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(54) L-SHAPE SLOTTED DECK BOARD AND HIDDEN FASTENER SYSTEM

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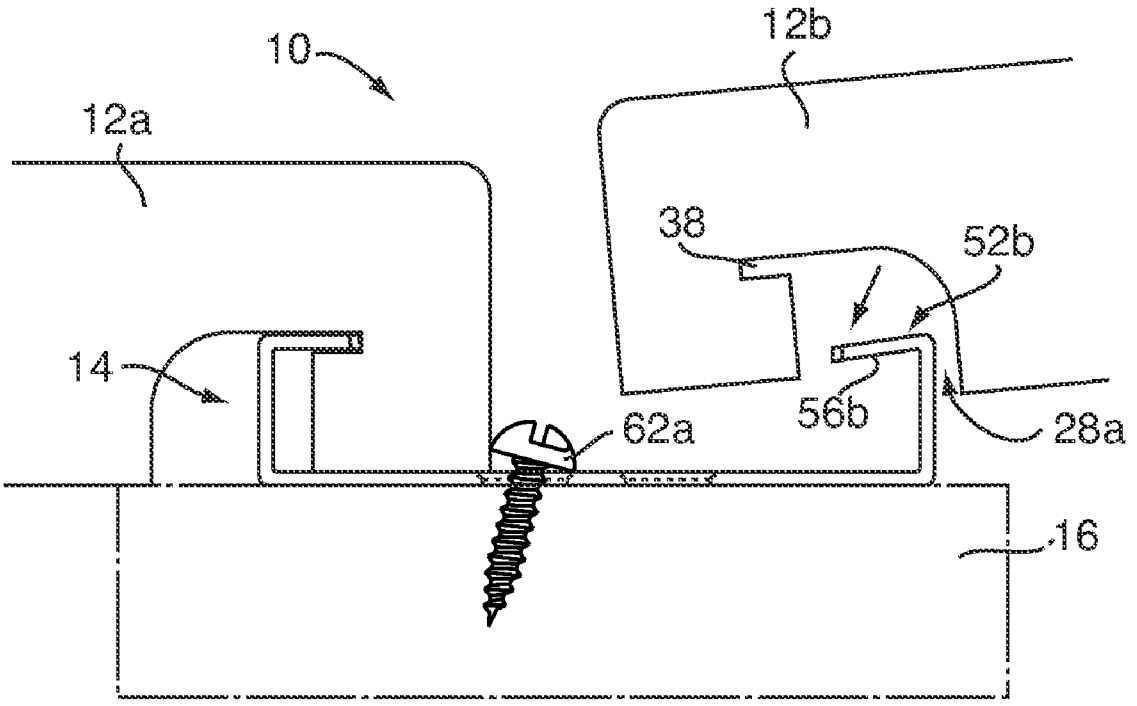
(57) **ABSTRACT**

An L-shape slotted deck board and hidden fastener system includes a decking board or plank and a hidden-type fastener device. The plank includes two generally L-shaped slots formed on a planar underside or bottom of the plank, which provide the construction member with two underside, inwards-facing shoulders or lips. The fastener is a clip-like member that includes a flat body portion and two "wing" portions on opposite edges of the body. Each wing includes a sidewall portion perpendicular to the body, as well as a lip portion attached to the sidewall and bent down inwards toward the body. The wings are complementary in shape to the slots, such that the lip and sidewall portions of the wing "hook around" the inwards-facing shoulder of the L-shaped slot. The fastener holds adjacent planks together by hooking around the planks' laterally adjacent, oppositely facing slots/shoulders.



