



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<b>(21) International Application Number:</b> PCT/CA90/00333 <b>(22) International Filing Date:</b> 28 September 1990 (28.09.90)  <b>(30) Priority data:</b> 615,292 29 September 1989 (29.09.89) CA 025,947 21 September 1990 (21.09.90) CA  <b>(71) Applicant:</b> WRIGHT LINE OF CANADA LTD. [CA/CA]; 130 Sparks Avenue, Willowdale, Ontario M2H 2S4 (CA).  <b>(72) Inventor:</b> BOURGOIN, Arman ; 45 Imperial Crescent, Bradford, Ontario L3Z 2N8 (CA).  <b>(74) Agents:</b> HALL, S., Warren et al.; 133 Richmond Street West, Suite 301, Toronto, Ontario M5H 2L7 (CA).		<b>(81) Designated States:</b> AT (European patent), AU, BE (European patent), CH (European patent), DE (European patent)*, DK (European patent), ES (European patent), FR (European patent), GB (European patent), IT (European patent), JP, LU (European patent), NL (European patent), SE (European patent).  <b>Published</b> <i>With international search report.</i>
<b>(54) Title:</b> LABEL  <div style="text-align: center;"> </div>		
<b>(57) Abstract</b>  <p>The present application is directed to improvements with respect to articles which are to be folded about an edge of a substrate. In particular, the invention is useful in multiple layer labels (2) which have a plastic film cover (14) of high tensile strength. These types of labels, when wrapped about the edge of a substrate, have a tendency to return to a less folded condition and thus, the adhesive layer (20) which maintains the label (2) in contact with the substrate must continuously offset this internal force. According to the present invention, this is overcome by structurally weakening the label (2) at a predetermined location (12) during the manufacture of the label to allow folding of the label (2) in this predetermined location (12). This structure reduces the internal stress forces which tend to urge the label (2) to a less folded condition. The invention also has application with respect to reinforcing films or other reinforcing materials which have a tendency, when folded, to return to a less folded condition.</p>		

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TITLE: LABELFIELD OF THE INVENTION

The present invention relates to improvements in adhesively adhered labels or strip material applied or to be applied about an edge of a substrate and adhered to opposed sides of the substrate. In particular, the invention relates to an improvement which reduces internal stresses normally produced during wrapping of the label or strip material about a substrate edge, such that the resulting product is less prone to separate from the substrate.

BACKGROUND OF THE INVENTION

Reinforcing film for file folders and multi-layered labels for file folders are well known in the filing art and have had application with respect to repair of file folders and the labelling of file folders, both during the initial manufacture of the file folder for customers or as a post-manufacturing operation carried out by the customers. Examples of particularly useful reinforcing film and of labels are disclosed in our United States Patents 4,183,779, 4,204,639, 4,240,848, 4,294,644, 4,329,191, 4,588,463 and 4,749,121.

With respect to multi-layered or composite labels, as disclosed above, the outer plastic film cover of the labels have a relatively high tensile strength to provide protection to the label and have proven particularly satisfactory in the marketplace. As can be appreciated, a label which is applied about the edge of a substrate is exposed to excessive wear, and particularly the portion of the label covering the edge of the substrate is vulnerable to wear. The reinforcing films used with these labels have proven particularly satisfactory and do not normally suffer from damage due to this demanding environment. Labels of this type typically use a pressure sensitive adhesive which secures the label either side of the substrate. The

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portion about the edge of the substrate is continuous. Unfortunately, the excellent wear characteristics of the plastic film introduces an additional disadvantage in that this plastic film tries to separate the label from the substrate to relieve internal stresses created during the wrapping of the label about the edge of the substrate. These internal stresses are opposed by the adhesive bonding of the label either side of the substrate which during original application are more than sufficient for maintaining the label. Unfortunately, with aging of the adhesive and exposing the labels to abuse, some labels may partially separate from the substrate due to these internal stresses which overcome the reduced adhesive force on a section of the label. Once the label is partially separated, it is then extremely prone to full separation.

Attempts to use better adhesives or possibly using a nonpressure sensitive adhesive have not proven entirely satisfactory and the convenience of a pressure sensitive adhesive for applying labels, particularly in a retrofit application, has led to this type of system being necessary.

There remains a need for providing a reinforcing film or label which is designed to be applied to either side of a substrate and about the edge of a substrate which has the desired high wear characteristics, but does not develop the high internal stresses which tend to cause labels to separate from the substrate during the passage of time. It must be appreciated that colour coding systems of the type referred to in the above patents often have files with a life of ten years or more. In colour coding systems it is possible to identify the file by reading the edge of the file folder as opposed to the indicia along the sides of the substrate and removal of a label defeats this purpose entirely.

#### SUMMARY OF THE INVENTION

A reinforcing film or label for application about

the edge of a substrate and in adhesion with either surface of the substrate, according to the present invention, is improved by having in the area which is to be applied about the edge of the substrate a structurally weakened area produced during the manufacture of the substrate which permits both the convenient folding of the substrate or label about the edge in this weakened area in combination with a structure which when folded in this weakened area has less of a tendency to return to separate from the substrate and return to a more flat configuration.

