

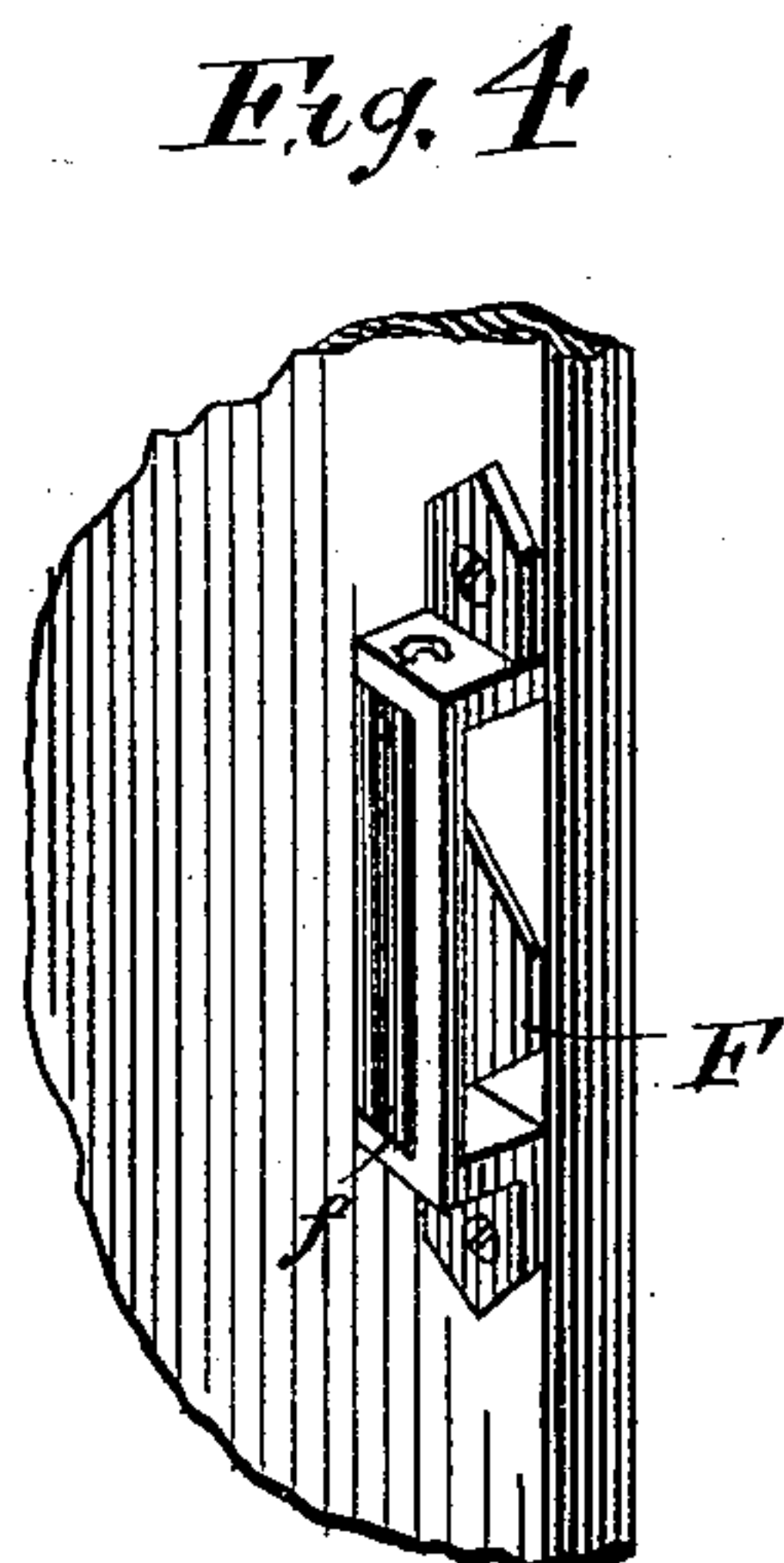
