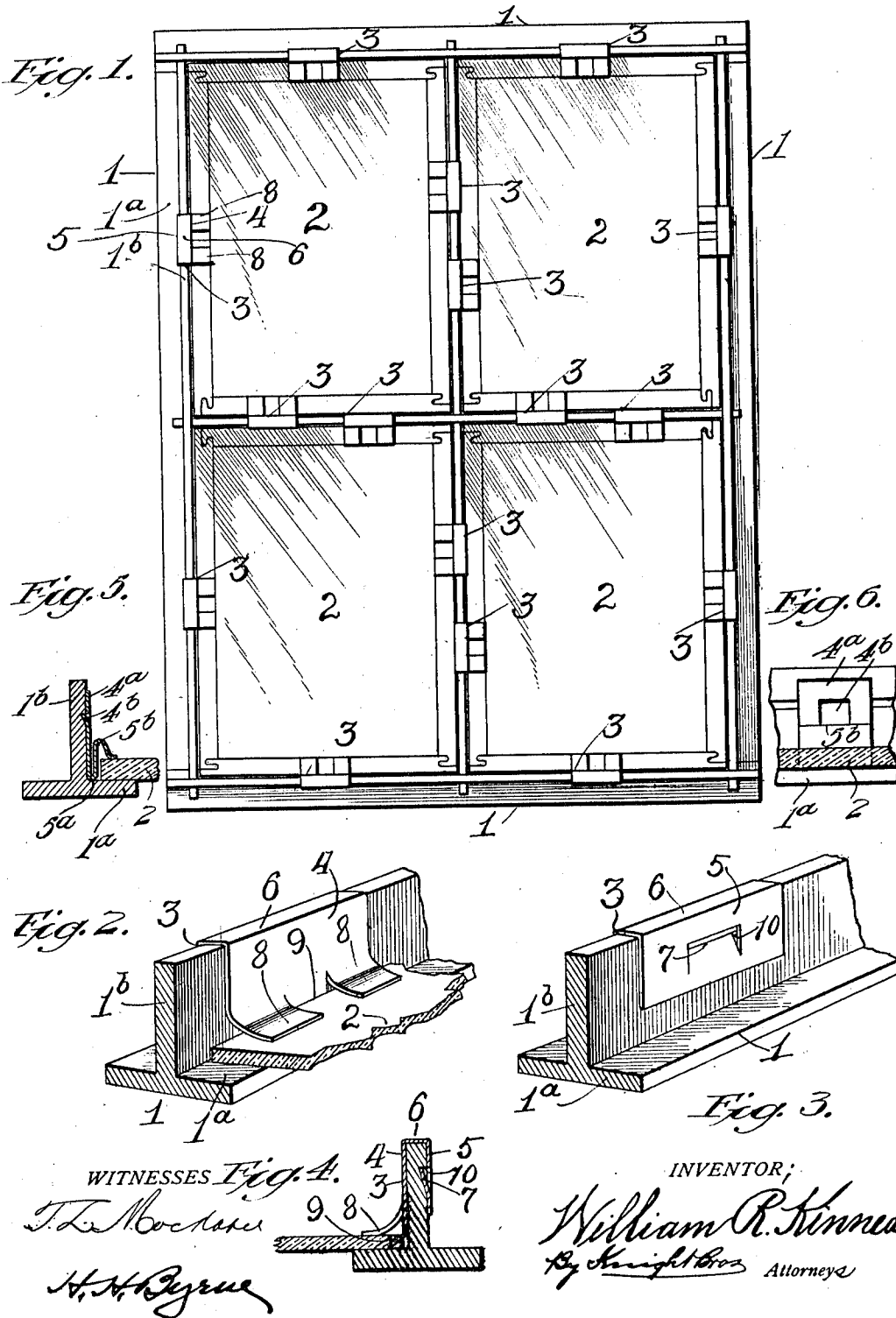


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GLASS HOLDER FOR METAL SASH.
APPLICATION FILED FEB. 25, 1911.

1,073,805.

Patented Sept. 23, 1913.



UNITED STATES PATENT OFFICE.

