A. G. HIGGINS.

STORE FRONT AND SHOW CASE CONSTRUCTION.

APPLICATION FILED JULY 22, 1908.

915,599. Patented Mar. 16, 1909.

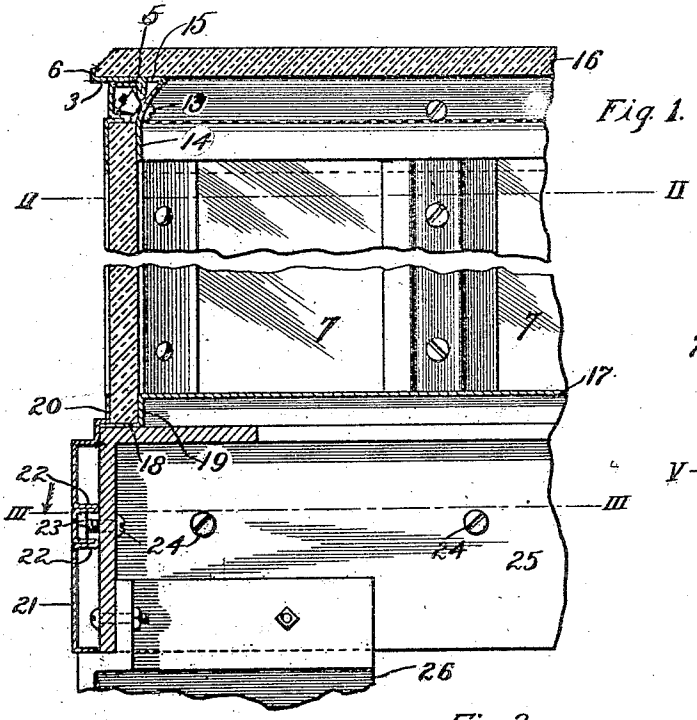

Fig. 1.

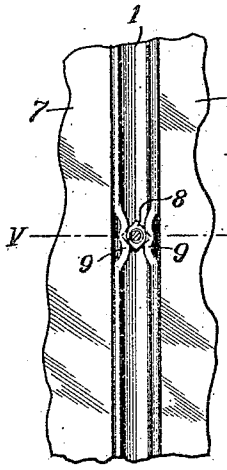

Fig. 4.

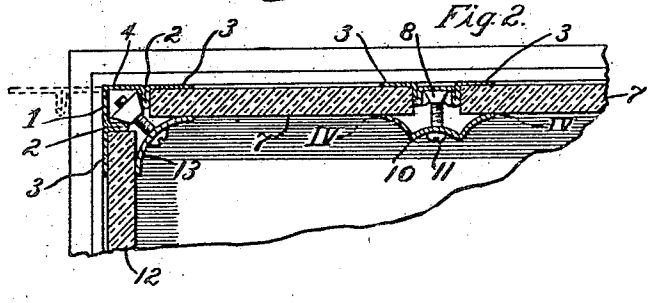

Fig. 2.

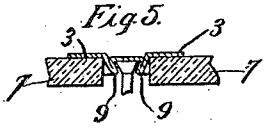

Fig. 5.

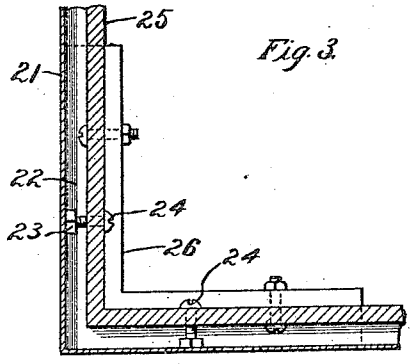

Fig. 3.

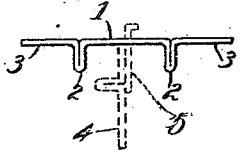

Fig. 6.

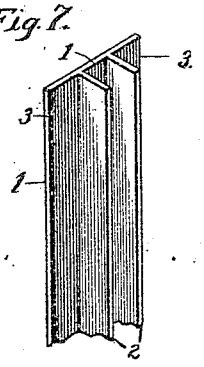

Fig. 7.

