FLEXIBLE PICTURE FRAME

Inventor: RUDOLF SHTAINHORN, MILLBURN, NJ (US)

Appl. No.: 13/186,044

Filed: Jul. 19, 2011

Related U.S. Application Data

Provisional application No. 61/365,797, filed on Jul. 20, 2010.

Publication Classification

Int. Cl.
A47G 1/06 (2006.01)

U.S. Cl. .................. 40/745; 40/700; 40/798; 40/768

ABSTRACT

The present invention is a flexible picture frame. The frame stretches so that a user can insert a picture, a picture and picture cover, or a picture, picture cover, and backer section. Once the components are disposed in the flexible frame, it then recovers to its original shape and size. The flexible frame contains grooves on the inside walls to contain the picture and other components.

Related U.S. Application Data

Provisional application No. 61/365,797, filed on Jul. 20, 2010.
FIG. 6
FLEXIBLE PICTURE FRAME

CLAIM OF PRIORITY

This application claims the priority of U.S. Ser. No. 61/365,797 filed on Jul. 20, 2010, the contents of which are fully incorporated herein by reference.

FIELD OF THE INVENTION

The invention relates to frames, in particular to frames for photographs or pictures.

BACKGROUND OF THE INVENTION

Many consumers shoot and print their own photographs or purchase photographs or pictures without frames, and buy frames separately. Many types of frames exist in the art; a standard frame has a back with a support, a rim, and a front cover that is glass or some type of clear plastic. One challenge when inserting a picture or photo into a frame is centering the picture correctly. A user must dissemble a frame assembly by removing the back of the frame and inserting the photo against the glass or plastic cover on the front of the assembly, then must place the back on the picture and secure it there. If the spacing is such to allow the picture or photo to move around, spacers may be placed between the picture or photo and the back. The fasteners that secure the back to the rim may be difficult to maneuver or cumbersome to use. Many examples exist in the prior art of attempts to make this process easier or to improve picture frames in general. Some of the prior art is discussed below.

U.S. Pat. No. 4,450,636 discloses a picture frame having two principal elements, a planar backing board and a flexible annular material element formed substantially as two discs with a central aperture therein, the discs being attached to each other at their perimeters. Biaxial means, such as an elastic band, are affixed to the cloth adjacent the apertures and are such that when the discs are placed over the backing board the elastic biases the apertures radially inwardly, thereby holding the outer element onto the backing board. In another embodiment a rigid element is substituted for the elastic element at the front of the frame, thereby defining a fixed shape through which the picture is presented. An additional embodiment involves a strip of spring-like material arranged adjacent to the central aperture of the disc-shaped materials in place of the circular portion of the disc-shaped material, a discontinuity is provided so that the free ends thereof may be spread apart and placed over the backing board and, upon releasing the ends, the outer element will close and appear as a continuous circular element.

European Patent Application EP2012158 discloses an optical element comprising at least one optical film wherein at least a portion of the optical film is maintained dimensionally stable by the presence of a mechanism for application of a controlled tensile force via an elastic material bonded to the perimeter of the film.

The present invention involves a unique frame that is elegant in its simplicity of use and that overcomes the difficulties described above. A flexible material is used to create a photo or picture frame such that inserting and removing photos or pictures is relatively easy. The flexible frame has grooves for containing the edges of the photo or picture, as well as a backing and a cover. The frame is such that it stretches enough for a user to insert a photo or picture with or without a backing and a cover, then elastically recovers to hold the picture or photo rigidly in the frame. It is therefore much easier for a user to insert a photo into the frame.

Another advantage of the present invention is that it doesn’t break. Commonly available frames made from wood or other rigid materials may break, for instance when packed in a moving box with insufficient padding, thus destroying the frame and possibly the picture as well.

The flexible frame of the present invention also is inexpensive to manufacture and can be made as one piece, thus reducing assembly time for a factory or a consumer. This also eliminates joints or weak points so the flexible frame won’t break as other frames that have joints (either nailed or glued) will.

