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(54) **Book structure**

Buchstruktur

Structure de livre

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Description

[0001] The present invention refers to a book structure or other publishing product such as and illustrated book, a book for children, a geographical or road atlas, a handbook, etc., made up of a cover and one or more leaves which exhibit an extension larger than that of the cover and which, in the position of non-use, are kept folded so as to not coming out from the outline defined by the same cover.

[0002] Examples of such publishing products are disclosed in the Patents EP-1004456 and EP-1030785.

[0003] The Patent EP-1004456 describes a book structure comprising a plurality of pages joined to each other and held within a cover. Some pages consist of folios which are larger than the cover in the reading direction, and each of said folios has an external part of the signature which is glued to the immediately preceding page and has, besides, a fold line that forms adjacent faces and allows folding, one over the other, the faces of folio pages that extend laterally of the cover's area.

[0004] The Patent EP-1030785 concerns a book structure comprising a plurality of pages and a cover, at least some of the pages being folios whose dimensions extend beyond those of the cover. Each folio page has an outer part glued to adjacent pages and, with respect to the reading direction, a vertical fold line extending past the whole height of the page and coinciding with the line of the book's back, in order to define adjacent faces and at least one horizontal fold line, so that the folio page exhibits a folded format in which its surface is fully covered by the cover, and a non-folded format in which at least a portion of the folio page extends past the surface defined by the cover, from the lowest and/or highest edge thereof.

[0005] Also US-A - 4 618 166, GB-A-2 342 616 and WO 99 26792 relate to book structures. The structures shown in these documents are provided with folio pages which extend beyond the surface defined by the cover. Using these structures it is impossible to extend the area of the folio page in correspondence of all the perimeter of the cover. In these documents it isn't show a manner for joining two or more pages each other.

[0006] One object of the present invention is a book structure able to provide, in conjunction with the limited dimensions of the cover, a printing area having larger extension than that defined by the cover, in particular an area extending, with respect to the reading direction, in both the vertical and horizontal directions.

[0007] A further object of the present invention is a book structure capable of being constructed by using the modern paging and binding technologies which allow relatively limited costs along with a high production quality.

[0008] Still another object of the invention is a structure that can be used for didactic manuals, geographical atlas, books for children, and able to meet the novel publishing requirements according to which the printing areas must often be larger than the area defined by the cover.

[0009] This result has been achieved, according to the invention, by adopting the idea of making a book structure having the characteristics disclosed in the claim 1. Further characteristics being set forth in the dependent claims.

[0010] Among the advantages of the present invention, one is that the book structure in question offers the possibility of extending the pages of a book or other publishing product beyond the vertical and horizontal edges of the area defined by the cover; that it is possible to obtain, from the opening of one folio page only, an area far larger, for example eight times larger, that the area defined by the closed cover; that the structure can be produced on automated production lines according to the most advanced paging and printing technologies; that the structure exhibits excellent characteristic of resistance and maintains its characteristics also after prolonged periods of use.

[0011] These and other advantages and characteristics of the invention will be best understood by anyone skilled in the art from a reading of the following description in conjunction with the attached drawings given as a practical exemplification of the invention, but not to be considered in a limitative sense, wherein:

- Fig. 1 is a schematic perspective view of a possible embodiment of a book structure, according to the present invention, shown in an incomplete opening configuration;
- Fig. 2 shows the embodiment of Fig. 1 in fully open configuration; and
- Fig. 3 is a schematic perspective view of a possible example of association between successive leaves of a book structure according to the invention.

[0012] With reference to the figures of the attached drawings, a book structure 1 consists of a plurality of pages joined to each other and held in a cover 2. Some of the pages may be formed by folios 3, that is, pages which exhibit a surface greater than the area defined by the cover 2.

