

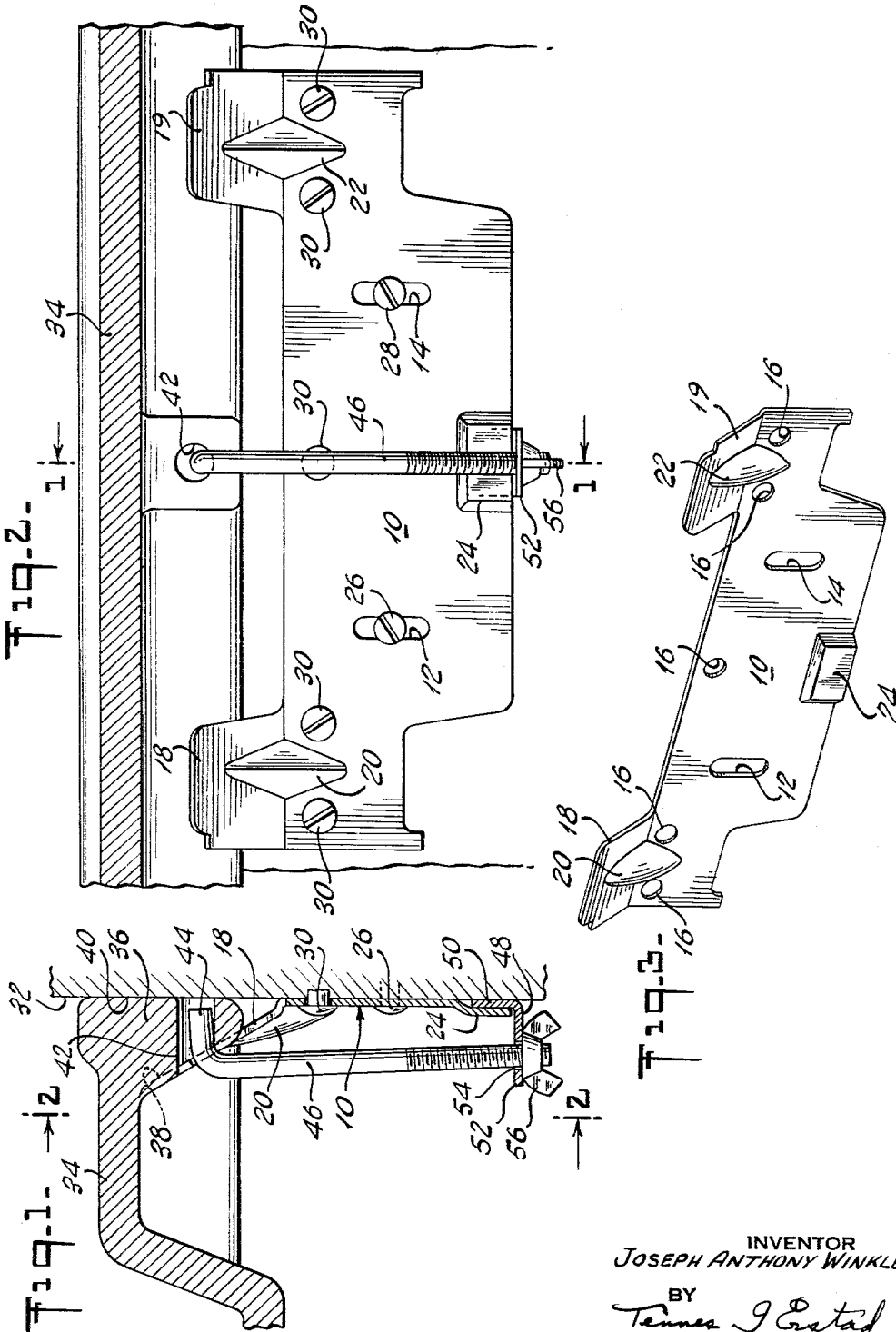
Jan. 11, 1966

J. A. WINKLER

3,228,037

HANGER FOR A PLUMBING FIXTURE

Filed Dec. 20, 1961



INVENTOR
JOSEPH ANTHONY WINKLER
BY
Tenness J. Estad
ATTORNEY

1

3,228,037

HANGER FOR A PLUMBING FIXTURE

Joseph Anthony Winkler, Glenolden, Pa., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 20, 1961, Ser. No. 160,744
3 Claims. (Cl. 4-170)

This invention relates to wash basins or lavatories which are used in bathrooms and more particularly to hangers for supporting such basins and lavatories on a wall. The invention is particularly well suited for use with vitreous china lavatories.

