

C. M. CONLEY.
 DEVICE FOR FASTENING TOGETHER PLATES OF GLASS.
 APPLICATION FILED SEPT. 5, 1908.

946,959.

Patented Jan. 18, 1910.

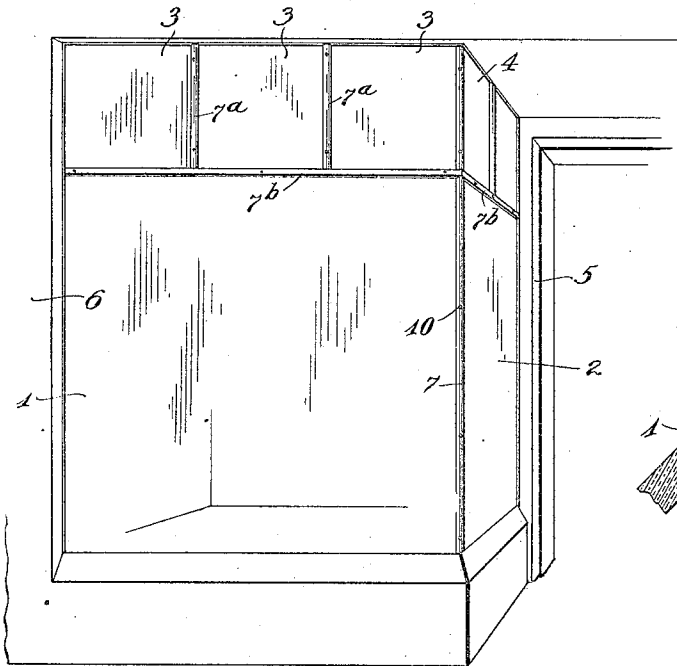


FIG. 1

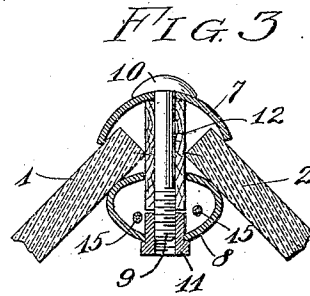


FIG. 3

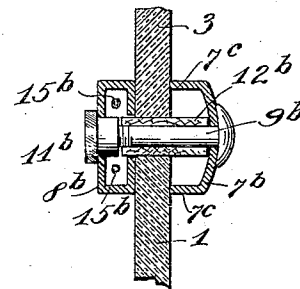


FIG. 4

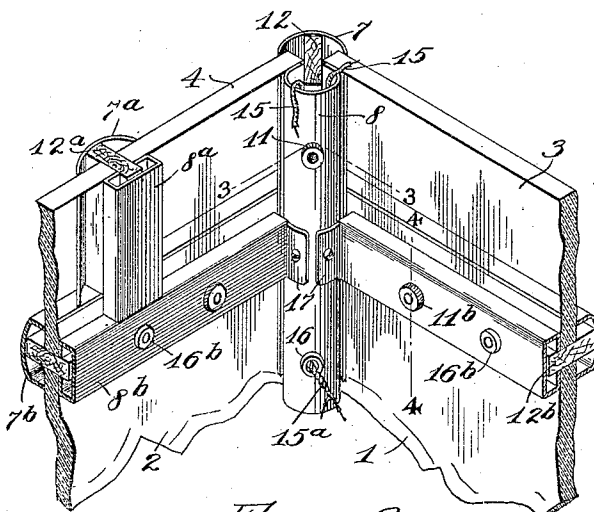
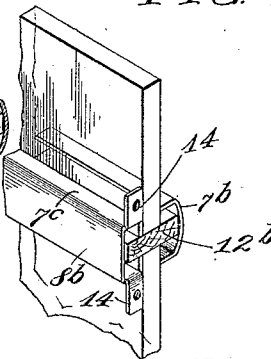


FIG. 2



WITNESSES:
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 BY Walter F. Hull.
 ATTYS.

UNITED STATES PATENT OFFICE.

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DEVICE FOR FASTENING TOGETHER PLATES OF GLASS.

946,959.

Specification of Letters Patent.

Patented Jan. 18, 1910.

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To all whom it may concern:

Be it known that I, CHARLES M. CONLEY, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Devices for Fastening Together Plates of Glass, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to devices for securing together pieces of glass, which glass may be of the ordinary plates used in store fronts, in show cases, in glass domes, or in various other constructions.

