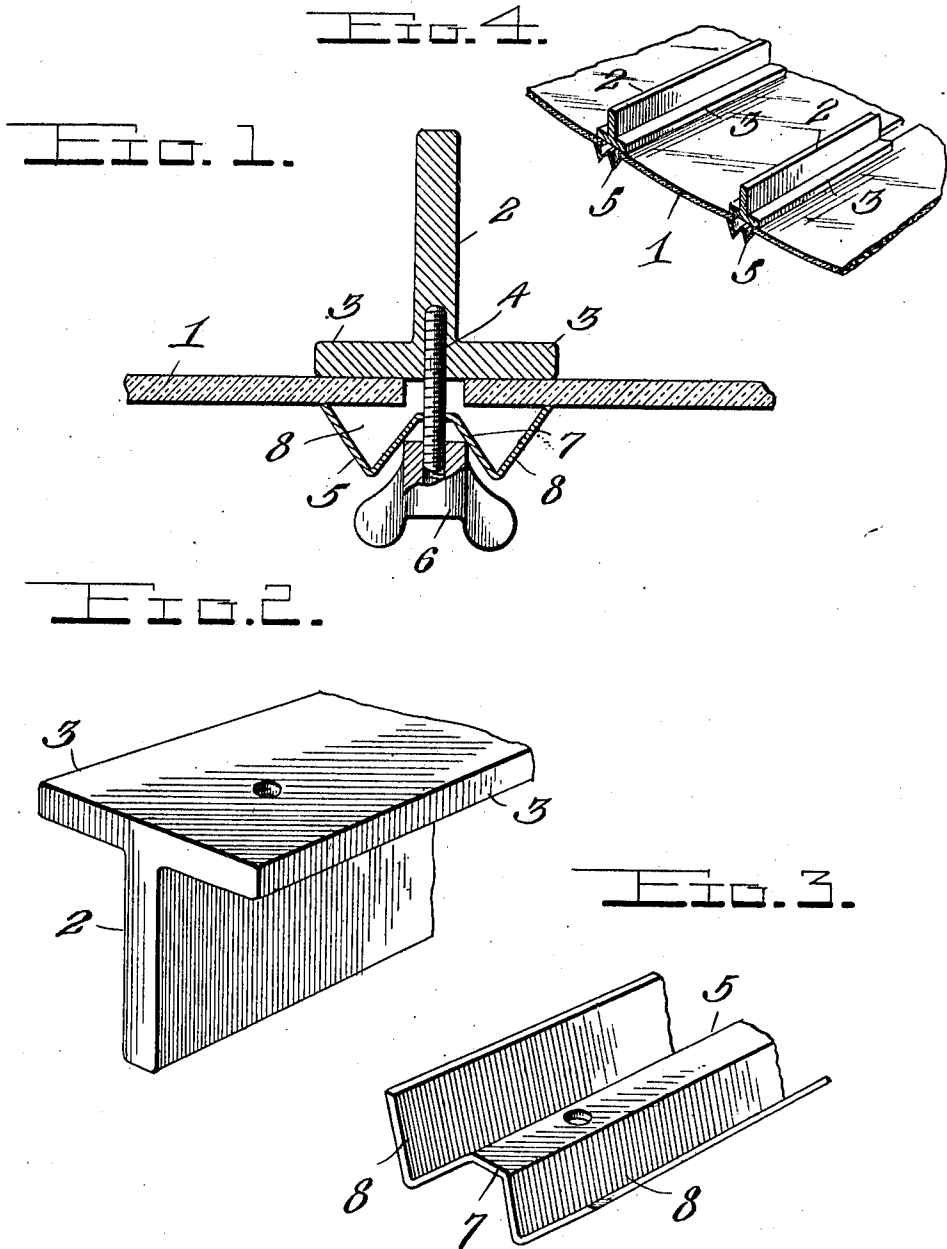


O. W. & G. A. HERMS.
GREENHOUSE CONSTRUCTION.
APPLICATION FILED APR. 4, 1910.

980,255.

Patented Jan. 3, 1911.



Witnesses

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UNITED STATES PATENT OFFICE.

OSCAR W. HERMS AND GEORGE A. HERMS, OF PORTSMOUTH, OHIO.

