United States Patent [19]

Sawyer

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[54] **PICTURE FRAME ASSEMBLY**

[76] Inventor: **Robert J. Sawyer,** 21585 Tuller Ct., Southfield, Mich. 48076

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[52] **U.S. Cl.** **40/156**

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

[58] **Field of Search** 40/152, 156, 152.1, 10

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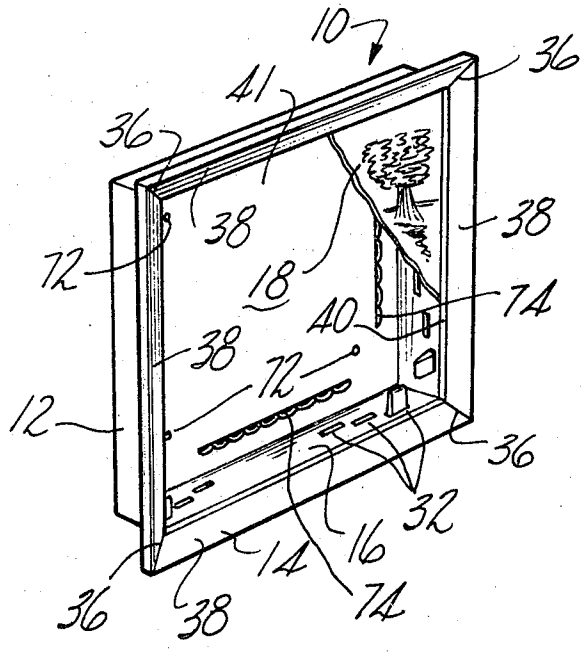
Primary Examiner—Robert W. Michell
Assistant Examiner—Wenceslao J. Contreras
Attorney, Agent, or Firm—Hauke, Gifford, Patalidis & Dumont

[57] **ABSTRACT**

An inexpensive picture frame assembly comprising an inner and an outer frame between which a painting or the like can be mounted. Means are provided to lock the frames together to retain the picture therebetween and the inner frame includes provisions for accommodating paintings of various thicknesses.

