United States Patent [19]

Knoell et al.

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[54] **DISPLAY CASE**

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[52] **U.S. Cl.** **40/152**

[51] **Int. Cl.** **G09f 1/12**

[58] **Field of Search** 40/152, 152.1, 156; 206/72

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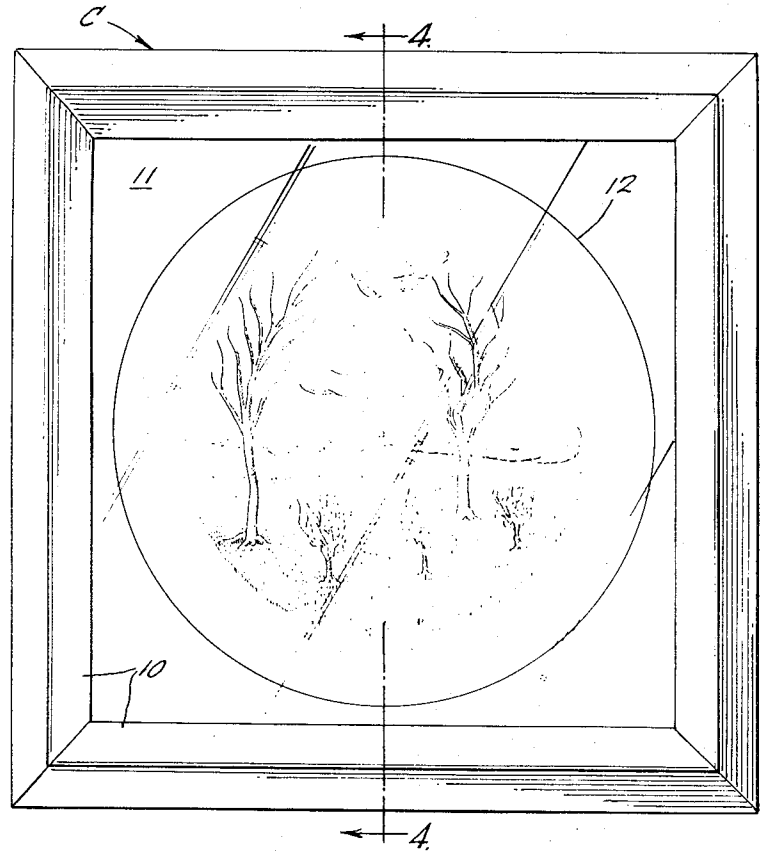
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Assistant Examiner—Wenceslao J. Contreras
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[57] **ABSTRACT**

A case for displaying art objects such as plates or the like is constructed in such a manner as to permit the art object to be readily removed for cleaning or handling. The case has a frame in which is mounted a transparent front panel and a removable rear panel spaced therefrom to define a display chamber. A removable one-piece wire form engages in a groove in the frame and has a series of fingers which engage the rear panel at selected locations. The art object is centered in the display chamber by means of a retainer which surrounds the periphery of the object.

9 Claims, 6 Drawing Figures



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FIG. 1.

