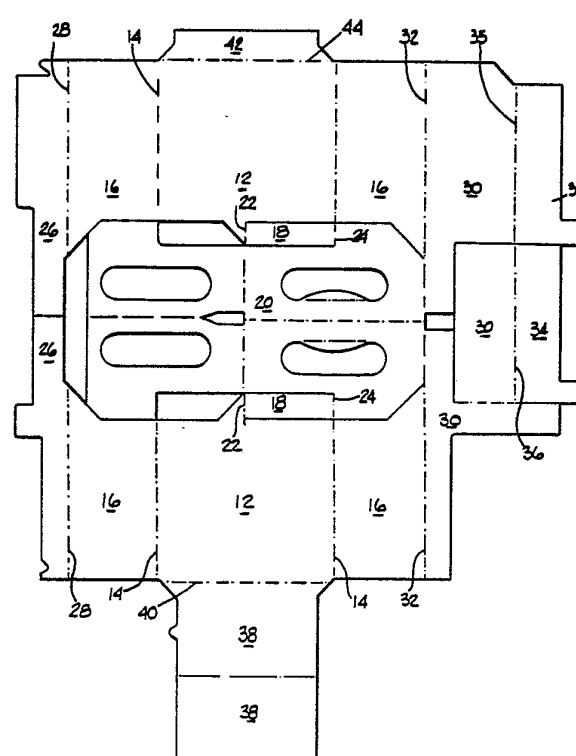


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<p>(21) International Application Number: PCT/US86/00283 (22) International Filing Date: 6 February 1986 (06.02.86) (31) Priority Application Number: 704,352 (32) Priority Date: 21 February 1985 (21.02.85) (33) Priority Country: US (71) Applicant: MANVILLE CORPORATION [US/US]; Patent and Licensing Department, P.O. Box 5108, Denver, CO 80217 (US). (72) Inventor: WILSON, Jerry, Franklin ; 116 Roxana Drive, West Monroe, LA 71291 (US). (74) Agent: QUINN, Cornelius, P.; Patent and Licensing Department, Manville Corporation, P.O. Box 5108, Denver, CO 80217-5108 (US).</p>		<p>(81) Designated States: AT, AT (European patent), AU, BE (European patent), BR, CH, CH (European patent), DE, DE (European patent), DK, FI, FR (European patent), GB, GB (European patent), IT (European patent), JP, KR, LU, LU (European patent), NL, NL (European patent), NO, SE, SE (European patent). Published <i>With international search report.</i> <i>With amended claims.</i></p>
<p>(54) Title: CARRIER WITH IMPROVED SIDE PARTITION</p>		
<p>(57) Abstract</p> <p>A carrier and blank for forming the carrier. Side partition portions (33, 34) are attached to straps (18) connecting the handle portion (20) to the side-walls (12). In addition the side partitions (33, 34) are connected along the fold lines to the center partition (30).</p> 		

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CARRIER WITH IMPROVED SIDE PARTITION

Background of the InventionField of the Invention

The invention relates to carriers for transporting beverage
5 containers or the like. More particularly, the invention relates to
an improved carrier and blank therefor which includes partition
portions to separate the particles contained in the carrier. In
still greater particularity, the invention relates to a carrier and
blank therefor which includes side partition portions connected to a
10 center partition and glued to straps extending from the center
partition to the sidewalls of the carrier.

Description of the Prior Art

In prior art carriers such as that disclosed in Fig. 4,
partition portions 302 and 304 are connected to straps 306 and 308
15 respectively. Partition portions 302 and 304 are connected along
fold lines 310 and 312 respectively as well as being glued to straps
306 and 308. Partition portions 302 and 304 are not connected to a
center partition 318 nor are they connected to the sidewalls 314 and
316. In that carrier, straps 306 and 308 are connected to center
20 partition 318 and sidewalls 314 and 316. While suited for its
intended purpose, the partition portions 302 and 304 are only
attached to straps 306 and 308 along fold lines 310 and 312 and
glued in relatively small areas 320 adjacent fold lines 310 and
312. As such, partitions 302 and 304 are not stable and the carrier
25 is thus weakened. In fact, due to carrier construction, partitions
302 and 304 are angled slightly away from sidewalls 314 and 316 such
that there is a space between the partitions and sidewalls as shown
in Fig. 4. In addition, because of the relationship of partitions
302 and 304 to straps 306 and 308, a relatively large amount of
30 paperboard is required to form this carrier. That is, in the form
of a blank, partitions 302 and 304 are extended from straps 306 and
308 at an angle along fold lines 310 and 312 such that a larger
amount of paperboard must be used to form the blank. By forming the
partitions in the main portion of the blank a relatively large
35 amount of paperboard could be saved thus reducing the cost of the

