

J. WHITAKER.
DOOR RETAINING DEVICE.
APPLICATION FILED JUNE 20, 1908.

921,765.

Patented May 18, 1909.

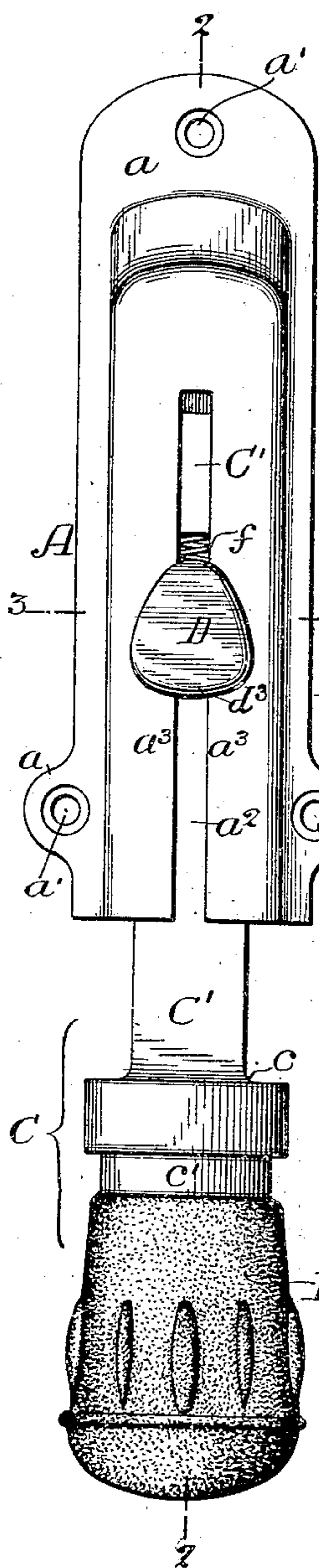


Fig. 1.

