No. 788,598. PATENTED MAY 2, 1905.

T. ROBERTSON & E. L. MIDDLEBROOK.

SHOW CASE.

APPLICATION FILED OCT. 10, 1904.

Fig. 1.

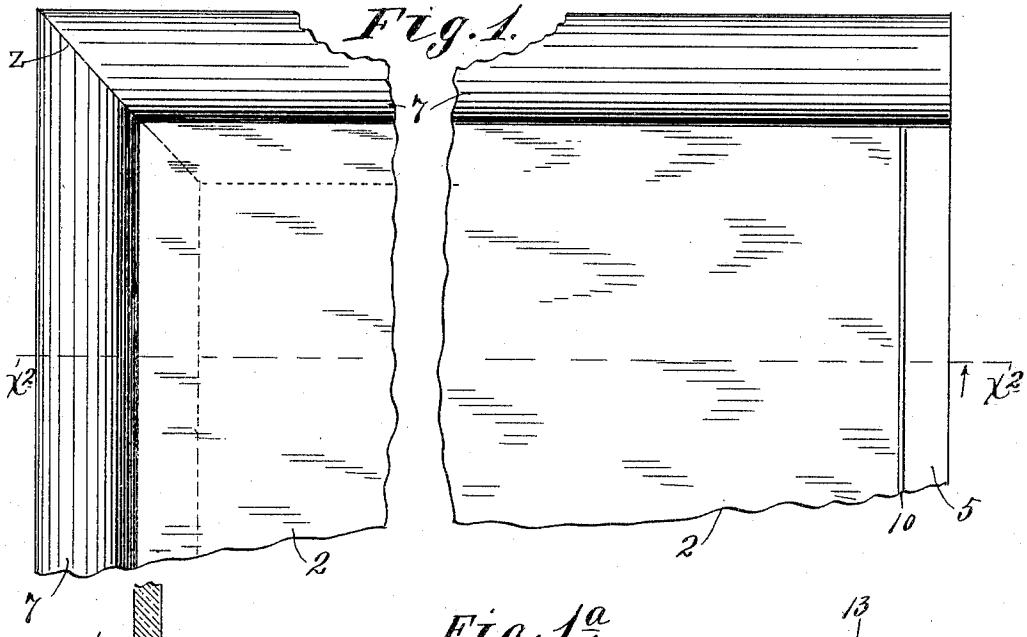


Fig. 1a.

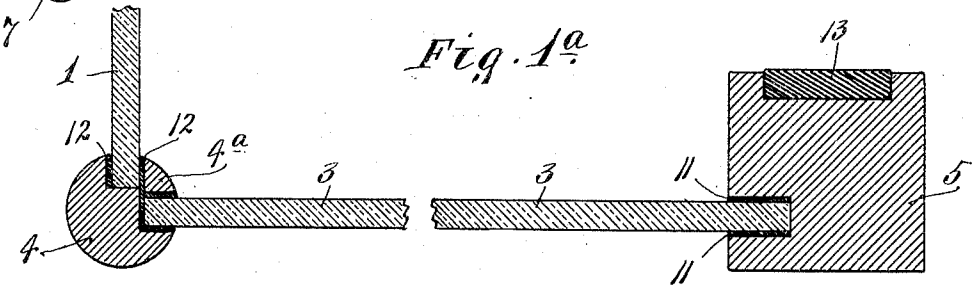


Fig. 2.

