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(54) Method of producing a photograph album

Photoalbum-Herstellungsverfahren

Méthode de fabrication d'un album de photos

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Description

The invention relates to a method of producing a photograph album.

Such method is known e.g. from US-A-5156419.

The object of the invention is to design this method such:

- that the pages come to rest in the flat state when they are turned over and do not tend to close again as a result of bulging or the like.
- and that the book has approximately the same thickness over the entire width in the state in which photographs are mounted on its pages.

To this end, according to the invention the method is characterized in that it comprises the following steps:

- supplying a straight web of album board,
- making a first perforation at a distance of 1 to 2 cm from a longitudinal edge of the web of board,
- making a second perforation at a distance of 1 to 2 cm from the said first perforation,
- making a means of folding at a small distance from the said second perforation,
- cutting the web of album board into pages,
- gluing a sheet of glassine to each page of album board by means of a narrow strip of adhesive in the region of the second perforation,
- folding the pages of album board in a zigzag manner along the two perforations, and
- combining a predetermined number of pages to form a book and joining these pages together by gluing or by means of punched holes and pins.

The zigzag parts which have been joined to one another ensure that the book, which in the empty state is considerably thicker at the spine side than at the outer edge, has an essentially uniform thickness over the width in the filled state (with photographs stuck in). As a result of the extra means of folding, the pages can be

turned over into the flat state.

If the photograph album comprises pages which are joined firmly together, endpapers are added to the front and rear end of the book, the pages of the book are glued at the location of the parts which have been folded in the form of a zigzag, the book obtained is clamped and gauze is glued (cold glue) to the spine of the book, and a spine reinforcement, for example crêpe paper, is then applied to the spine of the book by means of adhesive (hotmelt), as are headbands, and the endpapers are glued to a hard cover.

The said means of folding preferably has to be situated slightly further from the second perforation than the distance between the first and the second perforation. Preferably, the distance between the means of folding and the second perforation is 1.8 to 1.9 cm.

The means of folding may be formed by scoring a folding line to a depth of at least half the thickness of the

board.

Preferably, the thickness of the board is approx. 0.33 microns and the board is scored to a depth of approx. 0.2 microns.

An alternative method of making the means of folding which is particularly suitable for a report album consists in cutting a strip out of the web of board and covering the gap formed on both sides with tape. The tapes can consist of paper provided with a layer of adhesive, but they can also be made up of a PVC-based material.

In order to glue the pages, a cold-gluing method may be used, with the adhesive penetrating 1 to 2 mm between the zigzag parts which lie adjacent to one another in the form of a fan.

Prior to employing the cold-gluing method, strips of hotmelt adhesive may be applied beforehand to the strips of the zigzag parts, which hotmelt adhesive can be activated by heat for the purpose of achieving a first bond.

The invention will now be explained in more detail with reference to the figures, in which:

Figure 1 shows a diagrammatic illustration in perspective of the start of a possible method for producing a photograph album.

Figure 2 shows a side view of a pair of pages which have been laid on top of one another during the implementation of the method which is shown in Figure 1.

Figure 3 shows a perspective view of a photograph album which has been produced, a portion of which has been cut away.

Figure 4 shows a diagrammatic illustration in perspective of the start of an alternative method.

Figure 5 shows a side view of two pages which have been laid on top of one another during the production phase depicted in Figure 4.

Figure 6 shows a perspective view of a book which has been produced in accordance with the alternative method.

Illustrated in Figure 1 is a section of a long web 1 of album board, which has been unwound from a stock roll (not shown), bent back and given a certain tensioning by means of a belt mechanism (not shown). A first perforation 4 is made from the underside by means of a wheel 2 provided with cutting teeth and a mating wheel 3, at a distance of approx. 1.5 cm from a longitudinal edge of the web of board. A second perforation 5 is made at approx. 1.5 cm from the first perforation 4 by means of a wheel 6 provided with cutting teeth and a mating wheel 7, this time from the top side. In addition, a folding line 9 (for example having a depth of 0.2 microns for a board thickness of 0.33 microns) is made from the top side by means of a scoring wheel 8, and a cutting wheel 10 moving in the transverse direction cuts the web of board 1 into sheets 11.

A sheet 12 of glassine is glued to each sheet 11 by means of a narrow strip of adhesive 13, which is applied on or at a small distance from the inner side of the second perforation 5.

The album board is folded to form a zigzag element 14 along the two perforations 4 and 5.

A predetermined number of pages obtained in this way is combined to form a book, the zigzag elements being positioned on top of one another. The two endpapers 18 are added.