The prior art describes frames made from other materials and secured with elastic bands that act as fasteners or act to provide pressure to remove a picture from the frame. None of the prior art describes a frame that is constructed entirely from an elastic or flexible material, as the present invention does. The present invention provides nearly limitless design possibilities, with many unique and interesting looks.

SUMMARY OF THE INVENTION

The present invention is a flexible picture frame, and is an article of manufacture, with a backer section, having a front and a back, a circumference, a front and back, at least one edge and an edge thickness; a cover section, having a front and a back, a circumference, at least one edge and an edge thickness, wherein the circumference of the cover section is substantially the same as the circumference of the backer section; and a flexible elastomeric frame of unitary construction having a groove of thickness approximately the combined thickness of the cover and backer section edge thicknesses, where the groove has an internal circumference substantially equal to the backer or cover section circumference, and the flexible elastomeric frame may be stretched to completely encircle and secure the backer and cover sections in parallel orientation when the front of the backer section is disposed on the back of the cover section.

The present invention is a flexible elastomeric picture frame with a cover and a back. The flexible frame has grooves in the inside bottom, top, and right and left sides such that the edges of a picture, cover and back, when pressed together, will fit into the grooves and be held securely in the flexible frame. The frame may be used with any suitable object, including but not limited to, pictures, photos, documents, diplomas, drawings, paintings, autographs, religious cards, pressed flowers, minors, coasters, recipes, pressed metal artwork, foil artwork, polymer clay artwork, and with
objects of any type of material, such as but not limited to, paper, plastics, glass, metal, textiles and fabrics, plant or animal materials, polymeric materials, rubbers, or any combination of these with each other or other materials.

[0013] It is an object of the invention to provide a flexible frame for photos or pictures.

[0014] It is an object of the invention to provide a flexible frame for any type of artwork or other items a user desires to frame.

[0015] It is an object of the invention to provide a frame for photos or pictures that is easy to use.

[0016] It is an object of the invention to provide a frame for photos or pictures that doesn’t break.

[0017] It is an object of the invention to provide flexible frames for photos or pictures in a variety of shapes, sizes, colors, and designs.

[0018] It is an object of the invention to provide a flexible frame for photos or pictures that can be used with or without a glass or plastic cover.

[0019] It is an object of the invention to provide a flexible frame for photos or pictures that can be used with or without a back.

[0020] It is an object of the invention to provide a flexible frame for photos or pictures that can be used with a backer section that has hooks or a stand.

[0021] It is an object of the invention to provide a flexible frame for photos or pictures that is a single piece.

[0022] It is an object of the invention to provide a flexible frame for photos or pictures that has a break, where the ends of the break can be fastened to form a continuous piece.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] FIG. 1 is a front perspective view an embodiment of the invention.

[0024] FIG. 2 is an exploded view of the invention.

[0025] FIG. 3 is a front view of the invention being assembled.

[0026] FIG. 4 is side cut-away view of the invention.

[0027] FIG. 5 is a front perspective view of an embodiment of the invention.

[0028] FIG. 6 is a side perspective view of an embodiment of the invention.

[0029] FIG. 7 is a front perspective view of an embodiment of the invention.

[0030] FIG. 8 is a side view of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0031] FIG. 1 is a front perspective view an embodiment of the invention. FIG. 1 shows flexible frame 100, with flexible frame top side 110, flexible frame bottom side 112, flexible frame right side 114, flexible frame left side 116, picture cover 300, picture cover top side 310, picture cover bottom side 312, picture cover right side 314, picture cover left side 316 and picture 400.

[0032] In FIG. 1, the picture, cover, and back are disposed in the flexible frame. The picture is behind the cover, but the cover is made of a clear material so that the picture is seen by a user. The flexible frame is preferably a single piece, but may also have a break, where the ends of the break can be fastened to form a continuous piece. For instance, the flexible frame may be molded as a single piece during production. Alternatively, the flexible frame may have a break anywhere in its circumference, and the break may have a fastener such that the flexible frame can be opened and closed. The fastener may be any type, including but not limited to, a snap, a hook and eye fastener, a button and button hole, a latch, a pin, or anything that would join the ends together. In addition, the fastener may be a decorative element, such as a pearl button or a jade pin.

