E. G. WATROUS.

SUPPORTING DEVICE FOR WATER CLOSETS.

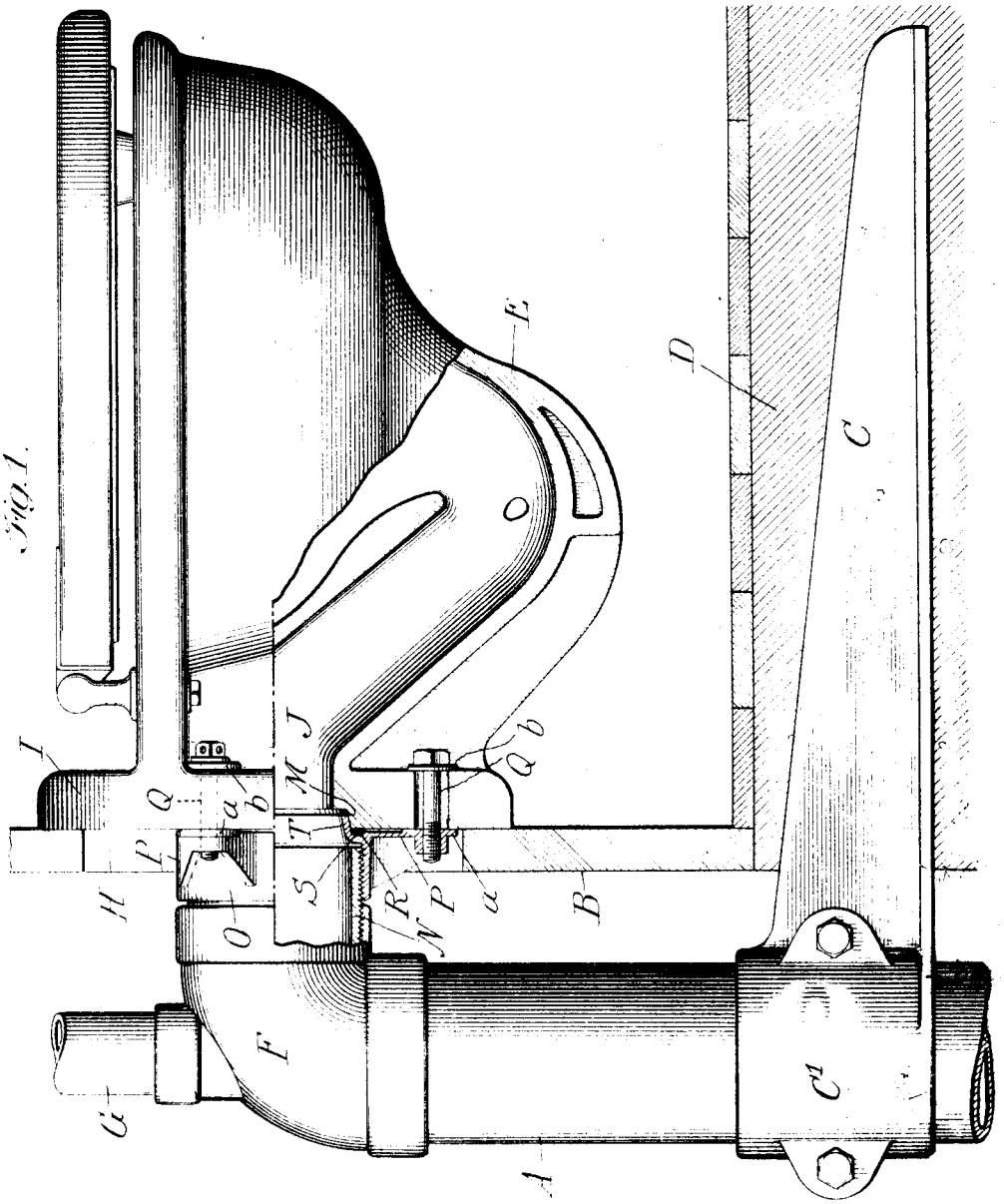
APPLICATION FILED MAY 29, 1914.

1,179,588.

Patented Apr. 18, 1916.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
Martin K. Olson.
Robert Dobberman

