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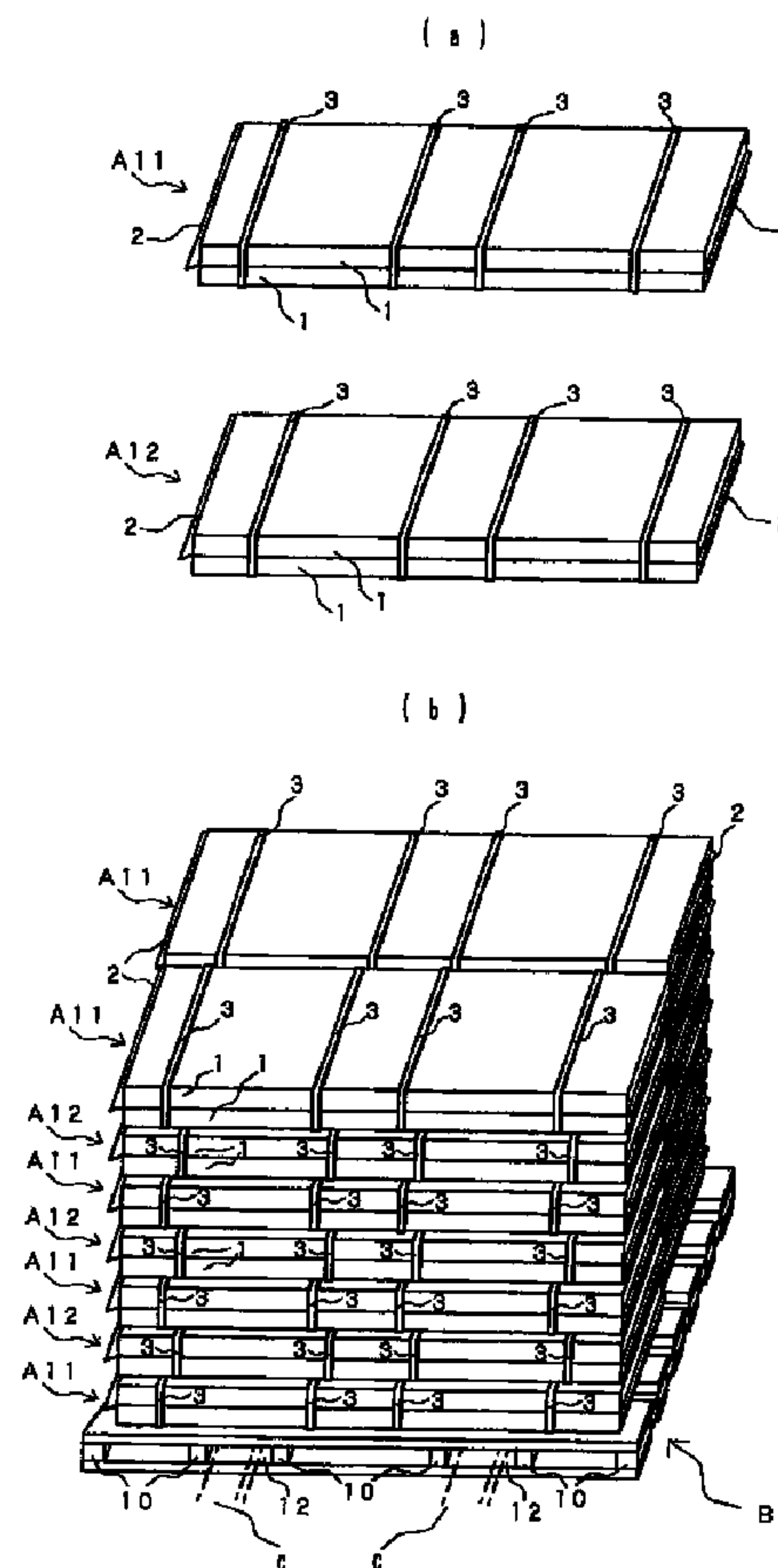
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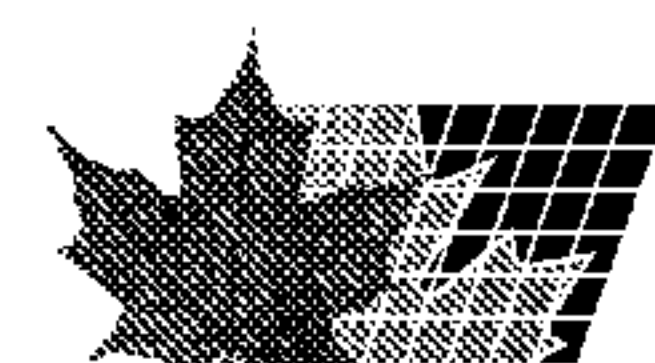
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(54) Title: A PACKAGING STRUCTURE FOR BUILDING BOARDS AND BUILDING BOARDS LOADING STRUCTURE



(57) Abrégé/Abstract:

This invention provide packaging structure for building boards and building boards loading structure. A packaging structure comprises plural building boards and plural bands, and wherein the plural building boards are banded at plural locations by the



(57) **Abrégé(suite)/Abstract(continued):**

plural bands, and wherein a surface of bands which locates in a both end of the packaging structure is adhesive. And a building boards loading structure which loads plural building boards a pallet with, wherein the building boards loading structure comprises plural packages, and wherein the package comprises plural building boards and plural bands, and wherein the plural building boards are banded at plural locations by the plural bands, and wherein the plural packages are loaded the pallet with, and wherein the location of bands in each upper and lower package which is loaded the pallet with is different each other. And/or wherein the location of bands in lowest package which is loaded the pallet with is different from upper location of the stringers and inserting fork of the fork lift truck.

**A PACKAGING STRUCTURE FOR BUILDING BOARDS
AND BUILDING BOARDS LOADING STRUCTURE**

ABSTRACT OF THE DISCLOSURE

This invention provide packaging structure for building boards and building boards loading structure.

A packaging structure comprises plural building boards and plural bands, and wherein the plural building boards are banded at plural locations by the plural bands, and wherein a surface of bands which locates in a both end of the packaging structure is adhesive. And a building boards loading structure which loads plural building boards a pallet with, wherein the building boards loading structure comprises plural packages, and wherein the package comprises plural building boards and plural bands, and wherein the plural building boards are banded at plural locations by the plural bands, and wherein the plural packages are loaded the pallet with, and wherein the location of bands in each upper and lower package which is loaded the pallet with is different each other. And/or wherein the location of bands in lowest package which is loaded the pallet with is different from upper location of the stringers and inserting fork of the fork lift truck.

A PACKAGING STRUCTURE FOR BUILDING BOARDS
AND BUILDING BOARDS LOADING STRUCTURE

BACKGROUND OF THE INVENTION

Field of the Invention

[0001]

The present invention relates to a packaging structure for building boards used for external wall or interior wall of house and building boards loading structure.

Description of the Related Art

[0002]

The following description sets forth the inventor's knowledge of related art and problems therein and should not be construed as an admission of knowledge in the prior art.

[0003]

In general, a building board is used for wall material or roofing material of house.

As for the building board, a package is applied for protecting from breakage and dirt when it is kept and it is carried in installation site. In consideration of workability, it is

general to pack two or three building boards one package, the plural packages are loaded pallet with, and it is kept or it is carried.

[0004]

In general, for pallet to load with the plural packages, as shown in FIG. 17, plural stringers 10 are arranged by predetermined spacing, and plural deck boards 11 are fixed by nail on a top face and undersurface of the stringer 10. Entry 12 to insert fork of a fork lift truck made from the stringer 10 and the deck board 11 is installed in pallet. Package is loaded pallet with, and package can be moved with a fork lift truck by inserting a fork of a fork lift truck in entry 12.

[0005]

In addition, numerical quantity of building board loaded pallet with is different by weight, shape and thickness. Furthermore, when it is transported to installation site, it is tended a picking work operation to be performed to adjust building boards to the numerical quantity that it is necessary. In addition, a picking work operation is a kind of a sorting work operation picking up article of manufacture in commodity distribution.

[0006]

As a representative example of described above building board, there is rectangle-shaped fiber reinforced cement siding having 455mm of width and 1500-3030mm of overall length and 9-25mm of thickness. In the case of described above fiber reinforced cement siding, a fiber reinforced cement siding which made a surface (a design patent side) a under face by turning is piled up on another fiber reinforced cement siding which made a surface a top face, and one packaging structure is made of two fiber reinforced cement sidings. So, each other's surface of fiber reinforced cement siding is made face-to-face, it is not exposing. Therefore, each other's surface of fiber reinforced cement siding is protected. In addition, in that case of fiber reinforced cement siding having a convexoconcave shank design in surface or having a coating surface, surface is protected more by using inserting paper between two fiber reinforced cement sidings. A size of inserting paper to use for this case is more massive than size of the whole surface of described above fiber reinforced cement siding.

[0007]

FIG. 14 is a view which shows a packaging structure for building boards and a building boards loading structure according to a related art. FIG. 14 (a) shows a perspective

view of package A141 of fiber reinforced cement sidings 1 as building boards, FIG. 14 (b) shows a perspective view of loading structure which loaded pallet B with packages A141.

As shown in FIG. 14 (a), package A141 has a structure which two pieces of fiber reinforced cement siding 1 is piled up with sandwiching a inserting paper 2, and it is covered the whole by shrink film 6, as shown in FIG. 14 (b), packages A141 are loaded pallet B with two lines.

[0008]

FIG. 15 is a view which shows a packaging structure for building boards and a building boards loading structure according to a related art (Japanese Patent Laid-Open No. 2005-231713 is referred to). FIG. 15 (a) shows a perspective view of package A151 of fiber reinforced cement sidings 1 as building boards, FIG. 15 (b) shows a perspective view of loading structure which loaded pallet B with packages A151.

As shown in FIG. 15 (a), package A151 has a structure which two pieces of fiber reinforced cement siding 1 is piled up with attaching paper cushioning material 5, 5 on either side of a longer direction of two pieces of fiber reinforced cement siding 1, and capping paper cap 7, 7 on either side of short direction of two pieces of fiber reinforced cement siding 1,

and banding two pieces of fiber reinforced cement siding 1 by plural polypropylene-made bands 3. As shown in FIG. 15 (b), packages A151 is loaded pallet B with two lines, and a location of polypropylene-made band 3 banding package A151 is the same in all package A151.

[0009]

FIG. 16 is a view which shows a packaging structure for building boards and a building boards loading structure according to a related art (Japanese Patent Laid-Open No. 2005-231713 is referred to). FIG. 16 (a) shows a perspective view of package A161 of fiber reinforced cement sidings 1 as building boards, FIG. 16 (b) shows a perspective view of loading structure which loaded pallet B with packages A161.

As shown in FIG. 16 (a), package A161 has a structure which two pieces of fiber reinforced cement siding 1 is piled up with banding in ends of two pieces of fiber reinforced cement siding 1 by shrink film 6,6. In this case, shrink film 6 is heated, and it shrinks. Furthermore, a slip resistance work by hot melt 8 is put for a top of shrink film 6. And as shown in FIG. 16 (b), packages A161 is loaded pallet B with two lines.

[0010]

However, in package A141 and loading structure shown in FIG.

14, there is no point catching package A141, so that it is difficult to pick up package A141 from pallet B. In addition, when plural packages A141 are loaded, it is difficult to pick up package A141 because a shrink film 6 of package A141 is made to stick another shrink film 6 by static electricity which is occurred by rubbing.

Furthermore, the work operation which opens package A141 to use fiber reinforced cement siding 1 in a installation site is necessary. In packaging structure of package A141, shrink film 6 must be stripped, and fiber reinforced cement siding 1 must be transferred to other pallet for removing stripped shrink film 6, so that an effort and hour are needed for an operation.

Furthermore, shrink film 6 after stripping is unnecessary so that it becomes industrial waste, and it is uneconomical.
[0011]

On the other hand, in package A151 and loading structure shown in FIG. 15, it is easy to pick up package A141 from pallet B by catching polypropylene-made band which bands in ends of two pieces of fiber reinforced cement siding 1. In addition, in a installation site, work operation which strips and removes shrink film 6 of package A151 is unnecessary and a problem that

shrink film 6 after stripping becomes industrial waste does not occur.

However, package A151 uses paper cap 7, so that packaging cost rises, and productivity in factory falls. In addition, in a installation site, paper cap 7 must be stripped of package A151, and fiber reinforced cement siding 1 must be transferred to other pallet for removing stripped paper cap 7, so that an effort and hour are needed for an operation. Furthermore, paper cap 7 after stripping is unnecessary so that it becomes industrial waste, and it is uneconomical.

Furthermore, location of polypropylene-made band 3 banding package A151 is the same in all package A151, as shown in FIG. 15 (b), plural packages A151 are loaded pallet B with, and only a point of polypropylene-made band 3 becomes a form to rise from other points by piling up plural polypropylene-made bands 3, so that load tends to be concentrated in a point of polypropylene-made band 3. It is remarkable for lifting pallet B which loads plural packages A151. It makes unfavorable brightness and micro crack at surface of fiber reinforced cement siding 1, it might lose good appearance and quality of fiber reinforced cement siding 1.

In addition, an antislip agent is not applied between each

package A151 loaded with, package A151 is mobile by receiving force, so that loading structure shown in FIG. 15 is easy to collapse.

[0012]

Furthermore, in package A161 and loading structure shown in FIG. 16, packing material is only shrink film 6 bands a both end of package A161 and hot melt 8, packaging cost can be low controlled. But when package A161 is picked up, package A161 bends greatly because package A161 bands only a both end, so that fiber reinforced cement siding 1 might be damaged during picking operation. In addition, it is difficult to pick up shrink film 6 because it was heated and shrinks.

Furthermore, location of shrink film 6 banding package A161 and hot melt 8 are the same in all package A161, as shown in FIG. 16 (b), plural packages A161 are loaded pallet B with, and only a point of shrink film 6 becomes a form to rise from other points by piling up plural shrink films 6 and hot melt 8, so that load tends to be concentrated in a point of shrink film 6. It is remarkable for lifting pallet B which loads plural packages A161. Same as loading structure of FIG. 15, it makes unfavorable brightness and micro crack at surface of fiber reinforced cement siding 1, it might lose good appearance and

quality of fiber reinforced cement siding 1.

[0013]

The description herein of advantages and disadvantages of various features, embodiments, methods, and apparatus disclosed in other publications is in no way intended to limit the present invention. For example, certain features of the preferred embodiments of the invention may be capable of overcoming certain disadvantages and/or providing certain advantages, such as, e.g., disadvantages and/or advantages discussed herein, while retaining some or all of the features, embodiments, methods, and apparatus disclosed therein.

SUMMARY OF THE INVENTION

[0014]

The preferred embodiments of the present invention have been developed in view of the above-mentioned and/or other problems in the related art. The preferred embodiments of the present invention can significantly improve upon existing methods and/or apparatuses.

[0015]

Among other potential advantages, some embodiments can provide packaging structure for building boards and building

boards loading structure, it is hard to collapse, and it does not make unfavorable brightness and micro crack at surface of building boards, and its packaging cost is low, and its productivity and picking workability do not deteriorate, and workability in a installation site is preferable, and industrial waste after unpacking is little.

[0016]

According to some embodiments of the present invention, in a packaging structure for building boards which packs plural building boards one package, wherein the packaging structure comprises plural building boards and plural bands, and wherein the plural building boards are banded at plural locations by the plural bands, and wherein a surface of bands which locates in a both end of the packaging structure is adhesive, and wherein a surface of band which locates in besides a both end of the packaging structure is non-adhesive.

