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2,564,923

WASHBASIN MOUNTING

Filed Dec. 30, 1947

2 Sheets-Sheet 1

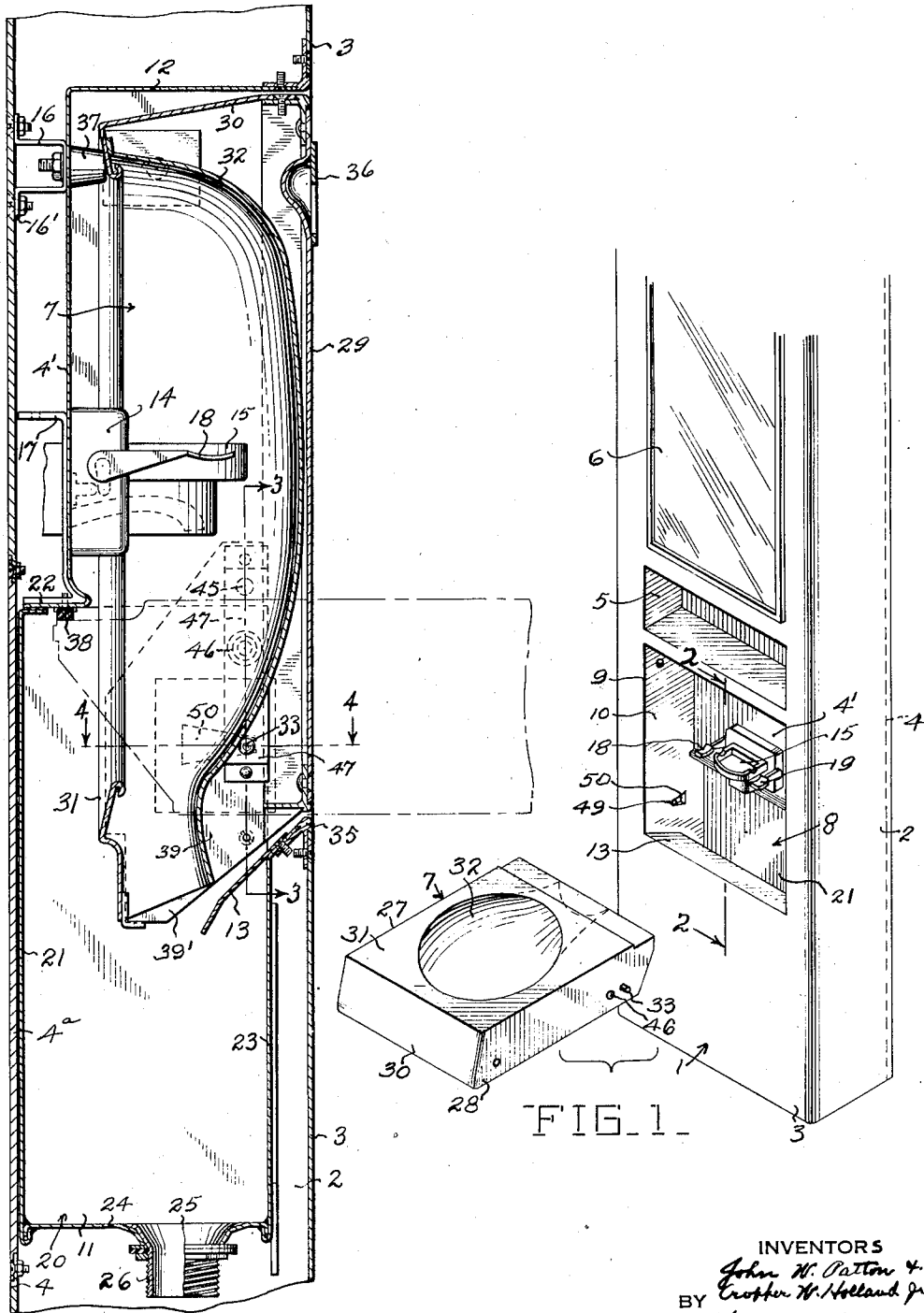


FIG. 2.

FIG. 1.

