

B. LANDER.

Fastener for the Meeting-Rails of Sashes.

No. 206,583.

Patented July 30, 1878.

Figure 1.

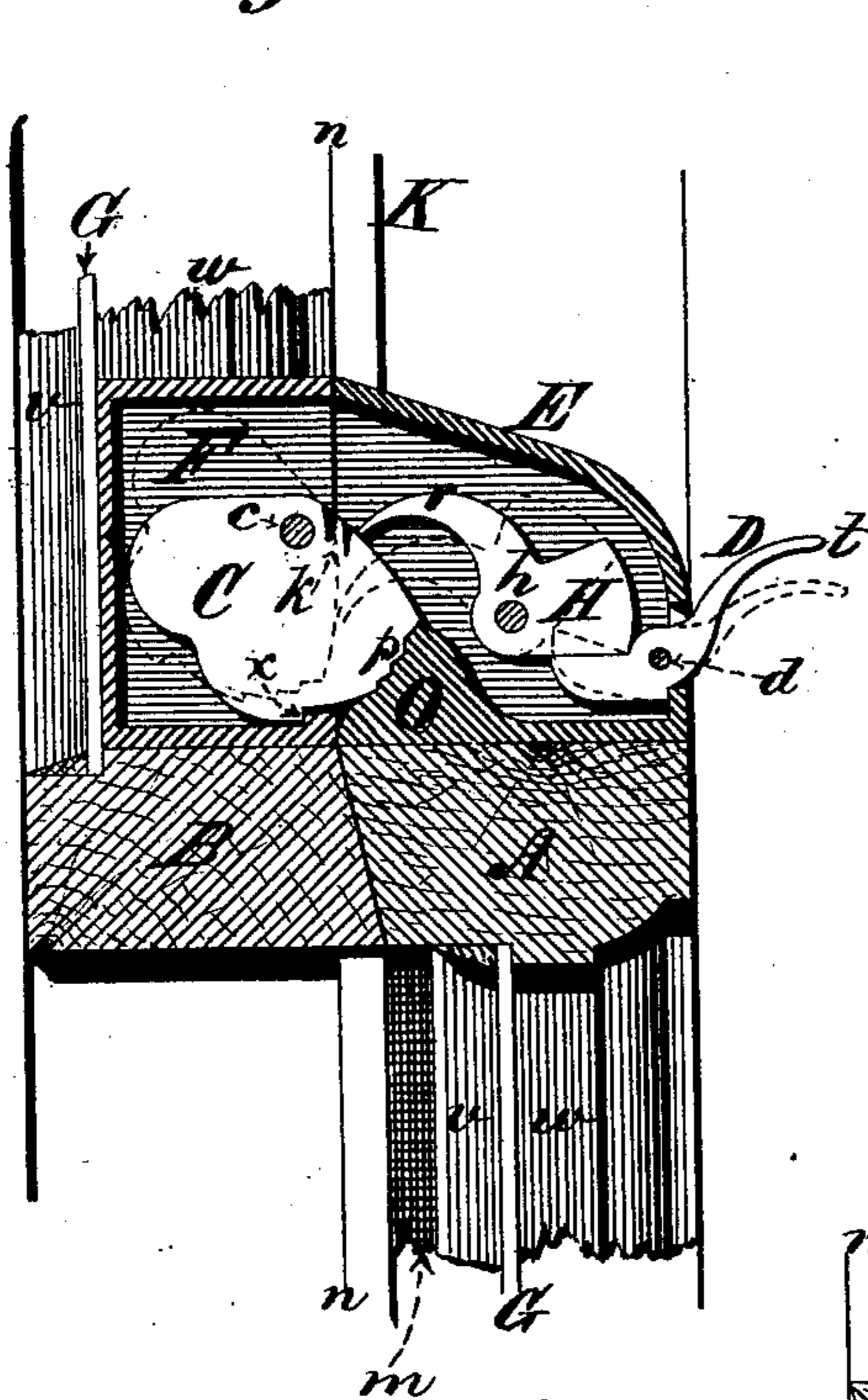


Figure 2.

