No. 641,745. Patented Jan. 23, 1900.

R. G. WINTER.

COMBINED STAY AND FASTENER.

(Application filed Feb. 17, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

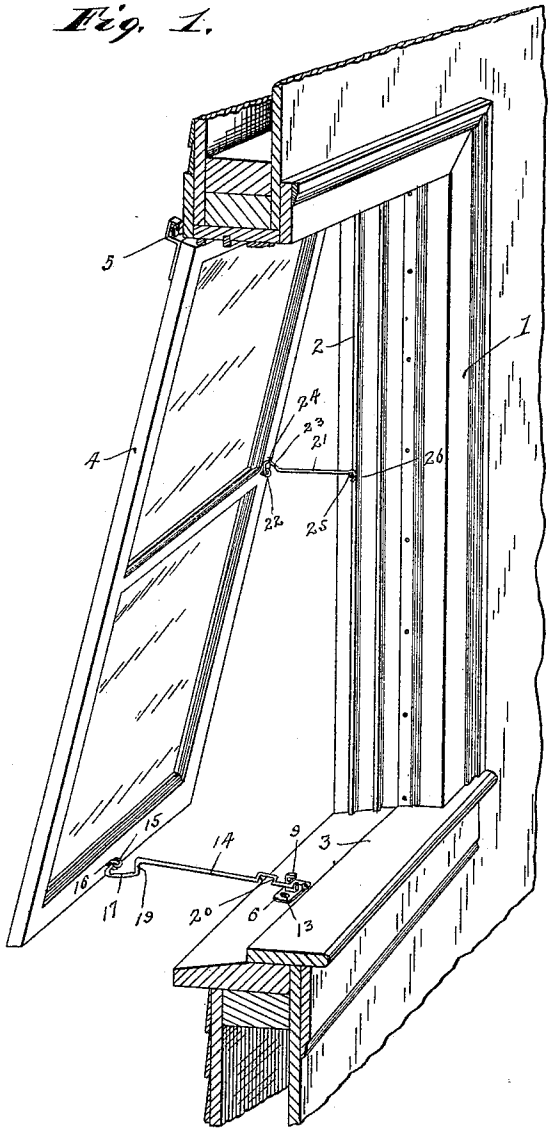
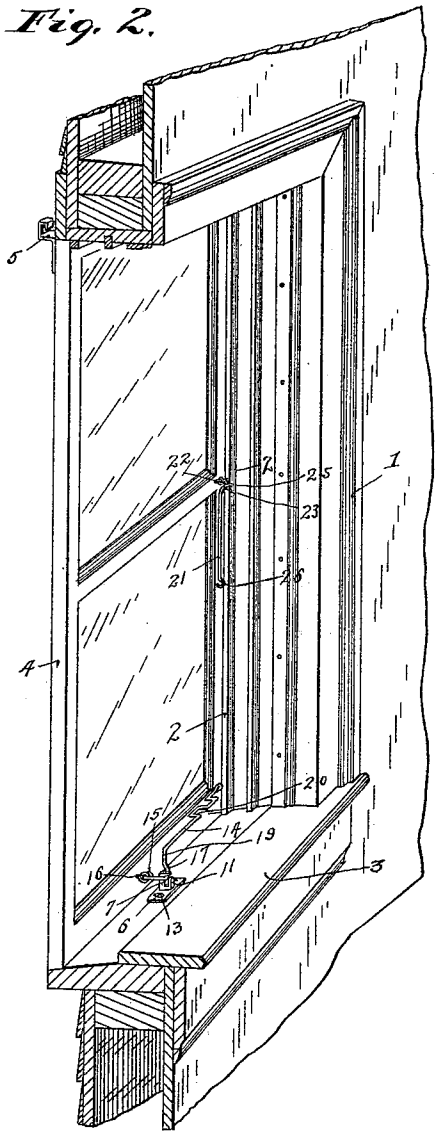


Fig. 2.



