MOUNTING SYSTEM FOR FLUSH ASSEMBLY IN WALLS AND CEILINGS

Inventors: Ray Call, Mission Viejo, CA (US); Ed Royka, Oceanside, CA (US)

Correspondence Address:
FISH & ASSOCIATES, PC
ROBERT D. FISH
2603 Main Street, Suite 1050
Irvine, CA 92614-6232 (US)

Assignee: DANA INNOVATIONS, San Clemente, CA (US)

Appl. No.: 12/047,070
Filed: Mar. 12, 2008

Related U.S. Application Data
Provisional application No. 60/894,418, filed on Mar. 12, 2007, provisional application No. 60/970,138, filed on Sep. 5, 2007.

Publication Classification

Int. Cl. A47F 5/08 (2006.01)

U.S. Cl. 248/231.9; 248/231.91

ABSTRACT

A flush-mounting system includes a mounting bracket with an opening that is coupled to a support extending substantially in a plane to allow the mounting bracket to move along the support. An inner bracket is disposed with the mounting bracket's opening and can be slide in and out of the opening to adjust accordingly. Among the many different possibilities, the flush mounting system also has a second support extending parallel to the first support and a mechanism coupling an opposite side of the bracket to the second support. It is further contemplated that the structure is a stud of any structure in a building such as wood, cement, masonry, and stone. A wallboard is then provided to cover the mounting system for a flush-mounting look.
MOUNTING SYSTEM FOR FLUSH ASSEMBLY IN WALLS AND CEILINGS

[0001] This application claims priority to U.S. provisional application Ser. No. 60/894,418 and 60/970,138 filed Mar. 12, 2007 and Sep. 5, 2007 respectively, which is herein incorporated by reference in its entirety.

FIELD OF THE INVENTION

[0002] The field of the invention is flush mounting system for particularly in-wall speakers.

BACKGROUND

[0003] Speakers, television screens, and other objects are traditionally mounted to a wall or on a ceiling in one of three ways. One method uses a bracket that surrounds a cutout in the wallboard. The bracket typically has a flange that overlays the front surface of the wallboard, and extends away from the cutout on the top, bottom, and sides. A decorative cover is then used to hide the flange. In a more modern version shown in U.S. Pat. No. 7,003,129 to Hecht (February 2006), the flange is itself decorative, which obviates the need for a separate cover. Unfortunately, using a flange can be extremely difficult to install in an already finished wall, since the flange must either be attached directly to a stud or to the wallboard itself. Studs may or may not be located behind a desired installation area, and typical wallboards do not provide much structural support.

[0004] Another traditional method of mounting an object to a wall is to extend the object housing from the front side of the wallboard. An example of that approach is the surface mounted lighting assembly of U.S. Pat. No. 5,722,208 to Humphrey (March 1998) that is affixed directly to the surface of the wall. Surface mounted loudspeaker and bracket of U.S. Pat. No. 6,845,840 to Cowan et al. (January 2005) also mounts to a wall surface. However, such mounts must either be restricted to a light material, be attached to a durable wall (for example plywood), or must be directly attached to a beam, since typical drywall does not provide much support.

[0005] Another solution involves attaching the mount directly to a support stud instead of the more delicate wallboard. For example, U.S. Pat. No. 5,405,111 to Medlin (April 1995) teaches attaching a flush-mounted electrical box directly to a pair of studs within a wall using a strut. The drawback Medlin is that the strut is not easily adjusted for variable distances between the stud pairs. Additionally, fine-tuning the position of the electrical box relative to the strut is difficult since the electrical box must be attached to predetermined attachment detents.

[0006] Thus, there is still a need for universal flush-mount speaker systems and methods that facilitate installation.

[0007] The patents and all other referenced extrinsic materials discussed herein are incorporated by reference in their entirety. Where a definition or use of a term in an incorporated reference is inconsistent or contrary to the definition of that term provided herein, the definition of that term provided herein applies and the definition of that term in the reference does not apply.

SUMMARY OF THE INVENTION

[0008] The present invention relates to systems and methods for a universal mounting system for speakers and other mounted objects on a wall or a ceiling. More particularly, system and methods are provided in which a mounting bracket is coupled to a support that extends in plane so an inner portion of the mounting bracket can be adjusted along the support in various directions.

