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(54) PHOTO FRAME AND THE LIKE

(71) We, MIDLAND INSTA-CHANGE Co., a corporation organised under the laws of the State of Ohio, United States of America, of 111 East Fourth Street, Cincinnati, Ohio, 45202 United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:

The present invention has utility for the display of all manner of items including leaflets, drawings, photographs, advertisements, and the like. It is particularly useful in situations where it is desirable to change the display at more or less frequent intervals. For purposes of illustration it will be described herein particularly for use with photographs. Photography has become so popular with the improvement of cameras and film, particularly color film, that it has reached the status of a practically universal hobby. With certain cameras and film sizes, prints are made in standard sizes and photo albums are available which are tailored to such standard size prints. Similarly, photo frames are available in various standard sizes to accept practically any standard size print. Such frames may be provided with easel back for display on a table or shelf, or they may be provided with means whereby they may be hung on a wall.

Such frames usually comprise a main frame element having on three sides a channel into which are inserted from the open end, first a sheet of glass, then the photo to be displayed then one or more sheets of cardboard, and finally a back member which is provided with the easel prop or a wing for hanging. When it is desired to change the picture, it is necessary to remove the back member and sheets of cardboard before the photo can be removed; and then all these elements must

be reinserted after the new photo has been placed in position. This operation is time consuming; and after several changes of photos, the back member becomes somewhat dog-eared so that insertion becomes progressively more difficult. It is easy to break the glass; and, as a matter of fact, the glass in such frames at the time of purchase often has jagged edges so that there is always a danger of cutting the fingers.

Frequent changing of photographs occur particularly in families having very young children or very young grandchildren. Young parents often photograph their babies at regular intervals of, say one month, and they like to display the most current photograph. Similarly, grandparents are usually given photographs of their grandchildren and as the children grow, they like to change the photographs so as to keep the most recent one on display.

With the foregoing considerations in mind, it is an object of the present invention to provide a frame such that the operation of changing the photo or other matter to be displayed can be accomplished very quickly and easily without danger and without deterioration of the frame with usage.

The present invention provides a photo frame or the like comprising a rigid rear frame member having a recess in its front face formed by a rear part and defined by an upstanding bezel; a rigid front frame member configured to fit loosely in said recess substantially within said bezel with a distinct peripheral clearance, for ready insertion thereinto, and removal therefrom, and having spaced front and rear plates providing a slot for the insertion of a photo therebetween, said front plate having a display aperture; and

cooperating permanent magnetic and metallic means, one secured to said rear

part of the rear frame member in said recess and the other secured to the rear surface of said front frame member, to hold said front frame member releasably within said recess, and spacing means secured between and to one of the rear and front frame members and disposed so as to hold at least part of said rear surface of said front frame member spaced from the rear part of said recess and being of such a size and so located that said front frame member is tiltable about said spacing means to move an edge of the front frame member out of said recess so that the front frame member may be grasped for easy removal thereof from said recess.

Thus, to change photos it is only necessary to depress the front frame member adjacent an edge thereof, whereupon it tilts slightly so that the opposite edge can be readily grasped for removal of the front frame member from the recess. Thereupon, the old photo is simply slipped out, the new one slipped in and the front frame member can then be replaced in the recess, all this being accomplished without removing the rigid rear frame member from its display location.

Conveniently the front and rear plates of the rigid front frame member are spaced apart by spacing elements along opposed edges thereof, leaving opposed edges open for insertion of a photo between said plates. If desired the rear plate may be configured along said open edges to provide marking guides for cutting oblong photos to square configuration to fit said front frame member.

From another aspect the present invention provides a photo frame or the like comprising a rigid front frame having front and rear plates, means to maintain said front and rear plates in parallel spaced relationship to releasably receive a photograph between the plates for viewing through an opening in the front plate thereof, a rigid, nonflexible rear frame having a rear part surrounded by a forwardly protruding rim for nestingly receiving said front frame, with a distinct peripheral gap between the external periphery of the front frame and the rim of the rear frame when the frames are nested together, thereby allowing the front frame to be easily received into and retrieved from the rear frame through the front face of the rear frame because of the peripheral gap established when the frames are nested together, and magnetically cooperable means mounted in the rear face of said front frame and in the rear part of said rear frame, said magnetically cooperable means retaining said frames in nesting combination, one of said magnetically cooperable means projecting from the surface on which it is mounted

and the arrangement being such that when said front frame is pressed adjacent an edge thereof said front frame is caused to tilt with respect to said rear part of said rear frame to move the opposite edge beyond said rim so that it may be grasped for easy removal.