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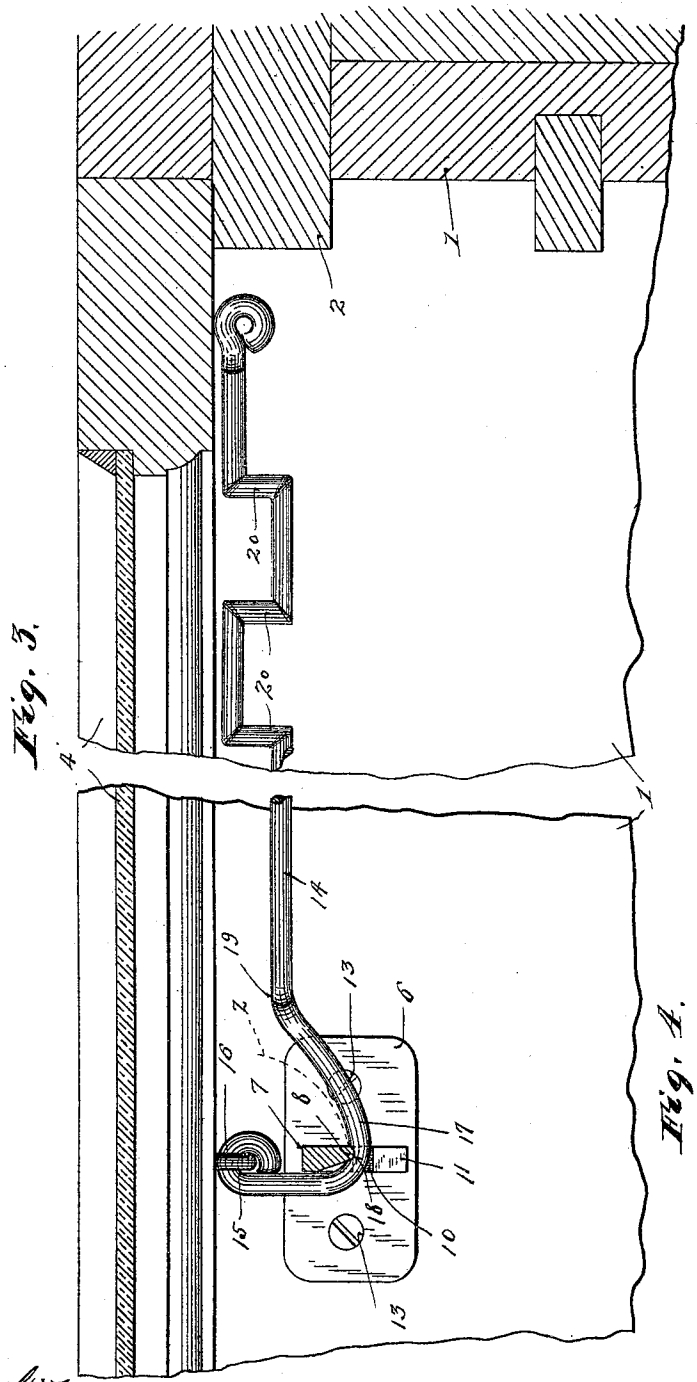


Fig. 3.

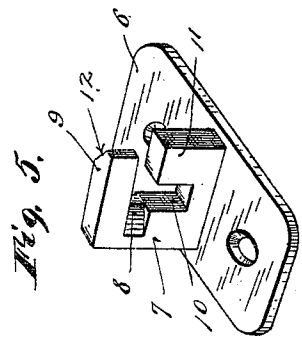


Fig. 5.

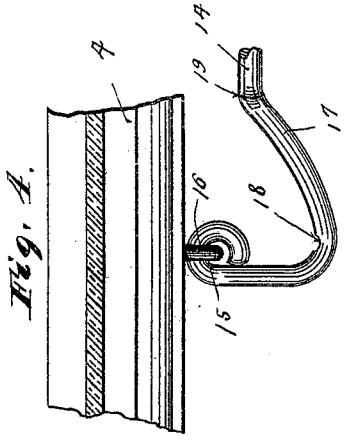


Fig. 4.

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UNITED STATES PATENT OFFICE.

RUDOLPH G. WINTER, OF MINNEAPOLIS, MINNESOTA.

COMBINED STAY AND FASTENER.

SPECIFICATION forming part of Letters Patent No. 641,745, dated January 23, 1900.

Application filed February 17, 1899. Serial No. 705,762. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH G. WINTER, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in a Combination Sash Stay and Fastener; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide a combined window stay and fastener of simple and efficient construction, and is in the nature of an improvement on the similar device disclosed and claimed in my prior application, Serial No. 689,731, filed August 29, 1898, entitled "Combination sash stay and fastener."

The device is illustrated in the accompanying drawings; and it consists of the novel devices and combinations of devices hereinafter described, and defined in the claim.

In the drawings, like characters indicating like parts throughout the several views, Figure 1 is a perspective view with some parts shown in section and others broken away, illustrating my present invention and showing the same applied to hold a storm-sash in an open position. Fig. 2 is a similar view to Fig. 1, but illustrates the manner of securing the storm-sash in its closed position. Fig. 3 is an enlarged view in horizontal section and with some parts broken away, illustrating the action of the preferred form of my improved device when used to lock the storm-sash in its closed position. Fig. 4 is a detail view, partly in horizontal section and partly in plan, showing a portion of the sash and a portion of the fastener; and Fig. 5 is a perspective view of the so-called "cam-lug" which coöperates with the cam rod or lever.

In the drawings, 1 indicates the window-frame, provided with the ordinary parts, of which for the purposes of this case it is desirable to indicate the outer window-stops or stop-strips 2 and window-sill 3. The ordinary upper and lower window-sashes are not shown.

