

No. 843,861.

PATENTED FEB. 12, 1907.

L. BARTELSTONE.
CORNER CLAMP FOR GLASS PLATES.
APPLICATION FILED FEB. 17, 1906.

Fig. 1.

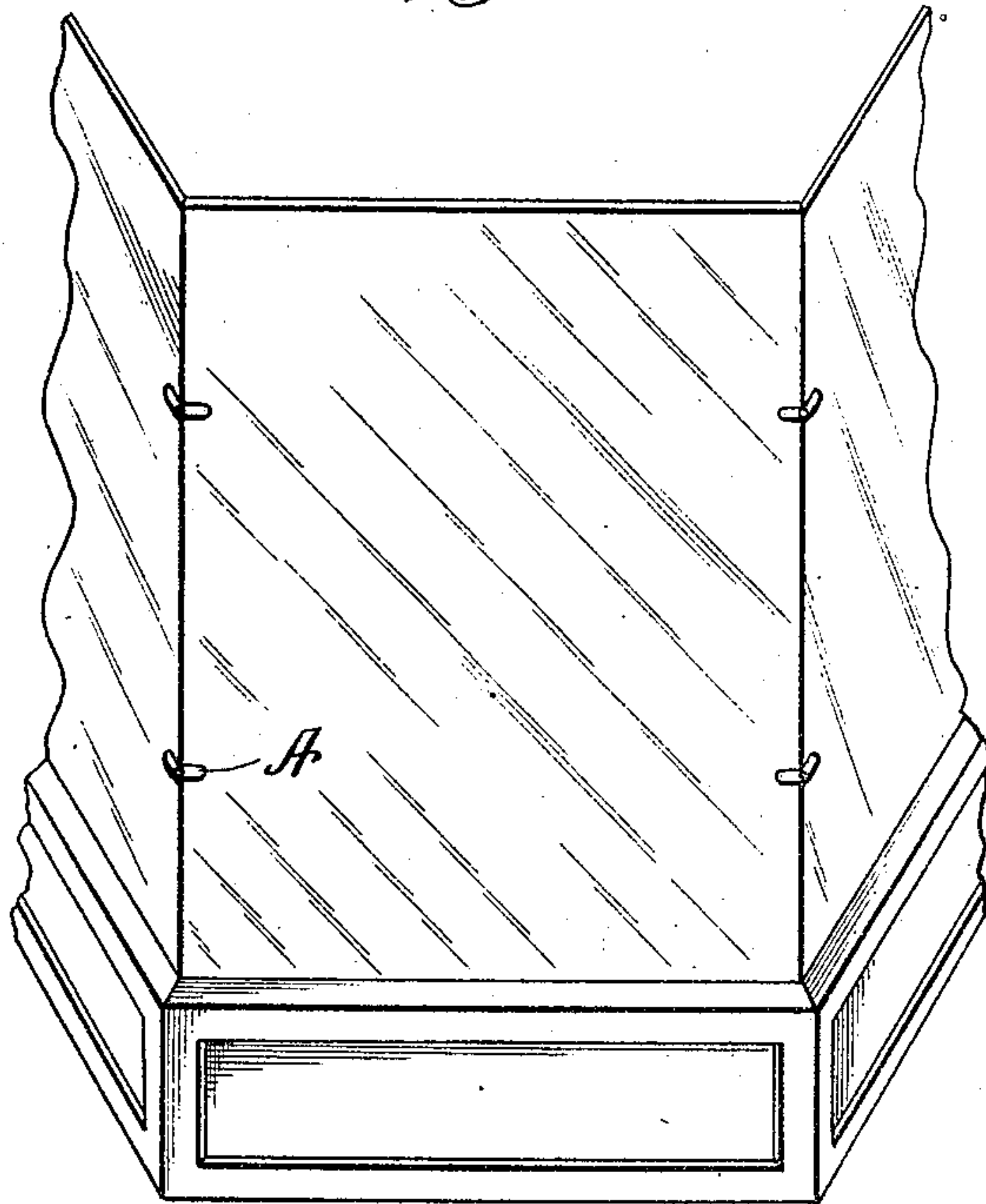


Fig. 3.

