

(No Model.)

J. L. EBERT.
SASH FASTENER.

No. 479,409.

Patented July 26, 1892.

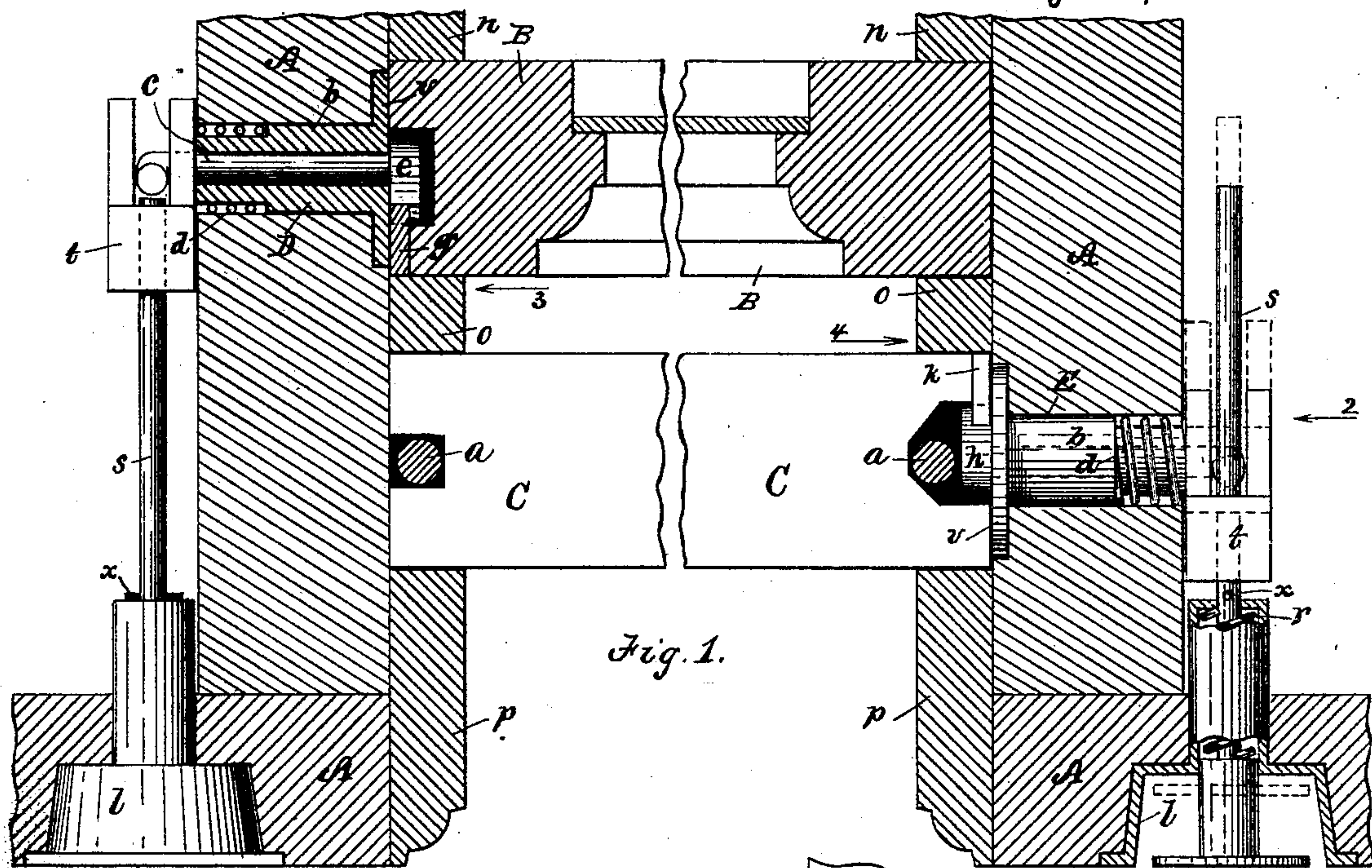


Fig. 1.

