A tread member for a staircase is preassembled from strips of wood material which are laminated to one another by adhesive to form a panel with an integral nosing member attached thereto. The preassembled tread member need only be cut to width and length for installation on an existing tread of a staircase for covering a staircase with hardwood floor material more quickly and with a better finished result as compared to traditional methods in which individual tongue and groove strips of wood material are attached to the staircase. A riser comprises a panel formed of strips of wood material laminated together is also provided for covering the existing risers spanning between the adjacent treads of the staircase.
PREASSEMBLED STAIR TREAD MEMBER


FIELD OF THE INVENTION

[0002] The present invention relates to a tread member for a staircase, in which the tread member is preassembled from strips of wood material and includes an integral nosing member for covering an existing tread of the staircase.

BACKGROUND

[0003] When finishing traditional stairs with hardwood floor material, it is typical to make use of commercially available elongate wood strips with tongue and groove profiles on respective lengthwise edges thereof. When covering stairs in this manner, the hardwood floor material must be installed on the treads at the same time as a surrounding floor area when the required tools and equipment available by the flooring installer are already available. Careful attention is then further required to protect the stairs from other trades when constructing a building for example. Installation is time consuming as each individual piece must be cut to length and then nailed into place as it is installed. A lot of waste is generated as many strips of material must be opened to find full length straight boards which can be used to span a full length of each tread being covered. When picking through boxes of hardwood floor material, of the type which are commercially available to include various lengths of wood strips, the installer will typically end up with too many leftover short pieces which are either wasted or which are required to be installed on surrounding floor areas. Accordingly higher material costs results for the customer.

[0004] The edge of each tread is required to be finished with a nosing member having a groove along one side for fitting with the tongue and groove connections of the hardwood floor material and a rounded free edge of slightly greater thickness for only partially overlapping the front edge of the tread being covered. The depth of the traditional nosing member is typically only 1 inch in thickness at the free edge so that when used in conjunction with ¾ inch hardwood floor material, the nosing member only covers approximately ¼ inch of the ½ inch thickness of the conventional material used for the treads. In addition nosing members are only sold in 8 foot lengths which means that on a traditional 3 foot wide staircase, 2 feet of every 8 foot length is typically wasted.

[0005] Typical tongue and groove hardwood floor material also includes a bevel along the edges which requires refinishing by a professional due to the difficult sanding and filing required to refinish beyond the thickness of the bevel in order to have a flush finished floor surface.

[0006] Due to the minimal overlap of the nosing along the front of each tread, conventional nosing members tend to loosen or teeter as the nosing is made from a separate piece added onto the flooring boards and anchored in place separately. The resulting covered treads of the stairs are thus formed of several pieces which in time will move and result in gaps in the step. In addition any warping or cupping in the construction material used to form the treads will translate into a similar cupping of the hardwood floor materials supported on the tread as the individual strips are free to move relative to one another with the warping of the treads. The resulting movement is evident by the squeaking noises which are common to staircases which are covered with traditional hardwood floor material.

SUMMARY OF THE INVENTION

[0007] According to one aspect of the invention there is provided a preassembled tread member for use on a staircase comprising a plurality of existing treads joined by respective risers, the tread member comprising:

[0008] a rectangular panel having a bottom side defining a length and a width of suitable dimension for spanning a top side of one of the existing treads, the panel comprising a plurality of elongate strips of wood material joined to adjacent ones of the strips by adhesive; and

[0009] a nosing member joined along a lengthwise side of the panel by adhesive, the nosing member including a rear surface which projects downwardly beyond the bottom side of the panel for covering a front edge of the respective existing tread.

[0010] According to a second aspect of the present invention there is provided a method for covering an existing tread on a staircase comprising a plurality of existing treads joined by respective risers, the method comprising:

[0011] providing a plurality of elongate strips of wood material;

[0012] forming a rectangular panel by joining each strip to adjacent ones of the strips using adhesive;

[0013] joining a nosing member along a lengthwise side of the panel by adhesive such that a rear surface of the nosing member projects downwardly beyond a bottom side of the panel; and

[0014] securing the bottom side of the panel onto the existing tread such that the nosing covers a front edge of the existing tread, subsequently to the nosing member being joined to the panel.