[0033] FIG. 2 is an exploded view of the invention. FIG. 2 shows flexible frame 100, with flexible frame top side 110, flexible frame bottom side 112, flexible frame right side 114, flexible frame left side 116, flexible frame front 118, flexible frame bottom groove 122, flexible frame right groove 124.

[0034] Also shown is backer section 200, with backer section top side 210, backer section bottom side 212, backer section right side 214, backer section left side 216, backer section front 218, backer section top edge 220, backer section bottom edge 222, backer section right edge 224, and backer section left edge 226.

[0035] FIG. 2 also shows picture cover 300, with picture cover top side 310, picture cover bottom side 312, picture cover right side 314, picture cover left side 316, picture cover front 318, picture cover top edge 320, picture cover bottom edge 322, picture cover right edge 324, and picture cover left edge 326.

[0036] Shown in FIG. 2 as well is picture 400, picture top side 410, picture bottom side 412, picture right side 414, picture left side 416, picture front 418, picture top edge 420, picture bottom edge 422, picture right edge 424, and picture left edge 426.

[0037] The order of assembly is shown in FIG. 2. The components are assembled such that the picture 400 will show through the picture cover 300 and will be supported by the backer section 200 when disposed in the flexible frame 100.

[0038] As can be see in FIG. 2, the backer section bottom edge 222, the picture cover bottom edge 322, and the picture bottom edge 422 are parallel with each other and with the flexible frame bottom side 112 and the flexible frame bottom groove 122.

[0039] The backer section right edge 224, picture cover right edge 324, and picture right edge 424 are parallel with each other and with the flexible frame right side 114 and the flexible frame right groove 124.

[0040] The backer section left edge 226, picture cover left edge 326, and picture left edge 426 are parallel with each other and with the flexible frame left side 116 and the flexible frame left groove 126 (not visible in FIG. 2).

[0041] The backer section top edge 220, picture cover top edge 320, and picture top edge 420 are parallel with each other and with the flexible frame top side 110 and the flexible frame top groove 120 (not shown in FIG. 2).

[0042] The picture 400 is placed between the backer section 200 and the picture cover 300, with parallel edges disposed against each other, and with the picture front 418 facing the picture cover back (not shown in FIG. 2), and the picture back (not shown) facing the backer section front 218. The assembled components are then placed in the flexible frame 100, with the parallel edges of the components disposed in the corresponding grooves, such that the flexible frame completely encircles and secures the backer section and cover section in parallel orientation.

[0043] FIG. 2 depicts one preferred embodiment, in which the backer section 200, picture cover 300, and flexible frame 100 are all rectangular, and all have the same dimensions of
length and width. The picture is also depicted as rectangular with the same dimensions as the flexible frame, although it could be any shape or size that fits within the flexible frame. The picture may be smaller than the other components and may be disposed directly on the backer section, or it may be matted and then disposed on the backer section. Alternately, the cover section may be in the form of a mat, in which case it may consist of a clear section disposed in a decorative mat section, such that the picture shows through the clear section but is surrounded by opaque matting material. The clear section may or may not have a covering, such as a transparent plastic covering. The preferred dimensions for the rectangular embodiment are the standard dimensions of photographs, for instance, five inches by seven inches, three inches by five inches, etc.

[0044] Although depicted with a picture 400 a backer section 200 and a picture cover 300, the flexible frame 100 may be used with any single component, any two of the components, or all of the components. For instance, if the user has a picture that is glued to a piece of cardboard, the backer section may be unnecessary, and the user may dispose only the picture on cardboard with the picture cover in the flexible frame. In another example, the user may wish to forego the picture cover but dispose the picture and backer section in the flexible frame.

