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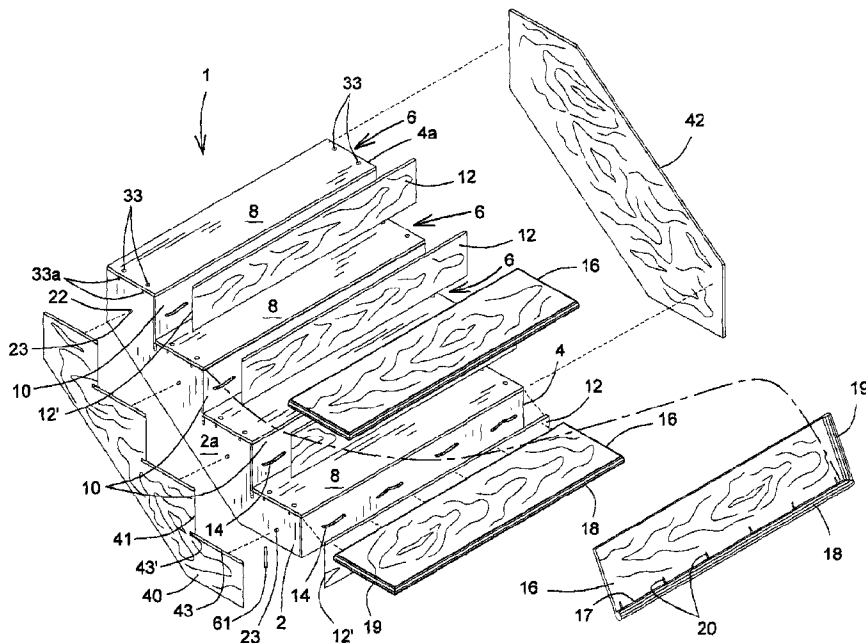
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(54) Titre : ESCALIER PREFABRIQUE ET MONTAGE DE FINITION, ET METHODE D'INSTALLATION CONNEXE

(54) Title: PREFABRICATED STAIRCASE AND FINISHING ARRANGEMENT AND INSTALLATION METHOD THEREFOR



(57) Abrégé/Abstract:

A staircase of skeletal form is prefabricated and is provided with prefabricated decorative cladding finishing plates for the treads, the risers and the stringer boards, the plates being pre-drilled for ease of assembly, a plurality of finishing plates can be preassembled, or factory assembled, together before installation over a portion of the prefabricated staircase, and the installation method thereof.

ABSTRACT OF THE DISCLOSURE

A staircase of skeletal form is prefabricated and is provided with prefabricated decorative cladding finishing plates for the treads, the risers and the stringer boards, the plates being pre-drilled for ease of assembly, a plurality of finishing
5 plates can be preassembled, or factory assembled, together before installation over a portion of the prefabricated staircase, and the installation method thereof.

(Figure 6)

PREFABRICATED STAIRCASE AND FINISHING ARRANGEMENT AND INSTALLATION METHOD THEREFOR

FIELD OF THE INVENTION

The present invention concerns a prefabricated staircase and finishing plate
5 arrangement therefore and method for installing same.

BACKGROUND OF THE INVENTION

It is well known in the art to provide finishing plates of finished wood or other
material for unfinished treads, risers, and/or stringers of an unfinished staircase
frame. Typically, the plates are installed after the unfinished staircase frame
10 has been installed in the building. In general, for each tread and riser, the tread
is measured by a workman and a corresponding finished tread plate and riser
plate is cut, fitted and then secured to the tread and riser of the frame.
Similarly, a finished stringer plate may be measured, cut, and fitted to one or
more stringers, whether uncovered stringers which face openly into a
15 surrounding room or wall stringers extending adjacent a wall.

Unfortunately, for such conventional staircases and finishing plates, the
measuring, cutting, and fitting of the finishing plates must often be performed by
workmen on-site at the building and require skilled workmen to ensure a nice
finish, especially at the intersection corner between riser plates and a staircase
20 open side stringer plate. Accordingly, installation is labour intensive and,
therefore, costly. Additionally, as the sizing and fitting of the plates may involve
substantial manual cutting of the plates on site, there is a risk of error in cutting
and sizing, which may further increase costs. Finally, the cutting, sizing, and
fitting of the plates on site in the building further increases risk of damage to the
25 plates.

Accordingly, there is a need for an improved prefabricated staircase and
finishing plate arrangement therefore and method of installation therefor.

SUMMARY OF THE INVENTION

It is therefore a general object of the present invention to provide an improved prefabricated staircase and finishing plate arrangement therefore and method of installation therefor.

- 5 An advantage of the present invention is that the staircase and finishing plates therefor are prefabricated, thus reducing manual labour required for cutting and fixing the staircase frame and the finishing plates.

Another advantage of the present invention is that the staircase frame and plates are easily installed, with a minimum of tools.

- 10 Another advantage of the present invention is that the plates are pre-sized to the correct size and shape for fitting to the prefabricated staircase frame, thus reducing risk of errors and damage.

Still another advantage of the present invention is that the staircase frame and plates may be installed in less time than for conventional plates and staircases.

- 15 A further advantage of the present invention is that the finishing plate arrangement for covering a plurality of adjacent steps of a prefabricated staircase frame can be preassembled, or factory assembled, to improve assembly quality and reduce cost thereof, since the dimensions of the prefabricated staircase frame are well known.

- 20 In a first aspect, the present invention provides a staircase finishing kit for installation over at least a portion of a prefabricated staircase frame having at least one vertical riser, at least one horizontal tread, the frame being connectable at opposing frame ends thereof to first and second floor structures of a building with the frame extending therebetween, the kit comprising:

- 25 - at least one prefabricated finished stringer plate having, for each tread, a respective horizontal plate edge in horizontal register therewith, and for each riser a respective vertical plate edge in vertical register therewith;

- for each riser, a respective prefabricated finished riser plate connectable to the at least one stringer plate to cover a respective riser with a top vertical plate edge of the riser plate in vertical register with an adjacent tread and the respective horizontal plate edge therefore and intersecting an adjacent vertical plate edge to form a riser corner therewith; and
- for each tread, a prefabricated finished tread plate having a decorative nosing extending along at least a front edge thereof and having a lip for abutment against the adjacent riser plate, the tread plate being connectable to the at least one stringer plate by intersecting an adjacent horizontal plate edge and to an adjacent riser plate with the tread plate abuttingly covering a

Conveniently, each vertical plate edge from at least one stringer plate is longitudinally mitred for intersection with a mitred lateral edge of a respective said riser plates to form a riser corner therewith. Each vertical plate edge and corresponding lateral edge have respective slots extending at least partially therealong and in register with one another for simultaneously receiving a securing member therein thereby securing the riser plate to the stringer plate.

