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## Description

**[0001]** The present invention relates to a package, preferably a film package, for gathering a plurality of primary containers, such as bottles, that comprises an integrated handle.

**[0002]** In the field of gathering packages, the prior art shows packages to group a plurality of primary containers such as for example water bottles, or metal cans. These known packages are typically made out of a shrinkable film that is rolled around the set of bottles and heat-treated so as to shrink around the bottles to tightly hold them together. Once gathered, the primary packages, for example the bottles, form a pack.

**[0003]** In the following description, it will be considered for the sake of clarity that the gathering package is made out of a shrinkable film, and the primary packages are plastic bottles. However, this limitation should not be considered as restricting the scope of the invention. Other types of materials than shrinkable plastic film may also be used for the gathering package, and other types of primary packages than plastic bottles may be gathered.

**[0004]** The interest of such film gathering packages has been known for long, and is a consumer must to facilitate handling and transportation of a set of primary containers.

**[0005]** Some of the known film gathering packages comprise a handle that is glued onto the outer surface of the film by means of adhesive tape for example.

**[0006]** These known film gathering packages show good reliability for consumers because they provide good gathering of the primary containers - for example bottles of mineral water - and the handle facilitates handling.

**[0007]** US 5 361 905 is a US patent application to McQueeney et Al, published November 8th, 1994. It discloses a primary packaging, according to the preamble of claim 1, for containing diapers, which is made of an envelope which holds the said diapers together and comprises precut lines for opening said envelope in two halves. Upon opening of the envelope, the two halves pivot around a hinge located in the base of the envelope, and one portion of the envelope is left which defines a carrying handle.

**[0008]** However, when a consumer is being shopping and wishes to transport the pack of bottles into a shopping trolley, it is necessary to place the pack into the trolley. However, such a pack is usually quite bulky and a lot of space into the trolley is lost for filling with other products.

**[0009]** Therefore, a need exists for a package for gathering a plurality of primary packages, that is easy to handle and that can be arranged in a shopping trolley in such a way that a maximum of space remains available into said trolley.

**[0010]** The present invention addresses the problems set out above with a secondary package for gathering a plurality of primary packages, comprising an envelope that surrounds the plurality of primary packages so as to tightly hold the latter together and so that said secondary

package has a generally flat configuration, said envelope comprising a base side supporting the primary packages, lateral sides, and a top side.

**[0011]** According to the invention, the secondary package is characterized in that:

- its base comprises a folding line that pivotally connects two portions of the envelope supporting the primary packages,
- the lateral sides and the top side of the envelope comprise a transversal predetermined weakness line in the region of the folding line, such that when the envelope is at least partially opened along said weakness line, it still holds tightly the primary packages disposed on each of the two portions and said portions can be pivoted around the folding line to allow compaction of the secondary package from its flat, unfolded, configuration into a compact configuration, and the envelope is made out of a thermoshrinkable film.

**[0012]** Preferably, the predetermined weakness line is a precut line, and also preferably, the folding line is located in the medium part of the base.

**[0013]** In a highly preferred embodiment of the present invention, the base of the secondary package comprises a carrying handle that is disposed vertically between the portions of the envelope.

**[0014]** In this case, said carrying handle is more preferably disposed in said envelope, such that it is accessible only after said secondary package is folded in its compacted configuration.

**[0015]** Said handle can be a strip that is fixed along the medium folding line of the envelope base.

**[0016]** In an embodiment of the invention, said handle can be glued to the external surface of the envelope, the precut comprising two precut lines that are substantially parallel to one another.

**[0017]** In all cases, the base of the envelope is preferably reinforced by an independent secondary base.

**[0018]** In this case, said secondary base can be made out of a corrugated plastic board, and is preferably rigid.

**[0019]** In another embodiment of the invention, the portions of the envelope base are symmetrical along the folding line.

**[0020]** The present invention is preferably meant to be used such that the primary packages are water-containing plastic bottles.

**[0021]** Additional features and advantages of the present invention are described in, and will be apparent from, the description of the presently preferred embodiments which are set out below with reference to the drawings in which:

Figure 1 is a perspective top view of a secondary package according to one embodiment of the invention ;

Figure 2 is a bottom view of a secondary package

according to one embodiment of the invention ;  
 Figure 3 is a perspective top view of a secondary package according to one embodiment of the invention in a partially unfolded state ;  
 Figure 4 is a perspective top view of a secondary package according to one embodiment of the invention in a completely unfolded state, with a completely accessible carrying handle ;  
 Figure 5 is a similar view to Figure 1 showing another embodiment of the invention ;  
 Figure 6 is a similar view to Figure 3 showing another embodiment of the invention ;  
 Figure 7 is a similar view to Figure 4 showing another embodiment of the invention ;  
 Figure 8 is a schematic top view of a plurality of secondary packages of the invention, disposed adjacent to one another in a pallet layer.

**[0022]** The secondary package 1 according to the invention, as shown in Figure 1, is meant for gathering a plurality of primary packages 2. In the particular embodiment as described hereafter in detail, the primary packages are plastic bottles 2 containing water.

**[0023]** The secondary package 1 according to the present invention comprises an envelope 3 that surrounds the plurality of primary packages 2 so as to tightly hold the latter together.

**[0024]** As shown in figures 1 and 2, said envelope 3 comprises a base 4 supporting the primary packages 2, as well as lateral sides 5, and a top side 6.

**[0025]** According to the invention, the base 4 of the envelope 3 comprises a medium folding line 7 that pivotally connects two halves 8a, 8b of the base 4 supporting the primary packages. The base 4 further comprises a carrying handle 9 that is disposed vertically along the medium folding line.