Witnesses.

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UNITED STATES PATENT OFFICE.

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STORE-FRONT AND SHOW-CASE CONSTRUCTION.

No. 915,599. Specification of Letters Patent. Patented March 16, 1909.

Application filed July 22, 1908. Serial No. 444,839.

To all whom it may concern:

Be it known that I, ALBERT G. HIGGINS, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Store-Front and Show-Case Constructions, of which the following is a specification.

This invention relates to store front and show case construction and more especially to the means for securing glass plates together, and my object is to produce a construction of the character mentioned embodying the desirable features of simplicity, strength, durability and cheapness.

With these general objects in view the invention consists in certain novel and peculiar features of construction and combinations of parts as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawings, in which:—

Figure 1 is a vertical section of a part of a show case embodying my invention. Fig. 2 is a horizontal section taken on the line II—II of Fig. 1. Fig. 3 is a horizontal section taken on the line III—III of Fig. 1. Fig. 4 is a vertical section on the line IV—IV of Fig. 2. Fig. 5 is a section on the line V—V of Fig. 4. Fig. 6 is an end view of one of the bars forming an element of the invention. Fig. 7 is a detail perspective view of a modified form of such bar.

In the said drawings, a metal bar comprises a body-portion 1, a pair of ribs 2 projecting from the same face of said bar and a pair of flanges 3 projecting from the opposite sides of said ribs, the latter being produced bybe nding the metal as shown in Fig. 6, or by the rolling method in which case the ribs 2 as shown in Fig. 7, are of single thickness as distinguished from the ribs 2 of Fig. 6, which are of double thickness.

For uniting the edges of two glass plates standing in the same plane or edgewise together, the bars are employed as shown in either Fig. 6 or 7. When it is desired to unite two glass plates standing at right angles to each other as shown at the corner of Fig. 2, the body-portion of the bar is bent along its longitudinal center to right angle form as indicated by dotted lines 4 in Fig. 6 and in full lines in Fig. 2. When it is desired to unite together two glass plates standing at an angle to each other with the end of one of them projecting beyond the inner face of the other as indicated at the upper corner of Fig. 1, the body-portion of the bar is bent by preference along its longitudinal center as before explained, and then one of the flanges 3 is doubled back on said bent portion as indicated at dotted lines 5 in Fig. 6 and full lines in Fig. 1, the said bent-back flanges being then again bent in the reverse direction as shown by dotted lines 6 in Fig. 6, and full lines in Fig. 1. The bar as bent in the manner last described is adapted primarily for uniting a vertical plate with a horizontal top plate, and is designed to be employed chiefly in show case construction.

Referring now to Fig. 1, which illustrates a show case construction, and Fig. 2 which may illustrate a window front construction as well as a show case construction, 7 indicates glass plates arranged in alinement, and engaging the same is a bar in which the body-portion and the flanges stand in or approximately in the same vertical plane, with the ribs projecting inwardly between and engaging the adjacent vertical edges of said plates. At suitable points along the length of said bar nuts 8 of preferably inwardly-tapering form are fitted between said ribs and then the latter are crimped or bent inwardly as at 9 upon said nuts so as to secure the same in a substantially rigid relation with the bar. A strip of metal 10—preferably spring metal—and of arched form with respect to said plates, is then fitted against the inner sides of the latter so as to bridge the space between them, and a series of screw-bolts 11 are fitted through said preferably resilient strip and screwed into the said nuts for the purpose of clamping the glass plates firmly in position. This construction as will be readily seen provides a reliable connection between two glass plates without exposing the fastening elements, viz., the screw-bolts and nuts to view from the outside of the case, it being further obvious that a person at the outer side of the window or case cannot remove or tamper with such fastening elements. 12 indicates a glass plate standing at right angles to plate 7 and united thereto in the same manner as plates 7 are united except that the bar employed is of the second type described, that is with parts of its body portion and its flanges and ribs standing at right angles to each other, the body-portion form-

