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(54) **Floor plank with adhesive portion able to adjust the position**

(57) The present invention relates to a double-layered floor plank sheet having a non-adhesive portion, more particularly to a floor plank sheet enabling adjustment of position during installation. When the upper layer of a floor plank sheet is bonded to the lower layer of an-

other floor plank sheet, a non-adhesive portion formed in part of an adhesive portion enables the adjustment of position.

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Description

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims all benefits of Korean Patent Application No. 20-2007-0015010 filed on September 7, 2007 in the Korean Intellectual Property Office, the disclosures of which are incorporated herein by reference.

BACKGROUND OF THE INVENTION

1. Field of the invention

[0002] The present invention relates to a floor plank sheet, more particularly to a floor plank sheet enabling adjustment of position during installation. When the upper layer of a floor plank sheet is bonded to the lower layer of another floor plank sheet, a non-adhesive portion formed in part of an adhesive portion enables an operator to adjust the position of the floor plank sheet.

2. Description of the Prior Art

[0003] The floor plank refers to a material bonded on a floor and having a surface to be worn down. In general, thin board- or laminated paper-type sheets are used indoors, rather than tiles or ceramics.

[0004] The conventional laminated paper-type sheets are made with a predetermined width and extendable in the length direction, and are cut according to the area of the corresponding floor. In case the floor shape does not coincide with the width of the laminated paper, the remaining portion of the laminated paper is cut off, or the insufficient portion is compensated by overlapping the laminated paper.

[0005] Recently, blocks of regular size are used for flooring. In general, after applying adhesives on the floor surface, the block-type floor planks are bonded thereon.

SUMMARY OF THE INVENTION

[0006] An object of the present invention is to enable the adjustment of position of floor planks during installation.

[0007] Another object of the present invention is to prevent the edge of the floor plank from directly contacting the pre-applied adhesive, so that the adhesive may not be pushed to away, lumped at the portion overlapped with the neighboring plank, or exposed out of the upper layer of the floor plank.

[0008] The present invention has been made in an effort to solve the above-described problems associated with the prior art.

[0009] In one aspect, the present invention provides a double-layered floor plank having an non-adhesive portion, the floor plank comprising a lower layer contacting the floor, and an upper layer laminated on the lower layer,

adhesive portions being formed on the lower surface of the upper layer and the upper surface of the lower layer, respectively, by applying an adhesive, the upper layer being laminated on the upper surface of the lower layer, so that the lower surface of the upper layer and the upper surface of the lower layer have a height difference, and a non-adhesive portion without being exposed to the adhesive being formed in part of the adhesive portion of the upper layer.

[0010] In a preferred embodiment, the present invention provides a floor plank, wherein the non-adhesive portion is formed only along one direction on the adhesive portion of the upper layer of the floor plank.

[0011] In a preferred embodiment, the present invention provides a floor plank, wherein the non-adhesive portion is formed along the length direction of the adhesive portion of the upper layer, by not applying the adhesive.

[0012] In a preferred embodiment, the present invention provides a floor plank, wherein the non-adhesive portion is formed intermittently along the length direction of the adhesive portion.

[0013] In a preferred embodiment, the present invention provides a floor plank, wherein the edge portion where the adhesive portion of the lower surface of the upper layer contacts the side surface of the upper layer is trimmed in the shape of C.

[0014] In a preferred embodiment, the present invention provides a floor plank, wherein the C-trimming is formed intermittently on the edge portion where the adhesive portion of the lower surface of the upper layer contacts the side surface of the upper layer.

[0015] In a preferred embodiment, the present invention provides a floor plank, wherein the non-adhesive portion is formed on the adhesive portion of the upper layer by attaching a non-adhesive material.

[0016] In a preferred embodiment, the present invention provides a floor plank, wherein the non-adhesive material is paper, fabric or special sheet.

[0017] In a preferred embodiment, the present invention provides a floor plank, wherein the upper layer of the floor plank is made of wood.

[0018] In a preferred embodiment, the present invention provides a floor plank, wherein a non-adhesive portion without being exposed to the adhesive being formed in part of the adhesive portion of the lower layer.

[0019] In a preferred embodiment, the present invention provides a floor plank, wherein the non-adhesive portion is formed only along one direction on the adhesive portion of the lower layer of the floor plank.

[0020] In a preferred embodiment, the present invention provides a floor plank, wherein the non-adhesive portion is formed along the length direction of the adhesive portion of the lower layer, by not applying the adhesive.

[0021] In a preferred embodiment, the present invention provides a floor plank, wherein the non-adhesive portion is formed intermittently along the length direction of the adhesive portion.

[0022] In a preferred embodiment, the present inven-

tion provides a floor plank, wherein the non-adhesive portion is formed along the length direction of the adhesive portion of the lower layer as a groove.

[0023] In a preferred embodiment, the present invention provides a floor plank, wherein the groove formed intermittently along the length direction of the adhesive portion.

[0024] In a preferred embodiment, the present invention provides a floor plank, wherein the non-adhesive portion is formed on the adhesive portion of the lower layer by attaching a non-adhesive material.

[0025] In a preferred embodiment, the present invention provides a floor plank, wherein the non-adhesive material is paper, fabric or special sheet.

