Dec. 3, 1957 W. P. BOYLE 2,814,809

SINK ASSEMBLY

Filed April 23, 1954 3 Sheets-Sheet 1

Fig. 1

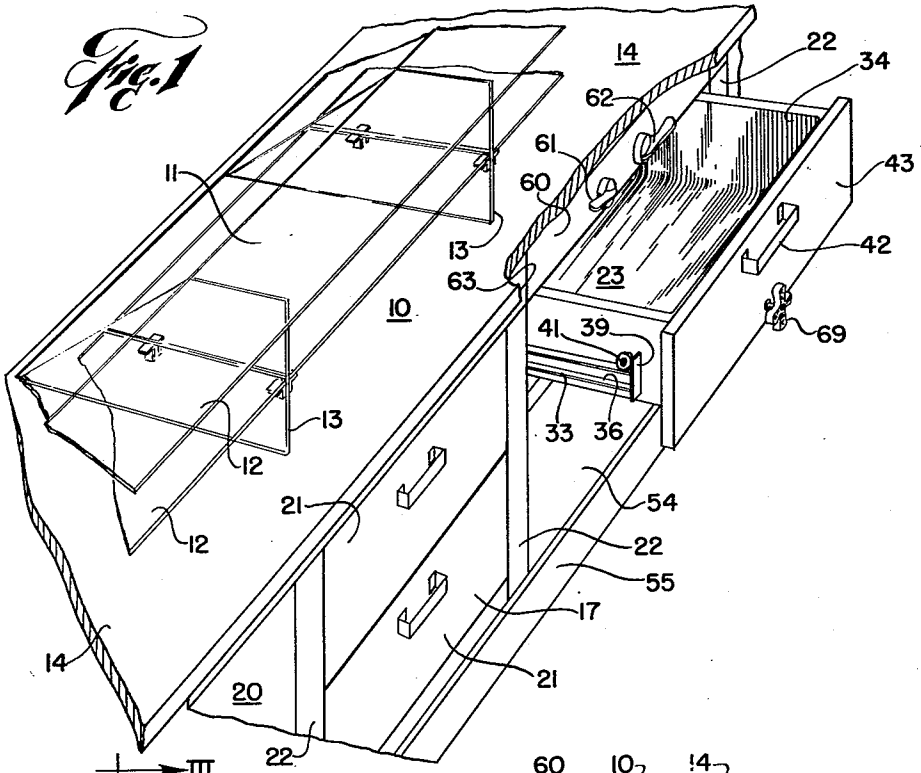
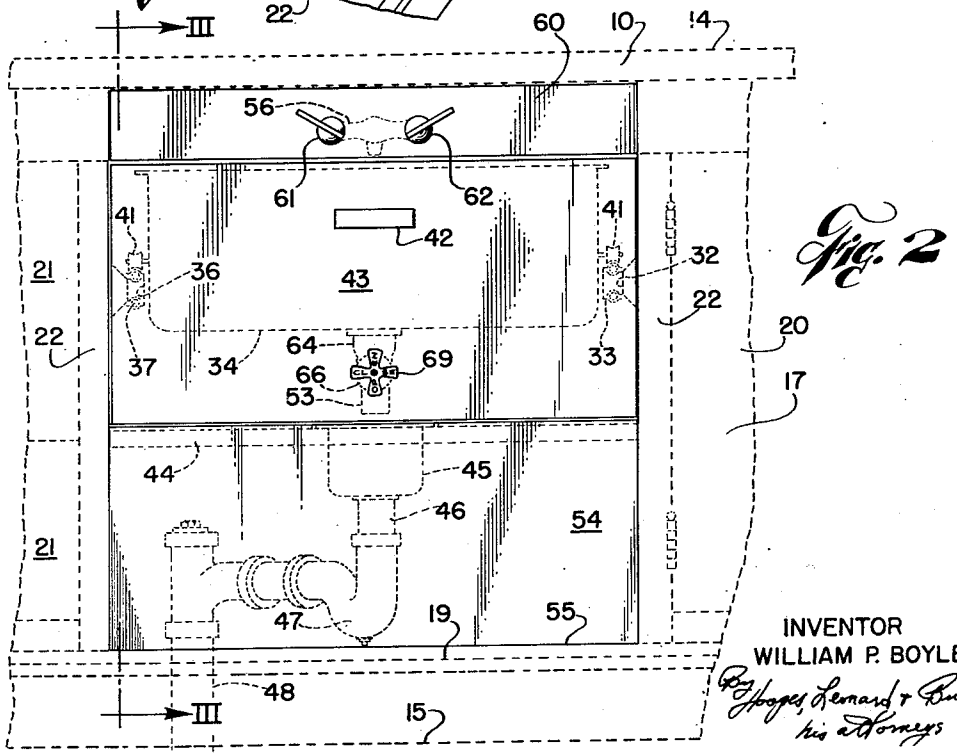


