

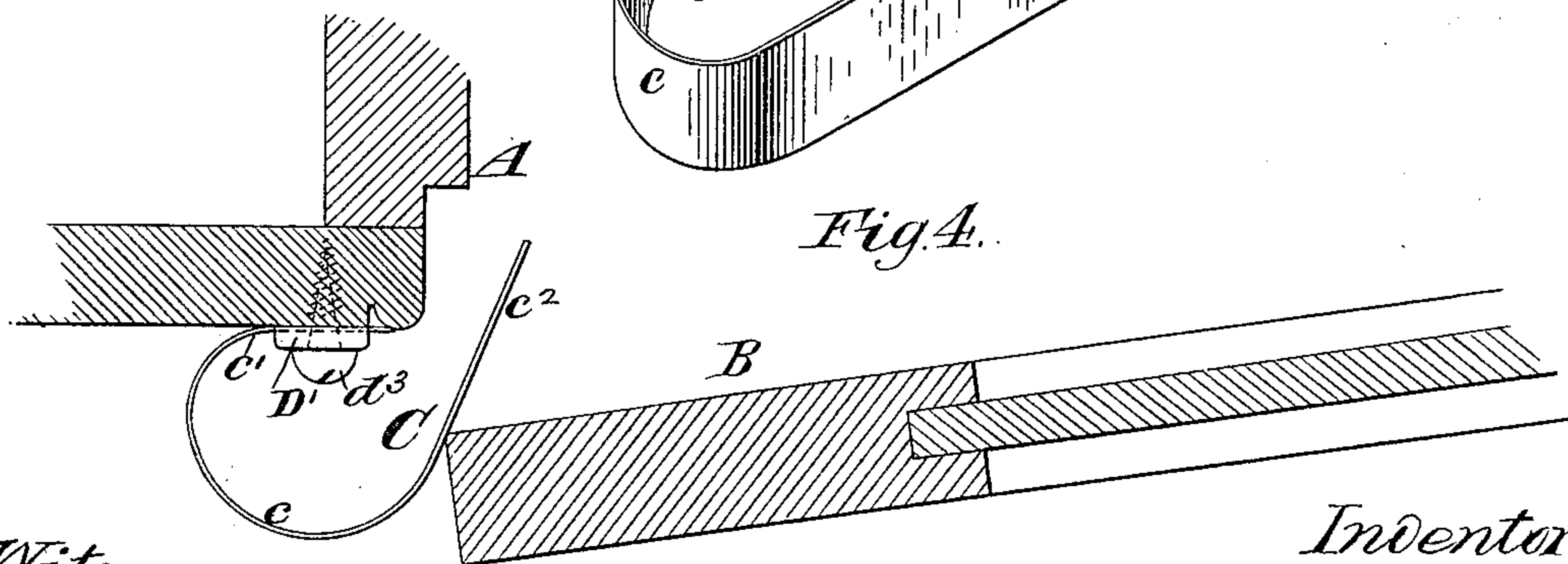