Example of the band in which surface is adhesive is a resin-made film such as stretch film and shrink film having tacky producer in surface, a resin-made band such as band made by polypropylene and polyethylene having tacky producer in surface. On the other hand, example of the band in which surface is non-adhesive is a resin-made film having no tacky producer

in surface and a resin-made band having no tacky producer in surface. In addition, the tacky producer always has tackiness in an absence of solvent condition, example of the tacky producer is crude-rubber and synthetic rubber, acryl, liquid aliphatic hydrocarbon.

When plural packages having said packaging structure are loaded pallet with, a surface of bands which locates in a both end of the package is adhesive, so that it is hard to collapse by sticking the bands. And a surface of band which locates in besides a both end of the packaging structure is non-adhesive, so that cutting the band and difficulty of picking by sticking the band in another band do not occur.

Furthermore, it is a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural bands, and it is not necessary to transfer plural building boards to other pallet, and industrial waste after unpacking is little. And it is easy to pick up package from pallet by catching the band.
[0017]

Furthermore, in the packaging structure for building boards, wherein band which locates in besides a both end of the packaging structure bands the building boards helically.

In the packaging structure, the band which locates in besides a both end of the packaging structure bands the building boards helically, so that banding force of the package by band becomes strong. And even if force was added to the package by the outside, upper and lower building boards slip off in the package is controlled.

[0018]

According to some embodiments of the present invention, in a packaging structure for building boards which packs plural building boards one package, wherein the packaging structure comprises plural building boards and plural bands, and wherein the plural building boards are banded at plural locations by the plural bands, and wherein a surface of all bands is adhesive.

Example of the band in which surface is adhesive is a resin-made film having tacky producer in surface and a resin-made band having tacky producer in surface.

When plural packages having said packaging structure are loaded pallet with, a surface of all bands in the package is adhesive, so that it is hard to collapse by sticking the bands.

Furthermore, it is a minimum package, so that packaging cost is cheap , and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural bands, and

it is not necessary to transfer plural building boards to other pallet, and industrial waste after unpacking is little. And it is easy to pick up package from pallet by catching the band.

[0019]

Furthermore, in the packaging structure for building boards, wherein band which locates in besides a both end of the packaging structure bands the building boards helically.

In the packaging structure, the band which locates in besides a both end of the packaging structure bands the building boards helically, so that banding force of the package by band becomes strong. And even if force was added to the package by the outside, upper and lower building boards slip off in the package is controlled.

[0020]

Furthermore, in the packaging structure for building boards, wherein the bands are resin-made film.

By using resin-made film as the band, a package having the packaging structure is banded enough, and a said effect of the invention can be shown enough. In addition, resin-made film is more flexible than a resin-made band, and thickness of the resin-made film is thin, so that load by banding bundling boards can be minimized, and unfavorable brightness and micro crack

at surface of building boards is controlled.

[0021]

According to some embodiments of the present invention, in a building boards loading structure which loads plural building boards a pallet with, wherein the building boards loading structure comprises plural packages, and wherein the package comprises plural building boards and plural bands, and wherein the plural building boards are banded at plural locations by the plural bands, and wherein the plural packages are loaded the pallet with, and wherein the location of bands in each upper and lower package which is loaded the pallet with is different each other.

Example of the band is a resin-made film such as stretch film and shrink film, a resin-made band such as band made by polypropylene and polyethylene, a paper-made band and cloth-made band.

In the building boards loading structure, the location of bands in each upper and lower package which is loaded the pallet with is different each other, so that it prevents load from concentrating the location of bands, and it does not make unfavorable brightness and micro crack at surface of building boards.

And even if using resin-made film as band of package, cutting the band and difficulty of picking by sticking the band in another band do not occur.

Furthermore, it is a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural bands, and it is not necessary to transfer plural building boards to other pallet, and industrial waste after unpacking is little. And it is easy to pick up package from pallet by catching the band.
[0022]

Furthermore, in the building boards loading structure wherein at least one of the bands which band the building boards helically.

A resin-made film such as stretch film and shrink film, a resin-made band such as band made by polypropylene and polyethylene, a paper-made band and cloth-made band are used as the band. Especially, using the resin-made film as the band is preferable.

In the packaging structure, at least one of the bands which band the building boards helically, so that banding force of the package by band becomes strong. And even if force was added to the package by the outside, upper and lower building boards

slip off in the package is controlled.

[0023]

Furthermore, in the building boards loading structure, wherein the pallet comprises plural stringers and plural deck boards, and wherein the plural stringers and plural deck boards make entry to insert fork of a fork lift truck, and wherein the location of bands in lowest package which is loaded the pallet with is different from upper location of the stringers and inserting fork of the fork lift truck.

In the building boards loading structure, the effect that it prevents load from concentrating the location of bands and it does not make unfavorable brightness and micro crack at surface of building boards is provided more. [0025]

According to some embodiments of the present invention, in a building boards loading structure which loads plural building boards a pallet with, wherein the building boards loading structure comprises plural packages, and wherein the package comprises plural building boards and plural bands, and wherein the plural building boards are banded at plural locations by the plural bands, and wherein the plural packages are loaded the pallet with, and wherein the pallet comprises plural stringers and plural deck boards, and wherein the plural

stringers and plural deck boards make entry to insert fork of a fork lift truck, and wherein the location of bands in lowest package which is loaded the pallet with is different from upper location of the stringers and inserting fork of the fork lift truck.

A resin-made film such as stretch film and shrink film, a resin-made band such as band made by polypropylene and polyethylene, a paper-made band and cloth-made band are used as the band.

When the pallet loading with the package moves with a fork lift truck, load tends to be concentrated in a point of upper location of the stringers and inserting fork of the fork lift truck.

However, in the building boards loading structure, the location of bands in lowest package which is loaded the pallet with is different from upper location of the stringers and inserting fork of the fork lift truck, so that it prevents load from concentrating the location of bands, and it does not make unfavorable brightness and micro crack at surface of building boards.

Furthermore, it is a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in

a installation site is only cutting the plural bands, and it is not necessary to transfer plural building boards to other pallet, and industrial waste after unpacking is little. And it is easy to pick up package from pallet by catching the band.

[0024]

Furthermore, in the building boards loading structure wherein the bands are resin-made film and/or resin-made band.

Example of the band is a resin-made film such as stretch film and shrink film, a resin-made band such as band made by polypropylene and polyethylene.

By using resin-made film and/or resin-made band as the band, a package is banded enough, and a said effect of the invention can be shown enough.

[0025]

According to some embodiments of the present invention, in a building boards loading structure which loads plural building boards a pallet with, wherein the building boards loading structure comprises plural packages, and wherein the package comprises plural building boards and plural bands, and wherein the plural building boards are banded at plural locations by the plural bands, and wherein a surface of bands which locates in a both end of the package is adhesive, and wherein the plural

packages are loaded the pallet with, and wherein the pallet comprises plural stringers and plural deck boards, and wherein the plural stringers and plural deck boards make entry to insert fork of a fork lift truck, and wherein the location of bands in a both end of the package in each upper and lower package which is loaded the pallet with is the same, and it is different from upper location of the stringers and inserting fork of the fork lift truck.

In the building boards loading structure, a surface of bands which locates in a both end of the package which is loaded the pallet with is adhesive, and the location of bands in a both end of the package in each upper and lower package which is loaded the pallet with is the same, so that it is hard to collapse by sticking the bands.

If location of bands in the package in each upper and lower package which is loaded the pallet with is the same, a point of bands becomes a form to rise from other points by piling up plural bands, so that load tends to be concentrated in a point of band. It is remarkable for lifting pallet which loads plural packages. However, in the building boards loading structure, a location of bands in a both end of the package in each upper and lower package which is loaded the pallet with

is different from upper location of the stringers and inserting fork of the fork lift truck, so that it prevents load from concentrating the location of bands, and it does not make unfavorable brightness and micro crack at surface of building boards.

Furthermore, it is a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural bands, and it is not necessary to transfer plural building boards to other pallet, and industrial waste after unpacking is little. And it is easy to pick up package from pallet by catching the band.

[0026]

Furthermore, in the building boards loading structure wherein the location of bands in besides a both end of the package in lowest package which is loaded the pallet with is different from upper location of the stringers and inserting fork of the fork lift truck.

In the building boards loading structure, the location of bands in besides a both end of the package in lowest package which is loaded the pallet with is different from upper location of the stringers and inserting fork of the fork lift truck, it prevents load from concentrating the location of all bands

and it does not make unfavorable brightness and micro crack at surface of building boards.

[0027]

Furthermore, in the building boards loading structure wherein the location of bands in besides a both end of the package in each upper and lower package which is loaded the pallet with is different each other.

In the building boards loading structure, the location of bands in besides a both end of the package in each upper and lower package which is loaded the pallet with is different each other, it prevents load from concentrating the location of all bands and it does not make unfavorable brightness and micro crack at surface of building boards.

And even if using band having adhesive surface, cutting the band and difficulty of picking by sticking the band in another band do not occur.

[0028]

Furthermore, in the building boards loading structure wherein the bands are resin-made film.

Example of the resin-made film is such as stretch film and shrink film.

By using resin-made film as the band, a package is banded

enough, and a said effect of the invention can be shown enough.

EFFECT OF THE INVENTION

[0029]

According to the present invention, it is a minimum package, so that packaging cost is cheap, and productivity does not deteriorate.

In addition, it prevents load from concentrating the location of band and it does not make unfavorable brightness and micro crack at surface of building boards.

Furthermore, unpacking in a installation site is only cutting the plural bands, and it is not necessary to transfer plural building boards to other pallet, and industrial waste after unpacking is little and workability in a installation site is preferable. And it is easy to pick up package from pallet by catching the band.

Furthermore, in the building boards loading structure, a surface of bands which locates in a both end of the package which is loaded the pallet with is adhesive, and the location of bands in a both end of the package in each upper and lower package which is loaded the pallet with is the same, so that it is hard to collapse by sticking the bands.

[0030]

The above and/or other aspects, features and/or advantages of various embodiments will be further appreciated in view of the following description in conjunction with the accompanying figures. Various embodiments can include and/or exclude different aspects, features and/or advantages where applicable. In addition, various embodiments can combine one or more aspect or feature of other embodiments where applicable. The descriptions of aspects, features and/or advantages of particular embodiments should not be construed as limiting other embodiments or the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031]

The preferred embodiments of the present invention are shown by way of example, and not limitation, in the accompanying figures, in which:

FIG. 1 is a view which shows a packaging structure for building boards and a building boards loading structure according to the first embodiment of the present invention;

FIG. 2 is a view which shows a packaging structure for

building boards and a building boards loading structure according to the second embodiment of the present invention;

FIG. 3 is a view which shows a packaging structure for building boards and a building boards loading structure according to the third embodiment of the present invention;

FIG. 4 is a view which shows a packaging structure for building boards and a building boards loading structure according to the fourth embodiment of the present invention;

FIG. 5 is a view which shows a packaging structure for building boards and a building boards loading structure according to the fifth embodiment of the present invention;

FIG. 6 is a view which shows a packaging structure for building boards and a building boards loading structure according to the sixth embodiment of the present invention;

FIG. 7 is a view which shows a packaging structure for building boards and a building boards loading structure according to the seventh embodiment of the present invention;

FIG. 8 is a view which shows a packaging structure for building boards and a building boards loading structure according to the eighth embodiment of the present invention;

FIG. 9 is a view which shows a packaging structure for building boards and a building boards loading structure

according to the ninth embodiment of the present invention;

FIG. 10 is a view which shows a packaging structure for building boards and a building boards loading structure according to the tenth embodiment of the present invention;

FIG. 11 is a view which shows a packaging structure for building boards and a building boards loading structure according to the eleventh embodiment of the present invention;

FIG. 12 is a view which shows a packaging structure for building boards and a building boards loading structure according to the twelfth embodiment of the present invention;

FIG. 13 is a view which shows a packaging structure for building boards and a building boards loading structure according to the thirteenth embodiment of the present invention;

FIG. 14 is a view which shows a packaging structure for building boards and a building boards loading structure according to a related art;

FIG. 15 is a view which shows a packaging structure for building boards and a building boards loading structure according to other related art;

FIG. 16 is a view which shows a packaging structure for building boards and a building boards loading structure

according to other related art; and

FIG. 17 is a view which shows a pallet to load with building boards.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0032]

In the following paragraphs, some preferred embodiments of the invention will be described with reference to the attached drawings by way of example and not limitation. It should be understood based on this disclosure that various other modifications can be made by those in the art based on these illustrated embodiments.

[0033]

A packaging structure for building boards and a building boards loading structure according to a preferable embodiment of the present invention will be explained with reference to FIG. 1 to 13.

[0034]

[Embodiment 1]

FIG. 1 is a view which shows a packaging structure for building boards and a building boards loading structure according to the first embodiment of the present invention.

FIG. 1 (a) shows a perspective view of packages A11 and A12 of fiber reinforced cement sidings 1 as building boards, and FIG. 1 (b) shows a perspective view of loading structure which loaded pallet B with packages A11 and A12.

As shown in FIG. 1 (a), package A11 and A12 have a structure which two pieces of fiber reinforced cement siding 1 is banded by plural polypropylene-made bands 3. As an example, number of using polypropylene-made band 3 in one package which is package A11 or A12 is four. When package A11 and A12 are loaded pallet B with, a location of polypropylene-made bands 3 is different from upper location of the stringers and inserting fork C of a fork lift truck. In addition, package A11 and A12 are different from location of polypropylene-made bands 3, so that location of polypropylene-made bands 3 in each upper and lower package which is loaded the pallet with is different each other by loading a package A11 with a package A12 alternately.

As shown in FIG. 1 (b), package A11 and A12 are arranged in two lines, wherein package A11 and A12 are loaded pallet B with alternately, so that a location of polypropylene-made bands 3 in each upper and lower package which is loaded the pallet with is different each other, and a location of polypropylene-made bands 3 is different from upper location

of the stringers 10 and inserting fork C of a fork lift truck. Therefore, it prevents load from concentrating the location of all polypropylene-made bands 3 and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1.

And it is easy to pick up package A11 and A12 from pallet B by catching the polypropylene-made band 3.

Furthermore, package A11 and A12 is a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural polypropylene-made bands 3, and it is not necessary to transfer plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0035]

[Embodiment 2]

FIG. 2 is a view which shows a packaging structure for building boards and a building boards loading structure according to the second embodiment of the present invention. FIG. 2 (a) shows a perspective view of packages A21 and A22 of fiber reinforced cement sidings 1 as building boards, and FIG. 2 (b) shows a perspective view of loading structure which loaded pallet B with packages A21 and A22.

As shown in FIG. 2 (a), package A21 and A22 have a structure which two pieces of fiber reinforced cement siding 1 is banded by plural stretch films 4. As an example, number of using stretch film 4 in one package which is package A21 or A22 is four. However, package A21 and A22 are different from location of stretch films 4, so that location of stretch films 4 in each upper and lower package which is loaded the pallet B with is different each other by loading a package A21 with a package A22 alternately.

As shown in FIG. 2 (b), package A21 and A22 are arranged in two lines, wherein package A21 and A22 are loaded pallet B with alternately, so that a location of stretch films 4 in each upper and lower package which is loaded the pallet with is different each other. Therefore, it prevents load from concentrating the location of all stretch films 4 and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1. And cutting the band and difficulty of picking by sticking the band in another band do not occur.

And it is easy to pick up package A21 and A22 from pallet B by catching the stretch film 4.