Inventor
Earl G. Watrous
By Reeder, Hibben, Davis & Macauley
His Attys

E. G. WATROUS.

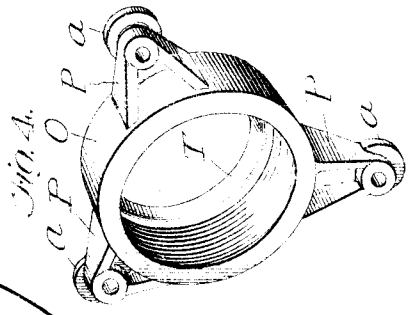
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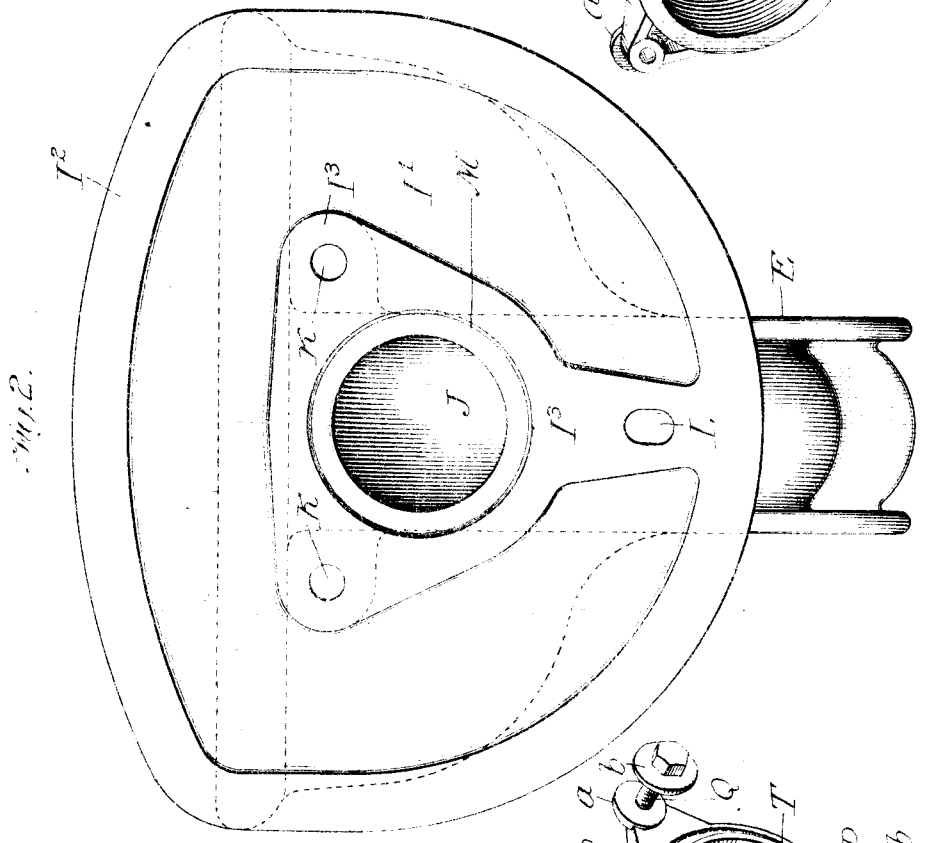
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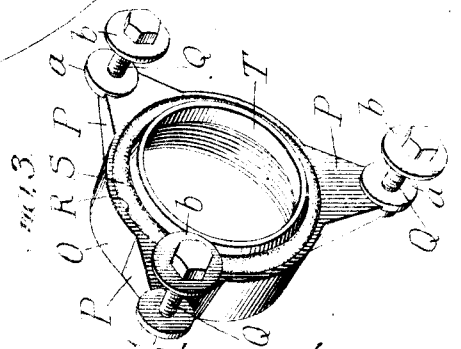
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2 SHEETS—SHEET 2.







Witnesses
Martin H. Olsen
Robert Dobberman

Inventor
Earl G. Watrous
By Keeton, Hobbs, Davis & Morgan
Attys.

UNITED STATES PATENT OFFICE.

EARL G. WATROUS, OF CHICAGO, ILLINOIS.

SUPPORTING DEVICE FOR WATER-CLOSETS.

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Application filed May 29, 1914. Serial No. 841,722.

To all whom it may concern:

Be it known that I, EARL G. WATROUS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Supporting Devices for Water-Closets, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

My invention has for its principal object the provision of a simpler and more efficient device for supporting and securing in position water-closets of the type which have a rearward discharge through the wall to the soil pipe behind the same and are supported from said pipe and have no support upon the floor.

The novelty of the invention will hereinafter be more fully set forth and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of a water-closet supported by a soil pipe by means of my improved supporting device, said view also disclosing a bracket-anchor secured to the soil pipe and embedded in the floor beneath the closet: Fig. 2 a rear elevation of the closet bowl shown in Fig. 1; Fig. 3 a perspective view of the forward side of my novel supporting device, and Fig. 4 a similar view of the rear side thereof.

The same letters of reference are used to indicate corresponding parts in the several views.