4 Claims, 8 Drawing Figures



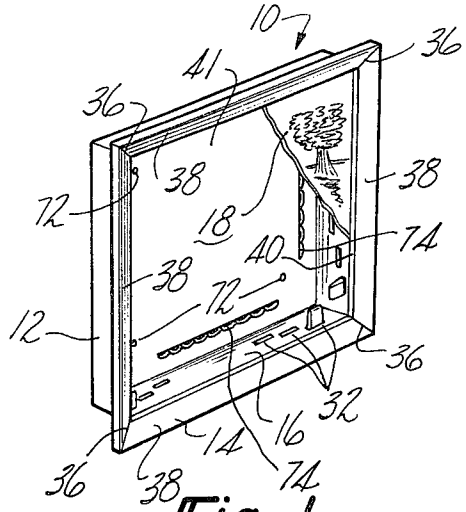


Fig-1

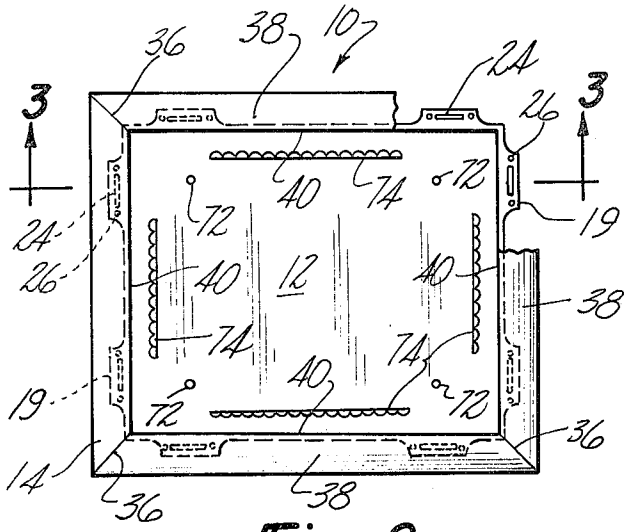


Fig-2

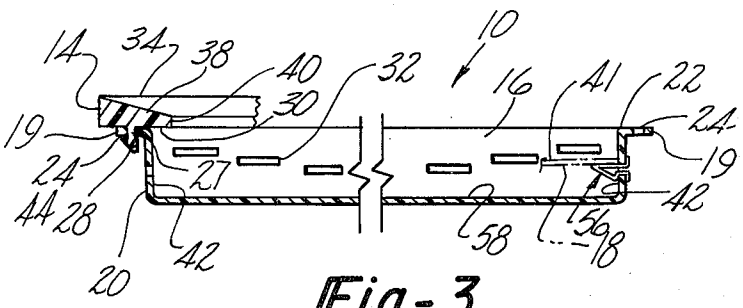


Fig-3

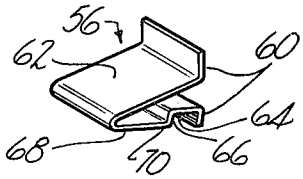


Fig-6

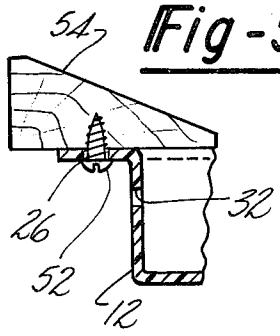


Fig-5

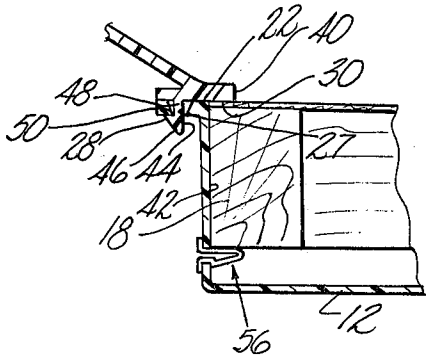


Fig-4

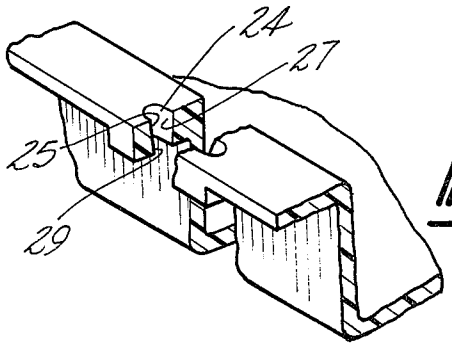


Fig-7

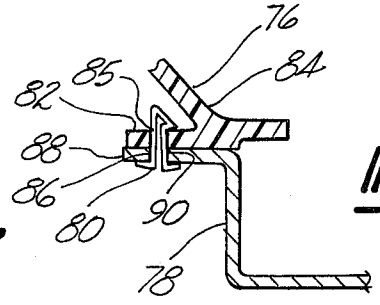


Fig-8

PICTURE FRAME ASSEMBLY

BACKGROUND OF THE INVENTION

I. Field of the Invention

The invention relates to picture frames in general and in particular to inexpensive picture frame assemblies which can be readily assembled to mount a picture or the like and which include means for accomodating paintings or the like of various thicknesses.

II. Description of the Prior Art

The market for low cost original paintings is severely limited by the present unavailability of inexpensive frames in which they can be displayed. Buyers have been forced to search out paintings which fit the present ready made frames or to have frames custom built for the paintings.

If a ready built frame is utilized the buyer is provided with a frame having fixed depth geometry which is suitable for display of paintings of only one thickness. Artists today work on a wide variety of surfaces having varying thicknesses. The usefulness to the buyer is therefore limited to the display of paintings of similar thicknesses. Furthermore the costs to manufacture such frames are relatively high because of the variety of frames that must be supplied. Mounting the pictures in ready made frames is sometimes quite difficult.

If a custom built frame is necessary, the cost to the buyer may be prohibitive and this is especially true where the value of the painting is small. Likewise, the usefulness of the frame is still limited to the display of paintings within a various range of thicknesses.

SUMMARY OF THE PRESENT INVENTION

The present invention overcomes these defects by providing a picture frame that can be readily assembled to accommodate paintings of various thicknesses. Further, it does this in a configuration that lends itself well to the technology of mass production. Having to provide only for differences in display area and not for differences in depth produces further economies for the manufacturer.

The frame assembly of the present invention comprises an inner frame which is a box-like structure. An outer frame, preferably made of plastic, is adapted to be mounted to the inner frame to mount a picture or the like therebetween. Means are provided to be attached to the inner frame to form the seat on the picture and these can be adjustably positioned to accomodate pictures of different thicknesses.

DESCRIPTION OF THE DRAWINGS

These advantages and other will become obvious to those skilled in the art of picture frames upon reference to the following specification and drawings in which like numerals refer to like parts throughout the several views and in which:

FIG. 1 is a perspective view of the picture frame assembly of the present invention illustrating the form in which it is assembled;

FIG. 2 is an elevational view of the picture frame assembly of the present invention in a position in which it is normally displayed;

FIG. 3 is a sectional view taken along line 3—3 of FIG. 2;

FIG. 4 is an enlarged view showing an alternate means of attaching the inner frame the outer frame together;

FIG. 5 is a view similar to FIG. 4 showing another alternate means for attaching the inner frame and the outer frame together;

FIG. 6 is a perspective view of the spring clip shown in FIG. 3;

FIG. 7 is an enlarged sectional perspective view showing the inner frame slot depicted in FIGS. 3, 5 and 8; and

FIG. 8 is an enlarged sectional view similar to FIGS. 4 and 5 illustrating another alternate means of attaching the inner frame and the outer frame together.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring first to FIGS. 1–3 one preferred picture frame assembly 10 of the present invention is illustrated as including an inner frame 12 and an outer frame 14 which together form a receptacle 16 into which a painting 18 or the like can be inserted for display.