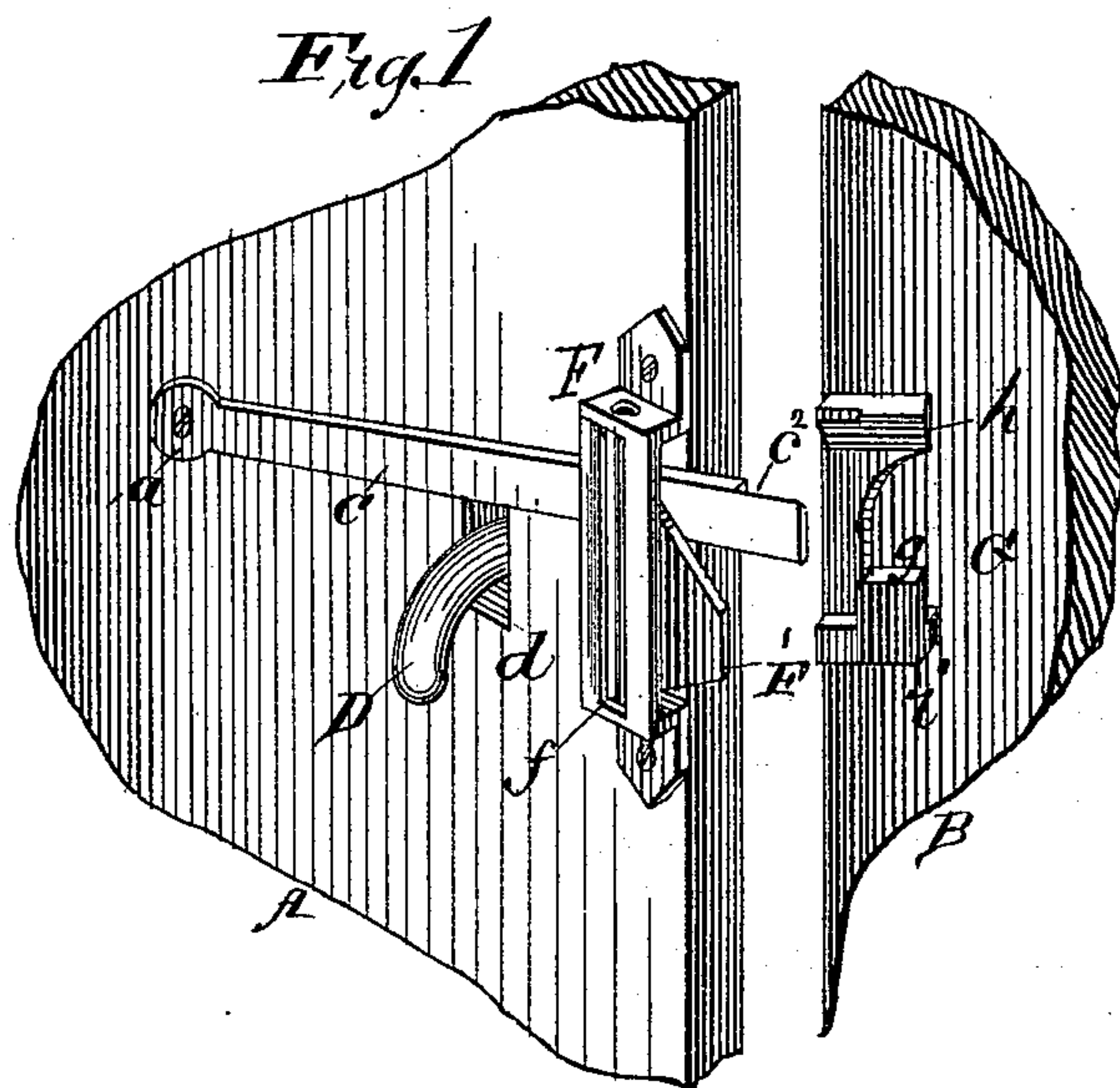
(No Model.)

