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J. N. HENDERSON ET AL

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PLASTIC PICTURE FRAME

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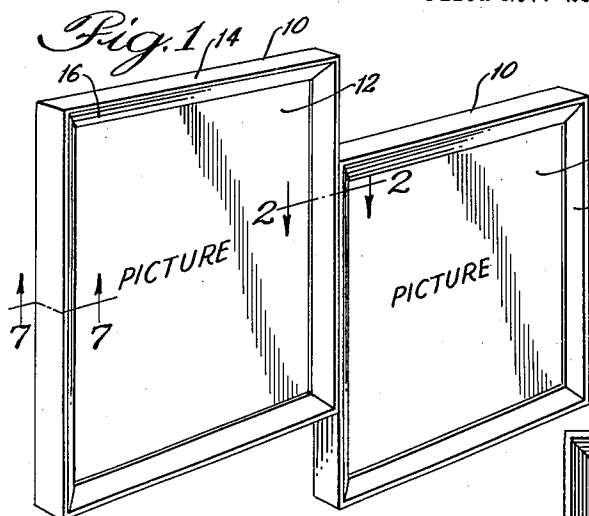
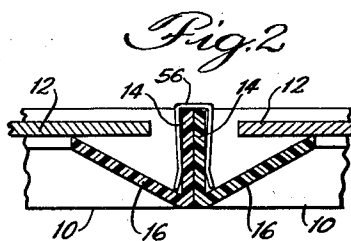


Fig. 3

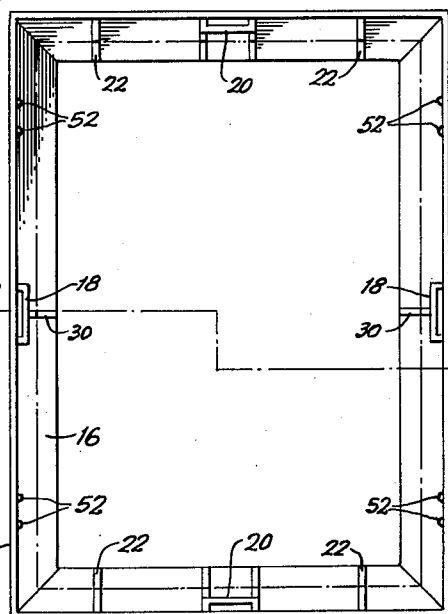
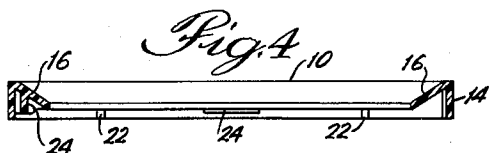
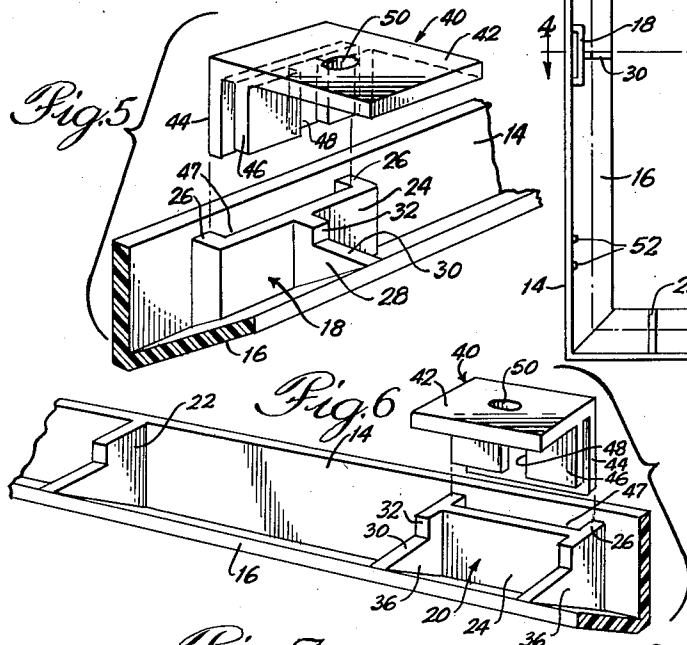
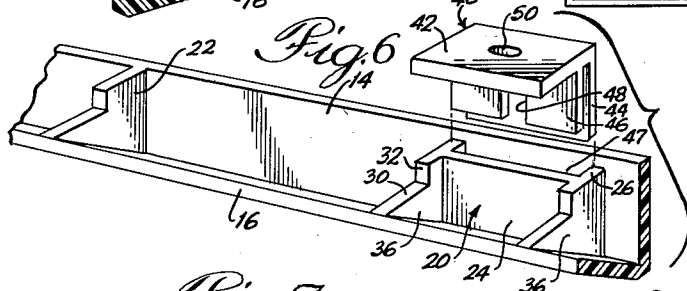
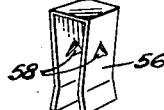
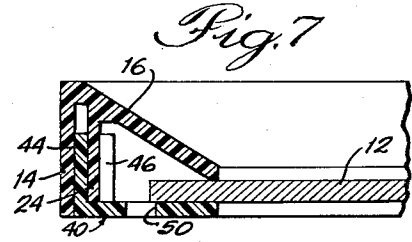


