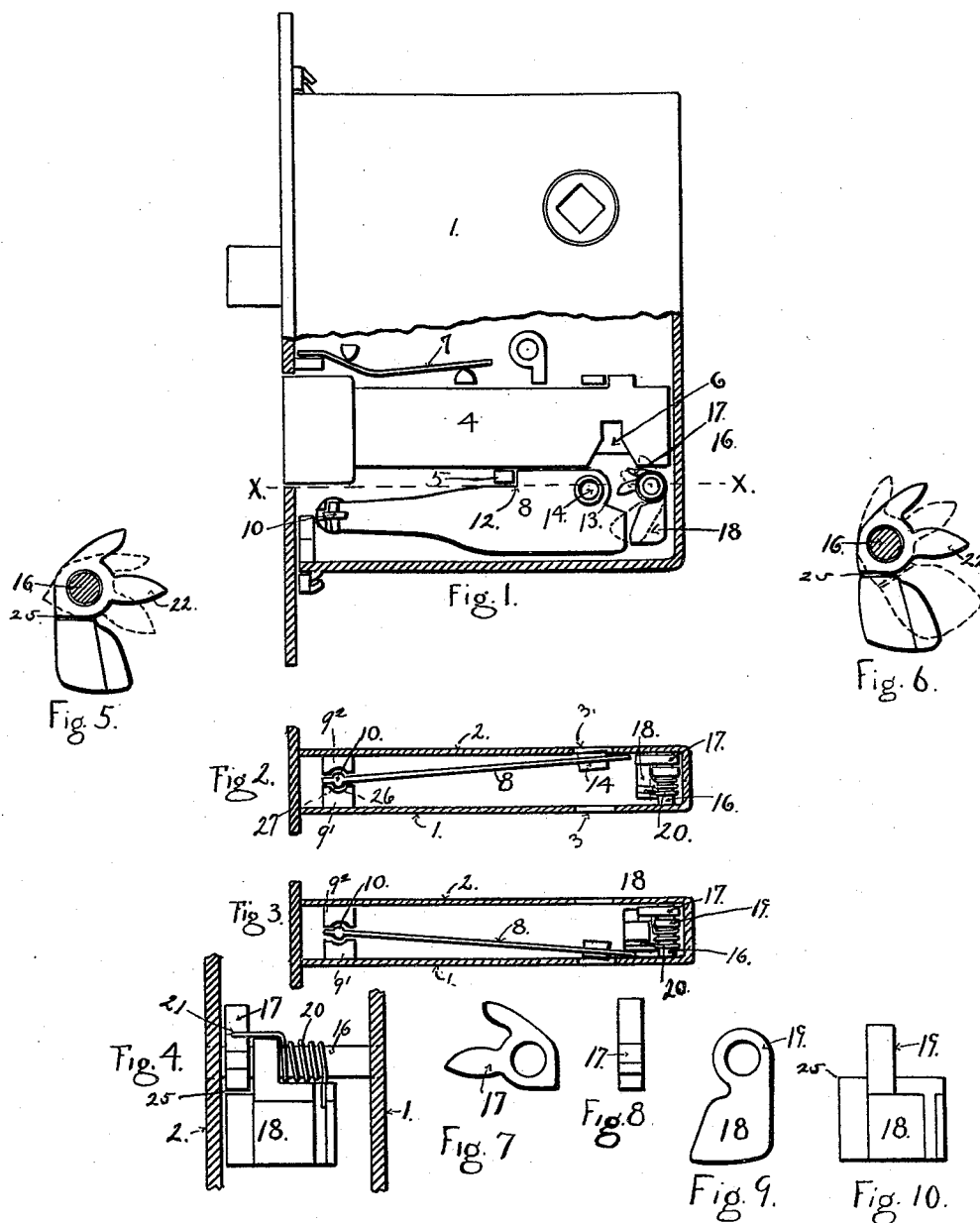


(No Model.)

G. W. SCHUMACHER.
KEYHOLE GUARD.

No. 530,206.

Patented Dec. 4, 1894.



WITNESSES.

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UNITED STATES PATENT OFFICE.

GUSTAVE W. SCHUMACHER, OF PORTLAND, MAINE, ASSIGNOR TO GEORGE F. GOULD, OF SAME PLACE.

KEYHOLE-GUARD.

SPECIFICATION forming part of Letters Patent No. 530,206, dated December 4, 1894.

Application filed June 12, 1893. Serial No. 477,388. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE W. SCHUMACHER, of the city of Portland, county of Cumberland, State of Maine, United States of America, have invented certain new and useful Improvements in Keyhole-Guards; and I do hereby declare that the following is a full, clear, and exact description of the same.

