

PATENTED JUL 11 1871

William T. Loughhead & Henry Smiley's Sash Fastener.

Fig. 1.

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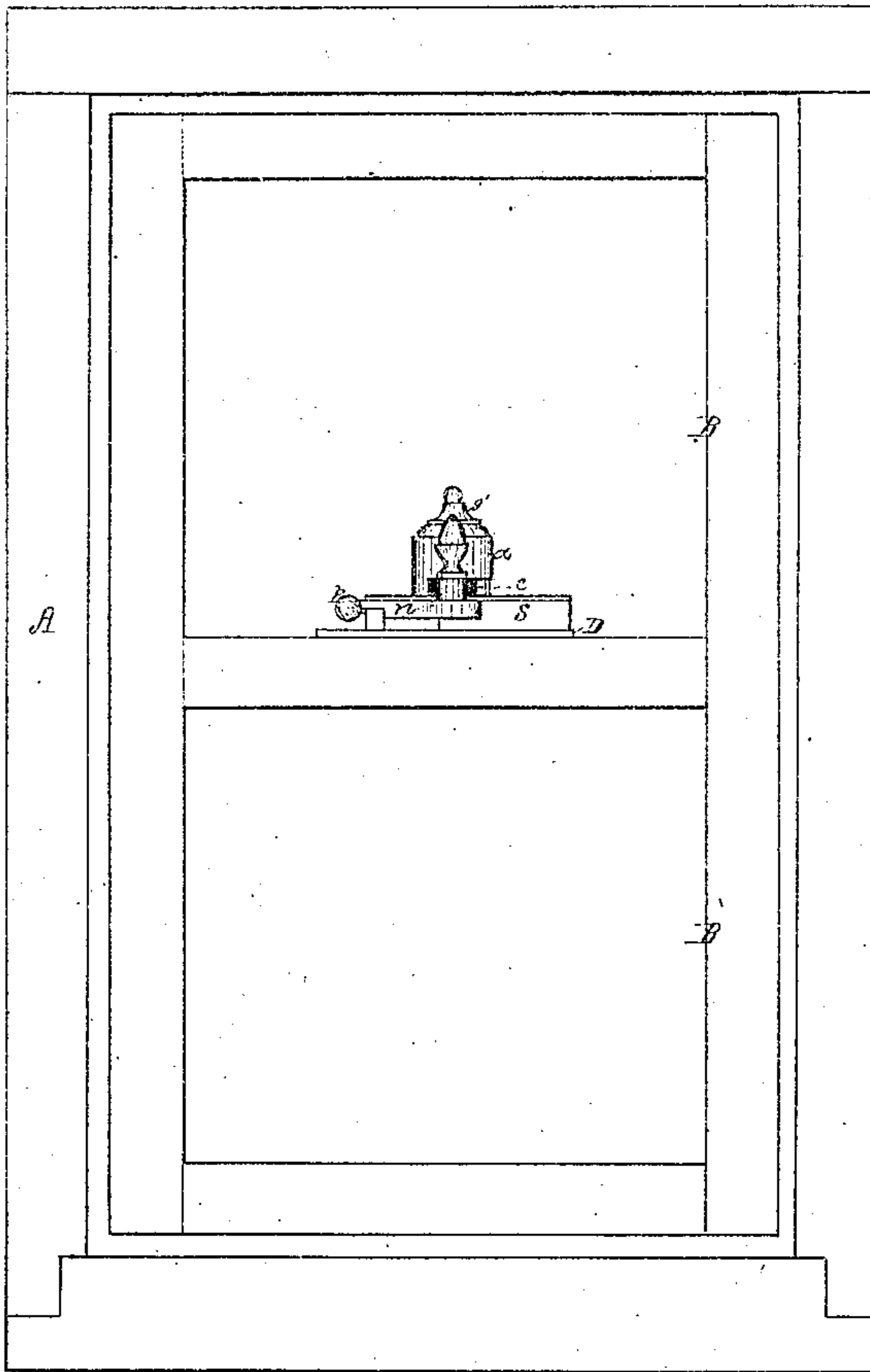


Fig. 2.

