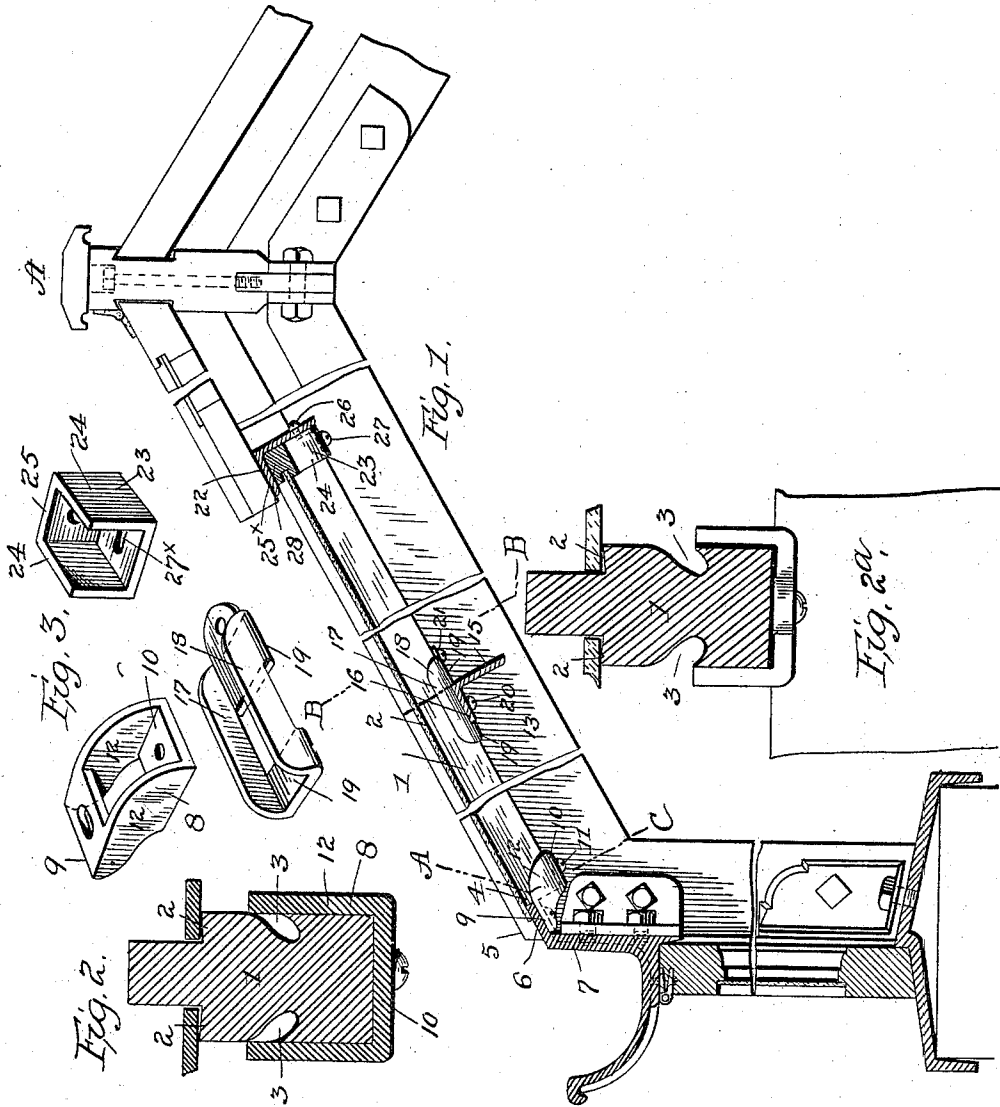


(No Model.)

W. A. BURNHAM.
CLASP FOR SASH BARS.

No. 535,049.

Patented Mar. 5, 1895.



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UNITED STATES PATENT OFFICE.

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CLASP FOR SASH-BARS.

SPECIFICATION forming part of Letters Patent No. 535,049, dated March 5, 1895.

