June 22, 1937. A. C. DENISON 2,084,793

BATHROOM EQUIPMENT

Filed Jan. 21, 1937

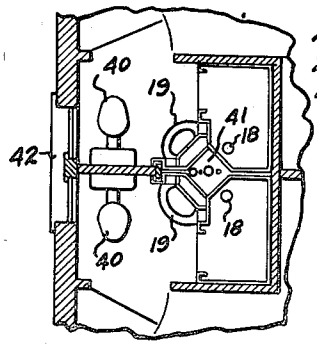

FIG. 3.

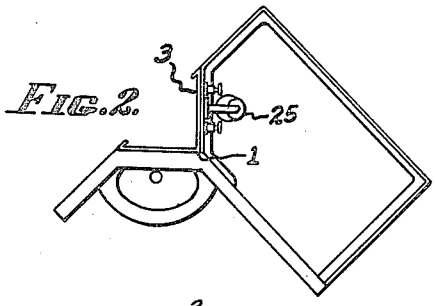

FIG. 2.

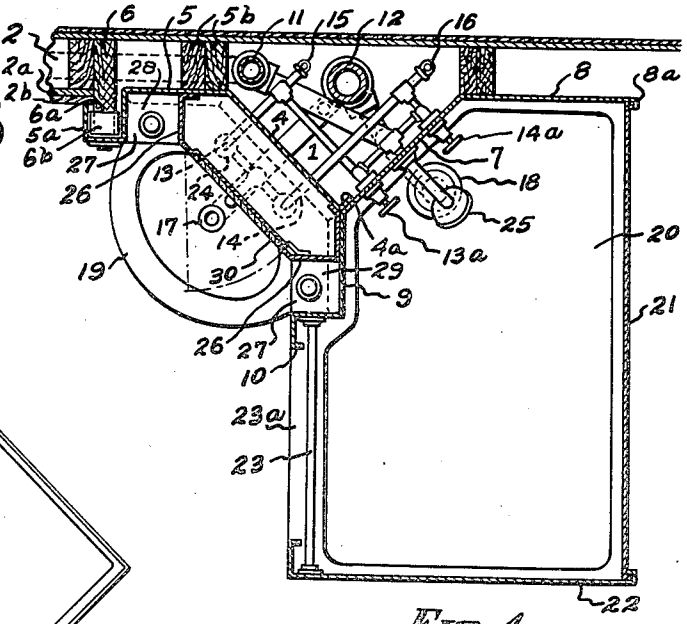

FIG. 4.

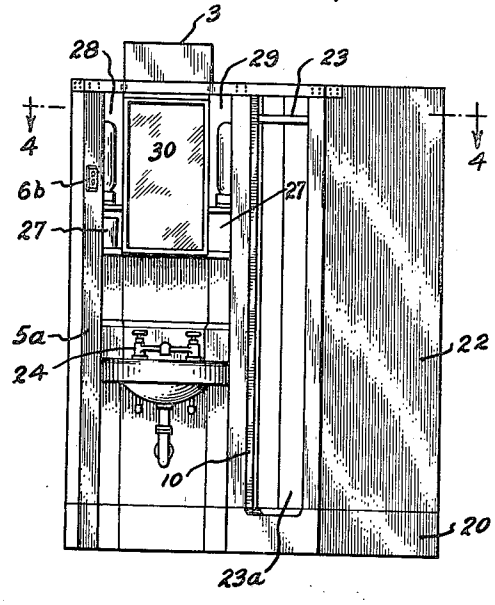

FIG. 1.

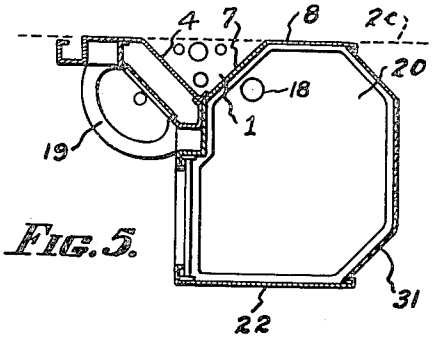

FIG. 5.

