W. M. WARD.

CLOSET INSTALLATION AND FIXTURE.

APPLICATION FILED JAN. 12, 1911.

1,147,664. Patented July 20, 1915.

Fig. 1

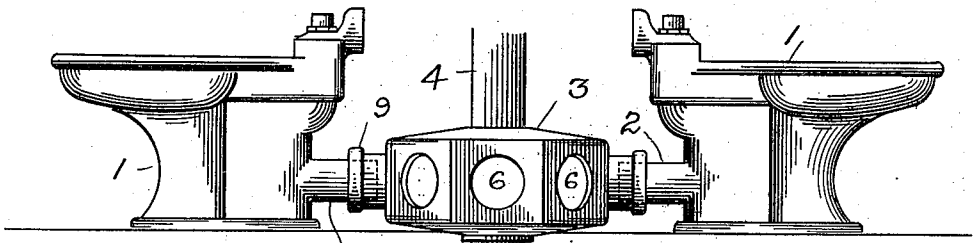


Fig. 2

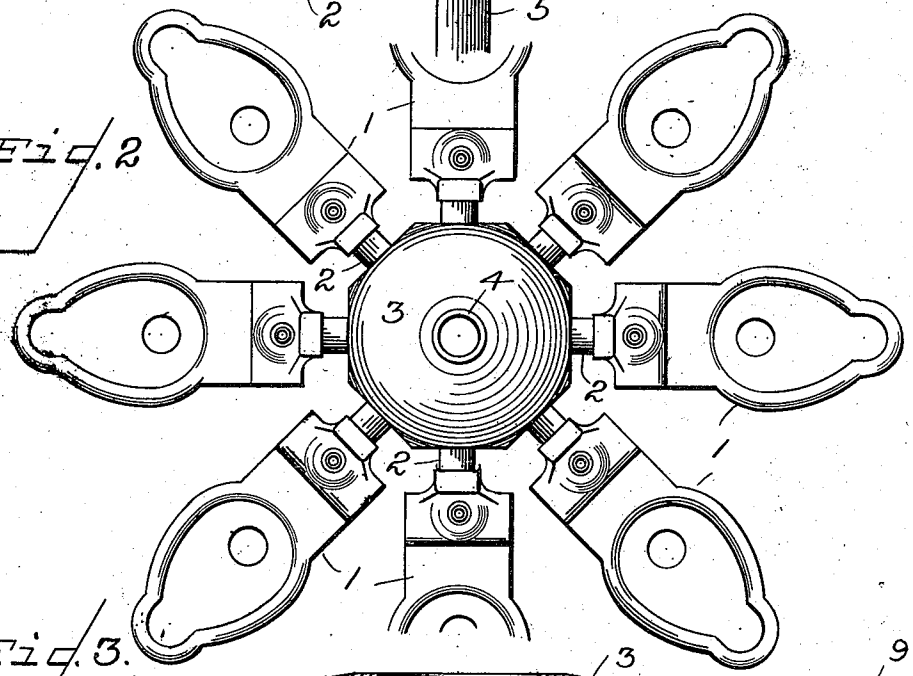
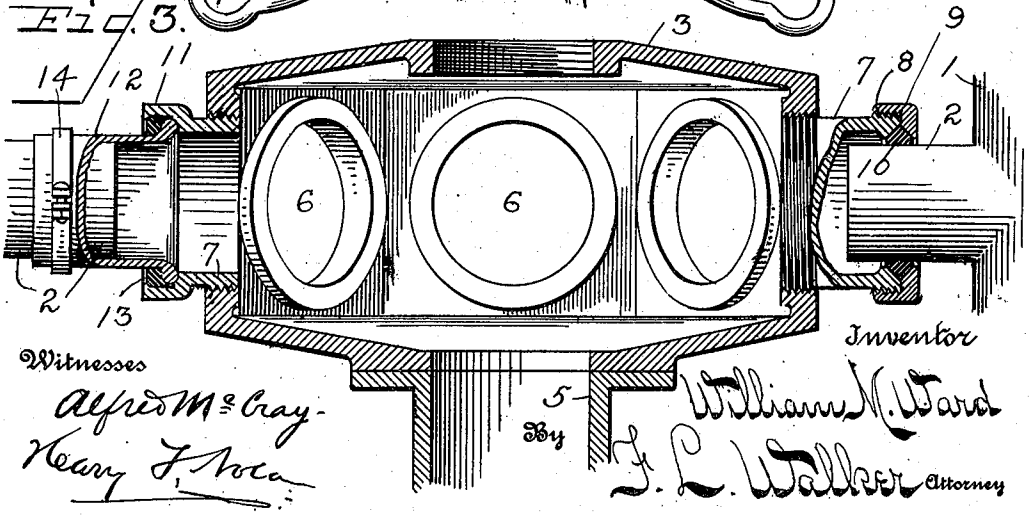