Various hangers have been employed in the past for mounting lavatories on walls. One of the problems encountered in mounting lavatories on walls, particularly in public places, has been the fact that such lavatories sometimes are dislodged from their hangers either because someone applies an upward lift to the lavatory or, where the lavatory for example is made of vitreous china, a downward pressure on the far end of the lavatory thus causing it to slip upwardly from the hanger support. This problem is most frequently encountered with vitreous china, due to the fact that vitreous china has a closely textured surface which facilitates its sliding out from its hanger. Also, because of the nature of vitreous china, the portion of the china which has the supporting flange formed thereon is of a sufficiently large angle that it increases the possibility of this happening.

The hangers developed heretofore to overcome this deficiency have either not been readily adaptable for china lavatories or have been cumbersome or have had a tendency to cause breakage of the lavatory.

It is therefore an object of this invention to provide a hanger where the lavatory will seat snugly in the hanger and which will be of a simple design and economical to manufacture.

A further object of this invention is to provide a hanger for lavatories which will be concealed and of such sturdy construction that it can satisfactorily and effectively support lavatories of vitreous china.

A further object of this invention is to provide a hanger for a lavatory wherein means are provided for positively clamping the lavatory to the hanger so that it cannot be lifted or dislodged from its hanger.

A further object of this invention is to provide a hold-down device for a lavatory which will be self-centering to equally distribute the hold-down pressure over the entire hanger.

Another object of this invention is to provide a hold-down device which will tend to exert a compressive force on the lavatory rather than a tensile force.

A further object of this invention is to provide a hold-down clamp which will have a resilient connection with the hanger and which will be adaptable for use with a hand-tightened wing-nut.

Another object of this invention is to provide a hold-down structure for use with a lavatory which can be easily connected and applied to the lavatory but will not be exposed to view.

A further object of this invention is to provide a lavatory hanger which can be readily employed with or without a hold-down device.

Other objects and features of the invention will appear

2

as the description of the particular embodiment selected to illustrate the invention progresses. In the accompanying drawings, which form a part of this specification, like characters of reference have been applied to corresponding parts throughout the several views which make up the drawings.

FIGURE 1 shows a partial cross-sectional side elevation, taken on line 1-1 of FIG. 2, of a lavatory supported on my improved hanger employing improved hanger hold-down device.

FIGURE 2 is a partial cross-sectional front elevation, taken on line 2-2 of FIG. 1, showing my hanger mounted on the wall with the hold-down device.

FIGURE 3 is a perspective view of my improved hanger without the hold-down device.

Referring to the drawings, the hanger 10 consists of an elongated stamped sheet or plate of metal having one or more slots 12 and 14 formed therein and suitable holes 16 punched in its upper side. The upper surface has two projections or flange ears 18 and 19 which extend upwardly at an angle to the elongated flat surface 10. Suitable strengthening indentations 20 and 22 may be formed in the two ears or flanges 18 and 19 to provide additional rigidity to the ears if this should be found desirable. The bottom portion of the bracket 10 has an indentation 24 formed in the metal to receive an angle clamp in a manner later described. Instead of being made from a stamping of sheet iron, the bracket could also be made of cast iron or aluminum.

The hanger 10 is mounted on the wall in the manner shown in FIGS. 1 and 2. In mounting the hanger on the wall, the plumber will first secure the hanger by two screws 26 and 28, extending through the slots 12 and 14, thus permitting him to adjust the hanger up and down to properly position and level the same before tightening the screws 26 and 28. When the screws 26 and 28 have been tightened, he then secures the screws 30 in their respective holes 16, thus firmly securing the hanger 10 to the wall.

