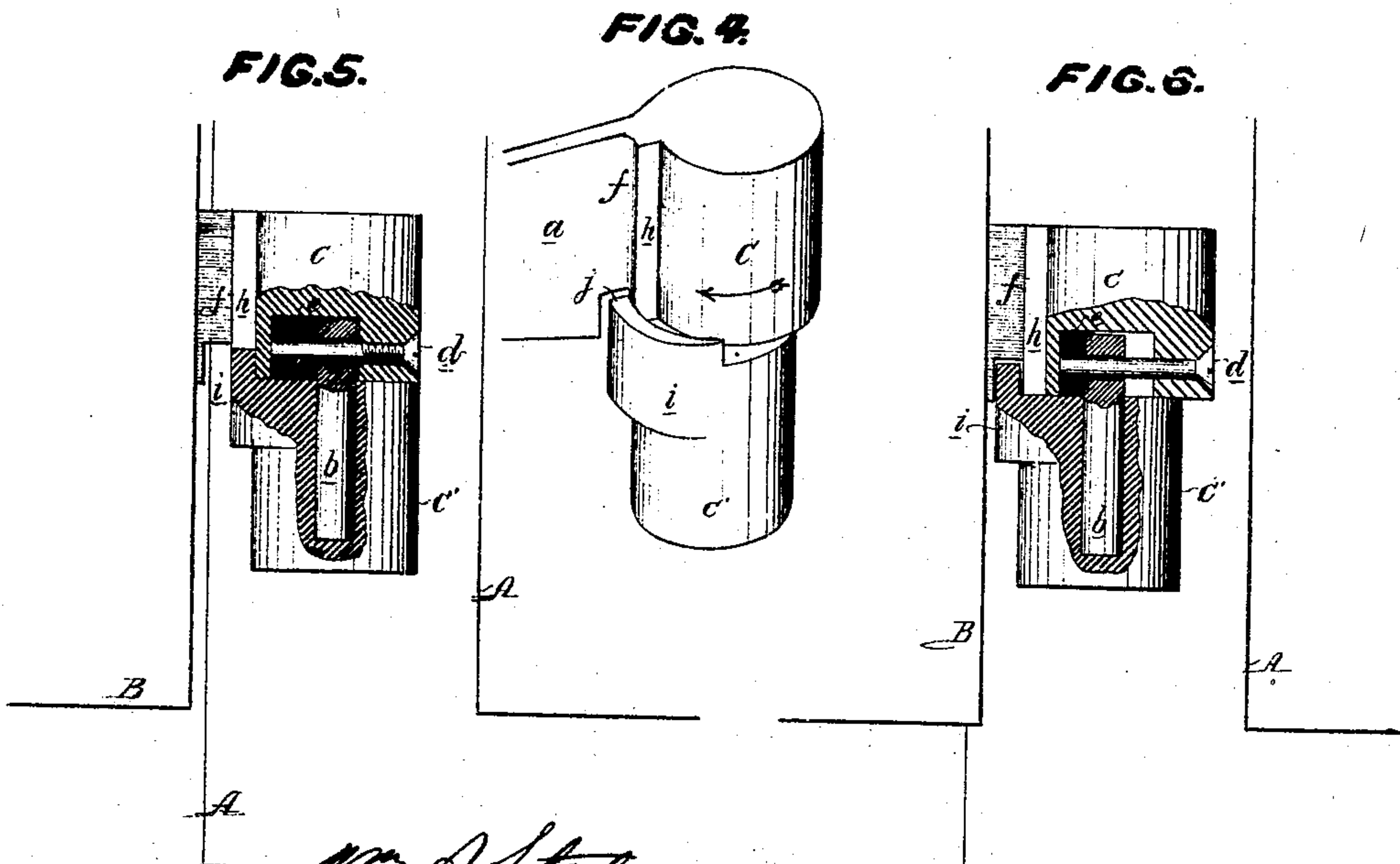
