

[54] **SHELF FIXTURE INCLUDING AN ATTACHMENT DEVICE THEREFOR**

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248/302, 248/318

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[58] Field of Search **108/92, 93, 108, 106; 211/119,**
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302, 303, 339, 340

[56] **References Cited**

UNITED STATES PATENTS

1,759,417	5/1930	Rabsilber	248/226 E X
1,819,713	8/1931	Klein	418/302 X
2,021,540	11/1935	Boyd	211/119 X
2,518,549	8/1950	Hyde	211/106 UX
2,839,202	6/1958	Arnett	211/106
3,266,764	8/1966	Briles	248/340 X
3,059,374	10/1962	Bernay	248/318 X

FOREIGN PATENTS OR APPLICATIONS

142,402	9/1930	Switzerland	248/213
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674,783 7/1952 Great Britain 248/226 E

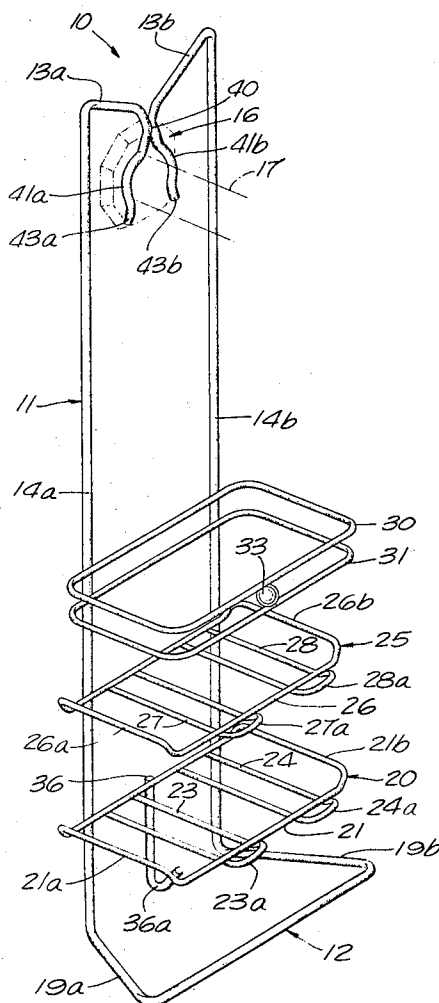
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[57] **ABSTRACT**

A shelf fixture for attachment to the water supply pipe of a stall shower is disclosed. The fixture includes a main frame formed of a single length of steel wire. The length of wire is bent so that the opposite end portions thereof located at the top of the frame are anchored together at a point and shaped to form an attachment device for the fixture. The opposite end portions of the wire for the attachment device is formed with extension portions extending downwardly from the anchor point prior to forming opposing outwardly curved portions which are made to tightly fit over the pipe. The terminating ends of the curved portions are located a sufficient distance from the anchor point because of the extension portions to provide an increased power of action for spreading the terminating ends to enable the attachment device to be readily snapped in a secure position over the pipe.

5 Claims, 3 Drawing Figures



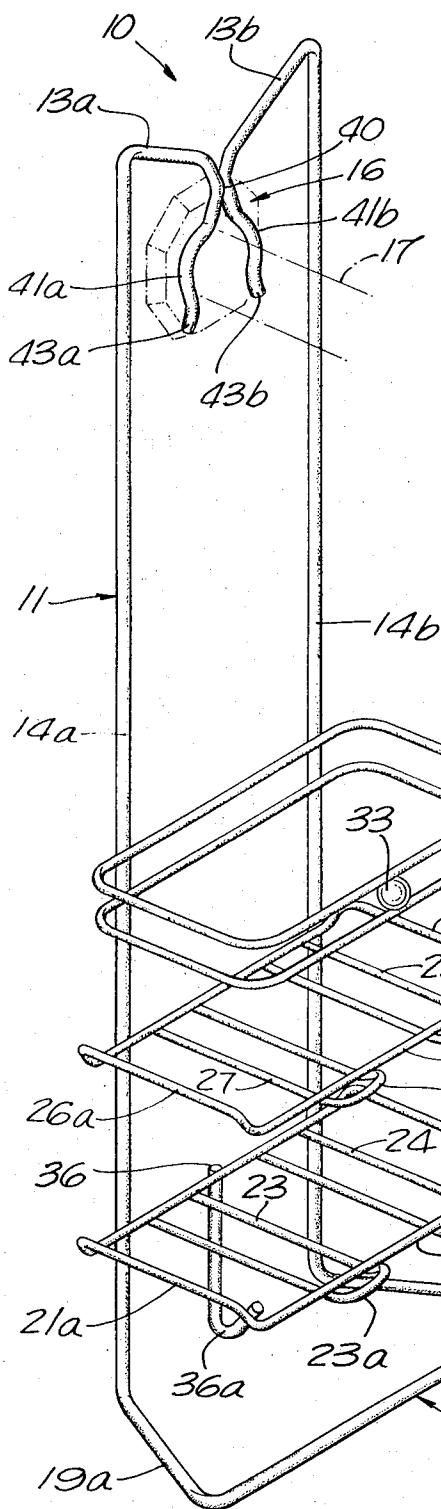


FIG. 1.

