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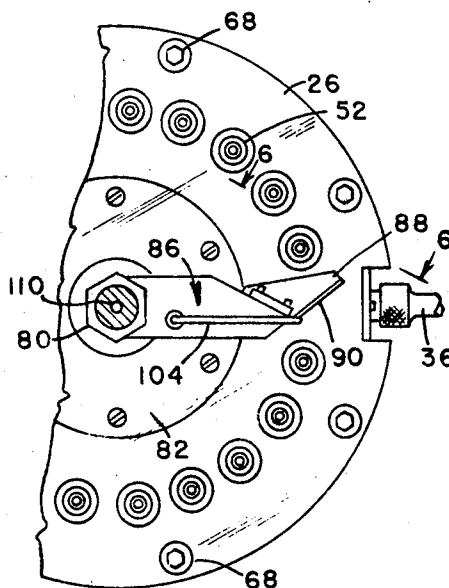
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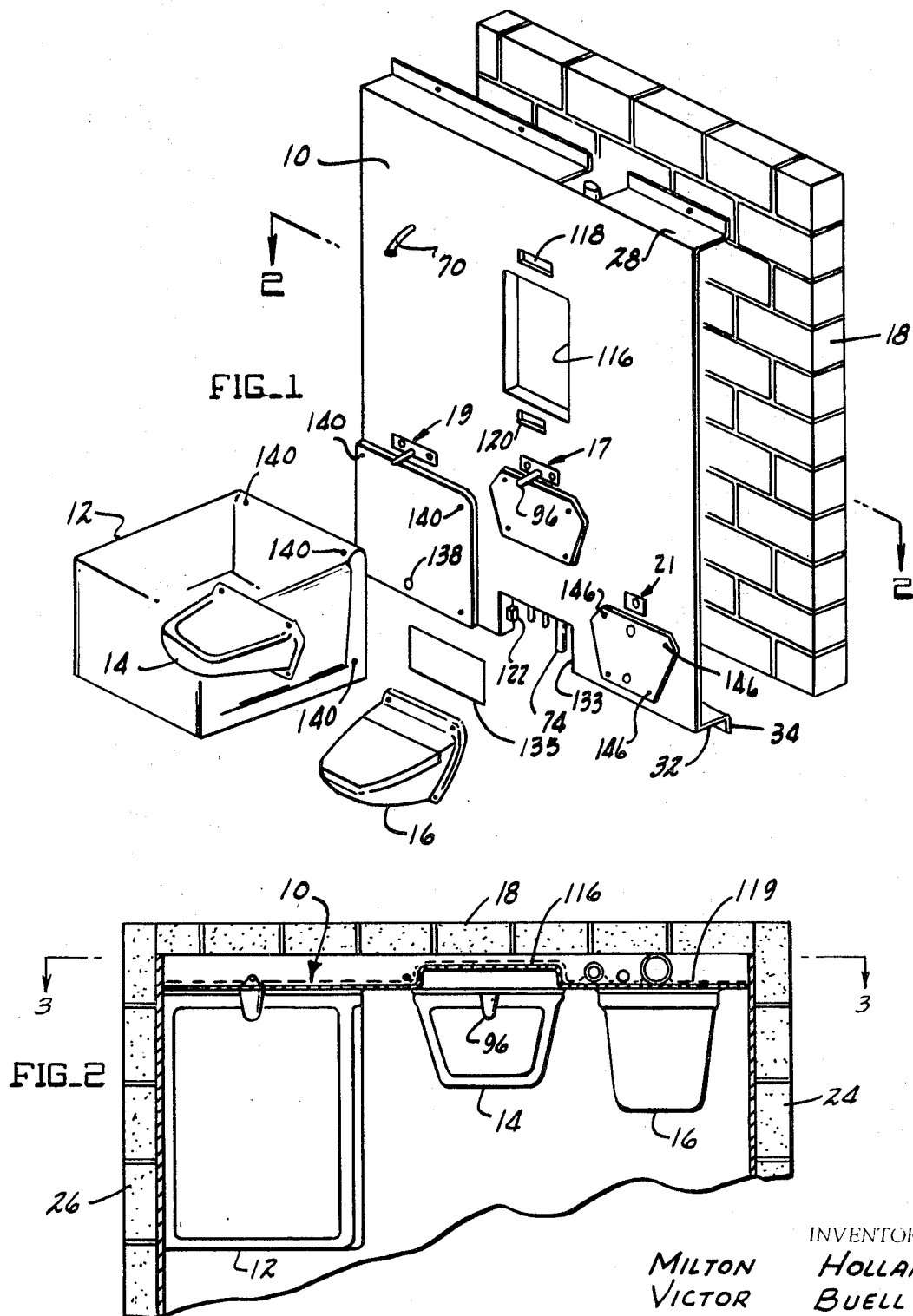
[54] **PREFABRICATED BATHROOM ASSEMBLY**
10 Claims, 18 Drawing Figs.