W. B. SHORLAND.

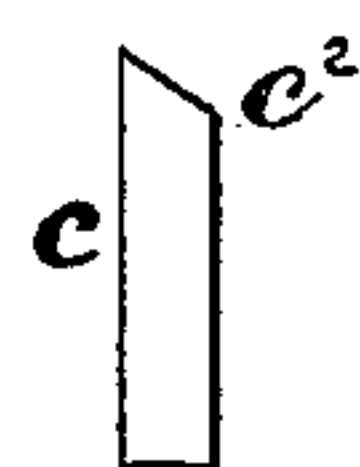
LATCH.

No. 300,651.

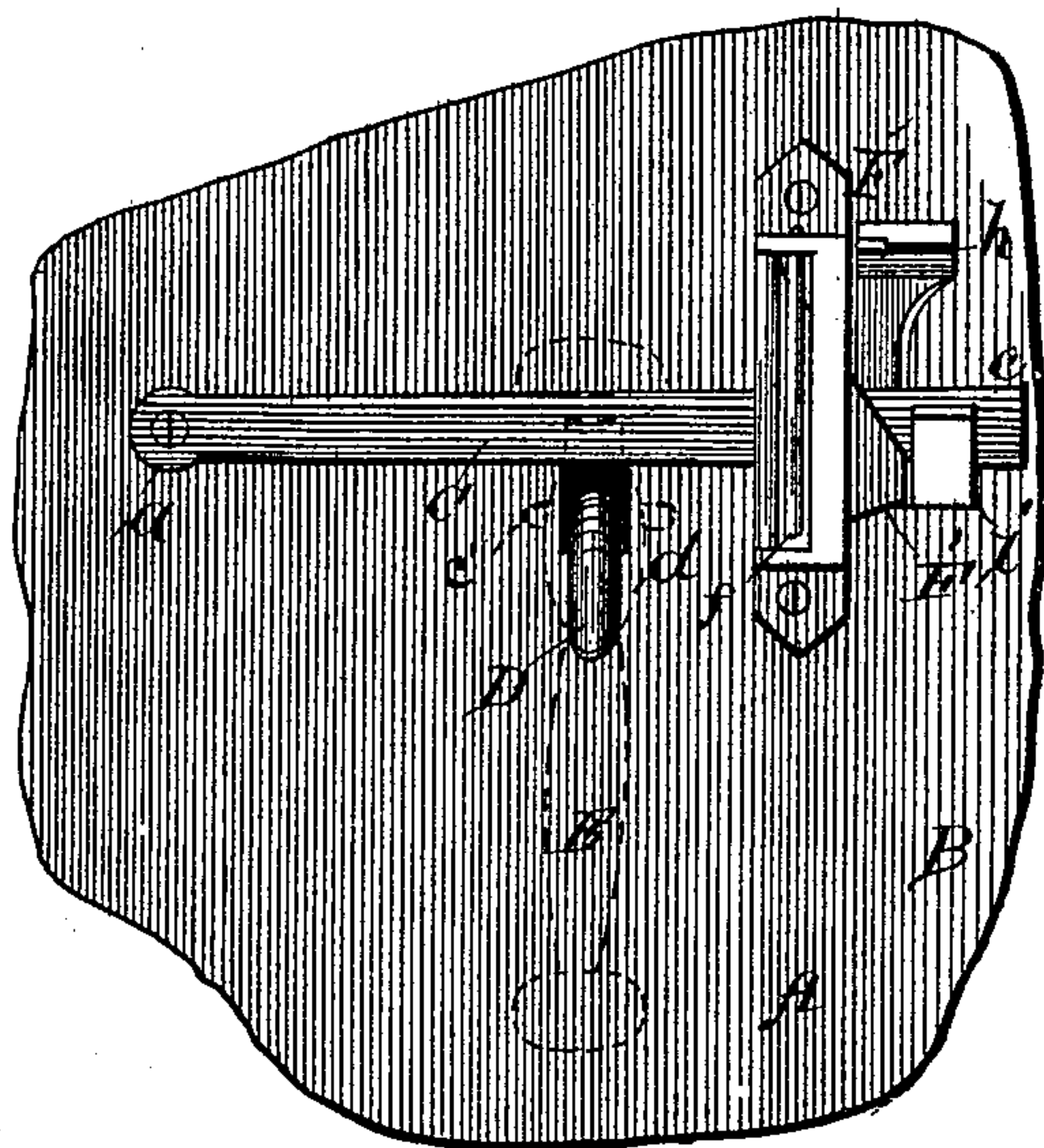
Patented June 17, 1884.