In general the nature of my present invention has relation to certain new and useful improvements in door-locks. Specially it has direct relation to certain novel and ingenious improvements in the construction and operation of that particular feature of a door-lock, commonly known and designated as a key-hole guard.

In the accompanying drawings, which form a component part of this specification, Figure 1 is an elevation or side view of a common door-lock, having the side plate partially broken out to show the proper application of my invention. Figs. 2 and 3 are transverse sections in the plane of the dotted line, *xx* (of Fig. 1) showing the movement of the key-hole guard when the key is inserted in the lock, from the front and back side, respectively. Fig. 4 is an enlarged detail of the safety attachment and wherein the operations of the device are fully illustrated by dotted outlines. Figs. 5, 6, 7, 8, 9, and 10, are details of parts of the safety mechanism.

The same numerals of reference indicate and refer to the same parts throughout the several views in the drawings.

- 1 and 2 are side-plates of a door-lock.
- 3 is a key-hole.
- 4 is a sliding lock-bolt.
- 5 is a lock-bolt guide.
- 6 is a tumbler.
- 7 is a tumbler spring.

The above enumerated parts are common and usual in lock construction and form no part of my invention. They are introduced at this time to facilitate the description as it becomes necessary, farther along, to show the relation of the several new elements of invention to those parts, when all are brought into harmonious connection.

Passing to a consideration of my newly organized invention, I will first describe the structure of the key-hole guard.

In general appearance the key-hole guard will be practically of the outline and shape delineated in the drawings, where it is represented as composed essentially of a blank 8, which is designed to cover the key-holes 3. On its upper edge the blank is provided with a notch 12 to engage with the bolt-guide 5. At 13 the blank is again notched to facilitate the operations of the key-hole guard in conjunction with the safety attachment, to be hereinafter set forth.

14 is a proper seat for receiving and holding a key-post, when locking or unlocking. The location of the blank 8 with reference to the other parts, will be best understood by reference to the drawings, wherein it is shown as centrally placed and extending nearly the entire depth of the lock case, with the part at or about the position of the key-holes, resting directly upon the lower frame piece of the lock, and with the part farthest away from the key-hole, reaching nearly to the face plate of the lock.

The key-hole guard is composed of any convenient metallic substance which can be easily wrought into the desired shape by die stamping or by casting.

For securing the blank 8 in its proper place in the lock, the following construction has been adopted. Short posts, 9' and 9², are set upon the inside face of the side plates 1 and 2 respectively. At their tops, along the line of their diameters, the posts are provided with semi-circular grooves 26, to receive and nicely engage with semi-circular enlargements 27, raised on the side of the blank 8, at the end nearest the face plate. The posts are placed directly opposite each other and their height is regulated to permit free passage of the blank between their ends. By this arrangement, when the several parts are brought into union, a convenient pivot or hinge is furnished for the end of the blank.

Let 10 represent the pivot point or hinge. To keep the enlargement 27 from falling from the groove 26 and thus breaking the pivot connection, a circular flange is set on the sides of the blank 8 at right angles to the semi-circular enlargements 27, and at a point midway between its ends and the ends of the posts 9' and 9², are also provided with cor-

responding receiving channels at right angles to the grooves 26.

The uses and applications are simple and are as follows: The blank 8, covers the key-hole at all times. When it is desired to operate the lock from either side, the key is inserted in the key-hole 3, as usual, and the key-post is slipped into the rest 14. The key is then pressed inwardly. This pressure causes the key-hole guard to swing upon its pivot connection in the posts 9' and 9², and throws the blank 8 over against the side of the lock opposite to the operator. As the blank 8 swings on its pivot or hinge, at 9', the notch 12 slips under the bolt guide 5, and any tendency of the free end of the blank to move upwardly, is overcome. The key can then be rotated at will.

From the foregoing, the nature and operation of the key-hole guard will be readily understood by all conversant with such matters.

Referring directly to Fig. 4 of the drawings, I will describe the construction of the safety attachment. 16 is a post designed to stand upon the side plate, 2, and project athwart the thickness of the lock to the side plate 1. 17 is a swivel plate or blank, loosely connected to the post 16. This plate rests flat against the side plate 2. Resting above the swivel blank is seen a block 18, having a side projecting collar 19, by means of which a loose connection is made with the post 16. On its under side at 25, the block is cut away to provide a shoulder to fit over and closely engage with the swivel blank, so that when the edge of the swivel blank is pressed against the shoulder at 25, the blank and block will act as if integrally connected. The upper end of the post is surrounded by a torsion spring 20. The two ends of this spring are free. The upper end is turned over and presses against the projecting collar 19. The lower end is turned downwardly and rests in a notch 21, cut in the swivel blank 17. The function of the torsion spring is to hold the parts in proper union. The position of the safety device is at the free end of the key-hole guard.

