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WALL-HUNG FIXTURE CARRIER COMBINATION WITH A DEVICE FACILITATING WALL FINISHING

Filed Feb. 23, 1962 2 Sheets-Sheet 1

FIG. 1

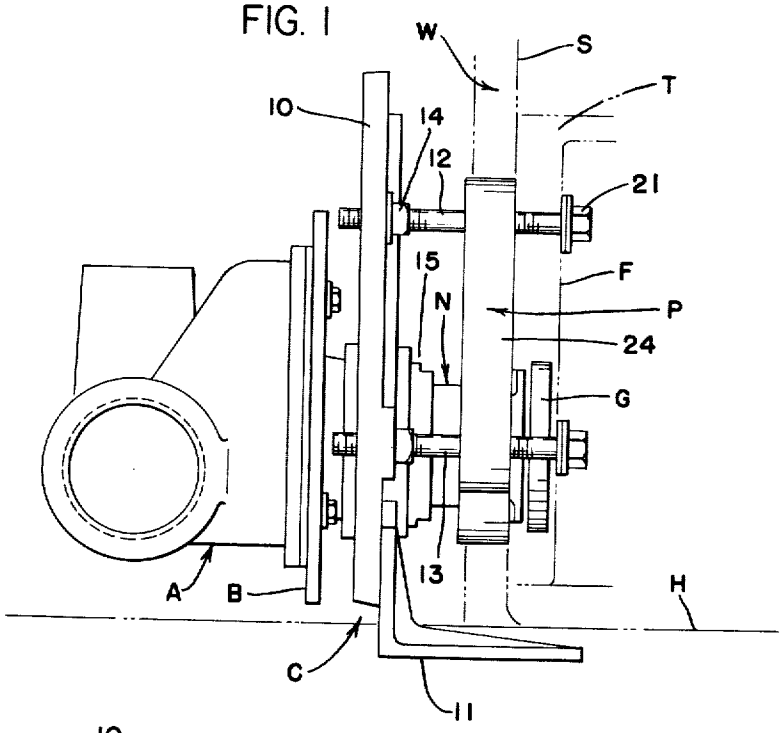
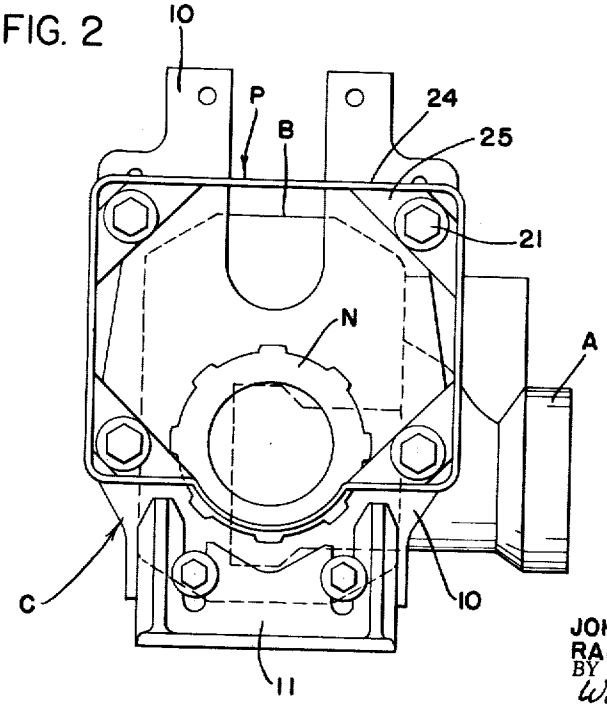


FIG. 2



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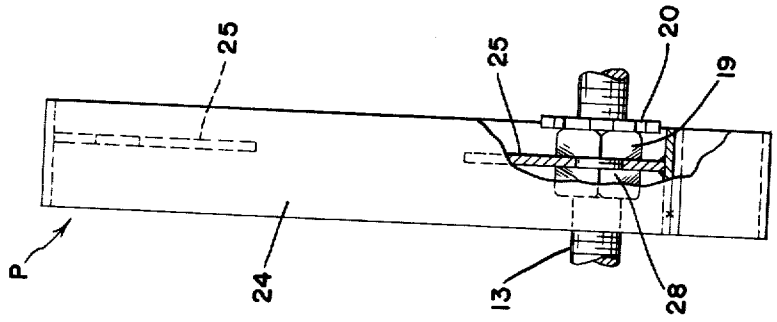