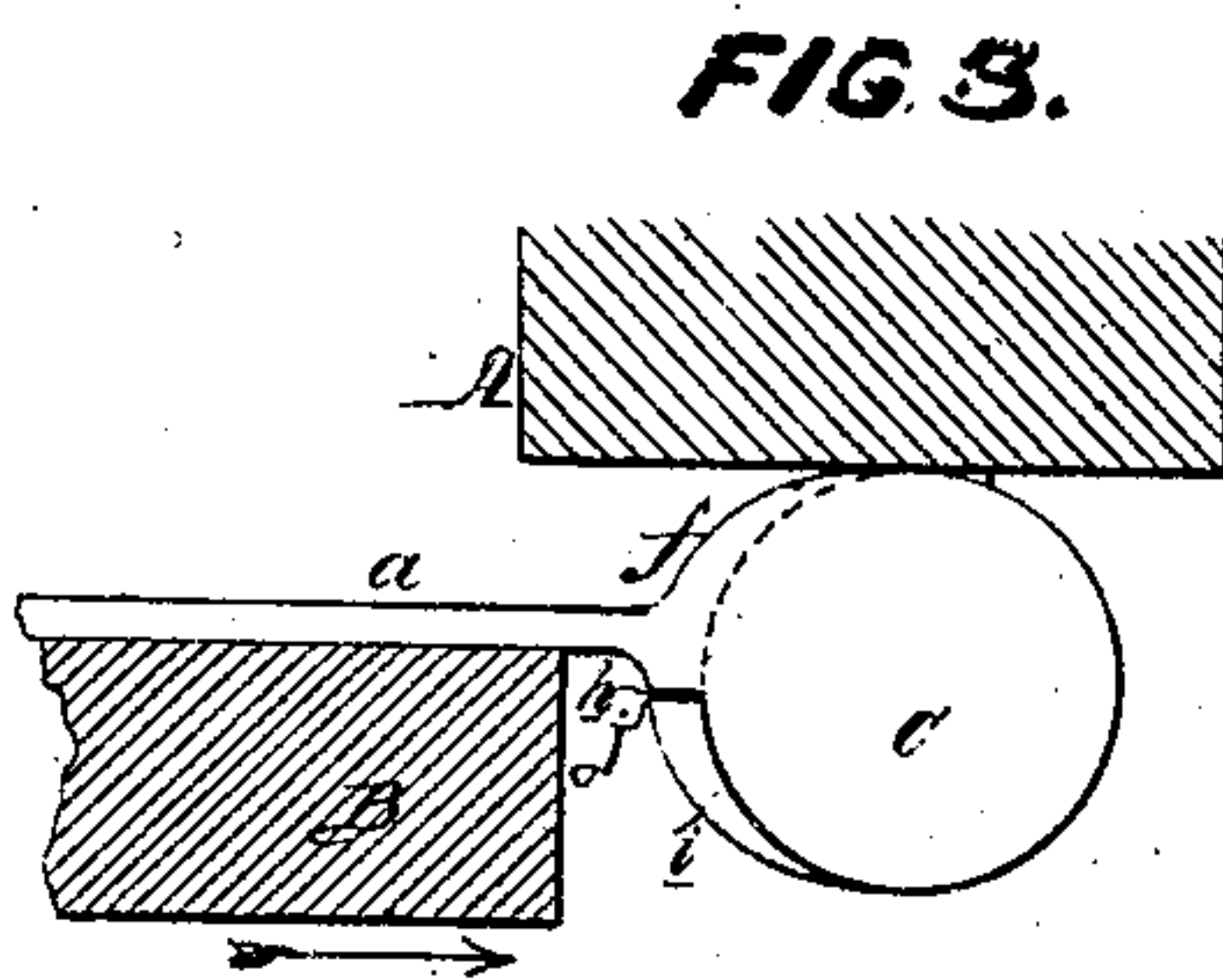