Fig. 2



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SINK ASSEMBLY

Filed April 23, 1954 3 Sheets-Sheet 2

Fig. 4

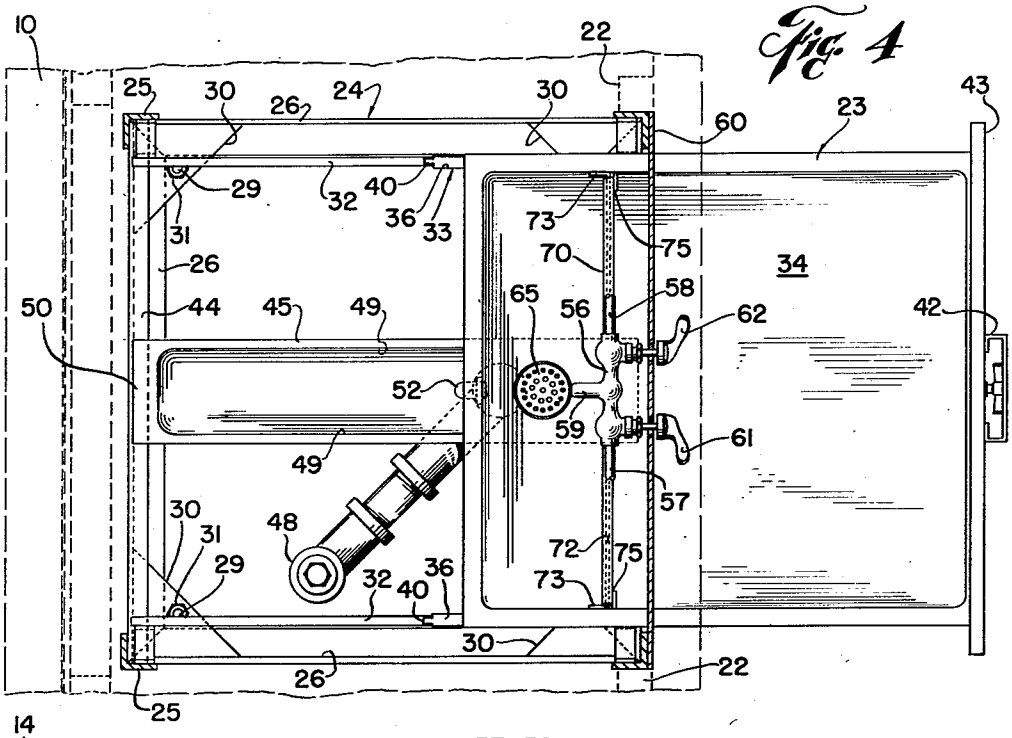
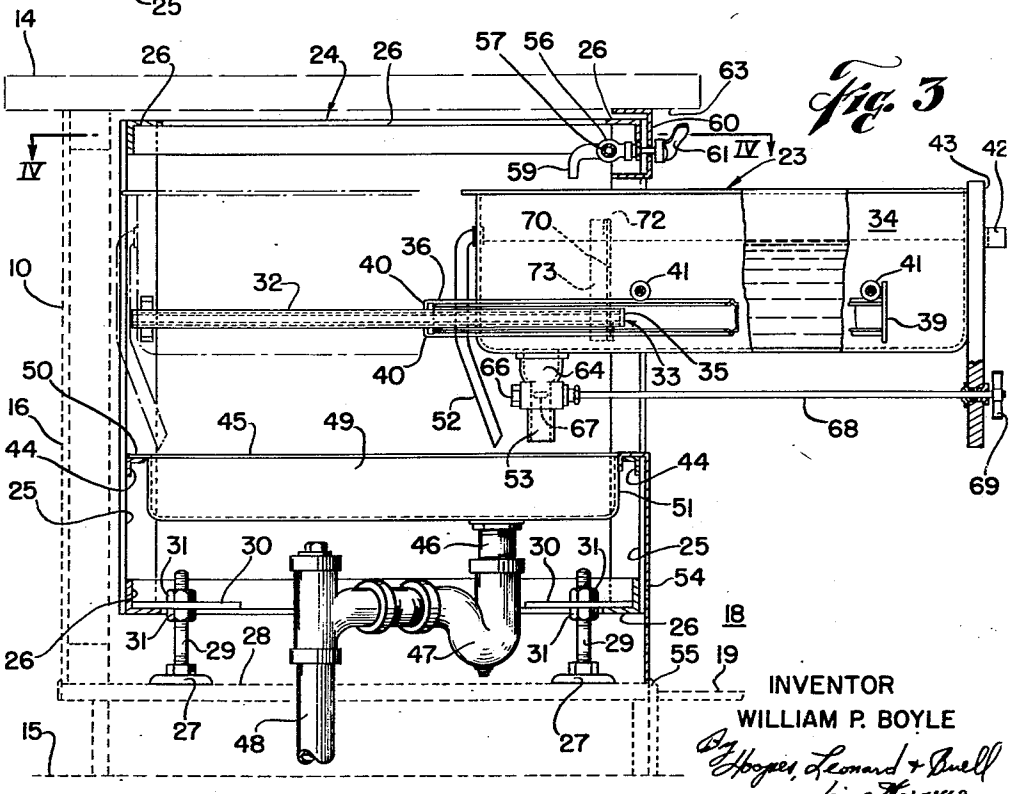


