Nov. 28, 1950 O. KUHLER 2,532,237

FOLDING SEAT BACK AND WASH BASIN UNIT

Filed July 16, 1946 3 Sheets-Sheet 1

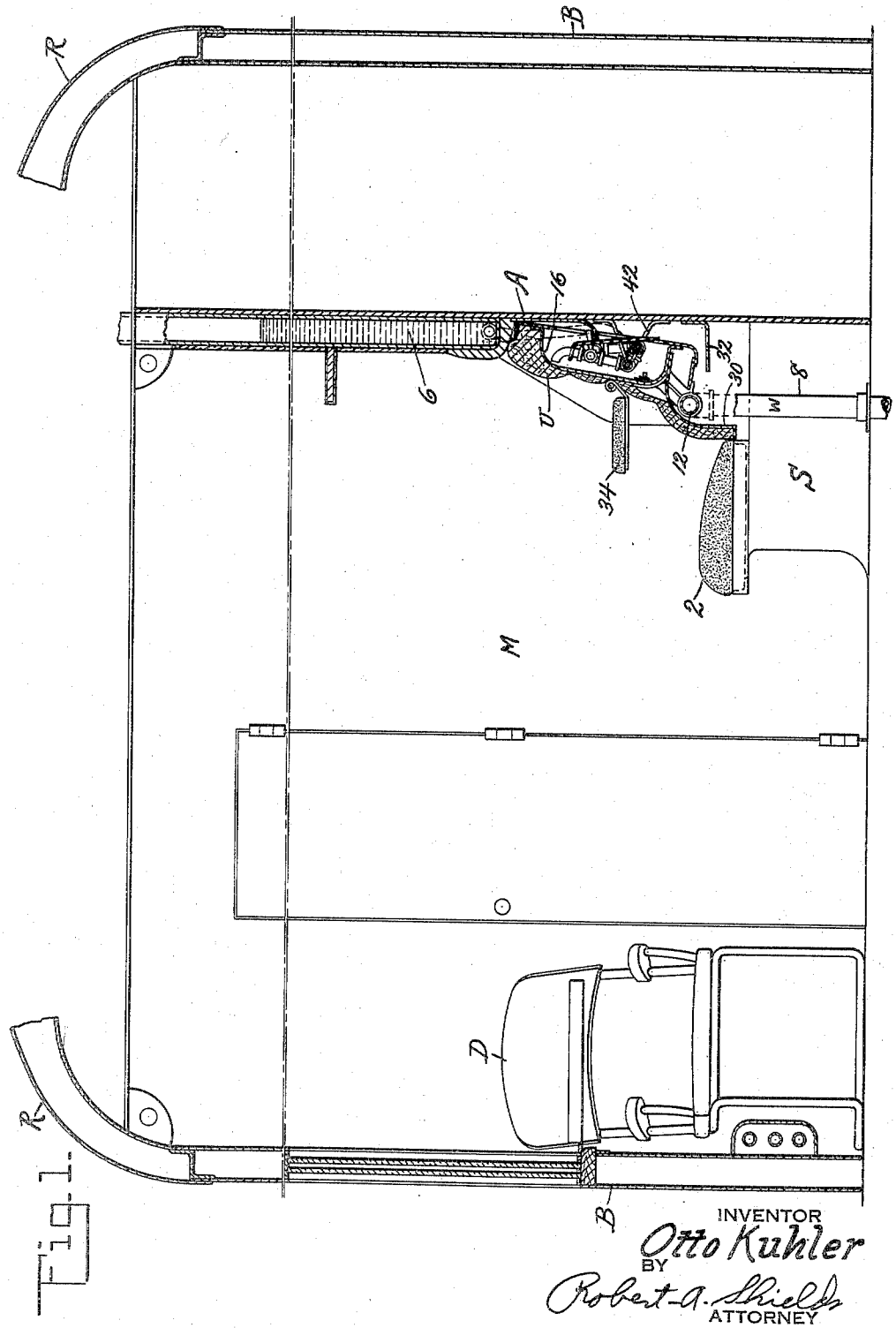


Fig. 1.

