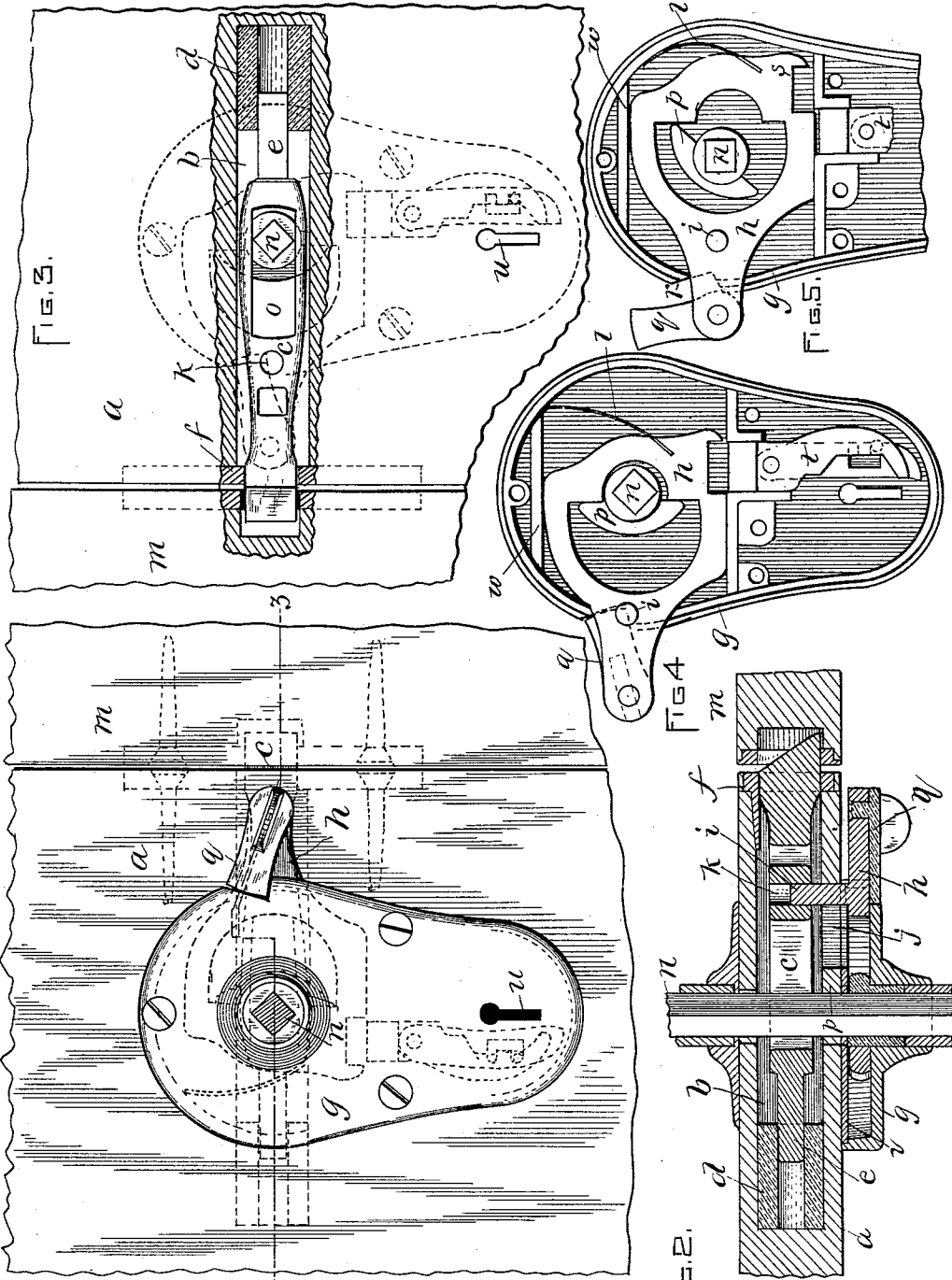


(No Model.)

C. F. GARLAND.
DOOR LOCK.

No. 480,236.

Patented Aug. 2, 1892.



WITNESSES.

Wm. C. Jackson
A. S. Harrison.

FIG. 1

FIG. 2

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Att'y.

UNITED STATES PATENT OFFICE.

CHARLES F. GARLAND, OF CHELSEA, MASSACHUSETTS, ASSIGNOR TO
RICHARD P. ELLIOTT, OF NASHUA, NEW HAMPSHIRE.

DOOR-LOCK.

SPECIFICATION forming part of Letters Patent No. 480,236, dated August 2, 1892.

Application filed November 9, 1891. Serial No. 411,249. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. GARLAND, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Door-Locks, of which the following is a specification.

It is the object of my invention to provide a lock which may be readily applied to a door and be employed upon a door constructed of thin stock.

It is also the object of my invention to provide a lock in which it may be necessary to inclose only the bolt in the stock or material composing the door, arranging the operating means in a casing or hollow scutcheon on the outside of the door.

It is also the object of my invention to provide improved means for latching or locking the bolt, so as to prevent the surreptitious opening of the door.

To these ends my invention consists of a bolt arranged in bearings in the door so as to be longitudinally movable therein, combined with operating means contained in a casing on the outside of the door.

My invention also consists in combining with the foregoing a latch peculiarly constructed and arranged to prevent the operation of the bolt.

