

TITLE OF THE INVENTION**PHOTO FRAME WITH FOLDABLE/UNFOLDABLE BORDERS**

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FIELD OF THE INVENTION

The present invention relates to a photo frame with foldable borders forming the frames and in which the borders can be easily unfolded for easy removal of a photo contained therein and the borders folded after a new photo has been inserted.

DESCRIPTION OF RELATED ART

15 It is often difficult to secure a photo within a framing unit, and/or remove the photo from the framing unit due to the complex arrangements required to hold the framing unit together and secure the photo in place. Traditional photo frames usually comprise two or more rectangular main pieces, such as a frame, a piece of glass or other transparent material and a back piece. The glass is usually contained within the frame, and the photo is placed on the glass and held in place by the back piece. The back piece may be slid in place or otherwise secured within the frame to prevent the photo from misalignment within, or falling out of, the framing unit.

Inventions have been proposed to address the need for easy removal and insertion of photos into photo frames. Some inventions such as GB 2 220 854, GB 2 306 319 and GB 2 325 157 are directed towards photo frames which are

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made of cardboard or some flexible material which allows for folding of the flexible material to form a photo frame. Such photo frames made of a single piece of cardboard or the like are then folded to form the borders of the photo frame and uses tabs and slits in the cardboard to hold the photo frame together. Such photo frames are cheap and inexpensive to manufacture. However, the use of tabs and slits would require many tabs and slits to be fitted to each other in order to have a more secure photo frame. This would make the removal and insertion of photos rather tedious. Furthermore, the use of tabs and slits would, over time through frequent removal and insertion of photos, cause tears in the tabs and slits in the photo frame. Thus, over time and with frequent usage, the user would find it more difficult to remove a photo from the photo frame cardboard. Eventually there might be the possibility of more tabs being torn off or worn off, rendering the photo frame useless.

Therefore, there is a need for an one piece photo frame that allows quick and simple insertion and removal of photos and which is yet durable even after many changes of photos.

PROBLEM TO BE SOLVED BY THE INVENTION

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It is desirable to have a photo frame made of card paper or some inexpensive material in which the photo frame can be easily opened for the photo to be removed and a new photo replaced and then sealed, without any tools and for many times without damage to the photo frame.

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It is desirable for such a photo frame to be displayed either in a vertical or horizontal manner without any tools and by merely adjusting the position of the photo frame stand.

5 SUMMARY OF THE INVENTION

It is an object of the invention to have a photo frame consisting of a rectangular cut out, the rectangular cut out having two long borders with five foldable sections; two short borders with four foldable sections; two long foam strips; two short foam strips; four magnets; six steel pieces and a backing sheet, 10 wherein the photo frame is formed by affixing the backing sheet to the rectangular cut out, embedding four magnets into four recesses positioned along the length of the backing sheet, embedding a steel piece on a length and a steel piece along the breath of the backing sheet, embedding two steel pieces 15 into each of the two long foam strips, and affixing the long foam strips onto one of the sections in the long borders, and affixing each of the two short foam strips onto one of the foldable sections of the short borders.

Preferably, when the photo frame has one or more photographs placed onto the 20 backing sheet, the first and second short borders are first folded inwards, followed by folding inwards of the first and second long borders, the force of attraction of the magnets embedded in the backing sheet in the rectangular cut out and the steel pieces embedded in the first and second long borders keeping the borders together to form a photo frame, thereby keeping the one or 25 more photographs inside the photo frame securely.

Preferably, when one or more photographs are removed from the photo frame, the first and second long borders are unfolded outwards thereby overcoming the force of attraction between the steel pieces embedded in the long borders and the magnets embedded in the backing sheet, followed by unfolding of the first and second short borders, after which the one or more photographs which have been placed on the backing sheet can be removed.

Preferably, the photo frame has two long border consisting of five foldable sections which are folded inwards and towards the backing sheet, the first, second and third foldable sections being shorter in length than the length of the photo frame, the fifth foldable section of substantially the same length as the length of the photo frame, and the fourth foldable section having each end cut at an angle to meet the third and fifth foldable sections.

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Preferably, the long foam strip is affixed onto the second foldable section of the long border of the rectangular cut out of the photo frame.

Preferably, the short border of the photo frame consists of four foldable sections which are folded inwards and towards the backing sheet, which are folded inwards and towards the backing sheet, the first, second, third and fourth sections being substantially the same breath as the breath of the photo frame, with a foldable tab at each end of the fourth section.