Conveniently the rigid front frame is in the form of a one piece envelope open along at least one side edge. Advantageously the depth of the nest defined is made such that it is sufficient to prevent said frame from sliding laterally off the rear frame and to prevent the photograph in said front frame from falling out of said front frame.

From a further aspect the present invention provides a photo frame or the like comprising a front frame, means on said front frame for releasably retaining a photograph, said front frame having a rear face and side edges, a rear frame having a recess open to the front of the rear frame, the recess having a back on which said front frame is seated, the walls of said recess at least partially enclosing said side edges of said front frame when said front frame is seated on said back and spacing means disposed between said rear and front frames to hold at least a portion of the rear face of said front frame spaced from the back of said rear frame and being of such a size and so located that said front frame is tiltable about said spacing means relative to said rear frame when said front frame is pressed adjacent one edge thereof to raise an edge of the front frame member out of the recess above said rear frame so that the front frame member may be grasped for easy removal thereof from said recess, and magnetically cooperable means fixed to the rear face of said front frame and to the back of said rear frame for retaining said frames in seating combination.

Desirably the spacing established between the rear face of the front frame and the floor of the rear frame is such that one edge of the front frame is raised above the rear frame when the front frame is tipped relative to the rear frame by depressing the opposite edge of the front frame.

The following is a description by way of example of two embodiments of the present invention, with reference to the accompanying drawings in which:

FIG. 1 is a perspective view of one embodiment of a frame according to the invention.

FIG. 2 is an exploded view of FIG. 1, showing the relationship of the several parts.

FIG. 3 is a front elevational view of the front member.

FIG. 4 is a cross sectional view taken on the line 4-4 of FIG. 3.

FIG. 5 is a front elevational view of the rear member.

5 FIG. 6 is a cross sectional view taken on the line 6-6 of FIG. 5.

FIG. 7 is a cross sectional view taken on the line 7-7 of FIG. 1 showing how a photo frame according to the invention may be mounted on a wall or a display board.

FIG. 8 is a cross sectional view of the front frame member of a slightly modified form similar to FIG. 4.

15 FIG. 9 is a view similar to FIG. 5 of a modified rear frame member.

FIG. 10 is a cross sectional view taken on the line 10-10 of FIG. 9.

FIG. 11 is a view similar to FIG. 7 showing the modified photo frame mounted on a wall or display board.

FIG. 1 shows a general view of a typical frame according to the invention. The frame shown in the drawings is of square format and is of a size designed to accept standard prints from the Kodak Instamatic (Trade Mark) Camera. A rigid rear frame member is indicated generally at 10, a front frame member at 11. A picture aperture is indicated at 12. The rigid, non-flexible front member 11 comprises a front plate 13 which has the photo opening or aperture 12 with the aperture 12 surrounded by a bezel 14. In the particular embodiment shown, the bezel 14 is a separate piece but it of course could be integral with the front plate member 13. It will be understood that the separate bezel may be arranged to be snapped in place or it may be adhered in place with a suitable adhesive. The advantage of a snap-in arrangement is that the color of the bezel may be changed to harmonize with the decor of the room where the frame is to be displayed. The rear plate is indicated at 15 and it has secured thereto, centrally of its external periphery 15a, a small metallic piece 16. The rear plate 15 also has a small cutout 17 through which a finger may contact the photograph to be removed from the frame.

The front and rear plates are spaced slightly apart by means of a spacing member 18 which extends around all sides of the front frame member except that side in which the recess 17 is located, thereby allowing a photo (not shown) to be received between the plates 13 and 15 for viewing through the photo aperture 12.

60 The rear frame member 10 is slightly larger than the front member 11 and is recessed at 19 to seat the front member 11. The seat or recess 19 has a floor 19b and an open front face defined by a bezel 19a.

