A wall fixture attachment device for securing a wall fixture to a support structure comprising a release liner including a main body portion and an integral extended body portion foldable over a length of the main body portion, an adhesive material having a first adhesive surface and a second adhesive surface, the first adhesive surface adjacent to and in contact with the integral extended body portion of the release liner and the second adhesive surface placed in contact with the wall fixture and a removable protective cover adjacent to and in contact with the second adhesive surface prior to contact of the second adhesive surface with the wall fixture, wherein the integral extended body portion of the release liner is peelably released from the first adhesive surface to expose the first adhesive surface for adhesive contact with the support structure. A method of application is also disclosed.
ADHESIVE TAPE WALL HANGING SYSTEM

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] Not Applicable

STATEMENT RE: FEDERALLY SPONSORED RESEARCH/DEVELOPMENT

[0002] Not Applicable

BACKGROUND

[0003] This invention relates to a system and method for affixing a wall hanging such as a picture, mirror or other such objects to a support surface. More specifically, this invention relates to a system and method of positioning and securing an object to a desired location on a wall.

[0004] Bare and boring walls can easily detract from the general décor of almost any room. Thus, wall fixtures such as pictures, mirrors and other types of wall hangings are frequently affixed to walls in both personal and commercial settings, such as homes, retail stores and professional offices. The decorative potential is endless as almost anything can be affixed to a support structure such as a wall. However, sometimes the selection of an appropriate wall fixture is the easiest step in the process of decorating. The placement and positioning of a wall fixture is generally more difficult and can be quite a laborious process, especially if one individual is engaging in the process alone. Typically, an individual must first select the appropriate or desired location on a support structure for the wall fixture. This can be somewhat complicated if there is more than one fixture to be affixed or if the fixtures are large and cumbersome to handle and manage. Specifically, an individual must physically hold the wall fixture at the desired location and determine if the location is proper, both vertically and horizontally, in relation to the wall itself, for a more permanent affixation. In addition, the individual may want to mark the location on the support surface lightly with a pencil or chalk or other non-permanent marking object. Next, the wall fixture is affixed using attachment devices including screws, nails, hooks and the like. Finally, the user positions the wall fixture at a certain orientation for final display. For example, if wall fixture is a framed wall hanging, the wall fixture is usually positioned such that the top edge and bottom edge of the wall fixture are level with the horizon.

[0005] Despite the time and care taken to properly position and affix the wall fixture to the support structure, common everyday movement may cause the wall hanging to lose its desired orientation. For example, anyone that may be passing by the wall fixture may accidentally touch or bump the wall fixture. Even a slight contact with the support structure near the location of the wall fixture may cause the wall fixture to become displaced. Similarly, structural motion such as that caused by the vibration of a building, which may be related to the passing of vehicles or the natural settling of the foundation on which a building sits, may cause enough movement to result in the shift of the orientation of a fixture. Also, a daily cleaning routine, such as dusting, may cause the position of the wall fixture to be altered, even if great care is taken to avoid such an occurrence. Additional problems may arise if the wall fixture is not originally affixed in an orientation that is level with respect to the horizon. For example, if more than one attachment device is required to support the weight of the wall fixture, the attachment devices must each be horizontally and vertically aligned. If such devices are not aligned, the wall fixture will also not be level and any slight bumps to either the wall fixture or the support structure can render the display further unappealing to the eye.

[0006] Several devices exist in the prior art to place, position and secure a wall fixture at a desired location along a wall. One example in the prior art that attempts to address these issues is Pedley, U.S. Pat. No. 2,952,431, issued Sep. 13, 1960 for a Picture Hanger. Pedley is directed to a picture frame hanger which comprises intersecting strips that are secured to the back of a frame of a wall hanging. The strips are adjusted relative to each other in a desired relationship prior to the frame being affixed to the wall. Specifically, Pedley utilizes a vertically elongated hanger member that may be in the form of a semi-rigid metal strip. The vertically elongated hanger member should be of a sufficient length to extend approximately the full vertical length of the wall hanging. Pedley further incorporates a horizontal member that is adapted to extend along the full horizontal width of the picture. The horizontal member has a raised central portion through which the vertically elongated hanger portion extends. This arrangement is intended to allow the vertical member to pivot relative to the horizontal member for further adjustments. Once the user assembles the picture hanger on the back of the wall hanging, the user removes the vertically elongated hanger member from the assembly and positions the same on the wall. The user must affix the appropriate hardware to the wall in connection with the vertically elongated hanger member at the location where the wall hanging is desired to be placed. Next the user must replace the vertically elongated hanger member into the assembly and hang the wall hanging in its proper place.

