CELLULAR PVC SIDING, TRIM, AND ARCHITECTURAL ASSEMBLIES

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ABSTRACT

Cellular PVC siding, trim, and architectural assemblies are provided which use cellular PVC as an exterior building material due to its stable weatherproof qualities, but which is combined with a substrate to improve the handling and usability of the cellular PVC material. Embodiments of the invention include modular exterior siding assemblies, trim board assemblies, corner trim assemblies, and cylindrical trim assemblies.
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FIELD OF THE INVENTION

[0001] The present invention relates to exterior siding, trim, and rigid structure architectural assemblies for buildings.

BACKGROUND OF THE INVENTION

[0002] Traditional exterior systems for wood frame construction homes involve plywood or oriented strandboard (OSB) sheets nailed to wood framing, covered with a vapor barrier, and covered with a siding material such as wood shingles, wooden clapboard siding, vinyl siding, or fiber cement composite siding.

[0003] Cellular polyvinylchloride ("PVC") materials have been used in the housing industry for at least 20 years for use in trim applications. It is a material that is easy to cut. It is more durable than wood, and does not succumb to rotting or other weather related problems. However, cellular PVC is very expensive compared to wood. Because of its expense, cellular PVC has had a very limited use in building exterior systems, typically only for building trim such as window trim. Furthermore, it is also not as rigid as wood and is more difficult to maneuver and position than wood products, which limits its suitability even for trim applications if the cellular PVC piece is so long that it becomes unmanageable.

SUMMARY OF THE INVENTION

[0004] Cellular PVC siding, trim, and architectural assemblies are provided which use cellular PVC as an exterior building material due to its stable weatherproof qualities, but which is combined with a substrate to improve the handling and usability of the cellular PVC material.

[0005] In one embodiment, a modular exterior siding assembly comprising a rectangular backer panel having a cellular PVC boards affixed to its outer surface, optionally having an insulating rigid foam affixed to the inner surface of the backer panel. In another embodiment, a cellular PVC board is affixed to a wood material substrate and used as trim. In another embodiment, two cellular PVC casing components enclose and are affixed to a cylindrical or tubular substrate to form spindles. In another embodiment, a corner trim assembly formed from two cellular PVC boards having 45 degree edge cuts located adjacent each other, and held together by removable adhesive tape.

DESCRIPTION OF THE DRAWINGS

[0006] The above described invention is shown in the accompanying Figures and is further described in connection with the figures as follows.

[0007] FIG. 1 is a front and left side perspective view of a house and pergola showing uses of cellular PVC siding, trim, and architectural assemblies in accordance with the invention.

[0008] FIG. 2A is a front and right side perspective view of an embodiment of modular exterior siding assemblies in accordance with the invention with siding assemblies shaped to appear as clapboard style siding.

[0009] FIG. 2B is a close up front and right side perspective view of the modular exterior siding assemblies of FIG. 2A.

[0100] FIG. 3A is a front elevation view of an embodiment of modular exterior siding assemblies in accordance with the invention with siding assemblies shaped to appear as aluminum siding style siding.

[0101] FIG. 3B is a front elevation view of a second embodiment of the modular exterior siding assemblies of FIG. 3A.

[0102] FIG. 4A is a front and right side perspective view of an embodiment of a modular exterior siding assembly in accordance with the invention with the siding assembly shaped to appear as shingle style siding.

[0103] FIG. 4B is a front elevation view of another embodiment of modular exterior siding assemblies with a foam insulation board in accordance with the invention with siding assemblies shaped to appear as shingle style siding.

[0104] FIG. 4C is a front and left side perspective view of an embodiment of modular exterior siding assemblies with a foam insulation board in accordance with the invention with siding assemblies shaped to appear as shingle style siding.

[0105] FIG. 5A is a partial front and right side perspective view of a window trim embodiment of an exterior trim assembly in accordance with the invention.

[0106] FIG. 5B is a partial rear and right side perspective view of the exterior trim assembly of FIG. 5A.

