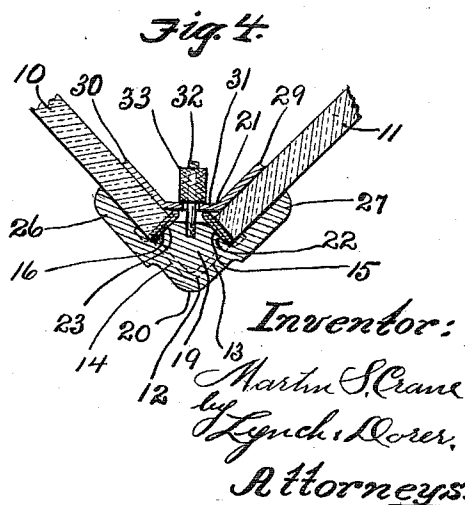
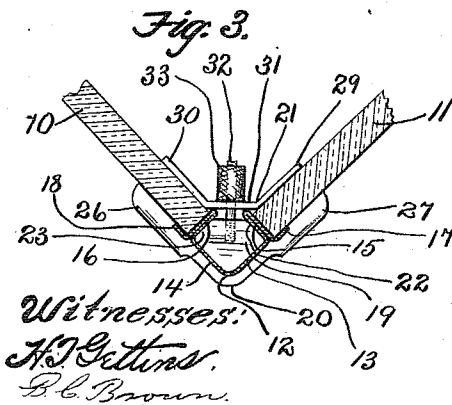
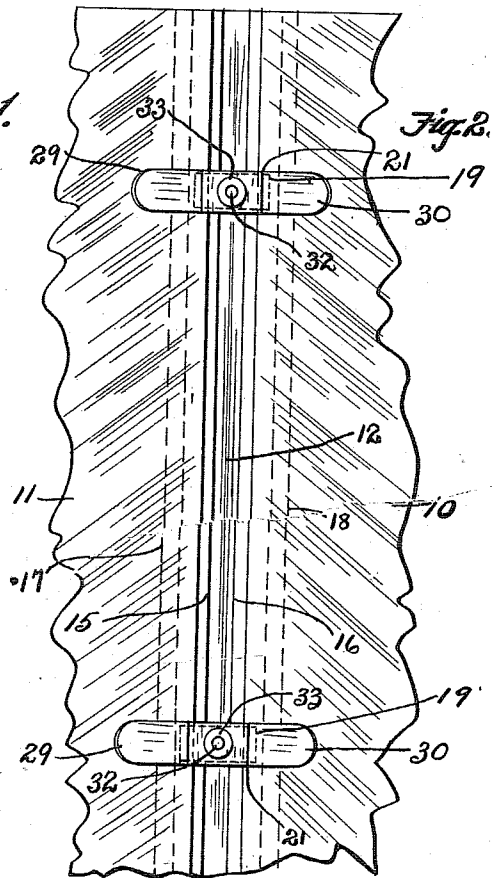
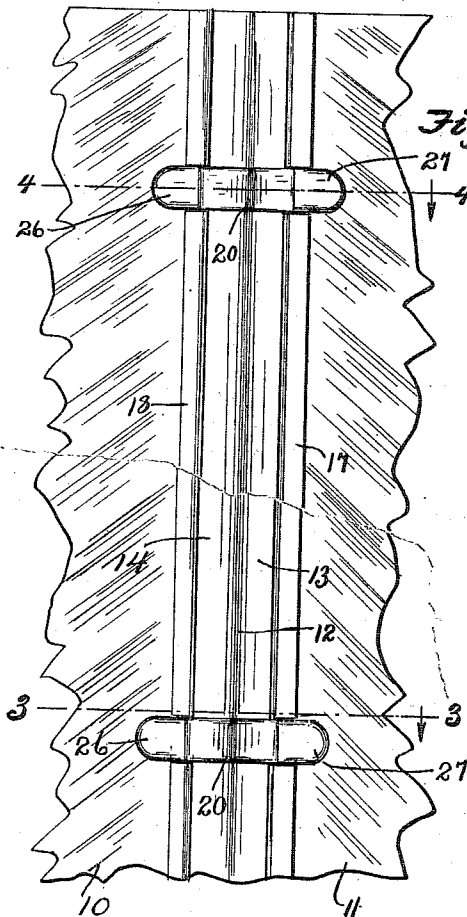


M. S. CRANE.
 DEVICE FOR SECURING TOGETHER GLASS PLATES FOR STORE FRONTS.
 APPLICATION FILED JULY 9, 1909.

994,721.

Patented June 13, 1911.



UNITED STATES PATENT OFFICE.

MARTIN S. CRANE, OF HOBOKEN, NEW JERSEY.

DEVICE FOR SECURING TOGETHER GLASS PLATES FOR STORE-FRONTS.

994,721.

Specification of Letters Patent. Patented June 13, 1911.

Application filed July 9, 1909. Serial No. 506,718.

To all whom it may concern:

Be it known that I, MARTIN S. CRANE, a citizen of the United States of America, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Devices for Securing Together Glass Plates for Store-Fronts, &c.; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to improvements in devices for securing together glass plates for store fronts, show-cases, and the like, and has for its object the provision of a device of the above character which will hold the glass plates securely in position, which is easy to manufacture and assemble, and which is neat and attractive in appearance.

The invention may be briefly summarized as consisting in certain novel details of construction and combinations and arrangements of parts which will be described in the specification and set forth in the appended claims.

