The picture frames are of one-piece construction and are used for displaying pictures, photographs, or the like. Two projections protrude respectively from opposite points on the side wall of the frame. One projection of a first picture frame is inserted through an opening in the projection of a second picture frame which is attached to the wall. Thus, the first frame will hang from the second frame.
INTERCONNECTED HANGING PICTURE FRAMES

An important object of the present invention is to provide picture frames which are interconnected, enabling one to be hung from the other, by means of elements that are integral with and form part of the picture frames themselves.

Another object of the invention is to provide means on a picture frame enabling it to be hung from another similarly constructed picture frame while minimizing the tendency of side-to-side sway.

Still another object of the invention is to provide picture frames respectively having elements for interconnection therebetween, which elements are attractive in appearance.

Yet another object of the invention is to provide interconnected picture frames which are molded of plastic and have the interconnecting elements molded as a part thereof.

In summary, there is provided, in one form of the invention, a one-piece picture frame comprising a substantially continuous side wall surrounding an opening for exposing a picture mounted in the frame, a first projection on the side wall and directed outwardly therefrom and disposed at a first point thereon, the first projection including a socket and an opening which communicates with the socket and faces away from the side wall, the socket having a first bearing surface which faces the side wall, a second projection on the side wall and directed outwardly therefrom and disposed at a second point thereon, the second projection including a neck portion and a head portion disposed on the outer end of the neck portion, the head portion having a second bearing surface which faces the side wall, the opening of one picture frame in use receiving the neck portion of another similarly constructed picture frame while the head portion of the other frame is lodged in the socket of the one picture frame, the first bearing surface of said one picture frame, being adapted freely to rest against the second bearing surface of said other picture frame.

In a second form of the invention, there is provided a one-piece picture frame comprising a substantially continuous side wall surrounding an opening for exposing a picture mounted in the frame, two projections on the side wall and directed outwardly therefrom and respectively disposed at opposite points thereon, each of the projections being in the form of a loop having an opening and a bearing surface, one of the loops on one picture frame being insertable into the opening of the opposite loop on another similarly constructed picture frame when hung from a support, the one loop then being movable to a position wherein the bearing surface thereon rests freely on the bearing surface of the other picture frame.

Further features of the invention pertain to the particular arrangement of the parts of the interconnected hanging picture frames, whereby the above-outlined and additional optional features thereof are attained.

The invention, both as to its organization and method of operation, together with further objects and advantages thereof, will best be understood by reference to the following specification, when taken with the accompanying drawings, in which:

FIG. 1 is a front view of three interconnected, hanging picture frames, each incorporating the features of the present invention;

FIG. 2 is an enlarged front view of one of the frames;

FIG. 3 is a rear view of the frame shown in FIG. 2;

FIG. 4 is a side elevational view of the frame shown in FIG. 2;

FIG. 5 is a greatly enlarged side elevational view of the connecting elements respectively on a pair of adjacent frames prior to assembly thereof;

FIG. 6 is a front view of the connecting elements of FIG. 5;

FIG. 7 illustrates a front view of an alternative construction of the connecting elements, in assembled form;

FIG. 8 is a cross-sectional view taken along line 8-8 of FIG. 7;

FIG. 9 illustrates a front view of three interconnected picture frames respectively incorporating yet another embodiment of the present invention;

FIG. 10 is an enlarged front view of the connecting elements respectively on a pair of adjacent frames after assembly thereof;

FIG. 11 is a side view of the connecting elements of FIG. 10;

FIGS. 12, 13, and 14 illustrate the steps in assembling this third form of the invention.

Referring now to the drawings, and more particularly to FIG. 1 thereof, there is shown a set of three picture frames 20, 20' and 20" interconnected in a vertical arrangement. It is to be understood that the word "picture" is intended to have a broad connotation whenever used in the specification, and includes photo frames and the like. In FIG. 1, the uppermost one of the picture frames 20 is attached to the wall in a convenient manner. The second picture frame 20' is then hung from the first in a manner to be presently described and is not, nor need it be, connected to the wall. Similarly, the lowermost picture frame 20" is interconnected with the second picture frame 20', and it, too, is not connected to the wall.

Referring now specifically to FIGS. 2 to 6, each of the picture frames 20 is generally oval or elliptical in outline, although this shape is merely exemplary. It is to be understood that various other shapes of picture frames may be utilized, such as round, square, rectangular, etc. Each picture frame 20 is of a one-piece construction and preferably is molded of plastic, so as to be rigid and substantially undeformable. The picture frame 20 is made up of substantially continuous side wall 21 defined by an essentially straight outer portion 22 at the rear and an inwardly curving outer portion 23 at the front, which portion 23 terminates in a generally flat front portion 24. An inwardly curved inner portion 25 extends rearwardly from the front surface 24, terminating in an essentially straight inner portion 26 at the rear. The portions 25 and 26 define an opening 27 through which may be viewed a picture which is mounted in the frame 20. The straight inner portion 26 terminates in a rearwardly facing ledge 28, the plane of which is generally parallel to the outer surface of the flat front portion 24. A plurality of reinforcing or strengthening ribs 29 is molded into the frame 20 at the rear thereof between the inner surfaces respectively of the curved portions 23 and 25.