[0009] A first aspect of the present invention provides a flush-mounting system that comprises a mounting bracket with an opening; a first support extending substantially in a plane; and a mechanism coupling a side of the mounting bracket to the first support so that the opening of the mounting bracket is disposed substantially in the plane to receive an inner bracket. The coupling mechanism allows the mounting bracket to be movable along the first support. It is also provided that the inner bracket has a sliding mechanism to connect the mounting bracket.

[0010] In preferred embodiments, the flush mounting system also has a second support extending parallel to the first support and a mechanism coupling an opposite side of the bracket to the second support. The inventive subject matter couples a structure to the first support so that the inner portion of the bracket is disposed substantially in the structure. Preferably the structure is a stud of any structure in a building such as wood, cement, masonry, and stone. A wallboard is then provided to cover the mounting system for a flush-mounting look.

[0011] The mounting bracket preferably includes at least two mounting holes, but can include a series of mounting holes, which are coupled to the first support. The mounting holes can be coupled along a slot across a surface of the support.

[0012] Preferably, the first support has a thickness of no more than 0.3 cm (⅛ in) immediately surrounding the holes. Furthermore, the bracket opening is measured preferably at least 25 cm² (10 in²), more preferably measured at least 250 cm² (100 in²) to accommodate a speaker bracket or any other type of brackets for an electronic or audio device. Thus, the opening can accommodate a variety of shapes and sizes, such as oval, rectangle or square.

[0013] In preferred embodiments, the speaker bracket is disposed into the inner portion of the mounting bracket so that a speaker can be mounted on the speaker bracket easily. To accommodate different requirements in terms of depth, the speaker bracket preferably includes a recess that can be pulled or pushed along the inner portion of the mounting bracket. Furthermore, the mounting bracket preferably includes a beveled edge having an end that can be positioned flush with a wall material to provide a mud dam.

[0014] In preferred embodiments, the coupling mechanism includes a detent that provides discreet positions in movement of the bracket relative to the first support and that mechanism may include a ratchet. It is also preferred for the mounting system to have a perforated retrofit mounting plate having an attachment mechanism to the bracket.

[0015] The first support preferably includes at least two mounting holes or a plurality of snap lines with which the support can be manually shortened. A grille preferably is sized and dimensioned to fit along an inside rim of the opening. Furthermore, a cover may be sized to fit along an inside rim of the opening and that cover can be a paint shield.

[0016] In a second aspect of the invention, a flush mounting system has a mounting bracket with an opening; a first sup-
port and a second support extending parallelly in a plane; and a mechanism coupling a side of the bracket to the first support and a parallel side of the bracket to the second support so that an inner portion extending from the bracket is disposed substantially in the plane.

[0017] In a third aspect of the invention, a speaker flush mount comprises a mounting-bracket with an opening; a first support extending substantially in a structure; and a mechanism coupling the mounting-bracket to the first support so that a speaker-bracket is disposed into the mounting-bracket and substantially in the structure.

[0018] In a fourth aspect of the invention, a method of mounting a speaker in a wall is provided by providing a mounting mechanism comprises at least one extending arm attached to at least one structure; attaching an outer bracket with a rim along the extending arm; positioning an inner bracket within the outer bracket and attaching the inner bracket to a wall; mounting a speaker within the inner bracket.

[0019] In preferred embodiments, the method of mounting a speaker also includes positioning a piece of wallboard over the structure in an end-to-end fashion. Furthermore, the step of positioning a piece of wallboard over the structure in an end-to-end fashion is preferably attached via a collar disposed within the inner bracket. The arms are movable along the structure and the outer bracket preferably is attached along a slot across a surface of the extending arm.

[0020] In another preferred embodiment, the step of providing the mounting mechanism comprises obtaining the extending arms, the structure, the outer bracket, and the inner bracket from a supplier with a precut arms, structure, outer bracket and inner bracket.

[0021] In yet another preferred embodiment, the step of providing the mounting mechanism comprises obtaining a kit from a supplier, the kit including the structure, extending arms, the outer bracket and the inner bracket.