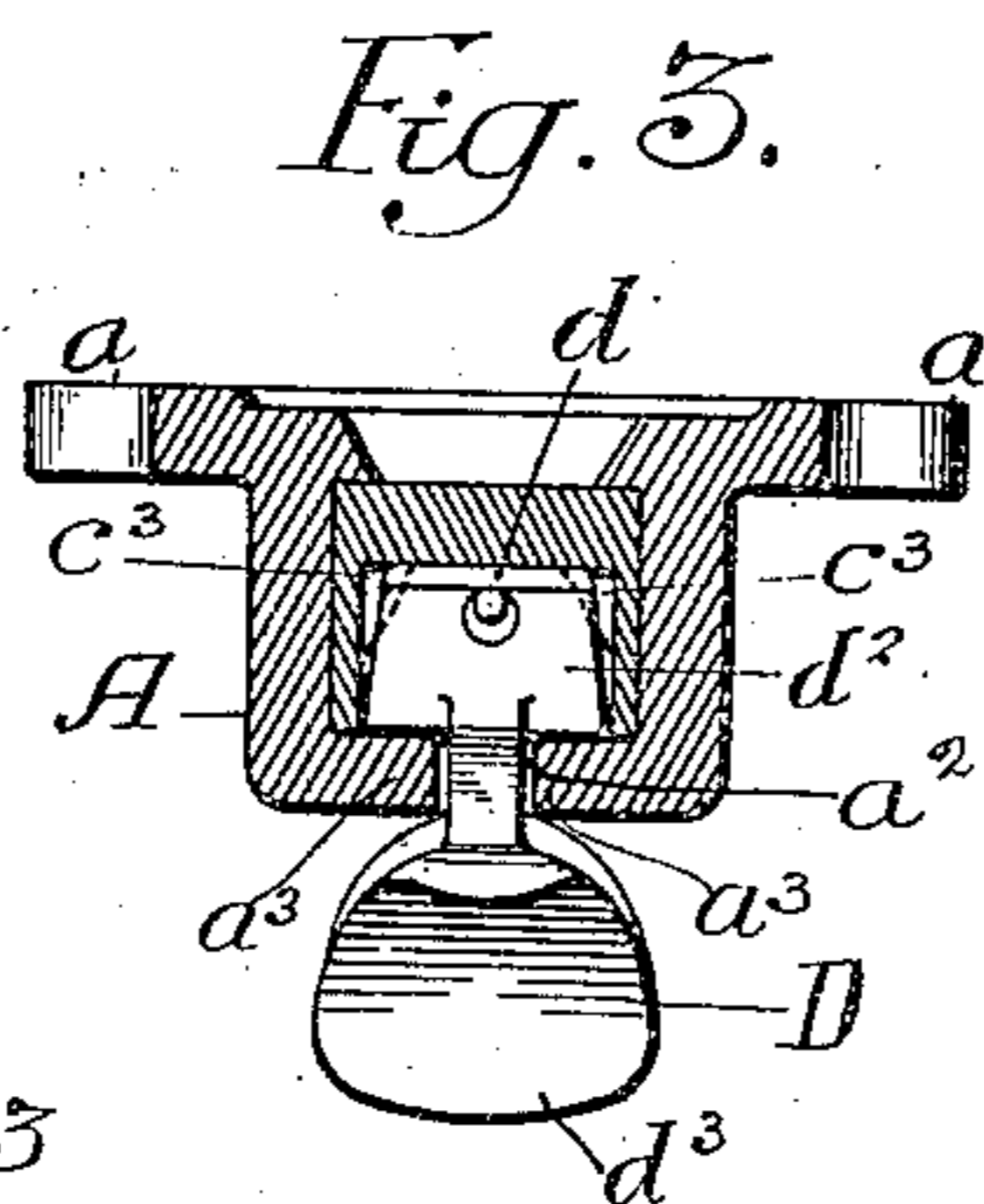


Fig. 3.

Fig. 4.