Fig. 8



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1

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PLASTIC PICTURE FRAME

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5 Claims. (Cl. 40—156)

This invention relates to a plastic picture frame integrally molded from a thermoplastic resin and having novel clip means for securing the picture panels within the frame.

The primary object of the invention is to provide an attractive picture frame which can be economically prepared by molding with integral clip-receiving means.

Another object is to provide means for anchoring a picture in the frame comprising a molded plastic clip which cooperates with said clip-receiving means and may be assembled without any tools.

Another object of the invention is to provide a frame construction which has locating means to facilitate locking several frames together in group arrangements of various designs. In the following description the frame is described in connection with a picture but it will be understood that the frame is also capable of mounting mirrors, display posters, or other panels that normally are used in a decorative frame.

These and other objects and advantages of this invention will become apparent from the following description when read in connection with the accompanying drawings, in which

FIGURE 1 is a perspective view of a pair of frames locked together and mounted in a group arrangement;

FIGURE 2 is a sectional view taken along the line 2—2 of FIGURE 1;

FIGURE 3 is a plan view looking at the rear of a picture frame constructed in accordance with the invention;

FIGURE 4 is a sectional view taken along the line 4—4 of FIGURE 3;

FIGURE 5 is a detailed perspective view showing a fragment of the frame which includes clip-receiving means and cooperating clip ready for assembly;

FIGURE 6 is a view like FIGURE 5 showing an alternative form of frame construction having a modified clip-receiving means;

FIGURE 7 is a sectional view taken along the line 7—7 of FIGURE 1; and

FIGURE 8 is a perspective view of a metal clip which is suitable for locking a pair of frames together.

Referring to the drawings, the picture frame of the invention is indicated generally by the numeral 10 and has a picture panel 12 mounted therein. Referring to FIGURE 1 particularly, it will be noted that two picture frames 10 may be mounted side by side by means of a clip 56 as shown in FIGURE 2. Each frame 10 consists of a vertical side wall 14 and an inwardly-extending angular wall 16 which forms a V with the wall 14. The inwardly extending angular wall 16 is adapted to cover the margin of the picture panel 12 when mounted in the frame. The picture 12 is adapted to be mounted between a clip-receiving means indicated generally by the numerals 18 and 20 and a clip indicated generally by the numeral 40. The clip-receiving means may be disposed at a plurality of points about the frame, the precise number depending upon the size of the frame. In FIGURE 3 we have shown four clip-receiving means, two designated by the numeral 18 on the sides of the frame and another two designated by the numeral 20 on the ends of the frame.

Referring to FIGURE 5, we have shown in some detail the clip-receiving means 18. It consists of a channel member 24 having a pair of legs extending normal to the base of the channel and identified by the numeral 26.

2

The legs about the inner surface of the vertical side wall 14 of the frame, to provide a slot 47 between the channel and wall 14. A triangular rib 28 extends between the base of the channel 24 and the angular wall 16 of the picture frame. The rib 28 has an exposed edge extending normal of the vertical wall 14 and adapted to support the picture panel 12. The rib 28 may also include a shoulder 32 against which the side edge of the picture may abut. The rib receiving means is integrally molded with the frame. The unit may be injection molded from any thermoplastic resin, particularly one which is not too costly, such as cellulose acetate, cellulose acetate butyrate, polystyrene, polyethylene or the like. The resin may be colored as desired, and the surface of the frame may carry an engraved design in the surface thereof.

Also in FIGURE 5 we have shown the cooperating clip 40 which is adapted to slide into the clip-receiving member 18. This clip is also molded from plastic resinous material and is generally L-shaped, having a main member 42 and a pair of legs 44, 46 which are spaced from each other and extend normal to the member 42. The clip shown in FIGURE 5 has a slot 48 cut in the inner leg 46 to receive and frictionally grip the rib 28 comprising part of the clip-receiving means. The clip 40 may be easily pushed into the clip-receiving means with the outer leg 44 sliding into the slot 47 and the inner leg 46 engaging frictionally the inner wall of the base of the channel member 24. The picture panel 12 is placed within the frame with its marginal edge abutting the shoulder 32. Thus the clip embraces the marginal portion of the picture to fasten it securely within the frame as shown in FIGURE 3.

