Description

Technical field

This invention relates to magnetic recording disk jackets.

Background art

A flexible magnetic disk jacket encloses and protects a magnetic recording disk and is inserted along with the disk into a so-called disk drive which is connected to a computer system. The disk drive includes a read/write magnetic head which contacts the magnetic disk through openings in the jacket and either magnetically records onto the disk information supplied by the computer system or magnetically reads information from the disk and supplies such information to the computer system.

Recently, with the advent of small and relatively inexpensive home computer systems, a large market has been developed for prerecorded information or computer programs ("software") which may be read directly by the computer system rather than entered manually by the user. Such software is relatively expensive and easily duplicated and has given rise to an illicit market specializing in the unauthorized duplication and sale thereof. It is, therefore, necessary that users, distributors and manufacturers be provided with means for distinguishing authorized and illicitly produced software.

The present industry-accepted method of manufacturing a disk jacket is disclosed in U.S. Patent No. 4,038,693 issued to Huffine et al. and U.S. Patent No. 4,263,624 issued to Chenoweth et al. These patents disclose a disk jacket formed from a rectangular, perimeter cut sheet which includes three envelope-type flaps extending from the three edges of one-half of the rectangular sheet. The center line of the sheet is heated and folded to define top and bottom panels of the jacket and the two flaps adjacent this fold are in turn folded over the bottom panel and secured by an adhesive, thermal bonding or ultrasonic welding to form a pocket between the two panels. The magnetic disk is inserted into this pocket and the flap opposite the initial center-line fold is folded over and likewise secured to contain and protect the magnetic disk and form a completed jacket.

These jackets are available from manufacturers in a partially assembled form wherein all that needs be done to complete the assembly is insert the disk and fold and secure the final flap. Since the information recorded on a disk is easily duplicated onto another disk, illicit producers need only insert a duplicated disk into a partially assembled jacket and secure the final flap to produce a software package which is indistinguishable from an authorized package.

Alternative disk jacket constructions have been proposed by U.S. Patent No. 3,864,755 which depicts a disk jacket having a relatively rigid, flat back cover and a relatively thin front cover which is thermoformed to accept the disk and bonded to the flat back cover and U.S. Patent No. 3,668,658 in which the jacket is a composite of three sheets which include a central gasket layer surrounding the magnetic disk and adhesively attached to flat side panels.

Disclosure of invention

The present invention discloses a method of forming a disk jacket and a disk jacket which results in a jacket that includes a deformed area which would be difficult or impossible to duplicate after the jacket has been partially or completely assembled. The deformed area may also relate to and identify the information recorded on the disk.

According to one aspect of this invention there is provided a method of forming a duplication-resistant disk jacket adapted to receive and enclose a magnetic recording disk characterised by the steps of:

providing a flat paper or polymer stock material;

perimeter cutting said stock material to produce a jacket blank;

partially assembling said jacket blank to form a partially-assembled disk jacket;

imparting indicia to one surface of said jacket blank prior to partially assembling said jacket blank in an area and in a manner which cannot be duplicated in a partially-assembled disk jacket not provided with said indicia prior to partially assembling said jacket blank;

inserting said magnetic recording disk into said partially-assembled disk jacket; and

assembling completely said jacket blank to form an assembled, duplication-resistant disk jacket enclosing said magnetic recording disk.

According to another aspect of this invention there is provided a jacket adapted to receive a magnetic recording disk and which is partially assembled in that the jacket includes first and second superimposed panels secured to each other and each panel having inner surfaces adjacent each other and outer surfaces, characterized by:

a printing embossment in at least said first panel recessed into said inner surface and raising said outer surface, the second panel not including a corresponding embossment recessed into said outer surface and raising said inner surface in the area thereof opposite the embossment in said first panel such as would occur if said superposed panels were embossed as a laminated structure in said superposed relationship, whereby said disk jacket is distinct from other partially assembled disk jackets formed without a said embossment and may be distinguished from other disk jackets wherein said embossment is added after partial assembly.