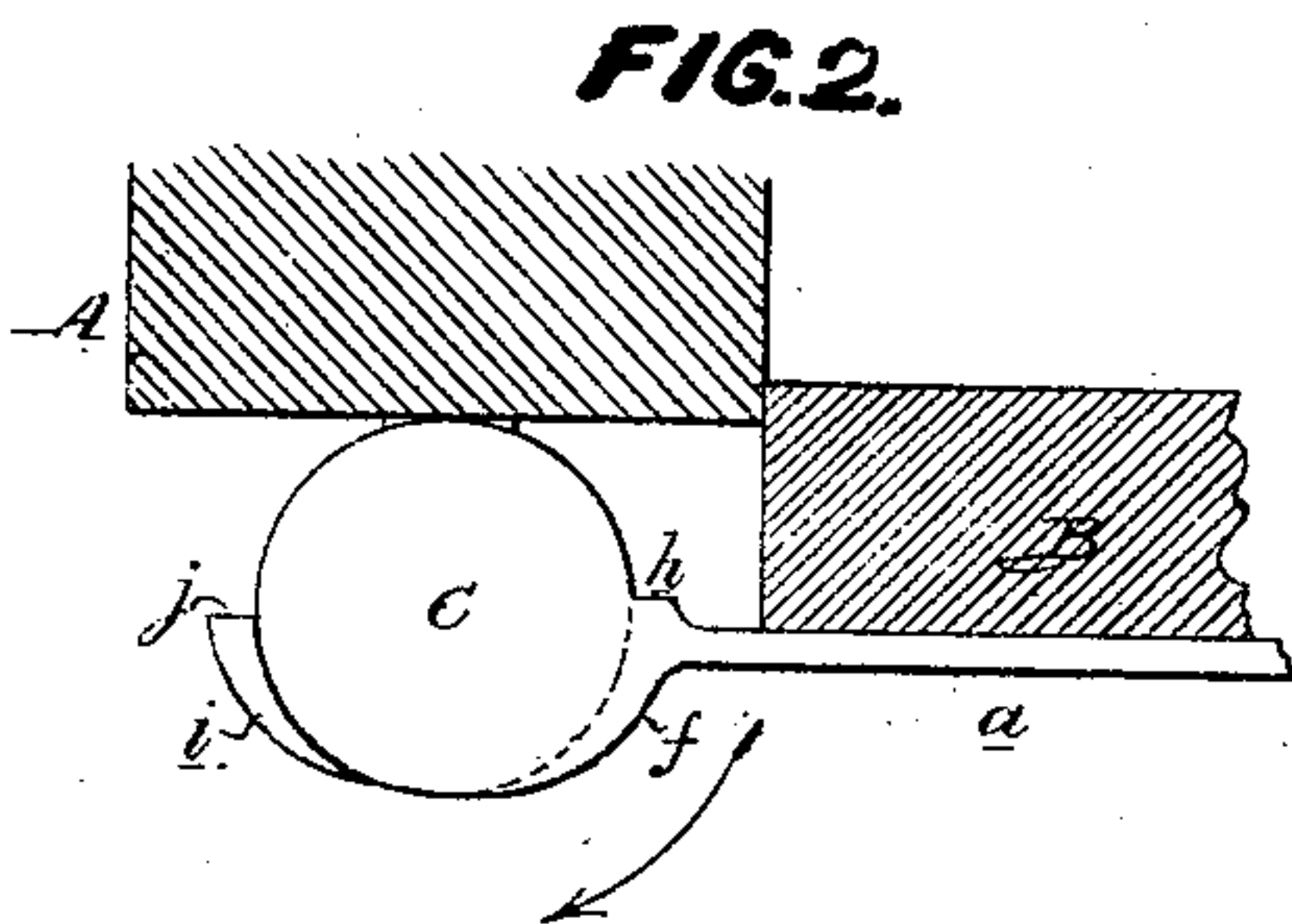
