MEMBRANE INTERFACE FOR BUILDING APERTURES

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ABSTRACT

An expanding seal for preventing water and air intrusion in gaps formed between aperture-engaged components of a wall which are surrounded by stucco or the like is provided. The device is configured to prevent moisture ingress between formed gaps created as stucco surfaces expand and contract over time which can exacerbate gaps. A first side of the body of the device engages the fixture while the opposing side is adapted for an embedded engagement with cured stucco whereby intrusion into gaps is prevented by elastic expansion and contraction of the seal.
MEMBRANE INTERFACE FOR BUILDING APERTURES

[0001] This application claims priority to U.S. Provisional Patent Application Ser. No. 61/849,013 filed on Jan. 18, 2013, and the specification and drawings of said application are included herein in their entirety by this reference thereto.

FIELD OF THE INVENTION

[0002] The present device relates to a moisture sealing device and method for windows and the like which communicate through wall surfaces and face the rigors of weather exposure. More particularly, the disclosed device and method herein, relates to the positioning of a flexible seal anchored on one side within the stucco or outer material surrounding a window or other fixture fit to an aperture formed in a building wall.

[0003] The device, when employed to maintain seal-integrity in areas surrounding windows and fixtures in stucco walls, provides a unique seal and moisture barrier in the space between a fixture such as a window or other component perimeter, and the surrounding stucco or cementitious material. Maintaining the integrity of the seal in this area has conventionally been problematic due to differing expansion and contraction rates of the stucco and the component it surrounds or due to the shrinkage of the surrounding stucco or cementitious material and other external forces that create an opening or gap. By a positioning of the device herein in an anchored engagement with the stucco and an adhesive or other engagement with the mounted window or other protruding fixture during installation, a flexible seal is formed which will not release from the stucco and thus water ingress is prevented along with the potential for resulting mold or other moisture related damage is mitigated.

BACKGROUND OF THE INVENTION

[0004] Modern frame construction buildings frequently employ an exterior facing surface which is adapted to handle the duress of weather and temperature variations. A frequent surface employed in homes and commercial buildings is cementitious material such as a layer of stucco material which is well known to be especially durable.

[0005] However, due to temperature variations, and disparate thermal expansion and shrinkage rates of differing but adjacent materials, a continual problem arises. An inherent and unsolved problem for builders and building owners is the formation of gaps between windows and fixtures communicating through the wall with their perimeter situated within an adjacent layer of a surrounding wall surface which is exposed to weather, such as stucco. While the building wall provides a frame with formed apertures or openings to operatively position a window, electrical box, or other wall-mounted fixture or component, most such wall-engaged components are manufactured from materials differing in form from that of the surrounding cementitious wall surface. This can result in disparate expansion and contraction rates of the window frame or fixture, and the abutting surrounding wall stucco surfacing.

[0006] Stucco is an exterior surface which is widely employed in the building industry and is essentially a cementitious product which weathers well for decades. Windows and electrical boxes and other wall-mounted fixtures, for manufacturing and other reasons, are conventionally formed of metal, wood, or polymeric material. Such metal and polymeric materials thermally expand and contract at significantly different rates during temperature fluctuations, than cementitious products such as stucco. Over time, because of these disparate rates of movement from expansion and contraction, seals fail and gap openings will develop between the perimeter edge of a window or fixture, and a formerly abutting surrounding stucco or other wall covering material.

[0007] As a result, gaps forming between the perimeters of wall-mounted windows and fixtures and surrounding wall surface layers such as stucco, as well as in the internal moisture barriers, can result in both aesthetic and structural damage. Moisture communicating through this gap tends to find pathways through and between other internal barriers such as flashings and building paper which results in water damage to wood and internal components and can result in the propagation of mold and mildew within walls and buildings as well as physical damage to the building and to its contents. Too often such damage from moisture penetration through formed gaps and those from less than professional workmanship, is discovered after it occurs and has become expensive to repair and remove. The discovery of leaks and property damage due to gaps left during construction or formed subsequent thereto, has in recent years frequently led to expensive litigation against homebuilders and contractors.

