E. L. STALLINGS.

CONNECTION FOR WATER CLOSETS.

APPLICATION FILED JAN. 22, 1908.

927,611. Patented July 13, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

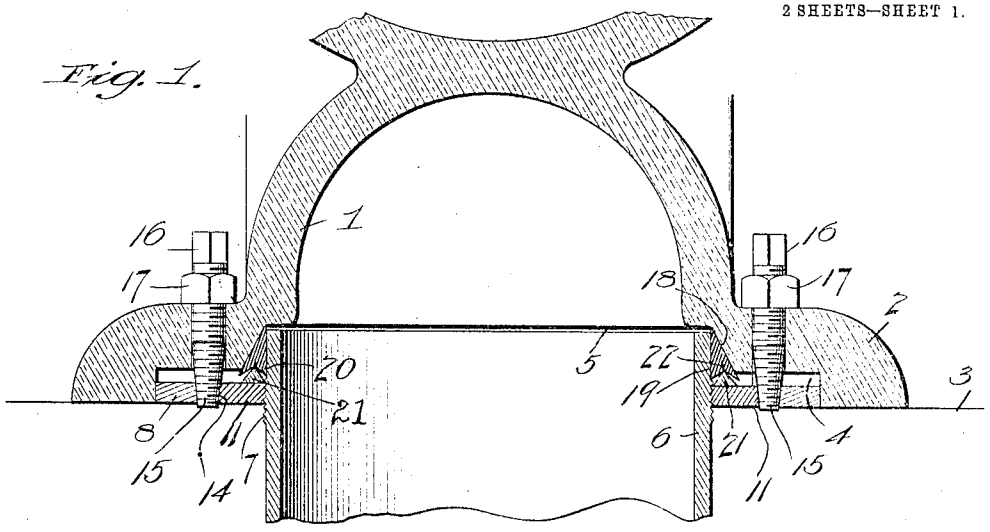


Fig. 2.

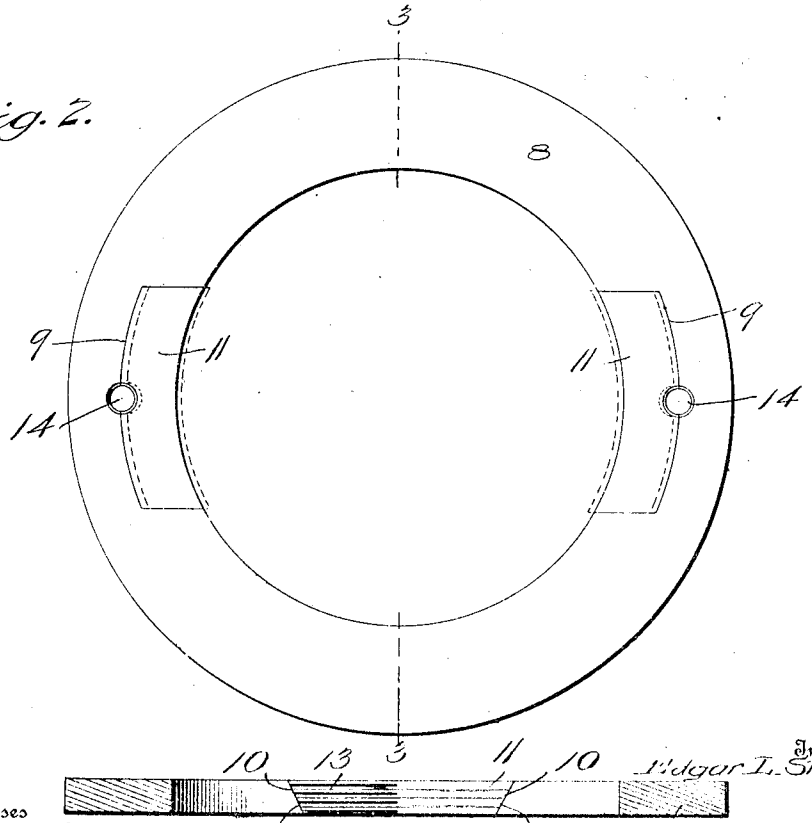


Fig. 3.