[0015] The tread member according to the present invention is formed of a plurality of strips of wood material and a nosing member which are preassembled into a single integrated laminated piece of material which is simpler to install and which maintains its unitary construction over time to prevent teetering of the nosing member or squeaks and deformations which result from strips of hardwood floor material which are individually mounted in place onto the treads. Due to the simplicity of the installation which does not require a special hardwood floor installation related tools, the tread member can be readily installed by a home owner or an onsite carpenter at the end of a building project to reduce the risk of damage to the stairs by other trades. Only basic tools are required to install the tread member resulting in easier installation and considerable time savings. By preassembling the tread member prior to installation, almost no waste results as the materials can be laminated together at a factory using long pieces of source material cut to near exact length. The stair can be distributed unfinished but pre-sanded so that the top surface is already flush requiring minimal effort and causing minimal mess to the surrounding area when installing as no significant onsite sanding is required other than to remove minor scratches.
Preassembly of the nosing ensures that the nosing is properly anchored to the strips of the wood material forming the panel of the tread member and accordingly the nosing does not rely on independent mounting to prevent it from teetering over the life of its installation. By laminating all of the components of the tread member, including the nosing member, the resulting one piece construction covers minor surface imperfections of the tread and squeaking or gaps in the installed tread members are not of concern.

[0016] The nosing member may include a flat rear surface which abuts the lengthwise side of the panel such that a seam between the nosing member and the panel lies in a common plane with the rear surface projecting downwardly beyond the bottom side of the panel.

[0017] The nosing member may project downwardly beyond the bottom side of the panel between 1/2 and 1 1/4 inches, but preferably by 1 1/4 inch for fully covering 1 1/4 inch thick existing tread material.

[0018] There may be provided a plurality of screw fasteners joining the nosing member to the rectangular panel, the screw fasteners being inserted through the bottom side of the panel and into the rear surface of the nosing member so as to remain hidden from the top side of the panel or the front side of the nosing member.

[0019] Preferably the nosing member has a depth between the rear surface and a front surface thereof which is less than 1 inch, in the order of 7/8 inch such that only a small portion of the assembled tread member is cantilevered in its mounted position on the existing tread.

[0020] A front surface of the nosing member, opposite the rear surface, may include an irregular shaped profile routed therein, by routing the nosing member prior to joining with the panel.

[0021] A top side of the rectangular panel is preferably pre-sanded such that the strips of wood material are flush with one another along the top side, but unfinished, prior to delivery to the customer.

[0022] Each of the strips preferably comprises a cut piece of a hardwood which is less than 12 centimetres in width and which span a lengthwise direction of the panel. Accordingly, each strip of wood material preferably spans a full length of the panel, a full thickness of the panel and only part of a width of the panel.

[0023] One or more strips may include a pattern routed in a top side thereof which spans a full length of the panel. The pattern is preferably routed after assembly and flush sanding of the top sides of the strips.

[0024] One embodiment of the invention will now be described in conjunction with the accompanying drawings in which:

**BRIEF DESCRIPTION OF THE DRAWINGS**

[0025] FIG. 1 is a partly sectional side elevational view of a staircase upon which the tread member is installed.

[0026] FIG. 2 is a top plan view of the staircase upon which the tread member is installed.

[0027] FIG. 3 is a perspective view of the tread member.

[0028] FIG. 4 is a sectional view of the nosing member.

[0029] FIGS. 5A through 5I are sectional views of various profiles of nosing members.

[0030] FIGS. 6A through 6F are top plan views of various examples of routed patterns in the tread member.

[0031] In the drawings like characters of reference indicate corresponding parts in the different figures.

**DETAILED DESCRIPTION**

[0032] Referring to the accompanying figures there is illustrated a stair covering kit generally indicated by reference numeral 10. The kit 10 is particularly suited for covering a set of stairs 12 with hardwood floor material to provide a finished appearance to the stairs.

[0033] The stairs 12 are typically of the type including a pair of elongate stringers 14 which support a plurality of horizontal existing treads 16 spanning between the stringers at vertically spaced positions therealong. Existing risers 18 span vertically between the forward edge of each tread and the rear edge of the next adjacent tread therebelow. The treads are typically manufactured of conventional 1 1/4 inch thick commercially available lumber.

[0034] The kit 10 includes plurality of tread members 20 for covering the existing treads 16 and a plurality of riser members 22 for covering the existing risers of the stairs respectively.

[0035] The tread member 20 comprises a plurality of elongate strips 24 of hardwood floor material which span a full length of the tread member in the order of approximately three feet in a conventional stair case and a full depth of three quarters of an inch. Each strip has a width which is less then twelve centimetres between adjacent side edges thereof. The strips of wood material are formed of solid wood which is laminated to adjacent strips by adhesive to form a rectangular panel having dimensions which span the full top side of the respective existing tread 16 to be covered. Typical panels 26 which are assembled from the strips are generally rectangular having a width of approximately 12 inches and a length of either thirty-seven, forty-nine or sixty-one inches to accommodate three foot, four foot and five foot wide staircases respectively with sufficient additional material to accommodate any misalignment of the existing staircase.