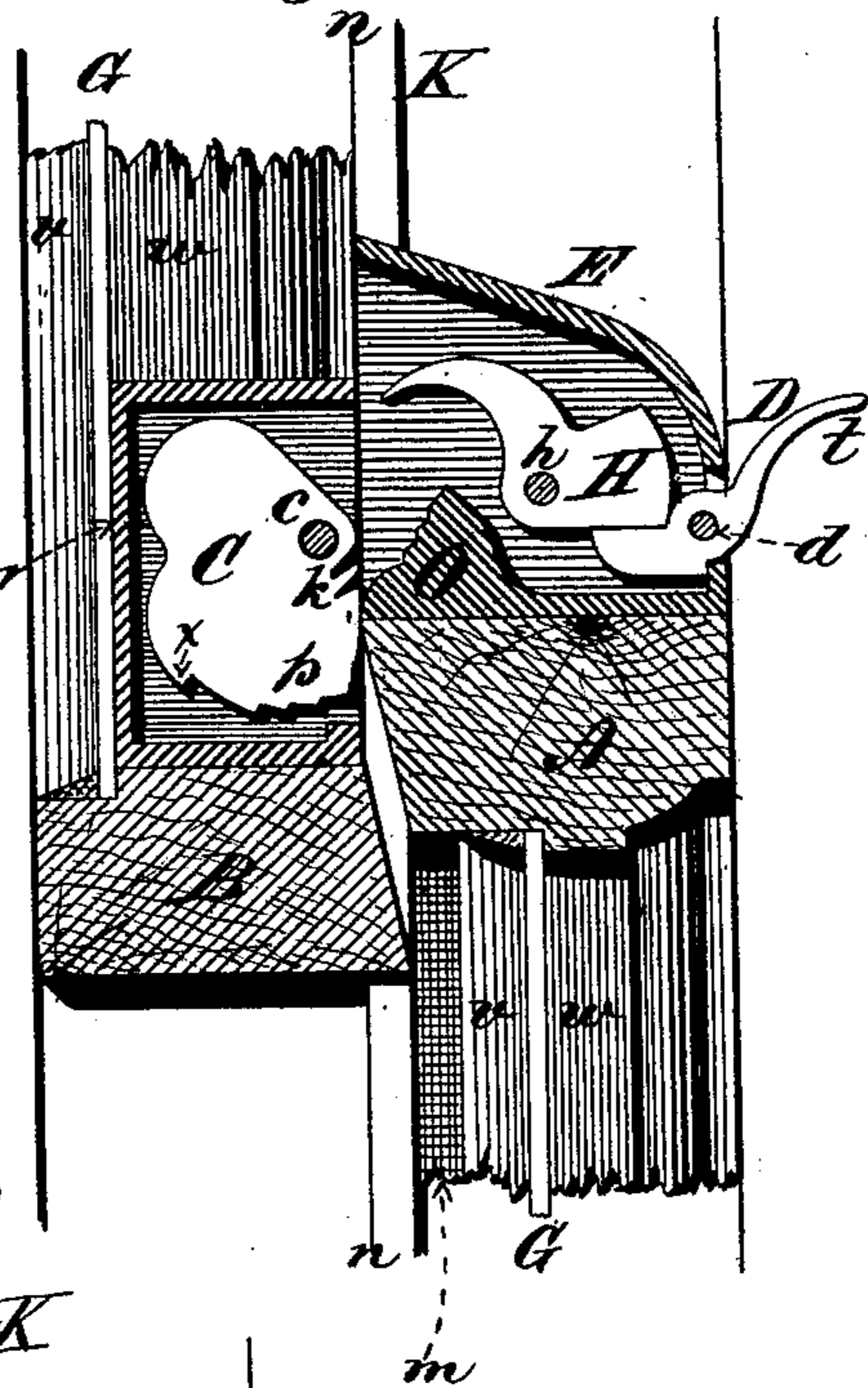
