

Dec. 26, 1961

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3,014,223

SUPPORTING HANGER FOR WALL-HUNG CLOSET BOWL

Filed Sept. 4, 1959

2 Sheets-Sheet 1

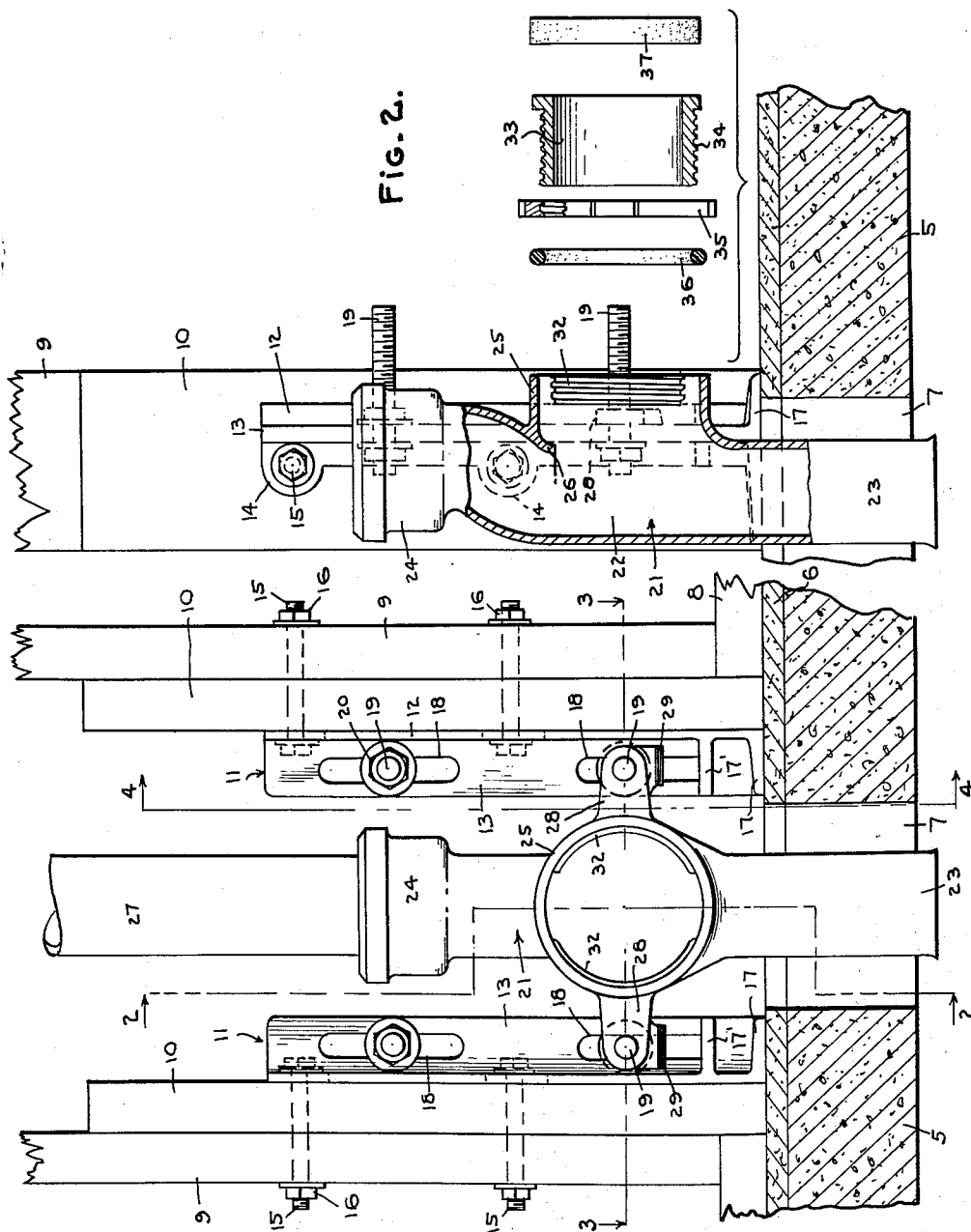


FIG. 1.

FIG. 2.

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2 Sheets-Sheet 2

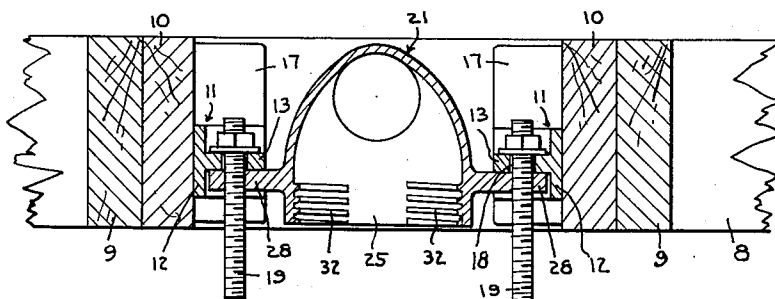


FIG. 3.