The inner frame 12 has a generally box-like shape being integrally formed by stamping, forging, casting, injection molding or like process from a light material, preferably a plastic. As can best be seen in FIGS. 2 and 3, flange portions 19 perpendicular to the sides 20 of the inner frame 12 form a plane surface 22 upon which the outer frame 14 rests. Each flange portion 19 has a slot 24 formed therein which registers with a tab 28 integrally formed on an inner surface 30 of the outer frame 14. The inner surface 30 which abuts the plane surface 22 of inner frame 12 and extends inwardly somewhat from the flange portions 19 as can best be seen in FIG. 3. The outer side of slot 24 as can best be seen in FIG. 7 is preferably inclined so that the cross-sectional area of the slot increases toward the side adjacent the outer frame 14.

The outer frame 14 is likewise preferably, but not necessarily, formed in one piece of a light material, such as a plastic, by use of a manufacturing process, such as injection molding, which is suitable for high volume manufacturing. It includes a top surface 34 which serves a decorative purpose, preferably including simulated mitered corners 36 (FIGS. 1–2) and having downwardly sloping surfaces 38 ending at inner edges 40, which form the rectangular opening 41 through which the painting 18 may be viewed.

Inner edges 40 are positioned farther inward than the inner edges 42 of inner frame 12 to provide a means for abutting the outer face of the painting 18. The painting 18 is mounted between the surface 30 and spring clips 56 in a manner which will become more apparent as the description proceeds. Integral tabs 28 extend from the surface 30 and register with the slots 24 of the flange portions 19. The tabs 28 have a straight side 44 positioned farther from the center of the frame than a straight side 27 of the slot 24 on the inner frame 12, an inclined surface 46 which intersects the straight side 44 and which is inclined outwardly at approximately the same angle as an inclined side 25 of the slot 24 of the inner frame 12, and a straight surface 48 equal to or more distant from the center of the frame as an inner edge 29 of the inclined side 25 of the inner frame slot 24. The last two mentioned surfaces are joined by another straight surface 50 perpendicular to the axis of the tab 28 as defined by the straight side 44.

Outer frames of various colors and appearances may be assembled to the inner frame 12 in the following

manner: The outer frame **14** is placed over the inner frame **12** so that the tabs **28** register with the slots **24.** The inclined surfaces **46** of the tabs **28** rest against the outer sides **25** of the slots **24.** Downward pressure tends to bend the tabs **28** inwardly until all of the surface **46** passes through the slot **24.** At this point the tabs **28,** being of a resilient material such as a plastic, snap back to assume the position shown in FIG. **4.** Forces tending to separate the frames will be ineffective unless the tab **28** is deflected so that it can pass through slot **24.**

If a wooden outer frame is to be used, another feature of the invention, as may be seen best in FIGS. **2** and **5,** may be utilizied. The flange portions **19** of the inner frame **12** have included therein through holes **26** through which screws **52** (FIG. **3**) may be driven into the wooden frame **54.**

Another important advantage of the invention is the depth adjustment feature it affords. As was related previously, the bottom surface **30** of outer frame **14** forms the upper wall of the receptacle **16** into which the picture **18** is inserted. The bottom surface is formed by the spring clips **56** in cooperation with slots **32** formed in the sides **20** of inner frame **12.** The slots **32** are arranged in sets, each set being displaced at different distances between the top surface **22** and a bottom surface **58** of the inner frame **12.**

Insertion of spring clips **56** into each of a set of slots **32** defines the bottom support for the painting **18** as can best be seen by reference to FIGS. **3** and **6.** In its assembled condition, each spring clip **56** has a flanged portion **60,** a straight portion **62** and **64** perpendicular to these flanged portions, a straight portion **66** perpendicular to the straight portions **62** and **64,** and an inclined portion **68** joining the portions **62** and **66.** In the relaxed condition, the portions **62** and **64** are not parallel and the perpendicular distance from surface of portion **62** to an edge **70** of the inclined surface **68** is greater than the corresponding height of the slot **32.** Therefore insertion of spring clip **56** into the slot **32** forces the sides of the spring clip **56** together until the edge **70** passes the inner wall **42** of the inner frame **12** at which point the spring clip, being formed of a resilient material, takes the position shown in FIG. **5.** The straight portion **62** is positioned at the top edge of the slot **32** and extends through it to the support of the painting **18.** As can best be seen in FIG. **5,** flanged portions **60** abut the inner frame wall **20,** preventing further insertion. The straight portion **64,** being slightly greater in length than the width of the inner frame wall **20,** rests on the bottom edge of the slot **32.** The straight portion **66** is positioned adjacent the inner wall **42** of the inner frame **12,** preventing retraction of the spring clip **56** without forcing the edge **70** of the inclined surface **68** above the bottom edge of the slot **32.**

By inserting the spring clips **56** in different sets of slots **32** the distance between the top of the spring clips **56** and surface **30** can be changed to accommodate paintings **18** or the like having different thicknesses.

