

No. 802,076.

PATENTED OCT. 17, 1905.

W. E. HINSDALE.

CLOSET JOINT.

APPLICATION FILED MAR. 8, 1905.

FIG. 1.

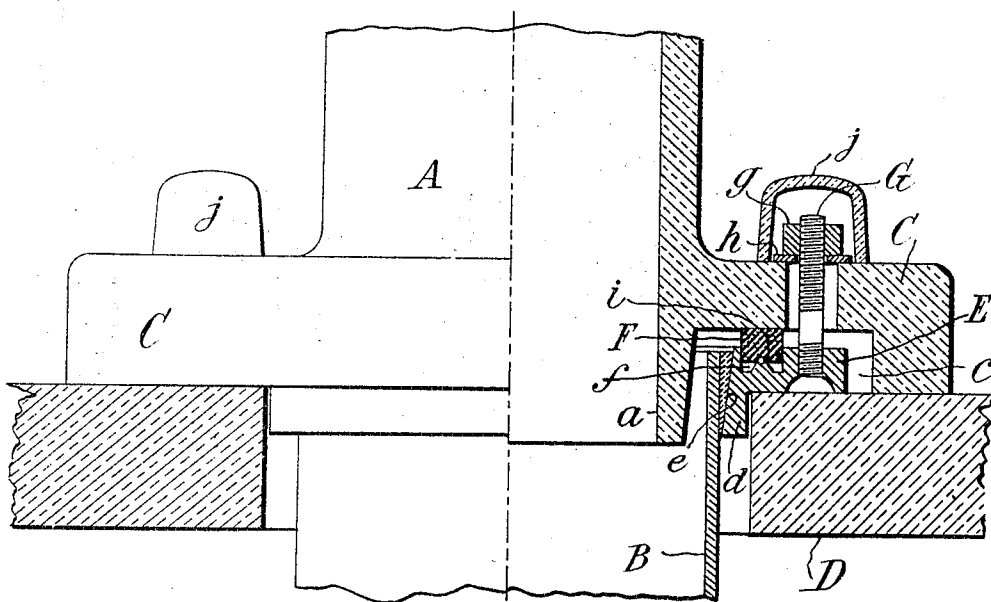


FIG. 2.

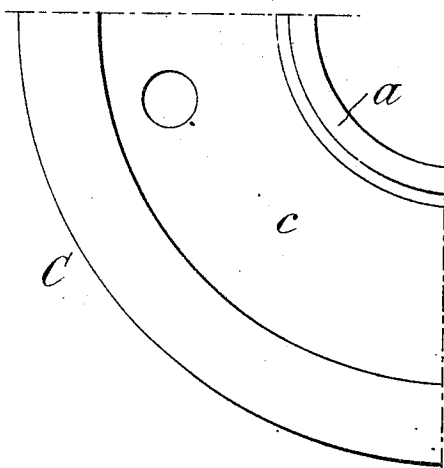
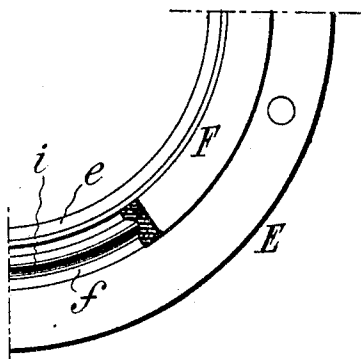


FIG. 3.



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UNITED STATES PATENT OFFICE.

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CLOSET-JOINT.

No. 802,076.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WINFIELD E. HINSDALE, a citizen of the United States, and a resident of the borough of Manhattan, in the city, county, and State of New York, have invented certain new and useful Improvements in Closet-Joints, of which the following is a specification.

This invention relates to closet floor-joints, and aims to provide certain improvements therein.

A large proportion of the closet-bowls now manufactured by the pottery establishments are constructed with a discharge-nozzle of standard type having a depending flange surrounding the discharge-opening which is designed to connect with the soil-pipe, and a flanged foot adapted to rest upon the usual supporting-slab for the bowl. In many localities there prevail sanitary laws which prohibit the use of a plastic material in forming the joint between the soil-pipe and the discharge-nozzle of the closet, as has been the common practice heretofore, and this has necessitated the formation of a mechanical joint between these parts. It is the object of my invention to provide a joint of this class which shall in the most efficient manner provide a gas-tight union between the parts which will be especially applicable to the standard type of bowl and which will be of simple construction and economical to manufacture.

To these ends in the preferred form of my invention I provide an annular floor-plate having a depending flange which is adapted to be soldered or otherwise secured to the end of the soil-pipe and a surrounding groove formed on the upper face of the plate in which a packing-gasket is seated, such groove having at its bottom an upwardly-extending circumferential rib which is adapted to press into the under side of the gasket when the plate and closet-foot are drawn toward each other by suitable clamping devices provided for this purpose.

Referring to the drawings, which illustrate my invention in its preferred form, Figure 1 is a view, partly in elevation and partly in vertical section, of a closet-foot provided with my improved joint. Fig. 2 is a view showing the under side of the closet-foot, and Fig. 3 is a plan of the floor-plate.