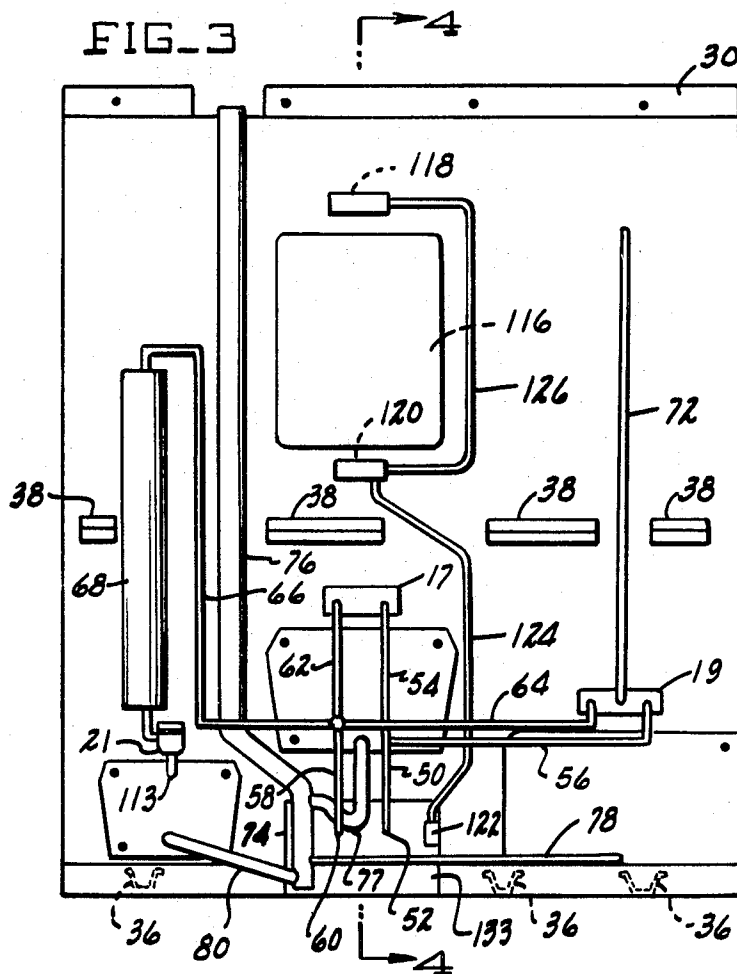
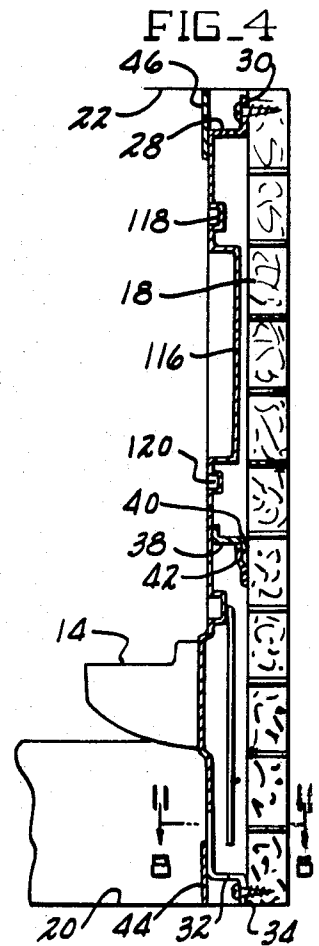
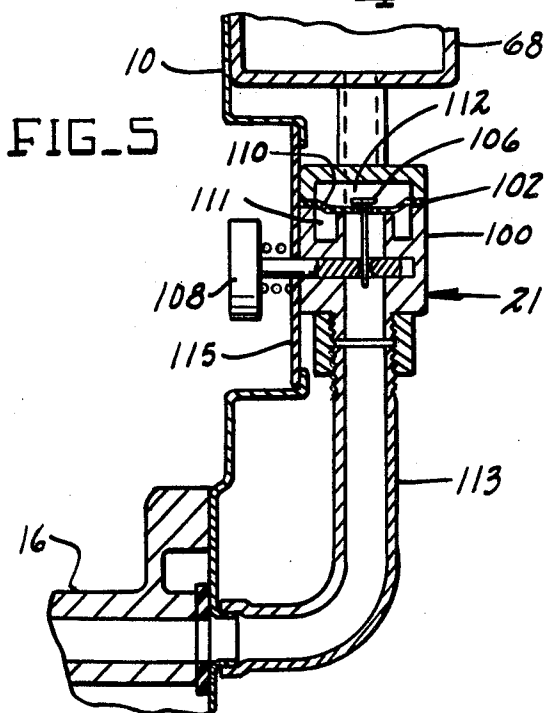
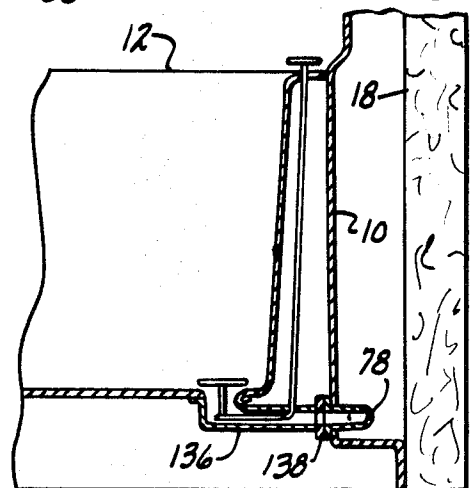
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[50] Field of Search..... 4/1, 2, 3, 4,
5, 252, 192; 52/27, 34, 35, 173, 716, 717

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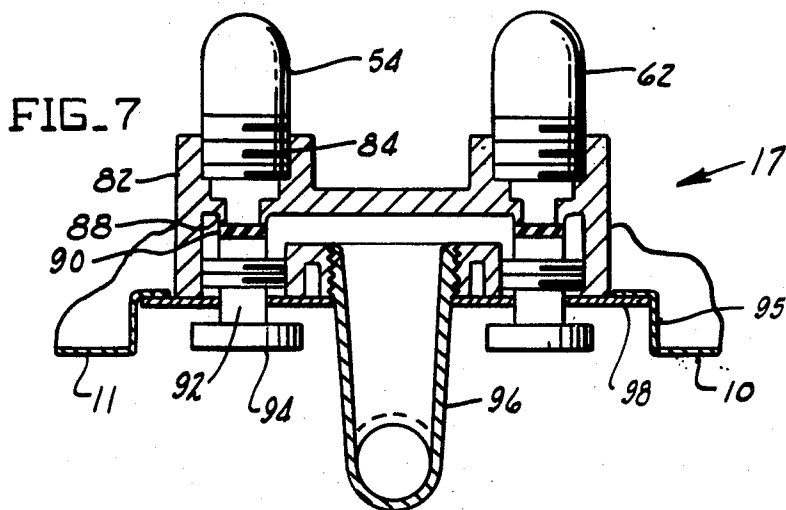
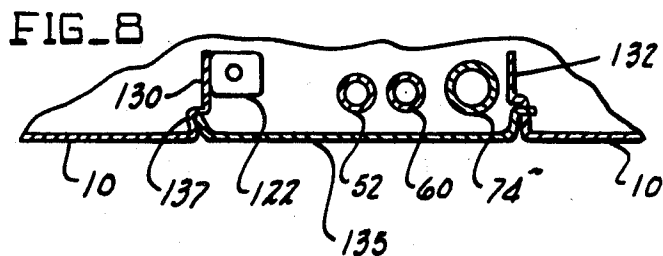
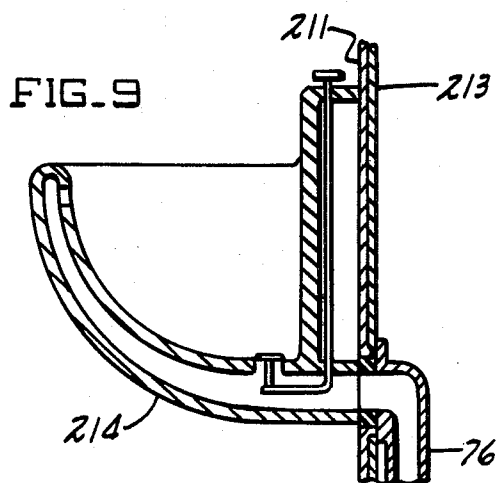
ABSTRACT: This invention proposes a prefabricated bathroom component built on the order of an appliance such as a clothes washer or dishwasher so that it may be plugged into place in a matter of minutes, as opposed to hours or days. The concept is to build the bathroom appliance as one single preplumbed panel which can be set against an unfinished bathroom wall and bolted or otherwise secured in place with a minimum of time and effort. This enables the operations requiring skilled effort and know-how to be performed at the factory where precision equipment is available to make low cost mass production operations most feasible.