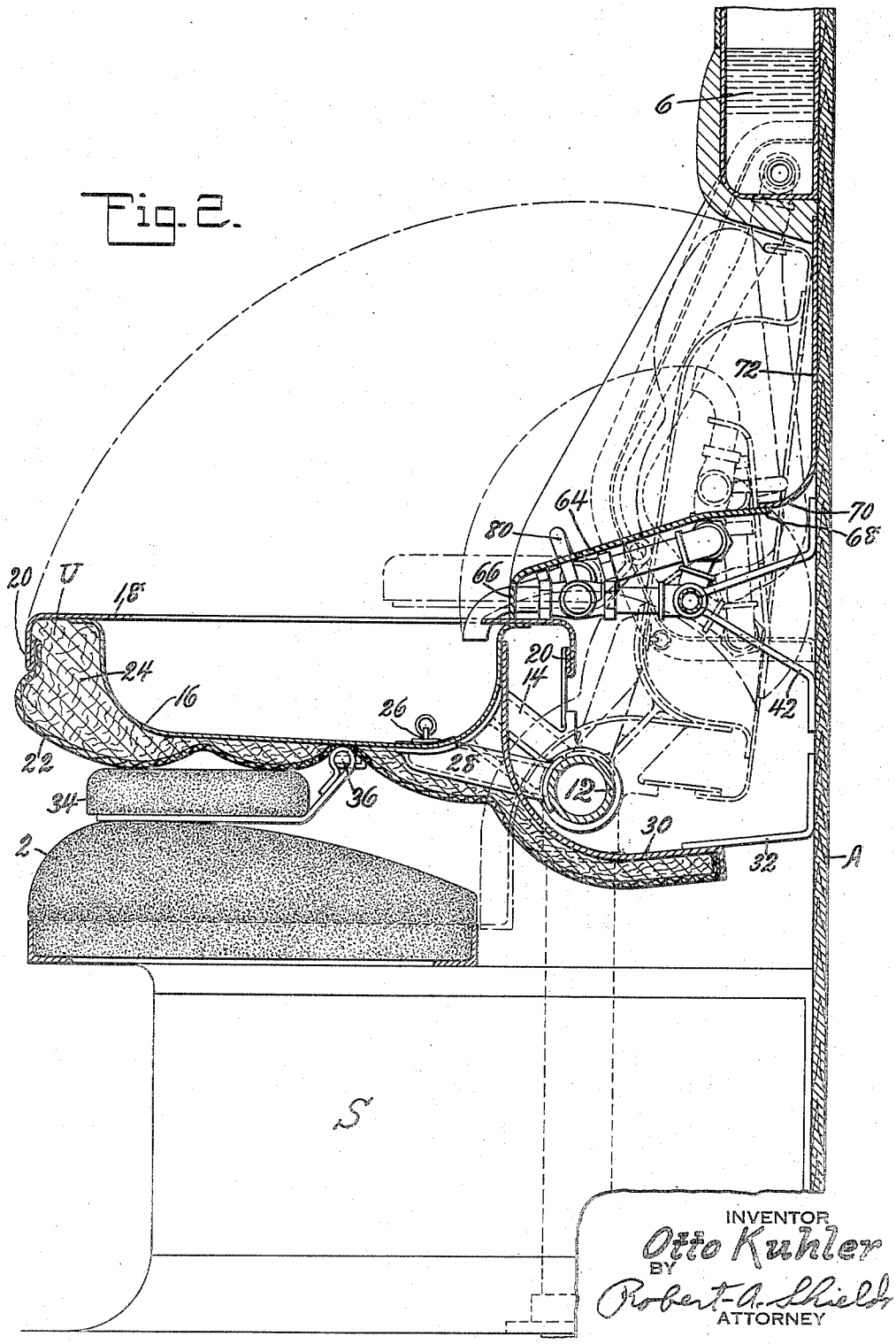
INVENTOR
Otto Kuhler
BY
Robert A. Shields
ATTORNEY

Nov. 28, 1950 O. KUHLER 2,532,237

FOLDING SEAT BACK AND WASH BASIN UNIT

Filed July 16, 1946 3 Sheets-Sheet 2

Fig. 2.



