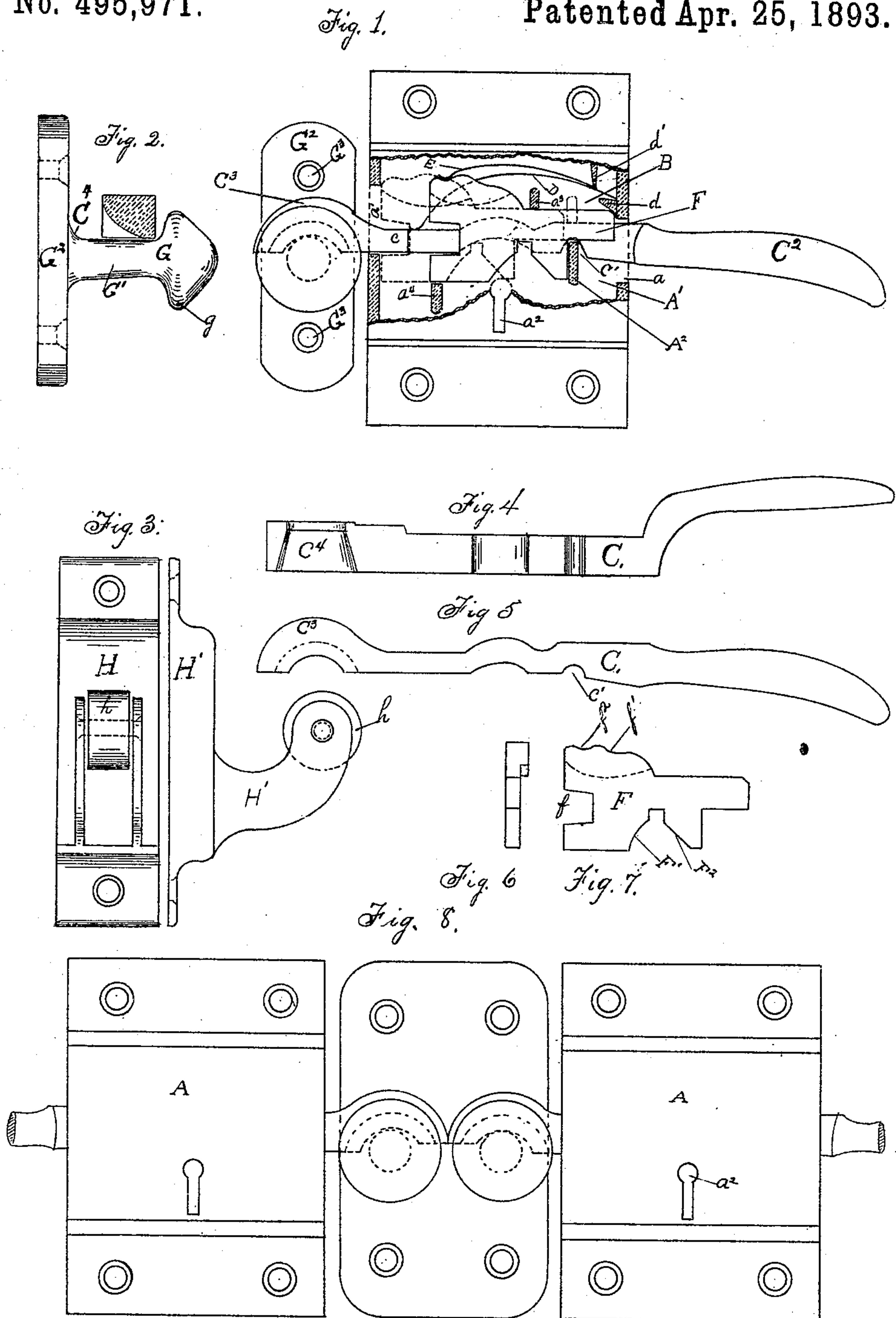


(No Model.)

G. H. HARRIS.
LATCH AND LOCK.

No. 495,971.

Patented Apr. 25, 1893.



Witnesses
W. Harvey Murry
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Inventor,
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UNITED STATES PATENT OFFICE.

GEORGE H. HARRIS, OF KENTON, OHIO.

LATCH AND LOCK.

SPECIFICATION forming part of Letters Patent No. 495,971, dated April 25, 1893.

