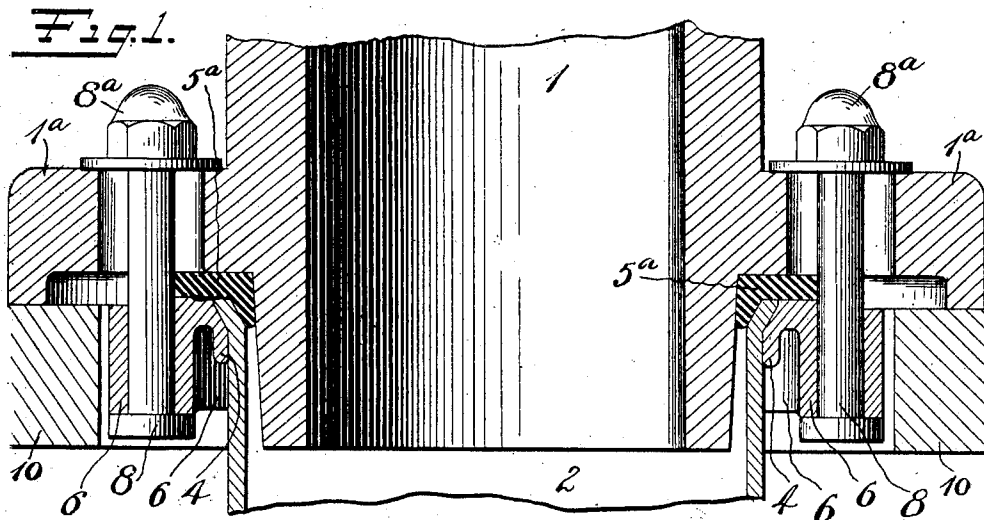
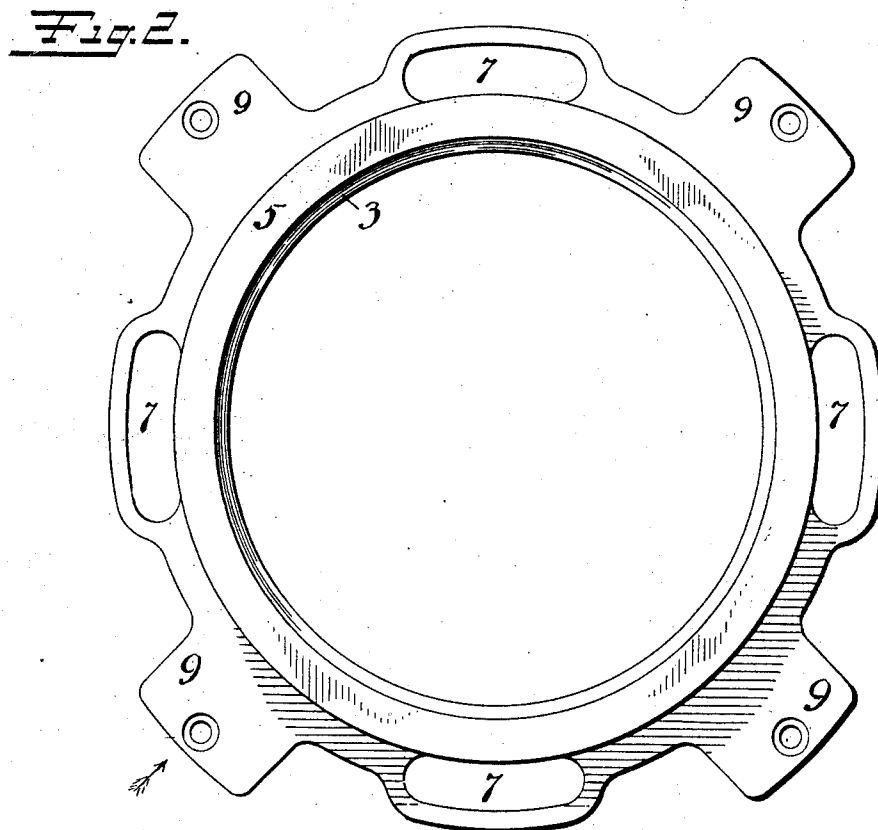


PATENTED JULY 24, 1906.

FLOOR FLANGE FOR WATER CLOSET BOWLS AND THE LIKE.

APPLICATION FILED DEC. 8, 1904.

2 SHEETS—SHEET 1.



Witnesses
Chas A. Beach
L. Treland.

Rollin C. Wilson & William H. Schulte.
Inventors.
By their Attorneys
Baxter, Bromberg & Hutchins

No. 826,638.

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R. C. WILSON & W. H. SCHULTE.

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2 SHEETS—SHEET 2.

Fig. 3.

