

No. 712,842.

Patented Nov. 4, 1902.

L. PAULLE.
CORNER CLAMP FOR SHOW CASES.
(Application filed June 28, 1902.)

(No Model.)

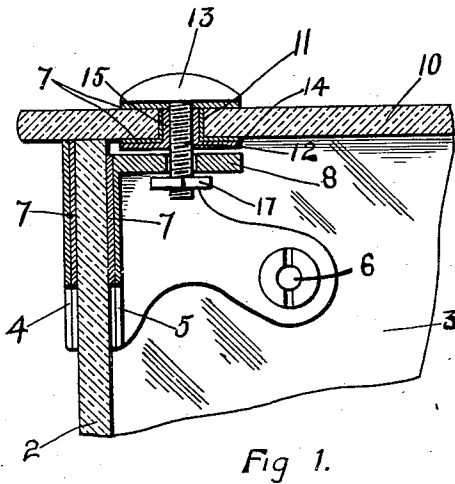


Fig 1.

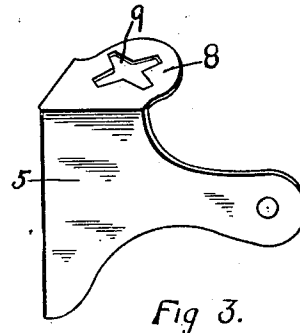


Fig 3.

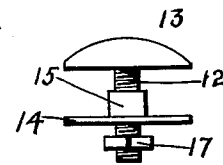


Fig 5.

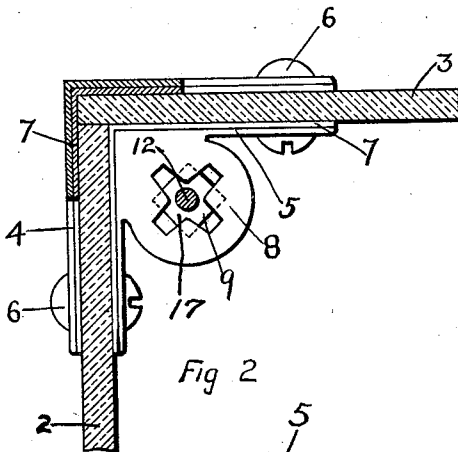


Fig 2

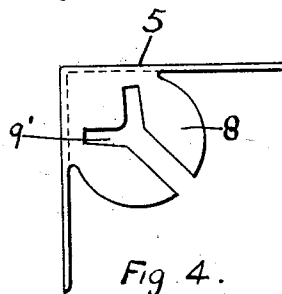


Fig 4.

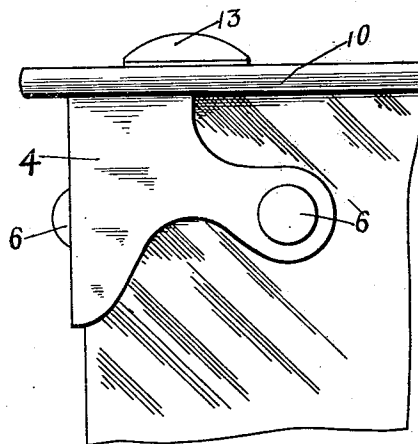


Fig 6.

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UNITED STATES PATENT OFFICE.

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CORNER-CLAMP FOR SHOW-CASES.

SPECIFICATION forming part of Letters Patent No. 712,842, dated November 4, 1902.

Application filed June 28, 1902. Serial No. 113,561. (No model.)

To all whom it may concern:

Be it known that I, LEONARD PAULLE, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Corner-Clamps for Show-Cases, of which the following is a specification.

The invention relates to show-cases, and is designed as an improvement over the clamping devices shown and described in my pending application for a similar invention, filed March 25, 1901, Serial No. 52,804.

In the manufacture of plate-glass show-cases I have found that where only a small threaded hole of sufficient size only to receive the retainer-shank is provided in the binder-flange it is necessary to determine with a considerable degree of accuracy the proper location of the hole in the top plate, or otherwise when said plate is placed in position on the side walls or panels the holes may not register, and as the plate having once been fitted cannot be moved horizontally without drilling new holes a great deal of time and labor may be wasted in setting up a case. I have also found that where the shank of the retainer passes through the top plate and its threaded end is secured in a correspondingly-threaded hole in the binder-flange the plate cannot adjust itself to the different positions assumed by the case through settling or sagging or any unevenness in the floor, and the shank rigidly secured at one end in the flange will transmit the strain to its other end, where it passes through the hole in the glass, and this strain will frequently become sufficiently severe to cause breakage at that weakened point.

