(Model.)

E. REED.

SASH HOLDER.

No. 405,180. Patented June 11, 1889.

Fig. I.

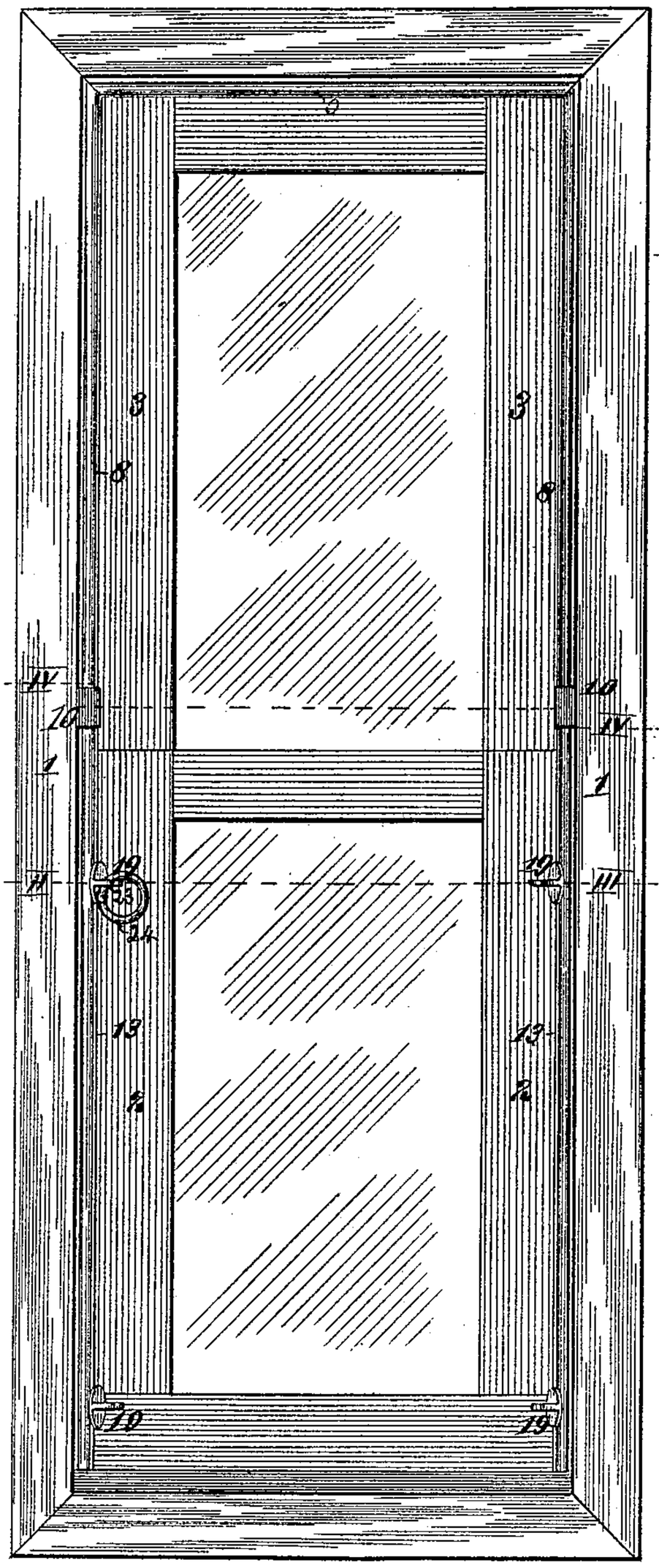


Fig. II.

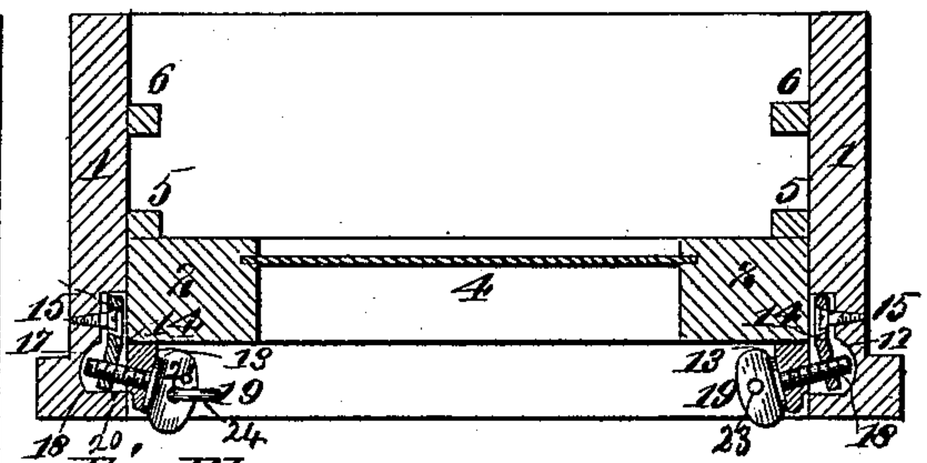


Fig. III.