FIG. 4

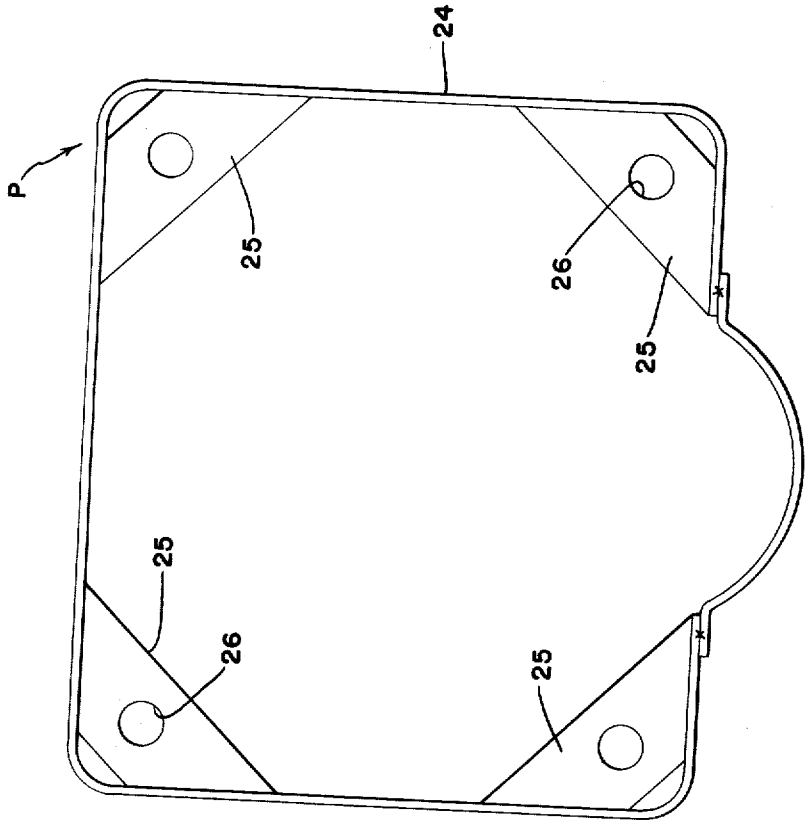


FIG. 3

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WALL-HUNG FIXTURE CARRIER COMBINATION WITH A DEVICE FACILITATING WALL FINISHING

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The present invention is concerned generally with carriers for wall-hung plumbing fixtures and more particularly with an improvement in carriers which facilitates the overall work of installing a wall hung fixture and constructing the finished wall on which it is located.

Where a wall-hung fixture such as a toilet bowl is to be installed—for example, in a residence—after the wall framing is complete and the soil stack, soil stack fitting to which the fixture or toilet bowl is to be connected, and the fixture carrier are in place, with fixture mounting studs on the carrier and the bowl connecting nipple on the fitting projecting beyond the plane of a desired finished wall surface, the wall framing covering material such as lath and plaster or lath, plaster base and tile, is then applied to finish off the wall.

In such case, the plasterers or tilers, or both, encounter some difficulty in working to the plane desired for the finished wall surface in the area where the fixture is to be hung, because of the presence of the fixture mounting studs and the connecting nipple projecting beyond that plane and therefore interfering with their tooling or working of plaster and the like to a smooth level surface. These projections obstruct the sweep of trowels or other tooling in that region, preventing proper troweling out of the plaster, leaving local irregularities in this region unless great and time consuming care is taken; and in any event presenting a great likelihood that in this region the surface of the wall will not be at the desired plane. The fact that the lathing—wood, metal or plaster board type—as applied in common practice, terminates at best at the studs and nipples, leaving a large opening, also makes it difficult to apply the plaster evenly as it tends to escape into the opening as troweled.

After the wall has been completed, the plumber then returns to make final adjustments of the toilet bowl connecting sleeve or nipple and of the studs or back fixture clamping nuts on the studs, as may be required by the finished wall surface actually established at the toilet bowl mounting region of the wall. Thereafter the fixture is mounted on the studs with the horn gasket interposed between the outlet of the fixture and the connecting nipple, and the usual decorative cap nuts are then threaded onto the ends of the studs to secure the fixture in place.

In other types of construction, for example where a battery of fixtures is hung along one wall in horizontally spaced relation, or where masonry wall construction is used with merely a plaster facing or a tile facing, essentially the same difficulties are encountered at each fixture location.