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BATHROOM EQUIPMENT

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Application January 21, 1937, Serial No. 121,634

13 Claims. (Cl. 4—3)

My invention relates to improvements in bathroom equipment particularly with relation to shower and lavatory combinations which give a very compact arrangement, with improved installation costs, but without departure from accepted standards of construction or requiring modification in the building structure in which they are housed.

The object of my invention is generally directed to space saving without departure from the requirements for use of the various pieces of equipment in a bathroom. According to my invention space is provided without calling for any modification in wall structure of a building for the pipes for water connection, drainage and venting. Also the supply and drainage pipes are made to serve all of the pieces of equipment in the bathroom, more particularly the shower compartment and the lavatory. Thus my equipment is of great value in modernization of existing dwellings, making it possible to locate a bathroom in the space of a closet, or to make two bathrooms from a single one.

One of the advantages of my structure is that it can be placed into a room which is finished except for the bathroom equipment. This is not only valuable in connection with old buildings, but is a great advantage in new construction because the several pieces of equipment need not be set in place until after the room is otherwise finished, thus saving the chances of marring them. There is not a piece of a size which cannot be taken into a room through an ordinary sized door opening.

Another advantage lies in the fact that the lavatory and shower device is really one unit, made up of panels, and pieces which can be fitted together, making the supplier of enamelled ware a supplier of the entire equipment as a unit. Indeed the bathroom fixtures could be placed together in a single "package" and delivered on the job as such and installed completely by the plumber.

I accomplish by objects by that certain construction and arrangement of parts of which an illustrative embodiment will be shown in the drawing and described in the following specification. Reference is made to the claims that follow for a statement of the invention inherent in my novel devices and arrangement.

In the drawing, Figure 1 is an elevation of my device looking directly at the lavatory.

Fig. 2 is a plan view omitting details of structure, showing the device in the same position as in Fig. 1.

Fig. 3 is a diagram showing a double bathroom arrangement in the usual space for one bathroom.

Fig. 4 is a section on the line 4—4 of Fig. 1.

Fig. 5 is a sector like Fig. 4 showing a different design of the shower cabinet.

It should be noted that in the drawing I have shown a structure which is adapted to be made up as a unit, and shipped in one package onto the erection job, consisting of plates, receptor and lavatory, with fittings including valves, soap and tumbler holders, and a bathroom cabinet with such other fixtures as may be desired. All can come from one plumbing supply house and be put in place by the plumber after the other workmen are finished with the bathroom, so that marring of enamelled surfaces will not be likely to occur.

In the preferred embodiment of my invention a triangular space indicated at 1 in Fig. 4 is provided close to the corner of the room, but not at the corner. This space is defined by the shape of certain plates which form the inner wall of my device. Located within this space previous to the erection of my improved structure are the necessary supply risers and drainage pipes as may be required. It will be noted that in Fig. 4 the service pipes or risers referred to are located within the space ordinarily occupied by the wall or partition 2. It will also be noted that the lathe 2*a* and the plastered finish 2*b* may be omitted in the area where my improved unit abuts the wall 2. Where the ceiling height of the room is greater than that of my cabinet it will of course be desirable to provide a plastered finish or other finish such as sheet metal to the area of the wall included between the top of my structure and the ceiling. This may be a preferable method of installing my device in a new structure where location of the risers from floor to floor may be effected as desired to minimize construction costs. However, when installing my unit in a building already constructed it may not be desirable or possible to locate the risers in a concealed manner from floor to floor within the walls. In this case the triangular space 1 will still provide ample room for installation of the necessary pipe work without disturbing the walls or partitions of the building. I have indicated this condition in Fig. 5, where the line 2*c* represents the inner boundary of a solid wall, which wall may be of brick or masonry work rendering the installation of concealed pipework impossible. Here the service risers have been located completely within the triangular space 1. It is thus apparent that in this type of installa-

tion my unit will effect considerable saving in the cost of installation besides simplifying the problems of locating the risers from floor to floor in an old structure. For concealing the risers between the top of my unit and the ceiling in this type of installation I may employ a V-shaped member or shield 3 as seen in Figs. 1 and 2. This member is adjustable to suit various heights of ceilings as may be required and provides a neat and inexpensive manner of concealing the risers from floor to floor in this type of installation.