[0007] The Pedley device is a complicated device with multiple components that attempts to solve the issues of general alignment and affixation. Although Pedley may assist in general alignment of the wall hanging, the arrangement of the vertically elongate hanger member and the horizontal member provide for freedom of movement with respect to each other and the orientation of the wall hanging. Thus, Pedley does not provide a method of securing the wall hanging to the wall.

[0008] Similarly, Robin, U.S. Pat. No. 4,212,123', issued Jul. 15, 1980 discloses a Positioning Device. This device disclosed by Robin is mounted on the rear surface of a wall hanging and is configured to alert the user when a wall hanging is out of its desired position. Specifically, the device includes an indicator arm that is pivotally mounted to a base portion. The base portion is adhesively secured to the wall hanging. Further, the arm is self-locating in a vertical plane. Thus, when the picture is tilted so as to be out of position, such as when the top and bottom edges of the wall hanging are not parallel to the horizon, the indicator arm projects from beyond the vertical edge of the picture and is visible when viewing the front of the picture. Thus, the indicator arm functions to alert the viewer of the picture when the wall hanging has been disturbed from its location and is no longer properly aligned. Adjustments to the wall hanging may then be undertaken until the indicator arm is once again hidden from view from the front of the wall hanging.

[0009] The positioning device provided by Robin not only does not provide an accurate initial orientation, but the device does not provide a method to prevent the future alteration of the orientation of the wall article. The wall hanging may
appear to be level at a first glance because the arm is not projecting out from the wall hanging. However, the nature of the configuration and the function of the device require that the device be out of position to a certain degree before the arm properly serves as an indicator. Moreover, the arm positioning device provided by Robin does not provide any method of securing the wall hanging to the wall surface to prevent future alteration of a proper orientation. Thus, the user is still burdened with the task of repositioning the wall hanging to the proper orientation each time that the wall hanging is displaced.

Therefore, what is needed is a system and method for aligning a wall fixture in a desired position on a wall surface and securing the wall fixture thereto such that the orientation or position is not easily affected by forces such as gravity, vibrations or accidental movement.

BRIEF SUMMARY

[0011] A wall fixture attachment device for securing a wall fixture to a support structure comprising a release liner including a main body portion and an integral extended body portion foldable over at least a length of the main body portion; an adhesive material having a first adhesive surface and a second adhesive surface, the first adhesive surface adjacent to and in contact with the integral extended body portion of the release liner and the second adhesive surface placed in engaging contact with the wall fixture and a removable protective cover adjacent to and in contact with the second adhesive surface prior to contact of the second adhesive surface with the wall fixture, wherein the integral extended body portion of the release liner is peelably released from the first adhesive surface to expose the first adhesive surface for adhesive contact with the support structure.

[0012] The release liner may be treated with a low friction material or the release liner may be constructed from a low friction material. The surface of the release liner that engages the adhesive material should have a relatively poor affinity for bonding with the adhesive material. Suitable materials for construction of the release liner may include without limitation, Teflon, Mylar, clay coated paper, polyethylene, wax paper and vinyl. The adhesive material is preferably a double-sided, noncurable, adhesive-usable material. Suitable adhesive materials may include without limitation a rubber-based adhesive or a double-sided tape. The removable protective cover should also be treated with or constructed from a low friction material.

[0013] A method of affixing a wall fixture to a support surface is disclosed comprising the steps of affixing a wall fixture attachment device to the surface of the wall fixture in contact with the support structure, the wall fixture attachment device including an adhesive material adjacent to and in contact with a release liner; mounting the wall fixture to the support surface; adjusting the wall fixture until it is in a desired position on the support surface; applying a pressure to the wall fixture near the location of the adhesive material and removing the release liner from the adhesive material to place the adhesive material in engaging contact with the support structure. The method may further comprise the step of placing a level device on a surface of the wall fixture to determine the orientation of the wall fixture. The method may further comprise a step of affixing a plurality of wall fixture attachment devices to the rear surface of the wall fixture. The placement of the adhesive material ensures that the wall fixture will not be affected by movement caused by naturally occurring vibrations or the occasional bumping. Additional wall fixture hanging devices may be utilized to further secure the wall fixtures to the support structure at other locations on the rear surface of the wall fixture.

