

## **WALL MOUNTABLE WIRE GRID ORGANIZER SYSTEM WITH REMOVABLE ACCESSORIES**

### **TECHNICAL FIELD**

[0001] The present invention relates generally to wall mountable storage and organizing articles and, more particularly, to a wire form shelf assembly that can be adhesively mounted to, for example, a vertical wall surface in a bathroom or the interior surface of a bath or shower enclosure to hold a variety of items commonly used in the bathroom or shower.

### **BACKGROUND**

[0002] Shower and bath storage devices, often referred to as shower or bath caddies, are commonly used to hold and/or store items such as soap, shampoo, and other bath items in shower and bath enclosures. Because of the weight of the stored items and because it is generally not practical to mount such items in shower or bath enclosures using mechanical fasteners, such as nails and screws, such devices are typically hung from the shower nozzle fixture. Such devices are known in the prior art. U.S. Patent No. 4,969,580 (Mikhail Essatt), U.S. Patent No. 4,108,314 (Racca), U.S. Patent No. 5,255,401 (Sambrookes et al.), and U.S. Patent No. 6,520,351 (Zadro), for example, disclose such devices. It is also known to mount such devices using suction cups as disclosed in, for example, U.S. Patent No. 5,289,927 (Emery).

[0003] Such devices, however, suffer from certain drawbacks and shortcomings. Devices that hang from the shower nozzle fixture, for example, tend to be large and cumbersome and because such devices must hang down from the shower nozzle fixture below the shower head so the items in the caddy can be accessed by a user, they are unstable and tend to swing sideways or slide off of the shower nozzle fixture. In addition, the mounting location is limited by the location of the shower nozzle fixture such that they cannot be moved, and, because they must be mounted immediately below the shower head, they tend to interfere with the use of the shower. Devices mounted with suction cups, on the other hand, have limited holding capacity and tend to lose their holding ability over time. As a result, devices mounted with suction cups frequently fail, thereby causing the device and

its contents to fall off the wall. The need therefore exists for a storage device that can be adhesively mounted to the wall surface of a shower or bath enclosure that is inexpensive, easy to install, is adjustable, and holds strongly enough to support items commonly stored in such devices.

[0004] The need therefore exists for a storage device that can be adhesively mounted to the wall surface of a shower or bath enclosure that is inexpensive, easy to make and use, is adjustable and versatile, and holds strongly enough to support items commonly stored in such devices.

### SUMMARY

[0005] The invention overcomes the above-identified limitations in the field by providing an organizer rack assembly that can be adhesively mounted to, for example, the wall surface of a shower or bath enclosure, that is inexpensive, easy to install, and holds strongly enough to support items commonly stored in such devices.

[0006] In one embodiment, the present invention provides a wall mountable organizer rack assembly including a support grid structure including a perimeter frame and a plurality of transverse support members connected with the perimeter frame, at least one accessory removably connected with the support members, and at least one stretch removable adhesive strip arranged between the support grid and the wall for adhesively bonding the rack to the wall. In one aspect, the present invention provides a rack including at least one back plate connected with the support grid to which at least one stretch removable adhesive strip is adhered.

[0007] In a specific aspect, the back plates have generally planar surfaces facing the wall and the at least one stretch removable adhesive strip is arranged on the back plate planar surface. In another aspect, the support members comprise a looped mounting rod comprising a pair of spaced generally parallel rod portions. One rod portion is connected with a back plate and the other rod is connected with the perimeter frame. In this manner, the looped mounting rod serves to maintain the perimeter frame in spaced relation from the wall.

### BRIEF DESCRIPTION OF DRAWINGS

[0008] The present invention will be further described with reference to the accompanying drawings, in which

[0009] FIG. 1 is a perspective view of a wall mountable wire grid rack assembly with removable accessories; and

[0010] FIG. 2 is partially exploded detailed view showing how the wire grid rack assembly is mounted on a wall surface.

### DETAILED DESCRIPTION

[0011] Referring now to the drawings, wherein like reference numeral refer to like or corresponding parts throughout, FIGS. 1 and 2 show a wall mounted wire grid rack assembly 2 for holding items such as soap, shampoo and the like in, for example, a shower or bath enclosure. The rack 2 includes a support grid structure 4, a plurality of accessories 6,8,10,12,14 removably connected with the support grid structure 4, and stretch removable adhesive strips 16 arranged to adhesively bond the grid structure 4 to a wall surface 18.

[0012] The support grid structure 4 includes a perimeter frame 20 and a plurality of transverse support members 22 connected with the perimeter frame 20. The perimeter frame 20 includes a top rail portion 20a, a bottom rail portion 20b and opposed side rail portions 20c,20d extending from the top 20a to the bottom 20b rail portions. In the illustrated embodiment, the support members 22 comprise horizontal rods extending from one side rail 20c to the opposite side rail 20d portion.

