US 20070199270A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2007/0199270 A1

Weir et al. (43) Pub. Date: Aug. 30, 2007

(54) VAPOR CONTROL FACING FOR WALL FINISHING SYSTEM

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(21) Appl. No.: **11/648,077**

(22) Filed: **Dec. 30, 2006**

Related U.S. Application Data

(63) Continuation-in-part of application No. 10/754,316, filed on Jan. 9, 2004.

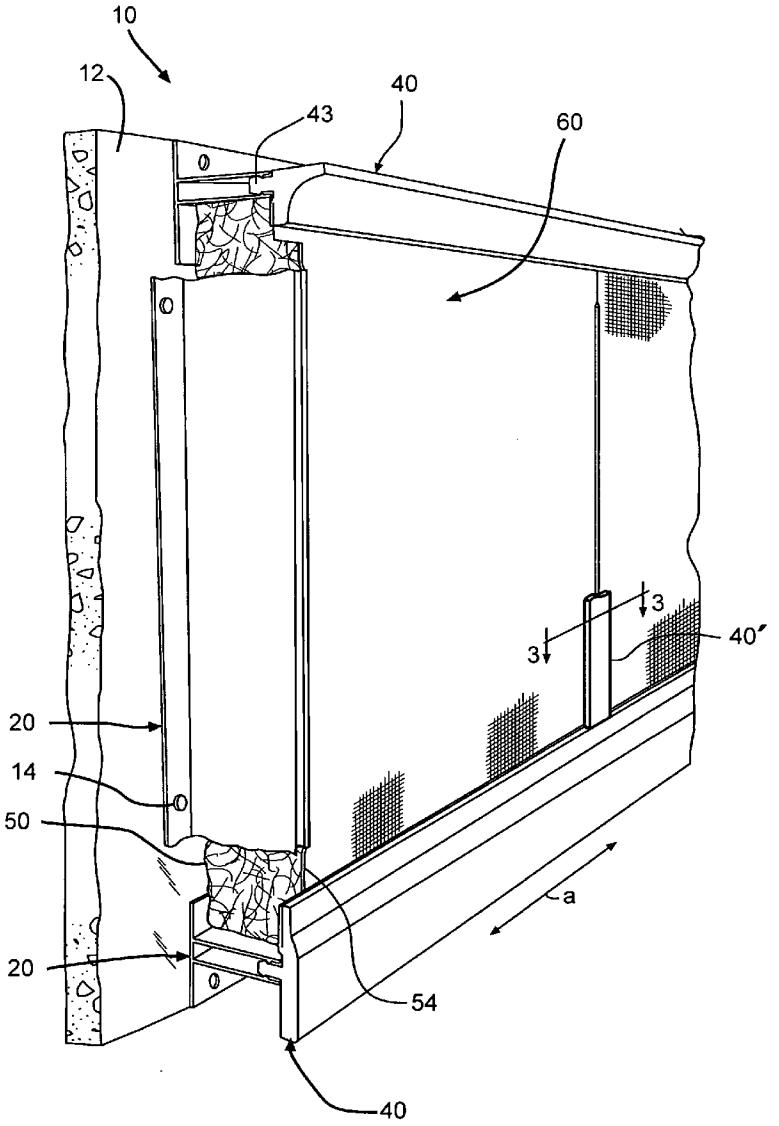
Publication Classification

(51) **Int. Cl.**
E04B 2/00 (2006.01)

(52) **U.S. Cl.** **52/506.01**

(57) **ABSTRACT**

A finishing system insulation panel includes a primary insulation board, a covering suitable to provide an aesthetically pleasing surface and a film bonding the covering to the primary insulation board. The film is configured to substantially retard the flow of air, moisture, and gases.