According to a further aspect of this invention there is provided a jacket for a magnetic recording disk, the jacket being the type which is formed from a single sheet of paper or polymeric material including a bottom panel, a top panel and edge flaps extending from the top panel by folding said

sheet at a fold line between said top and bottom panels so that said top panel overlies said bottom panel, folding said sheet at fold lines between the top panel and the edge flaps so that said flaps overlie said bottom panel, and securing the edge flaps to the bottom panel, characterized by:

printing which crosses at least one of said fold lines, said printing extending from said top panel and around at least one of said fold lines after said jacket is folded, whereby said printing is positioned in an area on said jacket such that said printing cannot be duplicated on a previously formed disk jacket rendering said previously formed disk jacket duplication resistant in that said printing cannot be applied to said jacket after said jacket is folded and said flaps secured.

Brief description of the drawings

The present invention will be more thoroughly described with reference to the accompanying drawings wherein like numbers refer to like parts in several views, and wherein:

Figure 1 is a plan view of a disk jacket blank incorporating various embodiments of the present invention;

Figure 2 is an enlarged, partial cross-sectional view of the jacket blank of Figure 1 taken generally along the line 2—2 of Figure 1;

Figure 3 is a plan view of the disk jacket blank of Figure 1 in a partially assembled condition;

Figure 4 is an enlarged, partial cross-sectional view of the partially assembled disk jacket of Figure 3 taken generally along the line 4—4 of Figure 3;

Figure 5 is an exploded perspective view of a second construction of a magnetic disk jacket which includes the present invention; and

Figure 6 is an enlarged, partial cross-sectional view of the assembled disk jacket of Figure 5.

Detailed description

With reference to Figure 1 of the accompanying drawings, there is shown a flat disk jacket blank 2 which has been cut from a flat sheet of paper, polyethylene, polycarbonate or like material. The jacket blank 2 includes areas which may be designated as a bottom panel 4, a top panel 6 and edge flaps 8, 10 and 12 extending from the top panel 6. The bottom panel 4 and the top panel 6 are separated by a fold line 14, and the edge flaps 8, 10 and 12 are separated from the top panel 6 by fold lines 16, 18 and 20, respectively.

Figure 3 illustrates a partially assembled disk jacket 22 which has been formed by folding the jacket blank 2 along the line 14 to superpose the bottom panel 4 and the top panel 6. The bottom panel 4 has been secured to the top panel 6 by folding the edge flaps 8 and 12 and attaching these flaps to the bottom panel 4 by a conventional method such as adhesive bonding, ultrasonic welding or thermal bonding. The partially assembled jacket 22 illustrated in Figure 3 is in the form which is commonly supplied by jacket manufacturers to disk packagers. If a completed jacket 22 and disk (not shown) assembly were to now be produced, the disk would be inserted between the top panel 6 and the bottom panel 4 and the edge flap 10 would be folded over and attached to the bottom panel 4 in like manner as the edge flaps 8 and 12.

Opposite sides of the jacket blank 2 and the partially assembled disk jacket 22 have been featured in Figures 1 and 3 for clarity to reduce the number of phantom lines necessary in the illustrations.

When completely assembled, the disk jacket 22 is inserted into a so-called disk drive which is connected to a computer system, neither of which have been illustrated. Apertures 24, 26 and 28 are provided in the disk jacket 22 to provide access of the disk drive to the disk for the purposes of rotating the disk, reading information from and writing information on the disk, and sensing the rotational position of the disk, respectively. The manner in which the disk drive performs these functions need not be discussed, as it forms no part of the present invention.

As mentioned above, the disk jacket 22, in the completely assembled condition, encloses and protects a flexible magnetic disk on which may be magnetically recorded information useful to a computer system. Such disks permit the computer to access information directly through the disk drive, thus eliminating the necessity of the user entering such information manually. Such prerecorded information is commonly referred to as "software" and, with the advent of inexpensive computers, the sale of such software has evolved into a significant business. Software packages, which include one or a number of such prerecorded disks, have proven extremely popular and are the subject of great competition. The cost of software packages is determined primarily by the perceived value of the information provided rather than the cost of either manufacturing the disk and the jacket or recording the information. Unfortuneatly, the information is easily duplicated from one disk to another. The combination of inexpensive disks and partially assembled jackets and readily available means for duplicating recorded information has spawned a large illicit market in the unauthorized duplication and sale of software packages which are not readily distinguishable from authorized counterparts.

