H. M. LUTZ.

GLAZING CLIP.

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1,385,217.

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Fig. 1.

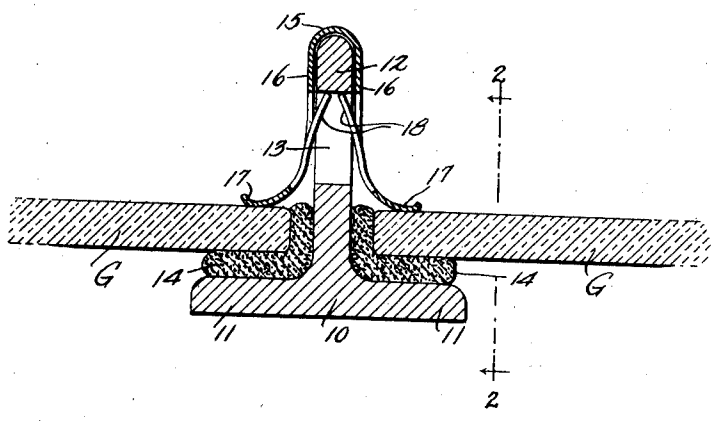


Fig. 2.

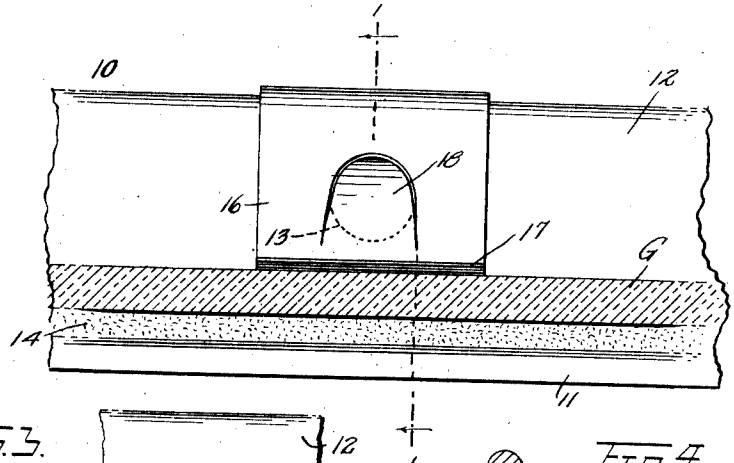


Fig. 3.

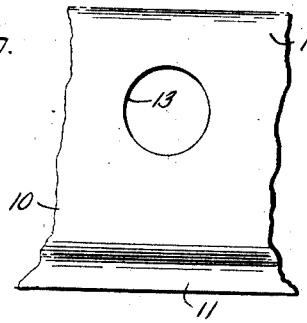
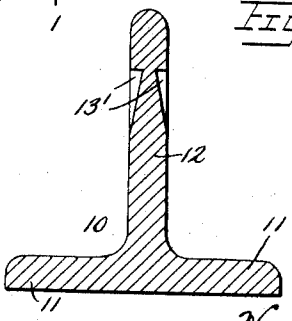


Fig. 4.



WITNESSES

H. T. Walker

Geo. H. Beeler

INVENTOR

Henry M. Lutz

BY

Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

HENRY M. LUTZ, OF NEW YORK, N. Y.

GLAZING-CLIP.

1,385,217. Specification of Letters Patent. Patented July 19, 1921.

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To all whom it may concern:

Be it known that I, HENRY M. LUTZ, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Glazing-Clip, of which the following is a full, clear, and exact description.

This invention relates to means for attaching plates of glass or the like to metallic bars such as are commonly used in the making of skylights or windows for factories or other buildings.

Among the objects of the invention is to provide a skylight construction for modern fireproof factory buildings in which window lights or plates are supported upon the base flange portions of T-rails or their equivalent, the arrangement being such that the plates are secured in the most reliable manner and with the least possible loss of time.

Another object of the invention is to provide a skylight or roof rail in the form of a T-beam having formed through or in the web portion thereof a series of holes or notches and with which the flexible tongue portion of a clip is adapted to engage and interlock, while the end or foot portion of the clip bears firmly against the outer surface of the plate.

A still further object of the invention is to provide a clip for securing the glass plates in place with respect to the metal angle or T-rails, said clip being designed to be secured in place by the simplest possible direct movement thereof over the free edge of the rail web.