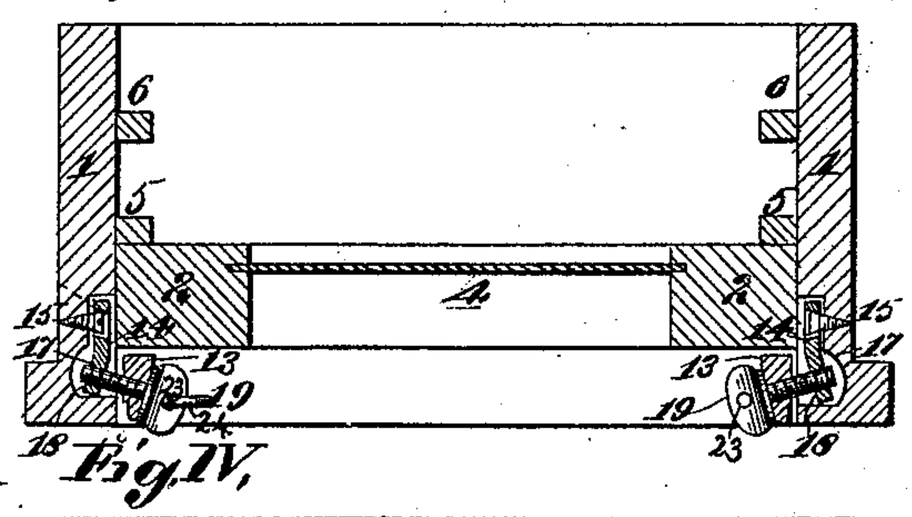


Fig. IV.

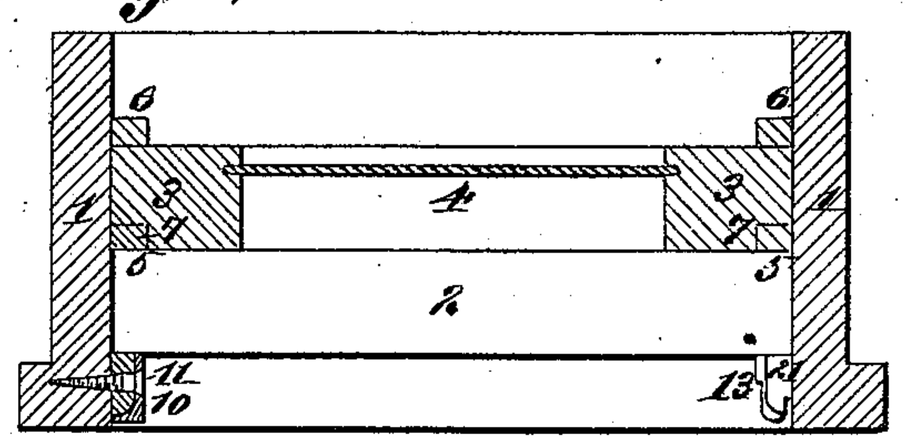


Fig. V.

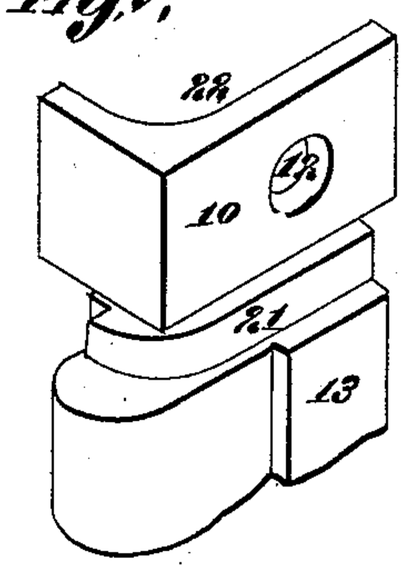


Fig. VI.

