(No Model.)

V. C. TRABOLD.

DOOR CHECK.

No. 416,874. Patented Dec. 10, 1889.

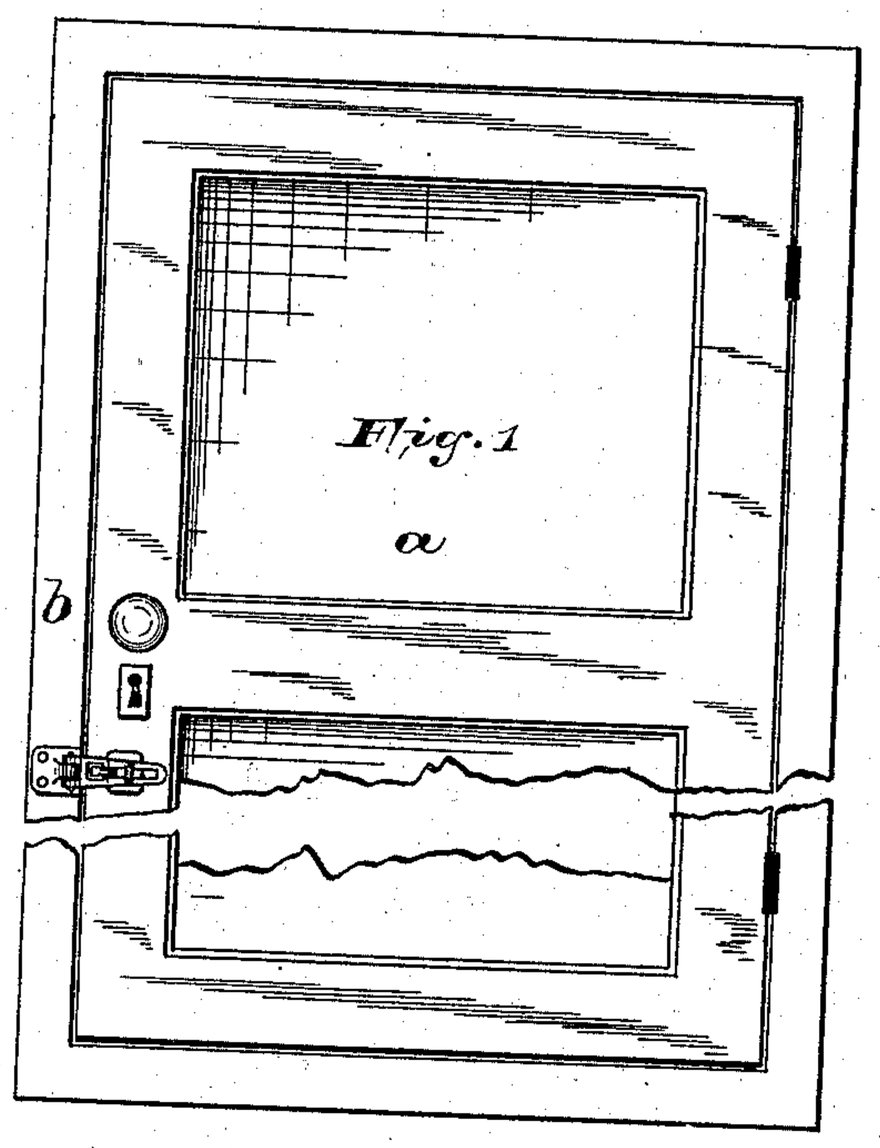

Fig. 1

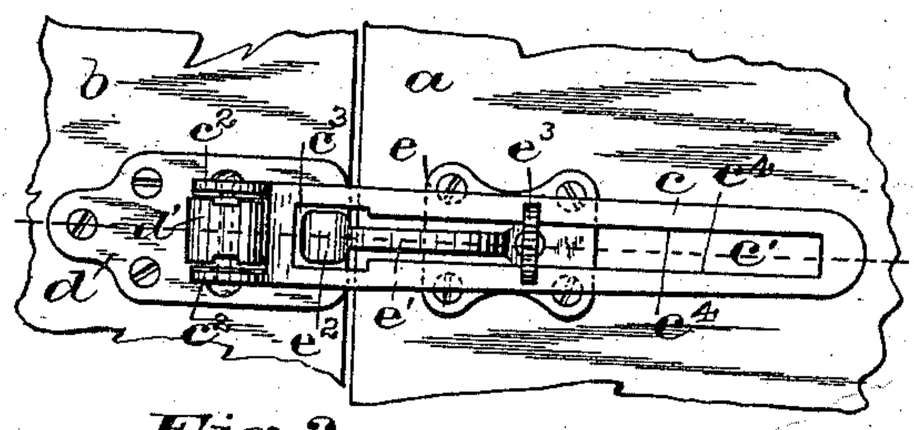

Fig. 2

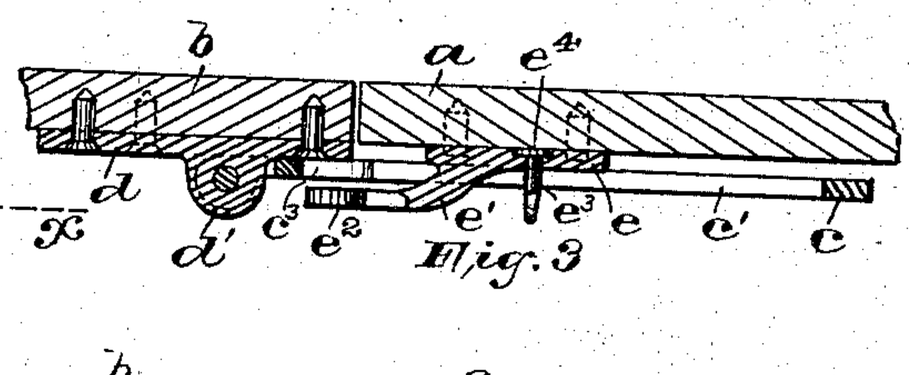

Fig. 3

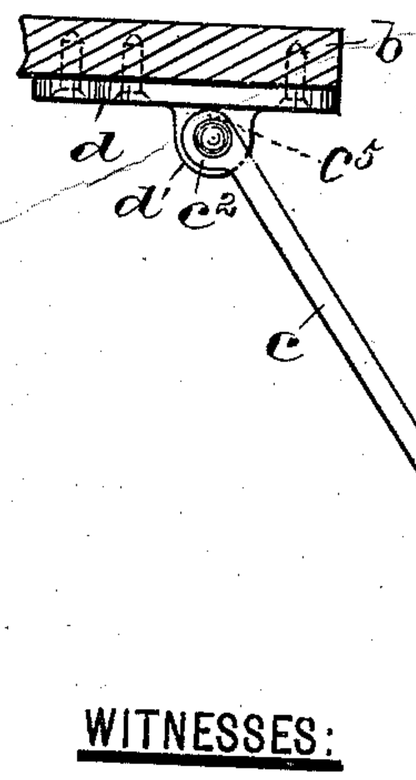

Fig. 5

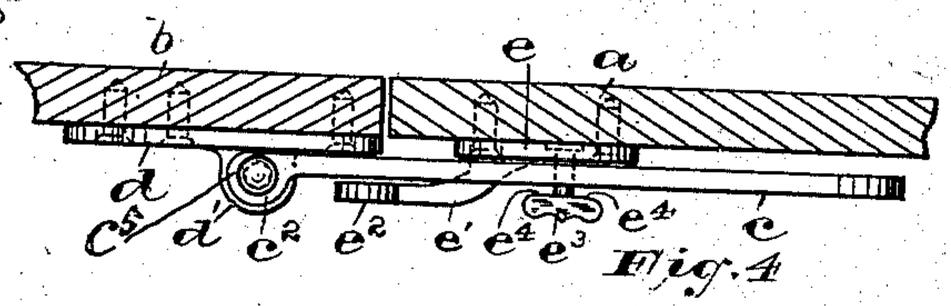

Fig. 4

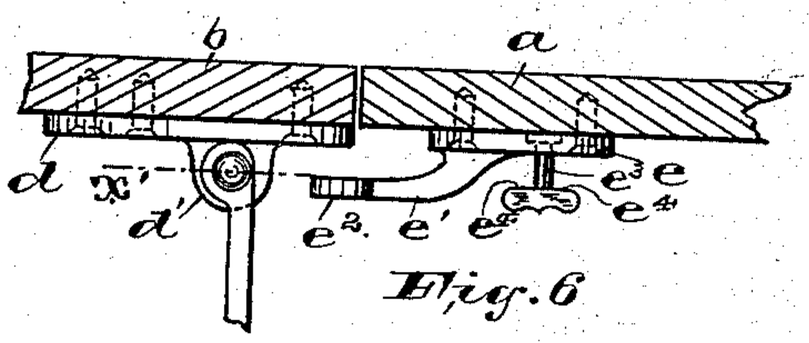

Fig. 6

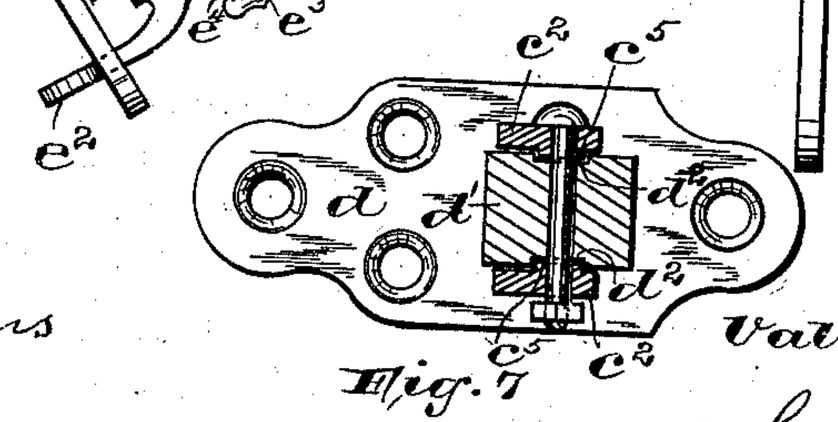

Fig. 7

WITNESSES:

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L. Smithers.

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UNITED STATES PATENT OFFICE.

VALENTIN C. TRABOLD, OF NEWARK, NEW JERSEY.

DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 416,874, dated December 10, 1889.

Application filed March 5, 1889. Serial No. 301,865. (No model.)

To all whom it may concern:

Be it known that I, VALENTIN C. TRABOLD, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in a Combined Door Bolt and Fastener; 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 of reference marked thereon, which form a part of this specification.