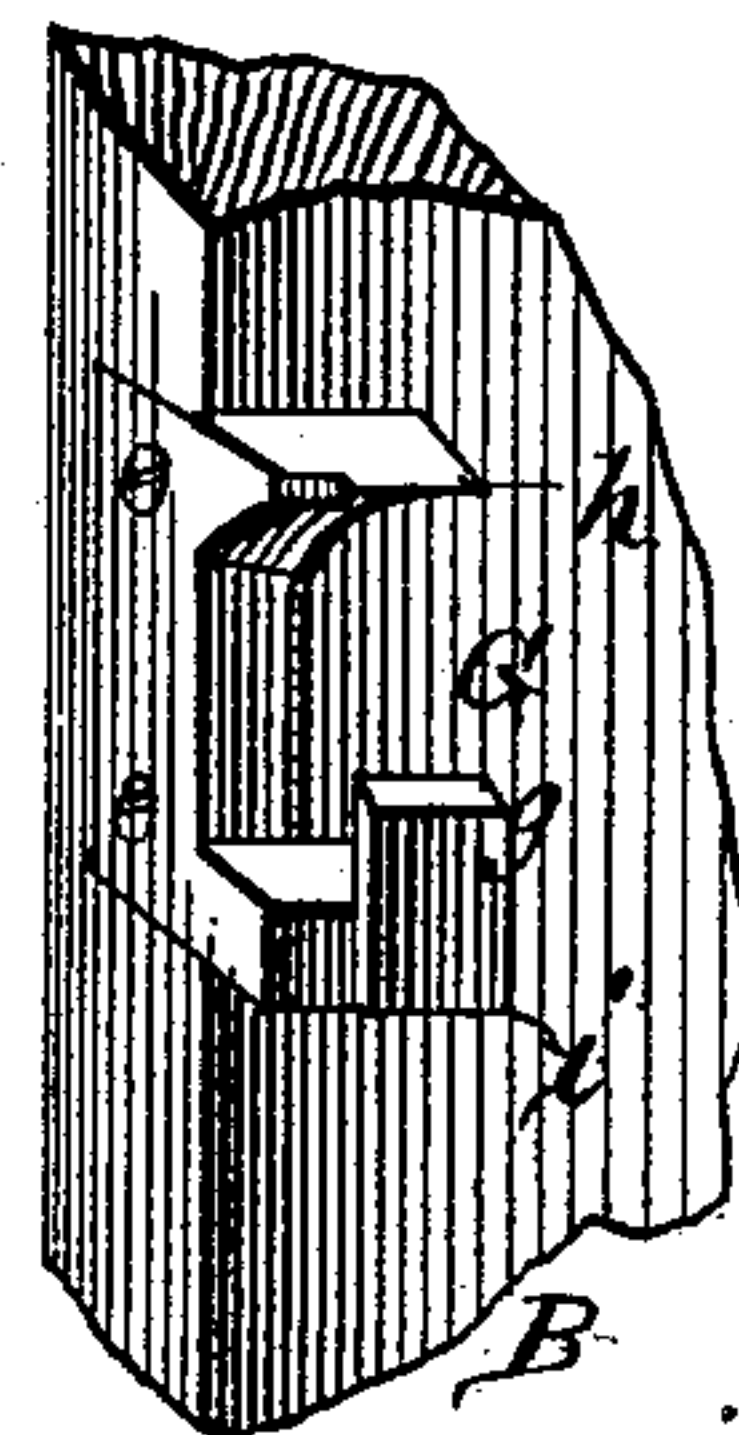
*Fig. 5.*



*Fig. 2*



*Fig. 3*



WITNESSES.

*W. F. Walling*  
*Wm a Garner.*

INVENTOR.

*William B. Shorland*  
*by L. Deane*  
*his Atty.*



# UNITED STATES PATENT OFFICE.

WILLIAM B. SHORLAND, OF MANCHESTER, COUNTY OF LANCASTER,  
ENGLAND.

## LATCH.

SPECIFICATION forming part of Letters Patent No. 300,651, dated June 17, 1884.

Application filed September 15, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM B. SHORLAND, a citizen of Great Britain, residing at Manchester, England, have invented certain new and useful Improvements in Latches; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view showing part of a door or shutter and its frame with my improved latch applied thereto. Fig. 2 is a front elevation showing the latch down. Fig. 3 is a perspective view of the catch and the beveled depressing-nose, which is applied to the door-frame. Fig. 4 is a perspective view of the latch-guard and its angular spring-actuated retaining-plate. Fig. 5 is an end view of the latch, showing the beveled upper edge thereof.

This invention relates to improvements in latches for doors, shutters, and like devices; and it consists, mainly, in a frictional spring-actuated plate combined with a latch-guard; also, in a beveled latch, in combination with a beveled nose and a catch for the latch, all of which will be fully understood from the following description, when taken in connection with the annexed drawings.

Before describing the peculiar construction of my improved latch, I will state that it is desirable that said latch should be held up when acted on to release it from the joint-catch of the door-frame; also, that the latch should positively and automatically drop into its catch when the door is shut.