Witnesses

T. L. Mochane

P. F. Taylor

Inventor

Edgar L. Stallings

By

Jas. L. Skidmore

his Attorney.

E. L. STALLINGS.

CONNECTION FOR WATER CLOSETS.

APPLICATION FILED JAN. 22, 1908.

927,611. Patented July 13, 1909

2 SHEETS—SHEET 2

Fig. 4.

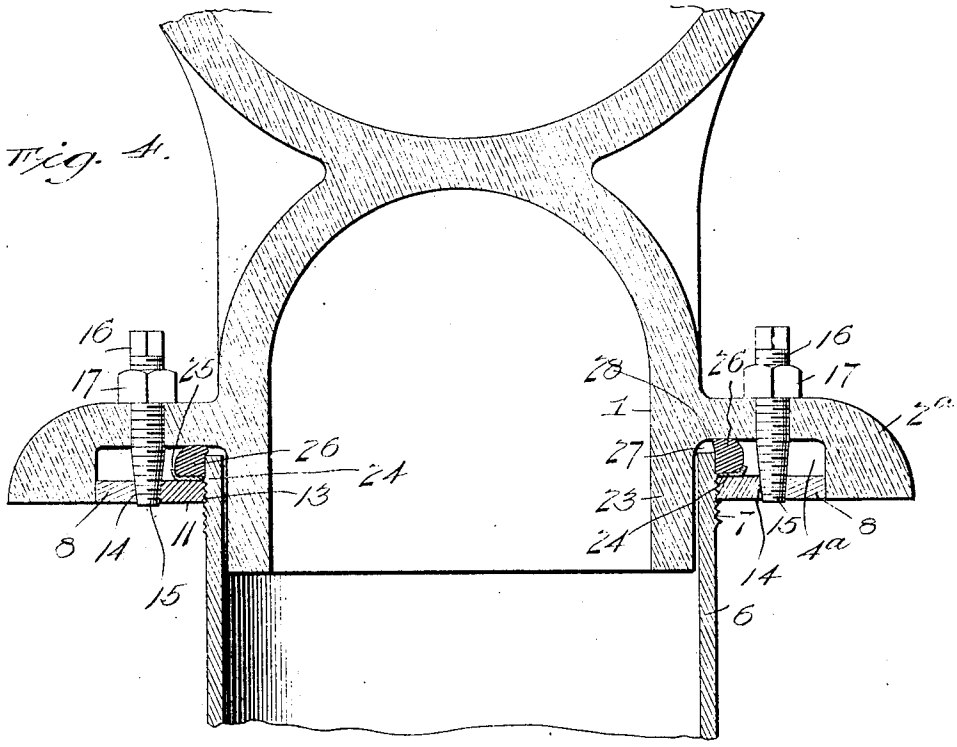
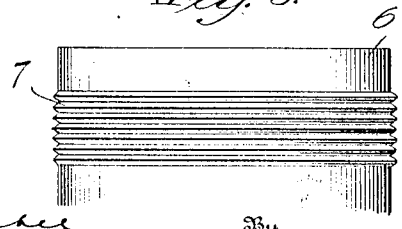


Fig. 5.



Fig. 6.



Witnesses

T. L. Mackaye

P. F. Taylor

Inventor

Edgar L. Stallings

By Jas. L. Skidmore

his Attorney

UNITED STATES PATENT OFFICE.

EDGAR L. STALLINGS, OF COLUMBIA, SOUTH CAROLINA, ASSIGNOR OF ONE-HALF TO HENRY J. BASSLER, OF COLUMBIA, SOUTH CAROLINA.

CONNECTION FOR WATER-CLOSETS.

