

FIG. 1

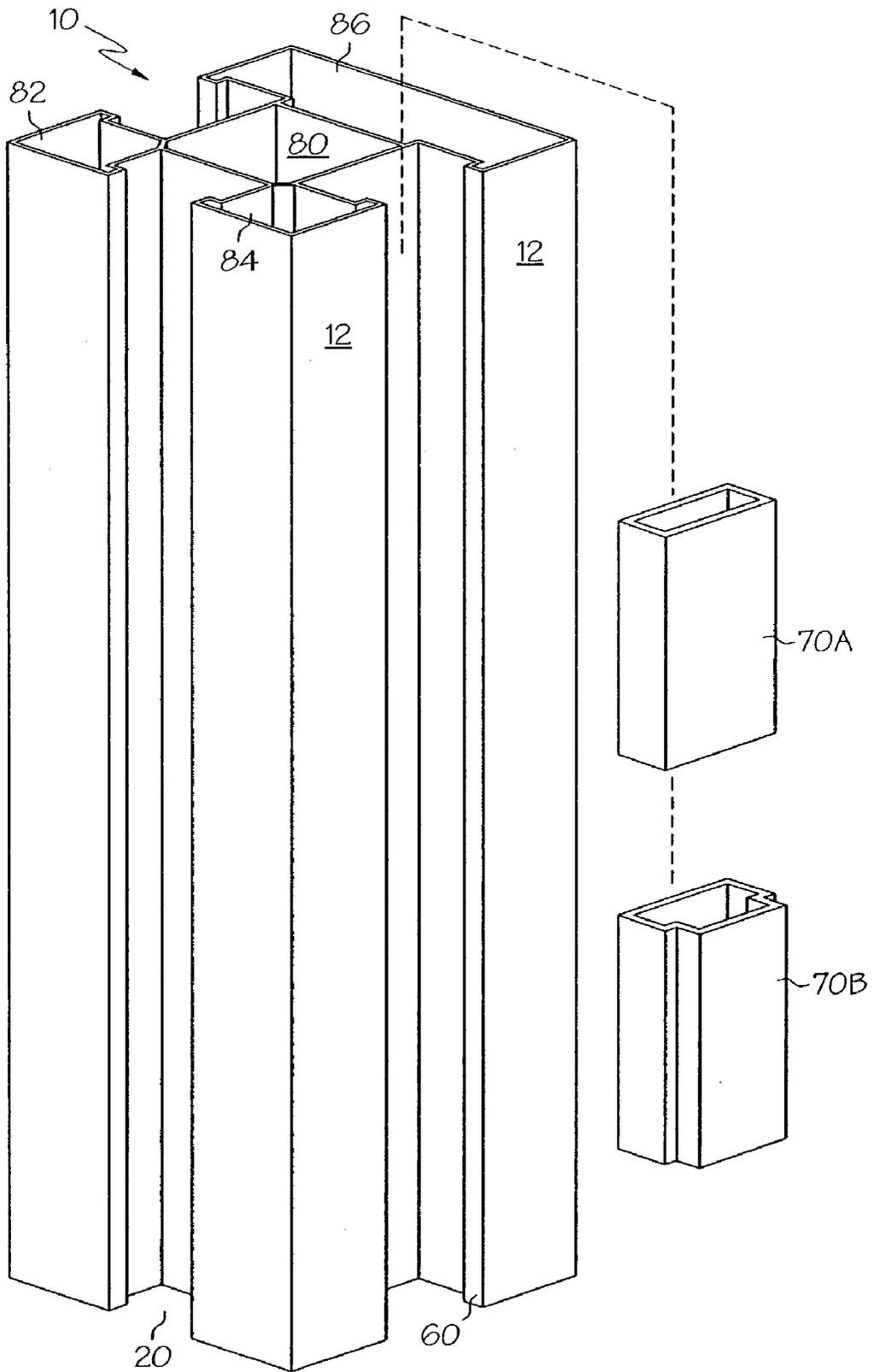