**[0026]** Also according to the present invention, the lateral sides 5 and the top side 6 of the envelope 3 comprise a transversal precut 10 in the region of the medium folding line 7, as shown in figures 1 or 5.

**[0027]** Therefore, as shown in figures 3, 4, 6 and 7, when the envelope 3 is open along said precut 10, said envelope 3 still holds tightly the primary packages 2 disposed on each of the two base halves 8a, 8b, and said halves can be pivoted around the medium folding line 7 in order to allow complete access to the carrying handle 9.

**[0028]** By "complete" access to the carrying handle it is meant that, although said handle is disposed outside of the envelope, when the secondary package is in its closed configuration, i.e. when the precut line has not been broken, the handle is not really accessible for the consumer because it is tightly adapted to the envelope and there is almost no gap between said handle and said envelope. Therefore, the consumer cannot insert his hand between said envelope and said handle, in order to grab the latter. On the contrary, when the precut has been broken and the secondary package is in its open configuration as illustrated in figure 7, said handle is clear from

the envelope and therefore completely accessible to the consumer.

**[0029]** In one first embodiment of the present invention illustrated in figures 1, 2, 3 and 4, the base 4 of the envelope 3 is reinforced by an independent secondary base 11.

**[0030]** In this particular embodiment of the invention, said secondary base 11 is made out of a rigid corrugated plastic board. Furthermore, in this first embodiment of the invention, the precut 10 comprises two precut lines 10a, 10b that are substantially parallel to one another.

**[0031]** In a second embodiment of the present invention illustrated in figures 5, 6, and 7, the base 4 of the envelope 3 is not reinforced and comprises solely the material making the whole envelope. The carrying handle 9 is a strip of thick film that surrounds said envelope 3, and that is attached to the latter by glue that is disposed at the interface between said handle and said envelope, in the base region of said envelope.

**[0032]** In both embodiments of the invention described hereinbefore, both halves 8a, 8b of the envelope base 4 are symmetrical along the medium folding line 7.

**[0033]** Furthermore, the envelope 3 is made out of a thermoshrinkable film.

**[0034]** As can be seen in figure 8, the disposition of the water bottles 2 on the base 4, and the fact that the contours of said base 4 is adapted to the disposition of the water bottles, makes it convenient to place several secondary packages of the invention, such that adjacent secondary packages are interlocked. This allows for building compact and strong layers of secondary packages in a pallet.

### 35 Claims

1. A secondary package (1) for gathering a plurality of primary packages (2), comprising an envelope (3) that surrounds the plurality of primary packages so as to tightly hold the latter together and so that said secondary package has a generally flat configuration, said envelope comprising a base side (4) supporting the primary packages, lateral sides (5), and a top side (6), and

(i) said base (4) comprising a folding line (7) that pivotally connects two portions (8a, 8b) of the envelope supporting the primary packages,

(ii) the lateral sides (5) and the top side (6) of the envelope (3) comprising a transversal predetermined weakness line (10) in the region of the folding line, such that when the envelope is at least partially opened along said weakness line (10), it still holds tightly the primary packages (2) disposed on each of the two portions (8a, 8b) and said portions can be pivoted around the folding line (7) to allow compaction of the secondary package from its flat, unfolded, configuration.

ration into a compact configuration,

**characterized in that:** said envelope (4) is made out of a thermoshrinkable film.

2. A secondary package according to claim 1, wherein said predetermined weakness line is a precut line.
3. A secondary package according to claim 2, wherein said folding line is located in the medium part of the base.
4. A secondary package according to claims 2 or 3, wherein said base further comprises a carrying handle (9) that is disposed vertically between the portions (8a, 8b) of the envelope.
5. A secondary package according to claim 4, wherein said carrying handle is disposed in said envelope, such that it is accessible only after said secondary package is folded in its compacted configuration.
6. A secondary package (1) according to claims 4 or 5, wherein said handle (6) is a strip that is fixed along the medium folding line (5) of the envelope base (3).
7. A secondary package according to claim 4, wherein said handle is glued to the external surface of the envelope, the precut comprising two precut lines that are substantially parallel to one another.
8. A secondary package (1) according to claims 1 to 5, wherein the base of the envelope is reinforced by an independent secondary base.
9. A secondary package (1) according to any of the claims 2 or 3, wherein said secondary base is made out of a corrugated plastic board.
10. A secondary package (1) according to any of the claims 2 or 3, wherein the secondary base is rigid.
11. A secondary package (1) according to according to any of the preceding claims, wherein portions (8a, 8b) of the envelope base are symmetrical along the folding line (5).
12. A secondary package (1) according to any of the preceding claims, wherein the primary packages (2) are water-containing plastic bottles.

#### Patentansprüche

1. Umverpackung (1) zum Zusammenfassen einer Vielzahl von Primärverpackungen (2), die eine Umhüllung (3) aufweist, die die Vielzahl von Primärverpackungen umgibt, um die letzteren eng so zusam-

menzuhalten, dass die genannte Umverpackung eine im Wesentlichen flache Anordnung aufweist, wobei die genannte Umhüllung eine Basisseite (4), die die Primärverpackungen trägt, seitliche Seiten (5) und eine Deckseite (6) aufweist, und wobei

- (i) die Basis (4) eine Abknicklinie (7) aufweist, die zwei Abschnitte (8a, 8b) der Umhüllung, die die Primärverpackungen trägt, schwenkbar verbindet,
- (ii) die seitlichen Seiten (5) und die Deckseite (6) der Umhüllung (3) eine vorgegebene quer verlaufende Schwächungslinie (10) im Bereich der Abknicklinie aufweisen, so dass dann, wenn die Umhüllung entlang der Schwächungslinie (10) wenigstens teilweise geöffnet ist, sie weiterhin die Primärverpackungen (2), die auf jedem der beiden Abschnitte (8a, 8b) angeordnet sind, eng zusammenhält, und dass die genannten Abschnitte um die Abknicklinie (7) geschwenkt werden können, um es zu ermöglichen, dass die Umverpackung aus ihrer flachen, ungefalteten Anordnung in eine kompakte Anordnung kompaktiert wird,

#### dadurch gekennzeichnet, dass

die genannte Umhüllung (4) aus einer wärme-schrumpfbaren Folie hergestellt ist.

