

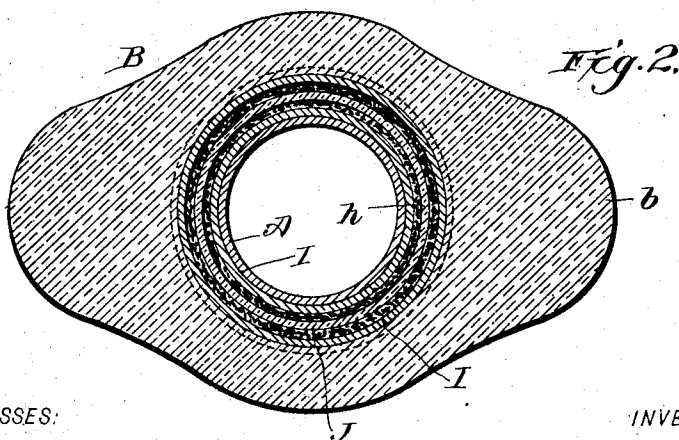
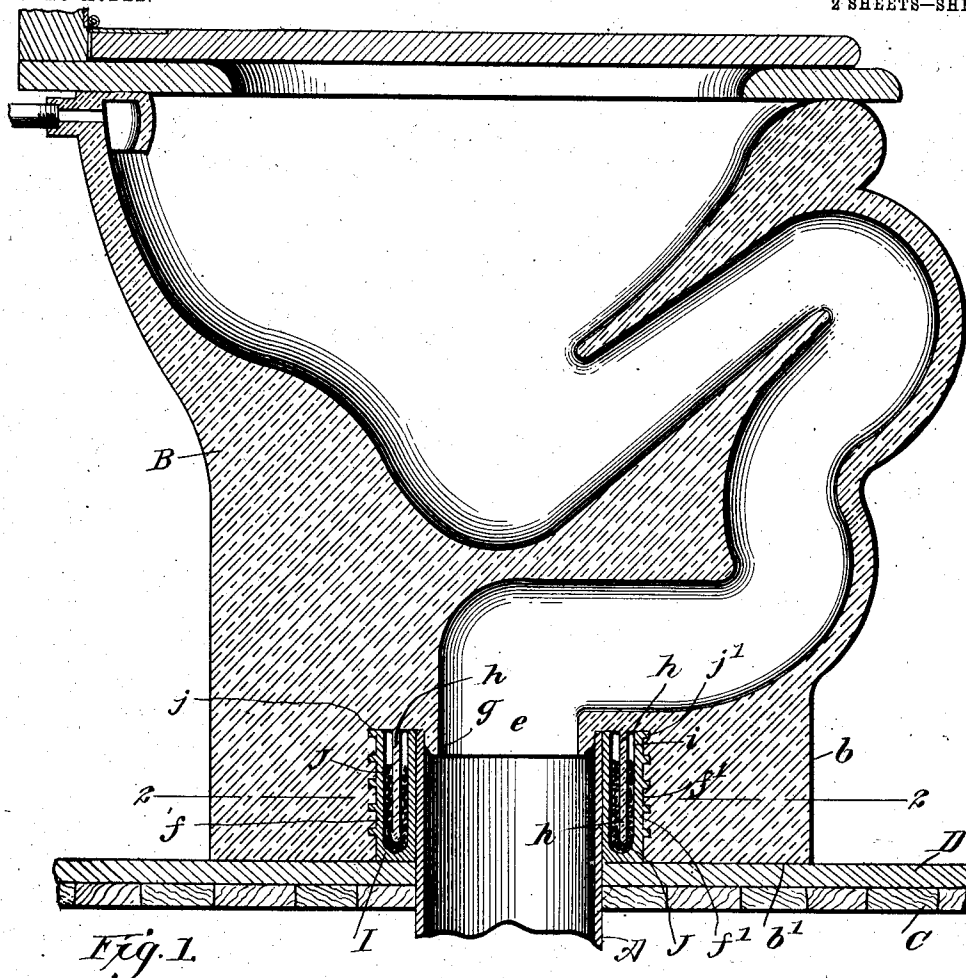
No. 760,874.

PATENTED MAY 24, 1904.

D. KEOHANE.
CLOSET CONNECTION.
APPLICATION FILED MAY 12, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

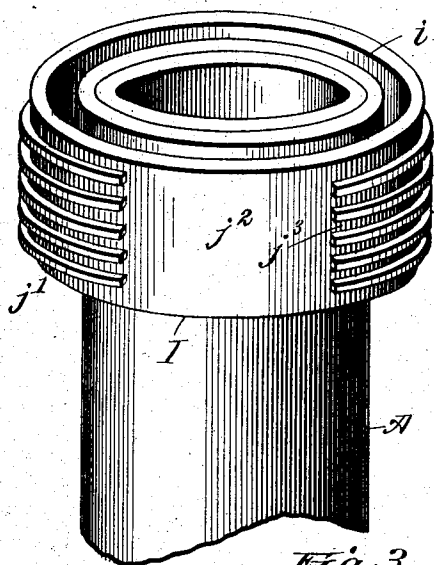


Fig. 3.

