

931,638.

2 SHEETS—SHEET 1.



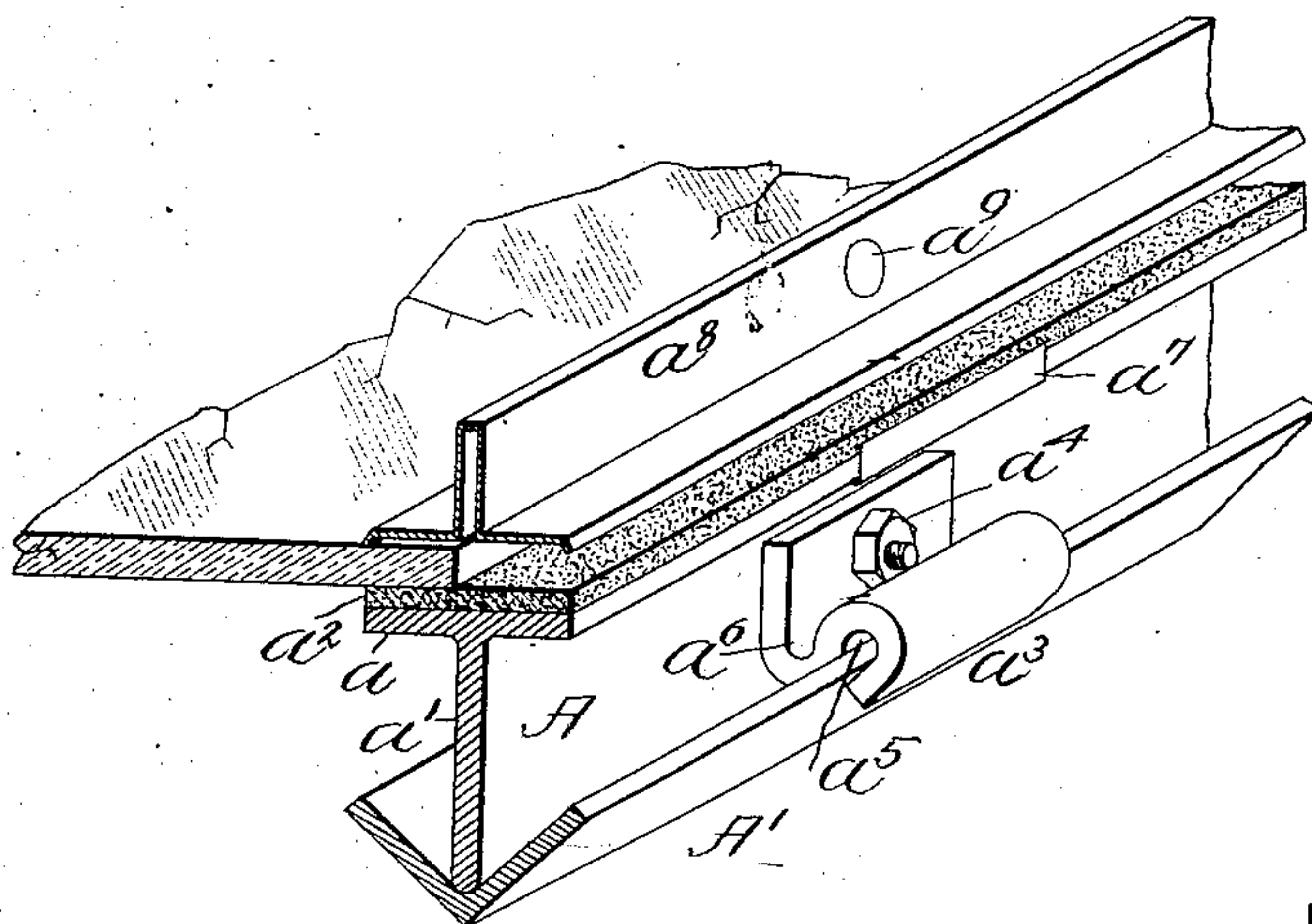
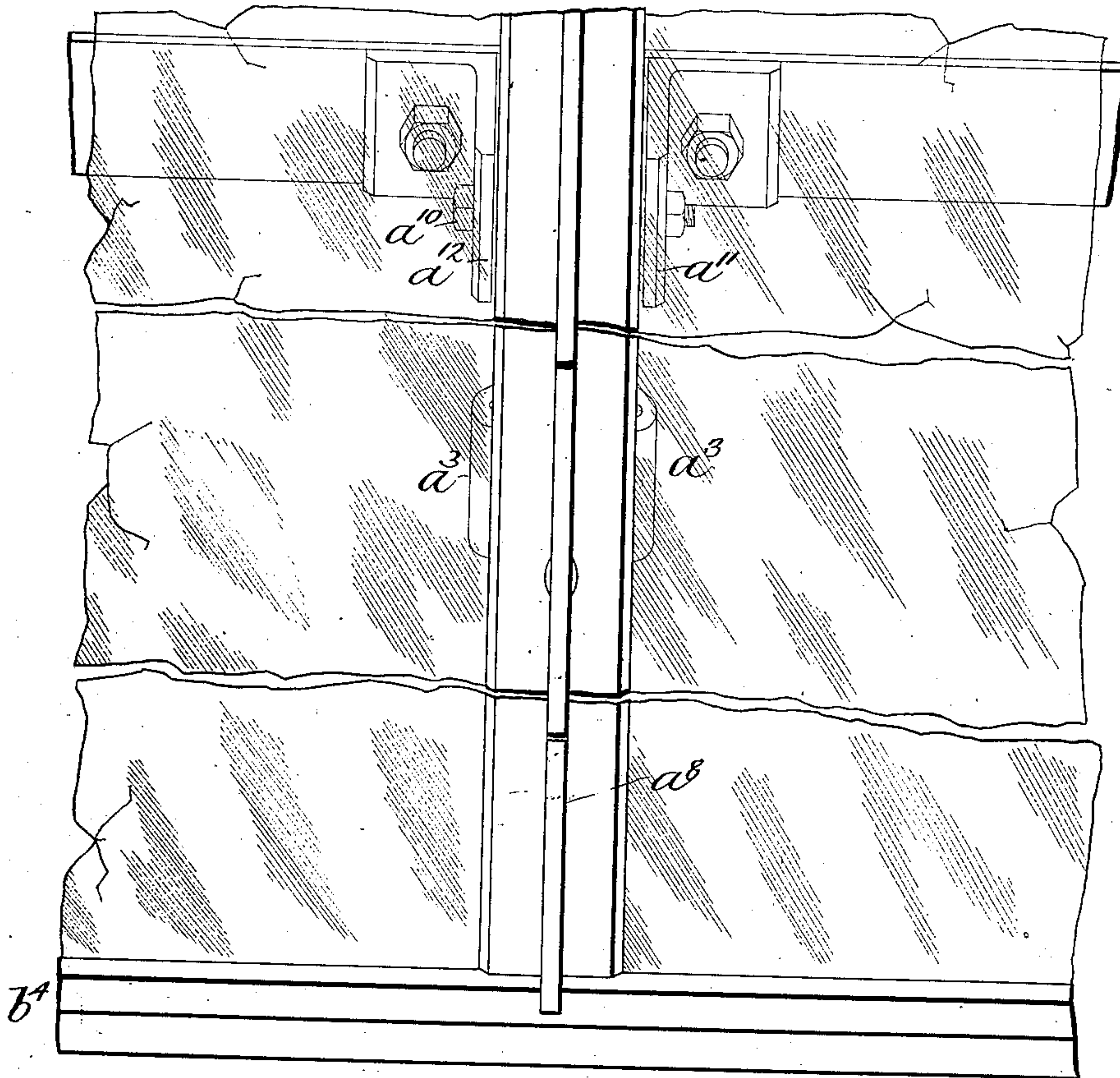
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 COMBINED TROUGH AND GLASS SUPPORT FOR GLAZED STRUCTURES.
 APPLICATION FILED MAY 4, 1908

