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(54) **BASEMENT FINISHING SYSTEM**

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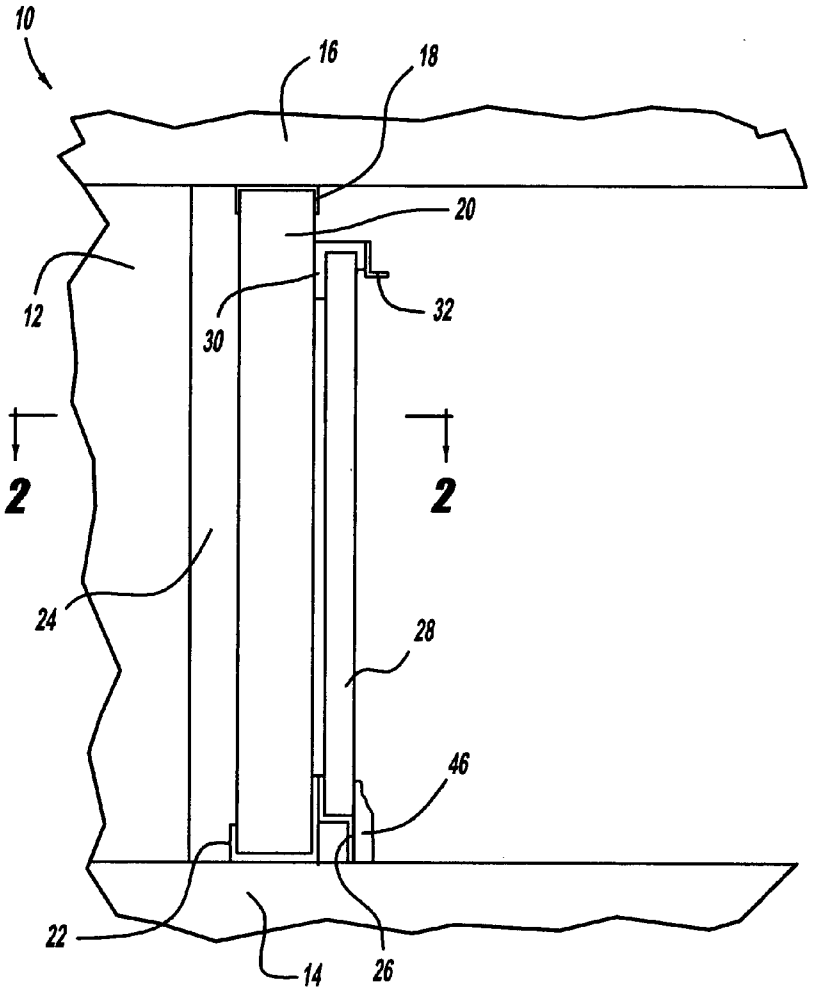
(57) **ABSTRACT**

A wall used in conjunction with a pre-existing wall to create an improved aesthetic appearance, and eliminate the chances of mold, or mildew growing on a wall. A method for installing a wall having an existing wall, installing at least one support beam substantially vertical on the interior side of the existing wall. Installing at least one top support channel substantially horizontal along a top portion of the interior side of the existing wall. Installing at least one bottom support channel substantially horizontal along a bottom portion of the interior side of the existing wall. Connecting at least one panel to at least one of the support beams, the top support channels, and bottom support channels. Inserting a flexible material of the panels into the intermediate support channels and the corner support channels.