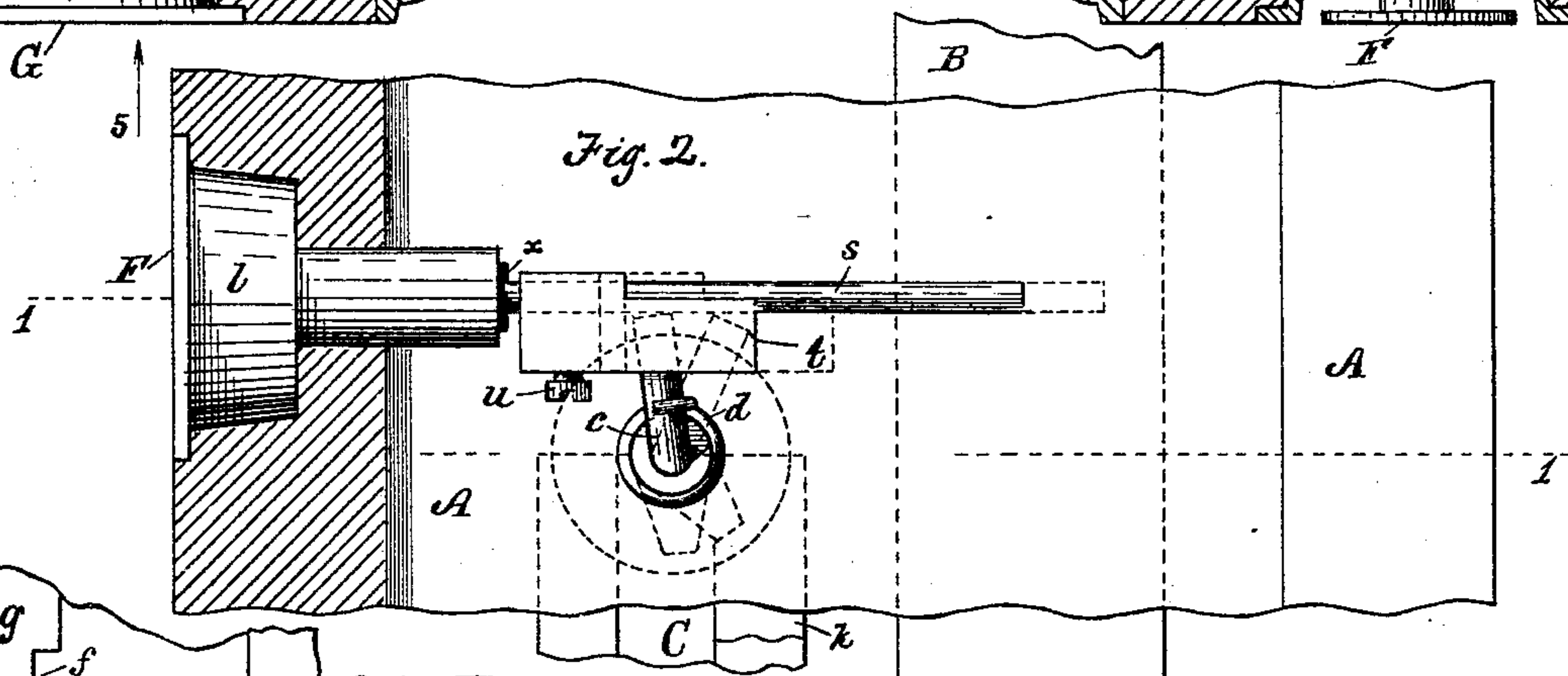


Fig. 2.