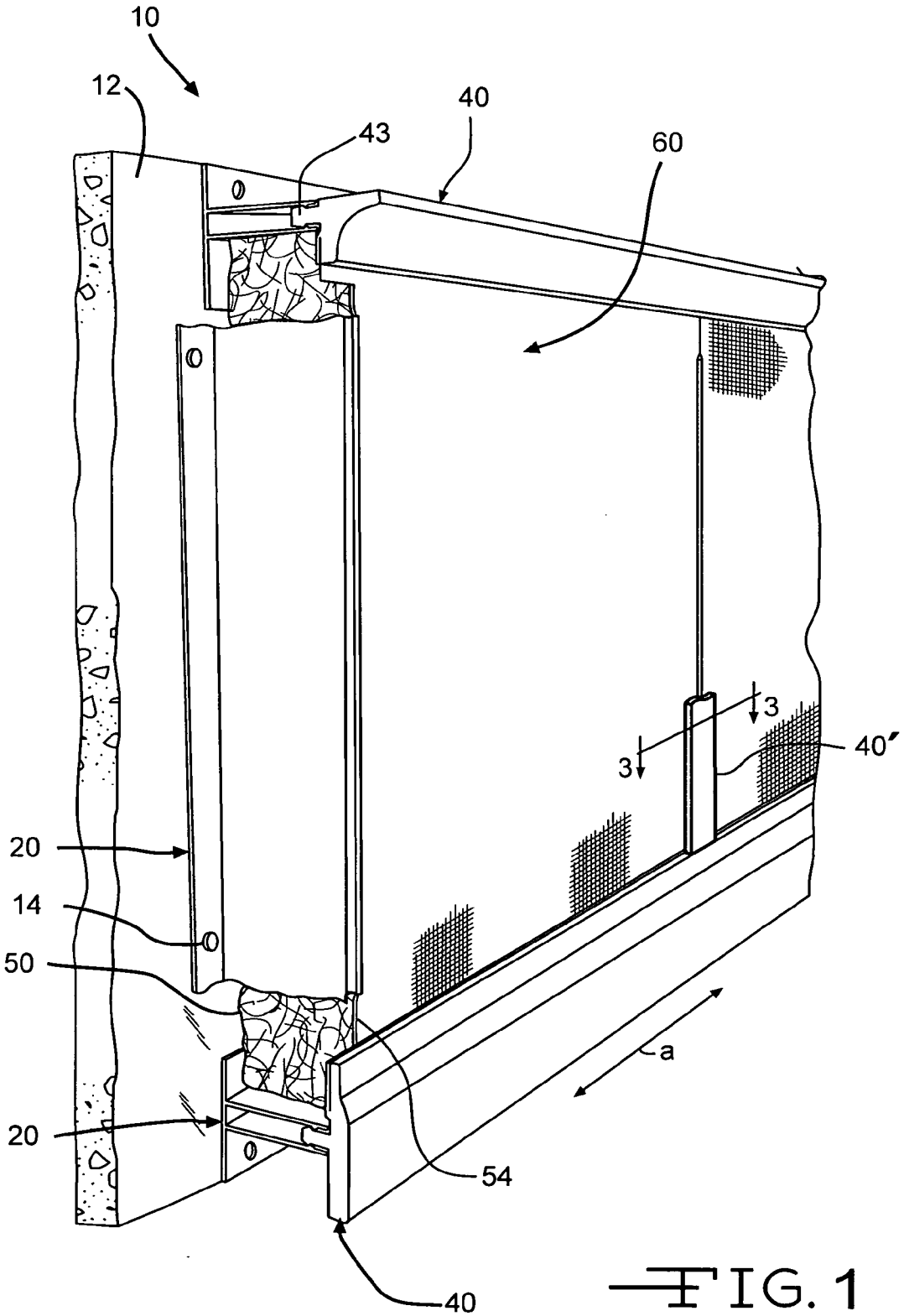


FIG. 1

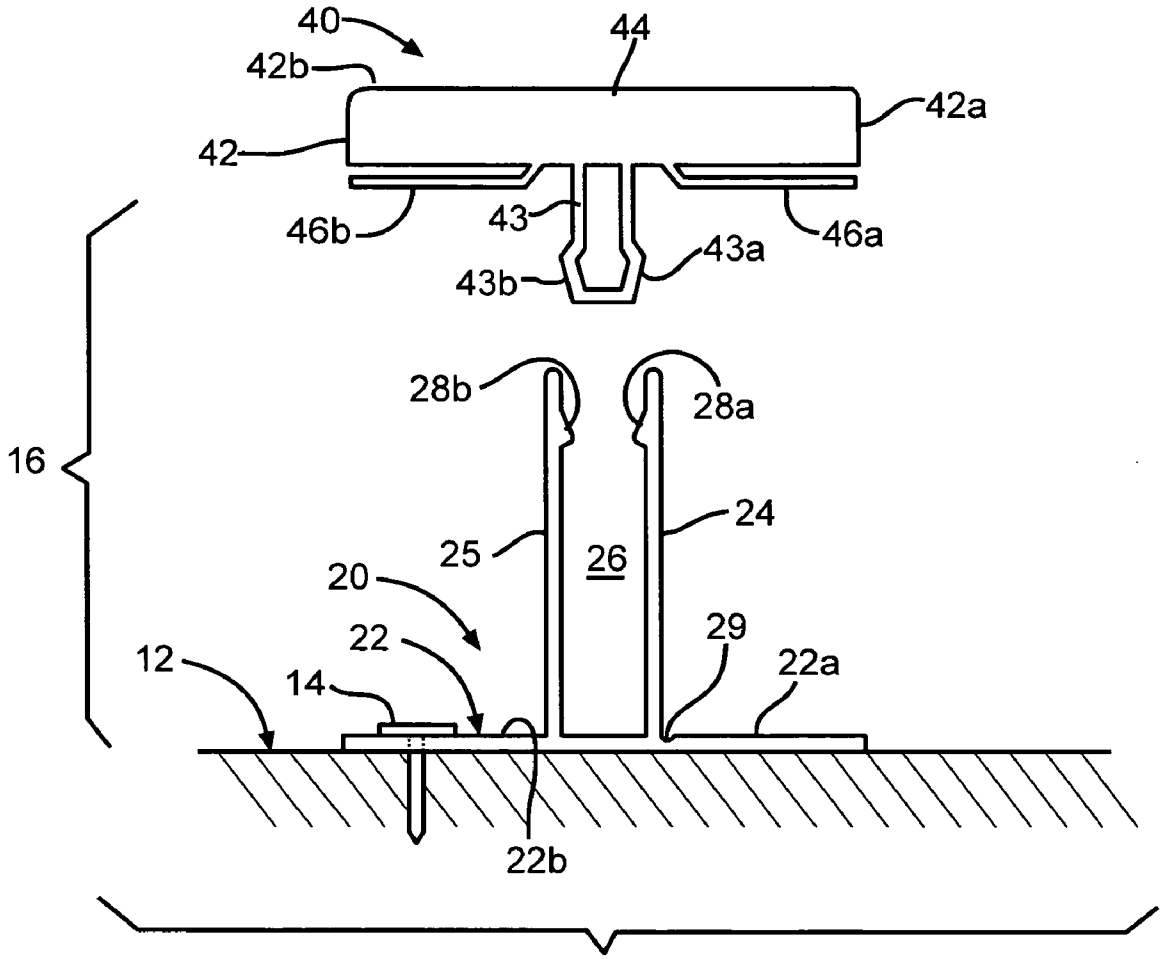

40
44
42b
42a
42
46b
43
43a
46a
43b
28b
28a
16
24
25
26
20
22
29
12
22a
14
22b

FIG. 2

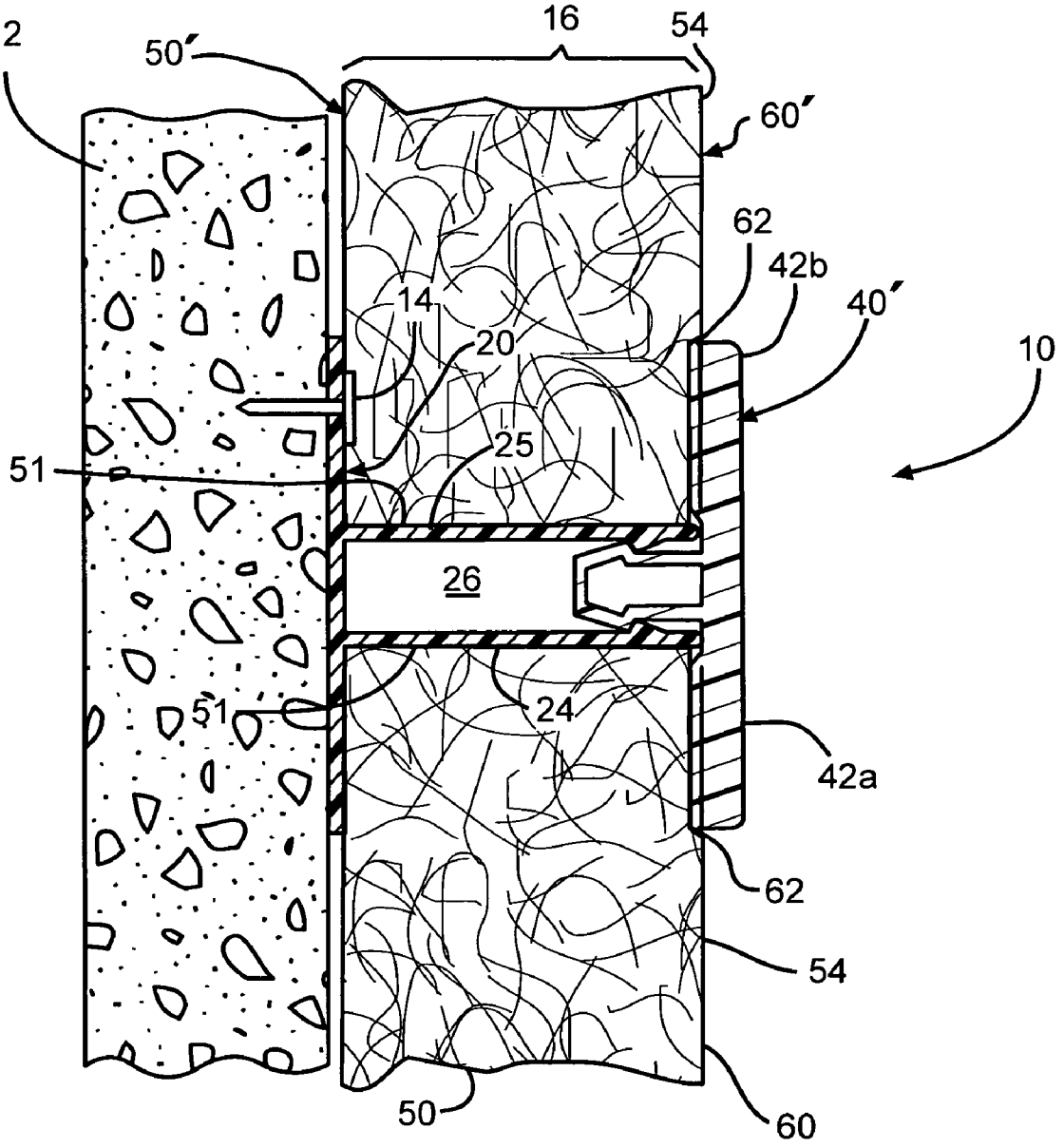


FIG. 3

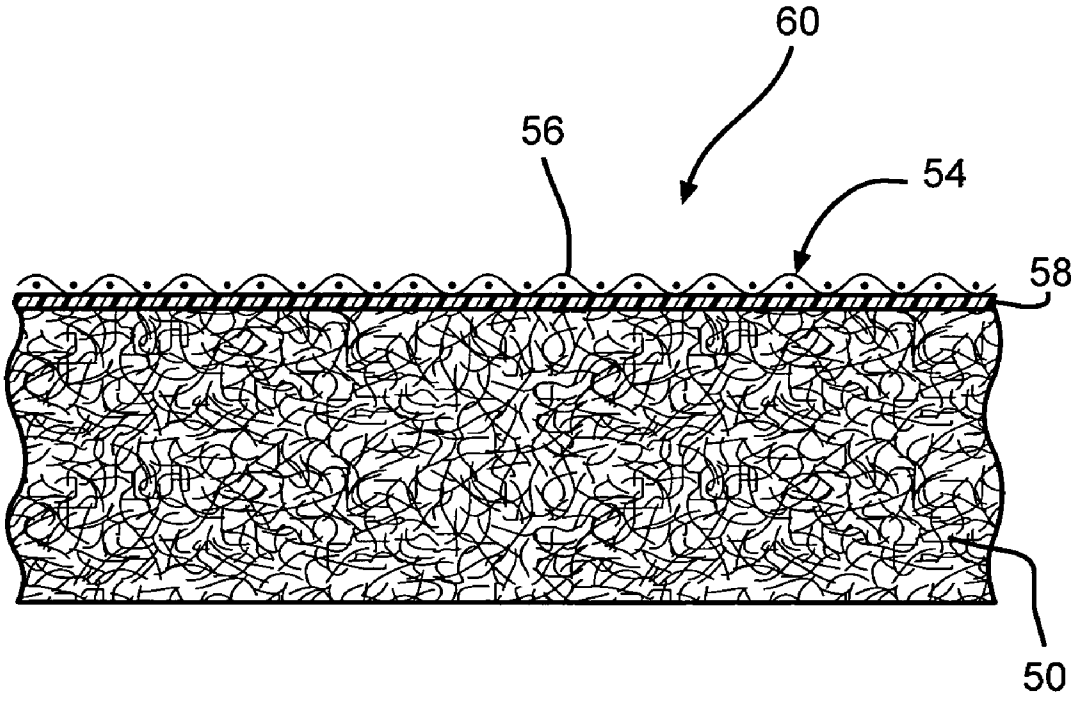


FIG. 4

