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BATHTUB HANGER

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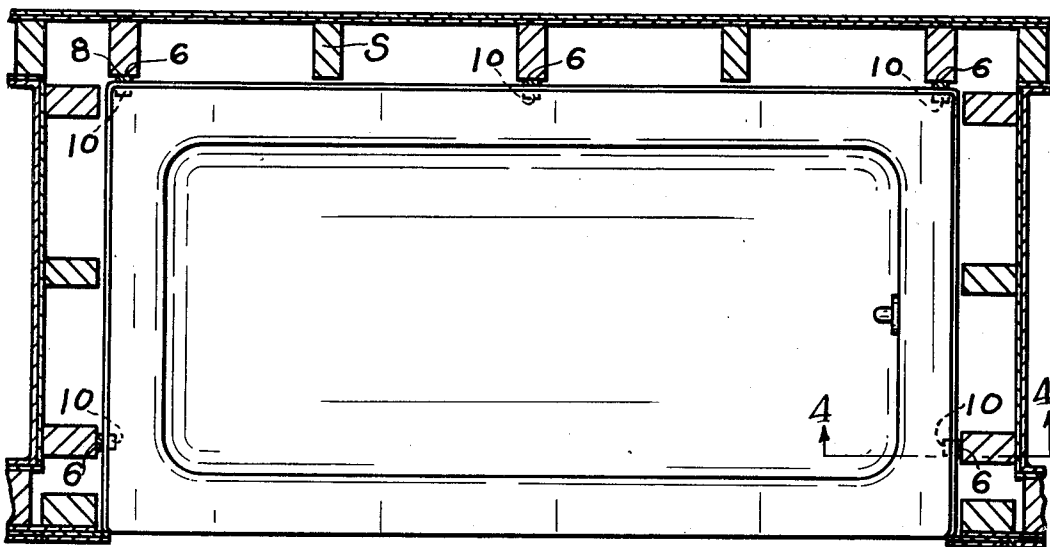
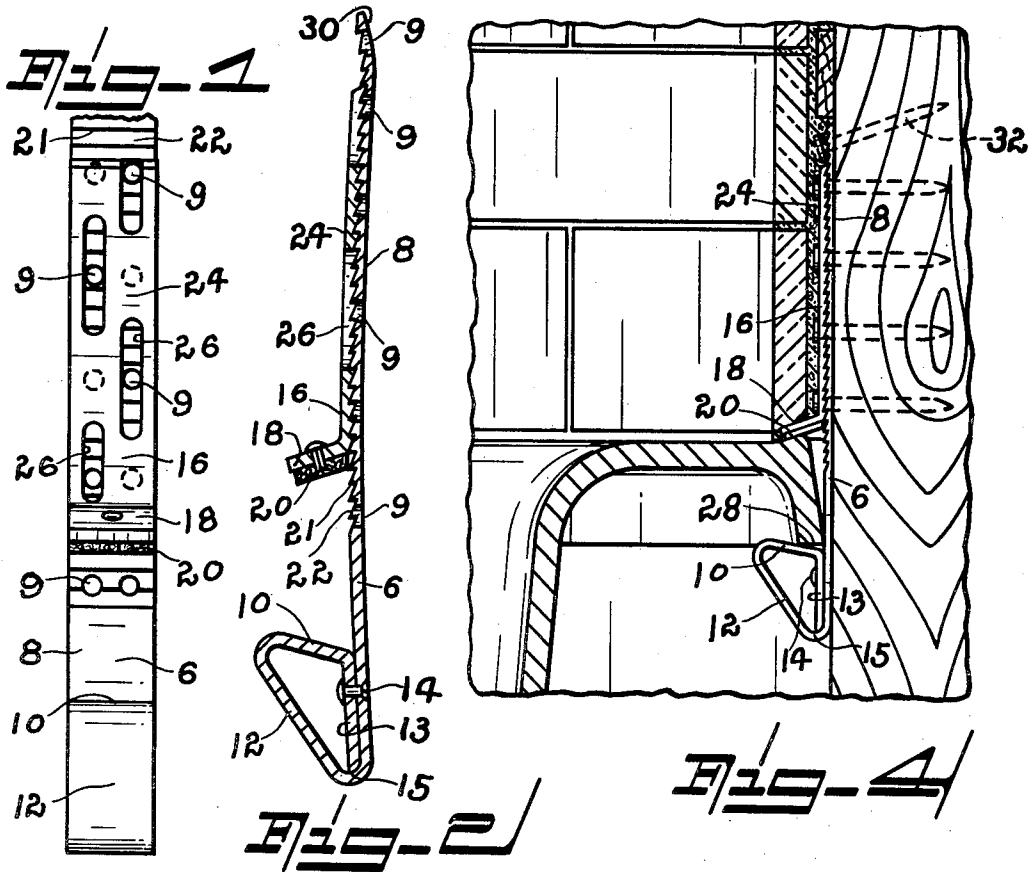


