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(54) **An article for rest**

Ruhevorrichtung

Article de repos

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Description

[0001] The present invention relates to an article for rest, such as a mattress or cushion.

[0002] For the sake of simplicity the following description refers to a mattress, although without limiting the scope of the invention.

[0003] Coverings for mattresses and the like are known which are designed to protect them from liquids which may accidentally be spilled on the mattress or on the mattress cover.

[0004] In particular, such coverings are widely used in hospitals and care homes where they are applied to every bed to protect the mattress if, for example, patients are incontinent or patients who cannot get out of bed need washing.

[0005] Water-repellent coverings are also applied on mattresses in the case of incontinent children, at home or at nursery school.

[0006] Amongst said coverings, the most widely used are oilcloths, which are placed on the mattress or on a portion of it.

[0007] Oilcloths are completely waterproof and are made using, for example, hydrophobic greasy substances such as paraffin, artificial and natural waxes and, therefore, have some disadvantages.

[0008] Firstly, the body of a user lying on the oilcloth cannot "breathe" and contact with the coating is unpleasant and unhygienic.

[0009] If a patient remains on such a surface for a lengthy period it may also cause bedsores, therefore, the patient must be moved regularly.

[0010] Moreover, the mattress, covered with the oilcloth, does not "breathe" and so has a limited life span.

[0011] In addition, the known waterproofing processes also make the cloths used as a support stiff and so not very soft, considerably reducing comfort.

[0012] It is also known, from US 2003/0121101, a covering sheet for bedding articles that is moisture vapour permeable and liquid impermeable. The covering comprises at least a moisture vapour permeable fibrous layer, such as fibres, woven, papers or cloth, and a liquid impermeable but moisture vapour permeable film layer of preferred thermoplastic compositions. The two layers are bonded together, so giving rise to a composite structure.

[0013] In this context, the main purpose of the present invention is to propose an article for promoting rest, in particular a mattress, which is free of the above-mentioned disadvantages.

[0014] In particular, the aim of the present invention is to propose an article for rest which is comfortable and absolutely hygienic.

[0015] Another aim of the present invention is to produce a covering for an item for rest which help to prevent bedsores if the patient is immobile in bed for lengthy periods.

[0016] Yet another aim is to produce an article for rest whose life span is not compromised by a lack of breath-

ability.

[0017] The stated technical need and the preset aims are substantially fulfilled by an article for promoting rest as described in the independent claim 1 and in one or more of the dependent claims herein.

[0018] Further features and advantages of the present invention are more apparent in the detailed description below, with reference to a preferred, non-limiting, embodiment of an article for promoting rest, in particular for mattresses and cushions, illustrated in the accompanying drawings, in which:

- Figure 1 is a schematic perspective view of a mattress in accordance with the present invention;
- Figure 2 is a schematic perspective view of a cushion in accordance with the present invention;
- Figure 3 is an enlarged schematic view of a cross-section of an article for rest in accordance with the present invention;
- Figure 4 is a view of a covering in accordance with the present invention, in a condition in which it is repelling a liquid substance;
- Figure 5 is an enlarged view of a detail from Figure 4;
- Figure 6 is a view of a second embodiment of the covering in accordance with the present invention, in a condition in which it is repelling a liquid substance;
- Figure 7 is an enlarged view of a detail from Figure 6;
- Figure 8 shows a cotton sample of the covering in accordance with the present invention;
- Figure 9 shows a towelling sample of the covering in accordance with the present invention.

[0019] With reference to Figures 1 and 2, the numeral 1 denotes as a whole an article for promoting rest.

[0020] In particular, by way of example and without thereby limiting the scope of the invention, Figure 1 illustrates a mattress 2 and Figure 2 a cushion 3.

[0021] As illustrated in Figure 3, the article 1 consists of a shell 4 filled with soft material 5 and a covering 6 which at least partly covers the shell 4.

[0022] As illustrated in Figures 1 and 2, the covering 6 covers the whole of the shell 4, forming a sort of cover.

[0023] The covering 6 comprises a textile support 7, that is to say textile material-based and with a basic textile structure, on which a film 8 is fixed making the covering 6 waterproof and permeable to air.

[0024] The film 8 is made from a resin, in particular a fluorocarbon resin, diluted in water.

[0025] The support 7 is treated with the resin, which is applied to it dry and subsequently fixed.

[0026] The support 7 is preferably immersed in a solution or emulsion containing the resin then dried.

[0027] The resin, in particular, is fixed using heat at a temperature of between 110°C and 150°C and, preferably, at around 130°C.