[0008] As noted, due to the cementitious nature of materials such as stucco forming the exterior layer of building walls, the areas where the stucco abuts the window frame or other fixtures are particularly susceptible to the formation of gaps over time, or due to poor workmanship in sealing when installed. Thereafter, water intrusion is possible with water communicating through gaps surrounding wall-engaged components such as windows, doors, pipes, vents, electrical boxes, lights, sills, wood beams, and plumbing protrusions.

[0009] Unfortunately, conventional means for sealing and preventing water intrusion subsequent to gap formation such as building paper, flashing materials and the like, which contractors adhere to mounted components and structural components frequently fail to prevent water intrusion.

[0010] Water which penetrates this gap can sometimes penetrate conventional water intrusion products including flashings and building paper or housewrap due to the forces of wind-driven moisture intrusion or capillary action. This phenomenon can cause water to travel considerable distance along and through interior components regardless of the slope of the pathway followed.

[0011] Despite the fact that the industry recommends that the gap between protruding fixtures and surrounding stucco be sealed with caulk or sealant, the observation has been made that it is common in the industry that no sealant is applied to such a gap, or potential gap areas. In the event sealant is employed, the water intrusion potential is reduced.

[0012] An inherent problem with using sealant or caulk is that it is prone to failure over time as it loses elasticity due to hardening and direct exposure to the elements including UV light and weather. As elasticity is lost, the potential for failure increases, especially where expanding and contracting windows or fixtures cause the gap to narrow and widen with temperature fluctuations. The disclosed device and method herein is not prone to such deterioration due to UV light or weather because in use it is fully encompassed within the cementitious matrix and therefore not exposed to weather or UV illumination.

[0013] In addition to water intrusion, gaps around exterior wall-positioned fixtures and windows will frequently allow a
communication of exterior air to flow between the exterior and interior of a building. This flow increases during high winds and during periods of high temperature differences between outside air and building interior air. Such air intrusion carries moisture into walls and attics along with allowing interior heat to flow out. Depending on the season this mixing of interior and exterior air can also increase heating and air conditioning costs.

As such, there is an unmet need for an expanding or substantially elastic seal for wall engaged fixtures such as windows and other wall mounted components, which are surrounded by exterior wall cementitious surfaces such as stucco and other surfaces differing from that of the engaged window or component. Such a sealing component should have a fixed or anchored engagement into or with the stucco to insure that the stucco side of the seal, never dismounts and remains in an intimate contact with the stucco thus preventing passage of moisture. Such a device and system should be configured in a manner that it provides a seal for any initial gaps or developed gaps and will accommodate enlarging of gaps.

Such a device, anchored in the stucco on a first side and in secure engagement to the wall-mounted fixture, should be configured to continue to maintain an air and moisture seal after years of expansion and contraction of the surrounding wall surface, formed apertures, and inserted windows and other components. Further, such a device should be easy to install using conventional construction techniques, to ensure wide use and adoption.

The foregoing examples of related art and limitation related therewith are intended to be illustrative and not exclusive, and they do not imply any limitations on the invention described and claimed herein. Various limitations of the related art will become apparent to those skilled in the art upon a reading and understanding of the specification below and the accompanying drawings.

Objects of the Invention

It is an object of the present invention to provide a device and method to achieve a flexible, anchored seal between stucco covered wall surfaces and the wall mounted fixtures which the stucco or other wall surface material surrounds.

It is an additional object of this invention to provide an adaptive seal which will accommodate enlarging gaps through the employment of a flexible member configured for anchored engagement with the stucco wall treatment, and secure engagement with the fixture whereby the seal maintains contact during expansion and contraction.

It is another object of the present invention to provide a flexible expanding seal for stucco treated walls which can be produced in rolls or segments for ease of installation.

It is a further object of this invention to provide such a flexible seal which is configured to anchor into the stucco on one side edge and provides a facing surface forming a tortuous path to prevent water intrusion through surface adhesion.