INVENTOR
Otto Kuhler
BY
Robert A. Shields
ATTORNEY

Nov. 28, 1950 O. KUHLER 2,532,237

FOLDING SEAT BACK AND WASH BASIN UNIT

Filed July 16, 1946 3 Sheets-Sheet 3

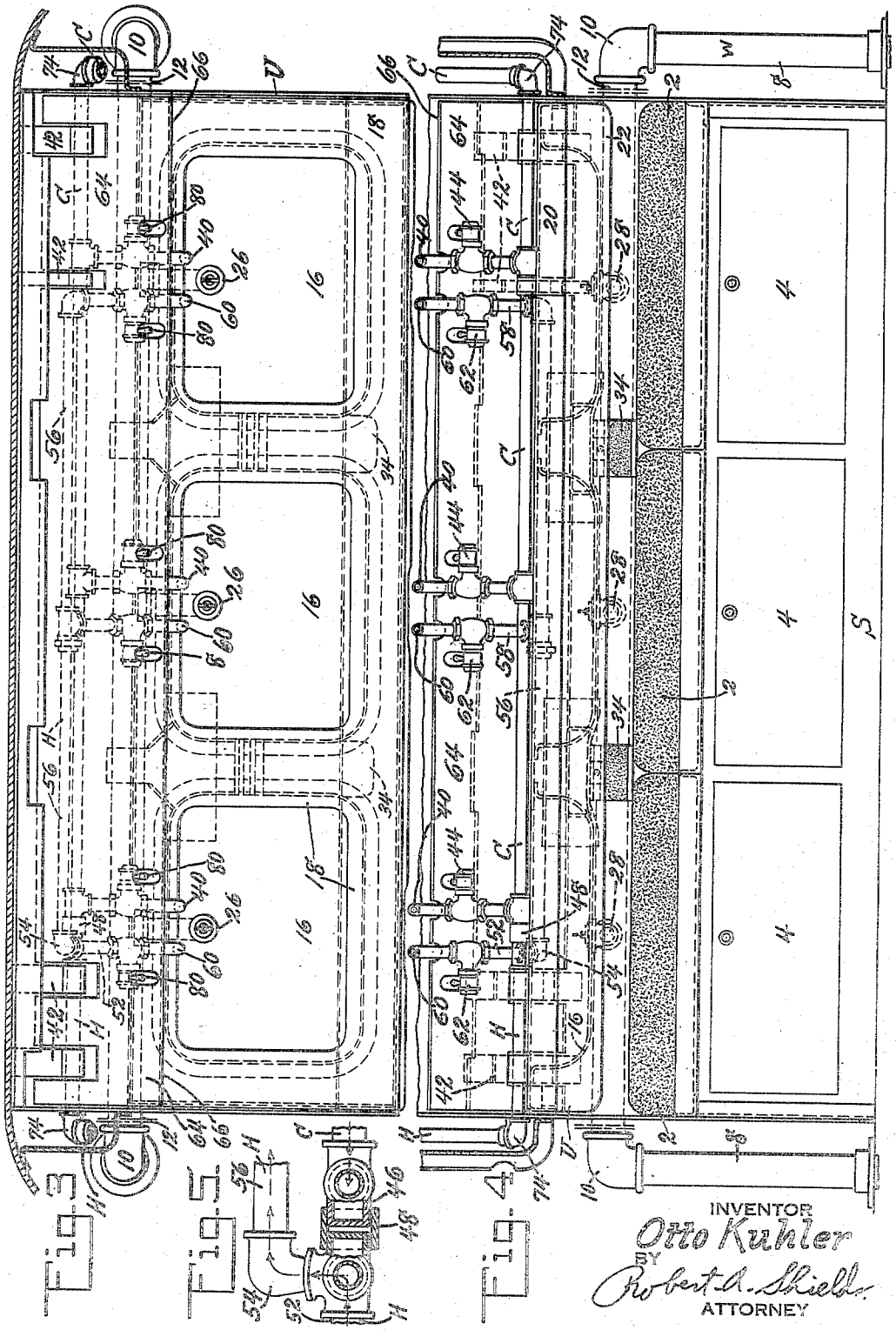


Fig. 3

Fig. 5

Fig. 4

INVENTOR
Otto Kuhler
BY
Robert A. Shields
ATTORNEY

Patented Nov. 28, 1950

2,532,237

UNITED STATES PATENT OFFICE

2,532,237

FOLDING SEAT BACK AND WASHBASIN UNIT

Otto Kuhler, Blauvelt, N. Y., assignor to American Car and Foundry Company, New York, N. Y., a corporation of New Jersey

Application July 16, 1946, Serial No. 684,042

8 Claims. (Cl. 4—169)

1

This invention relates to folding seat back and wash basin units and particularly to such units containing a multiple number of wash basins and intended for use in the general washroom of a railway vehicle.