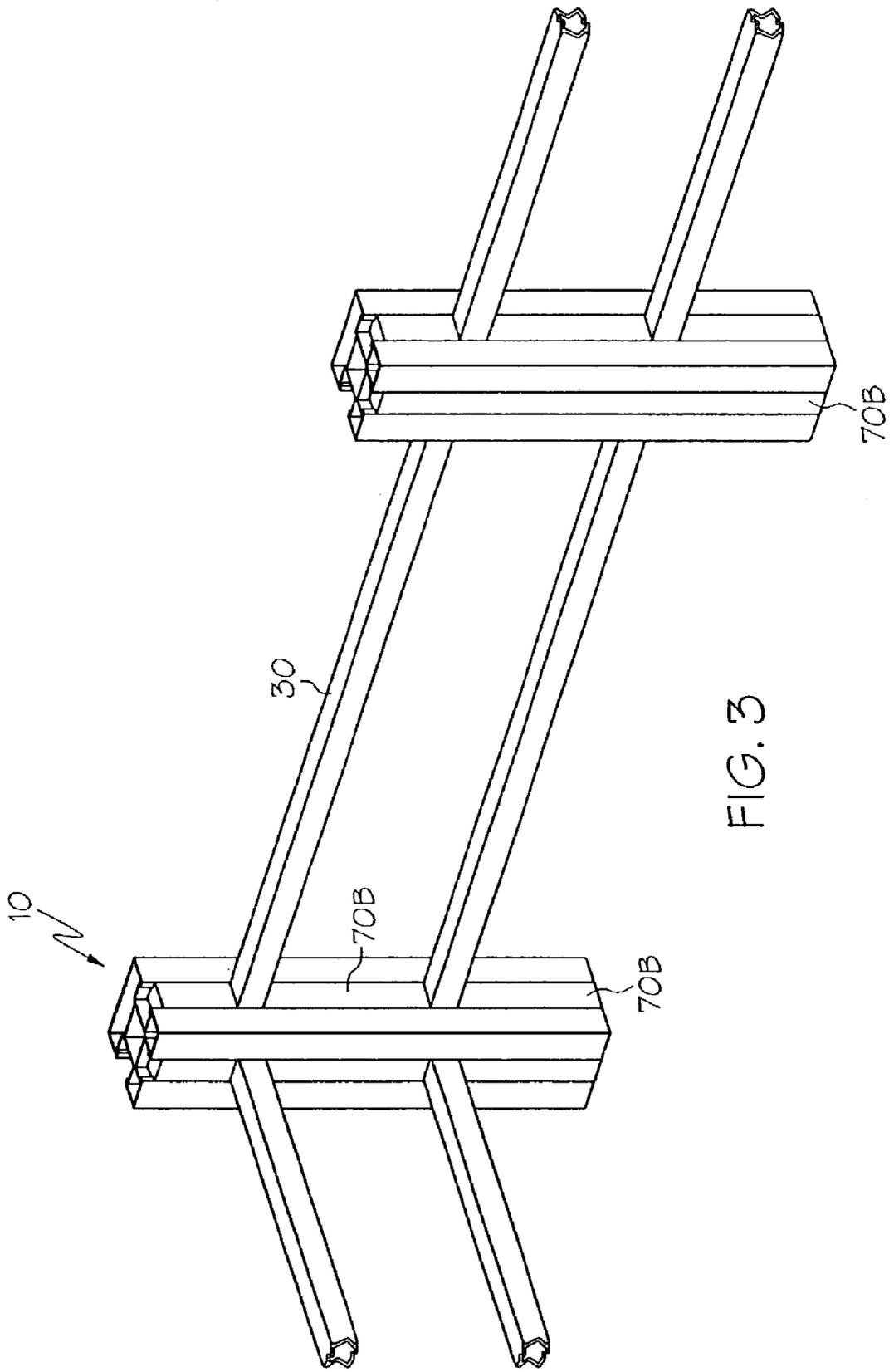
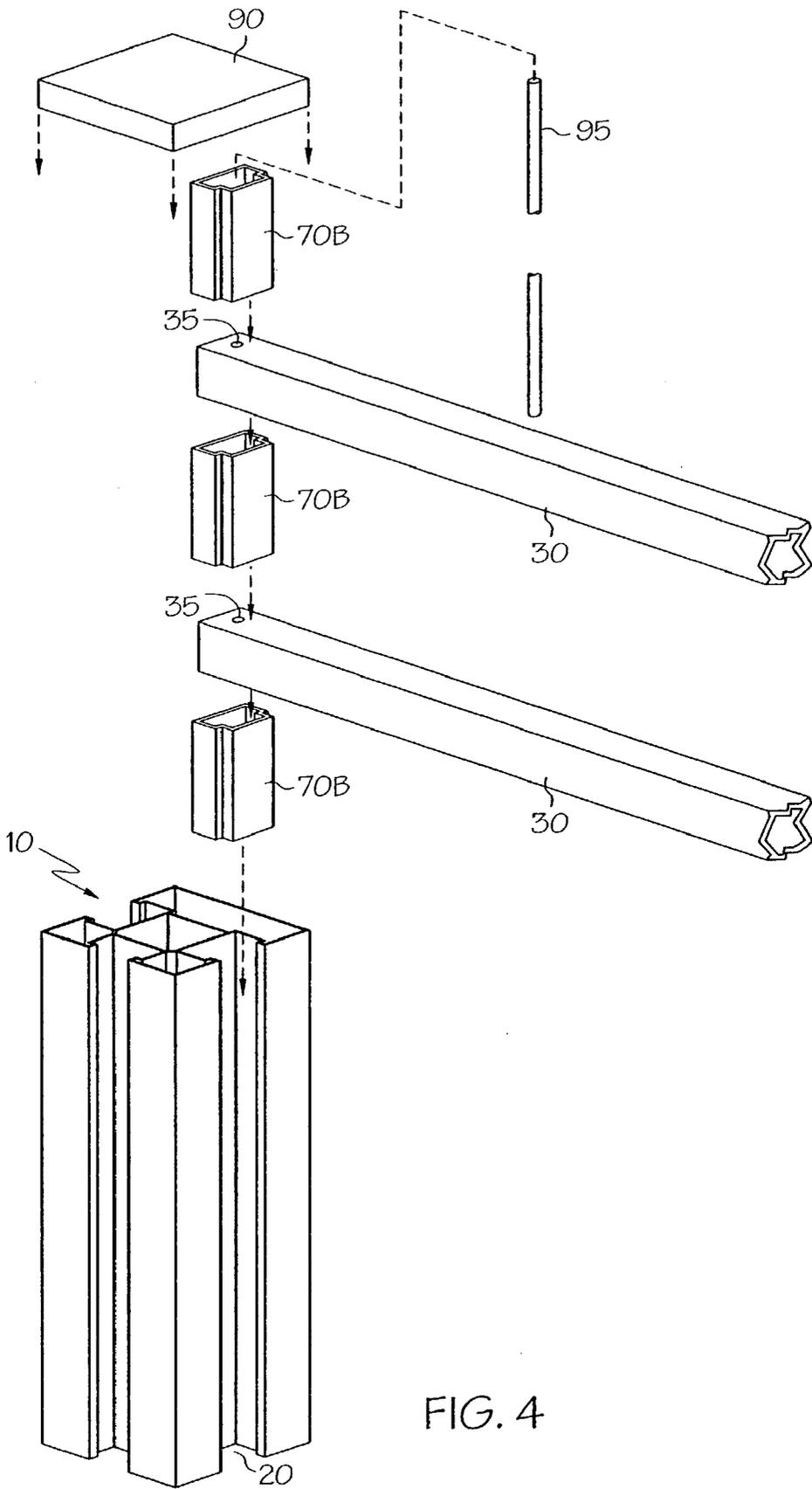