Furthermore, package A21 and A22 is a minimum package, so that packaging cost is cheap, and productivity does not

deteriorate. Unpacking in a installation site is only cutting the plural stretch films 4, and it is not necessary to transfer plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0036]

[Embodiment 3]

FIG. 3 is a view which shows a packaging structure for building boards and a building boards loading structure according to the third embodiment of the present invention. FIG. 3 (a) shows a perspective view of packages A31 and A32 of fiber reinforced cement sidings 1 as building boards, and FIG. 3 (b) shows a perspective view of loading structure which loaded pallet B with packages A31 and A32.

Package A31 and A32 are the same as package A21 and A22 in having a structure which two pieces of fiber reinforced cement siding 1 is banded by stretch film 4 and arranging in two lines. However, package A31 and A32 are different from package A21 and A22 in banding structure of stretch film 4. As shown in FIG. 3 (a), stretch film 4 bands plural fiber reinforced cement sidings 1 helically in package A31 and A32, so that banding force of the package A31 and A32 by stretch film 4 becomes strong. And even if force was added to the package A31 and A32 by the

outside, upper and lower fiber reinforced cement siding 1 slip off in the package is controlled. In addition, package A31 and A32 are different from location of stretch film 4, so that location of stretch film 4 in each upper and lower package which is loaded the pallet with is different each other by loading a package A31 with a package A32 alternately.

As shown in FIG. 3 (b), package A31 and A32 are arranged in two lines, wherein package A31 and A32 are loaded pallet B with alternately, so that a location of stretch films 4 in each upper and lower package which is loaded the pallet with is different each other. Therefore, it prevents load from concentrating the location of all stretch films 4 and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1. And cutting the band and difficulty of picking by sticking the band in another band do not occur.

And it is easy to pick up package A31 and A32 from pallet B by catching the stretch film 4.

Furthermore, package A31 and A32 is a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural stretch films 4, and it is not necessary to transfer

plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0037]

[Embodiment 4]

FIG. 4 is a view which shows a packaging structure for building boards and a building boards loading structure according to the fourth embodiment of the present invention. FIG. 4 (a) shows a perspective view of package A41 of fiber reinforced cement sidings 1 as building boards, and FIG. 4 (b) shows a perspective view of loading structure which loaded pallet B with packages A41.

Package A41 is the same as package A21 and A22 in having a structure which two pieces of fiber reinforced cement siding 1 is banded by stretch film 4 and arranging in two lines. However, package A41 is different from package A21 and A22 in a location of stretch films 4. As shown in FIG. 4 (b), a location of stretch films 4 in each upper and lower package A41 which is loaded the pallet B with is the same as each other. However, the location of stretch film 4 in the package A41 which is loaded the pallet B with is different from upper location of the stringers 10 and inserting fork C of a fork lift truck. Therefore, it prevents load from concentrating the location of all stretch

film 4 and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1.

And it is easy to pick up package A41 from pallet B by catching the stretch film 4.

Furthermore, package A41 is a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural stretch films 4, and it is not necessary to transfer plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0038]

[Embodiment 5]

FIG. 5 is a view which shows a packaging structure for building boards and a building boards loading structure according to the fifth embodiment of the present invention. FIG. 5 (a) shows a perspective view of packages A51 and A52 of fiber reinforced cement sidings 1 as building boards, and FIG. 5 (b) shows a perspective view of loading structure which loaded pallet B with packages A51 and A52.

Package A51 and A52 is the same as package A41 in having a structure which two pieces of fiber reinforced cement siding 1 is banded by stretch film 4 and arranging in two lines. However,

package A52 is different from package A41 in a location of stretch films 4.

As shown in FIG. 5 (a), package A51 and A52 are different from a location of stretch films 4 each other, and a location of stretch films 4 in package A51 which is loaded the pallet B with is different from upper location of the stringers 10 and inserting fork C of a fork lift truck. As shown in FIG. 5 (b), a lowest package which is loaded the pallet B with is package A51, other is package A52. Therefore, a location of stretch films 4 in a lowest package which is loaded the pallet B with is different from upper location of the stringers 10 and inserting fork C of a fork lift truck, so that it prevents load from concentrating the location of all stretch film 4 and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1.

And it is easy to pick up package A51 from pallet B by catching the stretch film 4.

Furthermore, package A51 is a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural stretch films 4, and it is not necessary to transfer plural fiber reinforced cement sidings 1 to other pallet, and

industrial waste after unpacking is little.

[0039]

[Embodiment 6]

FIG. 6 is a view which shows a packaging structure for building boards and a building boards loading structure according to the sixth embodiment of the present invention. FIG. 6 (a) shows a perspective view of package A61 of fiber reinforced cement sidings 1 as building boards, and FIG. 6 (b) shows a perspective view of loading structure which loaded pallet B with packages A61.

As shown in FIG. 6 (a), package A61 has a structure which two pieces of fiber reinforced cement siding 1 is banded by stretch films 4a and stretch films 4b. In the packaging structure, a surface of stretch films 4a which locates in a both end of the packaging structure is adhesive, and a surface of stretch films 4b which locates in besides a both end of the packaging structure is non-adhesive. A location of stretch films 4a and stretch films 4b is the same in all package A61.

As shown in FIG. 6 (b), the location of stretch films 4a and stretch films 4b in each upper and lower package A61 which is loaded the pallet B with is the same as each other. However, the location of stretch films 4a and stretch films 4b in the

package A61 which is loaded the pallet B with is different from upper location of the stringers 10 and inserting fork C of a fork lift truck. Therefore, it prevents load from concentrating the location of all stretch films 4a and stretch films 4b and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1.

And a surface of stretch films 4a which locates in a both end of the package A61 which is loaded the pallet B with is adhesive, and the location of stretch films 4a in a both end of the package in each upper and lower package which is loaded the pallet B with is the same, so that it is hard to collapse by sticking the package A61.

And it is easy to pick up package A61 from pallet B by catching the stretch film 4a.

Furthermore, package A61 is a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural stretch films 4a and 4b, and it is not necessary to transfer plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0040]

[Embodiment 7]

FIG. 7 is a view which shows a packaging structure for building boards and a building boards loading structure according to the seventh embodiment of the present invention. FIG. 7 (a) shows a perspective view of packages A71 and A72 of fiber reinforced cement sidings 1 as building boards, and FIG. 7 (b) shows a perspective view of loading structure which loaded pallet B with packages A71 and A72.

Package A71 and A72 are the same as package A61 in having a structure which two pieces of fiber reinforced cement siding 1 is banded by stretch films 4a and stretch films 4b and arranging in two lines. In the packaging structure, a surface of stretch films 4a which locates in a both end of the packaging structure is adhesive, and a surface of stretch films 4b which locates in besides a both end of the packaging structure is non-adhesive. And a location of stretch films 4a in package A71 and A72 which are loaded the pallet B with is the same as each other, and it is different from upper location of the stringers 10 and inserting fork C of a fork lift truck.

However, package A71 and A72 are different from package A61 in a location of stretch films 4b. As shown in FIG. 7 (a), package A71 and A72 are different from location of stretch films 4b each other, so that the location of stretch films 4b in each

upper and lower package which is loaded the pallet B with is different each other by loading a package A71 with a package A72 alternately.

As shown in FIG. 7 (b), package A71 and A72 are loaded pallet B with alternately. A location of stretch films 4a in package A71 and A72 which are loaded the pallet B with is the same as a location of stretch films 4a in showing in FIG. 6(b), that is location of stretch films 4a in package A71 and A72 which are loaded the pallet B with is the same as each other, and it is different from upper location of the stringers 10 and inserting fork C of a fork lift truck. However, a location of stretch films 4b in package A71 and A72 which are loaded the pallet B with is different from a location of stretch films 4b in showing in FIG. 6(b). The package A71 and A72 are loaded pallet B with alternately, so that a location of stretch films 4b in besides a both end of the package in each upper and lower package which is loaded the pallet B with is different each other. Therefore, it prevents load from concentrating the location of all stretch films 4a and 4b, and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1. And cutting the band and difficulty of picking by sticking the band in another band do

not occur.

And a surface of stretch films 4a which locates in a both end of the package A71 and A72 which is loaded the pallet B with is adhesive, and the location of stretch films 4a in a both end of the package in each upper and lower package which is loaded the pallet B with is the same, so that it is hard to collapse by sticking the package A71 and A72.

And it is easy to pick up package A71 and A72 from pallet B by catching the stretch film 4a.

Furthermore, package A71 and A72 are a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural stretch films 4a and 4b, and it is not necessary to transfer plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0041]

[Embodiment 8]

FIG. 8 is a view which shows a packaging structure for building boards and a building boards loading structure according to the eighth embodiment of the present invention. FIG. 8 (a) shows a perspective view of packages A81 and A82 of fiber reinforced cement sidings 1 as building boards, and

FIG. 8 (b) shows a perspective view of loading structure which loaded pallet B with packages A81 and A82.

Package A81 and A82 are the same as package A71 and A72 except that all band is stretch films 4a.

As shown in FIG. 8 (b), a location of stretch films 4a in besides a both end of the package in each upper and lower package which is loaded the pallet B with is different each other by loading a package A81 with a package A82 alternately. Therefore, it prevents load from concentrating the location of all stretch films 4a, and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1. And cutting the band and difficulty of picking by sticking the band in another band do not occur.

And a surface of stretch films 4a which locates in a both end of the package A81 and A82 which is loaded the pallet B with is adhesive, and the location of stretch films 4a in a both end of the package in each upper and lower package which is loaded the pallet B with is the same, so that it is hard to collapse by sticking the package A81 and A82.

And it is easy to pick up package A81 and A82 from pallet B by catching the stretch film 4a.

Furthermore, package A81 and A82 are a minimum package, so

that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural stretch films 4a, and it is not necessary to transfer plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0042]

[Embodiment 9]

FIG. 9 is a view which shows a packaging structure for building boards and a building boards loading structure according to the ninth embodiment of the present invention. FIG. 9 (a) shows a perspective view of packages A91 and A92 of fiber reinforced cement sidings 1 as building boards, and FIG. 9 (b) shows a perspective view of loading structure which loaded pallet B with packages A91 and A92.

Package A91 and A92 is the same as package A61 in having a structure which two pieces of fiber reinforced cement siding 1 is banded by stretch films 4a and 4b and arranging in two lines. In the packaging structure, a surface of stretch films 4a which locates in a both end of the packaging structure is adhesive, and a surface of stretch films 4b which locates in besides a both end of the packaging structure is non-adhesive. And a location of stretch films 4a in package A91 and A92 which

are loaded the pallet B with is the same as each other, and it is different from upper location of the stringers 10 and inserting fork C of a fork lift truck. And a location of stretch films 4b in package A91 which is loaded the pallet B with is the same as package A61, and it is different from upper location of the stringers 10 and inserting fork C of a fork lift truck. However, a location of stretch films 4b in package A92 is different from package A61. As shown in FIG. 9 (a), package A91 and A92 are different from location of stretch films 4b each other, and a location of stretch films 4b in package A91 which is loaded the pallet B with is different from upper location of the stringers 10 and inserting fork C of a fork lift truck, so that the location of stretch films 4b in each upper and lower package which is loaded the pallet B with is different each other by loading a package A91 with a package A92.

As shown in FIG. 9(b), a lowest package which is loaded the pallet B with is package A91, other is package A92. Therefore, a location of stretch films 4a and 4b in a lowest package which is loaded the pallet B with is different from upper location of the stringers 10 and inserting fork C of a fork lift truck, so that it prevents load from concentrating the location of

all stretch films 4a and 4b and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1.

And a surface of stretch films 4a which locates in a both end of the package A91 and A92 which is loaded the pallet B with is adhesive, and the location of stretch films 4a in a both end of the package in each upper and lower package which is loaded the pallet B with is the same, so that it is hard to collapse by sticking the package A91 and A92.

And it is easy to pick up package A91 and A92 from pallet B by catching the stretch film 4a.

Furthermore, package A91 and A92 are a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural stretch films 4a and 4b, and it is not necessary to transfer plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0043]

[Embodiment 10]

FIG. 10 is a view which shows a packaging structure for building boards and a building boards loading structure according to the tenth embodiment of the present invention.

FIG. 10 (a) shows a perspective view of packages A101 and A102 of fiber reinforced cement sidings 1 as building boards, and FIG. 10 (b) shows a perspective view of loading structure which loaded pallet B with packages A101 and A102.

Package A101 and A102 are the same as package A81 and A82 except a location of stretch films 4a in besides a both end of the package.

As shown in FIG. 10 (a), a location of stretch films 4a in besides a both end of the package A101 are different from location of stretch films 4a in besides a both end of the package A102, and a location of stretch films 4a in besides a both end of the package A101 which is loaded the pallet B with is different from upper location of the stringers 10 and inserting fork C of a fork lift truck, so that the location of stretch films 4a in besides a both end of each upper and lower package which is loaded the pallet B with is different each other by loading a package A101 with a package A102.

As shown in FIG. 10 (b), a location of stretch films 4a in besides a both end of the package in each upper and lower package which is loaded the pallet B with is different each other by loading a package A101 with a package A102 alternately. Therefore, it prevents load from concentrating the location

of all stretch films 4a, and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1. And cutting the band and difficulty of picking by sticking the band in another band do not occur.

And a surface of stretch films 4a which locates in a both end of the package A101 and A102 which is loaded the pallet B with is adhesive, and the location of stretch films 4a in a both end of the package in each upper and lower package which is loaded the pallet B with is the same, so that it is hard to collapse by sticking the package A101 and A102.

And it is easy to pick up package A101 and A102 from pallet B by catching the stretch film 4a.

Furthermore, package A101 and A102 are a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural stretch films 4a, and it is not necessary to transfer plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0044]

[Embodiment 11]

FIG. 11 is a view which shows a packaging structure for building boards and a building boards loading structure

according to the eleventh embodiment of the present invention. FIG. 11 (a) shows a perspective view of packages A111 of fiber reinforced cement sidings 1 as building boards, and FIG. 11 (b) shows a perspective view of loading structure which loaded pallet B with packages A111.

Package A111 is the same as package A61 in having a structure which two pieces of fiber reinforced cement siding 1 is banded by stretch films 4a and stretch films 4b and arranging in two lines. In the packaging structure, a surface of stretch films 4a which locates in a both end of the packaging structure is adhesive, and a surface of stretch films 4b which locates in besides a both end of the packaging structure is non-adhesive. And a location of stretch films 4a in package A111 which are loaded the pallet B with is different from upper location of the stringers 10 and inserting fork C of a fork lift truck.

However, package A111 is different from package A61 in banding structure of stretch film 4b. As shown in FIG. 11 (a), stretch film 4b bands plural fiber reinforced cement sidings 1 helically in package A111, so that banding force of the package A111 by stretch film 4b becomes strong. And even if force was added to the package A111 by the outside, upper and lower fiber reinforced cement siding 1 slip off in the package is

controlled.

In addition, a location of stretch films 4a and 4b in package A111 which is loaded the pallet B with is different from upper location of the stringers 10 and inserting fork C of a fork lift truck, so that it prevents load from concentrating the location of all stretch films 4a and 4b and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1.

And a surface of stretch films 4a which locates in a both end of the package A111 which is loaded the pallet B with is adhesive, and the location of stretch films 4a in a both end of the package in each upper and lower package which is loaded the pallet B with is the same, so that it is hard to collapse by sticking the package A111.

And it is easy to pick up package A111 from pallet B by catching the stretch film 4a.

Furthermore, package A111 is a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural stretch films 4a and 4b, and it is not necessary to transfer plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0045]

[Embodiment 12]

FIG. 12 is a view which shows a packaging structure for building boards and a building boards loading structure according to the twelfth embodiment of the present invention. FIG. 12 (a) shows a perspective view of packages A121 and A122 of fiber reinforced cement sidings 1 as building boards, and FIG. 12 (b) shows a perspective view of loading structure which loaded pallet B with packages A121 and A122.