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 2 SHEETS—SHEET 2.



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COMBINED TROUGH AND GLASS SUPPORT FOR GLAZED STRUCTURES.

No. 931,638

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed May 4, 1908. Serial No. 430,741.

To all whom it may concern:

Be it known that I, JOHN A. OLSSON, of Boston, in the county of Suffolk and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Combined Trough and Glass Supports for Glazed Structures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The combined trough and glass support for glazed structures is so well known in the art that it is unnecessary to refer to the objective purposes and functions performed by such a construction.

The especial object of my present invention is to provide a combined trough and glass support the essential elements of which consist of metal bars or the like of a common form, or in other words, bars which are a common commercial commodity easily obtainable in the market; these bars though comparatively light to be of a form possessing great inherent strength and to be combined in such manner that the structure made from them, though light, will be very strong and rigid and will possess also the advantage of being easily formed, easily taken apart in whole or in part section and will be relatively narrow so as not to obstruct the light, including also further points of structural utility as will hereinafter be explained.

The invention can best be seen and understood by reference to the drawings, in which—

Figure 1 shows the invention mainly in vertical longitudinal section. Fig. 2 shows a section on the line 2—2 of Fig. 1. Fig. 3 shows a plan of the device as one views the same looking down upon a glazed structure from the top side thereof, and Fig. 4 illustrates a portion of the device in perspective.

Referring to the drawings:—A represents the bar which forms the main support for the glazed structure. This support is a common T-shaped bar having a head a and a shank or rib a^1 extending or dependent from the head. The edges of the panes of glass rest upon the head a of this bar, there being preferably interposed some soft material such as felt a^2 which not only provides a cushion for the glass to rest upon, but also assists in sealing the joint between the glass and its support.