It is yet another additional object of this invention to incorporate the invention as a sub-component of fixtures such as electrical boxes in a manner providing the same performance characteristics as the other described modes of the device herein.

These and other objects, features, and advantages of the present invention, as well as the advantages thereof over existing prior art, which will become apparent from the description to follow, are accomplished by the improvements described in this specification and hereinafter described in the following detailed description which fully discloses the invention, but should not be considered as placing limitations thereon.

SUMMARY OF THE INVENTION

In accordance with the purposes of the present invention, as embodied and broadly described herein, the present invention provides a means for builders and renovators to properly seal over the gaps between stucco treated walls and wall-mounted outdoor fixtures surrounded by such stucco layers. Using a seal with an anchored engagement of one side edge into the stucco, and strong adhesive or other operative engagement of the opposing side, the device provides a flexible expanding seal which expands, contracts, or bends to accommodate expansions and contractions of the gap formed between wall mounted fixtures and surrounding stucco. The body forming the seal is flexible material which is elastic in nature and can be planar, woven, non-woven, extruded, laminated, or otherwise formed into a flexible and elastic body.

The disclosed device, as configured has a body with a first substantially planar section or edge configured for adherence to a surface of the window or other wall-engaged fixture through employment of tape or an adhesive strip, which maintains a sealed contact with the window or fixture on this first side edge, as the distance of the gap between the stucco and fixture expands and contracts. A second planar component or side edge of the body of the disclosed device runs along the opposite side of the body from the first side and may have a mesh or plurality of apertures communicating through the body adapted for the flow of wet stucco therethrough during installation. Once cured, the apertures having cured stucco therethrough, provide a means for anchoring this side edge into the stucco layer or cementitious material into an embedded engagement.

In use, as the fixture shrinks, the distance between the device’s first planar component or section and the adjacent stucco increases, causing an air gap. The device herein, engaged to the fixture and anchored in the stucco provides a means for sealing this gap.

The secondary planar component along the second side of the body, as noted, includes one or more means for embedding or anchoring the secondary component of the body into the stucco. These can include the noted apertures, outer bulge components, inner bulge components or other means for anchoring the second side of the body in a mechanical engagement with cured stucco as may occur to one skilled in the art.

In addition, such an embedded engagement ensures that as the stucco contracts in a direction away from the first planar component, or the window contracts away from the stucco, the stucco maintains an intimate contact with the body of the device to maintain its seal. The apertures providing means for anchoring the body into the stucco or cementitious material may be square, circular, semicircular, or any other shape which ensures a secure embedded connection of one side of the body of the device, into the stucco. Finally, inner and outer bulge components may be positioned on the body of the device as a means to create a tortuous path as a means to prevent moisture from bypassing the device.

While a continuous body portion of the device is preferred, the device may also be formed in segments. As
maintaining a seal between segments forming the device is preferred, formation of the body of the device in corner intersections should be symmetric and properly joined to enhance properly sealed corners.

[0029] In a third preferred mode, the device may additionally contain an expandable corner component, created by an arched wall of material bridged between the primary and second planar components. As the stucco contracts or expands, the expandable corner component grows or shrinks respectively to eliminate any air gaps and create a proper seal. Additionally, the expandable corner component can be filled with a compressible material, to provide further rigidity, or can be a homogeneous component that adheres to the primary and second planar components.

[0030] In a fourth preferred mode, the primary planar component may additionally contain one or multiple compressible node components which prevent further moisture ingress by adding a secondary tortuous path to the existing inner and outer bulge components. As with the expandable corner component, these node components can be composed of an air filled or compressible material-filled cavity, or may be composed of a compressible material joined to the remainder of the device. The preferred shape of the node components is a semicircle, though they can be configured to be square, triangular, arched or of any other geometric shape.

[0031] A yet additional preferred mode replaces bulge components, window components and node components with mesh components. The mesh components, can be composed of any plastic, fiber or metal which is water resistant and can withstand the load on the device during expansion and contraction of the stucco wall treatment in which it embeds.