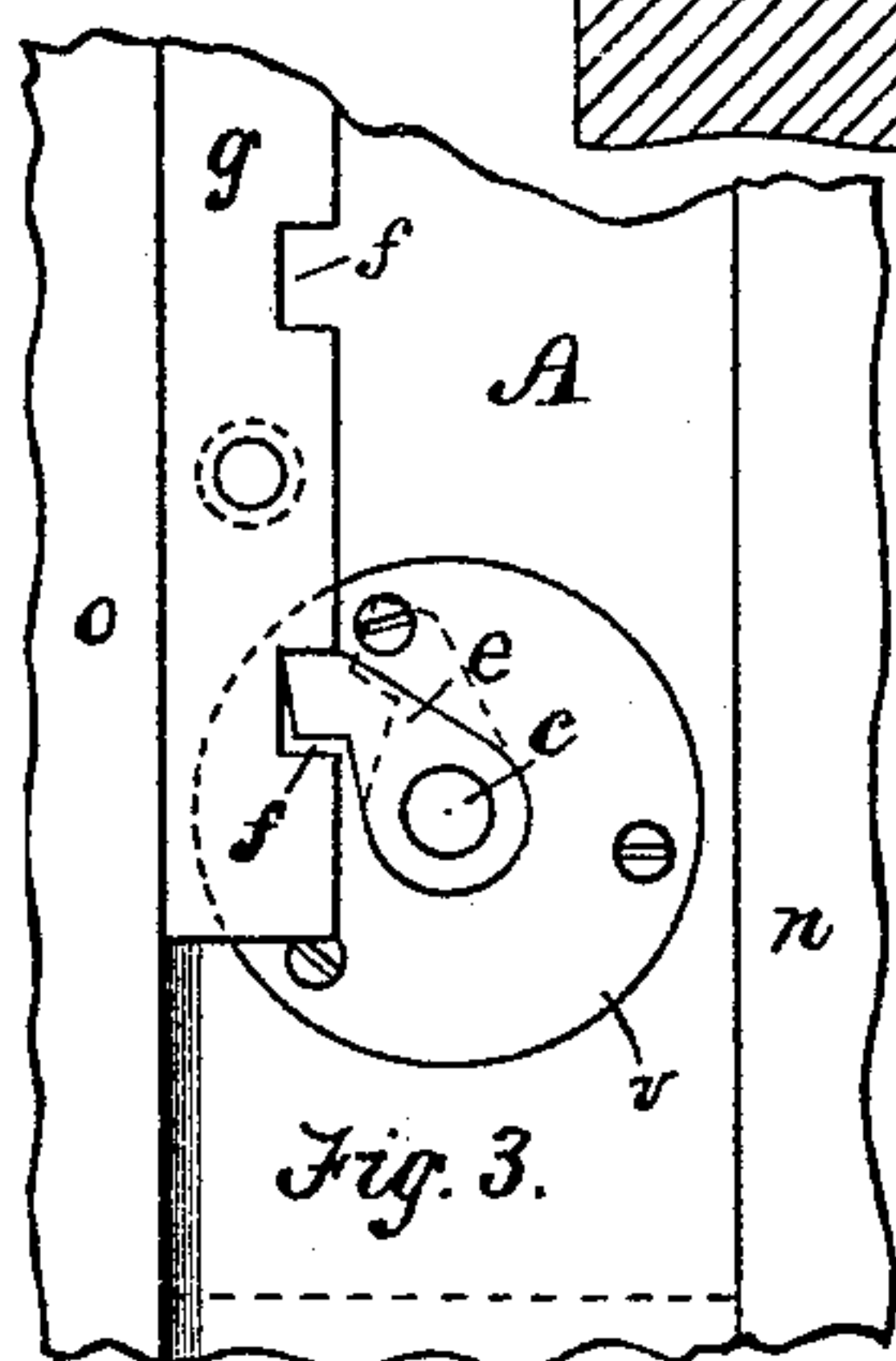


Fig. 3.

