Butt Joint Flashing for Cementitious Siding

A butt joint flashing article of manufacture for construction of buildings is provided comprising a relatively flat, planar back surface, and a ridged front surface, the back surface adapted to face a framed wall, and the front surface adapted to receive siding planks or sheets. The butt-joint flashing apparatus comprises a center ridge and a plurality of channels on either side of the center ridge, each of the channels being separated by substantially planar surface that can be of uniform height that is lower than the height of the center ridge. The butt-joint flashing can be symmetrically arranged about the center ridge. The center ridge is adapted to provide a substantially impervious seal between two planks or sheets of siding. The channels provide a path for water that can find its way into an area between the planks or sheets and a structural sheathing of a building out of that area. The butt-joint flashing apparatus can be made from a clear rubber or clear plastic material with a predetermined shore rating that provides for flexibility over an expected temperature range.
SELECT PROPER SIDING: VERTICAL SIDING, OR HORIZONTAL SIDING

SELECT VERTICAL BUTT-JOINT FLASHING ASSEMBLY 100

SELECT HORIZONTAL BUTT-JOINT FLASHING ASSEMBLY 100

CUT VERTICAL/HORIZONTAL SIDING TO PROPER DIMENSIONS, IF NECESSARY

ATTACH SELECTED BUTT-JOINT FLASHING ASSEMBLY TO SELECTED SIDING

ATTACH SPACER (900, 1500)

SECURE COMBINED BUTT-JOINT FLASHING ASSEMBLY AND SIDING TO EXTERIOR OF WALL ASSEMBLY OF BUILDING

FIG. 7
FIG. 9

- \( t_1 \)
- \( t_2 \)
- \( h_s \)
- \( W \)
- \( h_0 \)
BUTT JOINT FLASHING FOR CEMENTITIOUS SIDING

PRIORITY INFORMATION


TECHNICAL FIELD

[0002] The embodiments described herein relate generally to construction products, and more specifically to systems, methods, and modes for making, installing and using butt-joint flashing products for use with cementitious siding, or fiber cement siding products.

BACKGROUND

[0003] As those familiar with the building industry can appreciate, picking the correct siding for a building involves balancing between good looks, durability, maintenance, and affordability. As those of skill in the art can appreciate, wood, vinyl, stone, brick, or stucco typically provide only two or three of these characteristics. Fiber cement siding, however, which is a resilient mix of wood pulp and Portland cement, provides all four characteristics. Fiber cement siding combines the performance of masonry (i.e., minimal upkeep; rot-, fire-, and termite-proof; and wind and cold resistant), with the look of painted wood clapboards, shingles, and even stone or brick. Yet, fiber cement siding typically costs much less than the other materials. At the present time, nearly 15 percent of new home construction uses fiber cement siding products. As those of skill in the art can further appreciate, architects now regularly specify fiber cement siding because it holds down costs without compromising aesthetics. The use of fiber cement siding has even been accepted for use in some historic districts.

[0004] However, there are still problems associated with the use of fiber cement siding products, also known as cementitious siding. As with any other siding, there are going to be gaps between horizontal siding products (i.e., those siding planks that are about 5/4" to about 12" high, and about 12" long) and vertical siding products (i.e., those siding planks that are about 4' wide and about 8' long; about 4' wide and about 9' long; and about 4' wide and about 10' long). The gaps should be located over studs located in the wall construction of the new building. What generally occurs is the use of semi-liquid paste (sealant) squeezed from a tube to fill in and seal the gaps. This can be an ineffectual messy and process, and can lead to water infiltration from rain, and smears of the glue-like sealant over the new fiber cement siding, which can be unsightly if not immediately cleaned. The use of the sealants therefore add time, expense, and uncertainty to the overall building project, the latter occurring because even if the framework and construction of the shell is perfect, and the siding is placed perfectly, the job can still look like a mess if the sealant is applied incorrectly. Worse still, the negative effects of improperly applied sealant, such as rot or mold caused by water damage, may not be known for months or years, making the building a potential liability for the construction company years later.

[0005] Attempts have been made by others to create flashing systems for use as butt-joint components. However, many of these known systems have not provided the combination of features, convenience, and affordability that those of skill in the art desire from such products.

[0006] Accordingly, it would be desirable to provide systems, methods, and modes for making, installing and using butt-joint flashing products for use with cementitious, or fiber cement siding products.

SUMMARY

[0007] An object of the embodiments is to substantially solve at least the problems and/or disadvantages discussed above, and to provide at least one or more of the advantages described below.

[0008] It is therefore a general aspect of the embodiments to provide systems, methods, and modes for making, installing and using butt-joint flashing products for use with cementitious, or fiber cement siding products that will obviate or minimize problems of the type previously described.

[0009] According to aspects of the embodiments, a butt-joint flashing article of manufacture or apparatus for construction of buildings is provided herein comprising a relatively flat, planar back surface, and a ridged front surface, the back surface of the butt-joint flashing apparatus adapted to face a framed wall, and the front surface adapted to be the surface upon which fiber cement siding planks or sheets, or other siding products, can be fitted against. The butt-joint flashing apparatus further comprises a center ridge and a plurality of channels on either side of the center ridge, each of the channels being separated by substantially planar surfaces that can be of uniform height that is lower than the height of the center ridge. At least one of the planar surfaces can have an adhesive coating on it such that the butt-joint flashing can be secured onto the siding product prior to the assembly being placed on the framed wall. The butt-joint flashing can be symmetrically arranged about the center ridge. The center ridge provides a substantially impervious seal between two planks or sheets of siding. The channels provide a path for water that can find its way into an area between the planks or sheets and a structural sheathing of a building out of that area. The butt-joint flashing apparatus can be made from a clear rubber or clear plastic material with a predetermined shore rating that provides for flexibility over an expected temperature range. Because of the symmetry of the butt-joint flashing it is reversible, which allows it to be used when the siding installation process is done either from left-to-right, or right-to-left.

[0010] According to a first aspect of the embodiments, a gasket for the use in the construction of a building is provided comprising: a substantially planar mounting portion, adapted to be affixed to a framing component of the building; a side opposite to the substantially planar mounting portion, wherein the side opposite comprises—a plurality of water channels formed in the side opposite, each of which is adapted to channel water through the gasket when the gasket is mounted on the framing component, and a spacer ridge substantially centrally located on the side opposite, wherein a spacer ridge height corresponds to a first height, and wherein the plurality of water channels are formed on the remaining portion of the side opposite and on both sides of spacer ridge.

[0011] According to the first aspect of the embodiments, the side opposite comprises: a first and second water channel formed on a first side of the spacer ridge, and a third and fourth water channel formed on a second side of the spacer ridge; a first ridge formed between the first and second water channel; a second ridge formed between the third and fourth
A water channel; a first mounting surface formed at a first outer periphery of the side opposite, adjacent to the first ridge; and a second mounting surface formed at a second outer periphery of the side opposite, adjacent to the second ridge.

[0012] Still further according to the first aspect of the embodiments, the side opposite further comprises: an upper surface, substantially planar, formed of the upper surfaces of the first and second ridges, and the first and second mounting surfaces, all of substantially equal height corresponding to a second height, and wherein the first height is greater than the second height, and wherein the difference between the first height and the second height is substantially equal to a thickness of a siding material used in the construction of the building.

[0013] According to the first aspect of the embodiments the plurality of water channels are substantially parallel to each other, and wherein the gasket is further adapted to be affixed to the framing material of the building; such that the plurality of water channels are substantially vertically aligned with a surface of the earth to that water can pass through the gasket material, and wherein a first piece of siding material can be located adjacent to a first side of the spacer ridge, and a second piece of siding material can be located adjacent to a second side of the spacer ridge.