The present invention relates to improvements in that class of bolts or fasteners adapted for use on doors whereby the same may be partially opened when the parts of the fastener are in holding engagement; and the invention consists, essentially, in providing such devices with a hasp having cam-shaped ears or lugs thereon, which serve as stops and hold the hasp in its opened position at a right angle to the frame of the door.

In the accompanying sheet of drawings, in which similar reference-letters are employed to indicate corresponding parts in each of the several views, Figure 1 shows in elevation a door and a door-frame having my improved door-fastening device attached thereto. Fig. 2 represents a front elevation of my device in its locked position and arranged on a section of the door and door-frame. Fig. 3 is a horizontal section through line x in Fig. 2. Fig. 4 is a top view of the device, representing the parts in position on the door to enable the same to be partly opened, and Fig. 5 shows the position of the same parts, the door being partly opened and held by the bolt and hasp. Fig. 6 illustrates the position of the hasp on the device when the same has been thrown out of engagement with the bolt to enable the door being opened to its full extent, clearly illustrating my improved hasp provided with the cam-shaped ears in operative engagement with the hasp-plate to hold the said hasp in a position thereon out of the way of the closing of the door. Fig. 7 is a section through line x', Fig. 6.

In the above-described views, a represents the door; b, the door-frame. The locking device, which is clearly represented in the front elevation of the same in Fig. 1, consists of a bar or hasp c having a slot or perforation c' therein, which extends its entire length and is provided at one end thereof with ears or lugs c^2, by means of which the hasp is pivoted or hinged to a lug d' on the hasp-plate d, which is secured to the door-frame by screws or in any other desirable manner. As will be seen more especially from Figs. 3, 4, 5, and 6, the ears c^2 on the hasp c are cam-shaped on their upper sides c^5, whereby, when the hasp has been opened to its full extent, said cam-shaped surfaces c^5 engage with the upper side of the hasp-plate d and hold the said hasp in a position at a right angle thereto, as illustrated in Fig. 6.