The object, therefore, of this invention is to provide a fastening means for the top plate which will allow lateral adjustment thereof and render accurate placing of the holes therein unnecessary.

A further object is to provide means for clamping or binding the glass on both sides to brace and strengthen it where it is weakened by the drilling of the holes therein.

A further object is to provide a fastening device which, while holding the top plate securely and preventing its removal from the walls, will allow it to adjust itself to the varying conditions of settling and sagging without cramping or binding the glass or subject-

ing it to any unusual strain that would be likely to cause breakage at the corners when the holes are drilled.

Other objects of the invention will appear from the following detailed description.

The invention consists generally in providing a binding nut or plate that is adapted to receive the threaded shank of the retainer or button and having a broad flange to fit snugly against the under surface of the plate.

Further, the invention consists in providing a binding-nut having a broad flange and a bushing or hub to inclose the threaded shank where it passes through the plate.

Further, the invention consists in providing the binder-plate flange with a hole or opening of sufficient size to allow lateral adjustment of the shank therein and wherein said shank is loosely secured.

Further, the invention consists in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical section of the corner of a glass show-case, showing my invention applied thereto. Fig. 2 is a plan view showing the binder-plates in position before the top plate is secured thereto. Fig. 3 is a perspective view of the inner binder-plate. Fig. 4 is a plan view of the same, showing a modified form of opening in the flange. Fig. 5 is a detail of the retaining screw or button; and Fig. 6 is a side elevation of the corner, showing the complete attachment in position on the case.

In the drawings, 2 and 3 represent, respectively, the side and end walls or panels of a show-case with their abutting edges fitting snugly together at the corners.

4 represents the outer binder or corner plate, and 5 the inner one. These binders are angled in form to fit the corners of the case and are preferably secured together and to the side and end panels by bolts 6, passing through holes in the glass and corresponding holes in the binder-plates. The holes in the inner binder are a little nearer the corner of the case than those in the outer binder, so that when the bolts are tightened and the binders drawn up against the panels the abut-

ting edges of the panels will be drawn snugly together to form a firm substantial joint and exclude dust from the case. I prefer to provide strips of rubber cloth or similar yielding material 7 between the binders and the panels. The upper edge of the inner binder is preferably a little below the corresponding edge of the outer binder, which is preferably flush with the top of the panels to make room for the lock-nut hereinafter described, and said inner binder is provided with an inwardly turned or projecting flange or shelf 8, that is substantially horizontal, lying within the angle formed by the sides of said binder and flush with the upper edge of the same, as shown in Fig. 1, or a little below said edge, if preferred. This flange is provided with an opening 9, preferably star-shaped, formed by two intersecting slots, the ends of which, corresponding to the prongs of a star, being preferably tapered from the center toward the outside.

10 represents the top plate, which with the side walls or panels I have shown composed of plate-glass, now generally employed in the more expensive types of show-cases. This top plate is provided with a hole 11 near the corner to receive the threaded shank 12 of a button or retainer 13, which is suitably ornamented, and as the hole weakens the glass said button extends for a considerable distance therearound.

The opening 9 is of sufficiently greater diameter than the threaded shank to allow the ready insertion of the shank when the case is being set up without the necessity of accurately locating the proper position of the hole in the top plate with respect to said opening before drilling, and I am thus able to save considerable time that is frequently wasted in fitting the parts together to determine the proper position of the holes, and I am also able to adjust the top plate laterally after it has been placed on the side walls, which has not been possible with devices of this kind as heretofore constructed. Upon the shank 12 I provide a lock-nut consisting of a broad flange or plate 14, having an interiorly-threaded bushing or hub 15, that is adapted to enter the hole 11 in the top plate and inclose the shank at that point. This nut lies in the space between the flange and top plate and out of contact with the former, so as not to interfere with the free movement of the shank in the slotted flange, and is turned up snugly against the top plate, and with said button serves as a brace or clamp to support and strengthen the said plate where it is weakened by the drilling of the hole therein. I prefer to make the plate and bushing in one piece, so that the lock-nut will have a sufficient number of threads to insure its being held firmly against the under side of the top plate. On the end of the shank which extends through the opening 9 I provide a nut 17, to prevent the top plate and the shank from being lifted off the side

walls and at the same time permit lateral movement of the shank within the opening 9 and a corresponding sliding movement of the top plate on the panels.

In Fig. 4 I have shown a modified Y-shaped form of slot 9', having an open end to allow the shank to be slipped in or out of the slot without removing the nut.