The applications to practice of all the above parts when properly assembled, accomplish the object of the second purpose of invention.

Assume the operator to be standing on the outside of the door. The key is inserted in the lock and worked as heretofore described, either for locking or unlocking. In turning the key from this side of the lock, the key-bit slides freely over the swivel plate 17, lying upon the side plate 2, and the several operations of locking and unlocking, are readily performed without disturbing any of the parts of the safety attachment. It is manifestly desirable that when the bolt is thus thrown by a key inserted from the outside, that it should be capable of being unlocked at all times from the inside. An examination of the parts, shows that this can be accomplished. The door having been locked from

the outside as heretofore described, assume the operator to be standing on the inside of the door. The insertion of the key swings the key-hole guard to the opposite side plate. The key is rotated as usual. As the key turns, it engages the tumbler 6, and throws back the sliding bolt 4, continuing its revolution. As it leaves the tumbler 6, it strikes the off-set 22, on the rim of the swivel blank 17. This being loosely connected to the post 16, allows it to turn with the key until it reaches such an angle that the key slips off the off-set 22, and is free to be removed in the usual method. The off-set 22, as it has turned has engaged one end of the torsion spring which immediately causes it to resume its former position.

Assume the operator to stand at the inside of the lock and desirous to lock the door. The insertion of the key swings the key-hole guard to the opposite side-plate. The key is rotated as usual. As the key turns, the off-set 22, on the rim of the swivel blank 17, is caught by and pushed along before the key-bit, obviously causing the blank to pivotally turn upon the post 16. This movement of the blank, by reason of the engagements of the parts in the shoulder 25, causes the block 18, to turn. Just as the key-bit strikes the tumbler 6, it slips by the off-set. The swivel plate and block remain in the position left by the key-bit. Continuing in rotation the bit raises the tumbler and throws the sliding bolt 4. So long as the parts remain in this position, it will be impossible to insert a key into the lock from the outside, and the lock can be unlocked by a reversal of the last operation carried on from the inside only.

Obviously by the construction and operation above set out, an effective safety lock is furnished.

Various modifications of the device herein shown can be made while keeping within the spirit of my invention.

What I claim as my invention, and desire to secure to myself by Letters Patent, is—

1. The combination with the pivotally operating key-hole guard of the safety mechanism, consisting of a swivel blank and block loosely mounted on a proper carrying post, and a post torsion spring, substantially as herein set out.

2. In a door-lock, a pivotally acting key-hole guard consisting of a thin metal blank, located between the side plates of the lock, extending from near the lock face inward so as to cover the key-hole, the end farthest from the key-hole, near the lock face, being convexed, with a flange in the center of said convexed end to prevent any lateral motion and loosely connected pivotally, to two posts, one standing in each of the side plates of said lock and about midway between, with concaved ends and a depression to receive the aforesaid flange, forming a loose joint or hinge, the end of the blank opposite the key-holes being movable to either side of said lock and having a concaved boss on each side of

said blank on a straight line with the key-holes to hold the shank of the key that it may be readily rotated, the top edge of said blank being notched to engage with the lock-bolt guide, so that by inserting the key in one key-hole, the blank is made to cover the opposite key-hole substantially as herein described.

3. In a door lock, a key-hole guard, safety or locking mechanism consisting essentially of a pivot or carrying post, inserted between the side plates of the lock at the end nearest, and by the side of the key-hole having a metal blank attached thereto of a sufficient thickness to fill the space between the key-hole guard and the side plate of the lock, a swivel blank loosely connected to said carrying post, integrally engaging said metal blank and a post torsion spring for holding said metal

blank and swivel blank in union, substantially as is herein described.

4. In a door lock, the combination of a loosely pivotally acting key-hole guard blank, and a safety or locking mechanism, consisting essentially of a carrying or pivot post, having a metal blank attached thereto, a swivel blank integrally engaging said metal blank, loosely carried on said pivot post and a torsion spring for holding said metal and swivel blank in union, substantially as is herein described.

In testimony that I claim the foregoing as my own invention I have affixed my signature in the presence of two witnesses.

GUSTAVE W. SCHUMACHER.

Witnesses:

GEO. F. GOULD,

ELINOR S. MOODY.