65 The peripheral geometry of the bezel 19a

is the same as the peripheral geometry of the front frame member 11. The member 11 fits loosely substantially within the bezel 19a when the frame members are nested together, with a distinct peripheral gap or clearance 34 established between the external periphery 15a of the front frame member 11 and the adjacent periphery of the bezel 19a. Secured to the rear member 10 in the recess 19 is the permanent magnet 20. The magnet 20 is located centrally of the bezel 19a and is preferably a rubberised magnet such as is commonly used in refrigerator doors. It is common knowledge that the magnetic effect of such magnetic rubber is enhanced if it is backed by a metallic element; and therefore a piece of metal 21 is secured to the rear face of the rear member. The rear face of the rear member 10 is preferably recessed as best seen in FIG. 6, to receive the metal piece 21. It will of course be understood that the locations of the metallic and magnetic elements may be reversed without departing from the scope of the invention. The magnet 20 and metal piece 16 as shown in FIG. 7, also act as spacers to create a clearance between the rear face 15 of the front frame member and the floor 19b of the rear frame member. In use, and when the edge 31 of the front frame member is depressed, the opposite edge 32 is raised up above the bezel 19a by virtue of the fulcrum point established as at 33, thereby allowing the edge 32 to be grasped easily for removal of the front frame from the seat 19 of the rear frame (see FIG. 7). This tipping feature, along with the open face of the rear frame defined by the bezel 19 and the peripheral gap 34 between the frames, makes it very easy to receive the front frame into, and retrieve the front frame from, the rear frame.

The presence of the metallic element 21 on the rear face of the rear member 10 makes possible a magnetic mounting of the whole frame on a backing element as is best seen in FIG. 7. A wall or other supporting surface is indicated at 22 and has adhesively or otherwise secured thereto a permanent magnet 23. As clearly seen in this Figure, the permanent magnet 23 may cooperate with the recess-mounted metallic element 21 to hold the assembled frame on a backboard or wall. When the frame is to be secured to a backing member as shown in FIG. 7, it is desirable to provide a plurality of tab members 24 of rubber or plastic sponge type material to retain the frame in substantial parallel relation to the backing surface.

The modification shown in FIGS. 8 to 11 inclusive differs only slightly from that shown in FIGS. 1 to 7 inclusive and there-

fore like parts have been designated by the same reference numerals. Comparing FIGS. 9 and 10 with FIGS. 5 and 6, it will be observed that the magnet 20 and the metallic element 21 are mounted on a portion of the recess which is elevated slightly above the bottom of the recess. Furthermore, a series of studs are provided about an elevated platform 26 as indicated at 25. The elevation of the magnet 20 and the provision of the studs 25 makes it still easier to remove the front frame member from the recess because pressure along an edge of the front frame member produces a substantially greater degree of tilt with respect to the rear frame member, so that it is still easier to grasp the front frame member from the opposite edge to remove it from the rear frame member.

20 Comparing FIG. 11 with FIG. 7, it will be observed that the elevated platform 26 makes it necessary to use a thicker magnet at 23 when it is desired to secure the photo frame to a supporting surface.

25 Comparing FIG. 8 with FIG. 4, it will be observed that the notch 17 for finger access to remove a photo from the front frame element has been eliminated and instead the rear portion of the front frame element is configured as shown in dotted lines in FIG. 3. Thus, the photo slot is open at opposite sides of the front frame member so that a photo may be inserted from either side. Additionally, the edges 17a provide guides for marking a print which is longer than the front frame element so that it may be cut to proper size to fit within the front frame member as would be the case with photos which are not of square format.

40 A number of advantages derive from the construction above described. Both front and rear members may be made from plastic by conventional molding procedures; and as is now commonly known, such plastic may embody coloring material. Thus, the rear member 10 may be molded in one color while the front member 11 may be molded in a different color. If the bezel 14 is made separate, this bezel may also be molded in different colors.

55 The backing member indicated at 22 in FIG. 7 may itself be a decorative panel and may be covered with fabric if desired and one or more magnets 23 may be provided to hold a plurality of frames according to the invention. The rear members 10 of the frames may also be permanently affixed in a suitable arrangement on a backboard.

WHAT WE CLAIM IS:—

65 1. A photo frame or the like, comprising;

a rigid rear frame member having a recess in its front face formed by a rear part and defined by an upstanding bezel;

a rigid front frame member configured to fit loosely in said recess substantially within said bezel with a distinct peripheral clearance, for ready insertion thereinto, and removal therefrom, and having spaced front and rear plates providing a slot for the insertion of a photo therebetween, said front plate having a display aperture; and

cooperating permanent magnetic and metallic means, one secured to said rear part of the rear frame member in said recess and the other secured to the rear surface of said front frame member, to hold said front frame member releasably within said recess, and spacing means secured between and to one of the rear and front frame members and disposed so as to hold at least part of said rear surface of said front frame member spaced from the rear part of said recess and being of such a size and so located that said front frame member is tiltable about said spacing means to move an edge of the front frame member out of said recess so that the front frame member may be grasped for easy removal thereof from said recess.

2. A photo frame or the like as claimed in claim 1 wherein the spacing means is a spacing element which includes one of said magnetic and metallic means.