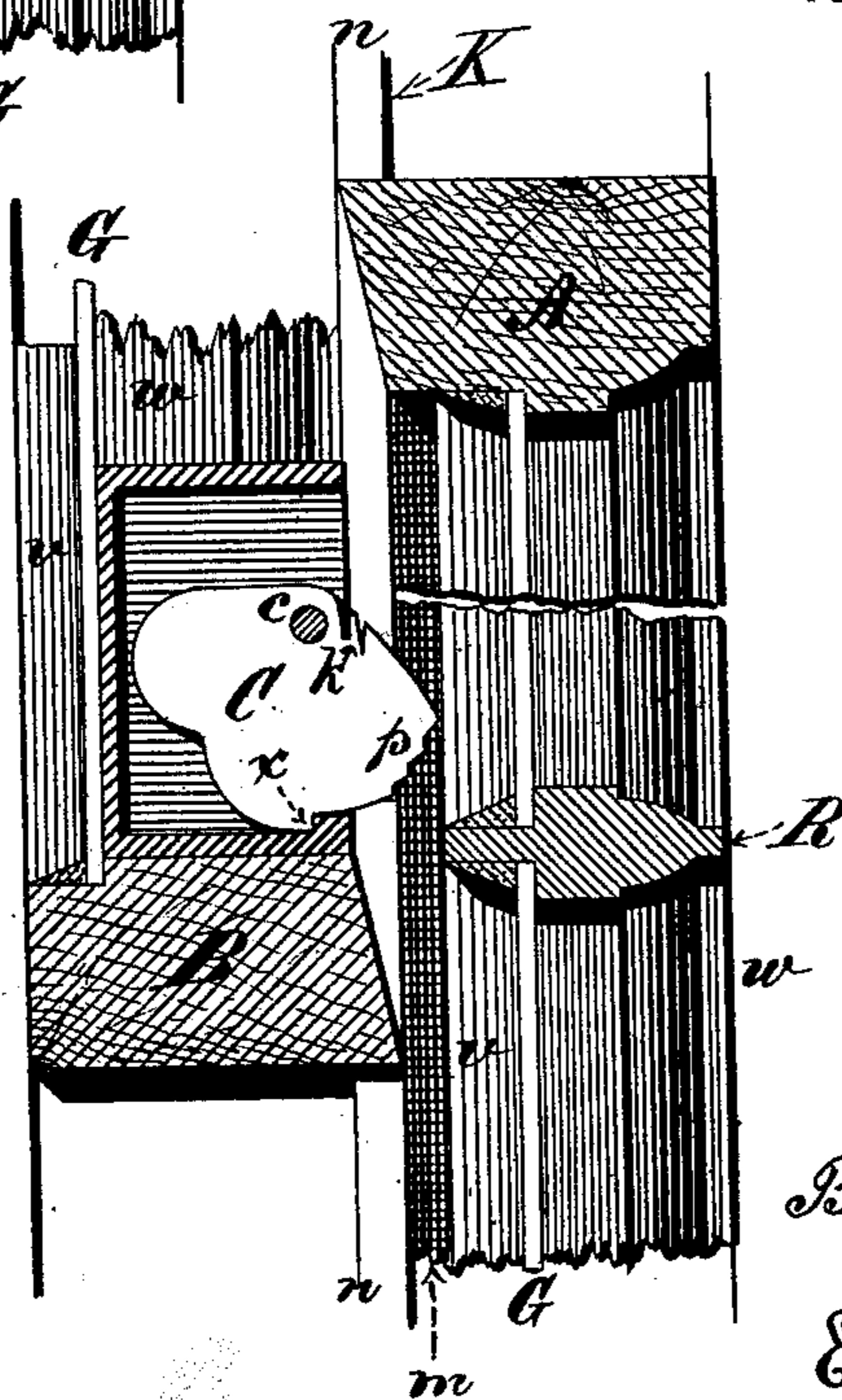