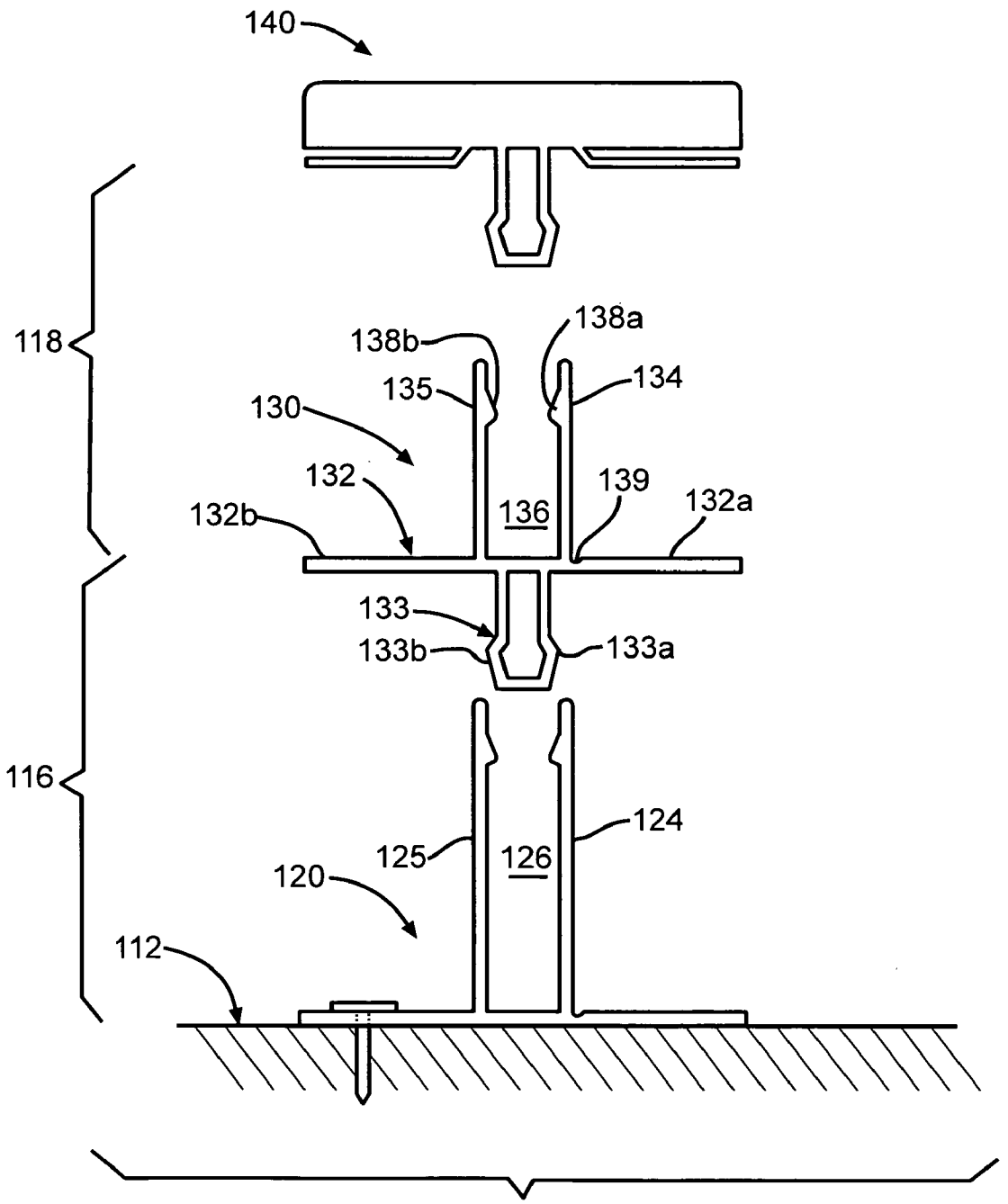

140
118
138b
138a
135
134
130
132
139
132a
132b
136
133
133b
133a
116
124
125
126
120
112

FIG. 5

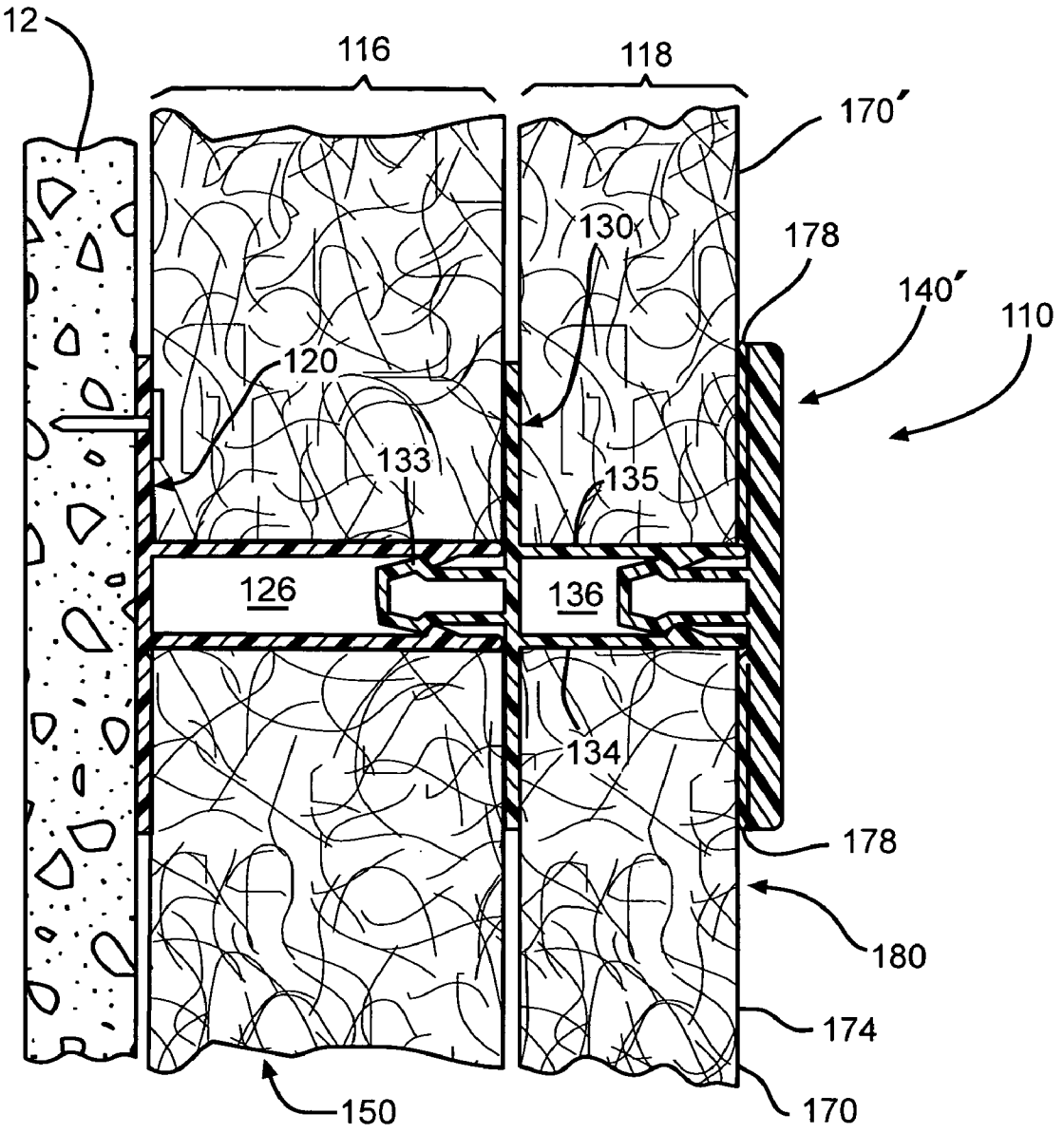

12
116
118
170'
130
178
140'
110
120
133
135
126
136
134
178
180
174
170
150

FIG. 6

VAPOR CONTROL FACING FOR WALL FINISHING SYSTEM

RELATED APPLICATIONS

[0001] This application is a continuation-in-part application of U.S. patent application, Ser. No. 10/ 754,316, filed on Jan. 9, 2004 entitled, "INSULATION SYSTEM WITH VARIABLE POSITION VAPOR RETARDER", which is incorporated herein by reference in its entirety.