According to the practice of the present invention, construction proceeds to the installation of the carrier with projecting fixture mounting studs and toilet bowl connector, but the projecting lengths of these are adjusted precisely to what is required relative to the desired finish wall surface. In the specific embodiment of the invention hereinafter disclosed there is then mounted and secured on the studs a "positioning frame" which provides a plaster ground having an outer edge or surface located in the plane of the desired finished wall surface. This establishes a reference surface towards which the plasterer or tiler may work in finishing up the wall,

thereby enabling the workman quickly and easily to achieve in that region a flat, smooth surface for the finished wall at the desired plane.

After completion of the wall, when the plumber returns for the fixture installation, he need do nothing further but hang the fixture on the studs and apply the usual decorative fixture flange securing nuts on the ends of the studs. No further adjustment of studs or nipple projection is required, since the use of the positioning frame had already insured that the final wall surface is at the desired plane with respect to which the projection of nipple and studs had already been established.

Thus it is seen that by the use of the present invention both the plumber's work in the complete installation of the fixture and also the plasterer's or tiler's work are facilitated and in general a more satisfactory overall construction is attained. Also it should be noted, at least where a relatively strong metal positioning frame is used, that the fixture mounting studs are tied together or trussed at a region outboard from their points of affixation to the carrier thereby rendering the same more rigid in their mutual relations. Also certain maintenance of the installation is easier in consequence of the use of this invention, by providing a clear access to the carrier environment.

Although the invention is here discussed and later described with respect to the installation of a syphon jet toilet bowl or closet, it should be understood that the basic invention is applicable not only to carriers used for blow-out bowls, but also for urinals or other types of fixtures utilizing carrier arrangements in which fixture mounting studs and drainage line connections project beyond the desired plane of wall finish surface at the time the wall framing covering material is applied.

The general object of the present invention is then the provision, with a wall-hung fixture carrier, of a device facilitating both the overall work of the plumber in completing an installation of such fixture and also of the plasterer or tiler in constructing the finished wall.

Another object of the present invention is then the provision, with a fixture carrier, of a device installed at the same time as the basic carrier which establishes in the region where a wall-hung fixture will be mounted the location of a desired finish wall surface to which plasterers or tilers may work as a point of reference in finishing off a wall.

Other objects and advantages of the invention will appear from the following description and the drawings wherein:

FIG. 1 is a side elevation of a typical carrier construction for a wall-hung closet, which incorporates the present invention, a portion of the wall and of the fixture being shown in dashed lines;

FIG. 2 is a front elevation corresponding to FIG. 1;

FIG. 3 is an enlarged front elevational view of the positioning frame used in the arrangement of FIG. 1; and

FIG. 4 is a side elevation view of the positioning frame of FIG. 3, including, however, at a broken-away portion a representation of one manner in which the frame is mounted at each of the fixture carrying studs.

In the drawings, the present invention is shown in the environment of and as applied to a known "reversible" carrier construction for a syphon jet closet, wherein there are represented a usual soil fitting A, such as would be used in a horizontal soil line to which are connected a plurality of or a battery of toilet bowls and including a vertically adjustable face plate B gasketed and bolted across the opening of a fitting inlet branch; a carrier assembly C; a nipple or connector N connected at one end to the face plate in sealed axially adjustable relation and at the other end through a gasket G in com-

pression sealed relation to the horn of a toilet bowl fixture or closet T (shown in fragmentary form by dashed lines), which is hung off the floor (represented by the finish line H) proximate to the wall W (represented in fragmentary form by dashed lines). For a convenience, the wall frame covering material designated W in the drawings may hereinafter for simplicity be called the wall.

In this particular arrangement, the vertical carrier plate **10** is vertically adjustably bolted to the carrier foot portion **11** shown partially embedded as in concrete below the floor finish line H, and has threadably engaged therein an upper and a lower pair of horizontally spaced fixture mounting studs **12, 13**; the studs being symmetrically disposed relative to a vertical center-line or center-plane of the carrier as may be seen from FIG. 2 and secured in axially adjusted position relative to the carrier plate by locking nuts and washers as at **14**.

The threaded nipple N is sealed to the face plate B and secured to its supporting fixture carrier by an assembly **15** (here no further detailed since known in commerce as well as the patented art and not per se part of the present invention) which permits axial adjustment of the nipple by a threaded engagement therewith.