[0022] In a fifth aspect of the invention, a method of mounting a speaker in a wall is provided by attaching an outer bracket in a structure; positioning an inner bracket within the outer bracket; attaching the structure into the wall; and mounting a speaker within the inner bracket.

[0023] In a preferred embodiment, a wallboard that covers the structure in an end to end fashion and is anchored to the structure via a collar on the inner bracket. The structure can be any construction items that are presented in the wall. For example, the structure can be a beam of even a stone wall.

DESCRIPTION OF DRAWINGS

[0024] FIG. 1 is a front perspective view of a mounting system according to an aspect of the inventive subject matter.

[0025] FIG. 2 is a back perspective view of a mounting bracket with arms according to an aspect of the inventive subject matter.

[0026] FIG. 3 is a side perspective view of FIG. 1.

[0027] FIG. 4 is an exploded view of FIG. 1.

[0028] FIG. 5 is a side perspective view of FIG. 1 with a wallboard.

[0029] FIG. 6 is a side cross section view of FIG. 1.

[0030] FIG. 7 is a top cross section view of FIG. 1.

[0031] FIG. 8 is an exploded view of a mounting system according to another aspect of the inventive subject matter.

[0032] FIG. 9 is a perspective view of a bracket configuration according to another aspect of the inventive subject matter.

[0033] FIG. 10 is an exploded view of a surface mounting system according to another aspect of the inventive subject matter.

[0034] FIG. 11 is an exploded view of a round mounting system according to another aspect of the inventive subject matter.

[0035] FIG. 12 is a front view of the mounting bracket of FIG. 11.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0036] In FIG. 1, a universal bracket installation system comprises mounting bracket assembly mounted on structures and 42.

[0037] Universal mounting bracket assembly comprises outer bracket mounted on arms. Outer bracket comprises outer opening and rim. A series of mounting holes are located along a top and a bottom of rim. It is preferable to have at least two mounting holes across the rim, but any number of holes are contemplated. The mounting holes enable the outer bracket to be mounted on arms to create mounting bracket assembly.

[0038] In a preferred embodiment, arms comprises right arm portion and left arm portion. At the end of both right arm portion and left arm portion is clip which attaches to structure via a screw or nail (not shown). Preferably a screw is used that is smaller than the mounting hole to allow for minor "wiggle" adjustments. In an exemplary embodiment, the arm can "wiggle" about 10 degrees in either direction before the screw is completely tightened. Clip is shown to attach to a "front" side of structure, but can be oriented to fasten to any side of structure in any suitable manner. FIG. 2 shows the back perspective of outer bracket mounted on arms. FIG. 3 shows a side perspective of outer bracket mounted on arms. Slot extends from both right arm portion and left arm portion so that when the right and left arms portions are joined, slot becomes one unitary slot. Outer bracket is mounted on the right and left arm portions by tightening screws, nuts and bolts, or other suitable tightening devices through mounting holes to slot. This allows both portions and to move along the outer bracket via slot and vice versa. Preferably, the two arms are installed parallel to each other and that outer bracket is disposed within the distance between the arms.

[0039] The length of arms is adjustable depending on the space between the two structures. Oftentimes the right arm portion and the left arm portion are joined together to be mounted between two structures and at the same time are coupled to an outer bracket. However, it is contemplated that the space between the structures can vary and the arms need to be adjusted. To make the adjustment, right arm portion can be first attached to structure, then left arm portion is attached to structure. Right arm portion and left arm portion slide relative to one another to determine the length of arms. Preferably, a tighter (not shown), for example a screw or a nut and bolt, is coupled to right arm portion and left arm portion to fix the length of arms. Even if there is space between right arm portion and left arm portion, outer bracket can still be attached to both arm portions via mounting holes. Outer bracket can serve as an extender to join the two arm portions without compromising the integrity and stability of the assembly. The arms are supports that hold up the bracket systems in between two structures.
It is contemplated that the arms are made of a durable material common during installation. Galvanized steel is a preferred choice since it is durable and easy to manufacture, and is a common construction material in the market. However, a variety of materials can also be used. The dimensions of the arms also depend on the size of the installation unit and the area of installation. For example, a right arm with a length of 35 cm and a width of 4 cm, respectively, and a left arm the same length and width can accommodate an installation area between 55 cm to about 68 cm. Longer if the outer bracket serves as an extender. A person of ordinary skill in the art will appreciate that the present inventive subject matter can accommodate a wide variety of different sizes speakers and walls.