TECHNICAL FIELD

[0002] The present invention relates generally to an insulated panel mounting system for building structures and, more particularly, to wall finishing systems capable of retarding the flow of air, moisture, and gases.

BACKGROUND OF THE INVENTION

[0003] Homeowners often desire to finish rooms, such as basements, in a manner which provides a comfortable and aesthetically pleasing atmosphere.

[0004] Most basements are constructed of common materials including cinder block walls or poured concrete walls. Left unfinished, cinder block or poured concrete basement walls can allow humidity into the basement, and also allow the loss of heat through the basement walls. Traditionally, basement walls have been finished by known methods including attachment of wood studs to the basement walls and subsequent attachment of an interior wall surface, such as drywall or paneling, to the wood studs. Insulation materials such as glass fiber insulation batts have been placed between the wall and the wall surface before attachment of the wall surface to the wood studs. In another known method, a granular or loose-fill fibrous insulation material is poured or blown into the spaces between the wall and the interior wall surface after the interior wall surface is attached to the wood studs.

[0005] A known method of finishing a room involves the use of insulative panels releaseably connected to installed frame members as developed by the assignee herein, Owens Corning, and as described in the Weir et al. U.S. Pub. No. 2004/0219853 A1 for a "Room Finishing System", and the Hettler et al. U.S. Pub. No. 2005/0150183 A1 for an "Insulation System with Variable Position Vapor Barrier", both of which are expressly incorporated herein by reference.

[0006] It would be advantageous if the insulative panels were finished with a facing capable of retarding the flow of air, moisture, and gases.

SUMMARY OF THE INVENTION

[0007] The above objects as well as other objects not specifically enumerated are achieved by a finishing system insulation panel. The finishing system insulation panel includes a primary insulation board, a covering suitable to provide an aesthetically pleasing surface and a film bonding the covering to the primary insulation board. The film is configured to substantially retard the flow of air, moisture, and gases.

[0008] According to this invention there is also provided an insulation finishing system, the insulation finishing system includes a plurality of lineals fixed to a building structure. The lineals include a lineal partition which protrudes from the building structure and define primary insulation cavities. Finishing system insulation panels are provided which include a primary insulation board and a covering suitable to provide an aesthetically pleasing surface. A film bonds the covering to the primary insulation board. The film is configured to substantially retard the flow of air, moisture, and gases. A plurality of trim pieces connect to the lineals and fix the finishing system insulation panels in the primary insulation cavities.

[0009] According to this invention there is also provided a method of manufacturing a finishing system insulation panel. The method includes providing a covering, softening a film, the film being configured to substantially retard the flow of air, moisture, and gases, bonding the softened film to the covering, and applying the softened film and covering to a primary insulation board to form a finishing system insulation panel.

[0010] According to this invention there is also provided a method of manufacturing a finishing system insulation panel. The method includes providing a covering, softening a film, the film being configured to substantially retard the flow of air, moisture, and gases, bonding the softened film to the covering, cooling the assembled softened film and covering, re-heating the assembled film and covering, and applying the softened film and covering to a primary insulation board to form a finishing system insulation panel.

[0011] According to this invention there is also provided an insulation finishing system, the insulation finishing system includes a plurality of lineals fixed to a building structure. The lineals include a lineal partition which protrudes from the building structure and define primary insulation cavities. Finishing system insulation panels are provided which include a primary insulation board and a covering. A film bonds the covering to the primary insulation board. The film is configured to substantially retard the flow of air, moisture, and gases. A plurality of trim pieces connect to the lineals and fix the finishing system insulation panels in the primary insulation cavities. The trim pieces include sealing flanges which seal the trim pieces against the finishing system insulation panels.

[0012] Various objects and advantages will become apparent to those skilled in the art from the following detailed description of the various embodiments, when read in light of the accompanying drawings. It is to be expressly understood, however, that the drawings are for illustrative purposes and are not to be construed as defining the limits of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] FIG. **1** is a perspective view, partially broken away, of a finishing system.

[0014] FIG. **2** is a cross-sectional view of a lineal and a trim piece for a finishing system.

[0015] FIG. **3** is a cross-sectional view of a finishing system taken along the line **3-3** in FIG. **1**.

[0016] FIG. **4** is a cross-sectional view of an insulation panel and a fabric capable of retarding the flow of air, moisture, and gases.

[0017] FIG. **5** is a cross-sectional view of a lineal, adapter and trim piece for a second embodiment of the finishing system.

[0018] FIG. **6** is a cross-sectional view of the second embodiment of the finishing system.

DETAILED DESCRIPTION AND PREFERRED EMBODIMENTS

[0019] The description and drawings disclose an insulation finishing system **10** for finishing a room. With reference to FIG. **1**, an insulation finishing system **10** is shown installed on a building structure **12**. For ease of explanation, the building structure **12** will be generally referred to as a wall **12**, although it is to be understood that the building structure can include ceilings and other building features. The wall **12** may be any type that one might desire to finish, either in a residential or a commercial building. The room may include more than one wall and may also include a floor (not shown) and a ceiling (not shown). The wall **12** may have windows, doors, electrical conduits, plumbing fixtures or any other components and assemblies commonly found in residential or commercial buildings.

[0020] The insulation finishing system **10** includes a plurality of lineals **20** which create primary insulation cavities **16**, as shown in FIG. **3**, when installed on the wall **12**. As shown in FIG. **1**, the lineals **20** are a plastic material, but the lineals **20** can be made of metal or any other material suitable to be installed on a wall **12** and create primary insulation cavities **16**.

[0021] The lineals **20** can be attached to the wall **12** in any suitable manner. In certain embodiments, the lineal **20** is attached to the wall **12** with suitable fasteners **14**; however, in other embodiments, the lineal **20** can be affixed to the wall **12** with a suitable adhesive material or any other mechanism which provides attachment to the wall **12**.

[0022] The insulation finishing system **10** further includes primary insulation boards **50**. The primary insulation boards **50** may be made of any type of insulating materials, such as, but not limited to, fiberglass, fiberglass board, rock wool board, mineral board, or a foam board. The foam board may be formed from extruded or molded polystyrene, polyisocyanurate, phenolic, polyurethane, or other similar insulation materials.

[0023] The primary insulation boards **50** include a decorative facing **54** bonded to the outer surface of the primary insulation board **50**, as best shown in FIG. **4**, as will be discussed later.

[0024] As best shown in FIG. **2**, the lineal **20** has a lineal base plate **22** which has opposing lineal retaining flanges **22***a* and **22***b*. The lineal **20** also has opposing lineal partitions **24** and **25** which extend from the lineal base plate **22**. The opposing lineal partitions **24** and **25** define a receiving channel **26** for releasably engaging a trim piece **40**.