In the accompanying sheet of drawings, Figure 1 is a front or outside elevation of the adjacent portions of two glass plates and of the plate securing means constructed in accordance with my invention. Fig. 2 is a rear or inside elevation of the same. Fig. 3 is a transverse section substantially along the line 3—3, Fig. 1, looking in the direction indicated by the arrow. Fig. 4 is a section substantially along the line 4—4, Fig. 1, looking in the direction indicated by the arrow.

In the figures of the drawings 10 and 11 represent respectively two glass plates which are held together by my improved uniting or securing device and which may be arranged at any angle to each other with their edges which are in the present case square edges, adjacent each other. Extending lengthwise of the plates is an outside corner strip 12 which bridges the space between the two plates and bears against the outer surfaces of the latter. This corner strip 12, which is preferably formed of sheet metal, is in outward appearance substantially V-shaped, having two portions 13 and 14 which form an angle corresponding to the angle made by the two plates and are substantially flush with the latter so as to be substantially a continuation of the outer

surfaces thereof. The strip is also provided with two inwardly extending convergent flanges 15 and 16 each of which is formed in this case by bending the metal inwardly and then doubling the same upon itself and is also provided with lips or flanges 17 and 18 which engage the outer surfaces of the two plates. It is not essential that the portion of the strip between the two inwardly extending flanges 15 and 16 be arranged so as to form an angle corresponding to the angle made by the plates, or in fact to form any angle at all, but I prefer that it have the shape here shown. The inwardly extending flanges 15 and 16 as here clearly shown in the drawings, extend along the edges of the glass plates and form seats or abutments therefor. The two plates and the corner strip are held together by inner and outer clamping members which are arranged at intervals and will now be described.

Each clamping device comprises an outer clamping member 20, an inner clamping member 21 and suitable means for drawing these parts together. The outer clamping member 20 is preferably formed of metal and is substantially V-shaped being provided with two wings or arms 26 and 27 which are arranged at an angle corresponding to the angle made by the glass plates and which embrace the corner strip and extend beyond the latter so as to engage portions of the surfaces of the two plates. On the inner face of the outer clamping member and arranged centrally thereof is a clamping block or lug 19 which extends between the adjacent edges of the plates and between the flanges 15 and 16 against which the plates bear. The angular faces 13 and 14 of the corner strip are notched or cut away at intervals, as shown in Fig. 4, so as to receive each of the lugs 19 which are shaped to substantially correspond to the open space in the strip between the inwardly extending flanges 15 and 16 and are each provided with two convergent faces 22 and 23 which bear against the flanges 15 and 16. The inner clamping member 21 is preferably formed of metal and is provided with portions 29 and 30 which bear against the inner surfaces of the two glass plates respectively and with an intermediate portion 31. All these parts above described are tightened or clamped together by means of a screw or threaded pin 32 which extends from the lug 19

through the portion 31 of the inner clamping member 21 and by means of a nut 33 which engages the outer end of the screw and bears against the portion 31 of the inner clamping member 21. It will be seen that when this nut 33 is tightened, the lug 19 between the adjacent edges of the two plates and between the inwardly extending flanges 15 and 16 is drawn inwardly producing a slight wedging action upon the flanges and upon the glass plates and tending to spread them apart. Since the outer clamping members 20 are integral with these lugs they will also be drawn inwardly so as hold the corner strip securely to the glass plates, but the arms 26 and 27 of the outer clamping member will spring sufficiently to permit the necessary inward movement of the lug 19 to produce the tightening or wedging action. By this construction the inwardly extending flanges 15 and 16 will be clamped so firmly between the edges of the glass plates and between the faces 22 and 23 of the block that practically air tight seams are provided.

What I claim is,—

1. In combination, a pair of glass plates arranged at an angle to each other and having adjacent edges, means for securing said plates together comprising a corner strip engaging the outer surfaces of the two plates and having inwardly extending convergent flanges which bear against the edges of the two plates respectively, a clamping block arranged within said corner strip intermediate the two flanges and having faces engaging the latter, an outside clamping member carried by the block and embracing the corner strip, an inside clamping member, and means for drawing said block and inner clamping member toward each other.

2. In combination, a pair of glass plates arranged at an angle to each other and having adjacent square edges, a corner strip engaging the outer surfaces of the two plates and having inwardly extending wings or flanges each formed by doubling the metal upon itself, said flanges forming seats or abutments for the adjacent edges of the two plates respectively, a wedging block located

intermediate the two flanges and having faces engaging the same, an outside clamping member carried by said block and serving to hold the corner strip against the plates, an inside clamping member embracing the inner surfaces of the plates, and means for drawing said block and inside clamping member toward each other.

3. In combination, a pair of glass plates having adjacent edges, a substantially V-shaped corner strip engaging the outer surfaces of the two plates and having inwardly extending convergent flanges which form seats or abutments for the adjacent edges of the plates, a portion of the strip intermediate the two flanges having a notch, a wedging block in said notch and engaging the two flanges, an outer clamping member carried by said block and embracing the corner strip, an inner clamping member, and means for drawing said block and inner clamping member toward each other.

4. In combination, a pair of glass plates arranged at an angle to each other and having adjacent edges, a substantially V-shaped corner strip bearing against the outer surfaces of the plates and having inwardly extending convergent flanges forming seats for the edges of the two plates respectively, said corner strip having a notch intermediate the two flanges, a wedging block seated in said notch and engaging said flanges, a substantially V-shaped outer clamping member carried by said block and embracing the corner strip, an inner clamping member embracing the inner surfaces of the plates, and means for drawing said block and inner clamping member toward each other comprising a screw passing through said inner clamping member and secured in said block.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

MARTIN S. CRANE.

Witnesses:

B. C. BROWN,

N. L. McDONNELL.