Dec. 12, 1961 E. L. MORRIS ET AL 3,012,250

FIXTURE CARRIER CONSTRUCTION

Original Filed July 13, 1956

FIG. 1.

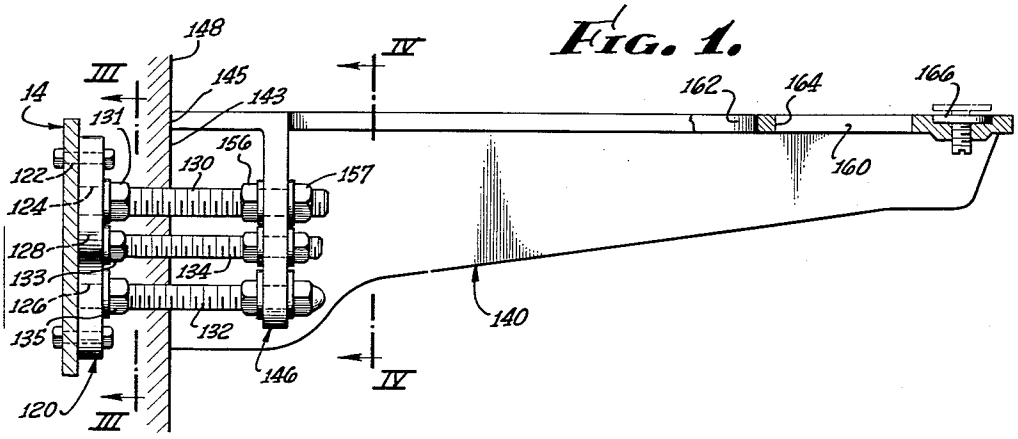



FIG. 2.

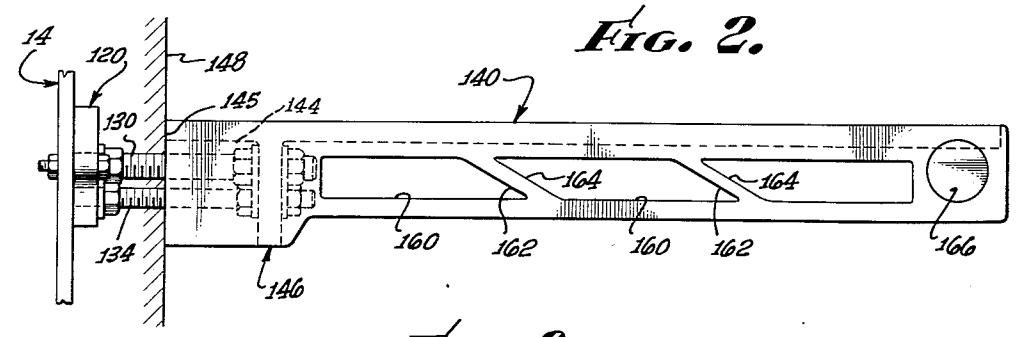



FIG. 3.

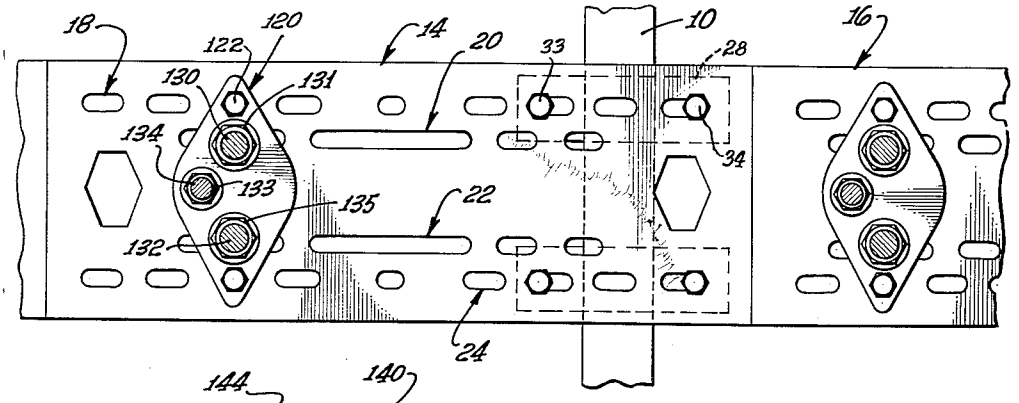
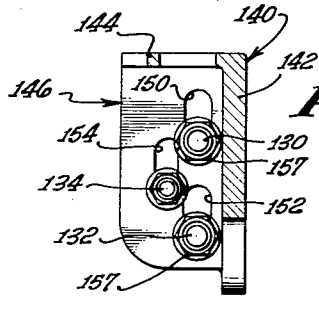



FIG. 4.