[0045] FIG. 3 is a front view of the invention being assembled. FIG. 3 shows flexible frame 100, with flexible frame top side 110, flexible frame bottom side 112, flexible frame right side 114, and flexible frame left side 116.

[0046] FIG. 3 also shows picture cover 300, with picture cover top side 310, picture cover bottom side 312, picture cover right side 314, picture cover left side 316, picture cover front 318, picture cover top edge 320, picture cover bottom edge 322, picture cover right edge 324, and picture cover left edge 326.

[0047] As can be seen in FIG. 3, desired components are assembled and the flexible frame 100 is then placed around them. The flexible frame 100 is elastic, so it stretches to allow a user to pull it around the other components; when in place, it recovers back to its original shape.

[0048] The flexible frame 100 may be made from any material that exhibits elastic properties, such as but not limited to, elastomers, including but not limited to, any type of rubber, thermoset elastomers, thermoplastic elastomers, fluorocarbons, thermoplastic vulcanizates, thermoplastic polyurethane, thermoplastic olefins, the proteins resilin and elastin, polysulfide rubber, plastics, and textiles, or any combination of these materials with each other or with other materials, even non-elastic materials, provided the flexible frame retains enough elasticity to function. For instance, small glass beads may be mixed in with the elastomer during manufacture to reduce cost or to provide a heavier frame that retains its elasticity. In alternate embodiments, there may be sections of elastic material interspersed with sections of non-elastic materials. These non-elastic materials may be any materials, including but not limited to, plastic, glass, gel-filled tubes, wood, metal, stone, paper or paper products, or any combinations of these materials with each other or with other materials. In addition, materials such as but not limited to, gems, false gems, colored glass, metals, stones, or glitter, may be machined into the flexible frame as design elements small enough that they do not affect elasticity, yet still form an integral part of the flexible frame.

[0049] The backer section 200 is preferably cardboard or plastic, but may be made from any material, including but not limited to, paper, wood, or paper or wood products, plastics, glass or glass products such as fiberglass, laminates, elastomers, rubbers, metals, stone, textiles, or any combination of these materials with each other or with other materials.

[0050] The picture cover 300 is preferably transparent plastic, but may be any material that allows a user to see the picture, such as but not limited to, glass, fabrics or textiles, cellophane, or any combination of these materials with each other or with other materials. In the case that the picture cover is in the form of a mat, it may be made from any material, including but not limited to, paper, vinyl, leather, plastics, rubber, glass, wood, cloth, or any combination of these materials with each other or with other materials. The open section which allows the picture to show may be left uncovered or may have a cover made from any of the materials described above. The matted cover may be removable or may be an integral part of the flexible frame. If the matted cover is integral with the flexible frame, then the groove dimensions would be altered to be approximately the same size as the backer section.

[0051] FIG. 4 is side cut-away view of the invention in use with all components installed. FIG. 4 shows flexible frame 100, with flexible frame top side 110, flexible frame bottom side 112, flexible frame right side 114, flexible frame left side 116, flexible frame front 118, flexible frame back 119, flexible frame top groove 120, flexible frame bottom groove 122, flexible frame groove bottom 140, and flexible frame frontal ornamentation 150.

[0052] Also shown is backer section 200, with backer section top side 210, backer section bottom side 212, backer section right side 214, backer section front 218, backer section top edge 220, and backer section bottom edge 222.

[0053] FIG. 4 also shows picture cover 300, with picture cover top side 310, picture cover bottom side 312, picture cover right side 314, picture cover front 318, picture cover top edge 320, and picture cover bottom edge 322.

[0054] Shown in FIG. 4 as well is picture 400, picture top side 410, picture bottom side 412, picture right side 414, picture front 418, picture top edge 420, and picture bottom edge 422.