Preferably, the short foam strip is affixed onto the first foldable section of the short border of the rectangular cut out of the photo frame.

Additionally, the photo frame of the invention can have an eleventh magnet embedded in a stand so that the photo frame can be displayed in a horizontal position by attaching the eleventh magnet on the stand to the sixth magnet embedded in the length of the photo frame. The photo frame can also be displayed in a vertical position by attaching the eleventh magnet on the stand to the fifth magnet embedded in the breath of the photo frame.

Advantageously, the photo frame of the invention can have a protective cover for the one or more photographs placed onto the backing sheet, the protective cover being placed on top of the front of the photographs, before the long and short foldable sections are folded to form the photo frame, thereby protecting the photographs during display.

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Advantageously, the rectangular cut out of the photo frame is made of card paper.

Advantageously, the backing sheet is also made of card paper.

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BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the invention, its advantages, and the objects attained by its use, reference should now be made to the accompanying drawings.

The accompanying drawings illustrate one or more embodiments of the invention

and together with the description herein, serve to explain the workings and principles of the invention.

Fig. 1 is a pre-assembly perspective view of a rectangular cut out of the unfolded photo frame of the invention with the backing sheet, four magnets, six steel pieces and two long foam strips placed next to each long border of the rectangular cut out and two short foam strips placed next to each short border of the rectangular cut out.

Fig. 2 is a perspective view of the rectangular cut out of the photo frame of the invention after the backing sheet has been affixed onto the photo frame and before the long and short foam strips have been affixed onto the long border and short border of the rectangular cut out of the photo frame. The backing sheet has four magnets embedded in the four recesses along the two lengths of the backing sheet and a steel piece had been embedded between one length of the backing sheet and another steel piece embedded between one breath of the backing sheet.

Fig. 3 is a perspective view of the rectangular cut out of the photo frame of the invention with the backing sheet affixed and after the first of the two longer foam strips have been affixed onto the first long border of the photo frame.

Fig. 4 is a perspective view of the rectangular cut out of the photo frame of the invention with the backing sheet affixed and after the two longer foam strips have been affixed onto the long borders of the photo frame.

Fig. 5 is a perspective view of the rectangular cut out of the photo frame of the invention with the backing sheet and two longer foam strips affixed onto the long border of the photo frame and after the first of the shorter foam strips have been affixed onto the first short border.

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Fig. 6 is a perspective view of the rectangular cut out of the photo frame of the invention with the backing sheet and two longer foam strips affixed onto the long border of the photo frame and after the first and second shorter foam strips have been affixed onto the first and second short border. Fig. 6 shows the
10 photo frame of the invention ready for use and before insertion of a photo.

Fig. 7 is a perspective view of the first step in folding the first short border of the photo frame of the invention after placement of a photo with its back facing the backing sheet.

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Fig. 8 is a perspective view of the second step in folding the second short border of the photo frame of the invention after the first short border had been folded.

20 Fig. 9 is a perspective view of the third step in folding the first long border of the photo frame of the invention after the first and second short border had been folded.

Fig. 10 is a perspective view of the fourth step in folding the second long
25 border of the photo frame of the invention after the first long border had been folded and after the first and second short border had been folded.

Fig. 11 is a perspective view of the complete folded photo frame of the invention, and the photo frame is ready for display.

- 5 Fig. 12 is a back view and a perspective view of the back of the photo frame of the invention showing the attachment of a stand to the back, allowing the photo frame to be displayed in a horizontal position.

- Fig. 13 is a back view and a perspective view of the back of the photo frame
10 of the invention showing the attachment of a stand to the back, allowing the photo frame to be displayed in a vertical position.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

- 15 An embodiment of the present invention will now be described with reference to the accompanying drawings.

- Fig. 1 and Fig. 2 shows the photo frame of the invention at the pre-assembly stage. Fig. 3, 4, 5 shows how the borders of the photo frame are folded for use.
20 Fig. 6 shows the photo frame ready for use.

Pre-Assembly

- Fig. 1 is a pre-assembly perspective view of a rectangular cut out 1 of the
25 unfolded photo frame of the invention, the backing sheet 6, four magnets 20, 21,

22, 23, six steel pieces 24, 25, 26, 27, 28, 29, two long foam strips 31, 32 and two short foam strips 33, 34.

