No. 617,211. Patented Jan. 3, 1899.

H. E. WILLER.

HANGER FOR STORM SASHES.

(Application filed Apr. 18, 1898.)

(No Model.)

Fig. 1.

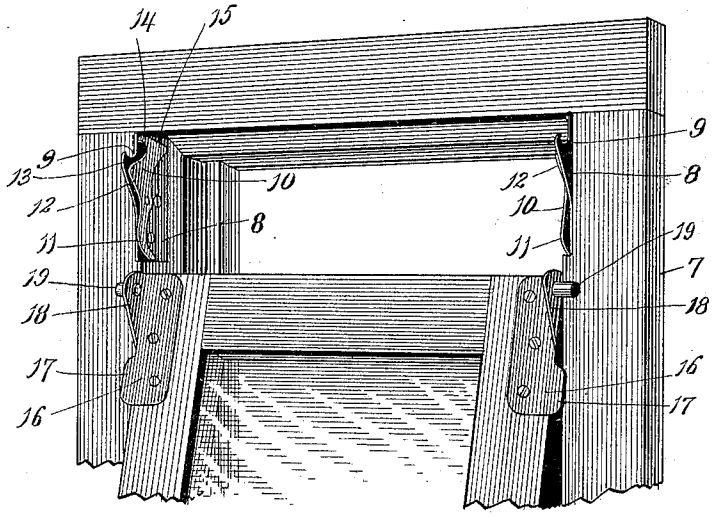


Fig. 2.

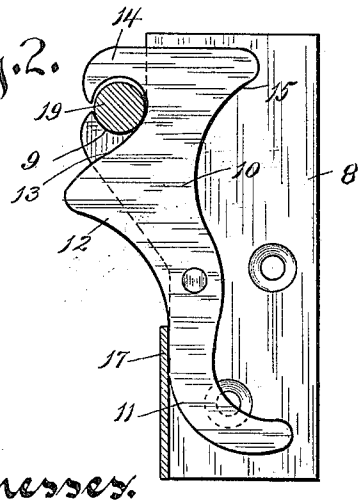
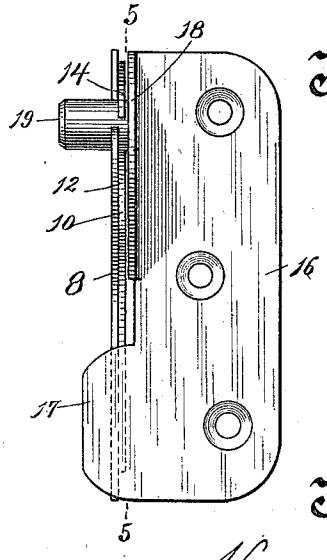


Fig. 3.



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HANGER FOR STORM-SASHES.

SPECIFICATION forming part of Letters Patent No. 617,211, dated January 3, 1899.

Application filed April 18, 1898. Serial No. 678,041. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. WILLER, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Hangers for Storm and Screen Sashes, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in hangers for storm and screen sashes.

The objects of the invention are to provide an absolutely self-locking device, to provide means for preventing the sash from being blown off by the wind, to provide for perfect ventilation and easy cleaning of the windows, and to provide for the sashes being as readily adjusted to place from the inside as from the outside, thereby obviating the necessity of using any ladders and doing any work at all from the outside.

With the above primary and other incidental objects in view the invention consists of the devices and parts, or their equivalents, as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a perspective view of a fragment of a window-casing and a fragment of the storm-sash, showing the latter in the act of being adjusted to position. Fig. 2 is a section on the line 5 5 of Fig. 3, and Fig. 3 is a front view of Fig. 2.

Referring to the drawings, the numeral 7 indicates an ordinary window frame or casing. Secured to the upper corners of the window and fitting in recesses therefor are supporting-brackets 8 8. The outer edges of these brackets project outwardly beyond the outer face of the window-frame, and these outwardly-projecting edges are formed at their upper ends with recesses 9 9, which form the bearings for the journals of the storm or screen sash. Pivoted at medial points of these brackets 8 are locking-arms 10 10. The lower portion of each of these arms below the pivot is curved inwardly, as indicated by the numeral 11, while above the pivot each is formed with an upwardly and an outwardly inclined edge 12, preferably on a slight inward curve. From the outermost end of this edge 12 the edge of the arm is slanted inwardly, as indicated at 13, and then curved in the arc of a circle to form a hook-like portion 14. The upper end of each arm is provided with an inwardly-projecting portion 15. This inwardly-projecting portion 15 throws an excess of weight on the inner side of the pivotal point of the arm, and the outer projection formed by the edges 12 and 13 provide an excess of weight on the outer side of the pivotal point of each arm. By the provision of these inner and outer overbalancing weighted portions each arm when its upper end is turned inwardly will retain that position until the lower end of the arm is acted upon, and, vice versa, when the arms are turned on their pivots so that the upper ends are thrown outwardly said arms will retain such position until again acted upon so as to be turned on their pivots in the opposite direction.