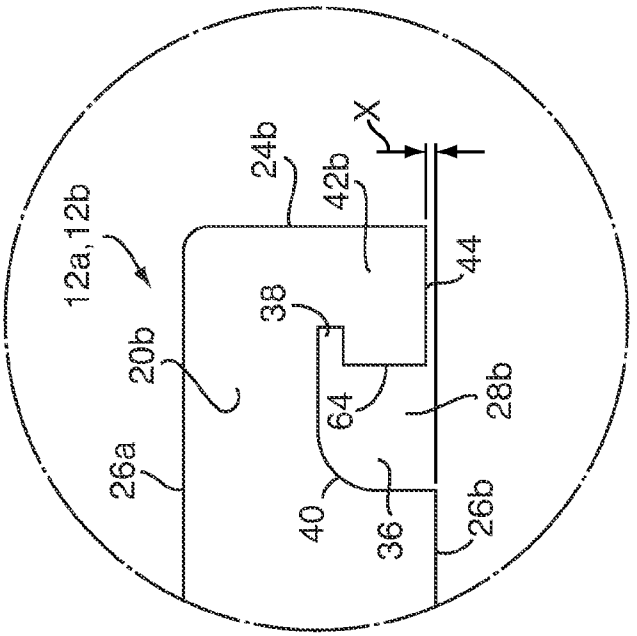

X
24b
42b
12a,12b
44
38
20b
64
28b
26a
40
36
26b

FIG. 1B

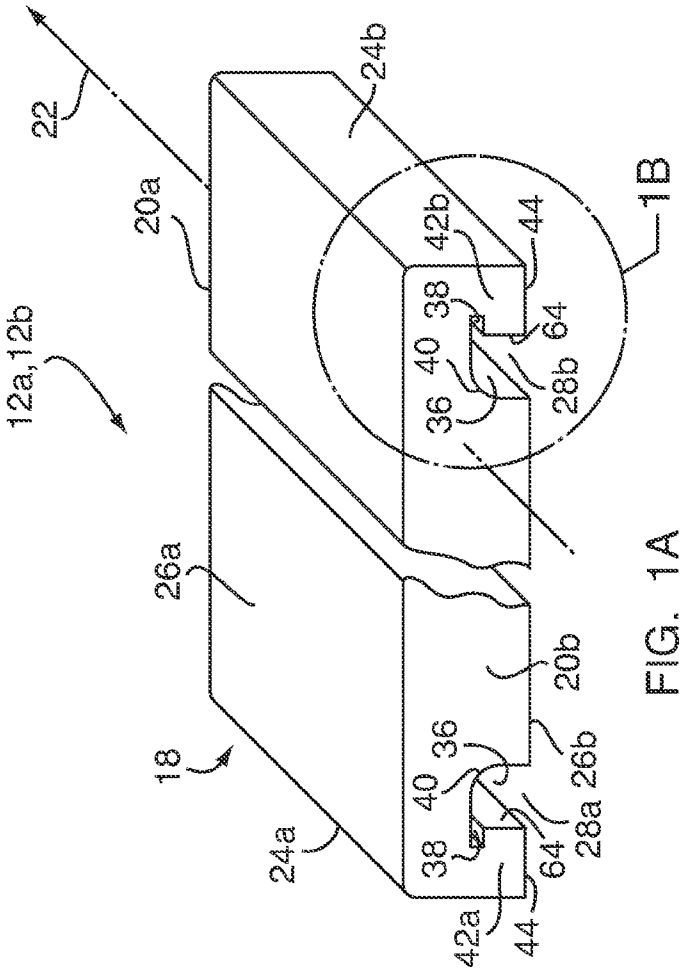

22
24b
20a
1B
42b
44
12a,12b
38
64
40
36
28b
26a
20b
18
36
40
26b
28a
24a
38
64
42a
44

