

UNITED STATES PATENT OFFICE.

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SHOW-CASE.

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To all whom it may concern:

Be it known that I, JAMES L. CRANE, residing at Cleveland, county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Show-Cases; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in show-cases, and more especially to a show-case that is practically an all-glass case and is known in the trade as an "all-glass" case.

The object of this invention is to provide improved means for bracing and preventing displacement of the glass plates—for instance, to laterally brace or prevent lateral displacement of the upright glass plates, to prevent upward displacement of the top plate, and to prevent edgewise displacement of the plates generally.

With this object in view my invention consists in certain features of construction and combinations of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure I is a top plan of a show-case embodying my invention. Fig. II is a front side elevation of the same. Fig. III is a right-hand end elevation. Fig. IV is a vertical section on any one of lines IV IV, Fig. I. Fig. V is a vertical section on line V V, Fig. IV, looking inwardly. Fig. VI is a vertical section on line VI VI, Fig. IV, looking inwardly. Fig. VII is a section of a rear portion of the case on any one of lines VII VII, Figs. II and III. Fig. VIII is a vertical section on line VIII VIII, Fig. VII, looking outwardly. Fig. IX is a vertical section on line IX IX, Fig. VII, looking outwardly. Fig. X is a vertical section taken through one of the forward upper corners of the show-case on line X X, Fig. I, or line X X, Fig. XI. Fig. XI is a bottom plan in section on line XI XI, Fig. X.

Referring to the drawings, *a* designates the glass top or top plate of the case; *b*, the glass front or front plate of the case; *c c*, the glass end plates of the case, and *d* the base, and *e* the back of the case, which back comprises a stationary wooden frame *e'* and suitably-applied sliding doors *e''*. The said doors *e''* are only partially shown in Fig. VII, and the frame

e' is partially shown in Figs. VII and VIII and shown also in dotted lines in Figs. I and III.

The upright plates *b* and *c c* are placed upon or connected with the base *d* in any approved manner. The top plate *a* is connected with the upright plates *b* and *c c* at the upper forward corners of the case and is connected with the upper portion of the front plate at any suitable number of points intermediate of the said corners. The top plate not only overlaps and rests upon the upper edges of the upright plates, but projects beyond the outer sides of the said upright plates.

Each fastening device *f* for connecting together the front plate and the top plate between the upper forward corners of the case comprises two metallic members *f'* and *f''*, overlapping opposite sides, respectively, of the front plate. Members *f'* and *f''* are secured to the top plate in any approved manner and are formed, preferably, upon and depend from two different narrow metallic pieces *f³* and *f⁴*, respectively, that are secured to the top of the case by means of a screw *g* and a nut *h*. In the case illustrated the said fastening-forming pieces *f³* and *f⁴* are arranged one upon the other below the top *a*. The upper piece *f³* extends between the said top and the front plate and transversely of the latter, and the front plate is recessed in its upper edge, as at *b'*, to accommodate the location of the said piece *f³* flush with the upper edge of the front plate, so as to avoid interference with the tight fit desired between the top plate and the front plate. The said piece *f³* at the outer side of the front plate is provided with a depending flange close to the said plate, which flange forms the member *f'*, already referred to. The lower piece *f⁴* at the inner side of the front plate is provided with a depending flange that forms the member *f''*, to which reference has already been made. Flange *f²* is provided with a lug *f⁵*, that engages a niche *b²*, formed in the inner side of the front plate *b*. The two pieces *f³* and *f⁴* are perforated vertically, as at *f⁶*, to accommodate the extension of the screw *g* therethrough. The screw has a head *g'*, arranged to engage the upper side of the top plate *a*, and the nut *h* upon the screw is arranged to engage the under side of the lower piece *f⁴*. Upon tight-

ening this nut the screw's head will cause the top plate to be tightened upon the upright plates *b* and *c c*. The screw-receiving perforation in the lower piece *f*⁴ is elongated longitudinally of the said piece to accommodate the longitudinal adjustment of the piece *f*⁴ toward or from the front plate *b* upon loosening the nut, which adjustment is required to accommodate different thicknesses of front plates in the manufacture of show-cases. The fastening devices *f* brace the front plate and will assist in resisting any force—such, for instance, as that of a lateral external push upon the plate. The top plate is of course perforated, as at *a'*, to accommodate the location and operation of the screw *g*. The lug *f*⁵ prevents upward displacement of or injury to the top plate by any force accidentally or otherwise applied upwardly upon the plate's portion that projects beyond the forward plate *b*. The opposing surfaces of the two pieces *f*³ and *f*⁴ are provided, preferably, with a tongue-and-groove connection. The tongue *f*⁷ of this connection in the case illustrated is formed upon the lower piece *f*⁴ and engages a shallow groove *f*⁸, formed in the under side of the upper piece *f*³, and the said groove is sufficiently longer than the engaging tongue to accommodate the longitudinal adjustment of the piece *f*³. The said tongue-and-groove connection assists in holding the members *f*³ and *f*⁴ together.

The end plates are fastened at their rear ends to the back frame *e'*, and the means preferably employed for the said purpose comprises any suitable number of comparatively small angle-plates *k*, arranged at suitable intervals vertically of the corners formed between the said frame and plates. One wing or arm *k'* of each angle-plate is secured to the frame *e'* by a wood-screw *l*, and the said frame is at its rear or outer surface recessed, as at *e*³, to receive the said member *k'* flush with the said surface of the frame. The other arm or wing *k*² of the angle-plate engages the outer side of the respective end plate *c* and is provided upon its inner side with a lug *k*³, that engages a niche *c'*, formed in the outer side of the end plate, that in its rear edge is provided with a recess *c*² for accommodating the reception of the angle-plate's member *k'* flush with the said edge when the end plate has its said edge flush with the rear or outer surface of the frame *e'*, as is the fact in the preferred construction illustrated.