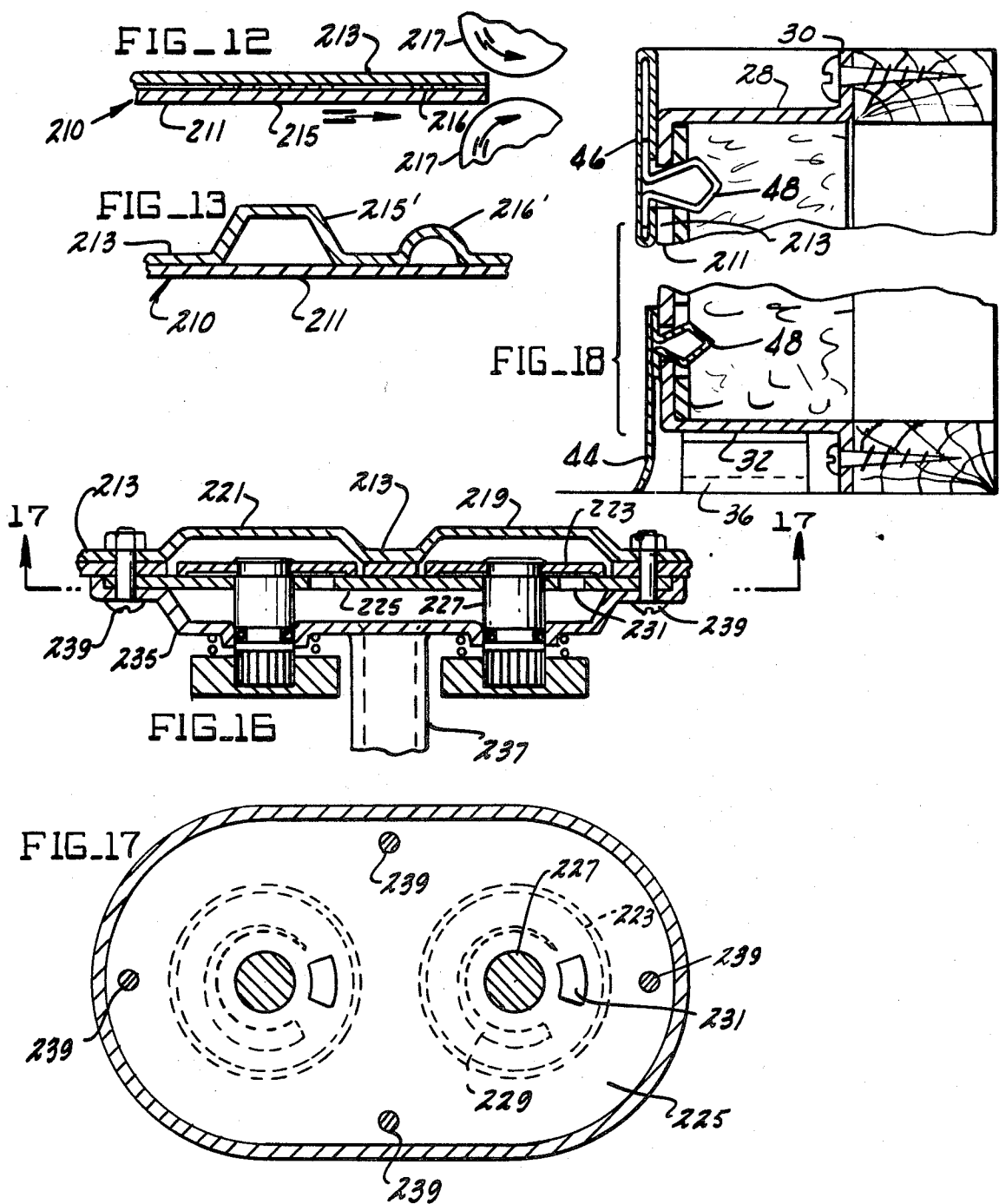




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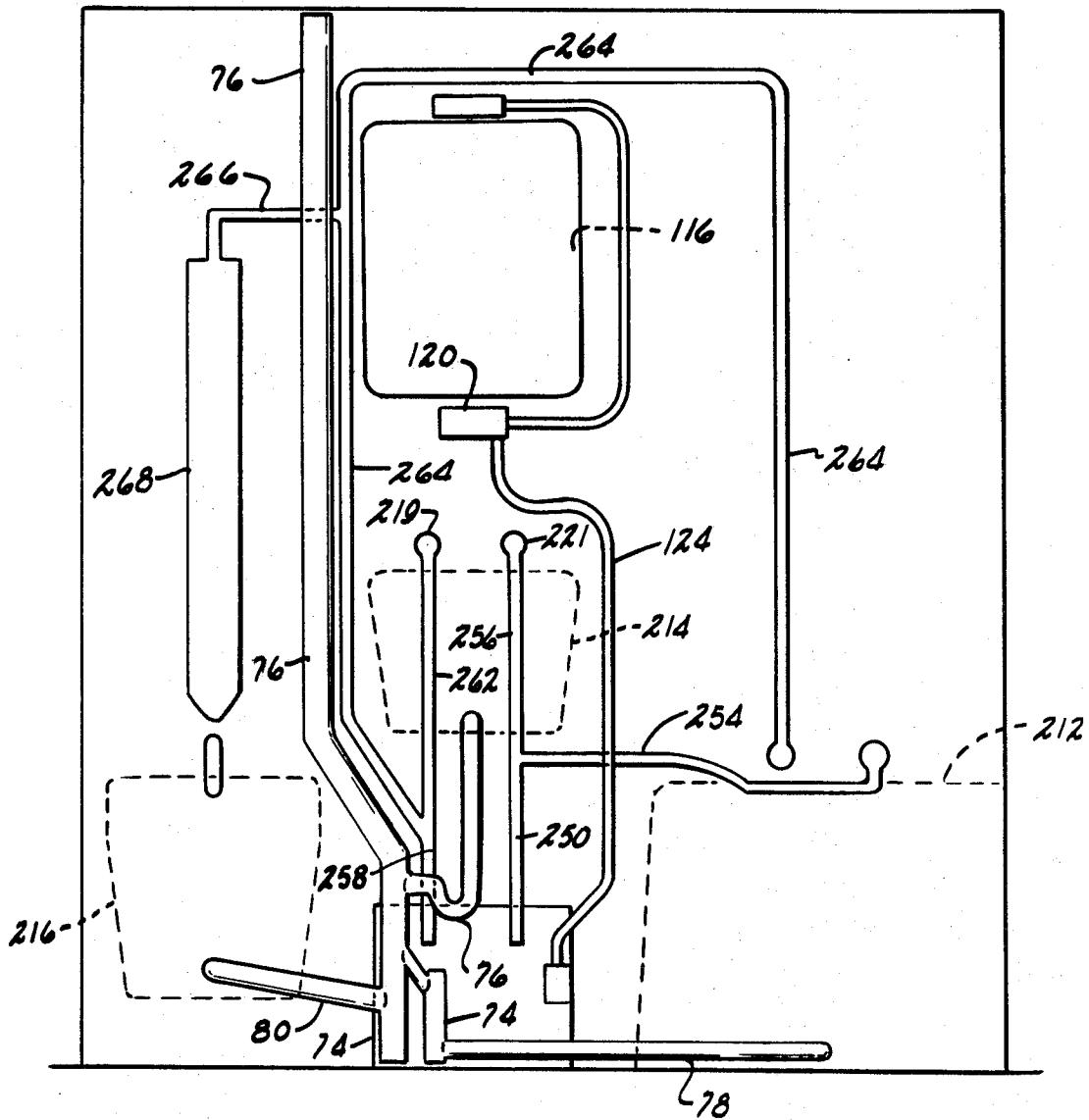
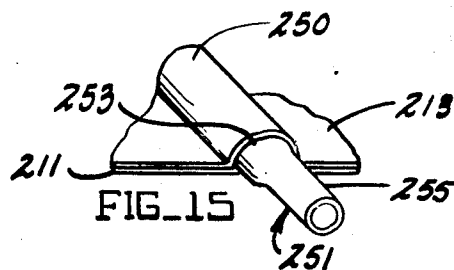


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FIG. 14



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PREFABRICATED BATHROOM ASSEMBLY

CONVENTIONAL PLUMBING INSTALLATION PRACTICE

Conventional bathroom plumbing comprises a tub, water closet and lavatory or basin, each connected with a source of cold water; the tub and lavatory are additionally connected with a source of hot water. The drains from these three fixtures usually connect to a soil stack leading to the sewer; to prevent back siphonage within the drainage system the soil stack is usually equipped with a vent stack which goes up through the roof of the building.

The plumbing system involves a tortuous maze of various sized pipes, elbows, tees, Y branches, traps, etc. which must be connected at the job site. In forming the drain system usually the soil stack and vent stack are first assembled in sections between the studs of an interior wall. Then the various horizontal drain pipes and trap sections are connected onto the soil stack. Thereafter the fixtures (tub, water closet, and lavatory) are mounted within the room area and connected to the trap sections. In forming the water supply system, the plumber usually runs the piping in horizontally from riser pipes installed between studs in a manner similar to the soil stack. Faucets are installed after installation of the supply piping.

The conventional process may involve such on-the-site operations as cutting and sizing of pipe, pipe threading, soldering, caulking, notching studs and/or joists, and hanging the pipe on whatever support is available. The present invention seeks to eliminate or minimize such operations, thereby considerably reducing the final cost of the bathroom.

THE DRAWINGS

FIG. 1 is an exploded perspective view showing one embodiment of the invention.

FIG. 2 is a sectional view taken on line 2-2 in FIG. 1.

FIG. 3 is a sectional view taken on line 3-3 in FIG. 2.

FIG. 4 is a sectional view taken on line 4-4 in FIG. 3.

FIG. 5 is an enlarged sectional view of a flush valve used in the FIG. 1 embodiment.

FIG. 6 is a sectional view taken through a bathtub employed in the FIG. 1 embodiment.

FIG. 7 is a sectional view taken through a water faucet employed in the FIG. 1 embodiment.

FIG. 8 is a fragmentary sectional view taken on line 8-8 in FIG. 4.

FIG. 9 is a sectional view taken through a lavatory employed in a second embodiment of the invention.

FIG. 10 is a front elevational view of an additional embodiment of the invention.

FIG. 11 is a sectional view taken on line 11-11 in FIG. 10.