The rectangular cut out 1 of the photo frame has two long borders 2,3 forming the lengths and two short borders 4,5 forming the breaths. Each of the long borders 2, 3 has five foldable elongate sections 10,11,12,13,14 running parallel along the length of the longer border. The first, second and third foldable sections 10,11, 12 are shorter in length. The fourth foldable section 13 has its end cut at an angle at the joint between the third 12 and fifth foldable section 14. Each of the short borders 4, 5 has four foldable long sections 15,16,17,18 running parallel with the short borders 4,5 of the rectangular cut out 1. The ends of the first, second and third shorter foldable sections 15,16,17 are cut straight. The fourth foldable section 18 of the short border 4,5 ends in a small rectangular flap 19.

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At time of manufacture, the four magnets 20,21,22, 23 and six steel pieces 24, 25, 26, 27,28, 29, two long foam strips 31,32 and two short foam strips 33,34 are prepared for assembly. Four magnets 20, 21, 22, 23 (embedded in the backing sheet) are positioned along each length of the rectangular cut out 1. A first steel piece 24 (embedded in the backing sheet) is positioned in the middle of the breath of the rectangular cut out 1 and a second steel piece 25 (embedded in the backing sheet) is positioned in the middle of the length of the rectangular cut out 1. Two steel pieces 26,27 are embedded in the long foam strip 31 near each end and two steel pieces 28,29 are embedded in the other long foam strip 32 near each end.

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The backing sheet 6 has six recesses 40,41,42,43,44,45 for the four magnets 20,21,22,23 and two steel pieces 24,25 to be embedded as follows. Two magnets 20, 21 embedded into two recess 40,41, on one length of the backing sheet 6 and two magnets 22, 23 embedded into two recess 42,43 on the other length of the backing sheet 6. The fifth recess 44 positioned on one of the breath of the backing sheet 6 is embedded with the first steel piece 24 and the sixth recess 45 positioned substantially mid way along one of the length of the backing sheet 6 is embedded with the second steel piece 25. The backing sheet 6 is then affixed onto the rectangular cut out 1 of the photo frame.

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Fig. 2 is a perspective view of the rectangular cut out 1 of the photo frame of the invention after the backing sheet 6 (with four magnets embedded into the recess 40,41,42,43 and two steel pieces embedded into the recesses 44,45) had been affixed onto the rectangular cut out and before the long foam strip 31,32 and short foam strips 33,34 have been affixed onto the lengths and breaths of rectangular cut out, to form the basic structure of the photo frame.

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The long foam strips 31, 32 are embedded with two steel pieces 26, 27 and 28, 29 at each end.

The long foam strips 31, 32 are then affixed onto the second foldable section 11 of the long borders 2, 3 as shown in Fig. 3. and 4.

Fig. 3 is a perspective view of the rectangular cut out 1 of the photo frame of the invention with the backing sheet 6 affixed and after the first of the two long foam strips 31 has been affixed onto the second foldable section 11 of the first long

border 2. The second long foam strip 32 is yet to be affixed onto the second long border 3.

Fig. 4 is a perspective view of the rectangular cut out 1 of the photo frame of the invention with the backing sheet 6 affixed and after the second long foam strip 32 has been affixed onto the second foldable section 12 of the second long border 3.

The first short foam strip 33 is then affixed onto the first short breath 4 as shown in Fig. 5.

Fig. 6 is a perspective view of the rectangular cut out 1 of the photo frame of the invention with the backing sheet 6 and two long foam strips 31, 32 affixed onto the long borders 2, 3 of the photo frame and after the first and second short foam strips 33, 34 have been affixed onto the short borders 4, 5. Fig. 6 shows the photo frame of the invention ready for use and before insertion of a photo.

Insertion of a photograph

Fig. 6 is a perspective view of the photo frame of the invention with the backing sheet 6 affixed to the rectangular cut out 1 and after the two long foam strips 31, 32 and two short foam strips 33, 34 have been affixed onto the foldable long sections 10, 11, 12, 13, 14 and foldable short sections 15, 16, 17, 18 of the photo frame respectively. The photo frame of the invention is now ready for insertion of a photo. The rectangular cut out 1 and backing sheet 6 are substantially larger

than the dimensions of a photograph be it 3 R or 5 R or any appropriate size, so that it could hold a photograph or photographs.

To insert a photograph, the back of the photograph (not shown) is placed on
5 the backing sheet 6, with the front of the photograph facing upwards. A clear plastic rectangular protective cover (not shown) may also be optionally placed onto the front of the photograph.

Fig. 7 is a perspective view of the first step in folding the first short border 5 of
10 the photo frame of the invention after placement of a photo with its back facing the backing sheet 6.