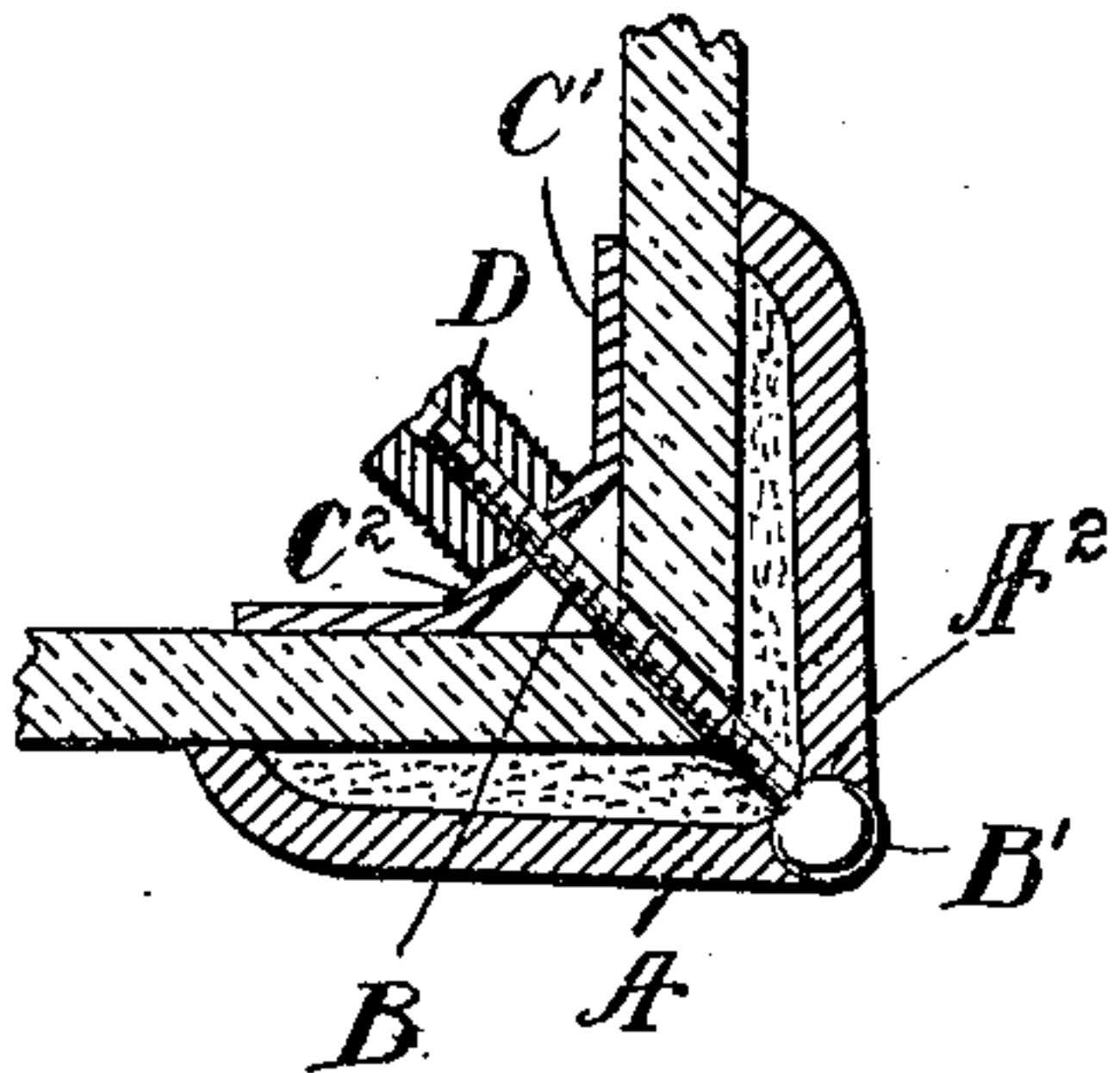


Fig. 2.

