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(54)

A blister pack for tablets

(57)

The invention relates to a blister packaging (1) for tablets (4), comprising a tablet part (2) with a number of compartments (3) for accommodating a number of tablets (4), a foil part (7) for covering the tablets (4) in the tablet part (2), and through which one or more tablets (4) can be pressed out of the packaging (1), and a shell part (5) that can be arranged and secured on top of the tablet part (2) on the opposite side of the foil part (7), where the

shell part (5) conceals the tablets; and wherein the shell part (5) is attached on top of the tablet part (2). Between the shell part and the tablet part, a sheet (6) is arranged, which is non-transparent and onto which information may be printed. The shell part (5) may be manufactured from a non-transparent material. In connection with the tablet part (2) or the shell part (5) a space (10) may be provided for attachment of information in the form of a sheet, a label or the like (11).

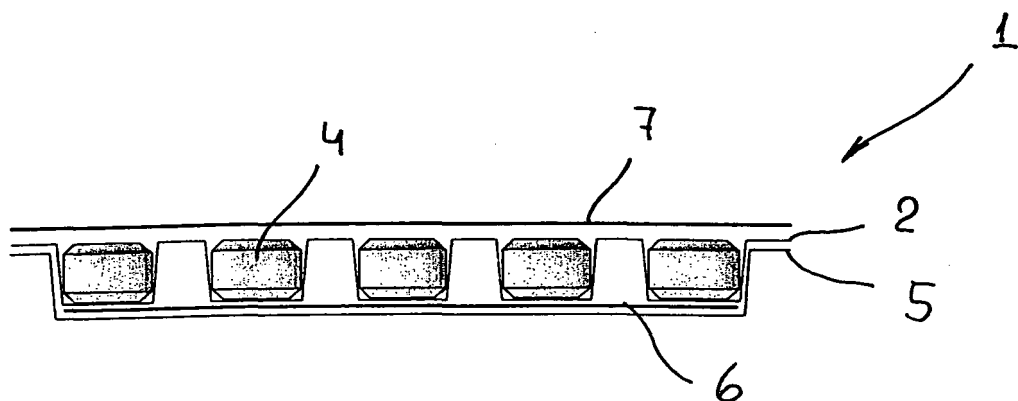


Fig.3

Description

[0001] The invention relates to a blister packaging for tablets, comprising a tablet part with a number of spaces for accommodating a number of tablets; a foil part for covering the tablets in the tablet part and through which one or more tablets can be pressed out of the packaging; and a shell part that can be arranged and secured on top of the tablet part opposite the foil part.

[0002] Blister packagings for tablets are known wherein the tablets are accommodated in each their space so as to prevent them from being shaken about in the packaging and destroyed.

[0003] It is an advantage in the context of packaging such tablets that they cannot be shaken against each other and that they are sealed on some way to prevent them from absorbing too large amounts of humidity. By having a tablet part in which the individual tablets can be received and contained, said tablet part being sealed with a covering foil, eg a foil or film of aluminium/plastics composite, each tablet is kept in position in the individual spaces until one or more tables are pressed out through the foil or the film to enable use of the tablet.

[0004] In most cases tablets for medical use are concerned, meaning that various kinds of pills are concerned, be it pills against headache, allergy, sore throat, etc. Vitamin pills may also be concerned.

[0005] Such blister packages are known from GB 1,099,499 that show a tablet part in which a number of tablets can be arranged and a foil attached to the underside of the tablet part. When they are to be used, the tablets may be pressed out through the foil one at a time. To further protect them against being crushed or destroyed, e.g. when kept in a pocket or the like, some kind of lid is hingedly connected to the tablet part, which may be snapped across the tablet part and yield additional protection against the tablets being accidentally crushed.

[0006] The protection lid being transparent, one is obviously able to see the tablets through the lid. The lid being openable and closable, it is also an option to use the space between the tablet part and the lid to advantage for insertion of informative or sales material, since such material could be seen by the user through the transparent protective lid.

[0007] However, blister packagings may be used for other kinds of tablets, eg tables that are useable within the cleaning sector or within other fields where it is not the intention that the tablets are to be ingested, but rather that they are to be used in some other context.

[0008] Therefore it is not convenient if such blister packaging with tablets can be confused with a packaging containing eg headache pills.

[0009] Since very often the tablets look alike or, at least, do not differ substantially from each other, whether used against headache or are to be added to liquid or the like in order to eg impart a cleaning effect to the tablet, it is important to be able to distinguish such tablets from each other prior to their being used in order to thereby

prevent confusion from readily occurring.

[0010] One way of relatively easily safeguarding against this is to make sure that a user does not readily take the packaging and, without reading the packaging and based on the appearance of the tablet, believes it to be eg a headache pill.

[0011] Thus, it does not suffice to indicate somewhere on the package that the tablets are not supposed to be ingested; it should also be ensured that such information remains visible on the packaging even if one or more tablets have been pressed out of the packaging.

[0012] If it attempted to solve the problem by selling the tablets in a container that differs in shape from the other containers or pill vials, the drawback remains that the tablets are not stored individually, whereby there is a risk that they are damaged by mutual contact and that they may absorb humidity in case the lid is not closed properly.

[0013] By transport from production to consumer continuous mechanical contact will often occur between the tablets when this type of packaging is concerned, meaning that they may be destroyed.

[0014] This drawback is obviated by use of a blister packaging; however, blister packagings are not available on the market that meet the requirement that substances are packaged such that the informative labelling and labelling are not lost when the product is used.

[0015] On the known blister packagings a part of the informative labelling and warnings may be lost when the tablets are pressed out through the rear side of the blister. On the rear side, which is often constituted by an aluminium foil with warning text applied, the labelling will be lost. Today, the text on the rear side of the blister is also found on the back of the box in which the blister is sold, but often the outer packaging is disposed off, following which only the blister packaging as such remains; and the text on the rear disappearing in pace with the tablets being pressed out through the foil, the informative labelling also disappears.

[0016] It is therefore the object of the invention to maintain the advantages of a blister packaging and to simultaneously avoid that the packaging is confused with headache pills or the like.

[0017] According to the invention, this is obtained by providing a shell part that conceals the tablets and by attaching the shell part on top of the tablet part.

[0018] The attachment may be accomplished by means of welding, gluing or the like suitable methods.

[0019] By thus providing the blister packaging with a shell part with a layer on top of the tablet part on the side of the tablet part that faces away from the foil part, said layer being non-transparent, it is not possible to see the tablet and hence it is not possible to confuse the tablet with eg a headache pill.

[0020] The shell part is glued, welded or otherwise permanently attached to the tablet part, whereby it is not possible to inadvertently remove the shell part from the tablet part.

[0021] According to one embodiment of the invention it is an option to position, along with and beneath the shell part, a non-transparent information part of card-board, carton, paper, plastics or the like on top of the tablet part.

[0022] According to a further embodiment the shell part as such may be manufactured from non-transparent material, optionally provided with printed text.

[0023] According to a further embodiment of the invention, where the shell part is manufactured from a non-transparent material, it is an option to provide, in an area on the tablet portion on the side or at the end thereof - where there is no space provided for accommodating tablets, an area for integrally moulding, gluing or in some other way attaching information material with a informative labelling, which area is not affected when the tablets are pressed out.