carrier. In addition, stabilizing the partitions by attaching them to the center partition would strengthen the partitions and the carrier itself.

Summary of the Invention

5 The invention is a carrier and blank therefor which includes a center partition and two side partitions connected to the center partition. The side partitions are also connected to straps which are themselves connected to the center partition and the carrier sides. A handle portion and end panels are connected to the
10 center partition.

Brief Description of the Drawings

Fig. 1 is a plan view of a blank from which the carrier of the present invention may be formed;

15 Fig. 2 is a perspective view of a carrier formed from the blank of Fig. 1;

Fig. 3 is a side sectional view of the carrier shown in Fig. 2 taken along the line 3-3 in Fig. 2; and

Fig. 4 is a side sectional view of a prior art carrier taken along a section line similar to that in Figs. 2 and 3.

Description of the Preferred Embodiment

20 Referring to Fig. 1, side panels 12 are connected along fold lines 14 to end panels 16. Strap portions 18 are connected to side portions 12 and a handle portion 20 along fold lines 22 and 24 respectively. First center partition portions 26 are connected to
25 end portions 16 along fold lines 28. Second center partition portions 30 are connected to end portions 16 along fold lines 32. Side partition portions 33 and 34 are connected to second center partition portions 30 along fold lines 35 and 36 respectively. Bottom portions 38 are connected to a side portion 12 along a fold
30 line 40. A bottom glue portion 42 is connected to the opposite side portion 12 along a fold line 44. The portions shown with heavy lines in Fig. 1 are cut out portions from which the paperboard has been removed.

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Referring to Fig. 2, the carrier formed from the blank of Fig. 1 is shown in perspective. End portions 16 are connected to side portions 12 along fold lines 14. Straps 18 are connected to handle portion 20 and side portions 12 along fold lines 24 and 22 respectively. Side partition 33 is glued to strap 18 and connected along fold line 35 to center partition portion 30. Side partition 34 is glued to strap 18 and connected to carton partition portion 30 along fold line 36 (not shown). Partition portions 26 and 30 make up the center partition.

Referring to Fig. 3, a side sectional view of the carrier formed from the blank of Fig. 1 is shown as taken through section line 3-3 of Fig. 2. Straps 18 are connected to handle 20 at fold lines 24. The center partition is formed from portions 26, 30. Straps 18 are connected to side panels 12 at fold lines 22. Side partitions 33 and 34 are connected to center partition portions 26, 30 at fold lines 35 and 36 respectively. In addition partitions 33 and 34 are glued along their entire width to straps 18. Thus partitions 33 and 34 are supported along at least two sides thereof which allows for increased stability for the partitions and overall increased strength for the carrier. In addition, referring to Fig. 1, because partitions 33 and 34 are formed as an integral part of the carrier blank, less paperboard is used than if they were extended away from the blank as is the case with prior art carriers such as is shown in Fig. 4.

Referring to Fig. 4, a prior art carrier is shown in a side sectional view as is the carrier of the present invention in Fig. 3. Straps 306 and 308 are connected to side panels 314 and 316 as well as to center partition 318. Side partitions are attached to straps 306 and 308 along fold lines 310 and 312. In addition partitions 302 and 304 are glued to straps 306 and 308 in the areas 320 generally designated with broken lines. Thus, partitions 302 and 304 are only supported in one area which is less than one entire side of the partitions 302, 304 as opposed to applicant's partitions 33, 34 which are supported along two full sides of the partitions.