[0028] The film 8 may also be polyurethane-based, that is to say comprising polyurethane, which is spread

on the support 7 using an aqueous solution.

[0029] In the preferred embodiment illustrated, the support 7 consists of a fabric 9, in other words, the support 7 is obtained by weaving textile fibres and yarns.

[0030] As illustrated in Figures 4, 5 and 8, in a first embodiment the fabric is cotton 10, whilst, as illustrated in Figures 6, 7 and 9, in a second embodiment the fabric is towelling 11.

[0031] In another embodiment, not illustrated, the support 7 is a non-woven fabric of the substantially known type.

[0032] The covering 6 is stain-resistant, that is to say, substances which accidentally come into contact with the article 1 do not penetrate the support 7, instead remaining on the surface of the covering 6 without reaching, in particular, the shell 4 and the soft material 5.

[0033] As illustrated in Figures 4 to 7, a liquid 12 remains suspended on the covering 6, in particular on the film 8.

[0034] Therefore, the liquid 12 does not reach the support 7, which remains substantially dry.

[0035] The covering 6 is removable from the article 1, for example so that it may be washed, preferably in water.

[0036] If the film 8 comprises polyurethane, the covering 6 is produced by immersing the support 7 in an aqueous solution containing the polyurethane.

[0037] The impregnated support 7 is subsequently passed through calendering means, of the known type and not described in further detail, then dried in the known way.

[0038] The invention brings important advantages.

[0039] The article for rest with the covering disclosed is water-repellent and breathable, guaranteeing comfortable contact with human skin.

[0040] The covering repels both moisture from the body and liquids accidentally spilled on the mattress or on the cushion.

[0041] In this way, the article for rest or the covering are ideal for particular situations involving prolonged immobility in bed, incontinence and the like.

[0042] Moreover, the high level of breathability helps to prevent bedsores.

[0043] The invention described has evident industrial applications and can be modified and adapted without thereby departing from the scope of the inventive concept as defined by the appended claims.

Claims

1. An article for rest comprising an outer shell (4) filled with a soft material (5), a covering (6) which at least partly covers the shell (4), the covering (6) comprising a textile support (7) and means (8) for making it impermeable to liquids, said means being attached to the support (7), the means (8) for making it impermeable to liquids being permeable to air, the article being **characterised in that** the covering (6) also

repels moisture from the body.

2. The article according to claim 1, **characterised in that** the means (8) for making the support impermeable form a film (8) which is permeable to air, the film (8) being fixed on the covering (6).

3. The article according to claim 2, **characterised in that** the film (8) is made from a resin.

4. The article according to claim 3, **characterised in that** the resin is a fluorocarbon resin.

5. The article according to claim 4, **characterised in that** the fluorocarbon resin is diluted in water.

6. The article according to any of the claims from 3 to 5, **characterised in that** the resin is fixed using heat on the covering (6).

7. The article according to claim 6, **characterised in that** the resin is fixed using heat at a temperature of between 110°C and 150°C.

8. The article according to claim 7, **characterised in that** the resin is fixed using heat at a temperature of around 130°C.

9. The article according to claim 2, **characterised in that** the film (8) comprises polyurethane.

10. The article according to claim 9, **characterised in that** the polyurethane is deposited on the support (7) using an aqueous solution.

11. The article according to any of the claims from 1 to 10, **characterised in that** the support (7) consists of a fabric.

12. The article according to claim 11, **characterised in that** the fabric comprises cotton (10).

13. The article according to claim 11 or 12, **characterised in that** the fabric comprises towelling (11).

14. The article according to any of the claims from 1 to 10, **characterised in that** the support (7) consists of a non-woven fabric.

15. The article according to any of the claims from 1 to 12, **characterised in that** the covering (6) is removable from the shell (4).