A designates a door, and B the upright jamb of the door-frame. To the inside of the door I pivot at *a* a gravitating latch, C, the upper edge of the free end of which is beveled at *c*<sup>2</sup>. This latch is practically a flat metal bar, beveled as described, for a purpose hereinafter explained. Through the door I make a slot, *d*, through which passes the longest arm of a thumb-lever, D, which has its fulcrum at *e*' on an upper extension of the door-handle E, which

handle is rigidly fixed to the outside of the door, as shown in Fig. 2 in dotted lines. The longest arm of said lever D is beneath the latch C, and so arranged in relation to it that by grasping the handle E and depressing the lever the latch is raised and the door can be opened.

F designates a looped latch-guard through which the latch passes, and F' is a friction-plate of angular form, which is pivoted to the upper and lower shoulders of the latch-guard, and acted on by a spring, *f*, so that its diagonal edge is pressed against the inner side of the latch when the door is open. It will be seen that the spring-actuated plate F' will hold the free end of the latch either up or down. Now, when the latch is up and the door is shut, it is desirable to fasten the door by freeing the latch from the said friction-plate. This I accomplish as follows:

G designates a catch-plate, which is recessed into the jamb of the door-frame, and which is constructed with a catching-lip, *g*, at its lower end, a beveled nose, *h*, at its upper end, and a shoulder, *i*, alongside of the said catching-lip. While I have shown in the present illustration a thumb-latch, it is obvious that I may use any convenient means for raising the latch—as, for instance, a button or knob may be used on the end of the screw by which the latch is pivoted to the door or shutter. It will be seen by reference to Fig. 1 that the lower angle of the friction-plate F' bears against the shoulder *i* in the act of shutting the door, which shoulder releases the latch and allows it to drop by its own weight behind the catching-lip *g*.

The peculiar structure of the catch as above described is of very great value, not only in avoiding the unsightly angular projection which is almost invariably used at present, and which acts as a guide to enable the latch to ride up till it reaches its seat. This old-style catch, not only objectionable in being unsightly, is often the disagreeable agent by which clothes are torn, and is also objectionable in offering no safeguard to prevent the door from slamming. The beveled edge *c*<sup>2</sup> of the latch in the act of shutting the door, primarily impinges by its beveled edge against the bev-



eled nose *h* of the catch-plate. By means of this peculiar construction all jar or concussion is reduced to the minimum, while the noise or bang of a slamming door is prevented. It will also be noticed that the latching of the door is automatic, while at the same time the unlatching of the door can be readily effected by the usual thumb-lever.

I do not confine myself to a pivoted latch, nor merely to the friction-spring that I have above described, for the reason that the gist of my invention consists in a gravitation-latch and a device which will hold the latch when the door is open, and which, when the door is shut, will automatically allow the latch to drop into its catch.

I claim—

1. The combination of an angular spring-actuated friction-plate with a latch-guard and a pivoted latch, substantially as described.

2. The combination of a friction-plate, *F'*, with a latch-guard and latch, whereby the latch is held up by said plate when the door is open, and released by the shoulder *i* on the catch when the door is closed, substantially as described.

3. The combination of a latch, a latch-guard, and a friction-plate located in front of the free end of the latch, all relatively arranged and adapted to operate substantially as described.

4. The catch-plate *G*, provided with a shoulder, *i*, adapted to press back a catching-plate, *F'*, and release a latch, *c*, a latching-lip, *g*, for

the latch, and a beveled nose, *h*, adapted to act on the upper beveled edge, *c*<sup>2</sup>, of the latch in the act of closing the door, substantially as described.

5. The combination of a pivoted latch, a spring actuated friction-plate to hold said latch in an elevated position, a catch-plate, and a releasing-shoulder, *i*, arranged to positively press back the friction-plate and release the latch when the door is closed, substantially as described.

6. The combination of a latch having a beveled edge, *c*<sup>2</sup>, a latch-guard having a spring-actuated friction-plate for holding up the latch, a catch having a releasing-shoulder arranged to bear against the plate, and an under beveled nose above said catch and shoulder, substantially as described.

7. The combination of a guard for a gravitating latch, the angular friction-plate *F'*, a spring adapted to act on said plate, a latch, means for raising the latter, a catch, a shoulder arranged to bear against the latch, and an under beveled nose, *h*, all arranged and adapted to operate substantially as described.

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

WILLIAM B. SHORLAND.

Witnesses:

ALBERT E. HALL,

ARTHUR J. YEOMANS,

9 Mount St., Manchester, England.