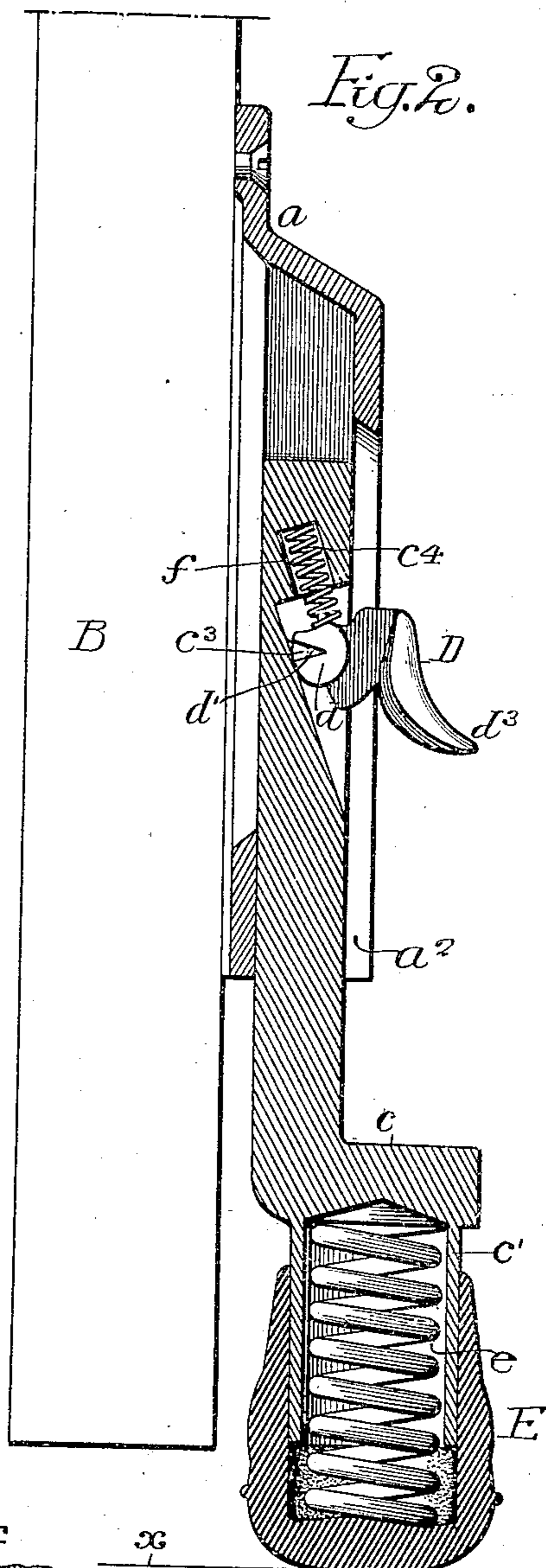
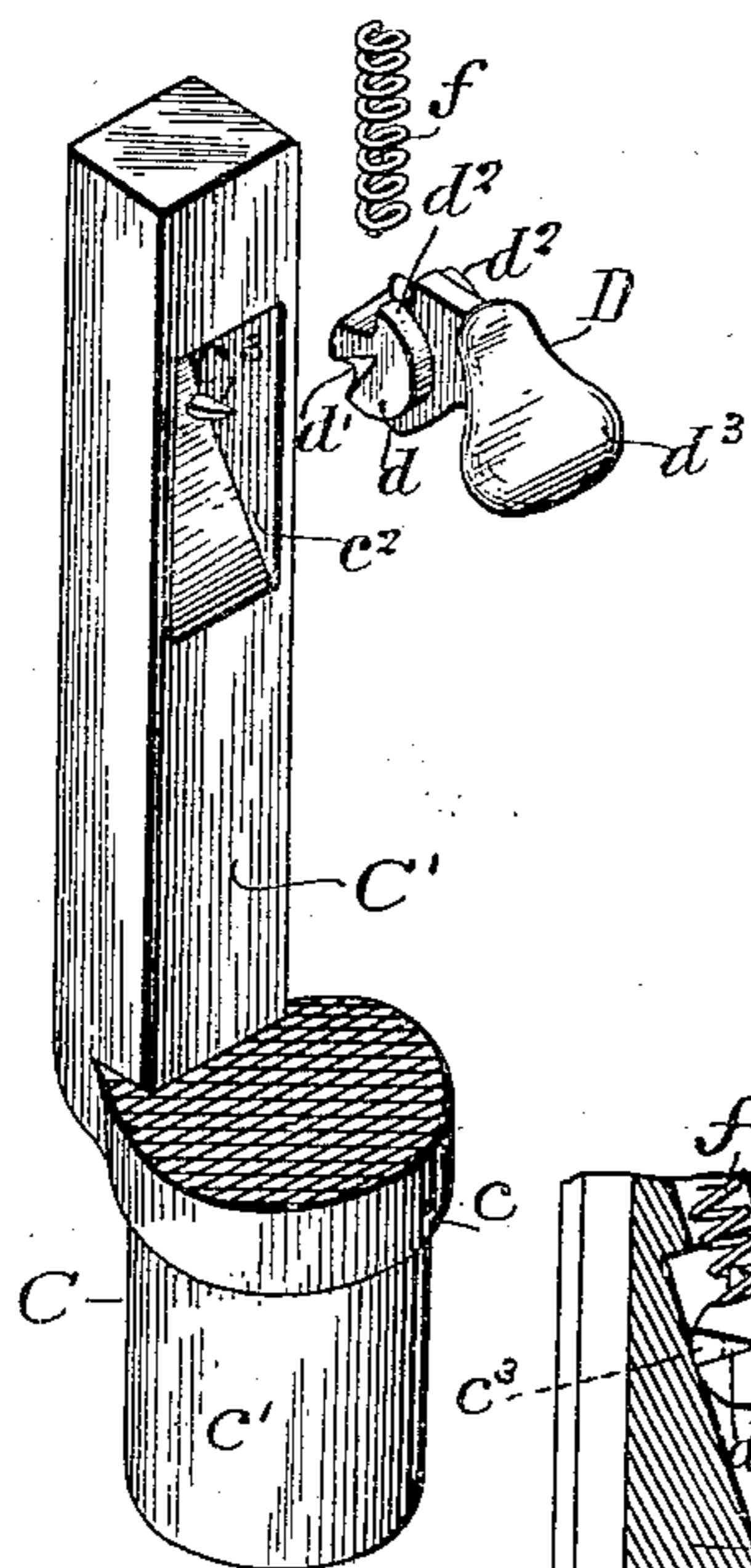


Fig. 2.