[0107] FIG. 5C is a top and right side perspective view of a fascia embodiment of an exterior trim assembly in accordance with the invention.

[0108] FIG. 5D is a front, top and right side perspective view of the exterior trim assembly of FIG. 5C.

[0109] FIG. 6A is a rear, top and right perspective view of an embodiment of exterior corner trim assembly in accordance with the invention prior to use.

[0100] FIG. 6B is a rear, top and right perspective view of the exterior corner trim assembly of FIG. 6A prepared for installation.

[0111] FIG. 6C is a rear, top and right perspective view of another embodiment of exterior corner trim assembly in accordance with the invention prior to use.

[0112] FIG. 6D is a rear, top, and right perspective view of the exterior corner trim assembly of FIG. 6C prepared for installation.

[0113] FIG. 7A is a front, top and left side partial cutaway perspective view of an embodiment of an architectural assembly in accordance with the invention.

[0114] FIG. 7B is a front, top and left side perspective view of an embodiment of an architectural assembly in accordance with the invention in a horizontal orientation.

[0115] FIG. 7C is another front, top and left side perspective view of the architectural assembly of FIG. 7B in a vertical orientation.

[0116] FIG. 8A is an exploded perspective view of a second embodiment of an architectural assembly in accordance with the invention.

[0117] FIG. 8B is a front, top and right side perspective view of an assembled architectural assembly of FIG. 8A.

DETAILED DESCRIPTION

[0128] The present invention and its preferred embodiments of the present invention may be further understood with reference to the following description and the related appended drawings, wherein like elements are provided with the same reference numerals. The described embodiments of the present invention relate to the use of cellular PVC as traditional siding, as trim, and as an architectural element.
The invention allows a contractor to replace traditional siding, wood trim, and wood structure, with cellular PVC or a composite of cellular PVC and a substrate. The exemplary embodiments of the present invention may be easily implemented into an existing home or into new construction. The exemplary embodiments are described with reference to specific examples of siding, trim, and architectural structures, but those skilled in the art will understand that the present invention may be implemented in any form of siding, trim, or rigid structure.

[0029] FIG. 1 illustrates the uses of assemblies in accordance with the invention in housing construction. House 100 represents a residential house with a number of different styles of siding and trim. House 100 further has an attached pergola structure 190 made in accordance with the present invention. On the upper front exterior of house 100 are modular exterior siding assemblies 110 in accordance with the invention with siding assemblies 110 shaped to appear as shingle style siding. House 100 also has modular exterior siding assemblies 120 designed to look like aluminum or vinyl siding. (See FIG. 3). House 100 also has also has modular exterior siding assemblies 120 shaped to appear as the side of a barn or as wainscoting. The cellular PVC can be milled or otherwise shaped or molded into any desired exterior appearance.

[0030] House 100 also has multiple trim elements in accordance with the invention. Window trim 140 is made out of cellular PVC mounted to a wood substrate and is used in place of an all wood or all cellular PVC window trim. Corner trim 150 is fabricated from or two separate pieces of cellular PVC, which are adhered together.

[0031] House 100 also has multiple architectural structures in accordance with the invention. These include stair and porch railings 160 including balusters 162. Rails 160 are designed to replace an all wood railing maintaining the structure and stability of wood with the added benefits of being weather resistant. Finally, house 100 has a pergola structure 190. Pergola 190 is made up of multiple vertical posts supporting multiple beams 170. In a standard pergola, the beams would be fashioned out of wood. In the present case, the beams are replaced with a cellular PVC beam which is cellular PVC affixed to multiple tubes to provide the rigidity and strength of wood. The cellular PVC is weather resistant and lasts significantly longer than its wood alternative.

[0032] In general, the cellular PVC siding, trim, and architectural assemblies of the present invention incorporate a substrate combined with a cellular PVC board material which has been milled to a particular shape. In general, the substrate is a wooden material such as plywood, oriented strand board ("OSB"), pressboard, or particle board. However, in some cases, the substrate is a composite material such as a Kevlar® material or a tubular PVC material.