FIG. 2





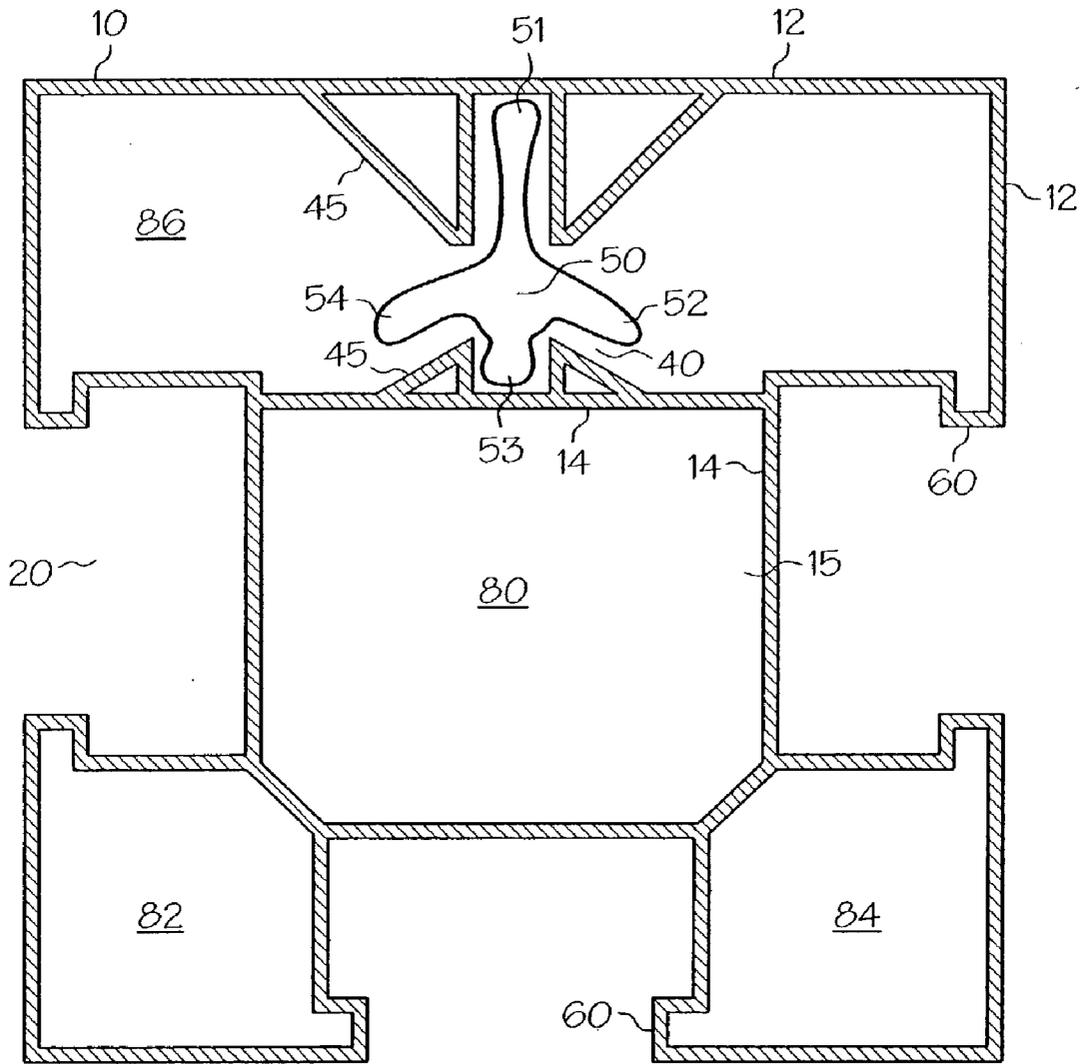


FIG. 5

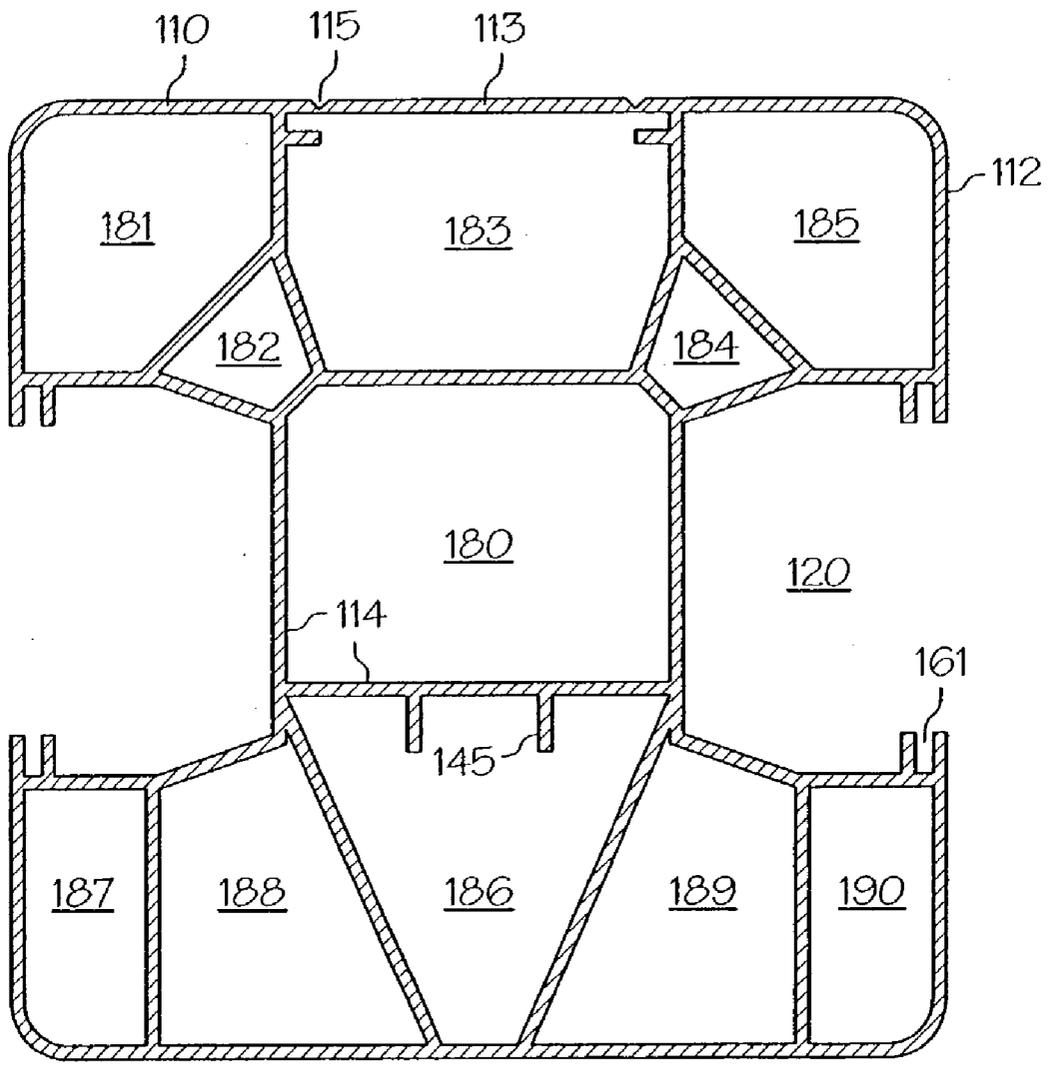


FIG. 6

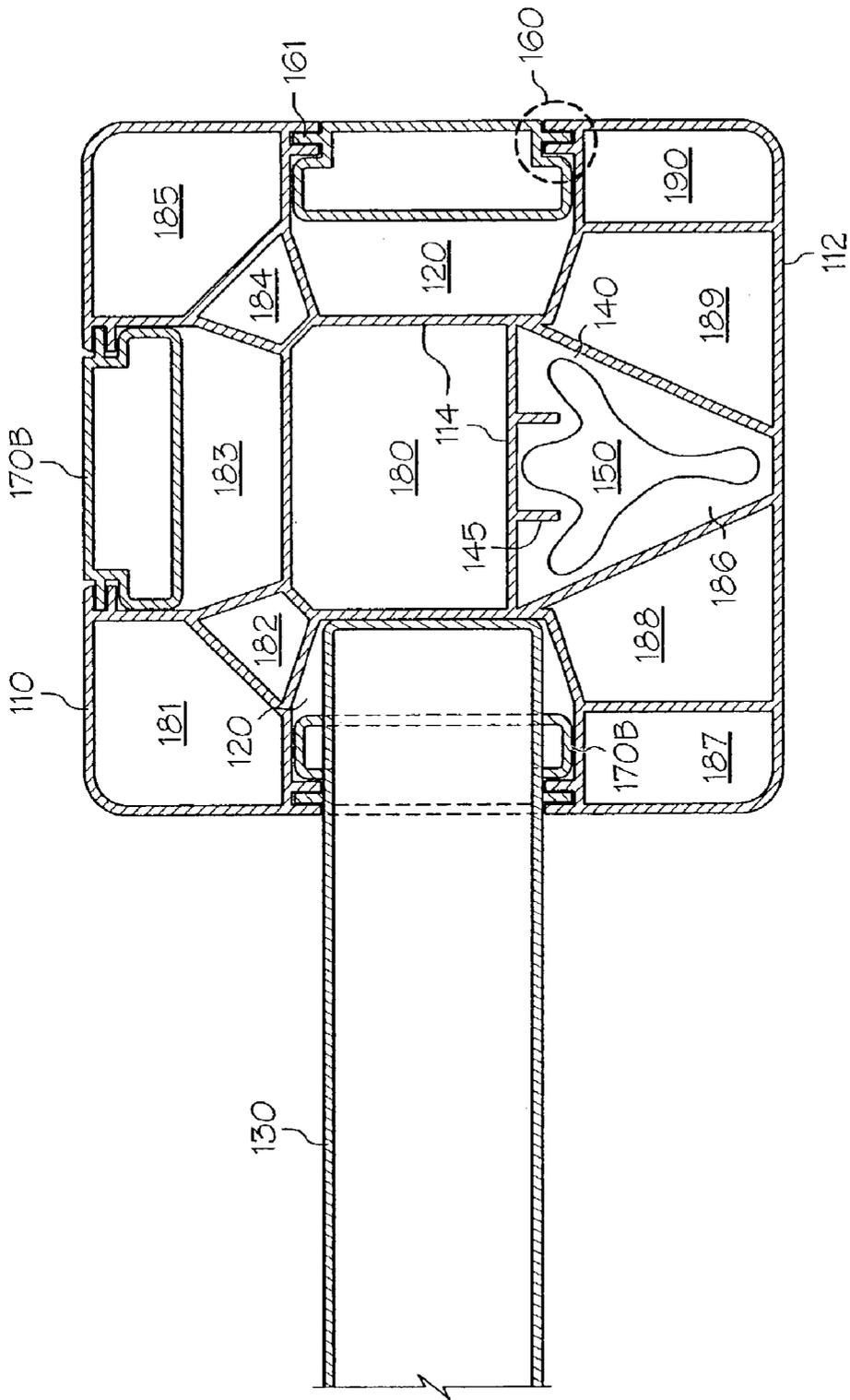


FIG. 7

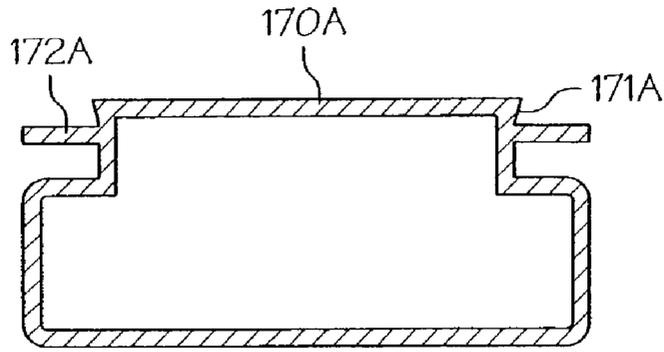


FIG. 8A

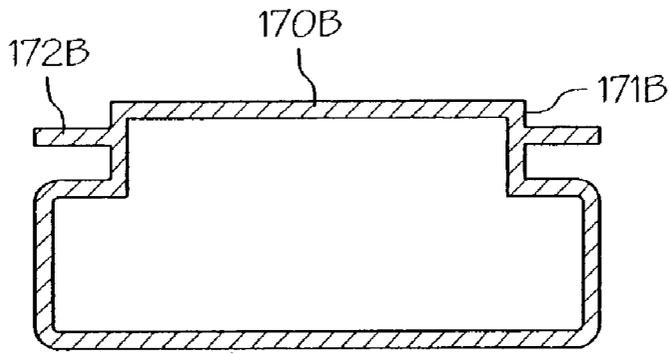


FIG. 8B

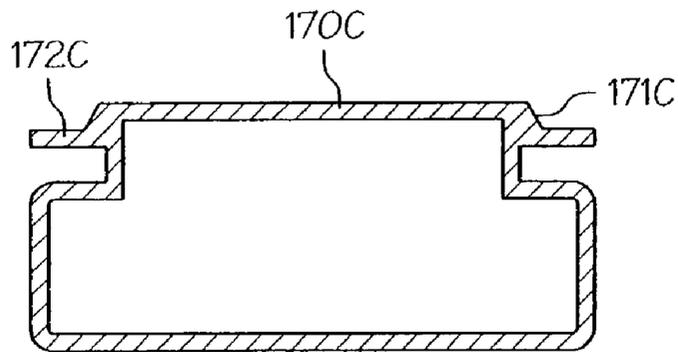


FIG. 8C

EXTRUDED FENCE POST AND RAIL SYSTEM

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application Nos. 60/366,382 filed Mar. 21, 2002, and 60/398,062 filed Jul. 24, 2002.