The pages of the book are glued by a cold-gluing method. The zigzag elements 14 are in this case held in the form of a fan and adhesive which is applied to the spine of the book will, as shown in Figure 3, penetrate between the zigzag elements 14 over a distance of approx. 1 to 2 mm.

The zigzag elements 14 are clamped on top of one another and textile gauze is arranged on the spine of the book obtained in this manner, and a reinforcement 16, usually consisting of crêpe paper, is then glued on using a hotmelt-adhesive method, as is a so-called textile headband 17 on the top side and the underside.

Finally, the endpapers 18 are glued to the inner surfaces of the hard cover 19.

The first and second perforations 4 and 5 are also made by the method according to Figures 4 and 6, but instead of scoring the folding line 9, a narrow strip (for example 7 mm wide) is cut out of the board using a double-action cutter 20, as a result of which a gap 21 is formed. This gap is covered at the top and at the bottom by a tape 22. The simplicity of folding (hinging) of each page in the prepared photograph album takes place automatically at the location of the tapes.

In the same way as in Figure 1, the glassine sheets are mounted and two hotmelt adhesive strips 23, 24 are positioned on the webs of board: one (23) on the top side and one (24) on the underside of the web.

After having folded the zigzag elements 14, combined the pages 11 to form a book and attached the endpapers 18, the hotmelt adhesive is thermally activated, as a result of which the zigzag elements 14 are bonded together initially. The cold gluing then takes place so as to implement a second adhesive bond.

Clamping the book, attaching gauze, crêpe paper and headbands and joining to the hard cover by means of the endpapers, take place in the same manner as described in conjunction with Figures 1 - 3. The tapes 22 may consist of paper or PVC.

If a loose-leafed reporting version is to be made, the glassine 12 is glued on and, in the manner described above, zigzag elements 14 are folded by means of perforations 4 and 5, and a strip is cut out, which is covered by two tapes 22. Finally, punched holes are made by means of a rotating punch. Gluing is thus omitted.

It is of essential importance that a separate means of folding (either the scored line 9 or the gap 21 covered by tapes 22) is made and that, as result of the zigzag

elements 14, the photograph albums produced exhibit approximately the same constant thickness over the entire width in the filled state.

Claims

1. Method of producing a photograph album, comprising:
 - supplying a straight web of album board,
 - making a first perforation at a distance of 1 to 2 cm from a longitudinal edge of the web of board,
 - making a second perforation at a distance of 1 to 2 cm from the said first perforation,
 - making a means of folding at a small distance from the said second perforation,
 - cutting the web of album board into pages,
 - gluing a sheet of glassine to each page of album board by means of a narrow strip of adhesive in the region of the second perforation,
 - folding the pages of album board in a zigzag manner along the two perforations, and
 - combining a predetermined number of pages to form a book and joining these pages together by gluing or by means of punched holes and pins.
2. Method according to Claim 1, characterized in that after the combining operation endpapers are added to the front and rear end of the book, the pages of the book are glued at the location of the parts which have been folded in the form of a zigzag, the book obtained is clamped and gauze is applied to the spine of the book, and a spine reinforcement, for example crêpe paper, is applied to the spine of the book by means of adhesive, as are headbands, and the endpapers are glued to a hard cover.
3. Method according to Claim 1 or 2, characterized in that the said means of folding is made at 1.8-1.9 cm from the second perforation.
4. Method according to one of the preceding claims, characterized in that the said means of folding is formed by scoring a folding line to a depth of at least half the thickness of the board.
5. Method according to Claim 1 or 2, characterized in that the means of folding is made by cutting a strip out of the board of the web of board and covering the gap formed on both sides with a tape.
6. Method according to one of the preceding claims, characterized in that the pages of the book are glued by means of a cold-gluing method.

7. Method according to Claim 6, characterized in that adhesive penetrates 1 to 2 mm between the zigzag parts which lie adjacent to one another in the form of a fan.

8. Method according to one of the preceding claims, characterized in that, prior to employing the cold-gluing method, hotmelt strips are applied to the strips of album board, which are made to form the zigzag parts, and after the combining operation the hotmelt is activated by means of heat in order to produce a first bond.