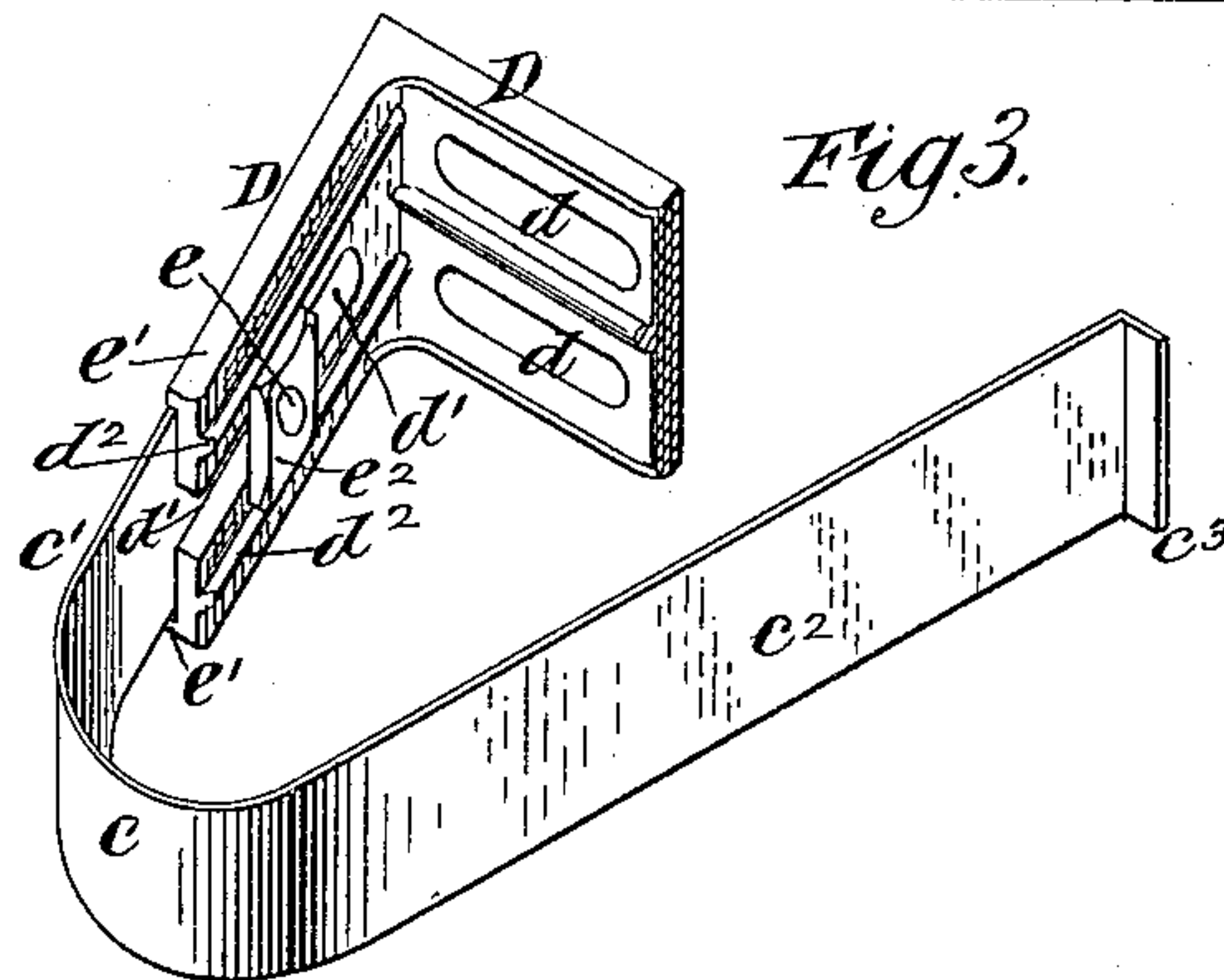
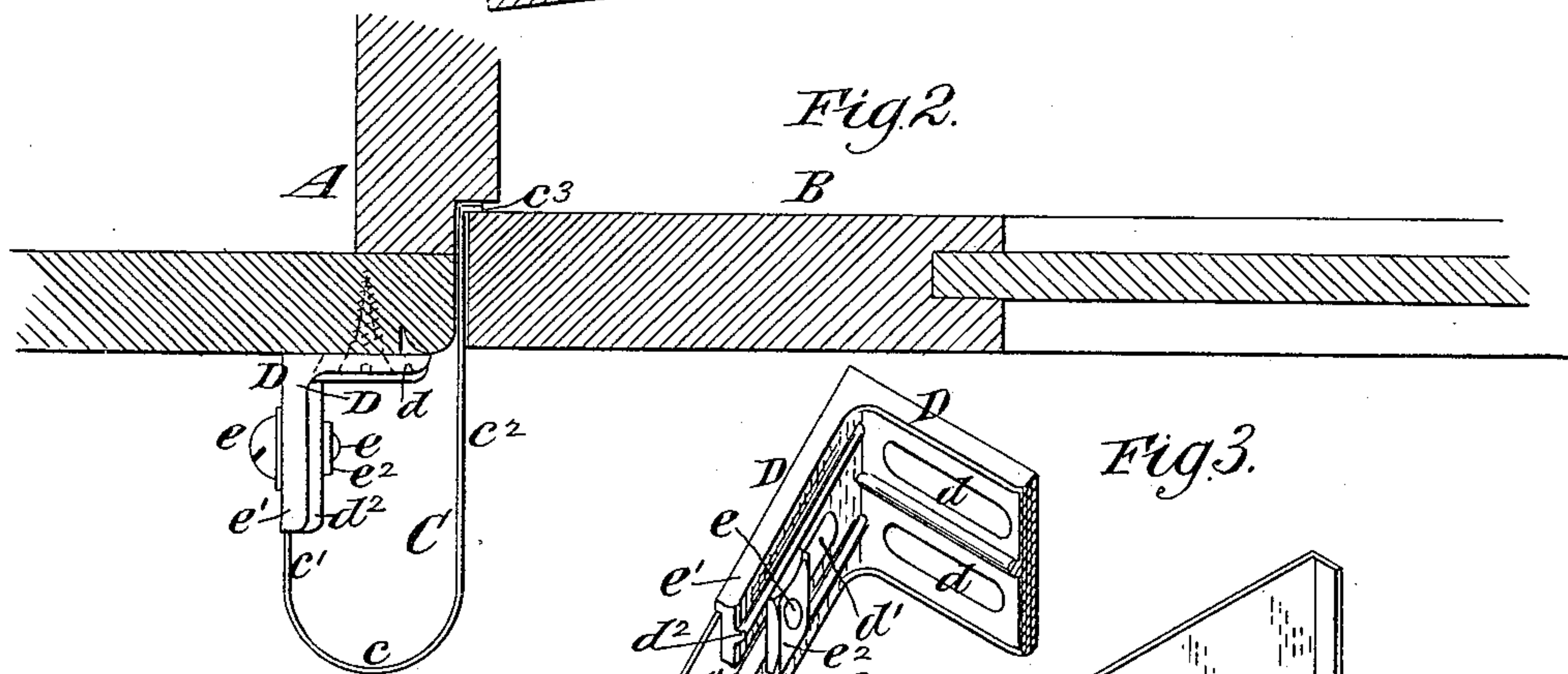