In railway vehicles there has been a trend in the last few years toward bettering the accommodations for the traveling public while retaining as much as possible the amount of revenue space which can be occupied by the people. In modern coaches and sleeping cars there is being provided space for smoking facilities in order that non-smokers may not be annoyed, however, in a lot of cases it has been impossible to provide a smokingroom and in addition a suitable washroom. Accordingly one object of the invention is the combining of these two rooms by providing a combination sofa and folding wash basin unit permitting the room to be used as a smokingroom during the day and as a washroom during the early morning or at meal times.

A further object of the invention is the provision of a combination upholstered seat back and wash basin, which when folded down for use as a wash basin does not expose unsightly catch basins.

A still further object of the invention is the provision of a combination seat back and wash basin unit folding down about the waste pipe and with the basin supplied through faucets rotating about the axis of one of the supply pipes.

A yet further object of the invention is the provision of folding faucets and baffle plates so arranged as to fully cover the space between a down-folded wash basin and a wall structure against which it is normally folded.

These and other objects of the invention will be apparent to persons skilled in the art from a study of the following description and accompanying drawings, in which

Fig. 1 is a sectional view taken through a railway car combination wash and smoke room;

Fig. 2 is an enlarged sectional view taken through the folding sofa unit and showing the back folded to basin exposed position;

Fig. 3 is a plan view of the unit;

Fig. 4 is an elevational view of the unit in down-folded position but with the faucets in their raised position for the purpose of better displaying the supply pipes, and

Fig. 5 is an enlarged detail view of the pivoting arrangement between the hot and cold water supply pipes whereby they may rotate around a single axis.

Referring now to the drawings in detail, it

2

will be seen that the entire sofa unit S has been placed in the combination wash and smoke room M adjacent the aisle partition A. The car side walls are indicated at B and portions of the roof at R. As indicated, the room will, in addition to the sofa, preferably contain one or more movable chairs D and also may contain a fixed wash stand (not shown). The sofa unit is provided with a seat cushion 2 mounted on a base structure equipped with sma l doors 4 behind which may be stored towels and other supplies. The aisle partition A may be thickened as shown in Fig. 1 to permit storage of water 6 therein, although preferably the partition will be made thin and the water supply taken from pressure tanks mounted beneath the vehicle as is customary.

The combination sofa or seat back and basin unit U is mounted to rotate about the axis of the waste pipe W. This waste pipe is supported by upright pipe connections 8 anchored to the floor and at least one of these upright pipes will be extended through the floor for discharge of waste water beneath the car either under the roadbed or into waste storage tanks. The upright waste pipes 8 are connected to elbows 10, which in turn support the horizontal waste pipe 12. The connection between horizontal waste pipe 12 and elbows 10 may be made by either means of right and left hand thread connection or preferably by means of a standard rotatable connection. The horizontal waste pipe 12 has welded or otherwise attached thereto a plurality of brackets 14 which extend outwardly for direct connection to the basins 16. These basins are bowl shaped with their upper flanged portions welded or otherwise secured to a top surface plate 18 overlapping the bowl so as to prevent slopping during movement of the train and this top cover plate 18 is flanged downwardly as at 20 for attachment at the back edge to bracket 14 and at the front or top edge for overlapping and holding in place the upholstery cover 22. This upholstery covers the padding 24 held in place between the cover and the basins 16. As clearly shown, each basin is provided with an outlet adapted to be closed by a plug or other means 26 permitting discharge of material from the basin into a discharge spout 28 welded or otherwise secured to the basin and to the horizontal waste pipe 12. A curved plate 30 extends along the back of the basins, is attached thereto and curved more or less eccentric around the waste pipe in order to support and back up the lower portion of the seat back. In

the down-folded position it is seen that this curved plate 30 will strike against stops 32 fastened on the partition wall A thereby supporting the basin in the down-folded position of Fig. 2. The basin will be additionally supported by means of folding arm rests 34 resting on the seat cushion 2 and hinged to the back structure at 36 for swinging movements relative thereto.

Cold water will be supplied to the basins through pipes C to which are connected the cold water faucets 40. The cold water supply pipes C are mounted for rotation in brackets 42 attached to the partition wall A and these pipes extend from the right hand edge of Figs. 3 and 4 to a point just beyond the third faucet 40. Cold water supplied through this pipe C can flow to each of the cold water faucets through the T connections and short pipes being under control of cold water valves 44. The last T on cold water pipe C has one end blind to thereby provide a trunnion 46 (Fig. 5) which may rotate in a sleeve 48 which also supports the blind or trunnion end of a four-way T connected to the hot water supply pipe H. It will thus be seen that the hot and cold water supply pots will be in alignment and will rotate about the same axis during swinging of the faucets. The left hand hot water faucet as viewed in Figs. 3 and 4 will be connected by a short pipe 52 to one outlet of the four-way T, while an elbow 54 will be connected to the other outlet and this in turn will carry the hot water pipe 56 from which branches 58 may extend to supply hot water to the remaining hot water faucets. These hot water faucets are indicated at 60 and flow of water thereto is controlled by hot water valves 62.