BACKGROUND OF THE INVENTION

[0002] The present invention relates generally to fence structures, and more particularly to extruded plastic fence rails and posts that can form connections with one another that improve the ease with which fence assemblies can be fabricated.

[0003] Fences have traditionally been constructed of wood, stone or metal. The use of plastic componentry in fence structures, which typically include posts, rails, pickets and related parts, has been in its ascendancy in recent years due to the ability to manufacture inexpensive, environmentally durable systems. Contributing to the desirability of using plastic fence assemblies is that once installed, they require comparatively little maintenance, such as painting, rust and vermin protection.

[0004] Despite these advantages, plastic fence assemblies continue to suffer from various shortcomings. For example, many of the constructions are overly complex, requiring multiple pieces or hybrid metal/plastic structures, as well as detailed steps to piece together the myriad components. In addition, if all or portions of the fence need to be disassembled for access, maintenance or replacement of damaged parts, the cumbersome process has to be repeated. Moreover, accommodations are often required at the time of fence installation for various contingencies, such as topography of the land and natural or artificial structures that could get in the way of the installation. In such cases, the installer may have to make minor adjustments to the dimensions of the post, rails and inserts. For example, an installer, especially if working alone, is faced with the difficult, if not impossible task of establishing a neat, secure assembly unless there are features built into the rails or posts to secure the two while determining placement of other components, such as subsequent posts. This task is exacerbated when additional component reinforcement, in the form of metal structure surrounded by plastic sleeves or covering, is used, as the additional weight makes the maneuvering of long parts (such as rails) even more unwieldy. Furthermore, once installed, the fence posts can be subject to rotational movements about its vertical axis unless they are adequately secured into the ground.

[0005] The present inventors have recognized a need for extruded plastic fence assemblies that are made up of components that are inexpensive to manufacture. They have further recognized a need for features within the components of the fence assembly that facilitate the rapid, secure anchoring of the components to one another, as well as to a mounting surface, such as the ground.

SUMMARY OF THE INVENTION

[0006] According to an aspect of the present invention, a post defined by a generally hollow construction along its elongate axis is disclosed. The post includes an exterior wall

structure, an inwardly projecting elongate rail-receiving channel formed into the exterior wall structure and a channel insert disposed in the channel. Each of the inserts include an outwardly-facing exterior surface and an inwardly-facing interior surface opposite the exterior surface. The channel and insert are configured to define an insert securement to restrict movement of the insert along the direction of the channel depth. The securement is disposed closer to the insert's exterior surface than its interior surface.

[0007] Optionally, the securement is defined at least in part by the exterior wall structure of the post. In another option, the securement is made up of a plurality of laterally-spaced tabs disposed on the insert and a throat defining a plurality of slots is disposed in the channel. The slots of the throat accept the tabs to secure the insert to the channel. Preferably, the tabs are disposed substantially adjacent the exterior surface so that precise dimensional control between otherwise spaced-apart components is not required. In the present context, the term "substantially" refers to an arrangement of elements or features that, while in theory would be expected to exhibit exact correspondence or behavior, may, in practice embody something slightly less than exact. As such, the term denotes the degree by which a quantitative value, measurement or other related representation may vary from a stated reference without resulting in a change in the basic function of the subject matter at issue. In a similar vein, each tab is spaced away from the exterior surface by an amount not greater than the thickness of the tab. Additionally, the exterior surface connects to the tabs via transition zone in the insert in one of at least three ways, including one that is bevelled outward, one that is bevelled inward, and one that connects through a right-angle transition zone. In another option, the insert is of substantially hollow construction, while in another still, the insert is shaped to form a substantially flush surface with the exterior wall structure, giving the post an aesthetically-pleasing appearance. In another option, the insert comprises a depth-wise dimension that is significantly smaller than the depth of the channel. In one embodiment, the significantly smaller depth-wise dimension of the insert is less than half of the depth of the channel. In an additional option, a rigid support pole is coupled to the post to provide increased resistance to rotation of the post about the post's elongate axis when the post and the rigid support pole are coupled to a mounting surface.

[0008] According to another aspect of the invention, a fence assembly is disclosed. The assembly includes a post as previously described plus at least one rail disposed in the channel. Optionally, the fence assembly includes a plurality of rails. Furthermore, at least two of the plurality of rails are disposed in the channel and vertically spaced relative to one another by at least one of the inserts. In addition, the rail defines an exaggerated surface that protrudes from a lateral surface on the rail end, the exaggerated surface configured to engage the securement. In one form, the exaggerated surface comprises a hinged flap, where more particularly, the hinged flap is integrally formed with the rail to define a unitary construction. As with the previous aspect, a rigid support pole can be coupled to the post. To additionally secure the rail once its end is disposed in the channel, the rail defines apertures in its end such that the apertures are substantially vertically-aligned relative to one another. A securing pin can be passed through the apertures and the inserts. In addition, the securing pin and post can be secured to a mounting surface (such as the ground, plate, platform or

related structure) to inhibit translational rail movement along the rail's longitudinal axis when the rail is disposed in the channel and the securing pin is positioned through the apertures.

[0009] According to another aspect of the invention, a fence assembly is disclosed. The fence assembly includes a post defined by a generally hollow construction along its elongate axis with an exterior wall structure and an inwardly projecting elongate channel formed into the exterior wall structure, at least one rail disposed in the channel, and a securing pin disposed within apertures formed in the ends of the rail. The securing pin is configured to mount to a mounting surface to inhibit translational movement of the rail similar to that of the previous aspect. Optionally, the fence assembly further includes an insert securement disposed in at least one of the channels, the securement defining a narrowed throat region configured to further restrain translation of the rail disposed in the channel. The narrowed throat region defines a plurality of slots therein. In another option, at least one channel insert can be placed into a rail-receiving channel, where the insert configuration is similar to that of the previous aspects. As previously discussed, the inserts can be substantially hollow such that the securing pin is configured to pass through the hollow portion of the insert.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0010] The following detailed description of the preferred embodiments of the present invention can be best understood when read in conjunction with the following drawings, where like structure is indicated with like reference numerals and in which:

[0011] FIG. 1 illustrates a top view of a fence assembly according to an aspect of the present invention;

[0012] FIG. 2 illustrates a perspective view of a fence post and two channel insert variants;