According to an aspect of the invention, a composite label is disclosed having a paper layer secured to a plastic film cover with the label being adapted to be folded at a predetermined location. The paper substrate at the predetermined location is structurally weakened and held in position by the plastic cover film. The label when folded at the predetermined location has reduced internal stresses urging the label to return to a flat condition.

According to an aspect of the invention, the reinforcing film or label is scored on an interior surface of the plastic film, such that the outer surface of the film remains continuous while the interior surface has been structurally weakened and folds readily about this weakened area.

According to a further aspect of the invention, the paper layer of the label has been cut in parallel lines in the predetermined region which extend generally in the direction of the desired fold and at least four separate cut lines are provided.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Preferred embodiments of the invention are shown in the drawings, wherein:

Figure 1 is a partial perspective view of a label applied about the edge and either side of a substrate;

Figure 2 is a sectional view through a label which has been applied about the edge and either side of a

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substrate;

Figure 3 is a partial exploded sectional view of a label;

Figure 4 is a partial cutaway perspective view of  
5 the label;

Figure 5 is a top view of a label partially applied to a substrate;

Figure 6 is a partial perspective illustrating certain manufacturing steps for the label;

10 Figure 7 is a partial perspective of a strip of labels;

Figure 8 is a partial perspective of the cutting operation; and

15 Figure 9 is an elevation of the cutting tool.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The invention is shown with respect to multi-layered labels, however, the same principles are applicable to reinforcing substrates such as the reinforcing films  
20 disclosed in United States Patent 4,588,463. In the case of the reinforcing film, the paper layer may or may not be present, however, the film would still include an adhesive layer and a plastic film layer. The problems are less  
25 troublesome as the complexity of the composite is reduced and the thickness of the composite is reduced. Only scoring of the plastic film would occur.

The label, generally shown as 2 in Figure 1, is applied either side of a substrate 4 and about the edge 6 of the substrate 4. The label includes the indicia,  
30 generally shown as 18, visible to either side of the substrate 4. In colour-coded labels as shown in Figure 4, the indicia is duplicated to be visible either side of the substrate and the background 19 provided about the indicia also implies a coding significance. This background colour  
35 will also be present in the folding region, generally shown as 12 in Figure 4.

The label 2 has a first section 8 and a second

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section 10 for application to opposite sides of the substrate separated by the fold region 12. The label has a clear plastic reinforcing outer layer 14, a paper substrate having the indicia 18 and 19 thereon identified as 16, and  
5 a lower adhesive layer 20.

The fold region 12, as best shown in Figures 2, 3 and 4, has a number of slits 24 through the paper substrate 16 and the adhesive layer 20 with the clear plastic reinforcing outer layer 14 preferably has been scored at  
10 the internal point 26 of the slits. These slits 24 structurally weaken the high tensile strength film in the folded region, but maintain a continuous outer surface of the film which will remain highly resistant to wear. The structural strength of the label is further weakened by  
15 cutting of the paper substrate and the adhesive layer into isolated segments 23. In the embodiment shown, six slits 24 have been shown in very close proximity, one to the other. The spacing between the slits is constant and the overall width between the outer slits is about 1/4 inch.  
20 This is more than satisfactory for file folders but can be varied depending upon the thickness of the substrate.

The label, as shown in the drawings, exhibits the desired structural characteristics of excellent wearability due to the continuous outer surface of the plastic film 14  
25 in combination with the reduced tendency of the label to try to separate from one surface of the substrate due to the reduced internal stresses created in the folding of the label. This tendency of the label has been reduced due to weakening of the label in the fold region and in a manner  
30 to maintain the continuous outer surface. In addition to having these desirable characteristics, the label, due to the slitting of the various surfaces and possibly including the scoring of the plastic film, is more suitable for the automatic application of the label to a file substrate, as  
35 generally shown in Figure 5.

Machines for the automatic application of labels are already known as exemplified in our United States

Patent 4,183,779. Although it is desirable to always accurately place the label on a file folder or substrate, it is not always possible due to misalignment of the label on its initial feed substrate or due to the slight shifting of the label during application to the edge of the substrate. Thus, it can be appreciated that some misalignment of the fold region 12 with the edge of the substrate can occur and problems can result when the label is wrapped about the substrate edge. Some folds may occur in the fold region, thus producing an extended portion of the label which projects from the substrate edge 6. It has been found that the weakening of the fold region in the manner described above provides a forgiveness in wrapping of the label about the edge of a substrate and reduces any fold projections of the label from the edge of the substrate. Thus, a smoother wrap of the label about the edge of a substrate is produced and the adhered label, even if it has been misaligned, is not as prone to damage. The weakening of the label in the fold region and making the weakened area oversized relative to the thickness of the edge of the substrate to which it is applied accommodate a margin of error in the application of the label to the substrate without creating the problems discussed above and allows an effective wrap of the label about the substrate edge 6.

The slits, in addition, have been found to maintain the colour of the background 19 about the fold region 12. This is a result of the outer surface of the paper substrate not being stretched in tension, as the slits accommodate what would otherwise be a compressive force at the lower surface of the paper substrate. It is believed the slits accommodate some room such that the strips do not need to compress as much as they would otherwise while still abutting to provide a full colour strip. Also, the cutting operation renders the strips less resistant to compression.