With the foregoing and other objects in view the invention consists in the arrangement and combination of parts hereinafter described and claimed, and while the invention is not restricted to the exact details of construction disclosed or suggested herein, still for the purpose of illustrating a practical embodiment thereof reference is had to the accompanying drawings, in which like reference characters designate the same parts in the several views, and in which—

Figure 1 is a vertical transverse section on the broken line 1—1 of Fig. 2.

Fig. 2 is a longitudinal section of one of the window plates and indicating the T-rail and clip in side elevation.

Fig. 3 is a side elevation of a fragment of the rail indicating a depression formed in or through the web thereof.

Fig. 4 is a vertical transverse sectional detail indicating a slight variation in the formation of the T-rail.

Referring now more specifically to the drawings I show a rail 10 having base flanges 11 and a web portion 12 arranged at right angles to the central portion of the base in the usual manner. Formed in or through the web 12 are any suitable number of holes 13 made by any suitable means such as by punching or drilling, and of any suitable size or form. Or as indicated in Fig. 4 the web 12 may simply be provided with notches or depressions arranged opposite each other in pairs as indicated at 13′ whereby the rail will maintain approximately its full strength. Such notches may be of any suitable form, but with their upper edges lying in the same plane approximately perpendicular to the plane of the web and so have the same effect as the hole 13.

The glass plates G may be supported upon the flanges 11 in any suitable or well known manner, preferably upon cushions 14.

My improved clip is shown as comprising a curved portion 15 embracing the free edge of the web 12 and having on either or both sides of the web leg portions 16 terminating in outwardly flared and slightly upturned feet 17 which bear directly against the outer surfaces of the glass. As shown the curved portion 15 of the clip is approximately U-shaped and conforms closely to the form of the edge of the web. Each leg portion 16 is provided with a tongue member 18 formed in any suitable manner from the main portion of the clip as by means of punching or stamping, and since the clip is preferably made of some suitable flexible sheet metal, or its equivalent, the tongues 18 are somewhat more resilient than the remaining portions of the clip. Each tongue is integral with the foot portion of the clip and otherwise free to be bent inward toward the opposite tongue. In the manufacture of these clips they are made to assume substantially the position or form shown in Fig. 1 with the points of the tongues bent inward somewhat toward each other while the side or main portions of the legs lie to a large extent parallel to the sides of the web.

The application of the clips to the rails is a very simple one. The glass plates having been put in place as aforesaid the operator simply applies the clips over the web 12 of the rails at as many points as are necessary

or desirable, each clip being forced directly over the free edge of the web, over the holes or notches. This operation may be performed by hand or by any suitable forcing tool, and the tongues 18 snap into the holes or notches as shown in Fig. 1. Inasmuch as the leg portions of the clip are slightly flexible it follows that with the clips and rails made in accordance with any building specification and corresponding to the thickness of the plates and cushions, obviously any slight variation that may occur in the effective space between the plane of the outer surface of the plates and the outer edge of the holes or notches will be compensated for by the resiliency or flexibility of the leg and foot portions of the clips. When the points of the tongues once snap into the notches or holes the clips are self-retaining and hold the plates firmly in place. The device is unusually simple in construction and operation and has superior holding qualifications. It is impossible for the device to become loose or fail to hold, and yet if it is desired to be removed it can be done by the use of a tool applied beneath one or the other of the legs causing such legs to be bent outward far enough to release the tongues from the holes or notches.

I claim:

1. A glass securing means comprising in combination with a T-shaped bar, the web of which is provided with cut-out portions, a U-shaped resilient clip, the free ends of the legs of which are flared outwardly to provide glass-engaging feet, and resilient tongues formed in the body portion of said U-shaped clip, the free ends of said tongues being adapted to engage within the cut-out portions of the web of the bar to maintain the feet in contact with the glass and the U-shaped clip in position upon the web of said bar.

2. A glass securing means comprising in combination with a glass supporting element having cut-out portions, a U-shaped clip of resilient metal, the free ends of which are flared outwardly to provide glass-engaging feet, and resilient tongues formed on opposite sides of the U-shaped member and having their free ends projecting forwardly of the body portion of the U-shaped member and adapted to be received within the cut-out portions of the glass support to maintain the glass engaging feet of the U-shaped member in engagement with the glass to retain the same in position on said support.

3. In combination with a glass and its support, glass securing means comprising a U-shaped member, the free ends of the legs of which are flared outwardly to provide glass engaging feet, and oppositely disposed resilient tongues, the free ends of which are positioned inwardly of the body portion of the U-shaped member and adapted for engagement with the support to maintain the U-shaped member in position on the support and the glass engaging feet of the legs of the U-shaped member in contact with the glass.

HENRY M. LUTZ.