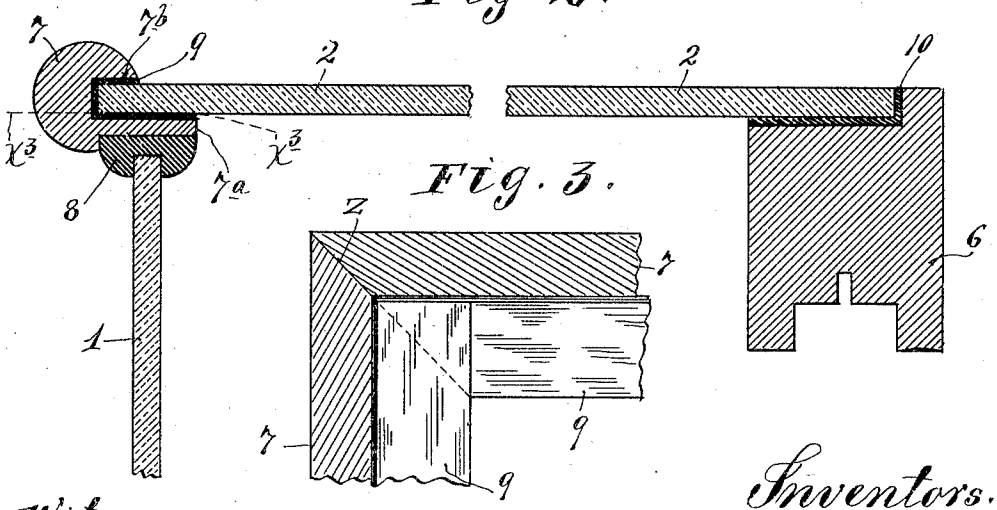


Fig. 3.

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No. 788,598. Patented May 2, 1905.

UNITED STATES PATENT OFFICE.

THOMAS ROBERTSON AND ELMER L. MIDDLEBROOK, OF MINNEAPOLIS, MINNESOTA.

SHOW-CASE.

SPECIFICATION forming part of Letters Patent No. 788,598, dated May 2, 1905.

Application filed October 10, 1904. Serial No. 227,825.

To all whom it may concern:

Be it known that we, THOMAS ROBERTSON and ELMER L. MIDDLEBROOK, citizens of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Show-Cases; and we 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 appertains to make and use the same.

Our invention relates to show-cases, and particularly to those that are made up almost entirely of heavy panes of plate-glass. It has hitherto been customary to connect the heavy front and top plates of these show-cases by drilling holes through one or the other thereof and passing bolts or screws therethrough. The drilling of the holes through heavy plate-glass is in itself an expensive operation and is rendered more expensive on account of the large amount of breakage occasioned in drilling such holes. Furthermore, the plates are weakened by holes drilled therein, so that they are more liable to be broken in the process of erection and even after the show-case has been set up.

Our invention provides a very simple and, as we have found in practice, a very efficient means for connecting the vertical front and horizontal top plates of a show case or other plates thereof for that matter without requiring holes to be drilled therein.

The invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims and includes the use of yielding strips interposed between the glass panes and their wooden frames or supports, a feature broadly claimed in our application, Serial No. 186,064, filed December 31, 1903, and allowed April 29, 1904.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a plan view, with some parts broken away, showing one end of a show-case embodying our invention. Fig. 1^a is a horizontal section through the other end of the show-case, some parts being broken away. Fig. 2 is a transverse vertical section on the line x^2 x^2 of Fig. 1, and Fig. 3 is a horizontal section on the line x^3 x^3 of Fig. 2.

The numeral 1 indicates the front plate, the numeral 2 the top plate, and the numeral 3 one of the end plates, of the show-case.

Referring to Fig. 1^a, the numeral 4 indicates one of the front or outer corner-posts of the case-frame, and the numeral 5 indicates one of the rear or inner corner-posts of said frame.

Referring to Figs. 1, and 2, the numeral 6 indicates the upper rail, which extends horizontally between the upper ends of the two inner corner-posts 5.

The numeral 7 indicates horizontally-disposed joint-strips which are interposed between the front edge of the top plate 2 and the upper edge of the front plate 1 and also between the ends of the top plate 2 and the upper edge of the end plates 3. The front and end members of the joint-strips 7 are mitered together by forty-five-degree joints, as best shown in Figs. 1 and 3 and indicated *z*. The horizontal flanges 7^a of the joint-strips 7 are extended under the front and end edges of the top plates 2, and to each thereof is cemented or otherwise rigidly secured a yielding channel-strip 8, preferably of rubber. The groove in the under surface of the yielding strip 8 receives the upper edge of the front plate 1 in the one instance and the upper edge of the end plate 3 in the other instance. Above the flanges 7^a the joint-strips 7 are formed with longitudinal grooves 7^b, that receive the edges of the top plate 2. Between the top, end, and bottom surfaces of the edges of the top plate 2 and the three walls of the groove 7^b are interposed strips of rubber 9 or other yielding material. These strips 9 are cemented both to the plate 2 and to the joint-strip.