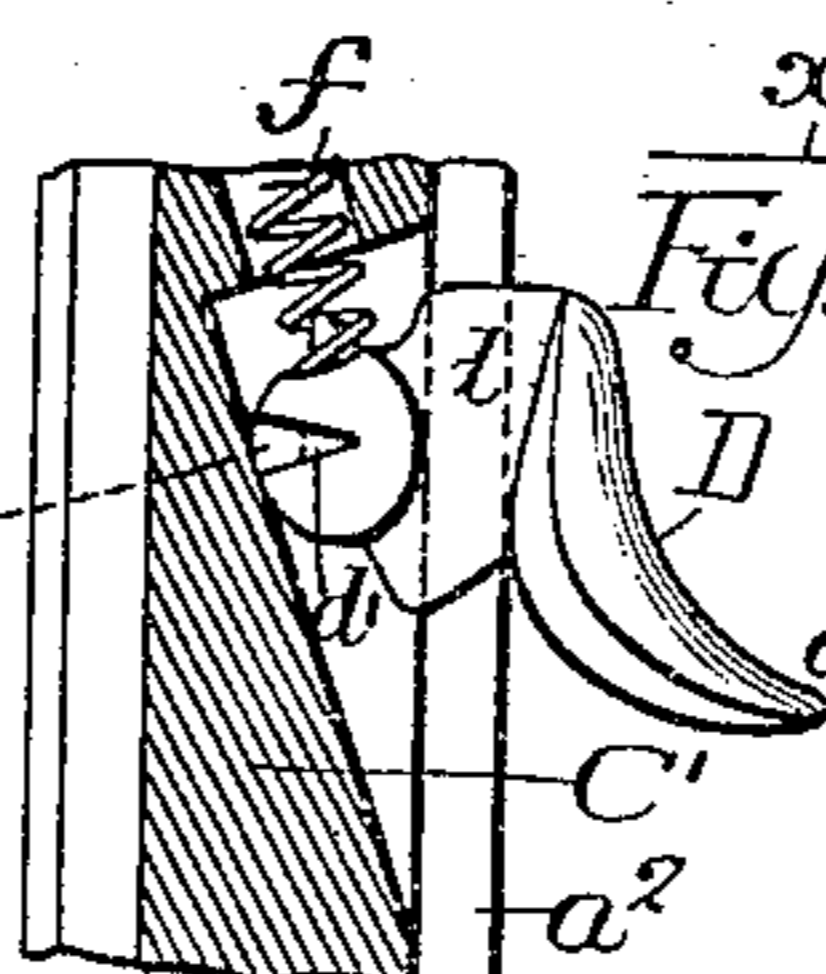


Fig. 5.