In devices of this kind as heretofore constructed the end of the retainer being rigidly secured in the flange the strain caused by the racking or twisting of the case or unevenness in the floor would be transmitted through the shank to the point where it passed through the top plate, and at this point the breakages usually occurred. In my improved clamp, however, the lower threaded end of the shank is free to adjust itself within the opening in the flange to neutralize the strain on the glass, while the top plate is firmly clamped between the head of the button and the locking-nut, the weak point around the hole is braced, strain is more widely distributed, and the top plate is free to slide in either direction and adjust itself to the settling or rising of the panels.

The binder-plates are preferably made of sheet metal suitably nickeled or otherwise ornamented, and may be made of various sizes and shapes, according to the dimensions and style of the case whereon they are used.

I claim as my invention—

1. As a new article of manufacture, a show-case clamp, comprising angled binders or plates to fit the corner of the case on the inside and outside and provided with means for securing said binders to the side and end walls and drawing the abutting edges of said walls together, said inner binder being provided with an inwardly-turned flange or shelf having a hole or opening, a retainer or button having a shank to pass through a hole in the top plate and through the hole in said flange, and means for preventing the withdrawal of said shank from the opening in said flange, said opening being of sufficient size to allow lateral adjustment of said shank therein.

2. A show-case clamp, comprising angled binders or plates to fit the corner of the case on the inside and outside, and means for securing said binders to the side and end walls and drawing the abutting edges of said walls together, said inner binder being provided with an inwardly-turned flange or shelf having a slotted opening, and a retainer or button having a threaded shank to pass through an opening in the top plate and through the slot in said flange, and a nut provided on the end of said shank to prevent its withdrawal from said slot but allowing its lateral adjustment therein.

3. A show-case clamp, comprising angled binders or plates adapted to fit the corner of the case on the inside and outside and means for securing said binders to the side and end walls and drawing the abutting edges of said

walls together, said inner binder being provided with an inwardly-turned flange or shelf having a star-shaped opening, and a retainer or button having a threaded shank to pass through an opening in the top plate and through the slot in said flange, and a nut provided on the end of said shank to prevent its withdrawal from said slot but allowing its lateral adjustment therein.

4. A show-case clamp, comprising angled binders or plates adapted to fit the corners of the case on the inside and outside, bolts passing through said binders and the side and end walls to draw the abutting edges thereof together, a retainer or button having a threaded shank passing through a hole in the top plate, a lock-nut provided on said shank and fitting snugly against the under side of said top plate and cooperating with said button to brace and strengthen the glass around the hole therein, and an inwardly-turned flange or shelf provided on said inner binder and having an opening to receive the end of said shank and wherein said shank is loosely secured.
5. In a show-case, the combination, with the abutting side and end walls or panels, of angled binder or corner plates fitting the corner of the case on the inside and outside, the outer binder being flush substantially with the upper edge of said panels and the inner binder a little below the same, bolts passing through said binders and through holes in said panels, an inwardly-projecting flange provided on said inner binder and having a hole or opening, a top plate resting upon said panels and having an opening to register with the opening in said flange, a retainer or button having a threaded shank to pass through said top plate and loosely held within the opening in said flange and a lock-nut provided on said shank between said flange and

the top plate and having a broad flange fitting snugly against and bracing and strengthening the latter and out of contact with the former, substantially as described.

6. A show-case clamp, comprising angled binders or plates fitting the corners of the case on the inside and outside and means for securing said binders to the side and end walls and drawing the abutting edges of said walls together, an inwardly-projecting flange provided on said inner binder and having a hole or opening, a top plate resting upon said side and end walls and having an opening to register with the opening in said flange, a retainer or button having a shank to pass through said top plate, means for loosely securing said shank within the opening in said flange, and a lock-nut provided on said shank between said flange and the top plate and spaced from the former and fitting snugly against the latter, said lock-nut being provided with a broad flange to bear upon the under surface of the glass and with a bushing to enter the hole therein and inclose said shank.

7. In a show-case clamp, a binder-plate having an opening or socket and adapted to be secured to the vertical walls or panels, a button or retainer having a shank to pass through a hole in the top plate and enter said socket and provided with a broad head, and a flanged lock-nut provided on said shank and between which nut and said head said top plate is braced and strengthened around the hole therein.

In witness whereof I have hereunto set my hand this 24th day of June, 1902.

LEONARD PAULLE.

In presence of—

RICHARD PAUL,
M. C. NOONAN.