[0013] FIG. 3 illustrates a perspective view of a section of fence using the fence assembly of FIG. 1;

[0014] FIG. 4 illustrates the positioning of the rails, channel inserts, a rigid support pole and end cap relative to the fence post shown in FIG. 1;

[0015] FIG. 5 illustrates a top view of an alternate fence post configuration, showing the addition of a rigid support pole inserted therein;

[0016] FIG. 6 illustrates a top view of another alternate fence post configuration;

[0017] FIG. 7 illustrates the fence post of FIG. 6, including a rail, channel inserts and a rigid support pole offset-mounted along the post's elongate axis; and

[0018] FIGS. 8A through 8C show the various channel inserts that can be used with the fence post of FIG. 6.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0019] Referring first to FIG. 5, a top view of a post 10 according to an embodiment of the present invention is shown. Post 10 may be formed into a single, unitary construction from a plastic material (such as polyvinyl chloride

(PVC)) by known methods (such as extrusion) and as such, defines an extrudable cross sectional profile. In the present context, a structural member defines an extrudable cross sectional profile if respective cross sections of the member, taken along a length or width-wise axis of the member, each define substantially identical dimensions. In such case, the member defining the extrudable profile may be produced by an extrusion process where a semi-soft plastic is forced through the orifice of an extrusion die to produce a continuously formed piece having a cross-sectional shape defined by the orifice or other shaping members downstream of the orifice. It is contemplated that a structural member having an extrudable cross-sectional profile may also include portions along its axis that are subject to post extrusion cutting, drilling, bending, deforming or related operations. Post 10 includes an interior chamber structure 15 made up of numerous hollow, elongate compartments 80, 82, 84 and 86 the last three of which are offset from and substantially parallel with a post centerline defined along a longitudinal (elongate) axis. By having the pole-receiving compartment 86 offset from the post centerline and at least partially against outer wall 12, it is easier for an installer to place the post 10 directly on a property line and without recourse to visual estimation, as the post side adjacent the pole/compartment combination can be placed closest to such property line. The post 10 is also made up of an exterior wall structure 12 and numerous inwardly projecting elongate rail-receiving channels 20 formed into exterior wall structure 12. Interior wall structure 14 defines the boundary between the rail-receiving channels 20 and the various compartments 80, 82, 84 and 86. This commonality allows each of the channels 20 to partially define the interior chamber structure 15. An interface in the form of a locking mechanism 60 is defined between the channel 20 and the exterior wall structure 12 such that channel 20 can engage a complementary end surface of a rail (as shown and described below) to substantially prohibit translation of the rail along its longitudinal dimension once the rail and channel are engaged. In the configuration shown, locking mechanism 60 includes a pair of lateral detents that form a throat in channel 20 to provide a narrowed contact region.

[0020] At least one compartment 86 is made up of a plurality of projections 45 that can engage a rigid support pole 50. Together, the projections and rigid support pole 50 define a pole-engaging axis that is parallel to the longitudinal, or elongate, axis of post 10, but radially offset relative to the post centerline. By coupling the pole 50 to the post 10 and having both secured to a mounting surface, such as the ground (not shown), a reinforced post is formed that exhibits increased resistance to torsional forces acting on it, thereby maintaining proper post orientation. Resistance to rotation is important to maintaining the integrity of a fence assembled with posts 10, as forces due to weather or animal, human or related contact otherwise would have a tendency to cause the rails and posts to shift relative to one another, causing the assembly to come apart. The rigid support pole 50 is shaped to include non-axisymmetric features to improve the tightness of the fit between rigid support pole 50 and the projections 45 that are formed in the offset compartment 86. In the configuration shown, rigid support pole 50 is substantially T-shaped, such that its various radial detents 51, 52, 53 and 54 fit in narrowly-defined spaces 40 formed by substantially triangular-shaped projections 45. It will be appreciated by those skilled in the art that while the projec-

tions 45 are shown as being triangular-shaped, the invention is not so limited, as other shapes configured to securely engage the rigid support pole 50 would also suffice. The projections 45 can be integrally formed with the remainder of post 10 through the aforementioned extrusion process. Moreover, the T-shape of the rigid support pole 50 is such that the interlocking fit between the detents 51, 52, 53 and 54 is only possible over a substantially singular angular orientation about the reinforcing axis. This sort of "keyed" connection ensures that the post 10 and rigid support pole 50 are placed in proper angular orientation to one another, subject only to the tolerance in the space 40 between the rigid support pole 50 and the projections 45. The longitudinal dimension of the rigid support pole 50 extends along a substantial length of the post 10, plus an additional distance beyond the lowermost portion of post 10 to ensure secure anchoring into the ground or other mounting surface.

[0021] Referring next to FIGS. 2 and 3, details of connection between the post 10 and rails 30 and channel inserts 70A, 70B are shown. In the present figure, the post 10 is structurally similar to that shown in FIG. 5, except for the lack of pole-engaging features in compartment 86. It will be appreciated by those skilled in the art that either variant can be employed, depending on individual user needs, such as how much torsional resistance is required. Referring with particularity to FIG. 2, two variants 70A, 70B of the inserts, as well as how they fit into channel 20 of post 10, are depicted. The first variant 70A, with its conventional box shape, emphasizes simplicity of structure and manufacture, while the second 70B, with its additional faceted surfaces to produce a step structure complementary with that of the throat in channel 20 (as shown in FIG. 1 and discussed below), is used to provide a smooth, flush finish with outer wall structure 12. Referring with particularity to FIG. 3, in addition to providing an aesthetically-pleasing finished surface to post 10, the inserts 70A, 70B (only the latter presently shown) maintain vertical spacing between rails 30, providing both a neat finished product and additional resistance to rail 30 movement. The construction of post 10 is such that it can function equally well as an end post, corner post or intermediate post, the last two being shown in the figure. As with the post 10, the inserts 70A, 70B are extrudable, and in situations where made of plastic, can be easily cut to any desired length. Similarly, rails 30 can be made from plastic such that they can be cut to desired lengths, and extrudable such that they can be produced economically in large quantities. As with the fit between the channel 20 and rails 30 described above, locking mechanism 60 may also be used to engage a complementary surface on the inserts 70A, 70B.