As shown in FIGS. 2 and 3, outer bracket 20 comprises outer opening 22 that has edges 26 that extend from the outer opening. The edges preferably extend at least 6 cm from the outer opening, but can be greater or smaller to accommodate a greater or a lesser movement along an axis. Coupling mechanisms include screws, nails or other preferred industry methods. Outer bracket 20 can be any size to accommodate the size of and shape of the device to be installed. To adjust the mounting position during installation, the outer bracket can be adjusted along slot 33 of the arms. This allows the outer bracket to be flexible in adjusting to any dimensions required. By simply sliding back and forth on the arm, the outer bracket is adjustable to any installation requirement, especially ones that include odd sizes.

Outer opening 22 is preferably large enough to accommodate inner bracket 50. Outer bracket 22 has a length and width of 28 cm, but can be any suitable dimension or size. Preferably, outer opening 22 is a circle, a square or a rectangle for aesthetic purposes. It is also contemplated that outer bracket is made of any durable and suitable material such as the material for the arms.

As shown on FIGS. 2-5, inner bracket 50 has a length and width of 20 cm, but, again, can be any suitable dimension or size to accommodate device 60. Inner bracket 50 is attached to outer bracket 20 through recesses 52 and edges 26 via screws, nails, or other fastening devices. However, it is contemplated any coupling mechanism can be used including the use of adhesive or a slot mechanism. By being secured to the outer bracket, inner bracket is able to take the benefits of the slidable features of the outer bracket and can be adjusted as it sees fit. It is further contemplated that the outer bracket’s edges 26 can have various indentations along its depth that couple to detents on the inner bracket. This enables the inner bracket for adjustments in depth as to. Preferably, a retaining system (not shown) is used between the inner bracket and the outer bracket, and a locking mechanism (not shown) can lock the inner bracket in position relative to the outer bracket.

Inner bracket 50 preferably is made of plastic, but other durable materials are contemplated, including metal. Inner bracket is sized to fit outer bracket, but inner opening can accommodate any shape or size of device 60.

Speaker device 60 can be mounted directly to inner bracket 50 as shown in FIGS. 1, 3 and 4. While the present inventive subject matter is directed to installing a speaker system, other types of devices that require for mounting are contemplated, such as televisions, other audio or visual components, interactive art works, lights, electric plates or anything that would require mounting within a wall or a ceiling. The advantage of the inner bracket is that it can slide in and out of the wall or ceiling to give a third axis access that previously no prior art has done. Optionally, surrounding the inner bracket is a collar or backer board (not shown) which can pick up blind screws that are driven through the drywall. The assembly allows the mounting bracket to be adjustable not only in terms of width and length, but depth as well. The three dimensional flexibility (sliding outer bracket 20 along slot 38 in an x-direction, positioning arms 30 along the length of structures 40 in a y-direction, and sliding inner bracket along recess 52 a z-direction) enables the mounting bracket to fit a variety of different walls.

Structures 40 can be of any construction structures that are part of the building. Preferably, structures 40 are two studs or frames of construction of a wall or ceiling before a wallboard is installed. The structures are typically made of wood, but other materials such as steel or stone are contemplated.

As shown in FIGS. 1, 3 and 4, prior to the installation of wallboard 70, arms 30 of the mounting assembly 10 are secured to structures 40 via clips 32. Outer bracket 20 coupled to inner bracket 50 is mounted to arms 30 via slot 38. Protective cover 80 is optionally attached to cover inner bracket 50 to prevent debris and damages to device 60. Protective cover preferably is a galvanized metal guard that protects the inner bracket which often is made of plastic.