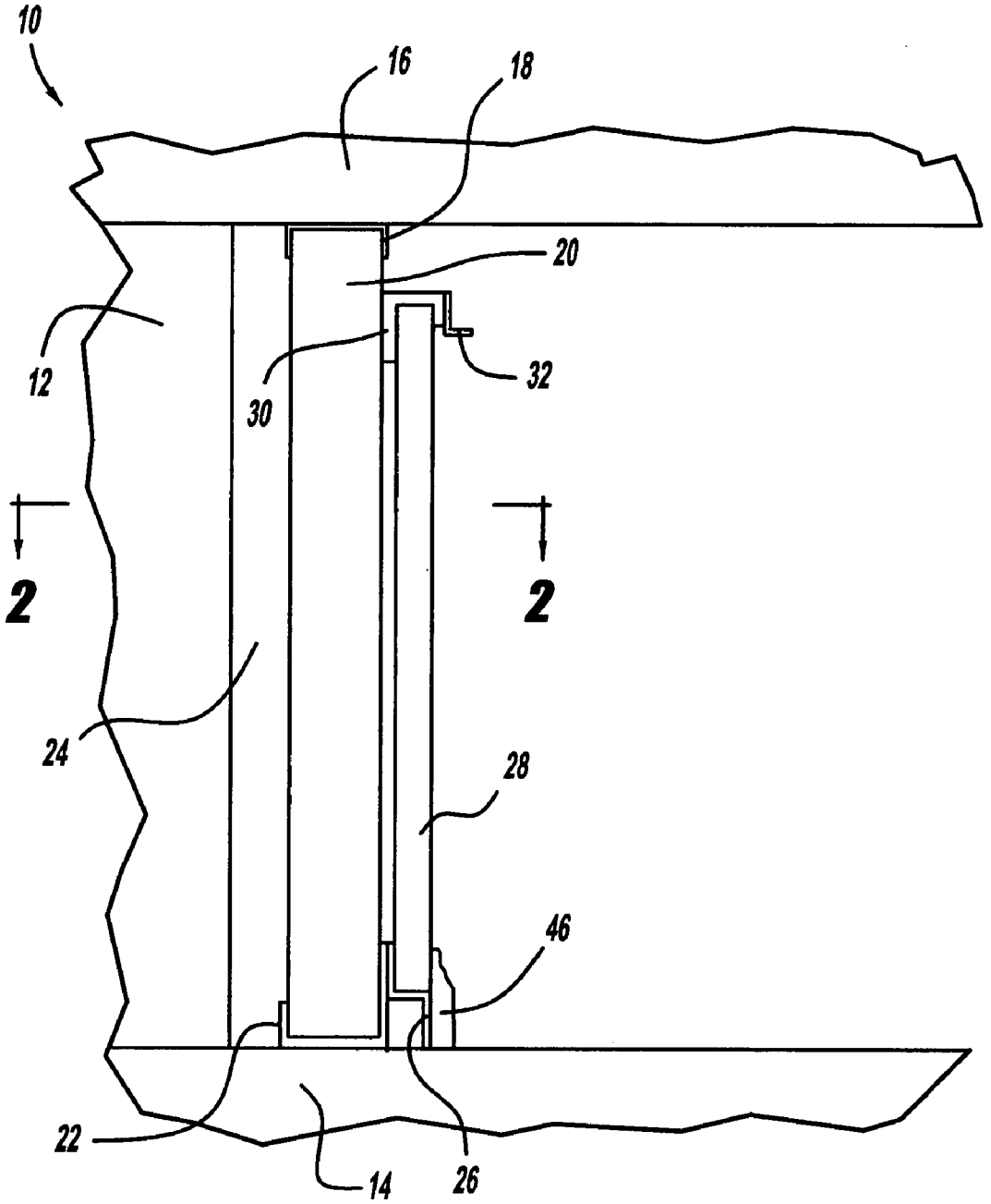


FIG - 1

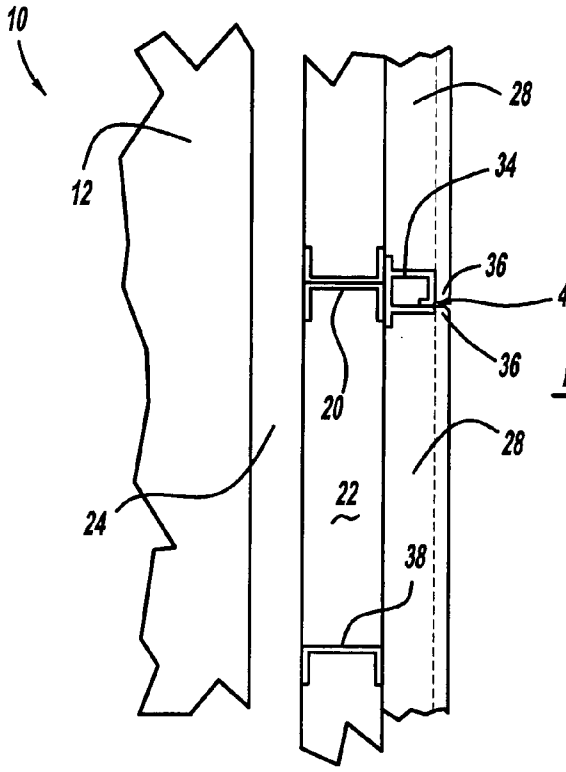


FIG - 2

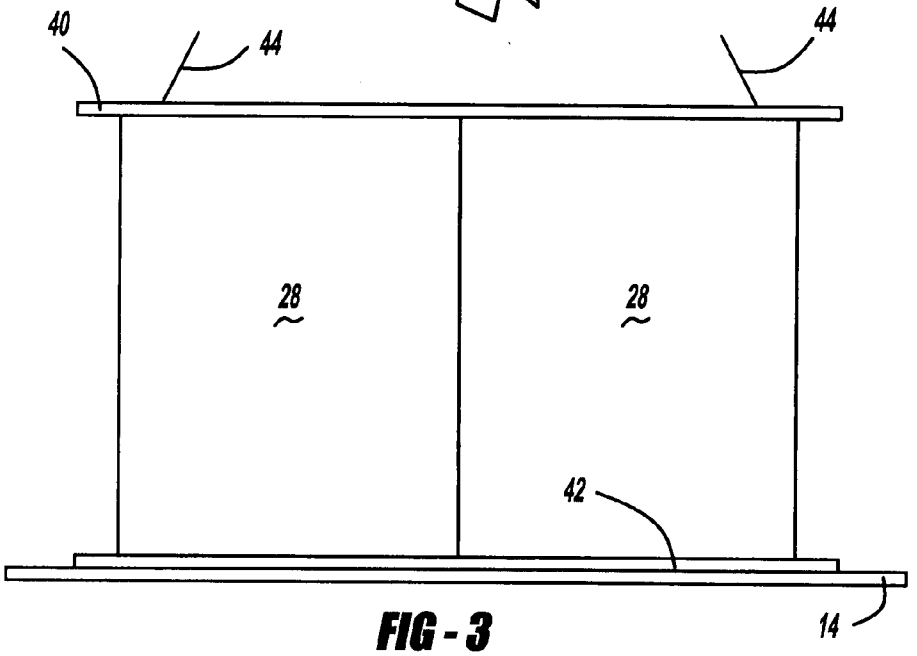


FIG - 3

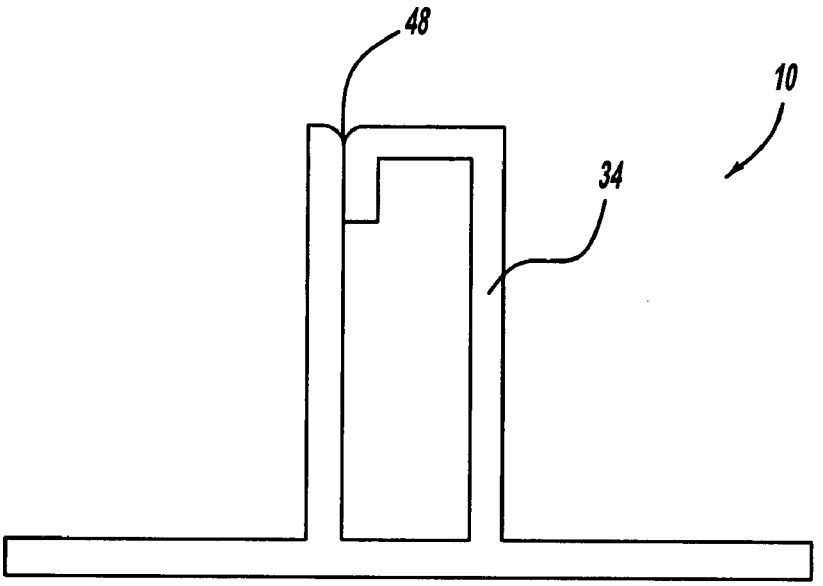


FIG - 4

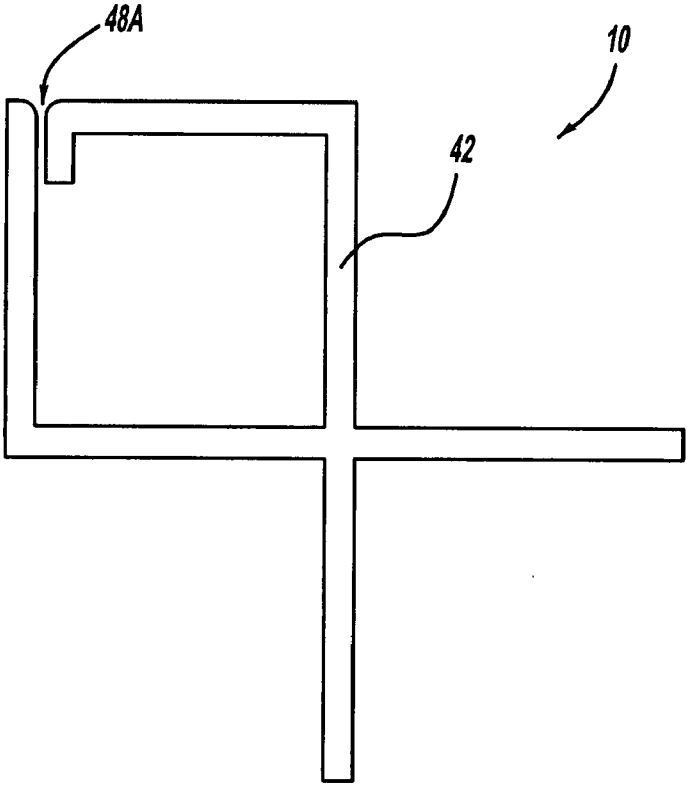


FIG - 5

BASEMENT FINISHING SYSTEM

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 60/813,403, filed Jun. 14, 2006.

FIELD OF THE INVENTION

[0002] The present invention relates to a wall for use in a basement which installs quickly and reduces the amount of moisture buildup.

BACKGROUND OF THE INVENTION

[0003] The walls of most homes are constructed using typical drywall or lumber. Lumber and drywall are suitable for above-ground areas, but are not always an ideal material to use in below-ground areas such as basements. Using typical lumber or drywall for finishing a basement presents several problems, the most common of which is that lumber and drywall can warp, rot, or allow for mold growth due to trapped moisture. This moisture is most prevalent in areas such as basements.

[0004] In addition, when lumber is used for framing along concrete basement walls, drywall is used to finish off the walls. Hanging drywall is a time consuming process which requires patching the joints between adjacent drywall panels with a filling material and sanding the material after it dries. This is usually done several times in order to get an acceptable finish along the joints of adjacent drywall panels. Then the drywall must be painted in order to cover up the patches along the joints between the drywall panels. In addition, the nails or screws which are used to attach the drywall panels to the lumber can come loose and project out from the drywall which is known as a "nail pop." In order to fix the nail pops, the nail must be placed back in the drywall and lumber, a patching compound must be applied to the nail pop area, which is then sanded and painted.

[0005] Accordingly, it is desirable to develop a wall construction system for high-moisture areas such as basements which alleviates some of the problems of a drywall and lumber finished basement. The wall construction system should be able to prevent damage caused by high-moisture and be easily constructed in order to provide a more efficient installation process when compared to a lumber and drywall finishing system.