Conveniently, each horizontal plate edge of said at least one stringer plate extends inwardly from a superjacent vertical plate edge to allow the respective tread plate to intersect said superjacent vertical plate edge and have the respective tread plate locally sandwiched between the stringer plate and the corresponding superjacent riser plate.

In one embodiment, the finishing kit is factory assembled and covers a plurality of steps of the prefabricated staircase.

Another aspect of the invention comprises the prefabricated staircase frame in addition to staircase finishing kit in accordance with the first aspect of the invention.

Conveniently, the decorative nosing includes a plurality of spaced apart spike members extending horizontally inwardly beneath the tread plate from the lip thereof, the tread plate being connectable to an adjacent riser with the tread

plate abuttingly covering the tread by insertion of the spike members through the adjacent riser plate and into the adjacent riser with the lip abutting against the adjacent riser plate.

5 In a further aspect of the present invention, there is provided a staircase comprising:

- 10 - a prefabricated staircase frame having at least one vertical riser, at least one horizontal tread, and at least one stringer board to which each riser and each tread is connected, the frame being connectable at opposing frame ends thereof to first and second floor structures of a building with the frame extending therebetween;
- 15 - at least one prefabricated finished stringer plate having, for each tread, a respective horizontal plate edge, and for each riser a respective vertical plate edge, the stringer plate being connectable to the stringer board to abuttingly cover the stringer board with each respective horizontal plate edge in horizontal register with the respective tread and with each
20 respective vertical plate edge in vertical register with the respective riser;
- for each riser, a respective prefabricated finished riser plate connectable to the riser to cover the riser with a top vertical plate edge of the riser plate in vertical register with an adjacent tread and the respective horizontal plate
25 edge therefore and intersecting an adjacent vertical plate edge to form a riser corner therewith; and
- for each tread, a prefabricated finished tread plate having a decorative nosing extending along at least a front edge thereof, the tread plate being connectable to an adjacent riser plate with the tread plate abuttingly
30 covering the tread by abutment against the adjacent riser plate with a lip of the nosing.

In yet another aspect of the present invention, there is provided a method for installing a prefabricated staircase, the method comprising the steps of:

- 30 - connecting generally opposed frame ends of a prefabricated staircase frame to first and second floor structures of a building with the frame extending therebetween, the frame having at least one vertical riser, at least one

horizontal tread, and at least one stringer board to which each riser and each tread is connected, the frame being connectable at opposing frame ends thereof;

- after connecting the generally opposed frame ends, connecting at least one preassembled finishing plate arrangement to at least a portion of the prefabricated staircase frame using a securing means.

Conveniently, the at least one preassembled finishing plate arrangement includes at least one prefabricated finished stringer plate, at least one prefabricated finished riser plate and at least one prefabricated finished tread plate, the step of connecting the at least one preassembled finishing plate arrangement includes:

- after connecting the generally opposed frame ends, for each stringer board, connecting a respective prefabricated finished stringer plate therefor to the stringer board to cover the stringer board with, for each tread, a respective horizontal plate edge of the stringer board in horizontal register with the tread, and, for each riser, a respective vertical plate edge in vertical register with the riser;
- after connecting each stringer plate, for each riser, connecting a respective prefabricated finished riser plate to abuttingly cover the riser with a top horizontal edge of the riser plate in horizontal register with an adjacent tread and the respective horizontal plate edge therefor and intersecting an adjacent vertical plate edge to form a riser corner therewith; and
- after connecting a respective prefabricated riser plate, for each tread, connecting a prefabricated finished tread plate, having a decorative nosing forming at least a front edge thereof, to an adjacent riser plate with the tread plate abuttingly covering the tread by abutment against the adjacent riser plate with a lip of the nosing and with tread plate side edges of the tread plate in register with the horizontal plate register.

Conveniently, the decorative nosing includes a plurality of spaced apart spike members extending horizontally inwardly beneath the tread plate from the lip thereof, and wherein the step of connecting a prefabricated finished tread plate

includes connecting a prefabricated finished tread plate to an adjacent riser with the tread plate abuttingly covering the tread by insertion of the spike members through the adjacent riser plate and into the adjacent riser with the lip abutting against the adjacent riser plate.

- 5 In one embodiment, at least one said vertical plate edge from at least one said stringer plate is longitudinally mitred for intersection with a mitred lateral edge of a respective said riser plates to form a riser corner therewith, and said mitred vertical plate edge and said mitred lateral edge have respective slots extending at least partially therealong and in register with one another, and wherein the
10 step of connecting a respective prefabricated finished riser plate includes securing the riser plate to the stringer plate by slidably and simultaneously inserting a securing member into said mitred vertical plate edge and corresponding said mitred lateral edge.

- The or each stringer board may conveniently be provided with preformed
15 registration points for matching with suitably positioned registration points preformed on the prefabricated stringer plate, for the purpose of aligning the plate with the board and for applying appropriate fixtures for securement of the plate to the board. For example, dowel holes may be predrilled in both the plate and the board and dowels are used in the aligned holes to connect the plate to
20 the board.

- Additional fixtures may be applied to secure the finishing stringer plate to the staircase and in particular may be in the form of angled screws extending from the treads through the stringer board and thence into the stringer plate when in cladding position in relation thereto. As will be appreciated, the pocket holes for
25 the screws will be predrilled and accurately positioned for correct fastening into the stringer plate without piercing its decorative surface. In the prefabrication of the staircase, jigs will typically be used to generate the fixing holes so that standardized dimensional interrelationships between the various elements of the staircase can be established to facilitate assembly.

- 30 Further fixtures may be provided at the mitred juncture between the stringer plate and the final finishing riser plate at the foot of the staircase. Such fixtures

may be in the form of Chinese nails extending between the plates within aligned registration slots at the mitre.