[0024] The tablet part may be configured such that several tablets can be pressed out at a time. This is particularly advantageous in cases where eg the size of the tablets influence the dosage. Those may be cases where the opening through which the tablets are to be added or dosed is so small that the size of a tablet should have to contain the appropriate amounts of active matter makes such tablet too large to pass through the delivery opening.

[0025] The invention will now be explained in further detail with reference to the drawing, wherein

Figure 1 schematically shows a tablet part showing tablets on their way down into the respective compartments;

Figure 2 schematically shows a tablet part and a shell part with an insert for being arranged between tablet part and shell part;

Figure 3 schematically shows an assembled blister packaging with tablet part, shell part with insert and a foil for securing the tablets in the tablet part prior to the individual parts being joined;

Figure 4 shows a shell part, in a view looking down into an indentation in the shell part;

Figure 5 schematically shows the contour of the shell part in a section X-X of the shell part shown in Figure 4;

Figure 6 schematically shows the contour of the shell part in a section X_2-X_2 of the shell part shown in Figure 4;

Figure 7 shows a tablet part, in a view looking down into the compartments for tablets;

Figure 8 schematically shows the contour of the shell part in a section Y-Y of the tablet part shown in Figure

7;

Figure 9 schematically shows the contour of the shell part in a section Y_2-Y_2 of the tablet part shown in figure 7;

Figure 10 schematically shows a tablet part and an insert with foldable edges prior to them being arranged in the shell part;

Figure 11 schematically shows a tablet part, wherein an insert with foldable edges is arranged in the shell part;

Figure 12 schematically shows a tablet part and an insert with foldable edges arranged in the shell part,

Figure 13 shows a shell part, in a view looking down into an indentation in the shell part, in which indentation indications are made of the position of the tablets in the assembled state of the blister packaging;

Figure 14 schematically shows the contour of the shell part in a section X-X-X of the shell part shown in figure 13;

Figure 15 schematically shows the contour of the shell part in a section X_2-X_2 of the shell part shown in figure 13;

Figure 16 schematically shows a tablet part with a protruding portion in which a label or the like is arranged prior to arrangement in the shell part;

Figure 17 schematically shows a tablet part with a protruding portion, in which a label or the like is arranged, prior to arrangement of the tablet part in the shell part.

Figure 18 schematically shows an assembled blister packaging with a tablet part with a protruding portion, in which a label or the like is arranged, a shell part and a foil for securing the tablets in the tablet part prior to the individual parts being joined;

Figure 19 schematically shows a shell part for the blister packaging shown in figures 16-18, wherein the shell part contains an indication of where the tablets are arranged in the blister packaging;

Figure 20 schematically shows the contour of the shell part in a section X-X of the shell part shown in Figure 19;

Figure 21 schematically shows the contour of the shell part in a section X_2-X_2 of the shell part shown in Figure 19;

Figure 22 schematically shows a tablet part for the blister packaging shown in Figures 16 - 18, wherein the tablet part comprises a protruding part in which a label or the like can be arranged;

Figure 23 schematically shows the contour of the tablet part in a section X-X of the tablet part shown in figure 22;

Figure 24 schematically shows the contour of the tablet part in a section X_2-X_2 of the tablet part shown in Figure 22;

Figure 25 schematically shows a tablet part shown with tablets on their way down into the respective compartments, corresponding to Figure 1;

Figure 26 schematically shows a tablet part and a shell part of non-transparent material and a foil part prior to the tablet part being arranged in the shell part, seen from the side;

Figure 27 schematically shows a tablet part and a shell part of non-transparent material and a foil part prior to the tablet part being arranged in the shell part, seen from the end;

Figure 28 shows a welding mould for a blister packaging, said welding mould having punched out portions for forming ventilated ducts in the blister packaging;

Figure 29 schematically shows a blister packaging with ventilated ducts;

Figure 30 shows a tablet part seen from the side, where the tablets are put into the tablet part; and

Figure 31 schematically shows the tablet part of Figure 30, seen from the end.

[0026] Now, convenient embodiments of the invention will be described.

[0027] A blister packaging 1 according to the invention comprises a tablet part 2 with a number of compartments 3 in which tablets 4 can be arranged, a shell part 5 and, if the shell part 5 is transparent, an insert sheet 6 and a sealing foil 7 or the like, through which a tablet 4 can be pressed out when the tablet 4 is to be used. If more than one tablet 4 is needed, the requisite number of tablets 4 can be pressed out of each their compartment 3 until the requisite number has been obtained.

[0028] The compartments 3 in the tablet part 2 are configured to each accommodate one tablet 4, to the effect that the tablets 4 can be kept in place in the packaging 1 and are unable to rattle around and bump into the remaining tablets 4 in the packaging. By providing a sealing foil 7 or the like on the open side of the tablet part 2, which

is the side from where the tablets 4 are introduced prior to sealing, it is accomplished that the tablets 4 are kept in place in their respective compartments and that the tablets do not absorb moisture, which may otherwise deteriorate the properties of the tablet 4 and optionally reduce its performance.

[0029] Hereby tablets 4 packed in such packages 1 are better protected during transport and storage than tablets 4 that are merely packed in large amounts in the same container.

[0030] The shell part 5 may be a trough-shaped part that accurately fits across the tablet part 2, where test may be applied onto the outwardly facing side of the shell part 5, or a label 6, a sheet or the like may be arranged in the shell part 5.

[0031] The shell part 5 is joined with the tablet part 2 that contains the tablets 4 to the effect that the label or the sheet 6 remains unharmed when the tablets are pressed out through the rear side 7 of the blister packaging which often consists of aluminium, cardboard carton or a thin blister foil; for instance the blister foil 7 may consist of PCC, PVdC or the like suitable materials.

[0032] The shell part 5 may be manufactured from a transparent material of the same type as the configured tablet part 2. In those cases a label or a sheet 6 featuring information or informative labelling is laid between the tablet part 2 and the shell part 5 to the effect that the text on the label or the sheet 6 can be read when shell part 5 and tablet part 2 are joined. The tablets not being directly visible it is an option to provide, in the shell part 5, a number of indications 9 showing where to apply pressure on the shell part 5 to press out the tablet 4 through the rear side of the foil 7.

[0033] Label or sheet 6 is adapted to the shell part 5 to the effect that the major part of the shape of the tablets 4 is not visible.

[0034] According to one embodiment the label or the sheet 6 may be configured with foldable sides 8, said sides extending from the label or the sheet 6 and down over/around the tablet part 2 and covering up the tablets 4 to make them non-visible.

[0035] The shell part 5 may be coloured such that the tablet part 2 that contains the tablets 4 is not visible.

[0036] The shell part 5 may also have coloured sides, to the effect that it is only the side or the bottom of the shell part 5 where the label or the sheet is inserted that is transparent.

[0037] If the shell part is completely opaque, a non-detachable label 11 may be adhered to the inwardly facing side of the shell part 5 and, likewise, a label may be printed onto the outwardly facing side.