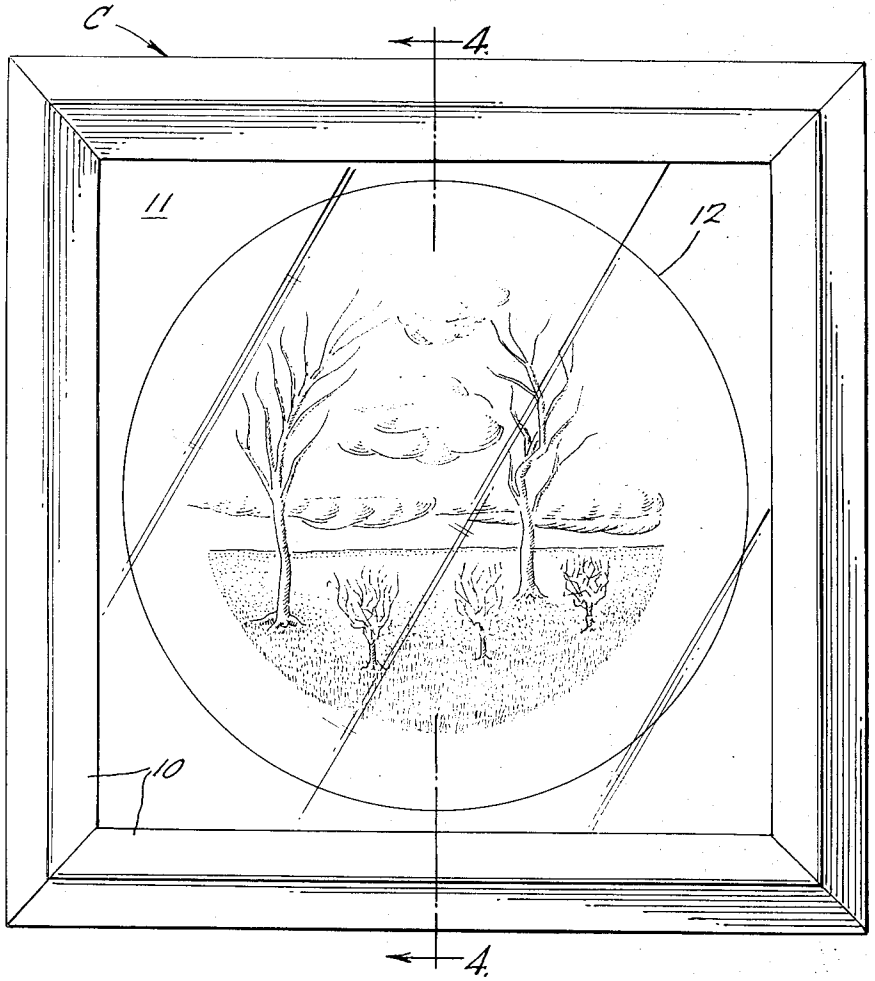


FIG. 2.

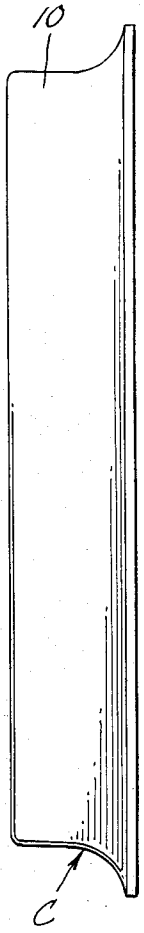
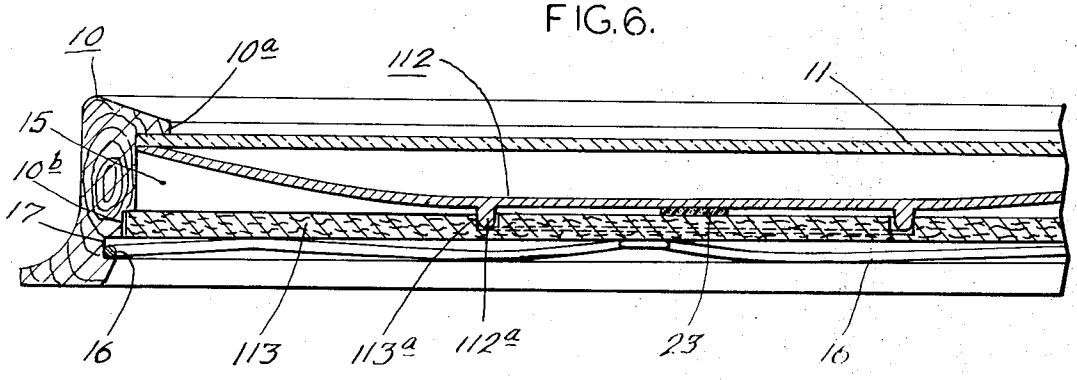


FIG. 6.



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FIG. 4.