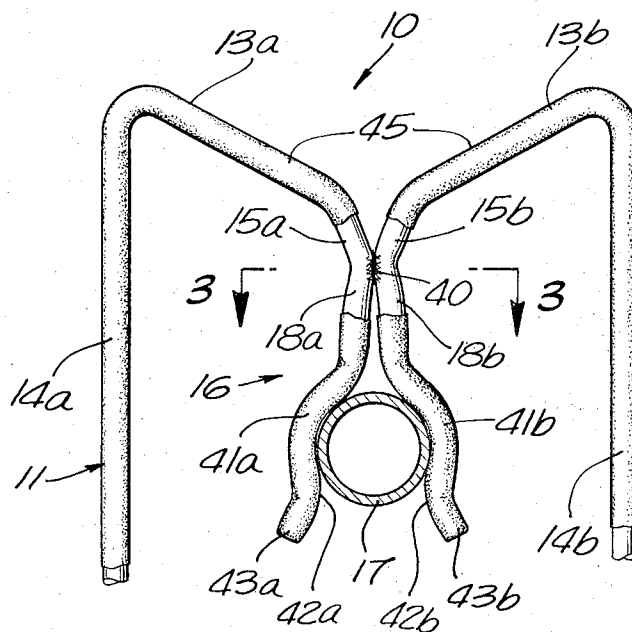


FIG. 2.

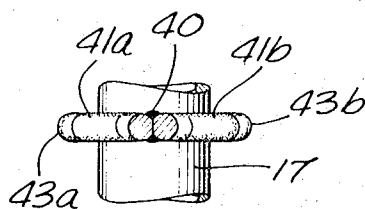


FIG. 3.

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SHELF FIXTURE INCLUDING AN ATTACHMENT DEVICE THEREFOR

This invention relates to a shelf fixture for use in a shower stall of a bathroom and more particularly to an improved, low cost attachment device for such a shelf fixture.

It is generally very useful and convenient to provide shelves in a shower stall, in addition to the built-in shelves usually provided, for holding the sundry items presently being marketed for aiding in bathing and otherwise caring of the hair and body. However, many persons, and especially women, are discouraged from purchasing presently available shelf fixtures for such purposes because of the difficulties encountered in securely attaching or otherwise providing for mounting such a shelf fixture within the shower stall. It is therefore evident that there is a need for a low cost shelf fixture for providing shelves in a shower stall wherein the bracket for the fixture can be simply and securely attached for convenient use within the shower stall without the need for any tools or separate fastening devices.

Accordingly, it is a principle object of this invention to provide an improved shelf fixture for a shower stall which includes a novel attachment device therefor.

It is an additional object of the invention to provide a low cost, simply fabricated shelf fixture for a shower stall which is designed to have an easy, secure attachment to the water supply pipe provided therein for the shower head.

A further object of the invention is to provide a new shelf fixture for a shower stall which includes a main frame formed of a single length of wire with the integral opposing end portions thereof shaped and joined to provide an easy attachment device for the fixture.

These and other objects and features of the present invention will become better understood through a consideration of the following description when taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of the shelf fixture of the present invention;

FIG. 2 is a detailed view of the integrally formed attachment device provided on the shelf fixture; and

FIG. 3 is a sectional view of the attachment device of FIG. 2 as taken along line 3—3 thereof.

Referring to the drawings, the fixture 10 of the present invention comprises a bracket or main frame 11 formed of a single, unbroken length of relatively heavy gauge steel wire. As illustrated in the drawings the length of wire is formed such that the middle portion thereof provides a horizontally extending rack or hanger 12 on the bottom of the frame and the side portions thereof, bent to extend upwardly from the hanger 12, provide relatively long, parallel, vertical sides 14a and 14b of the frame 11. Such an arrangement enables the opposing end portions of the length of wire to be joined and shaped at the top of the frame 11 to provide an attachment device 16 which is used for attaching the fixture 10 to a water supply pipe 17 extending from the wall of a shower stall to which a shower head (not shown) is connected.