Once mounting assembly is in place, wallboard 70 is installed to structures 40 using standard industry practice as shown in FIGS. 4 and 5. Preferably before installing the wallboard, a pre-cut measurement is taken for the location and the size of outer opening 22. Wallboard 70 can be of any wall material, such as dry wall, stone wall, masonry, cement, and the like. It is also contemplated that wallboard 70 is a ceiling wall, such as an acoustic plaster or the like. After wallboard 70 is installed, a cut out is made using the pre-cut measurement exposing the outer opening of the outer bracket. The protective cover if present is then removed further exposing the inner bracket which can be located within the wallboard or flushed with the wallboard depending on the desired look.

To prevent any gap between inner bracket and the wallboard, a gap filler or a water-based adhesive such as Lociite Power Grab, Liquid Nails Projects, or drywall can be used. A conventional putty knife or like objects can be used to smooth the adhesive and sparkle the adhesive over the lip of outer bracket 20 so that the entire assembly appears flush against the wall. However, depending on preference, it is also contemplated that the bracket can sit slightly below or above the wallboard. For example, since plaster is generally thicker than drywall, the bracket preferably sits 2 mm from the edge of the wallboard if drywall is being spaced, and 1/8 in. (4.7625 mm) for plaster. An additional mud dam 80 can be attached to the inner bracket to protect speaker device 60 from being splashed by drywall or grout during spackling. The mud dam preferably provides an air-tight seal around the mounting assembly to the wallboard.

Before finally installing the device, a fiberglass mesh joint tape is applied around the exterior of the inner bracket, adjacent to the mud dam if any. Then a joint compound or plaster is applied using standard industry practice. Any excess material from the mounting bracket system can be wiped off to keep a clean, precise edge.

Once the assembly is in place, protective cover 80 is removed and inner bracket 70 is ready to receive speaker device 60. Inner bracket 70 preferably is made specifically to
receive speaker device 60 for installation. Once the speaker device is installed, an optional decorative cover (not shown) can be placed over the speaker device. It is also contemplated that any decorative elements can be part of the mud-dam or directly on the speaker device. FIGS. 6 and 7 show the side and top view of the universal mounting assembly respectively.

There are numerous advantages of the present mounting assembly. Besides being securely anchored into a wallboard, the universal mounting assembly allows installation of different devices onto different sized and types of walls. Furthermore, the multi-dimension adjustability of the bracket system allows the bracket system to be flush with the wallboard surface on any portion of the wallboard for a smooth and sophisticated look. Not only is the mounting bracket system adjustable, it can be securely held in place with a few simple steps. The guess work of installing an electronic or audio device is out the equation.

FIGS. 8 and 9 show another preferred embodiment of the universal mounting bracket. The mounting assembly 100 comprise arms 130 located parallel across from each other to accommodate outer bracket 120, which is coupled to inner bracket 150.

Arms 130 comprises outer arm portion 132 and inner arm portion 134. Instead of two separate pieces, outer arm portion 132 overlaps inner arm portion 134 by engaging each other via a sliding motion. Both portions have slot 138 that outer bracket 120 is mounted to. Adjustments to extend or shorten the assembly are easily made by sliding the outer arm portion relative to the inner arm portion. A screw (not shown) can be used to fix the length of arms 130 once the adjustments are made.

Each end of outer arm portion 132 and inner arm portion 134 has clip 136 with additional top and bottom clips 135. The top and bottom clips allow the arms to be more securely anchored into structures 140 and 142 from multiple angles. Clips 135 and 136 can also be perforated or be otherwise detachable from the arms.

Outer bracket 120 comprises two mounting area 128 along its top portion 124 and bottom portion 126. While this embodiment shows two mounting area 128, it is contemplated that a various number of mounting areas are possible depending on the requirements.

Inner bracket 150 comprises engagers 153 along inner opening 152. Engagers 153 of inner bracket 150 are coupled to receivers 123 located on outer opening 122 of outer bracket 120. Before the outer bracket is mounting to the arms, the inner bracket is securely held to the outer bracket via the receivers. When the installation to the wallboard is completed and a pre-cut opening is made, the inner bracket is exposed and can be adjusted by being pulled in and out of via the receiver-engager mechanism. This allows for flexibility as to the depth of an installation of a device. Preferably, the receiver-engager mechanism comprises a ratcheting system or a slot/thread system that fixes the position of inner bracket 150 relative to outer bracket 120. In the exemplary embodiment, stops are attached to the receiver-engager mechanism to prevent inner bracket 150 from sliding too far in or too far out of outer opening 122.