[0014] According to a second aspect of the embodiments, a system for use in construction of a building is provided, comprising: a gasket adapted to provide a sealing surface between a first and second piece of siding material used in the construction of an exterior shell of the building, and wherein the gasket is further adapted to provide a water passageway through which water can pass, the gasket comprising a substantially planar mounting portion, adapted to be affixed to a framing component of the building, a side opposite to the substantially planar mounting portion, wherein the side opposite comprises — a plurality of water channels formed in the side opposite, each of which is adapted to channel water through the gasket when the gasket is mounted on the framing component, and a spacer ridge substantially centrally located on the side opposite, wherein the spacer ridge height is formed at a first height, and wherein the plurality of water channels are formed on the remaining portion of the side opposite and on both sides of spacer ridge; and a spacer adapted to be located between the framing material and the gasket.

[0015] According to the second aspect of the embodiments, the spacing comprises: a substantially wedge shaped spacer, adapted to be located between the gasket and the framing component and provide a proper amount of spacing such that a bottom portion of the siding material is located on top of a lower one of the siding material, comprising a substantially planar mounting portion (912), adapted to be located on a framing component of the building; a sloped surface (902) upon which the gasket can be located; and a bottom portion of a first thickness, wherein the first thickness is substantially equal to a second thickness of a siding material.

[0016] According to the second aspect of the embodiments, the side opposite comprises: a first and second water channel formed on a first side of the spacer ridge, and a third and fourth water channel formed on a second side of the spacer ridge; a first ridge formed between the first and second water channel; a second ridge formed between the third and fourth water channel; a first mounting surface formed at a first outer periphery of the side opposite, adjacent to the first ridge; and a second mounting surface formed at a second outer periphery of the side opposite, adjacent to the second ridge.

[0017] According to the second aspect of the embodiments, the side opposite further comprises: an upper surface, substantially planar, formed of the upper surfaces of the first and second ridges, and the first and second mounting surfaces, all of substantially equal height corresponding to a second height, and wherein the first height is greater than the second height, and wherein the difference between the first height and the second height is substantially equal to a thickness of a siding material used in the construction of the building.

[0018] According to the second aspect of the embodiments, the plurality of water channels are substantially parallel to each other, and wherein the gasket is further adapted to be affixed to the framing material of the building, such that the plurality of water channels are substantially vertically aligned with a surface of the earth to that water can egress through the gasket material.

[0019] According to the second aspect of the embodiments, the system further comprises: a trim assembly gasket, adapted to provide a sealing interface between an end of the siding material and trim material used in the construction of an exterior shell of a building, and wherein the spacer comprises: a substantially wedge shaped spacer, adapted to be located between the gasket and the framing component and provide a proper amount of spacing such that a bottom portion of the siding material is located on top of a lower one of the siding material, comprising a first sloped surface and at least one ridge component adapted to be located on a framing component of the building, a substantially planar mounting portion upon which the gasket can be located, and a bottom portion of a first thickness, wherein the first thickness is substantially equal to a second thickness of a siding material.

[0020] According to the second aspect of the embodiments, the side opposite comprises: a first and second water channel formed on a first side of the spacer ridge, and a third and fourth water channel formed on a second side of the spacer ridge; a first ridge formed between the first and second water channel; a second ridge formed between the third and fourth water channel; a first mounting surface formed at a first outer periphery of the side opposite, adjacent to the first ridge; and a second mounting surface formed at a second outer periphery of the side opposite, adjacent to the second ridge.

[0021] According to the second aspect of the embodiments, the side opposite further comprises: an upper surface, substantially planar, formed of the upper surfaces of the first and second ridges, and the first and second mounting surfaces, all of substantially equal height corresponding to a second height, and wherein the first height is greater than the second height, and wherein the difference between the first height and the second height is substantially equal to a thickness of a siding material used in the construction of the building.

[0022] According to the second aspect of the embodiments, the plurality of water channels are substantially parallel to each other, and wherein the gasket is further adapted to be affixed to the framing material of the building, such that the plurality of water channels are substantially vertically aligned with a surface of the earth to that water can pass through the gasket material.

[0023] According to the second aspect of the embodiments, the system further comprises: a trim assembly gasket, adapted to provide a sealing interface between an end of the siding material and trim material used in the construction of an exterior shell of a building; a starter piece adapted to provide
a predetermined angle to an attached lowermost row of siding material, wherein the starter piece comprises an angled surface with the predetermined angle upon which the lowermost row of siding material can be placed.

[0024] According to aspects of the embodiments, a method for the construction of an exterior shell of a building is provided, the method comprising: determining whether to use vertical siding material or horizontal siding material; selecting a vertical siding gasket assembly if the vertical siding material is to be used, and selecting a horizontal gasket assembly if a horizontal siding gasket assembly is to be used, and wherein each of the vertical and horizontal gasket assemblies are adopted to provide a sealing surface between a first and second piece of siding material used in the construction of the exterior shell of the building, and wherein the gasket is further adapted to provide a water passage through which water can pass; attaching the selected siding gasket assembly to the selected siding material; and attaching the combined selected siding gasket assembly and selected siding material to an exterior wall assembly of the building.

[0025] According to the third aspect of the embodiments, the method further comprises selecting a spacer to be placed between the selected gasket assembly and the framing material; and attaching the selected spacer to a back surface of the selected gasket assembly prior to attachment of the selected gasket assembly and selected siding material to the exterior wall assembly of the building, and wherein the selected spacer is adapted to provide a proper amount of spacing such that a bottom portion of the selected siding material is located on top of a lower one of the siding material.

BRIEF DESCRIPTION OF THE DRAWINGS

[0026] The above and other objects and features of the embodiments will become apparent and more readily appreciated from the following description of the embodiments with reference to the following Figures, wherein like reference numerals refer to like parts throughout the various Figures, unless otherwise specified, and wherein:

[0027] FIG. 1 illustrates a side view of a butt-joint flashing according to aspects of the embodiments.

[0028] FIG. 2 illustrates a top perspective view of the butt-joint flashing of FIG. 1.

[0029] FIG. 3 illustrates a front view of the butt-joint flashing of FIG. 1.

[0030] FIG. 4 illustrates a front perspective view of a building construction using the butt-joint flashing of FIG. 1 with horizontal fiber cement siding planks according to aspects of the embodiments.

[0031] FIG. 5 illustrates a close up view of the butt-joint flashing shown in FIG. 4 and a piece of horizontal cementitious siding according to aspects of the embodiments.

[0032] FIG. 6 illustrates a front perspective view of another building construction using a further embodiment of a butt-joint flashing with vertical fiber cement siding sheets according to aspects of the embodiments.

[0033] FIG. 7 illustrates a flow chart of a method for using butt joint flashing in construction of a building according to aspects of the embodiments.

[0034] FIG. 8 illustrates a top view of a trim assembly for use with vertical and horizontal cementitious siding when assembling siding pieces against trim portions of a building according to aspects of the embodiments.

[0035] FIG. 9 illustrates a front perspective view of a solid wedge-shaped spacer for use with the butt-joint flashing of FIGS. 1-7 according to aspects of the embodiments.

[0036] FIG. 10 illustrates a front view of the wedge-shaped spacer of FIG. 9.

[0037] FIG. 11 illustrates a left side view of the wedge-shaped spacer of FIG. 9.

[0038] FIG. 12 illustrates a front perspective view of an assembly of the wedge-shaped spacer, the gasket of FIGS. 1-7, and siding material according to aspects of the embodiments.

[0039] FIG. 13 illustrates a front view of the assembly of FIG. 12 according to aspects of the embodiments.

[0040] FIG. 14 illustrates a side view of the assembly of FIG. 13.

[0041] FIG. 15 illustrates a front perspective view of a partitioned wedge-shaped spacer for use with the butt-joint flashing of FIGS. 1-8 according to aspects of the embodiments.

[0042] FIG. 16 illustrates a close up view of a top portion of the partitioned wedge-shaped spacer of FIG. 15.

[0043] FIG. 17 illustrates a left side view of the wedge-shaped spacer of FIG. 15.

[0044] FIG. 18 illustrates a partially assembled side view of an assembly of the partitioned wedge-shaped spacer, the gasket of FIGS. 1-8, and siding material according to aspects of the embodiments.

[0045] FIG. 19 illustrates a front perspective view of the assembly of FIG. 18 according to aspects of the embodiments.

