May 24, 1932. H. HERZOGENRATH ET AL 1,859,511

PICTURE AND LIKE FRAME

Filed Jan. 5, 1931 3 Sheets-Sheet 1

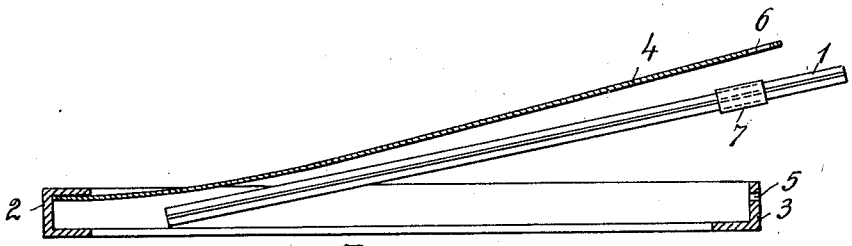


Fig. 1.

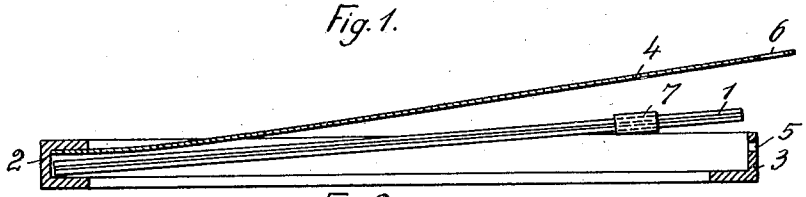


Fig. 2.

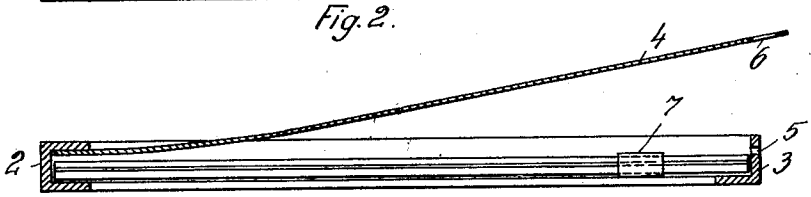


Fig. 3.

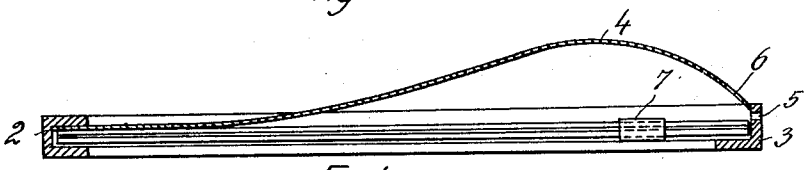


Fig. 4.

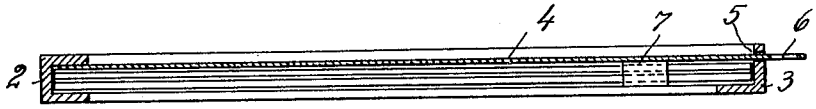


Fig. 5.

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PICTURE AND LIKE FRAME

Filed Jan. 5, 1931 3 Sheets-Sheet 2

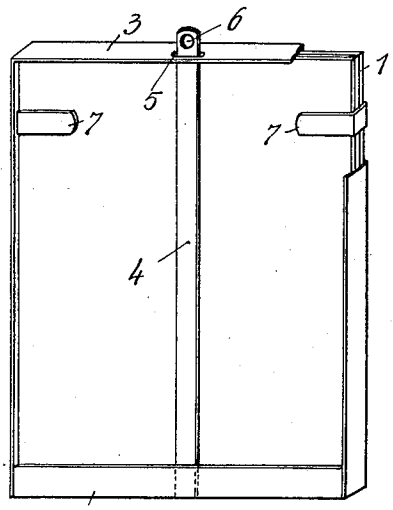


Fig. 6.