FIG. 1A

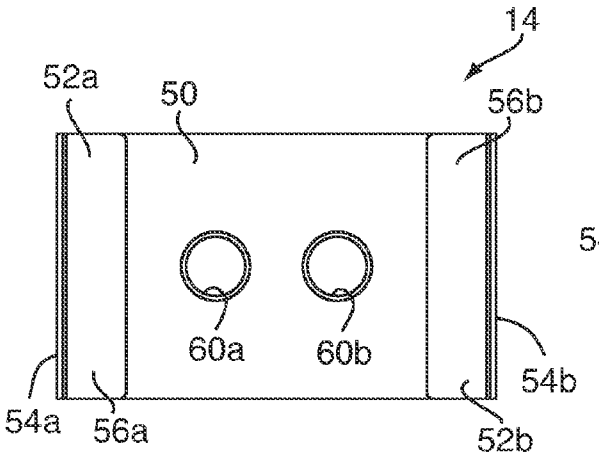


FIG. 2A

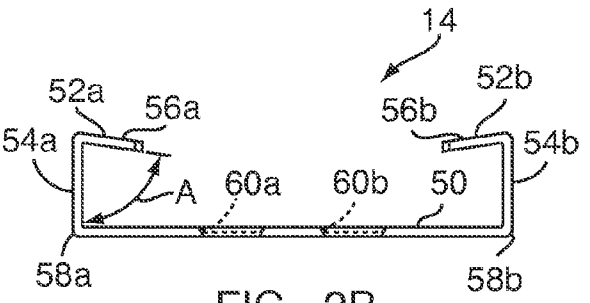


FIG. 2B

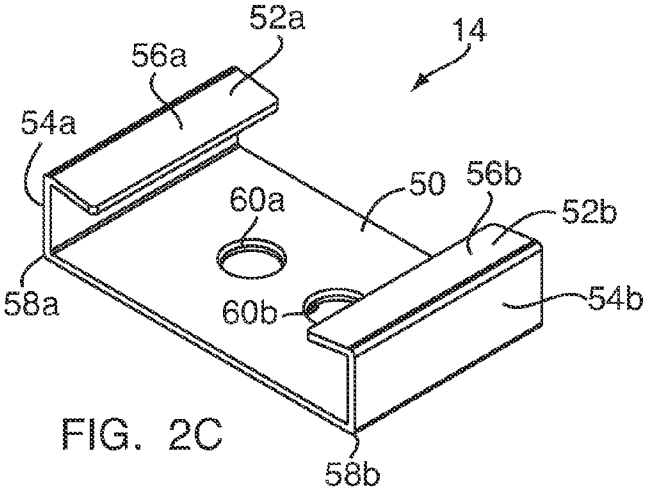


FIG. 2C

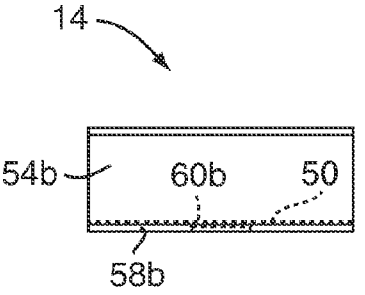


FIG. 2D

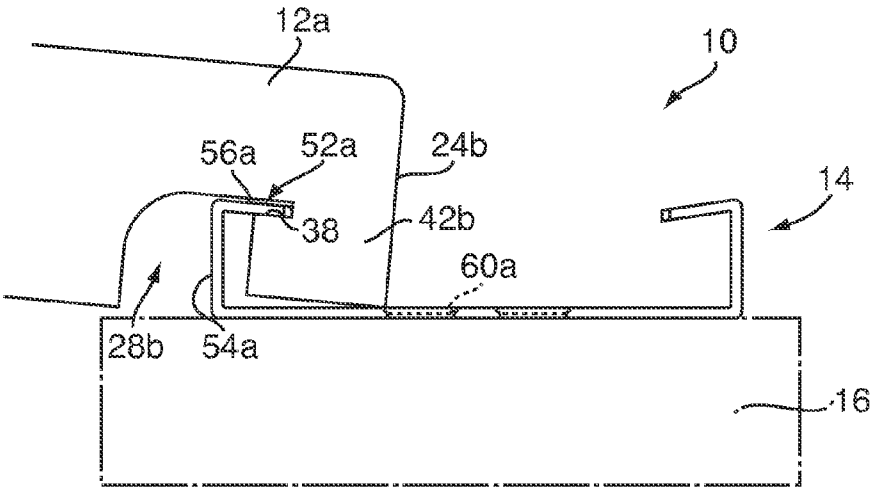


FIG. 3A

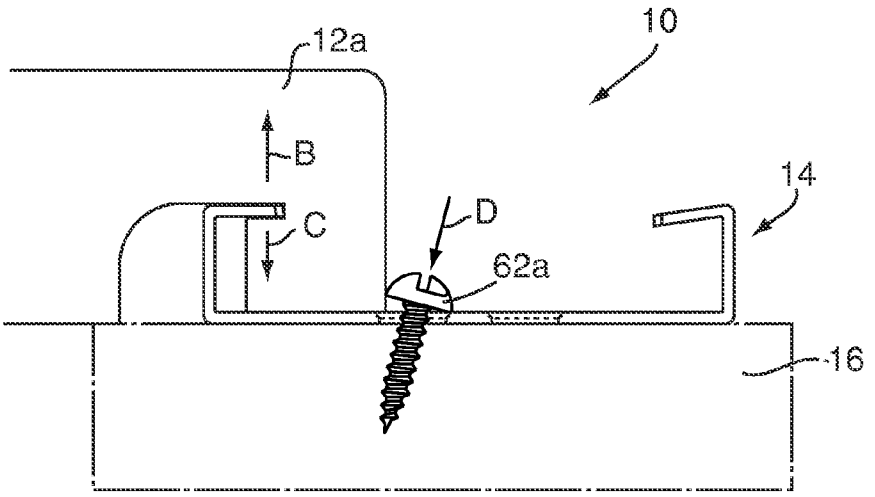


FIG. 3B

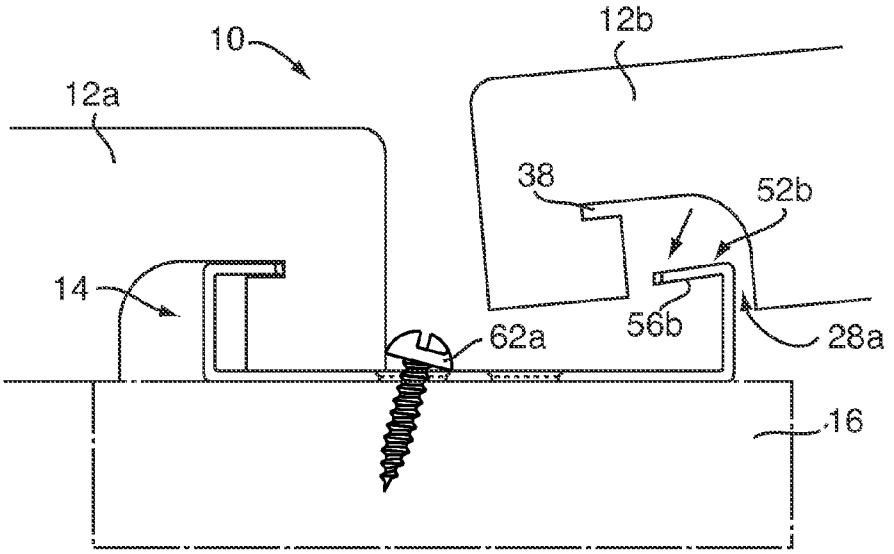


FIG. 3C

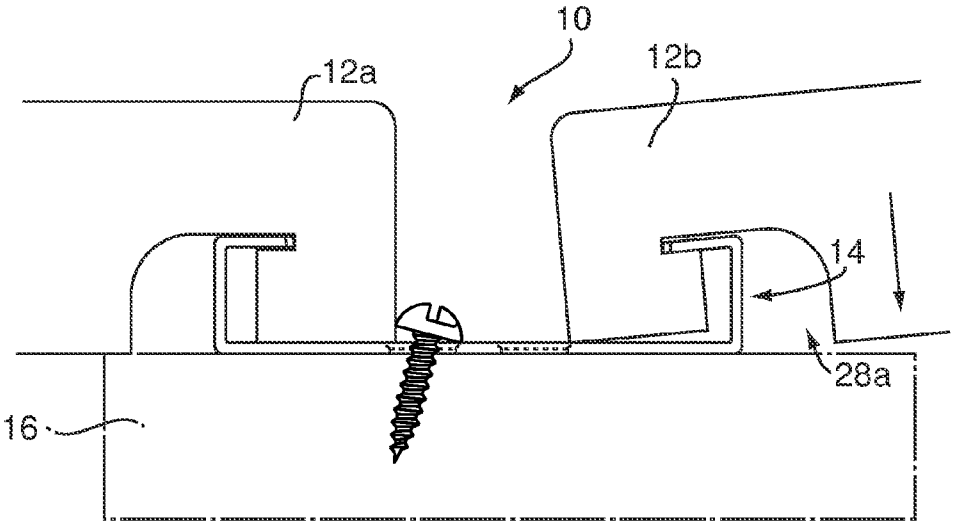


FIG. 3D

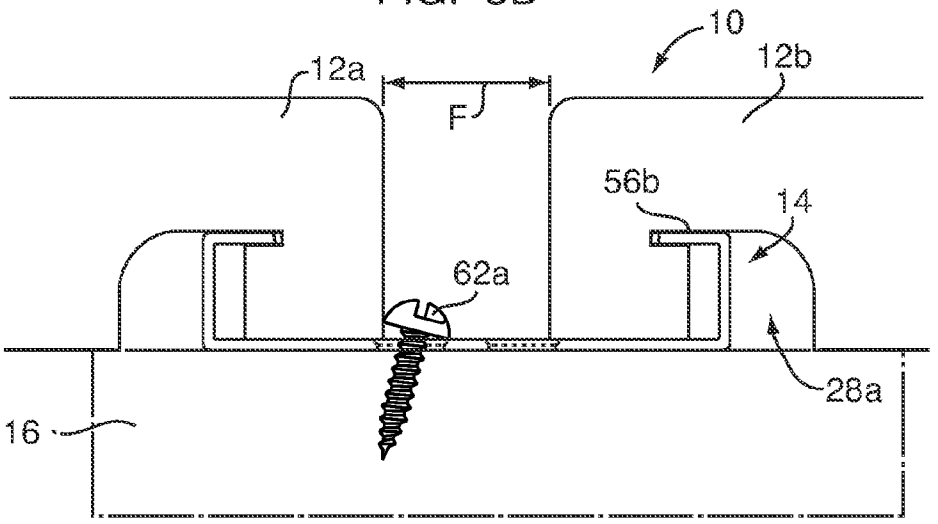


