No. 646,601. Patented Apr. 3, 1900.

P. P. HASEK.

FASTENING FOR PLATES OF SHOW WINDOWS.

(Application filed Apr. 10, 1899.)

(No Model.)

Fig. 1.

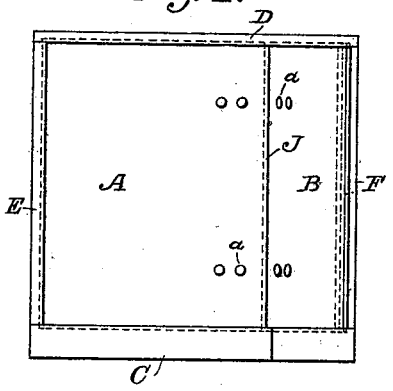


Fig. 3.

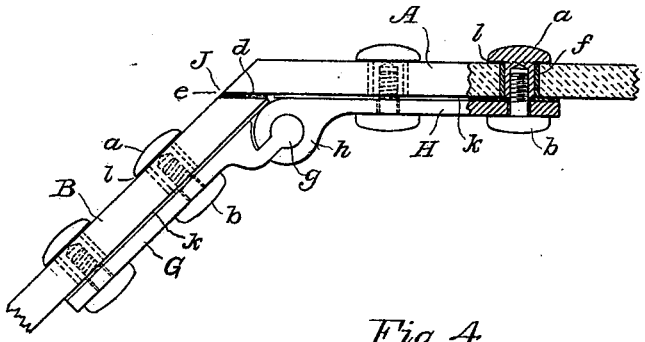


Fig. 2.

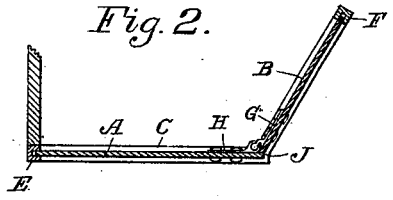


Fig. 4.

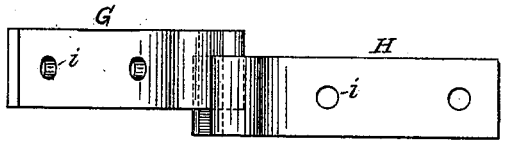


Fig. 5.

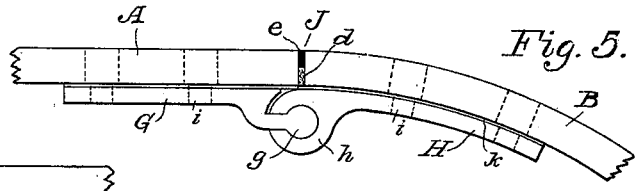
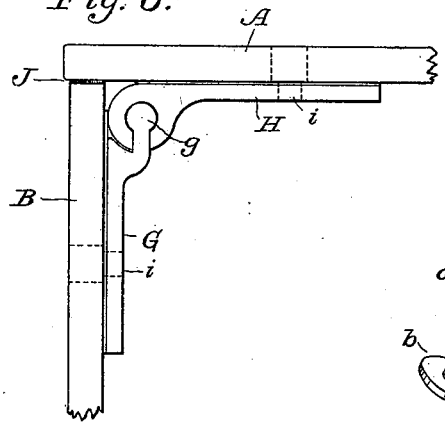


Fig. 6.



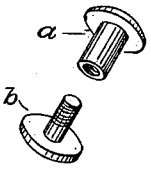
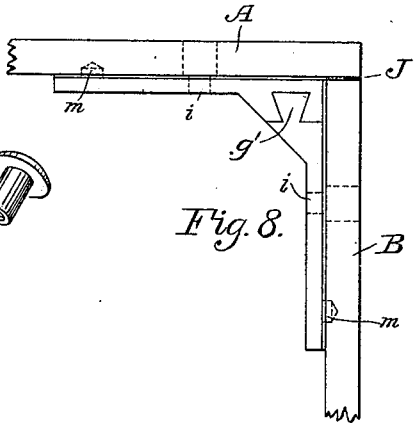


Fig. 7.

Fig. 8.



WITNESSES:

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George W. Higgins

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Peter P. Hasek,

BY

Luther G. Hopper

ATTORNEY.

UNITED STATES PATENT OFFICE.

PETER P. HASEK, OF CLEVELAND, OHIO, ASSIGNOR OF TWO-THIRDS TO GEORGE W. HIGGINS AND EDWARD G. SKINNER, OF SAME PLACE.

FASTENING FOR PLATES OF SHOW-WINDOWS.

SPECIFICATION forming part of Letters Patent No. 646,601, dated April 3, 1900.

Application filed April 10, 1899. Serial No. 712,368. (No model.)

To all whom it may concern:

Be it known that I, PETER P. HASEK, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Fastenings for Plates of Show-Windows, of which the following is a specification.

My invention relates to certain improvements in large plate-glass windows such as are placed in the fronts of stores for the purpose of attracting the attention of persons passing by to the goods therein displayed, and it may also be used in what are known as "all-glass" show-cases, which are formed of glass plates fastened together at the angles and joints.