The studs **12, 13** project beyond the surface S of the finish wall a sufficient distance to pass through the apertured fixture flange F which is clamped between the back-up nut and stabilizing washer **19, 20** (see FIG. 4) and a decorative cap nut **21**; it being generally preferred that the flange and other wall adjacent portion of the bowl fixture be spaced perhaps an eighth of an inch from the wall surface. The nipple N likewise projects beyond the plane of the finish surface S a distance required to form an adequate compression seal through the gasket G with the fixture horn.

A characteristic of the present invention is the positioning frame, designated by the general reference character P, which has a rim portion **24** and gussets or web portions **25** rigidly connected with the rim and each apertured at **26** to accommodate studs **12** and **13**. The positioning frame is located and secured at each stud by an aforementioned backing nut **19** and a further clamp nut **28** (see detail FIG. 4 for one stud **13**) acting on a corresponding web portion **25**.

The web portions **25** are positioned inwardly from the plane of the forward edge of the rim **24** to accommodate the height of the nuts **19**. After the studs **12, 13** are adjusted and locked in place to project the required distance beyond the intended wall surface S, the nuts **28** are threaded to such position that when the frame P is placed on the studs and backing nuts **19** tightened down against the webs, the forward edge of the rim portion **24** will lie at the plane desired for the finished wall surface.

For a modern syphon jet closet, requiring an upper and lower mounting stud coplanar at each side, the rim portion **24** has a generally rectangular almost square outline with the bottom side, however, curved outwardly to accommodate the nipple N, the shape and dimensions being such that the rim will be smaller than and lie within the bounds of the outline of the flanged portion of the toilet bowl fixture adjacent the wall, so that the frame as such will be hidden when the wall is finished and the fixture is in place. For other types of fixtures the rim portion will, of course, be correspondingly shaped to attain the same end; and the web portions **25** or such other portions of the positioning frame as are apertured for engagement by the stud will be located as required by the stud arrangement for the particular type fixture.

The width of the rim portion **24** is at least as thick as the plaster or plaster and tile of the wall construction, since the rim portion is serving essentially as a plaster ground, that is, a structure having an external or roomward surface at the plane of the desired finished wall surface relative to which the plaster or other material may be readily worked to desired thickness and position in space and serving also as a dam maintaining the plaster in position about an opening to the requisite thickness and shape during working and until hardened.

In the construction shown in FIGS. 3 and 4, the rim portion **24** is shown as comprised of a welded formed strap metal construction including a generally rectangular portion with a bottom gap across which there is an arcuately formed bridging piece; the gussets or web portions **25** being welded to the rim interior surface across the corner areas. However, it should be understood that as to the primary purpose and function of the positioning frame, this element may be likewise fabricated as an integrally molded plastic piece of sufficient rigidity to withstand handling. Where, however, any great rigidifying effect or trussing effect is desired between the several studs, obviously the heavier metal construction would be preferable.

We claim:

1. For supporting a wall-hung closet fixture having a mounting flange in predetermined relation to a soil line fitting, the combination of: a fixture carrier rigidly mounted rearwardly of the wall including two horizontally spaced upper fixture-mounting studs and at least one lower fixture mounting stud, said studs adjustably threadedly engaged in the carrier to extend outwardly beyond a wall finish line and being symmetrically disposed relative to a vertical centerline of the carrier to project through the fixture flange; nipple means supported on the carrier for connecting the fixture outlet to the fitting; a rigid frame having a rim portion adjacent and rigidly connected to the rim portion having also apertured localized web portions for receiving said studs within said rim portion, said frame being otherwise generally open within said rim portion and independent of other above described parts of the combination and said rim portion adapted in shape to circumscribe said studs and nipple means and to lie within the outline of the flange of a fixture mounted on the studs, and means on each stud clamping the apertured portions of the frame with the outer edge of said frame adjusted to the plane of the finished wall surface.

2. The combination of claim 1 including on said studs, outward of the last said means, means for spacing the fixture flange clear of the finished wall surface.

3. For use with a carrier for a wall-hung fixture, said carrier having spaced studs projecting outwardly beyond the finished wall plane and through apertures in a wall-adjacent part of the fixture, a frame comprising: a closed rim portion providing an outer side surface of width approximating the thickness of the wall framing covering material, web means within and rigidly connected to said rim and aperture to receive said studs, said frame being otherwise generally open within said rim portion and independent of other above described parts of the combination and said rim portion shaped to lie within the confines of the wall-adjacent part of the fixture when the fixture and frame are mounted on said studs, and paired clamping elements adjustably positioned on each stud on respective sides of said web means whereby the frame may be located with the outer edge of the rim portion at the plane of a desired finished wall surface to provide a ground for wall-framing covering material.

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