[0036] The strips 24 forming the panel 26 are oriented in the lengthwise direction of the panel to span the full length thereof but only a portion of the width. The side edges of each strip define a perpendicular surface which is flat between the top and bottom sides of the strip. The sides are abutted against the sides of adjacent strips when fastened by adhesive with no additional fasteners being required to assemble the strips into the panel 26.

[0037] A nosing member 28 is secured along a lengthwise edge 30 of the assembled panel 26 for covering a front edge 32 of the existing tread 16. The nosing member has a depth of approximately 1/4 inch in the lengthwise direction of the panel 26 so that the overall width of the assembled tread member is approximately 1 1/4 inches. The nosing member 28 has a flat rear surface 34 which abuts one of the sides of the strips 24 along the lengthwise edge 30 of the panel such that the flat rear surface 34 projects downwardly beyond a bottom side 36 of the panels by a distance of approximately...
1⅝ inches as a result of an overall height of approximately 2⅝ inches. Accordingly a tread of commercially available 1½ inch thick lumber will be fully covered by the nosing member.

[0038] The abutting seam between the nosing member and the strip 24 along the lengthwise edge of the panel is co-planar with the remainder of the rear surface 34 projecting downwardly beyond the bottom side of the panel so that the overall thickness of ¾ inch of the nosing member along with the rear flat surface thereof permits the opposing front surface 38 to be easily routed prior to assembly of the nosing member onto the panel.

[0039] In addition to adhesive which secures the nosing member onto the panel, a castle drill is used to form two sloped bores 40 projecting from the bottom side 36 of the panel near the lengthwise edge 30 to which the nosing is attached. The bores 40 extend at an upward and forward incline towards the nosing member 28 and has a sufficient depth that a screw 42 received therein is fully hidden flush with the bottom surface of the panel so that nothing projects past the bottom side and interferes with mounting of the bottom side on the top side of the existing tread. The internal end of the bore 40 is spaced inwardly from the lengthwise edge 30 mounting the nosing member thereon such that when the screw is received in the bore, the screw overlaps a portion of the last strip 24 of the panel as well as the nosing member into which it projects to ensure a firm grip across the seam therebetween. The screws 42 are inserted through the bores in the bottom side of the panel and subsequently into the rear surface of the nosing member such that the screws are not visible from the top side of the panel or the front side of the nosing member.

[0040] All of the strips 24 are assembled into the panel 26 with the nosing secured thereto by adhesive prior to installation. The preassembled thread member can be sanded smooth on the top and bottom sides thereof once assembled at the factory prior to being received by the customers so that only minimal sanding is required upon installation at the construction site. Also at the factory prior to installation, one or more of the strips 24 may include a pattern 44 which is routed in a top side thereof to span in a lengthwise direction. The pattern is preferably routed after assembly and flush sanding of the adjacent strips and nosing member so that the flush sanding does not remove a significant portion of the routed pattern 44. A light sanding to remove scratches afterward will not significantly affect the pattern 44.

[0041] The tread member is distributed to the customer in a form in which the strips and nosing member have been assembled and sanded along the top sides thereof to be flush with one another but without stain or other finishing material being applied thereto so that a customer can customize whatever type of finish is desired in the environment of the installation.

[0042] The riser members 22 comprise panels which are substantially identical to the panels 26 which form a portion of the tread members. Each riser member 22 is thus formed of a plurality of strips 24 which are laminated to one another by adhesive. The strips are similarly oriented in a lengthwise direction.

[0043] In order to install the kit, the tread members are first measured and then cut for mounting in place overtop of the existing treads of the staircase. For each existing tread, the width is measured between the front and back edges thereof and 1 inch is added to this measurement. The additional inch accommodates for the ¼ inch thickness of the nosing plus an additional ¾ inch buffer to accommodate minor misalignments. Any suitable table saw may be used to cut the side edge of the panel forming the tread member opposite the longitudinal edge supporting the nosing member thereon.

[0044] The length of the existing tread between the stringers is then measured to determine the overall length of the tread member. The squareness of the front edge of the tread relative to the stringer is checked before cutting the tread member to length as both ends may require some cutting if the existing the tread is not square to the stringers. Once the length and width of the tread member are cut, the tread member is dry fit into place overtop of the existing tread so that the bottom surface of the panel forming the tread member rests on top of the topside of the existing tread. Any cupping of the top surface of the existing tread is covered by the rigid preassembled panel of the tread member.