There are, as illustrated, two principal plates which form the V-shaped space 1. One of these forms the lavatory and bathroom cabinet backing. It has a wall 4 flanged as at 4*a*, an angling portion 5 which is secured to studding, and if desired a channel-shaped end 5*a* projecting back into the room and mounted over an additional stud 6. The stud 6 may be cut away as at 6*a* to provide for an electrical convenience outlet 6*b*.

The other of the two plates has a portion 7 which is secured to a flange 4*a* on the wall 4, a portion angling from it as indicated at 8 which may be secured to the studding, and a portion 9 which extends out from the apex of the angle formed by the walls 4 and 7. A decorative angled end 10 finishes off the portion 9, to suit the design of the receptor for the shower cabinet.

It is fundamental to the arrangement of my device that the V-shaped or a generally V-shaped projecting shape be provided so that a vertical chamber is left in front of the plane of the wall of the room in which pipe connections for both the shower and the lavatory can be extended and connected, and that the two angled walls shall be used for introduction of the connections for the inlet pipes to the lavatory and shower respectively. In the device shown the wall 4 is the back for the lavatory, and the wall 7 is used for the back for the shower cabinet.

I have shown in the wall space behind the V-shaped projection, the vent pipe riser 11, which will vent not only the lavatory and shower drains, but also a toilet drain. Also in the wall space is the main drain pipe 12, which serves both the lavatory and the shower and can also be connected for draining the toilet in the usual way, the latter connections being installed in the floor before it is laid. Inlets 13 and 14, for the lavatory and 13*a* and 14*a* for the shower are located in the walls 4 and 7 respectively and connect to common hot and cold water pipes 15 and 16, located in the wall of the room behind the V-shaped space.

The drain 17 for the lavatory and the drain 18 for the shower receptor are connected to the common vent 11 and drain pipe 12.

The lavatory is indicated at 19 and the shower receptor basin at 20. I show also metal plates 21 forming the back of the shower cabinet, and 22 forming the end wall thereof. These plates, as in the instance of the plate forming the odd shaped other end of the cabinet and the partial front wall thereof, will be connected to the receptor by some suitable form of joint, there being a number of styles used in plumbing fixtures which will serve.

I have shown a shower curtain rod 23, set in suitable fittings in the front wall and end wall of the shower cabinet, extending across the space 23*a* which forms the entrance to the shower. I have illustrated the taps 24 for the lavatory and the shower head 25 for the shower cabinet. The particular lavatory shown will be provided with a suitable mount in the wall portion 4, and the said wall portion will also have openings for passage of the drain and the inlet pipes, preferably below the lavatory basin itself.

The bathroom cabinet is illustrated as having a frame 26, the ends of which are essentially V-shaped to engage the wall portions 5 and 9, leaving spaces 27 at each side of the cabinet for tumbler holders, and illuminating fixture pockets 28 and 29 respectively. This is a matter of design, however, and can be arranged to suit. The cabinet has a glass door 30, and in the preferred form has no back since the metal wall plate 4 serves the purpose.

Suitable access openings (not shown) to get at the plumbing may be provided in the metal panels forming the V-shaped projecting wall. All panels where exposed will be coated with a suitable vitreous enamel, and the back of the shower cabinet will be secured against the wall of the room, the receptor being set directly into the corner. Instead of having the back panel flush with the back wall of the room the back wall may be left open, and a shaped back wall 31 (Fig. 5) provided, which projects into the wall space.