Package A121 and A122 are the same as package A111 in having a structure which two pieces of fiber reinforced cement siding 1 is banded by stretch films 4a and arranging in two lines. In the packaging structure, a surface of stretch films 4a is adhesive. And a location of stretch films 4a which locates in a both end of package A121 and A122 which is loaded the pallet B with is different from upper location of the stringers 10 and inserting fork C of a fork lift truck.

However, stretch film which locates in besides a both end of package A121 and A122 is different from package A111. As shown in FIG. 12 (a), stretch film which locates in besides a both end of package A121 and A122 is stretch film 4a having adhesive surface, and a location of stretch film 4a which

locates in besides a both end of package A121 is different from package A122. As shown in FIG. 12 (b), a location of stretch films 4a in besides a both end of the package in each upper and lower package which is loaded the pallet B with is different each other by loading a package A121 with a package A122 alternately. Therefore, it prevents load from concentrating the location of all stretch films 4a, and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1. And cutting the band and difficulty of picking by sticking the band in another band do not occur.

And a surface of stretch films 4a which locates in a both end of the package A121 and A122 which is loaded the pallet B with is adhesive, and the location of stretch films 4a in a both end of the package in each upper and lower package which is loaded the pallet B with is the same, so that it is hard to collapse by sticking the package A121 and A122.

And it is easy to pick up package A121 and A122 from pallet B by catching the stretch film 4a.

Furthermore, package A121 and A122 are a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting

the plural stretch films 4a, and it is not necessary to transfer plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0046]

[Embodiment 13]

FIG. 13 is a view which shows a packaging structure for building boards and a building boards loading structure according to the thirteenth embodiment of the present invention. FIG. 13 (a) shows a perspective view of packages A131 and A132 of fiber reinforced cement sidings 1 as building boards, and FIG. 13 (b) shows a perspective view of loading structure which loaded pallet B with packages A131 and A132.

Package A131 and A132 are the same as package A121 and A122 except stretch films in besides a both end of the package.

As shown in FIG. 13 (a), stretch film which locates in besides a both end of package A131 and A132 is stretch film 4b having non-adhesive surface, and a location of stretch film 4b which locates in besides a both end of package A131 is different from package A132, and a location of stretch films 4b in besides a both end of the package A131 which is loaded the pallet B with is different from upper location of the stringers 10 and inserting fork C of a fork lift truck.

As shown in FIG. 13 (b), a lowest package which is loaded the pallet B with is package A131, a location of stretch films 4b in besides a both end of the package in each upper and lower package which is loaded the pallet B with is different each other by loading a package A131 with a package A132 alternately. Therefore, it prevents load from concentrating the location of all stretch films 4a and 4b, and it does not make unfavorable brightness and micro crack at surface of fiber reinforced cement sidings 1. And cutting the band and difficulty of picking by sticking the band in another band do not occur.

And a surface of stretch films 4a which locates in a both end of the package A131 and A132 which is loaded the pallet B with is adhesive, and the location of stretch films 4a in a both end of the package in each upper and lower package which is loaded the pallet B with is the same, so that it is hard to collapse by sticking the package A131 and A132.

And it is easy to pick up package A131 and A132 from pallet B by catching the stretch film 4a.

Furthermore, package A131 and A132 are a minimum package, so that packaging cost is cheap, and productivity does not deteriorate. Unpacking in a installation site is only cutting the plural stretch films 4a and 4b, and it is not necessary

to transfer plural fiber reinforced cement sidings 1 to other pallet, and industrial waste after unpacking is little.

[0047]

While the present invention may be embodied in many different forms, a number of illustrative embodiments are described herein with the understanding that the present disclosure is to be considered as providing examples of the principles of the invention and such examples are not intended to limit the invention to preferred embodiments described herein and/or illustrated herein.

For example, a number, a location, a quality, a material, shape of banding, dimension, form of bands of package can be changed for achieving the present invention. In addition, a package can have a structure which two pieces of building board is piled up with attaching cushioning materials on either side of a longer direction of two pieces of building board, and/or building boards loading structure can have cushioning materials on either side of a longer direction of packages which is loaded pallet with. Furthermore, a pallet which does not comprise deck board 11 in undersurface of a stringer can be used.

[0048]

While illustrative embodiments of the invention have been described herein, the present invention is not limited to the various preferred embodiments described herein, but includes any and all embodiments having equivalent elements, modifications, omissions, combinations (e.g., of aspects across various embodiments), adaptations and/or alterations as would be appreciated by those in the art based on the present disclosure. The limitations in the claims are to be interpreted broadly based on the language employed in the claims and not limited to examples described in the present specification or during the prosecution of the application, which examples are to be construed as non-exclusive. In this disclosure and during the prosecution of this application, the terminology "present invention" or "invention" is meant as a non-specific, general reference and may be used as a reference to one or more aspect within the present disclosure. The language present invention or invention should not be improperly interpreted as an identification of criticality, should not be improperly interpreted as applying across all aspects or embodiments (i.e., it should be understood that the present invention has a number of aspects and embodiments), and should not be improperly interpreted as limiting the scope of the application or claims.

In this disclosure and during the prosecution of this application, the terminology "embodiment" can be used to describe any aspect, feature, process or step, any combination thereof, and/or any portion thereof, etc. In some examples, various embodiments may include overlapping features.

WHAT IS CLAIMED IS:

1. A packaging structure for building boards which packs plural building boards one package,
wherein the packaging structure comprises plural building boards and plural bands,
and wherein the plural building boards are banded at plural locations by the plural bands,
and wherein a surface of bands which locates in a both end of the packaging structure is adhesive,
and wherein a surface of band which locates in besides a both end of the packaging structure is non-adhesive.
2. The packaging structure for building boards as recited in claim 1,
wherein band which locates in besides a both end of the packaging structure bands the building boards helically.
3. A packaging structure for building boards which packs plural building boards one package,
wherein the packaging structure comprises plural building boards and plural bands,

and wherein the plural building boards are banded at plural locations by the plural bands,
and wherein a surface of all bands is adhesive.

4. The packaging structure for building boards as recited in claim 3,

wherein band which locates in besides a both end of the packaging structure bands the building boards helically.

5. The packaging structure for building boards as recited in any one of claim 1 to claim 4,

wherein the bands are resin-made film.

6. A building boards loading structure which loads plural building boards a pallet with,

wherein the building boards loading structure comprises plural packages,

and wherein the package comprises plural building boards and plural bands,

and wherein the plural building boards are banded at plural locations by the plural bands,

and wherein the plural packages are loaded the pallet with,

and wherein the location of bands in each upper and lower package which is loaded the pallet with is different each other.

7. The building boards loading structure as recited in claim 6,

wherein at least one of the bands which band the building boards helically.

8. The building boards loading structure as recited in claim 6,

wherein the pallet comprises plural stringers and plural deck boards,

and wherein the plural stringers and plural deck boards make entry to insert fork of a fork lift truck,
and wherein the location of bands in lowest package which is loaded the pallet with is different from upper location of the stringers and inserting fork of the fork lift truck.

9. A building boards loading structure which loads plural building boards a pallet with,
wherein the building boards loading structure comprises

plural packages,

and wherein the package comprises plural building boards
and plural bands,

and wherein the plural building boards are banded at plural
locations by the plural bands,

and wherein the plural packages are loaded the pallet with,
and wherein the pallet comprises plural stringers and
plural deck boards,

and wherein the plural stringers and plural deck boards
make entry to insert fork of a fork lift truck,

and wherein the location of bands in lowest package which
is loaded the pallet with is different from upper location
of the stringers and inserting fork of the fork lift truck.

10. The building boards loading structure as recited in
any one of claim 6 to claim 9,
wherein the bands are resin-made film and/or resin-made
band.

11. A building boards loading structure which loads plural
building boards a pallet with,
wherein the building boards loading structure comprises

plural packages,
and wherein the package comprises plural building boards
and plural bands,
and wherein the plural building boards are banded at plural
locations by the plural bands,
and wherein a surface of bands which locates in a both end
of the package is adhesive,
and wherein the plural packages are loaded the pallet with,
and wherein the pallet comprises plural stringers and
plural deck boards,
and wherein the plural stringers and plural deck boards
make entry to insert fork of a fork lift truck,
and wherein the location of bands in a both end of the
package in each upper and lower package which is loaded
the pallet with is the same, and it is different from upper
location of the stringers and inserting fork of the fork
lift truck.

12. The building boards loading structure as recited in claim
11,

wherein the location of bands in besides a both end of the
package in lowest package which is loaded the pallet with

is different from upper location of the stringers and inserting fork of the fork lift truck.

13. The building boards loading structure as recited in claim 11,

wherein the location of bands in besides a both end of the package in each upper and lower package which is loaded the pallet with is different each other.

14. The building boards loading structure as recited in claim 12,

wherein the location of bands in besides a both end of the package in each upper and lower package which is loaded the pallet with is different each other.

15. The building boards loading structure as recited in any one of claim 11 to claim 14,
wherein the bands are resin-made film.

