(No Model.) 2 Sheets—Sheet 1.

S. BENTON.

SASH HOLDER.

No. 348,103. Patented Aug. 24, 1886.

Fig. 2.

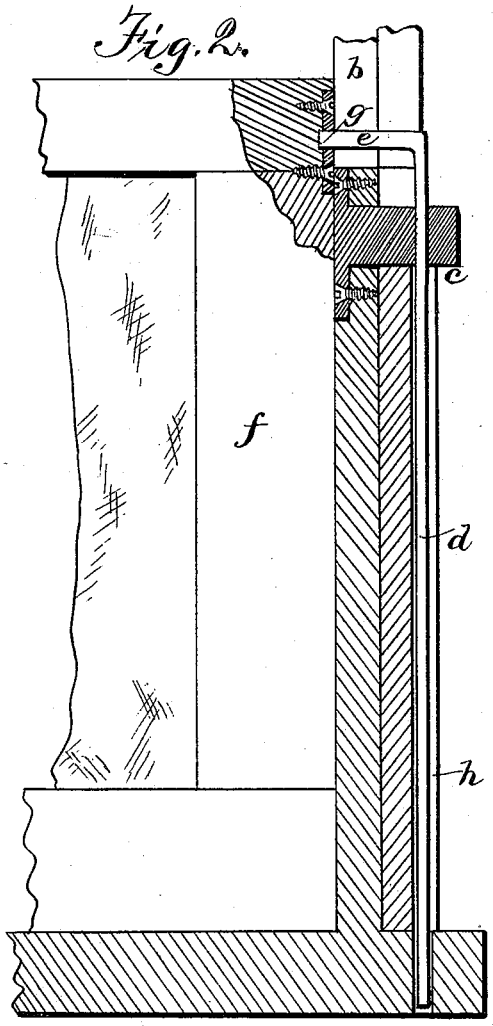


Fig. 1

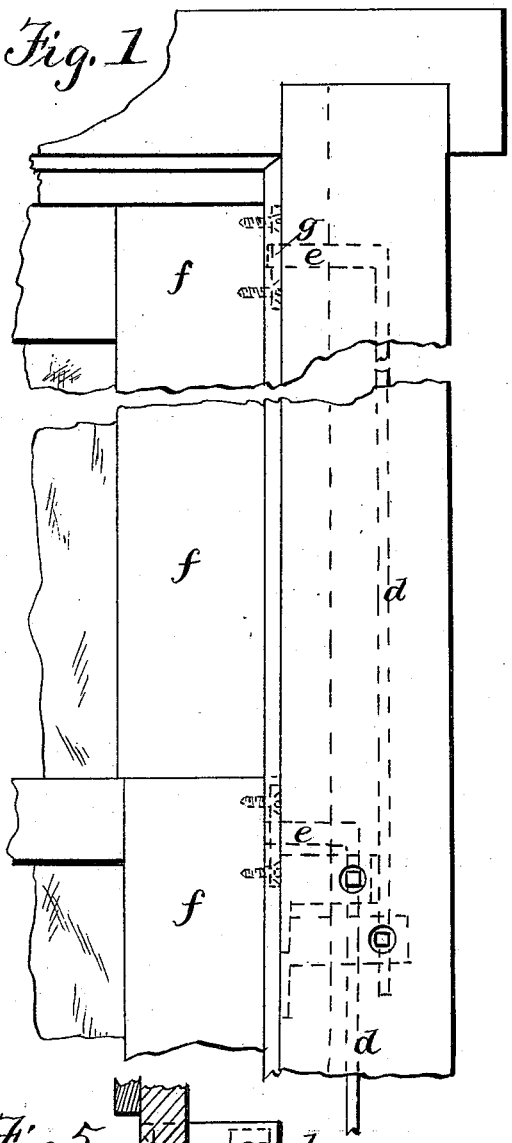


Fig. 4.

