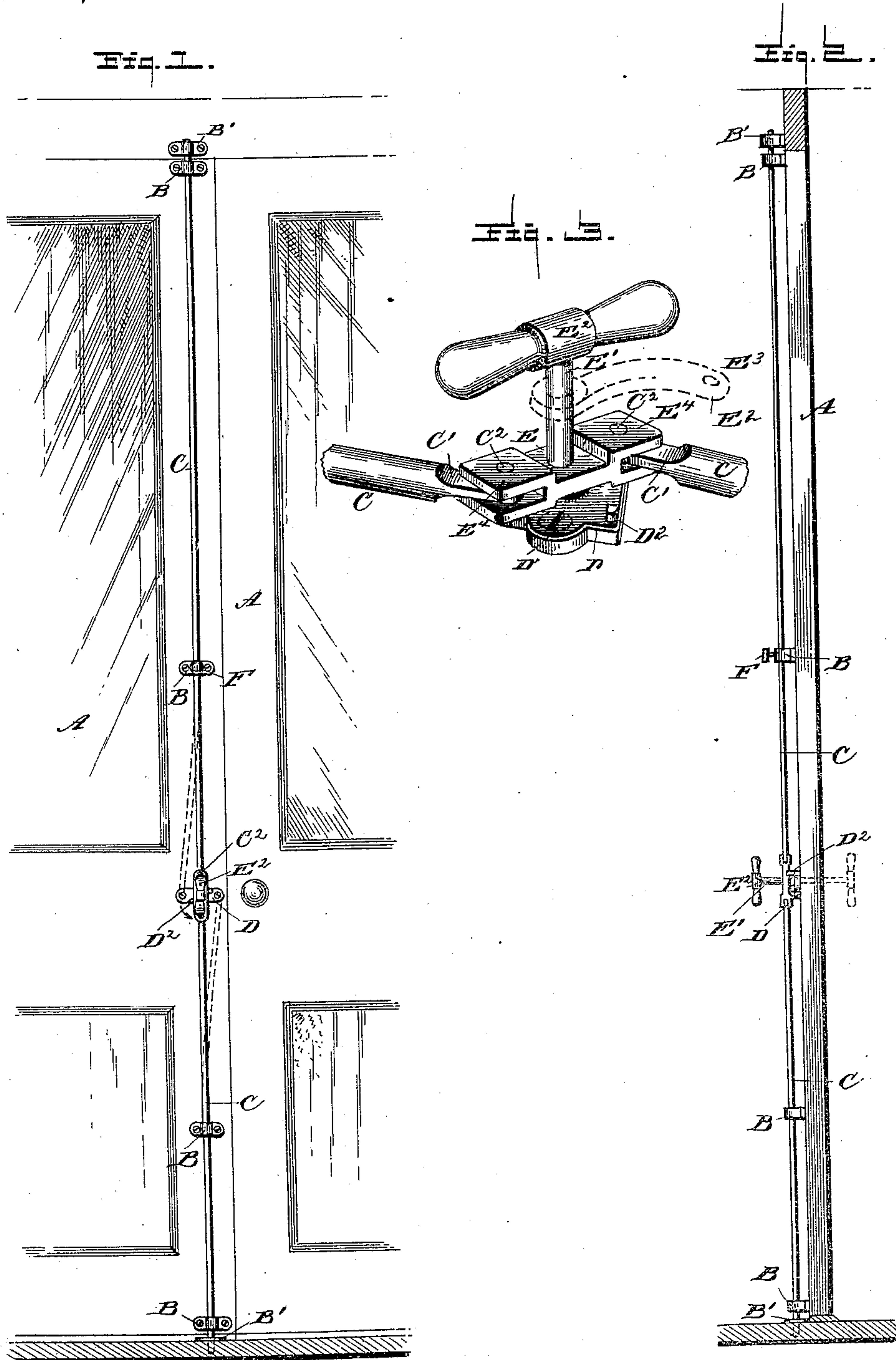


(No Model.)

A. T. WATERS.  
SPRING BOLT.

No. 429,748.

Patented June 10, 1890.



Witnesses

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# UNITED STATES PATENT OFFICE.

ABEL T. WATERS, OF MARINETTE, WISCONSIN.

## SPRING-BOLT.

SPECIFICATION forming part of Letters Patent No. 429,748, dated June 10, 1890.

Application filed December 17, 1889. Serial No. 334,100. (No model.)

*To all whom it may concern:*

Be it known that I, ABEL T. WATERS, a citizen of the United States, residing at Marinette, in the county of Marinette, State of Wisconsin, have invented certain new and useful Improvements in Spring-Bolts, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has relation to certain new and useful improvements in bolts of that class designed to lock both the top and bottom of doors or windows simultaneously. I provide either a single or duplex door or window fastener. I provide a safety-catch to prevent the bolts from being withdrawn should the door be cut through by burglars or other maliciously-inclined persons.