16. The article according to any of the foregoing claims, **characterised in that** the covering (6) is stain-resistant.

Patentansprüche

1. Ruhevorrichtung, enthaltend eine mit einem weichen Material (5) gefüllte äussere Hülle (4), eine Abdeckung (6), welche wenigstens teilweise die Hülle (4) abdeckt, wobei die Abdeckung (6) einen Textilträger (7) und Mittel (8) enthält, die ihn für Flüssigkeiten undurchlässig machen, wobei die genannten Mittel mit dem Träger (7) verbunden sind, und wobei die Mittel (8), die ihn für Flüssigkeiten undurchlässig machen, luftdurchlässig sind, wobei die Vorrichtung **dadurch gekennzeichnet ist, dass** die Abdeckung (6) ebenfalls Körperfeuchtigkeit abweist.
2. Vorrichtung nach Patentanspruch 1, **dadurch gekennzeichnet, dass** die Mittel (8), welche den Träger undurchlässig machen, einen Film (8) bilden, welcher luftdurchlässig ist, wobei der Film (8) auf der Abdeckung (6) befestigt ist.
3. Vorrichtung nach Patentanspruch 2, **dadurch gekennzeichnet, dass** der Film (8) aus einem Harz hergestellt ist.
4. Vorrichtung nach Patentanspruch 3, **dadurch gekennzeichnet, dass** das Harz ein Fluorkohlenstoffharz ist.
5. Vorrichtung nach Patentanspruch 4, **dadurch gekennzeichnet, dass** das Fluorkohlenstoffharz in Wasser verdünnt ist.
6. Vorrichtung nach einem beliebigen der Patentansprüche von 3 bis 5, **dadurch gekennzeichnet, dass** das Harz unter der Wirkung von Hitze auf der Abdeckung (6) angebracht ist.
7. Vorrichtung nach Patentanspruch 6, **dadurch gekennzeichnet, dass** das Harz unter der Wirkung von Hitze bei einer Temperatur zwischen 110° und 150° angebracht ist.
8. Vorrichtung nach Patentanspruch 7, **dadurch gekennzeichnet, dass** das Harz unter der Wirkung von Hitze bei einer Temperatur von etwas 130° angebracht ist.
9. Vorrichtung nach Patentanspruch 2, **dadurch gekennzeichnet, dass** der Film (8) Polyurethan enthält.
10. Vorrichtung nach Patentanspruch 9, **dadurch gekennzeichnet, dass** das Polyurethan unter Verwendung einer wässrigen Lösung auf den Träger (7) aufgetragen ist.
11. Vorrichtung nach einem beliebigen der Patentansprüche von 1 bis 10, **dadurch gekennzeichnet,**

dass der Träger (7) aus einem Textilgewebe besteht.

12. Vorrichtung nach Patentanspruch 11, **dadurch gekennzeichnet, dass** das Textilgewebe Baumwolle (10) enthält.
13. Vorrichtung nach Patentanspruch 11 oder 12, **dadurch gekennzeichnet, dass** das Textilgewebe Frottee (11) enthält.
14. Vorrichtung nach einem beliebigen der Patentansprüche von 1 bis 10, **dadurch gekennzeichnet, dass** der Träger (7) aus einem Vliesstoff besteht.
15. Vorrichtung nach einem beliebigen der Patentansprüche von 1 bis 12, **dadurch gekennzeichnet, dass** die Abdeckung (6) von der Hülle (4) abnehmbar ist.
16. Vorrichtung nach einem beliebigen der vorstehenden Patentansprüche, **dadurch gekennzeichnet, dass** die Abdeckung (6) fleckenabweisend ist.

Revendications

1. Un article de repos comprenant une enveloppe extérieure (4) remplie d'un matériau mou (5), un revêtement (6) qui recouvre au moins partiellement l'enveloppe (4), le revêtement (6) comprenant un support textile (7) et des moyens (8) destinés à le rendre imperméable aux liquides, lesdits moyens étant associés au support (7), les moyens (8) d'imperméabilisation aux liquides étant perméables à l'air, l'article étant **caractérisé en ce que** le revêtement (6) empêche aussi l'infiltration de l'humidité provenant du corps humain.
2. L'article selon la revendication 1, **caractérisé en ce que** les moyens (8) d'imperméabilisation du support forment une pellicule (8) qui est perméable à l'air, ladite pellicule (8) étant fixée sur le revêtement (6).
3. L'article selon la revendication 2, **caractérisé en ce que** la pellicule (8) est réalisée à partir d'une résine.
4. L'article selon la revendication 3, **caractérisé en ce que** la résine est une résine fluorocarbonée.
5. L'article selon la revendication 4, **caractérisé en ce que** la résine fluorocarbonée est diluée dans de l'eau.
6. L'article selon l'une quelconque des revendications de 3 à 5, **caractérisé en ce que** la résine est thermofixée sur le revêtement (6).