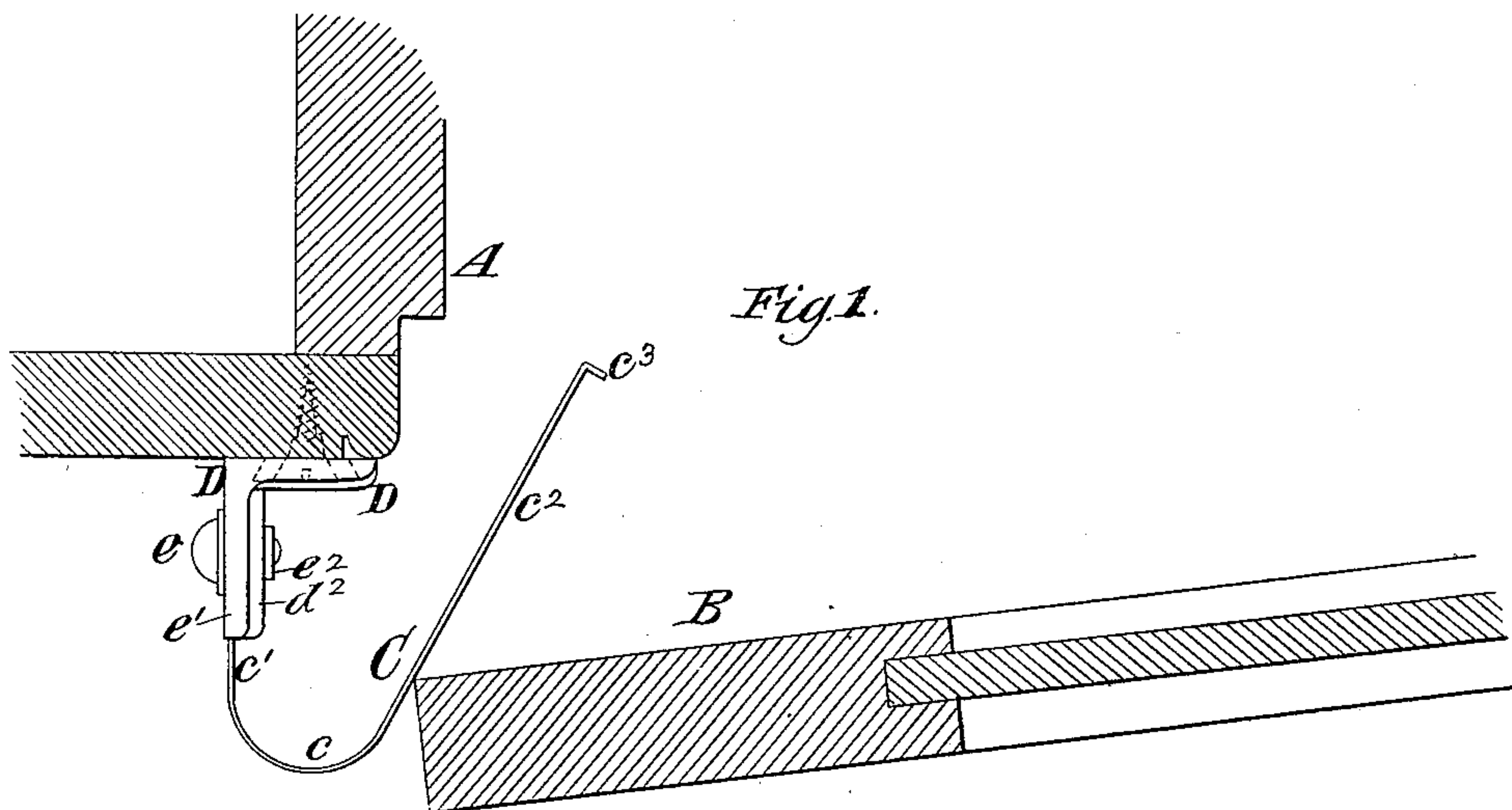
(No Model.)