[0046] FIGS. 20A and 20B illustrate perspective and side views, respectively, of a second starter strip according to further aspects of the embodiments.

[0047] FIG. 21 illustrates a perspective view of an assembly of an exterior shell of a building using the second starter strip of FIGS. 20A and 20B according to further aspects of the embodiments.

[0048] FIGS. 22A and 22B illustrate perspective and side views, respectively, of a shim that can be used in an assembly of an exterior shell of a building according to further aspects of the embodiments.

[0049] FIG. 23 illustrates a perspective view of an assembly of an exterior shell of a building using the shim of FIGS. 22A and 22B according to further aspects of the embodiments.

DETAILED DESCRIPTION

[0050] The embodiments are described more fully hereinafter with reference to the accompanying drawings, in which embodiments of the inventive concept are shown. In the drawings, the size and relative sizes of layers and regions may be exaggerated for clarity. Like numbers refer to like elements throughout. The embodiments can, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein. Rather, the embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the inventive concept to those skilled in the art. The scope of the embodiments is therefore defined by the appended claims. The following embodiments are discussed, for simplicity, with regard to the terminology and structure of general construction of new homes. However, the embodiments to be discussed next are not limited to general construction of new homes, but can be applied to construction of other types of buildings and renovations/refurbishments as well.
Reference throughout the specification to “one embodiment” or “an embodiment” means that a particular feature, structure, or characteristic described in connection with an embodiment is included in at least one embodiment of the embodiments. Thus, the appearance of the phrases “in one embodiment” or “in an embodiment” in various places throughout the specification is not necessarily referring to the same embodiment. Further, the particular feature, structures, or characteristics can be combined in any suitable manner in one or more embodiments.

According to embodiments, the problems described above can be addressed by, for example, a butt-joint flashing article of manufacture or apparatus. The butt-joint flashing comprises a relatively flat, planar back surface, and a ridged front surface, the back facing a framed wall with structural sheathing, and the front the surface adapted such that upon it the siding planks or sheets will be fitted against it. The butt-joint flashing apparatus according to embodiments includes a center ridge that separates the apparatus in half; in use, the center ridge of the butt-joint flashing is generally centrally aligned with a stud centrally located under the structural sheathing. According to further aspects of the embodiments, the center ridge is higher than the other portions of the front surface; it is used to separate a first siding plank or sheet placed to the right of it from a second siding plank or sheet placed to the left of it, thereby providing a gasket, sealing function between the two siding planks (or sheets). The butt-joint flashing apparatus provides the gasket, sealing function between the two siding planks or sheets since the butt-joint flashing apparatus is made from a clear rubber or clear plastic material with a shore rating at about a first shore rating value that provides for flexibility over an expected temperature range. Located on either side of the center ridge are a plurality of channels and surfaces between the channels that provide a substantially flat, planar mating surface for the siding planks or sheets and wherein the channels can provide a path for water, ostensible rain water, to pass through while running down a surface exterior to the structural surface but interior to the siding planks or sheets.

Used throughout the specification are several acronyms, the meanings of which are provided as follows:

ASTM American Society for Testing and Materials
BJF Butt Joint Flashing
EPF Expanded Polystyrene Foam
OC On-Center

The following is a list of the elements of the Figures in numerical order:

100 Butt-Joint Flashing (BJF) Assembly
102 First Mounting Surface
104 Second Mounting Surface
106 First Outer Water Channel
108 Second Outer Water Channel
110 First Ridge
112 Second Ridge
114 First Inner Water Channel
116 Second Inner Water Channel
118 Spacer Ridge
120 Back Surface
122 Adhesive Assembly
202 Glue/Adhesive

400 First Building Assembly
402 Studs
404 Structural Sheathing
406 Water Restrictive Barrier
408 Starter Strip
408 Second Starter Strip
409 Shim
410 Cementitious Horizontal Siding (Horizontal Siding)
412 Chalk Line
414 Trim
416 Foundation
418 Wall Assembly
420 Securing Means
502 Water
506 First End Horizontal Siding
508 Second End Horizontal Siding
510 Back Surface Horizontal Siding
512 Front Surface Horizontal Siding
600 Second Building Assembly
602 Cementitious Vertical Siding (Vertical Siding)
700 Method for Use of Butt-Joint Flashing in Construction of a Building
700 Steps of Method 700
800 Trim Assembly
802 Trim Portion
804 First Planar Portion
806 First Channel
808 Second Planar Portion
900 Solid Wedge-Shaped Spacer
902 Front Surface
904 Top Surface
906 Bottom Surface
908 Left Side
910 Right Side
912 Rear Surface
1500 Partitioned Wedge-Shaped Spacer
1502 Wedge Portion Surface
1504 Support Ridge
1506 Front Planar Surface
1508 Left Side
1510 Right Side
1512 Rear Surface
1514 Top Surface
1516 Bottom Surface
1902 Structural Sheeting
1904 Moisture Barrier
2002 Angled Front Surface of Second Starter Strip
2004 Rear Surface of Second Starter Strip
2006 Bottom Surface of Second Starter Strip
2008 Alignment Guide Second Starter Strip
2202 Front Surface of Shim
2204 Rear Surface of Shim
2206 Bottom Surface of Shim
2002 Angled Front Surface of Second Starter Strip
2004 Rear Surface of Second Starter Strip
2006 Bottom Surface of Second Starter Strip
2008 Alignment Guide Second Starter Strip
2202 Front Surface of Shim
2204 Rear Surface of Shim
2206 Bottom Surface of Shim

FIG. 1 illustrates a side view of butt-joint flashing (BJF) assembly 100, FIG. 2 illustrates a top perspective view of BJF assembly 100, and FIG. 3 illustrates a front view of BJF assembly 100 according to aspects of the embodiments. BJF assembly 100 includes first mounting surface 102, second mounting surface 104, first outer wall channel 106, second outer wall channel 108, first ridge 110, second ridge 112, first inner water channel 114, second inner water channel 116, and spacer ridge 118. Although not shown in FIG. 1, and
others, the number and location of ridges and channels is not limited to the embodiments shown in the accompanying Figures; that is, according to further aspects of the embodiments, additional ridges can be provided in BJF assembly 100 (and 100', discussed in detail below), including, for example, additional ridges that can be located immediately adjacent to both sides of spacer ridge 118. According to further aspects of the embodiments, the ridges and channels of BJF assemblies 100 and 100' can all have substantially similar dimensions, some can have substantially similar dimensions, and they can all have different dimensions. Located on a side opposite to the aforementioned feature of BJF assembly 100 is back surface 120. According to an aspect of the embodiments, located on second mounting surface 104 is adhesive assembly 122. According to further aspects of the embodiments, adhesive assembly can be located on either or both of first and second mounting surfaces 102, 104. According to further aspects of the embodiments, adhesive assembly 122 can also be located on either or both of first and second ridges 110, 112, as well as on all of or a portion of back surface 120. Each of the aforementioned features of BJF assembly 100 will be discussed in turn. According to further aspects of the embodiments, if additional ridges and therefore mounting surfaces are provided, some, all, or none can have adhesive assembly 122 added to them in a substantially similar manner as first and second mounting surfaces 102, 104, among others.

[0122] As shown in FIGS. 1, 2, and 3, BJF assembly 100 is generally planar in shape. BJF assembly 100 is fabricated from a clear plastic or rubber, with a Shore hardness rating of about 70-A. As those of skill in the art can appreciate, hardness can be defined as a material’s resistance to permanent indentation. Those of skill in the art have developed scales as a means of characterizing different materials. Once such scale was defined by Albert F. Shore, who developed a measurement device to measure what was thereafter referred to as “Shore hardness” in the 1920s. The term “durometer” is often used to refer to the measurement as well as the instrument itself. A durometer is typically used as a measure of hardness in polymers, elastomers, and rubbers. There are several scales of durometer, used for materials with different properties. The two most common scales, using slightly different measurement systems, are the ASTM D2240 type A and type D scales. The A scale is for softer plastics, while the D scale is for harder ones. According to further aspects of the embodiments, the Shore rating for BJF assembly 100 (and BJF assembly 100', described in greater detail below) can range from about 65-A to about 75-A. By virtue of the Shore rating of about 70-A, for example, BJF assembly 100 is somewhat pliable, and forms a gasket like interface between two pieces of siding, as described in greater detail below.