Figure 6 shows the manufacture of a strip 100



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comprising a series of individual labels having a plastic film cover 102 and a printed paper substrate 104 which has a number of longitudinal slits 106. After the various components have been brought into suitable engagement, die cutting wheels 108 and 110 serve to cut the label strip 100 to remove the excess portions of the plastic cover 102 and the paper substrate 106, such that the individual labels are formed on the strip as generally shown in Figure 7.

Details of the cutting operation are shown in Figure 8 where the cutting wheel 112 has six blades 114 which are closely spaced and designed to cut through the paper substrate 104, but not to cut through the release paper which is shown in Figure 7 as 116.

Cutting of the paper substrate 104, in this very narrow band at the predetermined fold location of the labels, separates each of the longitudinal strips of the substrate which remain at the label into discrete elements 123 allowing them to float and permit easier folding of the label. The gaps which result from the cutting operation is not only due to the thickness of the blades 114, but the paper tends to deform when cut and is weakened at the edge such that folding is again easier, not only due to the width of the cut, but the deformation that has occurred to the strips that remain. The cutting operation not only cuts, but it also compresses and weakens the strips which remain in the fold location. The gaps between the individual remaining strips in the fold location are fairly visible when the labels are in the flat condition, however, when they are folded about the edge of a file folder as shown in Figure 2, the gap is reduced due to the abutment of the individual members and thus, an essentially full colour strip is provided at the edge of the file folder. Thus, the spacing between the individual strips is reduced when the label is folded about the predetermined location. The respective sides of the labels 8 and 10 are fairly strong (relative to the weakened area) and do not readily bend intermediate their length. If a compressive force is

exerted on the label, the label will tend to buckle at the predetermined fold location. This clearly establishes the reduced structural strength of the fold location and the effect of the cutting of the paper substrate. It is  
5 believed that in a conventional label which is not slit in the predetermined fold location, the paper substrate at the exterior of the label is placed in tension, whereas the interior surface of the label adjacent the fold is placed in compression. These two forces are distributed  
10 throughout the label and are stored as internal stresses trying to return the label to a more flat condition. By structurally weakening the paper substrate, preferably by cutting thereof and leaving gaps between the cut segments, the internal stresses produced during folding of the label  
15 in a predetermined location is reduced and the tendency of the label to return to the generally flat condition is also reduced.

It has been found that cutting of the paper substrate, as shown in Figure 6, to produce small gaps  
20 between the longitudinal segments of the paper substrate which remain in the predetermined fold location substantially reduces the tendency of the label to return to its flat condition and substantially reduces the force required to maintain the label in its fold condition. Each  
25 of the individual strips which remain do not have substantial structural integrity and act almost as individual elements. However, these strips, even with the gaps provided between them, still cooperate when folded about the edge of the file folder to provide a  
30 substantially continuous colour code along the edge of the file folder. This is a result of the folding action and the narrowing of the gaps between the strips due to the folding of the label about the edge. The cutting operation, as shown in Figures 6 and 9, do provide these  
35 gaps and substantially deform the edges of the strips which remain. The accurate cutting of the longitudinal strip 100 is provided due to the edge rollers 120 of the cutting

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wheel 112 which engage the lower roller 122 and these rollers serve to accurately place the cutting edges 114 relative to the release paper 116. Such an arrangement provides for excellent cutting of the paper substrate 104 without cutting or damaging of the paper release paper 116. With the embodiment shown in Figures 6 through 9, it can be appreciated that the integrity of the plastic film cover 102 is maintained and thus, the thickness of the cover can be reduced. Since the thickness is reduced, any internal stresses built up within the film due to wrapping about the edge are reduced, as the dimensional differences between the interior and exterior curvature when the label is wrapped about the edge are reduced. Such a thin film can still provide the excellent wear resistant characteristics while reducing problems, such as the tendency of the label to return to a flat condition, and also reducing manufacturing costs due to reduced material.

The invention has been described in detail with respect to the label 2, however, the wrapping of a reinforcing film about the edge of a substrate can also be difficult and the problems associated with misalignment are even more common. The weakening of the reinforcing substrate in the fold region achieves the desired result of a continuous outer plastic film having excellent wear characteristics while providing a substrate which is more forgiving and easier to apply automatically. Even if reinforcing films are applied to one surface of a substrate and the substrate and film folded intermediate the width of the film as disclosed in United States Patent 4,588,463, the advantage of less internal stress force can be realized by structurally weakening the film as disclosed above and folding of the substrate and film within this region.

Although various preferred embodiments of the present invention have been described herein in detail, it will be appreciated by those skilled in the art, that variations may be made thereto without departing from the spirit of the invention or the scope of the appended claims.