The purpose of the present invention is to provide a partially assembled disk jacket 22 which is not easily or cannot be duplicated by those who would deprive the copyright owner of his rights in the information supplied in a software package.

The present invention deters the theft of copyrighted software by providing the disk jacket 22 with hot-stamp transfer printing or an embossment which is not easily or cannot be duplicated after the jacket 22 has been at least partially assembled.

Hot-stamp transfer printing is a process by which a thin layer of metal is attached to a surface by means of a stamping press which includes a heated pressure shoe. The metal coating is included in certain types of "roll leaf" which are

commercially available for such uses as lettering and decorating. A typical roll leaf consists of the following layers in order: a disposable carrier web having a low adhesion surface, a tough, abrasion-resistant transparent polymeric protective layer releasably adhered to the low-adhesion surface, a thin-film metal coating, and a layer of heat-activatable adhesive. A hot-stamping press, through a shoe which equals the desired size of the printing, presses the roll leaf against the surface to adhere the adhesive layer, whereupon the carrier web is pulled away, leaving the adhesive, thin-film metal coating and the protective layer on the surface in the pattern of the shoe. The surface to which the foil is to be applied must be well supported and flat in order to provide good adhesion and assure that the shoe contacts the entire surface to be printed. If the surface to be printed is a plastic, the heated shoe will deform the surface slightly during the printing process. This deformation may be an indentation or smoothing of the surface.

The transfer of indicia to the outside of the disk jacket 22 by a process such as decalcomania, transfer printing or silk screen printing would provide the user, distributor and manufacturer of software packages some protection in that a potential thief would be put to the trouble of reproducing such indicia on his jackets. The degree of protection afforded by these methods, however, would be very small since little pressure is required during the processes and the processes can be accomplished upon a surface which is not entirely flat.

Hot-stamp transfer printing provides a greater degree of protection in that the surface to be printed must be flat for the roll leaf to adhere properly and, if the surface is a plastic, the printing process slightly deforms the surface.

Hot-stamp transfer printing of an area of the jacket blank 2, such as the rectangular area bounded by the line 30 and the fold lines 16 and 18, would provide a greater degree of protection than printing or decalcomania because, after the disk jacket 22 is partially assembled, the area defined by the lines 16, 18 and 30 cannot be supported, against pressure in a flat condition since it will overlie a corner 32 of the bottom panel 4 and a corner 34 of the edge flap 8.

The degree of protection afforded by hot-stamp transfer printing will be significantly increased if it is applied to an area which is to be folded during the assembly process. Such an area is illustrated by the rectangular area 36 which lies over the fold line 14 between the bottom panel 4 and the top panel 6. Hot-stamp transfer printing in this area is particularly effective because after the disk jacket 22 has been partially assembled, pressure cannot be applied to the rectangular area 36 without crushing the fold at the line 14. Such a deformation of the fold line 14 would be immediately discernible upon inspection and would alert the user, distributor or manufacturer that the software package is not an authorized copy. It should be recognized that the hot-stamp transfer printing area 36 shown in Figure 1 need not be positioned as illustrated. Printing anywhere along the fold lines 14, 16, or 20 would be equally effective and printing at the junction of two fold lines might be even more effective because of the superposition of the printing area with respect to corners of the edge flaps 8, 10 or 12.

Transfer printing across the fold line 18 would not be effective because the partially assembled jacket 22 is supplied with flap 10 in an unfolded condition. Thus, the fold line 18 could be supported in a flat condition.

The two methods of deterrent described above, i.e., transfer printing in an area which cannot be supported in a flat condition and transfer printing across an area which will contain a fold line in the assembled condition, may be effectively combined by hot stamp transfer printing an area such as that bounded by the dashed lines 38 and 40. Printing in such an area would span many regions which could not be supported flat and also would cross a number of fold lines. An attempt to duplicate such transfer printing on a partially assembled jacket 22 would result in numerous imperfect printing areas which could be easily identified.