[0032] Additionally, the device and any of the material used to fill its cavities may be composed of any high durability rubber, fabric or plastic which is water impermeable. To allow for various device depths, the preferred mode of manufacturing is extrusion.

[0033] An alternative construction of the device exists in which the device is extruded as a single planar component and then bent 90 degrees about its middle axis. This mode of construction allows for easy packaging and shipping and reduces the complexity and cost of the required extrusion molds.

[0034] With respect to the above description, before explaining at least one preferred embodiment of the herein disclosed invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangement of the components in the following description or illustrated in the drawings. The device herein described and disclosed in various modes and combinations is also capable of other embodiments and of being practiced and carried out in various ways which will be obvious to those skilled in the art. Any such alternative configuration as would occur to those skilled in the art is considered within the scope of this patent. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

[0035] As such, those skilled in the art will appreciate that the conception upon which this disclosure is based may readily be utilized as a basis for designing of other bi planar flexible wall and fixture seals for carrying out the several purposes of the present disclosed device. It is important, therefore, that the claims be regarded as including such equivalent construction and methodology insofar as they do not depart from the spirit and scope of the present invention.

BRIEF DESCRIPTION OF DRAWING FIGURES

[0036] The accompanying drawings, which are incorporated herein and form a part of the specification, illustrate some but not the only nor exclusive examples of embodiments and/or components of the disclosed device. It is intended that the embodiments and figures disclosed herein are to be considered illustrative of the invention herein, rather than limiting in any fashion. In the drawings:

[0037] FIG. 1 displays a cross section view of the device as installed showing stucco communicating through apertures formed in the body and providing means for anchoring the body forming the seal on one side.

[0038] FIG. 2 displays a cross section view of the device of FIG. 1, as installed upon window contraction from the adjacent stucco.

[0039] FIG. 3 depicts one preferred mode of the device for use with straight walls and faces having an L-shaped body.

[0040] FIG. 4 shows the secondary mode of the device having the L-shaped body corner, configured with recessed engagement points to seal corner walls and faces.

[0041] FIG. 4a depicts a mode of the device having an inline joiner for forming a sealed engagement with two adjoining elongated body portions along a side edge similar to the corner of FIG. 4.

[0042] FIG. 5 shows a third preferred mode whereas the device contains an expandable cavity and projections on the side edge having stucco engaging apertures.

[0043] FIG. 6 depicts another preferred mode whereas expanding ridges are included along with dimpled projections.

[0044] FIG. 7 displays the final preferred mode of the device which employs a mesh component adapted for anchored engagement with stucco.

[0045] FIG. 8 shows an alternative planar body construction of the one preferred mode of the device wherein the device is folded prior to use.

[0046] FIG. 9 depicts the device herein in a sectional view showing sealing of formed gaps between a window perimeter and surrounding wall surface.

[0047] FIG. 10 depicts typical failure of prior art sealing systems which may or may not position sealant in the gap.

[0048] FIG. 11 depicts a mode of the device herein, formed in a unitary structure as a rectangle to engage and surround a component of industry-specified standardized size, such as a electrical box.

[0049] FIG. 12 depicts a mode of the device formed in assembleable engageable components which allow for strip and corner assembly on site, to form customized configurations.

[0050] FIG. 13 shows the device engaged to a fixture such as a window using butyl tape, and positioned for interlocking or anchored engagement within a stucco or cementitious layer.

DETAILED DESCRIPTION OF THE INVENTION

[0051] Now referring to drawings in FIGS. 1-13, wherein similar components are identified by like reference numerals, there is seen in FIG. 1-2, the device 10 displayed in a cross sectional view, operatively positioned anchored within adjoining stucco. The device 10 maintains a seal in gaps 18
between the edge of the stucco abutting the fixture 12 in the wall and the edge of the exterior facing surface of the fixtures 12 engaged in an aperture formed in a framed or constructed wall.