[0123] BJF assembly 100 includes first and second mounting surfaces 102, 104, which are generally narrow, rectangular shaped, and substantially planar portions of BJF assembly 100 upon which will rest the siding as shown and described in regard to FIGS. 4, 5 and 6, described in greater detail below. According to an aspect of the embodiments, all of BJF assembly 100 is fabricated from a single material, with the exception of adhesive assembly 122. However, according to further aspects of the embodiments, BJF assembly 100 can be made up of more than one type of material (e.g., plastic and rubber), and of more than one color (though when made of a single material, it is generally made to be relatively clear or opaque). Generally, however, BJF assembly 100 is manufactured of a single type of material using an extrusion process, the process and characteristics of which are known to those of skill in the art.

[0124] As discussed above, and shown in FIGS. 1, 2, and 3, first and second mounting surfaces 102, 104 are generally narrow, rectangular in shape, and planar. However, according to further aspects of the embodiments, first and second mounting surfaces 102, 104, and even the entire assembly of BJF assembly 100 can be square, circular, or some other shape. Located adjacent to first and second mounting surfaces 102, 104, are first and second outer water channels 106, 108, respectively. The width of first and second mounting surfaces 102, 104, designated as w1, can be about equal to the width of first and second outer water channels 106, 108, w2, both of which can be about 1". According to further aspects of the embodiments, w1 and w2 can range from about 0.95" to about 1.05".

[0125] First and second outer water channels 106, 108 are formed in BJF assembly 100 between first and second mounting surfaces 102, 104 and first and second ridges 110, 112, respectively. According to further aspects of the embodiments, the height of first and second mounting surfaces 102, 104, and first and second ridges 110, 112 are substantially equal, and can be designated as h1. According to an aspect of the embodiments, h1 is about 0.62", and according to further aspects of the embodiments, h1 ranges from about 0.52" to about 0.67". According to further aspects of the embodiments, the height of first and second mounting surface 102, 104, and first and second ridges 110, 112 is measured with respect to substantially planar and smooth back surface 120. As shown in FIGS. 1, 2 and 3, first and second mounting surfaces 102, 104 are generally wider than first and second ridges 110, 112, though that need not necessarily be the case. According to an aspect of the embodiments, the width of first and second ridges, w3, is about 0.25", and according to a further aspects of the embodiments, w3 ranges from about 0.20" to about 0.30".

[0126] Centrally located on BJF assembly 100 is spacer ridge 118. Spacer ridge 118 forms the main gasket function between two pieces of siding, as described in greater detail below. According to an aspect of the embodiments, spacer ridge 118 is formed along a centerline of BJF assembly 100, and each side of BJF assembly 100 is a mirror image of the other, as is apparent from FIGS. 1, 2, and 3. According to an aspect of the embodiments, the height of spacer ridge 118, h2, is about 0.375", and according to further aspects of the embodiments, h2 ranges from about 0.355" to about 0.395." According to an aspect of the embodiments, the width of spacer ridge 118, w4, is about 0.62", and according to further aspects of the embodiments, w4 ranges from about 0.52" to about 0.67". Also shown in FIG. 1 are heights h3 and h4. According to an aspect of the embodiments, h3 is about 0.312", and according to further aspects of the embodiments, h3 ranges from about 0.292" to about 0.332." According to an aspect of the embodiments, h4 is about 0.302", and according to further aspects of the embodiments, h4 ranges from about 0.032" to about 0.037.

[0127] Formed between first and second ridges 110, 112 and spacer ridge 118, which is substantially centrally located on BJF assembly 100, are first and second inner water channels 114, 116, respectively. According to further aspects of the embodiments, the widths of first and second outer water channels are substantially similar to each other, the widths of first and second inner water channels 114, 116 are substan-
tially similar to each other, and all of the widths of the water channels (106, 108, 114, 116) are substantially similar to each other, though that need not necessarily be the case. According to an aspect of the embodiments, the width of first and second inner water channels 114, 116, 118, is about 0.75", and according to a further aspect of the embodiments, 118 width ranges from about 0.70" to about 0.80".

[0128] According to further aspects of the embodiments, the widths of any of the water channels, or mounting surfaces, or ridges, can be the same, or different, or some can be the same, and so on. Further, even though BJF assembly 100 is shown and described herein as generally being symmetrical about spacer ridge 118 that need not necessarily be the case. Generally, however, spacer ridge 118 is of a smaller width as it functions to provide a temperature resilient sealing-gasket function between two pieces of siding (as shown and described below) and structural sheathing as shown and described in regard to FIGS. 4, 5, and 6, among others, below. That is, spacer ridge 118 is of a greater height than the front components of BJF assembly 100 (features 102, 104, 106, 108, 110, 112, 114, 116, and adhesive assembly 122) and of such a height as to adequately provide the sealing gasket function between the two pieces of siding. According to aspects of the embodiments, the total width of BJF assembly 100, WT, can be about 6.0", and according to a further aspect of the embodiments, the total width WT can range from about 5.625" to about 6.0", and the total length L can be one of several lengths, depending on the width of the siding for which BJF assembly 100 is to be used. That is, L can be about one of any of 5.25", 5.25", 7.25", 8.25", 9.25", 12.0", 8 feet, 9 feet, and 10 feet, with a variance in length of about plus 0.0" and minus 0.1" according to further aspects of the embodiments.

[0129] Also shown in FIGS. 1, 2, and 3 is adhesive assembly 122, which comprises glue/adhesive 122, and peel tape 204, which is fabricated to be adhesively removable in regard to glue/adhesive 122. According to an aspect of the embodiments, adhesive assembly 122 can be located on either of first or second mounting surfaces 102, 104, and FIGS. 1, 2 and 3 illustrate an embodiment wherein adhesive assembly is located on second mounting surface 104 only. According to further aspect of the embodiments, adhesive assembly 122 can be located on either of both of first and second mounting surfaces 102, 104. According to still further aspects of the embodiments, adhesive assembly 122 can be located on any of the planar raised surfaces, in any combination including any of them, none of them, or only some of them. The raised planar surfaces include first or second mounting surfaces 102, 104, and first and second ridges 110, 112.

[0130] Application of adhesive assembly 122 can be done in the following non-limiting manner. As those of skill in the art can appreciate, application of adhesive assembly 122 can be performed in manner different ways, and all such manners of application are considered to be within the scope of the embodiments. In fulfillment of the dual purposes of clarity and brevity, however, discussion will be made of application of adhesive assembly to only second mounting surface 104, though those of skill in the art can appreciate that, as discussed above, adhesive assembly 122 can be applied to any of the planar surfaces, 102, 104, 110, 112, in any combination. To apply adhesive assembly 122, a glue material is applied to second mounting surface 104, and the peel/tape is applied to the glue/adhesive such that the glue/adhesive is protected until needed. According to further aspects of the embodiments, adhesive assembly 122 can be manufactured as one assembly and applied to second mounting surface 104, in a process known to those of skill in the art (e.g., double-sided tape).

[0131] As described in greater detail below, BJF assembly 100 can be attached to a first piece of siding 410, 602, and then the assembly properly located and nailed to the structure of the house or building. A more detailed description of the operation of adhesive assembly 122 is provided below. According to further aspects of the embodiments, adhesive assembly 122 can also be applied to first and second ridge 110, 112, or be applied there in place of first and second mounting surfaces 102, 104, or on any combination thereof. In place of adhesive assembly 122, a glue can be applied to any or all of first and second mounting surfaces 102, 104, and first and second ridges 110, 112 to adhere BJF assembly 100 to the siding before securing the same to the building. According to still further aspects of the embodiments, BJF assembly 100 can be secured to wall assembly 418 (described in greater detail below) without any glue on first and second mounting surfaces 102, 104, and first and second ridges 110, 112. According to additional aspects of the embodiments, other means for securing BJF assembly 100 to side planks or sheets can be used, including the use of heat activated materials, staples, or even screws or other securing mechanisms. Those of skill in the art should appreciate that any and all such securing mechanisms, whether listed or not, and those not yet contemplated, are considered to be within the aspects of the embodiments.