Figure 1 also illustrates a method of deterring duplication which may perhaps be even more effective than hot-stamp transfer printing. In this method, suitable indicia 42 is embossed into the bottom panel 4 to deform the panel 4 into raised letters as shown in Figure 2. The difficulty in reproducing the embossed letters 42 is illustrated by Figure 4 which shows the bottom panel 4 superposed over the top panel 6, as would be the case in a partially assembled disk jacket 22. Any attempt to produce the raised letters 42 on the bottom panel 4 after the jacket 22 is partially assembled would require that the embossing die also deform the top panel 6 into a negative, recessed image of the raised letters 42. Such deformation of the top panel 6 would provide an immediate indication that the jacket 22 is not an authorized duplicate.

Embossing the jacket blank 2 prior to forming the blank 2 into the partially assembled disk jacket 22 would be effective if the embossment were located anywhere on the top panel 6, the bottom panel 4 or side flaps 8 or 12. Any of these locations would be effective because all of these areas overlie another layer of the material which comprises the disk jacket 22. Embossing the edge flap 10 would, of course, not be effective because the flap 10 overlies no other portion of the jacket 22 in the partially assembled condition illustrated in Figure 3. A potential duplicator could simply emboss the edge flap 10 prior to insertion of the disk into the jacket 22 and attachment of the flap 10 to the bottom panel 4.

The preferred location of the embossed letters 42, however, is on the bottom panel 4 adjacent one of the edge flaps 8 or 12. In these areas, the raised letters 42 will have a minimal impact on the overall thickness of the disk jacket 22.

Although the embossment 42 has been illus-

trated as overlying another layer of material which is flat, duplication prevention may also be accomplished by embossing both the superposed panels in opposite directions wherein each embossment extends away from the adjacent panel. The point is that the panel adjacent to the embossed panel need not be flat but must not include a negative, recessed image corresponding to the embossment.

Figures 5 and 6 illustrate how the above-described methods of deterring duplication could be applied to a disk jacket 44 which is constructed by a method other than folding a jacket blank 2. The disk jacket 44 is disclosed in U.S. Patent No. 3,864,755 and includes a flat back cover 46 and a relatively thin front cover 48 which is thermoformed to accept a disk 50 and bonded to the back cover 46. Fiber wiper layers 52 and 54 are interposed between the surfaces of the disk 50 and the front 48 and back 46 covers to clean the disk 50 and prevent the edge of the disk 50 from becoming wedged in the junction of the front 48 and back 46 covers. Hot-stamp transfer printing would be ineffective if applied to a laminated structure such as the jacket 44 because the areas around the disk 50 can be easily supported after assembly in a flat condition and because there are no fold lines which may be crushed by transfer printing after assembly. Embossment, however, of raised lettering 56 would be extremely effective because, as is the case with folded jackets 22, the embossment 56 cannot be added after assembly of the jacket 44 without deforming the panel adjacent the panel which includes the embossment 56. Thus, a negative, depressed image of the embossment 56 opposite the raised portion would indicate that the jacket 44 was not an authorized product. The embossment 56 is illustrated as being formed in the front panel 48 because this is the area in which raised letters 56 would have the least impact on the overall thickness of the assembled disk jacket 44. However, the embossment 56 could be located on any portion of either the back cover 46 or the front cover 48 and perform equally effectively as a deterrent to duplication.

Although the embossment 56 is illustrated in conjunction with a disk jacket cover 48 which is thermoformed to provide space for the disk 50, the principle of the present invention could be equally well applied to a disk jacket which is constructed of three sheets which include a central gasket layer surrounding the disk and adhesively attached to flat side panels by embossing one of the side panels before attaching the gasket layer.

It will be appreciated that the above-described means for deterring duplication of computer software packages have in common the deformation of an area of the disk jacket in a manner which would be difficult or impossible to duplicate after the jacket has been at least partially assembled. This is accomplished by either hot-stamp transfer printing, prior to assembly, an area of the jacket blank which cannot be supported against pressure, after the jacket is at least partially assembled, such that the area remains planar or embossing the jacket blank to produce an embossment which will be located adjacent a flat superposed panel after the jacket is at least partially assembled and which will extend away from the superposed panel.