FIG. 1

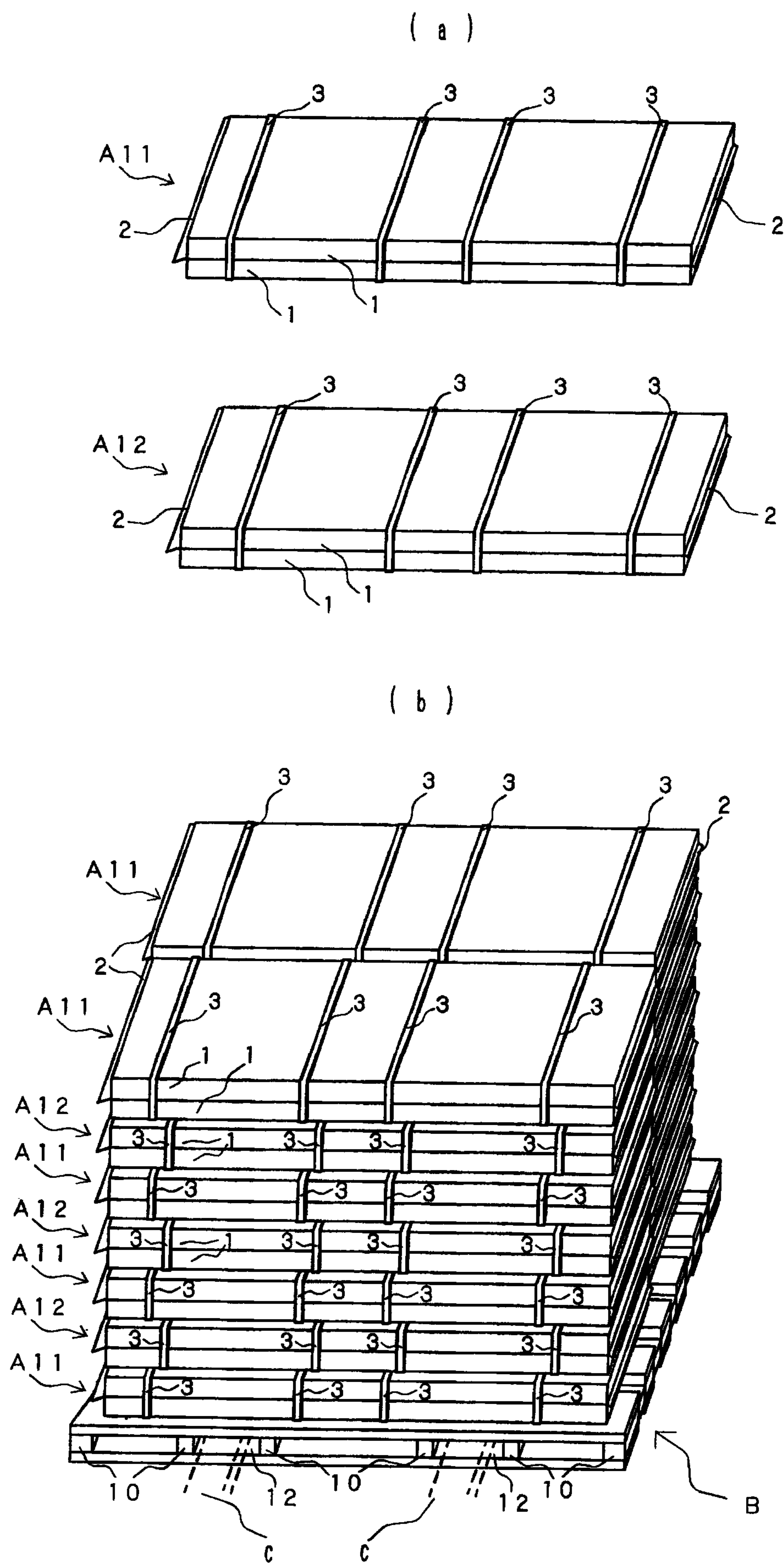


FIG. 2

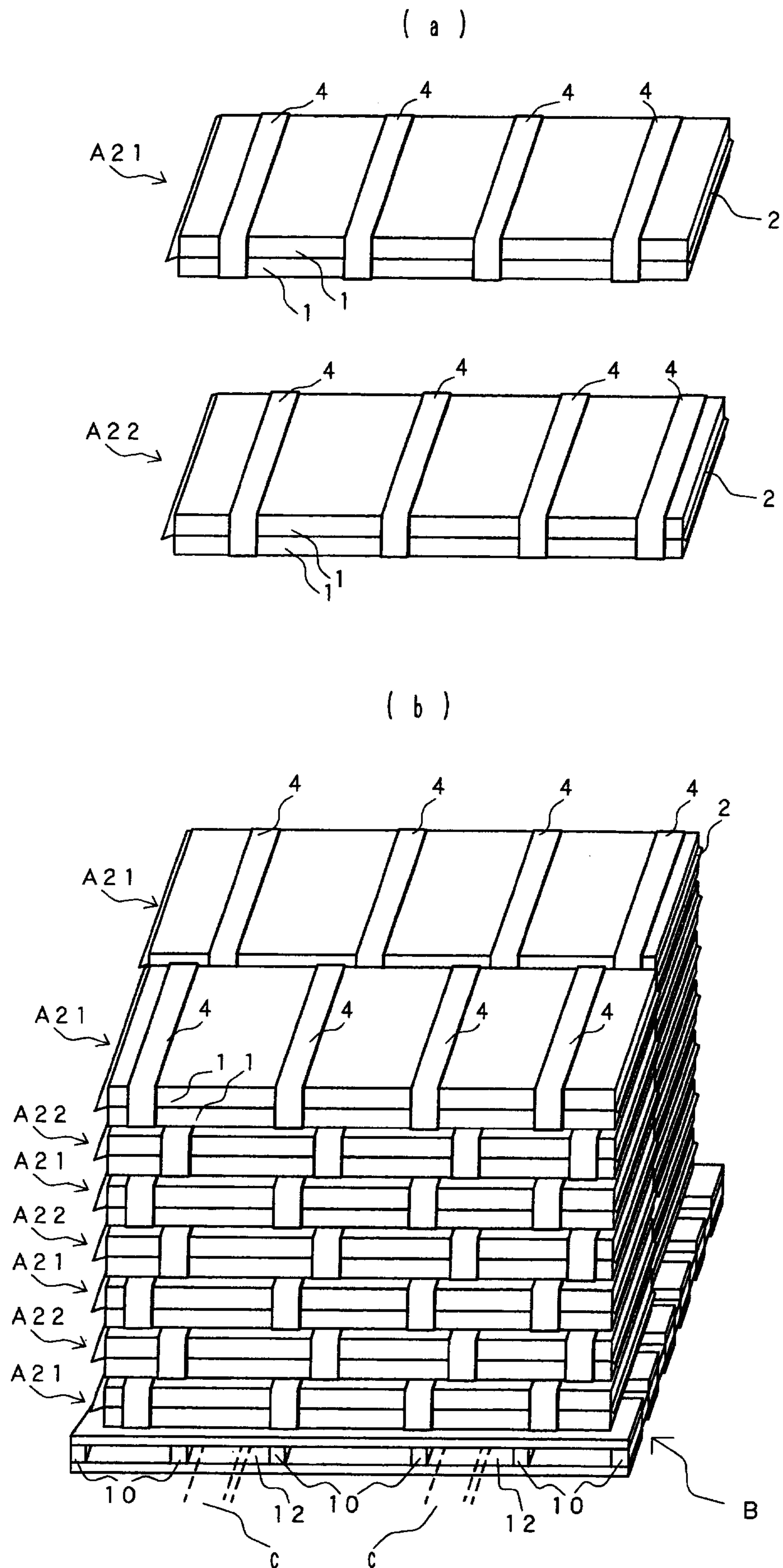


FIG. 3

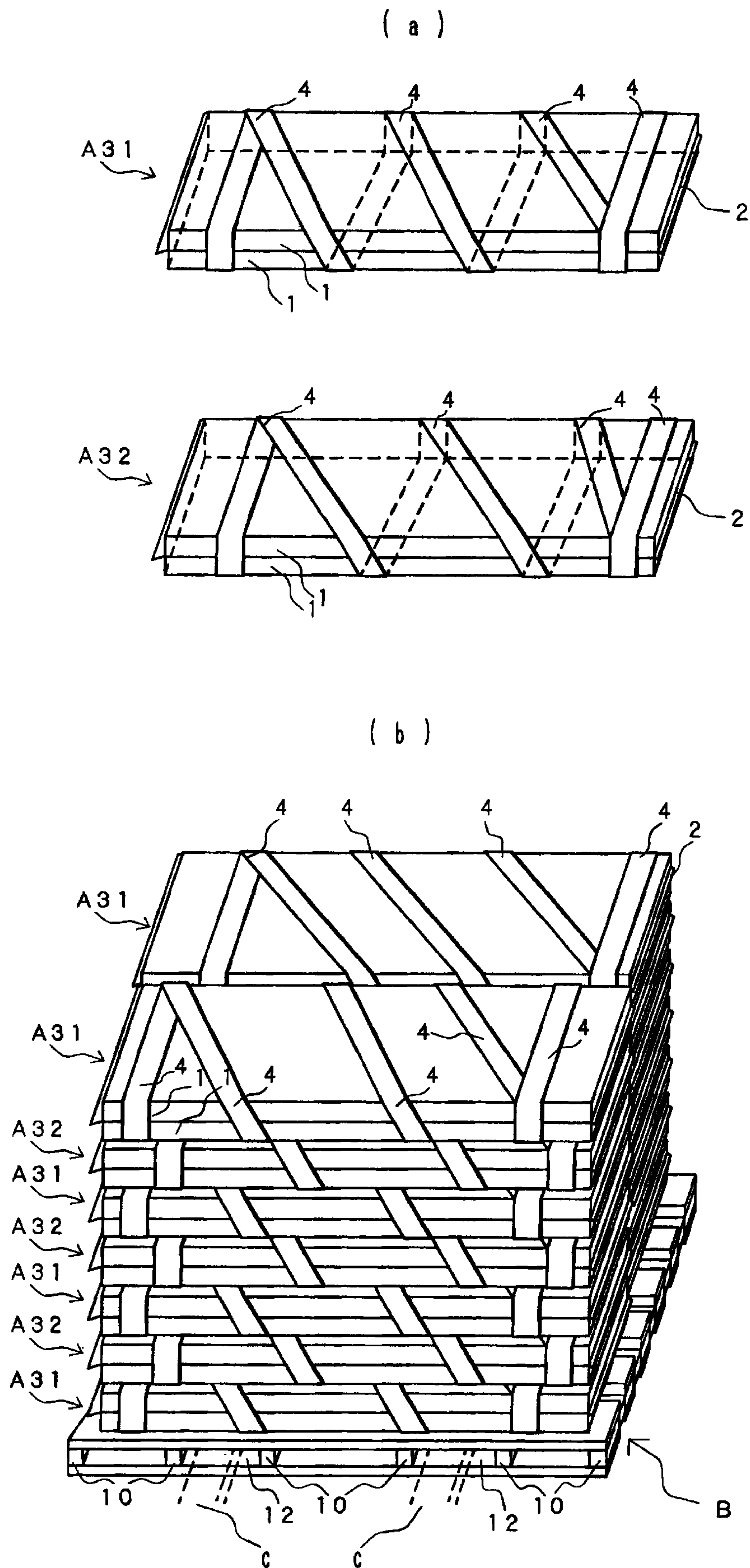


FIG. 4

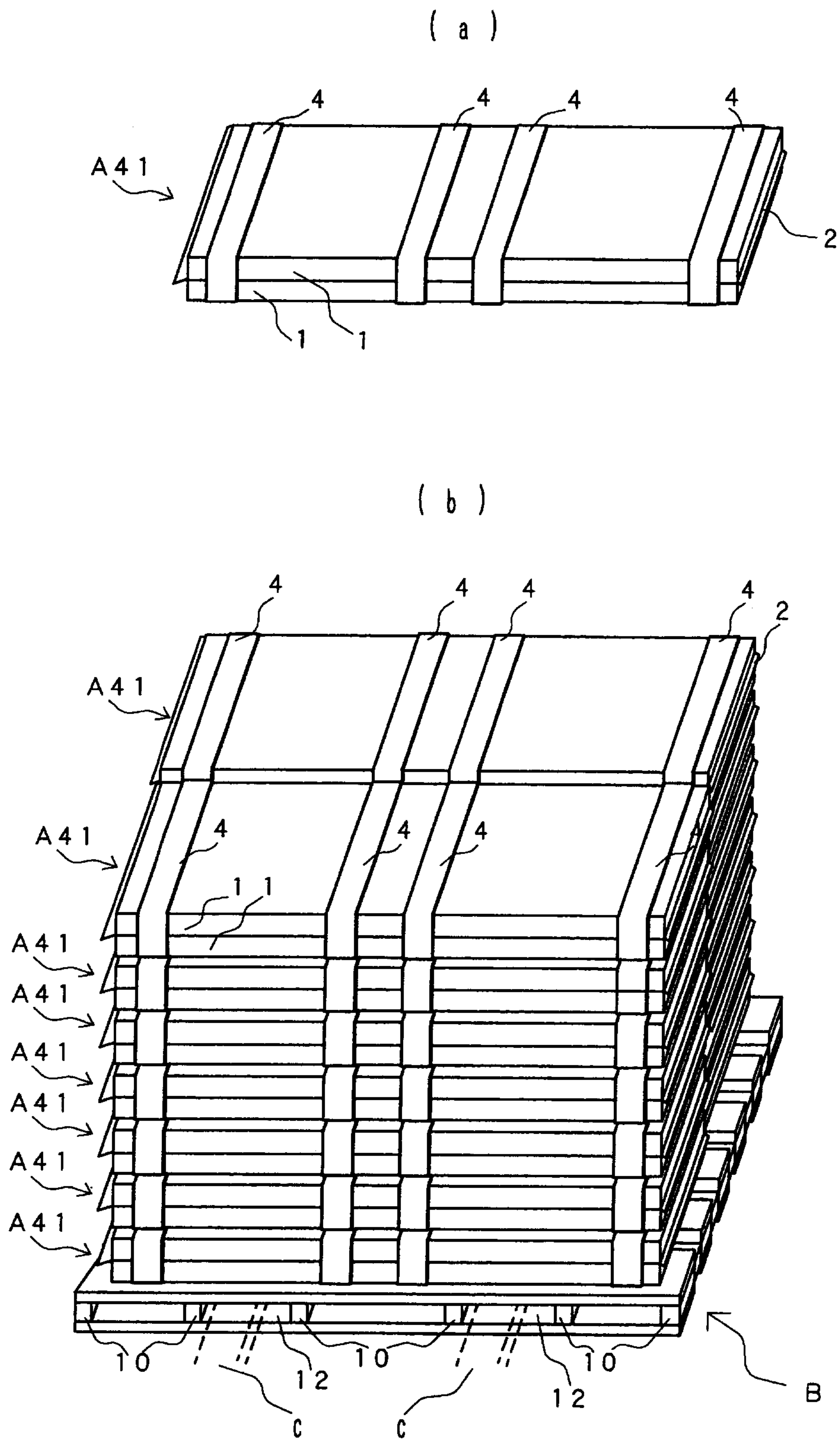


FIG. 5

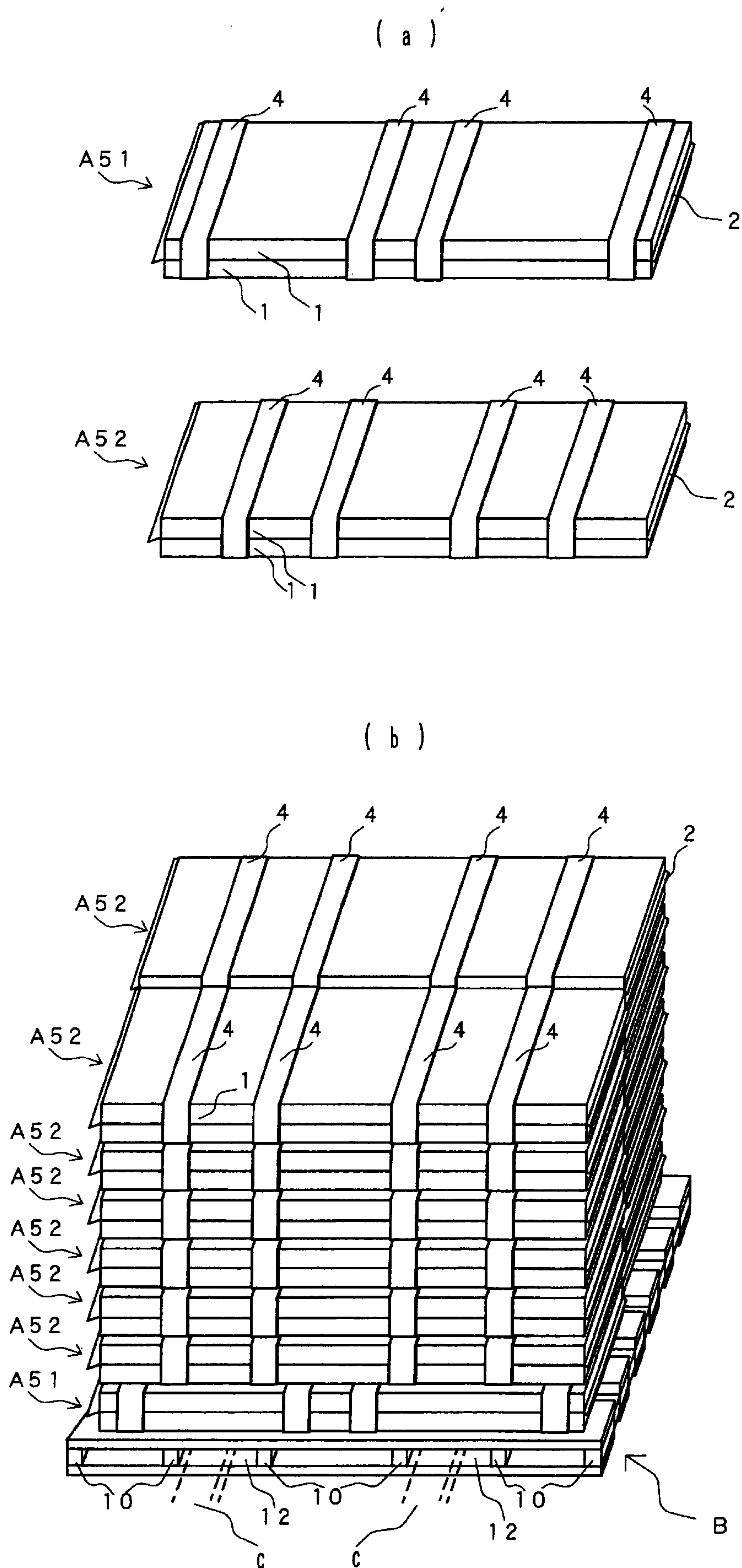