Describing the main frame 11 more particularly, the respective end portions of the length of wire, after forming the attachment device 16, have lengths or portions 13a and 13b which extend upwardly and outwardly therefrom in opposite directions and then sharply bend downwardly to form the relatively long,

parallel, vertical sides 14a and 14b of the frame 11. The lower ends of the respective vertical sides 14a and 14b then bend upwardly to form horizontal portions 19a and 19b that extend outwardly from each other. The outer ends of portions 19a and 19b then sharply bend inwardly toward each other to form the hanger 12 which comprises the middle portion of the single length of wire forming frame 11.

Provided on the lower half of the parallel vertical sides 14a and 14b of the main frame 11 is a lower shelf 20 and an upper shelf 25. These shelves are formed of a relatively lighter gauge wire than that used for the main frame 11. Lower shelf 20 is comprised of a generally rectangular shaped wire structure 21 with the back side thereof welded to the sides 14a and 14b of the frame 11. A pair of U-shaped wire members 23 and 24 are attached to the under side of wire structure 21 with their legs disposed parallel to the sides 21a and 21b thereof and spaced such as to close the opening formed by the structure 21 and thus prevent articles from passing therethrough. To further aid in retaining articles on the shelf 20 the opposite sides 21a and 21b of the lower shelf 20 are turned upwardly, and the respective closed ends 23a and 24a of the U-shaped members 23 and 24 that extend beyond the outer side of wire structure 21 are likewise turned upwardly. A wire element 36 formed with a hook 36a on the lower end thereof has its upper end welded to the back end of the wire structure 21 of the lower wire shelf 20 at a location centrally between the vertical sides 14a and 14b of the frame. The hook 36a may be used for holding the handle of a brush, for example.

Upper shelf 25 is similarly formed of a generally rectangular shaped wire structure 26 with the back side thereof welded to the sides 14a and 14b of the frame 11. Likewise, a pair of U-shaped wire members 27 and 28 are attached to the underside of wire structure 26 with their legs disposed parallel to sides 26a and 26b thereof and spaced such as to close the opening formed by the wire structure 26. In a similar manner, so as to aid in retaining articles on the shelf 25, the opposite sides 26a and 26b of the upper shelf 25 are turned upwardly and the respective closed ends 27a and 28a of the U-shaped members 27 and 28 that extend beyond the outer side of wire structure 26 are turned upwardly. Disposed above the upper shelf 25 are a pair of generally rectangular, open, wire holders 30 and 31. The back ends of these holders are welded to the sides 14a and 14b of the main frame 11 and the vertical spacing of these holders, which are disposed parallel to each other, is determined, for example, by a steel ball 33 which is secured by welding between the front ends of the holders. It should be noted that the sides of the pair of wire holders 30 and 31 are intended to serve as a side support for the taller articles, such as a bottle of shampoo, that may be placed on the upper shelf 25.

Reference will next be made to FIG. 2 which shows an enlarged elevational view of the attachment device 16 for the fixture 10. Thus as indicated, the respective end portions of the length of wire used for forming the main frame 11, after being sharply bent inwardly toward each other and downwardly at the top of the frame so as to form straight portions 13a and 13b having an angle less than 90° with the vertical sides 14a and 14b, continue on to form short, straight portions 15a and 15b that bend inwardly at a lesser angle until the opposite end portions of the wire contact each other at

a point 40. The opposite end portions of the wire then bend outwardly to form slightly longer straight extension portions 18a and 18b extending away from their contact point 40 at a similarly lesser angle. As illustrated in FIGS. 2 and 3 of the drawings, the end portions are welded together at their contact point 40.

After forming the straight extension portions 18a and 18b that respectively extend angularly outwardly from point 40, the respective end portions of the wire form opposing outwardly curved portions 41a and 41b which together form the sides of an opening for attachment device 16 that generally conforms with the curvature of the pipe 17. The terminating ends 43a and 43b of the wire then bend outwardly in opposite directions.

The advantage of the attachment device 16 of the present invention is that it provides a simple means for enabling a person to attach the fixture 10 on the supply pipe 17 extending from the wall of the stall shower in a bathroom without the need of any tools or separate fastening parts for the fixture 10. The fixture 10 need be merely placed with the opening formed in its frame 11 between the parallel vertical sides 14a and 14b positioned in front of the shower head (not shown) connected on the end of pipe 17. The spacing of the parallel, vertical sides 14a and 14b of the frame is made wide enough to enable the fixture 10 to be then easily positioned over the shower head. The fixture 10 is then moved down until the open terminating ends 43a and 43b of the attachment device 15 rest on the pipe 17.