Application filed May 21, 1892. Serial No. 433,837. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. HARRIS, a citizen of the United States, residing at Kenton, in the county of Hardin and State of Ohio, have invented certain new and useful Improvements in Latches and 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.

This invention relates to that class of locks in which a pivoted latch and sliding locking bolt are employed. The chief object of the said invention is to secure a very tight fit between the door and jamb when locked. This is especially important in refrigerator doors and the like where the escape of air must be prevented. To this end, and for other purposes, I make use of the construction and combination of devices hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 represents a front elevation of a lock and catch embodying my invention, a part of the front of the casing being broken away. Fig. 2 represents a detail view in side elevation of the said catch, the latch being shown in section. Fig. 3 represents a modified form of catch. Figs. 4 and 5 represent detail views of the latch taken at right angles to each other. Fig. 6 represents an end view and Fig. 7 a side elevation of the locking bolt. Fig. 8 represents a front elevation of two locks and catches used together in accordance with my invention, the casings being on the locks and the catches being attached to the same plate.

A designates the front plate of the lock-casing, which is arched out as usual, to form the lock-inclosing space A'; and B designates the back plate of the said casing, which holds the movable parts of the lock in place. Openings a and a' are left in the ends of the said front plate to allow the vertical play of a latch C, which is pivoted on a fixed lug A^2 on the interior of the said front plate, the said latch being constructed with a recess C' to fit on the said lug. This makes a very secure and strong pivot, but allows the easy removal of the said latch when desired. One end of the said latch outside of the casing is constructed to form a handle C^2 . The other end is curved to form a downwardly facing hook C^3 , the under face

of the said hook being flared upwardly and inwardly at C^4 so as to present a beveled face to the catch on the door-jamb. A spring D bears against the said latch to hold this locking end down. Lugs d d' of the casing hold detachably but firmly the other end of the said spring in place. They also hold similarly another spring E which bears on a longitudinally sliding locking bolt F, having a lug f which overlaps a shoulder c of the said latch when the said locking bolt is in its forward or outward position. A slight undulation f' on the top of the said locking bolt then receives the curved forward end of the spring E, and another undulation f^2 in front of the former is provided to similarly receive the end of the spring when the bolt is in its rearward position; the said spring thus holding it in either. This bolt is shot or withdrawn by means of a key inserted through a key-hole a^2 of the front plate a , the said key turning against shoulders F' F^2 on the under side of said bolt, for that purpose. Guide lugs a^3 a^4 on the inner face of the front plate A are employed to direct the motion of the said locking bolt. The pivot lug A^2 before described incidentally serves the same purpose and also prevents the said locking bolt from withdrawing too far.

G designates a conical catch having an outwardly presented point, a beveled face g at the base of the cone, a stem G' behind this and a plate G^2 which is held against the door-jamb by screws G^3 turned into the latter.

H designates another form of catch used as a substitute or alternative for the latter. This consists of a roller h in a pair of bearing arms formed on a plate or casting H' , these arms being extended outwardly and curved on top so as to present an inclined curvilinear face constituting an equivalent for the inclined rear face of the conical catch G.

Whichever catch is used, the curved and recessed end of the latch will ride up over and behind it and the said inclined face, acting on that of the latch, will have a wedge action, binding the door tightly to the jamb.

Of course, as in Fig. 8, two of the catches may be attached to one plate; locking a door on each side thereof by engagement with the necessary latches.

The roller h has the usual advantage of less-

ening friction; but the other form of catch is perhaps the stronger and more reliable.

Of course the locking bolt may be left out of use, and the latch then acts as such only.

5 But when the said bolt is shot the devices become a very secure lock also.

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

10 1. A casing provided on its inner face with the guide lugs a^3 a^4 and the pivot lug A^2 , in combination with a latch pivoted on the said lug A^2 and provided with a shoulder, a longitudinally movable locking bolt arranged to
15 engage the said shoulder for locking the said latch, and having undulations f' f^2 on its up-

per face, a spring bearing against the said latch and another spring arranged to bear against the said undulations substantially as set forth.

20 2. In combination with a pivoted latch having a hooked end which is beveled on one side and a bolt and springs for locking the said latch a catch attached to the door jamb and having a knob shaped head for engaging the
25 said latch substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE H. HARRIS.

Witnesses:

W. A. BELT,

JOHN H. GARY.