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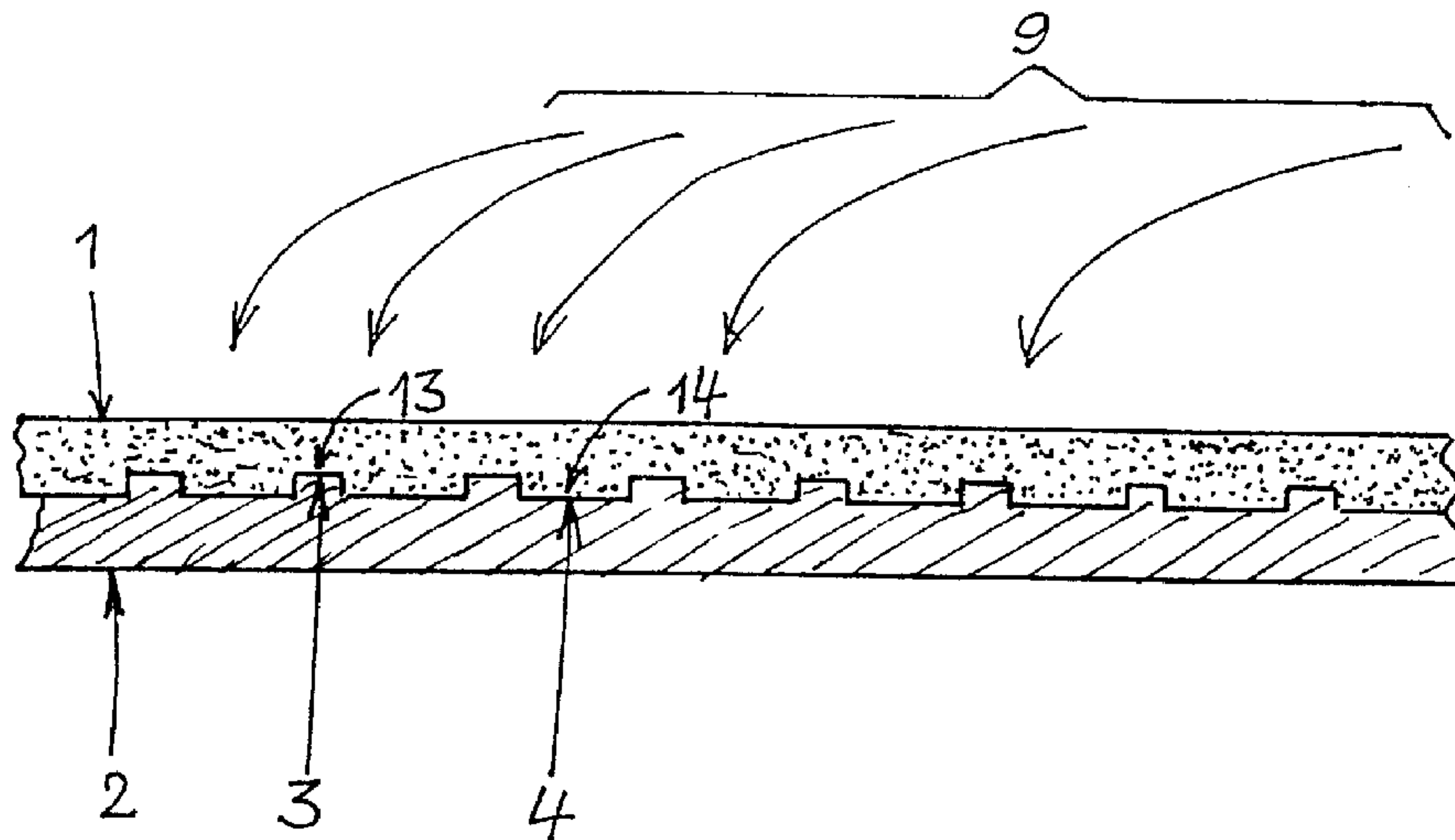
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(54) Titre : PREPARATION CONSTITUEE D'UNE FORME D'ADMINISTRATION ADHESIVE EN SURFACE, DU TYPE FILM OU CACHET

(54) Title: PREPARATION CONSISTING OF A SURFACE-ADHERING, FILM-LIKE OR WAFER-LIKE ADMINISTRATION FORM



(57) Abrégé/Abstract:

A preparation consisting of surface-adhering, film-like or wafer-like administration form having a coding comprising characters and/or graphic symbols or models to identify gustatory or odorous and/or preventive or healing substances that are released during application is characterized in that the coding is formed by surface sections having a different thickness.