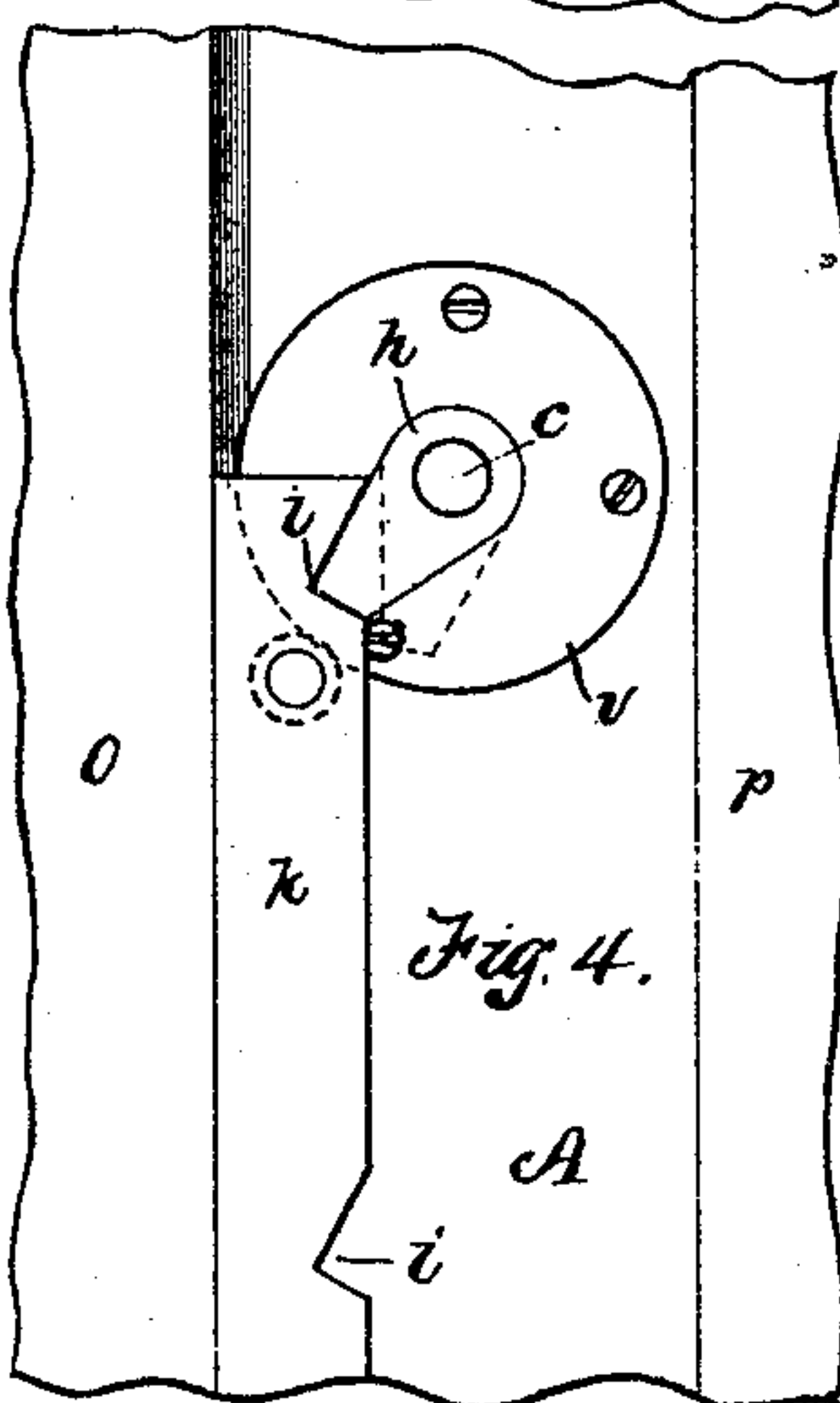


Fig. 4.

