United States Patent [19]

Sosaya, deceased

[11] **3,759,473**

[45] **Sept. 18, 1973**

[54] **CLAMP FOR WALL MOUNTING OF BATHROOM ACCESSORIES**

[76] Inventor: **Frank F. Sosaya, deceased,** late of 2820 La Junta St., P.O. Box 1811, Santa Fe, N. Mex. 87501 by Dolores P. Sosaya, executrix

[22] Filed: **May 3, 1971**

[21] Appl. No.: **139,755**

[52] **U.S. Cl.** ..... **248/205 R,** 248/27

[51] **Int. Cl.** **H02g 3/08**

[58] **Field of Search** ..... 248/27, DIG. 6, 205 R, 248/226 R; 242/106; 220/3.5, 3.6

[56] **References Cited**

UNITED STATES PATENTS

2,767,945	10/1956	Bragg	248/27
2,610,012	9/1952	Mackey et al.	248/27
2,859,930	11/1958	Brunsting et al.	248/27
2,288,637	7/1942	Mauro	248/DIG. 6 UX
1,971,396	8/1934	De Waide	248/467 X
3,087,206	4/1963	Delf et al.	248/DIG. 6 UX

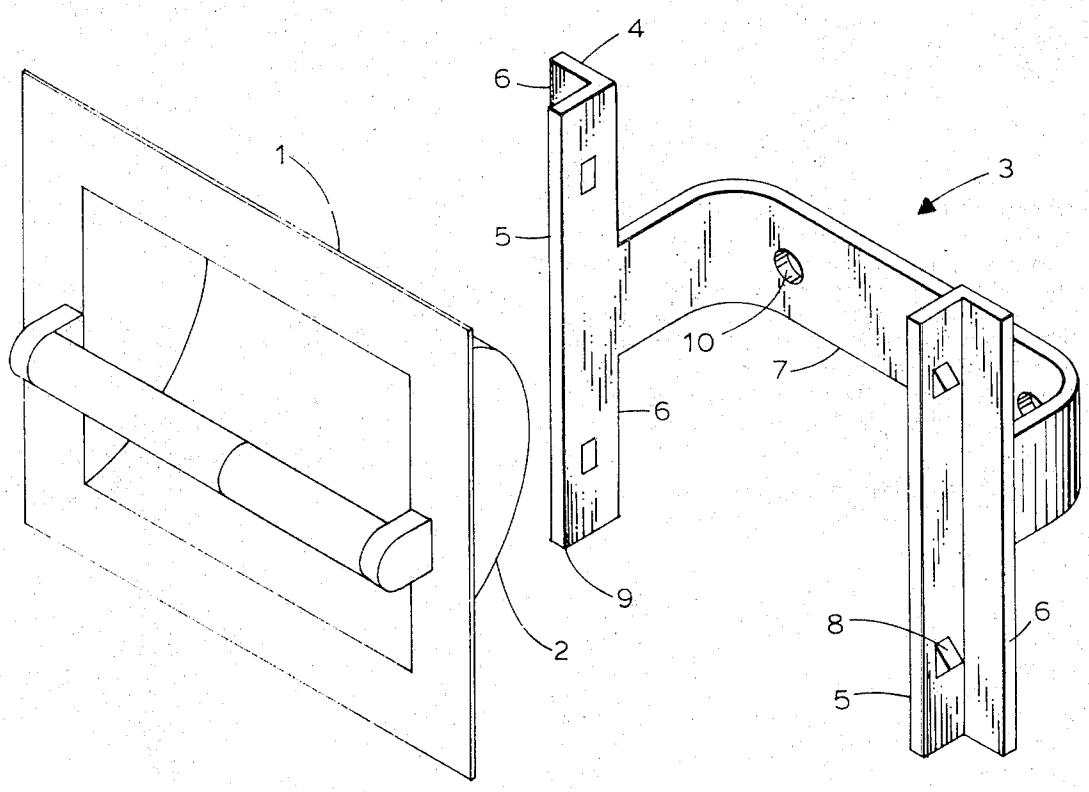
Primary Examiner—J. Franklin Foss

Attorney—Hiram B. Gilson

[57] **ABSTRACT**

A clamp for fastening in the bathroom wall accessories such as a toilet paper holder, a soap holder, a soap-and-grab, or a toothbrush holder. An H-frame of rigid material including a crossbeam is fitted into the bathroom construction wall or wallboard panel from the back side of the wall. A crossbeam with threaded studs is anchored by cement or mortar in a masonry wall. The crossbeam in either case is removably fastened to a single type of accessory receptacle and is secured to the bathroom wall.