2. Umverpackung nach Anspruch 1, wobei die genannte vorgegebene Schwächungslinie eine vorge-schnittene Linie ist.
3. Umverpackung nach Anspruch 2, wobei die genannte Abknicklinie im mittleren Teil der Basis angeordnet ist.
4. Umverpackung nach den Ansprüchen 2 oder 3, wobei die genannte Basis außerdem einen Tragegriff (9) aufweist, der vertikal zwischen den Abschnitten (8a, 8b) der Umhüllung angeordnet ist.
5. Umverpackung nach Anspruch 4, wobei der genannte Griff in der Umhüllung angeordnet ist, so dass er nur dann zugänglich ist, wenn die Umverpackung in ihre kompaktierte Anordnung gefaltet ist.
6. Umverpackung (1) nach den Ansprüchen 4 oder 5, wobei der genannte Griff (6) ein Streifen ist, der entlang der mittleren Abknicklinie (5) der Umhüllungs-basis (3) befestigt ist.
7. Umverpackung nach Anspruch 4, wobei der genannte Griff an die Außenoberfläche der Umhüllung geklebt ist, wobei der Voreinschnitt zwei vorgeschnit-tene Linien aufweist, die im Wesentlichen parallel zueinander verlaufen.

8. Umverpackung (1) nach den Ansprüchen 1 bis 5, wobei die Basis der Umhüllung durch eine unabhängige sekundäre Basis verstärkt ist.
9. Umverpackung (1) nach irgendeinem der Ansprüche 2 oder 3, wobei die genannte sekundäre Basis aus einer gerippten Kunststoffplatte hergestellt ist.
10. Umverpackung (1) nach irgendeinem der Ansprüche 2 oder 3, wobei die sekundäre Basis starr ist.
11. Umverpackung (1) nach irgendeinem der vorausgehenden Ansprüche, wobei die Abschnitte (8a, 8b) der Umhüllungsbasis entlang der Abknicklinie (5) symmetrisch sind.
12. Umverpackung (1) nach irgendeinem der vorausgehenden Ansprüche, wobei die Primärverpackungen (2) Wasser enthaltende Kunststoffflaschen sind.

### Revendications

1. Emballage secondaire (1) destiné à regrouper de multiples emballages primaires (2), comportant une enveloppe (3) qui entoure les multiples emballages primaires afin de maintenir étroitement ces derniers ensembles et afin que ledit emballage secondaire ait une configuration globalement plane, ladite enveloppe comportant une base (4) supportant les emballages primaires, des faces latérales (5) et une face de dessus (6), et

(i) ladite base (4) comportant une ligne de pliage (7) qui relie de façon pivotante deux parties (8a, 8b) de l'enveloppe supportant les emballages primaires,

(ii) les faces latérales (5) et la face de dessus (6) de l'enveloppe (3) comportant une ligne transversale prédéterminée (10) d'affaiblissement dans la région de la ligne de pliage, telle que, lorsque l'enveloppe est au moins partiellement ouverte le long de ladite ligne (10) d'affaiblissement, elle maintienne encore étroitement les emballages primaires (2) disposés sur chacune des deux parties (8a, 8b) et que lesdites parties puissent être amenées à pivoter autour de la ligne de pliage (7) pour permettre de compacter l'emballage secondaire de sa configuration plane, dépliée, en une configuration compacte,

#### caractérisé en ce que

ladite enveloppe (4) est constituée d'un film thermo-rétractable.

2. Emballage secondaire selon la revendication 1, dans lequel ladite ligne prédéterminée d'affaiblisse-

ment est une ligne prédécoupée.

3. Emballage secondaire selon la revendication 2, dans lequel ladite ligne de pliage est située dans la partie médiane de la base.

4. Emballage secondaire selon la revendication 2 ou 3, dans lequel ladite base comporte en outre une poignée (9) de transport qui est disposée verticalement entre les parties (8a, 8b) de l'enveloppe.

5. Emballage secondaire selon la revendication 4, dans lequel ladite poignée de transport est disposée dans ladite enveloppe de manière qu'elle soit accessible uniquement après que ledit emballage secondaire a été plié dans sa configuration compactée.

6. Emballage secondaire (1) selon la revendication 4 ou 5, dans lequel ladite poignée (6) est une bande qui est fixée le long de la ligne médiane (5) de pliage de la base (3) de l'enveloppe.

7. Emballage secondaire selon la revendication 4, dans lequel ladite poignée est collée à la surface extérieure de l'enveloppe, la prédécoupe comprenant deux lignes de prédécoupe qui sont sensiblement parallèles entre elles.