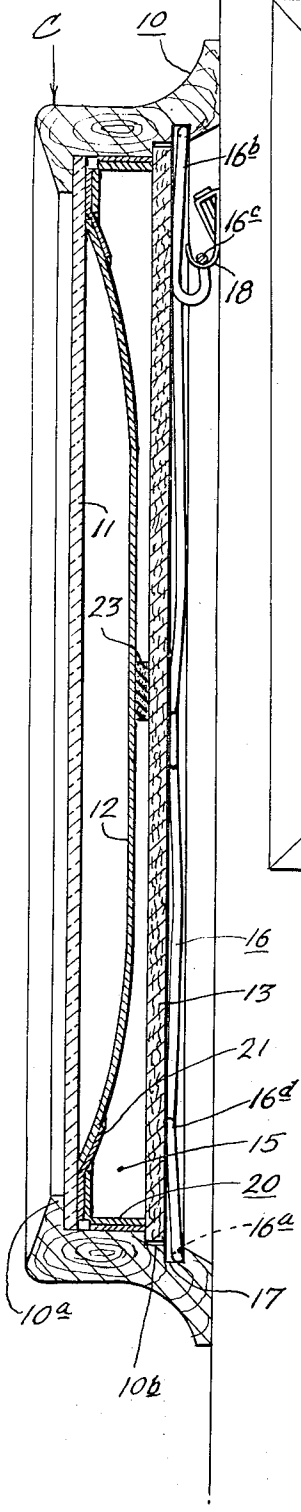


FIG. 3.

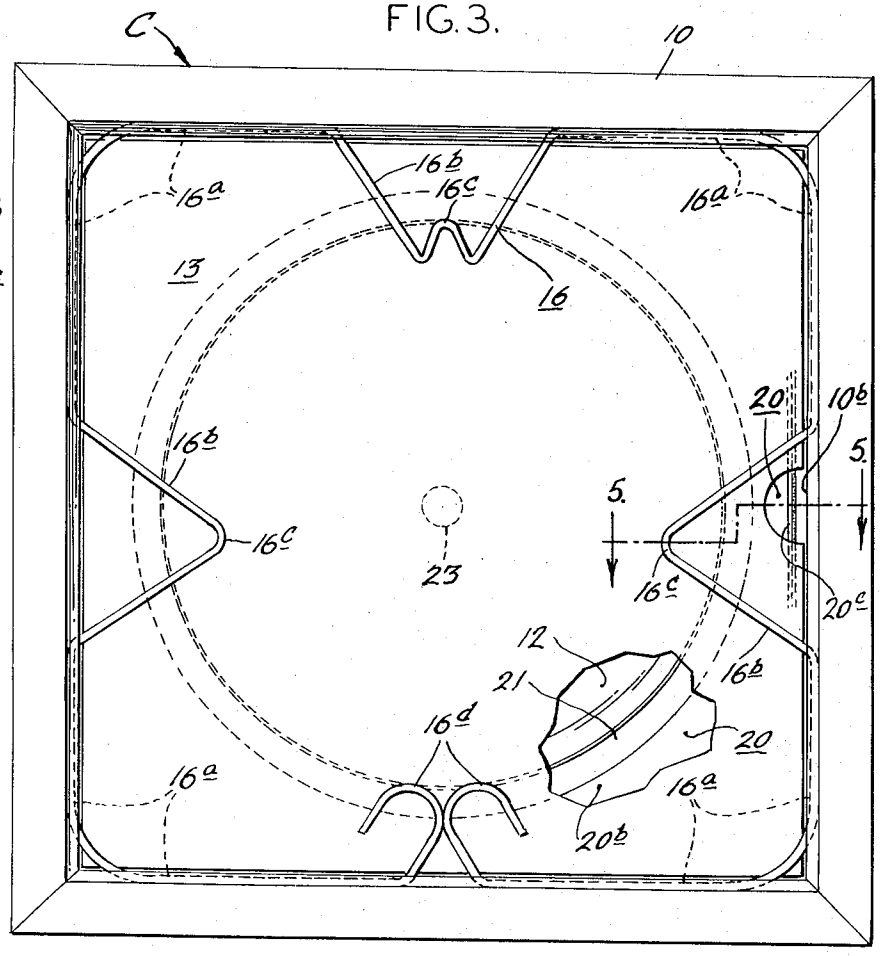
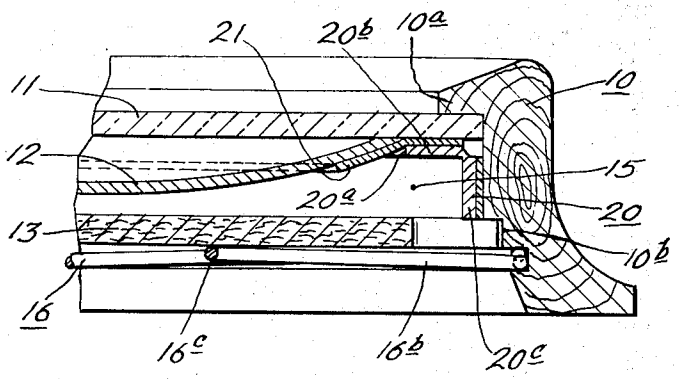


FIG. 5.