FIG. 12 and 13 are fragmentary sectional views of certain sheet metal components used to form a panel in the FIG. 10 embodiment.

FIG. 14 is a view taken on line 14-14 in FIG. 11.

FIG. 15 is a fragmentary perspective view of a passage connector means employed in the FIG. 10 embodiment.

FIG. 16 is a sectional view taken through a faucet employed in the FIG. 10 embodiment.

FIG. 17 is a sectional view taken on line 17-17 in FIG. 16.

FIG. 18 is a sectional view showing the upper and lower edge portions of the panel used in the FIG. 10 embodiment.

FIG. 1 IN DETAIL

FIG. 1 shows an embodiment of the invention consisting of four main components, namely a preplumbed panel assembly 10, a bathtub 12, basin or lavatory 14, and water closet 16. Panel assembly 10 may be shipped from the factory as one package, and the other three components (tub, basin and water closet) as a second package; in some cases the basin and water closet may be wholly or partially nested within the tub

for transportation compactness. Final on-the-site installation involves anchoring of panel 10 against an unfinished building wall or partition 18, and bolting of the other three components to the front face of panel 10. The water supply pipes and drainage pipes are located on the rear face of panel 10, with the supply pipes being factory-connected to the on-off valves; the valves are numbered 17, 19 and 21 in FIG. 1. The preferred arrangement is such that no on-the-site plumbing operations are required, other than connection of the panel 10 pipes to the main water supply-drainage system.

Panel 10 can be formed of metal or plastic. It preferably is a massive panel sized to form one entire wall of the bathroom. Thus, as shown in FIG. 4, the panel extends from floor 20 to ceiling 22. As shown in FIG. 2 the panel extends from building wall 24 to building wall 26. Walls 24 and 26 are shown in FIGS. 2 as concrete block, but they can be rough framing as shown in FIG. 11. In any event panel 10 is preferably a massive panel which completely conceals the rough wall on which it is positioned. Due to its mass panel 10 must be reinforced against bending or buckling under its own weight and occupant-imposed loads. Therefore reinforced light weight plastic may be an advantageous material for the panel. Suitable reinforcements should be incorporated into the panel, either integrally as part of its formation or separately by means of discrete reinforcement strips. The panel might be on the order of 7 feet high and 7 feet wide, and might weigh on the order of 200 pounds.

As shown in FIGS. 1 and 4, panel 10 is formed at its upper edge with a rearwardly turned section 28 which terminates in an upstanding flange 30. At the job site suitable screws or other fasteners are driven through openings in flange 30 to assist in securing the panel on building wall 18. The lower portion of panel 10 comprises a rearwardly turned wall section 32, and a down-turned flange 34 having suitable openings for accommodation of securement screws going into the building wall 18. The weight of the panel may be carried or distributed by three or more channel-shaped feet 36 (FIG. 3) suitably welded or otherwise secured to the underface of wall section 32. To resist the tendency of the panel to buckle or bulge away from wall 18 the rear face of the panel may be equipped with one or more transversely extending metal bars 38 having down-turned flanges 40 adapted to seat within a slot formed by a cleat 42.

The arrangement envisions that cleat 42 will be fastened to wall 18 at the correct height, and that panel 10 may thereafter be moved against wall 18 and then lowered slightly until feet 36 rest on the flooring 20, at which point the flange 40 will be positioned within the slot provided by cleat 42. Screws may then be run through the openings in flanges 30 and 34 to secure the panel in place. Concealment of the screws may be accomplished with suitable molding strips 44 and 46 having spring type retainers 48 going through openings in the panel, as shown best in FIG. 18.

PIPING SCHEME

FIG. 3 is a view looking at the rear face of panel 10. It shows hot water supply piping comprising an upstanding water pipe 50 having an open lower end 52 adapted to be connected with a source of hot water (not shown), and having two branches 54 and 56. Branch 54 leads upwardly to a conventional water faucet 17 disposed above the lavatory 14. Branch pipe 56 leads laterally to another faucet 19 positioned above the tub 12. Cold water is supplied to the fixtures through a pipe system comprising a main pipe 58 having an open lower end 60 adapted to be connected to a water source (not shown). A first branch pipe 62 leads to the faucet located above lavatory 14, a second branch 64 leads to the faucet above tub 12, and a third branch 66 leads to a water storage tank 68 located above the space behind water closet 16. The tub 12 may be equipped with an overhead shower fitting 70 (FIG. 1) which receives water from a pipe 72 (FIG. 3) suitably connected with faucet 19. A suitable diverter valve may be provided on the faucet to permit the tub or shower to alternately receive water.

The water drainage system for the illustrated unit comprises a relatively large diameter soil stack 74 connected to a vent stack 76. Lavatory 14 discharges to the soil stack through a U-trap 77, tub 12 discharges to the soil stack through a drain pipe 78, and water closet 16 discharges to the soil stack through a discharge pipe 80. For economy reasons it is desired to use a single soil stack for all three fixtures 12, 14 and 16. However the water closet must then discharge to the stack below the discharge point for the tub and lavatory; otherwise the water closet might discharge or siphon into the tub or lavatory. Conventionally the discharge point for the water closet is made lower than the discharge point for the other two fixtures by running the water closet discharge pipe downwardly through the floor and then over to the soil stack. This is undesirable in a preplumbed package as here envisioned. Therefore it may be necessary to design the components so that the bottom of the tub is elevated above the bathroom floor as shown in FIG. 6.

FAUCET-PIPING CONNECTION

FIG. 7 shows a faucet 17 located generally behind the front face 11 of panel 10, but nevertheless externally accessible after panel 10 has been installed on building wall 18; this is to permit repair or replacement of the valve seats, poppets, etc. without disturbing panel 10. The valve is generally conventional and comprises a main body or housing 82 having a threaded connection 84 with the supply pipe 54. Internally the valve body defines a valve seat 88 which cooperates with a poppet valve element 90 carried by a thread stem 92 attached to a manual actuating handle 94. Manual rotation of the handle opens element 90, permitting flow of water to a spigot 96. Spigot 96 may if desired be detachably connected with the valve body housing to permit the spigot to be shipped separately from panel 10; this reduces the thickness of the panel during shipment and also prevents the spigot from projecting outwardly beyond the panel front face in a manner as might cause damage to the spigot.