It should be noted that the outwardly bent opposing terminating ends 43a and 43b are shaped and spaced such as to make it relatively easy for these ends to be positioned such as to span the sides of the upper portion of pipe 17. Having so positioned the attachment device 16 of the fixture 10 over the pipe 17, the fixture 10 need be merely pulled down with a relatively moderate force to cause the pipe 17 to be wedged and seated within the opposing curved portions 41a and 41b. It should be particularly noted that the opposing terminating ends 43a and 43b of device 16 are located a sufficient distance away from the welded contact point 40 of the attachment device whereby a relatively small outwardly directed force on the terminating ends 43a and 43b resting on pipe 17, obtained by a downward pull on the main frame 11, provides a leverage action which causes the opposing terminating ends 43a and 43b to spring or deflect out in opposite directions from point 40 so that the curved portions 41a and 41b of device 16 can readily snap over the pipe 17. It should thus be clear that the increased power of action for spreading the terminating ends 43a and 43b apart is obtained by providing the extension portions 18a and 18b which locate these ends away from the welded contact point 40. More particularly, the spacing of the opposing outwardly curved portions 41a and 41b away from the welded contact point 40, by the use of extension portions 18a and 18b, is especially chosen to assure that the terminating ends 43a and 43b can be easily deflected outwardly such that the neck formed by points 42a and 42b can slide over the pipe 17, and to further assure that after the pipe is so positioned in the attachment device 16, the natural spring back of the end portions toward their normal position provides for the curved portions 41a and 41b to have a secure grip on the pipe.

It should now be clear that the attachment device 16 of the fixture 10 can be easily attached onto the pipe

17 and positioned thereon such that at least the lower portions of the back of the parallel, vertical sides 14a and 14b of the main frame 11 are supported by the wall of the shower stall. Further, the attachment device 16 provides a sufficiently strong, gripping action on the pipe 17 to hold the fixture 10 rigidly in its position against the wall of the shower stall. It should be further noted that the wire forming the fixture 10 may be covered with a protective coating 45 by dipping it in a bath of plastic material, such as vinyl, for example, and drying the coating in an oven. Such a coating further aids in the gripping action of the attachment device 16 onto the pipe 17.

While the description has been concerned with a particular structural embodiment of the present invention, it is to be understood that many modifications and variations in the construction and arrangement may be provided for without departing from the spirit and scope of the invention or sacrificing any of its advantages. The invention is therefore considered as including all such possible modifications and variations coming within legitimate and valid scope of the appended claims.

Having described the invention, what is claimed as new in support of Letters Patent is:

1. A fixture for attachment to a pipe extending from a wall, said fixture comprising:

a main frame and an attachment device therefor formed of a single length of resilient wire, said main frame formed with the middle portion of the length of wire forming the lower end of the frame and with the outer portions of the length of wire extending upwardly to provide vertical sides of the frame,

the respective end portions of said sides being formed into an attachment device by being bent to extend inwardly toward each other and anchored together at the point at which they make contact, and then being bent to extend downwardly from said anchor point away from each other by first forming extension portions and then continuing on to form opposing curved portions having outwardly bent ends corresponding to the respective terminating ends of the wire, and

a wire shelf connected to the vertical sides of the frame,

wherein the sides of said frame are spaced from each other to enable the frame to be placed over the end of said pipe so that the terminating ends of the attachment device can be positioned on the upper sides of the pipe, and

whereby said extension portions provide for the terminating ends of said opposing curved portions to be spaced from said anchor point so as to facilitate the outward deflection of said terminating ends by a downward pull on the frame to enable the opposing curved portions of the attachment device to be fitted over the pipe.

2. The invention in accordance with claim 1 wherein the middle portion of the length of wire on the lower end of the frame is bent outwardly to provide a horizontally extending hanger.

3. The invention in accordance with claim 1 wherein a wire holder is connected to the vertical sides of the main frame at a position above the wire shelf.

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4. The invention in accordance with claim 1 wherein the wire forming said fixture is covered with a coating of plastic.

5. A fixture having a main frame including as an integral part thereof an attachment device for securing the fixture to a horizontally extending pipe, the combination comprising:

a main frame having a pair of laterally spaced upwardly extending side arms formed of resilient wire,

the upper end portions of the said side arms respectively extending downwardly at an angle with the side arms and extending inwardly toward each other until they make contact and then extending downwardly and outwardly away from each other, said end portions being anchored together at the point at which they make contact,

the respective lengths of the end portions extending downwardly and outwardly from said anchor point

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including opposing outwardly curved portions spaced from said anchor point by opposing straight extension portions,

the terminating ends of said opposing outwardly curved portions being directed outwardly, and shelving means connected across the laterally spaced side arms of said main frame,

wherein the lateral spacing of the sides of said frame enable said frame to be placed over the end of said horizontally extending pipe so that the terminating ends of the attachment device can be positioned on the upper sides of the pipe, and

whereby the spacing of the opposing outwardly curved portions downwardly from the anchor point by the extension portions enables the outwardly directed terminating ends to be deflected outwardly and snapped over the pipe with the opposing curved portions tightly fitted against the pipe.

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