[0052] The gap 18 as depicted in FIG. 2, is shown somewhat exaggerated or enlarged for easy view, and communicates through the applied layer or coating of stucco 14 that surrounds the window or other fixture 12. This gap 18, may initially be narrow, however any gap 18 exposed to exterior weather, in combination with the divergent temperature-induced expansion and contraction between the stucco and window or fixture, yields a pathway for a potential leak for water and/or air passage therethrough. This threat only increases over time with continued exposure.

[0053] The device 10 has a body 11 which is formed on a first side, as a first planar component 20 and on a second side, a secondary planar component 22. A central area of the body 11, or portion between the two planar sides, defines the width of the body 11 which can vary according to application.

[0054] The first planar component 20 adjacent the first side or edge of the body 11 is configured to include or employ a means for engagement to the exterior of the fixture 12 which has been positioned within the formed wall or frame aperture of the building such as adhesive 16. This adhesive 16 which may be applied, may be a peel and stick adhesive 16 such as on strips of butyl rubber 19 (FIG. 13) or adhesion to the fixture may employ other means for engagement which are permanent and will hold up to years of such a positioning.

[0055] Fixtures 12 such as windows (FIG. 13), or electrical boxes 31 (FIG. 11) or breaker boxes 33 (FIG. 12) or the like, conventionally are mass produced in standard sizes and are engaged in formed passages in building walls. They have standard sized exterior perimeters which are defined by their wall surfaces, such as the aluminum or polymer members. These fixtures 12, are positioned in appropriately formed passages in the wall 23 with a frontal portion of the perimeter communicating both with the stucco 14 surrounding them, and the exterior of the building. A unitary body 11 in the shape of the box 33 to be surrounded with an interior aperture sized to engage the box 33 can be formed for standardized sized electrical boxes 31 or breaker boxes 33 or other industry standard dictated sized fixtures 12.

[0056] The exterior perimeter surface or walls defining the fixture 12 run in a plane substantially perpendicular to the plane of the wall 23 axis and the exterior surface on which the layer of stucco 14 is applied. The gap 18 if not sealed at the exterior surface of the stucco 14 can communicate along this plane. Installation of window style fixtures 12 is aided by a positioning flange projection 25 conventionally extending perpendicularly from the perimeter surface of window fixtures 12 for engagement to the members forming the skeleton of the wall 23, to fix the fixture within the formed wall aperture.

[0057] As noted, maintaining a sealed gap 18 is problematic when the adjoining materials are dissimilar in nature such as cementitious stucco 14 and aluminum window casings 37. This is because of the differing expansion and contraction rates of the materials relative to temperature. As the stucco 14 shrinks at a differing rate from the frame of the depicted window fixture, per FIG. 2, the air gap 18 increases between the two surfaces. In conventional installations such as in FIG. 10, over time with conventional sealing methods, the continual changing of gap 18 size can break down the seal and allow leakage.

[0058] As depicted in FIGS. 2-3, the device 10 and method herein, engages the first planar component or first side of the body 11 to the fixture, such as the depicted window frame, and the secondary planar component 22 or opposite side of the body 11 is provided with a unique means for maintaining its sealed connection embedded in the stucco 14 layer. Embedding the second side of the body 11 achieves a permanent engagement to the stucco which is otherwise particularly hard to maintain over time due to the stucco 14 material itself. Rather than employing caulk which in the conventional mode of sealing has been shown to break down, the device 10 herein, achieves and maintains this embedded engagement through positioning the plurality of apertures 28 communicating through the second planar component 22 on the second side of the body 11.

[0059] These apertures 28 as noted, allow for a communication of stucco 14 or other cementitious material, through the apertures 28 during placement of the stucco 14 on the wall. This communication of stucco 14 material through the apertures 28 provides a means for a permanent mechanical or anchored engagement of the second side of the body 11 or the second planar component 22, embedded into the adjoining layer of stucco 14 layer in a connection that cannot come lose over time.