BRIEF DESCRIPTION OF THE DRAWINGS

[0026] The above and other features of the present invention will now be described in detail with reference to certain exemplary embodiments thereof illustrated by the accompanying drawings which are given hereinbelow by way of illustration only, and thus are not limitative of the present invention, and wherein:

Figs. 1 to 4 are bottom perspective assembly view, bottom perspective view, side assembly view and perspective view schematically illustrating the floor plank according to an embodiment of the present invention, respectively.

Figs. 5 to 7 are bottom perspective view, side assembly view and perspective view schematically illustrating the floor plank according to another embodiment of the present invention with a different type of non-adhesive portion, respectively.

Figs. 8 and 9 are perspective views schematically illustrating the floor plank according to yet another embodiment of the present invention.

It should be understood that the appended drawings are not necessarily to scale, presenting a somewhat simplified representation of various preferred features of the present invention. The specific design features of the present invention as disclosed herein, including, for example, specific dimensions, orientations, locations, and shapes thereof will be determined in part by the particular intended application and use environment.

DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENTS

[0027] Reference will now be made in detail to the preferred embodiments of the present invention, examples of which are illustrated in the drawings attached hereinafter, wherein like numerals refer to like elements throughout. The embodiments are described below so as to explain the present invention by referring to the figures.

[0028] Fig. 1 is a perspective view schematically illus-

trating the assembly of the floor plank (1) according to an embodiment of the present invention. As illustrated in the figure, the side of a floor plank (1) adjoins the side of another floor plank (1). Preferably, as shown in the figure, the position of the floor plank (1) to be fixed is adjusted by slanting the floor plank (1) so that the floor is completed.

[0029] Figs. 2 and 3 are perspective view and side assembly view schematically illustrating the floor plank (1) according to an embodiment of the present invention, respectively. As illustrated in Figs. 2 and 3, the floor plank (1) of the present invention has a double-layer structure of an upper layer (10) and a lower layer (20), the upper layer (10) being laminated on the lower layer (20), so that the upper layer (10) and the lower layer (20) have a height difference. At the portion where the lower surface of the upper layer (10) and the upper surface of the lower layer (20) are not overlapped each other, that is at the adhesive portions (11, 21), an adhesive (30) is applied in advance. As illustrated in the figure, the adhesive portion (21) of the lower layer (20) of one floor plank (1) is placed and fixed on the adhesive portion (11) of the upper layer (10) of the neighboring floor plank (1). A non-adhesive portion is formed in part of the adhesive portion (11). The non-adhesive portion provided in part of the adhesive portion of the floor plank enables the adjustment of position of the floor plank during installation, thereby preventing the fixing of the floor plank at wrong position.

[0030] The adhesive portion (11, 21) formed on the upper layer (10) and the lower layer (20) is extended in L-form when the upper layer (10) and the lower layer (20) of the floor plank (1) are rectangles. Preferably, the upper layer (10) is laminated on the lower layer (20), so that the sides that form the L-form are extended by the same length to each direction.

[0031] As illustrated in Fig. 3, the adhesive (30) is pre-applied on the lower surface of the upper layer (10) and the upper surface of the lower layer (20), so that the upper layer (10) and the lower layer (20) may be bonded. The adhesive portion (11) of the upper layer (10) of the floor plank (1) to be installed is placed on the adhesive portion (21) of the lower layer (20) of the floor plank (1) which was installed earlier. The floor plank (1) to be installed is slanted, so that the side surface of the upper layer (10) of the floor plank (1) to be installed may contact the side surface of the upper layer (10) of the floor plank (1) which was installed earlier. The non-adhesive portion formed in part of the adhesive portion (21) of the lower layer (20) enables an operator to adjust the position of the floor plank (1) during installation. That is, the non-adhesive portion prevents the adhesive portion (11) of the upper layer (10) of the floor plank (1) to be installed from being bonded and fixed to the adhesive portion (21) of the lower layer (20) of the floor plank (1) which was installed earlier, and enables the adjustment of the position at which the edge portion where the adhesive portion (11) of the upper layer (10) and the side surface of the upper layer (10) adjoin contacts the lower layer (20) of the floor plank (1).

which was installed earlier, thereby it is possible to enable an operator to install the floor plank (1) at right position.

[0032] Specifically, the non-adhesive portion may be formed on the adhesive portion (11) in one or more areas. As seen in Fig. 2, it may be formed continuously along one direction, or intermittently. Even when the non-adhesive portion is formed intermittently, it may prevent the adhesive portions (11, 21) of the neighboring floor planks (1) from being perfectly bonded to each other and, thus, enables the adjustment of installation position. Preferably, as illustrated in Figs. 1 to 3, the non-adhesive portion formed on the adhesive portion (11) of the upper layer (10) of the floor plank (1) is formed at the edge portion of the adhesive portion (11).

[0033] In the mean while, when the upper layer (10) of the floor plank (1) is made of wood, bonding to the floor and neighboring floor planks (1) become easier.

[0034] Fig. 4 shows perspective view of the floor plank (1) on which a groove (22) is provided. The non-adhesive portion may be formed on the lower layer (20) of the floor plank (1), as well as on the upper layer (10). The presence of the non-adhesive portion on either of the upper layer (10) or the lower layer (20) sufficiently prevents the two neighboring floor planks (1) from being bonded to each other upon initial contact. However, when the non-adhesive portion is formed on the adhesive portions (11, 21) of both the upper layer (10) and the lower layer (20), the adjustment of the installation position of the floor plank (1) becomes easier. As seen in Fig. 4, the non-adhesive portion is preferably formed on the portion where the edge portion at which the adhesive portion (11) of the upper layer (10) and the side surface of the upper layer (10) of the floor plank (1) to be installed adjoin contacts directly, that is at the portion where the upper layer (10) and the lower layer (20) of the floor plank (1) which was installed earlier meet each other.