Patentansprüche

1. Verfahren zum Herstellen eines Fotoalbums, das die folgenden Schritte aufweist:

- Zuführen einer geraden Bahn von Albumkarton,
- Anbringen einer ersten Perforation in einem Abstand von 1 bis 2 cm von einem Längsrand der Kartonbahn,
- Anbringen einer zweiten Perforation in einem Abstand von 1 bis 2 cm von der ersten Perforation,
- Anbringen eines Faltmittels in einem geringen Abstand von der zweiten Perforation,
- Schneiden der Albumkartonbahn in Seiten,
- Aufleimen eines Pergaminpapierblatts auf jede Albumkartonseite mit Hilfe eines schmalen Klebstoffstreifens in dem Bereich der zweiten Perforation,
- Zickzackfalten der Albumkartonblätter entlang den zwei Perforationen, und
- Vereinigen einer vorbestimmten Zahl von Blättern, um ein Buch zu bilden, und Verbinden dieser Blätter miteinander durch Verleimen oder mit Hilfe von Stanzlöchern und Stiften.

2. Verfahren nach Anspruch 1, dadurch gekennzeichnet, daß nach dem Vereinigungsvorgang dem Vorder- und dem Hinterende des Buchs Vorsatzblätter hinzugefügt werden, die Blätter des Buchs an der Stelle der Teile, die zickzackförmig gefaltet worden sind, verleimt werden, das erhaltene Buch eingespannt und auf den Buchrücken Gaze aufgebracht wird, und eine Rückenverstärkung, beispielsweise Krepp-Papier, ebenso wie Kapitalbänder auf den Buchrücken mittels Klebstoff aufgebracht wird, und die Vorsatzblätter mit einem Hartdeckel verleimt werden.

3. Verfahren nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß die Faltmittel 1,8 bis 1,9 cm von der zweiten Perforation hergestellt werden.

4. Verfahren nach einem der vorhergehenden Ansprü-

che, dadurch gekennzeichnet, daß die Faltmittel gebildet werden durch Ritzen einer Faltlinie bis auf eine Tiefe von wenigstens der halben Dicke des Kartons.

5. Verfahren nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß die Faltmittel gebildet werden durch Ausschneiden eines Streifens aus dem Karton der Kartonbahn und Abdecken des gebildeten Spalts an beiden Seiten mit einem Band.

6. Verfahren nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Seiten des Buchs mit Hilfe eines Kaltleimverfahrens verleimt werden.

7. Verfahren nach Anspruch 6, dadurch gekennzeichnet, daß Klebstoff 1 bis 2 mm zwischen die Zickzackteile eindringt, die in Form eines Fächers einander benachbart liegen.

8. Verfahren nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß vor dem Anwenden des Kaltleimverfahrens Schmelzkleberstreifen auf die Albumkartonstreifen, die zur Bildung der Zickzackteile gebildet sind, aufgebracht werden, und nach dem Vereinigungsvorgang der Schmelzkleber mittels Wärme aktiviert wird, um eine erste Verbindung herzustellen.

Revendications

1. Procédé de fabrication d'un album de photographies, consistant à mettre en oeuvre un lé rectiligne de carton pour album, à réaliser une première perforation à une distance de 1 à 2 cm d'un bord longitudinal du lé de carton, à réaliser une seconde perforation à une distance de 1 à 2 cm de ladite première perforation, à réaliser un moyen de pliage à une faible distance de ladite seconde perforation, à découper le lé de carton pour album en pages, à coller une feuille de papier cristal sur chaque page en carton pour album au moyen d'une bande étroite d'adhésif dans la zone de la seconde perforation, à plier en zigzag les pages en carton pour album suivant les deux perforations, à réunir un nombre prédéterminé de pages pour former un volume et à assembler ces pages par collage ou au moyen de trous poinçonnés et de broches.

2. Procédé selon la revendication 1, caractérisé en ce que, après l'opération de réunion, des feuilles de garde sont ajoutées au début et à la fin du volume, les pages du volume sont collées au niveau des parties pliées en zigzag, le volume obtenu est comprimé, une mousseline est appliquée au dos du volume, un renfort de dos, par exemple du papier crêpé, ainsi que des tranchefiles sont appliqués au

dos du volume au moyen d'adhésif, et les feuilles de garde sont collées sur une couverture rigide.

3. Procédé selon la revendication 1 ou 2, caractérisé en ce que ledit moyen de pliage est réalisé à une distance de 1,8 à 1,9 cm de la seconde perforation. 5
4. Procédé selon l'une des revendications précédentes, caractérisé en ce que ledit moyen de pliage est obtenu en réalisant par entaillage une ligne de pliage d'une profondeur au moins égale à la moitié de l'épaisseur du carton. 10
5. Procédé selon la revendication 1 ou 2, caractérisé en ce que le moyen de pliage est réalisé en découpant une bande dans le carton du lé de carton et en recouvrant le jour ainsi formé avec un ruban appliqué de part et d'autre. 15
6. Procédé selon l'une des revendications précédentes, caractérisé en ce que les pages du volume sont collées par un procédé de collage à froid. 20
7. Procédé selon la revendication 6, caractérisé en ce que l'adhésif pénètre sur 1 à 2 mm entre les parties en zigzag accolées les unes aux autres en forme d'éventail. 25
8. Procédé selon l'une des revendications précédentes, caractérisé en ce que, avant la mise en oeuvre du procédé de collage à froid, des bandes d'adhésif fusible sont appliquées sur les bandes de carton pour album confectionnées pour former les parties en zigzag et, après l'opération de réunion, l'adhésif fusible est activé au moyen de chaleur afin de réaliser une première liaison. 30
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fig-1