In order to protect and hide the piping a plate 64 is provided which plate extends along the entire length of the sofa and wash basin unit and has a down turned flange 66 adapted to contact the upper surface 18 of the wash basin unit. From this flange the plate slopes upwardly and rearwardly to completely house the pipes and to have its free edge 68 in engagement beneath the curved edge 70 of a finish plate 72 carried by the partition wall. The lower curved edge of plate 72 is preferably slightly resilient so as to give good contact between plate 72 and plate 64. It is, of course, obvious that the basins, cover plate 18, pipe protecting plate 64 and partition finish plate 72 will be quite suitable surface finish, that is, they may be made of polished nickel plated metal or comparable material. Connection to the hot and cold water supply pipes from the source may be made through either flexible hose connections or by having the elbows 74 made of standard swivel construction.

From the preceding it will be seen that when the sofa back is folded up for normal day use it will provide a comfortable upholstered back for the sofa and having folding arm rests to separate the seating spaces if so desired. When it is desired to make the three or more wash basins available the back will be folded down into the position shown in Fig. 2, after which the faucet unit will be pulled down from its folded position shown by line and dash in Fig. 2 to its full line position, in other words, from the full line position of Fig. 4 to the position shown in Figs. 2 and 3. In the down-folded position the faucet units are completely covered by decorative plate 64 and the wall hidden by decorative plate 72, thus the unsightly space between the wash basin and the partition wall will be completely hidden by the faucet units and their covering plate. In other words, when the unit is in the full down-folded position persons using the same will only see the decorative plates, the short faucet ends and the operating units 60 connected to the hot and cold water valves. When the unit is folded up to its position shown in Fig. 1 this may be accomplished by merely folding the seat back up since the movement of the basin toward its folded position indicated in Fig. 2 will automatically cause the hot and cold water faucets to swing about the axis of their supply pipes to the folded position. In other words, the combined back and basins swing or rotate about the waste pipe as an axis, while the faucet units turn or rotate about the axis of the water supply pipes which are connected to the source of supply either in the partition wall or preferably to the pressure tanks beneath the car.

While the construction has been described more or less in detail with specific reference to the drawings, it will be seen by persons skilled in the art that various modifications and rearrangements of parts, other than those shown or described, may be made and all such modifications and rearrangements of parts are contemplated as will fall within the scope of the following claims defining my invention.

What is claimed is:

1. The combination with a seat back rotatable from a substantially vertical to a substantially horizontal position about an axis, a substantially horizontal waste pipe forming the axis of rotation for said seat back, a basin mounted within the seat back and accessible for use when the seat back is in its substantially horizontal position, means connecting the waste pipe and basin whereby the basin and seat back are supported on the waste pipe for rotation about the axis of the waste pipe, a passageway in certain of said means permitting drainage of said basin into said waste pipe while the seat back is in its substantially horizontal position, and fluid supply means for supplying fluid to said basin, said fluid supply means being mounted for rotation about an axis substantially parallel to said waste pipe and located above and to one side of said waste pipe.

2. The combination with a seat back rotatable from a substantially vertical to a substantially horizontal position about an axis, a substantially horizontal waste pipe forming the axis of rotation for said seat back, a basin mounted within the seat back and accessible for use when the seat back is in its substantially horizontal position, means connecting the waste pipe and basin whereby the basin and seat back are supported on the waste pipe for rotation about the axis of the waste pipe, a passageway in certain of said means permitting drainage of said basin into said waste pipe while the seat back is in its substantially horizontal position, fluid supply means for supplying fluid to said basin, said fluid supply means being mounted for rotation about an axis substantially parallel to said waste pipe and located above and to one side of said waste pipe, and plate means attached to said fluid supply means and movable therewith to cover the same when in position to supply fluid to said basin.