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THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE  
PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. In a label having a number of layers (14,16,20)  
5 terminating in a plastic film cover (14) having high  
tensile strength, said label (2) being of the type for  
folding at a predetermined location (12) across the label  
(2) for placing the label (2) about the edge of a  
substrate, said label (2) at said predetermined location  
10 being structurally weakened (24) during the manufacture  
thereof to easily fold upon itself, said structural  
weakening (24) in said predetermined location (12)  
including structural weakening of said plastic film cover  
(14) whereby the internal stress forces trying to return  
15 the label (2) from a folded position to a less folded  
condition are reduced.
2. In a label as claimed in claim 1, wherein the  
structural weakening (24) in said predetermined area (12)  
20 includes scoring (26) of the interior surface of the  
plastic film (14) in a manner such that only a portion of  
the film remains continuous at the outer surface of the  
film (14).
- 25 3. In a label as claimed in claim 2, wherein said  
structural weakening (24) includes a plurality of slits  
(24) through all layers (16,20) of the label other than the  
plastic film (14) which is only scored and wherein said  
slits (24) extend across the width of the label (2).  
30
4. In a label as claimed in claim 3, wherein said  
label (2) includes at least three slits (24) extending  
across the label (2).
- 35 5. In a label as claimed in claim 4, wherein said  
label (2) includes at least six slits (24) extending across  
the label (2).

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6. A composite label having a paper layer (16) secured to a plastic film cover (14) having high tensile strength with an adhesive layer (20) to the side of said paper layer (16) opposite said plastic film cover (14), said label (2) being adapted to be folded at a predetermined location (12) where said paper substrate (16) is structurally weakened and held in position by said plastic film (14), whereby folding of said label (2) at said predetermined location (12) is facilitated and internal stresses produced during folding of the label (2) and urging the label to return to a flat condition are reduced due to the structural weakened (24) paper substrate (16).

7. A composite label as claimed in claim 6 wherein said paper substrate (16) in said predetermined location (12) is cut or longitudinally scored in the general direction of the intended fold.

8. A composite label as claimed in claim 7 wherein said predetermined location is of a width of about one quarter of an inch.

9. A composite label as claimed in claim 7 wherein said predetermined location (12) is a straight region extending across the width of said label (2).

10. A composite label as claimed in claim 9 wherein said paper substrate (16) at said predetermined location (12) includes at least three parallel slits (24) each providing a gap between very narrow paper segments (23) physically separated from the remaining paper substrate (16).

11. A composite label as claimed in claim 10 wherein said label (2) includes at least six parallel slits (24).

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12. A composite label comprising an outer protective layer and an underlying support substrate which is substantially thicker than said outer protective layer, and an adhesive layer to the side of said support layer opposite said outer protective layer, said underlying support layer having an elongate weakened region located to define a fold region within said label about which said label easily folds.
- 10 13. A method of manufacturing a label comprising printing indicia on one surface of an elongate paper substrate, cutting the paper substrate in a narrow region extending in the longitudinal direction of said elongate paper substrate, applying an outer generally transparent protective cover to said cut paper substrate to maintain the relative positions of said cut paper substrate, and subsequently cutting both the outer protective cover and said cut paper substrate along the length of said paper substrate to define individual labels.
- 20 14. A method of manufacturing a label as claimed in claim 13 wherein the step of cutting the paper substrate cuts the paper substrate by means of at least three cut lines closely spaced one beside the other.
- 25 15. A method of manufacturing a label as claimed in claim 14 wherein said paper substrate includes an adhesive layer to the side of said paper substrate opposite said outer protective cover protected by release paper secured along the length thereof and wherein cutting of said paper substrate is controlled with respect to depth of cut such that the release paper is not cut.
- 30 16. A method of manufacturing a label as claimed in claim 13 wherein said paper substrate is cut in a manner to define at least six longitudinal slits.
- 35

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17. A method of manufacturing a label as claimed in claim 16 wherein said narrow region is about one quarter of an inch wide.

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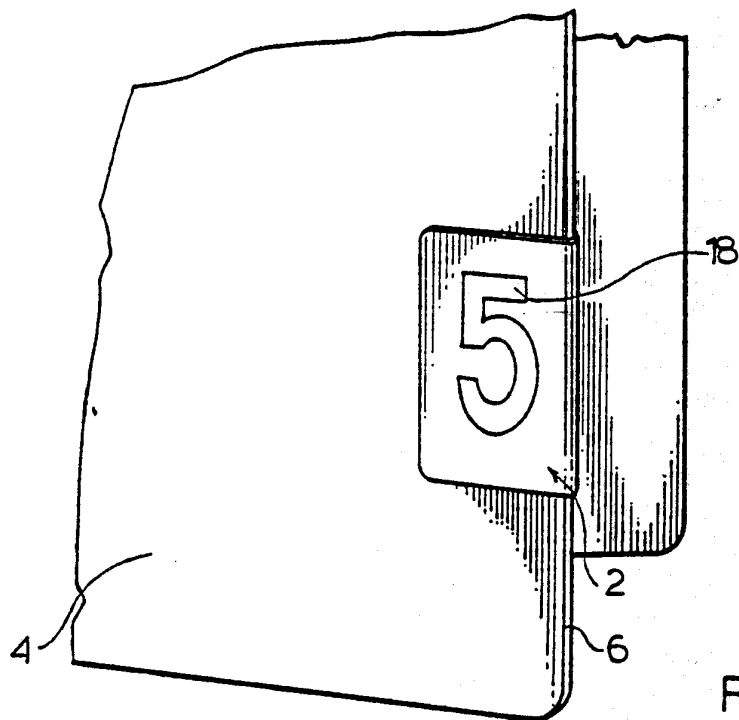