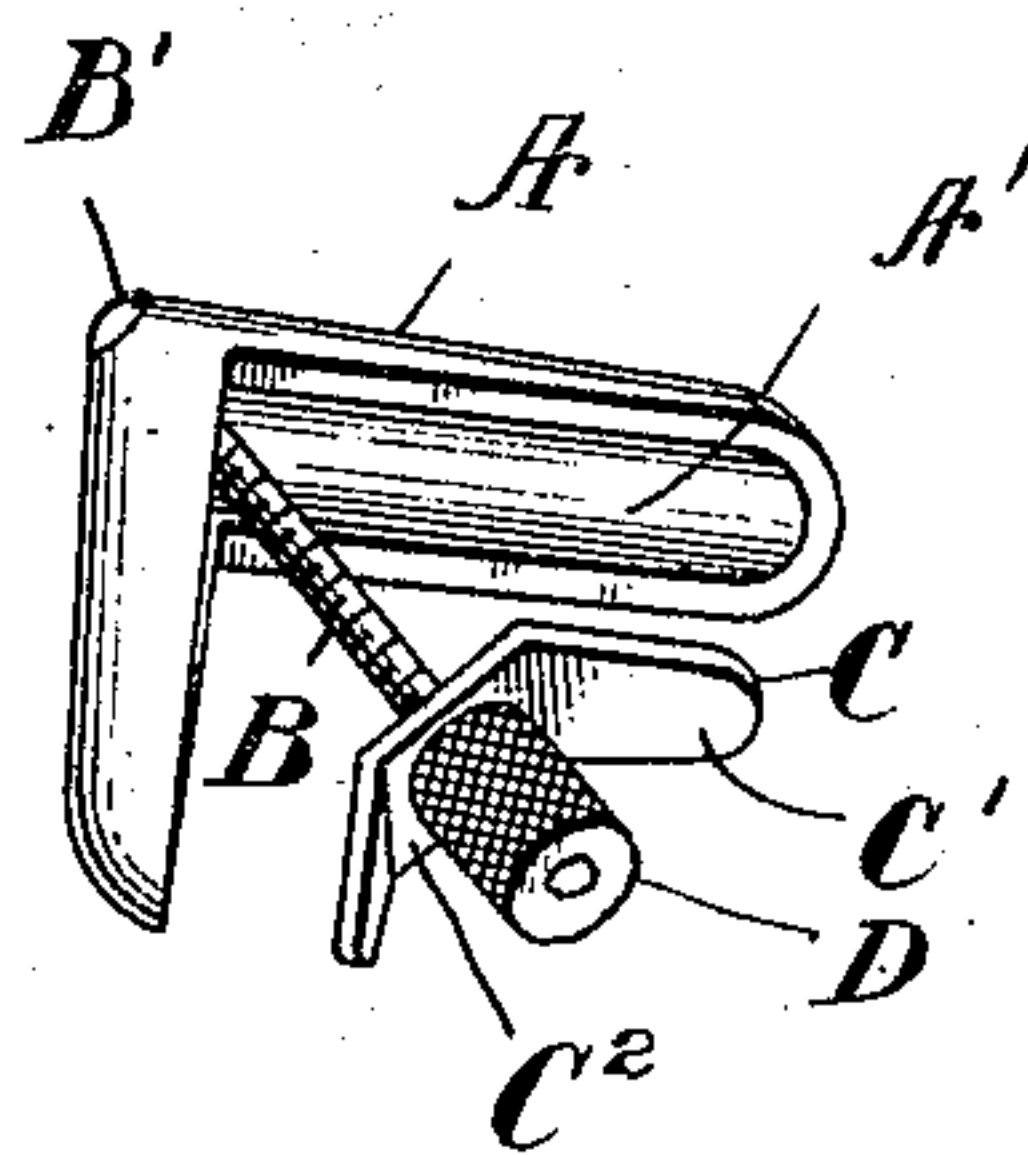


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CORNER-CLAMP FOR GLASS PLATES.

No. 843,861.

Specification of Letters Patent.

Patented Feb. 12, 1907.

Application filed February 17, 1906. Serial No. 301,541.

To all whom it may concern:

Be it known that I, LOUIS BARTELSTONE, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Corner-Clamps for Glass Plates, of which the following is a specification.

My invention relates to glass fronts such as are adapted to be used in stores and to show-cases and the like, and particularly to devices for securing the plate-glass of which such fronts or show-cases are constructed. Its objects are, among others, to provide a simple, strong, and durable clamp or fastening for securing the edges of the plate-glass, to permit a limited movement of the same, so that they may accommodate themselves to the shrinkage, movement, or vibration of the framework in which they are set or on account of different atmospheric conditions, and to facilitate the construction of such fronts and cases and reduce the liability of breakage.

To these ends the invention consists of the construction, arrangement, and combination of parts hereinafter described and claimed, and illustrated in the accompanying drawings.

In the said drawings, Figure 1 is an outside view of a glass store-front embodying my improvements. Fig. 2 is a perspective view of the clamping device on an enlarged scale. Fig. 3 is a horizontal medial section of the same. Fig. 4 is a detail of one of the parts.