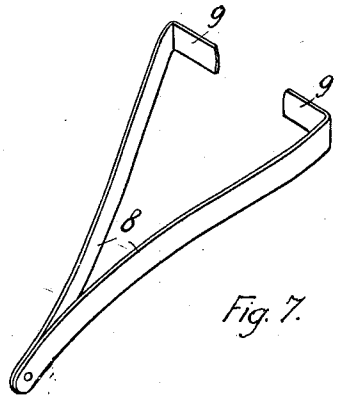


Fig. 7.

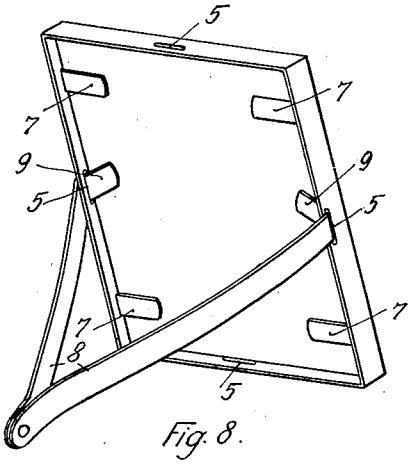


Fig. 8.

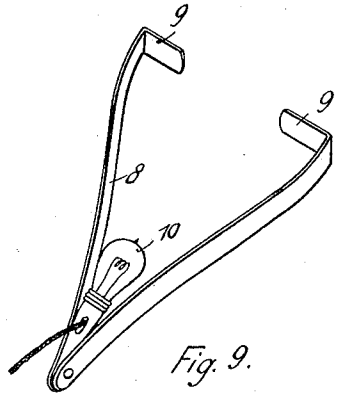


Fig. 9.

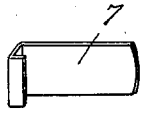


Fig. 10.

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PICTURE AND LIKE FRAME

Filed Jan. 5, 1931 3 Sheets-Sheet 3

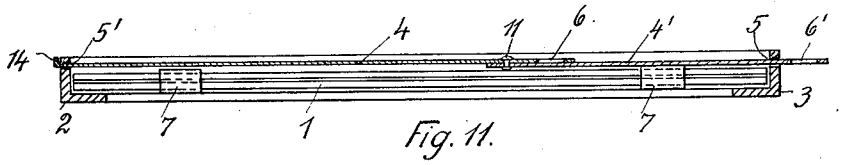


Fig. 11.

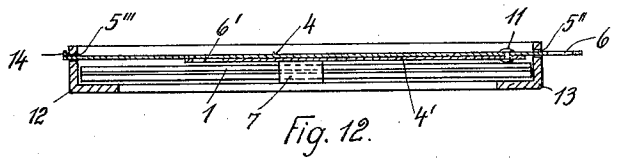


Fig. 12.

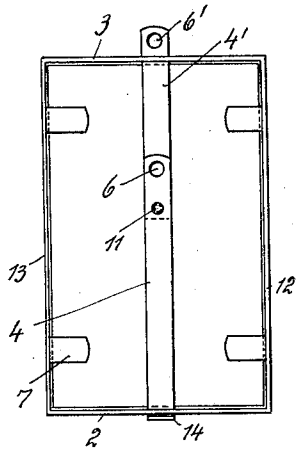


Fig. 13.

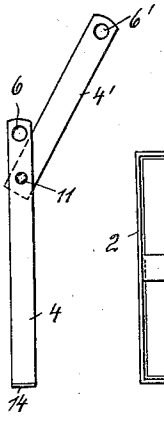


Fig. 14.

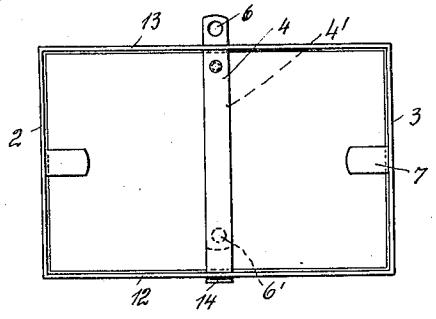


Fig. 15.