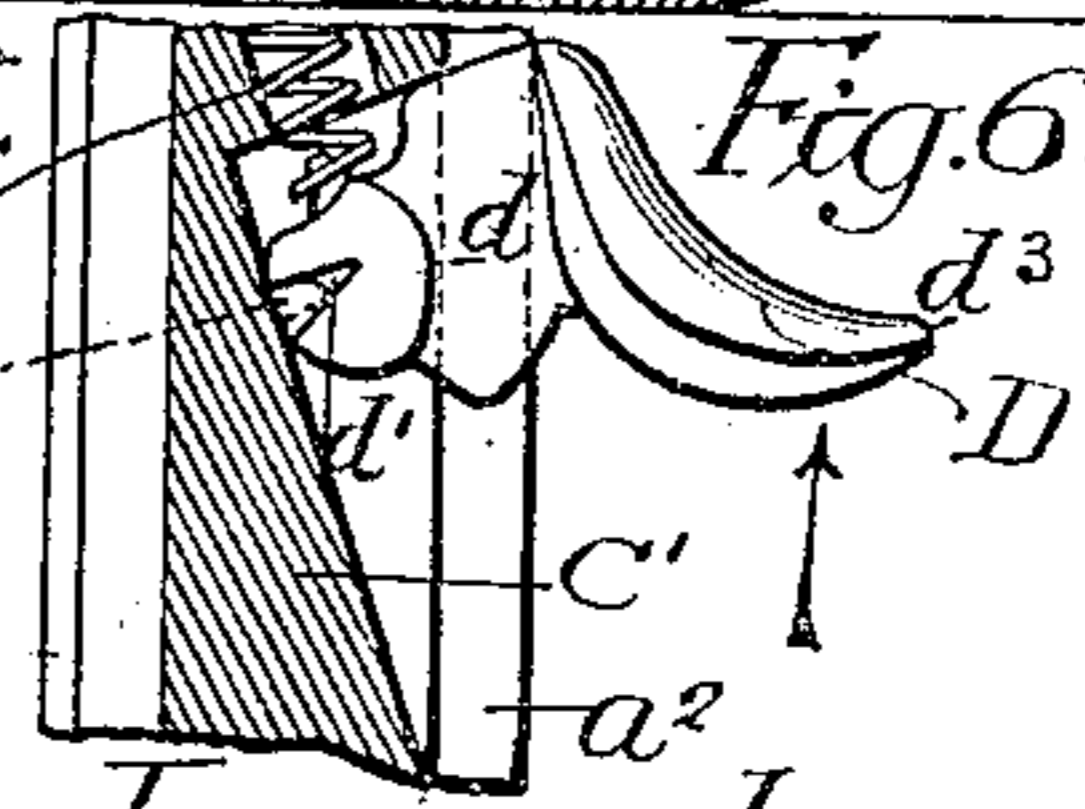


Fig. 6.

Witnesses:
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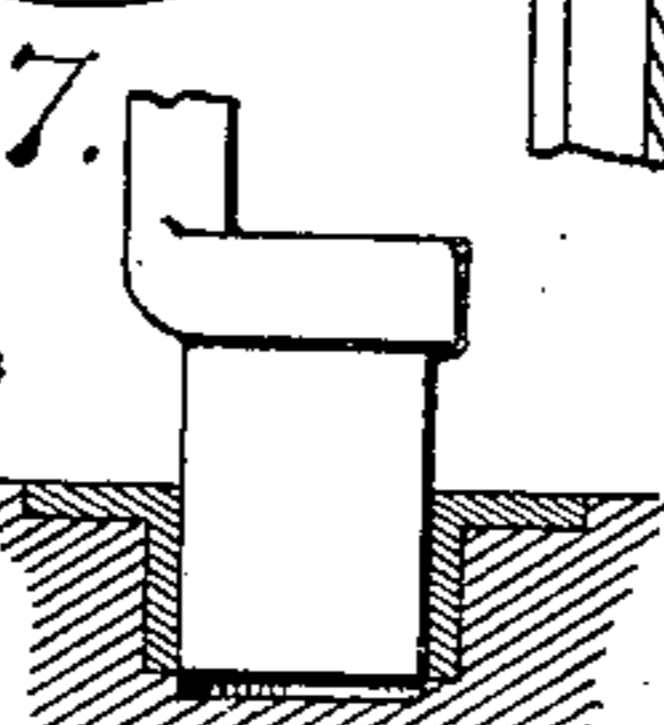


Fig. 7.

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UNITED STATES PATENT OFFICE.

JOHN WHITAKER, OF NORTH WALES, PENNSYLVANIA, ASSIGNOR TO NORTH WALES MACHINE CO., OF NORTH WALES, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

DOOR-RETAINING DEVICE.

No. 921,765.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed June 20, 1908. Serial No. 439,514.

To all whom it may concern:

Be it known that I, JOHN WHITAKER, a citizen of the United States, residing in North Wales, Pennsylvania, have invented certain Improvements in Door-Retaining Devices, of which the following is a specification.

The object of my invention is to construct a cheap and effective retainer for holding a door in any position to which it is adjusted. This object I attain in the following manner, reference being had to the accompanying drawing, in which:—

Figure 1, is a front elevation of my improved door retaining device; Fig. 2, is a longitudinal sectional view on the line 2—2, Fig. 1, showing the retainer applied to a door; Fig. 3, is a transverse sectional view on the line 3—3, Fig. 1; Fig. 4, is a detached perspective view showing the plunger and the retaining pawl; Figs. 5 and 6, are diagram views illustrating the movement of the pawl; and Fig. 7, is a view of a modification showing my invention applied as a bolt.

A is the casing of my improved door retaining device having a flange a provided with screw holes a' through which pass the retaining screws for securing the casing to the door B, shown in Fig. 2. Adapted to the casing is a shank C' of the plunger C offset at c to form a head for the reception of the foot, and projecting downwardly from the head is a tubular extension c' on which is mounted a flexible cushion E, preferably made of rubber and of sufficient diameter to be forced onto the tubular extension c' . In the tubular extension c' , in the present instance, is a coiled spring e , which rests against the inner surface of the cushion E, as shown in Fig. 2, so that when the plunger is forced toward the floor x , Fig. 2, considerable pressure can be exerted to force the cushion against the floor so as to compress the spring to a certain degree and thus hold the door against any swinging movement after the plunger contacts with the floor.