Fig. 3.



Witnesses

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CLOSET INSTALLATION AND FIXTURE.

1,147,664. Specification of Letters Patent. Patented July 20, 1915.

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To all whom it may concern:

Be it known that I, WILLIAM M. WARD, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Closet Installation and Fixtures, of which the following is a specification.

My invention relates to closets and closet fixtures and more particularly to methods and means of connecting closets in multiple.

The object of the invention is to simplify the structure of closets and fixtures as well as the installation thereof, whereby they will not only be cheapened in construction, but will be more efficient in use, more readily connected and disconnected easily accessible, and readily permitting the relative adjustment of the closets with each other and with the fixture to predetermined relative positions, and in minimum space.

A further object of the invention is to provide an improved arrangement of a plurality of closets for public buildings, hotels schools, etc., whereby a series of closets may be installed with a minimum amount of plumbing.

A further object is to provide an improved form of slip joint which will permit the adjustment of the closet in relation to the fixture, permit its removal, and compensate for expansion and contraction.

With the above primary and other incidental objects in view as will more fully appear in the specification, the invention consists of the features of construction and arrangement, the parts and combinations thereof, and the mode of operation or their equivalents, as hereinafter described and set forth in the claims.

Referring to the drawings, Figure 1 is a side elevation showing the fixture with two oppositely disposed closets connected thereto. Fig. 2 is a plan view of an installation of eight closets. Fig. 3 is a transverse sectional view through the fixture showing in detail two forms of slip joint connection by which the closet is connected to the fixture.

Like parts are indicated by similar characters of reference throughout the several views.

In the drawings 1 is a closet, the principal portion of which may be of any usual or desired construction, and the closet may be adapted to be flushed from a tank, (not shown) or by a direct connection.

2 is the spud or connecting sleeve of the closet which in the present instance is formed straight or continuous, of equal diameter throughout. In this respect the spud or sleeve 2 differs from the ordinary construction in that closet spuds are usually provided with a terminal flange or collar, or with a hub by which it is customary to positively attach the closet to a fixture or waste connection.

In a multiple installation of closets upon the plan forming the subject matter hereof, the several closets are arranged in radial positions about a given point. A fixture 3, comprising a chamber of polygonal form is located concentric with the series of closets. Such fixture 3 is common to all the closets, and is located above the floor line and on level with the spuds or connecting sleeves 2 of the several closets. In installing a plurality of closets, even where a waste pipe common to all the closets is employed, it is customary to carry the outlet from the closet through the floor and make the connection with the waste pipe below the floor line. Such construction necessitates sundry joints, elbows and turns intermediate the closet and waste pipe, which materially retard the flow from the closet to the outlet, and each joint becomes a possible source of trouble through leakage and otherwise. Furthermore such extra joints being located below the floor line are inaccessible for the purpose of repairs in the event of leakage of such joints or the clogging of the conduit. In the present construction the spud or sleeve 2 projects horizontally from the closet 1 and connects directly with the fixture 3 which being an enlarged chamber will afford no resistance or back pressure, and being located entirely above the floor line is at all times readily accessible. The spud 2 being of short length and connecting directly to the fixture provides a conduit of minimum length having therein but one joint and no turns or irregularities which might retard the flow therethrough.