Fig-3

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BATHTUB HANGER

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6 Claims. (Cl. 4—173)

My present invention relates to the art of plumbing accessories and more particularly to a bath tub hanger.

In all modern dwelling construction it is now customary to use bath tubs, trays and basins of the so called built in type. By this is meant a bath tub or other fixture which blends into the walls and floors of the room. In the case of bath tubs, particularly, it is usually most desirable to have the wall covering slightly overlap the upper rim of the bath tub to the end that water from the showers and the like that may be thrown on the wall will run down the same and drain into the bath tub. Then it has been found desirable that means be employed which will assure that there will be no leakage between the wall covering and the bath tub margin.

In keeping with this form of design it has been found necessary to use a bath tub which is not supported on the usual four feet but one which will be supported by shelves formed on the upper margin of the tub. This new design normally has one side extending down to the floor altho there are many installations of the so-called corner tub in which a side and one end may extend down to the floor. With such construction it becomes quite a problem to adequately support the tub. This is usually arranged by cutting vertical posts which exactly fill in the distance from the bath tub ledge to the floor. Now fitting a number of these shores so as to equally distribute the rather heavy weight of the tub over the entire floor surface calls for very careful fitting of the shores to the end that one will not take an excessive amount of the load. This requires frequent fitting and in order to make these fittings it is necessary to pull the tub back from its final position and as the tub is very heavy and unwieldy this entails considerable loss of time for installation of the same. It is one of the purposes of my present invention to do away entirely with all this fitting.

It has been found in certain installations, particularly where the corner type of tub is used and most particularly where the pier pattern tubs are installed, that there is quite a tendency for the weight of the tub to cause the same to cant and in so doing lift the wall edge of the tub off the supporting shores. It is one of the purposes of my present invention to provide means for engaging the upper surface of the tub to the end that this canting cannot take place.

It is a well known fact that after a building has been completed and probably most particu-

larly in the case of multi-story structures such as hotels and apartment houses that there is a good deal of settling and normally the floors settle more than the walls, in that they have a chance to deflect the floor beam whereas the walls themselves are supported by vertical members which are enabled to better support the load. This causes the tub to tend to draw away slightly from the wall, that is go down while the wall stands in its normal position. When this occurs a gap is produced between the tub and the wall and if by chance the wall is bonded in any manner to the tub support members the result in any event is that water works in the space provided by the displacement of the tub which will invariably cause cracking of the plaster or loosening of the tile if tile wall covering is used. With my present device it is intended that the tub will be held securely to the wall foundation so that there can be no displacement between the two. This prevents not only the necessity of replacing the wall surface due to cracking and the like, it also prevents water running down behind the tub and ruining the ceilings and walls below the bath tub.

The principal object of my invention is therefore to provide means for fixedly securing the bath tub on its wall engaging margin to the foundation members of the wall so that there can be no displacement between the wall and the tub due to settling and the like.

A further object of my invention is to provide means which will greatly lessen the labor incidental in placing a bath tub and securing it in position.

A further object of my present invention is to provide means which will prevent the canting of a bath tub with its incidental cracking of the plaster of the wall.