[0013] In the illustrated embodiment, the rack 2 includes back plates 24 connected with the support grid 4. The back plates 24 have generally planar surfaces facing the wall surface 18 to which the stretch removable adhesive strips 16 are affixed, thereby to adhesively bond the support grid 4 to the wall surface 18.

[0014] In the illustrated embodiment, the grid structure 4 includes three looped mounting rods 26,28,30 that serve to space the frame 20 from the wall surface 18 and serve as support members for one or more of the accessories 6,8,10,12,14. Each looped mounting rod 26,28,30 comprises a pair of spaced generally parallel rod portions 26a,b, 28a,b 30a,b. Referring to looped rod 26, one rod portion 26a is connected with a back plate 24, and the other rod portion 26b is connected with the perimeter frame 20, whereby the looped

mounting rod 26 serves to maintain the perimeter frame 20 in spaced relation from the wall surface 18. The other rod portion 26b serves as a support member to which accessories may be attached. In this manner, the rearward portion of the mounting rods 26a,28a,30a is arranged adjacent the wall surface, and the forward portion of the mounting rods 26b,28b,30b is arranged in spaced relation with the wall surface 18 and serves as a support to which accessories 6,8,10,12,14 may be secured.

**[0015]** In the illustrated embodiment, the two upper looped mounting rods 26,28 extend between the side rail portions 20c near the top rail portion 20 and are connected with the back plates 24, and the lower looped mounting rod 30 extends between the side rail portions 20c near the bottom rail portion 20b. The two support members 22 arranged between looped mounting rods 28,30 are single rods that extend between the side rail portions 20c,20d and serve to support accessories.

**[0016]** In the illustrated embodiment, each accessory 6,8,10,12,14 includes a curved end portion 6a,8a,10a,12a,14a that fits over either one of the support rods 22 or the forward portion 26b,28b,30b of one of the looped mounting rods 26,28,30. In the case of the looped mounting rods 26,28,30, the forward and rear rods are spaced to define an elongated opening 32 through which the end portion 6a,8a,10a,12a,14a of the associated accessory 6,8,10,12,14 may extend.

**[0017]** In the illustrated embodiment, accessory 6 is a unitary hook attached to the lower most looped mounting rod 30. Accessory 8 is a unitary tray configured to hold a bar of soap. Accessory 10 is a unitary shelf structure designed to hold, for example, a bottle of shampoo or conditioner. Accessory 12 is a unitary hook including a pair of spaced raised regions 12a defining a recessed region there between configured to hold a conventional razor. And accessory 14 is a cup shaped article designed to hold, for example, tooth brushes.

**[0018]** As shown in broken lines in FIG. 1, stretch removable adhesive strips 16 are arranged between the back plate 24 and the wall surface 18, and thereby adhesively bond the rack 2 to the wall surface 18. A suitable stretch removable adhesive is the double-sided stretch removable adhesive strips available from 3M Company, St. Paul, Minnesota under the COMMAND trade designation. Commercially available COMMAND adhesive

strips are currently manufactured as discrete strips with one end of the strip including a non-adhesive pull tab to facilitate stretching of the strip during removal.

**[0019]** Stretch removable adhesives are high performance pressure-sensitive adhesives that combine strong holding power with clean removal and no surface damage. The double-sided adhesive strips 16 may be any conventionally known stretch removable adhesive tape including a stretch removable adhesive tape with an elastic backing, a stretch removable adhesive tape with a highly extensible and substantially inelastic backing, or a stretch removable adhesive tape comprising a solid elastic pressure sensitive adhesive, but are preferably stretch removable adhesive strips that are moisture resistant (i.e. they maintain their holding power in the presence of water and/or in high humidity environments).

**[0020]** Specific tapes suitable for use in the various embodiments of the present invention include the pressure sensitive adhesive tapes with elastic backings described in U.S. Patent No. 4,024,312 (Korpman), the pressure sensitive adhesive tapes with highly extensible and substantially inelastic backings described in U.S. Patent Nos. 5,516,581 (Kreckel et al.) and 6,231,962 (Bries et al.), 6,569,521 (Sheridan et al.), 7,078,093 (Sheridan et al.), and the solid elastic pressure sensitive adhesive described in German Patent No. 33 31 016. Other suitable stretch removable adhesive constructions include the stretch removable adhesive tape laminate including a separable fastener described in U.S. Patent No. 6,972,141 (Bries et al.), and the elongate stretch removable tape constructions described in U.S. Patent Nos. 6,641,910 (Bries et al.), and 6,541,089 (Hamerski et al.).