[0025] In certain embodiments, one or more of the lineal partitions members **24**, **25** can include one or more inwardly extending detents **28***a*, **28***b* for securing the trim piece **40** in the lineal **20**. The lineal base plate **22** can optionally include at least one break-away notch **29** that extends along the intersection of the lineal base retaining flange **22***a* and the lineal partition **24**. The break-away notch **29** allows the installer to easily remove the lineal base retaining flange **22***a* so that the lineal **20** can be installed in a corner or other area such as against a window or door (not shown).

[0026] The insulation finishing system **10** also includes a plurality of trim pieces **40** which connect to the lineals **20** and retain the primary insulation boards **50** within the primary insulation cavity **16**. As shown in FIG. **1**, the trim pieces **40** are a plastic material, but the trim pieces **40** can be made of metal or any other material suitable to connect to the lineals **20** and retain the primary insulation panels **50** within the primary insulation cavities **16**.

[0027] As shown in FIG. **2**, the trim piece **40** has a trim base plate **42** with opposing trim retaining flanges **42***a* and **42***b*. The trim piece **40** can have an outer surface **44** treated in a manner such that the outer surface **44** presents a decorative finish, such as simulated wood grain finish. The trim piece **40** also has a trim connector **43** which extends from a bottom of the trim base plate **42**. The trim connector **43** can have any desired shape so that the trim connector member **43** can fit within the receiving channel **26** of the lineal **20**. In the embodiment shown in FIG. **2**, the trim connector **43** has generally convex walls **43***a* and **43***b*. The trim piece also has optional sealing flanges **46***a* and **46***b* which extend from the trim base plate **42**. In one embodiment, the sealing flanges **46***a* and **46***b* could be formed as an integral part of the trim piece **40**. In another embodiment, the sealing flanges **46***a* and **46***b* can be separate flanges not formed as part of the trim piece **40**. The separate flanges can be installed by various methods including gluing and stapling, or any other method sufficient to fix the sealing flanges between the finishing system insulation panels **70** and the trim pieces **40**.

[0028] In general, the trim retaining flanges **42***a* and **42***b* maintain the finishing system insulation panels **60** in the primary insulation cavities **16** and provide a decorative interface between adjacent finishing system insulation panels **60'**. In certain embodiments, as shown in FIG. **1**, a trim piece **40** can be oriented in a vertical direction and used as a vertical divider member **40'**, which is inserted between adjacent finishing system insulation panels **60** and **60'**.

[0029] As discussed previously, the primary insulation boards **50** include a decorative facing **54**. As best shown in FIG. **4**, the decorative facing **54** includes a covering **56** and a film **58**. In most cases, the covering **56** provides an aesthetically pleasing surface for the primary insulation boards **50**. The covering **56** can be any type of fabric or vinyl decorative covering, such Maharam Tek-Wall 1000 or Designtex US-OC, suitable to provide an aesthetically pleasing surface for the primary insulation boards **50**. The covering **56** is typically manufactured by weaving warp fibers together with weft fibers in a crossing pattern. The weaving together of the fibers results in interstices between the woven fibers. Generally, the interstices between the woven fibers are filled by the film **58**. The film **58** is softened at a temperature of approximately 210-300° F. and bonded to the covering **56**. In one embodiment, the temperature of the softened film **58** is limited to a maximum of approximately 210-300° F., which is less than the temperature at which most coverings start to melt or become too soft to handle. In another embodiment, the maximum temperature of the softened film **58** can be higher. The softened film **58** bonds to the covering **56** and also fills the interstices between the woven fibers.

[0030] Subsequent to the bonding of the softened film **58** to the covering **56**, the softened film **58** is used to bond the

covering **56** to the primary insulation boards **50**. The bonding of the softened film **58** and the covering **56** to the primary insulation board **50** can be completed using various manufacturing methods including a continuous rolling operation in which the softened film **58**, the covering **56** and the primary insulation boards **50** are fed together to form a finishing system insulation panel **60**. Alternatively, a pressing operation can be used in which the softened film **58**, the covering **56**, and the primary insulation boards **50** are pressed together to form a finishing system insulation panel **60**. Any other manufacturing operation can be used provided the manufacturing operation is sufficient to bond the softened film **58** and the covering **56** to the primary insulation board **50**. Alternatively, subsequent to the bonding of the covering **56** to the softened film **58**, the assembled covering **56** and softened film **58** can be cooled and can be held for further use in a convenient manner such as in rolls, stacked or any other storage manner sufficient to safely and conveniently store the assembly of the covering **56** bonded to the film **58**. At a later time, the assembled covering **56** and the film **58** can be heated to soften the film **58** for bonding to the primary insulation boards **50**.

[**0031**] In addition to bonding the covering **56** to the primary insulation board **50**, the film **58** also substantially retards the flow of air, moisture, and gases, without requiring the use of a separate vapor or air barrier (not shown). The film **58** is made of a polymer material, such as polyurethane, nylon, ethylene vinyl acetate, polyethylene or any material suitable to bond the covering **56** to the primary insulation boards **50** and substantially retard the flow of air, moisture, and gases. The film **58** can have a softening point within the range of from approximately 190° F. to approximately 300° F. To effectively retard the flow of air, moisture, and gases, the film **58** has a permeability rating of between 0 to 35 grams per hour per square foot as determined by water vapor transmission tests, such as ASTM E96. Typical water vapor transmission tests, such as the ASTM E96, evaluate the transfer of water vapor through semi-permeable and permeable materials over a period of time. Alternatively, the film **58** can have a variable permeability rating of between 0 to 35 grams per hour per square foot to allow variation in the flow of air, moisture, and gases through the finishing system insulation panels **60** as seasonal changes in temperature and humidity occur. A known product that has a variable permeability rating is "MemBrain: The SMART Vapor Retarder" which is available from Certainteed Corporation. Air retarding performance of the film **58** is measured using air transmission tests, such as ASTM E1677 or other similar testing methods, which are useful in measuring the rate of air flow in building materials.

[**0032**] During the installation process of the insulation finishing system **10**, various components may be installed in a step-wise fashion until the wall **12** is covered. An initial lineal **20** is fixed to a wall **12**, thereby forming an initial primary insulation cavity **16**. An initial finishing system insulation panel **60** is positioned in the initial primary insulation cavity **16**, such that the end portion **51** of the initial finishing system insulation panel **60** is pressed against the lineal partition **24** using hand applied pressure. Only hand applied pressure is necessary to affect an interference fit between the end portion **51** of the finishing system insulation panel **60** and the lineal partition **24**. Following installation of the finishing system insulation panel **60**, a subsequent lineal **20** is pressed against the installed finishing system installation panel **60**, again using only hand pressure, and the subsequent lineal **20** is fastened to the wall **12** using appropriate fasteners **14**. This procedure is followed until the wall **12** is covered by the finishing system insulation panels **60**. Alternatively, other installation techniques can be used.