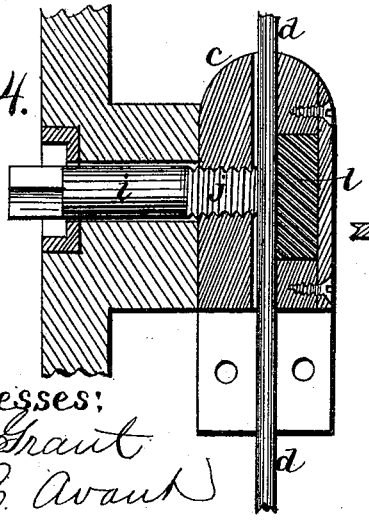
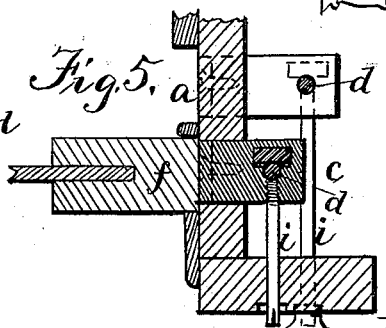


Fig. 5.



Witnesses:
R. E. Grant
H. R. Awald

Inventor:
Samuel Benton
By Johnson and Johnson
Attorneys.

(No Model.) 2 Sheets—Sheet 2.

S. BENTON.

SASH HOLDER.

No. 348,103. Patented Aug. 24, 1886.

Fig. 3.

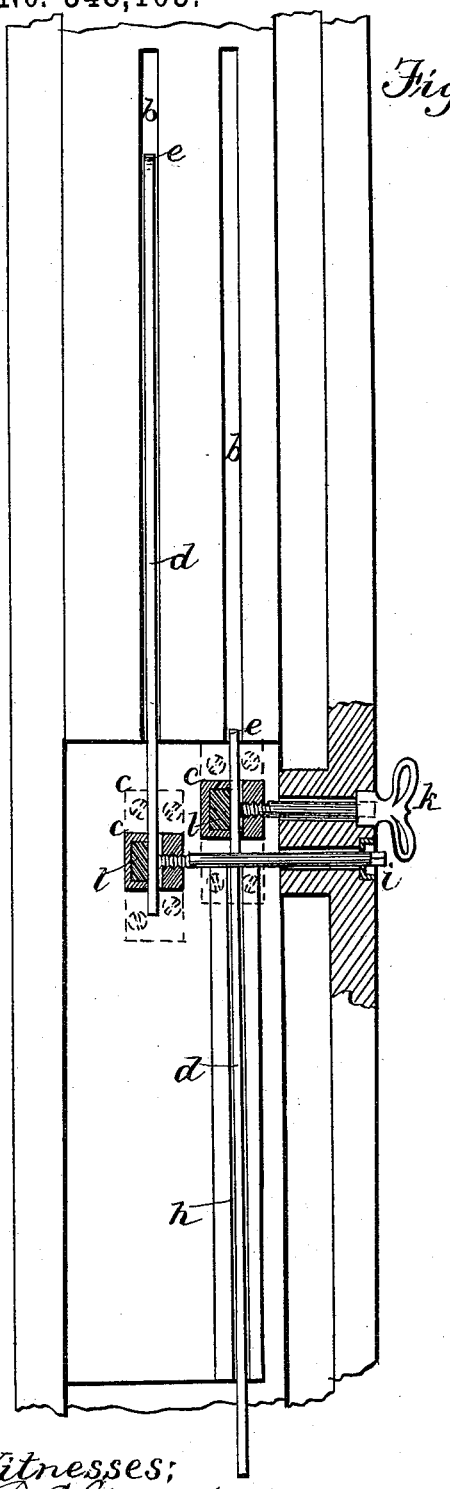
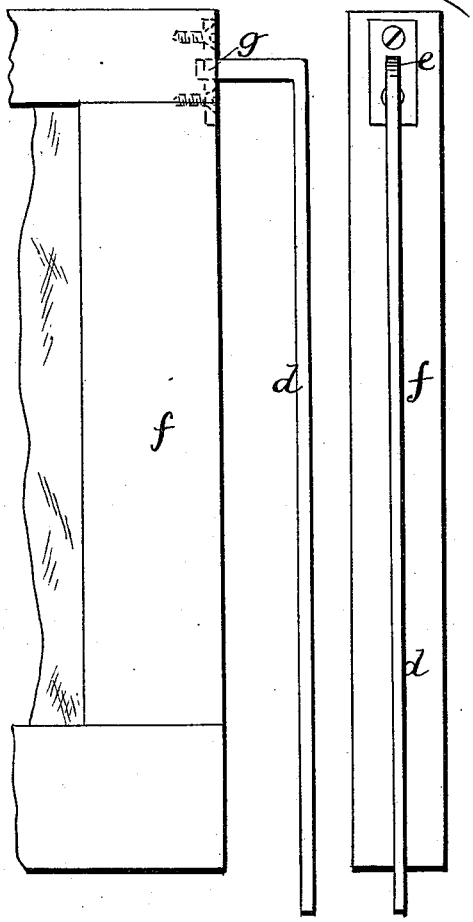