[0033] The cellular PVC material used in the present invention is preferably a free-foam cellular extrusion PVC board material such as the PVC board material sold under the brand KLEER by Kleer Lumber, Westfield, Mass. Cellular PVC extrusion boards are consistent in thickness, density, color and cell structure form. The product looks and works like wood but is moisture resistant, and does not rot, warp, splinter or decay and is impervious to insects. Surface textures may be applied to the boards during the manufacturing process to give the appearance of wood grains. Cellular PVC board materials are typically sold by the manufacturer in the form of rectangular boards. The material thickness is in the range of 0.375 inch thick to 1.0625 inch thick. Preferably, a 0.75 inch thick board is used and is sawed to a desired thickness. Thus, in most of the embodiments of the present invention a 0.75 inch board is used as a starting material and is sawed to a 0.375 inch nominal thickness. However any thickness PVC may be used depending on the desired ruggedness of the assembly and the strength of any supporting substrate. Cellular PVC boards are easily milled in the same way as wood, so the boards can be presented with a variety of shapes milled into them. For example, the panels may have the appearance of shingles or shakes by milling or cutting grooves in the outer surface of the boards; or they may have the appearance of traditional clapboards. Other shapes, textures, patterns, designs, may be cut into the panels using a CNC milling machine. The present invention provides a significant ability to easily replicate traditional architectural elements such as Victorian shingle patterns, but also provides an almost unlimited ability to create new architectural exterior surfaces, such as exterior surfaces which look like tiles, or planks, and can be milled to create patterns such as "bulls eye" or fish scale patterns, or to replicate the look of masonry such as bricks or stone.

[0034] Referring now to FIGS. 2A-4C, modular exterior siding assemblies comprise a rectangular backer panel having a cellular PVC siding material affixed to its outer surface, and optionally, insulating rigid foam affixed to the inner surface of the backer panel. The backer panel comprises one or more of plywood, OSB, pressboard, particle board, or other composite board material. The cellular PVC siding material is preferably affixed to the outer surface of the backer panel by an adhesive.

[0035] In a preferred embodiment, an insulating layer of rigid foam insulation 430 is adhered to the inner surface of the backer panel to provide an additional insulation layer to the building. The insulating layer desirably covers the entire backer layer and is sized and shaped to fit tightly against the insulating layers of adjacent panels so that the installed siding assembly provides a significant additional insulation to the structure. The addition of a one inch thick layer of rigid insulating foam over wall sheathing as seen in FIG. 4C will increase the exterior wall R value by 5 to 7 R. The addition of furring strips and a one inch thick layer of rigid insulating foam over wall sheathing will increase the exterior wall R value by 7 to 9+ R.

[0036] The modular exterior siding assemblies of the invention can be manufactured in any size, however, the following standard sizes are the preferred embodiments of the invention: (1) a standard size which is easily lifted, placed and installed by a single worker (for example a 4 foot wide by 1.5 foot high assembly); (2) a standard size which is easily stored in existing lumberyards (for example 4 foot by 8 foot or 4 foot by 4 foot sections). The 4 foot by 1.5 foot section is a preferred embodiment because it is easily installed by a single worker.

[0037] The modular exterior siding assemblies of the invention can be installed over existing wall sheathing such as plywood, OSB, or particle board materials, or may be installed in new construction as a nonstructural sheathing fastened directly to the wall framing members. The typical installation will be by nailing, screwing, and/or gluing the modular exterior siding assemblies to the wall.

[0038] FIGS. 2A and 2B show an embodiment of modular exterior siding assemblies 200 in accordance with the invention with siding assemblies 200 shaped to appear as clapboard style siding. In FIGS. 2A and 2B, a cellular PVC board 210 is
attached to a backer panel 220 by an appropriate adhesive. The backer panel 220 can be made of plywood, OSB, or any wood or other material used in construction.