[**0033**] In certain installations, a temporary clip, such as a scrap part of a lineal **20** and/or trim piece **40**, can be used to hold the finishing system insulation panels **60** within the primary insulation cavity **16** during the sequential installation of subsequent finishing system insulation panels **60**.

[**0034**] In a certain embodiment, the interference fit between the finishing system insulation panels **60** and the lineal partitions **24**, **25** is in the horizontal direction a, as shown in FIG. **1**. Alternatively, the interference fit between the finishing system insulation panels **60** and the lineal partitions **24**, **25** may be in a vertical direction or may be simultaneously in both a horizontal and vertical direction.

[**0035**] As shown in FIG. **3**, the trim retaining flanges **42***a* and **42***b* extend outwardly such that, when the insulation finishing system **10** is assembled, the finishing system insulation panels **60** are located within the primary insulation cavity **16**. Thus, the base plate **42**, with its flanges **42***a*, **42***b*, on the trim piece **40**, holds (or retains) the finishing system insulation panels **60** within the primary insulation cavity **16**. As the trim piece **40** is located within the receiving channel **26**, the sealing flanges **46***a*, **46***b* collapse against the finishing system insulation panel **60**, including the decorative facing **54**, thereby forming a sealed joint **62**, as shown in FIG. **3**. The sealed joint **62** substantially prevents air, moisture, and gases from penetrating the intersection of the finishing system insulation panel **60** and the trim piece **40**.

[**0036**] As shown in FIG. **3**, the finishing system insulation panel **60** is positioned within the primary insulation cavity **16** so that there is optionally an interference fit between the end portion **51** of the finishing system insulation panel **60** and the lineal partitions **24**, **25**. An interference fit is defined as constant direct contact between the end portion **51** of the finishing system insulation panel **60** and the lineal partition **24**, **25** such that there is substantially no continuous gap or clearance between the end portion **51** of the finishing system insulation panel **60** and the lineal partition **24**, **25**. The interference fit between the end portion **51** of the finishing system insulation panel **60** and the lineal partition **24**, **25** must provide enough contact to prevent air, moisture, and gases from flowing along the lineal partition **24**, **25** to the lineal **20**. The interference fit between the end portion **51** of the finish system insulation panel **60** and lineal partition **24** is achieved during the installation of the finishing system insulation panels **60** by hand applied pressure applied to the finishing system insulation panels **60** and also applied to the subsequently installed lineals **20**. This procedure has the advantage of eliminating the installation steps of sizing, measuring and cutting the finishing system insulation panels **60**. However, an interference fit between the end portion **51** of the finishing system insulation panels **60** and the lineal partitions **24**, **25** can also be made by the installation steps of sizing, measuring and cutting the finishing system insulation panels **60**.

[**0037**] In summary, the insulation finishing system **10** includes finishing system insulation panels **60** and various mounting components such as lineals **20** and trim pieces **40**. The finishing system insulation panels **60** include a covering

56 bonded to primary insulation panels **50** by a film **58**. The film **58** both bonds the covering **56** to the primary insulation panel **50** and substantially retards the flow of air, moisture, and gases. The film **58** eliminates the use a separate vapor or air barrier.

[**0038**] In another embodiment, the insulation finishing system **110** includes a second layer of insulating materials and additional components for mounting the second layer of insulating materials. The insulation finishing system **110** includes lineal adaptors **130** that create secondary insulation cavities **118**, as shown in FIGS. **5** and **6**, when connected to the lineals **120**. As shown in FIGS. **5** and **6**, the lineal adaptors **130** are a plastic material, but the lineal adaptors **130** can be made of metal or any other material suitable to be connected to the lineals **120** and create secondary insulation cavities **118**. The lineal adaptors **130** have opposing adaptor partitions **134** and **135** which extend from a top side of the adaptor base plate **132** and define an adapter receiving channel **136** for engaging the trim piece **140**. In certain embodiments, the adaptor partitions **134**, **135** allow a releasable engaging connection to be formed between the lineal adaptor **130** and the trim piece **140**.

[**0039**] The lineal adaptors **130** include an adaptor base plate **132** with opposing adaptor retaining flanges **132***a* and **132***b* and a connector member **133** which extends from a bottom side of the adaptor base plate **132**. The connector member **133** can have any desired shape so that the connector member **133** can fit within the lineal receiving channel **126**. In the embodiment shown, the connector member **133** has generally convex walls **133***a* and **133***b*. In certain embodiments, the adaptor connector **133** snaps into the lineal partitions **124**, **125** such that the adaptor connector **133** releasably retains the lineal adaptor **130** in engagement with the lineal **120**. If necessary, the lineal adaptor **130** can be removed without damage to the lineal **120** or the lineal adaptor **130** itself. Additionally, the lineal partitions **134** and **135** allow a releasable connection to be formed between the lineal adaptor **130** and the trim piece **140**. Referring again to FIG. **6**, each lineal adaptor flange **132***a* and **132***b* extends outwardly such that base plate **132**, and its flanges **132***a*, **132***b*, holds (or retains) the primary insulation board **150** within the primary insulation cavity **116**.

[**0040**] In certain embodiments, one or more of the adaptor partitions **134**, **135** can include one or more inwardly extending detents **38***a*, **38***b* for securing the trim piece **140** to the lineal adaptor **130**. The adaptor base plate **132** can optionally include at least one break-away notch **139** that extends along the intersection of the adaptor base retaining flange **132***a* and the adapter partition **134**. The break-away notch **139** allows the installer to easily remove the adaptor retaining flange **132***a* so that the lineal adaptor **130** can be installed in a comer or other area such as against a window or door (not shown).

[**0041**] The insulation finishing system **110** further includes a plurality of finishing system insulation panels **180** having a covering **174** bonded to an outer surface of secondary insulation boards **170** by a film (not shown). When installed, the finishing system insulation panels **180** are located in the secondary insulation cavity **118**.

[**0042**] The secondary insulation boards **170** may be made of the same materials used to make the primary insulation boards **50**, as discussed previously.