Referring to Fig. 1, A is a vertical soil pipe of a building, located in a stack behind the wall B, and in the present instance having secured to it an anchoring and supporting bracket C which is embedded in the floor D, beneath the closet bowl E, which latter is supported upon the pipe A in the manner and by the means to be described. The bracket C is provided with a split hub C′ which embraces and is firmly clamped upon the soil pipe A. In the form shown, the bracket is of inverted T-shape in cross-section, having a horizontal base flange and a middle vertical web, and is shown as embedded in the concrete floor, but where floors of other construction are employed the bracket may be introduced in and rest upon the floor in any suitable manner that will resist downward strain upon it. Inasmuch as the closet bowl E is supported entirely from the soil pipe, any strain imposed by weight upon the closet will be transmitted through the pipe to the bracket C and be resisted and supported by the latter.

In the instance shown in the drawings the closet is supported upon or from the upper end of the soil pipe A, the latter having screwed upon it an elbow F from which leads a vent pipe G; but the closet may of course be similarly supported from a T-fitting interposed in a soil pipe extending to floors above that upon which the closet shown is located.

The wall B is provided with a large circular opening H, over and around which fits the wall-flange I which is formed upon the rear end of the closet bowl E. A rear view of this wall-flange of the closet is shown in Fig. 2, where it will be seen that it has a recessed or depressed portion I′ formed in its rear face, such recessed or depressed portion being surrounded by a comparatively narrow raised portion I^2, the surface of which is accurately ground. At the center of the recessed or depressed portion is a raised portion I^3 surrounding the discharge outlet J of the closet and flush with the peripheral surface I^2, and accurately ground like the latter. This central raised portion, surrounding the discharge opening J, is of approximately triangular shape in the present instance, and is provided with three bolt holes, two of them, K K, being located above and upon opposite sides of the discharge outlet J, and the third, L, being located vertically beneath said outlet.

The internally threaded horizontal arm of the elbow F has firmly screwed into it an externally threaded sleeve or nipple N, upon the forward end of which sleeve or nipple is screwed the hub of the closet-attaching member O, which is shown in perspective view in Figs. 3 and 4. This hub is provided with three radial arms P, each provided at its outer end, in the present instance, with a circular boss *a* centrally tapped with a threaded hole for the reception of a bolt Q, and each having its front face slightly raised above the front face of the arm P. Washers *b* are confined on the bolts Q by the heads of the latter.

Formed in the front end or forward face of the hub O is an annular recess R, Figs. 1 and 3, in which is seated a packing ring or gasket S, which is preferably circular in cross section before it is compressed in assembling the parts. Projecting forward be-

yond the annular recess R, and forming a continuation of its inner wall, is a short circular flange or nipple T adapted to enter and fit within the annular recess M in the rear face of the closet bowl structure, Figs. 1 and 2.

Under the above described construction, the parts may be conveniently assembled, and the closet secured to the soil pipe, in the following manner: The bolts Q are removed from the arms P of the attaching member O, and the latter is applied to the rear face of the closet, with the flange or nipple T fitting within the annular recess M, with the packing ring S bearing against the rear face of the portion I^3 of the closet immediately surrounding the recess M, and with the front faces of the circular bosses *a* upon the outer ends of the arms P of the attaching member fitting against the accurately ground face of the portion I^3 at the three corners thereof, the threaded holes in the bosses *a* being coincident with the bolt holes K K and L. The bolts Q are then inserted through said bolt holes from the forward side of the wall flange, with the washers *b* upon them, and their threaded rear ends screwed into the threaded holes in the outer ends of the arms P of the attaching member O, so as to draw the latter tightly against the rear face of the portion I^3 of the wall flange of the closet, thereby compressing the packing ring S between the forward face of the hub O of the attaching member and the accurately ground face of the portion I^3 of the wall flange of the closet, around the recess M therein, and forming a perfectly water and gas-tight joint between said parts, while at the same time firmly securing the attaching member O to the closet. With said attaching member thus secured to the closet, it is applied to the front of the threaded nipple N, which projects forwardly from the elbow F of the soil pipe into the opening H in the wall B, and the closet bowl and attaching member are turned together upon said nipple until the attaching member is screwed firmly upon said nipple and the closet bowl is brought into desired position with the rear face of its wall flange I in close proximity to the front face of the wall B of the room.

The provision of the accurately ground surface I^3 upon the rear face of the wall flange of the closet, surrounding the annular recess M and the discharge opening J, the plane of such surface being at right angles to the axis of the closet connection and the opening J, affords a perfect bearing and contact surface for the attaching member O, and insures the accurate positioning of the closet when attached to the soil pipe by means of such attaching member. Such accurately ground surface, in such plane, likewise affords a perfect contact surface for the packing ring or gasket S surrounding the recess M and discharge opening J, and insures a perfectly water-tight and gas-tight joint between the attaching member O and the closet. The location of the marginal surface I^2 of the rear face of the wall flange of the closet in the same plane with the surface I^3 enables both of said surfaces to be accurately ground at one and the same operation, while the separation of said surfaces from each other by the intermediate recess I′ very materially lessens the work of the grinding operation, as compared with the work which would be required if said recess were omitted and the rear face of the wall flange formed of one continuous surface.