[0060] As a consequence of the secure connection to the inserted fixture, such as a window, and the integrated anchored connection to the stucco coating afforded by communication of material through the apertures 28 in the second planar component 22 section, both sides of the body 11 are secured in a manner which is permanent and not likely to dismount. As a consequence, despite the potential thousands of repeated expansion and contraction events which both stucco 14 and fixture undergo, and which increase and decrease the gap 18, the body 11 of the device 10 being slightly elastic, remains fixed to both mounts and continues to block water and air intrusion through the formed gap, and is unaffected by the continual disparate expansion and contractions of both the stucco 14 and window or other fixture. Further, the body 11 of the device 10 is not subject to deterioration associated with UV light exposure and direct exposure to the rigors of weather.

[0061] In addition to the two opposing sides, the body 11 may also include one or more outer bulge components 27, inner bulge components 24 and window components 28. These components define a tortuous pathway which helps insure that should any liquid or air, for some reason, travel past portions of the formed seal, that neither air pressure nor surface tension will be sufficient to communicate the water or air through the serpentine twists and turns of the formed path. This plurality of sequential bulge components can be square, circular, semicircular or any other shape that helps form the tortuous pathway which thereby increases the effectiveness of the device 10.

[0062] When forming a seal around a rectangular fixture as in FIG. 4, where segments are joined, maintaining a seal between adjoining segments is preferred. As shown in FIG. 4 showing a segment formed mode of the device 10, planar components 22 and 22a (in dotted line) are positioned symmetric around a corner edge 30 to ensure properly sealed corners. An overlap portion 21 in the corner section is provided for insuring a proper seal with adjoining planar components 22a.

[0063] FIG. 4c depicts a mode of the device having an inline joiner 29 for forming a sealed engagement with two
adjoining elongated body portions 22a along a side edge similar to the corner of Fig. 4 having opposing overlap portions 21 to insure a seal.

Per FIG. 5, in another preferred mode, the device 10 may additionally contain an expandable corner component 34, created by an arched wall 36 of substantially elastic material bridged between the primary and second planar components 20, 22.

In use, as the stucco 14 contracts or expands, the expandable corner component grows or shrinks respectively to eliminate any air gaps and create a proper seal. Additionally, the expandable corner component can be filled with an elastic and compressible material, to provide further rigidity, or can be a homogeneous component that adheres to the primary and second planar components.

In a preferred mode seen in FIG. 6, the primary planar component 20 may additionally contain one or multiple compressible node components 38 which prevent further moisture ingress by adding a secondary tortuous path to the existing inner and outer bulge components 24, 27. As with the expandable corner component 34, these node components 38 can be composed of an air filled or compressible material filled cavity, or may be composed of a compressible material joined to the remainder of the device 10. The preferred shape of the node components 38 is a semicircle, though they can be configured to be square, triangular, arched or of any other geometric shape.

Another depicted preferred mode of the device 10 and system herein, is shown in FIG. 7 were an outer mesh 42 having apertures 28 formed in the mesh 42 for communication of cementitious material therethrough extends from the body. The mesh components 42 can be composed of any screen or plastic, fiber or metal which is water resistant and can withstand the load on the device 10 while yielding the anchoring of the body on one side to the stucco or cementitious material during from expansion and contraction.

Additionally, the device 10 and any of the material used to fill its cavities may be composed of any high durability rubber, fabric or plastic which is water resistant. To allow for various device 10 depths, the preferred mode of manufacturing is extrusion.

Another alternative configuration of the device 10 is displayed in FIG. 8 whereas the device 10 is extruded as a single planar component formed of substantially elastic material and then bent 90 degrees about its middle axis 46. This mode of construction allows for easy manufacture and planar low volume packaging and shipping and reduces the complexity and cost of the required extrusion molds. In all modes of the device 11 the body is formed of elastic material able to stretch and contract with the requirements of the changing gap size. Such material can include polymeric materials, plastic, neoprene, polypropylene, polyester, woven textiles, non woven fabrics, vinyl, laminated fabrics, or other planar material or non planar material which are elastic in nature and which have a high UV and weather resistance and remain elastic below freezing temperatures.