[0022] Referring next to FIG. 1, a top view showing connection details of a fence assembly constructed using the post 10, rails 30 and channel insert 70B of FIGS. 2 and 3 is shown. Two of channels 20 of post 10 are shown engaged to rails 30, while a third has a channel insert 70B disposed therein. In the present figure, the post 10 is used as a corner post, such that inserts 70B provide flush surface finish features for channel 20 not being used. The faceted surfaces of insert 70B complement those the locking mechanism 60 formed at the throat of channel 20 such that the insert 70B cannot be removed other than by sliding it out along the elongate axis of post 10. The gaps shown between inner wall 14 and insert 70B are shown exaggerated for clarity; it will be appreciated by those skilled in the art that tolerances can

be made much tighter to ensure a secure, relatively smooth surface finish. Each of the rails 30 show a different protrusion extending laterally from the ends of the rails 30. In the present context, the "end" of the rail 30 includes not just the remote edge, but all portions of rail 30 that are designed to fit into the channel 20. These protrusions are sized to allow a locking interconnection between the rails 30 and the locking mechanism 60 of channels 20. In one variation, the rail 30 includes a pair of pins 37 that are axially aligned with one another so that the lateral dimension of rail 30 is greater than throat produced between locking mechanisms 60. Thus, once the rail 30 is disposed in channel 20 (such as by aligning the rail end with channel 20 and dropping the rail 30 down into the channel along the elongate axis of post 10), the interference fit between pins 37 and locking mechanism 60 prohibits movement between them, save the movement equal to the relatively small gap G, which, like the gap earlier described between the between channel 20 and insert 70B, is shown exaggerated for clarity. In another variation, the rail 30 includes a pair of flaps 33 integrally formed in the opposing lateral walls. Flaps 33 are shown as rectangular members defined by cut-outs on three sides such that when the rail is ready to be placed in channel 20, the flaps can be bent away from the rails 30 to provide an interference fit similar to that described for the pins 37 above. In addition to the protrusions in the form of flaps 33 and pins 37 to allow a locking interconnection between the rails 30 and the locking mechanism 60, rail 30 can include a securing pin 95 placed vertically through apertures 35 in the end of the rails 30. Details of the securing pin will be discussed in conjunction with FIG. 4 below.

[0023] Referring next to FIG. 4, a perspective view of the details of the fence assembly of FIG. 3 is shown. The assembly highlights how the inserts 70B act not only to establish a smooth surface finish along the exterior wall structure of post 10, but also vertical spacing between rails 30. In addition to the post 10, rails 30 and channel inserts 70B, the above-mentioned securing pin 95 is shown. The hollow nature of the inserts 70B along the longitudinal dimension of securing pin 95 improves the ease of pin placement through apertures 35 in the ends of each rail 30. The securing pin 95 can be configured to be long enough to extend through all of the inserts 70B and the ends of rails 30 stacked with the inserts, and can, like the rigid support pole 50 (shown in FIG. 5), extend into a mounting surface, such as the ground. The fence assembly also includes a cap 90 releasably connected to the top of post 10. Not only does this improve post aesthetics, it prevents debris and moisture from accumulating in the interior chamber structure of post 10.

[0024] Referring next to FIGS. 6 and 7, a top view of an alternate embodiment of the post and a reinforced fence assembly, respectively, are shown. As with the previous embodiment, numerous hollow, elongate compartments 180-190 define an interior chamber structure, including a trapezoidal-shaped pole-receiving compartment 186 with projections 145. In addition, as shown with particularity in FIG. 6, post 110 includes a removable channel cover 113 integrally formed across at least one of the rail-receiving channels 120 to form a substantially flush surface with exterior wall structure 112. One or more lines of weakness 115 are formed into exterior wall structure 112 such that cover 113 can be easily removed. In one form, the lines of weakness are made up of score lines. The cover 113 pre-

serves the smooth appearance of the exterior wall structure **112** until such time as access to the channel **120** disposed below the cover **113** is required. The lines of weakness **115** permit a user to easily remove the cover **113** with a conventional utility knife or the like. In addition, insert securement **160** shows a variation of locking mechanism **60** shown in **FIG. 5**, where it now defines an interface between the exterior wall structure **112** and channel **120** that includes two pair of lateral detents such that not only does securement **160** define a throat in channel **120**, but also an additional slot **161** for receiving a complementary surface on inserts **170A**, **170B** and **170C** (shown and described below). Referring with particularity to **FIG. 7**, rigid support pole **150** (still possessive of a substantially T-shaped construction similar to the one shown in **FIG. 5**) can fit in a particular angular orientation relative to the projections **145** and pole-receiving compartment. It will be appreciated by those skilled in the art that other rigid support pole **150** configurations are possible, including cylindrical and non-axisymmetric configurations. For example, a plurality of cylindrical poles (not shown) can be used, each disposed within each of the various semi-autonomous spaces formed by the projections **145**. An additional pole (not shown) could be placed within pole-receiving compartment **186** adjacent the exterior wall structure **112** such that the plurality of poles provide additional support. Also as with the previous embodiment, the pole-receiving compartment **186** is disposed offset relative to the centerline of post **110**, disposed against the exterior wall structure **112** so that the entire assembly can be accurately placed along the property line. Tabs (shown and described below) on the inserts **170B** promote a secure fit with securement **160**. Also as shown in **FIG. 7**, the stacking of rail **130** on top of insert **170B** in the same channel **120** is highlighted. It will be appreciated by those skilled in the art that although the present invention shows particular components depicted within two separate embodiments, it can embody any combination of the aforementioned interior chamber structure, pole-receiving compartment structure, securement configuration, and rail end and channel insert construction.

[0025] Referring next to **FIGS. 8A-8C**, details of various embodiments of channel inserts **170A**, **170B** and **170C** are shown. All three include tabs **172A**, **172B** and **172C**, respectively, that are disposed adjacent an outermost face of the inserts and used to engage the slot **161**. As such, the slot **161** and any one of tabs **172A-172C** together make up securement **160** (as shown previously in **FIG. 7**). It will be appreciated by those skilled in the art that while what is referred to herein as securement **160** is made up of laterally-disposed slots **161** formed into the post **110** with corresponding tabs **172A-172C** that extend from the lateral ends of the inserts **170A-170C**, slot **161** could alternately be disposed in the inserts **170A-170C**, while the tabs **172A-172C** could be disposed on the throat **160**. The nature of securement **160** is to be broadly construed to include both variants. The tabs **172A-C**, in conjunction with the relatively thin depth-wise profile of the insert **170A-C**, allow manufacturing tolerances to be relaxed on the inserts. By having the depth-wise distance from the outermost face to the tabs **172A-C** kept to a minimum, precise dimensional tolerances for the securement **160**, the tabs **172A-C** and transition zones **171A-C** between the insert outermost faces and the tabs is not required. The three insert configurations shown highlight different transition zones along the outermost face, including

a transition zone **171A** bevelled inward (**FIG. 8A**), right angle transition zone **171B** (**FIG. 8B**) and transition zone **171C** bevelled outward (**FIG. 8C**). The locking between the tabs **172A-C** and slots **161** (shown in **FIGS. 6 and 7**) relieves the requirement of having large depth-wise insert dimensions to ensure adequate coupling between the insert and channel. Thus, unlike conventional inserts, where the relatively large depth-wise dimension necessitates manufacturing to a relatively tight tolerance to ensure a good fit between the insert and the channel, the present inserts **170A-C** are constructed to allow for some dimensional variation.