W. S. BARLOW.

DOOR CHECK.

No. 365,224.

Patented June 21, 1887.



Witnesses.
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Inventor:
Warren S. Barlow
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UNITED STATES PATENT OFFICE.

WARREN S. BARLOW, OF PATERSON, NEW JERSEY.

DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 365,224, dated June 21, 1887.

Application filed April 13, 1887. Serial No. 231,584. (No model.)

To all whom it may concern:

Be it known that I, WARREN S. BARLOW, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Improvement in Door-Checks, of which the following is a specification.

The object of my invention is to provide a simple and inexpensive spring device which may be applied to a door-casing, and which, by the impact and sliding of the edge of the door when closed over a free arm of the spring, will check and soften the closing of the door under the influence of the closing spring which is applied to it.

My improved check consists, essentially, of a piece of spring metal, which is bent so as to form a bow or curve, and two arms extending in approximately the same direction. Through one of these arms the check is secured to a door-casing, and the edge of the door in closing bears upon and deflects the other arm. The arm on which the door bears may have on its end a projecting and outwardly-turned lip against which the door strikes as it completely closes, and which prevents the end of the spring from ever being caught by the door and being bent backward as the door is opened. I provide a knee or bracket having flanges extending at right angles to each other, and whereby the spring may be attached to the door-casing, one flange of the knee or bracket being formed with slots for the reception of screws, whereby the knee or bracket is secured to the casing, and the other flange being formed with a slot for the reception of a bolt, whereby the arm of the spring is secured to the knee or bracket. The slots in the knee or bracket provide both for the adjustment of the spring laterally, so that the door in closing will bear upon it with more or less force, and for the adjustment of the spring inward and outward from the casing in a plane at right angles to the plane of the door, so as to adapt the device for doors of different thicknesses, and so that the lip upon the free arm of the spring will be brought to the proper position.

In the accompanying drawings, Figure 1 is a horizontal section of a portion of a door-casing and door, showing my check as applied thereto and the door as having just come to a bearing upon the check in the act of closing. Fig. 2 is a corresponding view showing the

door as fully closed. Fig. 3 is a perspective view of the door check; and Fig. 4 is a view similar to Fig. 1, illustrating a slight modification of my invention.

Similar letters of reference designate corresponding parts in all the figures.

A designates a portion of the casing, and B designates a portion of the door which closes into the casing. The bent spring C, which constitutes the essential element of my door-check, may be of steel or brass, of the desired width, and comprises a bow or curve, c , and arms c' c'' . Through the arm c' the spring is attached to the door-casing A, said arm being in Figs. 1, 2, and 3 secured to the inner flange of a knee or bracket, D, and the other flange of this knee or bracket is secured by screws to the door-casing A. When secured in place, as shown in Figs. 1 and 2, the arm c'' of the spring projects somewhat in the path of the door B, so that the edge of the door in closing bears against the arm c'' , and is retarded or checked by the resistance which the spring-arm offers to lateral deflection. When the door is fully closed the spring-arm c'' lies between the edge of the door and the casing A, as is shown in Fig. 2.