[0038] If it is not desired to insert/adhere a label 6, 11 in or on the shell part 5, an extra space 10 may be formed, preferably at the end of or along the side of the packaging 1. For instance, the space may be formed as a punching or an embossment in the tablet part 2. In this space 10, which is transparent, a label 11 may be inserted or adhered. A non-transparent shell part 5 may then be applied

by welding or gluing or the like on top of the tablet part 2. On the rear side of the space 10 where the label or the sheet 11 is inserted, it is possible to apply text since that space remains undamaged when the tablets 4 are pressed out.

[0039] The shell part 5 may also consist of deformable carton or cardboard. In those cases the same indications and text must be printed onto the outside of the shell part. In that case the shell part must be manufactured and processed such that it can be attached to the shell part 2 by welding, gluing or the like methods.

[0040] A simplified method is to glue a simple, non-detachable label directly onto the tablet part 2.

[0041] For attaching the foil 7 to the tablet part 2 it is an option to have a particular welding mould 12 in which punch-outs are made between holes opposite the compartments 3 in the tablet part 2 and between holes opposite the compartments 3 in the tablet part 2 for each tablet and towards the rim of the welding mould corresponding to the edge of the packaging.

[0042] When the tablet part 2 and the foil 7 are joined, ventilated venting ducts are established to the effect that an excess pressure occurring in the blister packaging 1 is able to escape, whereas air is unable to penetrate into the blister packaging 1. The principle is quite simple in that the welded-on foil is not secured by welding where the ducts on the welding mould 12 are punched out. Thereby a flat "tube" appears that allows excess pressure in the blister packaging only to escape, but not to enter into the blister packaging. This is of significance to the stability of the rear side of the blister packaging since, otherwise, such high pressure may occur in the individual punched-out blisters that the rear side bursts and the tablet(s) 4 may fall out.

[0043] The packagings may be manufactured with any number of rows both in the longitudinal direction of the packaging and transversely of the packaging.

[0044] According to one embodiment of the tablet part 2, the compartments 3 or the blisters may be configured such that it is possible to press more than one tablet 4 out by applying pressure onto one blister 3 or a group of blisters 15. This may be accomplished by adapting the depth of a compartment or blister 3 for being able to receive more than one tablet 4, such that the tablets 4 rest against each other on their flat sides and are secured between the bottom of the blister 3 and the foil 7 to the effect that the tablets 4 are unable to move substantially relative to each other.

[0045] Another way in which a tablet portion 2 may be configured to dose more than one tablet 4 by being pressed out from the tablet part 2 is by having groups 15 of blisters 3 that are arranged in the tablet part 2 so that more than one tablet 4 is released by activation of a group 15 of blisters 3. To avoid, in this case, that the tablets 2 bump into each other if the packaging 1 is shaken, a number of elevations or depressions 16 may be provided in the tablet part 2. Such elevations or depressions 16 in the tablet part 2 may be arranged such that there is open

space for passage of air between the individual blisters 3 in a group 15, but no space for free passage to the surroundings. However, embodiments may be concerned where ventilation ducts are formed for being able to convey excess pressure, if any, out of each group 15 of blisters 3, but not from the surroundings and into the packaging.

[0046] A part of the elevations or depressions 16 in the tablet part 2 extend only partially down into the tablet part, whereas other elevations or depressions 16 are secured to the foil 7.

[0047] The number of blisters 3 in a group 15 is determined by the number of tablets 4 necessary for efficient dosage.

Claims

1. A blister packaging for tablets, comprising a tablet part (2) with a number of compartments (3) for accommodating a number of tablets (4), a foil part (7) for covering the tablets (4) in the tablet part (2), and through which one or more tablets (4) can be pressed out of the packaging (1), and a shell part (5) that can be arranged and secured on top of the tablet part (2) on the opposite side of the foil part (7), **characterised in that** the shell part (5) conceals the tablets; and that the shell part (5) is attached on top of the tablet part (2).
2. A blister packaging for tablets according to claim 1, **characterised in that** the shell part (5) is attached on top of the tablet part (2) by means of welding, gluing or the like.
3. A blister packaging for tablets according to claim 1 or 2, **characterised in that**, between the shell part and the tablet part, a sheet or the like (6) is arranged, which sheet (6) is non-transparent.
4. A blister packaging for tablets according to claim 3, **characterised in that** some kind of information or informative labelling is applied onto the sheet (6).
5. A blister packaging for tablets according to claim 1 or 2, **characterised in that** the shell part (5) is made of a non-transparent material.
6. A blister packaging for tablets according to claim 5, **characterised in that** the tablet part (2) comprises a space (10) for attachment of some kind of information or informative labelling in the shape of a sheet, a label or the like (11).
7. A blister packaging for tablets according to claim 5, **characterised in that** the shell part (5) comprises a space (10) for attachment of some kind of information or informative labelling in the shape of a sheet,

a label or the like (11).

8. A blister packaging for tablets according to claim 6 or 7, **characterised in that** the space (10) for attachment of some kind of information or informative labelling in the shape of a sheet, a label or the like (11) is arranged at the one end of the packaging (1). 5
9. A blister packaging for tablets according to claim 6 or 7, **characterised in that** a space (10) is arranged for attachment of some kind of information or informative labelling in the shape of a sheet, a label or the like (11) at each end of the packaging (1). 10
10. A blister packaging for tablets according to any one of the preceding claims, **characterised in that**, on the shell part (5), elevations (9) indicate where the tablets (4) are arranged in the packaging (1). 15
11. A blister packaging for tablets according to any one of the preceding claims 1-9, **characterised in that**, on the shell part (5), depressions (9) indicate where the tablets (4) are arranged in the packaging (1). 20
12. A blister packaging for tablets according to any one of the preceding claims, **characterised in that**, in the foil (7), ducts (14) are formed, which ducts extend from the individual compartments (3) and out towards the rim of the packaging (1). 25
30
13. A blister packaging for tablets according to claim 12, **characterised in that** ducts are formed between at least two compartments (3). 35
14. A blister packaging according to claim 12 or 13, **characterised in that** the ducts (14) are formed by a passage in the packaging (1) where the foil (7) is not secured to the tablet part (2) across sections of distances that correspond to the expanse of the individual ducts (14). 40
15. A blister packaging for tablets according to claim 12, 13 or 14, **characterised in that** the ducts (14) extend in parallel through the length of the packaging and/or its transverse direction. 45

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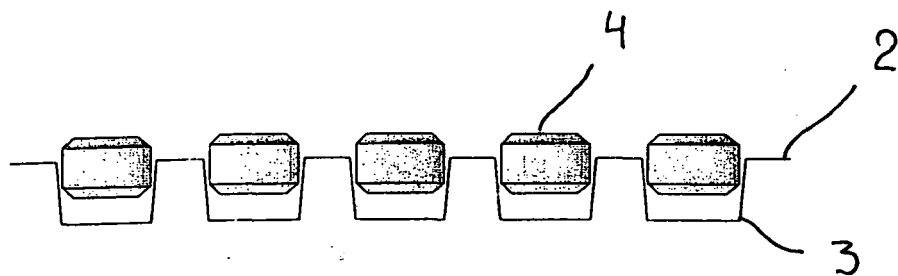