While the invention has been described with respect to a preferred embodiment thereof, it is not to be so limited as changes and modifications may be made which are within the full intended scope of the invention as defined by the appended claims. For example, the shape of partitions 33, 34 may be varied according to engineering design considerations as long as they are attached to straps 18 along at least two sides of partitions.

What is Claimed Is:

1. A carrier for transporting a plurality of articles including:

a handle portion;

5 end portions connected to said handle portion on either side thereof, said end portions being approximately perpendicular to said handle portion;

two side portions connected to said end portions along fold lines, said side portions being approximately perpendicular to said end portions;

10 a bottom portion connected to said side portions along fold lines, said bottom portion being approximately perpendicular to said end portions and said side portions;

15 a center partition connected to said handle portion and said end portions, said center partition being approximately parallel to said sidewalls and said handle portion; and

two straps, each one connected to a side of said handle portion and to a corresponding side portion;

the improvement comprising:

20 two side partition portions connected to said center partition along a fold line, each of said side partition portions being glued to a corresponding one of said strap portions, said side partition portions being approximately perpendicular to said center partition portion.

25 2. A blank for forming a carrier for transporting a plurality of articles including:

a handle portion;

two strap portions connected along fold lines to said handle portion;

30 two side portions connected along fold lines to said strap portions;

end portions connected along fold lines to said side portions;

35 bottom portions connected along fold lines to said side portions; and

center partition portions connected along fold lines to said end portions;

the improvement comprising:

two side partition portions connected to at least some of said center partition portions along fold lines, said side partition portions formed as an integral part of said blank.

AMENDED CLAIMS

[received by the International Bureau on 20 May 1986 (20.05.86);
original claims 1 and 2 replaced by new claims 1 and 2 (2 pages)]

1. A carrier for transporting a plurality of articles including:
 - a handle portion;
 - 5 end portions connected to said handle portion on either side thereof, said end portions being approximately perpendicular to said handle portion;
 - two side portions connected to said end portions along fold lines, said side portions being approximately perpendicular to said
 - 10 end portions;
 - a bottom portion connected to said side portions along fold lines, said bottom portion being approximately perpendicular to said end portions and said side portions; and
 - a center partition connected to said handle portion and said end
 - 15 portions, said center partition being approximately parallel to said sidewalls and said handle portion;
 - the improvement comprising:
 - two straps, each one connected to a side of said handle portion and to a corresponding side portion along fold lines;
 - 20 two side partition portions connected to said center partition along a fold line, each of said side partition portions being glued along its upper edge portion to a corresponding one of said strap portions, said side partition portions being approximately perpendicular to said center partition portion.
- 25 2. A blank for forming a carrier for transporting a plurality of articles including:
 - a handle portion;
 - two side portions;
 - end portions connected along fold lines to said side portions;
 - 30 bottom portions connected along fold lines to said side portions; and
 - center partition portions connected along fold lines to said end portions;

