G. C. HESTER.

CORNER BAR.

APPLICATION FILED NOV. 10, 1915.

1,278,343. Patented Sept. 10, 1918.

Fig. 1.

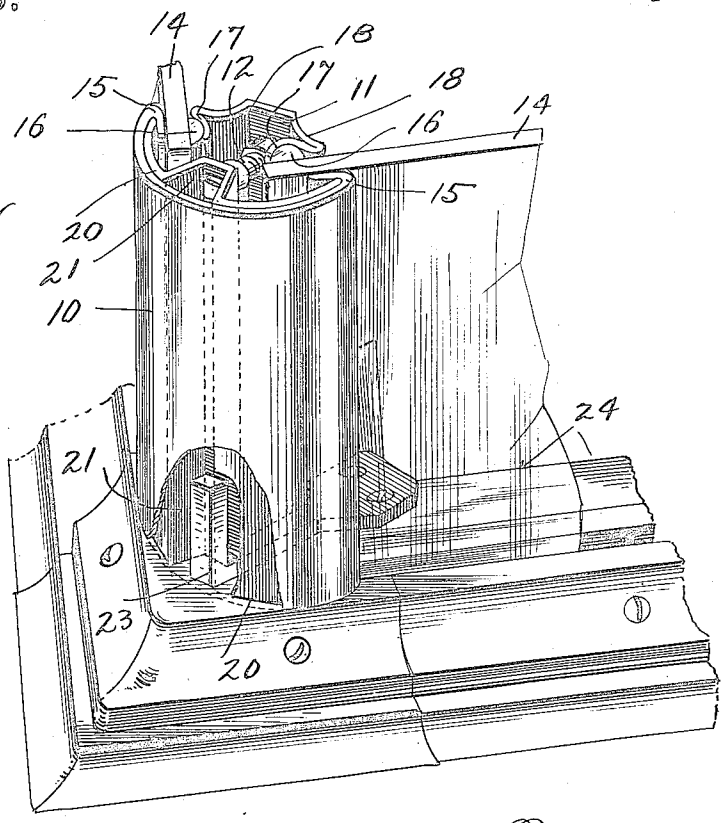


Fig. 2.

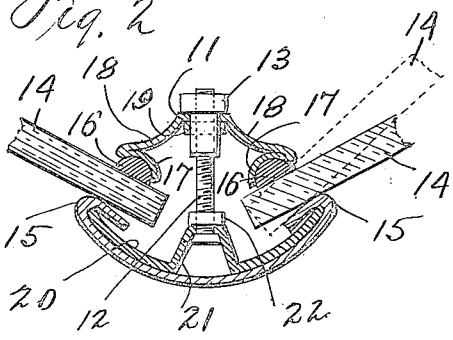
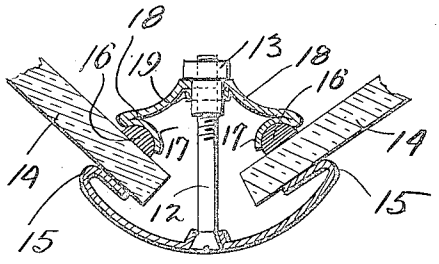


Fig. 3.



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CORNER-BAR.

1,278,343. Specification of Letters Patent. Patented Sept. 10, 1918.

Continuation in part of application Serial No. 462,483, filed November 13, 1908. This application filed November 10, 1915. Serial No. 60,767.

To all whom it may concern:

Be it known that I, GEORGE C. HESTER, a citizen of the United States, and resident of Chicago, in the county of Cook, and in the State of Illinois, have invented a certain new and useful Improvement in Corner-Bars, and do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to so-called store front construction where large sheets of plate glass are employed, and in particular such invention relates to what are known as corner bars which are the glass clamping devices that receive and support the edges of two plates of glass standing at an angle with each other to form a corner, and the object of my invention is to provide such a corner bar of sheet metal which will be strong and firmly grip, or hold the plates of glass, and which will adjust or adapt itself to a diversity of angles of the plates of glass.

In the accompanying drawings—

Figure 1 is a perspective view of a portion of a corner bar embodying my invention as installed;

Fig. 2 is a horizontal section through the same, the plates of glass being shown, respectively in full and dotted lines to illustrate the different angles to which the corner bar is adapted;

Fig. 3 is a horizontal section showing a somewhat different construction.