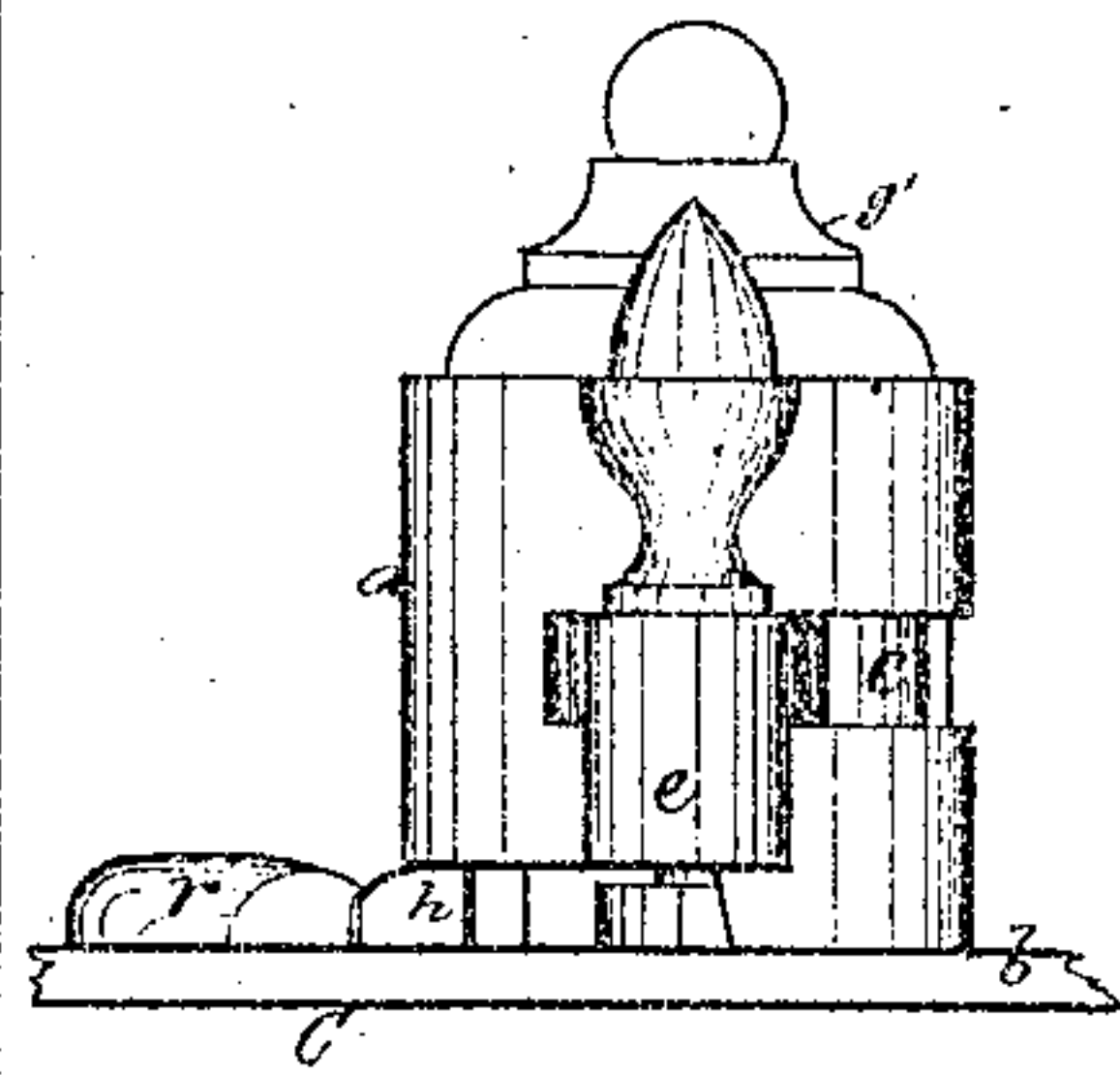