The horizontal rear rail 6 of the show-case frame is, as shown, rabbeted to form a seat for the rear edge of the top plate 2, and between the same and said plate is interposed a yielding strip 10 of rubber or other suitable yielding material. The vertical rear posts 5 are grooved to receive the rear edges of the

end plates 3, and between the same and said posts is interposed strips 11 of rubber or other suitable yielding material. The yielding strips 10 and 11 are secured by cement both to the glass plates and to the wooden-frame portions of the show-case.

The corner-posts 4, grooved to receive the edges of the vertical front plate 1 and adjacent end plate 3 and yielding strips 12, preferably of rubber, are interposed between said plates and said post and are cemented to both thereof. The sections 4^a of the corner-post 4 are disconnected therefrom—that is, are not integrally formed therewith—and may be secured in the position shown either by cement alone or by small bolts or nails. (Not shown.)

By reference to Fig. 3 it will be noted that one of the lower yielding strips 9 overlaps the joints between the front and end members of the joint-strip 7, and thereby assists in tying together the parts at the miter-joint.

In Fig. 1^a the numeral 13 indicates a rubber strip set into the post 5 to serve as a buffer for one of the sliding doors (not shown) of the show-case.

It will thus be seen that yielding strips are interposed between the several glass plates or panes of the show-case and the wooden framework thereof. It is a well-known fact that glass and wood expand unevenly under varying temperature and under variations of moisture in the air. These yielding strips permit the uneven expansions of the glass and wooden framework, and hence rigidly unite the said parts without causing breaking strains thereon due to expansions and contractions. Furthermore, a show-case having its wood and glass portions cemented by these yielding strips will without breaking stand very much greater jars or other strains than a show-case having the said parts rigidly united.

The joint-strip 7 and its supplemental section 8 interlock the edges of the top plate to the upper edges of the front and end plates and permit the front and end edges of the top plate to project considerably beyond the vertical front and end plates.

One of the objects of our invention has been to provide a show-case having an extremely small amount of wood exposed to view and which at the same time will be strong and durable. The construction above described fully meets these requirements.

From what has been said it will be understood that the device described is capable of modification within the scope of our invention as herein set forth and claimed.

What we claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with the vertical and horizontal plates of a show-case, of a joint-strip interposed between said plates, and having a groove receiving the edges of said horizontal plate, and a yielding strip interposed between said joint-strip and at least one of said plates, and secured to said strip and to the adjacent plate, substantially as and for the purposes set forth.

2. The combination with the vertical and horizontal glass plates of a show-case, of a joint-strip 7 interposed between said plates and having a groove receiving the edge of said horizontal plate, and a yielding strip 8, secured to said joint-strip 7, and having a groove receiving the upper edge of said vertical plate, substantially as described.

3. The combination with the vertical and horizontal glass plates of a show-case, of a joint-strip 7 interposed between said plates, and grooved to receive the edge of said horizontal plate, yielding strips 9 interposed between said horizontal plate and said strip 7, and the yielding strip 8 applied to the flange 7^a of said strip 7, and having a groove receiving the upper edge of said vertical plate, the said parts being united by cement, substantially as described.

4. In a show-case, the combination with the front plate 1, top plate 2, and end plates 3, of the joint-strip 7 interposed between said top plate and said front and end plates, and having grooves receiving the edges of said top plate, said joint-strips being joined by miter-joints z, the yielding strips 8 applied to the flanges 7^a of said joint-strips, and grooved to receive the upper edges of said vertical plates, and the yielding strips 9 interposed between said top plate and said joint-strips, certain of said strips 9 overlapping the said miter-joints z, the said parts being united by cement, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

THOMAS ROBERTSON.
ELMER L. MIDDLEBROOK.

Witnesses:
R. C. MABEY,
F. D. MERCHANT.