[0039] FIGS. 3A and 3B show an embodiment of modular exterior siding assemblies 300 in accordance with the invention with siding assemblies 300 shaped to appear as aluminum siding style siding. In FIGS. 3A and 3B, the siding assemblies 300 comprise two or more cellular PVC boards 310 mounted to backer panel 320 by an appropriate adhesive. The two cellular PVC boards are mounted to the backer panel 320 such that the bottom portion of the second cellular PVC board overlaps the top portion of cellular PVC board 310.

[0040] FIGS. 4A, 4B, and 4C show an embodiment of modular exterior siding assemblies 400 in accordance with the invention with siding assemblies 400 shaped to appear as shingle style siding. In FIGS. 3A and 3B, the siding assemblies 300 comprise two or more cellular PVC boards 410 mounted to a backer panel 420. The cellular PVC panels are designed such that a thicker end is at the bottom which tapers off to a thin end on the top, to be modeled after standard shingles. The cellular PVC panels are mounted such that the top of one panel is covered by the bottom of another panel.

[0041] Preferably the backer panels 220, 320, and 420 of modular exterior siding assemblies 200, 300, and 400 connect to adjacent backer panels with a half lap joint such as the half lap joints 240, 340, and 440 in backer panels 220, 320, and 420. In a preferred embodiment, each backer panel 220, 320, and 420 mates with adjacent backer panels with a half lap joint along all four edges and the seams along four edges are all covered by the cellular PVC sheet material. This design provides a more secure mounting of each exterior siding assembly and minimizes water penetration.

[0042] The backer panels 220, 320, and 420 of modular exterior siding assemblies 200, 300, and 400 preferably have their upper and left side edges free of the cellular PVC siding material so that the two edges may act as a nailing flange for mounting the backer panel to the building framing or wall. For example, in FIG. 3B nailing flanges 342 and 344 can be seen, and in FIG. 4A nailing flanges 442 and 444 can be seen. The nailing flange is overlapped by the cellular PVC siding boards of an adjacent backer panel when they are mounted to wooden or metal framing. Preferably, the backer panels are installed with each row of backer panels offset from the row of backer panels beneath so that the seams between adjacent panels are not aligned in a vertical line, but instead are located in alternating positions. In other words, the modular exterior siding assemblies 200, 300, and 400 are preferably provided with the cellular PVC boards 210, 310, and 410 affixed to the outer surface of the backer panels 220, 320, and 420 in an offset pattern with one end of the cellular PVC board extending over one edge of the backer panel and another end of the cellular PVC siding material being located inwardly of another edge of the backer panel, so that a plurality of the modular exterior siding assemblies 200, 300, or 400 may be mounted to a building frame with seams between adjacent backer panels covered by cellular PVC siding material.

[0043] Preferably, the top edge of the backer panels 220, 320, and 420 are slotted at regular intervals, providing gaps in the edges celled weep holes, to provide drainage holes for water that may infiltrate the wall system. For example, in FIG. 3B weep holes 346 can be seen.

[0044] The modular exterior siding assemblies 200, 300, and 400 provide a stronger and more rigid product compared to cellular PVC lumber boards. The modular exterior siding assemblies 200, 300, and 400 provide a less expensive product compared to solid cellular PVC lumber boards. The use of cellular PVC allows the assembly to be significantly lighter than prior art fiber cement laminar siding systems. The lighter weight makes the assembly of the present invention safer to work with than many products. The assemblies of the present invention can be installed very rapidly and at a considerable labor savings compared to traditional shingle siding.

[0045] FIGS. 5A, 5B, 5C, and 5D show two embodiments of an exterior trim assembly 500 comprising a wood material substrate 520 having an outer surface 522 and an inner surface 524, and a cellular PVC trim material 510 affixed to the outer surface 522 of the substrate 520. The wood material substrate 520 comprises one or more of plywood, OSB, pressboard, or particle board. The exterior trim assembly comprises a door trim, window trim, corner trim, fascia board, or a stair riser. Preferably, the cellular PVC trim material 510 is milled to provide the appearance of wooden trim.