In order to retain the plunger in any position to which it is set, I provide a pawl D, shown clearly in Figs. 2 and 4, which is adapted to a recess c^2 in the shank C' of the plunger, and in this recess c^2 are pivot pins c^3 which rest in notches d' in the portions d

projecting on each side of the body portion of the pawl. The rear edges d^2 of these projections are rounded and are made eccentric and rest against the portions a^3 of the casing A on each side of a slot a^2 . Adapted to a socket c^4 in the shank C' of the plunger is a coiled spring f which bears against the upper surface of the pawl D and tends to force it down, rocking it on the pivot c^3 .

When the pawl is in the position shown in Fig. 5, the rear portion d^2 rests against the surface a^3 of the casing, the pawl being forced down by the spring f , causing it to rock on the pivots c^3 . Thus any tendency to force the plunger up so as to raise it off the floor is prevented by the jamming of the pawl between the plunger and the casing, but by simply pressing the foot against the underside of the projecting portion d^3 of the pawl, as shown by the arrow, Fig. 6, the movement will compress the spring and throw the pawl out of engagement with the portion a^3 of the casing, releasing the plunger, which can be elevated to any position desired by continuing the pressure on the underside of the pawl D, the pawl carrying with it the plunger until the plunger is clear of the floor, then the door can be opened or closed, or adjusted to any position desired. By pressing the foot on the portion c of the plunger the plunger can be forced down in contact with the floor and the resistance can be increased by applying additional pressure upon the plunger, compressing the spring e and locking the door against movement in either direction.

My improved door retaining device can be made of any suitable material, or may be of any size, depending upon the character and size of the door to be retained.

In some instances the cushion E may be dispensed with and the ends of the plunger made solid, as shown in Fig. 7, and adapted to a cavity so that it will have the same function as a bolt, retaining the door or other device rigidly in position.

I claim:—

1. The combination of a casing, a plunger mounted in the casing, an eccentric pawl pivoted to the plunger and adapted to bear against the casing, a spring for forcing the pawl against the casing, whereby the plunger will be retained against end pressure in one direction by the eccentric pawl

bearing against the casing, but will be free to move in the opposite direction when the pawl is shifted so as to clear the casing.

2. The combination of a casing, a plunger adapted to the casing, said plunger having a recess, pivot points projecting into the recess, a pawl mounted in the recess and having notches, the pivot points being adapted to the notches in the pawl, said pawl having a bearing surface adapted to contact with the casing, and a spring for forcing the pawl into contact with the casing so that the plunger will be held by the pawl against movement in one direction but will be free to move in the opposite direction.

3. The combination in a door retaining device, of a slotted casing adapted to be applied to a door, a plunger mounted in the casing and having a projecting portion adapted to contact with the floor, a pawl carried by the plunger and projecting through the slot in the casing, a spring for forcing the pawl against the inner surface of the casing at the side of the slot so as to retain the plunger in its projected position, the pawl being so constructed that when pressure is applied to the underside of the pawl the plunger will be released and can be elevated through the medium of the pawl.

4. The combination in a door retaining

device, of a casing adapted to be secured to a door and having a vertical slot therein, a plunger adapted to the casing, a cushion mounted on the end of the plunger, a spring within the cushion, a pawl pivoted to the plunger and extending through the slot in the casing, and a spring bearing upon the pawl to force it against the casing on each side of the slot in order to lock the plunger in its projected position.

5. The combination in a door retaining device, of a slotted casing, a plunger adapted to the casing and having a projecting head, a cushion mounted on the head, said plunger being slotted and having pivot points, a pawl notched and arranged to rock on the pivot points and having rounded bearing surfaces arranged to contact with the casing, a spring for forcing the pawl in contact with the casing, and a projection on the pawl extending through the slotted casing and arranged to be acted upon so as to release the plunger.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

JOHN WHITAKER.

Witnesses:

F. M. KING, Jr.,

J. W. KING.