The advantage of my construction can be well illustrated in the diagram of Fig. 3. There an old bathroom of normal size is divided by a central partition. The two toilets 40, are placed back to back with connections under the floor. The shower cabinets are placed end to end, with connections for all four of them in the double space left by the V-shaped panels, as indicated at 41. The partition needs extend only to the one side of the two lavatory panels, since the rest of the room is filled as to walls by the shower cabinets. I have shown a window divided into two parts 42. It will be necessary, in most cases to erect a dividing wall separating the two baths in the space between the tops of the pair of shower-lavatory units and the ceiling height of the room or to modify member 3 so that it will form this separation.

The various advantages of my novel construction in economy of structure, economy of space, simplicity of setting up, etc. will be apparent to those skilled in the art from the above description. I have not attempted to point out the various modifications which could be provided, as these will be apparent, and have in my claims set forth the novelty which resides in the structure of which the illustrated form is an example.

Among other things, which my device is designed particularly for enamelled sheet metal members to form walls, as indicated certain aspects of my invention will be decidedly advantageous for use with cast wall pieces, or even with wall portions to be built up in whole or in part of tile.

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

1. In combination in a bathroom, means forming a projecting generally V-shaped wall away from a corner of the room, lavatory fittings mounted at the far side of said wall away from the corner, shower bath fittings mounted at the side of said wall toward the corner, and pipe connections for said fittings located in the generally prism shaped space formed by said wall.

2. In combination in a bathroom, means forming a projecting generally V-shaped wall away from a corner of the room, lavatory fittings mounted at the far side of said wall away from

the corner, shower bath fittings mounted at the side of said wall toward the corner, and pipe connections for said fittings located in the generally prism shaped space formed by said wall, a lavatory mounted against said far side of the V-shaped wall and a shower receptor located in the corner of the bathroom and shaped at one end to fit to the other side of said V-shaped wall and extending thence to the corner of the room.

3. In combination in a bathroom, means forming a projecting generally V-shaped wall away from a corner of the room, lavatory fittings mounted at the far side of said wall away from the corner, shower bath fittings mounted at the side of said wall toward the corner, and pipe connections for said fittings located in the generally prism shaped space formed by said wall, said V-shaped wall being formed by metal panels.

4. In combination in a bathroom, means forming a projecting generally V-shaped wall away from a corner of the room, lavatory fittings mounted at the far side of said wall away from the corner, shower bath fittings mounted at the side of said wall toward the corner, and pipe connections for said fittings located in the generally prism shaped space formed by said wall, a lavatory mounted against said far side of the V-shaped wall and a shower receptor located in the corner of the bathroom and shaped at one end to fit to the other side of said V-shaped wall and extending thence to the corner of the room, said V-shaped wall being formed by metal panels, having a portion extending out from the apex of the V-shaped wall part away along the front of the receptor.

5. In combination in a bathroom, means forming a projecting generally V-shaped wall away from a corner of the room, lavatory fittings mounted at the far side of said wall away from the corner, shower bath fittings mounted at the side of said wall toward the corner, and pipe connections for said fittings located in the generally prism shaped space formed by said wall, a lavatory mounted against said far side of the V-shaped wall and a shower receptor located in the corner of the bathroom and shaped at one end to fit to the other side of said V-shaped wall and extending thence to the corner of the room, said V-shaped wall being formed by metal panels, having a portion extending out from the apex of the V-shaped wall part away along the front of the receptor and a portion extending from the V-shaped wall to the corner of the room along the receptor.

6. In combination in a bathroom, means forming a projecting generally V-shaped wall away from a corner of the room, lavatory fittings mounted at the far side of said wall away from the corner, shower bath fittings mounted at the side of said wall toward the corner, and pipe connections for said fittings located in the generally prism shaped space formed by said wall, a lavatory mounted against said far side of the V-shaped wall and a shower receptor located in the corner of the bathroom and shaped at one end to fit the other side of said V-shaped wall and extending thence to the corner of the room, said V-shaped wall being formed by metal panels, having a portion extending out from the apex of the V-shaped wall part away along the front of the receptor and a portion extending from the V-shaped wall to the corner of the room along the receptor and metal panels forming walls along the receptor at the other two sides thereof.

