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WATER TAP RECEPTACLE AND DRAIN



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Fig.2



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Fig.6









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3,096,782 WATER TAP RECEPTACLE AND DRAIN John Wesley Williams, Dallas, Tex., assignor of fifty percent to Juanita W. Caruth, Dallas, Tex. Filed Oct. 27, 1960, Ser. No. 65,483 2 Claims. (Cl. 137-360)

This invention relates to wall receptacles for water supply outlets and drains, and it has particular reference to a receptacle for hot and cold water connections for 10 washing machines and includes a drain outlet whereby, when supply hoses are connected to the water supply valves, any leakage occurring through coupling defects can be drained into the waste lines usually connected to sewer lines. 15

A prime object of the invention resides in the provision of a self-contained unit capable of being installed in a wall structure and recessed therein between the framing members, and having an external frame applied thereto to afford an attractive appearance. 20

A further object of the invention is that of providing a completely fabricated wall unit having a depth dimension equal to the conventional wall thickness of residential frame structures which are usually formed with vertical two by four inch lumber and sheeted with wall board 25 for interior finish, the unit being adapted to fit flush with the interior of the wall and secured by nails, or other suitable device.

It is also an object of the invention to provide a wall receptacle of the character described capable of functioning not only for faucets used for washing machine connections but also serves to receive and drain off water from air conditioning or cooling apparatus thus obviating the necessity for directing water lines outside the house.

The present invention is a continuation-in-part of application Serial No. 565,040, filed February 13, 1956, of John W. Williams, now abandoned, and embodies improved features of construction adapting the same to greater flexibility in application to at once provide recessed means for ready access to hot and cold water taps, 40 for connecting a washing machine thereto, and afford a safe disposal for leakage water from the taps and hose connections.

While the foregoing objects are paramount, other and lesser objects will become manifest as the description 45 proceeds, taken in connection with the appended drawings wherein:

FIGURE 1 is a front elevational view of the unit embodying the invention showing the front frame partially closing the receptacle, and showing hot and cold water 50 faucets therein, and an electrical service receptacle.

FIGURE 2 is a vertical sectional view on lines 2-2 of FIGURE 1 showing the drain pipe to the sewage, and also fragmentarily showing a drain tube in the top of the receptacle for an air cooling device. 55

FIGURE 3 is a transverse sectional view of the invention on lines 3-3 of FIGURE 1 fragmentarily showing the wall structure and the bottom drain outlet, and

FIGURE 4 is a perspective exploded view showing the wall unit with knock-out disks in the side walls and top for service pipe openings and air conditioner drain tube, and illustrating the adjustably removable front frame.

FIGURE 5 is a front elevational view of a modified form of the invention, showing the frame partially broken away, and showing the faucets in the bottom of the receptacle.

FIGURE 6 is a vertical sectional view on lines 6-6 of FIGURE 5.

FIGURE 7 is a lateral sectional view of the invention, 70 on lines 7—7 of FIGURE 5, showing the bottom and drain outlet.

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FIGURE 8 is a front elevational view of the frame member, and

FIGURE 9 is a rear perspective illustration of the frame member.

It is well known that water faucets often tend to leak, and when hose couplings are connected thereto water sometimes drips or runs down the hose and on to the floor presenting problems such as damage to floor coverings, damage to the wall and the floor itself, and the hazard of bodily injury to persons slipping on wet floor coverings.

Recessed receptacles for water service lines and drains have heretofore been provided by poorly constructed wood or wallboard boxes, which leak and soon present an unsightly appearance, and it is an important object of the invention to provide a neat appearing, substantial unit which can be economically and easily installed and connected directly to the existing plumbing so that a washing machine can be used without the bother of water dripping from the faucets or hose connections to the floor.