The object of my improvement is to provide a fastening for glass plates which will hold their edges rigidly together and form a perfect joint and yet permit one of the plates to settle or expand more than the other without breaking the glass. It has been found that in store-fronts and the like of the all-glass pattern the supporting-frame of the front plate, being more exposed to the action of the elements, often shrinks or warps, while the side plates remain firm, which tends to fracture the glass, and when not noticed and rectified expensive windows are often ruined. Such a casualty my improved fastening is designed to prevent, and it also allows of unequal expansion of the plates. I attain these objects by the devices illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a show-window, and Fig. 2 is a sectional plan view of the same. Fig. 3 is a plan view of an angular joint and fastening with one bolt shown in section. Fig. 4 is an inside elevation of the fasteners, showing their relative positions when one plate settles more than the other. Fig. 5 is a plan view of a joint and fastening for flat and curved plates. Fig. 6 is a plan view of a square-corner joint and fastening. Fig. 7 is a perspective view of the bolt and nut. Fig. 8 is a plan view of a right-angled joint, showing a modification of the fastening.

The reference-letter A indicates the front glass plate of a show window or case, and B is a side plate. Any number of plates may be used and supported by a suitable base C. In show-windows a top rail D and upright members E and F at the extreme ends of the glass are usually employed, making, with the base, a complete frame; but in show-cases the top and end rails are often dispensed with, and both the top and sides are formed of glass plates. Straight or curved plates may be joined, and any required angle between the plates may be formed, the edges being squared or beveled to fit against each other, as shown at J. Perforations are made in the glass to receive the cap or sleeve nut *a*, and sleeves *f*, of rubber or similar material, are inserted in the perforations. A strip *d* of felt or other yielding material is placed along the inner half of the joint, and the space outside thereof is filled with putty mixed with varnish or shellac or any suitable waterproof substance, as shown at *e*, or, if desired, the entire joint may be made with either the felt or the waterproof filler. The joint being formed I secure the same with metallic straps, each of which is made in two parts having male and female ends. The male member G is provided at one end with an extension having an enlarged extremity *g*, which is preferably cylindrical in shape. The female member H has an enlarged end containing a socket *h*, fitted to receive the extremity *g* of the male member. Each member is provided with one or more bolt-holes *i* to match the perforations in the glass. Strips of rubber or felt *k* are placed on the front surfaces of the straps and rubber washers *l* under the flanges of the nuts, which, as also the sleeves *f*, serve to keep the metal out of contact with the glass. The sleeve-nuts *a* being slightly longer than the thickness of the glass and inserted in the perforations, the bolts *b* are then passed through the straps and screwed up tightly into the sleeve-nuts, when, as is evident, the joint is rigidly secured from movement in any direction except that of its length. A shouldered bolt with a nut inside may be used instead of the nut *a* and bolt *b*; but I prefer the style here shown, as it is easier to fit and makes a neater appearance. Dowels *m*, Fig. 8, may also be used, if desired.

If in the course of time either plate has a tendency to settle more than the other, the

fastenings will assume such a relative position to each other as that shown in Fig. 4 or the reverse; but the plates will still be held against each other, and the joint will be maintained. Any desired number of fastenings may be used on each joint.

The end of the tongue *g* is made cylindrical for convenience of manufacture, as the male member is then always the same and the female member is slotted to suit the angle of the plates; but it may be of any other suitable cross-section, one of which is shown in Fig. 8 at *g'*, without departing from the spirit of my invention.

It is obvious that should one or both of the glass plates be curved it is only necessary to bend one or both members of the fastening to conform to the surface of the glass, as plainly shown in Fig. 5.

Other modes of applying the principle of my invention may be employed, since,

Having described what I consider the best mode of applying it, what I claim, and desire to secure by Letters Patent, is—

1. In a show-window or glass case, the combination, with plates of glass abutting together, of metallic fasteners attached to each of the plates, tongues having enlarged ends carried by some of the fasteners, sockets in which said tongues are inserted carried by others of the fasteners, said tongues and sockets being free to slide to and fro upon each other from end to end thereof in a direction lengthwise of the joint between the glass plates, and suitable means for attaching said fasteners to the glass, substantially as set forth.

2. The combination, in a show window or case, of a plurality of abutting glass plates supported by a suitable base and having perforations near their joints, metallic fasteners provided with holes for bolts attached to each of the plates, tongues having enlarged ends carried by some of the fasteners, sockets engaging said tongues carried by others of the fasteners, said tongues being free to slide to and fro in said sockets from end to end thereof in a direction parallel to the abutting edges of the plates, whereby either glass plate may move relatively to the other lengthwise of the joint, flanged cap-nuts slightly longer than the thickness of the glass inserted in the perforations therein, suitable washers and sleeves placed between the nuts and the glass, and bolts passing through the fasteners and screw-threaded to fit said nuts by means of which the fasteners are attached to the glass, substantially as set forth.

In testimony whereof I affix my signature, in the presence of two witnesses, at Cleveland, Ohio, April 8, 1899.

PETER P. HASEK.

Witnesses:
EDWARD G. SKINNER,
GEORGE W. HIGGINS.