[0035] Figs. 1 to 4 are bottom perspective views, side assembly view and perspective view schematically illustrating the floor plank (1) according to another embodiment of the present invention, wherein a non-adhesive material (13, 23) is attached on the adhesive portion (11, 21), respectively. The non-adhesive material (13, 23) is attached on the upper surface of the adhesive portion (11, 21) after the application of the adhesive (30). The non-adhesive material (13, 23) may be paper, fabric, specially processed sheet, etc. and, preferably has a small thickness, so that the height is not quite different from that of the adhesive portion.

[0036] Although a non-adhesive material (13, 23) was exemplified for the non-adhesive portion in Figs. 1 to 4, the non-adhesive portion may be formed in various forms, as long as it may prevent the floor planks (1) from being bonded completely by the adhesive (30) upon initial contact.

[0037] Particularly, the purpose may be attained by not applying the adhesive (30) in some part of the lower surface of the upper layer (10) and the upper surface of the lower layer (20) of the floor plank (1). The portion on

which the adhesive (30) is not applied may be formed continuously or intermittently along the length direction of the adhesive portion (11, 21).

[0038] Figs. 5 and 6 are bottom perspective view and side assembly view schematically illustrating the floor plank (1) according to still another embodiment of the present invention, wherein the edge portion where the adhesive portion (11) of the upper layer (10) and the side surface of upper layer (10) adjoin is trimmed in the shape of C (14), respectively. In the figure, the non-adhesive portion is described as a C-trimming (14). The C-trimming (14) is formed before or after applying the adhesive (30). Since the C-trimming (14) is with no adhesive (30) or only little, if any, it can prevent the adhesive portion (11) of the upper layer (10) of the floor plank (1) to be installed from being bonded completely by a single contact to the adhesive portion (21) of the lower layer (20) of the floor plank (1) which was installed earlier. The non-adhesive portion, that is the C-trimming (14), is formed only in part of the adhesive portion (11) of the upper layer (10), and does not affect the overall adhesion to the neighboring floor plank (1).

[0039] Since the end of the adhesive portion (11) of the upper layer (10) directly contacts the adhesive portion (21) of the lower layer (20) of the floor plank (1) to be installed, the C-trimming (14) of the end of the lower surface of the adhesive portion (11), as illustrated in Fig. 6, prevents the adhesive (30) on the adhesive portion (21) of the lower layer (20) from being pushed away during the adjustment of the installation position of the floor plank (1). Also in the embodiments illustrated in Figs. 3 and 6, when the upper layer (10) of the floor plank (1) to be installed is placed on the lower layer (20) of the floor plank (1) which was installed earlier, the non-adhesive portion prevents the edge portion where the side surface and the lower surface of the upper layer (10) of the neighboring floor plank (1) adjoin from directly contacting the adhesive (30) applied on the adhesive portion (21), thereby preventing the floor plank (1) fixed wrongly upon initial contact and preventing the formation of crevices between the neighboring floor planks (1), which may be caused by the pushing away of the adhesive (30). Further, the problem of the adhesive being pushed away from the edge of the floor plank and consequent uneven connection of the floor planks can be prevented.

[0040] Fig. 7 is perspective view schematically illustrating the floor plank (1) with a non-adhesive portion provided with a groove (22) on the upper surface of the lower layer (20). The groove (12) has a function like C-trimming (14) formed on the upper layer (10) so that the groove (12) preventing the both floor plank (1) from being perfectly attached.

[0041] Figs. 8 and 9 are perspective views schematically illustrating the floor plank (1a) with a different shape according to yet another embodiment of the present invention. In such a long rectangular floor plank (1a), the non-adhesive portion may be formed along both the length direction and the vertical direction, as shown in

the figure. Alternatively, the non-adhesive portion may be formed only along the length direction.

[0042] Such disposition of the non-adhesive portion only one side of the adhesive portion (11, 21) of the floor plank (1) rather all of the adhesive portion (11, 21) of the floor plank (1) may be employed even when the floor plank (1) is in square form.

[0043] The floor plank according to the present invention enables the adjustment of adjustment of position during installation. Further, it prevents the problem of the adhesive being pushed away from the edge of the floor plank, thereby providing even connection of the floor planks.

[0044] The invention has been described in detail with reference to preferred embodiments thereof. However, it will be appreciated by those skilled in the art that changes may be made in these embodiments without departing from the principles and spirit of the invention, the scope of which is defined in the appended claims and their equivalents.