Other objects and advantages of the present invention will become apparent from a careful reading of the detailed description provided herein, with
5 appropriate reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Further aspects and advantages of the present invention will become better understood with reference to the description in association with the following
Figures, in which similar references used in different Figures denote similar
10 components, wherein:

Figure 1 is a top perspective view of a staircase incorporating a finishing plate arrangement in accordance with an embodiment of the present invention;

Figure 2 is a top perspective view similar to Figure 1, showing the staircase of Figure 1 with the finishing plate arrangement shown in exploded view above the
15 prefabricated staircase frame;

Figure 3 is an exploded plan view of a detail of a fixture shown in Figure 1;

Figure 4 is a perspective view of the detail of the fixture of Figure 3 showing the fixture aligned for application;

Figure 5 is a scrap underside view of the staircase showing the mounting
20 thereof to a floor structure of a building;

Figure 6 is a top perspective exploded view of a staircase incorporating a finishing plate arrangement in accordance with another embodiment of the present invention, with the finishing plates being preassembled together prior to mounting onto at least a portion of the prefabricated staircase frame; and

25 **Figures 7 and 8** are enlarged sectioned view taken along lines 7 and 8, respectively, showing attachment details of the different plates.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the annexed drawings the preferred embodiments of the present invention will be herein described for indicative purpose and by no means as of limitation.

5 Referring first to Figure 2, there is shown a prefabricated staircase 1 in skeletal form, and generally accurate in dimensions, comprising two spaced-apart stringer boards 2, 4 formed to provide the bases for four steps 6. Each step 6 comprises in known manner a tread 8 with a riser 10 in orthogonal horizontal and vertical disposition in relation to one another respectively, each tread
10 having a leading edge covering the top edge of its subjacent riser.

Decorative pre-finished riser plates 12, with mitred ends 12', are provided for the risers 10 of each step 6 and are bonded thereto by a suitable adhesive diagrammatically indicated by glue beads 14. Decorative pre-finished tread plates 16 are provided for the treads 8. Each tread plate 16 has a decorative
15 nosing 18 forming a front edge thereof and a plurality of spaced apart spikes members 20 extending horizontally inwardly beneath the tread plate from a lip 17 of the nosing 18 to a subjacent riser 10 with the tread plate 16 abuttingly covering the tread by insertion of the spike members through the adjacent riser plate 12 and into the adjacent riser 10 with the lip 17 abutting against the
20 adjacent riser 10 and with the side edges of the tread plate 16 in register with the treads 8 and with the vertical surfaces 2a, 4a of the respective stringer boards 2, 4. In this example, at least one side edge of each tread plate 16 has a decorative nosing 19 since the tread plates are to be part of the open side of the staircase, no such edge nosing being required at the other edge since it will
25 be located adjacent a bounding wall structure (not shown) of the relevant building.

On the open side of the staircase 1 as can be seen horizontal pre-drilled dowel holes 22 are formed in the vertical surface 2a of the stringer 2 with correspondingly located blind dowel holes 22' (see Figure 3) being formed on
30 the hidden side of the pre-finished stringer plate 40. Dowels 23 are provided for accurate positioning of the pre-finished stringer plate 40 relative to the

corresponding stringer 2 by positive and frictional engagement in the aligned dowel holes 22 and their counterparts 22' in the plate 40.

Each tread 8 adjacent each side edge thereof is pre-drilled with pocket holes 33
 5 which extend into and through the respective stringer board 2, 4 as can be seen at 33a.

On the open side of the staircase 1 a prefabricated decorative stringer plate 40 is provided and as shown essentially replicates the form of the stringer board 2 to which it is attachable by the dowels 23 registering with the holes 22 and their blind
 10 counterparts 22' (see Figure 3) in the hidden side of the plate 40, the pocket hole screws (not shown). The riser edges 41 of the plate 40 are mitered as at 41'.

On the closed side of the staircase 1, a prefabricated stringer plate 42 is provided and may also have pre-drilled dowel holes (not shown) if it is applicable for its installation,
 15 the plate 42 being of quasi-trapezoidal shape such that in situ it covers in and thus closes the other side of the staircase 1 (see Figure 1). Typically, such a stringer plate 42, on a closed side of the staircase 1, is slidably insterted into a corresponding opening left between the staircase and the rough adjacent wall.

20 The installation of the skeleton of the staircase 1 is achieved in conventional manner and as can be seen from Figure 5, the base 50 thereof is provided with a foot plate 52 for placement on a floor 54 with suitable bolting arrangements 56 being provided. As can be seen from this Figure 5, the bolting arrangements 56 are adjustable thus facilitating leveling. The riser plates 12 are then applied to the risers 6 as previously indicated and
 25 bonded thereto be suitable glue. The stringer plates 40, 42 are then affixed to the respective stringer boards 2, 4 with the use of the dowels 23 and the use of pocket screws (now shown) driven through the treads 8, the stringer boards 2, 4 and into the plates 40, 42.

30 The mitres 12' on the riser plates 12 and the mitres 41' on the vertical edges 41 of the stringer plate 40 register with one another and as can be seen from Figures 3 and 4 are provided with slots 60 extending part way along their length.

When the mitres are fully touching the slots 60 align and securing nails 61 as seen are slidably inserted, as by hammering, in frictional manner further to secure the plate 40, which prevents the riser plates 12 from sliding relative to the stringer plate 40 and ensures a nice assembly finish. A similar fixture arrangement is provided for the plate 42 in respect of the final, bottom step.

Finally, the tread plates 16 are applied to the treads 8 and essentially are slid onto the treads and forced into position with the spike members 20 penetrating the riser plates and the risers 10 and the riser plates 12, the decorative side nosing 20 overhanging the plate 40 as seen in Figure 1. As better seen in Figures 2 and 4, each horizontal edge 43 of the stringer plate 40 extends inwardly from a superjacent vertical edge 41 and forms a corresponding tread slot 43' to allow the respective tread plate 16 to intersect the superjacent vertical plate edge 41' and have the tread plate 16 locally sandwiched between the stringer plate 40 and the corresponding superjacent riser plate 12.

Referring now more specifically to Figures 6 to 8, there is shown another embodiment of a finishing plate arrangement 80, or kit, that is preassembled, or factory assembled, into three lower 81, middle 82 and upper 83 sections, plus a joining tread plate 84 between the middle and upper sections 82, 83. The arrangement 80 is adapted to mount over the prefabricated staircase frame 71 surrounded by an adjacent bounding wall structure 72 of the relevant building shown in stippled lines with the exception of one side of the lower section 81 and the lowest tread plate 16 of the middle section 82 which is open.