My invention also consists of other improvements incidental to the foregoing, as hereinafter more fully described.

Reference is to be had to the annexed drawings, and to the letters which are marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

In the said drawings, Figure 1 is a front elevation of my improved lock applied to the door. Fig. 2 is an elevation, partly in section, showing the opposite side of the door and door-casing represented in Fig. 1. Fig. 3 is a sectional view taken on the line 3 3 of Fig. 1. Fig. 4 is a view of the back side of the casing and operating means contained therein, showing the operating-frame latched or locked to prevent the opening of the door. Fig. 5 is a view similar to Fig. 4, but representing some of the parts in a different position from that in which they are shown in the last-mentioned figure.

In the drawings, *a* designates a door provided with a hole *b*, in which is arranged a bolt *c* so as to be longitudinally movable in the said hole.

d designates a guide or bearing of metal, which may be driven into the inner end of the hole *b* and form a bearing for the inner end *e* of the bolt, which may be at this point turned down to a diameter smaller than its body portion.

f designates a guide of metal arranged in the outer portion of the hole *b* to form a bearing for the outer end of the bolt *c*, the two bearings *d* and *f* serving to properly and accurately guide the bolt *c* in its movements. In an instance where the stock or material of which the door is constructed is sufficiently strong and durable the guides *d* and *f* may be dispensed with.

g designates a casing or hollow scutcheon adapted to be secured to the outside of the door, in which casing is arranged a sliding frame *h*, connected with which frame is a pin *i*, which extends through a slot *j*, formed in the door, and into a hole *k* in the bolt *c*, so that by sliding the frame *h* in the casing the bolt may be moved to and fro in its bearings in the door.

l designates a spring arranged in the casing and operating upon the frame *h* with a tendency to move the same, so as to throw the bolt *c* forward in its bearings and engage it with the door-frame *m*.

n designates the squared knob - spindle, which passes through the door and casing from side to side and through a slot *o*, formed in the bolt *c*, and also through a square hole formed in the frame for operating dog *p*, which is arranged to be actuated in the frame *h* and to operate upon the same in a well-known way, so as to move the said frame back against the tension or stress of the spring *l*. The manner in which the dog *p* operates upon the frame *h* will be understood by reference to Figs. 4 and 5 and need not be further described.

q designates a latch or catch pivoted upon an end of the frame *h*, projecting from the casing and arranged to be moved down, so as to engage a notch *r*, formed in the casing, and so lock the frame and secure the bolt against

movement by the knob-spindle or other means, as is shown in Fig. 4, or said latch may be folded or moved back out of engagement with the notch *r* of the casing, and so permit the sliding frame and bolt to be moved by the knob-spindle, as is represented in Fig. 5.

s designates a notch formed in frame *h*, with which a sliding bolt *t* may engage to lock the frame and bolt *c* against movement by means of an ordinary key inserted through the keyhole *u*.

An important feature of my invention resides in the fact that the entire means for operating the bolt *c* are arranged within a hollow scutcheon or casing on the outer surface of the door, making it necessary in the application of my improved lock to a door to bore or cut only a small hole in the door for the bolt *c*, so that the lock may be applied to a door constructed of very thin stock.

The construction of the catch *q* and its arrangement with respect to the sliding frame and casing affords a very efficient and simple means for locking the door from the inside against surreptitious opening.

It is to be noted, further, that my improvements provide a lock which cannot be readily picked, and, moreover, a lock which may be quickly applied to a door without defacing the same.

Any form of lock for securing the frame against movement by the knob-spindle may be provided and in my invention may be used in some cases without employing the lock of which the sliding bolt *t* forms a part.

v in Fig. 3 designates a plate, which may be interposed between the operative parts in the casing *g* and the door in order to retain the said parts in proper place in the casing.

w designates guides, which may be cast with or secured to the casing *g* to guide the sliding frame *h* in its movements.

It is obvious that changes may be made in the form and arrangement of parts compris-

ing the invention without departing from the nature or spirit of the same.

Having thus explained the nature of my invention and described a way of constructing and using the same, I declare that what I claim is—

1. The combination, with the bolt *c*, arranged in a hole formed in the door, and metal bearings *d, f*, arranged in said hole to support and guide the bolt, of a casing secured to the outer surface of the door, a sliding frame arranged entirely in said casing and connected with the bolt by a pin operating in a slot formed in the door, and a knob-spindle and connections for operating the said frame, as set forth.

2. The combination, with a bolt *c*, arranged to slide in ways formed in a door, of a casing secured to the outer surface of the door, a sliding frame arranged entirely in said casing and connected with the bolt by a pin operating in a slot formed in the door, a latch or catch *q*, pivoted upon the sliding frame and arranged to engage the casing, and a knob-spindle and connections for operating the said frame, as set forth.

3. The combination, with a bolt *c*, arranged to slide in ways formed in a door, of a casing secured to the outer surface of the door, a sliding frame arranged entirely in said casing and connected with the bolt by a pin operating in a slot formed in the door, and a knob-spindle and connections for operating the said frame, and a sliding bolt *t*, arranged to be operated by a key to engage the frame *h* and lock the same and the bolt *c* against movement, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 4th day of November, A. D. 1891.

CHARLES F. GARLAND.

Witnesses:

ARTHUR W. CROSSLEY,
A. D. HARRISON.