FIG. 1

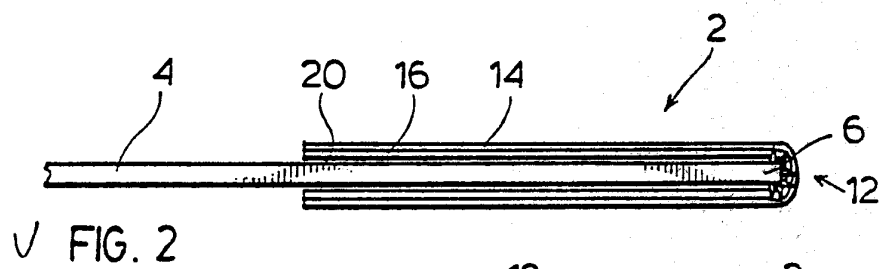


FIG. 2

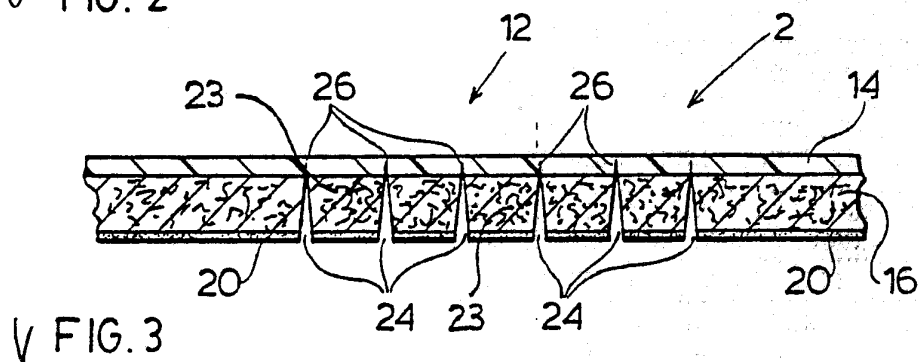