To install the three sections 81, 82, 83, the lowest one 81 has to be installed first since the bottom portion of the superjacent section 82 generally slides over the top portion of the subjacent section 81. In the present embodiment, the decorative front nosing 18 of the lowest tread plate 16 of the middle section 82 abuttingly covers to top edge of the uppermost riser plate 12 of the lower section 81 and the corresponding horizontal edge 43 of the stringer plate 40. Furthermore, the downwardly protruding staircase inner corner stringer plate of the middle section 82, represented here by a stringer post 42' or the like (since the middle section 82 is a 90-degree angle section), also slides inside a

corresponding recess 45 made into the closed side stringer plate 44 of the lower section 81 for better securing the two sections 81, 82 to one another.

Similarly, for ease of assembly in installing the upper section 83, the lowest tread plate 84 thereof is installed at the end to properly abuttingly cover the uppermost riser plate 12 and the stringer post 42'. Although not specifically shown, the installation of each section 81, 82, 83, 84 onto a corresponding portion of the prefabricated staircase frame 71 could be done using any suitable chemical and/or mechanical securing means such as adhesive, screws and the like.

10 In this arrangement 80, the stringer finishing plates 44 abutting against an adjacent wall structure 72 are adapted to abut the exposed front and top finished surfaces of the corresponding riser and tread plates 12, 16 for attachment thereto via securing screws 46 from the back and undersides of the plates 12, 16, respectively, as shown in Figures 7 and 8. In addition, adjacent
15 riser and tread plates 12, 16 are also secured to one another with a plurality of securing screws 46 or the like attachment means. Typically, predrilled holes are provided at the different locations to ensure proper registration of the adjacent plates 12, 16, 40, 42', 44 and prevent damaging thereof with the screws 46 while being inserted.

20 Although not shown in Figures 6 and 8, slots with corresponding Chinese nails or the like could also be used to better secure the corresponding mitred edges of the stringer plate 40 and the corresponding riser edges, as shown in Figure 4.

In the different embodiments of the present invention, the prefabricated staircase frame 1, 71 may also be part thereof, especially as they could be sold
25 into a whole complete staircase kit, including the rough frame and the corresponding finishing plates.

The present invention thus provides a staircase of relatively simple skeletal construction with the added aesthetic cladding provided by the easy-to-apply prefabricated decorative plates to cover the treads, the risers and the stringers
30 of the staircase skeleton, which may thus be produced from relatively unfinished

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wood. Furthermore, the staircase may be installed with minimal skills in the absence of any requirement to cut wood to size since all elements are prefabricated and pre-drilled as needed.

CLAIMS

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A staircase finishing kit for installation over at least a portion of a prefabricated staircase frame having at least one vertical riser, at least one horizontal tread, the frame being connectable at opposing frame ends thereof to first and second floor structures of a building with the frame extending therebetween, the kit comprising:

- at least one prefabricated finished stringer plate having, for each tread, a respective horizontal plate edge in horizontal register therewith, and for each riser a respective vertical plate edge in vertical register therewith;
- for each riser, a respective prefabricated finished riser plate connectable to the at least one stringer plate to cover a respective riser with a top vertical plate edge of the riser plate in vertical register with an adjacent tread and the respective horizontal plate edge therefore and intersecting an adjacent vertical plate edge to form a riser corner therewith; and
- for each tread, a prefabricated finished tread plate having a decorative nosing extending along at least a front edge thereof and having a lip for abutment against the adjacent riser plate, the tread plate being connectable to the at least one stringer plate by intersecting an adjacent horizontal plate edge and to an adjacent riser plate with the tread plate abuttingly covering a respective tread, ;

each prefabricated finished riser plate and each tread plate are provided with pre-drilled dowel holes, said dowel holes are adapted to register with corresponding dowel holes of said at least one stringer plate.

2. The kit of claim 1, wherein the prefabricated staircase frame further has at least one stringer board to which each riser and each tread is connected, and wherein at least one said vertical plate edge from at least one said stringer plate is longitudinally mitred for intersection with a mitred lateral edge of a respective said riser plates to form a riser corner therewith.

3. The kit of claim 2, wherein each vertical plate edge and corresponding lateral edge have respective slots extending at least partially there along and in register with one another for simultaneously receiving a securing member therein thereby securing the riser plate to the stringer plate.

4. The kit of claim 3, wherein said securing member is a securing nail.

5. The kit of claim 1, wherein each horizontal plate edge of said at least one stringer plate extends inwardly from a superjacent vertical plate edge to allow the respective tread plate to intersect said superjacent vertical plate edge and have the respective tread plate locally sandwiched between the stringer plate and the corresponding superjacent riser plate.

6. The kit of claim 1, wherein the at least one prefabricated finished stringer plate is provided with preformed registration points for matching with corresponding positioned registration points on a corresponding stringer board of the prefabricated staircase frame to which each riser and each tread is connected, securing fixtures connect with respective said stringer plate registration points and respective said stringer board registration points for alignment and securement of the stringer plate to the stringer board.

7. The kit of claim 6, wherein said registration points are predrilled dowel holes and said securing fixtures are dowels adapted to register with corresponding said stringer plate and board dowel holes.

8. The kit of claim 1, wherein the decorative nosing includes a plurality of spaced apart spike members extending horizontally inwardly beneath the tread plate from the lip thereof, the tread plate being connectable to an adjacent riser with the tread plate abuttingly covering the tread by insertion of the spike members through the adjacent riser plate and into the adjacent riser with the lip abutting against the adjacent riser plate.

9. The kit of claim 1, wherein the kit is factory assembled and covers a plurality of steps of the prefabricated staircase.