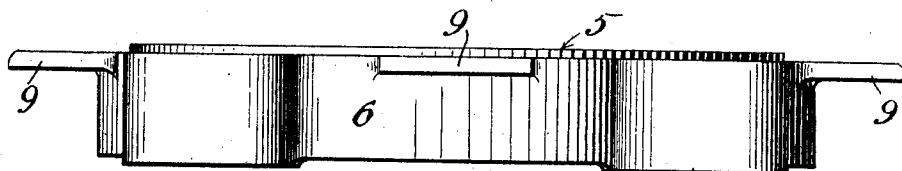


Fig. 4.

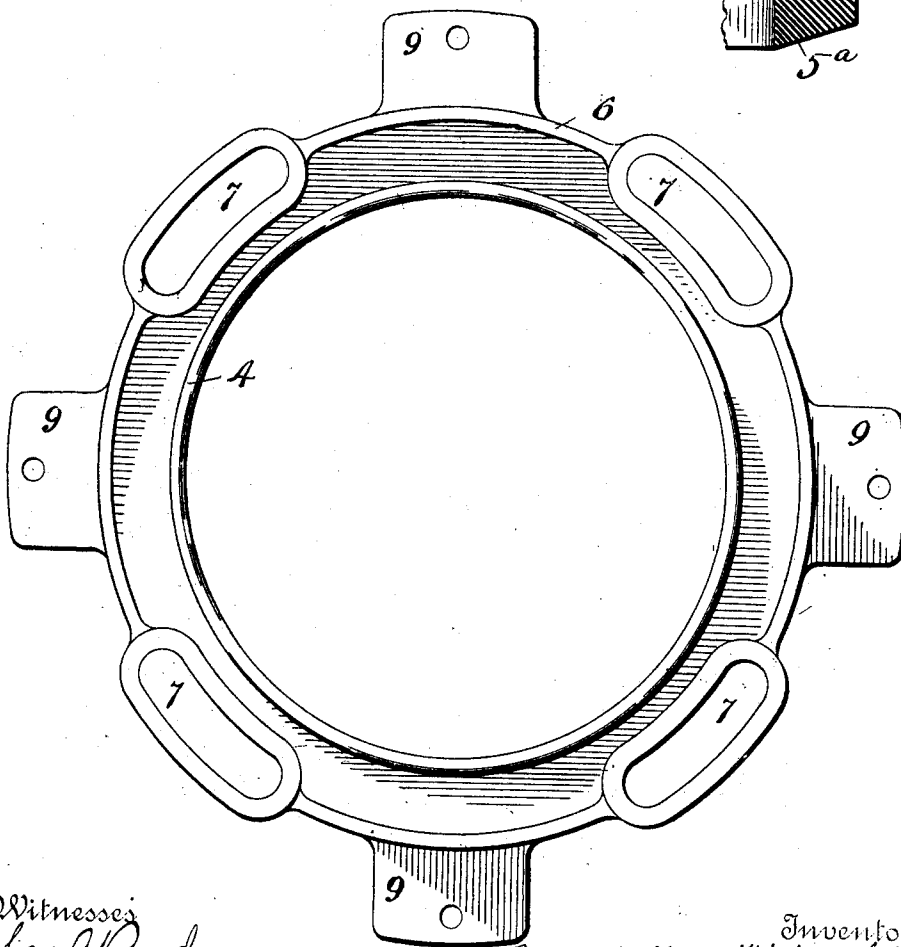
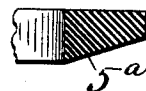


Fig. 5.



Witnesses
Chas. A. Baird
L. V. Vane

Inventors,
Rollin C. Wilson & William H. Schulte.
By their Attorneys,
Beulah B. Brown & Co.

UNITED STATES PATENT OFFICE.

ROLLIN C. WILSON, OF MOUNT VERNON, NEW YORK, AND WILLIAM H. SCHULTE, OF TRENTON, NEW JERSEY.

FLOOR-FLANGE FOR WATER-CLOSET BOWLS AND THE LIKE.

No. 826,638.

Specification of Letters Patent.

Patented July 24, 1906.

Application filed December 8, 1904. Serial No. 235,933.

To all whom it may concern:

Be it known that we, ROLLIN C. WILSON, residing at Mount Vernon, Westchester county, New York, and WILLIAM H. SCHULTE, residing at Trenton, Mercer county, New Jersey, citizens of the United States, have invented certain new and useful Improvements in Floor-Flanges for Water-Closet Bowls and the Like, of which the following is a full, clear, and exact description.

Our invention relates to improvements in floor-flanges particularly useful for water-closet bowls.

The object of our invention is to provide a means whereby an effective and durable liquid and gas tight joint may be made between a bowl and a soil-pipe, the said joint being equally secure at all points.