FIG. 3E

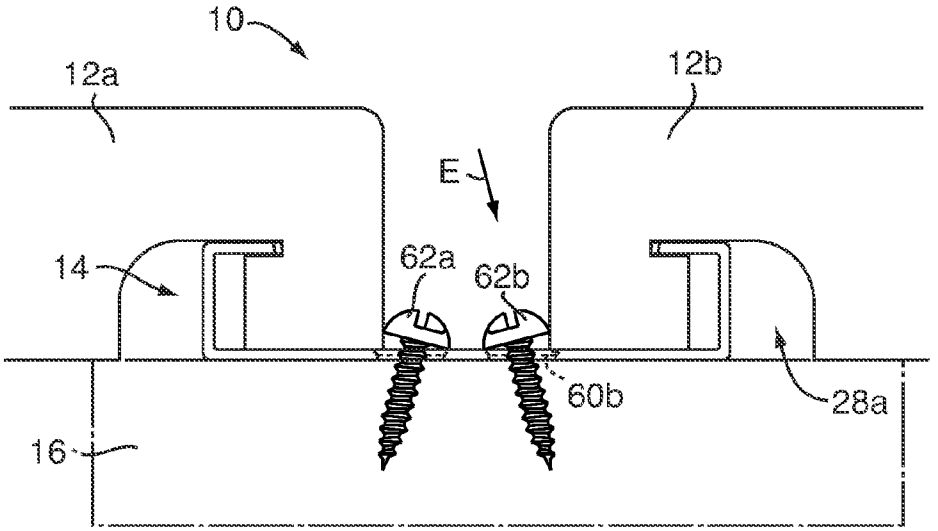


FIG. 3F

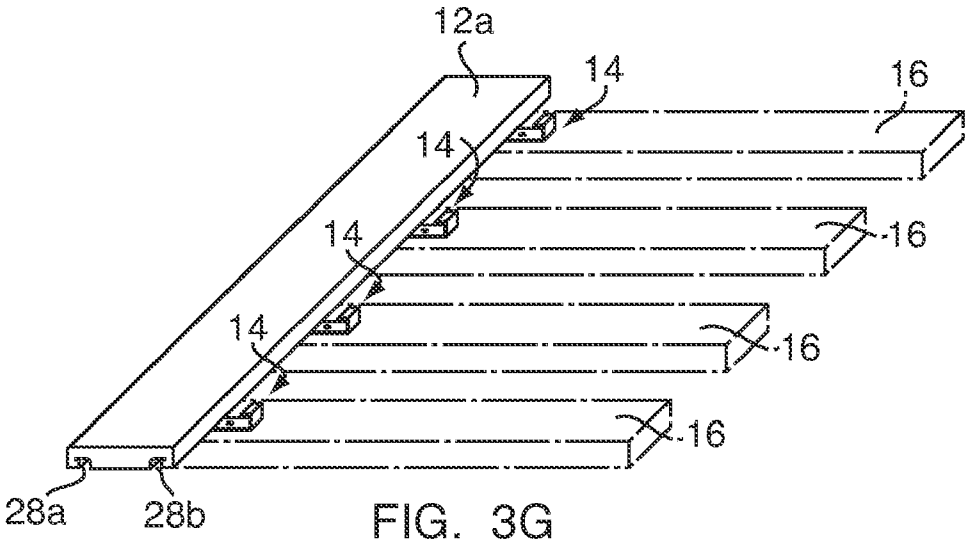


FIG. 3G

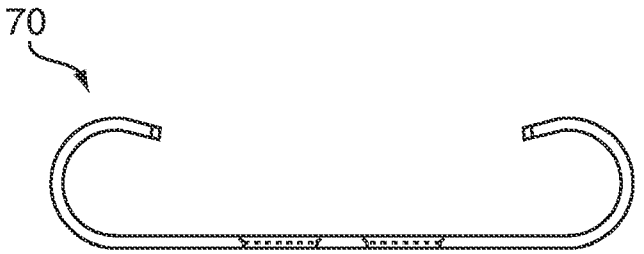


FIG. 4A

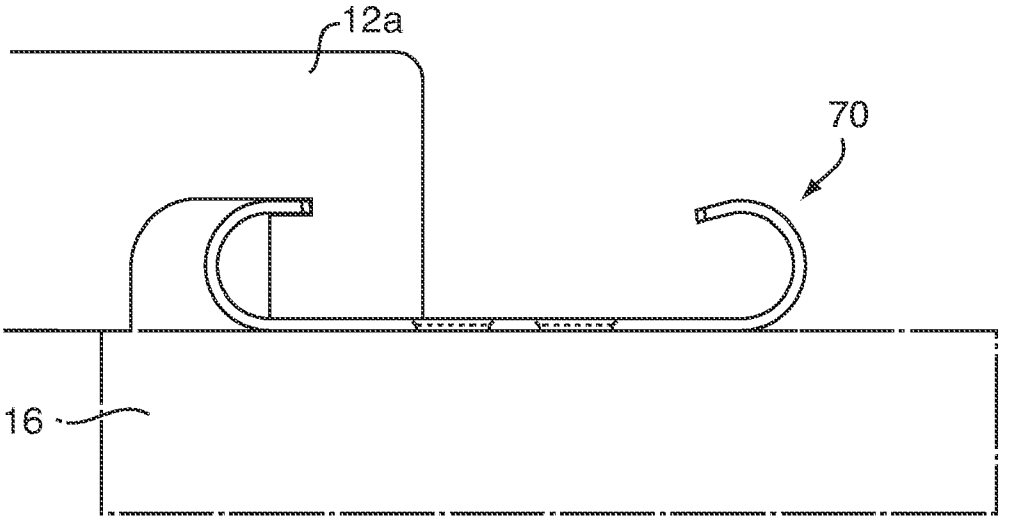


FIG. 4B

L-SHAPE SLOTTED DECK BOARD AND HIDDEN FASTENER SYSTEM

[0001] This application claims the benefit of U.S. Provisional Application Ser. No. 60/804,999, filed Jun. 16, 2006, hereby incorporated by reference herein in its entirety.