10. A staircase comprising:

- a prefabricated staircase frame having at least one vertical riser, at least one horizontal tread, and at least one stringer board to which each riser and each tread is connected, the frame being connectable at opposing frame ends thereof to first and second floor structures of a building with the frame extending therebetween;
- at least one prefabricated finished stringer plate having, for each tread, a respective horizontal plate edge, and for each riser a respective vertical plate edge, the stringer plate being connectable to the stringer board to abuttingly cover the stringer board with each respective horizontal plate edge in horizontal register with the tread and with each respective vertical plate edge in vertical register with the respective riser;

- for each riser, a respective prefabricated finished riser plate connectable to the riser to cover the riser with a top vertical plate edge of the riser plate in vertical register with an adjacent tread and the respective horizontal plate edge therefore and intersecting an adjacent vertical plate edge to form a riser corner therewith; and
 - for each tread, a prefabricated finished tread plate having a decorative nosing extending along at least a front edge thereof, the tread plate being connectable to an adjacent riser plate with the tread plate abuttingly covering the tread by abutment against the adjacent riser plate with a lip of the nosing;
- each said connection are made by screws inserted inside pre-drilled holes; each said stringer plate, each said prefabricated finished riser plate, and each said tread plate comprising pre-drilled dowel holes, said dowel holes are adapted to register with corresponding dowel holes of, respectively, said stringer board, said riser, and said adjacent riser plate.

11. The staircase of claim 10, wherein each vertical plate edge from at least one said stringer plate is longitudinally mitred for intersection with a mitred lateral edge of a respective said riser plates to form a riser corner therewith.

12. The staircase of claim 11, wherein at least one said vertical plate edge and corresponding lateral edge have respective slots extending at least partially therealong and in register with one another for simultaneously receiving a securing member therein thereby securing the riser plate to the stringer plate.

13. The staircase of claim 12, wherein said securing member is a securing nail.

14. The staircase of claim 10, wherein each horizontal plate edge of said at least one stringer plate extends inwardly from a superjacent vertical plate edge to allow the respective tread plate to intersect said superjacent vertical plate edge and have the respective tread plate locally sandwiched between the stringer plate and the corresponding superjacent riser plate.

15. The staircase of claim 10, wherein the decorative nosing includes a plurality of spaced apart spike members extending horizontally inwardly beneath the tread plate from the lip thereof, the tread plate being connectable to an adjacent riser with the tread plate abuttingly covering the tread by insertion of the spike members through the adjacent riser plate and into the adjacent riser with the lip abutting against the adjacent riser plate.

16. A method for installing a prefabricated and pre-drilled staircase, the method comprising the steps of:

- connecting generally opposed frame ends of a prefabricated staircase frame to first and second floor structures of a building with the frame extending therebetween, the frame having at least one vertical riser, at least one horizontal tread, and at least one stringer board to which each riser and each tread is connected, the frame being connectable at opposing frame ends thereof;
- after connecting the generally opposed frame ends, connecting at least one preassembled finishing plate arrangement to at least a portion of the prefabricated staircase frame,

said prefabricated and pre-drilled staircase is delivered in detachable single pieces which are built in the construction site to form the whole staircase, said pieces are different parts of said prefabricated and pre-drilled staircase, and all the pieces are pre-sized during their fabrication.

17. The method of claim 16, wherein the at least one preassembled finishing plate arrangement includes at least one prefabricated finished stringer plate, at least one prefabricated finished riser plate and at least one prefabricated finished tread plate, the step of connecting the at least one preassembled finishing plate arrangement includes:

- after connecting the generally opposed frame ends, for each stringer board, connecting a respective prefabricated finished stringer plate therefor to the stringer board to cover the stringer board with, for each tread, a respective horizontal plate edge of the stringer board in horizontal register with the tread, and, for each riser, a respective vertical plate edge in vertical register with the riser;
- after connecting each stringer plate, for each riser, connecting a respective prefabricated finished riser plate to abuttingly cover the riser with a top horizontal edge of the riser plate in horizontal register with an adjacent tread and the respective horizontal plate edge therefore and intersecting an adjacent vertical plate edge to form a riser corner therewith; and
- after connecting a respective prefabricated riser plate, for each tread, connecting a prefabricated finished tread plate, having a decorative nosing forming at least a front edge thereof, to an adjacent riser plate with the tread plate abuttingly covering the tread by abutment against the adjacent riser plate with a lip of the nosing.

18. The method of claim 17, wherein the decorative nosing includes a plurality of spaced apart spike members extending horizontally inwardly beneath the tread plate from the lip thereof, and wherein the step of connecting a prefabricated finished tread plate includes connecting a prefabricated finished tread plate to an

adjacent riser with the tread plate abuttingly covering the tread by insertion of the spike members through the adjacent riser plate and into the adjacent riser with the lip abutting against the adjacent riser plate.

19. The method of claim 17, wherein at least one said vertical plate edge from at least one said stringer plate is longitudinally mitred for intersection with a mitred lateral edge of a respective said riser plates to form a riser corner therewith, and said mitred vertical plate edge and said mitred lateral edge have respective slots extending at least partially therealong and in register with one another, and wherein the step of connecting a respective prefabricated finished riser plate includes securing the riser plate to the stringer plate by slidably and simultaneously inserting a securing member into said mitred vertical plate edge and corresponding said mitred lateral edge.