Additionally, paint shield 180 can be coupled to inner bracket 150 via gasket 165. It is also contemplated that protective cover 185 can be coupled to paint shield 180 for further protective of the bracket system. Preferably, protective cover 185 sits just within the perimeter of outer opening 122 so that an installer can roto-zip a hole in the wallboard to the exact size of outer opening 122. Inner bracket 150 can then be pulled out to abut the surface of the wallboard for spackling and painting to make the bracket flush with the wallboard surface before paint shield 180 and gasket 165 are removed for installation of a device.

Outer opening 122 and inner opening 152 are shown as round shaped. However, it is entirely contemplated that the outer opening and the inner opening can be of different shapes and sizes, and the outer opening can even be a different shape than the inner opening. Preferably, the opening is shaped and sized to accommodate the shape of the installed device, for example a round speaker, a square control panel, or an ovoid light source.

In yet another preferred embodiment as shown in FIGS. 10, 11 and 12, surface installation 200 comprises installing mounting system 210 to wallboard 270 without the use of any arms or supports.

Mounting system 210 comprises outer bracket 220 and inner bracket 250. Outer bracket 220 comprises flanges 226 with a series of mounting holes 228 surrounding outer opening 220. The mounting holes 228 forms a grille plate to be flush mounted onto wallboard 270.

Inner bracket 250 is attached to outer bracket 220 and disposed into a pre-cut wallboard opening 272 so as to be flush with wallboard 270. To install, a pre-cut opening 272 is made in wallboard 270. Such an opening can be traced using backer board 280, outer bracket 220, or other suitable means. Once the pre-cut opening measurements are made, the pre-cut opening is made using a roto-zip or similar type of machinery, preferably with 1/4" or 1/4" bit.

One preferred way of installation involves directly mounting outer bracket 220 to the front side of wallboard 270 via mounting holes 228. Nails and screws or other types of coupling mechanisms (not shown) can be used. Preferably, the shaft of the coupling mechanism is smaller than the mounting hole, to allow for a little “wiggle” room, at least 10 degrees in either direction. Direct mounting of the outer bracket is ideal when wallboard is of a sturdy material such that a mounting system can be securely held in place. Examples of such wallboard can be of stone wall, masonry, or other types of hard surfaces. However, wallboards that can not support a great deal of weight, such as dry wall or gypsum boards, may require an additional backer board 280 for secured installation.

Backer board 280 is made of any piece of material that has the same or similar dimension as the outer bracket. Similar to the outer bracket, backer board 280 has board opening 282 which corresponds to pre-cut opening 272, outer bracket opening 222, and inner bracket opening 252. Preferably, backer board 280 can be inserted into pre-cut opening 272 by folding along an axis, or collapsing in another suitable manner. Once backer board 280 is on the other side of wallboard 270, backer board can be unfolded or otherwise expanded, and can then be attached to the backside of wallboard 270 using coarse screws that thread through mounting holes 228 or a similar mechanism. Preferably, screws smaller than the mounting holes are used to allow for slight “wiggle” room. Use of a backer board on the other side of wallboard 270 allows the outer bracket to couple to the backer board, and distribute a compressive force equally around opening 272 instead of only the few mounting holes 228. The mounting surface 284 of backer board 280 is preferably shaped and
sized to accommodate flanges 226 so that screws or other
tighteners can mount to mounting surface 284. [0065]

Once the backer board is held in place, outer bracket 220 is inserted into pre-cut opening 272 with flanges 226
flushed against wallboard 270. Using the series of mounting
holes 228, outer bracket is secured onto wallboard 270 and
backer board 280 using the appropriate length screws along
the flange perimeter. Once in place, a device is ready to be
installed onto inner bracket 250. [0066]

This surface installation preferably is for direct
mounting or retrofitting an already finished structure. Instal-
lation of electric or audio components may or may not occur
before installation of a wall or ceiling. Thus, it is advanta-
geous to have surface installation for existing structures that
is easy, secure, and fits to the exact specification of the device.
The entire assembly also allows for a flush mounting appear-
ance that is seamless. [0067]