[0132] Attention is now directed to FIG. 4, which illustrates a cut-away front perspective view of first building assembly 400 that uses BJF assembly 100 according to an aspect of the embodiments, and FIG. 5 that illustrates a close up view of BJF assembly 100 (the circled portion A of FIG. 4) with a portion of first building assembly 400 shown in FIG. 4 along with a piece of horizontal cementitious siding 410 according to further aspects of the embodiments. In regard to FIG. 4, and any Figure related and discussed in regard to FIG. 4, spacers 900, 1500 (described in greater detail below), are not shown; however, it is considered to be within the aspects of the embodiments, that either of spacers 900, 1500 can be included in assemblies of FIG. 4, and related Figures. Although reference has been made herein to use of cementitious fiber siding products in the form of planks or sheets, the aspects of the embodiments are not limited with thereto. That is, siding planks or sheets can be made of practically any material and will benefit from the advantages of the aspects of the embodiments as described herein.

[0133] FIG. 4 illustrates a cut-away perspective view of a wall section of either a home, or office building of some type, that is constructed from studs 402, structural sheathing 404, and a water restrictive barrier 406, all built upon foundation 416 as is known to those of skill in the art. A detailed discussion of the manner and materials of the building construction are not necessary for an understanding of the aspects of the embodiments described herein, and as such, in fulfillment of the dual purposes of clarity and brevity, have been omitted herein. Wall assembly 418 in FIG. 4 comprises studs 402, structural sheathing 404, water restrictive barrier 406, and starter strip 408.

[0134] As can be seen in FIG. 4, starter strip 408 has been placed on a lowermost portion of an exterior surface of wall assembly 418 of first building assembly 400, then, in an appropriate manner, pieces of cementitious horizontal siding
(horizontal siding) 410 are placed over starter strip 410 to form the first row, and the second row builds upon the first row, and so on. Each of horizontal siding 410 are attached using securing means 420; generally, this is done one for each stud 402. Chalk lines 412 assist the installer in this endeavor. In this manner, the exterior protective surface of the building is built up in a manner known to those of skill in the art. Generally speaking, starter strip 408 has a depth that is approximately the same as that of horizontal siding 410 at a lowermost portion. This provides the slight inclination of horizontal siding 410 in relation to the substantially vertical wall of first building assembly 400, in a manner that is known to those of skill in the art. Further, the lengths of horizontal siding 410 are cut such that each begins and ends on locations of a center of studs 402, which has been marked by chalk line 412. Typically, such studs are placed “16” on-center (OC),” meaning the centers of adjoining studs 402 are about 16” apart. Since 2”x4” lumber is typically used in framing of buildings or houses, and 2”x4” lumber is actually about 1.75”x3.5”, this means there is about 9/16” of an inch on each side of the center of the 2”x4” stud 402 with which to adhere horizontal siding 410 to it. However, as discussed above, these practices of construction are well known to those of skill in the art. In addition to being cut to a length that causes it to begin and end on studs 402, it is known to place adjacent rows of horizontal siding 410 such that they overlap, usually at least by two stud-to-stud OC distances; in the case shown in FIG. 4, that would be about by 32” (16” OC distance times 2).

[0135] As can be further appreciated by those of skill in the art, when cutting to length horizontal siding 410, the width of spacer ridge 118 must be taken into account as well. As described above, the width of spacer ridge 118, w_s, is about 0.062”, and according to further aspects of the embodiments, w_s ranges from about 0.052” to about 0.067”. Such practices, however, are well known to those of skill in the art.

[0136] Following cutting to the appropriate length, BJJ assembly 100 is attached to horizontal siding 410. According to aspects of the embodiments, BJJ assembly 100 contains adhesive assembly 122. To attach BJJ assembly 100 to horizontal siding 410, peel tape 204 is removed from BJJ assembly 100 in a manner as shown in FIG. 2. BJJ assembly 100 is then located in a correct position with respect to horizontal siding 410 (i.e., on back surface 510 of horizontal siding 410, opposite to that of front surface 512 of horizontal siding 410 that will face structural sheathing 404). BJJ assembly 100 is then pressed against back surface 510 of horizontal siding 410 such that adhesive 202 forms a substantially permanent bond between BJJ assembly 100 and horizontal siding 410, in a manner as shown in FIG. 5.

[0137] The combined assembly of BJJ assembly 100 and horizontal siding 410 is then attached to an exterior side of wall assembly 418. As shown in FIG. 5, one or more securing means 420 are put through horizontal siding 410 at first end 506 and through BJJ assembly 100 to encounter stud 402 such that the combined assembly of BJJ assembly 100 and horizontal siding 410 are substantially secured to wall assembly 418 in a manner that is well known to those of skill in the art, using one or more securing means 420. According to an aspect of the embodiments, the height of spacer ridge 118 is such that it will be substantially flush with front surface 512 of horizontal siding 410; according to other aspects of the embodiments, the height of space ridge 118 is such that it is not flush with front surface 512 of horizontal siding 410.

Further, as those of skill in the art can appreciate, securing means can include nails, screws, staples, and the like, and can further include glues and other adhesives.

[0138] When the combined assemblies of BJJ assembly 100 and horizontal siding 410 are located against trim part 414—i.e., at the beginning and end of a row of horizontal siding 410, a slightly different procedure for securing BJJ assembly 100 to horizontal siding 410 occurs. In those cases, because BJJ assembly can be fabricated from a relatively soft plastic or rubber material, it can be easily cut with a utility knife. Thus, either before attachment to horizontal siding 410, or after, a craftsman can cut away the unused portion of BJJ assembly 100 just to the right or left of spacer ridge 118, as the case might be. The cut-to length of horizontal siding 410 at either end of row positions must take into account the extra width of space ridge 118 (for each row, one end or the other will have two spacer ridge 118 widths to contend with). This ensures that spacer ridge 118 forms a substantially impenetrable seal between all pieces of horizontal siding 410 with respect to each other, and to trim portion 414 of first building assembly 400 according to aspects of the embodiments. According to further aspects of the embodiments, polyurethane caulking can be used at the trim locations. According to still further aspects of the embodiments, trim assembly 800 can be used as shown in FIG. 8.

[0139] Trim assembly 800 is made of the same materials, and in a substantially similar process as that of BJJ assemblies 100, 100', and with substantially similar dimensions, such that a detailed description of such features of trim assembly 800 according to aspects of the embodiments is not needed. As shown in FIG. 8, trim assembly 800 includes trim portion 802, first planar portion 804, first channel 806, and second planar portion 808. According to further aspects of the embodiments, trim assembly 800 can also include adhesive assembly 122 that can be used in a substantially similar manner as described herein in regard to FIGS. 4-7. As those of skill in the art can appreciate, the dimensions of the aforementioned features of trim assembly 800 can differ from application to application, and as such, have not been included in this discussion. According to further aspects of the embodiments, first channel 806 can perform substantially similar water directing functions as described above in regard to first and second inner water channels, 114, 116, and first and second outer water channels 106, 108 of BJJ assemblies 100 and 100', and as such a detailed description of first channel 806 has been omitted in fulfillment of the dual purposes of clarity and brevity. According to still further aspects of the embodiments, first channel 806 can be omitted from trim assembly 800. As shown in FIG. 8, in use, trim assembly 800 is located against trim portion 414, and horizontal siding 410 or vertical siding 602 is located on top of trim assembly 800 in the manner shown, and affixed thereto as described herein in regard to vertical and horizontal sides 410, 602 and BJJ assemblies 100, 100'.

