Jan. 9, 1934. J. A. McDONALD 1,942,871

GLAZING BAR

Filed March 5, 1932

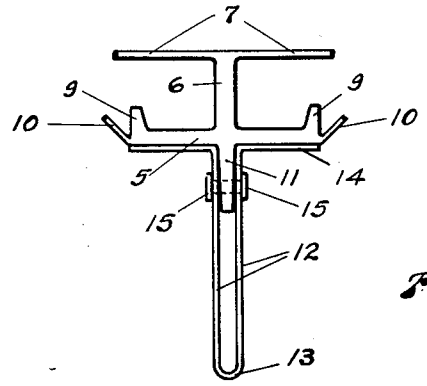


Fig. 1

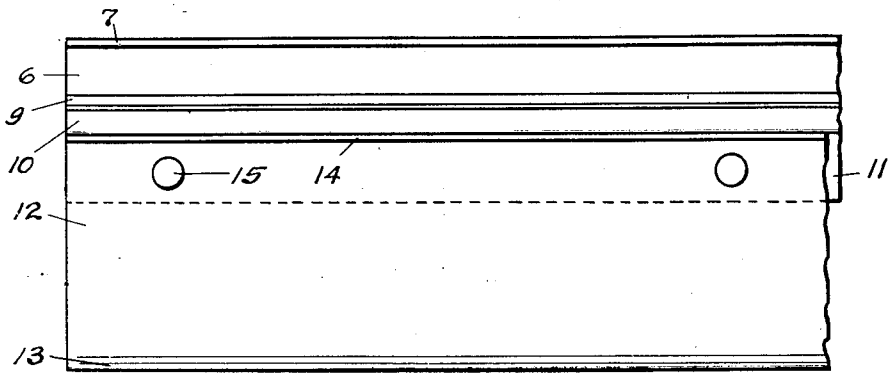


Fig. 2

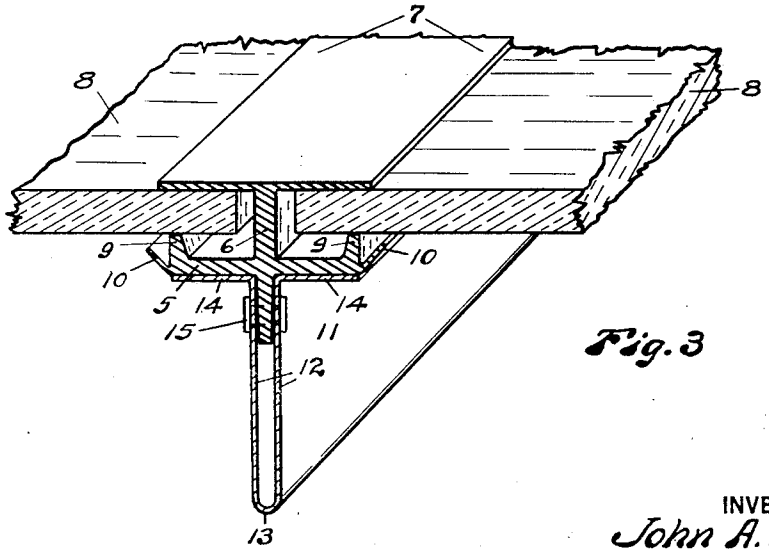


Fig. 3

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GLAZING BAR

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2 Claims. (Cl. 108—16)

My invention relates to improvements in glazing bars of the type adapted for use in connection with glass roofs or skylights.

The primary object of my invention is to provide an all metal glazing bar of strong and substantial construction which is relatively cheap and simple to manufacture thus making it especially desirable for use in cheaper classes of skylights.

A more specific object of my invention is to provide a glazing bar of this nature embodying a bar member of ductile metal, as lead, arranged to receive and hold plates of glass in a skylight, combined with a cheap and simple structural member of thin strong metal which supplies the necessary strength for the glazing bar.