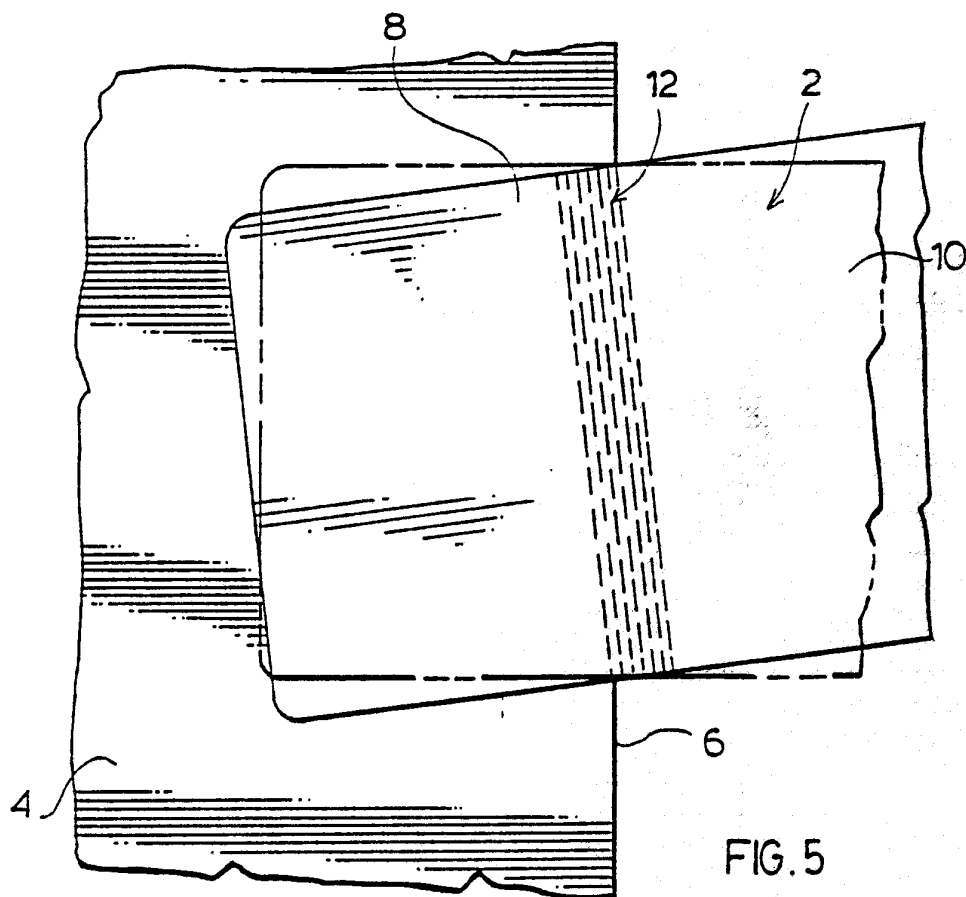
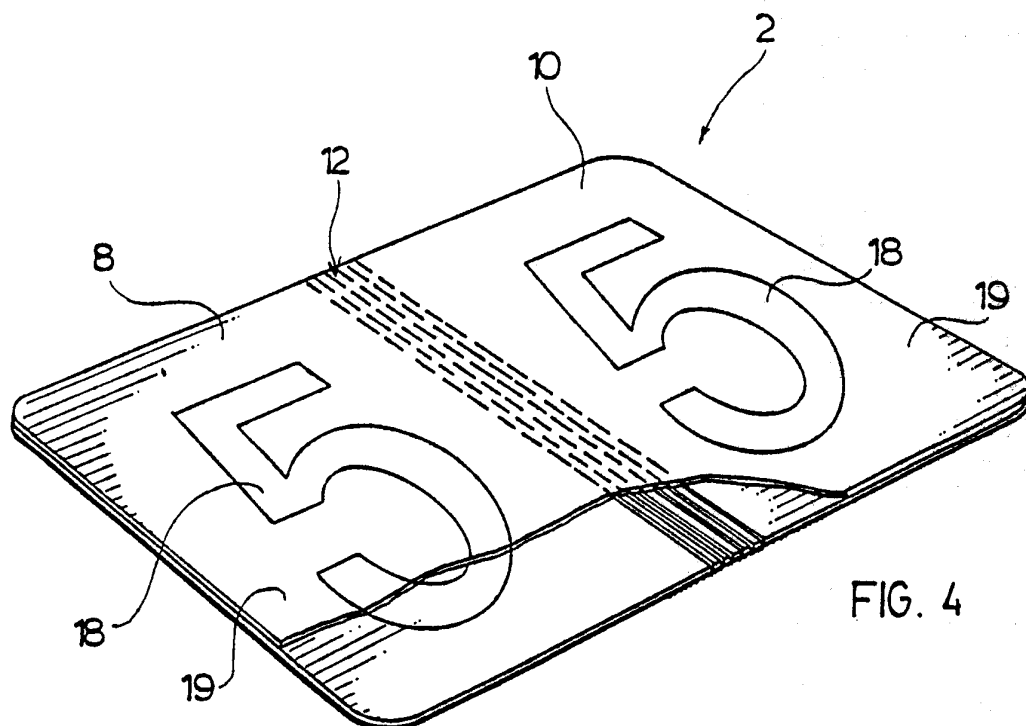
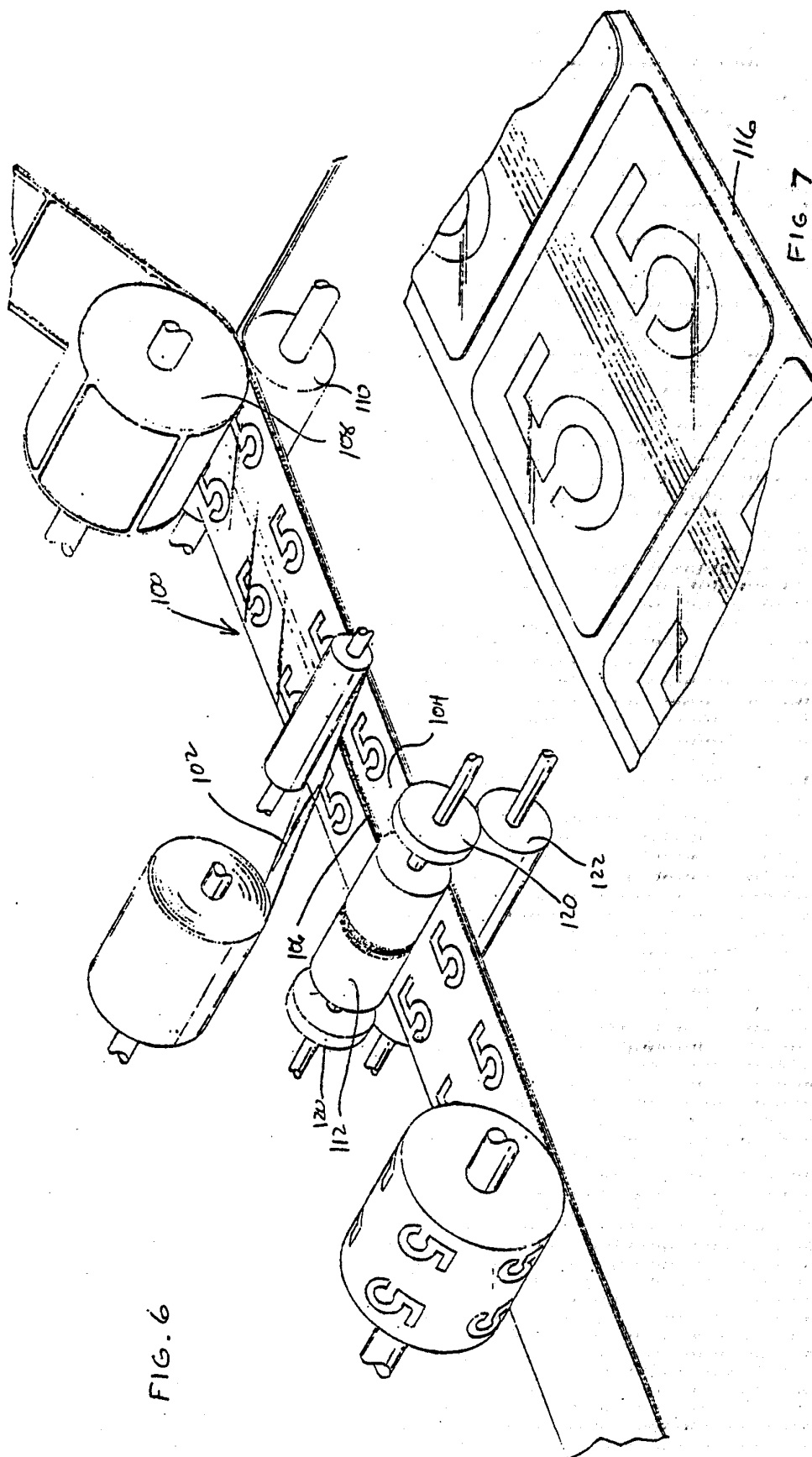