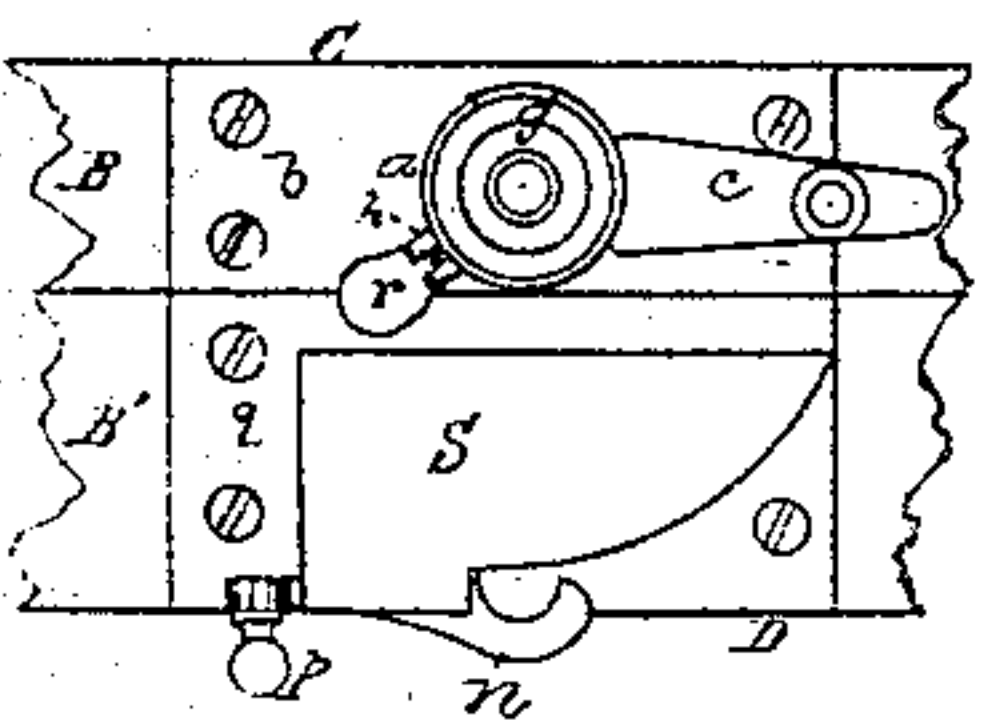