The oval-shaped ledge 28 supports a pane of glass 30 which also is oval or elliptical in shape. A picture, such as a photograph 31, is placed on the glass, followed by a backing member 32 which preferably is formed of corrugated cardboard. The backing member 32, as shown, is also oval or elliptical in shape and has dimensions to fit into the space between the inner surface of the portion 23 of the wall 21. The distance from the ledge 28 to the rear end of the outer portion 22 is, in the embodiment shown, equal to the combined thicknesses of the pane of glass 30, the photograph 31, and the backing member 32. With such a construction, the outer surface of the backing member 32 is substantially coplanar with the rearmost end of the wall 21.

The backing member 32 has dimensions to fill the space between the portion 22 of the wall 21 and resiliently to bear against the inwardly facing surface thereof. The backing member 32 is press-fitted into the frame 20 against the photograph 31, the frictional engagement of the side of the backing member 32 with the inner surface of the portion 22 serving to hold the various elements in position. The backing member 32 may be provided with a hole 33 for use in mounting the frame 20 on a nail, hook, or the like.

The picture frame 20 further comprises a female projection 40 on the side wall 21, located at a point along the major axis thereof. The projection 40 includes a base 41 which has various curves and designs to render the projection 40 attractive. The base 41 carries on the outer end thereof an outwardly and slightly forwardly directed socket 42, which socket has a laterally extending curved surface 43. It should be noted that the axis of the socket 42 in the form shown is at an angle of about 25° with respect to the plane of the pane of glass 30. The socket 42 has a front opening 44 of a given diameter and a rear opening 45 which has a smaller diameter, the openings 44 and 45 being generally round in shape when viewed along the
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axis of the socket 42. Thus, the surface 43 curves inwardly from the front toward the rear. The outermost end of the socket 42 is cut away to provide an opening in the form of a rectangular slot 46, which faces downwardly or away from the side wall 21. The portions of the curved surface 43 nearest the slot 46 define a bearing surface, which bearing surface faces the wall 21.

The picture frame 20 further comprises a male projection 50 on the side wall 21 disposed at a second point thereon, which point is located on the major axis of the frame 20 and diametrically opposite to the point at which the first projection 40 is located. The projection 50 also includes a base 51 having curves, scrollwork, and the like to provide a decorative appearance. The base carries an outwardly and slightly forwardly directed neck 52 which is cylindrically in transverse cross section. Disposed on the outer end of the neck 52 is a substantially spherical or ball-shaped head 53. The rear of the head 53 is cut away and a forwardly extending hole 54 is located therein to save material. The surface of the head 53 which faces the wall 21, that is nearest the neck 52, defines a bearing face.

The curvature of the surface 43 in the socket 42 substantially matches the curvature of the head 53. The front opening 44 is larger than the head 53, while the rear opening 45 is slightly smaller than the head 53. Thus, the head 53 of one picture frame 20 may be placed within the socket 42 on a second frame 20.

Specifically, referring to Figs. 5 and 6, the first frame 20 may be hung by a hook or the like by utilizing the hole 33. Preferably, the backing member 32 is oriented to place the hole 33 nearer the male projection 50. When the frame 20 is hung while in this preferred orientation, the male projection 50 will be directed upwardly, and the female projection 40 will be directed downwardly. Also, the slot 46 will face downwardly. The head 53' of the projection 50' on a second frame 20' is aligned with the front opening 44 in the first frame 20 and is then seated within the curved surface 43, with the neck 52' being seated within the slot 46. In this condition, the downwardly facing bearing surface of the head 53 will rest on the upwardly facing portion of the surface 43 immediately adjacent the slot 46. Thus, the second frame 20' will hang freely from the first frame 20. A third frame 20'' may be hung from the frame 20' in a similar fashion. Of course, any number of frames so constructed can be hung, one from the other.

It is to be understood that, although the frame 20 is shown to have an elliptical or oval shape, frames with round, polygonal, or other outlines may be utilized. Also, although the drawings depict the frames 20 as being mounted such that the male projection 50 is directed upwardly and the female projection 40 is directed downwardly, they may be mounted with the female projection 40 directed upwardly and the male projection 50 directed downwardly. In either case, the portion of the surface of the head 53 facing the associated wall 21 defines a bearing surface that will rest against the bearing surface defined by the portion of the curved surface 43 of the socket 42 that faces the associated wall 21.