When the hanger has been secured to the wall 32 in this manner, the plumber places the lavatory 34 in place as shown in FIGS. 1 and 2. The rear back side of the lavatory has a downwardly extending flange 36 formed with an inside taper 38 which seats itself firmly on the flange ears 18 and 19. It will be noted that the angle of the flange ears 18 and 19 correspond to the angle 38 formed on the flange 36 of lavatory 34.

As the lavatory 34 is slid into position in this manner, the rear portion 40 of the flange 36 comes into contact with the wall 32, thus seating the lavatory securely against the wall. This arrangement will frequently be quite sufficient to support a lavatory in the bathroom of a domestic dwelling, where it is not subjected to abnormal use. In schools or public places, however, there is sometimes a tendency for users of these facilities to lift the lavatory upwardly. If the waterline connections and the wastepipe connections are not sufficiently strong or rigid to hold the lavatory downwardly in its hanger, it might become dislodged. Likewise, if downward pressure is exerted on the portion of the lavatory which extends farthest from the wall, there might be a lever-action effect exerted on the lavatory which will cause the upper flange 36 to slide upwardly on the flanges 18 and 19, thus causing the lavatory to become dislodged from its hanger.

To overcome these problems, a hole 42 was formed in the flange 36 so as to permit the hook end 44 of an anchor rod 46 to engage with this hole 42. At the bottom of the wall bracket 10, one arm 50 of an angle bracket 48 is inserted under the indentation 24 as shown in FIGS. 1 and 2. The other arm 52 extends outwardly from the wall 32 and bracket 10. This surface has a hole 54 formed therein through which the lower threaded end of bolt 46 extends. A winged finger-tightening nut 56 is screwed on to the bolt 46, and thus exerts a downward pull on the flange 36 of the lavatory 34 to hold it securely in place on the flange ears 18 and 19. It will be noted that this bolt 46 is so located that it will not interfere with free movement of the vertical operating rod of the pop-up drain.

By employing a single bolt 46, engaging with the center of lavatory flange 36, for holding down the lavatory it will be noted that the lavatory 34 will automatically distribute the downward force being exerted thereon over the two upwardly extending flange ears 18 and 19 of bracket 10. It might be mentioned that if there were any irregularity in the formation of the flange 36, there would be no tendency to rock because the lavatory is supported on opposite sides. This feature avoids any rocking tendency as might occur were there a bump in either the flange 36 or in a hanger which was made with a continuous flange.

It will also be noted the flange through which the hole 42 extends has a great deal of supporting area so as to provide more for compressive forces, rather than tensile forces, which might tend to break the china. In this connection, it should be noted that the angle bracket 48 also has an inherent resilient force which, combined with the finger tightening of winged nut 56, also minimizes any tendency for the flange 36 to be broken at the area where the hook 44 engages with the flange 36. It will be apparent in the mounted lavatory shown in FIG. 2 that there are no exposed members extending from the bracket 10 which could either detract from the appearance of the lavatory or comprise objectionable extensions on which individuals could either injure themselves or snag material.

From the foregoing description, it will be evident that I have provided a lavatory wall bracket which is easy to manufacture and which is readily adaptable to minor variations in inaccuracies that are sometimes encountered in the manufacture of china lavatories or in wall bracket supports as could occur either in manufacture or in handling.

It will also be clear that while my hanger is designed for use with a hold-down clamp, by leaving off the angle bracket and clamping bolt and nut, it can be used without any hold-down means where this is not necessary. I have thus provided a simple, universal hanger that can be adapted to the use situation that the installer encounters.

The invention hereinabove described may, therefore, be varied in construction within the scope of the claims, for the particular device selected to illustrate the invention is but one of many possible embodiments of the same. The invention, therefore, is not to be restricted to the precise details of the structure shown and described.