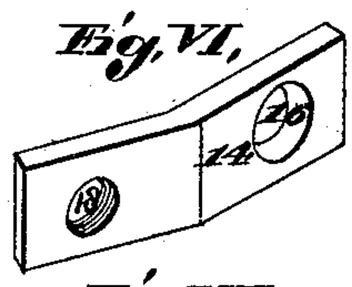
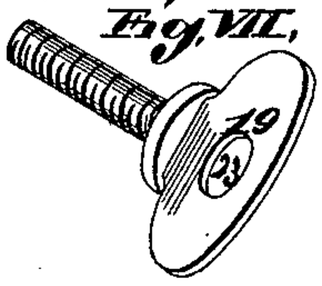


Fig. VII.



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UNITED STATES PATENT OFFICE.

EDEN REED, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO ISIDORE SIMON, OF SAME PLACE.

SASH-HOLDER.

SPECIFICATION forming part of Letters Patent No. 405,180, dated June 11, 1889.

Application filed March 7, 1889. Serial No. 302,285. (Model.)

To all whom it may concern:

Be it known that I, EDEN REED, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Sectional Adjustable Sash-Stops, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a sectional adjustable stop for the lower sash of windows, which, besides being adjustable to tighten the sash, and thus also an anti-rattler, is also removable to allow the free withdrawal of the sash; and the invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is an elevation of the window frame and sash with my adjustable stops attached. Fig. II is a horizontal section taken on line II III, Fig. I, and shows the stops in their tight operative position. Fig. III is a like view and shows the stops in their loose released position. Fig. IV is a horizontal section taken on line IV IV, Fig. I, and shows the bracket-boxings, in which the upper ends of the adjustable lower stops and the lower ends of the upper stationary stops are housed. Fig. V is an enlarged perspective view of the said bracket-boxing, with a detail of the upper end of the adjustable stop that is to be housed therein. Fig. VI is an enlarged perspective view of one of the pivoted swinging attachment-plates in which the clamping thumb-screw engages that automatically adjusts the stop, and Fig. VII is an enlarged perspective view of said clamping thumb-screw.

Referring to the drawings, 1 represents the window-frame, in which the lower sash 2 and upper sash 3 are inclosed.

4 is the glass inclosed in said sash, 5 the parting-beads between the two sashes, and 6 the outer stop-beads, between which and the parting-beads the upper sash works. Vertical grooves 7 in the upper sash provide seats for the parting-beads, so that said beads do not project in the way of the adjacent sash. I have shown and described the vertical grooves 7, in which the parting-strips are seated, in the upper sash; but said grooves may, when preferred, be countersunk in the lower sash, and will thus work equally well.

8 represents the permanently-attached upper section side stop-beads, and 9 the top bead that connects them.

10 represents metal bracket-boxings, which are secured by screws 11, that pass through the screw-holes 12 and engage in the inside of the frame, and in which boxings are housed the lower ends of the permanently-attached upper side sections of the stop-beads and the upper ends of the lower sections 13 of the stop-beads, which lower sections have a novel adjustable attachment to the side pieces of the frame, which I will now describe.

14 represents pivotally attached and swinging metal angle-plates, which are loosely secured by the screws 15, which screws are seated and have loose bearings in the large screw-holes 16 near the pivotally-attached end of said plate. The large size of said holes allows the free pivotal outward and inward movement of the angle-plates within the recessed countersunk boxings 17 within the side pieces of the window-frame, which boxings are individually located near the upper and lower end, respectively, of the lower sash 2. The reverse or free ends of the angle-plates are provided with threaded screw-holes 18, in which the screw-threaded ends of the thumb-screws 19 engage. The said thumb-screws have perforate loose bearings 20 in the adjustable sections 13 of the sash stop-beads, the said loose bearings registering with the pivotally-secured angle-plates 14. 23 are perforations in the heads of the thumb-screws, and 24 are rings, or their equivalents, that work in said perforations.

Now it will be seen that when the adjustable sections of the stops are set up in their approximate position to the lower sash the projecting tenon 21 at the top of said stops fits loosely in the recessed chamber 22 of the metal boxing 10, within which chamber the tenon freely slides as the stops are respectively adjusted either to their tight position, as shown in Fig. II, or to their loose position, as shown in Fig. III.