Having thus fully described my invention I claim:

1. The herein described supporting and attaching device for water-closets, comprising the threaded hub O having the radial arms P and provided at its forward end with the circular flange or nipple T and in its forward face with the annular recess R surrounding said flange or nipple, and the bolts Q engaging the outer ends of the arms P; substantially as described.

2. The herein described supporting and attaching device for water-closets, comprising the threaded hub O having the radial arms P having the raised bosses *a* at their extremities, said hub O being provided at its forward end with the flange or nipple T and in its forward face with the recess R surrounding said flange or nipple, and the bolts Q engaging the bosses *a* upon the extremities of the arms P and carrying the washers *b*; substantially as described.

3. The combination, with the wall B of a room provided with the opening H, of the soil pipe A located behind said wall and provided with the fitting F having the forwardly projecting horizontal member coincident with the opening H in said wall, the water-closet E in front of said wall, provided with the wall flange I having the ground rear faces I^2 and I^3 located in the same plane and separated by the recess I′, the attaching member O supported upon the fitting F and provided in its forward face with the annular recess R, the packing ring S seated in said recess R and bearing against the face of the portion I^3 of the wall flange of the closet around the discharge opening J, and the bolts Q securing the attaching member O to the wall flange I of the closet.

4. The combination, with the wall B of a room, provided with the opening H, of the soil pipe A located behind said wall and provided with the fitting F having the forwardly projecting horizontal member coincident with the opening H in said wall, the water-closet E in front of said wall, provided with the wall flange I having the

ground rear faces I^2 and I^3 located in the same plane and separated by the recess I', and having the annular recess M in the portion I^3 surrounding the discharge opening J, and provided with the three triangularly arranged bolt holes K K and L, the threaded hub O supported upon the fitting F and having the radial arms P, and provided at its front end with the flange or nipple T fitting within the recess M of the closet structure, and with the annular recess R surrounding said sleeve or nipple, the packing ring S seated in said recess R and bearing against the face of the portion I^3 of the wall flange I of the closet around the recess M therein, and the bolts Q passed through the bolt holes K K and L in the wall flange I of the closet and engaging the outer ends of the arms P of the hub O; substantially as described.

5. The combination, with the wall B of a room, provided with the opening H, of the soil pipe A located behind said wall and provided with the fitting F having the forwardly projecting horizontal member coincident with the opening H in said wall, the water-closet E in front of said wall, provided with the wall flange I having the ground rear faces I^2 and I^3 located in the same plane and separated by the recess I', and having the annular recess M in the portion I^3 surrounding the discharge opening J, and provided with the three triangularly arranged bolt holes K K and L, the threaded hub O, the nipple N connecting the said hub with the fitting F and serving to support said hub upon said fitting, said hub O having the radial arms P and provided at its front end with the flange or nipple T fitting within the recess M in the wall flange I of the closet, and having the annular recess R surrounding said flange or nipple, the packing ring S seated in said recess and bearing against the ground face of the surface I^3 of the closet around the recess M therein, and the bolts Q passed through the bolt holes K K and L in the flange I of the closet and engaging the arms P of the hub O; substantially as described.

6. The combination, with the wall B of a room, provided with the opening H, of the soil pipe A located behind said wall and provided with the fitting F having the forwardly projecting horizontal member coincident with the opening H in said wall, the water-closet E in front of said wall, provided with the wall flange I having the ground rear faces I^2 and I^3 located in the same plane and separated by the recess I', and having the annular recess M in the portion I^3 surrounding the discharge opening J, and provided with the three triangularly arranged bolt holes K K and L, the threaded hub O supported upon the fitting F and having the radial arms P provided with the circular bosses *a*, said hub O also having at its front end the flange or nipple T fitting in the recess M in the face I^3 of the flange I of the closet, and provided with the annular recess R surrounding said flange or nipple, the packing ring S seated in said recess and bearing against the face I^3 of the closet flange around the recess M therein, the bolts Q passed through the bolt holes K K and L in the flange I and having their threaded rear ends engaged with the outer ends of the arms P of the hub O, and the washers *b* interposed between the heads of said bolts and the forward face of the flange I of the closet bowl; substantially as described.

7. The combination, with the wall B and floor D, the former provided with the opening H, of a vertical soil pipe A located in the stack behind said wall, the fitting F carried by said soil pipe and having the forwardly projecting horizontal member coincident with the opening H in the wall B, the bracket C secured to the pipe A beneath the fitting F and extending horizontally forward from the pipe A into the floor D, and the closet bowl E supported upon the fitting F in front of the wall B and provided with the flange I covering the opening H in said wall; substantially as described.

EARL G. WATROUS.

Witnesses:
LOUIS B. ERWIN,
ROBERT DOBBERMAN.