[0013] Each of the folio pages 3 exhibits, with respect to the reading direction, at least two vertical fold lines 4, 5, 6 and at least a horizontal fold line 7, 9. A first line 5 coincides with the central fold line of the cover 2; the two lines 4 and 6, parallel to the first one, correspond, in the illustrated example, to the vertical edges of the area defined by the cover 2, while the two lines 7, 9, orthogonal to the preceding ones, correspond to the horizontal edge of such area. For the sake of clarity, the folio page 3 shown in the drawings has been subdivided into sixteen quadrants (31, 32, 33, 34, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51). Moreover, numerals 35 and 36 designate the whole inner faces, each of which is made up of eight of the above said sixteen quadrants. In particular, with reference to the central part of Fig. 3, numeral 35 designates the left inner face and numeral 36 the right inner face. Numerals 37 and 38 designate the corresponding outer faces of the folio page.

[0014] As best shown in Fig. 3, a folio page 3 is associated with other pages of the book. An external portion of page 3, having an extension substantially corresponding to a face of cover 2 and designated in the drawings by numerals 310 and 330, is glued to the immediately preceding page. In the example, the preceding page is a further folio page 3 and its concerned portion is the outer face 38, in particular the part designated with 320, 340, having an extension corresponding to the cover face. In Fig. 3, the reference numbers with three digits 310, 320, etc., designate the rear faces of corresponding quadrants indicated by two-digit numbers 31, 32, etc. In practice, each folio page 3 can be associated with the preceding adjacent page and to the next adjacent page by joining respectively the portion 320, 340 of the preceding page to the portion 310, 320 of the concerned page, and the portion 320, 340 of the concerned page to the portion 310, 330 of the next page. For the sake of clarity, the quadrants of the portions intended to be mutually associated have been represented with a differently combined background (in particular, with dotted regions for the association with the preceding page, and with diagonal lines for the association with the next page).

[0015] In Figs. 1 and 2, the book structure is schematically represented in partially, respectively fully open condition. As mentioned above, the left outer portion of page 3, marked by the quadrants 310 and 330, is glued to the preceding page and, similarly, the right outer portion, marked by quadrants 320 and 340, is glued to the next page. For this reason, the two inner faces, in correspondence of quadrants 31, 33, 32, 34, having the same extension as the cover 2, are stably associated with the adjacent pages. The remaining portions of the folio page 3, instead, can be either folded to dispose the structure 1 in closing condition, or opened outwardly to provide an opening condition. In Fig. 1, the page 3 is open upwards along the horizontal fold line 7 and is open both to the right and to the left, along the vertical fold lines 4 and 6. The lower part of the page 3 is instead still folded inwardly, along the horizontal line 9, by revealing the quadrants marked with 480, 500, 510 and 490, which are the rear faces of corresponding quadrants 48, 50, 51 and 49. In this configuration, the quadrants 46, 33, 34, 47 - and obviously, the quadrants 48, 50, 51 and 49 opposite to the above said respective rear quadrants designated by three-digit numerals - remain covered, that is, inside the folded page.

[0016] Starting from the configuration shown in Fig. 1, in order to cause the upper quadrants to take up their folded format, that is, of minimum extension, they are folded inwardly so as to cover the quadrants 44, 31, 32, 45; then, for a complete closing, the lateral quadrants are folded along the vertical lines 4 and 6. For the closing, provision can be made for another mode of superimposing the quadrants by folding first the vertical quadrants 40, 44, 46, 48 and 43, 45, 47, 49 inwardly, and then the upper and lower quadrants along the horizontal lines 7 and 9.

[0017] In the figures, besides the actual folding lines, a horizontal middle line is shown at 8, in order to define a better subdivision of the quadrants; such graphical subdivision is of aid in better understanding the multiplication by four of the area initially occupied when the cover is open (corresponding to the four central quadrants 31, 32, 33 and 34) thereby reaching an extension equal to sixteen quadrants, that is, equal to eight times the area defined by the closed cover.

It is understood that the above subdivision is merely envisaged for exemplifying purpose, as the quadrants may be in a different number, and texts and/or pictures reproduced on the page may extend without such subdivisions.