FIG. 10 shows outer and inner brackets accommodat-
ing a square or rectangular shaped electronic or audio
device. FIG. 11 shows surface installation 300 with a substan-
tially round opening. Not only does backer board 370 have a
round pre-cut opening 374, outer bracket 320 also has a round
outer opening 322 and inner bracket 350 also has a round
inner opening 352 to accommodate different round shaped
devices. As shown, backer board is divided into two pieces
that can fit in a wallboard hole, and then can be taped or
otherwise fastened together using adhesive 372. [0068]

Outer bracket 320 can be of any shape and size. It is
contemplated that while outer opening 322 is of one type of
shape, the overall shape of the outer bracket can be different,
such as an octagonal shape. Inner bracket 350 can be attached
to outer bracket 320 using different coupling mechanism such
as the use of receives 353 and engages 323. Receivers 353 and
engagers 323 slide into each other and enables inner bracket
to be adjusted in depth in regards to wallboard 370. Paint
shield 380 can be optionally coupled to inner bracket 350
using gasket 385. Furthermore, an additional protective cover
385 can be coupled to paint shield to prevent debris and
damages. [0069]

FIG. 12 shows surface installation 300 with all the
components attached to one another. Outer bracket preferably
has large holes 326 that screws can thread through to
help attach outer bracket 320 to backer board 370. Small holes
328 can be used to integrate the spackled joint compound into
the lip of outer bracket 320. [0070]

The overall advantage of the multi-level adjustable
mounting system is that the system can adjust in three axes.
Designs with traditional panels only adjust in just two axis on
a plane. This novel system allows adjustment for height,
width and depth of installation to accommodate wall and/or
ceiling thickness. Additionally, the same bracket assembly
can be mounted to studs using one or more extendable arms,
or directly to a wallboard using a backer board. For example,
the outer bracket of FIGS. 11 and 12 can be fitted with
removeable tabs that allow it to couple to slots of extendable
arms in one configuration, or those tabs can be removed so
that the outer bracket attaches to a backer board in another
configuration. [0071]

In preferred embodiments, a prefabricated kit is pro-
vided that comprises a mounting bracket, an inner bracket,
arms of various lengths, paint shield, gaskets to couple the
components, along with a protective cover or in some instances a backer board. Additionally, the kit includes a set of
instructions in printed, audible and downloadable forms. It is
also possible that each individual component is sold indi-
vidually. [0072]

It should be apparent to those skilled in the art that
many more modifications besides those already described are
possible without departing from the inventive concepts
herein. While the materials are preferably made of common
construction materials to match the structure of the wall-
board, other suitable materials can be used without departing
from the scope of the invention. Moreover, in interpreting the
disclosure, all terms should be interpreted in the broadest
possible manner consistent with the context. In particular, the
terms “comprises” and “comprising” should be interpreted as
referring to elements, components, or steps in a non-exclusive
manner, indicating that the referenced elements, components,
or steps could be present, or utilized, or combined with other
elements, components, or steps that are not expressly refer-
enced. Where the specification claims refers to at least one of
something selected from the group consisting of A, B, C . . .
and N, the text should be interpreted as requiring only one
element from the group, not A plus N, or B plus N, etc.

What is claimed is:

1. A flush mounting system, comprising:
   a mounting bracket with an opening;
   a first support extending substantially in a plane; and
   a mechanism coupling a side of the mounting bracket to the
   first support so that the opening of the mounting bracket
   is disposed substantially in the plane to receive an inner
   bracket.

2. The system of claim 1, wherein the mechanism allows
   the mounting bracket to be movable along the first support.

3. The system of claim 1, wherein the inner bracket has a
   sliding mechanism to connect the mounting bracket.

4. The system of claim 1, wherein the further comprising a
   second support extending parallel to the first support.

5. The system of claim, further comprising a mechanism
coupling an opposite side of the bracket to the second support.

6. The system of claim 1, further comprising a structure
coupled to first support so that the inner portion of the bracket
is disposed substantially in the structure.

7. The system of claim 6, wherein the structure is a stud.

8. The system of claim 6, wherein the structure is selected
from the group consisting of: wood, cement, masonry, or
stone.