In operation, the thumb-screws 19 are inserted through the loose bearings 20 in the ad-

justable sash-stops, and their screw-threaded ends are made to engage in the threaded screw-holes 18 at the free swinging ends of the pivoted angle-plates. Now, when first attached, the stop-bead is in its loose position, as shown in Fig. III, in which position it exerts no friction against the sash, which can be moved freely, but little, if any more, power being required in raising it than sufficient to overcome its gravity; but it is not always desirable to have the sash that loose, for in cold weather the drafts that creep in through the loose joints are objectionable, and then again sometimes the winds blow and the window rattles. Then, by a few turns of the thumb-screws 19, the stops are tightened against the side pieces of the window-frame, the pivotal angle-plates 14 are outwardly withdrawn from the rear side of their countersunk boxing, the plates turning on their pivot-screws 15, and the ends, with which the thumb-screws 19 connect under the influence of said screws, are in consequence made to describe a sufficient arc of a circle to bring the inner edges of the adjustable stops in contact with the sash, so that the draft is stopped and the sash is held from rattling.

If desired, the junction cross-pieces of the two sashes may be constructed so as to closely connect them, as they or the stiles of the sash do to the parting-bead, in which case, when the stop-beads are adjusted to tighten the two sashes together at their junction, they thereby prevent a draft from entering between said sashes, and at the same time not only hold the lower sash from rattling, but the upper one also. Now it will also be seen that in the operation of adjusting the stops they are carried not in severe frictional contact with the window-frame, but on the angle-plates 14, which freely move on their pivots in the arc of a circle. The exposed location of window-sashes makes them liable to alternating swelling and contraction with every change of weather, so that no permanent stop, or even weather-strip, can be so placed that it will now either tighten the sash, so that it is difficult to move in damp weather, or, if sufficient latitude is given to avoid that contingency, will in dry weather allow the entrance of drafts and the rattling of the sash. The invention is intended to avoid that difficulty, and also when, in course of years, the timber of the sash is subject to shrinkage the adjustable stops of this invention (by a few turns of the thumb-screws) constitute a compensatory remedy therefor.

If it is desired to not only tighten the sash, but also lock the same in any position, down or elevated, by turning the thumb-screw still farther a complete friction-lock is effected. Again, it will be seen that when a broken pane of glass is to be replaced or the window to be cleaned, the adjustable stop-beads, which, as described, are readily removable as well as adjustable when removed, allow the withdrawal of the lower sash for renewing or cleaning the glass therein, and when said lower sash is removed out of the way the upper sash is almost as conveniently approached from either beneath or above to operate on without removal.

I have shown rings seated in the perforations in the heads of the thumb-screws 19 and hanging pendent therefrom, so as to provide means by which said screws may be more conveniently turned when extra force is required to effect a rigid lock of the sash; but I do not confine myself to the use of said rings, for any other suitable device that can be made to enter the perforations of said screw-heads and operate on the screws in turning may be used, or said thumb-screws, when a light tension alone is needed, may be turned without the use of the rings or any other additional aid.

I claim as my invention--

1. In a sash-fastener, the combination of the upper stationary stop-bead sections, the lower adjustable stop-bead sections, and the metal boxing that houses the junction ends of said sections, substantially as described, and for the purpose set forth.

2. In a sash-fastener, the combination of the stationary sections of the stop-beads, the adjustable sections of the stop-beads, the pivoted angle-plates 14, the screws 15, by which said plates are secured to the side pieces of the frame in countersunk boxings provided in said frame, and the thumb-screws 19, that pass through perforations in the adjustable sections of the stops and engage in the threaded screw-holes 18 in the pivoted angle-plates 14, to tighten the stop to or relax it from the window-sash, substantially as described, and for the purpose set forth.

3. In a sash-fastener, the combination of the stationary sections of the stop-beads, the adjustable sections of the stop-beads, the tenons 21 on top of said adjustable sections, the metal boxings 10, provided with a recessed chamber 22, that house the lower ends of said stationary sections of the stops, and also house the tenons that surmount the adjustable sections of said stops, the angle-plates 14, the pivot-screws that secure the attached ends of said plates in the countersunk boxings 17, that are provided in the sides of the window-frame, and the thumb-screws 19, that pass through perforations in said stops and engage in the threaded screw-holes 18 in the angle-plates to respectively tighten and loosen the stops to and from the sash, the heads of said thumb-screws being provided with perforations in which rings or their equivalents may be seated, by which to turn the screws, substantially as described, and for the purpose set forth.

EDEN REED.

In presence of—
BENJN. A. KNIGHT,
SAML. KNIGHT.