The outside angular piece A is preferably made of metal and may be formed of any desired angle. Each of its arms is provided with a groove or recess A' on its inner side for the purpose of receiving and holding a suitable cement or other adhesive substance for the purpose of causing it to adhere to the glass. At the point where the two arms of the outside angular piece meet an aperture A² is provided. This aperture is substantially spheroidal in form and is adapted to receive the head B' of the screw-bolt B, which is formed to fit the walls of said aperture, so that it may move therein in any direction without being out of contact with the said walls at any point.

The screw-bolt B is provided with a screw-thread B², adapted to receive the milled screw-nut D. The angular clamp C consists of a straight central portion C², having

an aperture which permits the clamp to pass freely along the shank of the bolt B, and wings or flanges C', disposed at an angle to the central portion and substantially parallel to the arms of the outer angular piece A.

In operation the glass plates are first set up with their vertical edges in contact and with small openings between said edges at intervals, which are preferably formed by filing out a small groove in the edge of each plate. The cement-groove A' is then filled with a suitable cement and the angular piece A applied to the exterior of the plates. In applying this piece to the glass the screw-bolt B, which has previously been placed in its proper position in the angular piece, is passed through the aperture between the edges of the plates. It only remains to pass the clamp C over the inner end of the bolt and then screw the nut down to clamp the edges of the glass plates firmly between the outer and inner angular pieces. In this last operation it will be observed that the cement in the groove of the outer angular piece is compressed between the said piece and the surface of the glass, as the said angular piece being made of metal will possess a certain amount of resiliency, which will permit it to spread to a limited extent under the pressure exerted thereon. It will also be observed that all of the parts may have a limited movement in all directions, and this enables them to adjust themselves to different thicknesses or slight irregularities in the glass plates. The link or spherical head of the bolt and its complementary recess or socket in the outer angular piece contributes very materially to this automatic adjustment of the clamping device to the glass plates, and in this manner the danger of cracking the plates is avoided to a very material extent. The milled nut D is also an important factor in the operation of the device, as it affords a ready purchase for the fingers and can be made so that it will cover the end of the bolt B no matter what the thickness of the glass plates may be. This covering of the end of the bolt avoids the danger of injury to persons cleaning the windows and gives the entire device a neat and compact appearance.

The ability of all the parts of the device to adjust themselves to variations in the angle, position, and thickness of the glass plates is useful not only in assembling the device, but in holding the plates in position under various conditions to which the same are sub-

jected in use without danger of breakage. The cement groove or pocket is also useful in making the outer angular piece more resilient, and thus preventing it from breaking the glass under many conditions. The use of cement in the manner herein described reduces the amount of pressure required to secure the plates together, and this also lessens the liability of breakage.

10 What I claim is—

1. A device of the class described comprising, in combination, a pair of angularly-disposed glass plates, a V-shaped clamping-piece exteriorly abutting each of said plates and having in its apex a spherical seat, a link having a spherical head freely movable within said seat, said link terminating interiorly of said plates, a clamping-piece interiorly abutting each of said plates opposite to the exterior piece, and means for adjustably securing said link to said interior piece, whereby said plates may be clamped between said pieces and yieldably held together.

2. A device of the class described comprising, in combination, a pair of angularly-disposed glass plates, a V-shaped clamping-piece exteriorly abutting each of said plates and having in its apex a spherical seat, the plate abutting portions of said piece being

recessed, an adhesive within said recess adapted to impose friction between said piece and abutted plates, a link having a spherical head freely movable within said seat, said link terminating interiorly of said plates, a clamping-piece interiorly abutting each of said plates opposite to the exterior piece, and means for adjustably securing said link to said interior piece whereby said plates may be clamped between said pieces and yieldably held together.

3. A device of the class described comprising, in combination, a pair of angularly-disposed plates, a V-shaped clamping-piece exteriorly abutting each of said plates, a link having a universal-joint connection with said piece, a clamping-piece interiorly abutting each of said plates opposite to the exterior piece, and means adjustably securing said link to said interior piece whereby said plates may be clamped between said pieces and yieldably held together.

Witness my hand, this 7th day of February, 1906, at the city of New York, in the county and State of New York.

LOUIS BARTELSTONE.

Witnesses:

ALAN McDONNELL,
S. J. Cox.