Turning now to Figs. 7 and 8, there is shown a second form of the present invention, wherein parts corresponding to those of Figs. 1-6 and labeled with corresponding reference numerals, but with a factor of 40 added thereto. Although only the connecting elements are shown, it is to be understood that these connecting elements are used on picture frames such as is shown in Figs. 1-6.

There is provided a female projection 60 having a decorative base 61 which has scrollwork and other curves to present an attractive appearance. The base 61 carries on the outer end thereof a socket 62, which socket has a laterally extending curved surface 63. The socket 62 has a front opening 64 of a generally rectangular shape and a rear opening 65 which has a smaller diameter, the openings 64 and 65 being generally round in shape when viewed along the axis of the socket 62. Thus, the surface 63 curves inwardly from the front opening 64 to the rear opening 65. The outermost end of the socket 62 is cut away to provide an opening in the form of a rectangular slot 66, which faces downwardly or away from the side wall of the picture frame to which it is attached. The portions of the curved surface 63 nearest the slot 66 define a bearing surface, which bearing surface faces the side wall of the picture frame. On each of the edges defining the slot 66 is an inwardly directed projection or nib 67.

The other connecting element in the second form is a male projection 70 which includes a base 71 having curves, scrollwork, and the like to provide a decorative appearance. The base carries an outwardly and slightly forwardly directed neck 72 which is channel-shaped in transverse cross section. The neck 72 is tapered so that the side walls thereof are closer together at the rear than at the front. Disposed at the outer end of the neck 72 is a substantially spherical or ball-shaped head 73. The surface of the head 73 which faces the side wall to which the projection 70 is attached defines a bearing surface.

The curvature of the surface 63 in the socket 62 substantially matches the curvature of the head 73. The front opening 64 is larger than the head 73, while the rear opening 45 is slightly smaller than the head 73. Thus, the head 73 of one picture frame 20 may be placed within the socket 62 on a second frame 20. In interconnecting the elements, the head 73 of the projection 70 on one frame is aligned with the front opening 64 in another frame, and is then seated within the curved surface 63. The fact that the neck 72 is tapered facilitates entry thereof into the slot 66. The neck 72 engages the nibs 67 and forces them to spread slightly. When the neck 72 is finally seated within the slot 66, the nibs 67 snap back to their original position, thereby retaining the neck 72 in position therein.

In the interconnected condition, the downwardly facing bearing surface of the head 73 will rest on the upwardly facing portion of the surface 63 immediately adjacent the slot 66.

A third embodiment of the invention is illustrated in Figs. 9 to 14 in which the reference numerals correspond to those used in respect to the first embodiment, but with a factor 60 added thereto. In Fig. 9 there is shown a set of three picture frames 80, 80', and 80'' interconnected in a vertical arrangement, the uppermost one being attached to a wall in a convenient manner. The second picture frame 80' is hung from the first in a manner to be presently described and is not, nor need it be, attached to the wall. Finally, the lowermost picture frame 80'' is interconnected with the second picture frame 80', and, it, too, is not connected to the wall.

This embodiment also depicts the frames 80, 80', and 80'' as having an oval or elliptical shape, although this shape is not necessary. The picture frame 80 is of a one-piece construction and preferably is molded of plastic, so as to be rigid and substantially undeformable. The picture frame 80 is constructed of a substantially continuous side wall 81 which may have any desirable design such as that depicted in the first embodiment. The side wall 81 surrounds an opening 87 through which may be viewed a picture which is mounted in the frame 80. A backing member (not shown) such as is shown in respect to the first embodiment may be used to hold in a pane of glass 90 and a photograph (not shown). The backing member may have a hole for use in mounting the frame 80 on a nail, hook, or the like.