Fig. 7.



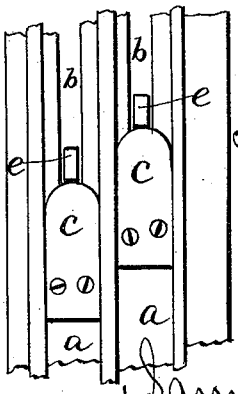


Fig. 6.

Witnesses;
R. C. Grant
H. R. Awalt

Inventor:
Samuel Benton
By Johnson and Johnson
Attorneys.

UNITED STATES PATENT OFFICE.

SAMUEL BENTON, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO WILLIAM H. DELANO, OF SAME PLACE.

SASH-HOLDER.

SPECIFICATION forming part of Letters Patent No. 348,103, dated August 24, 1886.

Application filed June 28, 1886. Serial No. 206,506. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL BENTON, a citizen of the United States, residing at Baltimore city, in the State of Maryland, have invented new and useful Improvements in Sash Carriers and Locks, of which the following is a specification.

My invention relates to improvements in devices for holding and locking window-sashes when open or closed.

My improvement embraces a construction in which a vertical slide is fitted in suitable guides in the casing and engages at one end, which passes through a vertical slot in the sashway, with the sash, so that both the slide and sash must move together; and I provide means for locking the slide to the casing, and thereby lock the sash when open or when closed. Both sashes have these provisions, and the connection of the sash with the slide is such as to permit the removal of the sash from the casing without disturbing the slide or its locking provision. The slide is an iron rod having its upper end bent at right angles and passing through a vertical slot in the sashway so as to engage with a mortise in the edge of the sash-bar near its upper end, while the guides are metal blocks fixed within the casing near the top of the lower sash when closed. The slide-rods are of a length about equal to the height of the sash, and therefore retain their connection with the fixed guides when the sashes are fully open at the top and at the bottom. A rubber cushion is combined with each slide-rod, so as to exert a binding force upon it to prevent the accidental falling of the sash when unlocked. I prefer to place these rubber cushions in the guide-blocks of the casing, so that the slide-rod will be locked against said cushion and compress it so that it will exert an expansive force upon the slide-rod and bind it in the guide-block when the sash is unlocked. I prefer to use a screw-key inserted into an opening in the inside face of the casing and screwing into the guide-block against the slide-rod. A fixed or removable thumb-screw key may be so used; or any suitable device may be used for locking the slide-rod to the casing, and thus hold the sash open or lock it when closed.

The object of my improvement is to provide against access to the fastening device from the outside of the window, and to provide a secure fastening and holder for the sash.

Referring to the accompanying drawings, Figure 1 represents in elevation a portion of the casing and of the upper and lower sash, showing the slide-rods and fixed guide-blocks in the casing in dotted lines; Fig. 2, a vertical sectional view of the lower sash, its casing, slide-rod, and guide-block in the casing. Fig. 3 represents in elevation an inner side view of the casing, showing the sash slide-rods in the casing-slots and the locking device for each rod. Fig. 4 shows in vertical section an enlarged view of the locking device, and Fig. 5 shows the locking device in horizontal section. Fig. 6 shows a part of the sashways for the sashes and the guide-blocks for the slide-rods, the angle ends of which project through the slots in the sashways; and Fig. 7 shows the sash-bar with its guide-rod.