FIELD OF THE INVENTION

[0002] The present invention relates to a deck fastener for securing deck boards together and to a supporting member and, more particularly, to a fastener for securing slotted planks or deck boards to an underlying support member.

BACKGROUND OF THE INVENTION

[0003] Composite deck boards or planks have become increasingly common as a replacement or alternative to traditional wood planks for outside decking or the like. Composite boards are made of a combination of materials usually including a polymer matrix material and one or more reinforcement materials such as wood fibers, with the polymer matrix surrounding and supporting the wood fiber reinforcement material. The reinforcement material provides strength, workability, and dimensional stability, while the polymer matrix material provides low-maintenance characteristics, durability (especially in terms of color longevity), and splinter-free wear.

[0004] Composite deck boards may be fastened to underlying support members in the same manner as traditional wood planking, e.g., by driving a fastener down through the body of the deck board. Despite improved mechanical qualities, however, composite boards are still subject to possible splitting. Moreover, users prefer not to have fasteners protruding above the decking surface, as may be unsightly and/or create a hazard. For example, conventional nails, even if countersunk in the first instance, have a tendency to work themselves above the decking surface over time as the planking contracts and expands due to changing weather conditions. Accordingly, various systems have been proposed for securing deck boards together and to underlying supports in a "hidden" manner, e.g., the fasteners do not protrude above the decking surface.

SUMMARY OF THE INVENTION

[0005] According to an embodiment of the present invention, an L-shape slotted deck board and hidden fastener system includes at least one construction member (e.g., decking board or plank) and a hidden-type fastener device. The construction member includes two generally L-shaped slots formed on an underside or bottom of the construction member and extending longitudinally along and proximate each long edge of the construction member. In effect, the slots provide the construction member with two underside, inwards-facing shoulders or lips. The fastener is a clip-like member that includes a flat body portion and two "wing" portions on opposite edges of the body portion. Each wing includes a sidewall portion perpendicular to the body, as well as a lip portion attached to the sidewall and bent slightly down inwards toward the body. The wings are complementary in shape to the slots, such that the wings can be maneuvered to engage the slots, e.g., the lip and sidewall portions of the wing "hook around" the inwards-facing shoulder of the L-shaped slot. The fastener holds adjacent construction members together by hooking around the construction members' laterally adjacent, oppositely facing slots/shoulders.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The present invention will be better understood from reading the following description of non-limiting embodiments, with reference to the attached drawings, wherein below:

[0007] FIGS. **1**A and **1**B are perspective and side elevation detail views, respectively, of a construction member with L-shaped fastener slots, according to an embodiment of the present invention;

[0008] FIGS. **2**A-**2**D are top plan, front side elevation, perspective, and end elevation views, respectively, of a hidden-type fastener for use with the construction members shown in FIGS. **1**A and **1**B;

[0009] FIGS. **3**A-**3**G are side elevation views showing the construction members and fasteners in use; and

[0010] FIGS. **4**A and **4**B are side elevation views of an alternative embodiment of the hidden-type fastener.

DETAILED DESCRIPTION

[0011] The present invention relates to an L-shape slotted deck board and hidden fastener system **10**, which includes decking boards, planks, or other construction members **12***a*, **12***b* (referred to hereinafter as "deck boards") and a hidden-type deck board fastener device **14**. Typically, for constructing a deck or similar structure, a number of deck boards **12***a*, **12***b* and fasteners **14** will be used. In particular, the fastener **14** ("fastener means") is used for connecting (i) a first L-shape slotted deck board **12***a* to an underlying support member or joist **16** and (ii) a second L-shape slotted deck board **12***b* to the first deck board **12***a* in an adjacent or lateral manner. In other words, the fastener **14** is used, in effect, to connect two deck boards to one another and both deck boards to an underlying support, in a manner in which the fastener **14** lies hidden below the upper plane of the decking when secured in place.

[0012] In one embodiment of the present invention, each deck board **12***a*, **12***b* is a generally rectangular, generally planar member having an elongate body **18**, first and second lateral ends **20***a*, **20***b* (e.g., the ends are perpendicular to a longitudinal axis **22** of the board), left and right longitudinal sides or side walls **24***a*, **24***b* (e.g., the sides are parallel to the longitudinal axis of the deck board), and top and bottom longitudinal sides **26***a*, **26***b*. The deck boards **12***a*, **12***b* may be made of a polymer, composite, wood, or another material suitable for decking. The bottom side **26***b* of the deck board **12***a*, **12***b* (also referred to herein as the underside of the deck board) has two generally parallel, longitudinal grooves or slots **28***a*, **28***b* formed therein. The slots **28***a*, **28***b* are located proximate the left and right sides **24***a*, **24***b* of the deck board, respectively, and face in opposite directions. Each slot **28***a*, **28***b* is generally L- or J-shaped, and includes a trough-like portion **36** that opens out to the deck board bottom **26***b* and a rectangular extension groove **38** extending along one side of the "bottom" of the trough in the direction of the respective side wall **24***a*, **24***b*. (As shown, the top and bottom of the extension groove **38** are generally parallel to the top and bottom sides **26***a*, **26***b* of the deck board, while the side of the extension groove is generally parallel to the left and right sides **24***a*, **24***b* of the deck board.) The side **40** of the

trough portion **36** opposite the extension groove **38** may be curved, e.g., provided with a radius of curvature. In effect, the slots **28***a*, **28***b* provide the deck board **12***a*, **12***b* with two inwards-facing shoulders **42***a*, **42***b* ("shoulder means"), opposite each of which lies the curved trough wall **40**. The bottom portions **44** of each shoulder **42***a*, **42***b* may be offset by a small longitudinal distance "X" from the remainder of the bottom side/surface **26***b* of the deck board (e.g., the bottom side **26***b* and bottom shoulder portions **44** define parallel planes offset by a slight amount such as 0.036"), to accommodate the thickness of the fastener **14**. (Here, "longitudinal" refers to a distance along an axis lying perpendicular to the bottom surface plane.)