No. 927,611. Specification of Letters Patent. Patented July 13, 1909.

Application filed January 22, 1908. Serial No. 412,044.

To all whom it may concern:

Be it known that I, EDGAR L. STALLINGS, a citizen of the United States, residing at Columbia, in the county of Richland and State of South Carolina, have invented certain new and useful Improvements in Connections for Water-Closet Bowls, of which the following is a specification.

This invention relates to pipe connections for water closet bowls, and its primary object is to provide simple and effective means for insuring a tight joint between the base of a closet bowl and the soil-pipe into which it discharges.

A further object of the invention is, to provide means for readily adjusting or compressing the packing employed as an element of the joint and maintaining the same in close contact with the upper end of the soil-pipe.

The invention comprises a ring surrounding the pipe, a plurality of clamps supported by said ring, and adjusting devices for said clamps.

The invention also comprises a ring surrounding the soil-pipe, a plurality of equidistant clamps supported by said ring and engaging said pipe, an annular packing surrounding said pipe, and means for compressing said packing against said pipe.

The construction of the improved joint will be fully described hereinafter, in connection with the accompanying drawings which form a part of this specification, and its features of novelty will be set forth in the appended claims.

In the drawings:—Figure 1 is a vertical section of the base of a water closet bowl, and the upper portion of a soil-pipe connected by my improved connecting devices. Fig. 2 is a top plan view on an enlarged scale of the ring employed. Fig. 3 is a section on the line 3—3 of Fig. 2. Fig. 4 is a vertical section illustrating a modified embodiment of the invention. Fig. 5 is a fragmentary perspective view on an enlarged scale of the ring, shown in Fig. 4 for supporting the packing, and Fig. 6 is a side elevation of the upper end of the soil-pipe.

The reference numeral 1 designates the base of a water-closet bowl, provided with an annular flange 2 adapted to rest upon a floor 3, and formed on its under side with an annular recess 4. The base 1 of the bowl is also provided with an internal annular shoulder 5 against which fits the upper end of the soil-pipe 6 formed adjacent to said upper end with a plurality of annular parallel ribs or corrugations 7.

Within the recess 4 of the base flange 2 is a flat ring 8 surrounding the pipe 6 and formed at equidistant points on its inner edge with segmental seats 9 having oppositely beveled end walls 10.

Within each of the seats 9 is loosely fitted a segmental clamping plate 11, the ends 12 of which are oppositely beveled to adapt them to fit the beveled walls of the seats 9. These clamps are formed with parallel longitudinal corrugations 13 to adapt them to engage the ribs or corrugations 7 of the pipe 6, and the outer edges of said clamps and the adjacent portions of the ring 8 are recessed and threaded to provide tapering sockets 14 to receive the lower tapered ends 15 of adjusting screws 16, said screws extending through openings in the base flange 2 and being provided with nuts 17 above said base flange.

Interposed between the upper end of the pipe 6 and the beveled wall 18 of the base of the bowl is an annular packing 19 of triangular form in cross section and formed at its base with an annular groove 20 to receive the upper edge of a supporting ring 21 of triangular form in cross section, said ring 21 resting upon the ring 8 and clamps 11.

The packing 19 is preferably of lead or other soft metal and is split on its lower surface as at 22 to adapt it to spread when the wedge-like edge of the ring is forced against it by the inward movement of the clamps 11.

The utility and advantages of the construction as thus described will be readily understood. The clamps are firmly held in engagement with the pipe by the tapered screws, and the packing 19 effectually prevents the escape of noxious gases between the pipe and bowl. The yielding packing avoids liability of breakage of the earthenware bowl, and said packing may be of rubber or other like material, although as above stated I preferably employ soft metal in its construction.

In the modification shown in Fig. 4, the base of the bowl is provided with a depending tubular extension 23 which extends down within the upper end of the pipe 6.