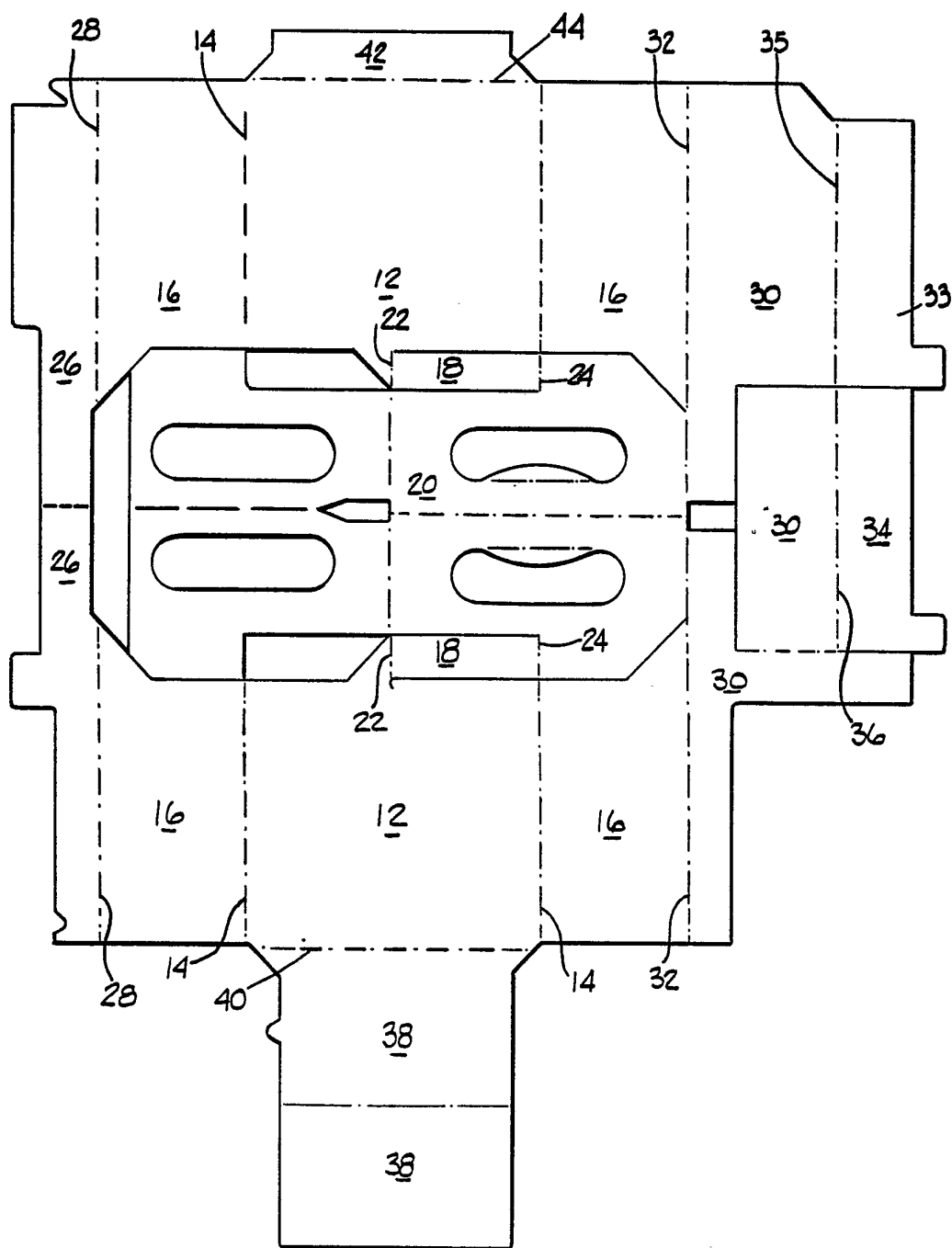
the improvement comprising:

two strap portions connected along fold lines to said handle portion and said two side portions; and