[0055] FIG. 4 shows the invention in use, particularly how the backer section 200, picture cover 300, and picture 400 fit into the flexible frame top groove 120, and flexible frame bottom groove 122. The grooves help keep these components in place inside the flexible frame. The grooves shown in FIG. 4 have a rectangular shape, so the components slide completely into the grooves, filling the entirety of the grooves to the flexible frame groove bottom 140, and such that the edges of the components fit snugly in the grooves. In a preferred embodiment, the groove thickness and the thickness of the picture cover and backer section are approximately the same. This assumes that the picture thickness conforms to a standard photo paper thickness of 0.13 millimeters and is therefore negligible. However, the groove thickness may vary depending on the type of object disposed in the flexible frame, and may be any thickness, with a preferred range from 0.001-100 millimeters thicker than the thickness of the backer section and picture cover combined. The circumference of the flexible frame and flexible frame grooves is the same as the circumference of the backer section and picture cover, such that the backer section and flexible frame will fit inside the flexible frame and flexible frame grooves.
0056. The backer section may have hooks or a stand, so that the user may hang the flexible frame with backer section, picture cover, and picture on the wall or stand them up on a desk or table.

0057. Any assembly of components chosen from the backer section, picture cover, and picture must be such that their combined width fits inside the width of the grooves. The combined width of the components may be less than the width of the grooves, but this may not be desirable because they may shift in the flexible frame. One embodiment of the invention not shown consists of a flexible frame with grooves that are V-shaped, such that thinner component assemblies fit all the way to the bottom of the grooves and are held tightly, while thicker component assemblies fit only part way down the grooves and are held tightly in a wider part of the V-shape of the groove.

0058. FIG. 5 is a front perspective view of an embodiment of the invention. FIG. 5 shows flexible frame 100, flexible frame front 118, flexible frame groove 128, and flexible frame frontal ornamentation 150.

0059. FIG. 5 shows a circular flexible frame, backer section, and picture cover. They may be any shape, including but not limited to, circular, square, elliptical, triangular, star shaped, animal or inanimate object shaped, such as shaped like a car or truck, letter shaped, or any desired shape. The flexible frame and backer section may be any color or combination of colors.

0060. FIG. 5 shows an ornamental design on the front portion of the flexible frame. The ornamental design could be any design, including but not limited to, geometric shapes, animal shapes, words or indicia, or any desired design. The ornamental design may be the same or a different color than the flexible frame; it may be integral with the flexible frame or detachable. Design elements may be embedded in the flexible frame, for example, colored glass beads may be embedded or partially embedded in the flexible frame.

0061. FIG. 6 is a side perspective view of an embodiment of the invention. FIG. 6 shows flexible frame 100, flexible frame top side 110, flexible frame bottom side 112, flexible frame right side 114, flexible frame left side 116, flexible frame front 118, flexible frame top groove 120, flexible frame right groove 124, and flexible frame frontal ornamentation 150.

0062. In the embodiment depicted in FIG. 6, the flexible frame frontal ornamentation consists of cut-outs in the flexible frame. Design elements such as these may be fashioned in any manner, including but not limited to being machined or dye-cut.

0063. FIG. 7 is a front perspective view of an embodiment of the invention. FIG. 7 shows flexible frame 100, flexible frame top side 110, flexible frame bottom side 112, flexible frame right side 114, flexible frame left side 116, flexible frame front 118, flexible frame bottom groove 122, flexible frame right groove 124, and flexible frame frontal ornamentation 150.

0064. FIG. 7 shows a flexible frame frontal ornamentation that has may be fashioned in any manner, including but not limited to, machining, molding, gluing or fastening some parts onto the flexible frame.

0065. In all of the embodiments, flexible frame frontal ornamentation may be any color or combination of colors, any design, any dimensions, and may be made from materials that are the same or different than those of the flexible frame.

0066. As noted earlier, different parts of the flexible frame may be made from different components, some elastomeric and some not elastomeric. For instance, in FIG. 7, the corners may be elastomeric while the sides are wood. Alternately, the sides could be elastomeric while the corners are copper or marble. One side may be elastomeric while the other three sides are made of non-elastomeric materials, such that a user could stretch the one elastomeric side out, slide the picture into the grooves on the two sides that are perpendicular to the elastomeric side, and then release the elastomeric side such that is recovers to its original shape and size.

