the keys of the locks thereon which renders the bolt so stuck as long as it cannot be removed from the door post when the door is closed. The screw in which the stud is shown in Fig 3. I is a plate which is first countersunk and which has two elongated oblong formed grooves at each end. The key part V slides into these grooves and covers the screw heads. This key part is then attached to the plate V by the screws the removal of which screws will not release of the key being removed with-out first opening the door. When the bolt is in the proper place the bolt pieces fall into their corresponding grooves by their own gravity but should they not do so readily the action of the key upon them will force them forward which will not the case with the locks formerly used by me.

What I claim as constituting the improvements for which I am claim a patent is the use of the pieces which I denominate the locks of the locks with the different varieties of which they are susceptible when used upon the principle described, which I do not consider as identical with that of the lock in my former patent. I also claim the attaching of the outside plate to the lock by screws which prevents its being detached without the agency of the keys and the attaching of the key to secure the bolt so that it cannot be removed whilst the door is closed.

Witnesses { Thomas Sykes
J. S. Sweetman }

Thomas Sykes