[0046] The specific application of the exterior trim assembly shown in FIGS. 5A and 5B is window trim, and a cutaway 530 is included in substrate 520 to accommodate mounting over a flange of a window assembly. In this embodiment, substrate 520 is smaller than the width of cellular PVC panel 510. This allows for siding pieces such as siding assembly 200 to be laid up against substrate 520 with area 540 of the cellular PVC trim material 510 overlapping the installed siding.

[0047] The specific application of the exterior trim assembly shown in FIGS. 5C and 5D is fascia board, and the cellular PVC trim material 510 includes both a trim board and a trim molding 512.

[0048] Traditional cellular PVC trim pieces have been made from cellular PVC boards, but without any substrate as provided herein. The exterior trim assemblies of the present invention are an improvement over such known trim pieces because thinner sheets of the cellular PVC material can be used. Since they require less of the expensive cellular PVC material; they are less expensive than the known products. Also, the exterior trim assemblies of the present invention are more rigid and stable than the known products due to the inclusion of the substrate. By combining cellular PVC trim 510 with substrate 520, the exterior trim assemblies 500 are more stable and cheaper, while being equally weather resistant.

[0049] FIGS. 6A and 6B show an exterior corner trim assembly 600. Exterior corner trim assembly 600 includes a first rectangular cellular PVC panel 610 and a second rectangular cellular PVC panel 670. First rectangular cellular PVC panel 610 has an inner surface 612 and an outer surface 614 and first and second long sides 616 and 618. The first long side 616 of the first rectangular cellular PVC panel 610 has a 45 degree edge from the outer surface 614 to the inner surface 612. Second rectangular cellular PVC panel 670 has an inner surface 672 and an outer surface 674 and third and fourth long sides 676 and 678. The third long side 676 of the first rectangular cellular PVC panel 610 has a 45 degree edge from the outer surface 674 to the inner surface 672. The first long side 616 and the third long side 676 are located adjacent each other with the 45 degree edges positioned together to form a 90 degree angle 630. A removable adhesive tape 660 retains the first rectangular cellular PVC panel 610 to the second rectangular cellular PVC panel 670. The tape 660 is adhered along the outer surfaces 614, 674 of the first long side 616 of the first rectangular cellular PVC panel 610 and the third long
of the second rectangular cellular PVC panel 670. Preferably, a wood material substrate 620 is affixed to one or both inner surfaces 612, 672 of the first rectangular cellular PVC panel 610 and the second rectangular cellular PVC panel 670.

[0050] The exterior corner trim assembly 660 is suitable for transportation in a laid-out, flat position, then can be assembled to a fixed right angle position for installation in a building by the following steps. A suitable PVC adhesive is spread in the angle 630. One or both panels 610 and 670 are moved to put the 45 degree edge of the first long side 616 against the 45 degree edge of the second long side 676 as seen at 650 in Fig. 63, and the two 45 degree edges are adhered together to form a 90 degree corner trim assembly. The assembled 90 degree corner trim assembly can be cut to appropriate length and nailed, screwed or glued to a building corner.

[0051] FIGS. 6C and 6 D show an exterior corner trim assembly 680 which is as described above in connection with exterior corner trim assembly 660, but which has one or two additional rectangular cellular PVC panels to provide a box shaped exterior corner trim assembly. Thus, in corner assembly 680, a third rectangular cellular PVC panel 690 is provided; the third panel 690 has an inner surface 692 and an outer surface 694, and has fifth and sixth long sides 696 and 698. The fifth long side 696 of the second rectangular cellular PVC panel has a 45 degree edge from the outer surface 694 to the inner surface 692 thereof; and the second long side 618 of the first rectangular cellular PVC panel 610 has a 45 degree edge from the outer surface 694 to the inner surface 693 thereof. The fifth long side 696 and the second long side 618 are located adjacent each other with the 45 degree edges positioned together to form a 90 degree angle. A removable adhesive tape 661 retains the third rectangular cellular PVC panel to the first rectangular cellular PVC panel. Tape 661 is adhered along the outer surfaces of the fifth long side of the third rectangular cellular PVC panel and the second long side of the first rectangular cellular PVC panel. A fourth rectangular cellular PVC panel 699 can similarly be positioned against the second rectangular panel.