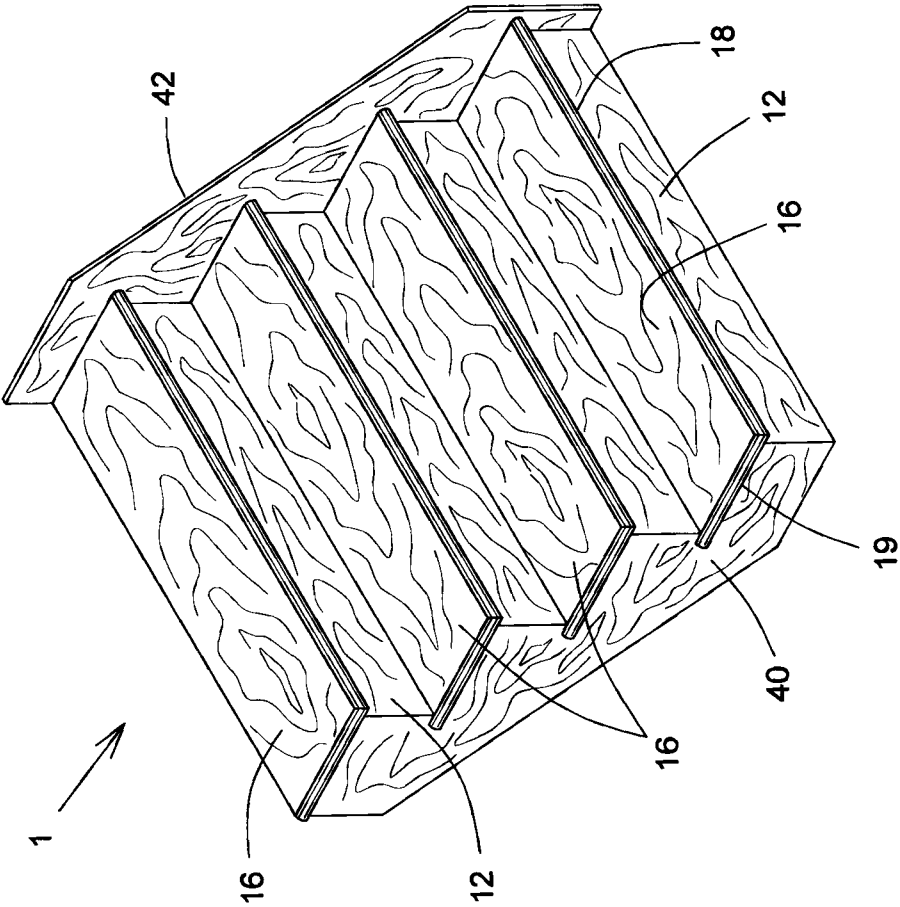
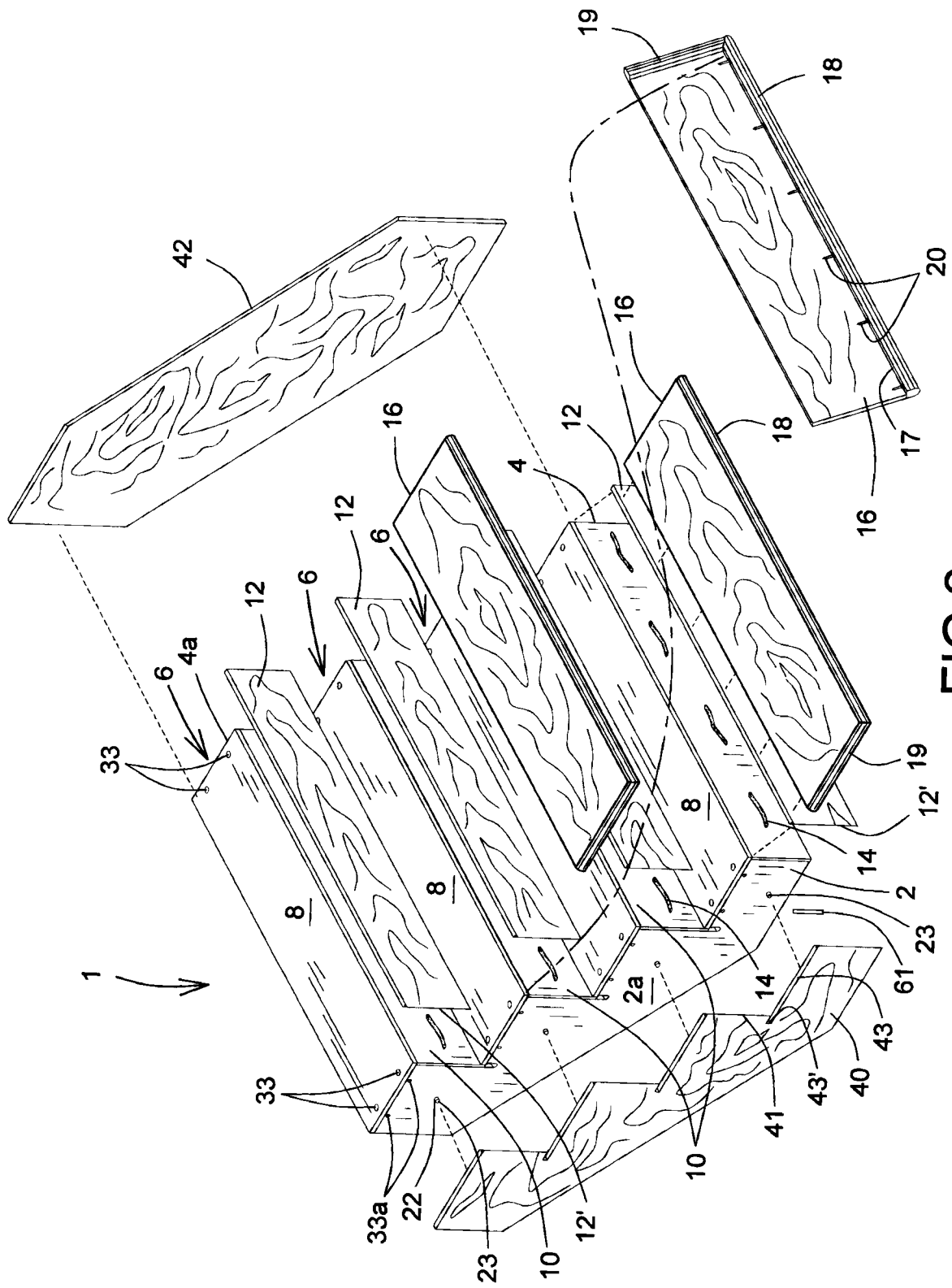