Fig. 8 is a perspective view of the second step in folding the second short
border 5 of the photo frame of the invention after the first short border 4 had
15 been folded.

Following Fig. 7 and 8, it can be seen that in the first step, the first short border 4 is folded inwards, beginning with the first foldable section 15, followed by the second foldable section 16, and so on. At the last section, the rectangular
20 flap is folded inwards. The precise number of foldable sections would enable the border to form a frame with its side facing the backing sheet 6 and photograph (not shown). The second short border 5 is then folded inwards, beginning with the first foldable section 15, followed by the second foldable section 16, and so on. At the last section, the rectangular flap 19 is folded inwards forming the second
25 frame with its side facing the backing sheet 6 and photograph (not shown).

Fig. 9 and 10 are perspective views of the third and fourth steps in folding the long borders of the photo frame of the invention. In the third step, the first long border 2 is folded inwards, beginning with the first foldable section 10, followed by the second foldable section 11, and so on. As the fourth foldable section 13 of the first long border 2 is cut at an angle, the side of the first long border 2 would fit snugly into the sides of the shorter borders 4, 5, which have already been folded. Since the long foam strip 31 on the first long border 2 has the steel pieces 26, 27, when the first long border 2 is folded inwards, the steel pieces 26, 27 embedded in the long foam strip 31 and the magnets 20, 21 embedded and positioned now on the rectangular cut out 1 attract each other, thereby securing the first long border 2 and along with it, the first and second short borders 4, 5.

In the fourth step, the second long border 3 is now folded inwards. As the foldable section 13 of the second long border 3 is also cut at an angle, the side of the second long border 3 would fit snugly into the sides of the shorter borders, 4, 5 which have already been folded. Since the foam strip on the second long border 3 has the steel pieces 28, 29, when the second long border 3 is folded inwards, the steel pieces 28, 29 on the second long foam strip 32 and the magnets 22, 23 embedded and positioned now on the rectangular cut out 1 attract each other, thereby securing the second long border 3 and along with it, the first and second short borders 4, 5. It can be seen that with the completion of the fourth step, the photo frame with the photograph inserted therein, is ready for display, as can be seen from Fig. 11.

Use of stand for display

The photo frame can be attached with a stand for display purposes. Fig. 12 is a back view and perspective view of the back of the photo frame of the invention showing the attachment of a stand 50 to the back of the photo frame, allowing the photo frame to be displayed in a horizontal position. The stand 50 also has a magnet 30. The stand is attached to the back of the photo frame by affixing the magnet 30 to the position of the second steel piece 25 located on the length of the rectangular cut out 1.

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Fig. 13 is a back view and a perspective view of the back of the photo frame of the invention showing the attachment of a stand 50 to the back, allowing the photo frame to be displayed in a vertical position. The stand 50 with the magnet 30 is now attached to the first steel piece 24 located on the breadth of the rectangular cut out 1.

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If at any time the display of the photo frame is to be switched from a vertical position to a horizontal position, the stand 50 which has a magnet 30 is shifted to the position of the first steel piece 25 located in the length of the rectangular cut out 1.

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If it is desirable for the photograph to be replaced by another photograph, the long borders 2, 3 are unfolded. Once the long borders 2, 3 are unfolded, the steel pieces 26, 27, 28, 29 in both the long borders 2, 3 and magnets 20, 21, 22, 23 embedded in the backing sheet affixed in the rectangular cut out 1 are no longer attracted to each other, making the unfolding complete. The short borders

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4, 5 are then unfolded. With the long borders 2, 3 and the short borders 4, 5 unfolded, the plastic protective cover (if used) is removed, and the photograph (not shown) taken away and a new photograph inserted.

- 5 The new photograph (not shown) is inserted, with its back onto the rectangular backing sheet 6, and the front of the photograph facing upwards. The plastic protective cover (not shown) is then placed over the photograph and the first to fourth steps of folding the first and second short borders 4,5 and then the first and second long borders 2,3 are repeated. Again the photograph can be
- 10 displayed either in a horizontal position or a vertical position, by either attaching the magnet 30 in the stand 50 to the first steel piece 24 along the breadth of the photo frame or attaching the magnet 30 in the stand to the second steel piece 25 along the length of the photo frame.
- 15 The use of the stand 50 is at the option of the user. The photo frame of the invention can also be used without the stand 50.

The rectangular cut out 1 is made of card paper making it durable and strong, even though the foldable sections are often folded and unfolded. The photo

20 frame of this invention is therefore both rigid, strong and capable of re-use many times.