[0018] In the exemplifying embodiment above described, the folio page 3 exhibits, with respect to the reading direction and in addition to the central fold line 5, other two vertical fold lines 4 and 6, as well as two horizontal fold lines 7 and 9. In an alternative embodiment of the book structure 1, the folio page 3 may extend towards three sides, instead of towards all the four sides as in the previous solution. For example, reference being made to the preceding designation numerals, the page 3 could include, besides the four central quadrants 31, 33, 32, 34, the upper quadrants 40, 41, 42, 43, the left 44, 46 and right 45, 47 lateral quadrants. In another embodiment, in addition to the central quadrants, the said page might include the left lateral quadrants 44, 46, and the upper 40, 41, 42, 43 and lower 48, 50, 51, 49 quadrants. In a yet another embodiment, in addition to the four central quadrants 31, 33, 32, 34, it might include the lower quadrants 48, 50, 51, 49, the left 44, 46 and right 45, 47 lateral quadrants. In a further embodiment, in addition to the four central quadrants, it might include the right lateral quadrants 45, 47, and the upper 40, 41, 42, 43 and lower 48, 50, 51, 49 quadrants.

Claims

1. A book structure(1) or other publishing product comprising a plurality of pages enclosed in a cover (2), two or more of which are formed by a folio page (3) having an extension larger than that of the area defined by the cover (2) and subdivided by a first fold line (5) coinciding with the back, that is, with the central fold line of the cover (2), said folio page (3) being reversibly foldable to take up a format of minimum extension in which its area results included in the one defined by the cover (2), and a format of maximum extension in which it extends beyond the area defined by the cover (2) in correspondence of one or two opposite edges, at least one portion (320,340; 310,330) of the outer face of said folio page (3) being glued to an immediately adjacent page; book structure (1) **characterized in that** said folio page (3) exhibits two fold lines (4, 6) parallel to said first fold line (5) and two fold lines (7, 9) orthogonal to the

preceding one, said lines coinciding with the four edges of the area defined by the cover (2), beyond which edges said page (3) extends when the same is in open or not folded format.

2. Book structure according to claim 1, **characterized in that** the structure (1) comprises two or more folio pages (3) and **in that** an external portion (310, 330) of a folio page (3), having an extension substantially corresponding to the face of the cover (2), is glued to a corresponding portion (320, 340) of an adjacent folio page (3).

3. Book structure according to claim 1, **characterized in that** the area taken up by said folio page (3) when in open condition has an extension equal to eight times the are defined by the same page (3) when in folded condition, with the cover (2) being closed.

Patentansprüche

1. Buchstruktur (1) oder sonstiges Verlagsprodukt mit einer bestimmten Anzahl von Seiten, die in einem Einband (2) zusammengefasst sind, und von denen zwei oder mehr unter ihnen von einem Blatt (3) gebildet sind, deren Abmessung die Abmessung des Einbandes (2) überragt und die durch eine mit dem Rücken des Buches bzw. mit der mittleren Falzlinie des Einbandes (2) übereinstimmende erste Falzlinie (5) unterteilt ist, in der das Blatt (3) reversibel faltbar ist, und eine Mindestausdehnung, bei der seine Fläche mit der Fläche des Einbandes übereinstimmt, und eine Maximalausdehnung, bei der die Fläche des Blattes (3) die Fläche des Einbandes (2) überragt, aufweist, in der an einem oder an zwei entgegengesetzen Rändern wenigstens ein Abschnitt (320, 340; 319, 330) der äußeren Seite des besagten Blattes (3) an das benachbarte Blatt angeklebt ist; Buchstruktur (1) **dadurch gekennzeichnet, dass** das besagte Blatt (3) zwei der ersten Falzlinie (5) parallel laufenden Falzlinien (4,6) aufweist, und zwei orthogonal laufenden Falzlinien (7,9), die mit den vier Rändern der vom Einband (2) überdeckte Fläche übereinstimmen, und die von dem besagten Blatt in der entfaltenen Phase überragt sind.