Fig. 3



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Dec. 3, 1957 W. P. BOYLE 2,814,809

SINK ASSEMBLY

Filed April 23, 1954 3 Sheets-Sheet 3

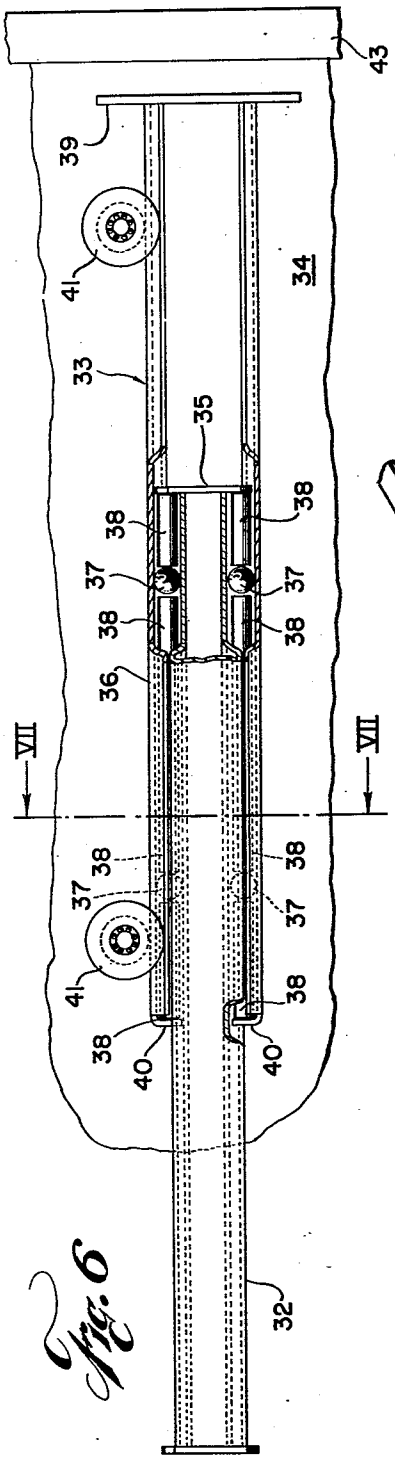

Fig. 6

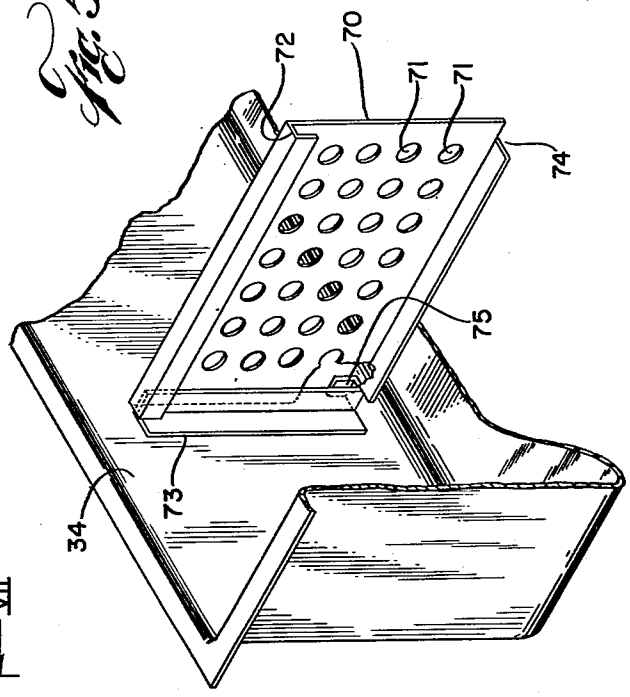

Fig. 5

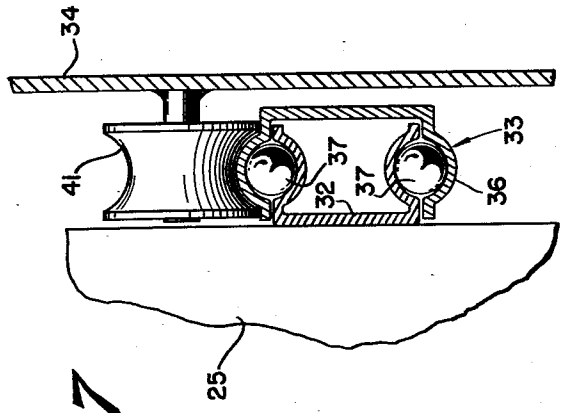

Fig. 7

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SINK ASSEMBLY

William P. Boyle, White Oak, Pa.

Application April 23, 1954, Serial No. 425,275

9 Claims. (Cl. 4—187)

This invention relates to a concealable sink assembly or the like. More particularly this invention pertains to a novel utility sink assembly particularly useful for merchandising counters and like equipment where articles or fixtures are present which require washing from time to time. Following use of the new sink assembly, it may be returned to a position which conceals it and places it out of the way of those working around such merchandising and like equipment.

Many merchandising counters, industrial benches, storage and display equipment used in business and industry are provided with fixtures or articles, including merchandise, or both, which require periodical washing. It is inefficient to transport the movable items to be washed to another location for that operation. On the other hand, many fixtures and articles to be so cleaned are relatively permanently fixed in position so that they must be washed in place. In some cases heretofore, a slop bowl has been provided in a cupboard or in an alcove adjacent to the location where fixtures and articles are to be washed. However, the provision of such a slop bowl is generally unsightly or it occupies needed space or has some other drawback. Heretofore also, a washing tray has been provided under a counter and located, in many cases, at an awkard height and in an awkward position. For example, the washing operation in such a tray frequently had to be conducted in a bent-over position with the operator's hands extending beneath the counter into the vicinity of the tray. Generally too, access to such a washing tray was provided through an opening beneath the counter which was unsightly and, moreover, often gave rise to conditions under which the steaming of the glass in display cases in the vicinity might more readily take place. The possibility of damage to goods was increased by the increased possibility of striking parts of the equipment and the size of articles that could be washed in the washing tray was limited by the size of the access opening. In addition, the attention of the operator during use of such a washing tray was diverted from customers and others who might desire attention.