A further object of my present invention is to provide a support which will adequately support a bath tub or other fixture even tho the supporting ledge may be uneven or irregular in outline.

Other and more specific objects will be apparent from the following description taken in connection with the accompanying drawing, wherein

Figure 1 is a face view of one of my bath tub hangers.

Figure 2 is a sectional view taken at right angles to Figure 1.

Figure 3 illustrates a bath tub in position with the wall foundation members or studding in this instance, shown in section.

Figure 4 is a fragmentary sectional view taken along the line 4—4 of Figure 3.

Referring to the drawing, throughout which like reference characters indicate like parts, 6 designates the main portion of my bath tub hanger. This is normally made of strap iron or steel having the studding engaging portion 8 of considerable extent and which is in turn provided with a plurality of nail openings 9. The lower end of member 6 is formed with a shelf member 10 which should preferably slope downwardly from its outer corner after the showing of Figure 2. This tends to urge the bath tub tight against the wall. The exact manner of forming shelf 10 is relatively unimportant. It must however be of such a construction as to provide the maximum strength. In the form shown with the slanting support portion 12 and the downwardly sloping portion 10 terminating in a shelf support 13 disposed parallel to member 6 riveted to body 8 at 14, is probably as inexpensive a construction as will be obtained. The shelf support rests in the curve at 15 and is thus able to provide maximum support. One factor which has been found to add materially to the firmness of the support is to have the straight portion 8 of the bracket member bowed so that when it is placed against a studding the last action of the securing nails as they draw the bow out of the piece will be to throw the outer tip of shelf 10 upwardly, thus seating it more securely under the lip of the bath tub.

In order to provide securing means which will prevent the lip of the tub lifting up off shelf 10, I provide another member to my bath tub hanger in member 16. This member I prefer to provide with a downwardly sloping extension 18 which should preferably be provided with a resilient padding as 20 to the end that when it engages the upper edge of the bath tub it will not have any tendency to chip the same. Cork, rubber, leather, felt and similar materials prove quite satisfactory for use here. As a matter of convenience in installation, it has been found desirable to place member 16 directly on the face of member 6. This is not an essential relationship as members 18 might be secured directly to the studding as is member 6. However, in order to so place them that they will be resistant to upward thrust it has been found desirable to roughen the inner surface of member 16 and to have the same type of roughening on member 6 so that the two will interlock. In the showing of Figure 2 this roughening has been somewhat exaggerated to bring out one form which is probably the most desirable. This consists in having matching teeth on members 6 and 16 and have them arranged with flat or horizontal surfaces at 21 and sloping surfaces at 22. The teeth of member 16, of course, will be just the reverse of those on member 6. This form represents the extreme and would naturally provide, with the teeth arranged as shown in Figure 2, the maximum resistance to upward thrust. In most instances however, this added refinement is not necessary, knurling the two surfaces with a similar knurl is usually found to be very satisfactory. When member 16 is formed it should be formed with the same bow formed in the strap portion 24 as strap portion 8 of member 6 to the end that a perfect fit will be secured. Then as the nails tighten both members against the studding the side displacement of shelf 18 being as it is angled will tend to tighten it upon the upper margin of the tub. Member 16 must of

necessity be provided with a plurality of preferably slotted openings 26 so that wherever it is necessary to seat member 16 the slots will be in such a position as to uncover some of the opening 9 of member 6 so that a single nail may be driven thru both members and secure them both in position at the same time.

Method of operation

When it is desired to set up a bath tub using my bath tub hangers the first operation is to place the bath tub substantially in its final position with just enough space between the bath tub and the studding end so that my hangers can be placed between the same. In this installation it is only necessary to consider the thickness of member 6 plus whatever bow may be in the strap portion 8. The bowing would never normally exceed an eighth of an inch so the bath tub can be placed substantially in its final position. After the bath tub is level a plurality of members 6 are pulled up snug against the under edge of the ledge 28 after the showing of Figure 4 then one nail may be placed in the same to secure it in position.