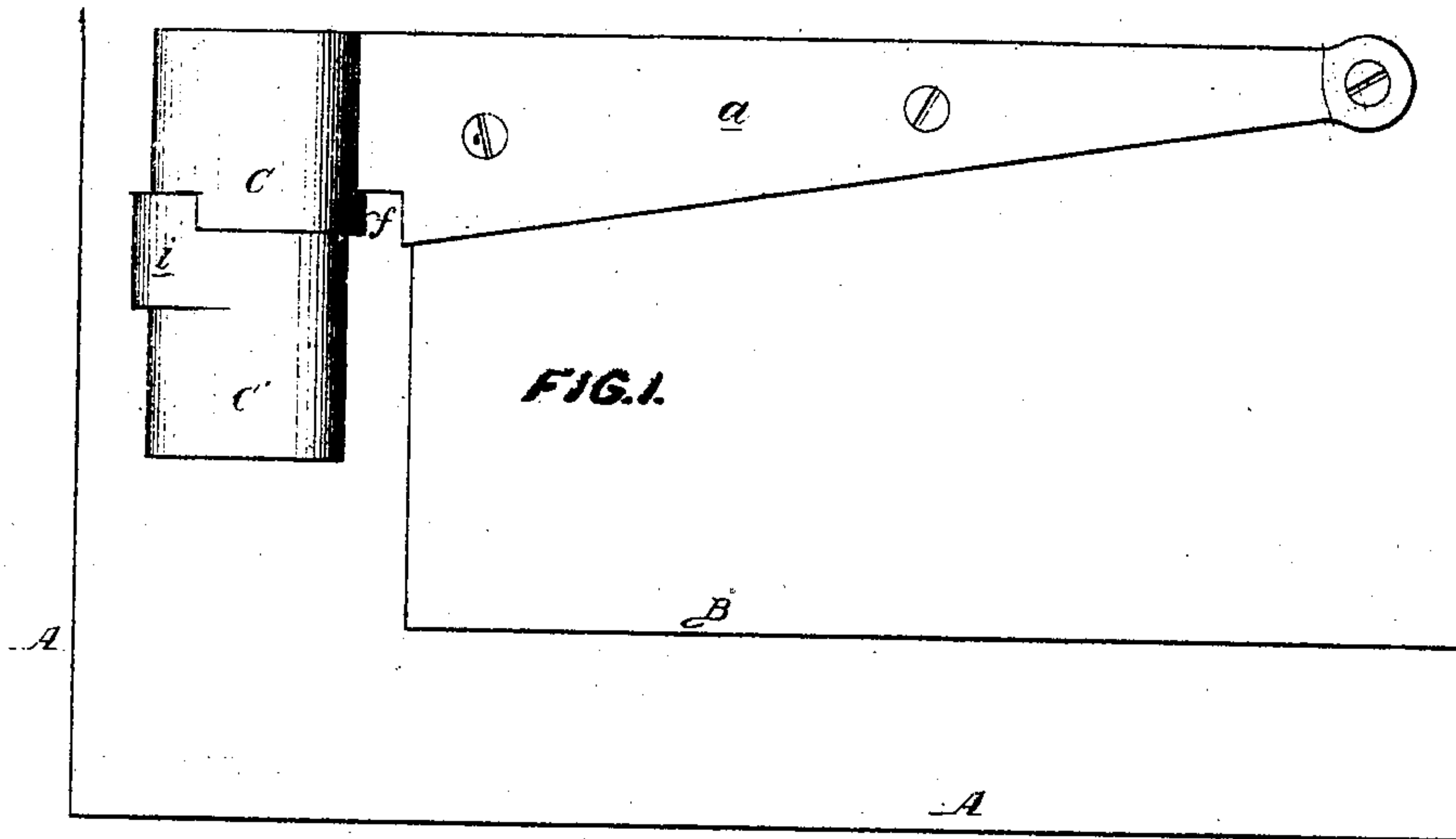