FIG. 6

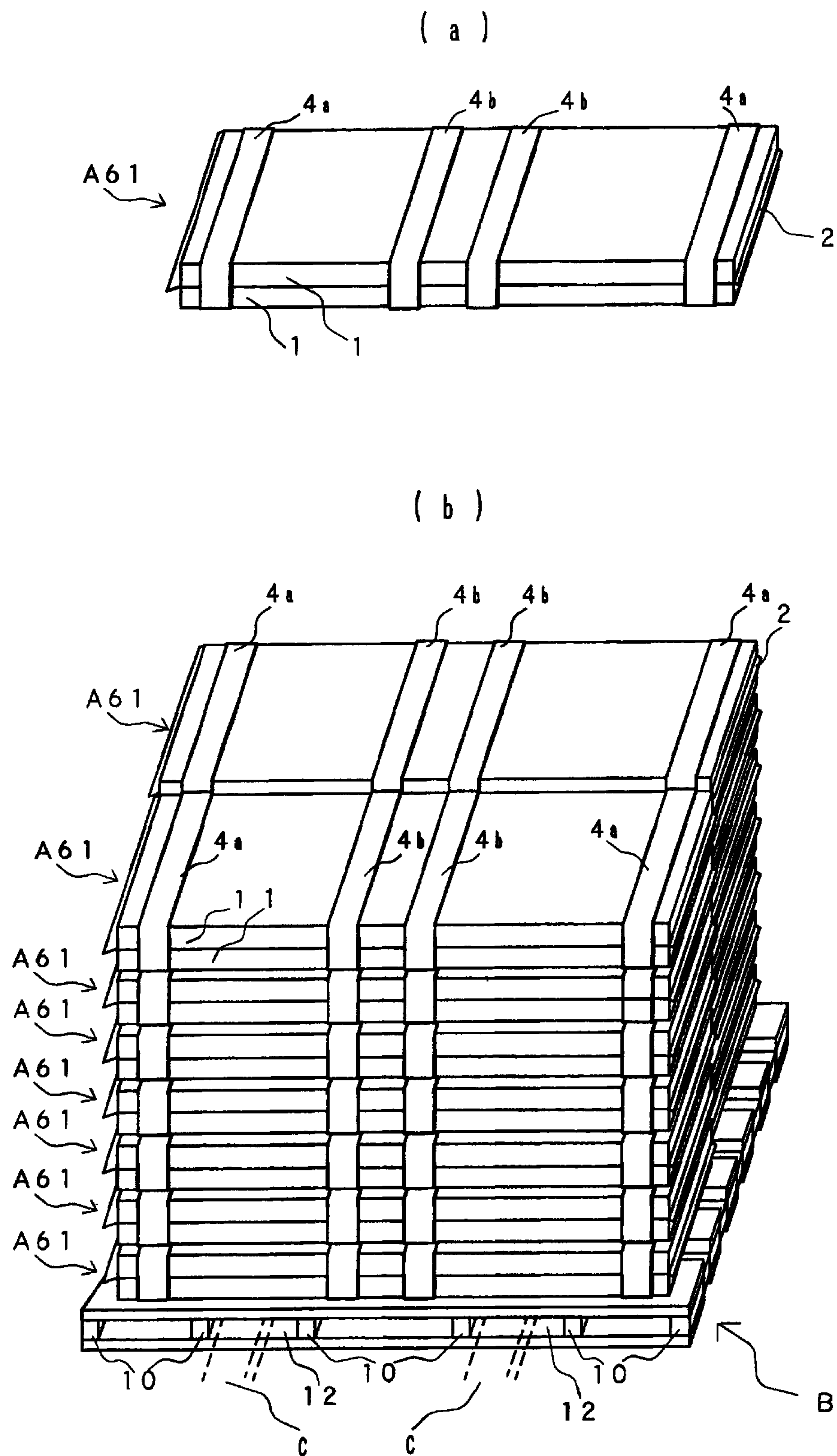


FIG. 7

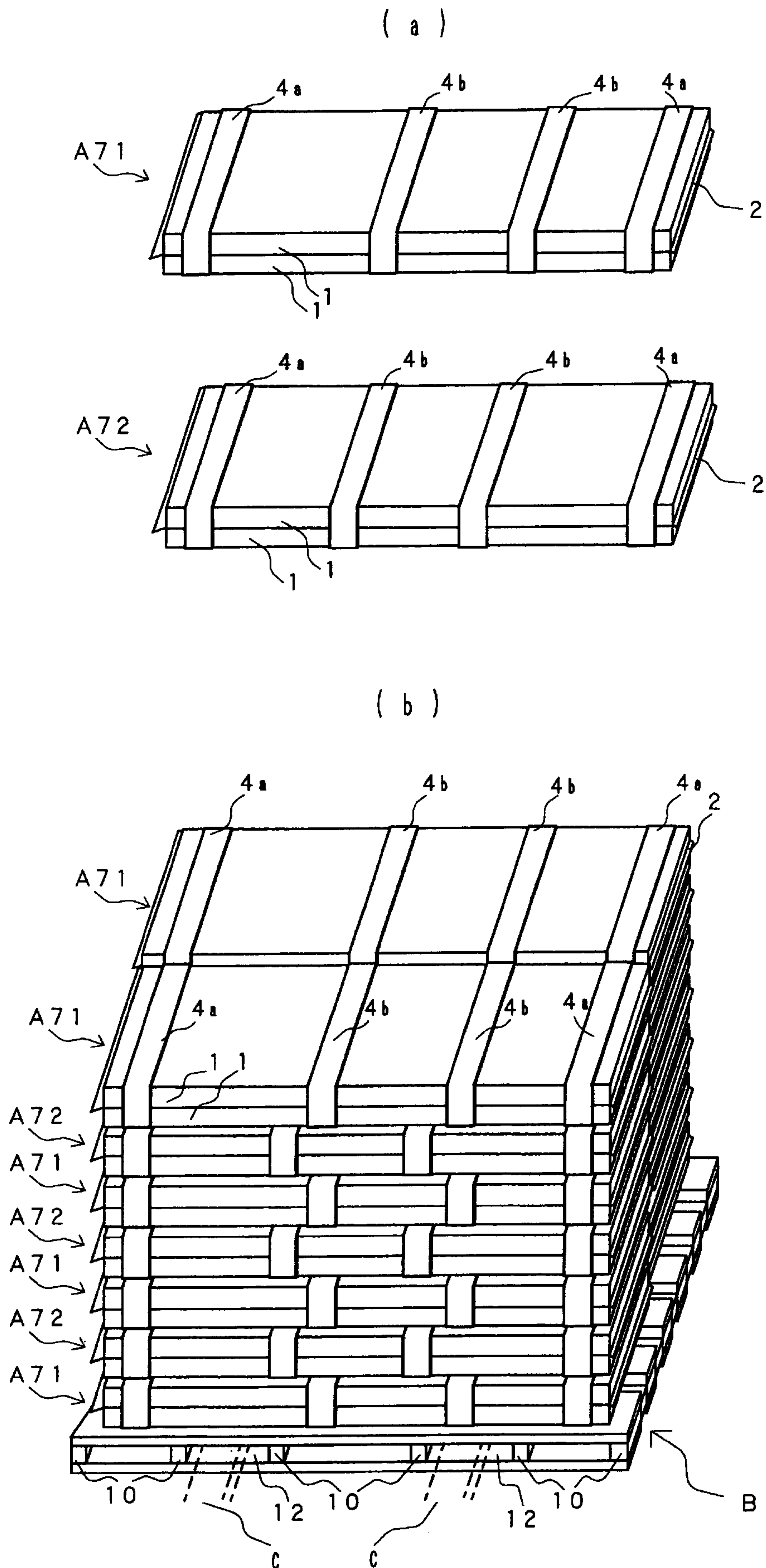


FIG. 8

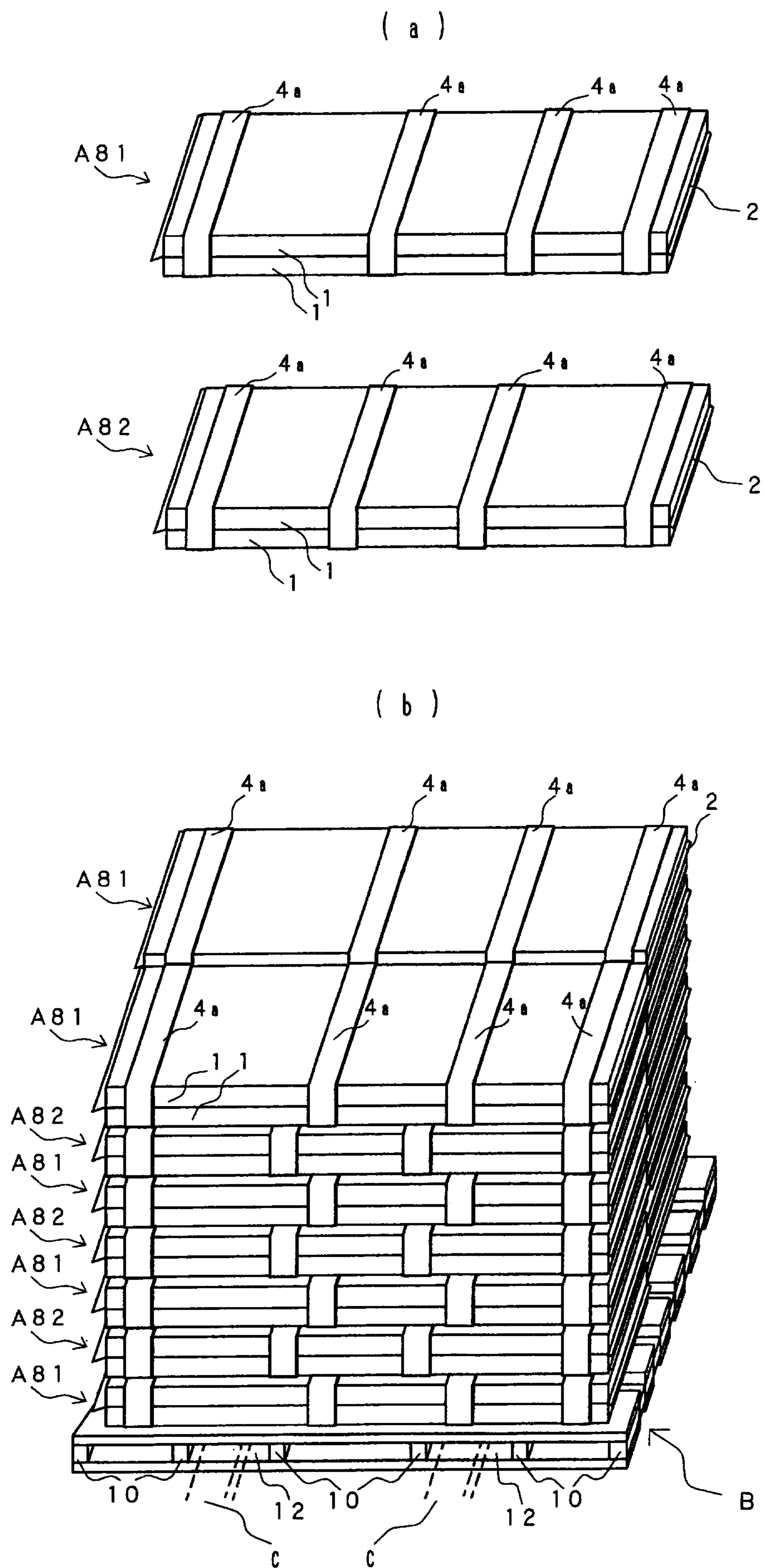


FIG. 9

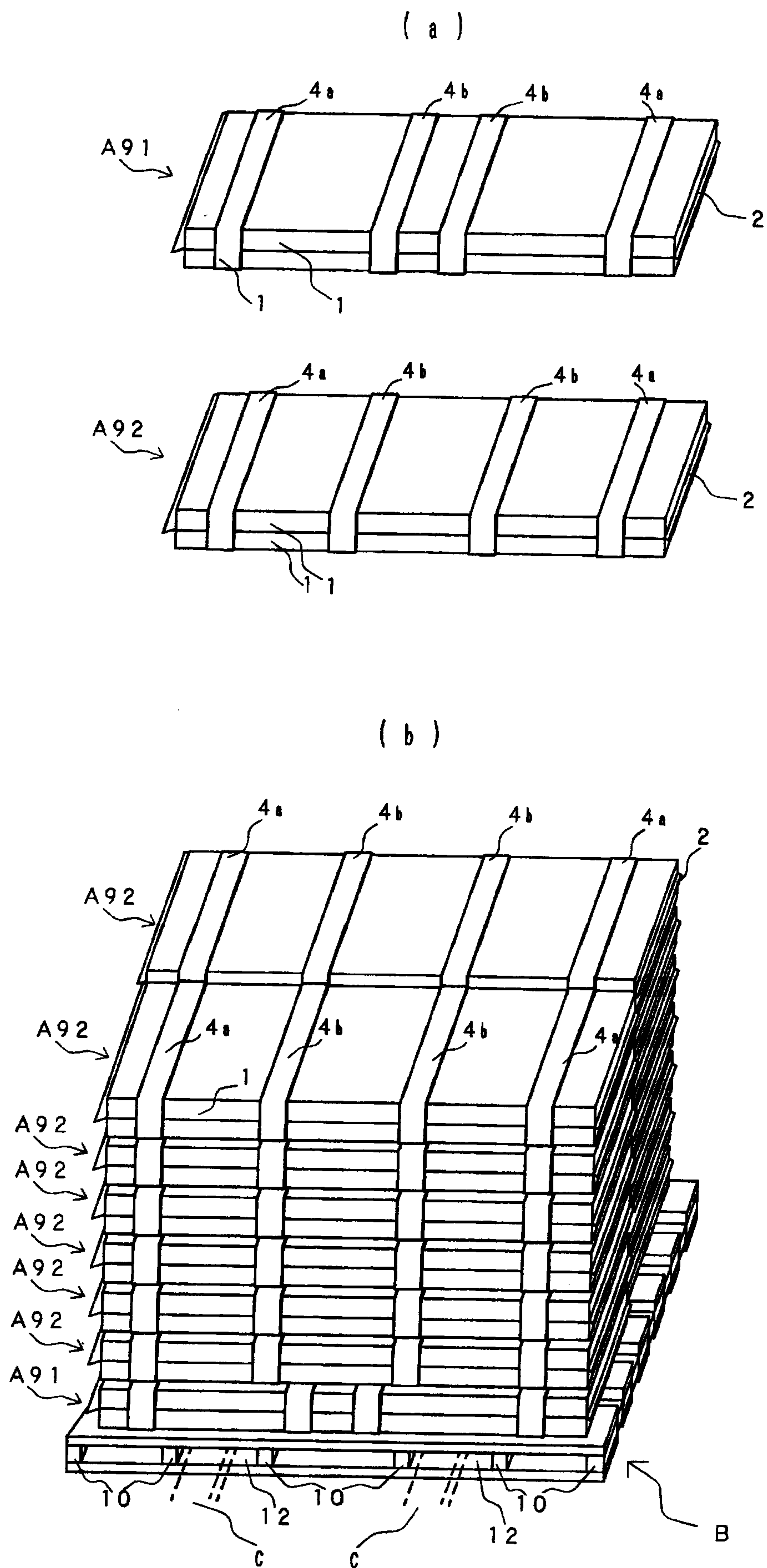


FIG. 10