7. A metal wall structure for a lavatory and shower unit comprising a series of panels having angled walls, the edge of one panel of the series to be joined to the other at the apex of an angle, so as to form the one end of a shower compartment, and a projecting portion to form a partial front wall for the shower compartment and a portion extending away at an angle from said apex to form a back for a lavatory, and panels forming the back wall and the other end wall of the shower compartment.

8. A metal wall structure for a lavatory and shower unit comprising a series of panels having angled walls, the edge of one panel of the series to be joined to the other at the apex of an angle, so as to form the one end of a shower compartment, and a projecting portion to form a partial front wall for the shower compartment and a portion extending away at an angle from said apex to form a back for a lavatory, and panels forming the back wall and the other end wall of the shower compartment and in combination with the above, a lavatory to be mounted against its wall panel portion and a shower receptor to be joined to the other panel portions.

9. A metal wall structure for a lavatory and shower unit comprising a series of panels having angled walls, the edge of one panel of the series to be joined to the other at the apex of an angle, so as to form the one end of a shower compartment, and a projecting portion to form a partial front wall for the shower compartment and a portion extending away at an angle from said apex to form a back for a lavatory, and panels forming the back wall and the other end wall of the shower compartment and in combination with the above, a lavatory to be mounted against its wall panel portion and a shower receptor to be joined to the other panel portions and fittings for the shower and lavatory located in the V-shaped wall portion formed by the juncture of the panels first mentioned.

10. A metal wall structure for a lavatory and shower unit comprising a series of panels having angled walls, the edge of one panel of the series to be joined to the other at the apex of an angle, so as to form the one end of a shower compartment, and a projecting portion to form a partial front wall for the shower compartment and a portion extending away at an angle from said apex to form a back for a lavatory, and panels forming the back wall and the other end wall of the shower compartment and in combination with the above, a lavatory to be mounted against its wall panel portion and a shower receptor to be joined to the other panel portions and a bathroom cabinet set against said panel portion above the lavatory.

11. A metal wall structure for a lavatory and shower unit comprising a series of panels having angled walls, the edge of one panel of the series to be joined to the other at the apex of an angle, so as to form the one end of a shower compartment, and a projecting portion to form a partial front wall for the shower compartment and a portion extending away at an angle from said apex to form a back for a lavatory, and panels forming the back wall and the other end wall of the shower compartment and in combination with the above, a lavatory to be mounted against its wall panel portion and a shower receptor to be joined to the other panel portions and fittings for the shower and lavatory located in the V-shaped wall portion formed by the juncture of the panels first mentioned and pipe connections

for said fittings located in the space behind said V-shaped wall.

12. In combination a shower bath receptor arranged to fit into the corner of a room, panels forming a back wall, two end walls and a partial front wall so as to form with said receptor a shower cabinet, the end wall of the cabinet so formed having its corner next adjacent the corner of the room formed as an angling wall, water inlets for the cabinet in said angling wall, a complementary angling wall extending back to the side of the room, and water inlets in said last noted wall for a lavatory and a lavatory located along the said complementary wall.

13. In combination a shower bath receptor arranged to fit into the corner of a room, panels forming a back wall, two end walls and a partial front wall so as to form with said receptor a shower cabinet, the end wall of the cabinet so formed having its corner next adjacent the corner of the room formed as an angling wall, water inlets for the cabinet in said angling wall, a complementary angling wall extending back to the side of the room, and water inlets in said last noted wall for a lavatory and a lavatory located along the said complementary wall, the said panels in each instance being formed of sheet metal enamelled where exposed.

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