To vary the strength of the door-check, so that it will offer more or less resistance to the closing of the door, as may be desired, I have represented the knee or bracket D as provided in one flange or member with slots d , which receive screws, whereby the knee or bracket is secured to the door-casing, and which provide for the adjustment of the knee or bracket laterally toward and from the edge of the door-casing, so that the arm c'' of the spring will be obtruded more or less in the way of the door, and its effect in checking the door will be more or less increased or diminished.

I have shown the arm c'' as terminating in a lip, c^3 , against which the door bears when it comes to a closed position, and this lip prevents the edge of the door from catching on the end of the spring-arm c'' and bending it backward when the door is opened, as it might otherwise do. When the spring is provided with a lip, c^3 , it is necessary to adjust it to suit different depths of casings and different thicknesses of doors. I have shown the arm c' of the spring as secured by a bolt, e , to the knee or bracket D; and, as best shown in Fig. 3, the

knee or bracket has in it a slot, d' , which receives this bolt, and which provides for the adjustment of the arm inward and outward from the plane of the casing, so as to bring the lip c^3 into a position suited to the thickness of door and the depth of casing. I have shown the knee or bracket D as recessed or channeled upon its outer face, or as provided with lips or flanges e' , receiving between them the spring-arm c' , as shown in Fig. 3, and I have shown this flange of the knee or bracket as having upon its inner face ribs d^2 , between which is received the nut e^2 upon the bolt e . Convenience is thus afforded for readily assembling the parts of the device and providing for the ready adjustment of the spring.

The modified form of door-check shown in Fig. 4 is somewhat simpler than that before described. In this case the spring C also consists of a bow or curve, c , and arms $c' c^2$; but the arm c' is held to the casing by means of a clamp, D' , beneath which it is introduced, and which may be secured by screws d^3 to the casing. The arm c' may be adjusted beneath the clamp D' , so that the operating-arm c^2 of the spring will be obtruded to the desired extent in the path of the door.

It will be observed that my improved check has a "duplex action," as I term it—that is to say, the spring-arm c^2 acts as a brake upon the door by reason of the resistance which it offers to lateral deflection until the door strikes against the lip c^3 , and it then offers a further resistance by the pulling action which the door exerts through the lip c^3 and upon the bow or curve c . The bracket D may be adjusted upon the casing, and the spring may be adjusted upon the bracket so as to suit the strength of the closing-spring which is applied to the door, and to permit the door to wholly close into the rabbet in the casing, or to hold it very slightly ajar or in an unlatched condition, so as to prevent its slamming the door against the rabbet. Not only does the check serve to prevent slamming of the door when closed, but it also holds the door in an approximately-closed condition, whether latched or not, and prevents any shaking or rattling of the door in any direction, thereby saving the latches or locks and the hinges, and thereby avoiding the breaking of the glass in case it be applied to a glazed door.

I have here represented the check as applied

to the side of the door and casing; but it might, if desired, be applied to the top thereof. I now deem its application to the side, however, more advantageous, because it then exerts no downward pressure upon the door.

I am aware of patent to Saunders, No. 347,587, dated August 17, 1886, and I do not claim as of my invention anything shown or described therein. In that patent there is employed a spring composed of a coil and two arms projecting in the same direction; but this spring through one arm is secured to a door-casing so that it lies in a horizontal plane with its arms parallel approximately with the face of the casing and the closed door, and when the door is closed a tappet or toe upon the face of the door comes against this spring. According to my invention the spring is so arranged that its arm c^2 receives the sliding impact of the edge of the door, and after the door is closed that arm lies between the recess in the jamb and the edge of the door.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The door-check herein described, consisting of a bent spring having the bow or curve c and the arms $c' c^2$, by the former of which the check is supported from the door-casing and on the latter of which the edge of the door bears in closing, substantially as herein set forth.

2. The door-check herein described, consisting of a bent spring having a bow or curve, c , and arms $c' c^2$, the latter arm, c^2 , being provided with an outwardly-turned lip, c^3 , at the end, and a bracket with which the arm c' has a sliding connection in the direction of its length and which is to be secured to the door-casing, so that in closing the edge of the door will bear on and remain against the arm c^2 and shoulder c^3 , substantially as herein set forth.

3. The combination, with the knee or bracket D, having in one flange the slots d , for securing-screws, and having in the other flange the slot d' , of the bent spring having the bow or curve c and the arms $c' c^2$, the arm c' being secured to the bracket by a bolt, e , and the other arm serving to receive contact of the door, substantially as herein described.

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Witnesses:

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