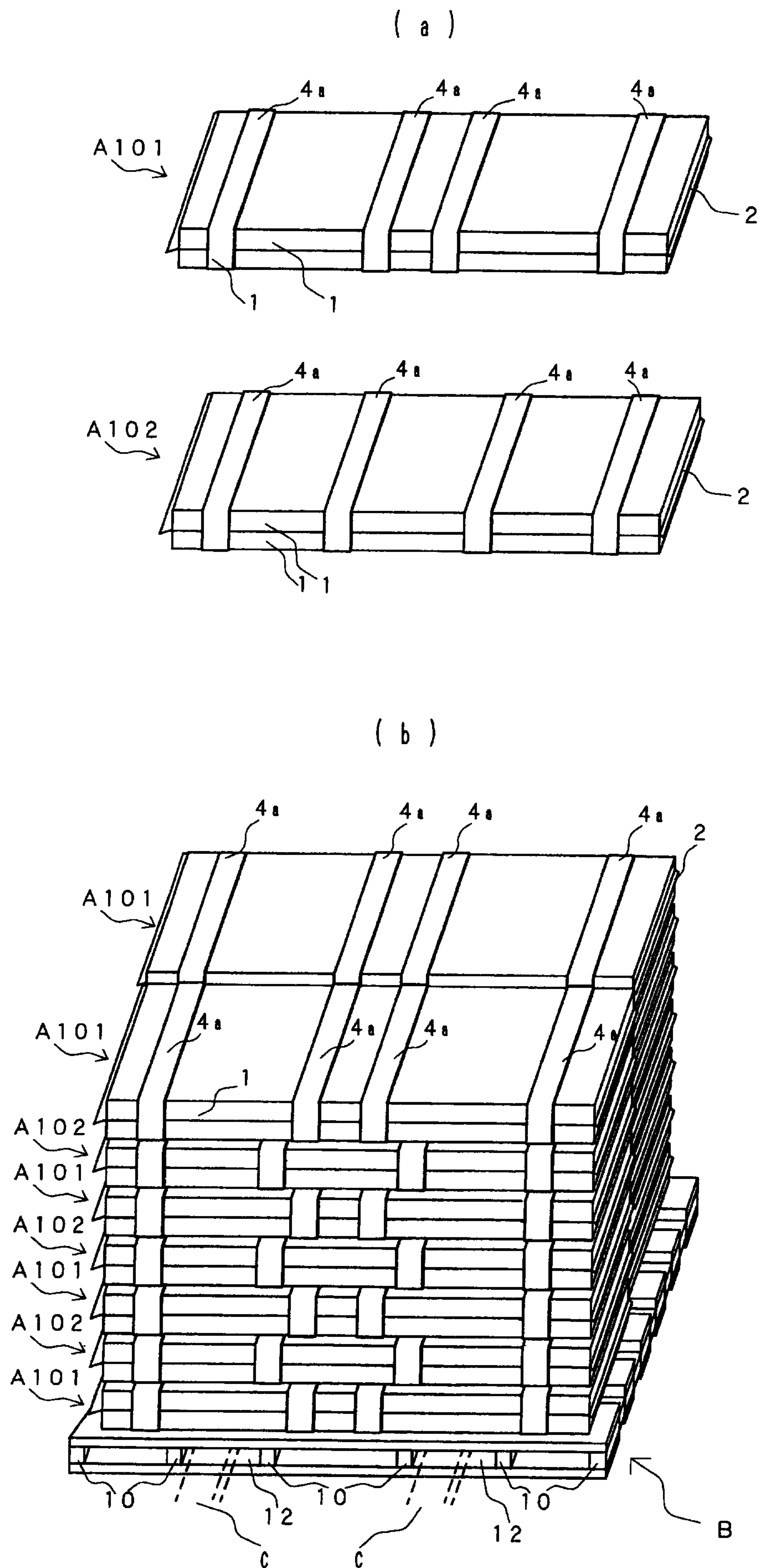


FIG. 11

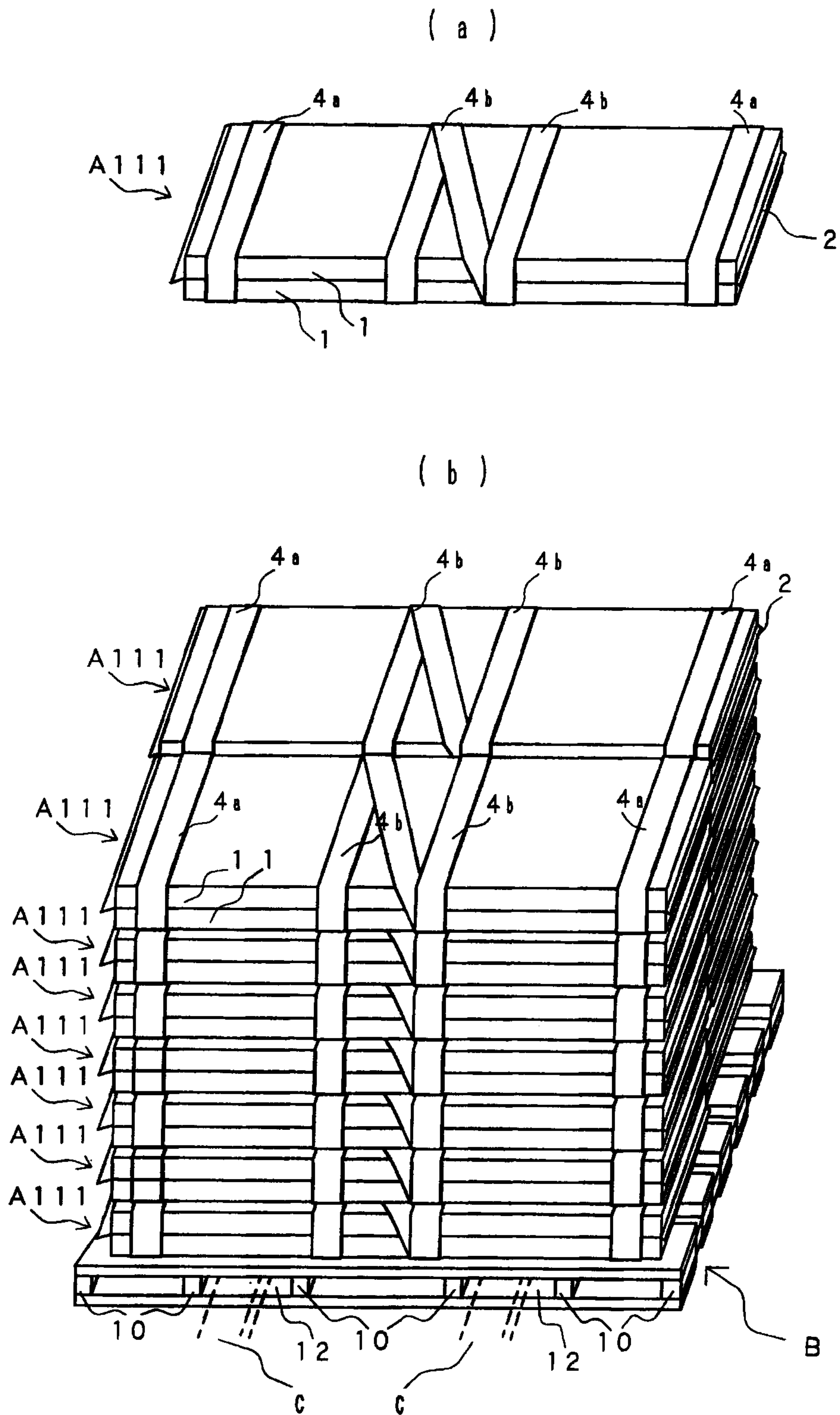


FIG. 12

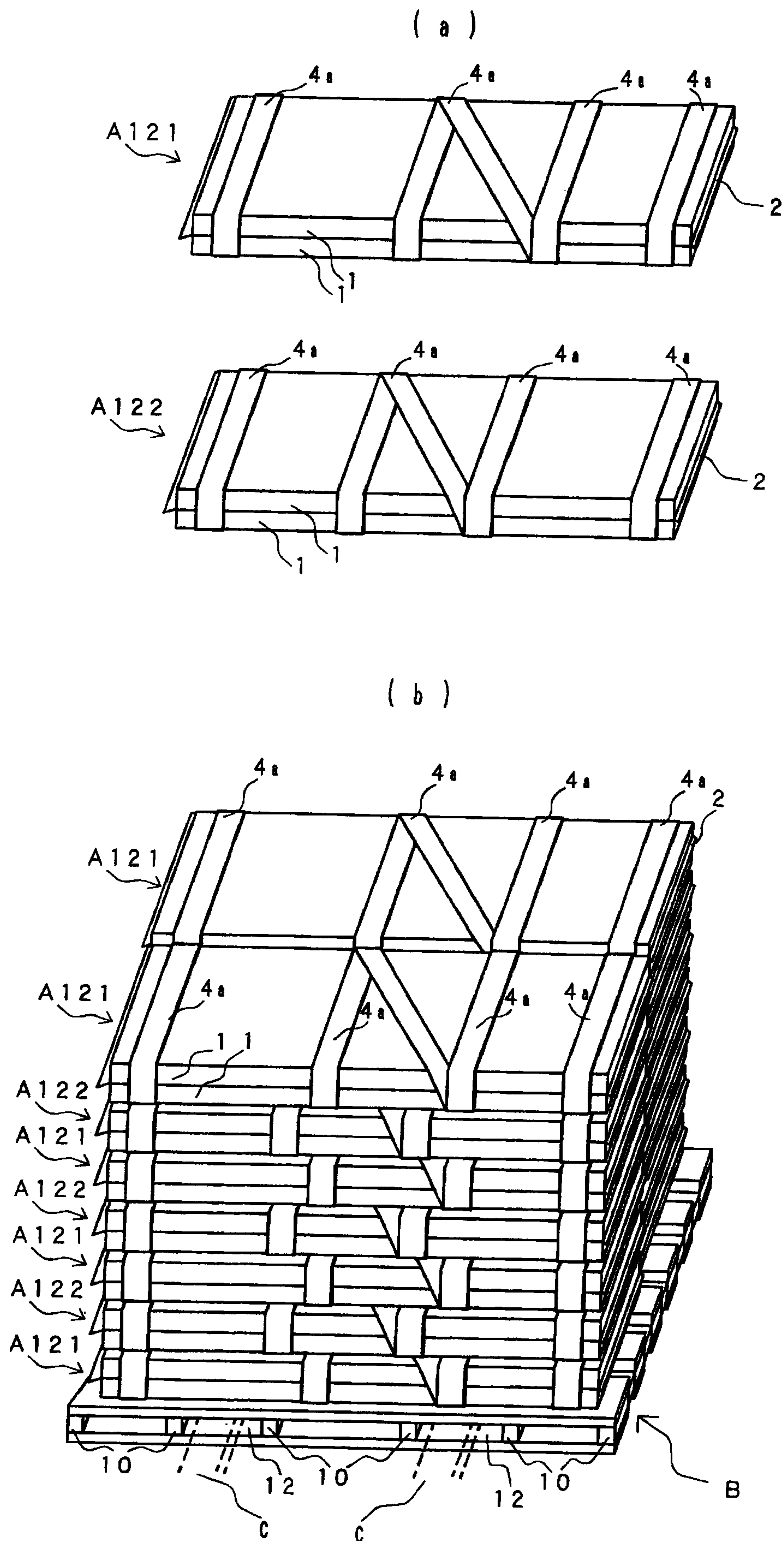


FIG. 13

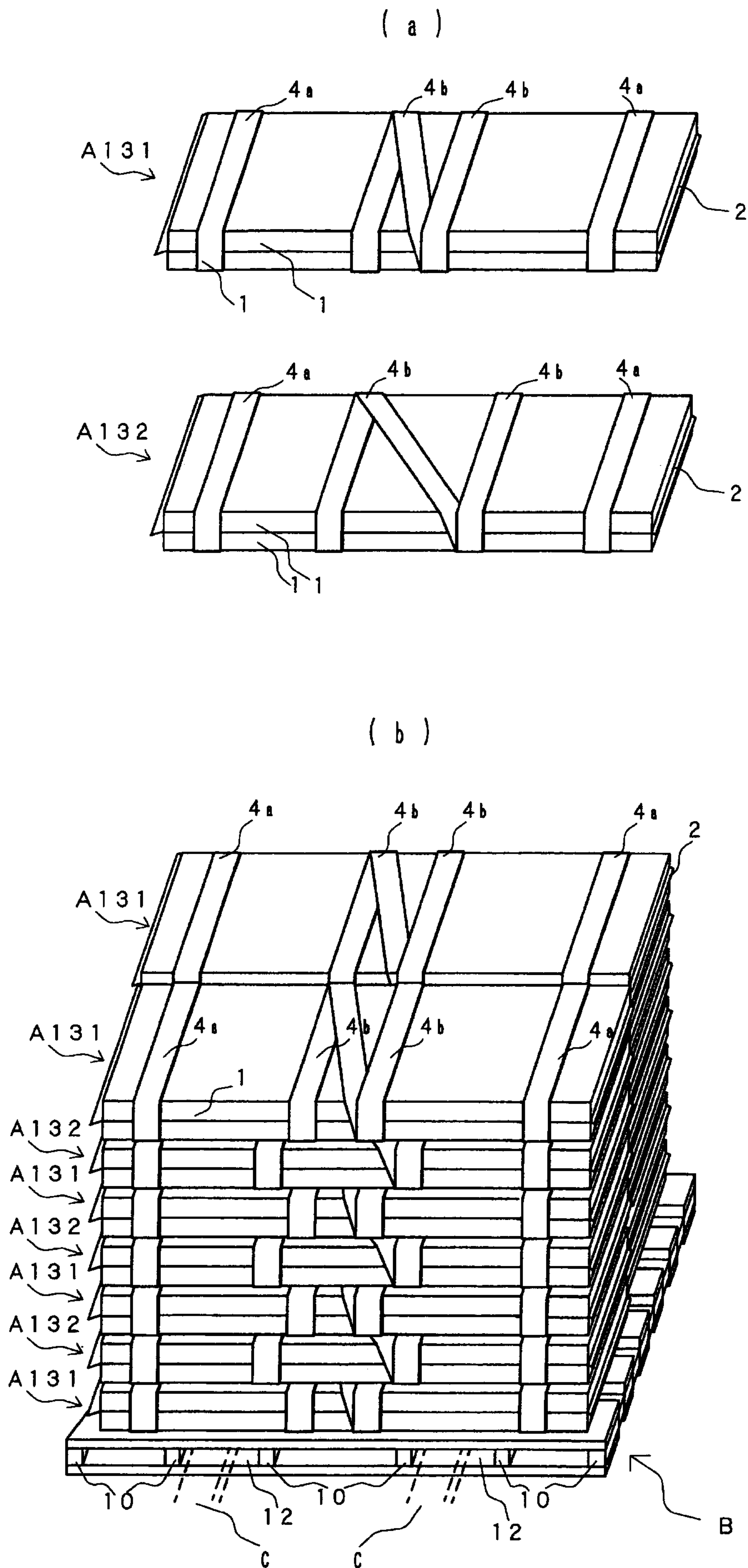


FIG. 14

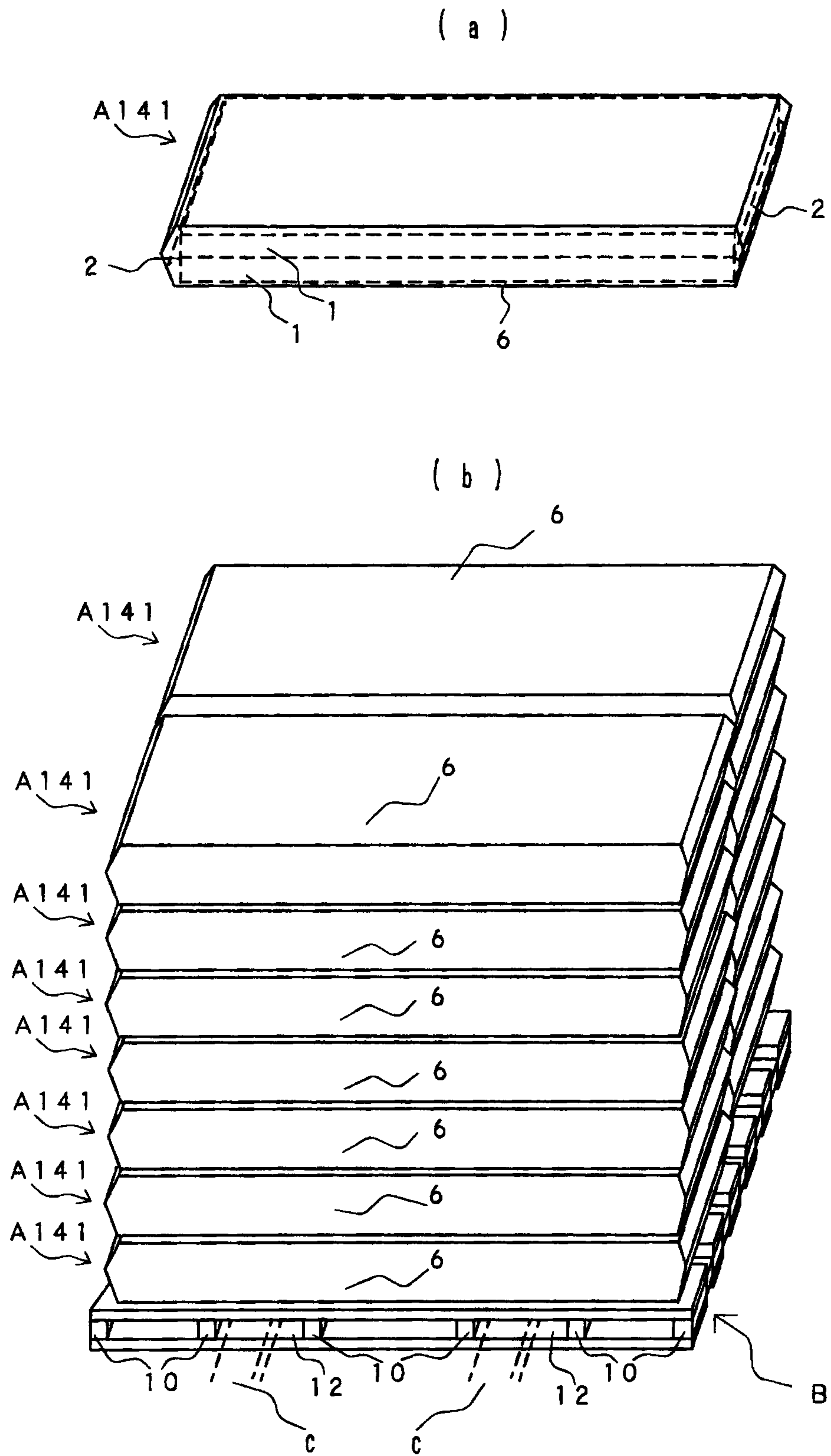


FIG. 15