7. L'article selon la revendication 6, **caractérisé en ce que** la résine est thermofixée à une température comprise entre 100°C et 150°C.
8. L'article selon la revendication 7, **caractérisé en ce que** la résine est thermofixée à une température de 130°C environ. 5
9. L'article selon la revendication 2, **caractérisé en ce que** la pellicule (8) comprend du polyuréthane. 10
10. L'article selon la revendication 9, **caractérisé en ce que** le polyuréthane est déposé sur le support (7) en utilisant une solution aqueuse. 15
11. L'article selon l'une quelconque des revendications de 1 à 10, **caractérisé en ce que** le support (7) est constitué d'un tissu.
12. L'article selon la revendication 11, **caractérisé en ce que** le tissu comprend du coton (10). 20
13. L'article selon la revendication 11 ou 12, **caractérisé en ce que** le tissu comprend du tissu-éponge (11). 25
14. L'article selon l'une quelconque des revendications de 1 à 10, **caractérisé en ce que** le support (7) est constitué d'un tissu non tissé.
15. L'article selon l'une quelconque des revendications de 1 à 12, **caractérisé en ce que** le revêtement (6) peut être enlevé de l'enveloppe (4). 30
16. L'article selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le revêtement (6) est antitaches. 35

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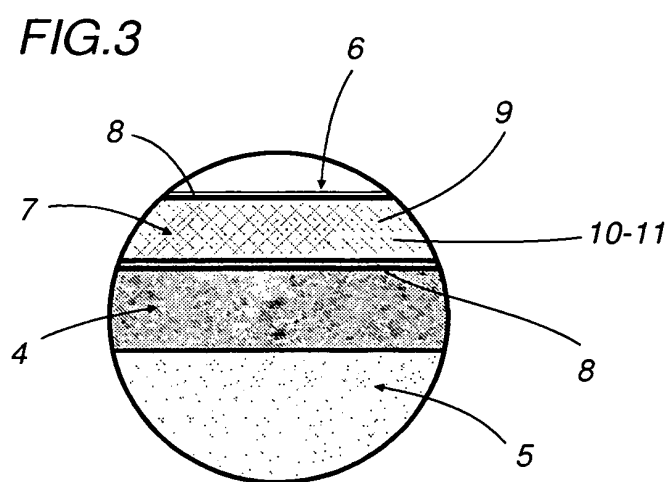
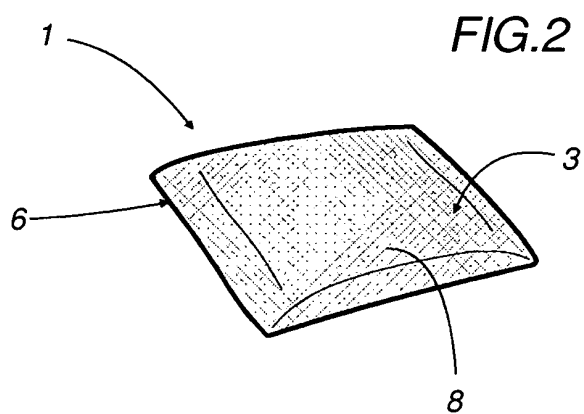
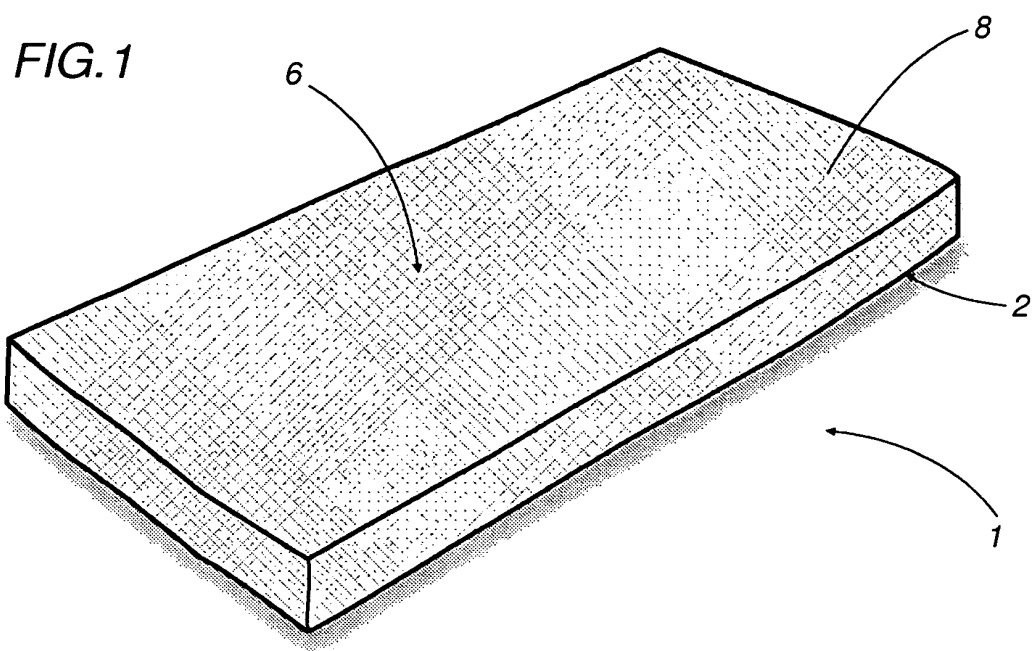