Fig.1

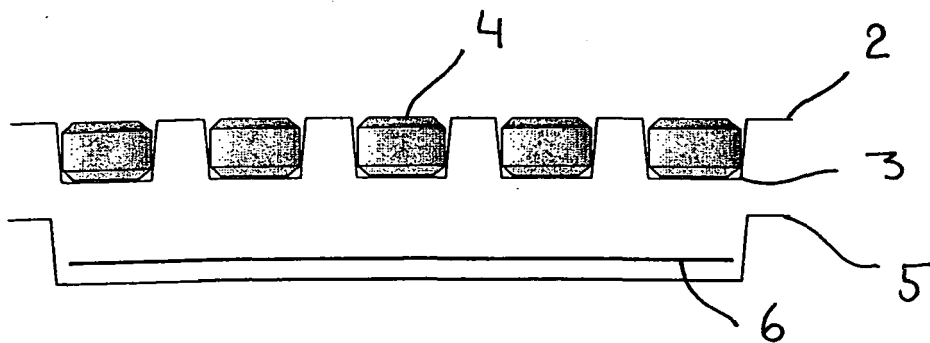


Fig.2

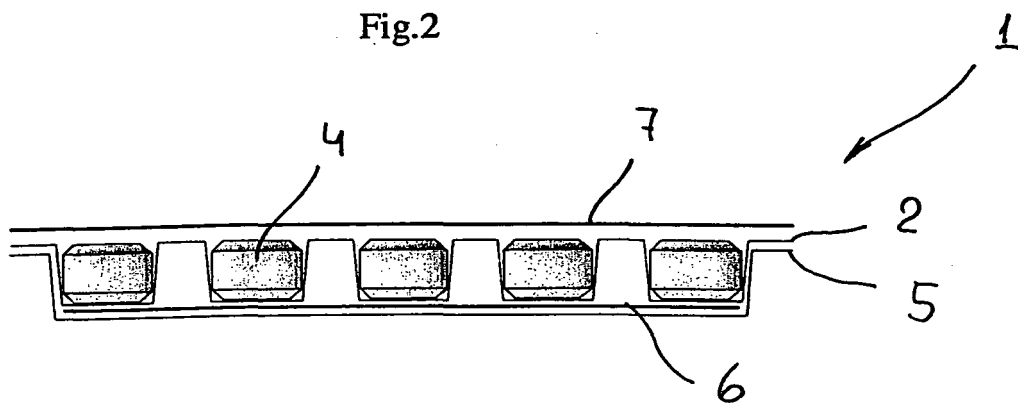


Fig.3

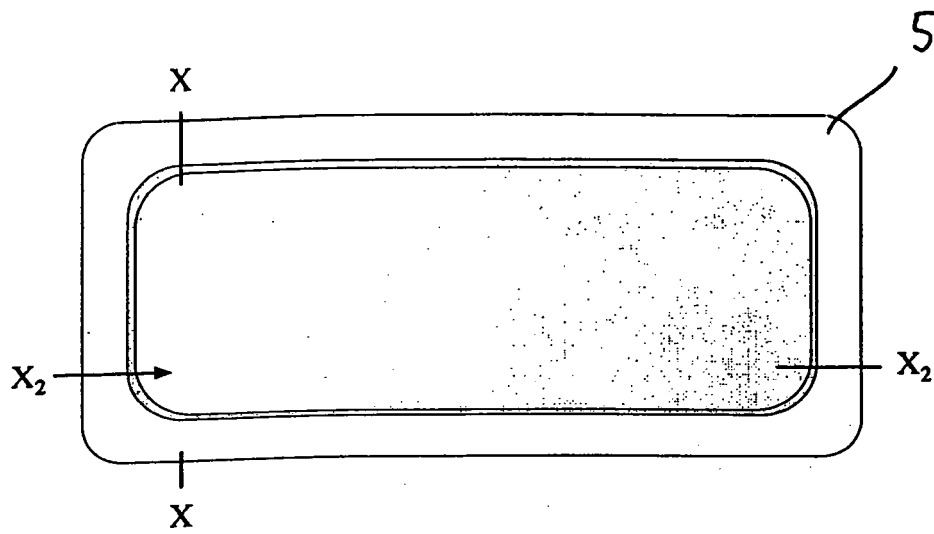


Fig. 4

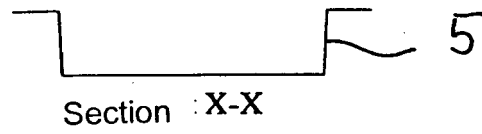


Fig. 5

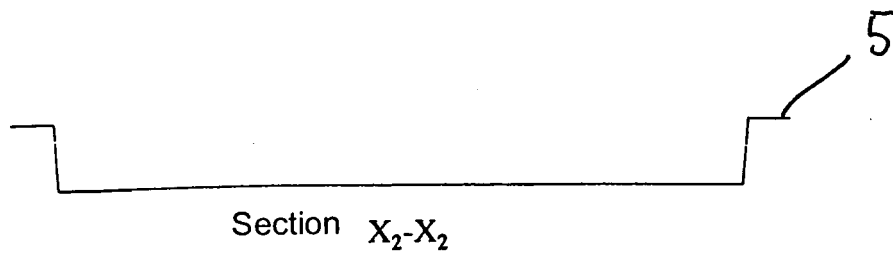


Fig. 6

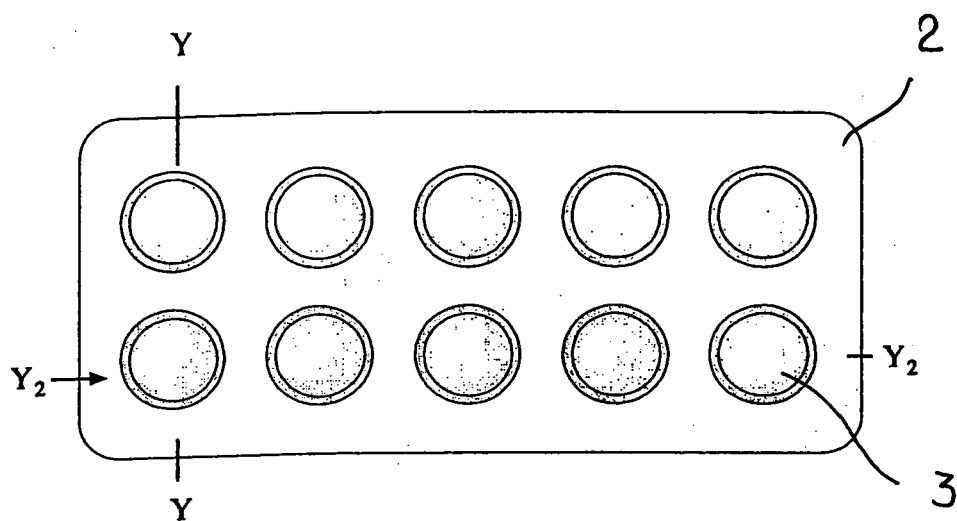


Fig. 7