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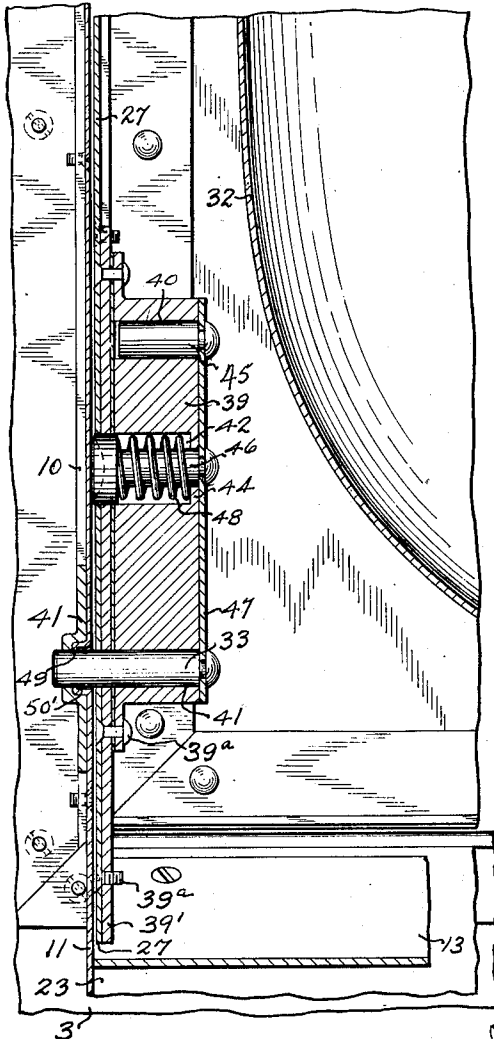


FIG. 3.

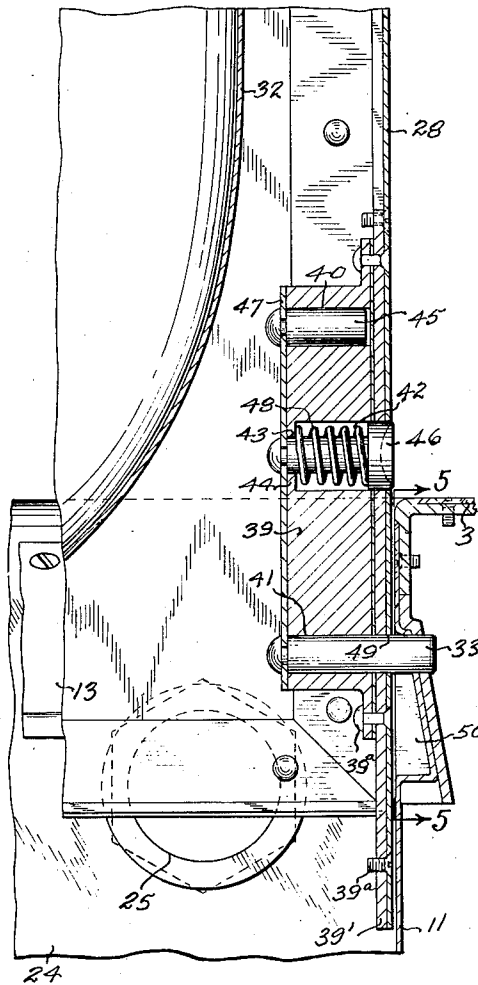


FIG. 4.

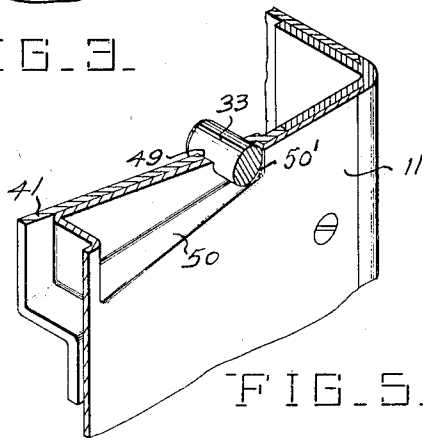


FIG. 5.

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WASHBASIN MOUNTING

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2 Claims. (Cl. 4-169)

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This invention relates to folding washbasins of the type now generally used in room accommodations of modern railway sleeping cars.