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GLASS-HOLDER FOR METAL SASH.

1,073,805.

Specification of Letters Patent.

Patented Sept. 23, 1913.

Application filed February 25, 1911. Serial No. 610,874.

To all whom it may concern:

Be it known that I, WILLIAM R. KINNAR, a citizen of the United States, and a resident of New Castle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Glass-Holders for Metal Sash, of which the following is a specification.

This invention relates to sash or frames for use in building construction and which are intended to contain glass or other filling panels in the spaces provided by the frame; and particularly to those sash or frames, which are constructed of metal having a base or flange member, which supports the glass or panel and a web perpendicular thereto, which provides the lateral limits of the panel opening.

The object of the invention is to provide a cheap, but efficient and easily applied and removable securing means for the glass or other filling panel, used in connection with the frame openings, which securing means may be relied on alone to secure the panel or plate of glass or other material, or may be used in conjunction with a plastic corner filling such as putty, without interfering with the continuity and adhesion of the latter.

The desired ends are attained, according to the present invention, by forming a depression or seat in the web of the metal structure which supports the plate and providing a clip constructed with a back leaf adapted to lie parallel with the web of the support, approximately in the plane of the edge of the plate secured and having a pawl which enters the seat to resist displacement of said back leaf, and also a presser foot or presser feet projecting outwardly from the back leaf in position to bear against the plate to be secured and by the resistance of said plate, to hold the back leaf against the web of the frame; said back leaf also having a retaining tongue extending in the plane of the back leaf to enter behind the edge of the plate to be secured and prevent displacement of the clip in the plane of the plate. Such a device is broadly claimed in my co-pending application Serial No. 639,830, filed July 21, 1911; said claims being based upon a

disclosure in which the back leaf which carries the presser foot or feet, as well as the retaining tongue, is provided with a face that engages a face on the web of the metal structure to prevent displacement of the back leaf in the plane of said web; one embodiment disclosing the additional feature of having the engaging face upon the web, elongated and arranged at such angles that by sliding the clip edgewise along the web, it is caused to bind upon the plate to be secured. The claims in the present case are restricted to embodiments in which the inter-engaging faces on the clip and web are provided, respectively, by a resilient pawl carried by the clip and a depression formed in the web; also an embodiment in which there is an additional leaf paralleling the back leaf in position to lie against the opposite side of the web, said leaves being connected by a part overlying the upper face of the web, and the presser feet being preferably duplicated on opposite sides of the retaining tongue, the parts being so proportioned that the resilient presser feet are left under tension when the clip is pressed downward sufficiently to permit seating of the locking pawl and the latter being preferably carried by that leaf which, when the clip is in use, lies on the opposite side of the frame web from the leaf which carries presser feet and the confining tongue.

The invention will be fully understood upon reference to the accompanying drawing, in which,

Figure 1 represents a frame or sash, constructed of T-iron in accordance with U. S. Letters Patent No. 971,011, granted September 20, 1910, and to which my present invention is shown applied by way of illustration. Figs. 2 and 3 are detail perspective views showing opposite sides of the clip in position. Fig. 4 is a sectional view through the metal frame, the glass plate or panel to be secured and the securing clip, the section being taken in a plane extending through the locking pawl. Figs. 5 and 6 are, respectively, a sectional view and front elevation of a modified structure of clip.

1 represents a frame having a base or flange 1^a, which provides a rest or support

for a glass plate or panel 2, and a web 1^b perpendicular thereto, which, in addition to its other obvious purposes, in connection with the structure of the frame, provides a lateral confining wall for the plate or panel.

For the purpose of holding the plate 2 down upon the base 1^a, I provide a clip 3, constructed with a back leaf 4, adapted to lie against or parallel with the web 1^b of the frame and secured against displacement in the plane of said web, by a pawl engaging a seat in one face of the web, as for instance, the pawl 7 carried by the leaf 5 lying on the other side of the web from the leaf 4, but joined thereto by a part 6, which overlies the narrow face of the web; said leaf 4 being also provided with one or more presser feet 8 (preferably two in number) formed by bending a portion or portions of the clip metal outward so that the feet project from the plane of the back leaf in position to bear downward upon the plate 2 to be secured and by their resiliency to exert considerable pressure on said plate; also a tongue 9, preferably intermediate of two presser feet 8, extending in the plane of the back leaf, down behind the edge of the plate so as to confine the clip against displacement in the plane of the plate. With the described arrangement, resistance to the presser feet is exerted in a direction to hold the back leaf against the web, as well as to hold the pawl 7 in its seat in those forms in which the pawl is carried by the back leaf.