In the new movable sink assembly of this invention, the disadvantages of prior practices and structures have been overcome. Thus, in my invention, fixtures and articles may, in effect, be washed in place by a sales person or other operator. In that washing function, the operator may remain in substantially normal standing position and at the same time keep an eye upon the area over which the operator has charge to serve the needs of customers and others who may come to his location. Still further, the hazard to fragile or brittle articles is reduced and a more extensive range in the size and shape of the articles may readily be taken care of. Moreover, the sink element in my new combination is supported so that it may be shoved into retracted position beneath the top of the merchandising counter or other equipment when a washing operation is completed. When so retracted, the new sink assembly is concealed and forms,

in appearance, a generally uniform facade with the remainder of the equipment in juxtaposition thereto.

Other and further objects and advantages of this invention will be evident from the following description and from the drawings, which are illustrative only, in which

Figure 1 illustrates an embodiment of my invention being utilized in a merchandise display counter and shows the sink element of my new combination in partially opened or extended position;

Figure 2 is a view in front elevation of the embodiment shown in Figure 1;

Figure 3 is a view of my new concealable combination, partly in section, taken along line III—III of Figure 2, with the new sink element illustrated in retracted concealed position and in open extended position;

Figure 4 is a view of the structure shown in Figure 3 taken substantially along line IV—IV of Figure 3;

Figure 5 is a detailed view of a baffle construction which may be utilized in the illustrated embodiment of my invention; and

Figures 6 and 7 are detailed views of a roller bearing which may be utilized to support the new sink element in my invention during movement and in closed and open position.

Referring to the drawings, a merchandising counter 10 may be provided, for example, with glass display cases 11 such as those used for displaying candy in which glass shelves 12 are utilized as stock supporting shams so that only a relatively small amount of stock is on display in a relatively large display case in accordance with the usual merchandising practice in that regard. The case 11 and shelves 12 may be vertically divided by partitions 13 supported on a counter top 14. Counter 10 may stand on a floor 15 of a store with its face 16 toward the customers who come to counter 10 to be waited upon. The other side 17 of counter 10 is in back of the counter and accessible to a sales person passing up and down in aisle 18. Floor 19 in aisle 18 is generally raised above the level of the floor 15 so that a sales person can reach over the display case 11 to serve a customer in front of counter 10. Beneath top 14 of counter 10, the counter is fitted with cabinets 20 and storage drawers 21, for example, for additional stock and supplies. Such cabinets and drawers may be fitted into cubical spaces between jambs 22.

The illustrated embodiment of my new concealable sink assembly combination 23 is likewise adapted to fit a suitable cubical space in a counter 10 beneath top 14. In my new combination 23, a cubical frame 24 may be provided comprising vertical corner members 25 joined together at their ends by horizontally extending frame members 26. The over-all dimensions of frame 24 fit within the cubical space provided and may be supported by the stands 27 fastened to base 28 of the counter itself. Stands 27 include bolt legs 29 which pass through openings in corner plates 30 and are adjustable in height by nuts 31 to adjust the height of such corner plates 30. Hence, the stands 27 enable frame 24 and my new sink assembly combination 23 to be adjusted in height as required and to be made level despite irregularities in base 28 or floor 15 upon which counter 10 stands.

Horizontally extending inner support channels 32 are fastened to frame 24 across each side on the same level and act as the primary supporting part of a roller bearing support 33 enabling sink 34 to be fully supported in concealed or open position and during linear longitudinal or sliding movement of the sink from one position to the other.