SUMMARY OF THE INVENTION

[0006] An embodiment of the present invention is a wall which can be used in conjunction with a pre-existing wall to create an improved aesthetic appearance, and eliminate or reduce the development of mold or mildew growing on a wall. The present invention is a method installing a wall structure including an existing wall, an existing ceiling, and an existing floor, the method for installing a wall structure providing the steps of: installing at least one support beam substantially vertical adjacent an interior side of the existing wall, installing at least one top support channel substantially horizontal along the existing ceiling, installing at least one bottom support channel substantially horizontal along the existing floor, connecting at least one panel to at least one support beam, connecting at least one intermediate support with at least one support beam, and connecting a flexible material of the panel with at least one intermediate support.

[0007] Further areas of applicability of the present invention will become apparent from the detailed description provided hereinafter. It should be understood that the detailed description and specific examples, while indicating the preferred embodiment of the invention, are intended for purposes of illustration only and are not intended to limit the scope of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] The present invention will become more fully understood from the detailed description and the accompanying drawings, wherein:

[0009] FIG. **1** is a sectional side view of a basement wall, incorporating the present invention;

[0010] FIG. **2** is a sectional top view taken along line **2-2** of FIG. **1**;

[0011] FIG. **3** is front plan view of a basement wall, incorporating the present invention;

[0012] FIG. **4** is a sectional top view of an intermediate support in accordance with the present invention; and

[0013] FIG. **5** is a sectional top view of a corner support in accordance with the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0014] The following description of the preferred embodiment(s) is merely exemplary in nature and is in no way intended to limit the invention, its application, or uses.

[0015] Referring to FIG. **1**, the wall of the present invention is generally shown at **10**, and is used in combination with an existing wall **12**. The existing wall **12** is typically a wall in a below-ground level of a house; however, it is possible to use this type of invention **10** at a ground level or above ground level. Usually the existing wall **12** is made of concrete, but the existing wall **12** can be made of any predetermined material in which additional materials can be connected to the existing wall **12**. The wall **10** of the present invention is also used in conjunction with a floor **14** and a ceiling **16**. There is also a top support channel **18** which contacts the ceiling **16**. A support beam **20** is arranged vertically, and extends from the top support channel **18** towards the floor **14**. In a preferred embodiment, the support beam **20** is two back-to-back 2"×2.5" studs which are made of 20-gauge metal, where the longer surface of the two studs contacts one another. The studs are preferably metal, but could be made from other materials such as wood or plastic as well. A bottom support channel **22** contacts the floor **14**. The support beam **20** extends from the top support channel **18** to the bottom support channel **22**. In a preferred embodiment, the support beam **20** extends substantially vertical between the top support channel **18** and the bottom support channel **22**. Ideally, the installer uses a level to ensure the support beam **20** is substantially vertical when installing the support beam **20**. There can be a gap **24** between the support beam **20** and the existing wall **12** which creates an air space between the existing wall **12** and the support beam **20**.

[0016] Connected to the support beam **20** is a first bracket or an H-base **26**. In a preferred embodiment, the H-base **26** is connected to the support beam **20** by any suitable fastener, such as but not limited to, a screw or rivet. In a preferred embodiment, a portion of the H-base **26** is parallel to and contacting the bottom support channel **22**. Another portion of the H-base **26** is perpendicular to the bottom support channel

22 and parallel to the floor 14. A third portion of the H-base 26, which contacts the floor 14, is parallel to the bottom support channel 22. The H-base 26 supports a panel 28, which in this embodiment has a thickness of approximately one inch, but it is within the scope of the invention that other thicknesses could be used for the panel 28. The panel 28 is preferably made of a high-density fiberglass, but could be made of other materials as well. The panel 28 extends vertically between the top support channel 18 and the bottom support channel 22. The panel 28 also extends horizontally between the support beams 20 which are spaced along the top support channel 18 and bottom support channel 22.