3. A photo frame or the like as claimed in claim 1, wherein the spacing means comprises a plurality of spacing elements provided in said recess, spaced about said magnetic or metallic means secured in said recess, said spacing means being substantially of the same height above the bottom of the recess as the surface of said magnetic or metallic means.

4. A photo frame or the like as claimed in any of claims 1 to 3 wherein said permanent magnetic means is secured in said recess, and said metallic means is secured to the rear surface of said front frame member.

5. A photo frame or the like as claimed in any of claims 1 to 5 wherein a second metallic means is secured behind said magnetic means.

6. A photo frame or the like as claimed in claim 5, wherein said second metallic means is recessedly located in said rear part of the rear frame member, and is in contact with said magnetic means.

7. A photo frame or the like as claimed in any of claims 1 to 6 wherein pad members are secured to the rear face of said rear part of the rear frame member, adjacent the edges thereof.

8. A photo frame or the like as claimed in claim 5, claim 6 or claim 7 when dependent on claim 5 or claim 6 in

fore like parts have been designated by the same reference numerals. Comparing FIGS. 9 and 10 with FIGS. 5 and 6, it will be observed that the magnet 20 and the metallic element 21 are mounted on a portion of the recess which is elevated slightly above the bottom of the recess. Furthermore, a series of studs are provided about an elevated platform 26 as indicated at 25.

10 The elevation of the magnet 20 and the provision of the studs 25 makes it still easier to remove the front frame member from the recess because pressure along an edge of the front frame member produces a substantially greater degree of tilt with respect to the rear frame member, so that it is still easier to grasp the front frame member from the opposite edge to remove it from the rear frame member.

20 Comparing FIG. 11 with FIG. 7, it will be observed that the elevated platform 26 makes it necessary to use a thicker magnet at 23 when it is desired to secure the photo frame to a supporting surface.

25 Comparing FIG. 8 with FIG. 4, it will be observed that the notch 17 for finger access to remove a photo from the front frame element has been eliminated and instead the rear portion of the front frame element is configured as shown in dotted lines in FIG. 3. Thus, the photo slot is open at opposite sides of the front frame member so that a photo may be inserted from either side. Additionally, the edges 30 17a provide guides for marking a print which is longer than the front frame element so that it may be cut to proper size to fit within the front frame member as would be the case with photos which are not of square format.

A number of advantages derive from the construction above described. Both front and rear members may be made from plastic by conventional molding procedures; and as is now commonly known, such plastic may embody coloring material. Thus, the rear member 10 may be molded in one color while the front member 11 may be molded in a different color. If the bezel 14 is made separate, this bezel may also be molded in different colors.

The backing member indicated at 22 in FIG. 7 may itself be a decorative panel and may be covered with fabric if desired and one or more magnets 23 may be provided to hold a plurality of frames according to the invention. The rear members 10 of the frames may also be permanently affixed in a suitable arrangement on a backboard.

WHAT WE CLAIM IS:—

1. A photo frame or the like, comprising:

a rigid rear frame member having a recess in its front face formed by a rear part and defined by an upstanding bezel;

a rigid front frame member configured to fit loosely in said recess substantially within said bezel with a distinct peripheral clearance, for ready insertion therinto, and removal therefrom, and having spaced front and rear plates providing a slot for the insertion of a photo therebetween, said front plate having a display aperture; and

cooperating permanent magnetic and metallic means, one secured to said rear part of the rear frame member in said recess and the other secured to the rear surface of said front frame member, to hold said front frame member releasably within said recess, and spacing means secured between and to one of the rear and front frame members and disposed so as to hold at least part of said rear surface of said front frame member spaced from the rear part of said recess and being of such a size and so located that said front frame member is tiltable about said spacing means to move an edge of the front frame member out of said recess so that the front frame member may be grasped for easy removal thereof from said recess.

2. A photo frame or the like as claimed in claim 1 wherein the spacing means is a spacing element which includes one of said magnetic and metallic means.

3. A photo frame or the like as claimed in claim 1, wherein the spacing means comprises a plurality of spacing elements provided in said recess, spaced about said magnetic or metallic means secured in said recess, said spacing means being substantially of the same height above the bottom of the recess as the surface of said magnetic or metallic means.

4. A photo frame or the like as claimed in any of claims 1 to 3 wherein said permanent magnetic means is secured in said recess, and said metallic means is secured to the rear surface of said front frame member.

5. A photo frame or the like as claimed in any of claims 1 to 5 wherein a second metallic means is secured behind said magnetic means.

6. A photo frame or the like as claimed in claim 5, wherein said second metallic means is recessedly located in said rear part of the rear frame member, and is in contact with said magnetic means.