Fig. 4.

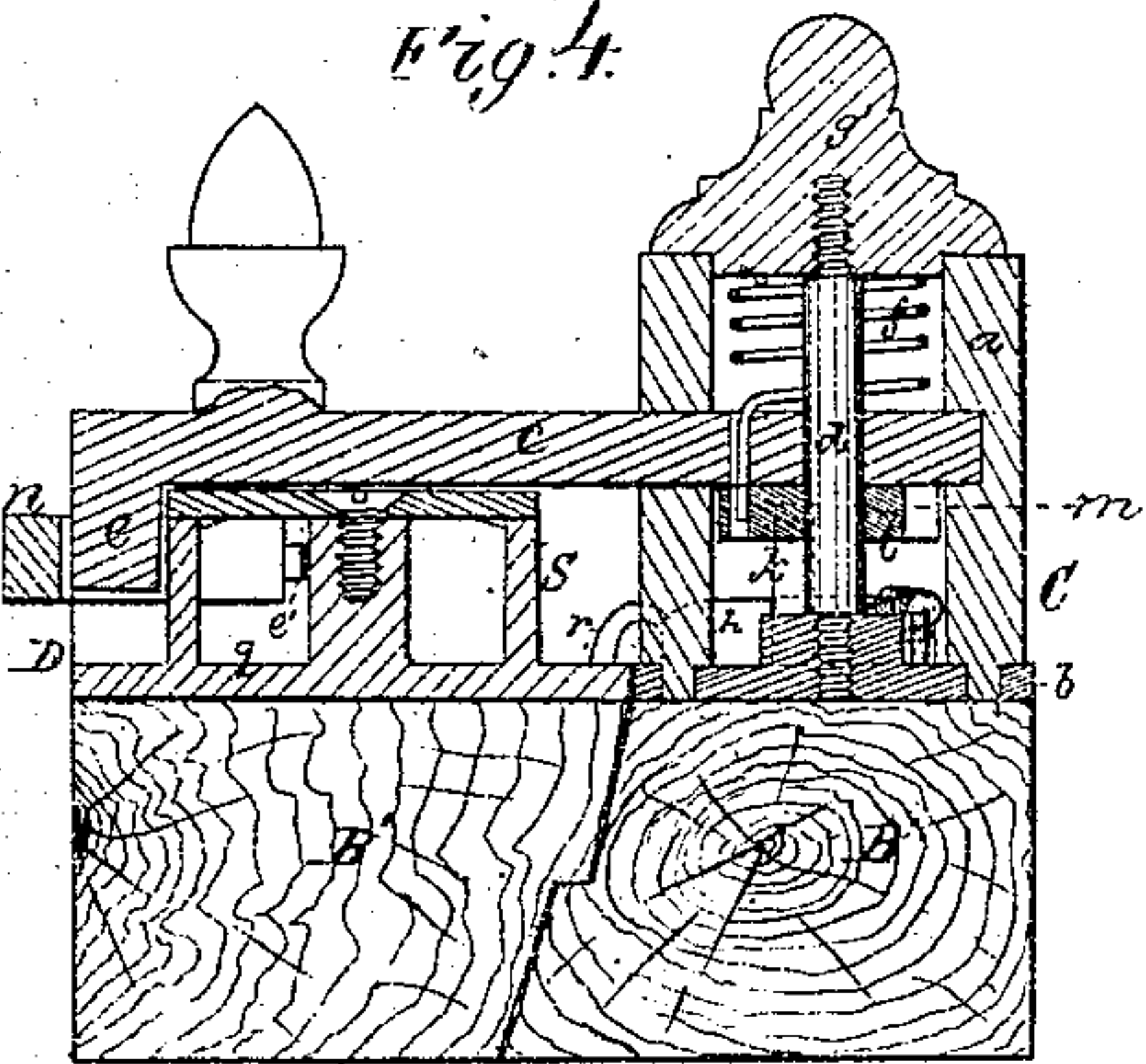


Fig. 5.