[0052] FIGS. 7A, 7B, and 7C show an architectural assembly 700, which may serve as a dowel, baluster, column, newel post, handrail, beam, or outdoor furniture. The architectural assembly comprises a cylindrical substrate 730 having an outer surface 732 and two cellular PVC casing components 710 and 720 having channels 712 and 722 provided therein to receive the cylindrical substrate 730. The two cellular PVC casing components 710 and 720 are affixed to and enclose some or all of the outer surface of the cylindrical substrate 730. Preferably, the cylindrical substrate 73- comprises a tubular material such as PVC conduit. Preferably, the two cellular PVC casing components are milled to provide an ornamental exterior appearance. The cellular PVC casing components 710 and 720 are adhered together with an adhesive, which is preferably a PVC solvent adhesive to provide a chemical weld between the components. Cylindrical substrate 730 may optionally be replaced with another relatively stiffer substrate.

[0053] Architectural assembly 700 has greater structural integrity than cellular PVC boards without the substrate and can bear more tension and compression forces, allowing it to be used in handrails or other similar structures. Architectural assembly 700 is lighter than wood making for easier and cheaper transport. The cellular PVC casing components are weatherproof and will not rot. The casing components of architectural assembly 700 can be milled to create intricate contours for the assembly.

[0054] FIGS. 8A and 8B show the use of cellular PVC as a replacement for wood beams in a pergola or other outdoor structure. In a normal pergola, multiple wood beams are used in a cross pattern to create an overhead structure. The wood, however, needs to be replaced often due to the rotting of wood. Beam 800 shows cellular PVC used as a replacement to the wood normally used in a pergola structure. Beam 800 is formed by taking two cellular PVC boards 810 and 820, milling channels 815 in the boards 810 and 820, and gluing the cylindrical substrates 830 in the channels. The preferred adhesive is a PVC solvent adhesive which welds the components together. This creates a seamless unitary structure. The cylindrical substrates 830 provide rigidity and structural integrity to beam 800. In the exemplary embodiment, the cylindrical substrate 830 is PVC conduit; however, the substrate can be made out of another similar material and need not necessarily be in a tube shape.

[0055] The cellular PVC pieces provide durability and weather resistance while combining with the interior cylindrical substrate to provide stability and rigidity. While the exemplary embodiment in FIGS. 8A and 8B uses a cellular PVC beam as a replacement to a wood beam in a pergola, the cellular PVC beam can be used in any other structure and can be shaped differently for different applications. The cellular PVC beam need not be in a beam shape but can be milled into any desired shape allowing for more intricate structures than using traditional wood.

[0056] It will be apparent to those skilled in the art that various modifications may be made in the present invention, without departing from the spirit or the scope of the invention. Thus, it is intended that the present invention cover modifications and variations of this invention provided they come within the scope of the appended claims and their equivalents.

What is claimed is:

1. A modular exterior siding assembly comprising a rectangular backer panel having an outer surface and an inner surface; cellular PVC siding material affixed to the outer surface of the backer panel.
2. The modular exterior siding assembly of claim 1, further comprising insulating rigid foam affixed to the inner surface of the backer panel.
3. The modular exterior siding assembly of claim 1, wherein the cellular PVC siding material comprises two or more boards.
4. The modular exterior siding assembly of claim 1, wherein the cellular PVC siding material is milled to provide the appearance of wooden shingles.
5. The modular exterior siding assembly of claim 1, wherein the cellular PVC siding material is milled to provide the appearance of clapboard siding.
6. The modular exterior siding assembly of claim 1 wherein the backer panel comprises one or more of plywood, OSB, pressboard, or particle board.
7. The modular exterior siding assembly of claim 1, where the assembly has a size and weight selected so that the assembly can be lifted, placed, and installed by a single worker.
8. The modular exterior siding assembly of claim 1, wherein the cellular PVC siding material is affixed to the outer surface of the backer panel by an adhesive.
9. The modular exterior siding assembly of claim 1, wherein the cellular PVC siding material is affixed to the outer surface of the backer panel in an offset pattern with one end of the cellular PVC siding material extending over one edge of the backer panel and another end of the cellular PVC siding material being located inwardly of another edge of the backer panel, whereby a plurality of said modular exterior siding assemblies may be mounted to a building frame with seams between adjacent backer panels covered by cellular PVC siding material.

10. An exterior trim assembly comprising:
   a wood material substrate having an outer surface and an inner surface;
   a cellular PVC trim material affixed to the outer surface of the substrate.

11. The exterior trim assembly of claim 10 wherein the wood material substrate comprises one or more of plywood, OSB, pressboard, or particle board.

12. The exterior trim assembly of claim 10 wherein the exterior trim assembly comprises a door trim, window trim, corner trim, fascia board, or a stair riser.

13. The exterior trim assembly of claim 10 wherein the cellular PVC trim material is milled to provide the appearance of wooden trim.

14. An architectural assembly comprising:
   a cylindrical substrate having an outer surface;
   two cellular PVC casing components, having channels provided therein to receive the cylindrical substrate, being affixed to and enclosing some or all of the outer surface of the cylindrical substrate.

15. The architectural assembly of claim 14 wherein the cylindrical substrate comprises a tubular material.

16. The architectural assembly of claim 15 wherein the tubular material comprises a PVC conduit.

17. The architectural assembly of claim 14 wherein the architectural assembly comprises a dowel, baluster, column, newel post, handrail, beam, or outdoor furniture.

18. The architectural assembly of claim 14 wherein the two cellular PVC casing components are milled.

19. An exterior corner trim assembly comprising:
   a first rectangular cellular PVC panel having an inner surface and an outer surface, and having first and second long sides, the first long side of the first rectangular cellular PVC panel having a 45 degree edge from the outer surface to the inner surface thereof;
   a second rectangular cellular PVC panel having an inner surface and an outer surface, and having third and fourth long sides, the third long side of the second rectangular cellular PVC panel having a 45 degree edge from the outer surface to the inner surface thereof;
   said first long side and said third long side being located adjacent each other with the 45 degree edges positioned together to form a 90 degree angle;
   a removable adhesive tape retaining the first rectangular cellular PVC panel to the second rectangular cellular PVC panel, said tape being adhered along the outer surfaces of the first long side of the first rectangular cellular PVC panel and the third long side of the second rectangular cellular PVC panel.

20. The exterior corner trim assembly of claim 19, further comprising: a wood material substrate affixed to one or both inner surfaces of the first rectangular cellular PVC panel and the second rectangular cellular PVC panel.

21. The exterior corner trim assembly of claim 19, further comprising:
   a third rectangular cellular PVC panel having an inner surface and an outer surface, and having fifth and sixth long sides, the fifth long side of the second rectangular cellular PVC panel having a 45 degree edge from the outer surface to the inner surface thereof; and the second long side of the first rectangular cellular PVC panel having a 45 degree edge from the outer surface to the inner surface thereof; said fifth long side and said second long side being located adjacent each other with the 45 degree edges positioned together to form a 90 degree angle; and a removable adhesive tape retaining the third rectangular cellular PVC panel to the first rectangular cellular PVC panel, said tape being adhered along the outer surfaces of the fifth long side of the third rectangular cellular PVC panel and the second long side of the first rectangular cellular PVC panel.

22. The modular exterior siding assembly of claim 1, having a sheet of foam insulation affixed to the inner surface of the rectangular backer panel.

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