ing a corner of the window or case and the flanges embracing the outer faces of the adjacent glass plates. In this construction it is necessary to insert the nuts from one end of the angle bar and then slide them to the points desired as it is impossible to slip the nuts between the ribs in any other manner because such ribs by the bending of the body-portion are brought closer together at their inner edges. In this construction, however, as in that already described, the ribs must be crimped substantially as shown in Fig. 4 to hold the nuts at the desired points for the purpose of receiving the screw-bolts after passing the latter through the resilient clamping plate 13 engaging the inner faces of the glass plates, which clamping plate when used in connection with glass plates disposed at an angle to each other will preferably be of the form shown in Fig. 2, though obviously a plate of the same cross sectional form as plate 10, may be employed. For the purpose of uniting a top plate to a side or end plate of a show case, a bar of the third type described is employed, the same being arranged between the plates as shown in Fig. 1. The nuts are also placed and secured in position as already described with reference to the corner bar, but the bolts are preferably fitted through a resilient plate 14 bearing at its lower edge against the inner side of the underlying glass, and provided at its upper edge with an outwardly projecting arm 15 which engages the underside of the top plate 16 and the rib of the bar projecting downward from said top-plate, it being obvious of course, that an arched plate of the type shown in Fig. 2, may be employed instead of plate 14. The top plate rests squarely on the bent-back flange 3 and its edge is snugly embraced by the flange 6 at the outer edge of flange 3 so that there is no chance of the top plate slipping out of position. In practice, however, the top may be secured more reliably in the position described by the use of a suitable cement not shown, in addition to flange 6.

The bottom of the window or show case will preferably consist of a plate 17 terminating at its edges in a step 18 underlying the side and end walls with the riser-portion 19 bearing against the inner sides of said glass plates, the latter being prevented from outward movement by a bead or flange 20 of any suitable type in window front construction, but preferably forming the upper edge of a metal bar 21 in show-case construction, which bar in the last-named construction is preferably of channeled form in cross section and provided with a pair of inwardly projecting parallel ribs 22 to receive between them at suitable points, nuts 23 for the reception of screw-bolts 24 extending through an angle-iron base 25 mounted as shown or otherwise upon supporting legs 26, if supporting legs are desired.

From the above description it will be apparent that I have produced a bar which can be adapted for the securing of glass plates together irrespective of their relative positions, and a window front construction or show case embodying such bars in which they are utilized with certain accessories not only to bind the glass plates together but in which the bars hide from and render such accessories inaccessible to a person standing at the outside of the window or case, and while I have illustrated and described the preferred construction, it is to be understood that I reserve the right to make such changes as properly fall within the spirit and scope of the appended claims.

Having thus described the invention what I claim as new and desire to secure by Letters Patent is:—

1. A bar provided with a pair of ribs projecting from the same face of the bar and crimped or bent inwardly or toward each other at a suitable point, in combination with a nut fitted between the ribs at and held by said crimped or bent portion.

2. A bar provided with a pair of ribs projecting from the same face of the bar and crimped or bent inwardly or toward each other at a suitable point, in combination with a nut fitted between the ribs at and held by said crimped or bent portion, a pair of glass plates fitting against the face of the bar from which ribs project and also against the outer sides of said ribs, a clamping strip bridging the space between said plates and bearing against the inner sides of the latter, and provided with a perforation opposite the said nut, and a bolt extending through said perforation and engaging said nut.

3. The combination with a bar provided with a pair of ribs projecting from one of its faces and crimped or bent toward each other at a suitable point, a pair of glass plates fitting against the face of the bar from which the ribs project and also bearing edgewise against the outer sides of said ribs, a clamping strip bridging the space between said glass plates, and a bolt and nut connection for clamping the bar and strip against the said plates and reliably held at one end between the crimped or bent portions of said ribs.

In testimony whereof I affix my signature, in the presence of two witnesses.

ALBERT G. HIGGINS.

Witnesses:
L. B. WHERRITT,
G. Y. THORPE.