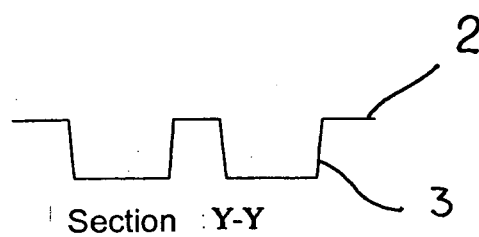


Fig. 8

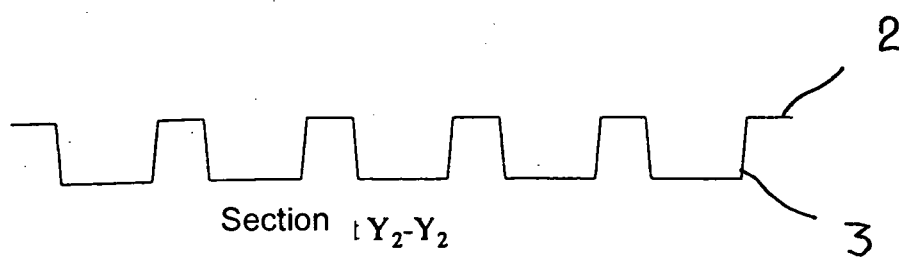


Fig. 9

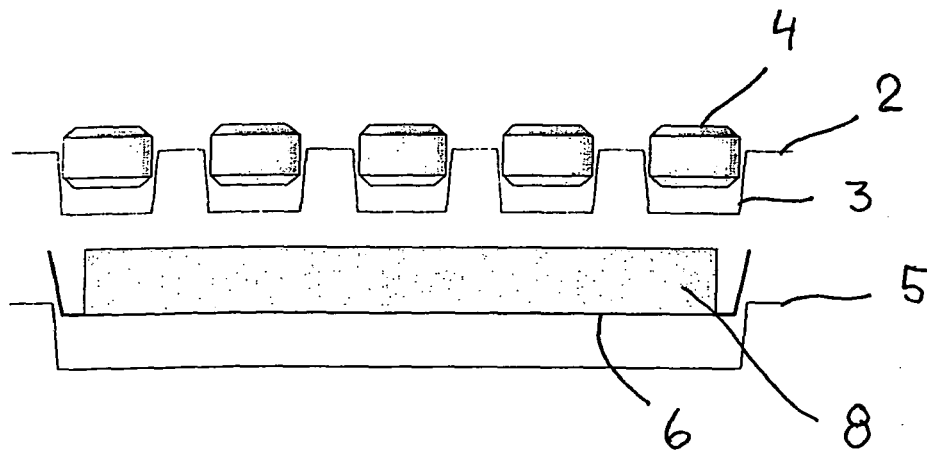


Fig.10

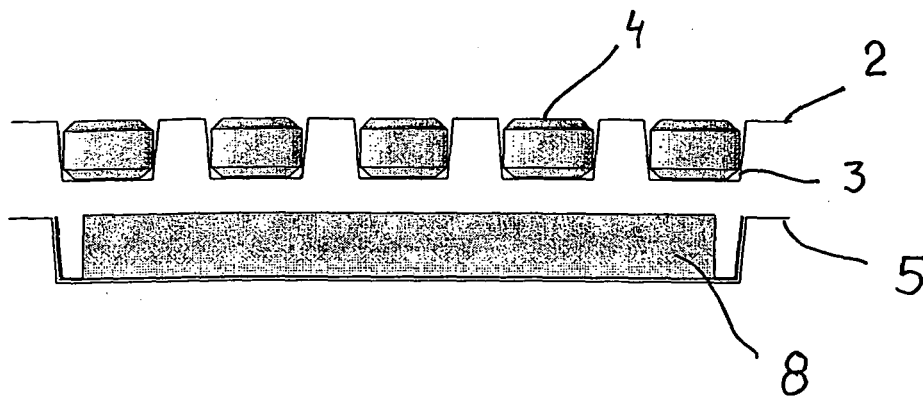


Fig.11

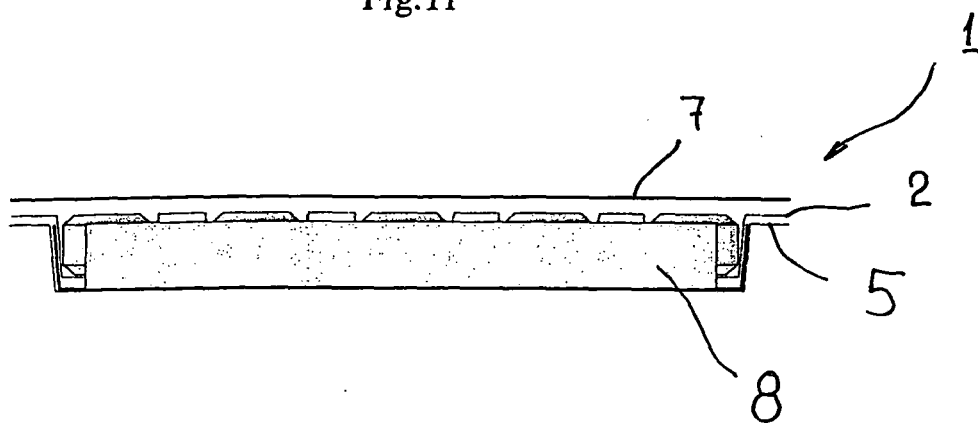


Fig.12

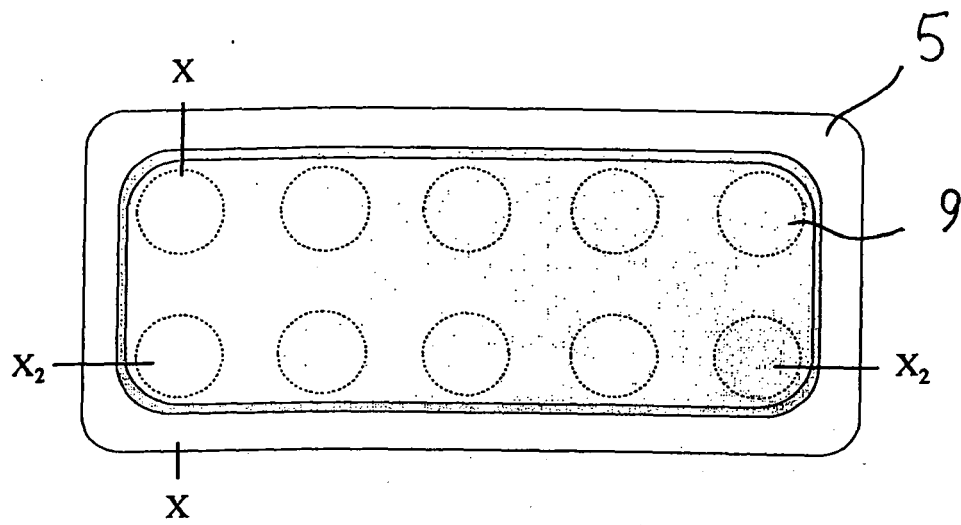


Fig. 13

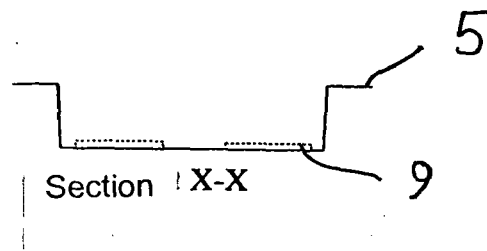