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Patented May 24, 1932

1,859,511

UNITED STATES PATENT OFFICE

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PICTURE AND LIKE FRAME

Application filed January 5, 1931, Serial No. 506,724, and in Germany July 10, 1929.

This invention relates to frames as commonly employed for the reception of photographs and pictures in such a manner that the photograph or picture so displayed can be readily removed and replaced by another. The improved frame hereinafter described may be also employed for displaying posters, railway timetables, charts, rules or regulations, advertising matter and the like.

According to the present invention the whole of the parts, that is to say the glass, mount and cardboard or plywood backing usually assembled with the picture for example within the frame, are retained in position by means of a bar which is secured to one side of the frame and passed through an aperture in the opposite side in such a manner that it projects beyond the edge of the frame and is there provided with an aperture which permits of the suspension of the frame. This and other features and advantages of the invention will be more readily apparent from the following description read in conjunction with the accompanying drawings in which:

Figures 1–5 show cross sections of the frame to illustrate diagrammatically the successive operations involved in placing the parts within the frame having a U-shaped base and securing the same in position by means of the retention bar.

Figure 6 is a perspective view of the rear side of the frame.

Figure 7 is a perspective view of a supporting strut and Figure 8 shows the same in position on the frame.

Figure 9 shows a supporting strut in combination with a source of light.

Figure 10 is a perspective view of a clip serving for clamping the backing to the glass.

Figures 11 and 12 show a frame with a bar consisting of two pieces and adapted to be employed in both the longitudinal and transverse directions of the frame.

Figure 13 is a view of the back of the frame with the bar inserted in longitudinal direction.

Figure 14 shows how the two-piece bar may be folded by turning the member 4'.

Fig. 15 is a rear elevation of a picture frame illustrating a further form of applying my invention.

As shown in the drawings one side 2 of the frame is preferably made U-shaped in cross section and the other sides of angular cross section. When so constructed the parts to be inserted in the frame, that is to say the glass, picture, mount and cardboard backing represented for convenience as a single sheet marked 1 in the drawings, rest on the side 2 which forms the bottom of the frame (Figure 3). The side 2 may be made also of angular cross section like the remaining sides in which case the parts 1 are simply inserted into an open frame (Figs. 11 and 12). The sides of the frame may each be made in one piece or may be built up of several sections.

In order to secure the parts 1 within the frame a bar 4 preferably made of hardened spring steel is employed which is secured to the bottom 2 of the frame and passed through an aperture or attached eye 5 in the opposite side or top 3 as clearly shown in Figures 3 to 5, 11 and 12. The bar 4 is of such length that when so disposed it projects beyond the upper edge of the top 3 and is there provided with an aperture which enables the frame to be suspended. Thus the bar 4 not only clamps all the parts represented by the sheet 1 within the frame but also affords a means for suspending the frame which is an advantage particularly in the case of large frames as all the weight is carried on the bottom 2 of the frame, thus the suspension of the picture or photograph is not apt to distort the sides of the frame which is likely to happen particularly when the sides of the frame are narrow as is the present prevailing fashion. If a large size picture or photograph is to be placed within the frame more than one retention bar may be employed.

If two bars are employed near to the edges of the frame, said bars being so narrow that they remain concealed by the sides of the frame, the frame may be used for transparent or similar pictures, such as f. i. diapositives and the like. Such pictures may f. i. be interposed between two glass plates.