The picture frame 80 further comprises a first projection in the form of a loop 100, the opening 101 of which has a substantially teardrop shape. The loop 100 is located at a point along the major axis of the side wall 81 and protrudes from the rear thereof and is curved outwardly and slightly forwardly, as is best seen in Fig. 11. Also, there is provided a second projection in the form of a loop 110 located at a point on the major axis of the side wall 81 diametrically opposed to the first loop 100. The loop 110 has an opening 111 which has a teardrop shape. The loop 110 protrudes from the rear of the side wall 81 and is curved outwardly and slightly forwardly. The mid-portions of the loop 110 define bearing surfaces 112, 113 as will be presently described.
Two frames 80 and 80' are interconnected by arranging the frame 80' such that its plane is normal to the plane of the frame 80, and then aligning the loop 110' for entry into the opening 101 of the loop 100, as shown in FIG. 12. The frame 80' is then tilted or pivoted with respect to the other frame to enable insertion of the loop 110' into the opening 101 of the loop 100, as is best seen in FIG. 13. The frame 80' is then rotated 90° to the position shown in FIG. 14, followed by again tilting or pivoting the frame 80' to the position shown in FIGS. 10 and 11, in which the frames 80 and 80' are substantially coplanar. In this position the bearing surfaces 112' and 113' of the loop 110' will bear against the bearing surfaces 102 and 103 of the loop 100. Depending on the particular construction, the bearing surfaces may be either on the front or rear of the loops or on the sides thereof. As is best seen in FIG. 11, the latter construction is utilized in the particular form, that is, the bearing surface 112' is on the outside of one leg of the loop 110' and engages the inside of the corresponding leg of the loop 100. Similarly, the bearing surface 113' is on the outside of the other leg of the loop 110' and engages the inside of the corresponding leg of the loop 100.

In the particular form shown in FIGS. 9 to 14, the loops 100 and 110' are substantially identical, although this is not required. Also, the loops may have decorative bases, such as incorporated in the first two forms disclosed.

It should be understood that, in the various forms described herein, each one enables a single frame to be secured to the wall and a number of additional frames to be hung therefrom. Also, with these proposed interconnecting means, the connecting elements, although protruding, present an attractive appearance, and are easily attachable and detachable. In their hanging positions, the frames are so designed to minimize side-to-side sway or any other tendency of the frames to depart from the selected orientation.

Although there have been described what are at present considered to be the preferred embodiments of the invention, it will be understood that various modifications may be made therein, and it is intended to cover in the appended claims all such modifications as fall within the true spirit and scope of the invention.

What is claimed is:

1. A one-piece picture frame comprising a substantially continuous side wall surrounding an opening for exposing a picture mounted in said frame, a first projection on said side wall and directed outwardly therefrom and disposed at a first point thereon, said first projection including a socket and an opening which communicates with said socket and faces away from said side wall, said socket having a first bearing surface which faces said side wall, a second projection on said side wall and directed outwardly therefrom and disposed at a second point thereon opposite to said first point, said second projection including a neck portion and a head portion disposed on the outer end of said neck portion, said head portion having a second bearing surface which faces said side wall, said opening of one said picture frame in use receiving the neck portion of another similarly constructed picture frame while the head portion of said other frame is lodged in said socket of said one picture frame, said first bearing surface of said one picture frame being adapted freely to rest against said second bearing surface of said other picture frame.

2. The picture frame set forth in claim 1, and being molded of plastic.

3. The picture frame set forth in claim 1, wherein said side wall has an elliptical outline.

4. The picture frame set forth in claim 3, wherein said projections are located at points on the major axis of said side wall.

5. The picture frame set forth in claim 1, herein each of said projections includes a decorative base portion for carrying the associated bearing surface.

6. The picture frame set forth in claim 1, wherein each of said projections is of rigid and substantial undeformable material.

7. The picture frame set forth in claim 1, wherein each of said projections is directed slightly forwardly.

8. The picture frame set forth in claim 1, wherein said neck is generally cylindrical.

9. The picture frame set forth in claim 1, wherein said neck has tapered side walls to facilitate entry of said neck into the opening on the second projection of said other picture frame.

10. The picture frame set forth in claim 9, wherein two projections are respectively formed on the edges forming said opening and are directed toward each other and serve removably to retain the neck of another picture frame therein.

11. The picture frame set forth in claim 1, herein said socket has a generally forwardly directed opening through which the head portion of another frames enters.

12. The picture frame set forth in claim 1, wherein said head portion is substantially ball-shaped.

13. A one-piece picture frame comprising a substantially continuous side wall surrounding an opening for exposing a picture mounted in the frame, two projections on said side wall and directed outwardly therefrom and respectively disposed at opposite points thereon, each of said projections being in the form of a loop having an opening and a bearing surface, one of said loops on one picture frame being insertable into the opening of the opposite loop on another similarly constructed picture frame which is hung from a support, said one loop then being movable to a position wherein the bearing surface thereof rests freely on the bearing surface of said other picture frame.

14. The picture frame set forth in claim 13, and being molded of plastic.

15. The picture frame set forth in claim 13, wherein said side wall has an elliptical outline.

16. The picture frame set forth in claim 15, wherein said projections are located at points on the major axis of said side wall.

17. The picture frame set forth in claim 13, wherein each of said loops is curved so that the outer end thereof is disposed forwardly of the inner end.

18. The picture frame set forth in claim 13, wherein each of said projections is rigid and substantially undeformable.

19. The picture frame set forth in claim 13, wherein each of said loops is substantially identical.