DISPLAY CASE

The present invention relates to cases for displaying substantially planar articles such as plates.

In recent years, the demand for commemorative plates has steadily increased. Some of these plates are displayed on metal hangers fastened on a wall; however, such hangers are undesirable not only because of their generally utilitarian appearance but also because the plates are completely exposed, thereby tending to collect dust. Moreover, plates displayed in this manner tend to be disposed at an angle with respect to the wall and this tends to detract from the aesthetic effect intended to be achieved by mounting the plate on the wall.

Because commemorative plates are often coined from metals which tend to tarnish or to become dull in time when exposed to air, it is desirable for the plates to be protected as much as possible from these undesirable effects of exposure to ambient air while on display. Even though encased plates may tend to resist tarnishing and soiling better than exposed plates it is desirable for the plates to be readily removable from their display cases in order to permit the plates to be cleaned and inspected or admired periodically.

With the foregoing in mind, it is a primary object of the present invention to provide a novel case for displaying planar art objects such as plates and for protecting such objects from the undesirable effects of exposure to ambient air.

It is another object of the present invention to provide a unique display case which is capable of readily being opened to afford access to an encased article, whereby periodic cleaning and handling of the article is facilitated.

As a further object, the present invention provides a handsome display case which is capable of being mounted flush against a wall to enhance the decorative appearance of the article contained in the case.

More specifically, the present invention provides a decorative display case having a frame surrounding the periphery of a transparent front panel and a removable rear panel which cooperate to define an article display chamber therebetween. The rear panel is releasably secured in the frame by means of a wire-form keeper which has base portions engaging in a peripheral groove in the rear of the frame and fingers engaging the back panel at spaced locations. Grips are provided on the wire form to permit it to be readily disengaged from the frame to afford ready removal of the rear panel and the article. A hanger is formed integrally with one of the fingers, and the hanger is inset from the rear of the frame to cause the rear of the frame to engage flush against a wall when hung. The article is centered in the display chamber by means of a retainer having an aperture shaped to receive a major portion of the article and having a resilient flange engaging behind the article along its peripheral margin to urge the article against the front panel when the rear panel is in position.

These and other objects, features and advantages of the present invention should become apparent from the following description when taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a front elevational view of a display case embodying the present invention;

FIG. 2 is a side elevational view of the case illustrated in FIG. 1;

FIG. 3 is a rear elevational view of the case illustrated in FIG. 1, the view illustrating a removable wire-form keeper securing a back panel in the case;

FIG. 4 is an enlarged sectional view taken along line 4—4 of FIG. 1;

FIG. 5 is a greatly enlarged fragmentary sectional view taken along line 5—5 of FIG. 3; and

FIG. 6 is a fragmentary sectional view of a modified embodiment of the present invention.

Referring now to the drawings, there is illustrated in FIG. 1 a display case C embodying the present invention. As seen therein, the case C has a cove-type frame **10** which in the present instance has a square configuration; however, the frame **10** may have other configurations such as rectangular, oval, etc. The frame **10** has a transparent front panel **11** preferably of glass, behind which is mounted a substantially planar article to be displayed, such as a plate **12**. As seen in FIG. **3**, the frame **10** also has a rear panel **13** of wood or fiberboard, and the front and rear panels cooperate to define a substantially planar display chamber **15** therebetween.

According to the present invention, the case C is constructed to permit the plate **12** to be readily removed for cleaning or inspection purposes, and to permit the glass front panel to be removed for cleaning. To this end, the frame **10** has an inturned peripheral front lip **10***a* (FIG. **4**) which engages along the peripheral margin of the front panel **11**, and the frame **10** has a shoulder **10***b* spaced rearwardly from the lip **10***a* which engages along the peripheral margin of the rear panel **13**. The spacing between the lip **10***a* and the shoulder **10***b* determines the width of the chamber **15**.