As the retention bar does not bear on the

whole surface of the inserted parts 1 it is important that the cardboard or ply-wood employed for the backing be of such a nature that it does not warp when exposed to heat or damp. The warping of the backing may however be avoided by clamping it to the glass by means of clips 7 (Figure 10) which on the front or exposed glass side of the frame should be of such size that they are concealed by the sides. The bar 4 may be secured to the bottom 2 by soldering, (Figs. 1 to 6) riveting or in any suitable manner or it may be simply threaded through an opening in the bottom 2 and the end then turned up to hold it in position, for example, by means of a hook 14 at the end of the bar 4, (Figs. 11 to 15). In this case the frame is provided with openings on its opposite sides the bar 4 passing through the two apertures abutting against the bottom 2 and projecting beyond the top 3 of the frame where it is provided as before with a hole for the suspension of the frame. The bar 4 may however be formed with suitable slots and secured to pins, hooks or the like on the frame by bayonet joints. This embodiment is particularly adapted for wooden frames. Moreover all four sides 2, 3, 12, 13, (Figs. 11, 12, 13 and 15) of the frame may be provided with openings or attached eyes and the bar 4 may be built up of two or more parts 4 and 4′ (Fig. 14) so that it can be shortened or extended as may be necessary according to the length of the frame, the two or more parts of the bar being pivotally attached together by loose rivets.

When opposite sides of the frame are provided with slots or attached eyes a strut 8 of the kind illustrated in Figure 7 may be employed for the support of the frame as shown in Figure 8. This strut being made of spring steel, the ends 9 of the two arms may be passed through the slots 5 as shown in Figure 8 and the bent portions of the arms bear against the cardboard backing and form a means of retention of the assembled parts within the frame.

For transparent and similar pictures, such as diapositives and the like, it is useful to employ the two-armed strut 8 in combination with a source of light 10 arranged in the closed end of the strut, as shown by way of example in Figure 9.

The frame according to Figure 6 may be readily secured to a wall or to a door for example for the exhibition of public notices in which case it may be secured to a panel of the door by means of a cup-headed bolt passed through the aperture in the protruding end of the bar 4, the nut of the bolt would then be hidden from view and could not be interferred with.

We claim:

1. A frame for removably supporting a card, photograph, or the like, comprising four sides and having a sight opening and an inner ledge to receive and retain said card or photograph in the frame and an opening in one of said sides of the frame, and a removable combined retaining and supporting bar flexible in a plane normal to the plane of frame and adapted to extend across the said sight opening and detachably engage opposite sides of said frame with one of its ends projecting through said opening and beyond the outer side of the frame to retain said card or photograph seated on the inner ledge and in the frame and provide means for suspending the frame.

2. A frame for removably supporting a card, photograph, or the like, comprising four sides arranged in the form of a rectangle to form a sight opening and means to receive, support and display said card or photograph in said sight opening, and an opening extending through one of said sides of the frame, a removable retaining bar flexible in a plane normal to the plane of the frame and having one end adapted to be threaded through said opening and project beyond the outer side of the frame and provided with means for suspending said frame, and means for securing the other end of the bar to the opposite side of the frame from that of said opening.

3. A frame according to claim 2, in which the retaining bar engaging opposite sides of the frame is provided with a hook at one of its ends to engage the outside of said frame.

4. A rectangular frame provided with a sight opening and with sides L-shaped in cross section for supporting or receiving in superimposed relation rectangular sheets of glass, picture and backing and a plurality of clips substantially U-shaped in cross-section, separate and independent of the frame, and in which one side of said clips is narrower than the width of the sides of the frame surrounding the sight opening and supporting said sheets, and the distance between the two sides of the clips corresponds to the thickness of the superimposed sheets of glass, picture and backing to adapt same to removably embrace and clamp together the edges of said superimposed glass, picture and backing, whereby the picture, glass and backing may be removed and replaced as a unit in said frame and said clips be invisible in said sight opening when said picture is inserted in said frame.

5. A frame according to claim 2, in which the retaining bar is composed of two pivotally connected sections and having a hook at one end and a hole at the other.

In testimony whereof we affix our signatures.

HEINRICH HERZOGENRATH.
HERBERT TIADEN.