Fig. 14

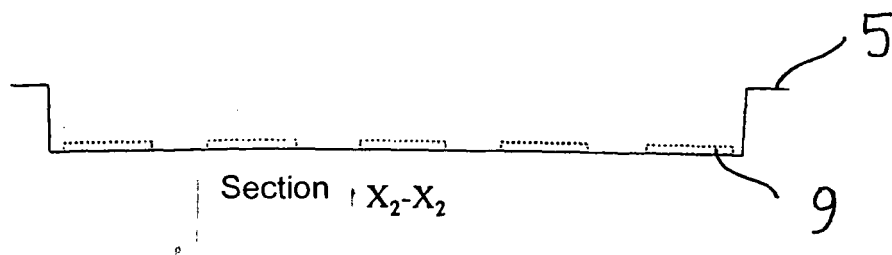


Fig. 15

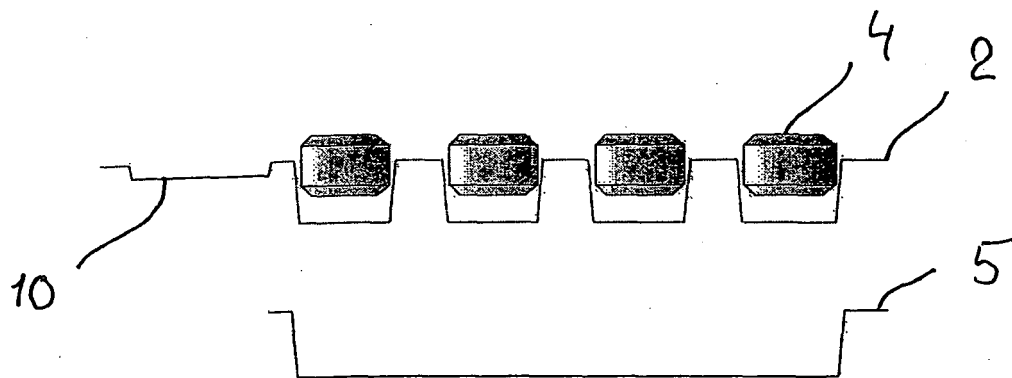


Fig.16

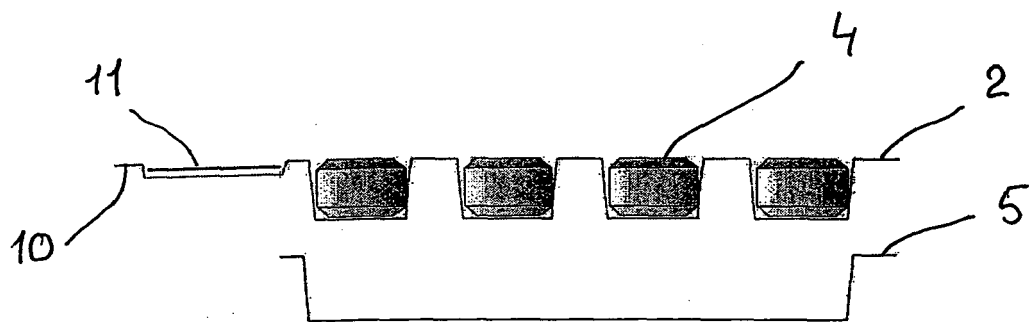


Fig.17

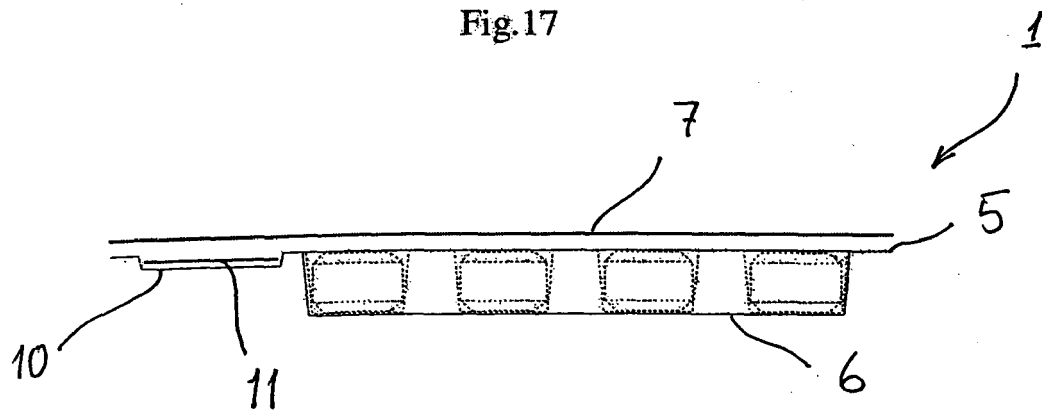


Fig.18

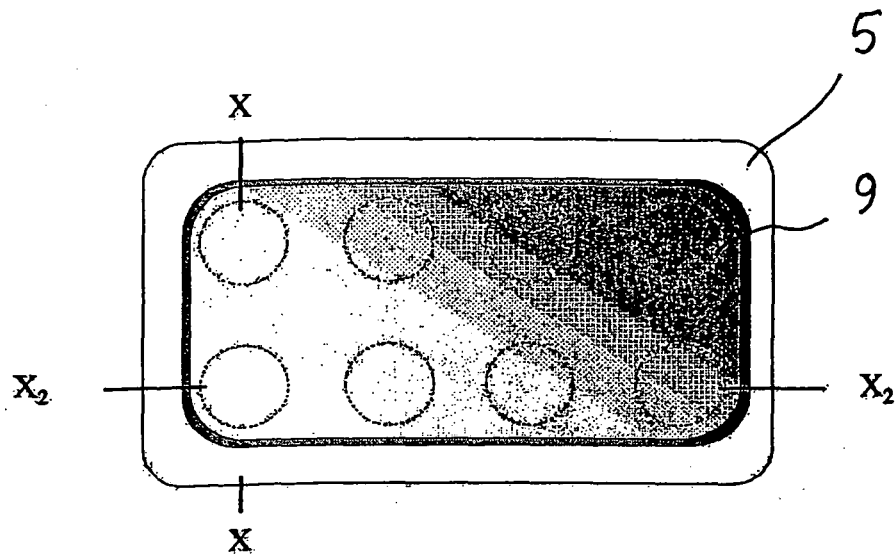


Fig. 19

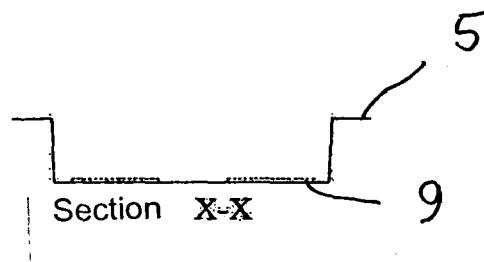