An alternative form of clip-receiving means is shown in FIGURE 6. In this form two ribs rather than one are employed. Instead of the central rib 30 two ribs 36 are disposed one at either end of the clip-receiving means. The same clip 40 is used in this form of the invention. It will be seen that in this form of the invention the channel member 24, 26 is integrally formed with the ribs 36. The ribs merely form an interior extension of the legs 26 of the channel.

The legs 44, 46 of the clip are spaced farther apart at their lower ends than at their upper ends. By means of this construction the clip is rather easy to slide into the clip-receiving means initially but as it is pushed down the frictional force of engagement increases so that the legs tightly grip the base of the channel member 24. An opening 50 is provided in the horizontal portion of the clip member 40 (as shown in FIG. 6) to permit hanging the picture from a nail or other projection extending from the wall.

The clip shown in FIGURE 8 is a U-shaped piece of sheet metal 56 having inwardly extending barbs 58 which prevent the clip from coming off the frame after it has once been placed in position. If it is desired to remove the clip to take the adjoining picture frames apart the legs of the clip can be spread for this purpose. The rib-like projections 52 constitute guide means extending from the inner surface of the vertical side wall 14 of the frame and are adapted to hold the clips against lateral movement.

The ribs 22 shown in FIGURE 3 and in FIGURE 6 are for the purpose of strengthening the frame and supporting the marginal edge of the picture. They may be spaced at intervals about the periphery of the frame between the clip-receiving members as required. Less rigid plastic material and wider frames will require more frequent rib support.

It will be apparent from the foregoing description that we have provided an improved frame construction which may be easily molded at very low cost from thermoplastic resins. The entire frame including the clip-receiving

3

members, the ribs 22 and the locating projections 52 are molded completely in one piece by the injection method. The clips are molded separately. In spite of the fact that the parts are relatively cheap to manufacture they may be formed very accurately by molding and thus the clips and the clip-receiving members complement each other perfectly so that the clips do not become accidentally dislodged because of frictional engagement.

Although the frames shown and described are rectangular it will be appreciated that the invention is not restricted to this shape. Preferably, the portions of the frame that carry the clips do not deviate markedly from a straight line, but the remaining portions may be curved as desired. Other modifications will occur to those skilled in the art and it is my intention to cover any such modifications that may reasonably be embraced by the appended claims.

We claim:

1. A picture frame molded from a plastic resin comprising a side wall vertically disposed with respect to a picture panel mounted in said frame, and an inwardly-extending angular wall forming an acute angle with said vertical wall and adapted to cover the margin of said picture panel, a plurality of clip-receiving means integrally molded with said frame and adapted to cooperate with clip means for securing said picture panel in the frame, said clip-receiving means comprising a channel member having a base and parallel legs extending normal thereto, said legs abutting said vertical wall to provide a slot between said wall and said channel base, a rib extending between said channel member and said angular wall and having an exposed edge extending normally of said vertical wall serving to support the margin of said picture panel, a removable L-shaped clip for each clip-receiving means having a pair of spaced legs one of which fits into said slot and the other of which frictionally engaged the outside face of said channel base, thereby clamping said

4

picture panel securely against said rib and the inner edge of said angular wall.

2. The frame of claim 1 in which said rib is disposed centrally of said channel member and said other of the pair of spaced legs on the clip has a slot for receiving said rib.

3. The frame of claim 1 in which said clip-receiving means has two ribs, one at either end of said channel member.

4. The frame of claim 1 in which said spaced legs for said clip are divergent so that the frictional force with which they engage the clip-receiving member increases as the clip is pressed into the clip-receiving means.

5. A picture frame molded from plastic resin comprising a side wall vertically disposed with respect to a picture panel mounted in said frame, an inwardly-extending angular wall forming an acute angle with said vertical wall and adapted to cover the margin of said picture panel, a plurality of clip-receiving means integrally molded with said frame and adapted to cooperate with clip means for securing said picture panel in the frame, said clip-receiving means comprising a channel member having a base and parallel legs extending normal thereto, said legs joining said vertical wall to provide a slot between said wall and said channel base, and a removable L-shaped clip for each clip-receiving means having a pair of spaced legs one of which fits snugly into said slot and the other of which frictionally engages the outside face of said channel base, thereby clamping said picture panel against the inner edge of said angular wall.

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