Figure 3.



Witnesses:

Geo. H. Miath
Geo. H. Evans

Inventor:

Benjamin Lander
By his attorney
E. N. Dickerson

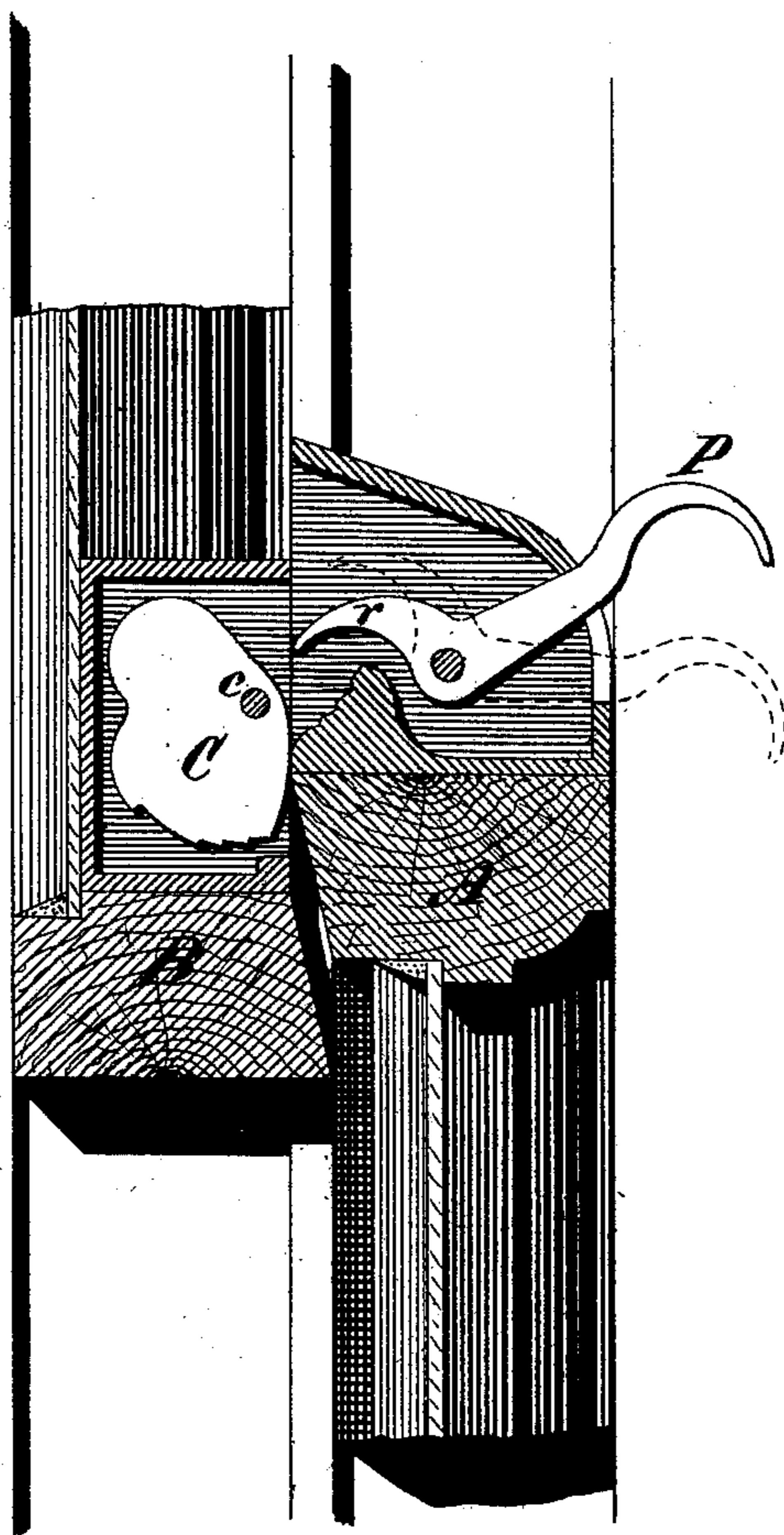
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Figure 4.



Witnesses:

Geo. W. Meath

S. F. Sullivan

Inventor:

Benjamin Lander

By his attorney

E. N. Dickerson Jr

UNITED STATES PATENT OFFICE.

BENJAMIN LANDER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN FASTENERS FOR THE MEETING-RAILS OF SASHES.

Specification forming part of Letters Patent No. **206,583**, dated July 30, 1878; application filed November 9, 1877.

To all whom it may concern:

Be it known that I, BENJAMIN LANDER, of the city of Brooklyn and State of New York, have invented a new and useful Improvement in Automatic Sash-Locks, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

The purpose of my invention is to form a sash-lock which will automatically lock together the two sashes of a window-frame when both are closed, which locking-cam is attached to one of the window-sashes, while a contrivance is attached to the other which will unlock and free the locking-cam attached to the other sash, and allow the window to be opened. By means of this contrivance, the difficulty commonly experienced in operating these locking-cams is avoided, for, whereas heretofore there has usually been a liability of pinching or injuring the fingers in throwing back the locking-cam at the time the window is raised, by means of this contrivance the hand does not come in contact with the locking-cam at all, but operates a tripping device attached to the moving sash; and my apparatus is constructed to be operated by gravity alone, without the necessity of any spring. This cam can be thrown back in various ways, as will be hereinafter shown.

In my drawing similar letters refer to similar parts in all the figures.

Figure 1 represents the sashes closed; Fig. 2, partially open; Fig. 3, still farther open, showing the window-bars more plainly; and Fig. 4, a general view, with the thumb-piece and tripping device connected together and forming one piece.

A and B represent the front or lower and rear or upper sash, sliding in the ordinary window-frame, and separated by the strip K in the usual way. G represents the glass set in the window-bars, which are vertically represented by *w* and *v*, horizontally by R. It is customary with windows that the glass be placed nearer the back than the front of the frame, and that the part of the bar *w* inside of the glass be broader than the part *v* outside of the glass, so that while the front edge of the bar or molding is flush with the edge of the window-frame, as is clearly shown in Fig. 3, the rear does not extend to the outside edge

of the window-frame, but is recessed, as it were, so that there is a certain amount of free space between the edge of the window-frame and the back edge of the window-bars, which I have represented by the letter *m*. It is plain that no locking contrivance attached to the front sash can project beyond the line *n* without coming in contact with the cross-bars of the upper sash; therefore any automatic device attached to the lower sash would necessarily strike against and injure the frame of the upper sash. I have therefore attached my automatic sash-lock to the upper or rear instead of the lower or forward one, whereby I obtain a space in which it can swing clear of the cross-bars of the lower sash, and thus avoiding the difficulty just mentioned.