The method of forming a non-duplicable disk jacket can, therefore, be reduced to providing a flat stock material, deforming an area of the stock by either hot-stamp transfer printing or embossing, cutting the stock material to produce a disk jacket blank which includes the printing or embossment in a desired area, and at least partially assembling the jacket blank.

Although the jacket blank 2, illustrated in Figure 1, and the partially assembled jacket 22, illustrated in Figure 3, have been shown for convenience as incorporating all of the various means for deterring duplication described above, it should be recognized that only one of the means described would normally be incorporated into a commercially produced disk jacket 22.

While the method described above will be effective in deterring the person who would steal copyrighted material by duplicating a software package from available "raw" materials, i.e., blank disks and unmarked disk jackets, there is another mode of theft which must be addressed. If disk jackets 22 were provided with an area which has been hot-stamped transfer printed or embossed in the manner described above with the software manufacturer's name, for example, duplication of the package from blank materials would be effectively prevented. It would still be possible for a person bent on theft to purchase an inexpensive software package from the software manufacturer, erase the recorded material and record more expensive software material on the already packaged disk. This erasure and recording could be accomplished through the read/write aperture 26 and so the disk jacket 22 would not have to be disassembled. The thief would thus acquire an authentic jacket 22 and be able to sell an expensive software package for the cost of an inexpensive software package. Substitution of software within an authentic jacket 22 can be prevented if the transfer printed or embossed area somehow relates to and identifies the information which should be contained on the disk.

This identification can be in the form of a code, such as the bar codes utilized to identify consumer products, a particular number associated with a particular software package, or a written description of the information which should be present on the disk.

The invention above, therefore, lends itself not only to the prevention of duplication of the jacket 22, but also to the identification of the information provided and the prevention of substitution of such information.

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Claims

1. A method of forming a duplication-resistant disk jacket adapted to receive and enclose a magnetic recording disk characterized by the steps of:

providing a flat paper or polymer stock material;

perimeter cutting said stock material to produce a jacket blank (2);

partially assembling said jacket blank (2) to form a partially-assembled disk jacket (22);

imparting indicia to one surface of said jacket blank (2) prior to partially assembling said jacket blank (2) in an area and in a manner which cannot be duplicated in a partially-assembled disk jacket (22) not provided with said indicia prior to partially assembling said jacket blank (2);

inserting said magnetic recording disk into said partially-assembled disk jacket (22); and

assembling completely said jacket blank (2) to form an assembled, duplication-resistant disk jacket enclosing said magnetic recording disk.

2. The method of claim 1 wherein said partially assembling and assembling is accomplished by folding said jacket blank (2) along predetermined fold lines (14—20).

3. The method of claim 2 wherein said indicia is hot-stamp transfer printing.

4. The method of claim 3 wherein said hot-stamp transfer printing spans at least one of said predetermined fold lines (14—20).

5. A jacket (22) adapted to receive a magnetic recording disk and which is partially assembled in that the jacket (22) includes first and second superimposed panels (4, 6) secured to each other and each panel having inner surfaces adjacent each other and outer surfaces, characterized by:

a printing embossment (42) in at least said first panel (4) recessed into said inner surface and raising said outer surface, the second panel (6) not including a corresponding embossment (42) recessed into said outer surface and raising said inner surface in the area thereof opposite the embossment (42) in said first panel (4) such as would occur if said superposed panels (4, 6) were embossed as a laminated structure in said superposed relationship, whereby said disk jacket (22) is distinct from other partially assembled disk jackets (22) formed without a said embossment (42) and may be distinguished from other disk jackets (22) wherein said embossment (42) is added after partial assembly.

6. A jacket (22) according to claim 5 wherein said first and second panels (4, 6) both include printing embossments recessed into said inner surfaces and raising said outer surfaces.

7. A jacket (22) according to claim 5 wherein said second panel (6) is flat adjacent said printing embossment (42) in said first panel (4).