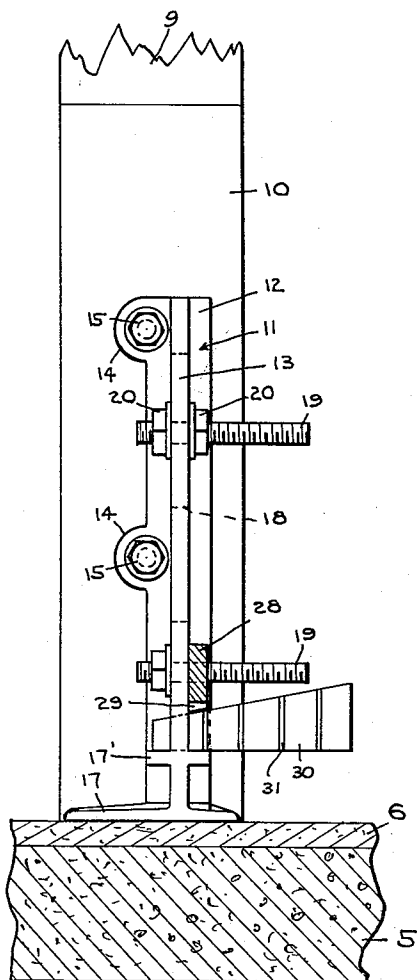


FIG. 4.

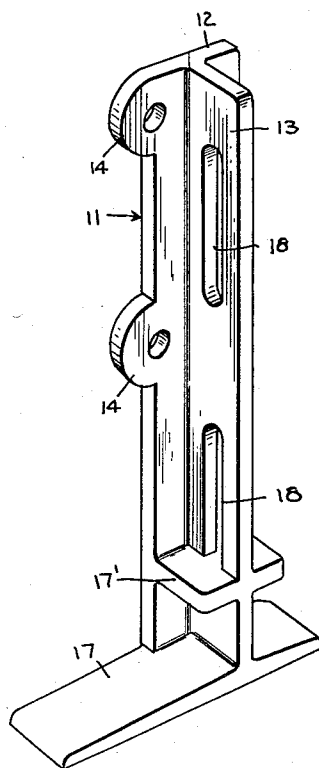


FIG. 5.

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1

3,014,223

**SUPPORTING HANGER FOR WALL-HUNG
CLOSET BOWL**

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Filed Sept. 4, 1959, Ser. No. 838,231

3 Claims. (Cl. 4-252)

This invention relates to an improvement in mounting and connecting means for the well known wall supported toilet fixture recognized as a commode.

The invention contemplates novel means for the mounting of the conventional T-fixture at a proper elevation with respect to the fixture to be mounted and with the several studs that project inwardly from the wall being likewise adjustable as to elevation for the fixed mounting support of the fixture.

The invention further contemplates a novel form of T-coupling that is designed in such manner that the entire coupling will be disposed within a preformed hollow wall structure that permits the mounting of a vent stack upwardly through the hollow area of the wall. The entire mounting means, including mounting brackets for the combined support of the T-coupling and the commode are all proportioned to be disposed within the wall area that is defined by conventional 2 x 6 studding.

The invention also provides novel wedge means that is adapted to be forced into wedging engagement with connecting wing portions of the T-coupling after adjustment.

The invention also provides a novel form of T-coupling having an offset upper bell-end for the reception of the stack and with the offset portion having an apron that is in vertical alignment with a wall area of the lower end of the T-coupling so that any water or debris that may drop downwardly from the stack, will fall directly into the soil pipe connection for the lower end of the T-coupling.

Novel features of construction and operation of the device will be more clearly apparent during the course of the following description, reference being had to the accompanying drawings wherein has been illustrated a preferred form of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

FIGURE 1 is a front elevational view showing the assembly of a T-coupling to be connected with the conventional wall mounted commodes and with a floor area being shown in section,

FIGURE 2 is a vertical section taken on line 2-2 of FIGURE 1, coupling and sealing means being shown in separated manner,

FIGURE 3 is a horizontal section taken on line 3-3 of FIGURE 1,

FIGURE 4 is a vertical section taken substantially on line 4-4 of FIGURE 1 and,

FIGURE 5 is a perspective view of one mounting bracket.