To the door, in the manner shown, is secured a bolt-plate e, having an arm e', extending up therefrom and into the slot c' in the hasp, as is clearly shown in Figs. 2 and 3. The bolt e' is of peculiar form, having an enlargement or head e^2 on the end thereof, which passes through and extends beyond an enlarged opening c^3 at one end of the slot c' in the hasp, conforming in shape to the form of the head on the bolt. Extending up from the bolt-plate e and into the slot c' in the hasp is a locking nut or pin e^3, preferably secured to the bolt-plate by means of a swivel e^4, as shown, by means of which the locking nut or pin e^3 may be turned at a right angle to the longitudinal direction of the slot c' when the door is in its closed position, thereby firmly locking the same and preventing the door from being opened. When the nut or locking-pin e^3 is turned at a right angle to the position indicated in Figs. 2 and 3, the door can be opened to a limited distance. To accomplish this, the arm or bolt e' is provided with the enlarged head e^2, which passes through the enlarged part c^3 of the slot c' in the hasp, and which engages with the edges c^4 c^4 of the slot until the hasp and the bolt have assumed the positions shown in Fig. 5, thereby preventing the opening of the door to a further extent, the bolt e' having moved in the direction of the length of the hasp within the slot in the same and having caused the rotation of the latter on its pivotal pin for a given distance, as will be evident from said figure.

By reference to Fig. 6 it will be seen that

in order to open the door, so as to allow the entrance of the person therethrough, the hasp *c* is turned at right angles to the door-frame and out of engagement with the arm or bolt *e'*, the enlarged head thereon readily passing through the enlarged opening c^3 in the slot *c'* in the hasp. From said Fig. 6 it will be noticed that when the hasp-plate *c* is turned out of engagement with the bolt on the door said cam-shaped surface on the lugs c^2 serve as a stop and hold the hasp-plate in its opened position, and thereby prevent the same from being thrown back too far or by means of an accident forward into its original position, and thereby being in way of the closing of the door. Said cam-shaped lugs have this further advantage that said hasp may thereby be handled with little trouble, standing, when open, in the most convenient position for grasping hold of the same, as is evident.

As shown more clearly in Fig. 7, the lug *d'* on the hasp-plate may be provided with grooves d^2 on each side thereof, into which extend the projections c^5 on the inside of the ears c^2 when the hasp has been turned at a right angle to the door-frame, as indicated in Fig. 6, to hold the hasp in position and to prevent the same from being accidentally turned or pushed between the door and the door-frame when the door is open. The slots or grooves in the lug *d'* and the projections c^5 on the hasp-ears may, however, be dispensed with, if desirable.

When the locking-pin or thumb-screw e^3 is turned in the position indicated in Figs. 2 and 3, the edges e^4 e^4 on the same engage with the upper surface of the hasp, firmly holding the same in its locked position, and thereby locking the door until the locking-pin or screw e^3 has again been turned at a right angle and is in line with the slot in the hasp, thereby allowing the door to be partly opened, as shown in Fig. 5, and as has been described in the above.

I am fully aware that bolts or door-fasteners provided with a slotted hasp engaging with a bolt-arm on the door, whereby the door may be partly opened, are not entirely new, such constructions being shown in patents to Phillips and Palmenberg, and to such I waive all claim; but it is new to provide such bolts with a hasp having cam-shaped ears thereon, by means of which the particular advantages described in the above are derived.

Having thus described my invention, what I claim is—

In a door bolt or fastener, the combination, with a hasp having cam-shaped ears for pivotally securing the same to a hasp-plate on the door-frame, of a bolt arranged on a bolt-plate and extending up therefrom and within the slot in said hasp, said cam-shaped ears on the hasp being adapted to engage with the upper surface of said hasp-plate when the said hasp is thrown out of holding engagement with the bolt, and thereby acting as a stop and holding the said hasp at a right angle to the hasp-plate and the door-frame, as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 1st day of March, 1889.

VALENTIN C. TRABOLD.

Witnesses:

FREDK. C. FRAENTZEL,

C. SMITHERS.