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(21) Internationales Aktenzeichen: PCT/EP97/06082 (22) Internationales Anmeldedatum: 4. November 1997 (04.11.97) (30) Prioritätsdaten: 196 46 836.1 13. November 1996 (13.11.96) DE (71) Anmelder (für alle Bestimmungsstaaten ausser US): LTS LOHMANN THERAPIE-SYSTEME GMBH [DE/DE]; Ir- licher Strasse 55, D-56567 Neuwied (DE). (72) Erfinder; und (75) Erfinder/Anmelder (nur für US): LUDWIG, Karin [DE/DE]; In der Au 9, D-56589 Datzeroth (DE). (74) Anwalt: FLACCUS, Rolf-Dieter; Sperlingsweg 32, D-50389 Wesseling (DE). (81) Bestimmungsstaaten: AU, CA, JP, KR, MX, SI, US, eu- ropäisches Patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Veröffentlicht <i>Mit internationalem Recherchenbericht.</i>		
(54) Title: PREPARATION CONSISTING OF A SURFACE-ADHERING, FILM-LIKE OR WAFER-LIKE ADMINISTRATION FORM (54) Bezeichnung: ZUBEREITUNG, BESTEHEND AUS EINER FLÄCHENHAFTEN, FILM- ODER OBLATENARTIGEN DARRE- ICHUNGSFORM		
(57) Abstract A preparation consisting of surface-adhering, film-like or wafer-like administration form having a coding comprising characters and/or graphic symbols or models to identify gustatory or odorous and/or preventive or healing substances that are released during application is characterized in that the coding is formed by surface sections having a different thickness.		
(57) Zusammenfassung Eine Zubereitung bestehend aus einer flächenhaften, film- oder oblatenartigen Darreichungsform mit einer Codierung durch Schrift- und/oder graphische Zeichen bzw. Muster zur Kennzeichnung der daraus bei Anwendung freisetzbaren geschmacks- oder geruchswirksamen und/oder pflegenden bzw. heilenden Substanzen, ist dadurch gekennzeichnet, daß die Codierung durch Flächenbereiche mit unterschiedlicher Dicke ausgebildet ist.		

Preparation, consisting of a sheet-like, film-like or wafer-like administration form

DESCRIPTION

The invention relates to a preparation, consisting of a sheet-like, film-like or wafer-like administration form with a coding in the form of characters and/or graphic symbols or patterns for identifying the substances affecting flavour or odour and/or the therapeutic or curative substances which can be released therefrom during use.

Manufacturers of pharmaceutical products are increasingly obliged to identify not only the primary packaging, but also the product itself. This especially applies to medicaments in an administration form aimed at controlling the release of active substance.

In the prior art, medicaments in the form of pills, tablets and foil-like or film-like products are usually coded in an operation which is additional to the actual manufacture, by printing or punching of special characters or patterns. In addition to the outlay necessitated by this, with correspondingly increased production costs, the introduction of a printing medium, a printing ink, in the printing process, for example, is not uncontroversial, because at least in some cases this creates or unnecessarily increases the risk of allergization.

The object on which the invention is based is to make available, for a preparation of the generic type specified in the preamble, a coding in the form of characters and/or graphic symbols or patterns which avoids the abovementioned disadvantages, in particular the application of a foreign substance such as printing ink,

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and which consequently avoids the risk of allergization and reduces the corresponding outlay for a coding subordinate to production.

The object is successfully achieved according to the invention, in a preparation of the type mentioned in the preamble of Claim 1, by virtue of the fact that the coding is formed by surface areas of differing thickness.

By forming surface areas of differing thickness for the purpose of coding, the application of a logo by printing with food colourings, and the disadvantages described in relation to this, are avoided. Instead, according to the invention, by means of patterned differences in the layer thickness of the film-like or wafer-like administration form, a logo visible to the eye is created in the surface area of the preparation, this logo roughly corresponding in its effect to a so-called watermark in paper-like dispersions. The invention accordingly represents an advantageous alternative to the application of product markings by printing with foreign substances. Although the formation of "watermarks" when drying dispersions on structured supports is likewise based on the formation of thickness variations of the sheet-like paper dispersions, it has never previously been proposed to use this type of identification in connection with film-like, paper-like or wafer-like administration forms for therapeutic or curative substances.

