CLASSIFICATION
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U.S. PATENT OFFICE

Improvement in Mortice Spring Locks.

2-5-1836

Patented Feb 1836

Fig. 1.

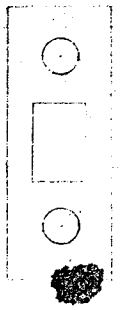


Fig. 2.

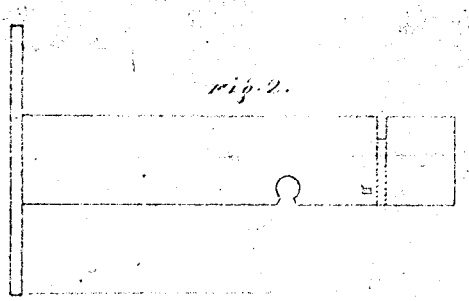


Fig. 3.



Fig. 4.

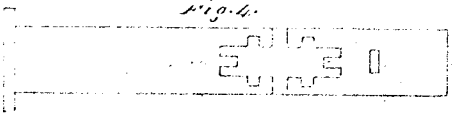
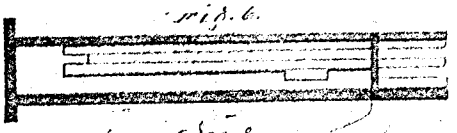


Fig. 5.



Fig. 6.



Case formed of sheet metal

Fig 7

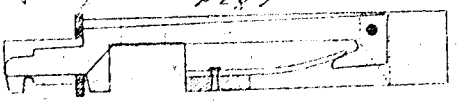


Fig. 8.



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Philo Blake & Eli Whitney Blake, New Haven, Conn.

Letters Patent

To all to whom these Letters Patent shall come, Be it known, that the said Philo Blake & Eli Whitney Blake, both of New-Haven in the County of New-Haven in the State of Connecticut citizens of said State of the United States have invented and discovered certain new and useful Improvements in Mortise Locks consisting in certain modifications of the Mortise Lock as heretofore made whereby the manufacture is facilitated and the expense diminished & whereby the Mortise Lock may be reduced to such a compass, that it may be put into any door or other to receive the Mortise Locks hereafter to be described & the following is a full and accurate description of the Mortise Lock so improved by the introduction of our improvements viz.

The Case or part which contains or includes the moving parts of the Lock, is made of one piece of sheet iron or other metal whose length is equal to the distance that the lock is to reach in from the edge of the door and whose width is equal to the inside width of the two sides and one edge of the case taking that side at right angles from the two sides & bottom of the case. The end of this piece is so formed & secured by soldering, riveting, screwing or otherwise, to the edge of the plate or piece through which the bolt is pushed when thrown out, & to the bottom of the case, as to form a box which receives the end of the key & incloses it so that the sides close to the bottom of the case do not extend over the bottom of the case, but leave a space between the other & other edge of the projection of the bit of the key which fits into the key hole & the bottom of the case for the bit of the key to enter in & to bring its bit within the case & within the moving part of the lock the bottom of the case & the projection at the end of the bolt may be cut away in any form corresponding to the whole or in part to the form of the key that constitutes wards to the lock

The Bolt has a square head & three shanks as in the common locks the form and position of the shanks may be varied to make it suit the locks & that the method that may be chosen to guide & retain the bolt

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also may) a notch in the edge of the blank for the key to fall into, to receive the bolt; which notch may be cut in the bit of the key corresponding in size & position to the size & position of the blank so that the extremity of the bit may just fit the inner edge of the blank and fall into a notch or between the shoulders or projections in it; the blank be located in the centre of the shoe or block in the bit for that purpose will be sufficient in this case. the bolt of the blank will be of one degree thickness the purpose of a middle band. The tumblers may have one or two locks or several at pleasure instead of hanging the tumblers in the case as in the common locks as yet in use, have the bolt so that they may move back and forth & sideways & projecting in the tumblers face into corresponding holes in the bolt to hold the bolt not when turned out this, which I term in all the common locks, we have holes in the two edges of the tumblers which perform that office by catching on the edge of a transverse partition in the case. this partition may extend nearly from bottom to top of the case and have notches cut in it to guide the ends of the tumblers and of the bolt-blank in their movements (in which case the tumblers will catch in the notches) or the partition may extend only one third or one half the way & these movements may be guided in a manner already mentioned. there may also be notches in the other edge of the tumblers to catch on the other end of the notches in the partition and prevent the bolt from moving, when the tumblers are raised to right by false keys or turning of the partition so not extend above the tumblers these notches may catch on a cross bar extending across the case from side to side above the tumblers. The relative position of the tumblers and blank of the bolt may be varied to suit wards & the locks in this variety may be also further multiplied by having notches of different depths in the bits of the keys for the tumblers to fall into & by varying the position of the blank of the tumblers & bolt-blank in the different manner mentioned, & by arranging the notches which will entirely differ a sufficient variety for all practical purposes & perhaps to the least possible degree which may require the joint action of the tumblers (if one only or one of them) in the centre so that it may pass with the inner notch of the key to withdraw the bolt from one side or the other of the key-hole, the key then taking the