[0140] As described above, adhesive assembly 122 can also be applied to first and second ridges 110, 112, such that adhesive 202 would also be on those surfaces, and further adhere BJJ assembly 100 to horizontal siding 410 according to further aspects of the embodiments. Also shown in FIG. 5 is flow of water 502, which is flowing through first outer water channel 106. The four water channels—first and second outer water channels 106, 108, and first and second inner water channels 114, 116—are adapted to provide a means or path for water to flow down an exterior surface of structural sheathing 404 and water restrictive barrier 406, behind back.
surface 510 of horizontal siding 410, and through BJF assembly 100, so that the flowing water is substantially prevented from pooling in any one area.

Attention is now directed to FIG. 6, which illustrates a front perspective view of second building construction 600 using butt-joint flashing assembly 100' according to further aspects of the embodiments. BJF assembly 100' is substantially similar to that of BJF assembly 100, with the exception that the length of BJF assembly 100' is much longer, generally about 8', 9', 10' to be used with correspondingly similar sized cementitious vertical siding (vertical siding 602), as shown in FIG. 6. Vertical siding 602 is fashioned in a similar manner as a sheet of plywood, which generally are about 4'x8' in length and width. Vertical siding 602 is made larger such that one sheet typically extends from a bottom portion of wall assembly 418 to a top portion, meaning that one sheet covers an entire exterior height of wall assembly 418. When attaching one sheet of vertical siding 602 against the other, BJF assembly 100' can be used to provide the sealing and water channeling effects as described above in regard to BJF assembly 100 and first building assembly 400 according to aspects of the embodiments. Not shown in FIG. 6 are securing means 420, though in practice their use would be substantially similar as shown in FIGS. 4 and 5 in regard to BJF assembly 100.

Although butt-joint flashing assemblies 100 and 100' have been described with a specific configuration of first and second mounting surfaces 102, 104, for example, those of skill in the art can appreciate that according to still further aspects of the embodiments, BJF assembly is not limited to any particular number of surfaces, ridges, or channels. That is, there could be only one mounting surface on each side, and only one water pass-through channel on each side of BJF assembly 100, or there could be several of the mounting surfaces, and ridges, and different numbers of water channels. According to still further aspects of the embodiments, the embodiments are not limited to an apparatus that is substantially symmetrical about center ridge 118.

As discussed in regard to FIGS. 1, 2, 3, 4, 5, 6, and 8, reference is made to several dimensions, including several widths, lengths, and heights, among others. Those of skill in the art can appreciate that although examples of dimensions are provided, these should not be taken in a limiting manner; that is, the aspects of the embodiments are not to be construed as defined or limited by the specific example of the dimensions shown and discussed, but instead are provided merely for illustrating an example of what a device that incorporates the aspects of the embodiments could, in a non-limiting manner, look like. Furthermore, as those of skill in the art can appreciate, since the aspects of the embodiments are directed towards a physical object, with dimensional characteristics, all of the parts will have various dimensions, some of which are not shown in fulfillment of the dual purposes of clarity and brevity. According to still further aspects of the embodiments, some of these objects will have dimensional characteristics that lend themselves to aesthetic aspects; in fulfillment of the dual purposes of clarity and brevity, dimensions in this regard have also been omitted. Therefore, as the aspects of the embodiments are directed towards a butt-joint flashing assembly 100, 100' for use in constructing or refurbishing buildings, it is to be understood that the different objects, with some dimensions shown and some dimensions not shown, will be understood by those of skill in the art.

FIG. 7 illustrates a flow chart of method 700 for using BJF 100, 100' in construction of an exterior shell of a building according to an embodiment. Method 700 begins with decision step 702, wherein a user (carpenter, skilled craftsman, among others) selects the proper siding for use according to the plans of the building being constructed. If vertical siding 602 is meant be used (“Vertical” path from decision step 702), then in method step 704, BJF assembly 100' is selected to be used in adhering vertical siding 602 to an exterior portion of wall assembly 418. If, however, horizontal siding 410 is meant to be used (“Horizontal” path from decision step 702), then in method step 706, BJF assembly 100 is selected to be used in adhering horizontal siding 410 to an exterior portion of wall assembly 418.

Following either of steps 704, 706, method 700 proceeds to method step 708, wherein, if necessary, horizontal siding 410 or vertical siding 602 is cut to the proper dimensions. In method step 710 BJF assembly 100, 100' is attached to horizontal siding 410 or vertical siding 602, as appropriate, using adhesive assembly 122 according to one non-limiting aspects of the embodiments. In optional method step 711, spacer 900 or spacer 1500 can be attached to stud 402 through structural sheathing 404 and barrier 406, or to BJF assembly 100, and then, in method step 712, the combined BJF assembly 100 (with spacer 900 or spacer 1500) and piece of horizontal siding 410, or BJF assembly 100' and vertical siding 602 is secured to the exterior of wall assembly 418, in the manner described above, with securing means 420.

Attention is now directed towards FIG. 9, which illustrates a front perspective view of solid wedge-shaped spacer (spacer 900) for use with BJF assembly 100 of FIGS. 1-7 according to aspects of the embodiments, and FIG. 10 illustrates a front view of the wedge-shaped spacer of FIG. 9. Spacer 900 can be used to provide proper spacing of BJF assembly 100 and siding 410, in a manner as described herein, below. Spacer 900 can be fabricated out of almost any suitable grade material, that meets or exceeds local building code requirements, including but not limited to wood, expanded polystyrene foam (EPF), metals (including, e.g., aluminum, among others), and many other materials.

Spacer 900 comprises a front sloped surface 902, top surface 904, with a thickness t₁, of about 0.06” plus or minus 0.01”, left side 908, right side 910, bottom surface 906, with a thickness t₂, of about 0.312” plus or minus about 0.01”, and rear surface 912. Spacer 900 has a height h. As described above, in regard to BJF assembly 100, there can be numerous different embodiments of spacer 900 that pertain to, or that can be used with, different sizes of sidings 410.

FIG. 11 illustrates a left side view of spacer 900, and FIG. 12 illustrates a front perspective view of an assembly of spacer 900, BJF assembly 100, structural framing components (stud 402) (omitted from FIG. 12 (and FIGS. 13 and 14) are structural sheathing 404, and barrier 406, though those of skill in the art can appreciate that such components would be provided therein in most cases), and siding 410 according to aspects of the embodiments. As shown in FIG. 11, spacer 900 has a bottom thickness t₁ that is substantially equal to a thickness of siding 410. According to aspects of the embodiments, t₁ is about 0.312”, and can range from about 0.302” to about 0.322”. Angle ⁰ is equal to the inverse tangent of the ratio of the thickness t₁ and height h₁; the height h₁ can be dependent upon the material spacer 900 is made from. The thickness t₁ is the thickness at the top of spacer 900. For example, if spacer 900 were to be made from a metal such as aluminium, then thickness t₁ can be very small, and height h₁ can be about the same height as the height of the siding.
For which spacer 900 will be used with. If spacer 900 were to be made from EPF, then the thickness \( t_1 \) could not be very small, and this would make the height \( h_1 \) less than the height of siding 410. However, angle \( \theta \) in all cases would be substantially the same, as this is product of dimensions of siding 410 and proper spacing of such siding 410 when following normal building and construction practices.

Referring now to FIG. 12, a pre-assembled front perspective view of spacer 900, and BJF assembly 100 can be seen, along with siding pieces 410a, b, and stud 402, structural sheathing 404, and barrier 406, according to aspects of the embodiments. In assembly, BJF assembly 100 can be first placed on spacers 900 (or 1500) using adhesive 122 that can be (though not necessarily) located on back surface 120 of BJF assembly 100, as indicated by arrows A and B, and then located onto barrier 406 and structural sheathing 404. In addition, assembly, BJF assembly 100 can also be first placed on spacer 900 using adhesive 122 that can be (though not necessarily) located on back surface 120 of BJF assembly 100, as indicated by arrows A and B. Then, as described above, the combined unit of BJF assembly 100 and spacer 900 can be attached to one or the other of siding 410a, or 410b, using adhesive 122 that can be located on first and second mounting surfaces 102, 104, respectively. The combined BJF assembly 100, spacer 900, and siding 410a, b according to aspects of the embodiments in order to affect a properly spaced set of siding pieces 410 with BJF assembly 100 to substantially prevent gaps between the siding pieces 410, and to provide a proper mounting surface for the siding pieces 410. Not shown in FIG. 12 is a lower row of siding 410; this is a typical manner of assembly, to work from the bottom up, so that each new row of siding 410 is correctly placed and located on the lower row of siding 410. On a lowermost row of siding 410, no spacing material can be used, or conventional spacing material can be used to impart the correct angular placement, or spacer 900 and BJF assembly 100 can be used in the manner just described.