[0026] Having described the invention in detail and by reference to preferred embodiments thereof, it will be apparent that modifications and variations are possible without departing from the scope of the invention defined in the appended claims. More specifically, although some aspects of the present invention are identified herein as preferred or particularly advantageous, it is contemplated that the present invention is not necessarily limited to these preferred aspects of the invention.

What is claimed is:

1. A post defined by a generally hollow construction along an elongate axis thereof, said post comprising:

an exterior wall structure;

an inwardly projecting elongate channel formed into said exterior wall structure, said channel defining a depth therein that is perpendicular to said elongate axis and extending from a plane of said exterior wall structure to a termination of said channel;

a channel insert disposed within said channel, said channel insert comprising:

an outwardly-facing exterior surface; and

an inwardly-facing interior surface opposite said exterior surface, wherein said channel and said insert are configured to define an insert securement to restrict movement of said insert along said channel depth, said securement disposed closer to said exterior surface of said insert than to said interior surface of said insert.

2. A post according to claim 1, wherein said securement is defined, at least in part, by said exterior wall structure.

3. A post according to claim 1, wherein said securement comprises:

a plurality of laterally-spaced tabs disposed on said insert; and

a throat disposed in said channel, said throat defining a plurality of slots that accept said tabs therein.

4. A post according to claim 3, wherein said tabs are disposed substantially adjacent said exterior surface.

5. A post according to claim 1, wherein said insert is of substantially hollow construction.

6. A post according to claim 3, wherein each said tab is spaced away from said exterior surface by an amount not greater than the thickness of said tab.

7. A post according to claim 1, wherein said insert is shaped to form a substantially flush surface with said exterior wall structure.

8. A post according to claim 3, wherein said exterior surface connects to said tabs via transition zone that is bevelled outward.

9. A post according to claim 3, wherein said exterior surface connects to said tab via right angle transition zone.

10. A post according to claim 3, wherein said exterior surface connects to said tab via transition zone that is bevelled inward.

11. A post according to claim 1, wherein said insert comprises a depth-wise dimension that is significantly smaller than said depth of said channel.

12. A post according to claim 11, wherein said significantly smaller depth-wise dimension of said insert is less than half of said depth of said channel.

13. A post according to claim 1, further comprising a rigid support pole coupled to said post and configured to provide increased resistance to rotation of said post about said elongate axis when said post and said rigid support pole are coupled to a mounting surface.

14. A fence assembly comprising:

a post defined by a generally hollow construction along an elongate axis thereof, said post comprising:

an exterior wall structure;

an inwardly projecting elongate channel formed into said exterior wall structure, said channel defining a depth therein that is perpendicular to said elongate axis and extending from a plane of said exterior wall structure to a termination of said channel;

a channel insert disposed within said channel, said channel insert comprising:

an outwardly-facing exterior surface; and

an inwardly-facing interior surface opposite said exterior surface, wherein said channel and said insert are configured to define an insert securement to restrict movement of said insert along said channel depth, said securement disposed closer to said exterior surface of said insert than to said interior surface of said insert; and

at least one rail disposed in said channel.

15. A fence assembly according to claim 14, wherein said at least one rail comprises a plurality of rails.

16. A fence assembly according to claim 14, wherein at least two of said plurality of rails are disposed in said channel and vertically spaced relative to one another by at least one of said inserts.

17. A fence assembly according to claim 14, wherein said rail defines an exaggerated surface that protrudes from a lateral surface on an end thereof, said exaggerated surface configured to engage said securement.

18. A fence assembly according to claim 17, wherein said exaggerated surface comprises a hinged flap.

19. A fence assembly according to claim 18, wherein said hinged flap is integrally formed with said rail to define a unitary construction.

20. A fence assembly according to claim 14, further comprising a rigid support pole coupled to said post.

21. A fence assembly according to claim 14, wherein said rail defines apertures in an end thereof such that said apertures are substantially vertically-aligned relative to one another, said fence assembly further comprising a securing pin disposed within said apertures and said inserts, said securing pin configured to mount to a mounting surface to inhibit translational movement of said rail along a longitudinal axis thereof when said rail is disposed in said channel and said securing pin is positioned through said apertures.

22. A fence assembly comprising:

a post defined by a generally hollow construction along an elongate axis thereof, said post comprising:

an exterior wall structure; and

an inwardly projecting elongate channel formed into said exterior wall structure;

at least one rail disposed in said channel, said rail defines apertures in an end thereof such that said apertures are substantially vertically-aligned relative to one another; and

a securing pin disposed within said apertures and extending along at least a portion of said channel, said securing pin configured to mount to a mounting surface to inhibit translational movement of said rail along a longitudinal axis thereof when said rail is disposed in said channel and said securing pin is positioned through said apertures.

23. A fence assembly according to claim 22, further comprising an insert securement disposed in at least one of said channels, said securement defining a narrowed throat region configured to restrain translation of a rail disposed in said channel, said narrowed throat region defining a plurality of slots therein.

24. A fence assembly according to claim 22, further comprising:

at least one channel insert selectively disposable in one of said rail-receiving channels, said insert comprising:

an outwardly-facing exterior surface; and

an inwardly-facing interior surface opposite said exterior surface; and

an insert securement disposed between said channel and said insert to restrict movement of said insert along said channel depth, said securement disposed closer to said exterior surface than to said interior surface, said securement configured such that upon placement of said insert into said channel, said securement is disposed substantially against said exterior wall structure.

25. A fence assembly according to claim 24, wherein said inserts are substantially hollow such that said securing pin is configured to fit within said inserts.

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