9. The system of claim 6, further comprising a wallboard
   with a wallboard opening coupled to a structure.

10. The system of claim 9, wherein the wallboard is a
   drywall.

11. The system of claim 9, wherein the wallboard is a
   stone-wall.

12. The system of claim 1, wherein the mounting bracket
   includes at least two mounting holes to coupled to the first
   support.

13. The system of claim 12, wherein the mounting holes
   can be coupled along a slot across a surface of the support.

14. The system of claim 1, wherein the first support has a
   thickness of no more than 0.5 cm (1/8th in) immediately
   surrounding the holes.

15. The system of claim 1, wherein the opening measures
   at least 25 cm² (10 in²).

16. The system of claim 1, wherein the opening measures
   at least 250 cm² (100 in²).

17. The system of claim 1, wherein the inner bracket is a
   speaker bracket.
18. The system of claim 1, wherein the inner bracket is an ovoid shape.
19. The system of claim 1, wherein the inner bracket is a rectangular shape.
20. The system of claim 17, wherein the speaker bracket is coupled to a speaker.
21. The system of claim 17, wherein the speaker bracket includes a recess that can be pulled or pushed along the inner portion of the mounting bracket.
22. The system of claim 1, wherein the mounting bracket includes a beveled edge having an end that can be positioned flush with a wall material to provide a mud dam.
23. The system of claim 1, wherein the mechanism includes a detent that provides discreet positions in movement of the bracket relative to the first support.
24. The system of claim 1, wherein the mechanism includes a ratchet.
25. The system of claim 1, wherein the first support includes at least two mounting holes.
26. The system of claim 1, wherein the first support includes a plurality of snap lines with which the support can be manually shortened.
27. The system of claim 1, further comprising a grille that sized and dimensioned to fit along an inside rim of the opening.
28. The system of claim 1, further comprising a cover that is sized to fit along an inside rim of the opening.
29. The system of claim 28, wherein the cover is a paint shield.
30. The system of claim 1, further comprising a perforated retrofit mounting plate having an attachment mechanism to the bracket.
31. A flush mounting system, comprising:
   a mounting bracket with an opening;
   a first support and a second support extending parallelly in a plane; and
   a mechanism coupling a side of the bracket to the first support and a parallel side of the bracket to the second support so that an inner portion extending from the bracket is disposed substantially in the plane.
32. A speaker flush mount comprising:
   a mounting-bracket with an opening;
   a first support extending substantially in a structure; and
   a mechanism coupling the mounting-bracket to the first support so that a speaker-bracket is disposed into the mounting-bracket and substantially in the structure.
33. A method of mounting a speaker in a wall, comprising:
   providing a mounting mechanism comprises at least one extending arm attached to at least one structure;
   attaching an outer bracket with a rim along the extending arm;
   positioning an inner bracket within the outer bracket and attaching the inner bracket to a wall;
   mounting a speaker within the inner bracket.
34. The method of claim 33, further comprising positioning a piece of wallboard over the structure in an end-to-end fashion.
35. The method of claim 33, wherein the step of positioning a piece of wallboard over the structure in an end-to-end fashion is attached via a collar disposed within the inner bracket.
36. The method of claim 33, wherein the arms are movable along the structure.
37. The method of claim 33, further comprising allowing the outer bracket to attach along a slot across a surface of the extending arm.
38. The method of claim 33, wherein the step of positioning the inner bracket within the outer bracket comprises attaching the inner bracket to an edge of the outer bracket.
39. The method of claim 33, wherein the step of providing the mounting mechanism comprises obtaining the extending arms, the structure, the outer bracket and the inner bracket from a supplier with a precut arms, structure, outer bracket and inner bracket.
40. The method of claim 33, wherein the step of providing the mounting mechanism comprises obtaining a kit from a supplier, the kit including the structure, extending arms, the outer bracket and the inner bracket.
41. The method of claim 33, wherein the structure is a beam.
42. A method of mounting a speaker in a wall, comprising:
   attaching an outer bracket in a structure;
   positioning an inner bracket within the outer bracket;
   attaching the structure into the wall; and
   mounting a speaker within the inner bracket.
43. The method of claim 42, wherein the structure is a stone wall.
* * * * *