FIG. 9 depicts the device 10 herein in a sectional view showing sealing of formed gaps 18 between a window fixture 12 perimeter and surrounding wall 23. Also shown is the anchored engagement of the body 11 of the device with the stucco 14 on one side edge which communicates through apertures 28 formed in the body 11 at a distal portion, opposite the engagement to the fixture 12 using means for fixed engagement such as adhesive 16 or mastic. The substantially elastic nature of the material forming the body 11 allows the anchored section to elongate the body 11 to compensate for the changing gap size caused by the fixture changing in size due to temperature and initially, by the shrinking of the stucco during curing. It is anticipated the device 10 and system herein can also be employed for sealing around fixtures which communicate through wall apertures in other surfaces than stucco such as siding material.

FIG. 10 depicts a sealing as is typical of prior art showing a window or fixture having a flashing 41 which is in an operative engagement with the wall 23. As noted, due to the disparate rates of expansion and contraction of the window or fixture and stucco 18 during temperature changes, yields an ongoing translation of the stucco 14 away from and subsequently toward the fixture 12. As noted over time, even if sealant is employed in the gap 18, the constant movement of the respective components combine to dislodge the sealant and thus the potential for leaks through the gap 18. Lacking the device 10 herein, water reaching breaching the gap 18 will flow along any available pathway to the interior of the wall 23 especially when wind driven.

FIG. 11 depicts a mode of the device 10 herein, where the body 11 is formed in a unitary structure having an interior perimeter edge 50 sized to cooperatively engage on a wall surface of, and surround, a component box 31 of industry specified standard size such as a electrical box, or buss box. Apertures 28 provide the means to anchor the device 10 embedded in surrounding stucco 14 which communicates therethrough prior to curing. The elastic nature of the body 11 maintains a seal over the perimeter gap between the stucco 14 and the box 31.

FIG. 12 depicts a mode of the device 10 allowing for strip and corner assembly on site, to form customized configurations where a non standard box 33 is employed, or the correct sized formed rectangle body 11 is not on site. In this mode strips of body material 53 having projections 54 rising from one planar side, engage with apertures 28 formed in the corners 59. The strips 53 can vary in length. Further, The projections 54, may be formed as a separate ingot-like component which is pushed into a frictional engagement through apertures 28 in both the corners and strips 53. This mode of the device would be provided in kit form allowing assembly on site of components. The recess providing an overlap 21 as in FIG. 4 might also be employed.

FIG. 13 shows the device 10 having the body 11 engaged to a fixture 12 such as a window using butyl tape 19. The tape 19 has adhesive 16 which engages with the fixture 12 and one side edge of the body 11 of the device 10. The device 10 is shown with an L-shaped body 11 which has a plurality of apertures 28 formed at the opposite edge from adhesion of the first side of the body 11 to the fixture 12. The apertures 28 serve to allow communication of stucco 14 therethrough which once cured, provides a means to anchor the body 11 of the device 10 with a second side embedded into the stucco 14 thereby preventing dislodgement. The elastic nature of the body 11, allows for stretch during widening of any formed gap being blocked by the body 11.

In a method of employment of the device 10, the body 11 would first be adhesively engaged to the fixture 12 on one side edge with apertures 28 formed in the exposed opposing projecting side or end. Thereafter, stucco would be adhered to the wall in a normal application and stucco is communicated through the apertures 28 and allowed to cure. At this point the device 10 is operatively embedded in the
stucco and in sealed engagement to the fixture 12 to block all gaps and being of elastic nature, expand and contract as needed.

[0076] As noted, any of the different configurations and components can be employed with any other configuration or component shown and described herein. Additionally, while the present invention has been described herein with reference to particular embodiments thereof and steps in the method of production, a latitude of modifications, various changes and substitutions are intended in the foregoing disclosures, it will be appreciated that in some instance some components, or configurations, or steps in formation of the invention could be employed without a corresponding use of other components without departing from the scope of the invention as set forth in the following claims. All such changes, alterations and modifications as would occur to those skilled in the art are considered to be within the scope of this invention as broadly defined in the appended claims.