FIG.1



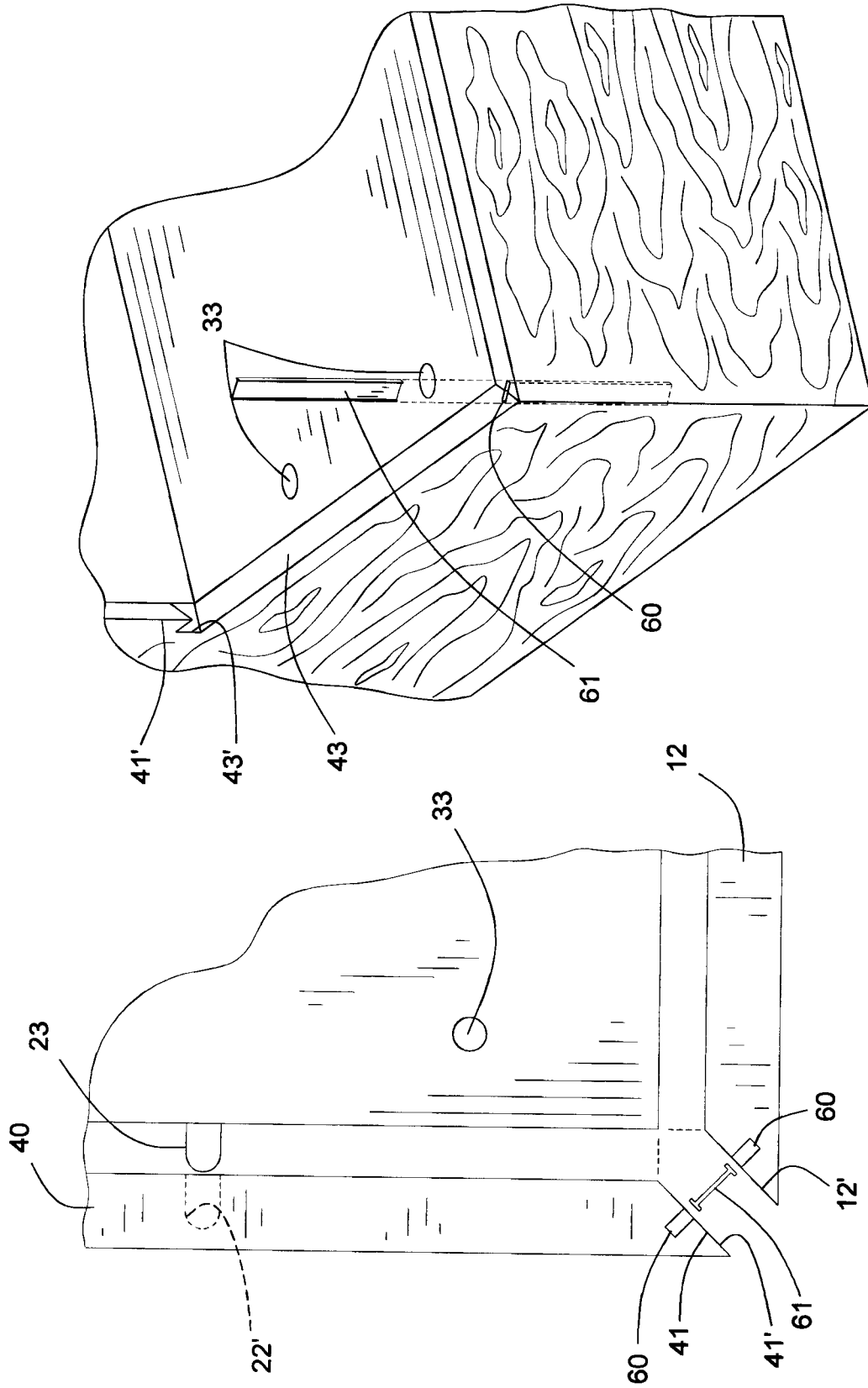


FIG.3

FIG.4

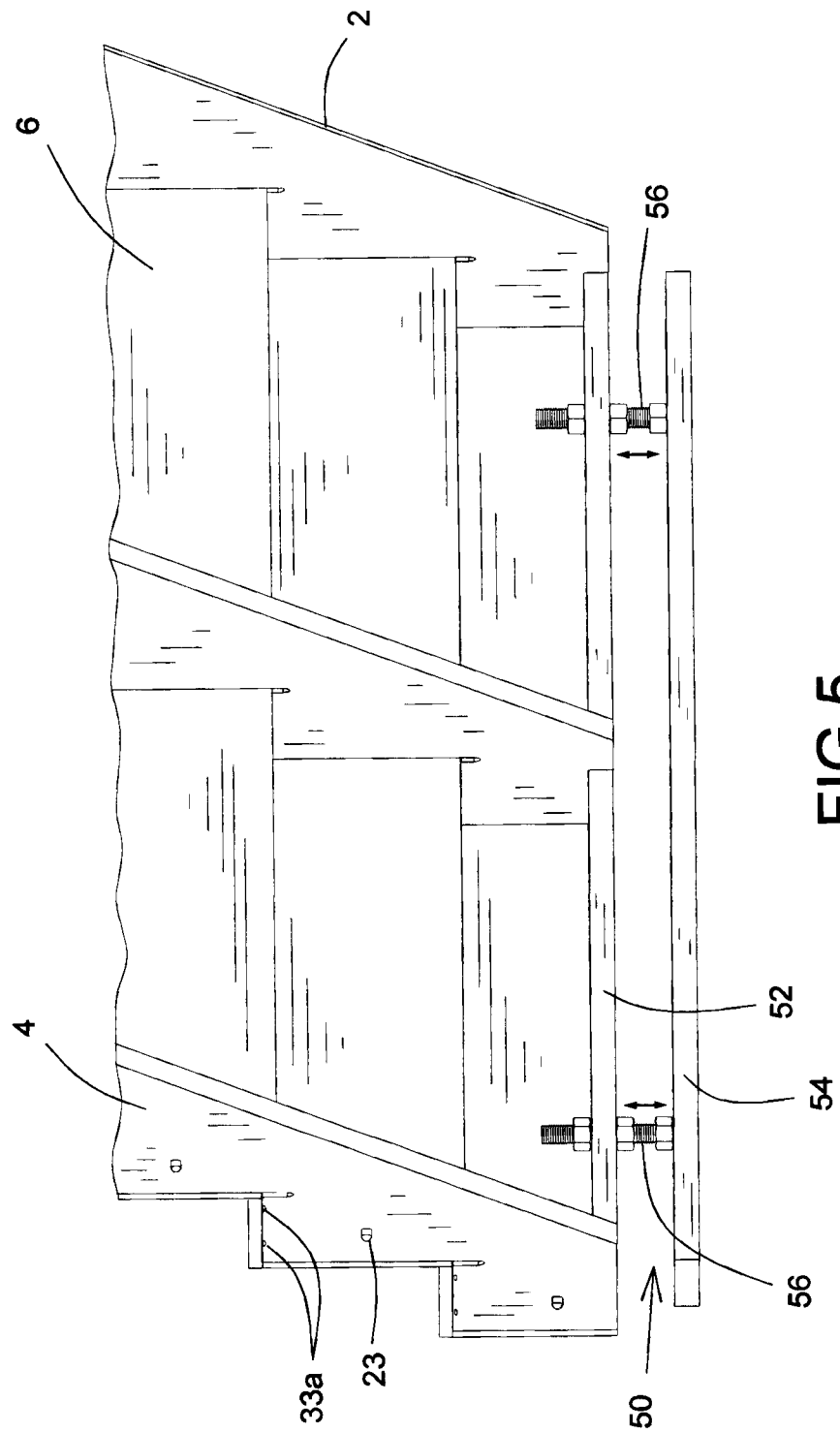


FIG. 5