The rear panel **13** is maintained in engagement with the shoulder **10***b* by means of a keeper, which in the present instance, includes a one-piece, substantially planar, wire-form **16** of spring material which cooperates with a continuous, inwardly open groove **17** lying in a common plane in the rear of the frame **10**. As best seen in FIG. **3**, the wire-form **16** has a substantially closed peripheral configuration and has base portions **16***a*, **16***a* which engage in the groove **17** and which extend around each corner of the frame **10**. The wire-form **16** has integral finger portions **16***b*, **16***b* which extends inwardly from the frame **10** and which engage against the rear panel **13** at spaced peripheral locations forwardly of the plane of the groove **17**, in the illustrated embodiment at the top and sides of the rear panel **13**. Each finger terminates in a rounded apex **16***c*, and each finger is turned or twisted frontward out of the plane of the wire-form and relative to the base portions **16***a*, **16***a* to provide a torsional spring action which causes the apex **16***c* to bear against and apply pressure to the rear panel **13** (See FIG. **5**). Thus, when the wire-form **16** is installed as illustrated, the rear panel **13** is securely mounted in the frame **10**.

In order to permit the wire-form **16** to be removed readily, the ends of the wire-form terminate in closely adjacent, outwardly-curled finger grips **16***d*, **16***d* which are disposed below the top finger. The grips **16***d*, **16***d*, like the fingers **16***c*, **16***c*, may also be turned toward the rear panel **13** to apply pressure against the panel **13** at still another location; however, it has been found that the pressure-action of the other three fingers **16***c*, **16***c* is adequate to securely mount the rear panel **13** in the frame **10**.

As noted heretofore, the frame **10** mounts flush against a wall. For this purpose, there is provided on the wire-form keeper **16** a means to hang the frame **10** on a wall in a manner which ensures flush engagement. In the illustrated embodiment, as seen in FIGS. **3** and **4**, the apex **16***c* of the top finger **16***b* is turned upwardly about a horizontal axis to provide a downturned shape for engaging over a support on a wall, such as the hook **18** (FIG. **4**). It is noted that in the present invention, the hanger is set forwardly of the rear edge of the frame **10** a sufficient distance to cause the frame **10** to engage flush against the wall when the frame is hung on the hook **18.**

The plate **12** is supported in a preselected position in the display frame **10.** In the illustrated embodiment, there is provided means to retain the plate **12** in a central location in the frame **10** by means of a retainer which engages behind the plate **12** and along its peripheral margin. As best seen in FIGS. **4** and **5,** the retainer includes an insert **20** which is mounted in the chamber **15** between the front panel **11** and the rear panel **13.** The insert **20** has a central aperture **20***a* with a shape corresponding to the shape of the plate **12,** and the aperture is dimensioned to permit a major portion of the plate **12** to be received in the aperture **20***a.* The insert **20** has a frontward-facing portion **20***b* surrounding the aperture **20***a*, and the insert has a rearwardly-extending peripheral flange element **20***c* which engages the inner-periphery of the frame **10.** A flexible flange **21,** preferably of felt or like resilient material, surrounds the aperture **20***a* and extends inwardly to engage behind and along the peripheral margin of the plate **12.** Thus, the insert **20** operates as a means to locate the plate **12** centrally in the frame **10.** It is noted that the rear edge of the flange element **20***c* engages the rear panel **13,** and that the front-portion **20***b* engages the front panel **11** and extends outwardly into proximity with the frame **10** from aperture **20***a.* With this structure the insert is urged into positive engagement with the rear of the plate **12.** If additional locating pressure is desired, a pad **23** of compressible material such as rubber may be interposed between the rear panel **13** and the back of plate **12.**

In certain instances, where a plate such as the plate **112** (FIG. **6**) has a circular rib **112***a* on its rear or under side, the rear panel **113** may be modified by providing a mating recess **113***a* or rib to center the plate **112** in the frame **10.** In such event, the rear panel **113** provides the retaining and locating function. Also, if desired, the insert **20** may be provided with recesses, apertures or the like which are capable of cooperating with ribs or the like on the underside of a plate for securing the same centrally in the display chamber. Of course, the particular form of retainer can be varied to suit various sizes, shaped and structural features of various plates.

In use, the plate **12** is placed in the display chamber **15** with its front edge engaging against the inside of the front panel **11.** The retainer **20** is then engaged against the rear of the plate **12,** and the rear panel **13** is installed. The base portions **16***a*, **16***a* of the wire-form **16** are inserted in the groove **17,** preferably serially and in either a clockwise or counter-clockwise direction from either finger grip **16***d.* The display case C, thus assembled with the plate **12** in the display chamber **15,** can then be hung on a support on a wall in the customary manner. In order to remove the plate **12** or front panel **11** for cleaning or handling purposes, the foregoing procedure is essentially reversed.