Referring specifically to the drawings, there has been illustrated a conventional concrete floor slab 5, having the usual finished floor area 6. The slab and the floor area are provided with the usual opening 7 for the installation of the T-coupling and its connection with the conventional soil pipe. The wall area adjacent to the mounting of the device is provided with the usual wood sill plate 8 and framing studs 9 in spaced apart relation. The studs 9 and the plate 8 are of the usual 2 x 6 dimensions. Adjacent studs 9 are reinforced by short sections of reinforcing studs 10 and with the spacing of the studs 10 defining a predetermined wall opening for the initial installation of the T-coupling.

2

Fixed upon the opposed faces of the studs 10, are right and left handed bracket devices 11. The bracket devices 11 are generally T-shaped in cross section, having a head flange 12 and a right angle flange 13. The head flange 12 is provided with rearwardly extending wings 14, that are apertured to receive clamping bolts 15. The clamping bolts 15 pass through aligned apertures formed in the studding 9 and 10, to be engaged by a clamping nut 16 at the opposite sides of the studs 9. The brackets 11 are adapted to be vertically disposed with respect to the studding and the bolts 15 extend through the studding substantially centrally of their width. Each of the brackets 11 are provided with integral foot portions 17, that seat upon the finished floor area 6 and with the foot portions having a width slightly less in the depth of the space formed by the studding. Each of the flanges 13 are provided with elongated slots 18 that are vertically spaced apart, for the adjustable reception of threaded studs 19. The studs 19 are adjustable vertically and extend inwardly beyond the inner wall area to constitute the mounting means for the conventional wall mounted commode, not shown. Clamping nuts 20 engage the stud upon opposite sides of the flange 13 after the studs have been adjusted vertically in accordance with the conventional openings formed in the commode. The lower slot 18 of each bracket terminates at a head portion 17' of the foot 17, for a purpose to be presently described.

Adapted to be adjustably supported upon the brackets 11 is a T-coupling, indicated as a whole by the numeral 21. The coupling 21 embodies a hollow body portion 22 communicating with a depending spigot end 23 and an upper forwardly offset bell-end portion 24. A forwardly extending horizontally arranged hub 25 constitutes the connecting portion for the commode. The upper extension terminates in an apron 26 that is in direct vertical alignment with the inner wall portion of the spigot end 23 and whereby any water, debris or other material that may drop downwardly through a vent stack 27, will be directed into the spigot end 23. The hub 25 is provided with oppositely extending outer wing portions 28, that are apertured with the apertures being threaded to have mounting engagement with the lower studs 19. Each of the wings 28 are provided with lower beveled extensions 29, that are horizontally arranged and that extend across the lower slots 18. The beveled portions 29 and the upper faces of the head 17' constitute a wedging surface for wedges 30, that may be driven through the lower slots 18 after the coupling 21 has been disposed at a predetermined level and to definitely fix the center line of the hub 25 against shifting downwardly. The wedge 30 is grooved at 31 so that, after being driven into wedging engagement with the bevel portions 19 of the wings 28 and the upper face of the head 17', any excess portion of the wedge 30 may be broken off, thus definitely fixing the center line coupling 21 against downward shifting.

The hub portion 25 is provided with interrupted threads 32, see particularly FIGURE 1. The threads 32 are adapted to be engaged by a sleeve 33, that also is provided with circumferential interrupted threads 34. Threaded upon the sleeve 33 is a clamping ring 35. A conventional compressible O-ring 36 is adapted to be clamped against the outer circumferential face of the hub 25 during the installation of the commode. The usual wax or rubber packing ring 37 is also adapted to be compressed against the forward end of the sleeve 33 to seal the union between the ring and the commode, to constitute a water tight connection.

In the use of the device, structural features, such as the floor, the sill 8 and the stud 9 are disposed in a usual manner and with the studs 9 defining a prescribed wall opening. With the sill 8 and studs 9 in position, the reinforcing studs 10 are fixed against the sides of the