2. Buchstruktur nach Anspruch 1, **dadurch gekennzeichnet, dass** die Struktur zwei oder mehrere Blätter (3) umfasst und dass ein äußerer Abschnitt (310, 330) eines Blattes (3), dessen Fläche im Grunde mit der Fläche des Einbandes (2) übereinstimmt, an dem entsprechenden Abschnitt (320, 340) eines benachbarten Blattes (3) angeklebt ist.

3. Buchstruktur nach Anspruch 1, **dadurch gekennzeichnet, dass** die vom gesagten Blatt (3) überdeckte Fläche im entfalteten Zustand eine Fläche acht Mal so groß wie/als die Fläche desselben Blattes im gefalteten Zustand aufweist, wenn der Einband (2) geschlossen ist.

Revendications

1. Structure de livre (1) ou autre produit de l'édition comprenant une pluralité de pages enfermées dans une couverture (2), desquelles deux ou plusieurs sont constituées par une page en feuillets (3) ayant une extension supérieure à l'extension de la surface définie par la couverture (2) et subdivisée par une première ligne de pliage (5) coïncidente avec le dos, c'est-à dire avec la ligne centrale de pliage de la couverture (2), ladite page en feuillets (3) étant d'une manière réversible repliable pour être en assiette d'extension minime, ou sa surface est contenue par la surface déterminée par la couverture (2), et une assiette d'extension maximale, dans laquelle s'étend au delà de la surface déterminée par la couverture (2) en correspondance d'une ou de deux marges opposées, au moins une portion (320, 340 ; 310, 330) de la face externe de ladite page en feuillets (3) étant collée à une page immédiatement adjacente; structure de livre (1) **caractérisée en ce que** ladite page en feuillets (3) présente deux lignes de pliage (4, 6) parallèles à ladite première ligne de pliage (5) et deux lignes de pliages (7,9) orthogonales à la précédente, lesdites lignes coïncidant avec les quatre marges de la surface définie par la couverture (2), au-delà desquelles s'étend ladite page (3) lorsque ladite page est en assiette d'ouverture ou elle n'est pas pliée.

2. Structure de livre selon la revendication 1, **caractérisée en ce que** la structure (1) comprend deux ou plusieurs pages en feuillets (3) et qu'une portion externe (310,330) d'une page en feuillets (3), ayant un extension fondamentalement correspondante à la face de la couverture (2), est collée à une portion correspondante (320,340) d'une page en feuillets (3) adjacente.

3. Structure de livre selon la revendication 1, **caractérisée en ce que** la surface prise par ladite page (3) en assiette d'ouverture a un'extension égale à huit fois la surface définie par la même page (3) en assiette pliée, avec la couverture fermée.