5 Claims, 3 Drawing Figures



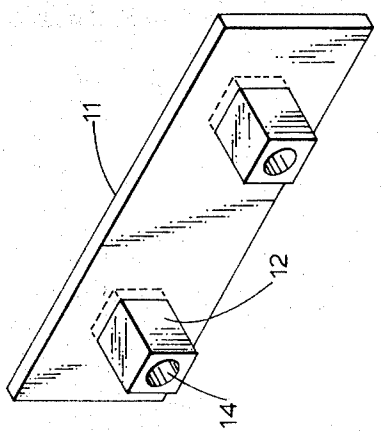


FIG. 2

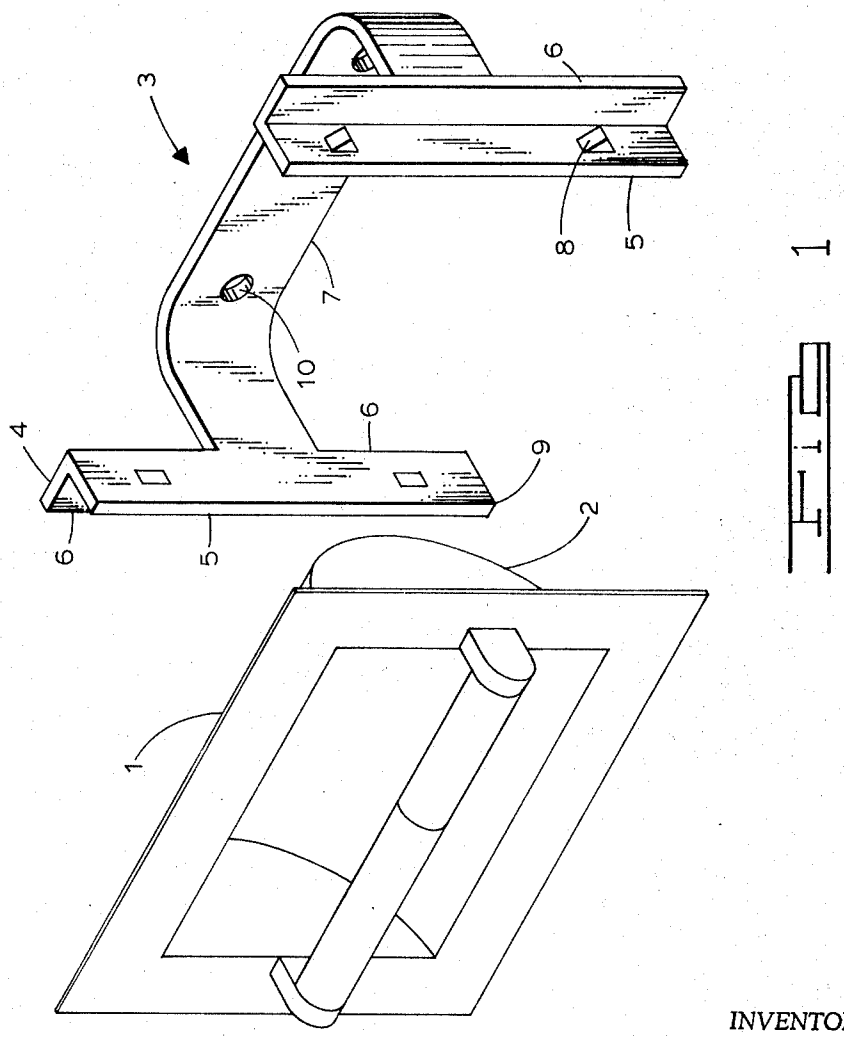


FIG. 1

INVENTOR.
FRANK F. SOSAYA
BY
Hiram B. Gilson
AGENT

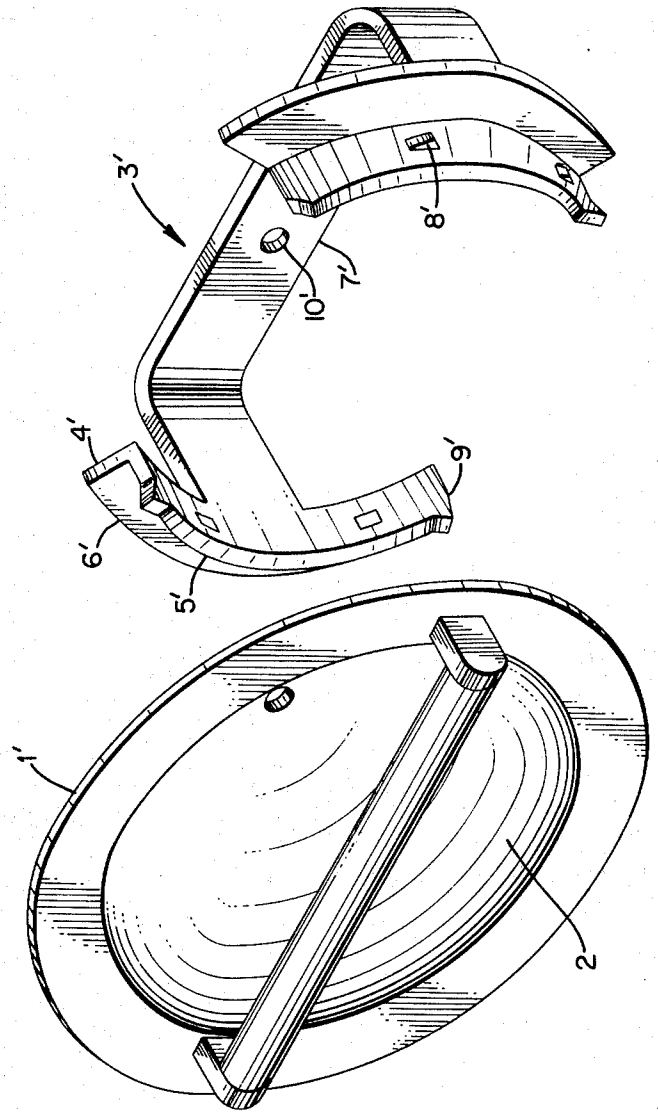


FIG. 3

CLAMP FOR WALL MOUNTING OF BATHROOM ACCESSORIES

BACKGROUND OF THE INVENTION

The installation of accessories such as toilet paper holders in bathroom walls has been both unreliable and expensive. Other typical examples of bathroom accessories are soap holders, soap-and-grab holders, and toothbrush holders. Common practice is to build up with wood or wallboard a structure on the back side of the wall opposite the cutout to which the receptacle portion of the accessory can be screwed or nailed. This type of built-up structure often fails in which case rebuilding is more difficult than on initial installation. Thus, the wood structure as a clamp on the back side of the wall is very unsatisfactory.

The prior art includes also metal clamps having a cross-piece held loosely in place by a spring which is also unreliable. In still another example, a clamp and the accessory are preassembled with exceptionally long screws, and the assembly is laboriously worked through the cutout so that the clamp is on the back side of the wall and the accessory is on the front of the wall. Then the long screws are painstakingly screwed in so that the receptacle of the accessory is pulled into the cutout and finally the entire assembly is tightly in place. In this case one hand must hold the clamp against the back side of the wall while the other hand holds the accessory and at the same time manipulates the screwdriver on the long screws. In the present day of high labor and overhead costs, the prior art devices have proven too slow and expensive. An important aspect of the problem is that the prior art clamps do not hold themselves in place in the wall cutout so that assembly of the accessory in the wall can proceed quickly and efficiently.

A similar assembly problem exists in the installation of bathroom accessories in a masonry wall. In this type of prior art accessory the anchoring means is formed integral with the receptacle of the accessory, such as a bracket welded to the receptacle surface to become embedded in the cement or mortar. Another masonry-type accessory has corrugations in the receptacle surface. Thus we see that one kind of accessory is for installation in a wallboard panel, but a different kind of clamp must be used in a masonry wall cutout. Stocking two types of accessories, one for each of the two different wall constructions, wastes space and is more expensive than with the clamp of the invention: one kind of receptacle fits either the panel or the masonry construction. Buying one type of soap holder accessory, for example, is a distinct advantage to the contractor.