In one embodiment of the preparation, the areas of differing thickness are formed under the production conditions while avoiding different density or compression.

In a further embodiment of the preparation, the areas of differing thickness have a different density (compression).

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The method according to the invention for producing the preparation involves the symbols or patterns of the coding being introduced by means of an irreversible deformation in the plastically deformable state.

One method according to the invention for producing the preparation involves the symbols or patterns of the coding being formed in the course of production without the action of pressure (compression).

A further method according to the invention for producing the preparation involves the symbols or patterns of the coding being applied under the action of pressure (compression).

In one embodiment, the thickness differences are produced by coating of a support which has a sequence of elevations and/or depressions corresponding to the coding. Such elevations and depressions can be arranged, for example, on a support similar to a pressure plate by grinding or etching.

In a further proposal according to the invention, the thickness differences can be produced by subjecting the preparation to local temperature differences during drying.

In a further method according to the invention for producing the preparation, the thickness differences are introduced continuously, for example with a structured embossing roller, or intermittently, for example with a stamp.

The production of coded sheet-like administration forms is explained in more detail below with reference to

Mass production:

Coating:

continuous coating on:

- I. structured support
(e.g. Teflon, special steel)
- II. dehesively treated material (e.g. paper or foil) with planar surface
- III. as under II

re I. By means of hot air.

In this way, a foil-like band is obtained which has different thicknesses. At the warmer zones, the material is thicker, and at the colder zones it is thinner.

a) an open-worked surface, e.g. lattice hole structure of the band-shaped support,

b) use of materials with different heat conduction in the production of the conveyor belt,

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c) dehesively treated material in which segments with differing heat conduction properties are implanted.

re III. By means of hot air as under I., and additional use of a structured embossing roller.

Fabrication:

1. Cutting lengthwise in narrow rolls.
2. Separating by punching or transverse cutting (in the case of II., the paper or the foil is first removed).
3. Packing.

Further details, features and advantages of the invention will be evident from the following explanation of two illustrative embodiments which are shown diagrammatically in the drawings, in which:

Figure I is a diagrammatic representation, in cross section, with production of the coding on a support exhibiting thickness differences,

Figure II shows, in cross section, the production of a coding by means of subjecting the preparation to local temperature differences.

Figure I shows the preparation (1) on a structured support (2) which has a sequence of elevations (3) and depressions (4). Correspondingly, depressions (13) develop reciprocally in the preparation (1) opposite the elevations (3), and elevations (14) develop opposite the depressions (4) within the preparation layer. Heat is delivered in a heat stream (9) which can involve both radiation and also convection.

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Figure II shows a manufacturing method in which the thickness differences (13, 14) in the layer (1) of the preparation are produced using local temperature differences during drying. Here, the preparation layer (1) lies on a foil-like carrier (5), for example silicone paper, aluminium foil, plastic foil or the like. A conveyor belt is designated by (6), which has a lattice or hole structure consisting of bridges (7) and openings (8). By means of heat delivered to the bridges in accordance with the arrows (10), these form warmer areas in contact with the carrier foil (5) and colder areas in the region of the openings (8). In the area of the warmer zones, the material turns out thicker on drying, while it is thinner in the colder areas. In this case, the drying can also be assisted from above, for example, likewise by a stream (9) of heated air. The temperature differences of the conveyor belt (6) can be generated, for example, by inductive heating of the bridges (7) of the lattice structure or by radiation or contact heating, while the openings (8), for example, are cooled by convection with air.

The invention is uncomplicated and optimally satisfies the object set out in the introduction.

PATENT CLAIMS

1. Preparation, consisting of a sheet-like, film-like or wafer-like administration form with a coding in the form of characters and/or graphic symbols or patterns for identifying the substances affecting flavour or odour and/or the therapeutic or curative substances which can be released therefrom during use, characterized in that the coding is formed by surface areas of differing thickness which are visible upon looking through the preparation.
2. Preparation according to Claim 1, characterized in that the areas of differing thickness are formed under the production conditions while avoiding different density or compression.
3. Preparation according to claim 1, characterized in that the areas of differing thickness have a different density.
4. Method for producing the preparation according to one of Claims 1 to 3, characterized in that the areas of differing thickness are formed under the action of pressure.
5. Method for producing the preparation according to one of Claims 1 to 2, characterized in that the areas of differing thickness are formed without the action of pressure.
6. Method according to Claim 4 or 5, characterized in that the thickness differences are produced by coating of a support which has a sequence of elevations and/or depressions corresponding to the coding.