As shown in FIG. 7, the hot water valve and cold water valve housings are formed as part of a single housing body so that both valves discharge to a common spigot 96. An ornamental escutcheon plate 98 may be snapped over the valve housing to conceal same from view. The two manual handles or knobs 94 may be disposed within a recessed portion 95 of panel 10; this protects the knobs during shipment, also provides an ornamental distinctive appearance, and further reinforces the panel since the recessing produces a panel-stiffening effect.

FIG. 7 illustrates but one valve or faucet arrangement which can be used. The drawing is intended to be illustrative, since other types of faucets can be employed without departing from the general concept of a preplumbed panel. It is desirable however that the valve design be so chosen as to permit access to the valve housing interior for repair or replacement operations. Therefore, while the valve housing is located behind the panel it should be exposable so as to permit access without disturbing the panel.

FIG. 7 shows a faucet construction applicable to the lavatory 14. A somewhat similar construction can be used for faucet 19 above tub 12, except that a diverter valve must be used for diverting the mixed flow to the pipe 72 (FIG. 3). This diverter valve can be located on the spigot (corresponding to spigot 96) or on the upper portion of the valve housing which connects with the lower end of pipe 72.

CLOSET WATER SUPPLY

As shown in FIG. 3, the water pipe 66 leads to a cylindrical tank 68. FIG. 5 shows the lower portion of tank 68 connecting to a flush valve 21 which controls flow from the tank to water closet 16. The valve is of generally conventional construction comprising a valve housing 100 suitably mounting a diaphragm type valve element 102. A pilot flow opening in the diaphragm 102 is normally closed by a pilot valve element 106 suitably connected with a manual actuator plunger 108,

whereby water flows from an inlet chamber 111 through a bleed opening 110 to accumulate in pressure chamber 112. Inward manual depression of plunger 108 allows the chamber 112 to rapidly empty, thereby permitting main flow of water from tank 68 through the main seat and thence into the water closet via a pipe 113. As the actuator 108 is released the water pressure builds up in chamber 112 to gradually force the diaphragm 102 closed. Tank 68 provides a large reservoir of water which hopefully will prevent the flushing operation from momentarily starving the remaining parts of the water system.

FIG. 5 is merely illustrative of one flushing construction which can be employed in the preplumbed panel concept. Whatever its construction, the flush valve should be so designed as to be accessible for repair or replacement without disturbing panel 10. The panel can be provided with access openings and closure doors, but such openings may not be desirable for reasons of costs or ornamentation purposes, and it is believed better to design the components so that access may be accomplished without special access openings. This is accomplished in FIG. 5 by locating the valve behind an escutcheon panel 115; the valve can thus be disassembled in place or removed through the panel opening. A conventional water closet tank (having a float valve control) could be used behind panel 10, but special access openings would then have to be provided in the panel. Therefore it may be preferable to use a flush valve of the type shown in FIG. 5 since such a valve does not require a large access opening in the panel.

PIPE FABRICATION

As previously noted, the various water supply pipes 50, 54, 56, 58, 62, 64 and 66 are preferably installed and connected at the factory—not at the job site. These pipes can be connected with one another in a large master jig, said jig enabling the various pipes to be soldered or otherwise secured together in the FIG. 3 configuration. Thereafter the various faucets for the lavatory 14 and the tub 12 can be connected to the pipes while the pipes are still held in the jig; all of this may be accomplished prior to assembly of the pipes on the rear face of panel 10.

Assembly of the piping on the panel may be accomplished with the panel in a horizontal prone position, the rear surface thereof facing up. With the panel in such a position the drain piping can be laid or deposited on the panel with the various elbows extending through the panel opening. Thereafter, the water supply piping can be laid or deposited onto the panel so that the faucets go through the respective panel openings. Final securing of the water supply and water drainage pipes can be accomplished by spraying the pipes, and particularly the pipe-panel joints, with adhesive material. The adhesive material can take various forms and compositions, one suitable composition being discrete fibers dispersed in a cementous or bituminous binder. Such a material, when applied to the rear face of panel 10 will mount the piping in place, will provide some panel stiffening, and will also provide dampening against the hollow or resonant sound characteristic of a bare metal panel. The adhesive material should preferably be a low density material so as not to add too much weight to the panel. Numeral 119 (FIG. 2) references the adhesive material.

It is believed that the above operations of pipe assembly, pipe disposition on the panel, and pipe retention (adhesive application), can be most expeditiously performed by an assembly line type procedure in which the prone panel is advanced in stepwise manner along a horizontal conveyor from station to station. In such a procedure the pipe and faucets could be laid at one station and the adhesive applied at the next station. Additional operations could be performed on the panel at other stations, either upstream or downstream.

ELECTRICAL AND WATER SUPPLY CONNECTIONS

As shown in FIG. 1, panel 10 is provided with a rectangular recess 116. This recess is formed during the initial embossing and piercing operations performed on the panel. In practice a

set of shelves would be mounted within recess 116, and a hinged closure mounted on the panel front face so that the recess would form a medicine cabinet. Overhead lighting can be provided by a suitable light disposed in a recess 118 formed integrally with the front face of the panel. A second recess 120 in the panel front face can be used as a junction box for a female receptacle useful in electrical hookup of a man's shaver or electric toothbrush etc.

FIG. 3 shows the rear face of panel 10, and the projecting portions which form the various depressions 116, 118 and 120. The electrical wiring for the overhead light and the electrical wall plug can be run from a conventional junction box 122 through piping 124 and 126. FIG. 8 shows one method of mounting junction box 122 on panel 10. As there shown, box 122 is positioned on flange 130 which is turned rearwardly from the panel 10 front face. An additional flange 132 is turned back from the panel so that the space between flanges 130 and 132 defines a rectangular access opening 133 in the panel. The opening is located in the lower central portion of the panel where piping and electrical connections are accessible for connection to their respective supplies. After the various plumbing and electrical connections have been made the rectangular opening may be closed by a removable closure 135. As schematically shown in FIG. 8 the closure is provided with tongues 134 which go into slots in panel 10 so as to act as hinges. The left edge 137 of the closure may frictionally seat against panel 10 to retain the closure in place. Other closure arrangements can be employed.