[0014] A wall fixture attachment device kit for mounting a wall fixture to a support structure is disclosed, the kit comprising: a plurality of wall fixture attachment devices, each device comprising a release liner and an adhesive material having a first adhesive surface and a second adhesive surface, the first adhesive surface in contact with the release liner and the second adhesive surface in contact with a removable protective cover and a level device for indicating the orientation of the wall fixture. The level device may be a bubble level.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] These and other features and advantages of the various embodiments disclosed herein will be better understood with respect to the following description and drawings, in which like numbers refer to like parts throughout, and in which:

[0016] FIG. 1 is a front perspective view of one embodiment of the present invention having a release liner, an adhesive material and a partially removed protective covering.

[0017] FIG. 2 is a side cutaway view of the embodiment shown in FIG. 1.

[0018] FIG. 3 is a front view showing the invention applied to a wall fixture prior to removal of the release liner.

[0019] FIG. 4 is a perspective view showing the invention applied to the rear surface of a wall fixture, as viewed by the user from the front of wall fixture.

[0020] FIG. 5 is a side cutaway view of FIG. 3 along the line 5-5.

[0021] FIG. 6 is a side cutaway view of FIG. 4 along the line 6-6.

[0022] FIG. 7 is a side cutaway view showing the step of removing of the release liner from the wall fixture hanging device.

[0023] FIG. 8 is a side cutaway view of the adhesive material in position to secure a wall fixture to a support structure.

[0024] FIG. 9 is a perspective view showing the adhesive material in position to secure a wall fixture to a support structure as viewed from the front of the wall hanging.

[0025] FIG. 10 is a front perspective view of wall fixture hanging device kit, according to an aspect of the present invention.

[0026] FIG. 11 is a rear perspective view of a wall fixture hanging device kit, according to an aspect of the present invention.

DETAILED DESCRIPTION

[0027] Referring now to the drawings wherein the showings are for purposes of illustrating the preferred embodiments of the present invention and not for purposes of limiting the same, FIGS. 1 and 2 represent an embodiment of a wall fixture hanging device 5 that comprises a roll over release liner 20 having a main body portion 25 and an integral extended body portion 30 that is foldable over a length of the main body portion 25 such that the main body portion 25 may extend beyond the integral extended body portion 30. The release liner 20 has a first surface 20a and a second surface 20b. A adhesive material 10 is provided on the integral extended body portion 30 on the first surface 20a of the release liner 20.
0028. The release liner 20 is generally treated with a low friction material, such as silicone, so that the release liner 20 has a low affinity for allowing the adhesive material 10 to bond thereto. The release liner 20 may also be constructed from a low friction material. At least the surface of the release liner 20 that engages the adhesive material 10 should have a relatively poor affinity for bonding with the adhesive material 10. The release liner 20 is preferably manufactured from a thin and flexible material. For example, appropriate materials for construction of the release liner include Teflon, Mylar, clay coated paper, polyethylene, wax paper and vinyl. The release liner 20 may also be constructed from a material such as regular paper or fabric so long as the area of the release liner 20 in contact with the adhesive material 10 is constructed from a low friction material or has been treated with a low friction material. The material from which the release liner 20 is constructed may depend on the nature of the adhesive material 10. The release liner 20 should be peelably removable from the adhesive material 10, as further described herein.

0029. The adhesive material 10 is preferably a pressure sensitive adhesive having generally strong and durable bonding qualities suitable to secure to a support surface an unlimited variety of objects having an unlimited variety of shapes, sizes and weights. The adhesive material 10 is preferably noncurable. The adhesive material 10 should be double-sided such that the adhesive material 10 has a first adhesive surface 10a and a second adhesive surface 10b. In the embodiment of the wall fixture hanging device 5 shown in FIGS. 1 and 2, the first adhesive surface 10a of the adhesive material 10 is adjacent to and in contact with the first surface 20a of the release liner 20. A suitable adhesive material 10 may include, but is not limited to, a rubber based adhesive or a double sided tape.