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7. Method according to Claim 4 or 5, characterized in that the thickness differences are produced by subjecting the preparation to local temperature differences during drying.
8. Method according to Claim 4 or 5, characterized in that the symbols or patterns are introduced intermittently.
9. Method according to Claim 4 or 5, characterized in that the symbols or patterns are introduced continuously.
10. Method for producing the preparation according to Claim 1, characterized in that the coding of the surface areas takes place with the preparation in a plastically deformable state.

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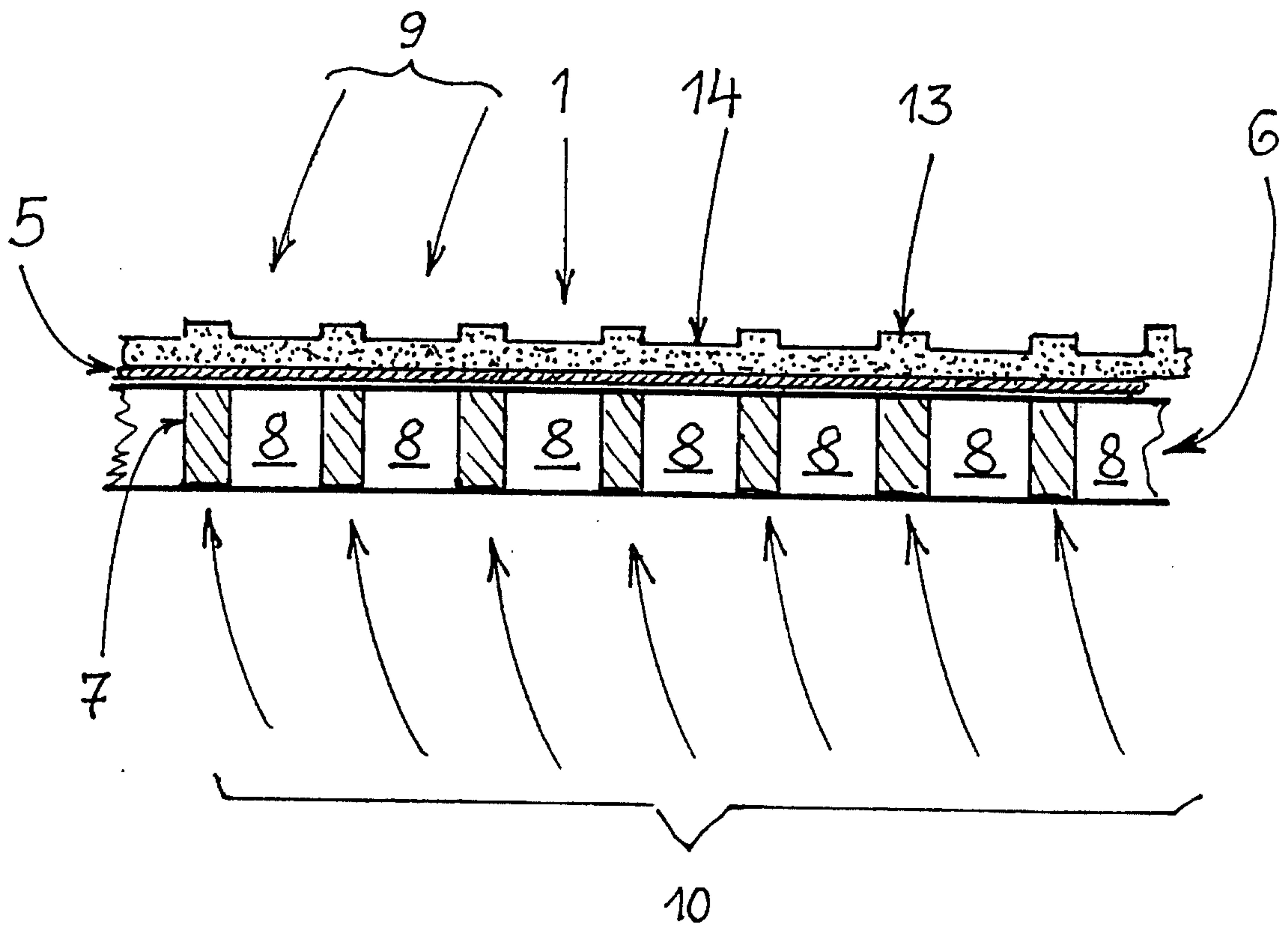
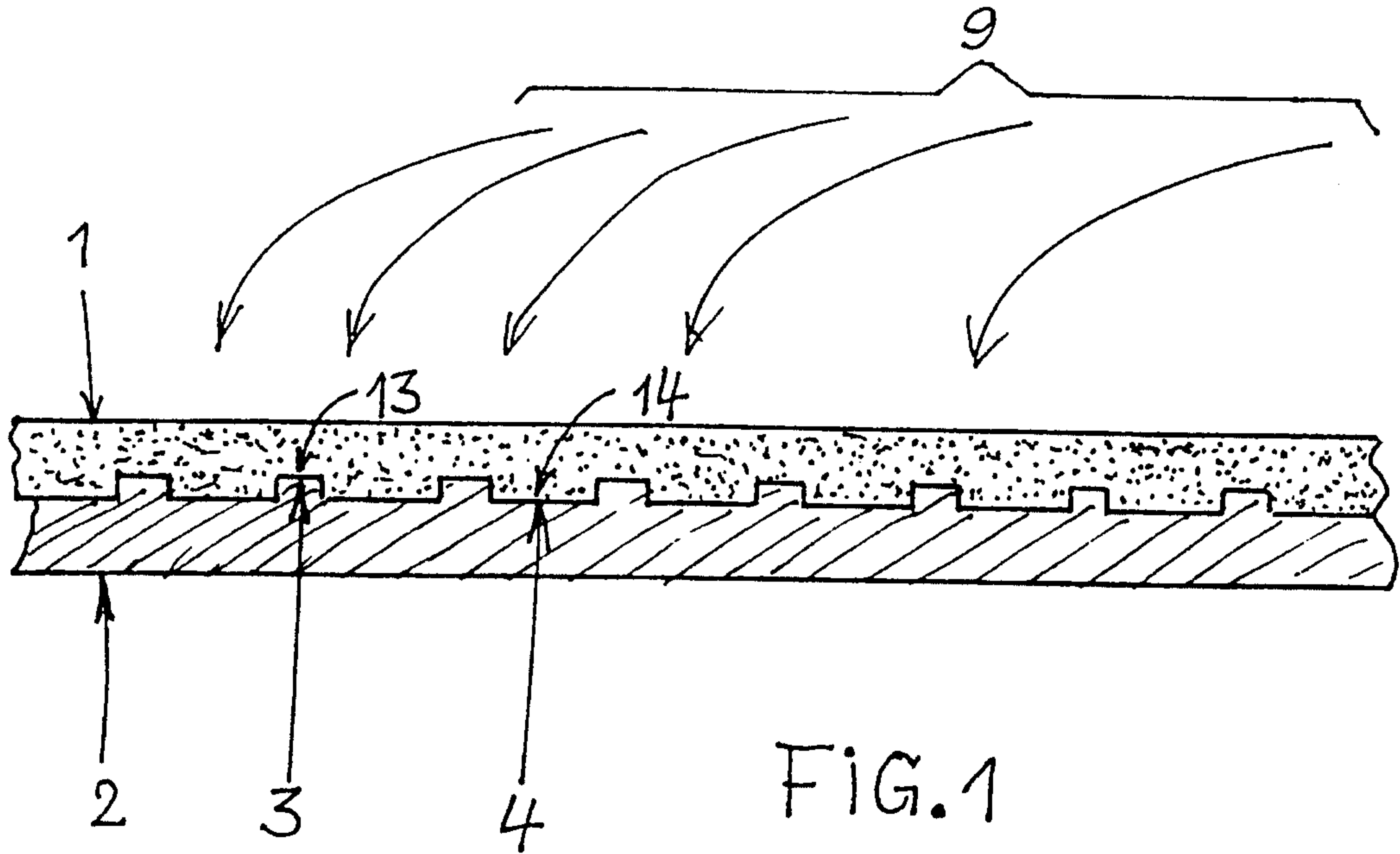


FIG. 2