Claims

1. A double-layered floor plank (1) having an non-adhesive portion,
the floor plank (1) comprising a lower layer (20) contacting the floor, and an upper layer (10) laminated on the lower layer (20),
adhesive portions (11, 21) being formed on the lower surface of the upper layer (10) and the upper surface of the lower layer (20), respectively, by applying an adhesive (30),
the upper layer (10) being laminated on the upper surface of the lower layer (20), so that the lower surface of the upper layer (10) and the upper surface of the lower layer (20) have a height difference, and a non-adhesive portion without being exposed to the adhesive (30) being formed in part of the adhesive portion (11) of the upper layer (10).
2. The floor plank having an adhesive portion according to claim 1, wherein the non-adhesive portion is formed only along one direction on the adhesive portion (11) of the upper layer (10) of the floor plank (1).
3. The floor plank having an adhesive portion according to claim 1, wherein the non-adhesive portion is formed along the length direction of the adhesive portion (11) of the upper layer (10), by not applying the adhesive (30).
4. The floor plank having an adhesive portion according to claim 3, wherein the non-adhesive portion is formed intermittently along the length direction of the adhesive portion (21).
5. The floor plank having an adhesive portion according to claim 1, wherein the edge portion where the adhesive portion (11) of the lower surface of the upper layer (10) contacts the side surface of the upper layer (10) is trimmed in the shape of C (14).
6. The floor plank having an adhesive portion according to claim 5, wherein the C-trimming (14) is formed intermittently on the edge portion where the adhesive portion (11) of the lower surface of the upper layer (10) contacts the side surface of the upper layer (10).
7. The floor plank having an adhesive portion according to claim 1, wherein the non-adhesive portion is formed on the adhesive portion (11) of the upper layer (10) by attaching a non-adhesive material (13).
8. The floor plank having an adhesive portion according to claim 7, wherein the non-adhesive material (13) is paper, fabric or special sheet.
9. The floor plank having an adhesive portion according to claim 1, wherein the upper layer (10) of the floor plank (1) is made of wood.
10. The floor plank having an adhesive portion according to any of claims 1 to 9, wherein a non-adhesive portion without being exposed to the adhesive (30) being formed in part of the adhesive portion (21) of the lower layer (20).
11. The floor plank having an adhesive portion according to claim 10, wherein the non-adhesive portion is formed only along one direction on the adhesive portion (21) of the lower layer (20) of the floor plank (1).
12. The floor plank having an adhesive portion according to claim 10, wherein the non-adhesive portion is formed along the length direction of the adhesive portion (21) of the lower layer (20), by not applying the adhesive (30).
13. The floor plank having an adhesive portion according to claim 12, wherein the non-adhesive portion is formed intermittently along the length direction of the adhesive portion (21).
14. The floor plank having an adhesive portion according to claim 10, wherein the non-adhesive portion is formed along the length direction of the adhesive portion (21) of the lower layer (20) as a groove (22).
15. The floor plank having an adhesive portion according to claim 14, wherein the groove (22) formed intermittently along the length direction of the adhesive portion (21).
16. The floor plank having an adhesive portion according to claim 10, wherein the non-adhesive portion is

formed on the adhesive portion (21) of the lower layer (20) by attaching a non-adhesive material (23).

17. The floor plank having an adhesive portion according to claim 16, wherein the non-adhesive material (23) is paper, fabric or special sheet.