Fig. 20

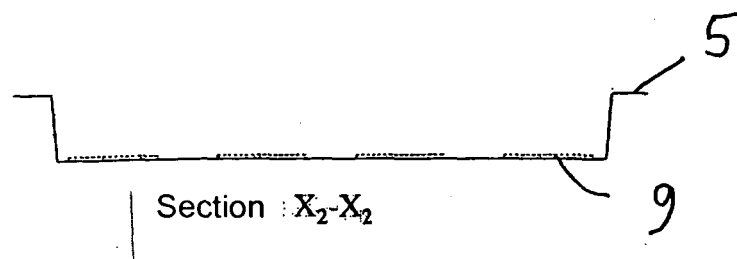


Fig. 21

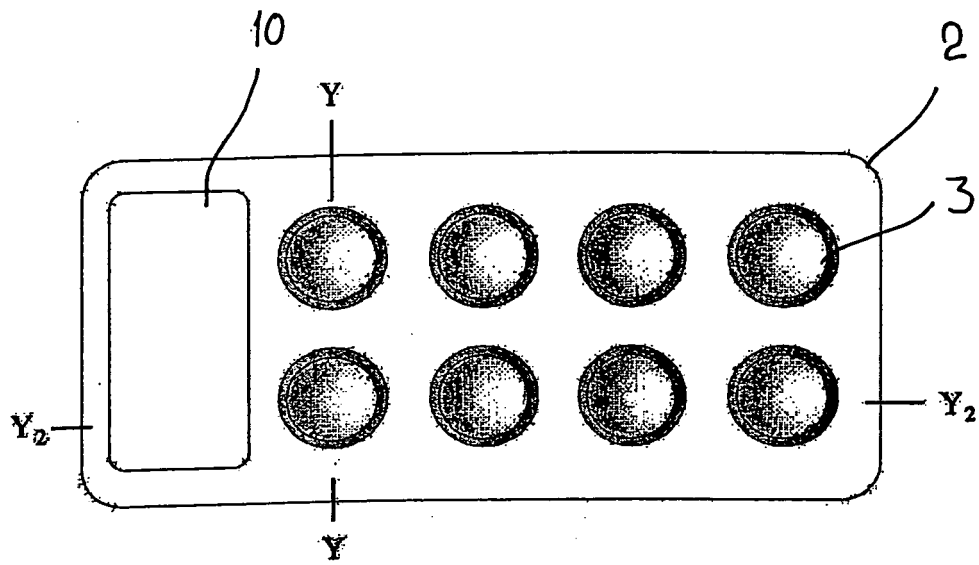


Fig. 22

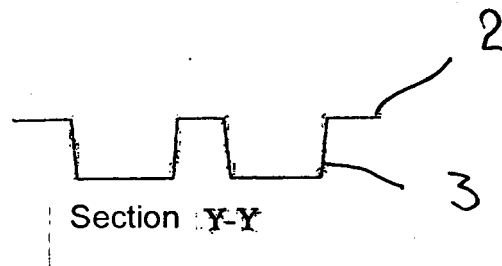


Fig. 23

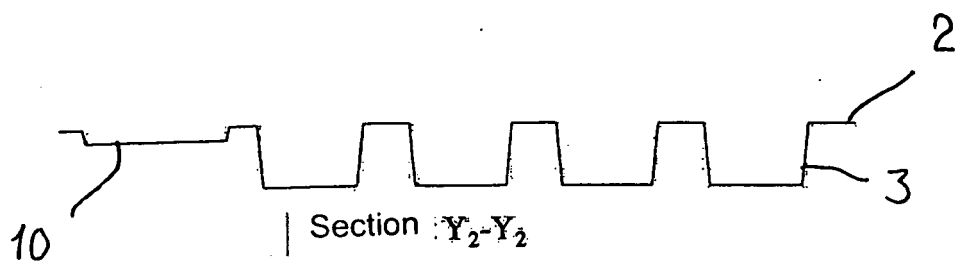


Fig. 24

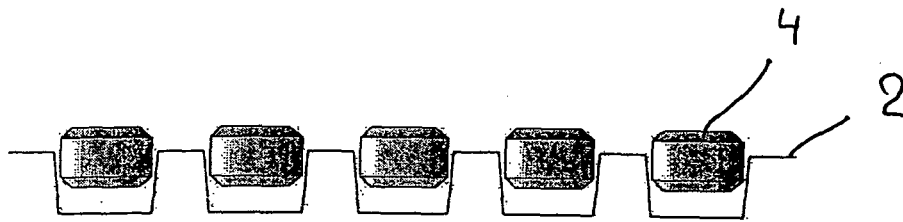


Fig.25

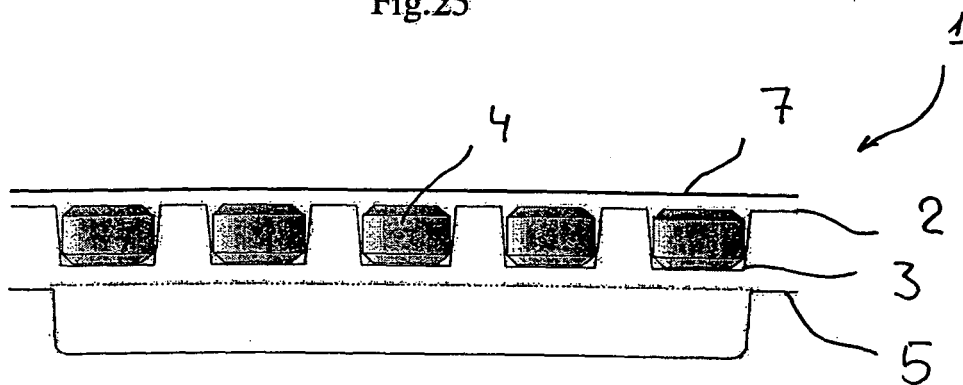


Fig.26