[0045] To complete the installation, two strips of double sided, pressure activated tape are applied in a length wise direction at spaced apart positions along the existing tread to span generally between the two stringers. Flooring adhesive is applied between the strips, for example PL 400 adhesive. The tread member is then dropped in place onto the existing tread at which point weight applied to the step will activate the tape to secure the tread member in place until the adhesive sets. In some instances, nails may be used to secure the tread member in place on the existing tread, however these are only required to be small placement nails as the adhesive alone would be sufficient to hold the tread member in place on the existing treads.

[0046] Similar steps are accomplished for mounting each individual riser in place between the adjacent treads. The panel forming the riser member is measured and cut to height and is subsequently measured and cut to length to be first dry fit between an adjacent pair of existing treads. For installation, double sided tape and flooring adhesive is similarly applied to either the existing riser or the riser member being mounted thereon. Pressure will again activate the tape to hold the riser member in place until the adhesive sets.

[0047] Since various modifications can be made in my invention as herein above described, and many apparently widely different embodiments of same made within the spirit and scope of the claims without department from such spirit and scope, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense.

1. A preassembled tread member for use on a staircase comprising a plurality of existing treads joined by respective risers, the tread member comprising:

   a rectangular panel having a bottom side defining a length and a width of suitable dimension for spanning a top side of one of the existing treads, the panel comprising a plurality of elongate strips of wood material joined to adjacent ones of the strips by adhesive; and

   a nosing member joined along a lengthwise side of the panel by adhesive, the nosing member including a rear
The tread member according to claim 1 wherein the nosing member includes a flat rear surface which abuts the lengthwise side of the panel such that a seam between the nosing member and the panel lies in a common plane with the rear surface projecting downwardly beyond the bottom side of the panel.

3. The tread member according to claim 1 wherein there is provided a plurality of screw fasteners joining the nosing member to the rectangular panel which are inserted through the bottom side of the panel.

4. The tread member according to claim 1 wherein at least one strip includes a pattern routed in a top side thereof which spans a full length of the panel.

5. A method of forming a tread member for covering an existing tread on a staircase comprising a plurality of existing treads joined by respective risers, the method comprising:

- providing a plurality of elongate strips of wood material;
- forming a rectangular panel by joining each strip to adjacent ones of the strips using adhesive; and
- joining a nosing member along a lengthwise side of the panel by adhesive such that a rear surface of the nosing member projects downwardly beyond a bottom side of the panel sufficiently for covering a front edge of the existing tread.

6. The method according to claim 1 wherein a front surface of the nosing member opposite the rear surface includes an irregular shaped profile routed therein.

7. The method according to claim 15 wherein at least one strip includes a pattern routed in a top side thereof which spans a full length of the panel.

8. The method according to claim 15 wherein a strip of wood material spans a full length of the panel, a full thickness of the panel and only part of a width of the panel.

9. The tread member according to claim 1 wherein the nosing member has a depth between the rear surface and a front surface thereof which is less than one inch.

10. The tread member according to claim 1 wherein the nosing member projects downwardly beyond the bottom side of the panel between 1½ and 1¾ inches.

11. The tread member according to claim 1 wherein the nosing member projects beyond the bottom side of the panel by approximately 1¼ inch.

12. The tread member according to claim 1 wherein there is provided a plurality of screw fasteners joining the nosing member to the rectangular panel which are inserted through the bottom side of the panel.

13. The tread member according to claim 1 wherein at least one strip includes a pattern routed in a top side thereof which spans a full length of the panel.

14. The tread member according to claim 1 wherein at least one strip includes a pattern routed in a top side thereof which spans a full length of the panel.

15. A method of forming a tread member for covering an existing tread on a staircase comprising a plurality of existing treads joined by respective risers, the method comprising:

- providing a plurality of elongate strips of wood material;
- forming a rectangular panel by joining each strip to adjacent ones of the strips using adhesive; and
- joining a nosing member along a lengthwise side of the panel by adhesive such that a rear surface of the nosing member projects downwardly beyond a bottom side of the panel sufficiently for covering a front edge of the existing tread.

16. The method according to claim 15 including attaching the tread member to the existing tread of the staircase with adhesive subsequent to the nosing member being joined to the panel.

17. The method according to claim 15 wherein the rear surface of the nosing member is flat and wherein the method includes abutting the rear surface against the lengthwise side of the panel such that a seam between the nosing member and the panel lies in a common plane with the rear surface projecting downwardly beyond the bottom side of the panel.

18. The method according to claim 15 including inserting a plurality of screw fasteners through the bottom side of the panel to join the nosing member to the rectangular panel.

19. The method according to claim 15 including routing a front surface of the nosing member prior to joining the nosing member to the panel.

20. The method according to claim 15 including orienting the strips to each span a full length of the panel, a full thickness of the panel and only part of a width of the panel.

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