0067. FIG. 8 is a side view of the invention with only the picture disposed in the flexible frame. FIG. 8 shows flexible frame 100, with flexible frame top side 110, flexible frame bottom side 112, flexible frame right side 114, flexible frame front 118, flexible frame back 119, flexible frame top groove 120, flexible frame bottom groove 122, and flexible frame groove bottom 140.

0068. Shown in FIG. 8 as well is picture 400, with picture top side 410, picture bottom side 412, picture right side 414, picture front 418, picture back 419, and picture bottom edge 422.

0069. FIG. 8 shows the invention in use with the flexible frame component and a picture. The flexible frame grooves and the interaction of the picture with them can be seen more clearly in this figure than in FIG. 4. The edges of the picture fit inside the grooves and are secured.

0070. As noted earlier, the flexible frame may be used with the backer section, picture cover, and picture, or with one, two, or all of these components. It may be desirable to use the flexible frame with just the picture component in the case where the picture component is thick, for instance for a painting canvas.

0071. Although this invention has been described with a certain degree of particularity, it is to be understood that the present disclosure has been made only by way of illustration and that numerous changes in the details of construction and arrangement of parts may be resorted to without departing from the spirit and the scope of the invention.

What is claimed:

1. An article of manufacture, comprising:
   a backer section, having a front and a back, a circumference, a front and back, at least one edge and an edge thickness;
   a cover section, having a front and a back, a circumference, at least one edge and an edge thickness, wherein the circumference of the cover section is substantially the same as the circumference of the backer section; and
   a flexible elastomeric frame of unitary construction having a groove of thickness approximately the combined thickness of the cover and backer section edge thicknesses, where the groove has an internal circumference substantially equal to the backer or cover section circumference, and the flexible elastomeric frame may be stretched to completely encircle and secure the backer and cover sections in parallel orientation when the front of the backer section is disposed on the back of the cover section.

2. The article of claim 1, wherein the flexible elastomeric frame has a front portion and the front portion has an ornamental design.

3. The article of claim 1, wherein the flexible elastomeric frame groove has a rectangular shape.
4. The article of claim 1, wherein the flexible elastomeric frame groove has a v-shape.

5. The article of claim 1, wherein the backer section, the cover section and the flexible elastomeric frame have a rectangular shape.

6. The article of claim 1, wherein the backer section, the cover section and the flexible elastomeric frame have a square shape.

7. The article of claim 1, wherein the backer section, the cover section and the flexible elastomeric frame have a circular shape.

8. The article of claim 1, wherein the backer section, the cover section and the flexible elastomeric frame have an elliptical shape.

9. The article of claim 1, wherein the cover section is in the form of a mat.

10. The article of claim 1, wherein the cover section is transparent plastic.

11. The article of claim 1, wherein the backer section is plastic or cardboard.

12. The article of claim 1, wherein the back of the backer section has hooks or a stand.

13. The article of claim 1, wherein the flexible elastomeric frame has design elements embedded therein.

14. The article of claim 1, wherein the flexible elastomeric frame is a single piece.

15. The article of claim 1, wherein the flexible elastomeric frame has a break, and the ends of the break can be fastened to form a continuous piece.

16. An article of manufacture, comprising:
   a flexible elastomeric frame of unitary construction having a groove of thickness approximately the thickness of a photograph or picture, where the groove has an internal circumference substantially equal to the photograph or picture circumference, and the flexible elastomeric frame may be stretched to completely encircle and secure the photograph or picture.

17. The article of claim 16, wherein the flexible elastomeric frame has a front portion and the front portion has an ornamental design.

18. The article of claim 16, wherein the flexible elastomeric frame has design elements embedded therein.

19. The article of claim 16, wherein the flexible elastomeric frame is a single piece.

20. The article of claim 16, wherein the flexible elastomeric frame has a break, and the ends of the break can be fastened to form a continuous piece.

* * * * *