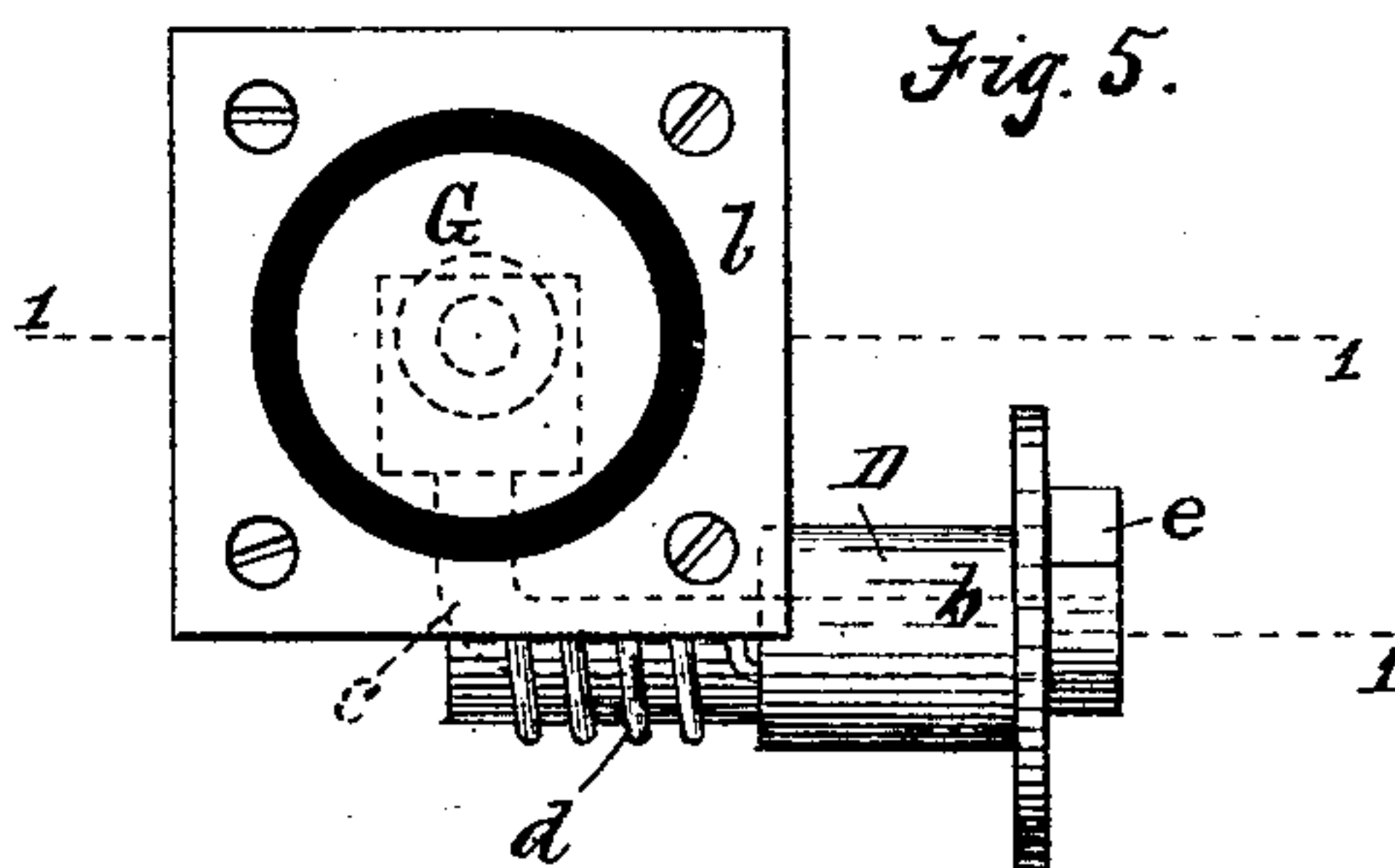


Fig. 5.

Attest:

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UNITED STATES PATENT OFFICE.

JOHN L. EBERT, OF FARMINGTON, NEW YORK.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 479,409, dated July 26, 1892.

Application filed April 19, 1892. Serial No. 429,772. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. EBERT, of Farmington, in the county of Ontario and State of New York, have invented a new and useful Improvement in a Sash Lock and Holder, which improvement is fully set forth in the following specification, and shown in the accompanying drawings.

The object of my invention is to produce an automatic sash lock and holder constructed to lock both the upper and the lower sashes of the window in their normal places and to securely hold them in any desired position as to elevation within the casing of the window.

The invention is hereinafter fully described, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a horizontal section at the middle of a window on the dotted line 1 1 in Fig. 2, parts being broken away and the figure condensed as to width. Fig. 2 is a view at the side of the casing next the wall, seen as indicated by arrow 2 in Fig. 1, the frame being in part vertically sectioned along the axis of the push-button. Fig. 3 is a view of a part of the channel for the upper sash, seen as indicated by arrow 3 in Fig. 1. Fig. 4 is a similar view of a portion of the channel of the lower sash, seen as indicated by arrow 4 in Fig. 1. Fig. 5 is a face view of the left-hand push-button with the associated holder for the sash, seen as indicated by arrow 5 in Fig. 1.

Referring to the parts shown in the drawings, A is the casing of the window, B the upper and C the lower sash, and *p p, o o,* and *n n* the stops, all of which parts are substantially of common construction. The sashes are preferably suspended by cords *a a* in the usual manner.

D is the lock or holder for the upper sash, and E the lock or holder for the lower sash, which locks are in most respects alike. Each of these sash-holders consists of a flanged barrel *b*, holding an axial shaft *c*, actuated by a spiral spring *d*, joined to the shaft and wound upon a reduced part of the barrel, with its end secured thereto. These barrels are formed with circular flanges *v v* and are inserted horizontally in the opposite sides of the window-casing, so that their axes are parallel and

in the same horizontal plane, each barrel being opposite the edge of a sash. The barrels are set so that the outer faces of their respective flanges are flush with the channels in which they are inserted and face the respective sashes. Upon its end next the sash the shaft in the barrel of the left-hand holder D for the upper sash is provided with an arm or pawl *e*, Figs. 1 and 3, rigid with the shaft, which catches into notches *f* in the sash, or, preferably, in a vertical iron bar *g*, secured rigidly to the sash, said bar extending from the top to the bottom thereof. When the pawl *e* rests in the lower notch of the bar or sash, the latter is locked in its upper or normal position and cannot be drawn downward. Now by turning the shaft *c* in the barrel, so as to throw the pawl out of the notch, as shown in dotted lines, the sash may be lowered at pleasure. The bar *g* (or sash) is formed with various notches, so that the sash may be lowered to different distances, as may be wished, and held by the pawl in each position.

The manner of operating the pawl *e* will be described farther on.

The shaft *c* in the holder E for the lower sash C is also provided at its end next the sash with a pawl *h*, Figs. 1 and 4, to catch into notches *i* in the sash or in an iron bar *k*, rigidly secured to the sash and extending throughout its length. When this sash is fully down and the pawl occupies the upper notch, as shown in Fig. 4, the sash is securely locked against an upward movement, and it can only be raised by turning the pawl out of the notch, as in the case of the upper sash.