To the upper corners of the storm or screen sash are secured hinge-plates 16 16. The outer edges of these hinge-plates at their lower ends are provided with laterally-extending projections 17 17. The upper ends of the outer edges of the hinge-plates are turned outwardly to form the outwardly-projecting flanges 18 18. The outer faces of these flanges are formed or provided with journals or pintles 19 19.

In the operation of my invention the lower portion of the storm or screen sash is supported and held out at an angle, with the journals resting against the outer sides of the window-frame, as clearly shown in Fig. 1. The sash is supported in this position by the hands of a person on the inside of the building. The sash is then slid upwardly, and if the pivoted arms are in such position that their lower ends 11 are inward, so as not to be acted upon by the journals 19, said journals will first contact with the surfaces 12. This will have the effect of turning the arms so that their upper ends are thrown inwardly and their lower ends outwardly. With the continued upward sliding of the sash the journals pass into the recesses 9, and are thereby supported by the brackets 8. The sash is now permitted to swing inwardly, and this will cause the side projections 17 to contact with the edges 11 of the arms and again turn said arms on their pivots, so as to throw the upper ends of the arm outwardly and cause the hook formations 14 to engage over the journals 19, and thereby automatically lock

the sash in place against being detached from the outside.

It will be noticed that the above description presupposes that the arms 10 were turned on their pivots so that the lower portions 11 thereof were inward far enough to prevent contact of the journals 19 therewith. It will be understood, however, that the successful attachment of the sash is as readily effected when the arms are turned so that the lower portions thereof are outward. In this case on the upsliding of the sash the journals will first contact with the edges 11 of the arms and turn said arms on their pivots, so as to throw the upper ends of the arms inwardly in position to permit the journals to engage the edges 12, when of course the locking will be effected in precisely the manner explained.

In detaching the sash all that is necessary to be done is to turn each arm on its pivot by pressing on the lower end of the arm with a screw-driver, stick of wood or nail, or with the finger. This will of course turn the pivoted arm so as to throw its upper end inward, thus leaving the journal free to be removed.

From the above description it is thought that the construction, operation, and advantage of my invention will be readily understood. It will be seen that with my improved construction the sash can be fitted and hung to place entirely from the inside, thus obviating the necessity of using ladders, which, as is well known, is a great disadvantage in most forms of existing storm and screen sashes. In my form also the sashes are easily and quickly hung in place and as readily detached. The device is absolutely self-locking, and when the sash is once in place it cannot be blown off by the wind no matter how far it may be swung out at the bottom.

In the accompanying illustration of my invention I have shown a form only applicable to square-headed windows. In the case of segment, circular, or other irregular shaped windows square-headed sashes or screens must be used and the irregular space filled with a separate stationary transom or boards and the joints rabbeted or covered by a molding to make the same as air-tight as possible.

What I claim as my invention is—

1. In a hanger for storm or screen frames, and the like, the combination, of a frame or casing provided with outwardly-projecting bearings, pivoted arms provided at their upper ends with hook-like projections, adapted, when the arms are turned in one direction, to close over the bearings, and when turned in the opposite direction to uncover said bearings, and a storm or screen frame provided with laterally-extending journals.

2. In a hanger for storm or screen frames, and the like, the combination, of a frame or casing, provided with outwardly-projecting bearings, medially-pivoted arms, provided at their outer ends with hook-like projections, adapted, when the arms are turned in one direction, to close over the bearings, and when turned in the opposite direction to uncover the bearings and a storm or screen frame formed or provided with laterally-extending projections, and also formed or provided with laterally-extending journals.

3. In a hanger for storm or screen frames, and the like, the combination, of a frame or casing, provided with outwardly-extending bearings, medially-pivoted arms, said arms having their upper ends formed with hook-like projections, and also formed on their outer edges, above the pivotal points, with upwardly and outwardly inclined edges, and a storm or screen sash formed or provided with laterally-extending portions, and also formed or provided with laterally-extending journals.

4. In a hanger for storm or screen frames, and the like, the combination of a frame or casing provided with outwardly-projecting bearings, medially-pivoted arms provided at their upper ends with hook-like projections, said projections adapted, when the arms are turned in one direction, to close over the bearings, and, when turned in the opposite direction, to uncover the bearings, a storm or screen frame, and hinge-plates secured to the upper corners of the storm or screen frame, said plates provided with laterally-extending projections, and also with forwardly-extending flanges, the latter having their outer faces formed or provided with laterally-extending journals.

5. In a hanger for storm or screen frames, and the like, the combination, of a frame or casing provided with outwardly-projecting bearings, medially-pivoted arms provided at their upper ends with hook-like projections, adapted, when the arms are turned in one direction, to close over the bearings, and, when turned in the opposite direction, to uncover the bearings, and said arms also having their inner and outer edges formed with overbalancing portions or projections, which are eccentric to the pivots, and a storm or screen frame formed or provided with laterally-extending projections, and also formed or provided with laterally-extending journals.

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

HENRY E. WILLER.

Witnesses:
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EDWARD A. LUECK.