[0013] The slots **28***a*, **28***b* may be formed through extrusion or molding of the deck boards, or by cutting or machining operations or the like, according to standard manufacturing methods. The slots **28***a*, **28***b* may extend from end **20***a* to end **20***b*, or they may terminate before the ends **20***a*, **20***b*, including a possible staggered arrangement. Typically, both slots **28***a*, **28***b* will be dimensioned the same, e.g., the deck boards will be generally bilaterally symmetric. The length and width of the deck boards **12***a*, **12***b* may vary.

[0014] The fastener **14** includes a thin, flat, generally rectangular body portion **50** and two connection lips or "wings" **52***a*, **52***b*. The underside of the body portion **50** (opposite the wings **52***a*, **52***b*) defines a planar underside of the fastener. Each wing **52***a*, **52***b* includes a rectangular-shaped sidewall **54***a*, **54***b* and a rectangular-shaped lip portion **56***a*, **56***b*. The wing sidewalls **54***a*, **54***b* are attached to respective side edges **58***a*, **58***b* of the body portion **50**, and lie generally perpendicular to the body portion, on the same side of the body portion (e.g., the sidewalls **54***a*, **54***b* extend in the same direction). The sidewalls **54***a*, **54***b* define the left and right boundaries of the fastener. The lip portions **56***a*, **56***b* are attached to the top edges of the wing sidewalls **54***a*, **54***b* at an angle A=81.50° (or thereabouts), such that the lip portions **56***a*, **56***b* each generally face inwards and inclined down towards the body portion **50** by a non-0° angle "B"=(90° A). (Typical values for B range between 5° and 25°, i.e., corresponding to an angle A between 85° and 65°.) The body **50** includes two centrally located openings **60***a*, **60***b* for passing connectors, such as screws **62***a*, **62***b*.

[0015] As explained in more detail below, the fastener **14** is complementary in shape to the L-shape slots **28***a*, **28***b*. The height of the wing sidewalls **54***a*, **54***b* generally corresponds to the height of the flat side **64** of the trough **36** (e.g., the side closest to the left or right sides **24***a*, **24***b* and generally parallel thereto), and the wing lip portions **56***a*, **56***b* are dimensioned to fit in the extension groove **38**. The openings **60***a*, **60***b* are spaced apart from the wings by a distance such that the shoulders **42***a*, **42***b* fit in the space between the openings **60**, **60***b* and wings, as shown in FIG. **3**F. As also shown in FIG. **3**F, the distance separating the wings **52***a*, **52***b*, as established by the width of the body portion **50**, is such that when two deck boards are positioned laterally together, the oppositely facing shoulders **42***a*, **42***b* of the adjacent deck boards fit in the space between the openings and wings, with a predefined lateral space "F" lying between the deck boards.

[0016] The fastener **14** may be made of metal or some other suitably strong and durable material, using standard manufacturing methods. For example, the fastener may be formed by stamping an appropriately shaped flat piece of metal or other material (e.g., the piece would be generally rectangular), and then bending the ends of the piece in a compound manner to form the wings **52***a*, **52***b*. In this manner, the wings would be integral with the body portion **50**.

[0017] In use, with reference to FIGS. **3**A-**3**F, a deck board **12***a* is held in place against an underlying support member **16**, e.g., joist. As noted above, the deck board **12***a* is a generally rectangular, elongated construction member having the L-shape slots **28***a*, **28***b* formed on a planar underside thereof. The deck board may be used as decking, e.g., a number of the deck boards are placed across the support members to form a deck. Before placing the deck board **12***a* against the support **16**, the "left" wing **52***a* of a fastener **14** is maneuvered into the slot **28***b*, such that the outer edge of the lip portion **56***a* lies in the extension groove **38**. In this position, the wing **52***a* effectively "curls around" the shoulder **42***b*, while the rest of the fastener **14** lies extended outwards and away from the sidewall **24***b* of the deck board, as shown in FIG. **3**A. The trough-like opening **36** and curved wall **40** of the slot **28***b* provide clearance for the wing sidewall **54***a*, for facilitating movement of the lip **56***a* into the extension groove **38**.

[0018] After the fastener **14** is placed in the slot **28***b*, the deck board **12***a* is placed against the support **16** as shown in FIG. **3**B. A screw or other connector **62***a* is inserted through the opening **60***a* and is secured in place down into the support member **16**, as indicated by arrow D. Because the fastener lip **56***a* is bent downwards slightly, the weight of the deck board **12***a* (and/or the action of the connector **62***a* in securing the fastener to the support **16**) causes the lip **56***a* to flex upwards slightly in the direction given by arrow B. This in turns causes the lip **56***a* to exert a downwards force in the direction of arrow C against the bottom surface of the extension groove **38** (e.g., against the shoulder **42***b*). This helps to hold the deck board **12***a* securely in place.

[0019] Once the first connector **62***a* has been driven into place, a second deck board **12***b* is maneuvered over the "right" wing **54***b* of the fastener **14**, as shown in FIG. **3**C. Typically, the deck board **12***b* will be oriented at an angle for positioning the leading edge of the lip **56***b* in the extension groove **38** of the slot **28***a*, as shown in FIG. **3**D. Allowing the second deck board **12***b* to drop into place against the support **16** causes the lip **56***a* to flex upwards slightly, as shown in FIG. **3**E, holding the second deck board **12***b* in place. Subsequently, a second connector **62***b* is driven down through the second connector opening **60***b*, as indicated by the arrow E. This process is repeated for successive lateral deck boards to complete a section of decking. As should be appreciated, before attaching the second deck board **12***b* over the right wing **52***b*, fasteners **14** may first be disposed in the second deck board's right hand slot **28***b*. Also, it may be the case that a plurality of fasteners **14** are used between each successive pair of deck boards, in a spaced apart manner down the length of the deck boards. See FIG. **3**G.