Basins of this type are conventionally mounted for rotation about a horizontal pivot from a closed vertical position to a horizontal open position. When moved from the horizontal open position to the vertical closed position the basin is constructed to discharge its waste water, and any toilet articles or the like left on the top surface of the basin, will fall into the waste sump. It is impossible to retrieve articles from the sump without removing the basin from its mounting.

An object of this invention is to render the sump more accessible for the recovery of lost articles, by making it possible for the user of the basin to easily remove the same from its mounting without mechanical skill or the aid of tools.

Another object is to provide an assembly which will permit the removal of the basin without the possibility of damage to the structure.

Additional objects and advantages will appear from the following description, taken in connection with the drawings, in which:

Figure 1 is a fragmentary perspective view of a basin cabinet showing the basin removed;

Figure 2 is an enlarged vertical section view through the cabinet taken on the line 2-2 of Figure 1;

Figure 3 is an enlarged fragmentary vertical section through the basin in its vertical closed position taken on the line 3-3 of Figure 2;

Figure 4 is an enlarged fragmentary horizontal section through the basin in its horizontal open position taken on the line 4-4 of Figure 2; and

Figure 5 is a fragmentary perspective view of a portion of the cabinet showing a horizontal section taken on the line 5-5 of Figure 4.

Referring to Figure 1, the reference numeral 1 indicates a cabinet having a front wall 3, side wall, one of which is indicated by the numeral 2, and a rear wall structure generally indicated at 4.

The front wall 3 is formed with a mirror 6, a recessed shelf 5, and an opening 9 in wall 3 through which washbasin 7 can swing. An inner chamber 8 is arranged in the cabinet to receive the washbasin in the folded position and to provide a sump. This chamber is defined by side walls 10 and 11, a sectional rear wall structure 4' and 21, upper wall 12, bottom wall 24 and front wall 23 having its top edge below opening 9. The lower edge of opening 9 is formed by a structural member 35 of V-section, opening downwardly, one flange of the V being secured to the inner

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surface of front wall 3, and the other flange extending inwardly and downwardly. Drainplate 13 is attached to member 35 and extends into the inner chamber, its long dimension being equal to the width of recess 8, and its short dimension being such that it extends only about a third of the way across the inner chamber. Drainplate 13 is bent longitudinally near its lower marginal edge, so that the lower portion of the drainplate surface extends downwardly with respect to the main portion of the drainplate.

The rear wall section 4' is reinforced by structural members 16 and 17 which are attached to its rear surface. The upper structural member 16 is a U-shaped member and has outwardly extending feet 16' attached to rear wall 4, and a web attached to the back surface of the upper portion of rear wall section 4'. The lower reinforcing member is of modified channel section; it extends horizontally across the rear surface of rear wall 4, its vertical web being secured to the rear wall section 4' to form a reinforcement thereto capable of supporting a water fixture 14. The lower marginal edge of rear wall section 4' is bent to conform to the lower flange portion of member 17, thereby forming a rearwardly extending horizontal ledge 22. The lower section 20 of the inner chamber houses a part of the washbasin when folded, acts as a mounting for the washbasin and serves as a sump. The rear wall 21 of the lower section is secured at its upper marginal edge to the free end of the lower ledge 22 of member 17 and the front wall 23 of the sump section terminates at the lower boundary of opening 9 and is attached to angle member 35.

The water fixture 14, including a soapdish 15, hot and cold water faucets, and faucet handles 18 and 19 are attached to and project outwardly from upper rear wall structure 4', substantially in the middle of chamber 8, so that when the basin is folded they will be received within the concave cavity thereof. An opening 25 in the bottom wall 24 has a threaded outlet pipe 26 for connection with the car drainage system, to permit the discharge of waste water.