0030. A removable protective cover 15 is provided over the second adhesive surface 10b of the adhesive material 10. The removable protective cover 15 prevents the wall fixture hanging device 5 from prematurely becoming adhered to an object other than the wall fixture. At least the portion of the removable protective cover 15 in contact with the adhesive material 10 should be constructed from or treated with a low friction material to prevent the adhesive material 10 from establishing a bond with the removable protective cover 15.

0031. FIGS. 3 through 9 illustrate a methodology of mounting a wall fixture 45 using the wall fixture hanging device 5. For illustrative purposes only and not to limit the types of wall fixtures with which the wall fixture hanging device may be utilized, the wall fixture 45 shown in FIGS. 3 through 9 is a framed object, such as a painted or photographic picture, a certificate, a diploma, or a box frame containing an object for display such as a prize jersey. The wall fixture 45 shown in the Figures may also be a framed mirror. However, it can be appreciated by one skilled in the art that the wall fixture 45 may be any type of wall hanging that can be affixed to the wall for a decorative or functional purpose. The wall fixture 45 should have a surface that is capable of bonding with the adhesive material 10 for the purposes of securing the wall fixture 45 to a support structure, such as a wall surface as shown in FIG. 4. Thus, wall fixture 45 may also include almost any object that can be hung on a wall in addition to objects similar to those previously described, including without limitation, a decorative rug, a paper article, photographs and plaques. For illustrative purposes the surface of the wall fixture 45 in the Figures to which the adhesive material 10 is bonded is a frame 35.

0032. Initially, the user must decide on the placement of the wall fixture 45 on the support structure. The user may prefer to mark this location lightly with a pencil or nonpermanent marker. Next, for ease of use, the wall fixture hanging device 5 is preferably affixed to a location along the surface of the wall fixture 45 that is to be placed in contact with the support structure, as shown in FIG. 3. To do so, the removable protective cover 15 must first be removed from the wall fixture hanging device 5 to expose the second adhesive surface 10b of the adhesive material 10. Thus, the user moves the removable protective cover 15 out of covering relation with respect to the adhesive material 10 by folding back the removable protective cover 15 and removing it to expose the adhesive material 10. The adhesive material 10 of the wall fixture hanging device 5 is then placed in contact with the surface of the wall fixture 45 that the user desires to mount to the wall surface.

0033. For example, if the user desires to mount a picture frame 35 to a support structure 50, such as shown in FIG. 4, the user should remove the removable protective cover 15 from the adhesive material 10 and place the adhesive material 10 in contact with the surface of the frame 35 that is to be placed in contact with the support structure 50. FIGS. 3 and 5 illustrate the second adhesive surface 10b of the adhesive material 10 placed in adhering engagement to the frame 35 of the wall fixture 45. A bond is formed between the frame 35 and the adhesive material 10. Pressure should be further applied to adhesive material 10 of the wall fixture hanging device 5 to ensure that the wall fixture hanging device 5 is securely bonded to the surface of the wall fixture 45. The wall fixture attachment device 5 should be placed at a location on the surface of the wall fixture 45 such that the main body portion 25 of the release liner 20 is visible and hangs below a bottom edge 80 of the wall fixture 45. Preferably, the main body portion 25 of the release liner 20 visible below the bottom edge 80 of the wall fixture 45 should be long enough for the user to firmly grasp.

0034. As shown in FIG. 4, once the wall fixture hanging device 5 is affixed to the frame 35, the wall fixture 45 may then be affixed to the support structure 50. For example, the wall fixture 45 shown in FIG. 4 has been affixed to the support structure 50 through the use of an attachment device 60. The attachment device 60 utilized to affix the wall fixture 45 in FIG. 4 is a nail 60. However, other attachment devices 60 may be utilized including without limitation a screw, a picture hook and nail combination or any other known attachment device that may be utilized to affix a wall fixture 45 to a wall. Additional support to the wall fixture 45 may be provided by utilizing hanging wire, such as shown in FIG. 4.