INSTALLATION OF FIXTURES 12, 14 AND 16

FIG. 6 shows generally one manner of connecting the tub 12 to panel 10. It involves a gentle forcing of the tub against the front face of the panel so that drain pipe 136 abuts against the seal 138 which has been previously positioned against the panel. As shown in FIG. 1, the tub can be bolted to the panel with three bolts going through holes 140 corners of the tub and portions of the panel. These bolts preferably go through panel 10 into nuts welded or otherwise secured to the panel rear face. The panel may be outwardly embossed around the tub profile for strengthening purposes.

Lavatory 14 is connected generally in the same manner as tub 12. Thus as shown in FIG. 1, four bolts can be extended through holes 144 in each corner portion of the lavatory rear wall. These bolts preferably extend through openings in panel 10 into concealed nuts on the panel rear face. FIG. 9 shows the general configuration of the lavatory and its connection with the drain pipe 76.

As in the case of tube 12 and lavatory 14, the water closet 16 can be mounted on panel 10 by means of bolts extending through the panel. FIG. 1 illustratively shows four bolt openings 146 in the panel which register with spaced openings in the water closet rear wall. It may be necessary to reinforce the panel in the area directly behind the water closet, as for example by means of reinforcing channels welded or otherwise secured to the panel rear face.

GENERAL CONCEPT

It will be seen from the above discussion that the principal feature of interest is the "preplumbed panel" concept whereby the water piping and faucetry is factory-positioned on the panel so that the plumber is no longer required to build up a piping system on the job. The panel preferably occupies one entire wall of the bathroom so that after the panel has been installed no further finish walls, tiles, or the like are needed to complete that particular wall.

It will be seen from FIG. 2 that panel 10 is spaced outwardly from building wall 18. The panel thus somewhat decreases the amount of free space in the room. However conventional plumbing installations have usually required some thickening of the hollow wall area to accommodate the relatively large diameter soil stack (which is usually 4 or 5 inches in diameter). In conventional arrangements there is some weakening of

the building walls necessary to cut away joists and studs for accommodation of the water piping. With the present arrangement no cutouts are required in the building walls so that these walls can realize their full strength potential for load-bearing purposes.

Previously it has been known to prefabricate complete three dimensional bathrooms comprised of four walls, a doorway, window, flooring, ceiling, piping and fixtures. However, as far as we know, none of these arrangements incorporates each of the three fixtures or the front face of a single wall panel, and the piping on the rear face of the panel, whereby the panel constitutes the sole mechanism for mounting the entire system of water components. This arrangement is materially simpler and less costly than the known prior art arrangements.

SECOND EMBODIMENT

FIG. 10 illustrates a second embodiment of the invention comprising a panel 210 arranged to mount a tub 212, lavatory 214, and water closet 216. As shown in FIG. 11, panel 210 is formed of two separate metal sheets 211 and 213 secured together, as by pressure welding. These sheets are bulged apart in certain areas to form reinforcements and water passages, thus eliminating the need for the separate structures required in FIG. 1.

Pressure welding is a known method of securing sheet metal parts together, having been described for example in such U.S. Pat. Nos. as 2,759,247 issued to Grenell et al., 2,874,942 issued to Rieppel et al., 3,205,563 issued to Pauls et al., and 3,206,839 issued to Tranel et al. FIGS. 12 and 13 illustrate schematically two sheets arranged for pressure welding against one another; in our contemplated usage these sheets might be steel galvanized on their facing surfaces, each sheet having a thickness of about 0.04 inches. Stop weld material may be applied to one of the sheets at areas 215 and 216 so that when the sheets are run between the rolls 217 the resulting squeezing pressure on the sheets will be ineffective to weld them together in these areas; in the other sheet areas the pressure of the rolls will weld the facing sheet surfaces together. Subsequent introduction of pressure fluid into the joints at the nonwelded areas will bulge the two sheets apart by a metal stretching action. If at the time of this application of fluid pressure the sheets are positioned between two suitably shaped dies the bulging effect will be controlled, thus determining the shape of the bulged article. FIG. 13 illustrates a bulged area 215' useful for reinforcement of the panel, and a bulged area 216' useful as a water passage. FIG. 11 illustrates the entire panel having various bulged-apart sections functioning as water passages and reinforcements.

The reinforcements 215' of FIG. 11 are not shown in FIG. 14 since that might tend to obscure the water passage routes shown in that FIG. As shown in FIG. 11, the reinforcements include three reinforcement rib sections, two located leftwardly of the medicine cabinet 116, and one located near the right edge of the panel. The showing is intended to be illustrative since the reinforcement pattern can be varied according to positionment of the fixtures, size of the panel, and experimental experience. The water passages are not designated as reinforcements, but it is apparent that they serve such a purpose as an incident to their main function.

Some additional reinforcement may be provided in the way of a foam backing designated by numeral 208 in FIG. 11. This foam backing may be formed by conventional processes, as for example by spray gun application of a suitable material such as urethane or styrene. In service the backing reinforces or stiffens the panel without adding any appreciable weight.

FIG. 14 is a rear view of the FIG. 10 panel; it corresponds to FIG. 4 in that it shows water passage routes suitable for hot and cold water flows to the various fixtures. The essential difference between FIGS. 4 and 14 is that in FIG. 4 the water passages are formed by connected pipes or tubes whereas in FIG. 14 certain ones of the water passages are formed by bulged-out sections of the panel, (as at 216' in FIG. 13). In

FIG. 14 the hot water enters passage 250 and then flows into passage 254 or 256. Cold water enters passage 258, and then flows into passage 262, 264 or 266. Passage 264 is required to take a devious route above the medicine cabinet recess 116 in order to avoid crossing passage 250 or 254; if this were not done the hot and cold water flows would intermingle.