Accordingly, the invention comprises a box 10 of metal, or other suitable material, having a top or cap 11, sides 12 and 13, and a bottom or cup 14, the latter being inclined from the back wall 15 and the sides 12 and 13 toward a central drain outlet 16 which is shown in detail in FIGURES 2, 3 and 4. The depth of the box 10, or the lateral dimension of the top, sides and bottom is such that the box 10 can be installed in a conventional wall structure without protruding beyond the inner wall surface 17, as illustrated in FIGURES 2, 3, 6 and 7.

In modern residential frame structures the wall studs 18 are of 2" x 4" or 2" x 6" dimension and at least the inner wall surface is of conventional wallboard 19. The outer wall 20 may be of standard dimension lumber or wallboard as desired. Water pipes 21 and 22 are installed within the wall structure, and through the studs 18 where desirable to provide accessible taps or faucets 23 and 24, as shown in FIGURES 1, 2 and 3, or vertically between the studs 18 and through the bottom 14 of the receptacle 10, as shown in FIGURES 5, 6 and 7.

Fitted to the bottom drain outlet 16 is a tail pipe 25 of relatively short length which is inserted into a drain pipe 26 connected to the regular plumbing outlets to the sewer. The drain pipe 26 is fragmentarily shown in FIG-URE 1 and may, if desired, be provided with a trap 26', as shown in FIGURE 5, to prevent back flow of sewer gases through the receptacle.

The sides 12 and 13 each are provided with laterally extending tabs 27 and 28 set near the front edges of the sides 12 and 13 providing means for securing the box 10 to wall studs 18 by nails 29, or the like, in the manner shown in FIGURES 3, 5 and 7. The tabs 27 and 28 are more readily seen in FIGURES 4 and 5 in which the latter are shown spot welded or soldered to the sides 12 and 13 but may, if desired, be secured by screws in slots (not shown) whereby adjustment can be made to accommodate wall board of different thicknesses and insure that the front edges of the box 10 are flush with the surface of the interior wall.

The box 10 is fabricated with a suitable number of knock-out disks 30 in the sides 12 and 13 and the top 11 to provide openings for the water supply pipes 21 and 22, which project through the sides 12 and 13, and a drain pipe 31 entering the box 10 through the top 11 for draining an air conditioner, or other appliance, as shown in FIGURES 1, 3 and 4. In FIGURES 5, 6 and 7 the pipes 21 and 22 enter the receptacle 10 through the bottom 14.

For convenience a receptacle box 32 for an electrical service outlet 33 can be formed with the bottom 14, or

attached thereto, as shown in FIGURES 1 and 4, to facilitate connecting a washing machine service cord. This device, however, is optional and is not necessarily a part of the invention.

After the box 10 is installed a frame 34 is applied to 5 the front thereof by screws 35 arranged in a plurality of slots 36 formed in the inner edges of lateral flanges 37 integral with the side members 38 of the frame 34, as shown more particularly in FIGURE 4. The flanges 37 extend into the box 10 and the screws 35 are threaded 10 into apertures 39 in the sides 12 and 13. Inwardly extending lateral flanges 40 and 41 are formed with the upper and lower members 42 and 43 of the frame 34 to insure an attractive finish for the receptacle. The frame 34 is preferably bevelled about its edges 44, as shown 15 especially in FIGURES 4, 5, 8 and 9.

The lower member 43 of the frame 34, shown in FIG-URES 1 and 4, provides an apron which extends substantially above the bottom 14, as apparent in FIGURES 1 and 2, and well below to cover the electrical service outlet box 32. A pair of properly spaced openings 45 are formed in the lower frame member 43 to receive the plug-in service receptacles 33 shown in dotted lines in FIGURE 1.

Also formed in the upper edge of the lower frame 25 member 43 are a pair of spaced notches 46 in which the hot and cold water hoses rest when connected to the faucets 23 and 24 so that any leakage from the faucets, or the hose connection, is drained behind the frame 34 and into the box 10 and prevented from running down 30 the hoses to the floor. The slots or notches 46 may be of any desired form, or may be apertures through which the hoses can be passed before connecting the same to the faucets 23 and 24. It is contemplated that the frame 34 may be of any desired design to suit the surrounding 35 decor, as in a kitchen.