SUMMARY

A clamp is provided for a bathroom construction wall or wallboard panel by means of which an accessory can be clamped securely to the wall. The clamp is constructed of angle members and a crossbeam to prevent vertical or lateral movement of the accessory, and be locked in place of itself by crimps or pierce flash in the angle members for anchoring the members in the wall cutout. In a variation of this crossbeam design for clamping an accessory to a wallboard panel, there is a flat crossbeam on which are mounted spacing studs for anchoring the crossbeam in place in a masonry wall by means of cement or mortar. In each case the clamp is held in place by itself to simplify assembly of the same type of accessory onto the clamp. The result of both variations of the invention is to provide the plumbing industry with a reliable and economical means for clamping a bathroom accessory in a bathroom wall.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:

FIG. 1 lefthand portion is a perspective view of a toilet paper holder, one type of bathroom accessory with receptacle, and the righthand portion of FIG. 1 is a perspective view of the clamp of the invention for a wall or panel.

FIG. 2 is a perspective view of a clamp of the invention for masonry wall construction where a recess must be chipped out of the cinder or concrete block or solid wall to accommodate the receptacle of the accessory, including space for the clamp and cement or mortar for holding the clamp solidly in the wall.

FIG. 3, lefthand portion, is a perspective view of a grab-handle bathroom accessory, and the righthand portion is a perspective view of the clamp of the invention, similar to the clamp of FIG. 1 except that the straight angle members are curved to fit a circular wall board cutout instead of being straight to fit a rectangular cutout as in FIG. 1.

Referring to the drawings, FIG. 1 in the lefthand view, the flange 1 which fits against the front side of the bathroom wall surrounds the receptacle 2 which is adapted to fit into the rectangular cutout in the wall, wall and cutout not being shown. FIG. 1 in the righthand view, the H-frame construction 3 includes two parallel , equal length, spaced apart angle members 6 with ends 4, the two angle members being connected together by cross beam 7 which is offset throughout its length to form two legs of equal length to displace the straight middle portion of the cross beam a sufficient distance to accommodate the depressed portion of the receptacle 2, the members having inboard flanges 5 in opposed parallel facing relationship for contacting opposite sides of the wall cutout, such that the flat sides of the receptacle fit between the parallel faces of the flanges 5 in overlapping relationship on assembly, the inboard flanges being pierced so that the point of the pierce 8, or the end corners 9 of the inboard flanges 5, may be crimped outwardly, to anchor the clamp in the cutout, the outboard flanges 6 fit against the back side of the wall at opposed cutout sides, and the fastening means 10 of the crossbeam match corresponding fastening means in receptacle 2 (not shown) such that the H-frame and the accessory may be drawn together tightly against the bathroom wall by a machine screw or the like.

In FIG. 2 a clamp is illustrated for being cast into a masonry wall cutout for securing a bathroom accessory. The crossbeam 11 is a flat piece of material onto which are mounted spacing studs 12, the studs being drilled 14 and tapped for the attachment of an accessory receptacle by a threaded fastener. Thus the crossbeam 11 with its tapped studs serves a purpose similar to that of the crossbeam of FIG. 1, that is, to secure the same type of receptacle accessory in the bathroom wall of masonry construction. The spacers displace the crossbeam from the receptacle bottom a sufficient distance for the flow of cement or mortar into such space which on solidifying will lock the clamp in place.

Referring to the drawings, FIG. 3 in the lefthand view, the flange 1' which fits against the front side of bathroom wall surrounds the receptacle 2' which is

adapted to fit into the circular cutout in the wall, wall and cutout not being shown. Further in FIG. 3, in the righthand view, the modified H-frame construction includes two substantially parallel spaced apart angle members 6' formed in circular quadrant segments, the two angle members being connected together, as by welding, with crossbeam 7' which is offset to accommodate the depressed portion of the receptacle 2'. Each of the angle members has an inboard flange 5' in opposed substantially parallel facing relationship for contacting opposite sides of the wall cutout, the inboard flanges being pierced so that the flash of the pierce 8', or the end corners 9', may be bent outwardly, to anchor the clamp in the cutout. The outboard flanges 6' fit against the back side of the wall at opposed cutout sides, and the fastening means 10' of the crossbeam match corresponding fastening means in receptacle 2' such that the clamp and the accessory may be drawn tightly together against the bathroom wall by a machine screw of the like.