The two shafts *c c*, with their respective pawls *e h*, are operated from within the room by means of push-buttons G F, held in cups *l l*, as shown. The cups are inserted horizontally in the inner faces of the casing and at the opposite sides of the window, and are provided with reduced cylindrical parts, in each of which is a spiral spring *r*. Each push-button is formed with an axial rod *s*, extending through the returning-spring *r* and into the space within the casing, as shown. These rods or extended parts of the push-buttons are for the purpose of holding adjustable "jacks" or blocks *t t* for engaging the respective shafts *c c*. These blocks are longitudinally divided, as shown, and the adja-

cent ends of the respective shafts are bent upward and caused to enter the spaces between the divided parts of the blocks. The latter are held to their respective push-buttons by simple set-screws, one of which is shown at *u* in Fig. 2.

It will now be readily understood that when the push-button *F*, for instance, is pushed inward by the thumb the pawl *h* will be turned out of the notch in the bar *k*, as indicated by dotted lines in Fig. 4. This will release the sash *C*, so that it may be moved upward. The bar *k* is formed with various notches differently spaced, so that the sash may be held by the pawl at various positions of elevation. Likewise by pushing the button *G* inward the pawl *e* will be turned out of the notch in the bar *g* to release the upper sash, so the latter may be moved downward, as may be desired.

The spiral springs *d d* are formed to have considerable force, and they serve to hold the respective pawls firmly in the notches of the contiguous bars, and when either push-button is pushed inward, as described, it moves inward against the action of the spring *d* and also the returning-spring *r*.

The spring *r* in the cups *l* may be made light and weak, for the function of each is merely to return the push-button to its normal position flush with the face of the cup.

It will be observed that the operating-point of the pawl *e* is above the shaft *c*, while the operating-point of the pawl *h* is below its shaft *c*. On account of this both pawls, urged by the springs *d d*, act to press the sashes toward each other or against the middle stops *o o*. The pawls in holding the sashes against said stops tend to prevent the sashes from rattling on account of the action of the wind, and it also tends to keep the meeting-rails of the two sashes close together, and thus reduce the opening between them.

The pawls *e* and *h* and the notches they occupy in the bars or sashes are so formed that either sash may be moved toward its normal position without pressing either push-button—that is to say, the upper sash may be pushed upward and the lower sash may be pulled downward without pressing either push-button; but neither sash can be moved in the opposite direction without first being released from the action of the pawl.

The weights of the upper sash are preferably made heavier than the sash, so that when left to control the sash the latter will be car-

ried upward to its normal or closed position. The action of the spring upon the pawl *e*, however, is sufficient to hold the sash against this upward pull of the weight. To raise the sash against the action of the pawl, a little force must be exerted in addition to the action of the weights to raise the sash. On the contrary, the lower sash is preferably made a little heavier than the weights that act with it, so that when left unimpeded it will of itself move downward to its closed position. To raise it, a little force must be added to that of the weights; but the action of the pull pressed by the spring *d* is sufficient to hold the sash against a downward movement by its own preponderance of weight. A little force is necessary to move it downward when pressed by the pawl.

What I claim as my invention is—

1. A sash-fastener consisting of a horizontal barrel in the window-casing opposite the sash, a non-endwise moving rotary axial shaft in said barrel, and a spring in the barrel to turn the shaft, the axis of the latter being parallel with the plane of the sash, the shaft having a pawl or arm at right angles with it to engage the sash and having its opposite end turned at right angles with the shaft, in combination with a push-button held in the casing, formed with an extended part at right angles with said shaft, and a longitudinally-adjustable block secured to the extended part of the push-button to engage the upturned part of said shaft, and a returning-spring for said push-button, substantially as shown and described.

2. A window provided with a lock and holder for each sash, placed at opposite sides of the window, each lock and holder consisting of a shaft in the casing of the window opposite the edge of the sash, provided with a pawl to engage the sash, the axes of said shafts being parallel and in the same horizontal plane, and a push-button for each sash-holder to actuate said shaft thereof, said shafts and push-buttons being actuated by springs, the springs of said shafts acting in a manner to press the sashes toward each other or against the middle stops *o o*, substantially as described.

In witness whereof I have hereunto set my hand, this 12th day of April, 1892, in the presence of two subscribing witnesses.

JOHN L. EBERT.

Witnesses:

ENOS B. WHITMORE,
M. L. McDERMOTT.