FIG. 3

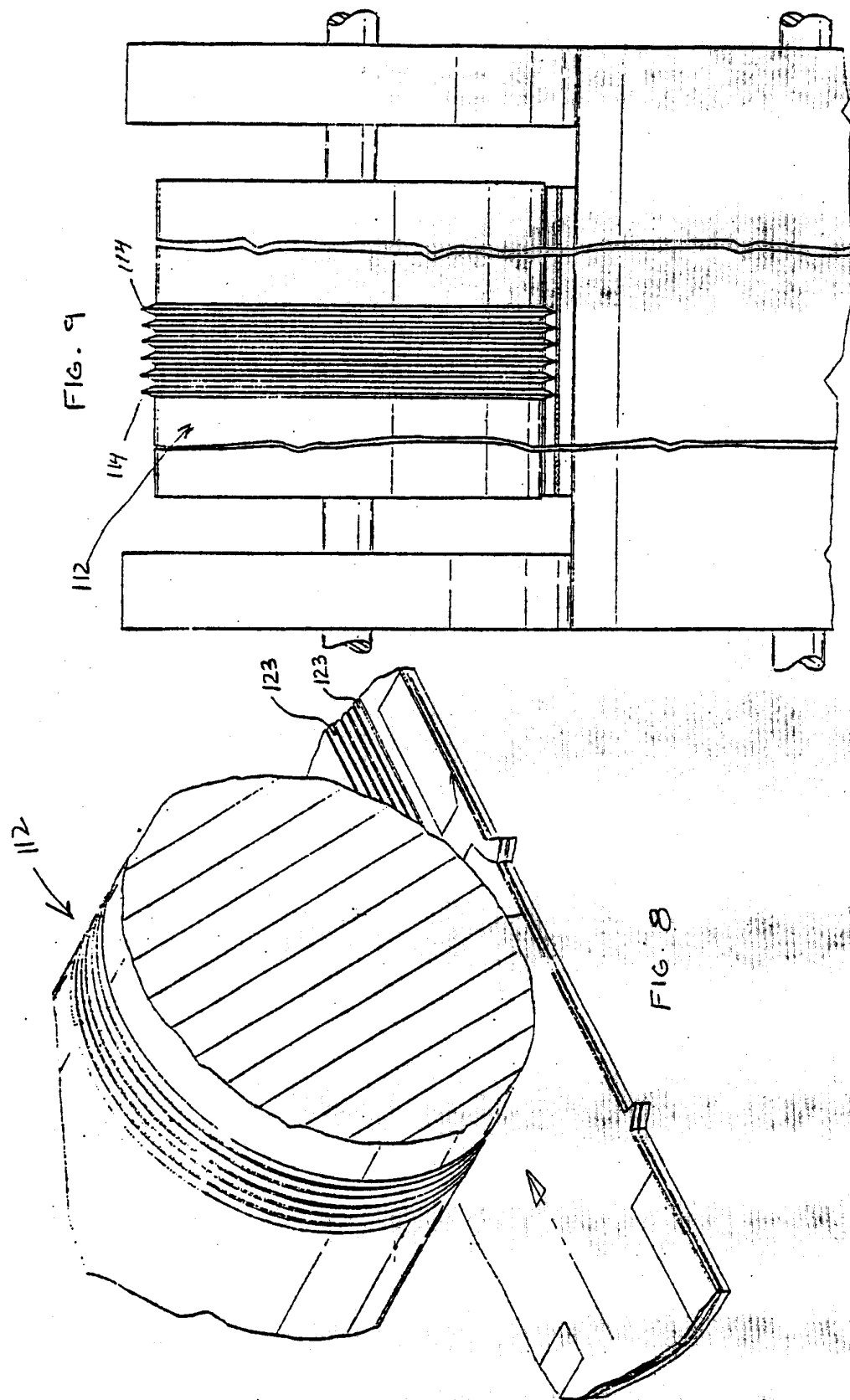


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# INTERNATIONAL SEARCH REPORT