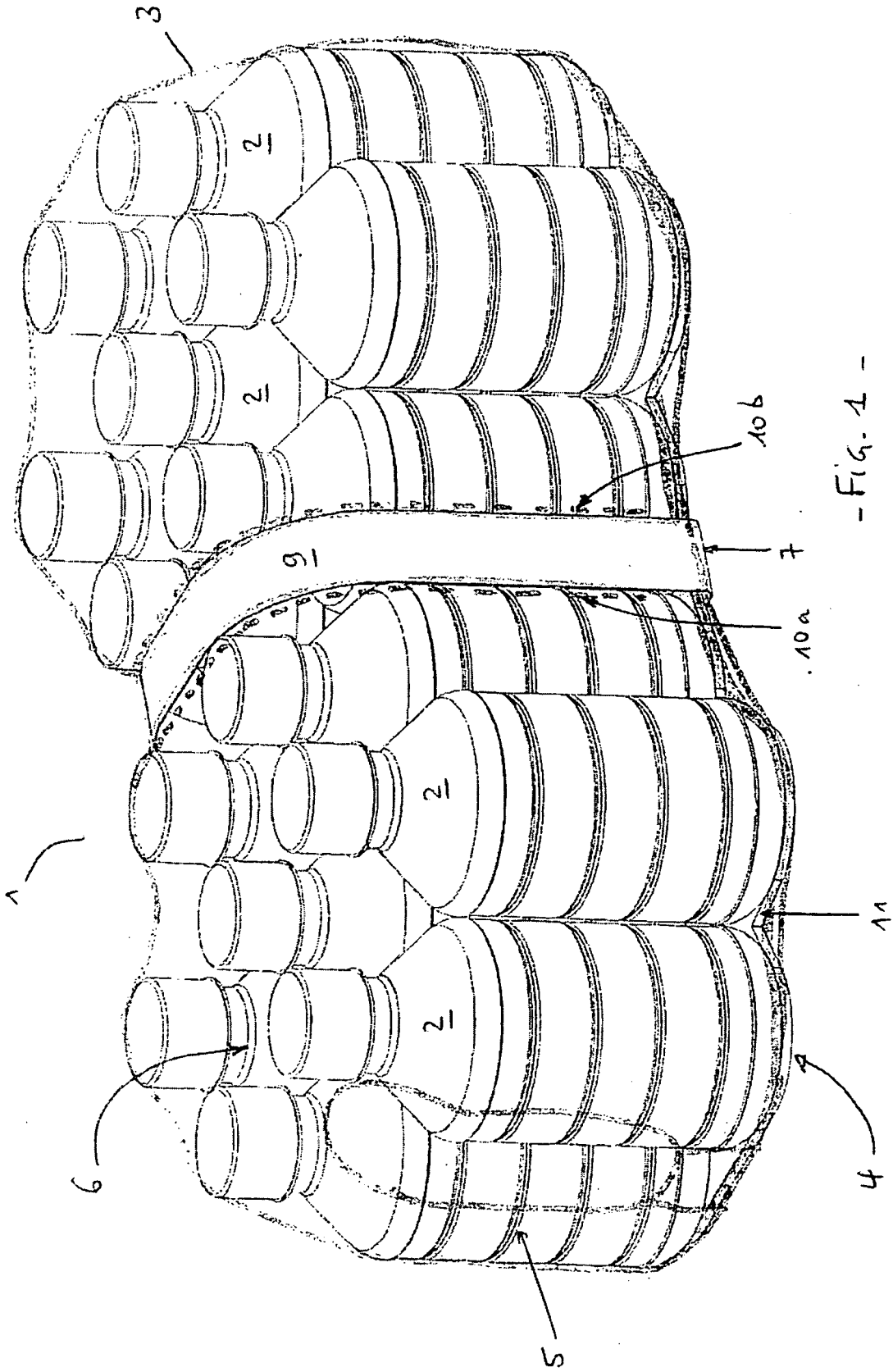
8. Emballage secondaire (1) selon les revendications 1 à 5, dans lequel la base de l'enveloppe est renforcée par une base secondaire indépendante.

9. Emballage secondaire (1) selon l'une des revendications 2 et 3, dans lequel ladite base secondaire est constituée d'une plaque en matière plastique ondulée.