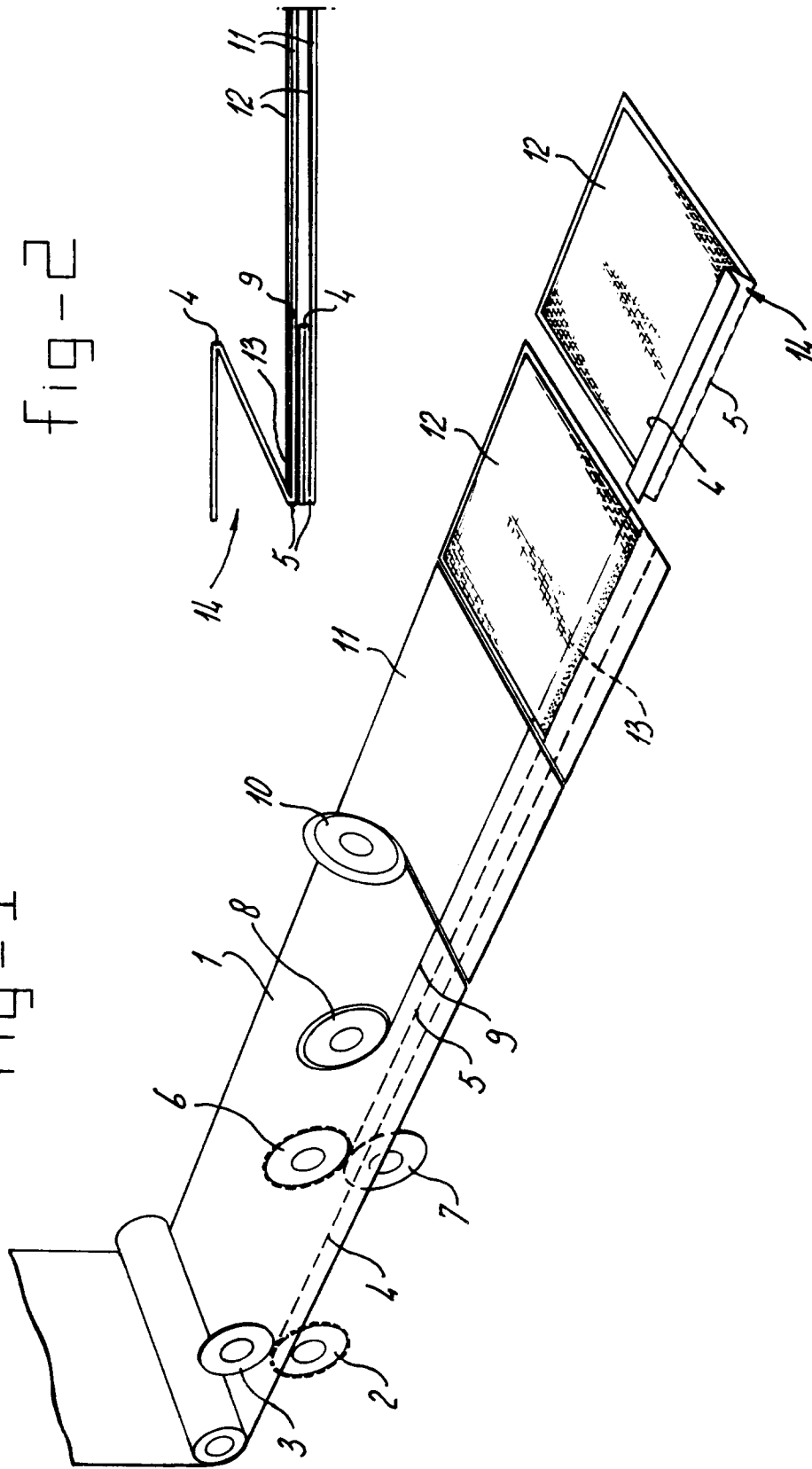


fig-2