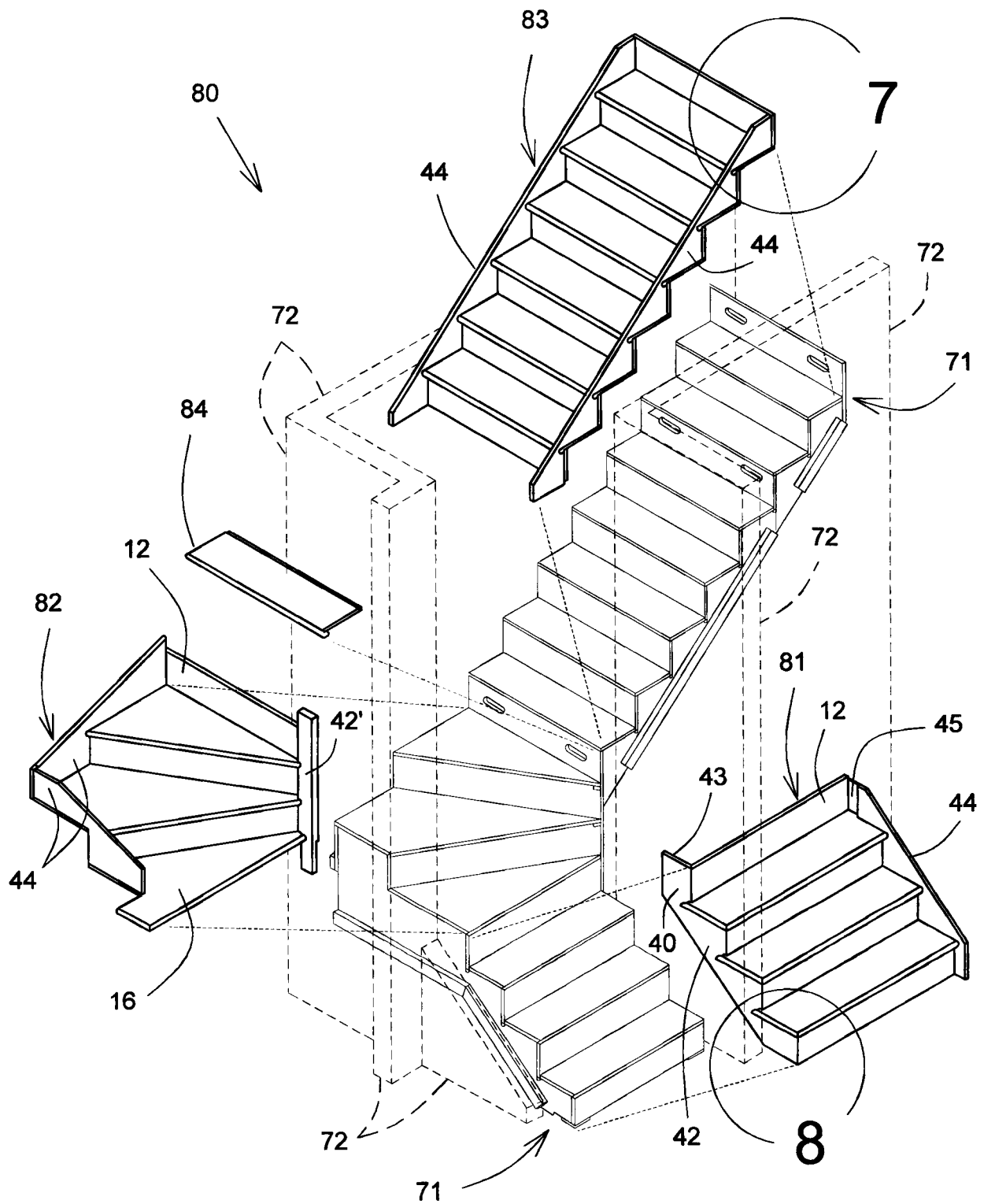


FIG.6

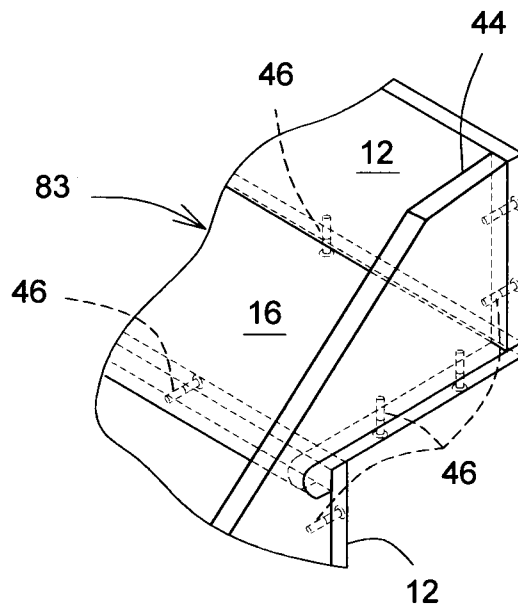


FIG. 7

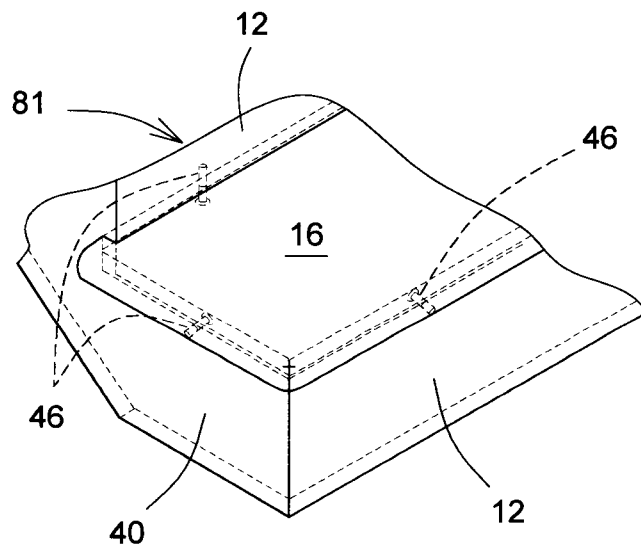


FIG. 8