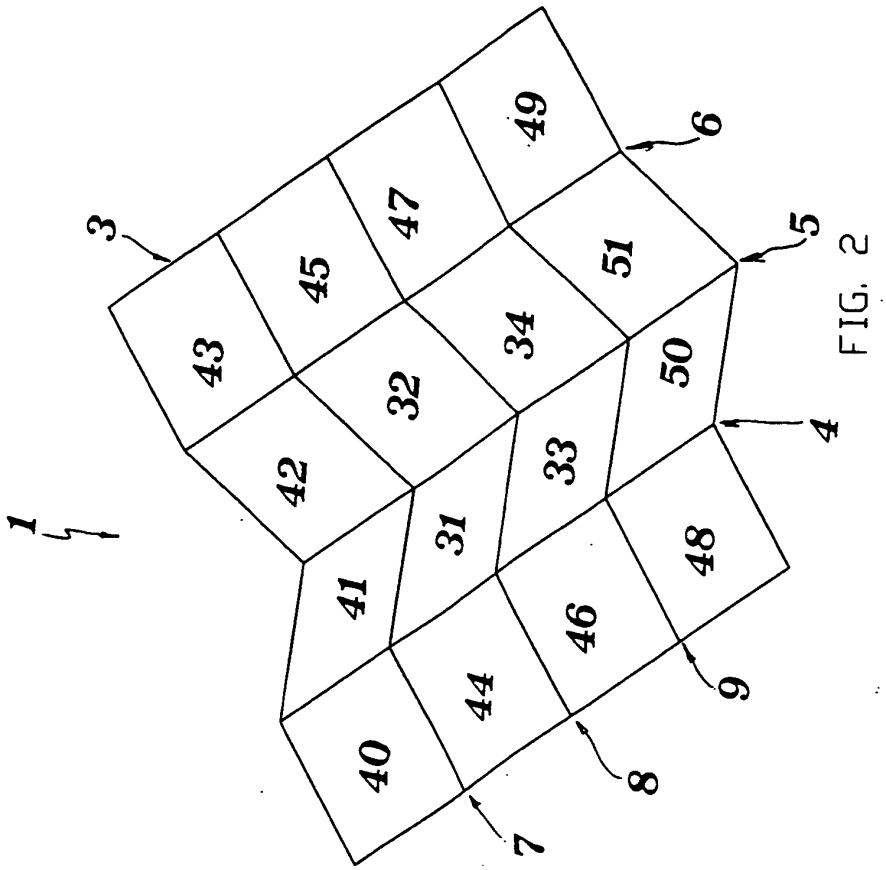

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5
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45
47
49
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32
34
51
50
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31
33
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40
44
46