[0017] The top of the panel 28 is inserted into a second bracket or a J-bracket 30, which is connected to the support beam 20. Also connected to the J-bracket 30 is a ceiling support structure or ceiling track 32 which is fastened by any suitable fastener, such as but not limited to, a screw or rivet. The J-bracket 30 extends between the support beam 20 and the panel 28. The J-bracket 30 then extends over the top of the panel 28 and between the panel 28 and the ceiling track 32. In a preferred embodiment, the panel 28 extends from the H-base 26 to a predetermined point below the height of the support beam 20. Thus, a drop ceiling or suspended ceiling 40 can be hung in accordance with a known method.

[0018] Referring now to FIGS. 2 and 4, a top view of the wall 10 is shown. Connected to the support beam 20 is an intermediate support 34 which holds the panels 28 in place. A predetermined number of intermediate supports 34 are attached along the vertical axis of the support beam 20. In a preferred embodiment, there are at least two intermediate supports 34 attached to the support beam 20; however, a greater or lesser number of intermediate supports 34 can be used depending on a particular application. Each panel 28 has a flexible material 36 which is connected to the intermediate support 34. In this embodiment, the flexible material is an acoustical fabric which is laminated to the surface of each panel 28. The flexible material 36 is wrapped at the top of the panel 28, and the edge of the flexible material 36 is aligned with the bottom of each panel 28. A portion of the flexible material 36 also overhangs off the edge of each panel 28 in the area of each intermediate support 34. The intermediate support 34 grips and holds the panel 28 in place through the use of the flexible material 36. Thus, the flexible material 36 is inserted into the intermediate support 34, which creates an even surface between the adjacent panels 28.

[0019] Also, additional supports or studs 38 can be placed between the top support channel 18 and bottom support channel 22 to provide additional support for the panels 28. The supports 38 extend substantially vertical between the top support channel 18 and bottom support channel 22. The supports 38 are placed intermediate the horizontal length of the panels 28, between the support beams 20. The supports 38 are preferably of the same size as the support beams 20. The support 38 provides additional support for the panel 28, but there are no intermediate supports 34 attached to the support 38. Typically, a single support 38 is placed between the support beams 20, but depending on the horizontal length of the panel 28, additional supports 38 can be used to provide the necessary support for the panels 28. The supports 38 are also positioned such that the center of each support 38 is approximately sixteen inches apart from the intermediate support 34 or, if more supports 38 are used, one another. The spacing of sixteen inches between supports 38 is standard in the construction of buildings.

[0020] Referring to FIGS. 1, 2, and 5, a corner support 42 is shown. Preferably, the corner support 42 is for an outside corner, where the corner extends out from the wall rather than into the existing wall 12, i.e., the outer surface of one panel 28 is two hundred and seventy degrees from the outer surface 28 of another panel. The corner support 42 can connect to either a support beam 20 or support 38 so long as the support beam 20 of support 38 is in a corner of the existing wall 12. Similar to the intermediate support 34, the corner support 42 grips the flexible material 36 to hold the panel 28.

[0021] Referring now to FIGS. 1-5, the ceiling track 32 is used along with support wires 44 to support a suspended ceiling 40 (shown in FIG. 3). Thus, a suspended ceiling 40 can be installed using a suitable method. The suspended ceiling 40 provides an aesthetic feature which covers up the connection between the support beam 20, the panel 28, and the J-bracket 30. There is a base molding 46 which is connected to the H-base 26 which provides an aesthetic feature to cover up the connection between the floor 14, the H-base 26, and the panel 28.

[0022] In a preferred embodiment the top support channel 18, the support beam 20, and the bottom support channel 22 are made of a galvanized metal material. The metal material provides adequate strength characteristics to support the structure and is not as susceptible to moisture as lumber is. Also, the brackets 26, 30, 32 and the intermediate support 34 are made of metal. Preferably, the panels 28 are made of a fiber material that is also not susceptible to moisture, and covered with an acoustical polyester fabric.