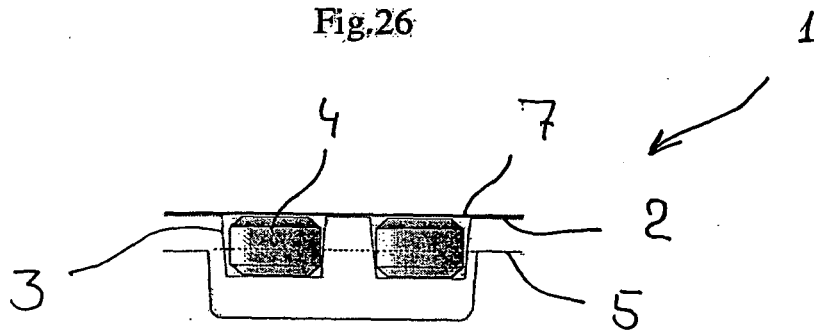


Fig.27

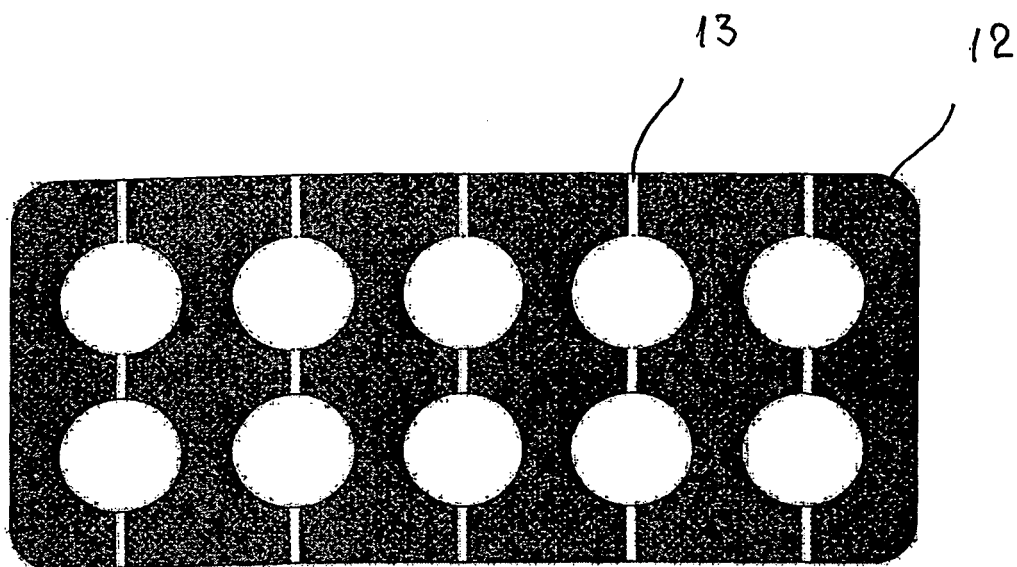


Fig. 28

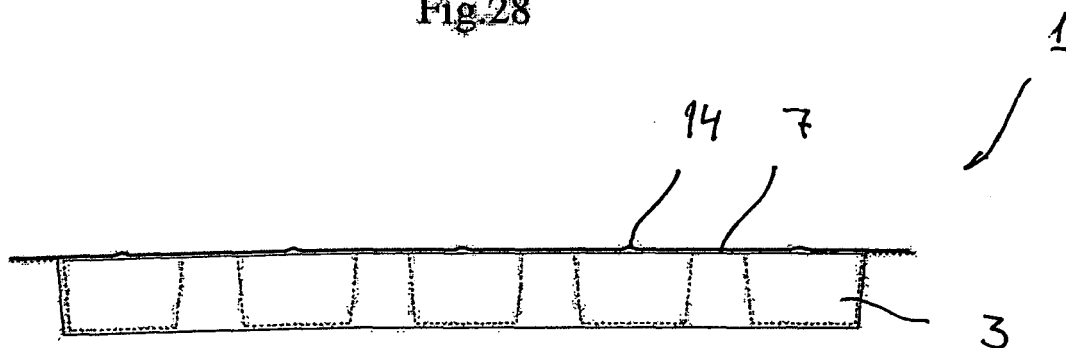


Fig. 29

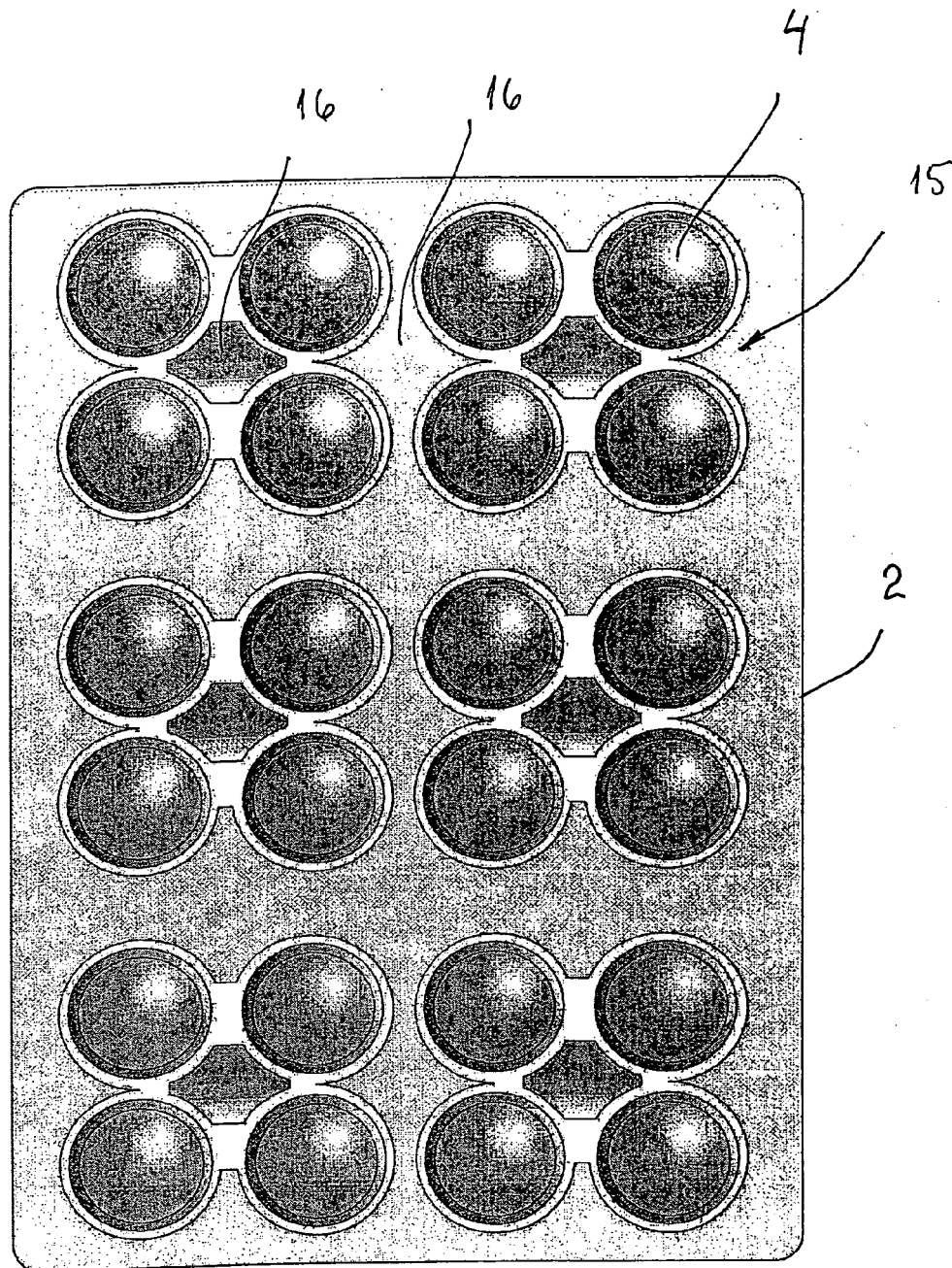


Fig.30

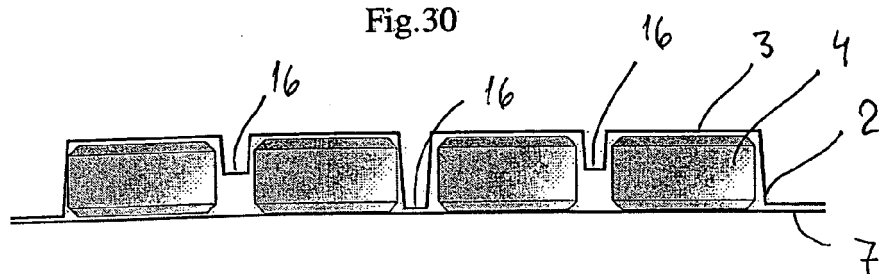


Fig.31

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- GB 1099499 A [0005]