What is claimed is:

1. In combination, a lavatory and a hold-down hanger for supporting said lavatory on a wall, said hold-down hanger comprising a bracket having a pair of spaced flange ears extending upwardly and outwardly at an angle from the general plane of said bracket, said bracket having openings formed therein through which fastening means are inserted to secure the bracket to a wall, said lavatory having an elongated flange formed across the rear thereof, said elongated flange having an angular cross-sectional configuration which corresponds to the angle of the bracket flange ears, said flange ears receiving said lavatory flange to support the weight of the lavatory, said lavatory flange being of sufficient rigidity independ-

ently of the remaining structure of the lavatory to avoid fracture thereof as the lavatory is supported by said flange ears, means formed in the longitudinal center portion of the lavatory flange defining an opening, a hold-down clamping bolt having one end which is received in said lavatory flange opening, support means extending from a lower side of said bracket and generally underlying said lavatory flange opening receiving the opposite end of said hold-down bolt and yieldably supporting the latter, and a fastening member engaging said bolt and cooperating with said support means to put the hold-down bolt under tension and thereby cause the lavatory flange to seat on the bracket flange ears and to distribute the force exerted by the hold-down bolt on the lavatory flange equally between the bracket flange ears such that the hold-down force exerted by the hold-down bolt and the opposing weight supporting force exerted on the lavatory flange by the hanger flange ears are localized in the weight supporting lavatory flange to thereby limit stresses in other parts of the lavatory.

2. In combination, a lavatory and a hold-down hanger for supporting said lavatory on a wall, said hold-down hanger comprising an elongated wall bracket having projections extending upwardly and outwardly from the general plane thereof, said lavatory having an elongated and downwardly extending flange formed along the rear thereof which is carried in said wall bracket projections for supporting the weight of the lavatory, said lavatory flange being of sufficient rigidity independently of the remaining structure of the lavatory to avoid fracture thereof as the lavatory is supported by said wall bracket projections, means formed in said bracket through which screws or the like are inserted for attaching the hanger to a wall, yieldable attaching means affixed to and extending from a lower and central longitudinal portion of said elongated wall bracket, a hold-down bolt having an upper end carried in a generally longitudinal central opening in said downwardly extending and weight supporting lavatory flange and a lower end connected to said attaching means such that the attaching means may yield as tension is applied to said hold-down bolt, and means on said hold-down bolt cooperating with said attaching means to apply tension to the hold-down bolt so that the latter applies a hold-down force on the central portion of the downwardly extending lavatory flange as the longitudinal end portions of the latter are supported in the spaced flanges of the wall bracket such that the hold-down force exerted by the hold-down bolt and the opposing weight supporting force exerted on the lavatory flange by the bracket projections are localized in the weight supporting lavatory flange thereby limiting stresses in other parts of the lavatory.

3. In combination, a plumbing fixture and a hanger for supporting said plumbing fixture on a wall, said hanger comprising an elongated wall mounted bracket, said bracket having spaced projections extending upwardly and outwardly of the general plane thereof, a downwardly extending flange across the rear of said plumbing fixture and received in said spaced projections such that the weight of the plumbing fixture is supported thereby, said plumbing fixture flange being of sufficient rigidity independently of the remaining structure of the plumbing fixture to avoid fracture thereof as the lavatory is supported by said spaced projections, yieldable attaching means carried at a lower and longitudinal central portion of said elongated bracket, said plumbing fixture flange having means located in a central longitudinal portion thereof defining an opening, said opening generally overlying said attaching means, and a bolt having a laterally projecting arm at one end portion thereof carried in said opening in said plumbing fixture flange, adjusting means adjustably connecting the other end of said bolt to said attaching means whereby said bolt holds said plumbing fixture flange within the spaced projections of the wall mounted bracket as the forces applied to the plumbing

fixture flange by the bolt and the spaced projections of the wall mounted bracket are localized in the plumbing fixture flange.

References Cited by the Examiner

UNITED STATES PATENTS

846,022	3/1907	Ficener	-----	4—170
1,035,457	8/1912	Madden	-----	4—170
2,584,107	2/1952	Beam	-----	4—170
2,846,695	8/1958	Hartog	-----	4—187
3,060,454	10/1962	Ament	-----	4—170

5

10

FOREIGN PATENTS

824,397	11/1937	France.
1,105,357	4/1961	Germany.
857,461	12/1960	Great Britain.

LAVERNE D. GEIGER, *Primary Examiner*.
FRANK H. BRONAUGH, FRANK E. BAILEY, ED-
WARD V. BENHAM, *Examiners*.
H. KLINKSIEK, H. GROSS, *Assistant Examiners*.