The top plate *a* is secured near its rear edge at *m* in any approved manner to the frame *e'* of the back. The top plate is secured to corner-fasteners *o*, employed in fastening together the front plate and end plates. A fastener *o* is provided at the junction of each end plate and the front plate next below the top plate and comprises two angle-plates or jaws *o*² and *o'*, engaging the inner sides and outer sides, respectively, of the said upright plates, and a screw *o*³, that secures the said

angle-plates or jaws together and extends through the joint formed between the said upright glass plates. The outer jaw or angle-plate *o'* is gradually enlarged upwardly to accommodate the formation of a vertical screw-threaded hole *o*⁴ in the upper end of the said jaw without detracting from the appearance of the corner-fastener. Hole *o*⁴ is engaged by a screw *o*⁵, that extends into the said hole through the top plate *a*, that is perforated, as at *a*², to accommodate the introduction of the said screw, that at its upper end has a head overlapping the upper surface of the top *a* and holding the said top downwardly upon the upright plates below.

The projection of the top *a* beyond the outer sides of the upright plates of the show-case is desirable not only because it beautifies the case, but because it forms a guard to prevent or deter persons from bodily striking, leaning against, or touching the upright plates of the case. The formation of this guard renders desirable the location of the top-plate-securing screw *o*⁵ of each corner-fastener *o* as near to the edge of the said guard as is practicable and outside of the case proper, and this object is attained by the construction illustrated, wherein the said screw extends into and coöperates with the nut-forming outer jaw or angle-plate of the said fastener, that comprises clamp-forming angle-plates or jaws between which the upright glass plates are clamped, and the outer clamping member has its upper end forming a nut that is engaged by a screw whose head, in conjunction with the said nut, clamps the top *a* downwardly upon the upright plates.

What I claim is—

1. In a show-case, the combination, with the front plate *b* having its upper edge provided with recesses *b'* extending transversely of the said edge and arranged at suitable intervals longitudinally of the plate, and the top plate overlapping the said recessed edge of the front plate, of fastening devices engaging the different aforesaid recesses, respectively, and secured to the top plate at the under side of the latter, and each of the said fastening devices having two members depending from the top plate at and overlapping opposite sides, respectively, of the front plate, substantially as shown, for the purpose specified.

2. In a show-case, the combination, with the front having its upper edge provided with a recess *b'* and having one of its sides provided, near the said edge, with a lateral recess *b*², and the top overlapping said edge, of a fastening device engaging the first-mentioned recess and comprising two depending members overlapping opposite sides, respectively, of the front, means securing the said fastening device to the top, and a lug formed upon one of the aforesaid depending members and engaging the aforesaid lateral recess *b*².

3. In a show-case, the combination with the front plate and the top plate overlapping the upper edge of the front plate: of a fastening

device arranged at the under side of the top plate and comprising two pieces arranged, one above the other, and one of said pieces being adjustable longitudinally of the other; means securing the said fastening-forming pieces to the top plate and instrumental in securing the adjustable piece in the desired adjustment; flanges formed upon the two different pieces, respectively, of the fastening device and overlapping opposite sides, respectively, of the front plate; a tongue-and-groove connection formed between the opposing surfaces of the said pieces, and the groove of the said tongue-and-groove connection being longer than the tongue to accommodate the longitudinal adjustment of the aforesaid adjustable piece, substantially as shown, for the purpose specified.

4. In a show-case, the combination with the front plate provided, in its upper edge, with recesses arranged at suitable intervals between the ends of the case, and the top plate overlapping the upper edge of the front plate; of a fastening device for connecting the said plates together at each of the aforesaid recesses, which fastening device is arranged at the under side of and suitably secured to the top plate and comprises two flanged pieces, one of said flanged pieces extending through one of the aforesaid recesses and having its flange overlapping the outer side of the front plate, and the other flanged piece having its flange overlapping the inner side of the front plate, substantially as shown, for the purpose specified.

5. In a show-case, the combination with the upright front plate, upright end plates, and the top plate overlapping the upper edges of the said upright plates and extending beyond the outer sides of the front plate and end plates; of a fastening device located at each upper forward corner of the case and com-

prising two suitably-connected angle-plates or jaws engaging the inner sides and outer sides, respectively, of the upright plates at the said corners, and the outer jaw being provided with an upright threaded hole in its upper end, and a screw extending through the projecting portion of the top plate and engaging the said hole, which screw, at its upper end, has a head that overlaps the outer side of the top plate, substantially as shown, for the purpose specified.

6. In a show-case, the combination with the upright front plate, the top plate and the upright end plates; of a fastening device located at each upper forward corner of the case and comprising two angle-plates or jaws engaging the inner sides and outer sides, respectively, of the upright plates at the said corner, and the outer jaw being gradually enlarged in thickness toward its upper end; an upright screw-threaded hole formed in the upper end of the outer jaw; a perforation formed in the top plate and registering with the aforesaid screw-threaded hole, and a screw engaging the said screw-threaded hole and extending through the perforation in the top plate and having a head at the outer side of the top plate, substantially as shown, for the purpose specified.

7. In a show-case, the combination with the back recessed, as at e^3 , and the end plates c having the recesses c^2 and the niches c' ; of the angle-plates k having the lugs k^2 , all arranged and operating, substantially as shown, for the purpose specified.

Signed by me at Cleveland, Ohio, this 21st day of April, 1899.

JAMES L. CRANE.

Witnesses:

C. H. DORER,
A. H. PARRATT.