3. The combination with a wall structure, a basin unit normally folded in a substantially vertical inoperative position against said wall structure, a waste pipe extending substantially parallel to said wall structure, bracket means connected to said basin and supporting the same on said waste pipe for rotation therewith relative

to said wall structure from said inoperative position to a substantially horizontal operative position, means rigidly connected to said basin and waste pipe to discharge the basin contents into said waste pipe when the basin is in its operative position, water supply pipes mounted on said wall and rotatable relative thereto about an axis substantially parallel to said waste pipe, faucets connected to said water supply pipes and rotatable therewith from a vertical inoperative position to a substantially horizontal operative position for discharge of water into said basin.

4. The combination with a wall structure, a basin unit normally folded in a substantially vertical inoperative position against said wall structure, a waste pipe extending substantially parallel to said wall structure, bracket means connected to said basin and supporting the same on said waste pipe for rotation therewith relative to said wall structure from said inoperative position to a substantially horizontal operative position, means rigidly connected to said basin and waste pipe to discharge the basin contents into said waste pipe when the basin is in its operative position, a pair of water supply pipes mounted on said wall and rotatable relative thereto about an axis substantially parallel to said waste pipe, faucets connected to said water supply pipes and rotatable therewith from a vertical inoperative position to a substantially horizontal operative position for discharge of water into said basin, and plate means connected to said water supply pipes and rotatable therewith, said plate means fully concealing said water supply pipes and spanning the space between the wall and basin when said basin and faucets are in their operative positions.

5. The combination with a wall structure, a plurality of basins connected to form a unit normally folded in a substantially vertical inoperative position against said wall structure, a waste pipe extending substantially parallel to said wall structure, bracket means connecting said basins together and to said waste pipe and supporting the same on said waste pipe for rotation relative to said wall structure from said inoperative position to a substantially horizontal operative position, means rigidly connected to each of said basins and to the waste pipe to discharge the basin contents into said waste pipe when the basins are in their operative position, separate water pipes for supplying hot and cold water to said basin, valve structures connected to said pipes to control the flow of water, and means mounting at least portions of said separate water pipes in axial alignment on said wall for rotation relative thereto about the axis of said portions of the pipes.

6. The combination with a wall structure, a plurality of basins connected to form a unit normally folded in a substantially vertical inoperative position against said wall structure, a waste pipe extending substantially parallel to said wall structure, spaced apart bracket means connecting said basins together and to said waste pipe to support the same on said waste pipe for rotation therewith relative to said wall structure from said inoperative position to a substantially horizontal operative position, means rigidly connected to each of said basins and to said waste pipe to discharge the basin contents into said waste pipe when the basins are in their operative position, separate water pipes for supplying hot and cold water to said basins, means mounting portions at least of said separate water pipes in axial alignment on said wall for rotation relative thereto about an axis located to one side of and parallel to said waste pipe, faucet members connected to said pipes and rotatable therewith from an inoperative position within the inoperative basin to an operative position for discharge into the basin when in its operative position.

7. The combination with a wall structure, a basin unit normally folded in a substantially vertical inoperative position against said wall structure, a waste pipe extending substantially parallel to said wall structure, spaced apart bracket means connected to said basin and supporting the same on said waste pipe for rotation relative to said wall structure from said inoperative position to a substantially horizontal operative position, means connected to said basin and waste pipe to discharge the basin contents into said waste pipe when the basin is in its operative position, water pipes extending parallel to each other and to said waste pipe for supplying hot and cold water to said basin, means mounting portions at least of said water pipes in axial alignment on said wall for rotation relative thereto, faucet members connected to said pipes and rotatable therewith from an inoperative position within the inoperative basin to an operative position for dscharge into the basin when in its operative position, and plate means connected to said pipe portions and concealing said water pipes and faucets when in their operative position.

8. The combination with a basin unit adapted to be mounted adjacent a wall structure and rotatable about an axis substantially parallel to said wall structure from an inoperative to a substantially horizontal operative position in which the inner edge of the basin is spaced outwardly from the wall, a supply unit for fluid under pressure mounted adjacent the wall structure and rotatable about an axis substantially parallel to said first named axis and located above and to the wall side of said first named axis, and plate means secured to said supply unit and rotatable therewith, said plate means fully concealing said supply unit and spanning the space between said basin unit and wall structure when in position to supply fluid under pressure to said basin.

OTTO KUHLER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,080,702	Legge	Dec. 9, 1913
1,122,444	Vaughan	Dec. 29, 1914
1,746,422	Gorham	Feb. 11, 1930
1,831,937	Watrous	Nov. 17, 1931
2,076,950	Koch	Apr. 13, 1937
2,101,523	Willis	Dec. 7, 1937