C represents the swinging cam, pivoted at *c*, and so constructed that gravity tends to throw it forward into the position shown in Figs. 1 and 3, while it can be thrown back into the position shown in Fig. 2 by some unlocking contrivance. This locking-cam is situated within the protecting and inclosing case F. Attached to the front sash is the stationary piece O, with which the locking-cam C engages. Both are provided with corresponding notches and teeth *p*, whereby a more certain contact is obtained. Attached to the lower sash is a tripping device, which preferably consists of two pieces, H and D, pivoted at *h* and *d*.

The vibrating piece H is provided with a tooth or arm, *r*, which bears against the locking-cam C. It is obvious that if the vibrating piece H be thrown up, as shown by the dotted lines in Fig. 1, its action on the locking-cam will force the cam into the position shown in dotted lines in Fig. 1 or in Fig. 2. This vibrating piece H can be raised by the trigger D, pivoted at *d*, and provided with a thumb-piece, *t*. If the thumb-piece be depressed, the frame will likewise be depressed, and the cam C will be thrown back into the position shown in Fig. 2. By placing the hand beneath the upper bar of the frame A, with the thumb against the thumb-piece *t*, said thumb-piece is readily thrown into the position shown in Fig. 1 by dotted lines, when the lower sash can be raised, since the cam will be in the position shown in Fig. 2. After the frame of the lower sash has passed clear of the cam C it will

swing forward into the position shown in Fig. 3; but, owing to the existence of the recess *m*, it will not come in contact with the cross-bar *R* of the window-frame.

The locking-cam *C* is provided with the tooth or lug *x*, which comes in contact with the lower part of the frame or case *F*, which prevents its farther forward movement; but this is obviously unnecessary if the cam be properly balanced.

After the window-frames *A* and *B* have passed each other and the window is closed, gravity will tend to throw the cam forward into the position shown in Fig. 1, after it has been forced back by the edge of the window-frame into the position shown in Fig. 2. The stationary piece *O* might be provided with a guard extending down on the beveled surface of the lower sash, on which the forward point of the cam *C* could slide.

In case the window was not entirely closed, a tooth, *p*, of the cam *C* would still engage with some of the teeth of the stationary piece *O*. It is plain that the thumb-piece *t* might be attached directly to the vibrating piece *H*, as shown. The upward movement of the thumb-piece would then have the effect of first unlocking, then raising the sash *A*.

The principle of my invention is the use of an automatic cam operated by gravity, which locks the two window-frames firmly together on the closure of the sash, which cam is preferably attached to the upper sash, and which cam can be unlocked by a tripping device attached to the other sash, whereby it can be thrown clear of the rising lower sash.

The advantages of this arrangement are very obvious, for the sashes cannot, if once closed, be left unlocked, as is now the case. The ap-

paratus is simple, inexpensive, reliable, and durable, and accomplishes the whole result without an unnecessary movement, which is not the case with any other apparatus with which I am acquainted. The cam *C* might be notched at *k*, for the purpose of preventing the throwing down of the cam *C*, by means of a bent wire acting against the upper surface of the cam *C*, and inserted from the outside, since such wire or knife would catch in one of the notches, and bear against the side of the case *E* surrounding and supporting the vibrating piece *H*.

It is plain that the cam could be constructed in various ways, provided its center of gravity was so arranged as to throw it forward on a pivot. It might have only one bearing-point against the stationary piece *O*.

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

1. The combination of the swinging cam *C*, having one or more teeth or points, *p*, attached to one sash of the window, with the fixed surface *O*, having corresponding teeth or corrugations, and attached to the other sash of the window, substantially as described.

2. The combination of a swinging locking-cam attached to one sash of a window and a vibrating piece attached to the other sash of the window, whereby the cam can be forced back so as to clear the moving sash, substantially as described.

3. The combination of the locking-cam *C*, vibrating piece *H*, and trigger or tripping device *D*, substantially as described.

BENJAMIN LANDER.

Witnesses:

S. F. SULLIVAN,
T. A. HARRAB.