In the drawings, Figure 1 is a vertical sectional elevation of our floor-flange as it appears in use, showing a portion of the bowl and a portion of the soil-pipe. Fig. 2 is a plan view with the floor-flange detached. Fig. 3 is a side elevation thereof looking in the direction of the arrow, Fig. 2. Fig. 4 is a view of the under side of the floor-flange. Fig. 5 is a cross-section of one side of the packing or gasket before applied.

1 is the lower part or neck of the bowl.

2 is a soil-pipe. This pipe is usually formed of lead, and its upper end is flanged outwardly and soldered securely to the inner edge of the floor-flange.

The complete floor-flange is shown in Figs. 2, 3, and 4. Since it is important to understand the various parts thereof, said parts will be designated by different reference-numerals.

3 is a shoulder over which and in intimate contact with which the soil-pipe 2 is secured.

4 is a depending web of annular form which may be provided at the inner edge of the flange to afford ample bearing for the upper end of the pipe 2, said web giving added rigidity to the flange and aiding the main web, hereinafter described, in resisting any bending strains.

5 is a seat for a packing-gasket 5^a, formed of any suitable material.

The gasket is shown, Fig. 1, in place as it appears after the parts are assembled. This gasket is preferably made to have a cross-sectional shape like that illustrated in Fig. 5, in which the inner periphery is shown to be of

greater thickness than the outer periphery. By thickening the gasket toward its inner edge a more effective joint may be made, since the corner at the inner edge of the floor-flange where the pipe 2 makes connection may be pressed well into said gasket before the clamping force is distributed over the entire upper and lower surfaces.

6 is an upright web of generally circular outline. This web is spaced away from the inner edge of the flange. In line with the web bolt holes or slots 7 7 are formed. 8 8 are clamping-bolts. In the drawings four of these slots 7 7 are shown, although in use it is seldom that more than two are availed of, these two being diametrically opposite.

9 9 are flange-supporting ears of relatively thin metal, extending outside of the circle formed by the web 6. These ears 9 9 are usually secured to the floor 10 by wood-screws.

1^a is the foot of the bowl 1.

8^a represents nuts which may be fitted to the bolts 8 8 and by which the foot of the bowl and the flange may be drawn toward each other.

From the foregoing it will be seen that the construction of the flange as a whole is such that a uniformly-effective gas-tight joint may be formed entirely round the inner edge of the fitting. If the construction were such that the flange could bend, the seat 5 might be sprung substantially out of a given plane in case only two bolts were used, with the result that while the joint would be entirely effective close to the bolts it would be less effective and even faulty at intermediate points. By our construction the web being arranged substantially in the line of pull of the bolts so stiffens the flange that the strain will not bend it, but will be distributed equally all around. The advantage of having the ears 9 9 outside of the web 6 and yielding is that should the flange be applied to the floor at such a low plane (all around or at one side) that the foot 1^a of the bowl would contact with the floor 10 before the gasket is sufficiently clamped even then the parts may be drawn together still more without breaking said ears or pulling the fastenings or breaking the porcelain foot 1^a of the bowl. These dangers are avoided by making said ears so that they will yield sufficiently to permit the seat 5 to be drawn upwardly toward the bowl

and into more intimate contact with the gasket.

It should be understood that our invention is not limited to the particular use above referred to.

What we claim is—

1. In a device of the character described, an annular flat ring-like member, a seat thereon, a depending pipe-receiving flange at the inner edge thereof, a depending reinforcing stiffening-web on the under side of said annular member and outside of said flange, and fastening devices arranged externally of said seat but in such a position relatively thereto as to distribute the pulling strain of said fastening devices uniformly around said annular member.

2. In a flange of the character described, an annular member, a seat thereon, bolt-holes outside of said seat, a reinforcing stiffening-web of annular form arranged to distribute the pulling strain of the bolts located in said bolt-holes, and ears extending outside of said stiffening-web and constituting supporting means for said flange.

3. In a flange of the character described, an annular member, a seat thereon, bolt-

holes outside of said seat, a reinforcing stiffening-web of annular form arranged to distribute the pulling strain of the bolts located in said bolt-holes, ears extending outside of said stiffening-web, and constituting supporting means for said flange, said ears being yielding for the purpose described.

4. In a floor-flange for the purpose described, a flat annular member, a flat seat thereon, a depending pipe-receiving flange, fastening or clamping devices outside of said seat, and an annular depending reinforcing stiffening-web on the lower side of said annular member outside of said pipe-receiving flange, said clamping or fastening means engaging with that portion of the flange in line with said annular stiffening-web, whereby the pulling strain when the fastening devices are set up, will be distributed around said annular member uniformly.

Signed at New York city, New York, this 7th day of December, 1904.

ROLLIN C. WILSON.
WILLIAM H. SCHULTE.

Witnesses:

R. C. MITCHELL,
L. VREELAND.