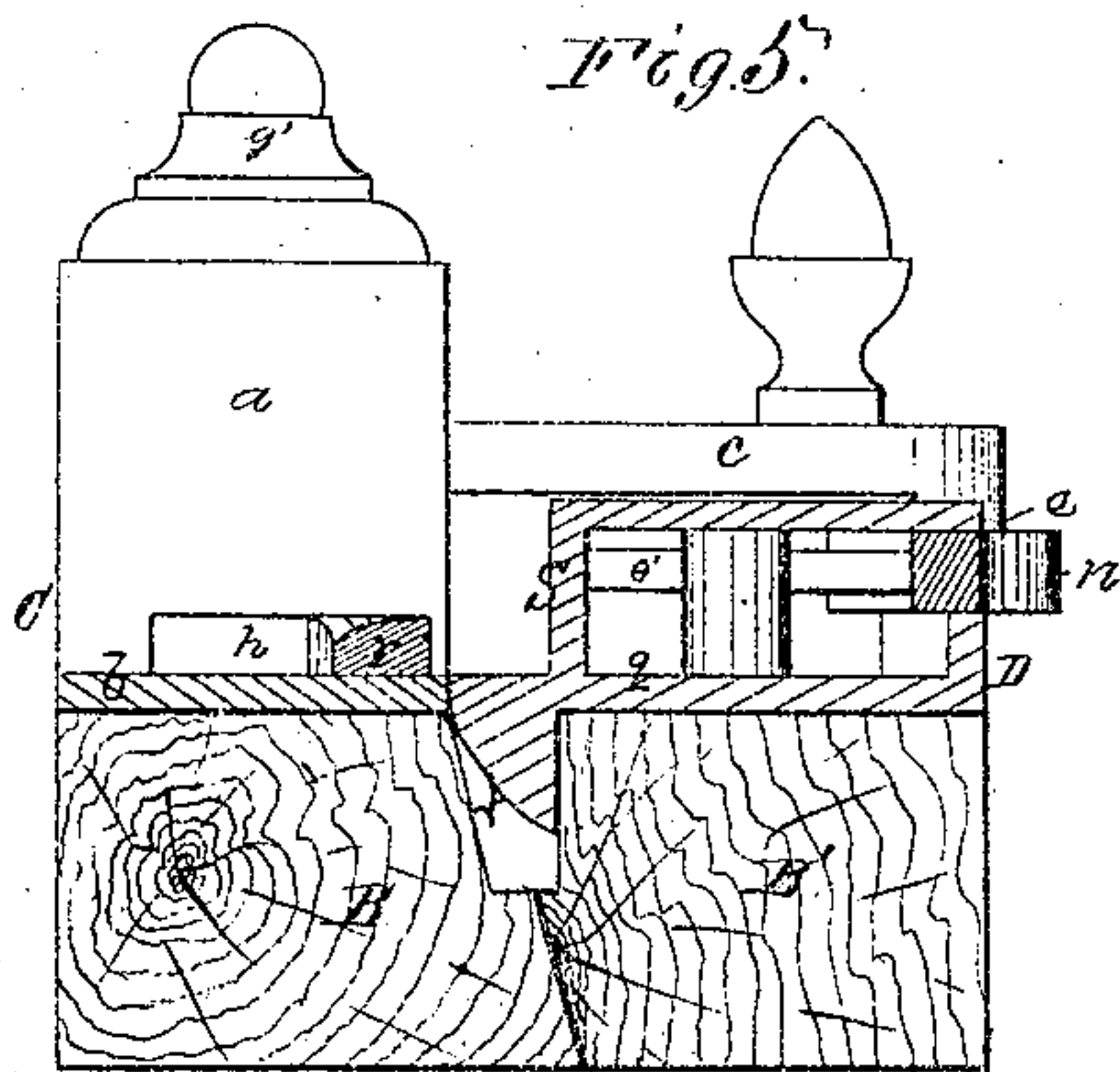