place and in some degree subserving the purpose of the bridle or bridge part of the lock. In this case a great variety will be produced in the shape of each of these keys without preventing the possibility of forging the right one or the alteration of the others in the key with which they respectively fit.

The Tumbler Spring one spring may serve several tumblers which the proper cock number may have its appropriate spring. The spring may be formed in the same piece of metal with the tumbler when the tumbler are attached to the bolt the proper to attach their springs to the bolt either by riveting them to the same projecting piece of the shank of the bit or bolt. In inserting the case above mentioned a recess or piece of cork is to be put between the upper edge of the tumbler and the bit purposely because the tumbler the lock complete without it. It will nothing either to the shanking security stability or durability of the lock and may therefore be dispensed with in economy in general. If however the article of workmanship is to have the utmost more valuable with a cap this may be added to serve as a cheap and good method would be to cover the interior of the tumbler the upper edge with a thin piece of sheet iron or other metal bending it and turned down to cover the end of the case the key. It does not matter which side of the key part from the bow before it is cut into the form of the bit already described which must of course correspond to the peculiar construction arrangement and position of the internal furniture of the lock.

The Catch Bolt. This does not necessarily differ from the corresponding part of a common mortice lock. The key hole escutcheon or drop for the key hole escutcheon differs from those hereto fore in being separate from the lock by projecting backward a little from the face or the drop that the drop is being behind it either in a separate projecting backward piece the escutcheon in the face of the door or behind that as usual which is fixed to the door by means of this construction the drop may be made with more of this shape or bigh which renders it less liable to be injured in the inside of the escutcheon. The drop should have a small projecting beyond the edge of the escutcheon after it the top or inside of the door the bottom by means of which it may be withdrawn from the key hole when

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the key is introduced. The Mortise lock thus above described is, taken as it is by us believed to be new in the following particulars which we deem important as mainly contributing to the compactness of its form & the facility of its construction & which severally and collectively & whether combined in whole or in part we claim as our invention, to wit — 1st the combining a case whose two sides or lower edge are of one piece with the mode as herein described of hanging the tumblers &c by attaching them to the bolt. Note. The upper edge of the case is that toward which the bit of the key is turned when it acts on the bolt & the other edge is the lower edge or bottom. 2d In so constructing the case as to have it open or capable of being opened for the purpose of receiving & adjusting the internal machinery of the lock on its upper edge & not on either side or the lower edge. 3d So locating the key hole, that when the key is introduced its bit may pass in whole or in part below the bottom of the case. 4th using the edge or bottom of the case for [illegible] the lock by cutting it to correspond in whole or in part to the form of the key. 5th combining a bolt moved by the action of the key in a notch or between checks on the side of its shank with tumblers falling into slits or recesses in the bit of the key. 6th so locating the tumblers one of the tumblers that it may fall into the same notch or recess in the bit of the key whether the key be introduced from one side or the other of the door. 7th combining the method as herein described of hanging the tumblers &c by attaching them to the bolt with the method as herein described of giving additional security to the lock viz by having several tumblers falling into corresponding notches or slits of different depths in the bit of the key. 8th placing the drop behind the key hole escutcheon. And whereas the foregoing eight enumerated particulars are all applicable as herein described to the Mortise lock we do therefore claim them all in their application to mortise locks. And whereas with the exception of the first and second they are equally applicable and in the same manner to other locks we do therefore claim them all with the exception of the first & second in their application to other locks. Witness our signatures this 10th Dec 1835

Philos Blake
Eli W Blake

Witnesses
Chas Underford
Jacob [illegible]

Exd. W.G.

Patented Feb 6, 1836

Drawing

[2045 [illegible]