FIG. 2

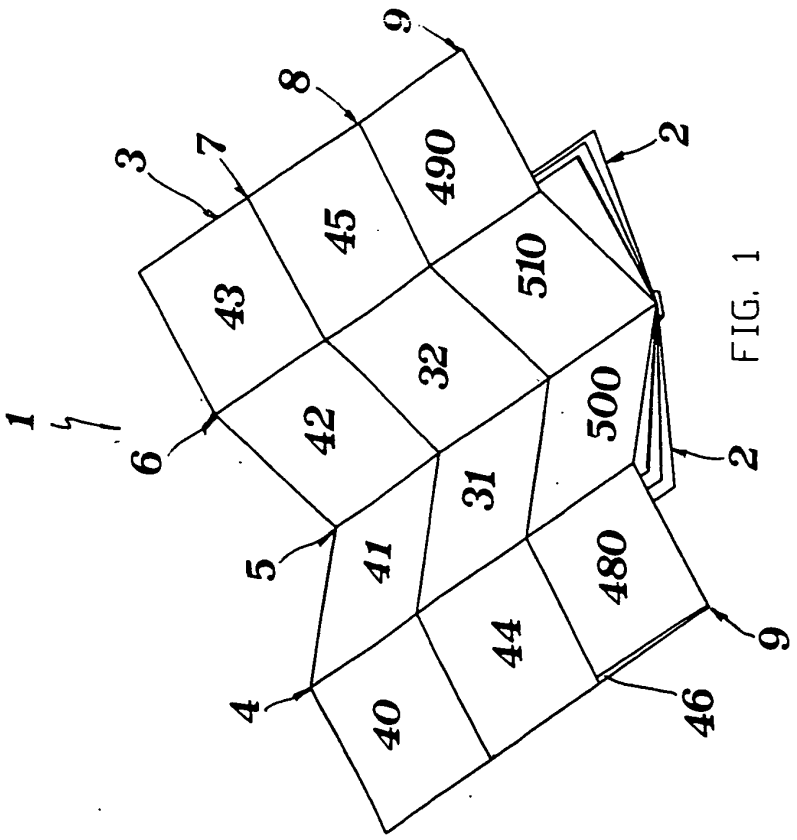

1
3
7
8
9
2
6
5
4
46
43
45
490
510
42
32
500
41
31
480
40
44

FIG. 1

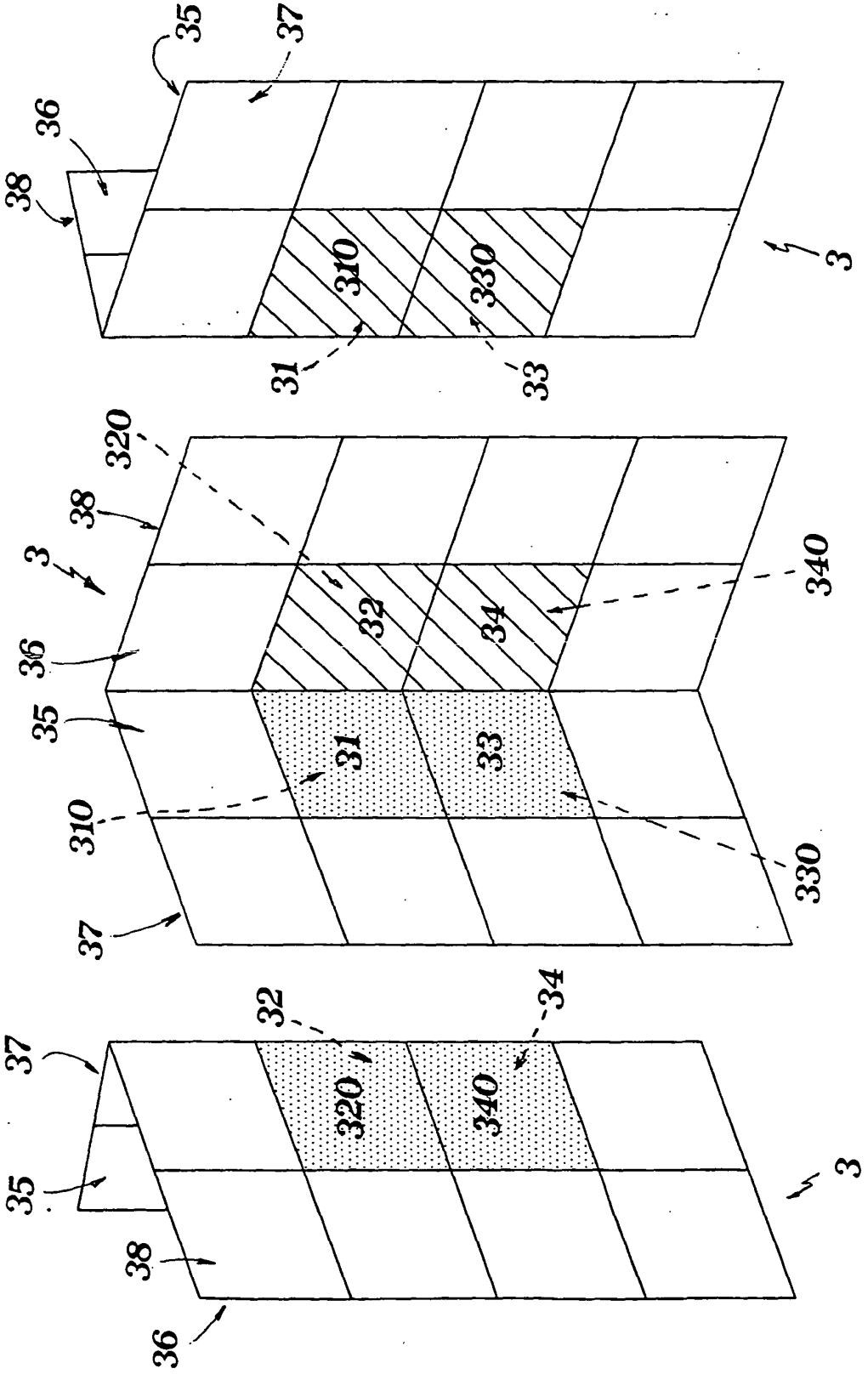

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310
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3
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340
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330
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320
340
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38
36

FIG.3

REFERENCES CITED IN THE DESCRIPTION

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- EP 1030785 A **[0002] [0004]**
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