0035. As will be further described with respect to FIGS. 10 and 11, the wall fixture attachment device 5 may be provided in a kit which may include a level device 55. The level device 55 may be utilized to perform a leveling step to ensure that a top edge 75 and the bottom edge 80 of the wall fixture 45 are level to the horizon before the wall fixture 45 is adhered to a support structure 50 using the wall fixture attachment device 5. The level device 55 may be a transparent plastic tube-like device 65 that may further include a housing 70 to prevent the tube 65 from shifting or rotating while performing a leveling step. The leveling device 55 may hold two different types of fluids, such as an oil and water mix or a mix of air and at least one other liquid. In the case of water and oil, the two liquids are generally immiscible which allow the level device 55 to be used as a level to indicate to the user if the wall fixture is in a
desired orientation. The level device 55 operates to indicate a level orientation with respect to an ordinary picture frame when the line between the fluids aligns with an etched or otherwise marked line upon the surface of the level device. The level device 55 should be placed in the center region of the wall fixture 45 and the orientation of the wall fixture 45 is continuously adjusted until the fluid contained within the level device 55 indicates that the top edge 75 and the bottom edge 80 of the wall fixture 45 are level with the horizon.

[0036] Next FIGS. 4 through 7 represent the steps taken to install the wall fixture attachment device 5 once the device 5 has been positioned in place on the rear surface of the wall fixture 45. As shown in FIGS. 4 and 6, the wall fixture 45 is affixed to the support structure 50. Further, the second adhesive surface 10b of the adhesive material 10 is affixed to the rear surface of the frame 35 and the unexposed first adhesive surface 10a of the adhesive material 10 is covered by the release liner 20 which is in contact with and adjacent to the wall surface. As further shown in FIGS. 4, 6 and 7, the user grasps the portion of the release line 20 which extends beyond the wall fixture 45. The user may grasp this portion of the release liner 20 with a thumb and an index finger of the hand that the user is most comfortable with performing such tasks. As shown in FIGS. 4 and 7, the user should also place the index finger of the other hand at a location on the front of the wall fixture 45 near the location of the adhesive material 10 and, at approximately the same time, apply a small amount of pressure to hold the wall fixture 45 in place. If the wall fixture 45 is a picture frame 35, such as that shown in the Figures, the user should apply pressure with the index finger on the front surface of the frame 35 near the location of the adhesive material 10 as possible. Depending on the configuration and type of the wall fixture 45, the user may need to apply such pressure in a different manner or location along the wall fixture 45.

[0037] FIG. 7 illustrates the process of removing the release liner 20 from the second surface 10b of the adhesive material 10. As the user grasps the portion of the release liner 20 extending below the wall fixture 45, the user pulls in a generally downward direction to remove the release liner 20 from the second surface 10b of the adhesive material 10. As previously described, the release liner 20 is constructed from or treated with a low bonding material so that the release liner 20 is easily removable from the adhesive material 10. As the user pulls downward on the release liner 20 with the thumb and index finger of one hand, the user may continue to apply the pressure with preferably the index finger of the other hand to move the now exposed second surface 10b of the adhesive material 10 in adhesive contact with the surface of the support structure 50.

[0038] FIGS. 8 and 9 show the adhesive material 10 in place between the wall fixture 45 and the support structure 50. The second adhesive surface 10b of the adhesive material 10 is in adhesive contact with and adjacent to the frame 35 of the wall fixture 45. The first adhesive surface 10a of the adhesive material 10 is in adhesive contact with and adjacent to the support structure 50. As shown in the Figures, the wall fixture 45 is secured to the support structure 50 by the attachment device 60, such as a nail, located at or near the top of the frame 35. The placement of the adhesive material 10 ensures that the wall fixture 45 will not be affected by movement caused by naturally occurring vibrations or the occasional bumping by a passerby. Additional wall fixture hanging devices 5 may be utilized to further secure the wall fixtures 45 to the support structure 50 at other points on the rear surface of the wall fixture 45, such as along the top or sides of the frame 35 of the wall fixture 45. Such affixation may be useful in commercial settings where the user may want to ensure that the wall fixture 45 is not easily removable from the support structure 50. Each wall fixture hanging device 5 may be utilized in the manner as described above to affix the adhesive material 10 to the rear surface of the wall fixture 45.