The fixture 3 is polygonal in form, that shown in the drawing being octagon, but it is obvious that the fixture may be given any number of sides corresponding with the number of closets to be attached, or the fixture might be made circular. The top and

bottom walls of the fixture 3 are concavo-convex with the convex surfaces outward. Centrally disposed in relation to the top wall of the fixture is a vent pipe 4 leading to the exterior of the building. Leading centrally from the bottom of the fixture is the waste pipe 5, by which the contents of the chamber are conducted to the sewer or other disposal point. The interior surface of the bottom of the fixture being concave facilitates the rapid drainage of the contents from all parts of the fixture toward the waste pipe connection. Each of the lateral faces of the polygonal fixture is provided with an opening 6 in which is mounted a radial extending sleeve 7.

The spuds or sleeves 2 of the several closets are connected with the sleeves 7 by slip joints which permit the adjustment of the closet to and from the fixture and compensates for expansion and contraction. In Fig. 3 two forms of slip joints are shown either of which will be found serviceable, the one at the left of the figure being of cheaper construction than that at the right.

The construction is not limited to either style of slip joint but both styles may be used with the same fixture, as shown in Fig. 3. Referring to the slip joint shown at the right in Fig. 3, the sleeve 7 is screw threaded as at 8 to receive a corresponding screw threaded collar 9. The adjacent surfaces of the sleeve extremity and collar are beveled or recessed to receive a packing ring 10. The spud or sleeve 2 of the closet projects through the collar 9 and packing ring 10 into the sleeve 7 and may be shifted longitudinally therein to bring the closet to the desired position. The screw collar 9 is tightened upon the sleeve thereby compressing the packing ring 10 causing it to grip the spud 2 and form a tight joint therewith. The spud 2 extending beyond the said joint discharges into the fixture in such way that the flowing contents will not pass over the said joint, as is usual with flange or other connections, thereby reducing the chance of seepage through the joint. While the joint is sufficiently tight to prevent leakage, it is not a rigid or positive connection such as the flange or collar connections commonly used, but will possess sufficient flexibility to compensate for expansion and contraction of the parts.

Referring to the cheaper style joint shown at the left in Fig. 3, the sleeve 7 is provided with a terminal hub 11. A lead ferrule 12, or ferrule of other suitable material, is calked into the hub 11 as shown at 13. The spud 2 of the closet projects within the ferrule 12, a strip of hemp, rubber, or other packing being interposed between the exterior of the spud and interior of the ferrule, and the compression band or collar 14 is applied, by which the ferrule and packing are contracted or compressed to form a tight joint with the spud 2. This construction also permits the ready adjustment of the closet by the longitudinal movement of the spud within the ferrule, and also possesses sufficient flexibility to compensate for expansion and contraction as in the joint shown at the right in said figure.

Referring to Fig. 1 it will be seen that the fixture 3 and all connections of closets therewith are above the floor line 15, thereby said parts are readily accessible without the necessity of tearing up the floor.

Having thus described my invention I claim:

1. A series of separate closet members, a horizontally disposed spud forming a part of each closet member, the said spuds being arranged in radial positions about a common point, a receiving chamber located above the line of the floor upon which the closet members rest, radially disposed sleeves projecting from the receiving chamber into which the closet spuds project, and a slip joint between the receiving chamber sleeves and the closet spuds, the construction and arrangement being such that the closets may be separately adjusted radially independent of each other and independent of the receiving chamber.

2. A receiving chamber, a plurality of closet members arranged in radial positions about the receiving chamber, the chamber being located above the floor line, and telescopic connections between the receiving chamber and the closet members, the construction and arrangement being such that the closet members are independently adjustable in a horizontal plane while maintaining communication with the receiving chamber.

3. A receiving chamber located above the floor level, a series of separate closet members arranged in radial positions about the receiving chamber, and horizontal radially disposed connections between the chamber and closets.

In testimony whereof, I have hereunto set my hand this 6th day of January 1911.

WILLIAM M. WARD.

Witnesses:
ALFRED MCCRAY,
F. L. WALKER.