4 indicates the storm-sash, which, as shown, is hinged at its upper end to the upper and outer portions of the window-frame 1 by means of hinges 5. As shown, the hinges 5 are of the form illustrated and claimed in my Patent No. 610,010, of date August 30, 1898, entitled "Separable suspension-hinge;" but this hinge may so far as my present invention is concerned be of any suitable form.

To the bottom of the frame 1, outward of the sill 3, a plate or base-piece 6 is rigidly secured, and this base-plate is provided with a cam lug or projection 7, which as preferably constructed is provided with a rounded cam-surface 8, above which a guide-finger 9 projects inward. Spaced inward from the body 7 of the cam-lug, so as to form a slot 10, is a stop-lug 11, which is either cast integrally with or rigidly secured with respect to the parts 6 and 7. The upper surface of the stop-lug 11 terminates a considerable distance below the guide-finger 9 and preferably in line with the lower portion of the cam-surface 8 of said cam-lug 7. As shown, one side of the projecting end of the finger portion 9 is beveled at 12 for a purpose which will hereinafter appear. As shown, the base-plate 6 is secured to the frame 1 by screws 13. In this preferred construction the rod or bar which coöperates with the cam-lug just described to constitute the combined stay and fastener is formed from a round rod or large and heavy wire section, which by bending is given the proper form. This rod, which I may designate as the "stay-rod," is indicated as an entirety by the numeral 14, and in this preferred construction it is formed as follows: At its outer end it is provided with an eye 15, by means of which and a screw-eye 16 it is pivotally connected or hinged to the lower and central portion of the storm-sash 4. Just inward from this eye 15 the rod 14 is bent or bulged outward or laterally to form a cam-section 17. The curve of this cam-section 17 deviates from a true arc struck from the eye 15 approximately as indicated by the dotted line (marked *z*) on Fig. 3. At the innermost portion of the cam-section 17 is a notch or depression 18, which is adapted for engagement with the cam-surface 8 of the cam-lug 7, as will be hereinafter described. At the outermost portion of the cam-section 17 the rod 14 is offset vertically, as shown at 19, to adapt it to clear the sill 3 when the device is being used as a fastener. At its free end the said rod 14 is provided with several offset sections,

which afford a plurality of transversely-extended portions 20, adapted for engagements with a notch or seat 10 between the lugs 7 and 11 to variably secure the sash in open positions.

In the illustration given I have shown a supplemental catch or fastener secured to one side of the window frame and sash. This device is very similar to the device first described, except that no provision has been made for variably securing the sash open. Of the parts of this device, 21 indicates the rod which is hinged to the central portion of one side of the sash, as shown at 22, and is provided with a cam-section 23, having the lock-notch 24, and 25 indicates a pin or projection on the side of the window-frame, which coöperates with the cam-section 23 and notch 24. As shown, the rod 21 is provided with a hook-like portion 26 at its free end, which when the sash is swung open engages the pin 25 and acts as a stop. This latter device, which is shown as secured to one side of the window, would not be used in most cases; but in some cases it is desirable in order to give additional security, and it is very desirable if the sash happens to be warped or bowed outward at its central portion.

The use of the device first described, which device is located at the lower portions of the window frame and sash, will now be considered. The sash may be secured open, as illustrated in Fig. 1, by engaging one of the transverse or offset portions 20 with the notch 10, as previously noted.

To secure the sash in its closed position, as illustrated in Fig. 2, the outer portion of the cam-section 17 is first rested upon the upper portion of the lug 11, which serves as a guide, and then the rod 14 is swung toward the right, so as to bring the cam-section 17 into engagement with the cam-surface 8 of the lug 7, and by this camming action between said parts 17 and 8 the sash is drawn tightly closed. When the lock-notch or bulge 18 reaches the cam portion 8 of the lug 7, these two parts will be interlocked and the rod 14 will be held against accidental movement. Thus the sash is securely fastened in its closed position. A similar operation of the rod 21 23, if the same be employed, will further secure the sash at its central portion. The beveled surface 12 of the guard or guide finger 9 prevents the vertically-offset portion 19 of the rod 14 from catching said finger when said rod is swung toward the left to release the sash.

The device above described may be very easily operated, it is efficient for the purposes had in view, and it is of extremely small cost. The lug device on the window-frame may be cast to the proper form, and the combined stay and fastener, which is secured to the sash, may be very easily formed from a straight rod or section of heavy wire.

It will of course be understood that the device above described is capable of modification as to the details of construction and disposition of the parts.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

The combination with a sash or similar device and its relatively-fixed frame or support, of a combined stay and fastener, comprising the cam lug or projection on said frame, provided with the cam-surface 8 and seat or depression 10, and the rod 14 hinged to said sash and provided with the laterally-curved cam-section 17 terminating in the lock-notch or depression 18, and provided at its free end with one or more laterally-offset sections 20, the said parts 17 and 18 coöperating with said cam-surface 8, and said offset portion or portions 20 coöperating with said seat 10, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

RUDOLPH G. WINTER.

Witnesses:

M. M. McGRORY,

F. D. MERCHANT.