Corner bars of the type to which my invention relates comprise two members usually made of sheet metal, an outer one in the form of a concavo-convexly curved strip 10, preferably made of sheet copper, and an inner stop or bar 11, also formed preferably of sheet copper, and a clamping device in the form of a bolt, or screw 12 whose head is suitably attached to the outer member 10 with a securing nut 13 at the inside of the inner bar, or stop. To afford a good finish and give an easy bearing upon the outer face of the plates of glass 14 by the outer strip 10, its respective side edges are folded inward and slightly spaced from the body of the strip so as to constitute inwardly projecting glass-engaging ribs 15. The inner bar 11 at each edge has a concave seat which contains a strip of wood 16 with a flat face that bears against the glass and a convex face to fit the concave seat, said concave seat being formed by a concavo-convex bend 17 at the side of the bar 11, and by a return fold, or bend and a concavo-convex bend 18 extending outwardly from the bearing strip seat, resiliency, or elasticity is further added to the inner bar, so that a firm, but nevertheless, elastic support is provided for the glass at the inner side thereof. The wooden bearing strips 16 are free to rock, or turn in their seats on the inner bar 11 and as the outer bar, or member 10 has a rounded corner contiguous to the glass, it will be seen that the plates of glass may stand at angles that vary considerably, and yet at all times the plates of glass will be firmly clamped, and without any danger of breakage, either from the grip of the corner bar, or such movements as may take place from the action of high winds, or the settling of the structure. In reality a double spring is provided on the inner bar by the double curvature shown and described at each side of the central portion of the bar which gives substantially a V-shape at each side of the bar 11.

The flat glass-engaging face or surface of the wood being a continuous surface of some extent assures a good friction grip on the glass, and wood is highly desirable, not merely because of its soft nature which affords cushioning protection to the glass, but because it adheres to the glass in a way and to a degree that is not the case with metal. The wood strips give an evenly distributed pressure upon the glass so that there is no localized pressure as along a line which is apt to result in breakage.

The metal around the bolt hole in the inner bar 11 is forced inward to provide an annular flange 19 which surrounds the bolt and which has the important effect of adding stiffness to the bar where weakness would result if the metal were punched clean out to form the hole and it constitutes a lateral bearing, or support for the bolt.

As shown in Figs. 1 and 2, a reinforcing strip 20 of iron, or steel is placed within the outer bar, or member 10 which conforms generally to the shape of the latter in cross section and which at its center has an inwardly bent, or offset rib 21 which adds to its stiffness and which constitutes a convenient means for attaching the clamping

bolt 12 thereto, the head of the bolt being seated in the groove on the outside of said strip and a lock nut 22 being applied to the bolt on the inner side of said rib. As shown in Fig. 3, no reinforcing strip is used and the screw head appears on the outside of the outer member 10 where it is accessible for turning by means of a screw driver.

The reinforcing strip 20, by reason of the provision of the hollow offset rib 21, enables the use of an anchor 23 at the end of the corner bar, said anchor 23 being of L-shape with a horizontal member adapted to be attached by screws to the window frame members 24 of wood, while the vertical member extends into the rib 21 so that it engages the inner side of said rib and the inner side of the outer corner bar strip 10, and thus the corner bar is rigidly braced, or anchored against movement under wind pressure upon the plates of glass and dangerous vibration of the latter is thus prevented. The anchor is of such shape that it may be readily cast, and is, therefore, inexpensively made, and no special formation of the corner bar is required for coöperation of the anchor ends therewith, and thus, if a given corner bar should be too long for the job it can be cut off to the proper length without in any manner hindering the proper use of the anchor.

This application is a continuation in part of an application filed by me November 13, 1908, No. 462,483, in that the subject matter of these two applications is common in certain particulars.

Having thus described my invention what I claim is—

1. The combination in a corner bar of inner and outer glass plate-engaging bars, that support plates of glass standing at an angle to each other, the inner bar being formed of sheet metal and having its edges bent to form concave seats, and strips of wood with convex sides rotatably mounted in said seats, and having flat sides that engage the sides of the plates of glass.

2. The combination in a corner bar of inner and outer glass plate-engaging bars, that support plates of glass standing at an angle to each other, the inner bar being formed of sheet metal bent at each side of its central portion into substantially a V-shape, one arm of the V being toward the plate of glass, and concave on its side toward the glass, and a strip of wood rotatably seated in said arm and having a flat glass-engaging side.

3. The combination in a corner bar of inner and outer glass plate engaging members that support plates of glass standing at an angle to each other, means connecting the two members passing between the edges of two plates of glass situated at opposite sides of the corner bar, said inner member having at each side a concave seat, and a strip of wood convex on one side fitting said concave seat and rotatable therein and flat on its outer glass-engaging side.

In testimony that I claim the foregoing I have hereunto set my hand.

GEORGE C. HESTER.