7. A photo frame or the like as claimed in any of claims 1 to 6 wherein pad members are secured to the rear face of said rear part of the rear frame member, adjacent the edges thereof.

8. A photo frame or the like as claimed in claim 5, claim 6 or claim 7 when dependent on claim 5 or claim 6 in



combination with a backing surface, said backing surface having a permanent magnet secured thereto, and cooperating with said second metallic means to secure said frame removably to said backing surface.

9. A photo frame or the like as claimed in any of claim 1 to 8 wherein said front frame member has a bezel surrounding said display aperture, said last named bezel being a separate piece and secured in said aperture.

10. A photo frame or the like as claimed in any of claims 1 to 9 wherein the said front and rear plates of the rigid front frame member are spaced apart by spacing elements along opposed edges thereof, leaving the remaining opposed edges open for insertion of a photo between said plates.

11. A photo frame or the like as claimed in claim 10 wherein the said rear plate is configured along said open edges to provide marking guides for cutting oblong photos to square configuration to fit said front frame member.

12. A photo frame or the like comprising a rigid front frame having front and rear plates, means to maintain said front and rear plates in parallel spaced relationship to releasably receive a photograph between the plates for viewing through an opening in the front plate thereof, a rigid, nonflexible rear frame having a rear part surrounded by a forwardly protruding rim for nestingly receiving said front frame, with a distinct peripheral gap between the external periphery of the front frame and the rim of the rear frame when the frames are nested together, thereby allowing the front frame to be easily received into and retrieved from the rear frame through the front face of the rear frame because of the peripheral gap established when the frames are nested together, and the magnetically cooperable means mounted in the rear face of said front frame and in the rear part of said rear frame, said magnetically cooperable means retaining said frames in nesting combination, one of said magnetically cooperable means projecting from the surface on which it is mounted and the arrangement being such that when said front frame is pressed adjacent an edge thereof said front frame is caused to tilt with respect to said rear part of said rear frame to move the opposite edge beyond said rim so that it may be grasped for easy removal.

13. A photo frame or the like as claimed in claim 12 wherein said rigid front frame is in the form of a one-piece envelope open along at least one side edge, and wherein said magnetically cooperable means comprise a magnetic element and a metallic element, one of said elements

being secured to the floor of said rear frame and the other of said elements being secured to the rear face of said front frame.

14. A photo frame or the like as claimed in claim 12 or claim 13 wherein the configuration of the rim of the rear frame is nestingly conformable with the external periphery of the front frame.

15. A photo frame or the like as claimed in any of claims 12 to 14 wherein the depth of the nest defined by the floor of said rear frame and rim is sufficient to prevent said front frame from sliding laterally off said rear frame, and to prevent the photograph in said front frame from falling out of said front frame.

16. A photo frame or the like comprising a front frame, means on said front frame for releasably retaining a photograph, said front frame having a rear face and side edges,

a rear frame having a recess open to the front of the rear frame, the recess having a back on which said front frame is seated, the walls of said recess at least partially enclosing said side edges of said front frame when said front frame is seated on said back and spacing means disposed between said rear and front frames to hold at least a portion of the rear face of said front frame spaced from the back of said rear frame and being of such a size and so located that said front frame is tiltable about said spacing means relative to said rear frame when said front frame is pressed adjacent one edge thereof to raise an edge of the front frame member out of the recess above said rear frame so that the front frame member may be grasped for easy removal thereof from said recess, and

magnetically cooperable means fixed to the rear face of said front frame and to the back of said rear frame for retaining said frames in seating combination.

17. A photo frame or the like as claimed in claim 16, said magnetically cooperable means being raised out of the plane of at least one of the rear face of the front frame and the floor of the rear frame to space the rear face of the front frame from the floor of the rear frame when said frames are seatingly combined.

18. A photo frame or the like as claimed in claim 16 or claim 17 wherein said magnetically cooperable means include,

a magnetic element and a metallic element, one of said elements being fixed to the floor and the other of said elements being fixed to the rear face of said front frame centrally of said front frame's external periphery.

19. A photo frame or the like as claimed in any of claims 16 to 18 wherein



the spacing established between the rear face of said front frame and the floor of the rear frame is such that one edge of said front frame is raised above the rear frame when said front frame is tipped relative to said rear frame by depressing the opposite edge of said front frame.

20. A photo frame or the like substantially as hereinbefore described with reference to Figures 1 to 7 of the accompanying drawings.

21. A photo frame or the like substantially as hereinbefore described with reference to Figures 8 to 11 of the accompanying drawings.

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