The object of the invention is to provide a device of the character stated which shall be adjustable to accommodate any thickness of glass, which shall adapt itself to practically any angle in which the adjacent pieces of glass may extend, and which shall be simple in construction, economical in manufacture and convenient in application.

In the drawings forming a part of this application, Figure 1 shows in perspective a portion of a store front having large plate glass windows and smaller transom windows above, the various plates of glass being secured together by my invention; Fig. 2 is a perspective view on an enlarged scale of the store front shown in Fig. 1, said view being taken from the interior of the store and looking toward the corner; Fig. 3 is a horizontal section through the corner of a store front taken substantially on the line 3—3 of Fig. 2; and Fig. 4 is a vertical section through the fastener for the transom windows, taken on the line 4—4 of Fig. 2.

Taking up a detailed description of the invention by reference to the drawings, in which the same reference character designates the same part throughout the several views, 1 and 2 represent plates of glass forming the front and sides respectively of a display window.

3 represents transom windows above the plate 1, and 4 represents transom windows above the plate 2.

As will hereinafter appear, the invention is applicable to substantially all forms and designs of window construction. In Fig. 1, I have shown at 5 a door frame or casing, and at 6 I have shown the outer casing of the window, against which abut one edge of the plate 1 and of the adjacent plate 3.

The plates 1 and 2 are placed at an angle to each other, as shown in Fig. 3, and they are held together by the fastening device which forms the subject matter of my invention, and which consists of an outer member 7, and an inner member 8, said members being held together by bolts 9 which extend through said members and between the edges of the glass, said bolts preferably having their heads 10, which are usually of an ornamental design, engaging with the outer member 7 at its center, and the nut 11 engaging with the inner member 8 at its center. Extending vertically between the edges of the plates of glass is a strip 12 of wood, or of some other relatively soft material, through which strip the bolts 9 pass, thereby holding the strip in position. This strip of wood serves to prevent the edges of the glass from contacting with each other, or with the bolts 9, which contact, if permitted, would be liable to result in injury to the glass,—it being understood that the said strip is composed of a material which is softer than the glass so that the latter will not be injured by contact therewith. The outer member 7 is composed of a strip of resilient metal, which may be of brass or any other suitable material, bent transversely into a curved shape, as shown, the outer edges of which engage with the outer faces of the glass plates. The inner member 8 is likewise composed of a strip of resilient metal bent substantially in the shape of a letter C, between the edges of which the bolts 9 and the strip 12 extend, the said strip practically closing the gap between said edges. The plates 1 and 2 project between the edges of the member 7 and the inner rounded portions of the member 8, and the nuts 11 are screwed up on the bolts 9 so as to tighten the members 7 and 8 against the sides of the glass. By this construction, the glass pieces are held together in such manner as to prevent injury thereto, and yet are held firmly so that the said pieces are maintained rigidly in position. By this construction, the plates may be placed at substantially any angle, the plates always finding a suitable bearing against the rounded surfaces of the member 8, while the outer resilient member yields, but always bears firmly against the plates.

The construction thus described is especially adapted for use where the plates form a corner, although the same may be used

where the plates lie in the same plane. In the latter case, however, I prefer to slightly modify the construction in the manner shown in Fig. 2, in which 7^a is the outer member, and 12^a the wooden strip separating the glass plates, said member and strip being substantially identical with the construction hereinbefore described. The inner member 8^a is preferably a rectangularly shaped tube having a longitudinal slot in the side next the glass through which slot the strip 12^a extends. This construction affords a straight face against which the inner faces of the plates lie, thus holding said plates more firmly in position than would be possible if the contacting portions of the member 8^a were curved, as shown in Fig. 3.

The plates 1 and 2 are joined to the transom plates 3 and 4 by the fastening device which is shown in Figs. 2 and 4, the same consisting of an outer member 7^b and an inner member 8^b, the latter member being substantially the same as the member 8^a hereinbefore described. The outer member 7^b is in this instance preferably formed with a convex outer surface and with edges 7^c turned inwardly so as to abut against the plates at right angles thereto. The bolts 9^b extend through strips 12^b which separate the edges of the plates, and the bolts are held in position by nuts 11^b which engage with the outer flat surface of the member 8^b. As will be understood, when one of the rounded corner members 7 is joined with the members 7^b, the adjacent ends of the latter members are required to be rounded or concaved so as to form a satisfactory joint with the members 7, said joint being more or less difficult to produce. For this reason, I prefer to provide the member 7^b with the edges 7^c at right angles to the glass plates in order that the abutting members 7^a may form a square joint therewith, this form of joint being more easy to construct than the rounded joint hereinbefore referred to. At the outer end of the member 8^b, I provide lugs 14 having apertures there-through by means of which the said member may be secured to the window casing. Preferably these lugs are formed integral with the sides 7^c of said member, the lugs being turned at right angles to said sides, as shown in Fig. 2.