**[0021]** The stretch removable adhesive strips 16 include an adhesive portion 16a, which is typically concealed by the back plate 24 when the back plate 24 is mounted to the wall surface 18, and a non-adhesive pull tab portion 16b that extends outwardly beyond the bottom of the back plate 24 as shown in FIG. 2. In the illustrated embodiment, the rack 2 further includes an optional cover plate 34 arranged over the back plate 24. When the cover plate 34 is assembled over the back plate 24, it serves to conceal the non-adhesive pull tab portions 16b of the stretch removable adhesive strips 16, but, when removed from the back plate 24, the non-adhesive pull tabs 16b are visible and may be readily accessed by a user wishing to stretch remove the adhesive strips 16 from the wall surface 18.

[0022] If the adhesive strips 16 include a separable fastener, such as is described in U.S. Patent No. 6,972,141 (Bries et al.), the adhesive strips 16 may be arranged such that both the adhesive portion 16a and the non-adhesive pull tab portion 16b of the adhesive strip may be concealed by the back plate 24. This is possible because each adhesive strip can be removed by first separating the adhesive strip via the separable fastener and then stretch removing each remaining half from its respective surface. In this case, the cover plate 34 may be omitted.

[0023] The support rack 4, including the perimeter frame 20, the support members 22 and the looped mounting rods 26,28,30, is typically formed of metal rods, such as vinyl coated metal rods, but may be formed of any suitable material such as an injected molded synthetic plastic material. The accessories 6,8,10,12,14 are typically formed of injected molded synthetic plastic material but may be formed of any suitable material including metals. The back plate 24 and cover plate 34 may also be formed of metals and/or synthetic plastic materials.

[0024] Persons of ordinary skill in the art may appreciate that various changes and modifications may be made to the invention described above without deviating from the inventive concept. For example, it will be recognized that although the rack 2 is illustrated as being mounted with two back plates 24 each having two adhesive strips 16, one or more such mounting plates and adhesive strips may be used. In addition, it will be recognized that the rack 2 may be provided with any practical number of support members 22. Thus, the scope of the present invention should not be limited to the structures described in this application, but only by the structures described by the language of the claims and the equivalents of those structures.

What is claimed is:

1. A wall mountable organizer rack assembly, comprising:
  - (a) a support grid structure including a perimeter frame and a plurality of transverse support members connected with the perimeter frame;
  - (b) at least one accessory removably connected with the support members; and
  - (c) at least one stretch removable adhesive strip arranged between the support grid and the wall for securing the rack to the wall.
2. A rack as defined in claim 1, wherein the frame includes a top and a bottom rail portion and opposed side rail portions extending from the top to the bottom rail portions.
3. A rack as defined in claim 1, wherein the support members comprise support rods extending from one side rail to the opposite side rail portion.
4. A rack as defined in claim 1, wherein the rack includes at least one back plate connected with the support grid, the back plates having generally planar surfaces facing the wall and further wherein the at least one stretch removable adhesive is arranged on the back plate planar surface.
5. A rack as defined in claim 4, wherein the support members comprise a looped mounting rod comprising a pair of spaced generally parallel rod portions, one rod portion being connected with a back plate and the other rod being connected with the perimeter frame, whereby the looped mounting rod serves to maintain the perimeter frame in spaced relation from the wall.
6. A rack as defined in claim 5, comprising a pair of looped mounting rods, one extending between the side rail portions near the top rail portion, and one extending between the side rail portions near the bottom rail portion.

7. A rack as defined in claim 5, comprising a pair of looped mounting rods extending between the side rail portions and connected with a back plate.
8. A rack as defined in claim 1, wherein the accessory includes a curved end portion configured to support the accessory from a support rod.
9. A rack as defined in claim 1, wherein the accessory is a unitary hook.
10. A rack as defined in claim 1, wherein the accessory is a unitary shelf structure.
11. A rack as defined in claim 1, wherein the accessory is a unitary tray configured to hold a bar of soap.
12. A rack as defined in claim 1, wherein the accessory is a unitary hook including a pair of spaced raised regions defining a recessed region there between configured to hold a conventional razor.
13. A rack as defined in claim 4, wherein the stretch removable adhesive strip is a double-sided adhesive strip including a non-adhesive pull tab at one end, and wherein when the back plate is mounted on a vertical wall surface, the non-adhesive pull tab extends outwardly beyond the end of the back plate, whereby the non-adhesive pull tab is accessible to a user wishing to stretch remove the adhesive strip from the wall surface.
14. A rack as defined in claim 13, further comprising a cover plate removably connected with the back plate, whereby when the cover plate is connected with the back plate, the cover plate serves to conceal the non-adhesive pull tab portion of the stretch removable adhesive strip.
15. A rack as defined in claim 1, wherein the support grid structure is formed of metal rods and the accessory is formed of an injected molded synthetic plastic material.