FIG. 13 illustrates a front view of the assembly of FIG. 12 according to aspects of the embodiments, and FIG. 14, illustrates a side view of the assembly of FIG. 13. In FIG. 14, a lower-most row of siding 410 is shown in order to more clearly demonstrate the dimensional characteristics of spacer 900 in use with BJF assembly 100 according to aspects of the embodiments. In FIG. 14, it can be seen that the thickness of the bottom portion of spacer 900, \( t_2 \), is substantially equal to the thickness \( t_{2,LEC} \) of siding 410. Having thickness \( t_2 \) of spacer 900 being substantially equal to thickness \( t_{2,LEC} \) of siding 410 ensures a substantially complete seal and junction of an upper row of siding pieces 410 and lower siding pieces 410. Because BJF assembly 100 is relatively thin, and fabricated using a flexible material, as described above, BJF assembly 100 will readily bend around spacer 900 to seat upon structural sheathing 404, barrier 406, and stud 402 in the manner shown in FIG. 14. Not shown in FIG. 14, for the purpose of clarity, is an upper row of siding 410 that, as described above, would generally be attached to BJF assembly 100 prior to mounting to stud 402.

FIG. 15 illustrates a front perspective view of partitioned wedge-shaped spacer (spacer 1500) for use with BJF assembly 100 of FIGS. 1-7 according to aspects of the embodiments, and FIG. 16 illustrates a close up view of the top portion of spacer 1500 of FIG. 15. Spacer 1500 is an alternate embodiment of spacer 900, and thus can be fabricated from the same materials, in a substantially similar manner, with substantially similar dimensions. As such, those aspects of spacer 1500 need not be repeated in fulfillment of the dual purposes of clarity and brevity.
19, structural sheeting 1902 is located over studs 402a, b, and then moisture barrier 1904 is located over sheeting 1902. As those of skill in the art can appreciate, structural sheeting 1902 can comprise plywood, or fiberboard, among other different materials. Spacer 1500, BGF assembly 100, and siding 410 can be pre-assembled and then attached to studs structural sheeting 404, barrier 406, and stud 402 in the manner described above in regard to spacer 900, or they can be attached to structural sheeting 404, barrier 406, and stud 402 one at a time, beginning with spacer 1500, then BGF assembly 100, then siding 410. According to further aspects of the embodiments, other orders of assembly can be fashioned, and all should be considered to be within the aspects of the embodiments in embodiments in regard to assembly.

Attention is now directed towards FIGS. 20A and 20B, which illustrate perspective and side views, respectively, of second starter strip 408 according to further aspects of the embodiments. Second starter strip 408 can have substantially similar dimensions, or can be different, from those of starter strip 408. Second starter strip 408 can include, optionally, adhesive assembly 122 that can make it easier to locate it and fix it in place against framing components of a building prior to final assembly of the exterior shell of the building. Second starter strip 408 includes angled front surface 2002, which is formed at angle θ with respect to back surface 2004 (which is substantially perpendicular to bottom surface 2006, as indicated in FIGS. 20A and 20B). In addition, second starter strip 408 can include alignment guide 2008 that, as shown in FIG. 20B, facilitates alignment of the starter strip 408 against structural sheeting 404.

[0156] Angled front surface 2002 provides a suitable angle for a first row of siding material 410, as shown in FIG. 20B, when assembling the exterior shell of the building. FIG. 21 illustrates a perspective view of an assembly of an exterior shell of a building using second starter strip 408 of FIGS. 20A and 20B according to further aspects of the embodiments. Not shown in FIG. 21 are spacers 900, 1500, though, as those of skill in the art can now appreciate, spacers 900, 1500 can be used to provide the correct angular placement of additional rows of siding material 410 according to aspects of the embodiments.

[0157] FIGS. 22A and 22B illustrate perspective and side views, respectively, of a shim that can be used in an assembly of an exterior shell of a building according to further aspects of the embodiments.

[0158] FIG. 23 illustrates a perspective view of an assembly of an exterior shell of a building using the shim of FIGS. 22A and 22B according to further aspects of the embodiments.

[0159] Attention is now directed towards FIGS. 22A and 22B, which illustrate perspective and side views, respectively, of shim 409 that can be used in an assembly of an exterior shell of a building according to further aspects of the embodiments. Shim 409 is cubic in shape, meaning that it comprises vertesxes that are substantially perpendicular to each other, with three pairs of parallel sides, as shown in the Figures. Shim 409 can have substantially similar dimensions, or can be different, from those of starter strips 408, 408'. According to further aspects of the embodiments, shim 409 can be substantially smaller in length than either of starter strips 408, 408', as shown in FIG. 23. Shim 409 can include, optionally, adhesive assembly 122 that can make it easier to locate it and fix it in place against framing components of a building prior to final assembly of the exterior shell of the building. By its dimensions of width, wₛₜₙ, height, hₛₜₙ, as well as placement against the framing materials, shim 409 causes siding material 410 to be located at an angle θ with respect to back surface 2204 (which is substantially perpendicular to bottom surface 2206, as indicated in FIGS. 22A and 22B). Siding material 410 rests upon front surface 2202 and provides a suitable angle for a first row of siding material 410, as shown in FIG. 22B, when assembling the exterior shell of the building. FIG. 23 illustrates a perspective view of an assembly of an exterior shell of a building using shim 409 of FIGS. 22A and 22B according to further aspects of the embodiments. Not shown in FIG. 23 are spacers 900, 1500, though, as those of skill in the art can now appreciate, spacers 900, 1500 can be used to provide the correct angular placement of additional rows of siding material 410 according to aspects of the embodiments.

[0160] As discussed in regard to the Figures, reference is made to several dimensions, including angles, height, among others. Those of skill in the art can appreciate that although examples of dimensions are provided, these should not be taken in a limiting manner; that is, the aspects of the embodiments are not to be construed as defined or limited by the specific example of the dimensions shown and discussed, but instead are provided merely for illustrating an example of what a device that incorporates the aspects of the embodiments could, in a non-limiting manner, look like. Furthermore, as those of skill in the art can appreciate, since the aspects of the embodiments are directed towards a physical object, with dimensional characteristics, all of the parts will have various dimensions, some of which are not shown in fulfillment of the dual purposes of clarity and brevity. According to still further aspects of the embodiments, some of these objects will have dimensional characteristics that lend themselves to aesthetic aspects; in fulfillment of the dual purposes of clarity and brevity, dimensions in this regard have also been omitted. Therefore, as the aspects of the embodiments are directed towards BGF assembly 100, 100', trim assembly 800, and spacers 900, 1500, it is to be understood that the dimensions of the different objects, some dimensions shown, some dimensions not shown, will be understood by those of skill in the art.

[0161] The embodiments described herein provide system, means, and methods for sealing gaps associated with the use of one or more pieces of vertical or horizontal siding planks or sheets used in construction of new buildings, or refurbishment of old ones as well. It should be understood that this description is not intended to limit the embodiments. On the contrary, the embodiments are intended to cover alternatives, modifications, and equivalents, which are included in the spirit and scope of the embodiments as defined by the appended claims. Further, in the detailed description of the embodiments, numerous specific details are set forth to provide a comprehensive understanding of the claimed embodiments. However, one skilled in the art would understand that various embodiments can be practiced without such specific details.

[0162] Although the features and elements of aspects of the embodiments are described being in particular combinations, each feature or element can be used alone, without the other features and elements of the embodiments, or in various combinations with or without other features and elements disclosed herein.