Referring to the drawings, let A indicate

the lower part of a closet-bowl or other fixture, which is formed with a depending flange *a* surrounding the discharge-opening of the closet and which is designed to enter the upper end of the soil-pipe B. The closet is also formed with a flanged foot C, adapted to rest upon the usual supporting-slab D. The under side of the foot is formed with a circumferential recess *c*, which is adapted to receive the floor-plate E, whose function it is to provide a gas-tight union between the soil-pipe and the closet-foot.

The floor-plate is constructed of metal (usually brass) and is formed with a central opening within which the soil-pipe is adapted to fit and at which point it is secured to the plate by soldering or otherwise. Preferably the plate is formed with a depending flange *d*, which assists in centering the plate and pipe within the opening in the slab and which forms a more extended soldering-surface for making the connection. Preferably, also, the plate at its opening is formed with a beveled or sloping face *e*, so that there is provided a space between it and the pipe for holding the solder. By this construction the end of the pipe may, if desired, be expanded to fit the beveled face of the plate and soldered to the latter along their upper edges. The plate is formed on its upper face with a circumferential groove *f*, which is designed to receive a packing-ring or gasket F, which is pressed between the plate and the under side of the closet-foot by any suitable clamping devices—such, for instance, as the bolts G shown—which are screwed into the plate at their lower ends and pass through openings in the closet-foot, being drawn upwardly by nuts *g*, bearing against the upper face of the closet-foot, washers *h* being usually interposed between the two, as shown.

The gasket F is preferably made of cork composition, but may be of any suitable material having the requisite degree of compactness. As before stated, the use of plastic materials or rubber is prohibited in many places, for the reason that their lack of durability renders their use dangerous. It is hence essential that a packing of a considerable degree of hardness be used, and I find that a cork composition serves the purpose effectively, being open to none of the objections which render the use of soft packings inadvisable.

Closet-bowls or similar fixtures being made of earthenware necessarily present somewhat uneven surfaces, due principally to the baking processes which such articles undergo. The under side of the flange C or any other surface against which the gasket may contact in an earthenware fixture hence has many inequalities which must be compensated for by the gasket in order to secure a perfectly tight joint. I have found in practice that if a gasket of the requisite degree of hardness is used and is merely compressed between the two plain surfaces a perfectly tight joint cannot invariably be made. This is due to the fact that as the under face of the closet-foot is usually uneven the floor-plate cannot compress the gasket against such face with sufficient pressure at all points to secure a gas-tight joint. I have found, however, that if the groove *f* is provided at its bottom with an upwardly-extending circumferential rib, such as *i*, a tight joint will always result when the gasket is placed under compression between the parts. The rib *i* presses upwardly against the gasket and cuts its way into the latter to a greater or less degree around its entire under face, the extent of its penetration depending upon the degree of unevenness of the face of the closet-foot. Any irregularities of the latter are hence compensated for, and a gas-tight union between the soil-pipe and closet is insured.

The exposed ends of the bolts G and nuts *g* are preferably concealed by porcelain caps *j*, which are cemented to the upper surface of the flange C.

It will be observed that my invention provides an extremely simple means for effecting the necessary gas-tight connection between the soil-pipe and bowl or similar fixture, which at the same time permits the easy removal of the fixture, if desired. While my invention is of especial value in that it is particularly adapted for use with the standard form of bowl, it will of course be understood that it requires no special closet formation and is hence susceptible of use with any fixture which affords the requisite bearing-surface for the gasket. By its use the bowl or other fixture can be mounted by any mechanic without previous experience and without the use of special tools.

While I have described in detail the preferred form of my invention, it will be understood that I do not wish to be limited thereto, as many changes may be made therein without departing from the invention.

I claim as my invention the following de-

finer novel features substantially as hereinbefore specified, namely:

1. The combination with a closet-bowl or similar fixture, of an annular floor-plate having an upwardly-extending circumferential rib, a gasket of relatively hard packing material between said rib and bowl, and means for drawing said bowl and plate toward each other to cause said rib to press into said gasket.

2. The combination with a closet-bowl or similar fixture, of an annular floor-plate having an upwardly-extending circumferential rib, a gasket of relatively hard packing material between said rib and bowl, means adapted to hold said gasket in place upon said rib, and means for drawing said bowl and plate toward each other to cause said rib to press into said gasket.

3. The combination with a closet-bowl or similar fixture, of an annular floor-plate having a circumferential groove on its upper face, and a circumferential rib at the bottom of said groove, a gasket of relatively hard packing material seated in said groove and bearing on its upper face against said bowl and on its under face against said rib, and means for drawing said bowl and plate toward each other to cause said rib to press into said gasket.

4. The combination with a closet-bowl or similar fixture, of an annular floor-plate having a depending flange to adapt it for connection with a soil-pipe, and having its upper face formed with a circumferential groove, and a circumferential rib at the bottom of said groove, a gasket of relatively hard packing material seated in said groove and bearing on its upper face against said bowl and on its under face against said rib, and means for compressing said gasket between said parts.

5. A floor-plate having its upper face formed with a circumferential groove, and a circumferential rib at the bottom of said groove.

6. A floor-plate having a depending flange to adapt it for connection with a soil-pipe, and having its upper face formed with a circumferential groove, and a circumferential rib at the bottom of said groove.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WINFIELD E. HINSDALE.

Witnesses:

ARTHUR C. PATTON,
THEODORE T. SNELL.