[0023] The installation of the wall 10 is accomplished through several steps. The bottom support channel 22 is first connected to the floor 14, and the top support channel 18 is connected to the ceiling 16. The support beam 20 is then installed between the top support channel 18 and the bottom support channel 22. A predetermined number of support beams 20 are used, depending upon the size of the existing wall 12. Thus, the number of support beams 20 is dependent upon providing sufficient support for the panels 28. Typically, the panels 28 have a predetermined horizontal length, so that the support beams 20 have to be spaced according to the horizontal length of the panel 28 in order to provide an attaching surface for the panels 28. Also, the bottom support channel 22 and the top support channel 18 can be cut to any predetermined length to fit the length of the existing wall 12.

[0024] Once the top support channel 18, bottom support channel 22, and support beam 20 are in place, the H-base 26 is then connected to bottom support channel 22. The J-bracket 30 is then fastened to the support beam 20 at the desired height for the ceiling, the ceiling track 32 is then fastened to the J-bracket 30, and the suspended ceiling system can then be installed in a conventional fashion. The ceiling track 32 is fastened to the J-bracket 30 by any suitable fastener, such as but not limited to, a screw or rivet. The top of the panel 28 is inserted into the J-bracket 30 and the bottom of the panel 28 is placed upon the H-base 26. The intermediate support 34 is firmly pressed against the panel 28 and fastened to the support beams 20 using a suitable fastener. The portion of the flexible material 36 which is overhanging from the panel 28 is inserted into the jaw 48 of the intermediate support 34. The preferable method for installing the flexible material 36 into the jaw 48 is through the use of a rolling tool, similar to a screen roller. The base molding 46 is then fastened to the

H-base **26**. The ceiling track **32** and the base molding **46** can also be cut to any predetermined length to match the length of the existing wall **12**.

[0025] After the support channels **18**, **22** and the support beam **20** are installed, additional materials can be installed. For example, electrical wiring and plumbing can be installed with relative ease prior to the panels **28** being installed.

[0026] In addition to the J-bracket **30** and base molding **46**, the panels **28** are also held in place by intermediate support **34** having the jaw **48**, which is attached to the support beam **20**. Thus, when the panels **28** are installed, they are connected to and secured by the H-base **26** and J-bracket **30**. Each panel **28** also includes a flexible material **36**, which is inserted into the jaw **48**. The flexible material **36** can be connected to each panel **28**, or each panel **28** can be installed, with the flexible material **36** placed over the panel **28** to hold each panel **28** in place. The jaw **48** grips and holds the panel **28** in place, and can hold the flexible material **36** for two adjacent panels **28**. Once installed, the panels **28** will be substantially even with one another because of the flexible material **36** of each panel **28** being inserted into the jaw **48**. In the embodiment shown in FIG. **3**, there are two panels **28**. The panels can be any predetermined size so as to extend vertically between the J-bracket **30** and the H-base **26**, and horizontally between the support beams **20**, without departing from the scope of the present invention.

[0027] Similarly, the corner support **42** is connected to a support beam **20** or support **38** in the corner of the wall **10**. The corner support **42** has a jaw **48***a* which grips the flexible material **36** of the panel **28**. Preferably, the jaw **48***a* is offset from the corner so that the flexible material **36** of one of the panels **28** connected to the corner support **42** extends over the corner to create an even corner surface.

[0028] The description of the invention is merely exemplary in nature and, thus, variations that do not depart from the gist of the invention are intended to be within the scope of the invention. Such variations are not to be regarded as a departure from the spirit and scope of the invention.

What is claimed is:

1. A method for installing a wall structure including an existing wall, an existing ceiling, and an existing floor, said method for installing a wall structure comprising the steps of:
- installing at least one support beam substantially vertical adjacent an interior side of said existing wall;
- installing at least one top support channel substantially horizontal along said existing ceiling;
- installing at least one bottom support channel substantially horizontal along said existing floor;
- connecting at least one panel to said at least one support beam;
- connecting at least one intermediate support to said at least one support beam; and
- connecting a flexible material of said at least one panel with said at least one intermediate support.