The window-casing in each sashway *a* has a slot, *b*, extending from the top of the casing to below the meeting-rails of the sash when closed. Inside of the casing is fixed a metal guide-block, *c*, being secured, for convenience, in the sashway, as shown in Fig. 6, so as to project through the casing, as shown in Figs. 2 and 5. Each sash has a vertical guide-rod, *d*, which has a right-angle arm, *e*, at its upper end, which passes through the case-slot *b* and connects with the vertical bar *f* of the sash, near its upper end, by entering a mortise, *g*, in the edge of said bar, so that the connection allows of the removal of the sash when desired, as the rod only has a socket-connection therewith, as shown in Fig. 2. This rod is of a length a little greater than the height of the sash, and passes through a vertical opening in the fixed guide-block, and lies in a vertical groove, *h*, on the inner side of the casing, and, being connected with the sash, must move with it in the casing-slot *b*. A binding-screw is inserted in an opening in the casing, and is screwed into a threaded opening in the guide-block at right angles to the guide-rod, and against it, so as to bind it hard in the guide-block, and thus hold and lock the sash, whether open or closed. Each sash carries a guide-rod,

and each guide-rod has a binding-screw, which may be turned by a thumb-piece integral therewith, or by a socket-key, *k*, as shown in Fig. 3. The fixed case guide-blocks are so disposed one above the other as to allow the binding-screw for the upper sash to pass the guide-rod of the lower sash, as shown in Figs. 1 and 3.

A rubber binding-cushion, *l*, is provided for each slide guide-rod, to prevent the sudden descent of the sash when open and unlocked. It may be placed in a socket in the casing; but I prefer to seat it in the guide-block so as to constantly exert a binding force upon the slide-rod, as shown in Figs. 3, 4, and 5. When the rod is locked, it is bound hard upon the guide-block and compresses the cushion, and when the slide-rod is unlocked it has sufficient play in its guide-opening to be bound therein by the expansive force of the cushion. In this construction the locking-screw is on one side of the rod and the rubber cushion is on the other side; but the cushion is only intended to bind the rod to prevent the sudden falling of the sash when open, and the bite of the screw is released in closing the sash. My improvement is, however, not limited to the use of the binding-cushions, as the sash is held by hand in raising and lowering it.

When a socket-key is used, it may be kept on the frame and the square-ended screw-stem permanently connected with the screw-threaded guide; or a thumb-screw key may be used and made permanent or removable.

I have stated that the connection of the sash with the case-slide is such as to permit the removal of the sash from the casing without disturbing the slide or its locking device, and it will be understood that this is effected by removing one or both the beads on that side of the window-casing opposite to that which contains the slide-rod, when the sash may be pulled out at that side, drawing its opposite vertical bar off the right-angle end of the slide-rod, because the latter merely has a socket-connection with the sash, and the latter is thereby made removable from its slide-rod.

I claim—

1. The combination of a window-sash with a slide-rod fitted vertically in the casing and connected through a vertical slot in the sashway of the latter with the sash, and moving with it, a fixed guide in the casing, and a locking device for binding the sash-rod to the fixed guide, substantially as described, for the purpose specified.

2. The combination of a window-sash with a guide-rod arranged in the casing, having a right angle arm connected with the sash through a vertical slot in the sashway, a metal guide-block for said rod, fixed in the casing, having a screw-threaded opening, and a screw-key screwed into said guide-block through the casing; whereby to hold and lock the sash, substantially as herein set forth.

3. The combination of a window sash with a guide-rod fitted in the casing connected to and moving with the sash, a guide-block for said rod, fixed in the casing, a locking device, and a fixed rubber binding-cushion for said rod, substantially as described, for the purpose specified.

4. The combination of a window-sash with the guide-rod connected to and moving with it, a fixed guide-block, a screw locking device, and a rubber binding-cushion, both acting in the fixed guide upon said rod, substantially as described.

5. The casing of a window frame, having vertical slots in the sashways, a guide-rod for each sash, having a top angle-arm, and a fixed guide-block for each guide-rod, in combination with a locking device fixed in the casing, operated by a thumb-key against said sash-rod, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

SAMUEL BENTON.

Witnesses:
A. E. H. JOHNSON,
J. W. HAMILTON JOHNSON.