The annular flange 2^a of the bowl is formed on its under side with an annular recess 4^a to receive the ring 8 and clamps 11 as in the construction shown in Fig. 1.

In lieu of the triangular packing 19 and ring support 21, I employ in the modification a ring 24 resting on the clamps 11 and provided with a flange 25, and an annular yielding packing 26 of the cross-sectional contour shown in Fig. 4 supported on the ring 24. Said packing projecting into the space 27 between the upper end of the pipe 6 and the upper wall 28 of the recess 4^a.

As will be apparent this modified construction is substantially equivalent to that disclosed in Fig. 1 of the drawings, and I would have it understood that the invention includes all such further modifications or variations in the details of construction as may fall within the terms and scope of the following claims.

Having thus described by invention, what I desire to secure by Letters Patent and claim is:—

1. The combination with a water closet bowl, provided with a base-flange formed on its under side with an annular recess, of a soil pipe formed adjacent to its upper end with a series of parallel annular corrugations, a ring fitting within said recess, and provided with beveled seats, segmental clamps loosely supported within said seats, and corrugated on their inner surfaces, an annular packing interposed between the pipe and bowl, and means for forcing said clamps inwardly.

2. The combination with a water closet bowl, provided with a base flange formed on its under side with an annular recess, of a soil-pipe formed adjacent to its upper end with a series of parallel annular corrugations, a ring fitting within said recess, and provided with beveled seats, segmental clamps loosely supported within said seats, and corrugated on their inner surfaces, and annular packing interposed between the pipe and bowl, and means for forcing said clamps inwardly, comprising tapering screws extending through openings in said base flange and tapering threaded sockets formed partly in said ring and partly in the outer edges of said clamps.

3. The combination with a water closet bowl provided with an interior annular shoulder, and a base flange provided on its under side with an annular recess, of a soil pipe fitting against said shoulder, and formed near its upper end with a series of annular parallel corrugations, a ring within said recess surrounding said pipe, and provided with a plurality of beveled seats, a plurality of segmental clamps within said seats and corrugated on their inner surfaces to engage the corrugations of said pipe, a yielding annular packing interposed between said pipe and bowl, supports for said packing resting on said clamps and means for forcing said clamps inwardly.

4. The combination with a water closet bowl provided with an interior annular shoulder, and a base flange provided on its under side with an annular recess, of a soil-pipe fitting against said shoulder, and formed near its upper end with a series of annular parallel corrugations, a ring within said recess surrounding said pipe, and provided with a plurality of beveled seats, a plurality of segmental clamps within said seats and corrugated on their inner surfaces to engage the corrugations of said pipe, a yielding annular packing interposed between said pipe and bowl, supports for said packing resting on said ring and means for forcing said clamps inwardly, comprising tapered screws extending through openings in said base flange, and into tapering threaded sockets formed partly in said ring, and partly in the outer edges of said clamps.

5. The combination with a water closet bowl, formed with an internal annular shoulder, a beveled wall below said shoulder, and an annular flange formed on its under surface with an annular recess, of a soil pipe fitting said shoulder, a ring within said recess formed with segmental seats, clamping-plates movably supported within said seats, a yielding packing interposed between the upper end of said pipe and the beveled wall of the bowl, a ring upon which said packing rests, and means for moving said clamping plates inwardly.

6. The combination with a water closet bowl, formed with an internal annular shoulder, a beveled wall below said shoulder, and an annular flange formed on its under side with an annular recess, of a soil pipe, a ring within said recess formed with segmental seats, clamping-plates movably supported within said seats, a yielding packing interposed between the upper end of said pipe and the beveled wall of the bowl, a ring upon which said packing rests, and means for moving said clamping plates inwardly, comprising tapered screws extending through openings in the flange of the bowl, and into tapered sockets formed partly in said clamping-plates and partly in the ring which supports said clamping plates.

EDGAR L. STALLINGS.

In presence of—
G. V. JOUBERT,
M. L. MANN.