It is in the hanging of the tub that one feature of my support means becomes very apparent. That is the desirability of supporting the tub with a plurality of members so that even tho the edge 28 may be quite irregular and rough, as it almost invariably is, that a secure mounting can be obtained and each member be so placed as to take its fair share of load. This is not possible in many of the trough-like arrangements which are supplied to support a tub in this manner.

After a number of members 6 are in position it is then time to securely nail them in place and I have found that three of four 16d common nails are ample as in shear their holding power is many times the possible weight of a tub plus water and bather. If the tub installation is of the character that requires the holding down member 16 they should be applied after the first nail is put into member 6.

In proportioning members 6 and 16 provision should be made that the two end openings 9 in member 6 shall be spaced sufficiently far apart so that no matter where member 16 is placed one or the other of these openings will be available for the first nail, then there will be no interference with the tooth engagement of members 6 and 16. In that case it would be necessary to apply both members at once although the nail need not be driven home until members 16 are wedged down tightly against the margin of the tub. In this connection it is normally not necessary to employ member 16 in all installations. They are normally intended for the pier or corner type tubs which have a tendency to cant after being in use for some time. In the recessed tub as shown in Figure 3 it might not be necessary to use any members 16. In that case they would not be used. It is normal to make the width of member 6 and 16 considerably less than the overall width of the studding to the end that lathing may extend to the studding and be secured thereto and not be interfered with by my hanger. The wall covering is then placed entirely over my hanger that is that portion above the margin of the tub and it has been found when made of strap material that there is no interference with the wall covering.

It has been found that if the upper end of body 8 is curved outwardly as indicated at 30 it will

be comparatively easy to drive the first securing nail as 32 so as to slant upwardly, this tends to seat the shelf 10 tight against the tub lip 28.

Throughout my present specification I have referred to my support means as being particularly adaptable for use with bath tubs. However, it is believed to be apparent that such a support member might be used in many other instances. Any sort of plumbing fixture might be so anchored. It might also be used for the anchoring of shelving and the like, for steps in stairways and many other industrial uses.

The foregoing description and the accompanying drawing are believed to clearly disclose a preferred embodiment of my invention but it will be understood that this disclosure is merely illustrative and that such changes in the invention may be made as are fairly within the scope and spirit of the following claims.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a hanger-support adapted for attachment to an upright structure, the combination with a bowed strap of resilient metal, means in the bowed portion of the strap for close attachment to the structure, and a supporting shelf rigid with the lower end of the strap, whereby when the strap is flexed by attachment to said structure the free end of said shelf is elevated.

2. In a hanger-support for attachment to an upright structure, the combination with a bowed strap of resilient metal having nail-holes in its bowed portion, of a shelf at the lower end of said strap comprising an infolded end having an attaching plate, and means for fastening said plate to the strap.

3. In a hanger-support for attachment to an

upright structure the combination with a strap having a bottom bend and infolded end forming a shelf, said shelf terminating in an attaching plate having its end resting in said bend, and means for attaching said plate to the strap.

4. In a hanger-support for attachment to an upright structure the combination with a bowed strap of resilient metal having nail holes in its bowed portion and a supporting shelf at the lower end of the strap, of a second bowed strap and co-acting means on said straps to prevent relative longitudinal movement, a bracing-foot at the lower end of the second strap, and means for fastening said straps to the structure, whereby when the support is flexed by attachment to said structure the free ends of the shelves are tilted toward one another.

5. In a hanger-support for attachment to an upright structure, the combination with a bowed strap of resilient metal having a bottom-shelf, of a second bowed strap having a bracing-foot spaced above said shelf, co-acting rack teeth on said straps to prevent longitudinal movement, and means for attaching said straps to the structure whereby when the support is flexed by attachment to the structure the free ends of the shelf and bracing-foot are tilted toward one another.

6. In a hanger-support for attachment to an upright structure, the combination with a strap having a shelf at its lower end, of a second strap having a bracing-foot spaced above the shelf, said straps having co-acting rack teeth to prevent longitudinal displacement after the support is attached to its structure, and one of said straps having nail holes registering with nail slots in the other strap.

VICTOR J. NELSON.

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65	140
70	145
75	150