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Figure 1

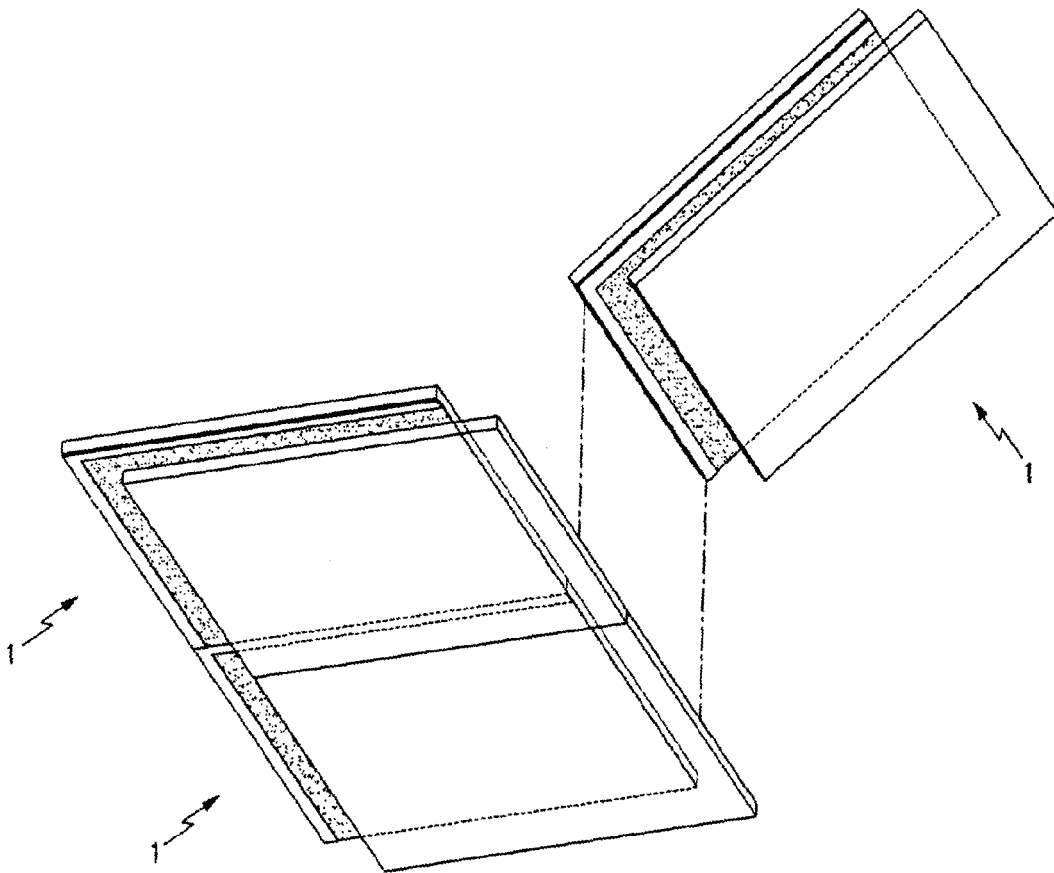


Figure 2

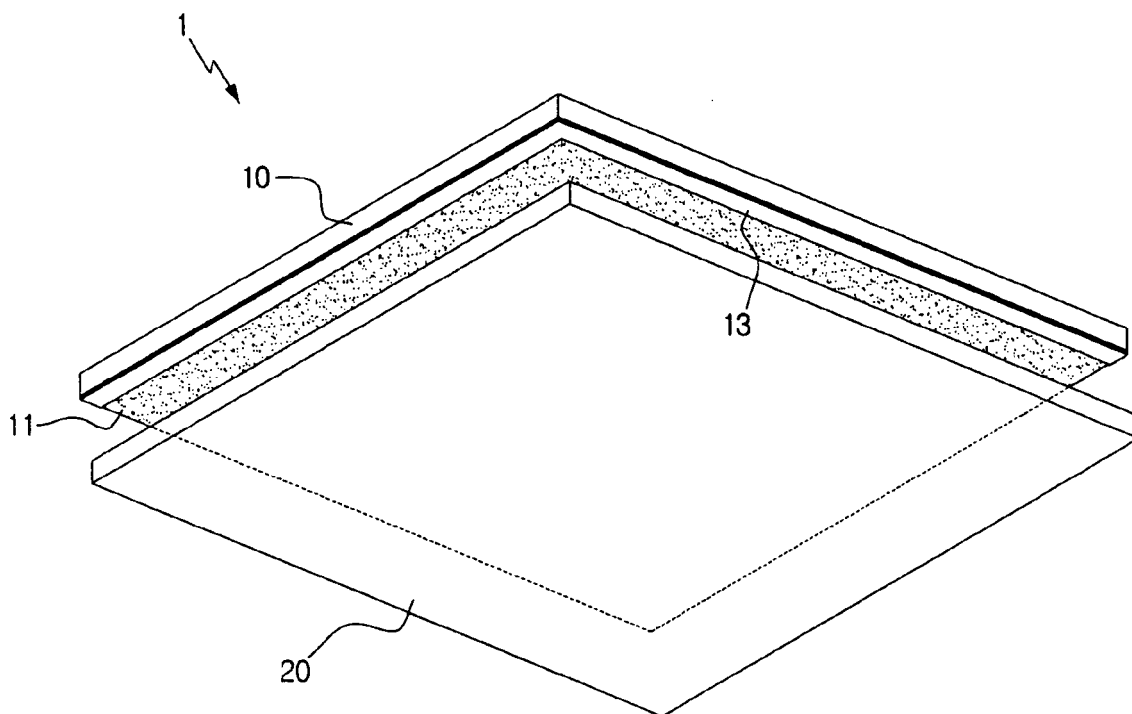