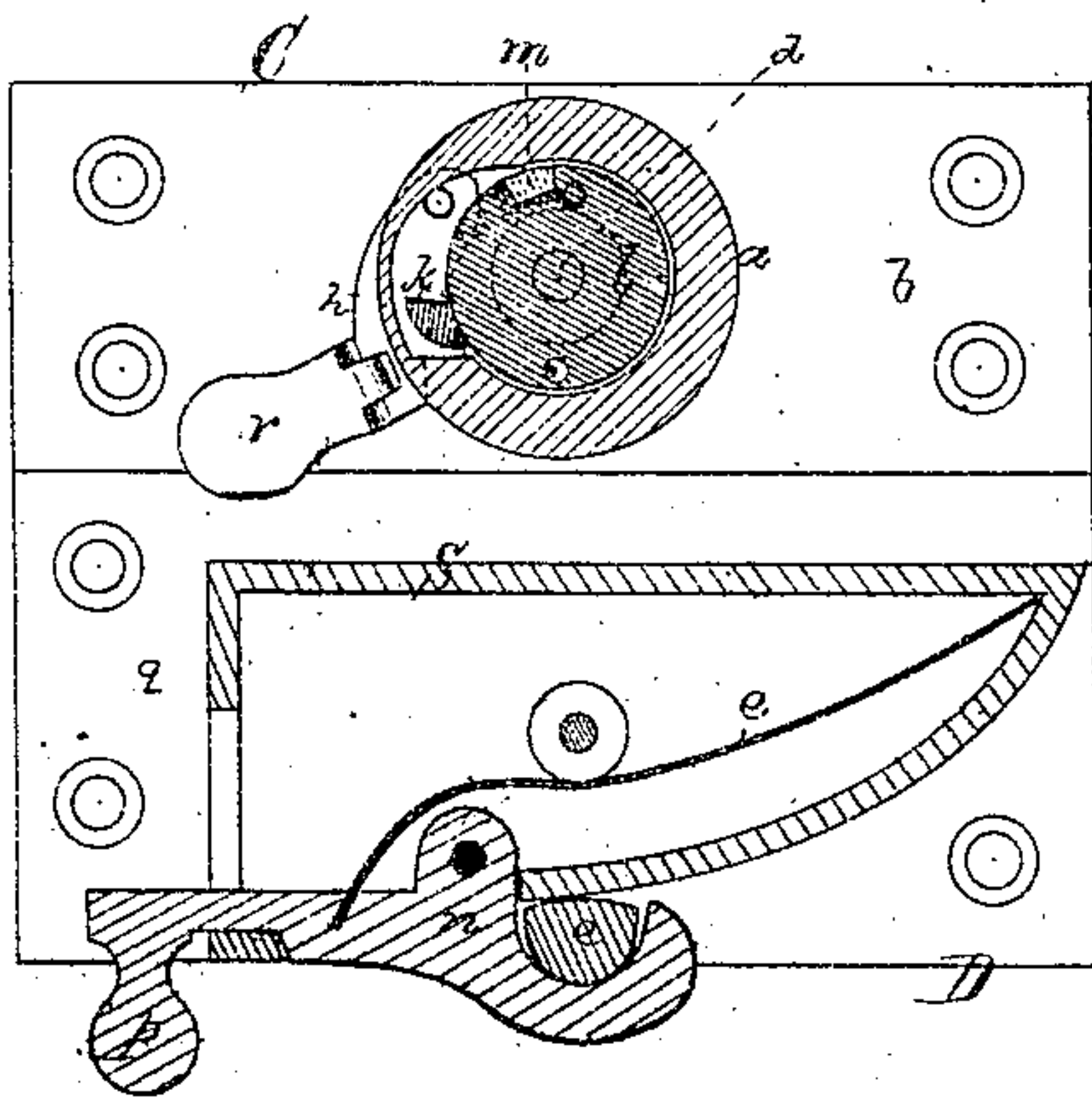