A flange 35 adjacent the forward end of channel 32 acts as a stop for a floating outer channel member 36. Channel 36 telescopes over stop 35 and ball bearings 37 having spacers 38 associated therewith. Channel 36

is also provided with a stop 39 at the forward end thereof and an inwardly extending stop flange 40 at the rearward end thereof. Sink 34, on the other hand, is provided with wheels 41 on each side thereof. Hence, pulling sink 34 open by a handle 42 brings on each side the forward wheel 41 up against stop 39 and channel member 36 moves forward relative to inner channel 32 until flange 40 arrests the forward motion at the point where sink 34 is in its extended or open position, as shown in solid lines in Figures 3 and 4. Conversely, when sink 34 is returned to its retracted or concealed position, as shown in dotted lines in Figure 3, wheels 41 of sink element 34 roll back upon channel member 36 until the rear of the sides of panel 43 at the front of sink 34 abuts against each stop 39 pushing channel members 36 rearwardly into telescoping relation relative to channel member 32 until sink 34 and panel 43 are in closed position and flush with the closed positions of the cabinets 20 and drawers 21, as shown in Figure 1. That substantially flush relation effectively conceals my new sink combination within counter 10 beneath top 14. Preferably, sink 34 will be mounted in its bearing support members such that it will remain in any position to which sink 34 is moved regardless of whether or not sink 34 is filled with washing or rinsing water or other cleaning liquid.

Horizontal angles 44 are supported by the frame 24 across the front and back thereof. Angles 44 in turn have a drain trough 45 secured thereto to receive waste from sink 34. The inner sides and bottom of drain trough 45 slope to a discharge opening to which a discharge pipe 46 is connected. In turn, the lower end of discharge pipe 46 is connected to a trap 47 leading to a sewer 48. A suitable union fitting is provided to couple trough 45 to trap 47 in the course of an installation of one of my new sink assemblies.

Trough 45 is open at the top between its sides 49 and its back 50 and front 51 respectively. Hence, regardless of the position of sink 34, an overflow pipe 52 and a drain pipe 53 supportably secured to sink 34 are above trough 45 so that if there is any discharge from either of said pipes, it passes into the drain trough 45 where it then moves on into sewer 48. A lower panel 54 which may be in the shape of an inverted J may hook over the front edge of the front angle 44 on each side of trough 45 with the lower edge of panel 54 extending below the top edge of baseboard 55 of counter 10. Thereby, lower panel 54 may readily be inserted in place and removed when sink 34 is open. When panel 54 is in place, it, with the face of panel 43, completes the finished flush appearance of my new concealable sink assembly combination. When in such closed position, the new sink element 34 is entirely out of the way and out of the aisle 18. On the other hand, when there is a washing operation to be performed, sink 34 is moved into its extended or open position and the sales person or operator can wash in sink 34 whatever requires cleaning without material stooping or awkward reaching or likelihood of damage to the items being cleaned.

The upper front frame member 26 is provided with a combination faucet 56 to which hot water may be supplied through a pipe 57 and cold water through a pipe 58, said piping being respectively continued above the top of sink 34 and beneath counter top 14 to a position such as one behind a jamb 22 where such pipes may be led downwardly to suitable hot and cold water connections under the floor of the store. A common spout 59 of faucet 56 discharges into sink 34 and is positioned thereabove. The respective hot and cold water valve stems of faucet 56 extend through openings in a frieze 60 which is a part of cabinet 10 immediately beneath top 14. Hot and cold water handles 61 and 62 permit the turning on and turning off of the respective valves in faucet 56 and the adjustment of the temperature of the water discharged through spout 59 in accordance with

the user's desires. Water may be discharged from faucet 56 into sink 34 in any position of sink 34 between fully open and fully closed position. The inlet of overflow pipe 52 is set in sink 34 just above the normal maximum liquid level desired in sink 34. Damage to the valve handles 61 and 62 is prevented due to the fact that counter top 14 is provided with an overhang 63 which also conceals the faucet handles from the view of a customer.