Figure 3

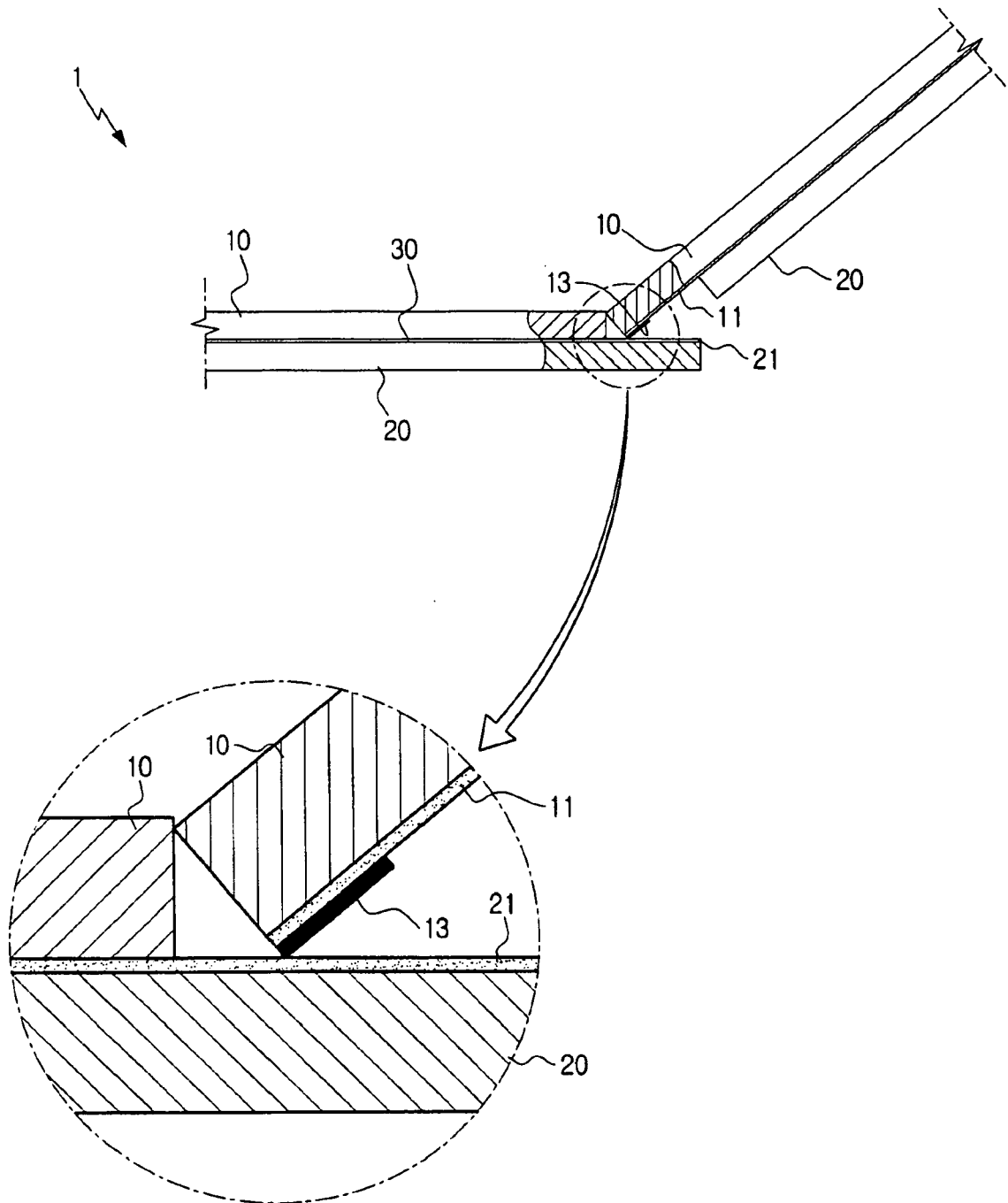


Figure 4

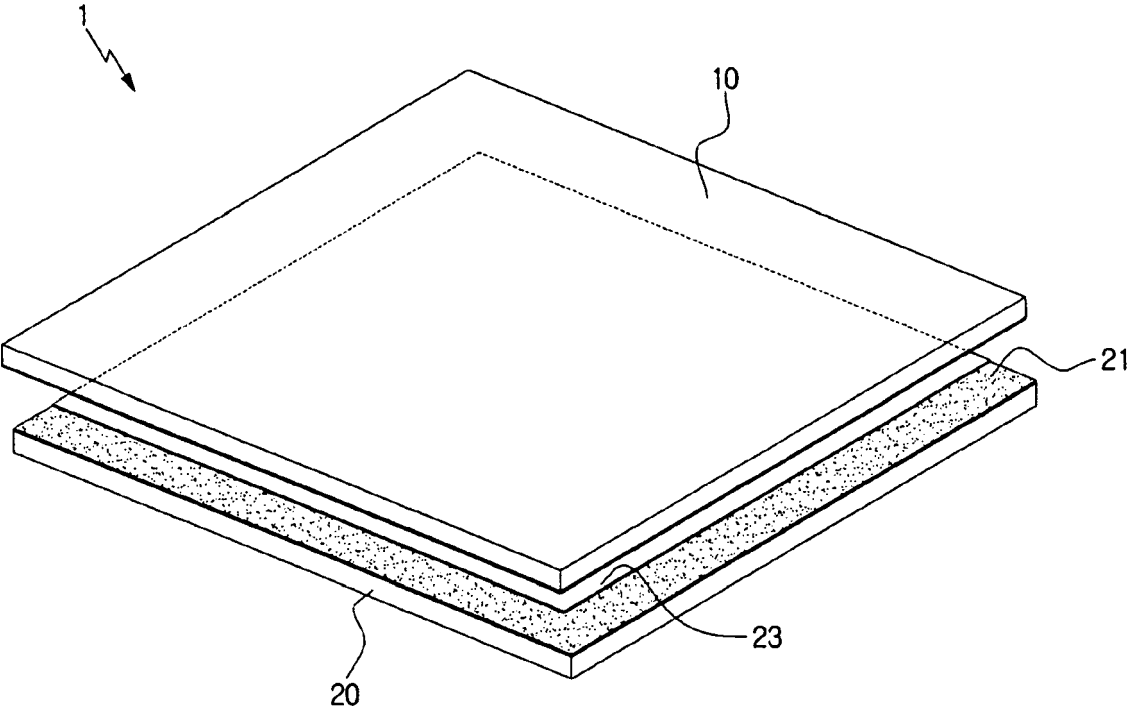


Figure 5

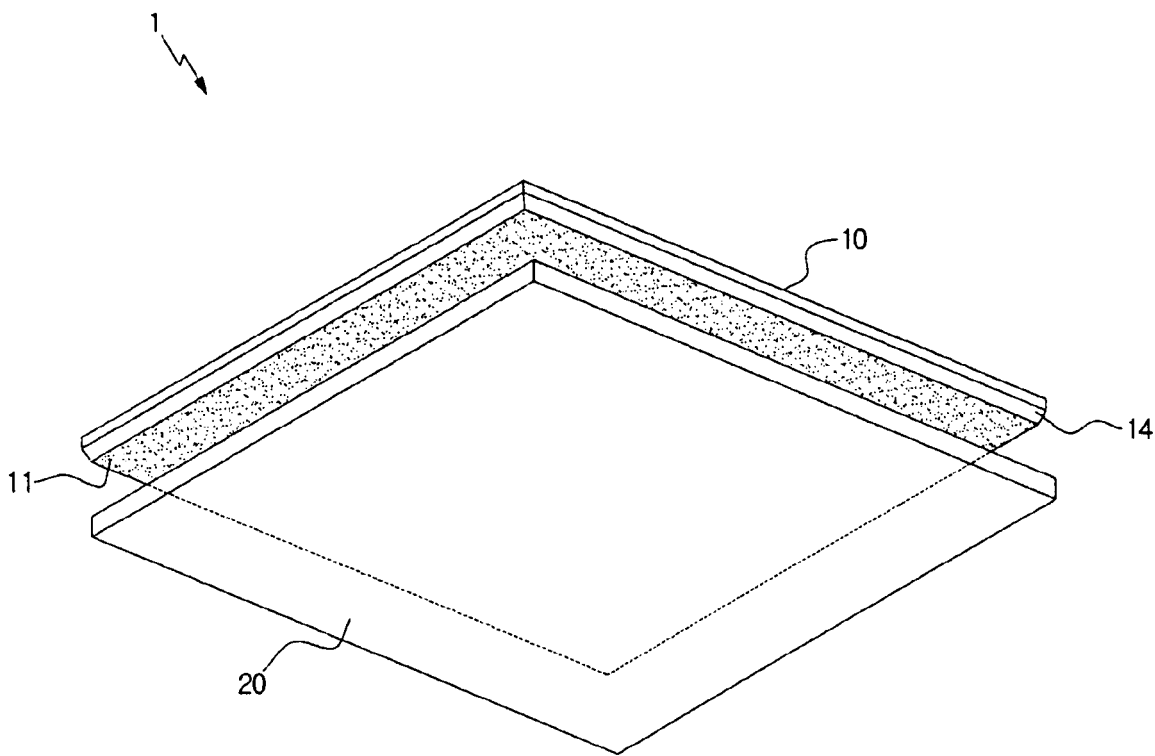