10. Emballage secondaire (1) selon l'une des revendications 2 et 3, dans lequel la base secondaire est rigide.

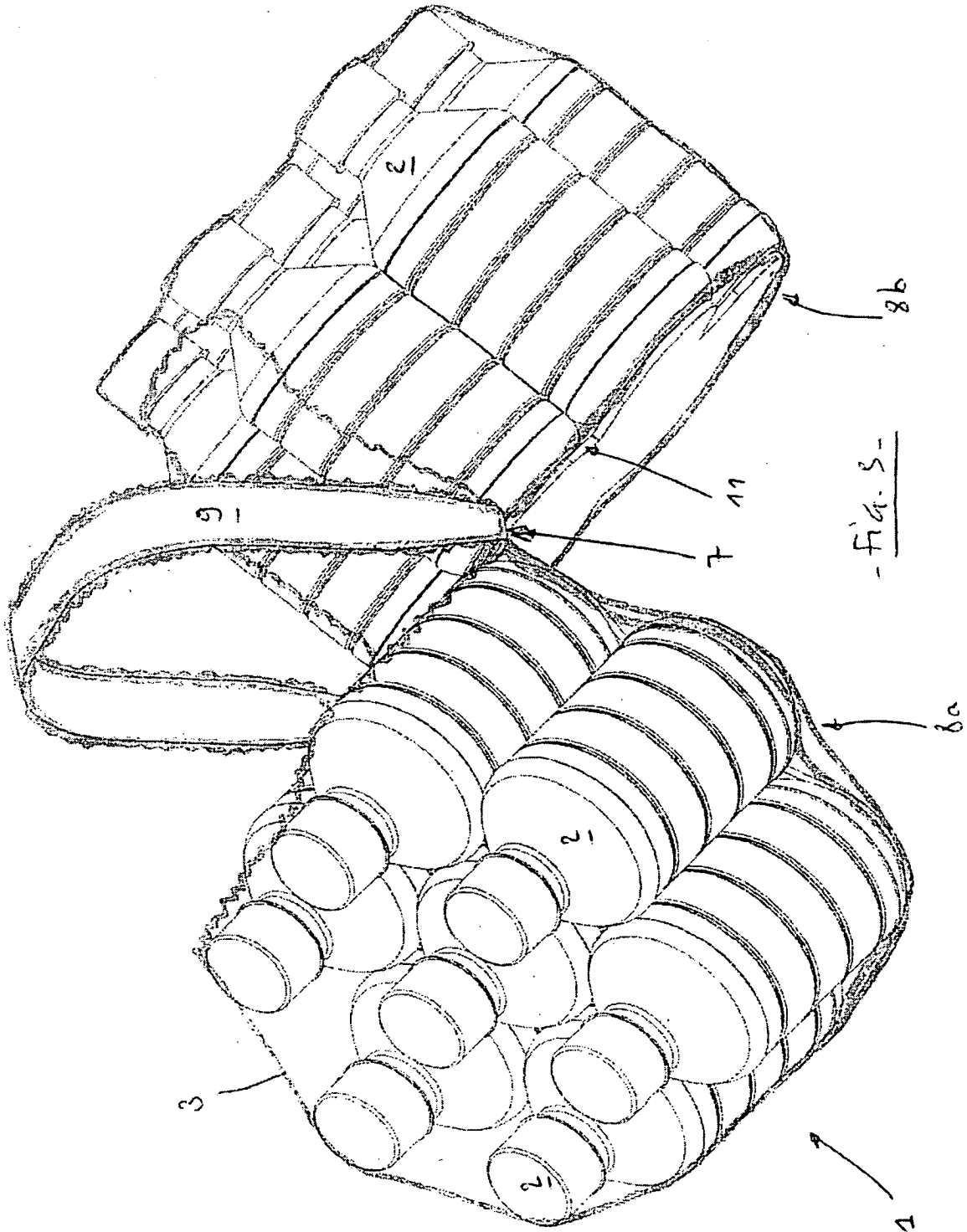
11. Emballage secondaire (1) selon l'une quelconque des revendications précédentes, dans lequel les parties (8a, 8b) de la base de l'enveloppe sont symétriques le long de la ligne de pliage (5).

12. Emballage secondaire (1) selon l'une quelconque des revendications précédentes, dans lequel les emballages primaires (2) sont des bouteilles en matière plastique contenant de l'eau.