Application filed November 26, 1894. Serial No. 530,045. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ADDISON BURNHAM, a citizen of the United States, residing at Irvington, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Clasps for Sash-Bars, of which the following is a specification, reference being had therein to the accompanying drawings.

It is the object of my invention to provide means for securing the sash bars of horticultural buildings firmly in place, said means allowing them to be readily removed and replaced in case of decay and permitting them to be connected directly to the metal parts of the structure without requiring any wood work whatever in order to make the attachment. In the ordinary construction of hot houses the wooden sash bars are secured in gains cut in the longitudinal board or plate at the lower ends. The joint thus formed catches the water and the ends of the bars decay rapidly and require frequent replacing of the entire bar. By my invention the bars are secured so that the joint will not catch the water and the lower ends of the bars as well as the upper and middle portions are secured directly to the metal frame parts by clasps of special construction adapted to engage the bars and yet not interfere with the drip grooves.

In the accompanying drawings:—Figure 1, shows a transverse section through the main structure with the clasps in place. Fig. 2, is a sectional view of the sash bar and clasp on line A C of Fig. 1. Fig. 2^a is a similar view through the middle clasp on line B B of Fig. 1, and Fig. 3, shows the three clasps detached and in detail view.

In the drawings the sash bar 1 is substantially of the ordinary construction having the shoulders 2 for the glass to rest upon and the grooves 3 in the sides of the bar to convey the drips. The lower end of the sash bar is cut away at 4 leaving an overhanging extension 5. The shoulder fits against the edge of the glazing flange 6 formed on the combined gutter and side plate 7 while the extension 5 extends down over this flange with the shoulders 2 for the glass in line with the upper

surface of the glazing flange and the glass when in place laps over the flush joint thus formed between the sash bar and the glazing flange and makes a water tight connection. The main body of the bar is below the glazing flange and is held firmly against displacement in any direction by the clasp 8 consisting of the base piece 9 secured to the under side of the glazing flange, the bar supporting piece 10 extending across the under face of the sash bar and secured thereto by the screw 11 and the curved side plates 12 connecting the base piece with the cross piece 10, the said sides inclining back from one cross piece to the other. The space between the side plates of the clasp and below the base piece 9 is open and the grooves in the sides of the sash bars are thus left unobstructed for the drops of water to fall from the lower ends through the clasps. By this construction there is no joint exposed to catch water and the clasp enables me to readily put up or take down the sash bars at this point and at the same time offers no obstruction to the flow of the drips.

The iron rafters of the structure are represented at 13 and at a point intermediate of the gutter and the ridge A, a purlin iron 15 extends longitudinally of the structure and is supported by the rafters. This purlin is right angular in cross section and the sash bars rest on the flange 16 thereof and are engaged by clasps 17 having side flanges 18 connected at their ends by cross pieces 19, the flange of the purlin fitting in the space between the cross pieces, the space with the edges of the cross pieces forming a shouldered seat for the purlin. A screw 20 passes through the purlin into the sash bar and a second screw passes through the upper part of the clasp into the sash bar. This clasp is particularly adapted to making a strong butted joint between sections of sash bars brought end to end, the lower section being held by the screw 20 while the upper section is held by the screw 21.

The upper ends of the sash bars are secured directly to a second purlin iron 22 supported by the rafters by means of a third socket 23 having sides 24, a back piece 25 fitted against the purlin and secured by a screw 26 and a

bottom piece fitting under the bar and secured thereto by a screw 27.

The clasp is secured against the face of the depending flange of the purlin and over the clasp and beneath the inclined flange 25^x of the purlin a wooden stop piece 28 is placed, having a groove in which fits the edge of the glass. This wood stop extends the width of each glass, being simply slipped in between and supported by the shoulders of the sash bars. This upper purlin with the wood stop is below the ventilator sash and as the flange 25^x extends over the joint between the wooden stop and the sash bar a water tight joint is formed.