While the above describes a photo frame with foldable borders forming the frame to contain a photograph or photographs therein, the same photo frame can be

25 unfolded easily and re-folded with a different photograph or photographs and displayed in a different position, as described above.

While an embodiment of the invention have been described, it should be apparent, however, that various modifications, rearrangements, substitutions alterations and adaptations to those embodiments may occur to persons skilled in the art with the attainment of some or all of the advantages of the present invention. Accordingly, it should be clearly understood that the present invention is not intended to be limited by the particular features and structures hereinbefore described and depicted in the accompanying drawings. It is therefore intended to cover all such modifications, alterations and adaptations without departing from the scope and spirit of the present invention as defined by the appended claims.

ADVANTAGEOUS EFFECTS OF THE INVENTION

A photo frame with foldable borders forming the frames which can be easily unfolded for removal of photographs and insertion of new photographs without using any tools.

The photo frame is also rigid, strong and capable of re-use many times over.

The same photo frame can be displayed in either the horizontal position or vertical position by easily switching the location of the magnetic stand.

CLAIMS

1. A photo frame consisting of a rectangular cut out,
5 the rectangular cut out having
two long borders with five foldable sections;
two short borders with four foldable sections;
two long foam strips;
two short foam strips;
10 four magnets;
six steel pieces; and
a backing sheet with six recesses
characterized by affixing the backing sheet to the rectangular cut out,
embedding four magnets into the four recesses positioned along the length of
15 the backing sheet, embedding a first steel piece into a fifth recess along the
breath of the backing sheet and a second steel piece into a sixth recess along
the length of the backing sheet, embedding the third, fourth, fifth and sixth steel
pieces into the two long foam strips, and affixing each of the long foam strips
onto the one of the foldable sections in the long borders, and affixing each of
20 the two short foam strips onto one of the foldable sections of the short
borders.

2. A photo frame as claimed in Claim 1 wherein one or more photographs
are placed onto the backing sheet, the first and second short borders folded
25 inwards, the first and second long borders folded inwards, the force of attraction
of the magnets embedded in the backing sheet and the steel pieces embedded

in the first and second long borders keeping the borders together to form a photo frame to keep the one or more photographs inside the photo frame.

3. A photo frame as claimed in Claim 1 wherein one or more photographs
5 are removed from the photo frame, by unfolding the first and second long borders outwards thereby overcoming the force of attraction between the steel pieces embedded in the long borders and the magnets embedded in the backing sheet affixed on the rectangular cut out, unfolding the first and second short borders, and removing the one or more photographs which have been placed on
10 the backing sheet.

4. A photo frame as claimed in Claim 1 wherein each long border consists of five foldable sections which are folded inwards and towards the backing sheet, the first, second and third foldable sections being shorter in length than
15 the length of the photo frame, the fifth foldable section of substantially the same length as the length of the photo frame, and the fourth foldable section having each end cut at an angle to meet the third and fifth foldable sections.

5. A photo frame as claimed in Claim 1 wherein the long foam strip is
20 affixed onto the second foldable section of the long border.

6. A photo frame as claimed in Claim 1 wherein each short border consists of four foldable sections which are folded inwards and towards the backing sheet, the first, second, third and fourth sections being substantially the same
25 breath as the breath of the photo frame, with a foldable tab at each end of the fourth section.

7. A photo frame as claimed in Claim 1 wherein the short foam strip is affixed onto the first foldable section of the short border.

5 8. A photo frame as claimed in Claim 1 wherein the backing sheet has six recesses, two recesses each along each length of the backing sheet for the embedding of magnets and a fifth recess along one breath and a sixth recess on an adjacent length of the backing sheet, for embedding of the first and second steel pieces respectively.

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9. A photo frame as claimed in Claim 1 having an fifth magnet affixed onto a stand wherein the photo frame can be displayed in a horizontal position by attaching the fifth magnet on the stand to the second steel piece embedded on the length of the photo frame and wherein the photo frame can be displayed in
15 a vertical position by attaching the fifth magnet on the stand to the second steel piece embedded on the breath of the photo frame.

10. A photo frame as claimed in Claim 1 having a protective cover for the one or more photographs placed onto the backing sheet, the protective cover
20 being placed on top of the front of the photographs, before the long and short foldable sections are folded to form the photo frame, thereby protecting the photographs during display.

11. A photo frame as claimed in Claim 1 wherein the rectangular cut out of
25 the photo frame is made of card paper.

12. A photo frame as claimed in Claim 1 wherein the backing sheet is made of card paper.

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