studs 9 by nailing or otherwise. With the opening being defined, the brackets 11 are then disposed against each of the short studs 10, with the foot portion 17 resting upon the finished floor area 6. The studs are then marked and bored to receive the bolts 15, rigidly fixing the brackets 11 against the studs by the clamping nuts 16. The coupling 21 is then installed by passing the lower threaded studs 19 through the lower slots 18 and engaging said studs with the apertures in the wing portions 28 and with the spigot end 23 engaged with the bell-end of the conventional soil pipe. The upper studs 19 are also disposed through the slots 18 so that all of the studs project inwardly beyond the wall area a predetermined distance in accordance with the commode mounted thereon and with the studs in adjusted position, they are suitably locked in position by the lock nuts 20. The lower studs have threaded engagement through the wings 28 of the coupling 21 and whereby the coupling 21 is rigidly locked with respect to the brackets. With the studs in adjusted position, the wedges 30 are driven inwardly beneath the bevel portion 29 of the wings 28 and the head portion 17' of the foot 17, forming a definite stop against any tendency of the commode to shift downwardly under the usual weight that is normally disposed thereon. Any projecting part of the wedge 30 is broken away along one of the score lines 31, leaving the inserted wedge permanently as a part of the assembly. The stack 27 is then installed in the usual manner within the bell-end 24 and in the complete assembled relation, the entire structure is disposed within the confines of the wall opening, permitting the installation of exterior and interior finishes and with the studs 19 projecting beyond the interior wall facing, such as tile or the like. With the assembly in position, the operator then proceeds to thread the ring 35 upon the sleeve 33, together with the O-ring 36. The sleeve 33 is then threaded into the threads 32 by engagement of the threads 34 with the threads 32 of the hub 25 a predetermined distance in accordance with the discharge end of the commode and with the sleeve in adjusted position, the ring 35 is rotated to compress the O-ring 36 into sealing engagement with the marginal edge of the hub 25. The commode is then assembled to be supported upon the studs 19 and with the wax or rubber ring 37 disposed in sealing engagement with the outer end of the sleeve 33 in the usual manner.

It will be apparent from the foregoing that a very novel form of assembly has been provided for the mounting support of the coupling 21 whereby the entire assembly is within the limits of the opening defined by the studs. The brackets are quickly and easily mounted and provide an exceptionally strong support for the commode, retarding any tendency for the commode to sag under the weight of an individual supported thereon. The wedges 30 further prevent downward shifting of the coupling 21 after installation. The reinforcing studs 10 also prevent any tendency of movement of the brackets, since the bolts 15 pass substantially through the center line of the studs and any tendency to move under the weight of the commode and a person disposed thereon, would be against the vertical grain of the wood of the studs. The offset upper end of the coupling 21 is believed to be novel and a provision of the apron 26 avoids any objection to the offsetting, by preventing any accumulation of matter upon the inner wall of the coupling 21, such accumulation being objectionable under the various sanitary codes. The brackets may be formed of any desirable material such as cast iron. The foot portion 17 further tends to prevent any rocking motion of the brackets 11.

It is to be understood that the invention is not limited

to the precise construction shown, but that changes are contemplated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claims.

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

1. Mounting means for wall supported toilet commodes that comprises the combination of a pair of up-standing brackets for the support of a T-coupling, the brackets and the T-coupling all being disposed within the depth of a wall opening that is defined by a floor and up-standing spaced apart studding, the brackets each being rigidly connected to the studding upon sides of the opening and with the brackets also engaging the floor, the brackets being T shaped in cross section and with a leg of the T of each bracket being provided with upper and lower slots, the T-coupling having a forwardly opening hub portion, a depending spigot end portion and an upwardly extending offset bell-end portion, the hub portion being provided with integral oppositely extending wing portions that overlie the legs of the T, the said wing portions being apertured and threaded for the reception of elongated bolts that extend through the lower slots of the brackets to project forwardly of the wall area and that jointly serves to clamp the T-coupling at an adjusted elevation and to constitute the lower supports for the commode, upper elongated threaded bolts that extend through the upper slots of the brackets to project forwardly of the wall opening and that constitute the upper supporting means for the commode, clamping nuts for clamping the elongated bolts in adjusted elevation and wedge means adapted to be driven through the lower slots beneath the said wings and whereby to fixedly support the T-coupling in adjusted elevation and to fixedly support the first named bolts against accidental downward movement.

2. The structure according to claim 1 wherein the said wings are provided with lower beveled edges to be engaged by the wedges and with the wedges also bearing upon a flat surface formed on the brackets.

3. In a mounting means for commodes, a commode supporting bracket for attachment to a vertical stud, said bracket including a foot, said foot being adapted to rest on a floor, a vertically-extending T-shaped supporting member formed integrally with the foot and arising therefrom, said T-shaped member including an apertured flange for flat disposition against and securement to the vertical stud, a head portion in the form of a horizontal shelf on the bracket and disposed over and spaced from the foot, the T-shaped member including a slotted flange at right angles to the apertured flange, said slotted flange having a lower slot having one end terminating at the head portion and having an upper slot spaced from and located above the lower slot, a pipe-supporting bolt extending through the lower slot, a pipe having a wing engaged by the bolt and disposed across the lower slot, and a wedge driven in between the wing and the head portion.

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