Novel sink element 34 itself may be made of a single sheet of stainless steel, for example, drawn into sink shape such as the one illustrated. To the front thereof, upper panel 43 with handle 42 thereon is suitably affixed by welding if panel 43 is stainless steel or otherwise if it is of another material, to match the outside vertical surface of the back of the counter 10. The inside bottom surface of sink 34 will be provided with a sufficient slope to insure complete drainage of all liquid in sink 34 into outlet 64 which may, if desired, be provided with a crumb strainer 65. Between outlet 64 and drain pipe 53, a drain valve 66 is positioned. Drain valve 66 may be in the nature of a petcock and provided with an orifice 67 through the body thereof. When orifice 67 is in alignment with pipes 64 and 53, waste in sink 34 will discharge through pipe 53. Conversely, when orifice 67 is out of alignment with the axis of pipe 53 and outlet 64, the drain for sink 34 will be closed and sink 34 will hold liquid up to the level of the inlet of overflow pipe 52. The rotating part in valve 66 with the orifice 67 therein is turned by an extension rod 68. Rod 68 passes through a bushing in the lower part of panel 43 and is provided with a handle 69 which may be in the form of a cross. In the position shown in Figure 3, the marking on the horizontal arms of the cross of handle 69 reads "close" indicating that the drain for sink 34 is closed. A rotation of ninety degrees in one direction by handle 69 will open outlet 64 and drain any liquid in sink 34 into trough 45.

In order to prevent a sloshing effect of liquid in my new sink element 34, either during the filling thereof or during movement of sink 34 with liquid therein, a baffle 70 may be provided. Baffle 70 is provided with large openings 71 over the entire surface thereof and has its upper edge 72 folded back and downwardly to hook over the top edge of a vertical flange 73 fastened to the respective inner sides of sink 34. The outer lower corners 74 of the vertical portion of baffle 70 in turn slide between flange 73 and a second short flange 75 at the bottom thereof, removably securing baffle 70 in place whenever it may be used. An "aerator" may be utilized with spout 59 to further diminish the likelihood of splashing or sloshing in filling sink 34 with liquid. After extended periods of use, it may be desirable to remove sink 34 for scouring. Such removal of sink 34 itself with the parts secured thereto is readily achieved. All that is required is to pull sink 34 into an open position and lift the wheels 41 upwardly and forwardly to separate sink 34 from its bearing support 33 whereupon it may be pulled out of frame 24 and such scouring performed before sink 34 is replaced in cooperative position with the other elements of my new combination.

Various modifications may be made in particular elements of my invention without departing from the spirit thereof or the scope of the appended claims.

I claim:

1. In a sink assembly, in combination, bearing supports connected to a frame, a sink movably supported by said bearing supports for movement between non-projecting and projecting positions in said frame, a waste receiver positioned beneath said sink and extending in the direction of movement of said sink, said waste receiver further extending for a distance generally at least equal to the extent of said movement of said sink, liquid supplying means positioned above a forward portion of said sink when in said non-projecting position and a rearward por-

tion when in said projecting position, outlet means in said sink positioned above said receiver in all positions of said sink, and means to regulate said outlet means.

2. In a concealable sink assembly, in combination, a frame, a counter or the like into which said frame fits, extensible bearing supports supportably connected to the respective sides of said frame, a sink engaging said bearing supports, said sink being in the upper part of said frame and movable in and out thereof, said bearing supports adapted to be moved by said movement of said sink, a drain liquid receiver supported by said frame beneath said sink, liquid supplying means positioned above said sink, an outlet in said sink overlying said liquid receiver at all times, and means for opening and closing said outlet in accessible position at the front of said sink.