GREENHOUSE CONSTRUCTION.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, OSCAR W. HERMS and GEORGE A. HERMS, citizens of the United States, residing at Portsmouth, in the county of Scioto and State of Ohio, have invented certain new and useful Improvements in Greenhouse Constructions, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in greenhouse constructions, and more particularly to a new method and means for fastening glass to metal sash bars.

One object of the invention is to provide means whereby the panes of glass may be secured to the sash bars from the inside of the greenhouse, thereby obviating the necessity of climbing over the roof to apply the glass or to replace broken panes.

Another object of the invention is to provide an improved simple and practical sash bar construction which will be comparatively inexpensive, and which will yieldably support the glass to allow for uneven expansion of the different materials composing the structure, which will obviate the use of putty or other packing, which will carry off the drippings should any water work beneath the panes of glass, and which as above noted, will enable the panes of glass to be applied and removed from the inside of the greenhouse or other building in which the improved sash bar construction is used.

A further object of the invention is to provide an improved form of drip conductor which will serve not only as a drip conductor but also as an elastic supporting means for the panes of glass so that the latter will not be broken because of unequal expansion of the parts of the structure.

With the above and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, hereinafter fully described and claimed, and illustrated in the accompanying drawings in which:—

Figure 1 is a cross sectional view through a sash bar construction which embodies the invention and which has been especially designed for greenhouse construction; Fig. 2 is an inverted perspective view of one end of one of the sash bars; Fig. 3 is a perspective view of one end of one of the sections of the drip trough and conductor; and Fig. 4 is a sectional perspective of a portion of a

greenhouse roof constructed in accordance with the invention.

The invention consists broadly in the method and means for fastening panes of glass 1 to the sash bars 2 from within the greenhouse or other building so that the glass may be easily replaced when broken. The sash bar 2 may be of any form and construction but an ordinary metal T-bar is preferably employed because it can be obtained on the market at small expense. When such bar is used its cross portion is formed with oppositely projecting flanges or shoulders 3, beneath the bottom or inner faces of which the panes of glass 1 are supported by any suitable means. The preferred means of doing this is illustrated in the drawings and comprises screw studs 4 depending from a sash bar and carrying drip trough or conductor sections 5 which are adjustably supported by nuts 6, the conductor sections 5 being preferably constructed of resilient sheet metal so that they will yieldably support the glass panes 1 against the sash bar. The studs 4 are arranged at suitable intervals along the sash bar and are preferably screwed into the same, as shown in Fig. 1. The nuts 6 are preferably in the form of wing nuts and so constructed that they will bear against the conductor sections 5 and press them upwardly or outwardly against the panes of glass. The conductor sections 5 preferably correspond in length to the length of the panes of glass, and while they may be of any cross sectional shape, they are preferably made of W-shape in cross section so as to provide a central portion 7 apertured to receive the supporting studs or pins 4, and two channeled side portions 8 which serve as drip troughs to carry off the drippings, and which have their edges engaged with the panes of glass to yieldably support the latter against the flanges 3 of the sash bar. If desired the panes of glass 1 may have their upper faces of concave shape, as illustrated in Fig. 4, so that rain water falling upon the same will be directed toward the longitudinal center of the panes, and away from the sash bars.

From the foregoing it will be seen that the invention provides an exceedingly simple, convenient and effective means for mounting panes of glass in the roof or sides of a greenhouse or any other building. By

fastening the panes of glass from the inside of the building, the necessity of climbing over the roof to repair broken panes is entirely obviated and a broken pane may be quickly replaced at any point of the structure without disturbing the adjacent panes and other parts of the structure.

The simple construction of the embodiment shown and described enables a greenhouse to be produced at an exceedingly small cost, and also renders it exceedingly durable, it being noted that no wood, putty or other parts which must be replaced from time to time (excepting the glass) are needed in this improved construction.

By constructing and mounting the drip conductor sections as set forth they not only serve as troughs to effectively carry off the drippings, but also serve to yieldably and removably support the panes of glass, thereby greatly simplifying the construction and

rendering it very easy to replace broken panes.

Having thus described the invention, what is claimed is:

The combination of a sash bar, panes of glass, a drip conductor constructed of resilient material and of W-shape in cross section, the channeled side portions of the conductor forming troughs and bearing against the panes to support them against the bar, and means connecting the central portion of the conductor to the bar.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

OSCAR W. HERMS.
GEORGE A. HERMS.

Witnesses:

CATHARINE DEATERLA,
OSCAR W. NEWMAN.