8. A jacket (22) for a magnetic recording disk, the jacket being the type which is formed from a single sheet of paper or polymeric material including a bottom panel (4), a top panel (6) and edge flaps (8—12) extending from the top panel (6) by folding said sheet at a fold line (14) between said top and bottom panels (4, 6) so that said top panel (6) overlies said bottom panel (4), folding said sheet at fold lines (16—20) between the top panel (6) and the edge flaps (8—12) so that said flaps (8—12) overlie said bottom panel (4), and securing the edge flaps (8—12) to the bottom panel (4), characterized by:

printing (36) which crosses at least one of said fold lines (14—20), said printing (36) extending from said top panel (6) and around at least one of said fold lines (14—20) after said jacket (22) is folded, whereby said printing (36) is positioned in an area on said jacket (22) such that said printing (36) cannot be duplicated on a previously formed disk jacket (22) rendering said previously formed disk jacket (22) duplication resistant in that said printing (36) cannot be applied to said jacket (22) after said jacket (22) is folded and said flaps (8—12) secured.

9. A jacket (22) according to claim 8, wherein said printing (36) crosses said fold line (14—20) between said top and bottom panels (4—6).

10. A jacket (22) according to claim 8, wherein said printing (36) crosses at least one of said fold lines (16—20) between said top panel (6) and said edge flaps (8—12).

11. A jacket (22) according to claim 8, wherein said printing (36) is a hot-stamp transfer printed area.

Patentansprüche

1. Verfahren zum Herstellen einer duplizierungssicheren Plattenhülle zum Aufnehmen und Umschließen einer magnetischen Speicherplatte, gekennzeichnet durch folgende Schritte:

Es wird ein Flachgut aus Papier oder Polymer verwendet;

durch umfängliches Zuschneiden des genannten Gutes wird ein Hüllenzuschnitt (2) hergestellt;

durch teilweise Schließen des Hüllenzuschnitts (2) wird eine teilweise geschlossene Plattenhülle (22) hergestellt;

vor dem teilweisen Schließen des Hüllenzuschnitts (2) wird dieser auf einer Fläche derart mit Zeichen versehen, daß diese einer teilweise geschlossenen gesetzten Plattenhülle (22), die vor ihrer teilweisen Fertigstellung nicht mit den genannten Zeichen versehen worden ist, nicht dupliziert werden können;

die magnetische Speicherplatte wird in die teilweise geschlossene Plattenhülle (22) eingeführt und

durch vollständiges Schließen des Hüllenzuschnitts (2) wird eine duplizierungssichere, geschlossene Plattenhülle gebildet, die die magnetische Speicherplatte umschließt.

2. Verfahren nach Anspruch 1, dadurch gekennzeichnet, daß zum teilweisen Schließen und zum Schließen des Hüllenzuschnitts (2) dieser an vorbestimmten Faltlinien (14 bis 20) gefaltet wird.

3. Verfahren nach Anspruch 2, dadurch gekennzeichnet, daß die Zeichen eine im Umdruck hergestellte Heißprägung sind.

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4. Verfahren nach Anspruch 3, dadurch gekennzeichnet, daß der sich die im Umdruck hergestellte Hießprägung über mindestens eine der vorherbestimmten Faltlinien (14 bis 20) erstreckt.

5. Zur Aufnahme einer magnetischen Speicherplatte geeignete Hülle (22), die teilweise geschlossen ist und eine erste und eine zweite Wand (4, 6) besitzt, die übereinanderliegen und aneinander befestigt sind und einander zugekehrte Innenflächen haben sowie Außenflächen, gekennzeichnet, durch:

einen Prägedruck (42), der in der Innenfläche mindestens der ersten Wand (4) vertieft und auf der genannten Außenfläche erhaben ist, während die zweite Wand (6) in dem der Prägung (42) der ersten Wand (4) gegenüberliegenden Bereich keine entsprechende, in seiner Außenfläche vertiefte und auf seiner Innenfläche erhabene Prägung (42) besitzt; wie dies der Fall wäre, wenn die übereinanderliegenden Wände (4, 6) beim Prägem übereinandergeschichtet gewesen wären, so daß sich die Plattenhülle (22) von anderen teilweise geschlossenen Plattenhüllen (22) unterscheidet, die keine derartige Prägung besitzen, und von anderen Plattenhüllen (22) unterscheidbar ist, die nach ihrem teilweisen Schließen mit der Prägung versehen worden ist.