Figure 6

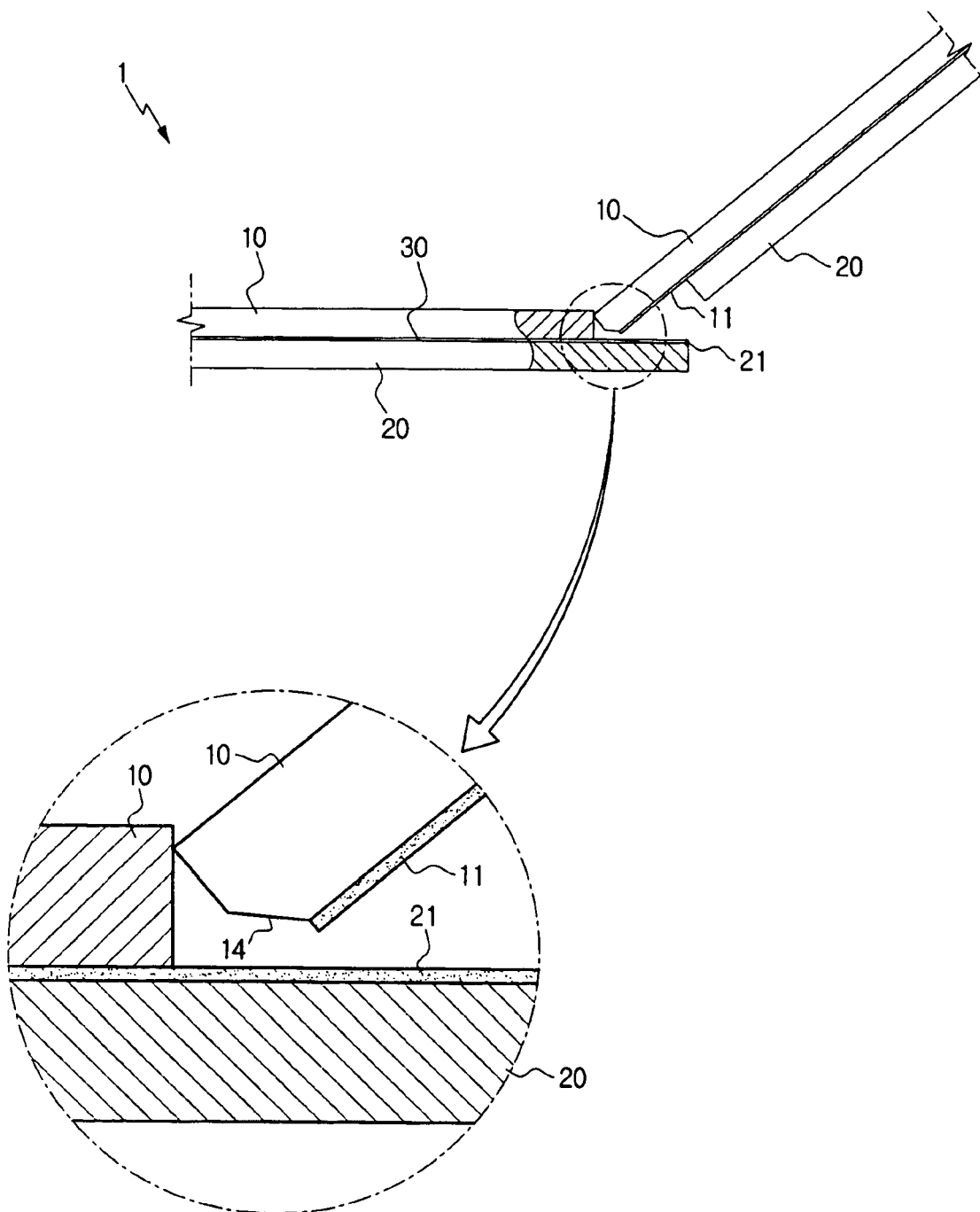


Figure 7

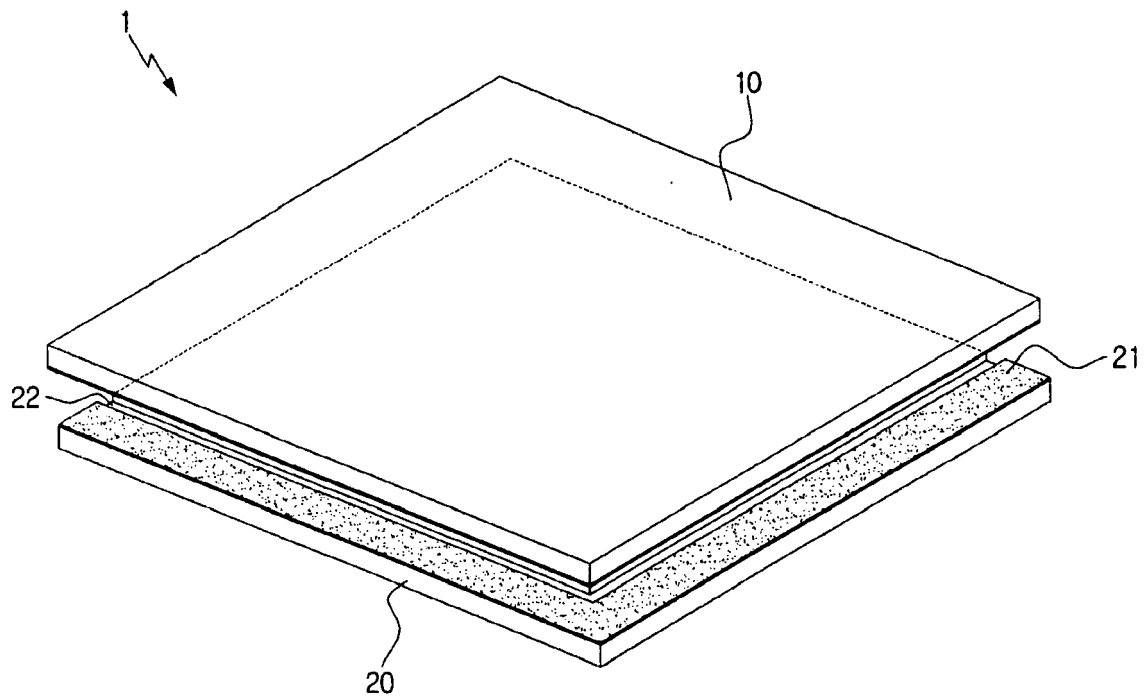


Figure 8

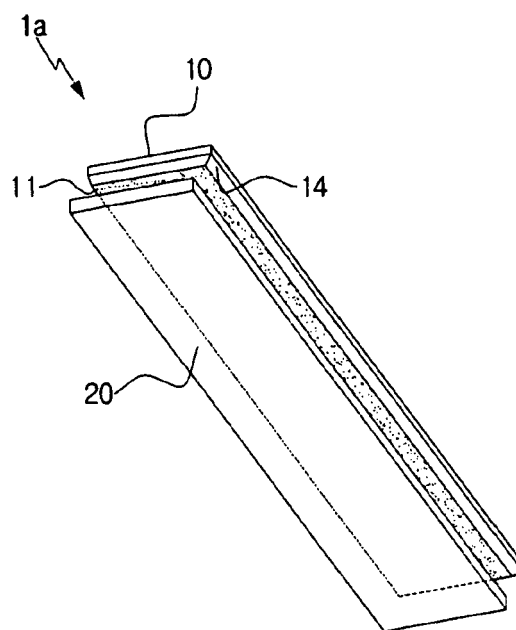