[0077] Further, the purpose of any abstract of this specification is to enable the U.S. Patent and Trademark Office, the public generally, and especially the scientists, engineers, and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. Any such abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting, as to the scope of the invention in any way.

What is claimed is:

1. A sealing apparatus for gaps between fixtures mounted in surrounding cementitious material, comprising:
   an elongated body formed of substantially elastic material;
   said body having a first side configured for an adhesive engagement with a fixture positioned in a wall to be surrounded by stucco;
   said body having a second side edge, opposite said first side edge;
   means for anchoring said second side edge, into a layer of said stucco subsequently applied to said wall surrounding said fixture;
   said anchoring of said body on said second side edge and said adhesive engagement along said first side edge, and a stretching of said body therebetween, defining an elastic seal over said gap which maintains said seal even during gap enlargements caused by differing expansion rates of said stucco and said fixture during temperature differentials.

2. The sealing apparatus of claim 1, additionally comprising:
   said means for anchoring comprising a plurality of apertures communicating through said body in between said first side and said second side edge.

3. The sealing apparatus of claim 1 additionally comprising:
   said means for anchoring comprising an undulating surface formed adjacent said second side edge having gaps in between projections; and
   said gaps filled with said stucco providing an anchor of said second side edge with said stucco.

4. The sealing apparatus of claim 2, additionally comprising:
   said body formed by strips of body material configured for an engagement with one side of a corner portion of said body material;

5. The sealing apparatus of claim 2, additionally comprising:
   raised portions projecting along a portion of said body adjacent said first side of said body; and
   said raised portions when in operative contact with said stucco forming a torturous path for water or air past said body to said gap.

6. The sealing apparatus of claim 1, additionally comprising:
   said body formed in rectangular configuration;
   said first side edge defining a shape and size of an aperture adapted for engagement upon an exterior circumference of a rectangular wall mounted component; and
   said second edge defining an exterior perimeter of said body, said body having apertures communicating therethrough adjacent said second edge, said apertures defining means for anchoring said second edge embedded in said stucco.

7. The sealing apparatus of claim 6, additionally comprising:
   said first side edge defining a round or oval aperture adapted for sealed contact with a wall mounted component having a matching shape.

8. The sealing apparatus of claim 6, additionally comprising:
   said body formed of four elongated members and four corner members each said corner member engaging one end from each of two of said elongated members;
   means for fixing said engagement of said ends of said elongated members with said corner members; and
   whereby said body can be formed to engage said exterior circumference of said fixture from an assembly of said corner members and said elongated members.

9. The sealing apparatus of claim 8, additionally comprising:
   said means for fixing said engagement comprising a projection communicating from an engagement with a said corner member, through an aperture formed in a said elongated member.

10. The sealing apparatus of claim 8, additionally comprising:
   a pair of overlap sections positioned on each said corner member where it engages with one of said end one of said elongated member; and
   said overlap sections configured to engage with an area adjacent said one end of said elongated member and thereby form an overlap engagement of said corner member and said one end of said elongated member.

11. The sealing apparatus of claim 9 wherein said fixture is one of an electrical box or window.

12. The sealing apparatus of claim 10 wherein said fixture is one of an electrical box or window.

13. The sealing apparatus of claim 6, additionally comprising:
   wherein said body is formed as a unitary structure.

14. A method for sealing gaps between fixtures communicating through a wall, and surrounding cementitious material, positioned upon said wall, employing an elongated seal having a body adapted on a first side to engage with said fixture, and configured on a second side opposing said to said first side, with one or a plurality of apertures communicating through said body of said seal, comprising the steps of:
engaging a first side of an elongated seal with said fixture positioned in said wall, to position said second side of said extending in a direction away from said fixture; communicating said wet cementitious material to said wall and concurrently communicating said cementitious material through said one or plurality of apertures; and allowing time for said cementitious material to dry to a cured state, whereby said cementitious material communicated through said one or plurality of apertures, in said cured state, forms an anchor communicating through said body of said seal adjacent said second side.

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