The upper clasp may be screwed to the upper purlin as shown or to a suitable header piece and it may have a slot 27^x for the screw 27 to permit lateral adjustment of the sash bar, as at the lower clasp.

From this construction it will be seen that the bar may be readily placed or removed and that the connection is made directly with the metal parts of the frame and without exposing any joints to catch water and cause decay.

The lower clasp holds the bar firmly so that the glass may lap over the joint between the glazing flange and the bar.

The lower clasp 8 may have the opening in its base piece 9 elongated so that the clasp with the sash rail may have slight adjustment laterally, in order to secure accurate spacing for the glass between the bars. This slot is shown in the detail view.

In all the forms of clasps above described the sash rail is embraced closely by the sides of the clasps and they are thus held firmly and prevented from splitting when the screw enters them.

It will be understood that I do not wish to limit myself strictly to the form of clasps shown nor to the particular manner of securing them in position.

I claim—

1. In combination with the sash bar, the frame work and the clasp for the lower end of the bar having the two sides, the cross piece extending between the sides under the sash bar, and the base piece extending between the sides secured to the frame, substantially as described.

2. In combination with the sash bar having the drip grooves, the frame work and the clasp for the lower end of said sash bar having the sides, the cross piece extending between the sides under the sash bar, the base piece extending between the upper portions of the sides and secured to the frame work, said clasp being open for the escape of the drippings from the sash bar, substantially as described.

3. In combination, the sash bar having the drip grooves, the frame work and the clasp having sides embracing the side faces of the lower end of the sash bar and secured to the

frame, said clasp being open for the free escape of the drippings, substantially as described.

4. In combination, the sash bar, the glazing flange against which the lower end of the bar abuts with its main portion depending below the flange, the shoulders of said bar being in line with the surface of the glazing flange and the clasp for supporting the lower end of the sash bar, said clasp depending from the glazing flange and engaging the depending portion of the bar, substantially as described.

5. In combination, the sash bar, the glazing flange against which the bar abuts and the clasp for the bar comprising the cross piece secured to the glazing flange, the cross bar extending under the sash bar and the sides inclining from the cross piece to the cross bar and clasping the sides of the sash bar, substantially as described.

6. In combination, the sash bar, the purlin iron and the clasp comprising the sides engaging the sash bar and the upper and lower cross pieces between which the purlin iron fits, the screw passing through the upper cross piece and the screw passing through the purlin iron through the space in the clasp and into the sash bar, substantially as described.

7. In combination, the sash bar, the purlin iron and the clasp comprising the two sides engaging the bar and having upper and lower cross pieces connecting them, having an open space between the said cross pieces, and the purlin fitting in said space and between the shoulders formed by the cross pieces substantially as described.

8. In combination with the sash bar, the upper purlin or header and the clasp comprising the sides, the back and the bottom pieces, said back being secured to the header and the sides and bottom clasping the sash bar, substantially as described.

9. In combination with the sash bar, the angle iron purlin and the clasp secured to the purlin beneath its overhanging flange and clasping the upper end of the sash bar, substantially as described.

10. In combination with the sash bar the purlin or header, the clasp securing the sash bar thereto and the stop piece over the clasp adapted to receive the glass, substantially as described.

11. In combination with the sash bar, the purlin or header, the clasp securing the sash bar to the purlin and the stop for the glass arranged over the clasp and beneath the overhanging flange of the purlin, substantially as described.

12. A clasp for a sash bar having the seat therefor and an elongated opening extending transversely of the clasp to permit lateral adjustment thereof with the sash bar on the frame work to suit the glass.

13. A clasp having the two sides for embracing the sash bar and a connecting plate between them said plate having an opening for the screw to engage the sash bar and the support for the clamp, substantially as described. 5

overhanging flange of the purlin substantially as described. 10

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

W. ADDISON BURNHAM.

14. In combination, the angular purlin, the sash bar connected with the purlin and the stop piece for the glass arranged below the

Witnesses:

LYMAN B. CRAW,
LOUIS N. BRANT.