Referring to the modified form of the invention, shown in FIGURES 5 to 7, it will be noted that the hot and cold water supply pipes 21 and 22 are arranged through apertures 47 in the bottom 14 of the receptacle 10, and 40 which are bevelled inwardly, as shown in FIGURE 5, to provide a proper seal about the pipes 21 and 22 to prevent leakage from the receptacle 10 with suitable gaskets applied in the conventional manner.

The front frame 34, in the modified form, is provided 45 with an opening 48 for access to the faucets 23 and 24, and has a peripheral flange 49 which projects internally of the receptacle 10 from the rear of the frame 34, as shown best in FIGURE 9. In the lower portion of the frame 34, below the opening 48, are a pair of circular apertures 50 adapted to receive the ends of hoses (not shown) extended therethrough for attachment to the faucets 23 and 24. The apertures 50 have smaller adjacent apertures 51 immediately therebelow and communicating therewith into which the hoses repose and which 55 closely embrace the latter to prevent water from draining out and down the hoses in the event of leakage resulting from a faulty coupling, or a defective hose gasket. The apertures 50 and 51 may be of any desired shape.

The receptacle 10 has an upturned flange 52 along the 60 front thereof, and projecting upwardly from the bottom 14 to retain the water therein, and a baffle 53 is provided longitudinally of the frame 34, along its inner surface below the apertures 50 and 51 to overhang the flange 52 and deflect any leakage occurring about the hoses over 65 the flange 52 down into the bottom 14.

It is recognized that receptacles of a character similar to the instant invention have been designed for installation in a wall in much the same manner as herein described, but such devices are utilized only to house a 70 fire hose, or the like, which must be of a suitable dimension to contain a coiled hose, and no provision is usually made for drainage. Moreover, such receptacles are not ordinarily intended for residential installation.

Obviously, the invention herein shown and described is capable of certain changes and modifications, from time to time, by persons skilled in the art without departing from the spirit and intent of the invention or the scope of the appended claims.

What is claimed is:

- 1. In a water tap and drain receptacle for installation in a wall structure, the combination which comprises:
- (a) a rectangular box having a top, side walls, and a bottom and a depth dimension adapting the same to be recessed in wall structure, the said bottom being recessed downwardly from each wall of said box and having a drain outlet centrally thereof, said box having ports on each side of said drain outlet each capable of receiving a water pipe therethrough having a tap thereon,
 - (b) an upturned flange formed along the front edge of said bottom,
- (c) means formed with each side wall of said box for securing the same to a wall structure, and
- (d) a front frame for said box having means therein adapted to receive and retain lengths of hoses connected to said water taps and a baffle element thereon overreaching said upturned flange and depending downward into said box for directing inside of said upturned flange any leakage caught by said frame from hoses leading from said taps.
- 2. In a water tap and drain unit for installation in a wall structure, the combination which comprises:
- (a) a receptacle including a rectangular bottom cup having relatively short upturned side walls and having an inwardly and downwardly sloping bottom surface with a drain outlet centrally thereof, a rectangular cap of dimensions corresponding with those of said cup and having short downwardly turned side walls, and a back and side forming sheet of height determining the height of said receptacle and shaped to form two side panels and a back panel corresponding in width and length respectively with the width and length of said cup and cap and marginally secured inside said cup and cap,
 - (b) flanges extending from and adjacent the front edges of said side panels for securing said receptacle in a wall structure,
- (c) said receptacle having a pair of ports, one on each side of said drain outlet, each capable of receiving a water pipe therethrough having a tap thereon for connection to a hose which may extend through the open face of said receptacle, and
- (d) a front frame for said receptacle having an opening therein of a width corresponding with the width of said receptacle and having inturned flanges extending along the length of vertical sides of said opening for securement to said receptacle and having, in the region of the bottom of the opening in said frame, an inturned flange overreaching the upturned front side wall of said cup and depending downward into said receptacle for directing inside said cup any leakage caught by said frame from hoses leading from either said tap.

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