Feb. 26, 1963 J. H. SCHMID ETAL 3,078,477

WALL CLOSET CARRIER

Filed July 20, 1961 2 Sheets-Sheet 1

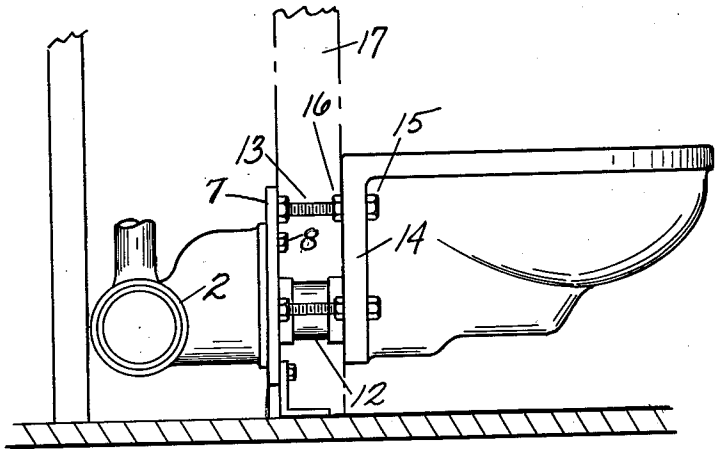


FIG. 2

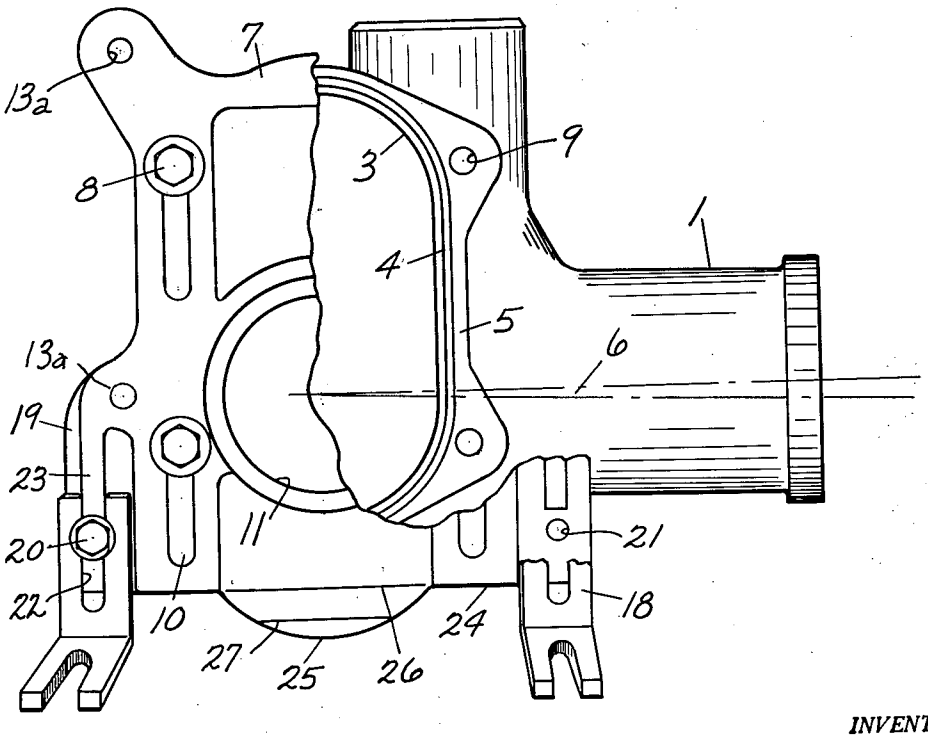


FIG. 1

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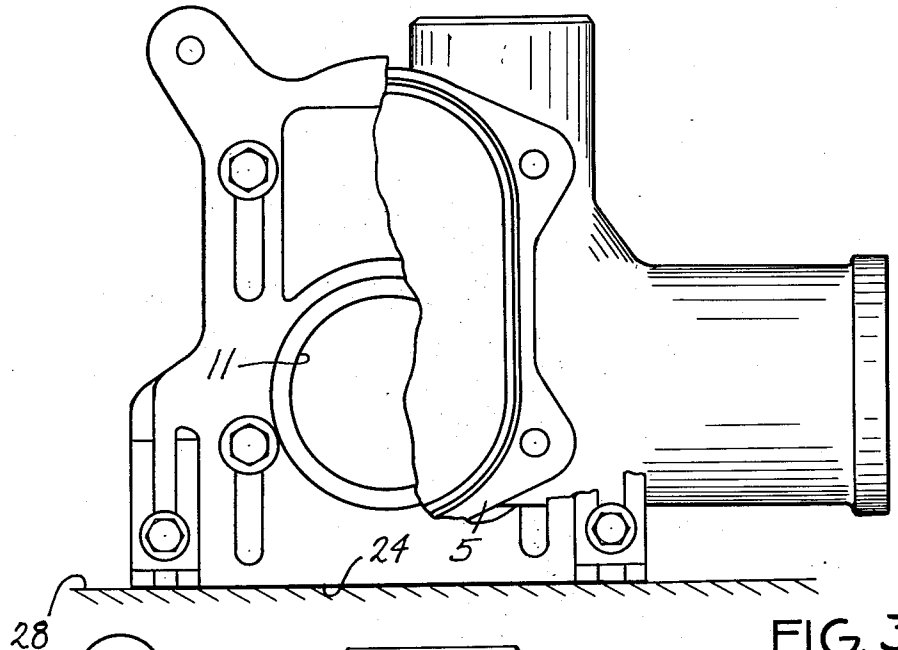


FIG. 3

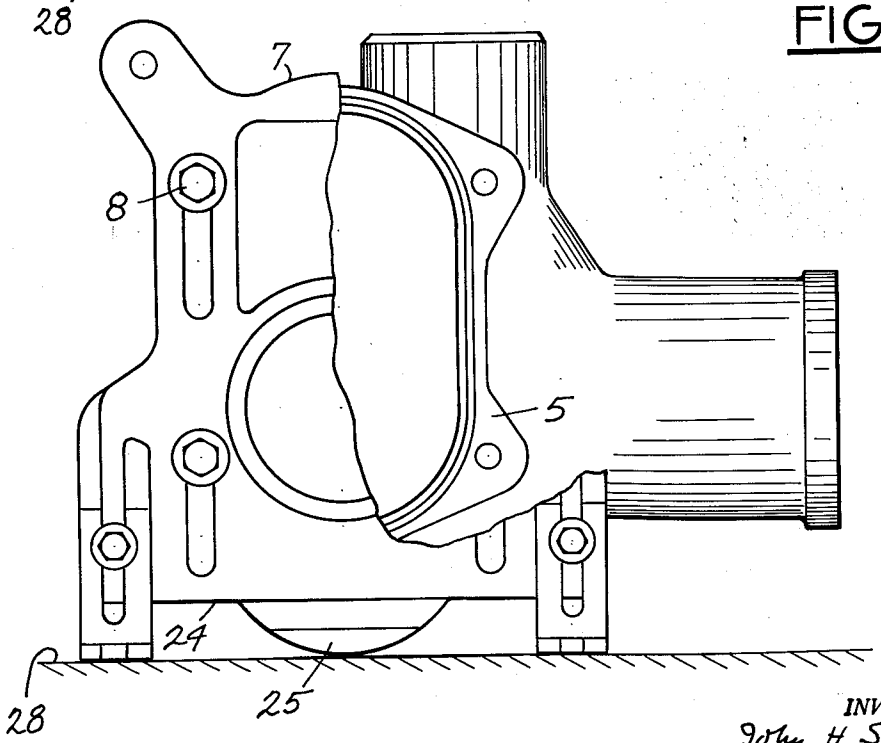


FIG. 4

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WALL CLOSET CARRIER

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This invention is a carrier for syphon jet wall type water closets which permits installation on a horizontal drain line without recessing below the floor. This is of particular advantage in reinforced concrete floor construction where the floor slab is relatively thin and the location of the reinforcing is so critical that recessing cannot be tolerated.

