

No. 644,192.

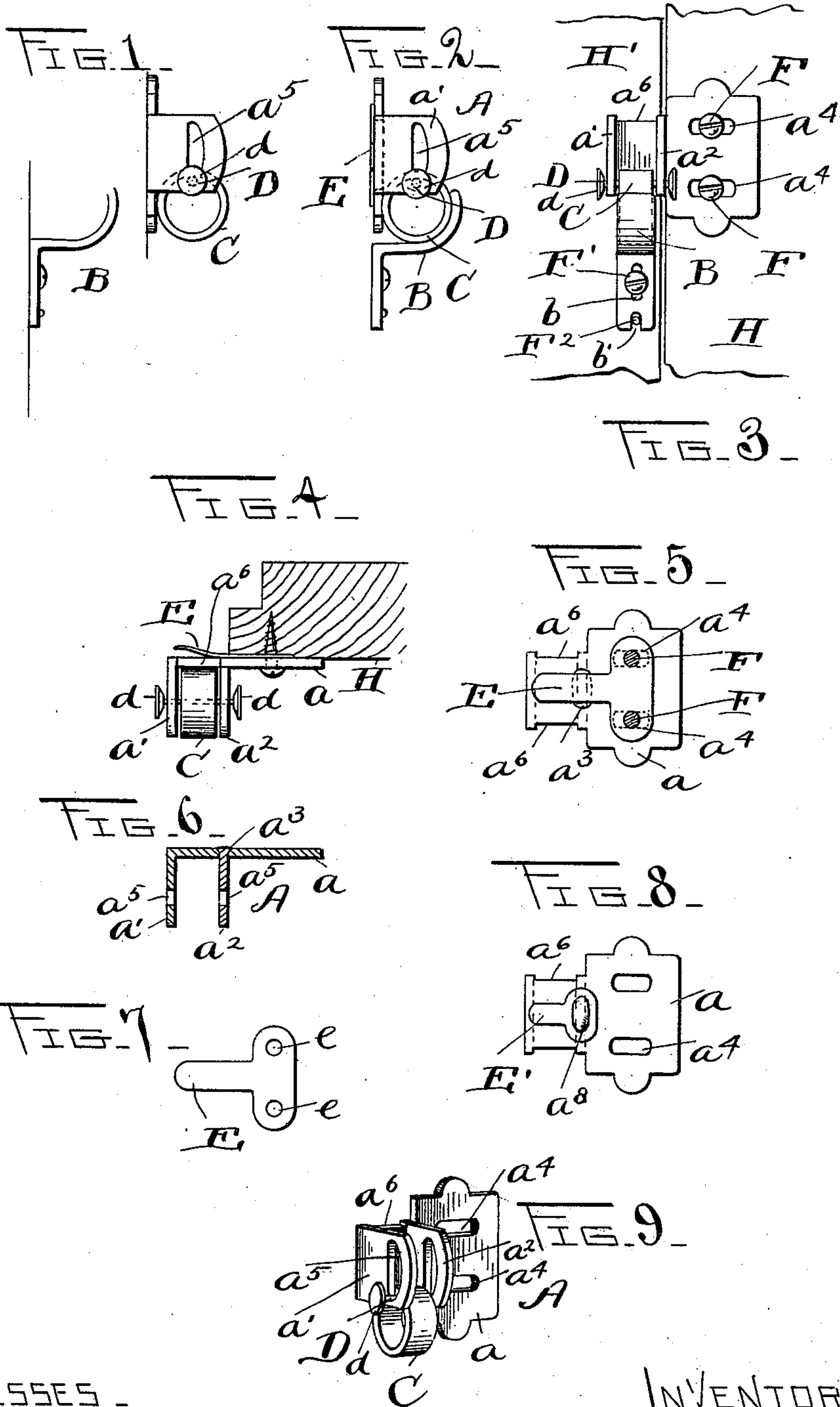
Patented Feb. 27, 1900.

T. B. STEVENS.

LATCH.

(Application filed Mar. 6, 1899.)

(No Model.)



WITNESSES -

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# UNITED STATES PATENT OFFICE.

THEODORE B. STEVENS, OF CLEVELAND, OHIO.

## LATCH.

SPECIFICATION forming part of Letters Patent No. 644,192, dated February 27, 1900.

Application filed March 6, 1899. Serial No. 707,865. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE B. STEVENS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Latches for Doors or Windows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

10 The object of my invention is to provide a very simple and efficient lock adapted, primarily, to be secured to the front side of swinging doors or windows and automatically lock them when closed.

15 My improved lock has the advantage of being very cheap to construct, neat in appearance, automatic in its operation, reversible—i. e., may be applied to either a right or left hand door—and adjustable to compensate for the shrinking or swelling of the door.

The invention may be best summarized as consisting of the characteristics and combinations of parts hereinafter specified, and definitely enumerated in the claims.

25 In the drawings, which clearly disclose my invention, Figure 1 is an end view of the two parts of the lock separated, and Fig. 2 is a similar view with the parts in coöperation. Fig. 3 is a front view with the parts in coöperation. Fig. 4 is a plan of the member which carries the locking-bolt, which in this case is a ring or roller. Fig. 5 is a rear view of the same, showing the spring, which may be behind it, and showing the fastening-screws in section. Fig. 6 is a horizontal section of such part without the spring. Fig. 7 is a side elevation of the spring alone. Fig. 8 is a rear elevation of a modified form in which the spring is secured to the casing. Fig. 9 is a perspective front view of the roller-carrying portion of the lock.