[0020] Although the connectors **62***a*, **62***b* are shown driven into the support at an angle, the connectors **62***a*, **62***b* could instead be driven straight into the support and generally flush against the fastener **14**, e.g., the openings **60***a*, **60***b* may be slightly tapered for countersinking purposes.

[0021] The relative dimensions and spacing of the deck boards, fasteners, slots **28***a*, **28***b*, and wings **52***a*, **52***b* dictate the distance "F" (FIG. **3**E) between successive deck boards once the deck boards are secured in place. The distance F can be selected by adjusting these parameters at the manu-

facturing stage. Typically, F will be selected based on aesthetic considerations, to allow enough room for passage of the connectors **62***a*, **62***b*, and to allow for material expansion/contraction.

[0022] Although the fastener **14** is shown as having two openings **60***a*, **60***b*, one opening could instead be provided without departing from the spirit and scope of the invention. Also, more generally speaking, two openings **60***a*, **60***b* are more typically provided for functional symmetry (e.g., a fastener can be driven through the body portion close to a deck board shoulder regardless of which wing is engaged with the shoulder), and not necessarily because two connectors are intended to be driven into the support member. In many applications, a single connector may be sufficient for attaching the fastener to the underlying support. Additionally, in another embodiment, the fastener is provided without a connector aperture. In such a case, a connector aperture is in effect machined or otherwise provided in the field by either driving a connector directly through the body portion (e.g., the connector forms the aperture as it is driven through the body) or by pre-forming a connector aperture (e.g., using a drill) and then driving a connector through the newly pre-formed aperture.

[0023] Although the fastener **14** is shown as having generally perpendicular/angled wall members, the fastener could instead be "rounded" or C-shaped, without departing from the spirit and scope of the invention. See, for example, the fastener **70** with C-shaped wings shown in FIGS. **4**A and **4**B (not to scale). Additionally, provided the fastener and slots are complementary in shape for "hooking" the fastener wings around the deck board slots/shoulders, the particular shape and configuration of the slots and wings may vary.

[0024] As used herein, the term "generally" refers to the element in question conforming to the stated characteristic except for manufacturing tolerances, e.g., which would not affect the manner in which the L-shape slotted deck board and hidden fastener system operates as described herein.

[0025] As suggested above, an embodiment of the present invention may be characterized as a construction member fastening system that includes fastener means **14**, **70** and first and second elongate construction members **12***a*, **12***b* each having an underside and at least one slot **12***a*, **12***b* formed in the underside, where the slot(s) defines a shoulder means **42***a*, **42***b* for engaging the fastener means. The fastener means is complementary to the shoulder means for engaging the shoulder means of both construction members and for securing the construction members to each other and to a support member that underlies and abuts the construction members.

[0026] Since certain changes may be made in the above-described L-shape slotted deck board and hidden fastener system, without departing from the spirit and scope of the invention herein involved, it is intended that all of the subject matter of the above description or shown in the accompanying drawings shall be interpreted merely as examples illustrating the inventive concept herein and shall not be construed as limiting the invention.

What is claimed is:

1. A system for securing construction members to an underlying support, said system comprising:

an elongate construction member having an underside and a side wall, said underside including a generally planar bottom surface and an inwards facing shoulder, wherein the shoulder is defined by a slot formed in the underside of the construction member proximate to the side wall; and

a fastener for securing the construction member to an underlying support, said fastener comprising:

a generally flat body portion having at least one connector aperture and left and right, generally parallel side edges; and

left and right wings attached to the left and right side edges of the body portion, respectively, each of said wings extending up from a top surface of the body portion and having a lip portion extending inwards towards a center of the body portion, wherein the wings are complementary in shape to the shoulder of the construction member for engagement therewith.

2. The system of claim **1** wherein for each of said wings, the lip portion is angled down towards the top surface of the body portion by a non zero-degree angle, said lip portion flexing upwards when the wing is engaged with the construction member shoulder and the construction member is placed against the underlying support.

3. The system of claim **1** wherein:

the fastener body portion is generally rectangular; and

each wing further comprises a generally rectangular, generally flat side wall attached to a respective one of said left and right edges of the body portion, said wing side wall lying generally perpendicular to the body portion and extending up from the top surface of the body portion, and said wing side wall having a top edge lying generally parallel to said left and right edges of the body portion, wherein the lip portion of the wing is attached to the top edge of the wing side wall.

4. The system of claim **3** wherein the wing lip portions are generally flat and generally rectangular.

5. The system of claim **3** wherein for each of said wings, the wing lip portion is angled down towards the top surface of the body portion by a non zero-degree angle, said lip portion flexing upwards when the wing is engaged with the construction member shoulder and the construction member is placed against the underlying support.

6. The system of claim **1** wherein the slot is generally L- or J-shaped in lateral cross section.

7. The system of claim **6** wherein the slot comprises:

a first, rounded slot side wall portion extending up from the bottom surface of the construction member;

a flat slot top surface portion extending from an end of the rounded side wall portion towards the side wall of the construction member, said slot top surface portion being generally parallel to the bottom surface of the construction member;

an extension groove extending from the slot top surface portion towards the construction member side wall, said extension groove being generally rectangular in lateral cross section and having top and bottom surfaces generally parallel to the construction member bottom surface and a side wall generally parallel to the construction member side wall; and

a second, generally flat slot side wall portion extending from an end of the bottom surface of the extension groove towards the bottom surface of the construction member, said second slot side wall portion being generally parallel to the construction member side wall.

8. The system of claim 7 wherein:

the construction member bottom surface includes at least first and second generally planar sections, said first planar section of the construction member bottom extending from an end of the second, flat side wall portion of the slot to the side wall of the construction member, and said second planar section of the construction member bottom extending from an end of the first, rounded side wall portion of the slot towards an edge of the construction member opposite the side wall of the construction member; and

the first and second planar sections of the construction member bottom surface are generally parallel, and are spaced longitudinally apart from one another by a non-zero distance, said first planar section lying closer to a top surface of the construction member than the second planar section by said non-zero distance.