Referring to the drawings, FIG. 1 and FIG. 3, it is seen that the clamp is designed to provide for either vertical or horizontal alignment of the crossbeam in a rectangular cutout or in a circular cutout. The form of the clamp of FIG. 1 can be converted to the form of FIG. 3 by a single die forming operation.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In assembly of the accessory and H-frame clamp, the first step is the insertion of the clamp through the wall cutout and then the clamp is oriented and pulled into the cutout with the outboard flanges fitting against the back surface of the wall such that the inboard flanges fit closely against the faces of the cutout with the pierce flash or crimps embedded in the wall to anchor the frame in place. By anchoring the frame in place at this point, a principal object of the invention is achieved in that the frame will hold itself in place for the next assembly step — that of placing the receptacle into the cutout and locating the screws or other fastening means to draw frame and accessory together.

The clamp of the invention serves not only to hold itself firmly in anchored position, but it also serves to effect a permanent connection to the accessory to secure the accessory in place in the cutout. The H-frame construction of the invention has been found to be unexpectedly strong because the clamping force is distributed over a wider wall back side area than is achieved with clamps of the prior art. A common experience of those skilled in the plumbing art of installing accessories and clamps therefor in bathroom walls has shown that the prior art accessories work loose and fall out of the wall cutout. There is also a certain amount of personal danger present when an accessory grab handle is pulled out of the wall accidentally because of poor clamping.

An important advantage of the instant clamp invention is that the accessory can be removed from clamp, as for example, in the case of accessory replacement, and a replacement accessory can be installed quickly and easily because the clamp on the back side of the wall remains solidly in place by itself. The same secure anchoring is experienced with the clamp for masonry construction.

While the H-frame as set forth above is fitted to a rectangular cutout, it is visualized that the angle members could be shaped to fit either a circular or an elliptically shaped cutout. In such case, the accessory receptacle would be circular or elliptical. For a circular cutout in a wallboard panel the angle members would be of circular shape rather than straight. The two circular segmented angle members would be opposed quadrants to facilitate insertion of the clamp into and through the circular wall cutout for subsequent fitting to the back side of the wall.

What is claimed is:

1. A clamp for clamping a bathroom accessory receptacle into a bathroom wall cutout comprising:

a. an H-frame formed of two, equal-length, spaced-apart right-angle members;

b. the right-angle members having inboard flanges in opposed facing relationship for contacting throughout their lengths the opposite sides of a wall cutout;

c. the right-angle members having outboard flanges for contacting throughout their lengths the back-surface of the wall to distribute the clamping force over the surrounding back-wall surface;

d. a crossbeam connected rigidly at its ends to the midpoints of the inboard flanges to form the H-frame;

e. the crossbeam being offset throughout its length to form two legs of equal length, the legs being at right angles to the straight middle portion of the crossbeam, the length of the legs displacing the straight middle portion of the crossbeam from the front-wall surface a distance sufficient to accommodate the depth of a grab handle accessory receptacle through the wall cutout, the length of the middle portion of the cross beam being both parallel to the backwall surface and equal to the largest dimension of the wall cutout;

f. the inboard flanges being crimped outwardly to anchor the H-frame in the sides of the wall cutout; and

g. fastening means in the middle portion of the crossbeam for connection to fastening means in the bottom portion of the receptacle for rigidly clamping the accessory to the wall.

2. The combination of a bathroom accessory and clamp as claimed in claim **1**, the angle member is of right angle cross-section, the two angle flanges are of equal length, and the flat sides of the receptacle fit between the parallel faces of the inboard flanges in overlapping relationship on assembly.

3. A clamp as claimed in claim **1** wherein the right-angle members are straight, and their equal lengths correspond to the straight parallel sides of a rectangular wall cutout adapted to accommodate a grab-handle accessory receptacle of semi-cylindrical shape.

4. A clamp as claimed in claim **1** wherein the right-angle members are circular segments, and their equal lengths correspond in shape to the side of a circular wall cutout.

5. A clamp as claimed in claim **4** wherein the circular segments are formed from straight right-angle members.

* * * * *