In the manufacture of glazing bars it is common practice to use structural members to support the lead bars which hold the glass. These structural members have heretofore usually been in the nature of steel angle bars or T bars in the more costly glazing bars and of wood in the cheaper glazing bars. In the present invention I utilize thin strong metal capable of being bent or folded double as the structural element and in this way I am able to produce a glazing bar having qualities of strength and durability comparable to the previous all metal bars at a cost not greatly in excess of the cost of the glazing bars in which the structural element is made of wood.

In the accompanying drawing, Figure 1 is a view in end elevation of a glazing bar constructed in accordance with my invention.

Fig. 2 is a fragmentary side elevation of the same.

Fig. 3 is a fragmentary perspective view of the glazing bar and glass skylight plates, parts being shown in cross section.

Like reference numerals designate like parts throughout the several views.

Referring to the drawing I show an integral lead bar comprising a flat portion 5 having an upwardly extending web 6 which terminates in two glazing leaves 7 arranged to rest on the top surface of glass skylight plates 8. The flat portion 5 has two upwardly extending cushion ribs 9 along its respective edges whereon the glass plates 8 may rest and is further provided with two condensation gutter webs 10 which extend outwardly from the sides thereof. A longitudinally extending medial flange 11 extends downwardly from the flat portion 5 directly opposite the web 6 and completes the construction of the lead bar which is preferably extruded or otherwise formed with all parts integral. It will be noted that the web 6 and flange 11 are in the same plane thus producing a lead bar which is more resistant to sagging than the usual lead bar but which must, nevertheless, be supported by a structural member of stronger material.

The structural member is preferably constructed from a single piece of thin material, as a sheet of iron, brass, aluminum or the like bent double to form two side plates 12 which are spaced a short distance apart and are integrally connected at their lower edges as at 13 and which are bent outwardly at their upper edges to form right angle portions 14 on which the lead bar may rest. The side plates are relatively deep to afford relatively great resistance to bending in an edgewise direction and are spaced just far enough apart to receive therebetween the downwardly extending flange 11 of the lead bar. Rivets 15 disposed at intervals, extend crosswise through the side plates 12 and the flange 11 thus firmly securing these two parts together.

When this glazing bar is installed the edges of the glass plates 8 rest on the cushion ribs 9 and are held down by the glazing leaves 7. The glazing leaves 7 may extend upwardly before installation of the bar and may be bent down onto the glass plates during the construction of the skylight. The gutter webs 10 may be in any desired position when the lead bar is constructed and may be suitably bent at the time of installation to form the condensation gutters. The cushion ribs 9 and web 6 cooperate to form drainage gutters for carrying off any moisture which may enter at the location of the leaves 7.

The two side plates 12 positioned on opposite sides of the flange 11 form a very cheap and at the same time a very strong and substantial support or structural element for the glazing bar.

The foregoing description and accompanying drawing clearly disclose a preferred embodiment of my invention but it will be understood that this disclosure is merely illustrative and that such changes in the invention may be made as are fairly within the scope and spirit of the following claims.

I claim:

1. In a glazing bar of the class described, a structural member comprising two side plates of relatively thin strong metal spaced a short distance apart and integrally connected with each other at their lower edges by a portion which extends directly across from one side plate to the other, integral angle flanges extending at

right angles from the upper edges of said side plates, a flat bar of ductile metal resting securely on said angle flanges and supported thereby throughout its entire width, a longitudinal integral flange extending downwardly from said ductile bar between said side plates, and rivets securing said side plates and said flange together.

2. In an all metal glazing bar, a lead bar member of one piece construction comprising a transverse flat portion, a longitudinal medial web extending upwardly from said flat portion, transverse glazing leaves on the upper edge of said upwardly extending web, a glass supporting cushion extending upwardly from each edge of said flat portion, a condensation gutter strip protruding from each edge of said flat portion, a medially disposed longitudinal flange extending downwardly from the bottom of said flat portion and forming a continuation of said upwardly extending web, a structural member comprising two side plates of thin strong metal spaced a short distance apart and integrally connected with each other at their lower edges and integral angle flanges extending sidewise at right angles from the upper edges of said side plates and supporting said flat member, said downwardly extending flange being secured betwen said side plates.

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