Washbasin 7 is provided for pivotal mounting within chamber 8 and includes side walls 27 and 28, bottom wall 29, front wall 30, a top 31, and bowl 32 having an open-ended spout portion extending to the rear of the basin. Trunnion pins 33 extend horizontally from the side walls 27 and 28 and fit into holes 49 in recess sidewalls 19 and 11, cooperating therewith to form a horizontal hinge for washbasin 7. Washbasin 7 is, there-

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fore, free to be rotated about the horizontal pivot from a vertical position within chamber 8 to a horizontal position partially outside of the cabinet. When the basin is in the vertical closed position, its bottom wall 29 is flush with cabinet front wall 3 and serves as a closure for opening 9. For aid in opening the basin, a hand grasp member 36 is secured over a depression in bottom wall 29. Buffers 37 project outwardly from the upper portion of rear wall 4 into chamber 8 to be engaged by top 31 of washbasin 7 when the basin is in the vertical closed position, thereby maintaining the basin in a true vertical position as well as preventing metal-to-metal contact between the basin and the rear wall 4' of chamber 8.

A rubber strip 38 projects downwardly from the horizontal ledge 22 of rear wall 4' and serves as an abutment against the inner portion of top 31 of washbasin 7 engaged to limit the opening movement of the washbasin when it reaches the horizontal position and to also serve as a sealing means.

Referring now to Figures 3 and 4, the numeral 39 indicates horizontally extending guide blocks attached to each of the inside surfaces of basin side walls 27 and 28. Between the basin side walls and the guide blocks 39 are reinforcing and spacer plates 39'. The blocks and plates are secured to the basin side walls by screws and rivets 39^a or some other suitable means. Cylindrical holes 40 and 41, normal to the plane of the basin side walls, extend through opposite end portions of guide blocks 39. Cylindrical recess 42, of greater diameter than holes 40 and 41, but also normal to basin side walls 27 and 28, extends inwardly from the outer surface of guide blocks 39 and is located approximately medially of the length of guide block 39; recess 42 terminates a short distance from the inner surface of guide blocks 39, the remaining distance being pierced by a cylindrical recess 43 concentric with, but of smaller diameter than recess 42. The difference in diameter between recesses 42 and 43 results in the formation of annular flange 44 at the inner end of recess 42. Aligned holes of the same diameter as holes 41 and recesses 42 extend through side walls 27 and 28. Each guide block 39 serves as a guide for a set of pins 45, 46, and 33, which extend through and slide in holes 40, recesses 42, and holes 41, respectively. A flat actuator bar 47, equal in length and width to the inner vertical surface of guide block 39, is provided to carry each set of pins 45, 46, and 33, which are secured normal to a flat surface of bar 47, and which are so arranged that when the edges of bar 47 are aligned with corresponding edges of guide block 39, the pins 45, 46, and 33 will be aligned with holes 40, recesses 42, and holes 41, respectively. Pins 45, 46 and 33 are secured to the bars 47 by upsetting one end or by other suitable means. The longest of the three pins in each set is the trunnion pin 33, which normally projects some distance outwardly from the outer surface of side walls 27 and 28. The pins 46 are provided with an enlarged head portion, of slightly less diameter than recesses 42; the outer surface of the head portions are concave, their rims being normally held substantially flush with the outer surface of the adjacent basin side walls 27 and 28. Pins 45 serve as a guide means for actuator bars 47. A compression spring 48 is mounted on each pin 46 within its recess 42, and abuts at one end against adjacent flange 44 and at the other end against the enlarged head portion of the associated pin

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46, such springs tending to force pins 46 outwardly, thereby causing them to pull bars 47 against the inner surface of the associated guide blocks 39. Since bars 47 can only move in a direction normal to the basin side wall, and are retained parallel thereto at all times through the mounting of pins 33 and 45 in the guide block 39, the entire outer surface of bars 47 abut against the inner surface of the associated guide block 39. Trunnion pins 33 project some distance beyond the outer surface of the basin side walls, and into holes 49 in each of the side walls 10 and 11. Holes 49 provide bearing surfaces for trunnion pins 33, thereby cooperating with trunnion pins 33 to form a horizontal pivot for basin 7. Trunnion pins 33 may be moved inwardly by pressure against pins 46, until their outer ends are flush with the outer surface of side wall 10 or 11 thereby disengaging them from holes 49. The application of finger pressure on the heads of pins 46 further compresses springs 48 thereby causing the actuator bars 47 to move inwardly, drawing trunnion pins 33 with them. When this is done, the basin may be removed from the cabinet 1. Panel 4^a is removable to provide access to the inner chamber for servicing or removal of the sump section 20.