FIG.4

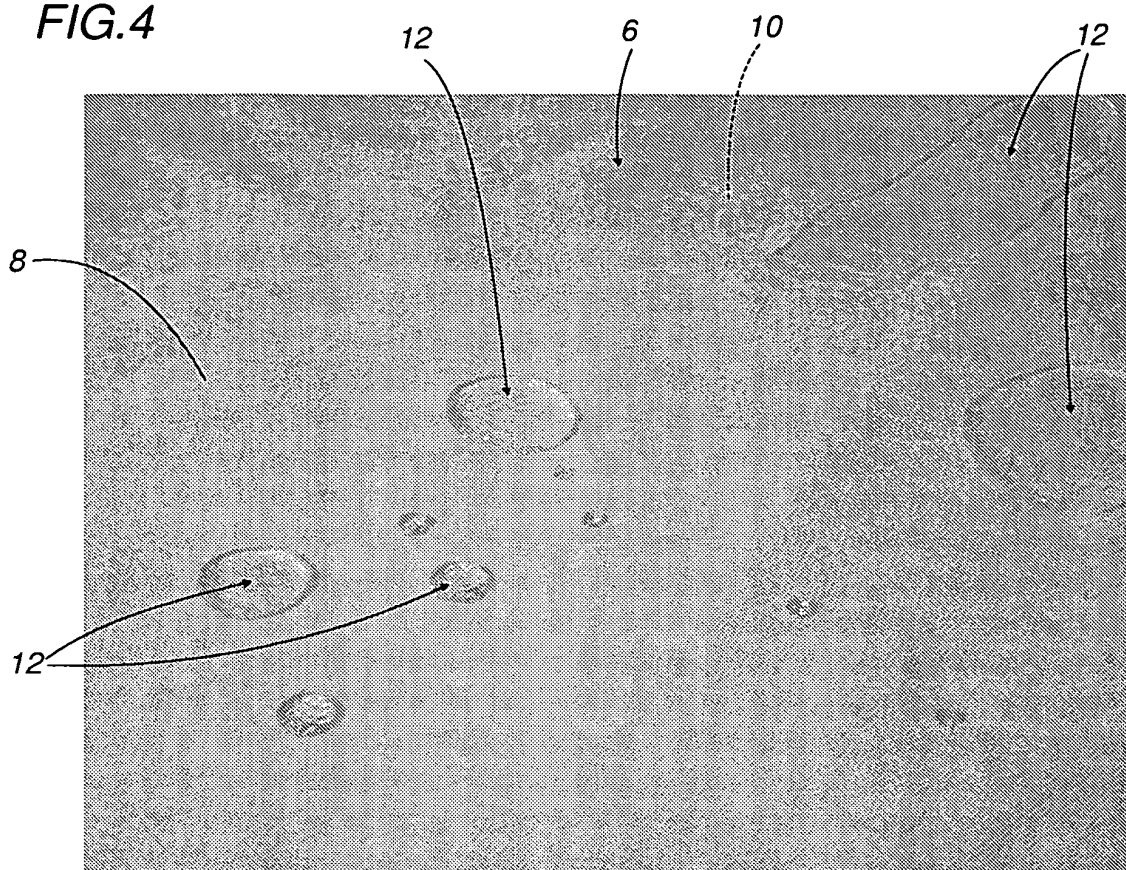


FIG.5

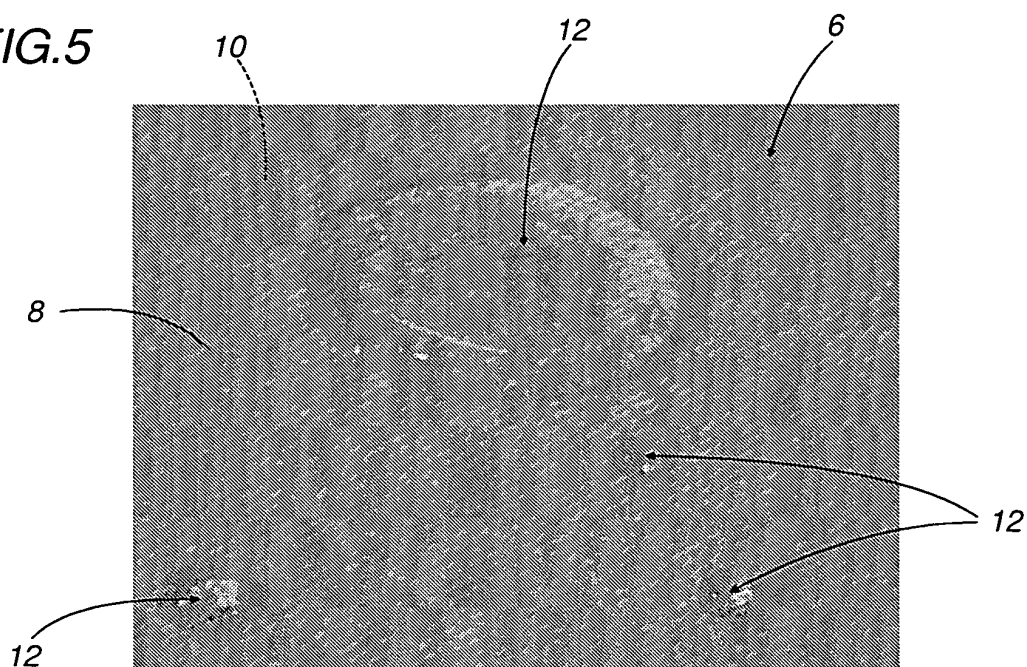