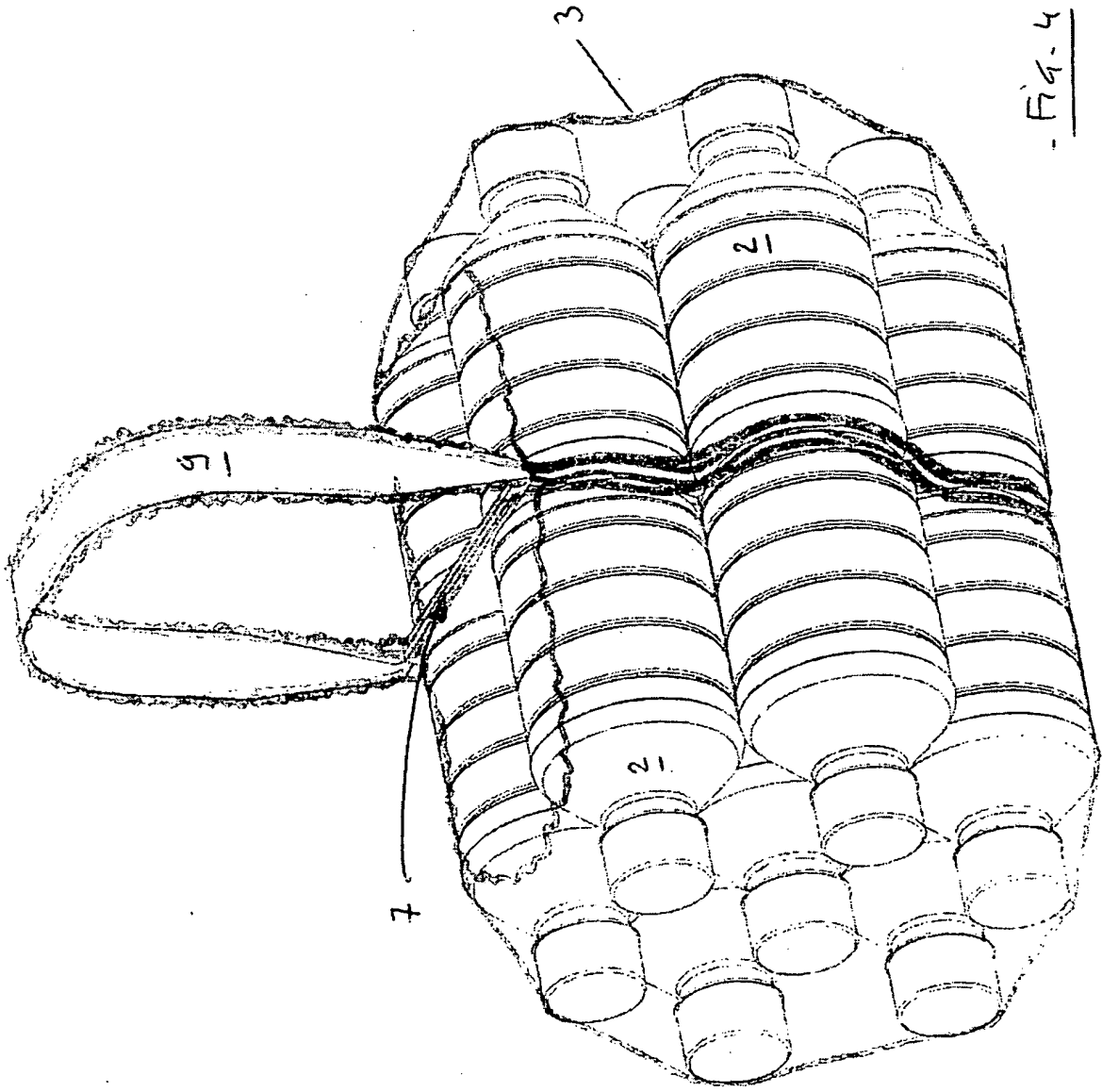


- Fig. 1 -

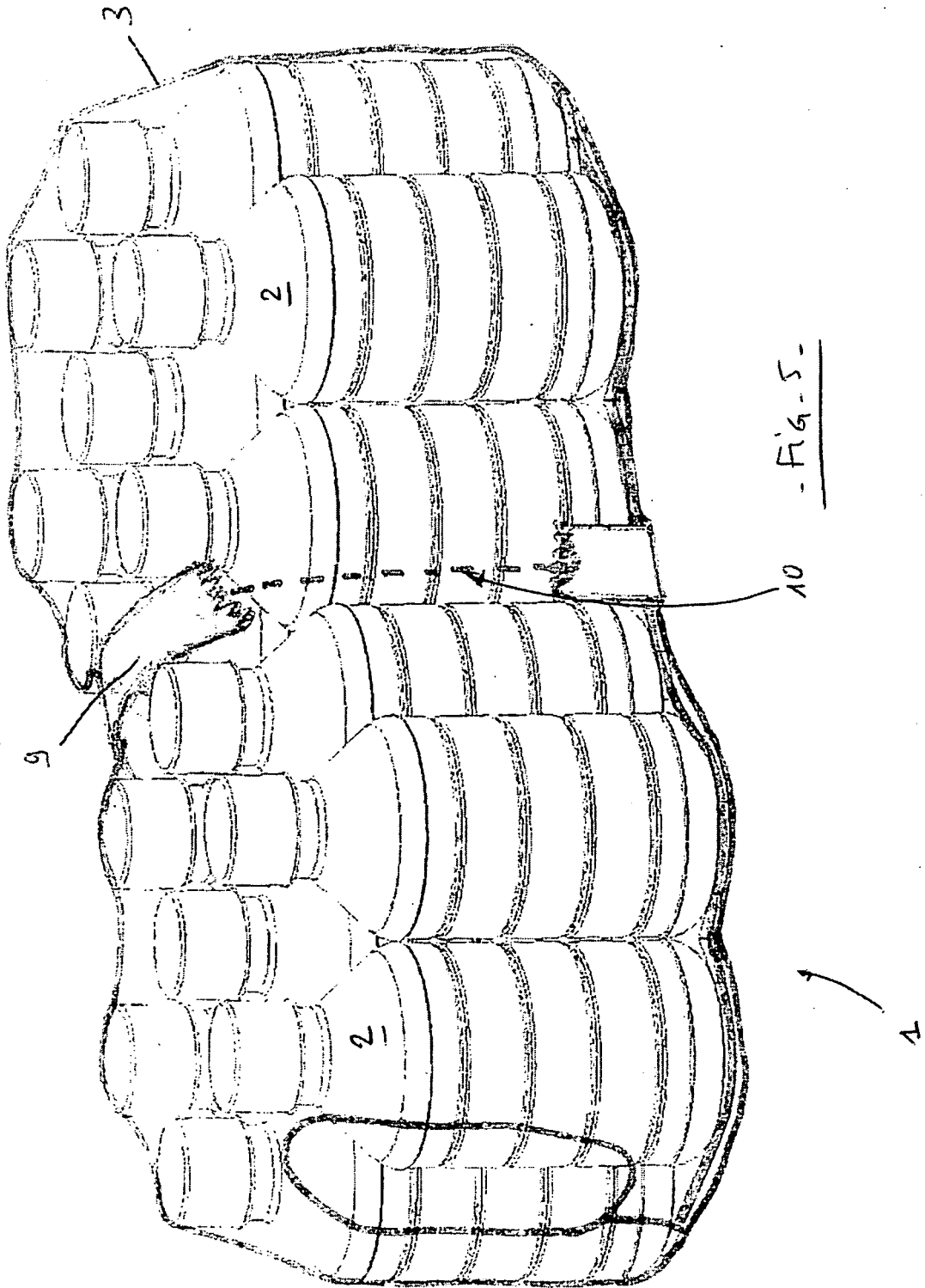




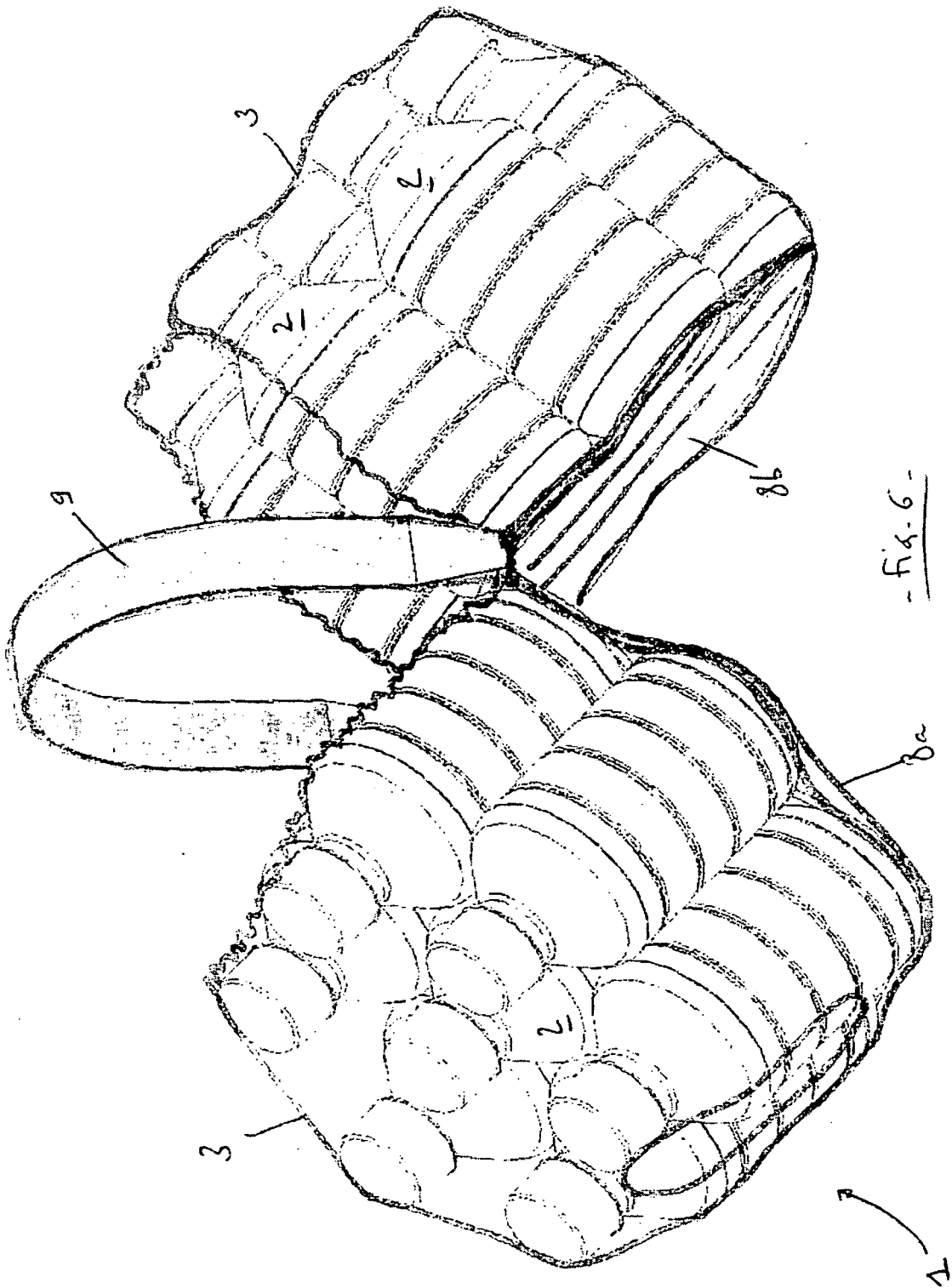
-fig. 3-