In the drawing, FIG. 1 is a front view of the carrier, FIG. 2 is a side view, FIG. 3 is a front view partly broken away showing the carrier face plate in condition to accommodate closets with outlets closest to the floor and FIG. 4 is a similar view showing the carrier face plate in condition to accommodate closets with outlets at the greatest distance above the floor.

In the drawing, **1** indicates a drain line section having at one end a hub **2** and a vertically elongated opening **3** extending above the center of the line and surrounded by a seal **4** and a flange **5**. In a typical installation, a plurality of sections **1** are connected in a horizontal line having a drainage pitch indicated at **6**. The spacing of the sections **1** in the line is determined by the desired spacing of the closets. When a face plate **7** is tightened against the seal **4** by bolts **8** screwed into tapped holes **9**, a leak proof connection to the drain line is established. The face plate is provided with vertical slots **10** which permit vertical adjustment of the face plate relative to the drain line without affecting the leak proof connection.

At the lower center of the face plate and between the slots **10** is a threaded opening **11** for closet coupling **12** and around the opening **11** are tapped holes **13***a* for closet supporting bolts **13**. The closet flange **14** is clamped between nuts **15** and **16** on the bolts. This provides a closet support independent of the wall **17** and essentially unaffected by settling of the building.

In reinforced concrete construction where the strength is derived largely from the embedded reinforcement, the floor slab is quite thin and the finish floor of tile or asphalt may be applied directly to the floor slab. When it is considered that the syphon jet closet design places the outlet at from 4¼ to 5½ inches above the surface of the finish floor, it can be seen that there is little space above the floor for the standard closet carrier for four inch drain lines. Heretofore, it has been customary to overcome this difficulty by recessing or chipping of the floor. This, however, is not feasible in reinforced concrete construction where the strength of the floor depends critically upon the reinforcement. To overcome this difficulty without recessing the floor, the face plate is designed to decrease the vertical projection below the closet coupling opening. Supporting feet **18** are arranged on lateral extensions **19** outside the slots **10**. The feet are fastened to the extensions by bolts **20** threaded into tapped holes **21** and are provided with slots **22** straddling a rib **23** so that, if necessary, the feet can be moved to an uppermost position flush with the lower edge **24** of the face plate. In this position, the threaded opening **11** in the face plate would be in its lowest possible position, approximately 4½ inches above the surface of the floor slab. Since the finished floor coating on the floor slab will be at least ¼ inch thick, this accommodates the syphon jet closets with outlets closest to the floor. At the center, the face plate has a tab **25** integral with and projecting downwardly below the lower edge **24** between the slots **10** so

it does not interfere with the joint between the face plate and the seals. The surface of the tab adjacent the sealing flange **5** is designed to be clamped in sealing relation against the flange in the same manner as the balance of the face plate. In outline, the tab preferably conforms to the shape of the seal **4** because it has a sealing function. The tab is provided with indented score lines **26** and **27**. For the closets having outlets closest to the floor, the tab is cut off at the score line **26** flush with the lower edge **24** of the face plate. This will accommodate closets having outlets from 4¼ inches to 5 inches above the floor. For closets having outlets from 5 inches to 5½ inches above the floor, the tab is cut at score line **27**. For closets having outlets 5½ inches above the floor, the tab **25** is left intact. This permits a single design of face plate to accommodate all available designs of syphon jet closets.