International Application No. **PCT/CA 90/00333**

<b>I. CLASSIFICATION OF SUBJECT MATTER</b> (if several classification symbols apply, indicate all) * According to International Patent Classification (IPC) or to both National Classification and IPC IPC <sup>5</sup> :        G 09 F 3/02, B 42 F 21/04																				
<b>II. FIELDS SEARCHED</b> <div style="text-align: right; font-size: small;">Minimum Documentation Searched <sup>7</sup></div> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%; border: none;">Classification System</td> <td style="border: none;">Classification Symbols</td> </tr> <tr> <td style="border: none; vertical-align: top;">IPC<sup>5</sup></td> <td style="border: none; vertical-align: top;">G 09 F 3/00, B 42 F 21/00</td> </tr> </table> <div style="text-align: center; font-size: x-small; margin-top: 5px;">Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched <sup>8</sup></div>			Classification System	Classification Symbols	IPC <sup>5</sup>	G 09 F 3/00, B 42 F 21/00														
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<b>III. DOCUMENTS CONSIDERED TO BE RELEVANT</b> <sup>9</sup> <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <thead> <tr> <th style="width: 10%;">Category <sup>9</sup></th> <th style="width: 70%;">Citation of Document, <sup>11</sup> with indication, where appropriate, of the relevant passages <sup>12</sup></th> <th style="width: 20%;">Relevant to Claim No. <sup>13</sup></th> </tr> </thead> <tbody> <tr> <td style="text-align: center; vertical-align: top;">X</td> <td style="vertical-align: top;">US, A, 4520055 (JETER) 28 May 1985 see the whole document</td> <td style="vertical-align: top;">6,7,9-14,16</td> </tr> <tr> <td style="text-align: center; vertical-align: top;">A</td> <td style="text-align: center; vertical-align: top;">---</td> <td style="vertical-align: top;">1-5,15</td> </tr> <tr> <td style="text-align: center; vertical-align: top;">X</td> <td style="vertical-align: top;">EP, A, 0112177 (DATAFILE) 27 June 1984 see page 14, lines 24-28; page 15, lines 4-11; page 17, lines 12-17; figures 14,17</td> <td style="vertical-align: top;">6,7,12,13</td> </tr> <tr> <td style="text-align: center; vertical-align: top;">A</td> <td style="text-align: center; vertical-align: top;">---</td> <td style="vertical-align: top;">1,2,15</td> </tr> <tr> <td style="text-align: center; vertical-align: top;">A</td> <td style="vertical-align: top;">GB, A, 1204080 (MAPPEI) 3 September 1970 see page 3, lines 79-98; figures 15-21  -----</td> <td style="vertical-align: top;">1,6,12</td> </tr> </tbody> </table>			Category <sup>9</sup>	Citation of Document, <sup>11</sup> with indication, where appropriate, of the relevant passages <sup>12</sup>	Relevant to Claim No. <sup>13</sup>	X	US, A, 4520055 (JETER) 28 May 1985 see the whole document	6,7,9-14,16	A	---	1-5,15	X	EP, A, 0112177 (DATAFILE) 27 June 1984 see page 14, lines 24-28; page 15, lines 4-11; page 17, lines 12-17; figures 14,17	6,7,12,13	A	---	1,2,15	A	GB, A, 1204080 (MAPPEI) 3 September 1970 see page 3, lines 79-98; figures 15-21  -----	1,6,12
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A	GB, A, 1204080 (MAPPEI) 3 September 1970 see page 3, lines 79-98; figures 15-21  -----	1,6,12																		
<div style="display: flex; justify-content: space-between; font-size: x-small;"> <div style="width: 45%;"> <p>* Special categories of cited documents: <sup>10</sup></p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&amp;" document member of the same patent family</p> </div> </div>																				
<b>IV. CERTIFICATION</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">           Date of the Actual Completion of the International Search  <div style="text-align: center; font-size: large;">14th December 1990</div> </td> <td style="width: 50%; padding: 5px;">           Date of Mailing of this International Search Report  <div style="text-align: center; font-size: large;">22.01.91</div> </td> </tr> <tr> <td style="width: 50%; padding: 5px;">           International Searching Authority  <div style="text-align: center; font-weight: bold;">EUROPEAN PATENT OFFICE</div> </td> <td style="width: 50%; padding: 5px;">           Signature of Authorized Officer  <div style="text-align: center;">               U. TORIBIO           </div> </td> </tr> </table>			Date of the Actual Completion of the International Search <div style="text-align: center; font-size: large;">14th December 1990</div>	Date of Mailing of this International Search Report <div style="text-align: center; font-size: large;">22.01.91</div>	International Searching Authority <div style="text-align: center; font-weight: bold;">EUROPEAN PATENT OFFICE</div>	Signature of Authorized Officer <div style="text-align: center;">               U. TORIBIO           </div>														
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**ANNEX TO THE INTERNATIONAL SEARCH REPORT  
ON INTERNATIONAL PATENT APPLICATION NO.**

CA 9000333

SA 40444

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 08/01/91  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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