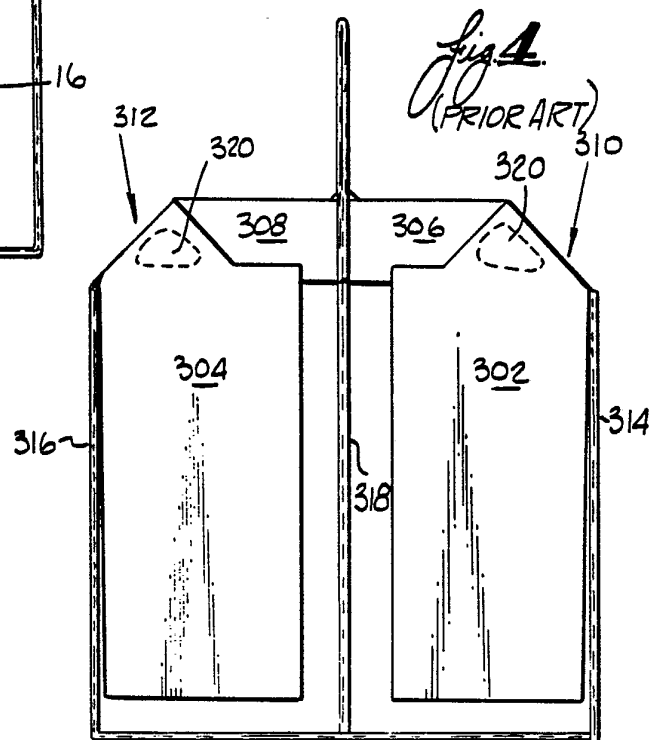
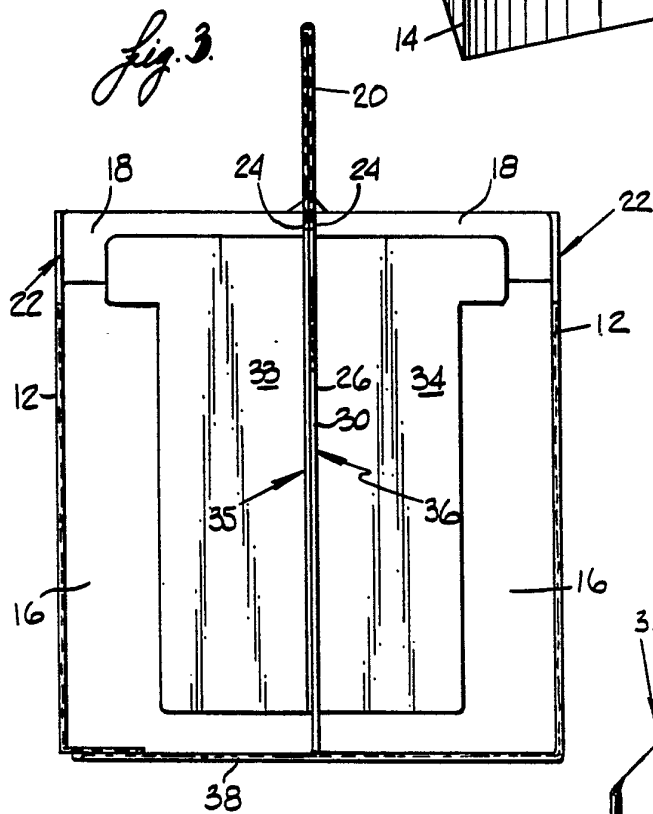
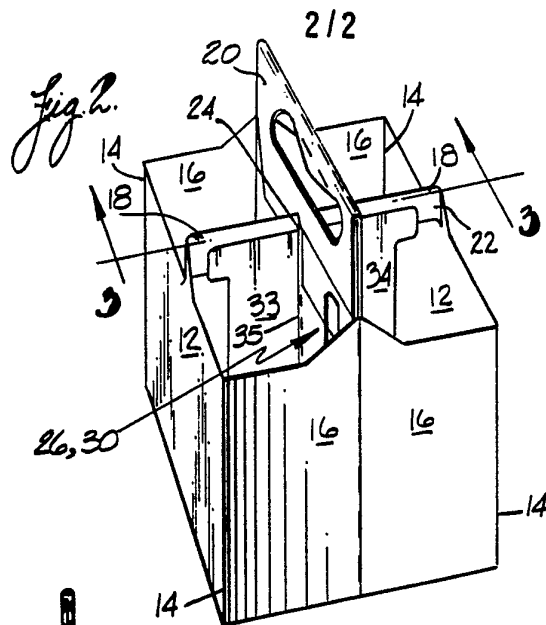
5 two side partition portions connected to at least some of said center partition portions along fold lines, said side partition portions formed as an integral part of said blank.

1/2

fig. 1.