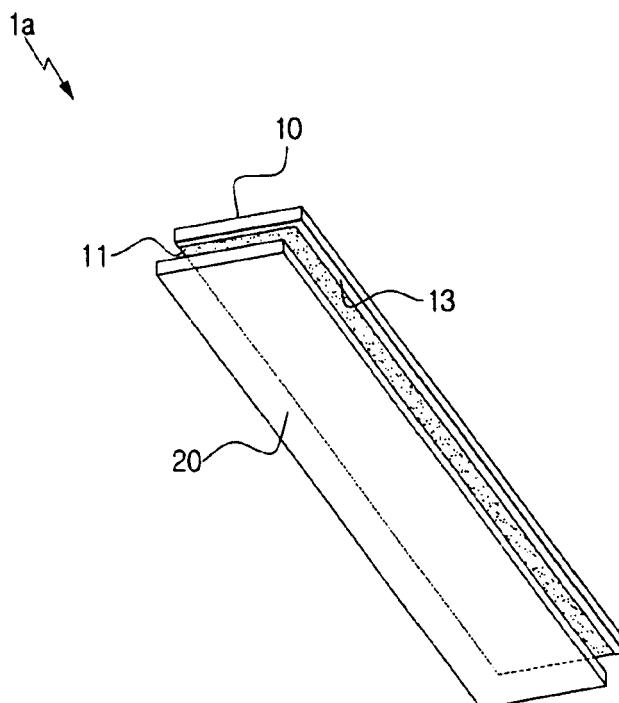


Figure 9



REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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