FIG.6

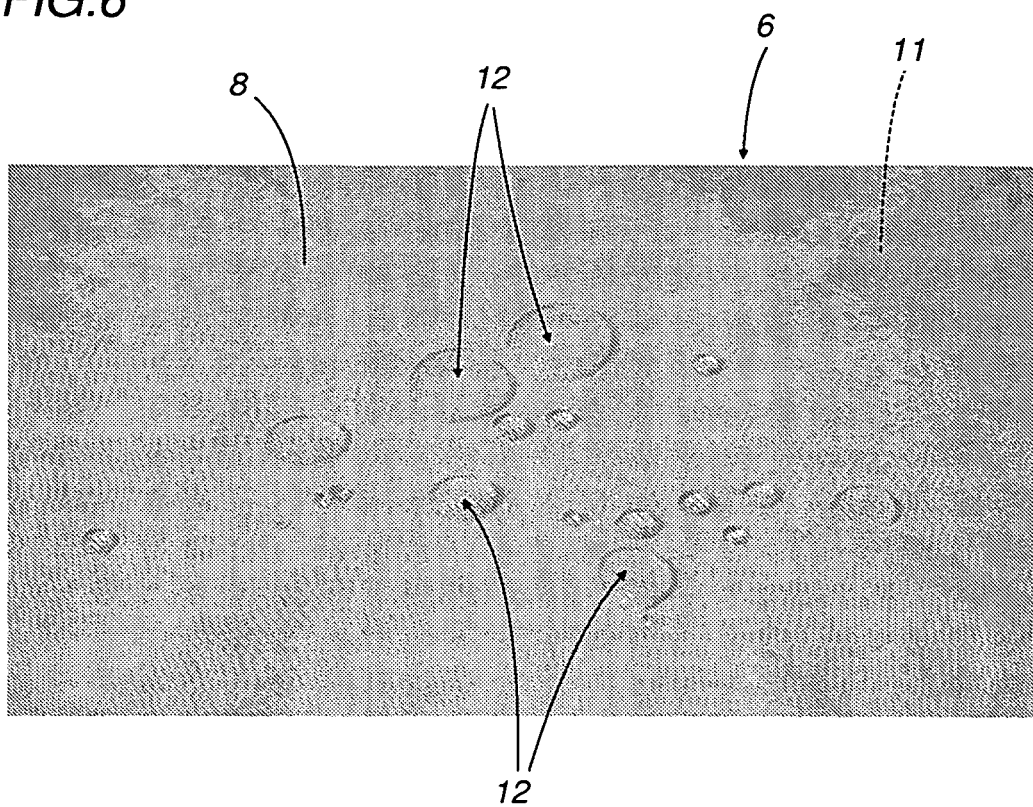


FIG.7

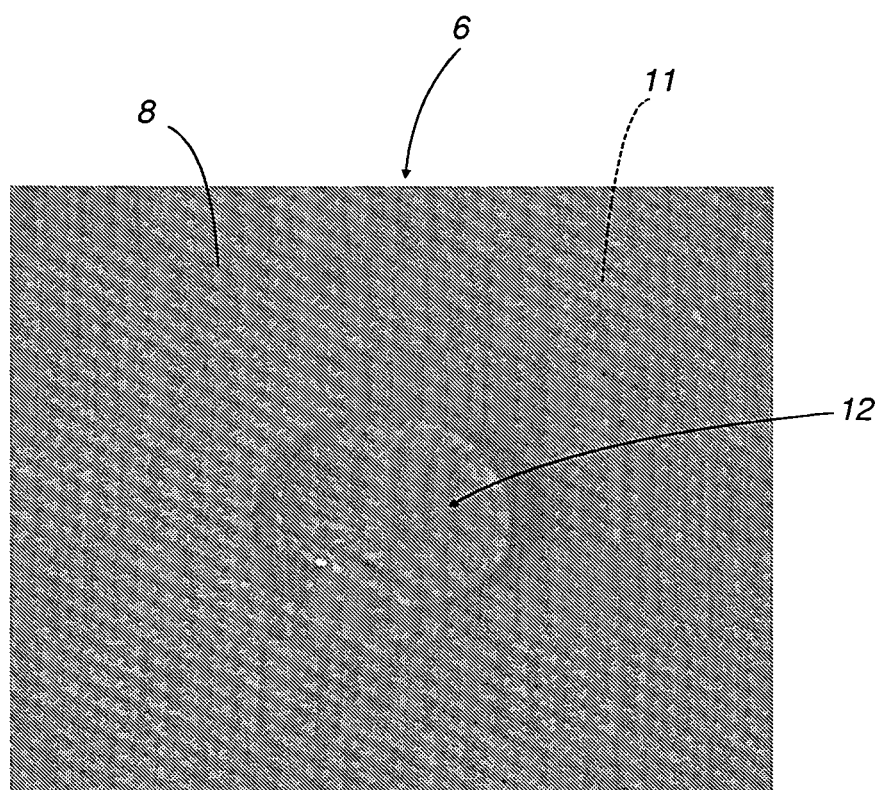