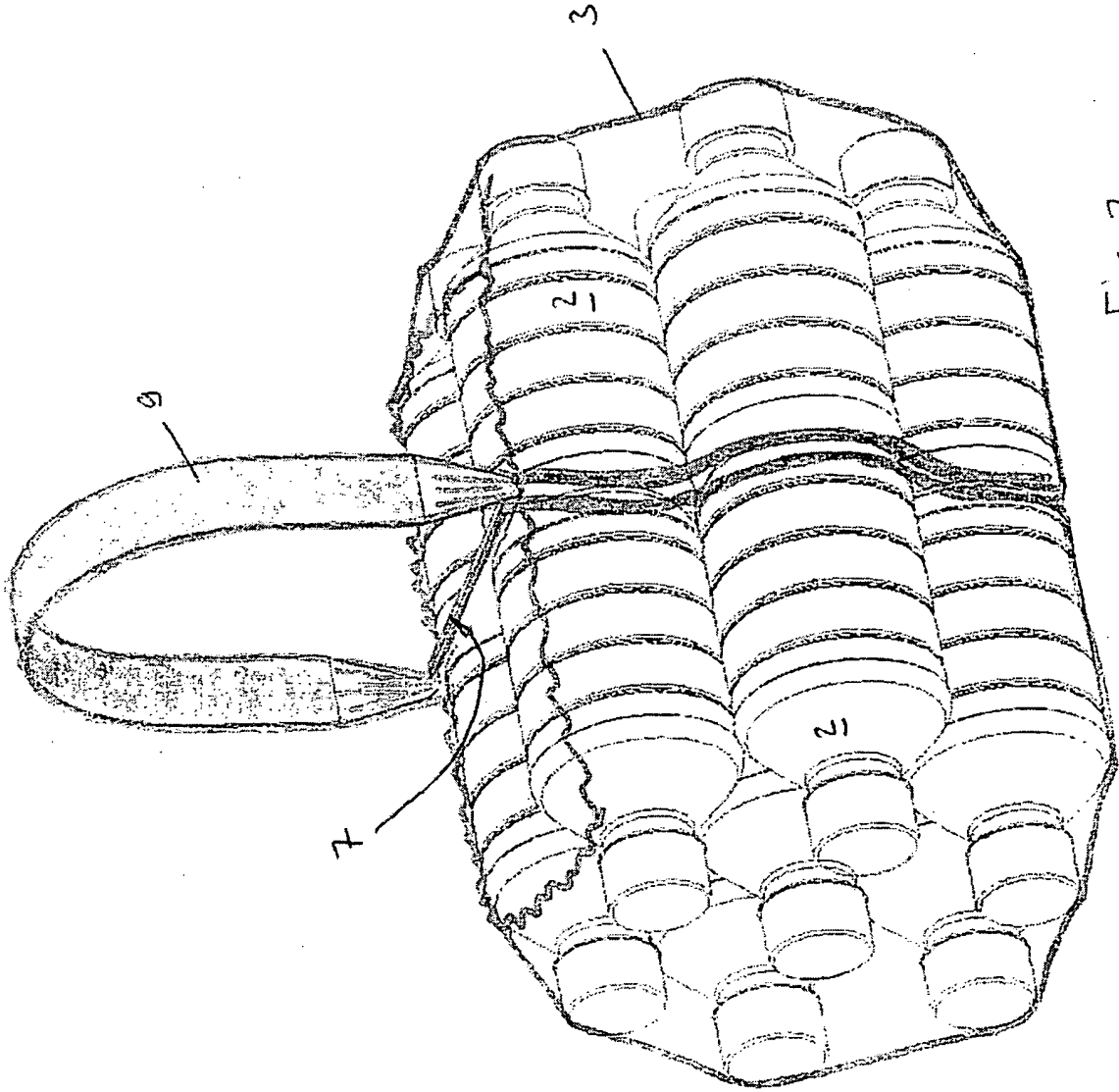


- Fig. 4 -

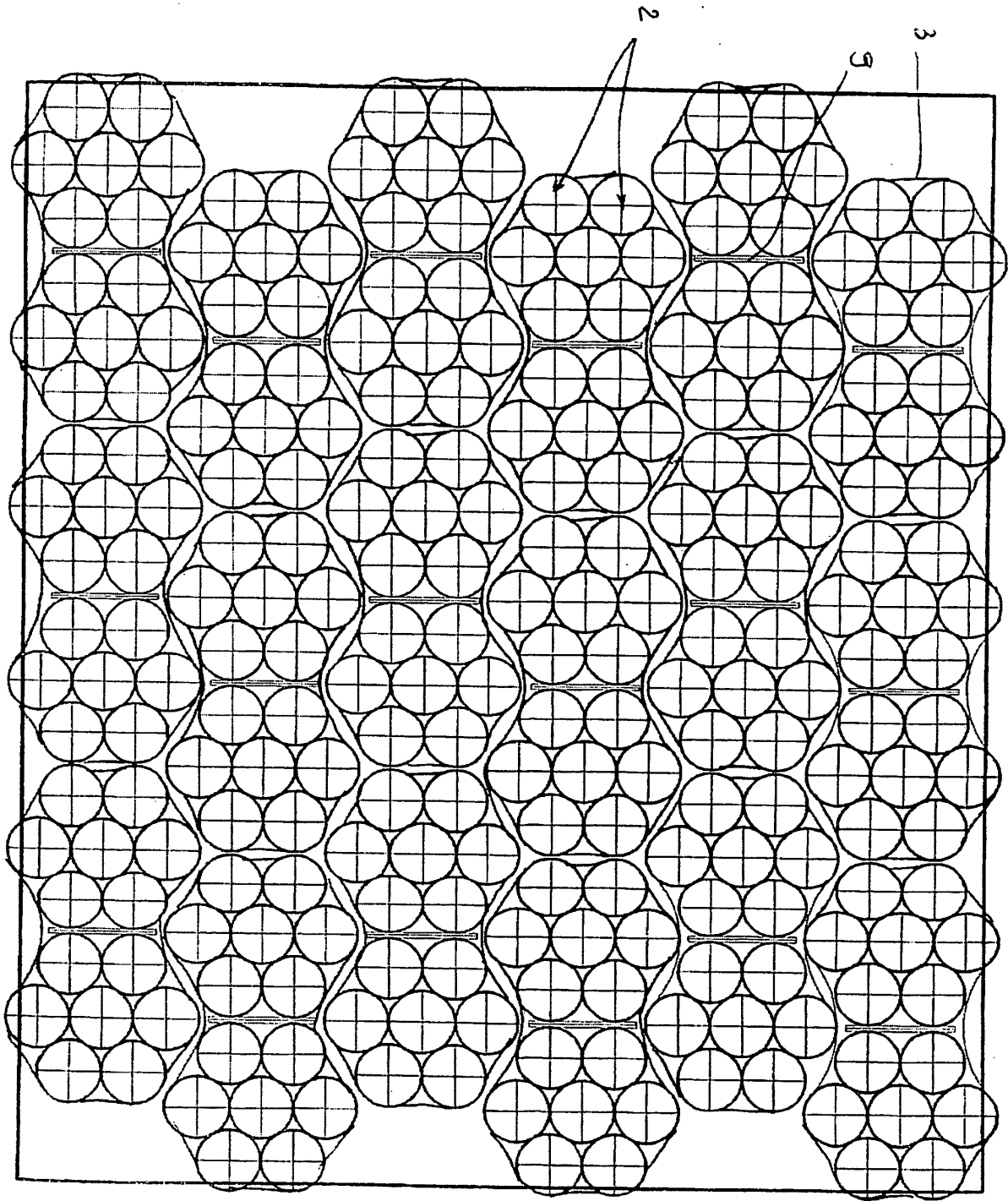


10 - FIG. 5 -





- Fig. 7 -



- Fig. 8 -

**REFERENCES CITED IN THE DESCRIPTION**

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**Patent documents cited in the description**

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