6. Hülle (22) nach Anspruch 5, dadurch gekennzeichnet, daß sowohl die erste als auch die zweite Wand (4, 6) mit Druckprägungen versehen sind, die in den Innenflächen vertieft und auf den Außenflächen erhaben sind.

7. Hülle (22) nach Anspruch 5, dadurch gekennzeichnet, daß die zweite Wand (6) im Bereich der Druckprägung (42) der ersten Wand (4) flach ist.

8. Für eine magnetische Speicherplatte bestimmte Hülle (22), die aus einem einzigen Blatt aus Papier oder polymerem Material hergestellt ist und eine Bodenwand (4), eine Deckwand (6) und Randklappen (8 bis 12) bestizt, die sich von der Deckwand (6) erstrecken und zu deren Bildung das Blatt an einer Faltlinie (14) zwischen der Deckwand und der Bodenwand (4, 6) derart gefaltet worden ist, daß die Deckwand (6) über der Bodenwand (4) liegt, und das Blatt an Faltlinien (16 bis 20) zwischen der Deckwand (6) und den Randklappen (8 bis 12) derart gefaltet worden ist, daß die genannten Klappen (8 bis 12) über der Bodenwand (4) liegen, worauf die Randklappen (8 bis 12) an der Bodenwand (4) befestigt worden sind, gekennzeichnet durch:

einen Druck (36), der sich quer über mindestens eine der Faltlinien (14 bis 20) erstreckt und der sich in der gefalteten Hülle (22) von der Deckwand (6) um mindestens eine der Faltlinien (14 bis 20) herum erstreckt, so daß sich der Druck (36) in einem solchen Bereich der Hülle (22) befindet, daß der Druck (36) nicht auf einer vorher hergestellten Plattenhülle (22) dupliziert werden kann und diese vorher hergestellte Plattenhülle (22) daher insofern duplizierungssicher ist, daß der genannte Druck (36) nicht auf die Hülle (22) aufgebracht werden kann, wenn die Hülle (22) gefaltet worden ist und die genannten Klappen (8 bis 12) festgelegt worden sind.

9. Hülle (22) nach Anspruch 8, dadurch gekennzeichnet, daß sich der Druck (36) quer über die genannte Faltlinie (14 bis 20) zwischen der Deckwand und der Bodenwand (4 bis 6) erstreckt.

10. Hülle (22) nach Anspruch 8, dadurch gekennzeichnet, daß sich der Druck (36) quer über mindestens eine der genannten Faltlinien (16 bis 20) zwischen der Deckwand (6) und den Randklappen (8 bis 12) erstreckt.

11. Hülle (22) nach Anspruch 8, dadurch gekennzeichnet, daß der genannte Druck (36) einen in Umdruck hießgeprägten Bereich bildet.

Revendications

1. Procédé de préparation d'une enveloppe de disque résistant à la reproduction, prévue pour recevoir en enfermer un disque d'enregistrement magnétique, caractérisé par les opérations de:

fourniture d'une matière de base plane, en papier ou polymère;

découpe du périmètre de ladite matière de base, pour produire une ébauche d'enveloppe (2);

assemblage partiel de ladite ébauche d'enveloppe (2), pour former une enveloppe de disque partiellement assemblée (22);

création de marques sur une surface de ladite ébauche d'enveloppe (2), avant l'assemblage partiel de ladite ébauche d'enveloppe (2), dans une zone et d'une manière qui ne peuvent pas être reproduits dans une enveloppe de disque partiellement assemblée (22) non pourvue desdites marques avant l'assemblage partiel de ladite ébauche d'enveloppe (2);

insertion du disque d'enregistrement magnétique dans ladite enveloppe de disque partiellement assemblée (22); et

assemblage complet de ladite ébauche d'enveloppe (2) pour former une enveloppe de disque assemblée et résistant à la reproduction qui enferme le disque d'enregistrement magnétique.