[0163] This written description uses examples of the subject matter disclosed to enable any person skilled in the art to practice the same, including making and using any devices or
The above-described embodiments are intended to be illustrative in all respects, rather than restrictive, of the embodiments. Thus the embodiments are capable of many variations in detailed implementation that can be derived from the description contained herein by a person skilled in the art. No element, act, or instruction used in the description of the present application should be construed as critical or essential to the embodiments unless explicitly described as such. Also, as used herein, the article “a” is intended to include one or more items.

All United States patents and applications, foreign patents, and publications discussed above are hereby incorporated herein by reference in their entirities.

I claim:

1. A gasket for the use in the construction of a building, comprising:
   a substantially planar mounting portion, adapted to be affixed to a framing component of the building;
   a side opposite to the substantially planar mounting portion, wherein the side opposite comprises—
   a plurality of water channels formed in the side opposite, each of which is adapted to channel water through the gasket when the gasket is mounted on the framing component, and
   a spacer ridge substantially centrally located on the side opposite, wherein
   a spacer ridge height corresponds to a first height, and wherein the plurality of water channels are formed on the remaining portion of the side opposite and on both sides of spacer ridge.

2. The gasket according to claim 1, wherein the side opposite comprises:
   a first and second water channel formed on a first side of the spacer ridge, and a third and fourth water channel formed on a second side of the spacer ridge;
   a first ridge formed between the first and second water channel;
   a second ridge formed between the third and fourth water channel;
   a first mounting surface formed at a first outer periphery of the side opposite, adjacent to the first ridge; and
   a second mounting surface formed at a second outer periphery of the side opposite, adjacent to the second ridge.

3. The gasket according to claim 2, wherein the side opposite further comprises:
   an upper surface, substantially planar, formed of the upper surfaces of the first and second ridges, and the first and second mounting surfaces, all of substantially equal height corresponding to a second height.

4. The gasket according to claim 3, wherein the first height is greater than the second height, and wherein
   the difference between the first height and the second height is substantially equal to a thickness of a siding material used in the construction of the building.

5. The gasket according to claim 2, wherein
   the plurality of water channels are substantially parallel to each other, and wherein
   the gasket is further adapted to be affixed to the framing material of the building, such that the plurality of water channels are substantially vertically aligned with a surface of the earth to that water can pass through the gasket material, and wherein
   a first piece of siding material can be located adjacent to a first side of the spacer ridge, and
   a second piece of siding material can be located adjacent to a second side of the spacer ridge.

6. A system for use in construction of a building, comprising:
   a gasket adapted to provide a sealing surface between a first and second piece of siding material used in the construction of an exterior shell of the building, and wherein the gasket is further adapted to provide a water passage through which water can pass, the gasket comprising a substantially planar mounting portion (120), adapted to be affixed to a framing component of the building, a side opposite to the substantially planar mounting portion, wherein the side opposite comprises—
   a plurality of water channels formed in the side opposite, each of which is adapted to channel water through the gasket when the gasket is mounted on the framing component, and
   a spacer ridge substantially centrally located on the side opposite, wherein
   the spacer ridge height is formed at a first height, and wherein
   the plurality of water channels are formed on the remaining portion of the side opposite and on both sides of spacer ridge; and
   a spacer adapted to be located between the framing material and the gasket.

7. The system according to claim 6, wherein the spacer (900) comprises:
   a substantially wedge shaped spacer, adapted to be located between the gasket and the framing component and provide a proper amount of spacing such that a bottom portion of the siding material is located on top of a lower one of the siding material, comprising a substantially planar mounting portion (912), adapted to be located on a framing component of the building; a sloped surface (902) upon which the gasket can be located; and
   a bottom portion of a first thickness, wherein the first thickness is substantially equal to a second thickness of a siding material.

8. The gasket according to claim 7, wherein the side opposite comprises:
   a first and second water channel formed on a first side of the spacer ridge, and a third and fourth water channel formed on a second side of the spacer ridge;
   a first ridge formed between the first and second water channel;
   a second ridge formed between the third and fourth water channel;
   a first mounting surface formed at a first outer periphery of the side opposite, adjacent to the first ridge; and
   a second mounting surface formed at a second outer periphery of the side opposite, adjacent to the second ridge.

9. The system according to claim 8, wherein the side opposite further comprises:
an upper surface, substantially planar, formed of the upper surfaces of the first and second ridges, and the first and second mounting surfaces, all of substantially equal height corresponding to a second height.

10. The system according to claim 9, wherein the first height is greater than the second height, and wherein the difference between the first height and the second height is substantially equal to a thickness of a siding material used in the construction of the building.

11. The system according to claim 8, wherein the plurality of water channels are substantially parallel to each other, and wherein the gasket is further adapted to be affixed to the framing material of the building, such that the plurality of water channels are substantially vertically aligned with a surface of the earth to that water can egress through the gasket material.

12. The system according to claim 7, further comprising: a trim assembly gasket, adapted to provide a sealing interface between an end of the siding material and trim material used in the construction of an exterior shell of a building.

13. The system according to claim 6, wherein the spacer comprises:
   a substantially wedge shaped spacer, adapted to be located between the gasket and the framing component and provide a proper amount of spacing such that a bottom portion of the siding material is located on top of a lower one of the siding material, comprising
   a first sloped surface and at least one ridge component adapted to be located on a framing component of the building,
   a substantially planar mounting portion upon which the gasket can be located, and
   a bottom portion of a first thickness, wherein the first thickness is substantially equal to a second thickness of a siding material.

14. The gasket according to claim 13, wherein the side opposite comprises:
   a first and second water channel formed on a first side of the spacer ridge, and a third and fourth water channel formed on a second side of the spacer ridge;
   a first ridge formed between the first and second water channel;
   a second ridge formed between the third and fourth water channel;
   a first mounting surface formed at a first outer periphery of the side opposite, adjacent to the first ridge; and
   a second mounting surface formed at a second outer periphery of the side opposite, adjacent to the second ridge.

15. The system according to claim 14, wherein the side opposite further comprises:
   an upper surface, substantially planar, formed of the upper surfaces of the first and second ridges, and the first and second mounting surfaces, all of substantially equal height corresponding to a second height.

16. The system according to claim 16, wherein the first height is greater than the second height, and wherein the difference between the first height and the second height is substantially equal to a thickness of a siding material used in the construction of the building.

17. The system according to claim 14, wherein the plurality of water channels are substantially parallel to each other, and wherein the gasket is further adapted to be affixed to the framing material of the building, such that the plurality of water channels are substantially vertically aligned with a surface of the earth to that water can pass through the gasket material.

18. The system according to claim 13, further comprising: a trim assembly gasket, adapted to provide a sealing interface between an end of the siding material and trim material used in the construction of an exterior shell of a building:
   a starter piece adapted to provide a predetermined angle to an attached lowermost row of siding material, wherein the starter piece comprises an angled surface with the predetermined angle upon which the lowermost row of siding material can be placed.

19. A method for the construction of an exterior shell of a building, the method comprising:
   determining whether to use vertical siding material or horizontal siding material;
   selecting a vertical siding gasket assembly if the vertical siding material is to be used, and selecting a horizontal gasket assembly if a horizontal siding gasket assembly is to be used, and wherein each of the vertical and horizontal gasket assemblies are adopted to provide a sealing surface between a first and second piece of siding material used in the construction of the exterior shell of the building, and wherein the gasket is further adapted to provide a water passage through which water can pass;
   attaching the selected siding gasket assembly to the selected siding material; and
   attaching the combine selected siding gasket assembly and selected siding material to an exterior wall assembly of the building.

20. The method according to claim 19, further comprising:
   selecting a spacer to be placed between the selected gasket assembly and the framing material; and
   attaching the selected spacer to a back surface of the selected gasket assembly prior to attachment of the selected gasket assembly and selected siding material to the exterior wall assembly of the building, and wherein the selected spacer is adapted to provide a proper amount of spacing such that a bottom portion of the selected siding material is located on top of a lower one of the siding material.

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