The bulged-out water passages are noncircular in cross section, which poses a problem in field-connecting the passages to circular water supply pipes. FIG. 15 illustrates a method of connection which comprises a transition tube 251 having a half-moon section 253 telescoped into the bulged-out passage, and a projecting circular section 255. This tube can be factory soldered or otherwise secured to panel 10, leaving circular portion exposed for field connection with the hot or cold water supply pipes.

The water drainage piping is generally much larger in diameter than the water supply piping, for example 4 inches as opposed to 1 inch. Also for sanitation reasons it may be necessary to design the drainage piping with a circular cross section to avoid small crevices which could trap solid wastes. Therefore it may not be feasible to build the drainage piping as bulged-out sections of the panel. FIG. 14 therefore shows the drainage piping built up from separate pipe sections in the manner of FIG. 4.

For illustration purposes we show the drain 78 from the tub discharging to a soil stack 74' which is separate from the stack 74 receiving the discharge from the water closet. This may be a feasible method of permitting the tub floor to be relatively low without danger of cross flow from the closet to the tub. Stack 74' may have a short connector pipe 75 leading to the same vent stack 76 which serves soil stack 74, thus economizing on piping and installation costs. The lower ends of stacks 74 and 74' may connect to a common discharge via a Y section, not shown.

FIG. 10 FAUCETRY

Because the FIG. 10 water supply passages are noncircular and built into panel 210 it may not be feasible to use conventional valves for the lavatory, tub, and water closet. Instead it may be more appropriate to use cartridge type valves as shown in FIGS. 16 and 17. As there shown, sheet 213 is provided with two circular bulges 219 and 221 communicating with the respective passages 256 and 262 (FIG. 14), so that hot water fills the chamber defined by bulge 219 and cold water fills the chamber defined by bulge 221. Flow out of the hot chamber is controlled by a rotary slide valve 223 carried by a manual stem 227, said valve having a tapering port opening 229, and the cooperating plate 225 having a larger port 231.

In operation, clockwise rotation of stem 227 advances different areas of port 229 into registry with port 231, thereby providing a metered flow of water into the chamber 233 defined by the frontmost plate 235. This plate carries a spigot 237 which discharges the flow to the lavatory basin. Cold water flow is controlled by a stem-valve assembly similar to the hot control assembly.

The cartridge unit can take different forms than that shown schematically in FIGS. 16 and 17. However it should be of such design as to permit removal of the cartridge through the space in front panel 10; otherwise replacement of seats, and valve elements becomes difficult. In the FIG. 16 arrangement cartridge removal may be accomplished after removing four screws 239 which thread into nuts carried on the rear face of sheet 213. Suitable gaskets, not shown, must be provided to seal the cartridge-panel joints.

FIGS. 16 and 17 show a valve useful over the lavatory 214. A similar valve (not shown) can be employed over tub 212. Likewise the cartridge concept might be employed for the flush valve controlling water flow from tank 268 to the water closet. The tank itself may be formed as a bulged-out section of sheet 213 to the configuration depicted in FIGS. 11 and 14.

In general the embodiment of FIGS. 10 through 18 is similar to the FIG. 1 embodiment in structure and mode of installa-

tion. Therefore it is believed that further explanation is unnecessary.

We claim:

1. In bathroom having an unfinished upstanding load-supporting partition structure defining one boundary of the room: the combination comprising a floor-to-ceiling panel adapted to be secured to said partition structure to conceal same from view; said panel having a planar width that is substantially the same as the facial width of the load-supporting partition structure; said panel being of sheetlike character and having a front face exposed to the bathroom and a rear face presented to the partition structure; spacer means projecting from the panel rear face; and attachment means carried by the spacer means for adherence of the panel the partition structure; said spacer means spacing the rear face of the panel from the partition structure to define a concealed free space therebetween; piping carried on the panel rear face in said free space; means for rigidly attaching the piping to the panel so that the panel supports the piping weight; and plumbing fixtures securable to the panel front face for operable connection with the piping; said fixtures comprising a tub, a basin, and a toilet.

2. The combination of claim 1 wherein the piping comprises a number of connected cold water pipes and a number of connected hot water pipes; said connected cold water pipes comprising a cold water inlet pipe, a first branch leading to the basin, a second branch leading to the tub and a third branch leading to the toilet; said connected hot water pipes comprising a hot water inlet pipe, a first branch leading to the basin, and a second branch leading to the tub; said panel having an access opening therethrough adjacent its lower edge; the hot water inlet pipe and cold water inlet pipe having their water entrance end portions located behind said access opening to permit connection to water supplies after the panel has been secured to the partition structure.

3 The combination of claim 2 wherein said access opening is located approximately midway between the panel lateral edges; said hot water inlet pipe and cold water inlet pipe extending upwardly from the area circumscribed by the access opening.

4. The combination of claim 1 wherein the piping comprises drainage piping which includes a soil stack, and drainage piping extending from each fixture to the stack; said stack being located approximately midway between the panel side edges, and the fixtures being arranged with the tub on one side of the stack, the basin closely adjacent the stack, and the toilet on the other side of the stack, whereby relatively short drainage pipes are required.

5. The combination of claim 4 wherein the panel is provided with an access opening adjacent its lower edge, said soil stack being disposed behind said access opening for connection with system piping while the panel is in place on the partition structure.

6. The combination of claim 1 wherein the piping comprises cold water supply piping, hot water supply piping, and drainage piping; said panel having an access opening in its lower edge, and said piping having exposed pipe ends reachable through the access opening.

7. The combination of claim 1 wherein the spacer means comprises a flange extending rearwardly from the panel top edge; the attachment surfaces comprising apertured wall means extending upwardly from said flange.

8. The combination of claim 7 and further comprising a molding strip securable to the upper edge portion of the panel to conceal the attachment surfaces from view.

9. The combination of claim 1 wherein the spacer means comprises a flange extending rearwardly from the panel bottom edge; said panel having support feet extending downwardly from said flange to rest on the floor, whereby the panel weight is carried by the floor instead of the partition.

10. The combination of claim 9 and further comprising a molding strip securable to the bottom edge portion of the panel to conceal the support feet from view.