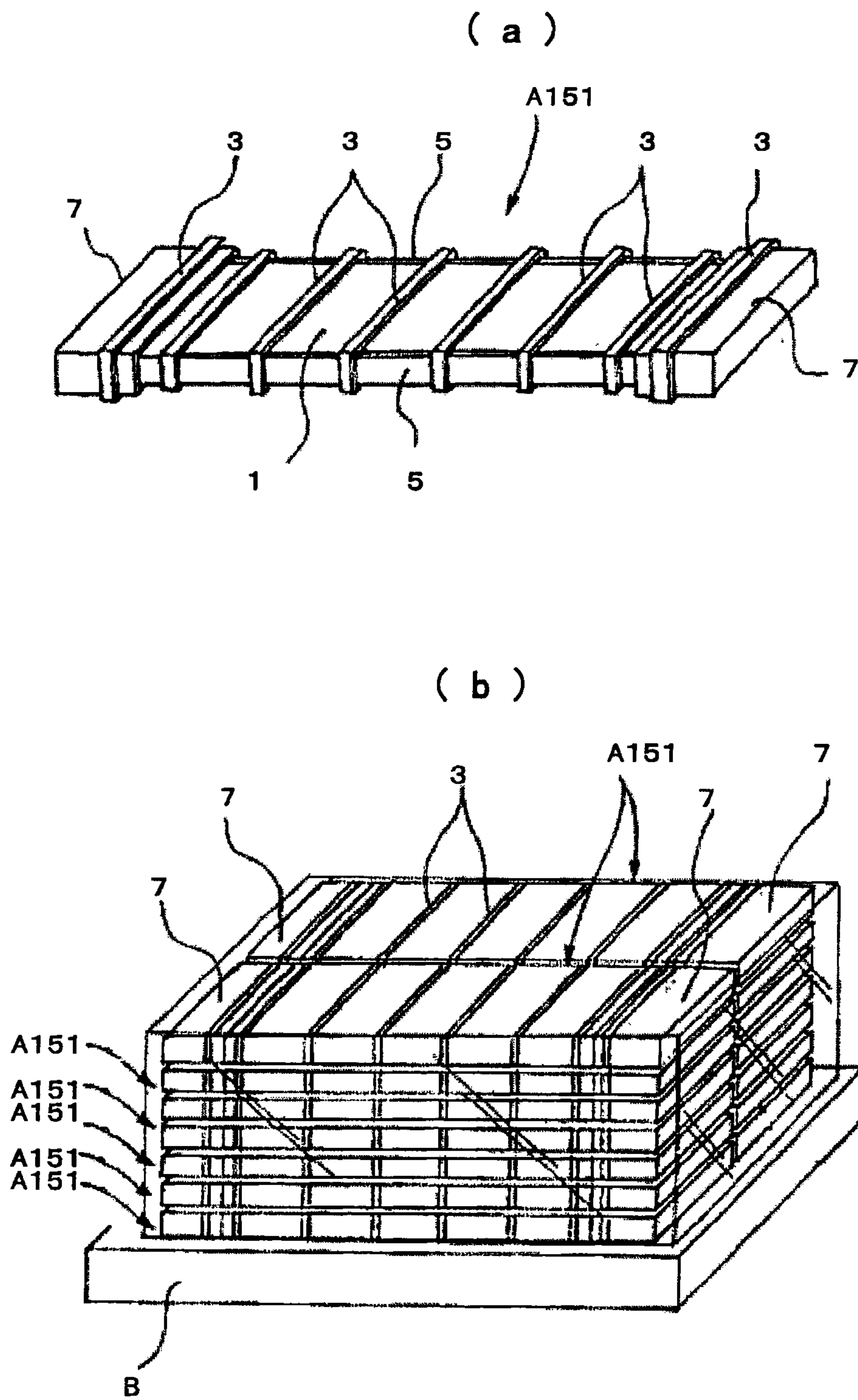


FIG. 16

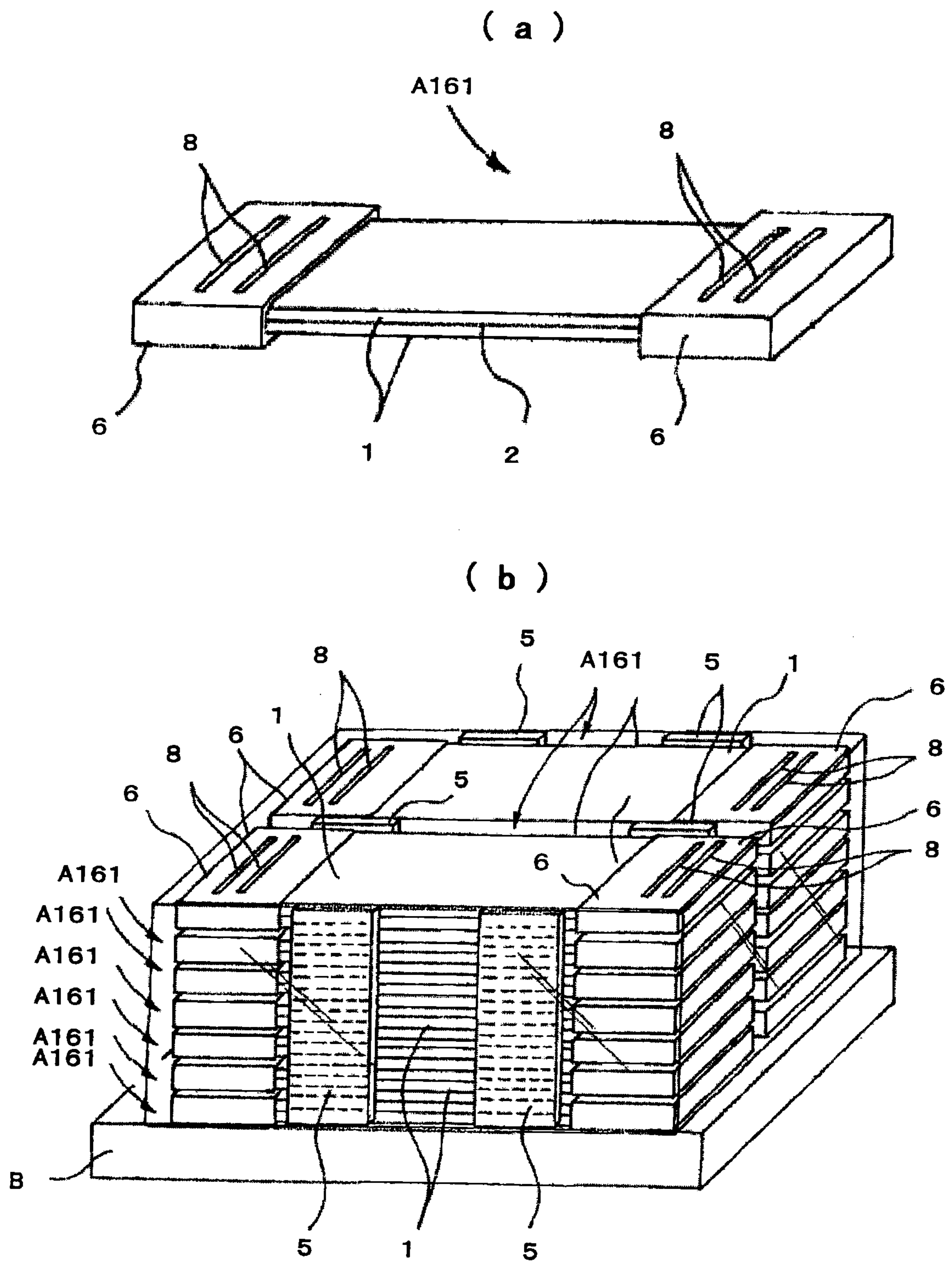
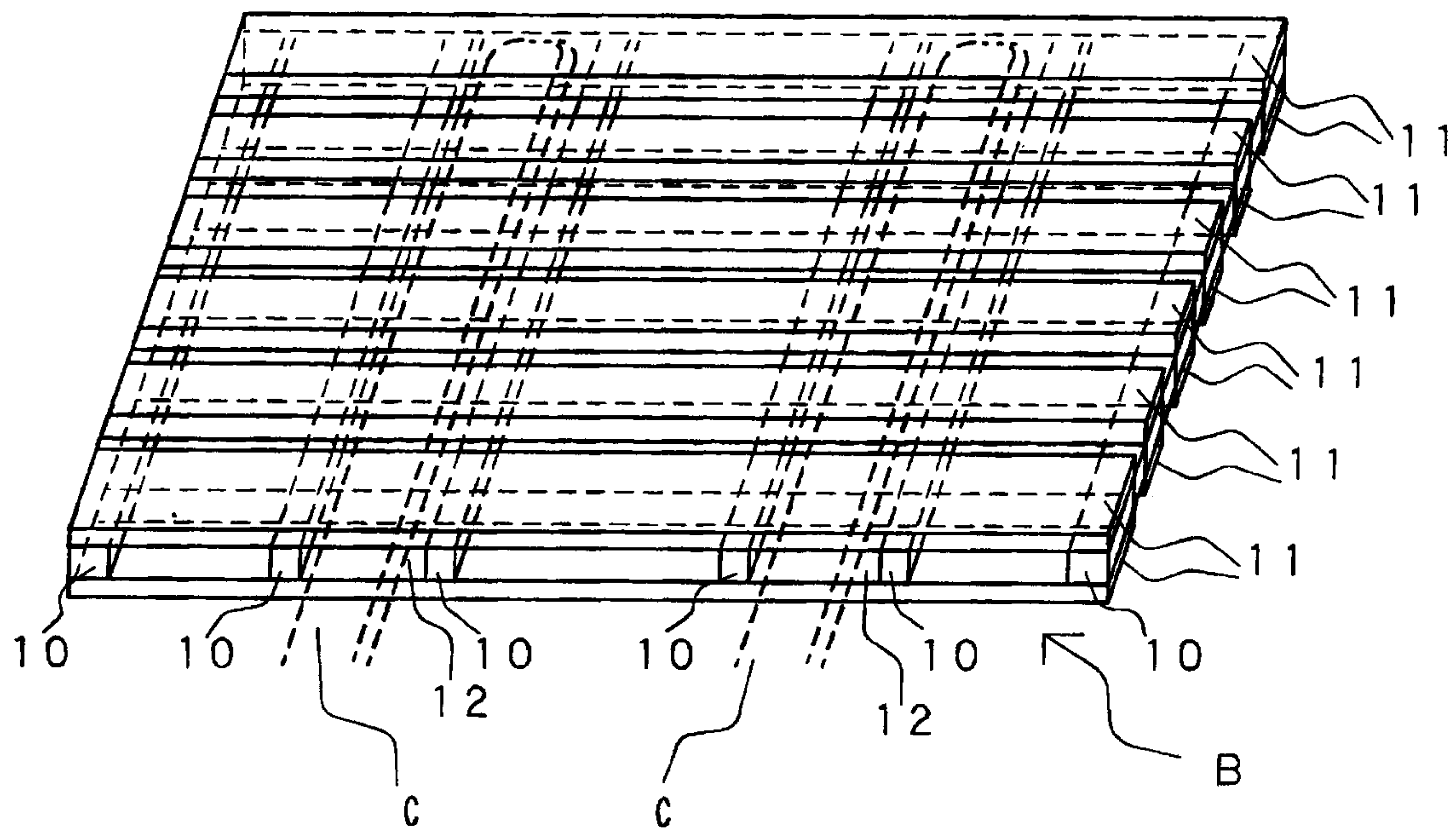
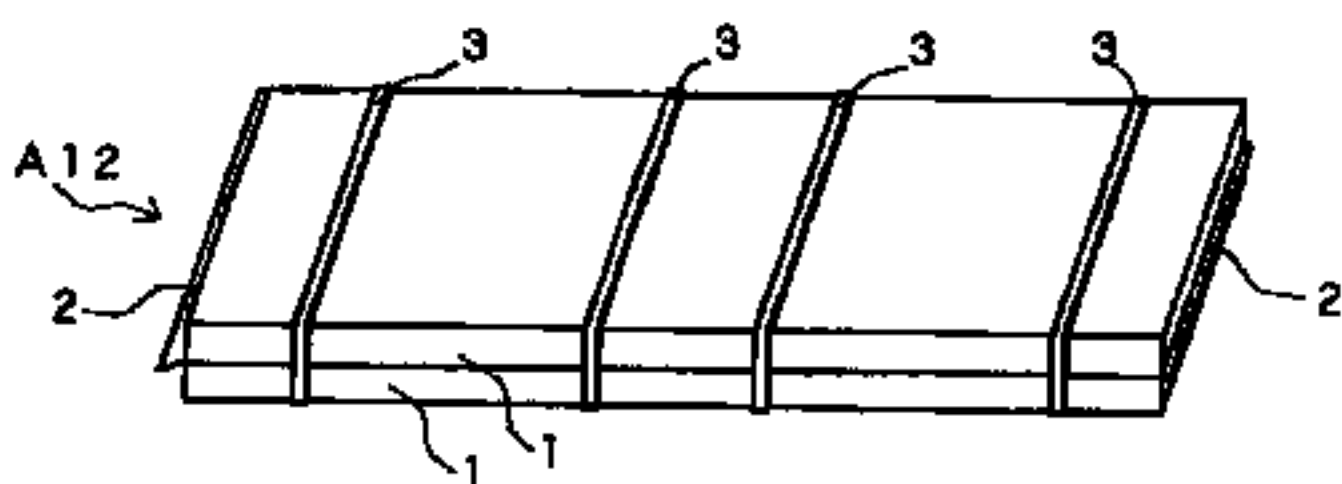
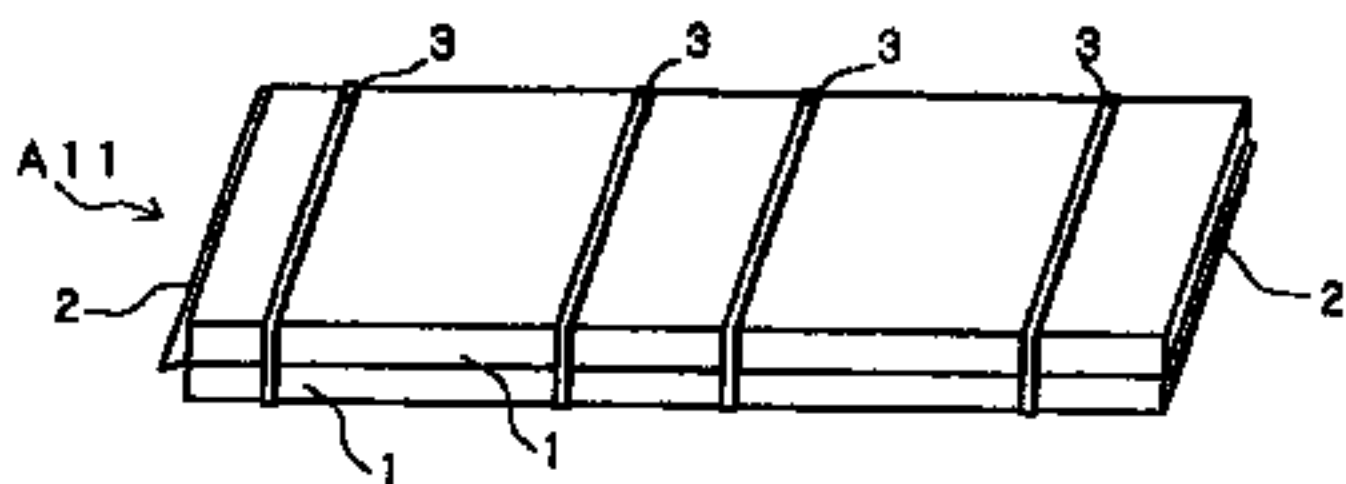


FIG. 17



(a)



(b)