3. In a concealable sink assembly, in combination, a frame, a drain trough supported by said frame, a bearing support connected to said frame above said drain trough, a movable sink engaging said bearing support, a drain pipe carried by said sink, said drain pipe overlying said trough in all positions of movement of said sink, a faucet to supply liquid to said sink, said faucet being connected to said frame and overlying said sink in all positions of movement thereof, a baffle toward the rear of said sink and extending across the same to minimize splashing and sloshing, and an overflow pipe to limit the maximum liquid level in said sink, said overflow pipe being always open and overlying said trough in all positions of said sink.

4. In a concealable sink assembly, in combination, a frame, a drain trough supported by said frame, a bearing support connected to said frame, a movable sink engaging said bearing support for movement into and out of said frame, said trough extending in the direction of movement of said sink, an outlet having a drain pipe connected to said sink, said drain pipe overlying said trough in all positions of movement of said sink, a faucet to supply liquid to said sink, said faucet overlying said sink in all positions of movement thereof, a removable perforated baffle in said sink to minimize splashing, said baffle being positioned across and adjacent the rear of said sink, and an overflow pipe in said sink overlying said trough in all positions of said sink.

5. In a concealable sink assembly, in combination, a frame, a counter or the like into which said frame fits, extensible bearing supports supportably connected to the respective sides of said frame, a sink removably supported on the top of said bearing supports, said sink being in the upper part of said frame and movable in and out thereof, stop members to limit the movement of said sink, a drain trough supported by said frame beneath said sink, faucet means connected to said frame above said sink to supply liquid thereto in all positions thereof, an outlet in said sink overlying said trough at all times, a valve in said outlet, and means extending through to accessible position adjacent the front of said sink for opening and closing said valve.

6. In a concealable sink assembly, in combination, a frame, channel members connected to said frame, a sink supported by said members in the upper part of said frame and longitudinally movable between a closed concealed position and an open extended position, a drain receiver trough supported by said frame in fixed position beneath said sink, said trough extending for a distance in the direction of movement of said sink generally at least equal to the extent of movement of said sink, liquid supplying means supported by said frame in fixed position above said sink and operable to supply liquid to said sink in all positions thereof, outlet means connected to said sink and positioned above said trough in all positions of said sink, a front panel on said sink, and a handle on the outer side of said panel to regulate said outlet means and indicate the position thereof.

7. In a concealable sink assembly for a counter or the like, in combination, a cubical frame having corner members joined together, means for holding said frame in level position inside said counter or the like, a sink movable into and out of the upper part of said counter and frame in a linear manner, means for supporting said sink in all positions thereof, liquid supplying means within said counter and below the top thereof, said last-mentioned means being adapted to discharge liquid into said sink in all positions thereof, waste liquid receiving means within said counter and said frame, said waste liquid receiving means being beneath said sink and extending in the direction of movement thereof, and panels for the front of said sink and the front of the lower part of said frame, said panels being flush when said sink is in closed concealed position, said panels further being in surface conformity with adjoining vertical outer surfaces of said counter.

8. In a concealable sink assembly, for a counter or the like, in combination, a cubical frame having corner members joined together, means for holding said frame in level position inside said counter or the like, a sink movable into and out of the upper part of said counter and frame in a linear manner, extensible roller bearing means for supporting said sink in all positions thereof and adapted to be extended by moving said sink to its extended position, liquid supplying means within said counter and below the top of said counter and inwardly of the back edge of said top, said last-mentioned means being adapted to discharge liquid into said sink in all positions thereof, waste liquid receiving means within said counter and said frame, said waste liquid receiving means being beneath said sink, and panels for the front of said sink and the front of the lower part of said frame, said panels being flush when said sink is in closed concealed position, said panels further when flush with each other being substantially flush also with other adjoining vertical outer surfaces of said counter.

9. In a sink assembly, in combination, a frame, a sink drawer slidably supported by said frame for movement between non-projecting and projecting positions in said frame, liquid-supplying means connected to said frame and positioned above a forward portion of said sink drawer when the latter is in said non-projecting position and above a rearward portion of said sink drawer when the latter is in said projecting position, and means for draining liquid from said sink drawer.

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