Forbes & Rutter

Lock Hinge.

No. 102242.

Patented Apr. 26. 1870.



WITNESSES

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United States Patent Office.

CHARLES HENRY FORBES AND WILLIAM FORBES RUTTER, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 102,242, dated April 26, 1870.

IMPROVEMENT IN HINGES FOR SHUTTERS

The Schedule referred to in these Letters Patent and making part of the same

We, CHARLES HENRY FORBES and WILLIAM FORBES RUTTER, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improved Shutter-retaining Device, of which the following is a specification.

Nature and Object of the Invention.

Our invention consists of a hinge composed of a lower section, having a cam-like projection and a central vertical pin or stud; and an upper section, having a cam-like projection, a recess for the reception of the stud on the lower section, and a spring, which permits the upper section to move laterally as the hinge is turned, but carries it to a position coinciding with the lower section, when certain shoulders on the cam-like projections are brought opposite to each other.

Description of the Accompanying Drawing.

Figure 1 is a view of part of a window-frame and shutter, with our improved retaining device for the latter;

Figure 2, a sectional plan view of the same, showing the shutter closed;

Figure 3, a sectional plan, showing the shutter opened and held by the retainer;

Figure 4 is a perspective view, showing the operation of the retainer; and

Figures 5 and 6, side views, partly in section, and also illustrating the operation of the retainer.

General Description.

A represents a portion of a window-frame, and B, part of a shutter, the latter being attached to the frame by lift-hinges, as usual.

The lower lift-hinge consists of an upper section, C, secured to the shutter by a strap, *a*, and of a lower section, C', secured to the window-frame, the hinge being, thus far, similar to those in common use.

The pin *b*, however, which is adapted to a socket in the section C' of the hinge, instead of being rigidly secured to the upper section, as usual, is adapted to a recess in the same, and is arranged to slide upon a horizontal pin, *d*, which extends across the said recess.

This pin *d* passes, also, through a block of rubber, *e*, or through a strong spiral spring, which presses against one side of the pin *b*, and has a constant tendency to maintain the same in the position shown in fig. 5, or in such a position that the section C shall be directly over the section C'.

On one side of the section C, adjacent to the strap *a*, is a cam-like projection, *f*, which terminates in an abrupt shoulder, *h*, and on the lower section C' of

the hinge, and projecting above the upper face of the same, is a similar cam-like projection, *i*, which also terminates in an abrupt shoulder, *j*.

When the shutter is closed, as shown in figs. 1 and 2, the cams *f* and *i* will be at opposite sides of the hinge, and the section C will be directly over the lower section.

When, however, the section C is turned in the direction of the arrow, figs. 2 and 4, in order to throw the shutter open, the cam *f* will be brought in contact with the cam *i*, and will be gradually pushed to one side by the latter, until the several parts have assumed the position shown in figs. 4 and 6, or, in other words, the gum spring *e* will yield and permit the pin *b* to slide upon *d*, and the section C to be moved laterally so as to overhang the lower section, and, on continuing the movement in the same direction, the shoulder *h* will pass the shoulder *j* of the lower cam. This will relieve the pressure upon the gum spring *e*, and will permit the same to expand and adjust the several parts to the position shown in figs. 3 and 5, or until the section C is directly over the lower section, and the shoulders *h* and *j* of the two cams are opposed to each other, so as to effectually prevent the accidental closing of the shutter.

The shutter may be readily closed, however, when necessary, by merely drawing the same inward or laterally, in the direction of the arrow, fig. 3, to a sufficient extent to compress the gum, as shown in fig. 6, and permit the shoulder *h* to pass the shoulder *j* without striking the same.

The above simple arrangement will hold the shutter as effectually when opened as the ordinary turn-buckle, while the expense of the latter, as well as the necessity of puncturing the wall for the reception of the same, is avoided.

It will be evident that this improvement can be applied to door-hinges, as well as to those used for shutters.

Claim.

The section C', its pin *b* and cam *i*, in combination with the section C, its cam *f*, recess receiving the end of the pin *b*, and spring *e*, arranged within the recess at one side of the pin, all substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CHARLES HENRY FORBES.
WILLIAM FORBES RUTTER.

Witnesses:

LOUIS BOSWELL,
HARRY SMITH.