FIG. 3 shows the use of the carrier for closets having outlets closest to the floor, for example, 4¼ inches. For this design of closet, the tab **25** is removed along score line **26** so that the lower edge **24** of the face plate can rest directly on the floor slab indicated by line **28**. At the high end of the drain line, the closet coupling opening **11** is centered on the drain line and the hub **2** is 1⅜ inches above the floor slab. At a pitch of ⅛ inch per foot, this will permit a horizontal run of 11 feet before the hub **2** strikes the floor slab. Such a line will accommodate four closets on a 36 inch spacing or five closets on a 30 inch spacing.

FIG. 4 shows the face plate positioned for use with closets having outlets 5½ inches above the surface of the floor. For these closets, the tab **25** is kept intact and at the high end of the drain line where the coupling opening **11** is centered on the drain line, the hub **2** is 2⅝ inches above the surface of the floor. With a pitch of ⅛ inch per foot, this permits a horizontal run of 21 feet before the hub strikes the surface of the floor and such a run will accommodate eight closets on a 36 inch spacing or nine closets on a 30 inch spacing. The slots **10** are long enough to accommodate the larger vertical adjustment permitted by closets having outlets higher above the surface of the floor. With either FIG. 3 or FIG. 4, at the low end of the drain line the flange **5** will be above the floor slab and the seal between the face plate and flange will be above the lower edge **24** (FIG. 3) or within the tab (FIG. 4).

What is claimed as new is:

1. A carrier for wall type water closets comprising a horizontal drain line section having a vertically elongated opening extending above the center of the drain line and surrounded by a sealing flange, clamping bolts screwed into the flange on opposite sides of the opening, a face plate having vertical slots on opposite sides of the opening receiving the bolts and clamped by the bolts against the sealing flange, closet support bolts screwed into the face plate, said face plate having a threaded opening for a closet coupling between said slots and above the lower edge of the face plate, a tab integral with and depending below the lower edge of the face plate between said slots, the surface of said tab adjacent the sealing flange being shaped to be clamped against said sealing flange and having score lines at and below the lower edge of the face plate at which all or part of the depending portion of the tab may be cut off to decrease the vertical projection of the face plate below said elongated opening and thereby support closets with outlets closer to the floor without requiring recessing of the floor to accommodate the face plate, extensions on the face plate laterally spaced outside said slots and above the lower edge of the face plate, and supporting feet on said extensions vertically adjustable through a range of positions including an upper position substantially flush with the lower edge of the

plate whereby in all conditions of the tab the supporting feet need not project below the lowermost portions of the tab or face plate.

2. A carrier for wall type water closets comprising a horizontal drain line section having a vertically elongated opening extending above the center of the drain line and surrounded by a sealing flange, clamping bolts screwed into the flange on opposite sides of the opening, a face plate having vertical slots on opposite sides of the opening receiving the bolts and clamped by the bolts against the sealing flange, closet support bolts screwed into the face plate, said face plate having a threaded opening for a closet coupling between said slots and above the lower edge of the face plate, a tab integral with and depending below the lower edge of the face plate between said slots, the surface of said tab adjacent the sealing flange being shaped to be clamped against said sealing flange and having score lines at and below the lower edge of the face plate at which all or part of the depending portion of the tab may be cut off to decrease the vertical projection of the face plate below said elongated opening and thereby support closets with outlets closer to the floor without requiring recessing of the floor to accommodate the face plate.

3. A carrier for wall type water closets comprising a horizontal drain line section having a vertically elongated opening extending above the center of the drain line and surrounded by a sealing flange, clamping bolts screwed into the flange on opposite sides of the opening, a face plate having vertical slots on opposite sides of the opening receiving the bolts and clamped by the bolts against the sealing flange, said face plate having a threaded opening for a closet coupling between said slots and above the lower edge of the face plate, a tab integral with and depending below the lower edge of the face plate between the sides of the face plate, the surface of said tab adjacent the sealing flange being shaped to be clamped against said sealing flange and having score lines at and below the lower edge of the face plate at which all or part of the depending portion of the tab may be cut off to decrease the vertical projection of the face plate below said elongated opening and thereby support closets with outlets closer to the floor without requiring recessing of the floor to accommodate the face plate.

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