20 Other objects and advantages of the invention will appear in the following description and the novel features thereof will be particularly pointed out in the claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

30 Figure 1 is a face view of portions of a door provided with my improved fastener. Fig. 2 is an end view, and Fig. 3 is a perspective view on an enlarged scale, of the handle and the connection between the bolts.

Like letters refer to like parts in all the figures.

35 Referring now to the details of the drawings by letter, A designates a double door of any known construction, or it may be a window hinged similar to a door, and B designates keepers or guides upon one portion of the door and through which pass the bolts or rods C, suitable keepers B' being provided at the top and bottom of the door frame or casing, and which the ends of the bolts or rods engage when projected, as indicated in Figs. 1 and 2. Secured to the door within 45 convenient reach from the floor is a plate D, secured thereto by means of screws or other suitable means D', passed through openings in the plate, which plate is also provided with lugs D<sup>2</sup>, the two inner faces of which 50 form a right angle, as shown in Fig. 3, and serve to limit the motion of the pivot-plate hereinafter described.

E is a plate pivoted to the plate D and formed with a shank E', to which is attached a handle E<sup>2</sup>, which may either be of the form 55 shown in full lines in Figs. 2 and 3, or it may be curved, as indicated by dotted lines in Fig. 3, which latter is designed to be used in connection with the fastener upon high church or other windows hung upon hinges, and is 60 designed to be operated with a pull of proper length provided with a hook to engage with a hole E<sup>3</sup> in the curved handle, which acts as a lever. This plate E has upon opposite ends a bifurcated portion E<sup>4</sup>, between which are 65 pivotally secured the flattened ends C' of the rods or bolts C, by means of pivots C<sup>2</sup>, as indicated more clearly in Fig. 3.

The bolts may be of equal length, or the one may be shorter than the other, as preferred. 70

The operation of the invention is apparent. When the handle is turned so as to bring it in line with the bolts or rods, the bolts will be projected and the door locked. In order 75 to hold the bolts in their locked position and to prevent their being unlocked by a manipulation of the handle, I provide a set-screw F, which passes through a hole in one of the keepers and bears against the rod, as indicated in Fig. 2. When the handle is turned 80 so as to bring the plate E horizontally or at right angles to the bolts, the bolts will be sprung out of said plane, as indicated by dotted lines in Fig. 1, and will be thus held 85 against any accidental displacement, preventing the bolts being moved by the opening or closing or shaking of the door and preventing their rattling. The handle serves both as a means for operating the bolts and of 90 opening and closing the door. It may be placed either upon the inside or outside of the doors, as indicated in Fig. 2, and the handle may be made removable to serve upon either side as desired. 95

Only one bolt may be used, if desired, operating upon the same principle, and the fastener may be of different designs and sizes, as the taste of the manufacturer may dictate, and they may be employed upon doors, win- 100 dows, tail-gates of wagons, and for various others, forming a durable, convenient, and cheap fastener.

I deem it important that there be an inter-



mediate keeper between the keeper at the end of the bolt and the pivoted plate to which the end of the bolt is attached, whereby the bolt is prevented from springing for the greater part of its length, whereby I obtain better results than where the rod is free to bend from end to end, avoiding all tendency of the bolt to bind at its end farthest from the pivoted plate.

10 I deem it important that the rods C and the plate E, with the pivots connecting said rods and plate, be so arranged that the pivot of the plate and its pivot-connection with the bolt, and the keepers, all lie normally in line, 15 whereby the resiliency of the rods is not destroyed.

What I claim as new is—

1. In a door-fastener of the class described, the combination, with the spring-rods C C, 20 outer keepers B' B' and intermediate keepers B B, of a plate E, having perforated ear E<sup>1</sup>, standard E' and suitable handle, and pivotally connected with the inner ends of said rods, and with a locking device, as F, arranged 25 in one of the intermediate keepers, substantially as specified.

2. The combination, with the keeper and the normally-straight bolt passed there-

through, and an intermediate keeper between the end keeper and the plate, of a plate hav- 30 ing its pivot in line with the keeper and pivotally connected with one end of the bolt, whereby by one turn in one direction the pivot of the plates, its pivot-connection with the bolt, and the keeper, are all in line, and when 35 turned in the other direction the pivotal connection between the plate and bolt will be thrown out of line, substantially as and for the purpose specified.

3. The combination, with the plate formed 40 with lugs D<sup>2</sup>, of the plate E<sup>2</sup>, pivoted on said plate and formed with bifurcated ends, and a shank projecting therefrom between the ends of the keepers on the door, and the normally-straight rods having flattened adjacent 45 ends pivotally connected between the bifurcated ends of said plates and adapted to be bent out of line by the turning of the plate on its pivot, substantially as shown and described.

In testimony whereof I affix my signature 50 in presence of two witnesses.

ABEL T. WATERS.

Witnesses:

J. D. SMITH,

W. J. WAGNER.