2. The method for installing a wall of claim **1** further comprising a first bracket and a second bracket, wherein said at least one panel is connected to said first bracket and said second bracket.

3. The method for installing a wall of claim **1** further comprising the step of connecting said flexible material of said panel with a jaw of said intermediate support.

4. The method for installing a wall of claim **1**, wherein a first surface of said flexible material of a first panel is substantially even with a second surface of said flexible material of a second panel when said flexible material of said first panel and said second panel is connected to said intermediate support.

5. The method for installing a wall of claim **1** further comprising the step of installing a ceiling support structure prior to connecting said at least one panel to said at least one support beam.

6. The method for installing a wall of claim **1**, wherein said at least one support beam further comprises a plurality of support beams, said plurality of support beams are substantially evenly spaced adjacent said existing wall in accordance with the horizontal length of said panel.

7. The method for installing a wall of claim **1**, further comprising the step of installing supports substantially vertical between said top support channel and said bottom support channel.

8. The method for installing a wall of claim **1**, further comprising the step of leveling at least one of said at least one top support channel and said at least one support beam.

9. A wall structure including an existing wall, an existing ceiling, and an existing floor, said wall structure comprising:
- at least one support beam extending substantially vertical adjacent said existing wall;
- at least one top support channel extending substantially horizontal along said existing ceiling;
- at least one bottom support channel extending substantially horizontal along said existing floor;
- at least one intermediate support connected to said at least one support beam; and
- at least one panel extending along said at least one support beam, wherein said at least one panel has a flexible material that is connected to said intermediate support.

10. The wall structure of claim **9**, further comprising a first bracket and a second bracket, wherein said at least one panel is connected to said first bracket and said second bracket.

11. The wall structure of claim **9**, wherein said flexible material is connected to a jaw of said at least one intermediate support.

12. The wall structure of claim **9**, wherein a first surface of said flexible material of a first panel is substantially even with a second surface of said flexible material of a second panel when said flexible material of said first panel and said second panel is connected to said intermediate support.

13. The wall structure of claim **9**, wherein said at least one support beam, said at least one top support channel, said at least one bottom support channel, and said at least one intermediate support channel is at least partially made of a metal material.

14. The wall structure of claim **8**, said at least one support beam further comprising a plurality of support beams, wherein said plurality of support beams are substantially evenly spaced adjacent said existing wall.

15. A wall structure including an existing wall, an existing ceiling, and an existing floor, said wall structure comprising:
- a plurality of support beams extending substantially vertical adjacent said existing wall;
- a plurality of top support channels extending substantially horizontal along said existing ceiling;
- a plurality of bottom support channels extending substantially horizontal along said existing floor;
- a plurality of intermediate supports connected to said plurality of support beams;
- a plurality of panels extending between said plurality of support beams; and

at least one jaw on each of said plurality of intermediate supports, wherein a flexible material of said plurality of panels is connected to said intermediate support by said jaw.

16. The wall structure of claim **15**, wherein a first surface of said flexible material of a first panel is substantially even with a second surface of said flexible material of a second panel when said flexible material of said first panel and said second panel is inserted into said jaw of said intermediate support.

17. The wall structure of claim **15**, wherein said plurality of support beams, said plurality of top support channels, said plurality of bottom support channels, and said plurality of intermediate supports are at least partially made of a material resistant to moisture.

18. The wall structure of claim **15**, wherein said plurality of support beams are substantially evenly spaced along said existing wall.

19. The wall structure of claim **15**, further comprising a first bracket and a second bracket, wherein said plurality of panels are connected to said first bracket and said second bracket.

20. The wall structure of claim **15**, further comprising supports that extend substantially vertical between said plurality of top support channels and said plurality of bottom support channels.

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