In view of the foregoing, it should be apparent that there has now been provided a novel display case for planar articles such as plates and the like which case is capable of being readily opened to permit the article to be periodically cleaned or handled. Moreover, the display case of the present invention enhances the appearance of the article being displayed by being capable of flush mounting against a wall.

While preferred embodiments of the present invention have been described in detail, various modifications, alterations or changes may be made without departing from the spirit and scope of the present invention as defined in the appended claims.

Although the preferred embodiments have been described with reference to plates, it should be apparent that the shallow chamber of the display case of the present invention adapts it to be used to contain other types of shallow articles such as medallions or the like.

What is claimed is:

1. A display case, comprising a frame having a front and a rear, a translucent front panel mounted in said frame, a rear panel spaced from said front panel to define therebetween a chamber for receiving an article to be displayed, retainer means for engaging the article and spacing the article in the chamber, said retainer means including a removable insert disposed between said panels, said insert having a frontward-facing portion with an aperture for receiving the article, the marginal part of said portion around said aperture engaging behind the article when mounted in the chamber, said insert also having a rearwardly extending peripheral flange engaging the inner periphery of the frame and said rear panel, keeper means located behind said rear panel and engaging said rear panel at spaced locations, said keeper means including a groove in said frame, a wire-form having base portions engaging in said groove and finger portions extending inwardly from said base portions to engage said rear panel at said locations, said fingers being turned toward said rear panel so that pressure is applied to the rear panel for securing the rear panel in the frame and for urging the insert forwardly against the rear of the article to locate the article in the chamber.

2. A display case according to claim **1** wherein said marginal part includes a flexible flange mounted on said insert and extending inwardly around said aperture to engage the article when mounted in said chamber with said frontward-facing portion of said insert engaging said front panel when said flexible flange engages behind said article.

3. A display case according to claim **1** wherein said groove lies in a common plane spaced rearwardly of said rear panel, and said fingers engage said rear panel in a plane forwardly of the plane of the groove.

4. A display case according to claim **9** wherein said frame has portions engaging one another to form corners, and said wire-form extends around said corners.

5. A display case, comprising a frame having a front and a rear, a translucent front panel mounted in said frame, a rear panel spaced from said front panel to define therebetween a chamber for receiving an article to be displayed, retainer means for engaging the article and spacing the article in the chamber, keeper means located behind said rear panel and engaging said rear panel at spaced locations, said keeper means including

a groove in said frame, a wire-form having base portions engaging in said groove and finger portions extending inwardly from said base portions to engage said rear panel at said locations, said fingers being turned toward said rear panel so that pressure is applied to the rear panel for securing the rear panel in the frame and the article in the chamber, said frame having a top, a bottom and sides with at least one of said fingers depending from said top and including means providing a downwardly concave hanger integral with said depending top finger for engaging a support on a wall to mount said case to the wall.

6. A display case according to claim **5** including a pad of compressible material carried by said rear panel for engaging the rear of said article and urging the same forwardly to locate said article in said chamber.

7. A display case according to claim **5** wherein said depending finger has an apex turned upwardly about a horizontal axis to provide said downwardly concave hanger means and said upturned apex is inset from the rear of the frame to cause the rear of the frame to engage flush against the wall when the frame is supported by the hanger means.

8. A display case according to claim **7** wherein said wire-form terminates in closely adjacent finger grips located below said hanger means.

9. A display case, comprising a frame having a front and a rear, a translucent front panel mounted in said frame, a rear panel spaced from said front panel to define therebetween a chamber for receiving an article to be displayed, retainer means for engaging the article and spacing the article in the chamber, keeper means located behind said rear panel and engaging said rear panel at spaced locations, said keeper means including a groove in said frame, a wire-form having base portions engaging in said groove and finger portions extending inwardly from said base portions to engage said rear panel at said locations, said fingers being turned toward said rear panel so that pressure is applied to the rear panel for securing the rear panel in the frame and the article in the chamber, said wire-form having ends located adjacent one another with said ends terminating in finger grips to facilitate mounting and dismounting of said wire-form, and said wire-form having an integral hanger, said frame having an inturned front flange engaging a peripheral margin of the front panel and having a shoulder spaced from said front flange for engaging a peripheral margin of the rear panel with the rear panel being larger than the front panel, whereby both panels are capable of being removed from the rear of the frame after said wire-form is disengaged from its mounting groove.

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