Beneath the main support A is the gutter A^1 . This gutter comprises a grooved or channeled bar and one preferably of common V-shaped cross section inasmuch as this form of bar makes a relatively narrow deep gutter and can be very conveniently attached to the shank of the main support by the means of attachment which I have provided. This attachment comprises a series of clips a^3 intermittently arranged in pairs. Each pair of clips on opposite sides of the shank to the main support is secured thereto by means of a bolt a^4 passing through the shank and the ends of the respective clips. The clips from the point of their attachment to the shank extend downwardly to connect with the edges of the trough, there being formed in the bent end of the clip sockets a^5 into which the edges of the gutter are adapted to fit. The effect is that when the nut on the end of the bolt a^4 is tightened the clips will become affixed to the shank and draw over or hook onto the edges of the trough binding the main support and trough tightly together. The strength and rigidity of the combined parts is, also, materially increased by the shank of the main support extending so far as to fit snugly within the hollow of the apex of the trough. One further feature to be noted in connection with the clips a^3 is that each of the clips in the part which extends between the shank and the edge of the trough is preferably bent so as to provide a depressed surface a^6 so that any water which might fall or accumulate upon the clips will run off into the trough.

The edges of the panes of glass resting upon the head of the main support are secured thereto by means of a clip a^7 adapted in part to encircle and grip the head on opposite sides thereof and provided with a shank which extends upwardly through a slit in the interposed felt and between the edges of adjacent panes of glass to project upwardly beyond the same. There are a series of these clips a^7 intermittently arranged and over the projecting ends of the shanks thereof is adapted to fit a continuous cap a^8 . This cap is provided with a recess or channel into which the ends of the shank are adapted to fit and be secured thereon by means of a rivet a^9 . The cap a^8 has also flanges which lap over and rest upon the edges of the adjacent panes thereby providing a fixture which presents not only a neat and finished appearance but one

also which covers and protects the joint between the panes of glass. In case water should work in under the flanges of the cap a^8 it will encounter the clip a^7 and be directed around the head of the main support into the trough. Not only do the clip a^7 and cap a^8 , combined with it, form an effective means for binding the adjacent edges of the panes and weatherproofing the joint between the same, but these parts can also be very easily formed each out of a single piece of bent metal.

In the application of the combined trough and glass support to a building these parts are maintained in a proper upright position to perform their respective functions by means of a bolt a^{10} which extends crosswise through the shank to the main support and is secured by a nut on the end of the bolt to angle-pieces a^{11} , a^{12} bolted or otherwise affixed to the purlins B or other fixture forming a portion of the building.

In practice the troughs will be extended so far as to lap onto the curb B^1 of the building over the edge of which the water is delivered from the trough. On the curb at the ends of the troughs I prefer to place blocks or pieces of joist b so arranged as not to impede the flow of water from the trough. To the pieces b is secured a continuous angle-piece b^1 preferably secured to the pieces b by the same fastening b^2 as secures the pieces to the curb. Bolted to the angle-pieces b^1 are angle-pieces b^3 which are affixed to the shank forming a portion of the main glass support as before explained. The attachment of these angle-pieces prevents the main support and trough from being moved laterally and adds to the strength and rigidity of the entire structure. A finish may then be given the building, the ends of the trough being concealed by a molding b^4 secured in any suitable manner and between which and the curb the water is adapted to fall as it flows from the troughs out over the edge of the curb as above explained.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States:—

1. In a device of the character specified, the combination of a glass support, the same comprising a supporting head upon which the panes of glass rest and a shank or rib dependent therefrom, means for holding the panes of glass on said head, means connecting with a fixture or fixtures of support for maintaining said shank in a proper upright

position for said head to support the panes of glass, an independent trough extending along beneath said shank, and means for supporting said trough from said shank.

2. A device of the character specified having a T-shaped bar, the same comprising a head upon which the panes of glass rest and a shank dependent from said head, a V-shaped trough extending along below the shank of the bar and into which trough said shank of the bar is adapted to extend, means for holding the panes of glass onto the head of said bar, and means for supporting said trough to cooperate with the shank of said bar.

3. A device of the character specified having a T-shaped bar, the same comprising a head upon which the panes of glass rest and a shank dependent from said head, and a V-shaped trough extending along below the shank of the bar and into which trough said shank of the bar is adapted to extend.

4. In a device of the character specified, the combination of a glass support, the same comprising a supporting head upon which the panes of glass rest and a shank or rib dependent therefrom, means for holding the panes of glass on said head, a bolt supported to extend crosswise through said shank or body for holding the same in an upright position for the panes of glass to rest properly on said head, a gutter extending along beneath said shank, and means for supporting said gutter to cooperate with said shank.

5. In a device of the character specified, the combination of a glass support, the same comprising a supporting head upon which the panes of glass rest and a shank or rib dependent therefrom, a clip passing around and gripping said head and extending in part between the edges of adjacent panes of glass to project above the same, a cap adapted in part to receive the projecting portion of said clip and overlapping the adjacent edges of the panes of glass to rest thereon, means for combining said clip and cap, means connecting with a fixture or fixtures of support for maintaining said shank in a proper upright position for said head to support the panes of glass, an independent trough extending along beneath said shank, and means for supporting said trough from said shank.

JOHN A. OLSSON.

Witnesses:

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