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# FIXTURE CARRIER CONSTRUCTION

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Original application July 13, 1956, Ser. No. 597,652, now Patent No. 2,903,712, dated Sept. 15, 1959. Divided and this application Mar. 30, 1959, Ser. No. 802,913

7 Claims. (Cl. 4—170)

The present invention relates generally to carriers for the support of plumbing fixtures on a wall of a room and is particularly directed to means whereby such a fixture, exemplarily a lavatory, may be rigidly and firmly supported and maintained in position.

The invention contemplates the use of a steel or other rigid metal mounting plate fixed to the vertical structural members such as studs in the wall of a building. By the use of such a mounting plate, the weight of a single plumbing fixture such as a lavatory may be distributed over a number of studs or other vertical structural members. The mounting plate desirably includes a multiplicity of openings extending therethrough by which various mounting members may be fastened to the mounting plate and supported thereby. One of such mounting members desirably provides a firm anchor for an outwardly extending arm for concealed arm type of support of a lavatory. In the present construction such an arm includes a novel combination of elements by which the lavatory may be accurately leveled during installation and may, by the same mechanism, be frictionally clamped and positively locked to the arm and thus maintained in its desired position. Mounting members may also be fastened to the plate for supporting carrier arms according to the exposed arm type of construction. When the present invention is used for exposed arm construction, the arm so used and disclosed hereinafter facilitates accurate adjustment of the arm and final leveling of the fixture supported thereby from the face of the finished wall.

This is a division of application Serial No. 597,652 filed July 13, 1956, for "Fixture Carrier Construction," since matured into Patent No. 2,903,712 on September 15, 1959.

Preferred embodiments of the present invention will be described hereinafter by reference to the accompanying drawings, in which:

FIG. 1 is a side view, partially in section, showing an exposed type arm in accordance with the present invention.

FIG. 2 is a plan view of the structure of FIG. 1.

FIG. 3 is a view taken on line III—III of FIG. 1.

FIG. 4 is a sectional view taken on line IV—IV of FIG. 1.

FIGS. 1, 2, 3 and 4 show a preferred use of the present invention in connection with an exposed arm construction. A mounting member indicated generally at **120** is attached to a mounting plate **14** by suitable fastening members **122** extending through openings formed in the upper and lower ends of the mounting member **120** as well as through selected openings in the mounting plate **14**. The mounting member **120** includes a pair of vertically aligned threaded openings extending therethrough indicated at **124** and **126**, and may also be provided with a third threaded bore extending therethrough indicated at **128**, the latter named bore being displaced laterally from the bores **124** and **126** and being disposed approximately midway therebetween.

The mounting plate may be provided with a number of holes extending therethrough, the holes being aligned in four separate rows **18**, **20**, **22** and **24**. The holes are



desirably horizontally elongated as shown (FIG. 3) and holes adjacent rows **18** and **20**, and in adjacent rows **22** and **24**, are desirably staggered to facilitate flexibility in attachment of the plate to structural members of varying horizontal spacing. The mounting plate **14** is fastened securely to the posts or vertically extending, horizontally spaced structural members **10** by suitable means such as bolts **33** and **34** extending through openings **18** and adapted to be secured to a U-shaped clip **28** adjustably and slidably positioned around post **10**.

Studs **130**, **132** and **134** are threaded respectively into the bores **124**, **126** and **128** of the mounting member **120**, the threaded studs being retained in position by nuts **131**, **135** and **133** respectively. An exposed arm is indicated generally at **140** and desirably L-shaped as seen in section (see FIG. 4), and including a relatively deep vertical portion **142** and a somewhat narrower horizontal portion **144**, the two portions being formed integrally as shown. A mounting flange is provided in the arm **140** and is indicated generally at **146**. This mounting flange extends perpendicularly to both the sides **142** and **144** of the arm **140** and is parallel to and spaced a substantial distance outwardly from the inner edges **143** and **145** of the vertical and horizontal walls respectively of the arm. The edges are abuttable against a finished wall **148** of any desired construction.

The mounting flange **146**, as is best seen in FIG. 4 is provided with vertically elongated openings **150**, **152** and **154**, the vertical elongations permitting vertical adjustment of the arm relative to the studs **130**, **132** and **134**, as will be understood. These studs are fastened to the flange by means of suitable fastening members such as nuts **156**, **157** adapted to clamp the flange **146** therebetween.