When the picture frame assembly **10** is assembled as shown in the drawings, it may be hung from a wall for display, using certain other features of the invention. Inner frame **12** includes four through holes **72** in its bottom surface **58** spaced approximately as shown in FIG. **2.** The holes **72** are intended to receive attaching means for suspension of the assembly by cable, cord or the like and permit the frame to be hung in any of four positions. Slots **74** can also be included or can replace the holes **72.** The slots **74** preferably have a scalloped outer edge and extend about one-half the length of each side of the frame, centrally located as shown in FIG. **2.** These are intended to receive pegs, nails, or the like, from which the assembly may be suspended. If the scalloped construction of slots is chosen, through holes **72** are unncessary since the upper surface of the scallops can cooperate with attaching means such as cables, cords, and the like.

In another alternative configuration, shown in FIG. **8,** an outer frame **76** similar to outer frame **14** is attached to an inner frame **78** similar to inner frame **12** by means of a spring clip **80.** The outer frame **76** includes an outer flange portion **82,** hidden from view from the front of the assembly by inwardly inclined portions **84** of the outer frame **76,** having a slot **85** formed therethrough. The slot **85** registers with an identically sized slot **86** in a flange portion **88** of the inner frame **78.** Insertion of the spring clip **80** through the slots **85** locks the frames **76** and **78** together in the same manner that spring clip **56** is locked in place to support the painting **18.** The two spring clips differ only in that a straight portion **90** of the spring clip **80** may differ in length from the corresponding straight portion **64** of the spring clip **56** since it must be greater in length than the combined thickness of the flange portions **82** and **88.**

To mount a painting **18** or the like their slots **32** are selected to accommodate the thickness of the particular painting **18** which is to be mounted. Spring clips **56** ae snapped into place in the selected slots **32.** The painting **18** is then inserted in the inner frame **12** and rests upon the spring clips **56.** The outer frame **14** or **76** is then snapped into place to hold the painting **18** in place.

While only the above embodiments of the present invention are described, other embodiments may be made by those skilled in the art without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A frame assembly for mounting a picture or the like, said frame assembly comprising:

an open ended box shaped inner frame member formed in a single piece and an outer frame member,

means for locking said frame members together to mount said picture or the like therebetween,

means carried by said inner frame for supporting the inner side of said picture or the like, said last mentioned means being adjustably mounted to said inner frame to permit said frame assembly to accommodate pictures or the like of various thicknesses;

said supporting means comprising: a plurality of rectangular slots formed in the sides of said inner frame member and arranged in sets, each set being at a different distance from the face of the inner frame adjacent to the outer frame member; a plurality of spring clips to be inserted from the outside into a selected set of said slots, said spring clips being formed from a resilient material having two straight flanged portions, two straight sides extending perpendicularly from the inner edge of the flange portions, a third straight side, perpendicular to the two straight sides, and an inclined side extending from the third straight side to an edge at which it meets one of the first mentioned straight sides, the space

between said first mentioned two straight sides when the spring clip is in a relaxed condition being greater than the length extension of said rectangular slots measured along the depth of said inner frame.

2. A frame assembly for mounting a picture or the like, said frame assembly comprising:

an open ended box shaped inner frame member and an outer frame member,

said inner frame member having a substantially imperforate back and sides extending outwardly from said back,

means for locking said frame members together to mount said picture or the like therebetween,

means carried by said inner frame for supporting the inner side of said picture or the like, said last mentioned means being adjustably mounted to said inner frame member to permit said frame assembly to accommodate pictures or the like of various thicknesses,

said supporting means comprising a plurality of rectangular slots formed in the sides of said inner frame member and arranged in sets, each set being at a different distance from the face of the inner frame member adjacent the outer frame member; a plurality of spring clips insertable from the outside of said frame assembly into a selected set of said slots; each of said clips having a portion extending into the interior of said frame when inserted in said slots to support a picture or the like of a predetermined thickness.

3. A frame assembly as defined in claim **2**, and in which said locking means comprises flanged portions extending perpendicularly outwardly from the sides of said inner frame member, said flanged portions having through holes and fastening members extending through said holes and connecting said inner frame member and said outer frame member together.

4. A frame assembly as defined in claim **2**, wherein said locking means comprises flanged portions formed on said inner and outer frame members, formed in said flanged members and spring clips received in said slots to lock said inner frame member and said outer frame member together.

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