Referring to the parts by letters, A represents a casing consisting of the plate  $a$ , having the integral end  $a'$  turned forward at right angles to the rest of the plate, and the piece  $a^2$ , projecting from the plate  $a$  parallel with the plate  $a'$  and riveted to the plate  $a$  by a rivet-tongue  $a^3$ . A pair of holes  $a^4$ , elongated horizontally, are made through the plate  $a$ , whereby it may be adjustably secured to a swinging member, as the door or casement-window H, by screws F.

Between the plates  $a'$  and  $a^2$  is a ring or roller C, loosely held by a rod D extending through slots  $a^5$  in said plates. This rod may be in any shape desired, as a pin, a ring, or the intumed ends of a partial ring. In the form shown it consists of a straight bar having the two circular heads  $d$ .

The receptive part of the casing is designated B. It consists, preferably, of a curved-up bracket, as shown, having a depending portion which is secured to the jamb or relatively-stationary door H' by means of a screw F', which takes through a vertically-elongated hole  $b$  in the bracket, and an escutcheon-pin F<sup>2</sup>, which takes into the elongated notch  $b'$ . Thus this bracket is vertically adjustable.

When the window or door is closed, the roller C bears at its rear side against the plate  $a$  and at its front side against the upturned end of the bracket B, and thus locks the door. When the roller is elevated, as it may be very easily by the thumb and forefinger grasping the heads  $d$  of the rod D, (or a single finger if a ring is employed in place of the rod,) the bracket is freed and the door unlocked.

In order that the thrust on the roller when in engagement by a pull on the door shall not be near enough in line with the horizontal diameter of the roller to cause the roller to jump over the bracket, I cut away the plate  $a$  back of the roller, as shown at  $a^6$ . This makes the roller in action virtually a diagonal strut between the plate  $a$  and the bracket B and makes the lock very stable.

For many uses—as, for example, on a casement-window or a swinging window in a boat—it is very desirable that all rattling be prevented. I accomplish this very simply by a spring E, which is secured between the casing A and the window H by reason of the screws F passing through the holes  $e$  in the spring. This spring, as shown, extends beyond the edge of the window and is adapted to bear against the jamb, or, if desired, against the head of a screw screwed into the jamb.

If desired, in place of a separate spring E the spring may be attached to the casing A, as shown in Fig. 8. There E' represents a spring which is secured by the rivet-tongue  $a^3$  of the plate  $a^2$ .

In securing the parts in place the casing A is screwed to the door or window near its



edge, with the part carrying the roller overhanging it. The bracket is then placed against the opposing door or jamb, with its upper edge just beneath the cut-away edge  $a^6$  of the casing A. The escutcheon-pin  $F^2$  is then driven into place and the screw  $F'$  turned in. If necessary to change the adjustment, either at the time it is put up or later from the shrinking or expanding of the door or window, the screws are loosened slightly and the casing A shifted horizontally or the casing B vertically, as the circumstances require.

It will be observed that the casing A is exactly the same above a horizontal medial line as it is below it, the edge  $a^6$  being cut away both above and below. Thus the casing may be attached to a right-hand or a left-hand door or window with equal facility.

Having described my invention, I claim—  
 1. In a latch, the combination of a casing having a pair of ears, each ear having a curved slot, a rod playing in the slots and having an enlarged head at each end outside the ears, a ring-latch loosely hung on the rod and a bracket to receive the ring-latch, substantially as described.

2. In a latch, the combination of a casing, a pair of ears projecting at substantially right angles from the casing, a ring-latch loosely journaled in and playing between the ears, the casing being cut away at the base of the ears, and a locking-bracket, the edge of whose engaging lip is substantially in line with the adjacent edges of the ears and out of line with the cut-away base of the casing.

3. A reversible casing for a latch, comprising a pair of ears projecting at substantially right angles from the casing, the casing being cut away on both sides at the base of the ears, the ears having curved slots, and all the features being uniform on each side of a medial horizontal line through the casing.

4. The combination of a casing, a ring-latch carried thereby, a cooperating bracket, the lower edge of the rear wall of said casing being cut away behind the ring-latch whereby the ring-latch when in engagement forms a diagonal strut between the casing and the bracket, substantially as described.

5. In a latch, comprising a ring-latch, a sustaining-casing and a locking-bracket, a rod bearing the ring-latch movable in the casing and having disks at each end which serve to retain the rod and furnish a grasp for the fingers, substantially as described.

6. The combination of a casing adapted to be secured to a door or window near its edge, a bracket adapted to be secured to the member cooperating with said door or window, a roller carried by the casing and adapted to stand within the bracket and lock the casing to the bracket, slots through said casing and bracket, those in one member being horizontal and in the other vertical whereby the lock may be adjusted either vertically or horizontally, substantially as described.

7. A casing for a lock consisting of the sheet-metal plate  $a$  having a forwardly-turned end  $a'$  projecting at right angles to the rest of the plate, the plate  $a^2$  riveted to the plate  $a$  and lying parallel with the plate  $a'$ , slots through said plates  $a'$  and  $a^2$ , the plate  $a$  being cut away at its upper and lower edges as at  $a^6$  between the plates  $a'$  and  $a^2$  there being holes through the plate  $a$  beyond the plate  $a^2$  whereby it may be secured to a door or window and overhang the edge, substantially as described.

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

THEODORE B. STEVENS.

Witnesses:

ALBERT H. BATES,  
 PHILIP E. KNOWLTON.