SUBSTITUTE SHEET



INTERNATIONAL SEARCH REPORT

International Application No PCT/US86/00283

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ³ According to International Patent Classification (IPC) or to both National Classification and IPC Int. Cl. 4 B65D 5/48 U.S. Cl. 206/162																	
II. FIELDS SEARCHED <div style="text-align: center; border-top: 1px solid black; border-bottom: 1px solid black; margin: 5px 0;">Minimum Documentation Searched ⁴</div> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 20%; border: 1px solid black; text-align: left; padding: 2px;">Classification System</th> <th style="border: 1px solid black; text-align: left; padding: 2px;">Classification Symbols</th> </tr> <tr> <td style="border: 1px solid black; text-align: center; vertical-align: middle; padding: 5px;">U.S.</td> <td style="border: 1px solid black; padding: 5px;">206/141, 143, 162, 170, 174, 175, 180, 186, 187, 427; 229/28BC, 52BC</td> </tr> </table> <div style="text-align: center; border-top: 1px solid black; border-bottom: 1px solid black; margin: 5px 0;">Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁵</div>			Classification System	Classification Symbols	U.S.	206/141, 143, 162, 170, 174, 175, 180, 186, 187, 427; 229/28BC, 52BC											
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III. DOCUMENTS CONSIDERED TO BE RELEVANT ¹⁴ <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%; border: 1px solid black; text-align: left; padding: 2px;">Category *</th> <th style="border: 1px solid black; text-align: left; padding: 2px;">Citation of Document, ¹⁶ with indication, where appropriate, of the relevant passages ¹⁷</th> <th style="border: 1px solid black; text-align: left; padding: 2px;">Relevant to Claim No. ¹⁸</th> </tr> <tr> <td style="border: 1px solid black; text-align: center; vertical-align: top; padding: 5px;">A</td> <td style="border: 1px solid black; padding: 5px;">US, A, 4,308,950, Published 05 January 1982 (Wood)</td> <td style="border: 1px solid black;"></td> </tr> <tr> <td style="border: 1px solid black; text-align: center; vertical-align: top; padding: 5px;">A</td> <td style="border: 1px solid black; padding: 5px;">US, A, 4,319,682, Published 16 March 1982 (Wright)</td> <td style="border: 1px solid black;"></td> </tr> <tr> <td style="border: 1px solid black; text-align: center; vertical-align: top; padding: 5px;">A</td> <td style="border: 1px solid black; padding: 5px;">US, A, 4,374,561, Published 22 February 1983 (Stout et al)</td> <td style="border: 1px solid black;"></td> </tr> <tr> <td style="border: 1px solid black; text-align: center; vertical-align: top; padding: 5px;">Y</td> <td style="border: 1px solid black; padding: 5px;">US, A, 4,402,400, Published 06 September 1983 (Stout)</td> <td style="border: 1px solid black; text-align: center; vertical-align: top; padding: 5px;">1,2</td> </tr> </table>			Category *	Citation of Document, ¹⁶ with indication, where appropriate, of the relevant passages ¹⁷	Relevant to Claim No. ¹⁸	A	US, A, 4,308,950, Published 05 January 1982 (Wood)		A	US, A, 4,319,682, Published 16 March 1982 (Wright)		A	US, A, 4,374,561, Published 22 February 1983 (Stout et al)		Y	US, A, 4,402,400, Published 06 September 1983 (Stout)	1,2
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<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>* Special categories of cited documents: ¹⁵</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>"&" document member of the same patent family</p> </div> </div>																	
IV. CERTIFICATION <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border: 1px solid black; padding: 5px;"> Date of the Actual Completion of the International Search ² <div style="text-align: center; font-weight: bold;">07 April 1986</div> </td> <td style="width: 50%; border: 1px solid black; padding: 5px;"> Date of Mailing of this International Search Report ² <div style="text-align: center; font-weight: bold; font-size: 1.2em;">17 APR 1986</div> </td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;"> International Searching Authority ¹ <div style="text-align: center; font-weight: bold;">ISA/US</div> </td> <td style="border: 1px solid black; padding: 5px;"> Signature of Authorized Officer ²⁰ <div style="text-align: center;">Stephen Garbe </div> </td> </tr> </table>			Date of the Actual Completion of the International Search ² <div style="text-align: center; font-weight: bold;">07 April 1986</div>	Date of Mailing of this International Search Report ² <div style="text-align: center; font-weight: bold; font-size: 1.2em;">17 APR 1986</div>	International Searching Authority ¹ <div style="text-align: center; font-weight: bold;">ISA/US</div>	Signature of Authorized Officer ²⁰ <div style="text-align: center;">Stephen Garbe </div>											
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