To adapt the frame to receive clips constructed as above described, the web 1^b is provided with a seat or depression 10, preferably having its top wall perpendicular to the plane of the web so as to afford an effective stop and in position to permit the pawl 7 of the clip to snap into it when the clip is pressed down firmly upon the web, and the presser feet have been brought under tension against the plate. The seat 10 is preferably pressed but part way through the web and preferably located only at points where it is desired to locate the clips in use. And when so constructed and located, it is preferably given a dimension lengthwise of the web, which is considerably wider than the pawl, which is to enter it in order to facilitate putting the clip into position without the delay incident to accurate placing. It is obvious, however, that the purpose would be equally served if the seat 10 were continuous along the face of the web of the frame as for instance, if it were rolled therein.

To remove the clip for the purpose of replacing a broken plate or panel, it is simply necessary to withdraw the pawl 7 from the seat 10, which may be done by forcing a thin instrument up beneath the leaf 5 or by having the pawl 7 perforated so as to

receive a withdrawing tool. Or the seat 10 might be tapered at its ends, from the full depth of the seat outwardly to the plane of the web face, so that by forcing the clip 3 longitudinally on the web, the tongue would be gradually forced outward from its seat and the clip could be lifted upwardly. Or the leaf 5 carrying the pawl 7 may be forcibly drawn outward without care of preserving the clip and the clip replaced by a new one in putting in a new plate or panel. The cheapness of the construction permits of this if desired.

It will be observed from the disclosure of the drawing that not only will the clip not interpose obstruction to the application of the ordinary putty or other plastic packing in the angle between the plate and the web, but keying space is afforded both by the lower edge of the leaf 5 and the spaces beneath the presser feet 8.

In the arrangement shown in Figs. 5 and 6, the retaining clip is not designed to straddle the web 1^b, but on the other hand lies against and engages with only one and the same side of the web. This modified form of clip consists of a leaf 4^a having a pawl or tongue 4^b similar to and having the same function as the pawl 7 in the other structure. The leaf 4^a extends for its full width to the base or flange 1^a, and is thence folded upon itself as indicated at 5^a, and extended upwardly to a position well above the plate or panel 2. The said folded portions 5^a are located intermediate the edge of the plate 2 and the web 4^a, and cooperating with the tongue 4^b, said part 5^a affords a secure fastening for the clip. The upwardly disposed part of the member 5^a is bent outwardly and downwardly to provide a presser foot 5^b for retaining the panel against the base 1^a.

I claim:—

1. A clip for frames having a plate supporting base and a web at an angle to said base; said clip comprising a web-abutting member having struck therefrom a tongue transversely resilient but longitudinally rigid relatively to said member; said web-abutting member also carrying a tongue extending in the plane thereof adapted to engage the edge of a plate supported on the base of the frame, and with a presser foot extending at an angle to said tongue and resilient in the direction of the tongue.

2. A clip for frames having a plate supporting base and a web at an angle to said base; said clip comprising a web-abutting member having struck therefrom a tongue transversely resilient but longitudinally rigid relatively to said member; said web-abutting member also carrying a tongue extending in the plane thereof adapted to engage the edge of a plate supported on the base of the frame, and with a presser foot

extending at an angle to said tongue and resilient in the direction of the tongue; said web-abutting member comprising two opposing leaves adapted to embrace the web, one of said leaves carrying the resilient web-engaging tongue, and the other carrying the presser foot and the plate-engaging tongue.

The foregoing specification signed at Detroit, Michigan, this 4th day of November, 1910.

WILLIAM R. KINNEAR.

In presence of—

ALBERT G. REED,

HOYT L. FRACHER.