FIG.8

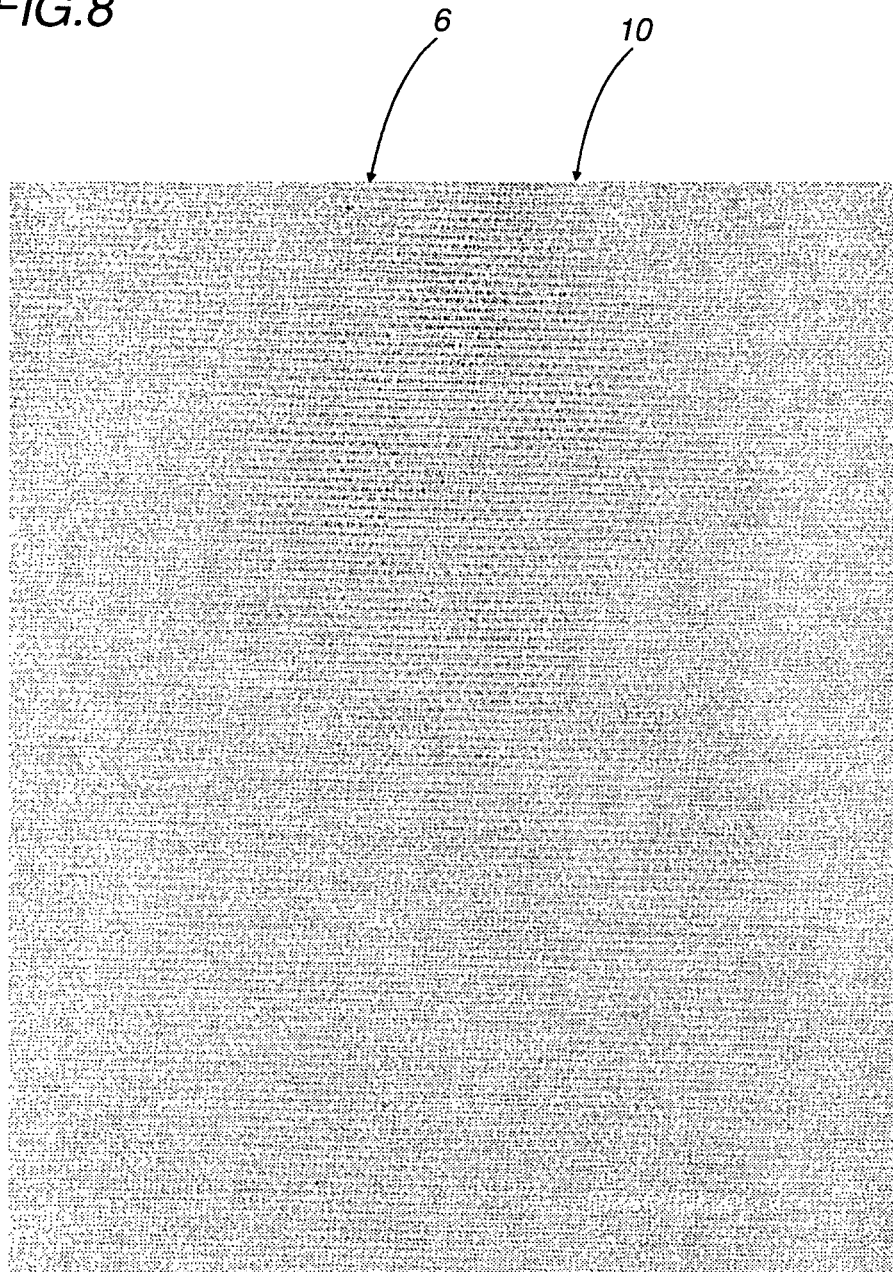
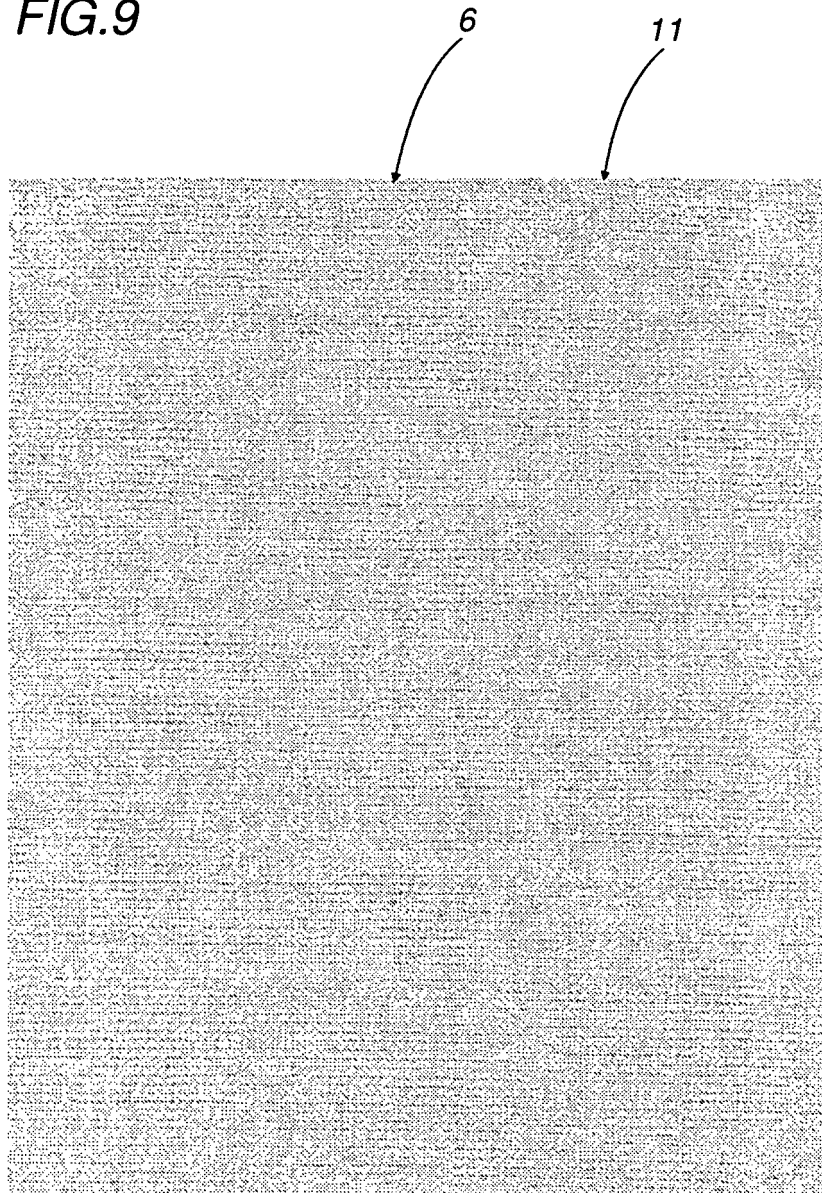


FIG.9



REFERENCES CITED IN THE DESCRIPTION

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