It is particularly to be noted that the mounting flange **146** is spaced outwardly from intersecting edges **143** and **145** by a substantial distance, which in a typical construction is preferably at least about two inches. By this construction access is facilitated to the inner nuts **156** when mounting the present arm into position by means of at least one exterior access opening between the mounting flange **146** and the finished wall **148**. Thus a person doing the installation of an arm according to the present invention may thread the inner nuts **156** onto the studs **130**, **132**, **134**, positioning the inner nuts in approximately correct location. The arm **140** is then mounted into position, with the outer ends of the threaded studs extending through the elongated openings in the mounting flange **146** as previously described. The outer nuts **157** are then placed in position, and it will be seen that the person may easily apply a wrench to the inner nuts **156** even after the arm has been mounted in position as just described, this by reason of the outward spacing of flange **146** from the wall. Furthermore, because of the fact that the stud **134** is offset laterally from the studs **130** and **132**, the arm **140** may be easily and effectively positioned, after the wall is finished, to extend outwardly from the wall **148** at whatever angle is required by a given installation, in spite of any manufacturing tolerances or imperfections which may exist in the apparatus or in the construction of the wall itself.

The upper horizontally extending portion **144** of the arm **140** is provided with one or more elongated openings **160** (see FIG. 2) for the reception of downwardly extending mounting bolts conventionally furnished with a lavatory or similar fixture with which the present carrier construction is to be used. Desirably adjacent ends of the openings **160** are provided with transverse edges **162** and **164**, so that some portion of one of the openings **160** will be in vertical alignment with an attachment bolt extending downwardly from the fixture regardless of

where such downwardly extending bolt may be located in a particular fixture used. Desirably a leveling screw **166** (see FIG. 1), is provided at the outermost end of the arm **140**.

Accordingly it will be seen that there is here provided improved construction for the support of fixtures and similar apparatus adapted to extend outwardly from a wall. Although a principal purpose and use of the invention is for the support of a lavatory fixture, and the invention has been herein so described and illustrated, nevertheless it will be understood that the present constructions are adaptable for use in the support of other equipment as well.

Modifications and changes from the specific forms of the invention hereinabove described and illustrated will occur to those skilled in the art, and are intended to be embraced in the scope of the appended claims.

We claim:

1. In combination with a plumbing fixture supported from a vertical wall, a fixture carrier comprising: a vertical, rigid mounting plate adapted to be rigidly secured within the wall; a plurality of horizontal, threaded, fastening studs adjustably mounted on said plate and adapted to extend beyond the face of the wall; a horizontally disposed carrier arm adapted to be supported at one end thereof from the vertical wall and carried on the ends of said fastening studs by a vertical mounting flange rigidly secured to and spaced from said one end of the carrier arm to provide at least one exterior access opening between the vertical mounting flange and the face of the wall; and locking nuts threadedly engaging the threaded portions of said fastening studs on either side of said mounting flange for firmly positioning and holding said one end of the carrier arm against the face of the vertical wall, whereby the locking nuts within the space between the vertical wall and mounting flange are easily accessible through said access opening for adjustment.

2. In a combination as stated in claim 1, wherein said fastening studs include a pair of vertically aligned studs and a stud offset laterally from said other two studs whereby the carrier arm can be adjusted at various angles with the vertical wall independent of any imperfections in the wall.

3. A fixture carrier for use in building construction having a plurality of vertically extending horizontally spaced structural members comprising: a mounting plate of rigid material having a plurality of openings formed therethrough arranged in horizontally disposed rows; means for attaching the mounting plate to vertical structural members including fastening members engageable with selected ones of said openings; a mounting member



attachable to the mounting plate by means including fastening members for engaging with selected ones of said openings; and a horizontal carrier arm having its inner end supported by said mounting member and its outer portion adapted to rigidly support a fixture, said arm including a vertically disposed mounting flange spaced substantially outwardly from a substantially vertical finished wall line of a building to provide at least one exterior access opening between the finished wall line and the vertically disposed flange, horizontally disposed elongated fastening elements extending between and adjustably fixed to said mounting member and mounting flange, and adjustable locking means on either side of said vertically disposed mounting flange for adjustably mounting the fixture carrier on said elongated fastening elements, whereby said adjustable locking means within the space between the finished wall line and the vertically disposed flange are easily accessible for adjustment through said access opening.

4. The invention as stated in claim 3 wherein two of said elongated fastening elements are in substantially vertical alignment and a third is laterally spaced therefrom whereby the fixture carrier can be adjusted at various angles with the vertical wall line independent of any imperfections in the wall.

5. In a fixture carrier: an elongated L-section shaped carrier arm having integrally formed angularly related portions terminating inwardly in intersecting edges abuttable against a wall and a mounting flange fixed to said portions and disposed substantially parallel to the plane of said edges and spaced at least about two inches therefrom to form at least one access opening between said mounting flange and said intersecting edges and the wall against which said intersecting edges are adapted to abut, said flange having openings formed therethrough for receiving elongated support members.

6. The invention as stated in claim 5 wherein said openings are vertically elongated and include a pair of vertically aligned openings.

7. The invention as stated in claim 6 wherein said flange includes a third opening horizontally displaced from said vertically aligned openings.

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