2. Procédé suivant la revendication 1, dans lequel ledit assemblage partiel et ledit assemblage sont effectués par pliage de ladite ébauche d'enveloppe (2) le long de lignes de pliage prédéterminées (14—20).

3. Procédé suivant la revendication 2, dans lequel lesdites marques sont une impression par transfert par estampage à chaud.

4. Procédé suivant la revendication 3, dans lequel ladite impression par transfert par estampage à chaud recouvre au moins une desdites lignes de pliage prédéterminées (14—20).

5. Enveloppe (22) prévue pour recevoir un disque d'enregistrement magnétique et qui est partiellement assemblé, l'enveloppe (22) comportant un premier et un deuxième panneaux superposés (4, 6) fixés l'une à l'autre, et chaque panneau présentant des surfaces intérieures mutuellement adjacentes et des surfaces extérieures, caractérisée par une gravure d'impression par repoussage (42) dans au moins ledit premier panneau (4), en creux dans ladite surface intérieure et en relief dans ladite surface extérieure, le deuxième panneau (6) ne comportant pas un

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repoussage correspondant (42) en creux dans ladite surface extérieure et en relief dans ladite surface intérieure dans sa région opposée au repoussage (42) dudit premier panneau (4) comme cela se produirait si lesdits panneaux superposés (4, 6) étaient repoussés comme une structure stratifiée dans ladite relation superposée, de sorte que ladite enveloppe de disque (22) est distincte d'autres enveloppes de disques partiellement assemblées (22) formées sans un tel repoussage (42) et elle peut être distinguée d'autres enveloppes de disque (22) dans lesquelles ledit repoussage (42) est ajouté après l'assemblage partiel.

6. Enveloppe (22) suivant la revendication 5, dans laquelle lesdits premier et deuxième panneaux (4, 6) comprennent tous deux des impressions par repoussage en creux dans lesdites surfaces intérieures et en relief dans lesdites surfaces extérieures.

7. Enveloppe (22) suivant la revendication 5, dans laquelle ledit deuxième panneau (6) est plat et adjacent audit repousage d'impression (42) dudit premier panneau (4).

8. Enveloppe (22) pour un disque d'enregistrement magnétique, l'enveloppe étant du type qui est formé à partir d'une feuille unique de papier ou de polymère, comportant un panneau inférieur (4), un panneau supérieur (6) et des rabats de bord (8—12) partant du panneau supérieur (6), par pliage de ladite feuille suivant une ligne de pliage (14) entre lesdits panneaux supérieur et inférieur (4, 6) de sorte que ledit panneau supérieur (6) est superposé audit panneau inférieur (4), pliage de ladite feuille suivant des lignes de pliage (16, 20) entre le panneau supérieur (6) et les rabats de bord (8—12) de sorte que lesdits rabats (8—12) se superposent audit panneau inférieur (4), et fixation des rabats de bord (8—12) au panneau inférieur (4), caractérisée par: une impression (36) qui croise au moins l'une desdites lignes de pliage (14—20), ladite impression (36) s'étendant à partir dudit panneau supérieur (6) et autour d'au moins l'une desdites lignes de pliage (14—20) après le pliage de ladite enveloppe (22), de sorte que ladite impression (36) se trouve dans une région de ladite enveloppe (22) telle que ladite impression (36) ne peut pas être reproduite sur une enveloppe de disque préalablement formée (22), ce qui rend ladite enveloppe de disque préalablement formée (22) difficile à reproduire en ce que ladite impression (36) ne peut pas être appliquée à ladite enveloppe (22) après le pliage de ladite enveloppe (22) et la fixation desdits rabats (8—12).

9. Enveloppe (22) suivant la revendication 8, dans laquelle ladite impression (36) croise ladite ligne de pliage (14—20) entre lesdits panneaux supérieur et inférieur (4—6).

10. Enveloppe (22) suivant la revendication 8, dans laquelle ladite impression (36) croise au moins l'une desdites lignes de pliage (16—20) entre ledit panneau supérieur (6) et lesdits rabats de bord (8—12).

11. Enveloppe (22) suivant la revendication 8, dans laquelle ladite impression (36) est une surface imprimée par transfert par estampage à chaud.

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