[**0043**] The covering **174** and the film used to bond the covering **174** to the secondary insulation panels **170**, as shown in FIG. **6**, can be the same covering **56** and film **58** bonded to the primary insulation panels **50**, as discussed previously. The covering **174** can be bonded to the secondary insulation panels **170** by the film using the same manufacturing techniques and operations as discussed previously to bond the covering **56** to the primary insulation panels **50**. Similarly, the interstices between the woven fibers of the covering **174** are filled by the film when the film is softened and bonded to the covering **174**. In addition to bonding the covering **174** to the secondary insulation panels **170**, the film also substantially retards the flow of air, moisture, and gases without requiring the use of a separate vapor or air barrier. The film can be made of the same materials used to make the film **58**, as previously discussed, and has the same permeability ratings. Optionally, the film can have a variable permeability rating of between 0 to 35 grams per hour per square foot.

[**0044**] In certain embodiments, the primary insulation panel **50** has a first thickness and the secondary insulation panel **170** has a second, different thickness. It is to be understood that the R-values of the primary insulation panel **50** and the secondary insulation panel **170** may be determined for a particular geographic region.

[**0045**] In a manner similar to that discussed earlier with respect to the primary insulation panels **50**, the finishing system insulation panels **180** can be installed against the adapter partitions **134**, **135** in a step-wise fashion until the primary insulation panels **50** are covered. Alternatively, other installation techniques can be used.

[**0046**] As shown in FIG. **6**, the trim piece **140** holds (or retains) the finishing system insulation panel **180** within the secondary insulation cavity **18** in a similar manner as the way the trim piece **40** holds the finishing system insulation panel **60** within the primary insulation cavity **16**, as previously discussed. Similarly, the trim piece **140** forms a seal joint **178** between the trim piece **140** and the finishing system insulation panel **180** to substantially prevent the flow of air, moisture, and gases from penetrating the intersection of the finishing system insulation panels **180** and the trim piece **140**.

[**0047**] In summary, the insulation finishing system **110** includes a second layer of insulating panels and additional mounting components. The second layer of insulating panels includes a covering **174** bonded to the secondary insulation panels **170**. The covering **174** includes a film (not shown) which both bonds the covering **174** to the secondary insulation panel **170** and substantially retards the flow of air, moisture, and gases. The film eliminates the requirement to use a separate vapor or air barrier.

[**0048**] While the invention has been described with reference to a preferred embodiment, it should be understood by those skilled in the art that various changes may be made and equivalents may be substituted for elements thereof without departing from the essential scope of the invention. In addition, many modifications may be made to adapt a particular situation or panel to the teachings of the invention without departing from the essential scope thereof. Therefore, it is intended that the invention not be limited to the particular embodiment disclosed as the best mode contem-

plated for carrying out this invention, but that the invention will include all embodiments falling within the scope of the claims.

What is claimed is:

1. A finishing system insulation panel, the finishing system insulation panel comprising:

a primary insulation board;

a covering suitable to provide an aesthetically pleasing surface; and

a film bonding the covering to the primary insulation board, wherein the film is configured to substantially retard the flow of air, moisture, and gases.

2. The finishing system insulation panel of claim 1, wherein the film is bonded to the covering by softening the film and contacting the covering with the softened film.

3. The finishing system insulation panel of claim 1, wherein the film is configured to variably retard the flow of air, moisture, and gases.

4. The finishing system insulation panel of claim 4, wherein the film has a variable permeability rating of between 0 to 35 grams per hour per square foot.

5. The finishing system insulation panel of claim 1, wherein the film is one of the group consisting of polyurethane, nylon, ethylene vinyl acetate, and polyethylene.

6. The finishing system insulation panel of claim 1, where the film has a softening point at a temperature of about 220° F.

7. The finishing system insulation panel of claim 1, wherein the film is bonded to the primary insulation board and to the covering by softening the film and contacting the covering and the primary insulation board with the softened film.

8. An insulation finishing system comprising:

a plurality of lineals fixed to a building structure, the lineals including a lineal partition which protrudes from the building structure, wherein the lineal partitions define primary insulation cavities;

a plurality of finishing system insulation panels, the finishing system insulation panels including a covering bonded to a primary insulation board by a film, wherein the film is configured to substantially retard the flow of air, moisture, and gases; and

a plurality of trim pieces connected to the lineals, the trim pieces fixing the finishing system insulation panels in the primary insulation cavities.

9. The insulation finishing system of claim 8, wherein the finishing system insulation panels within the primary insulation cavities are provided with an interference fit with the lineal partitions.

10. The insulation finishing system of claim 8, wherein the film is configured to variably retard the flow of air, moisture, and gases.

11. A method of manufacturing a finishing system insulation panel, the method including the steps of:

providing a covering;

softening a film, wherein the film is configured to substantially retard the flow of air, moisture, and gases;

bonding the softened film to the covering;

applying the softened film and covering to a primary insulation board to form a finishing system insulation panel.

12. The method of claim 11, wherein the softened film, covering, and primary insulation board are rolled together to form the finishing system insulation panel.

13. The method of claim 11, wherein the softened film, covering, and primary insulation board are pressed together to form the finishing system insulation panel.

14. The method of claim 11, wherein the film is configured to variably retard the flow of air, moisture, and gases.

15. A method of manufacturing a finishing system insulation panel, the method including the steps of:

providing a covering;

softening a film, wherein the film is configured to substantially retard the flow of air, moisture, and gases;

bonding the softened film to the covering;

cooling the assembled softened film and covering;

re-heating the assembled film and covering; and

applying the re-heated and softened film and covering to a primary insulation board to form a finishing system insulation panel.

16. The method of claim 15, wherein the softened film and covering are coiled into a roll for later use.

17. The method of claim 15, wherein the film is configured to variably retard the flow of air, moisture, and gases.

18. An insulation finishing system comprising:

a plurality of lineals fixed to a building structure, the lineals including a lineal partition which protrudes from the building structure, wherein the lineal partitions define primary insulation cavities;

a plurality of finishing system insulation panels, the finishing system insulation panels including a covering bonded to a primary insulation board by a film, wherein the film is configured to substantially retard the flow of air, moisture, and gases; and

a plurality of trim pieces connected to the lineals, the trim pieces including sealing flanges, the trim pieces fixing the finishing system insulation panels in the primary insulation cavities, wherein the sealing flanges seal the trim pieces against the finishing system insulation panels.

19. The insulation finishing system of claim 18, wherein the finishing system insulation panels within the primary insulation cavities are provided with an interference fit with the lineal partitions.

20. The insulation finishing system of claim 18, wherein the film is configured to variably retard the flow of air, moisture, and gases.

21. The insulation finishing system of claim 18, where in the sealing flanges are integrally molded to the trim pieces.

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