[0039] The wall fixture hanging device may be provided as a kit 100, as further described with respect to FIGS. 10 and 11, which may include a level device 55 and a number of wall fixture hanging devices 5. The kit 100 may be supplied in a package 105, such as a packet, a bag, a carton, an envelope, casing or the like, as well as any combinations thereof. The package 105 may be heat sealed or the package 105 may be resealable such that it can be selectively opened and selectively reclosed, as desired by the user. The package 105 may optionally include smaller sub-packages 110 or multiple compartments. The package may be constructed from a clear material such as a plastic so that the user can view the contents of the package.

[0040] A hanging aperture 115 may be included on the package 105 to allow for retail display of the package 105. Generally, the configuration of the package 105 should permit a potential purchaser to view the contents. The packages 105 may be displayed on a shelf. However, the hanging aperture 115 may be provided such that the package 105 may be hung or suspended from a rod or a hook to be readily visible to the consumer.

[0041] The above description is given by way of example, and not limitation. Given the above disclosure, one skilled in the art could devise variations that are within the scope and spirit of the invention disclosed herein. Further, the various features of the embodiments disclosed herein can be used alone, or in varying combinations with each other and are not intended to be limited to the specific combination described herein. Thus, the scope of the claims is not to be limited by the illustrated embodiments.

What is claimed is:

1. A wall fixture attachment device for securing a wall fixture to a support structure comprising:
   a release liner including:
   a main body portion; and
   an integral extended body portion foldable over at least a length of the main body portion;
   an adhesive material having a first adhesive surface and a second adhesive surface, the first adhesive surface adjacent to and in contact with the integral extended body portion of the release liner and the second adhesive surface placed in contact with the wall fixture and a removable protective cover adjacent to and in contact with the second adhesive surface prior to contact of the second adhesive surface with the wall fixture, wherein the integral extended body portion of the release liner is peelably released from the first adhesive surface to expose the first adhesive surface for adhesive contact with the support structure.

2. The wall fixture attachment device of claim 1, wherein the release liner is treated with a low friction material.

3. The wall fixture attachment device of claim 1, wherein the release liner is a low friction material.
4. The wall fixture attachment device of claim 1, wherein the release liner is Teflon.

5. The wall fixture attachment device of claim 1, wherein the adhesive material is a double-sided tape.

6. The wall fixture attachment device of claim 1, wherein the adhesive material is noncurable.

7. The wall fixture attachment device of claim 1, wherein the adhesive material is a rubber-based adhesive.

8. The wall fixture attachment device of claim 1, wherein the removable protective cover is treated with a low friction material.

9. The wall fixture attachment device of claim 1, wherein the removable protective cover is a low friction material.

10. The wall fixture attachment device of claim 1, further comprising a level device for indicating the orientation of the wall fixture.

11. The wall fixture attachment device of claim 10, wherein the level device is a bubble level.

12. A method for affixing a wall fixture to a support surface, the method comprising the steps of:
affixing a wall fixture attachment device to a rear surface of the wall fixture, the wall fixture attachment device including an adhesive material adjacent to and in contact with a release liner;
mounting the wall fixture to the support surface;
adjusting the wall fixture until it is in a desired position on the support surface;
applying a pressure to the wall fixture near the location of the adhesive material and removing the release liner from the adhesive material to place the adhesive material in engaging contact with the support structure.

13. The method of claim 12, further comprising a step of placing a level device on a surface of the wall fixture to determine the orientation of the wall fixture.

14. The method of claim 12, wherein the adhesive material is a double sided adhesive.

15. The method of claim 12, further comprising a step of affixing a plurality of wall fixture attachment devices to the rear surface of the wall fixture.

16. A wall fixture attachment device kit for mounting a wall fixture to a support structure, the kit comprising:
a plurality of wall fixture attachment devices, each device comprising a release liner and an adhesive material having a first adhesive surface and a second adhesive surface, the first adhesive surface in contact with the release liner and the second adhesive surface in contact with a removable protective cover;
a level device for indicating the orientation of the wall fixture.

17. The wall fixture attachment device kit of claim 16, wherein the level device is a bubble level.

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