It is sometimes desirable to illuminate the show windows, show-cases, etc., and my invention is admirably adapted to the purpose, the hollow construction affording conduits for the electrical conductors. Thus, as shown, conductors 15 are extended through the vertical inner members 8 on opposite sides of the wooden strip 12, said strip amply insulating the conductors from each other. At intervals, connecting wires 15^a may be extended outwardly through the insulating bushings 16 in the member 8 and

connected with suitable lamps. At the joints between the main and the transom plates branch conductors 15^b may be carried outwardly from the corner through the members 8^b, as indicated in Fig. 4, and lamps may be attached thereto at the bushings 16^b, said bushings being shown in Fig. 2. The inner horizontal members 8^b are preferably secured to the inner vertical member 8^b by lugs 17 which are preferably made integral with the said horizontal members and which are screwed or otherwise secured to the corner member.

As stated, my invention is adapted for securing pieces of glass together in various kinds of construction, such as window fronts, show cases, domes, etc., and the store front construction is merely selected for the purpose of illustrating one use to which my invention may be applied.

Various changes in the details of construction may be made without departing from the invention, and I desire it to be understood that the following claims are not intended to be limited to such details any further than is rendered necessary by the terms therein employed.

Having thus described my invention, I claim:

1. In a device for securing together pieces of glass at their inner edges, the combination with an outer transversely bent member covering the joint between the glass pieces on the outside and contacting with said pieces near their ends, of a member bent transversely of its length, the sides thereof engaging with the inner faces of the glass pieces, a strip of relatively soft yet stiff material, said strip being formed with two substantially parallel and flat surfaces, said strip extending between the pieces of glass, the edges of the glass contacting the said strip, means for securing the said members together, the said pieces of glass being capable of slight movement while in contact with the strip to vary the angle between the said pieces of glass.

2. In a device for securing together pieces of glass at their edges, the combination with an outer transversely bent member covering the joint between the glass pieces on the outside and contacting with said pieces near their ends, of a member bent transversely of its length, and having its edges separated, the sides of said member engaging with the inner faces of the glass pieces, a strip of relatively soft yet stiff material, said strip being formed with two substantially parallel flat surfaces, the said strip abutting against the outer transverse member and engaging the inner member extending between the separated edges thereof, the two pieces of glass bearing upon the flat surfaces before mentioned, said glass pieces being capable of slight movement whereby the angle be-

tween the said glass pieces may be varied, and means for securing the said members together.

5 3. In a device for securing together pieces of glass at their edges, the combination with a transversely bent outer member covering the joint between the said pieces on the out- side, said member having its edges yield- 10 ingly engaging the outer sides of the said pieces, of an inner member covering the said joint on the inner side, said inner member being bent transversely and having its edges separated and its sides engaging with the 15 inner sides of the glass pieces, a wooden strip extending between the said members, between and in contact with the separated edges of the inner member, and between the inner edges of the glass for separating the 20 latter, and bolts passing through said members and through the said strip for pressing the members against the opposite sides of the glass.

4. In a device for securing together pieces of glass at their edges, the combination with

an outer strip of resilient metal covering the 25 joint between the pieces of glass on the out- side, the edges of said strip engaging with the outer sides of the glass pieces near their ends, of an inner strip of resilient metal bent transversely and having its edges sepa- 30 rated, the sides of the said inner strip en- gaging with the inner sides of the pieces of glass near the end thereof, a strip of wood between the said members and between the 35 inner edges of the glass pieces, said strip of wood extending between the edges of and in slidable contact with the inner strip of metal, and bolts passing through the said strips of metal and through the strip of 40 wood whereby the parts are securely held to- gether with the ends of the glass pieces clamped between the said resilient strips.

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

CHARLES M. CONLEY.

Witnesses:

S. E. FOUTS,
BRENNAN B. WEST.