9. The system of claim 1 wherein:

the fastener body portion is generally rectangular, and each wing of the fastener further comprises a generally rectangular, generally flat side wall attached to a respective one of said left and right edges of the body portion, said wing side wall lying generally perpendicular to the body portion and extending up from the top surface of the body portion, and said wing side wall having a top edge lying generally parallel to said left and right edges of the body portion, wherein the lip portion of the wing is generally flat and rectangular and attached to the top edge of the wing side wall, said lip portion being angled down towards the top surface of the body portion by a non zero-degree angle;

the construction member slot is generally L- or J-shaped in cross section and comprises: a first, rounded slot side wall portion extending up from the bottom surface of the construction member; a flat slot top surface extending from an end of the rounded portion towards the side wall of the construction member, said slot top surface being generally parallel to the bottom surface of the construction member; an extension groove extending from the slot top surface towards the construction member side wall, said extension groove being generally rectangular in lateral cross section and having top and bottom surfaces generally parallel to the construction member bottom surface and an extension groove side wall oriented generally parallel to the construction member side wall; and a second, generally flat slot side wall portion extending from an end of the bottom surface of the extension groove towards the bottom surface of the construction member, said second side wall portion of the slot being generally parallel to the construction member side wall; and

each of said fastener wings, in conjunction with the fastener body portion, is configured to hook around the construction member shoulder for engagement therewith, with the wing lip portion extending into the slot extension groove, the wing side wall extending generally along and parallel to the second, generally flat side wall portion of the slot, and the fastener body portion extending along a bottom of the shoulder and generally outwards from and perpendicular to the construction member side wall.

10. The system of claim 9 wherein:

the construction member bottom includes at least first and second generally planar sections, said first planar section of the construction member bottom extending from an end of the second, flat side wall portion of the slot to the side wall of the construction member, and said second planar section of the construction member bottom extending from an end of the first, rounded side wall portion of the slot towards an edge of the construction member opposite the side wall of the construction member; and

the first and second planar sections of the construction member bottom are generally parallel, and are spaced longitudinally apart from one another by a non-zero distance, said first planar section lying closer to a top surface of the construction member than the second planar section by said non-zero distance, wherein the non-zero distance corresponds to a thickness of the fastener body portion for said fastener body portion to lie between the construction member shoulder and the underlying support when the construction member is positioned against the underlying support with the second planar section of the construction member abutting the underlying support.

11. A fastener comprising:

a generally flat body portion having at least one connector aperture and left and right, generally parallel side edges; and

left and right wings attached to the left and right side edges of the body portion, respectively, each of said wings extending up from a top surface of the body portion and having a lip portion extending inwards toward a center of the body portion, wherein the wings are adapted in size and shape for engagement with an inwards-facing shoulder provided in the bottom surface of a construction member, for securing the construction member to a support member that underlies and abuts the construction member, by engaging one of said wings with the shoulder and driving a connector through the connector aperture into the underlying support member.

12. The fastener of claim 11 wherein the lip portions of the fastener wings are angled down towards the top surface of the body portion by a non zero-degree angle, said lip portions flexing upwards away from the body portion when the wings are engaged with the construction member shoulder and the construction member is placed against the underlying support.

13. The fastener of claim 11 wherein:

the fastener body portion is generally rectangular; and

each wing further comprises a generally rectangular, generally flat side wall attached to one of said left and right edges of the body portion, said side wall lying generally perpendicular to the body portion and extending up from the top surface of the body portion, and said side wall having a top edge lying generally parallel to said left and right edges of the body portion, wherein the lip portion of the wing is attached to the top edge of the side wall.

14. The fastener of claim 13 wherein the wings are generally flat and generally rectangular.

15. The fastener of claim 13 wherein the lip portions of the fastener wings are angled down towards the top surface of the body portion by a non zero-degree angle, said lip portions flexing upwards when the wings are engaged with the construction member shoulder and the construction member is placed against the underlying support.

16. A construction member fastening system comprising:
fastener means; and
first and second elongate construction members each having an underside and a slot formed in the underside, said slot defining shoulder means for engaging the fastener means;
wherein the fastener means is complementary to the shoulder means for engaging the shoulder means of both construction members and for securing the construction members to each other and to a support member that underlies and abuts the construction members.

17. A deck comprising:
a support member;
first and second elongate deck boards each having a generally flat top surface, a generally flat bottom surface generally parallel to the top surface, and at least one slot formed in the bottom surface, said slot defining an inwards-facing shoulder, wherein the deck boards lie laterally adjacent to one another and against the support member, with at least a portion of the bottom surfaces of the deck boards abutting the support member and the inwards-facing shoulders of the deck boards lying laterally adjacent to one another but facing in opposite directions;
a hidden-type fastener securing the deck boards to each other and to the support member, said fastener comprising: a generally flat body portion having a connector aperture; and first and second wings attached to opposite edges of the body portion, each of said wings extending up from a top surface of the body portion and having a lip portion extending inwards towards a center of the body portion, wherein the wings are complementary in shape to the deck board shoulders for engagement therewith, with the first wing of the fastener engaging the shoulder of the first deck board and the second wing of the fastener engaging the shoulder of the second deck board; and
a connector extending down through the connector aperture and into the support member.

18. The deck of claim **17** wherein the fastener defines a non-zero lateral distance between the deck boards.

19. The deck of claim **17** wherein the lip portions of the fastener wings exert a downwards force against the shoulders, thereby pressing the deck boards against the support member.

20. The deck of claim **17** wherein:
the fastener body portion is generally rectangular; and
each wing further comprises a generally rectangular, generally flat side wall attached to the body portion, said side wall lying generally perpendicular to the body portion and extending up from the top surface of the body portion, and said side wall having a top edge lying generally parallel to a side edge of the body portion where the side wall is attached, wherein the lip portion of the wing is attached to the top edge of the side wall.

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