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY SMILEY AND WILLIAM T. LOUGHEAD, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN AUTOMATIC FASTENERS FOR MEETING-RAILS OF SASHES.

Specification forming part of Letters Patent No. 116,878, dated July 11, 1871.

To all whom it may concern:

Be it known that we, HENRY SMILEY and WILLIAM T. LOUGHEAD, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Self-Locking Sash-Fastener; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 denotes a front elevation of a window-frame and its two sashes provided with our invention, the same representing the sashes as locked or fastened; Fig. 2, a top view of our invention as applied to the two sashes of a window, the same showing the parts as unlocked. Fig. 3 is a horizontal section taken through the said fastener. Fig. 4 is a vertical and central section thereof. Fig. 5 is a transverse section taken through the incline and the tripping-dog or lever. Fig. 6 is an elevation of the rear half or portion of the fastener.

The object of our invention is to provide the sashes of a window with an improved device which shall be self-fastening or automatic in its operations whenever the two sashes may be brought into their normal or closed positions; and such invention consists in the peculiar construction and arrangement of its several operating parts, as hereinafter described and shown in the accompanying drawing.

In the said drawing, A denotes an ordinary window-frame, provided with two sashes—B being the upper and B' the lower one thereof. To the said sashes our said device is applied, the said device consisting of two parts, C D, the former being affixed to the upper and the latter to the lower sash. The said part C has a cylindrical band or case, *a*, extending up from its base-plate *b*, which is affixed to its sash by means of screws. *c* is a lever, whose inner end is pivoted on a vertical spindle, *d*, which extends axially through the said case, and carries on its outer end a stud or bolt, *e*. The said lever projects through a long slot formed in the side of the said barrel, as shown in Figs. 1 and 6, and so as to have a horizontal movement of about ninety degrees. *f* is a spring, which is coiled around the spindle *d*, and has one of its ends affixed to the said lever, and its other to the inner surface of the case *a*, the object of such spring being to actuate the said lever and force its locking-stud into the eye or hook of the catch-lever, to be herein-

after described. *g'* is a screw-cap, which surmounts and screws upon the top of the case *a*. *h* is a lever, disposed within a chamber formed in the lower part of the case *a*, its outer end projecting through the side of the case. The inner end of such lever is pivoted to the base, its outer end being capable of moving freely in a horizontal direction. The said lever consists of two parts so hinged or jointed together as to enable the outer part thereof to move vertically without affecting any movement of the inner part of such lever. The outer end of the said lever is beveled and laps over or upon the base-plate of the fellow half of the sash, as seen in Figs. 2 and 3, it being so applied and hinged as to offer no impediment to the raising of the lower sash whenever it is desirable to do so. Furthermore, the said lever has a stud, *k*, projecting up from its upper surface, the same being to operate with a socket, *m*, made in a washer or plate, *l*, which is affixed to the inner end of the lever *c*, and turns with it upon the spindle *d*. The said stud *k* and the socket *m* constitute a lock or means of retaining the lever *c* out of the way of the lower sash while the latter is being raised. The other half or portion D of the device consists of a case, *s*, having the external form as shown in Figs. 1 and 2. Within this case a curved catch-lever, *n*, is pivoted, the same projecting through a slot formed in the side of the case, as shown in said figures. The said lever is so formed and applied as to be capable of movement in a horizontal direction a spring, *e'*, attached to the said lever and the case, serving to allow of such movement and to restore such lever to its normal position after having been thus moved. *p* is a knob applied to the said lever to enable its rear part to be drawn backward, and thus force its front end forward in order to release the catch from the fastening-bolt and enable the latter to be rotated through an arc of ninety degrees, or out of the path of movement of the lower sash while being raised. *q* is the base-plate of the said part, and by which it is secured to the sash. From the rear edge of the said base-plate an incline, *r'*, projects downward. This incline is to operate with the lever *h* while the lower sash is being raised, the outer end of the lever being simply thrown upward without producing any movement of the inner half of such lever; but when the lower sash is brought downward, the incline, impinging against the outer end

of the said lever, forces it horizontally back and releases its stud from the socket.

Having described the construction of our improved device, its operation is as follows: If we suppose the parts to be in the positions as shown in Fig. 1, and we desire to unfasten the sashes, we have simply to press on the knob of the lever *n* and force such inward so as to throw outward the hooked end of such lever, and with the other hand seize the knob of the lever *c* and rotate the same horizontally through an arc of ninety degrees, when the retaining mechanism heretofore described, operating automatically, will lock and securely hold the said lever *c* in its desired position, when either the upper sash may be lowered or the lower one raised, as may be desirable. In order to lock or fasten the sashes we have simply to bring them into their normal or closed state, the action of the incline upon the end of the lever *h* causing the stud of such lever to be

released from its socket, and thus the bolt of the lever *c*, under the action of its spring, is thrown against the end of the catch-lever *n*, which, yielding under the action of its spring, allows it to enter the eye or hook of its fellow lever, when the two become firmly fastened.

What we claim as our invention is as follows:

Our improved self-locking sash-fastener, as described, the same consisting of the two movable levers *c n*, constructed as described, and provided with actuating-springs, as specified, the pivoted lever *h*, its stud *k*, and hinged portion *r*, the socket *m*, and incline *r'*, the whole being arranged and operating together, substantially as set forth.

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WILLIAM T. LOUGHEAD.

Witnesses:

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