Referring to Figure 5, the numeral 50 indicates a substantially horizontal groove in each chamber side wall 10 and 11 extending inwardly from the outer edge of holes 49. The outer end of grooves 50 are relatively shallow and have a semicircular end wall 50' concentric with and of the same diameter as hole 49; the inner end of each groove 50 is somewhat deeper than the outer shallow end, and has a flat end wall, the vertical dimension of which is somewhat greater than the diameter of the inner end wall; all other surfaces of the groove are flat. Grooves 50 are provided to guide the trunnion pins to holes 49 in the chamber side walls 10 and 11. To return the basin 7 from the removed position to its position in the cabinet 1, pressure is applied to the heads of pins 46, thereby moving the trunnion pins 33 inward until the outer end of trunnion pins 33 are flush with the outer surfaces of the basin side walls 27 and 28; this permits the insertion of the rear portion of the basin into the lower part of chamber 8. Basin 7 is then inserted in chamber 8, the side walls 10 and 11 of recess 8 preventing trunnion pins 33 for moving outwardly until the position of the trunnion pins coincides with some part of grooves 50. When this occurs, springs 48, acting on pins 46, force bars 47 and consequently trunnion pins 33 outwardly until the outward ends of trunnion pins 33 about the sloping inner wall of grooves 50. An outward movement of the basin 7 and consequently of trunnion pins 33 will cause trunnion pins 33 to follow the walls of grooves 50 to ends 50', at which point springs 48 are free to force trunnion pins 33 into holes 49.

Removal of the basin from the cabinet is a relatively simple operation. The basin is moved to the open position; the side walls are grasped by the user's hands, and finger pressure is applied to the enlarged heads of pins 46, thereby depressing pins 46 and trunnion pins 33. The basin is then slid outwardly, and the user is free to reach through the open lower portion of chamber 8 into sump 20 for the retrieval of articles which had fallen in from the top of the washbasin.

The invention may be modified in various respects as will occur to those skilled in the art

and the exclusive use of all modifications as come within the scope of the appended claims is contemplated.

What is claimed is:

1. Pivot structures for removably mounting a basin having fore and aft apertures in the sides thereof, each comprising a guide block secured to the inner rear surface of a basin side wall and having a plurality of apertures there-through, two of the apertures in the block aligning with apertures in the basin wall, a trunnion extending through aligned apertures in the block and the adjacent basin side wall, an actuator pin extending through aligned apertures in the block and the adjacent basin side wall and restricted in axial movement, spring means normally urging the pin into extreme projected position with one end substantially flush with the outer surface of the basin side wall, a guide pin in an aperture in the block, and an actuator bar fixed to the inner projecting ends of the trunnion, actuator pin and guide pin, said bar moving the trunnion and guide pin therewith when shifted by the actuator pin.

2. Mounting structure for a basin having fore and aft openings in the sides thereof comprising a chamber having a basin receiving opening between side walls, said side walls having oppositely disposed depressed horizontal guideways decreasing in width from the front toward the rear of the chamber and axially aligned openings therethrough at the rear end of the guideways, guide blocks secured to the rear portion of the side walls of the basin having a plurality of openings therethrough, two of the openings in

the blocks aligning with openings in the basin side walls, trunnions extending through the rear openings in the blocks and the basin sides and adapted to ride in the guideways and to enter the openings in the side walls of the chamber, axially shiftable actuator pins extending through the intermediate openings in the blocks and the front openings in the basin side walls and restricted in axial movement, spring means in the blocks normally urging the actuator pins into extreme projected position with one end substantially flush with the outer surface of the adjacent basin side wall, guide pins axially movable in the front openings in the blocks, and an actuator bar adjacent each block fixed to the inner end of the adjacent trunnion, actuator pin and guide pin, said bars moving the associated trunnion and guide pins therewith when shifted by pressing the actuator pins inwardly to thereby release the trunnions from the openings in the chamber side walls for sliding contact with the depressed guideways when the basin is to be dismounted.

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