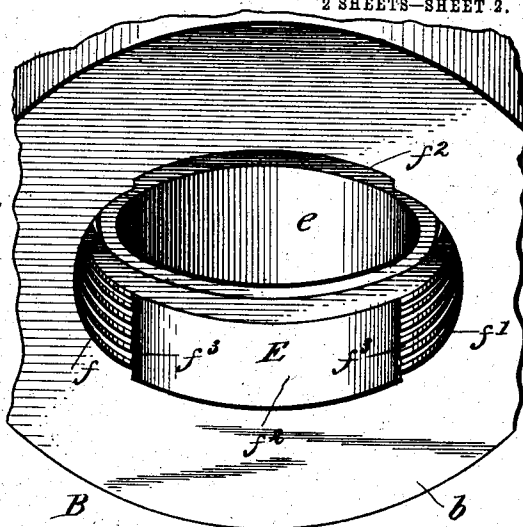


Fig. 4.

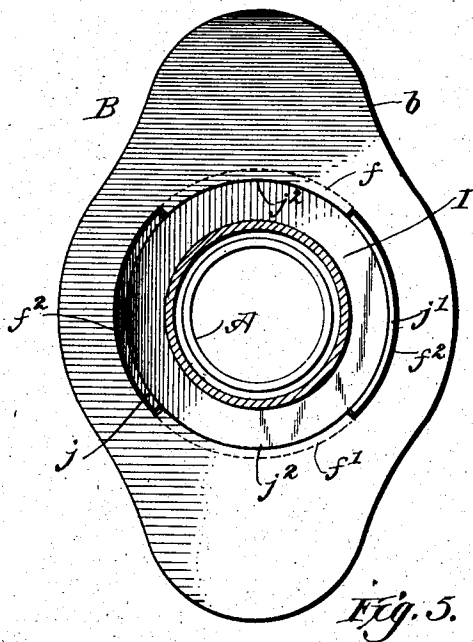


Fig. 5.

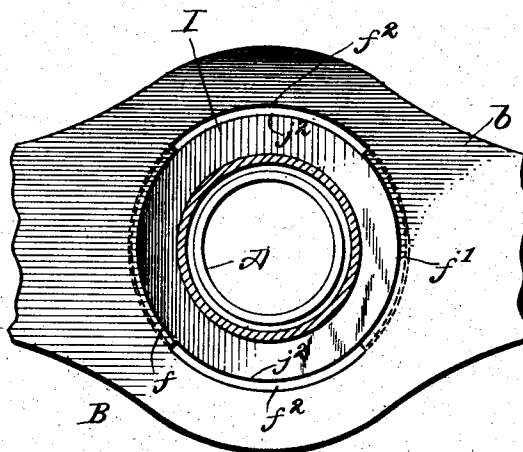


Fig. 6.

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CLOSET CONNECTION.

SPECIFICATION forming part of Letters Patent No. 760,874, dated May 24, 1904.

Application filed May 12, 1903. Serial No. 156,775. (No model.)

To all whom it may concern:

Be it known that I, DENIS KEOHANE, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Closet Connection, of which the following is a full, clear, and exact description.

My invention relates to improvements in water-closets and the like; and the object that I have in view is the provision of an improved connection between the soil-pipe and the lower part of the bowl, said connection affording a strong and tight coupling between the parts which overcomes escape or leakage of water or sewer-gas and the possibility of the bowl becoming displaced on the floor or a marble slab.

The improved connection enables a workman to easily and quickly set a closet in place without the use of bolts, screws, or other fastenings; and said connection is so disposed that the base of the bowl may rest squarely and solidly on a floor or slab.

Further objects and advantages of the invention will appear in the course of the subjoined description, and the novelty will be defined by the annexed claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical sectional elevation through a portion of a soil-pipe and a closet-bowl, showing the parts coupled by an improved connection of my invention. Fig. 2 is a horizontal sectional plan view in the plane of the dotted line 2 2 of Fig. 1. Fig. 3 is a detail perspective view of a portion of the soil-pipe, showing one member of the connection. Fig. 4 is an under perspective view of a part of the bowl having another member of the improved connection. Figs. 5 and 6 are sectional plan views illustrating the method of adjusting the bowl in the operation of coupling it to the soil-pipe.

A designates the upper portion of an ordinary soil-pipe, and B is a closet-bowl. These parts may be of any suitable materials or con-

struction preferred by those skilled in the art; but the lower part of the bowl is modified in a way to make it serve as one member of a coupling which is contemplated by my invention. The lower part of this bowl is shown by the drawings as formed to produce a base *b*, which is of increased length in one direction, and said base is provided with a flat under-bearing face *b'*, by which it is adapted to rest firmly on a floor *C* or upon a marble slab *D*, substantially as indicated by Fig. 1. The bowl is provided with an eduction-passage *e*, which opens into a vertical socket *E*, provided centrally in the bottom portion of said bowl. This socket is circular in cross-section, as indicated by Figs. 2, 5, and 6, and the surrounding wall of the socket is provided with two groups of parallel ribs *f f'*, said groups of ribs extending part way around the wall of the socket and being separated by intervening gaps or spaces *f''*, as clearly shown by the drawings. Each group of ribs *f f'* extends one-quarter way around the annular wall of the socket *E*, and the ribs of each group are of uniform thickness and are disposed parallel to each other in a way to form an intermediate series of grooves *f'''*.

The bowl *B* is furthermore provided with a lip or shoulder *g*, which surrounds the outlet-passage *e*, and said bowl is also provided with a depending web or flange *h*, which is circular in cross-section and is arranged concentric with the annular wall of the socket *E*, said web *h* being spaced relatively to the ribs *f f'* and extending continuously around the socket concentrically therewith.

The soil-pipe *A* extends through the floor *C* and the slab *D* a suitable distance for the reception of a sealing-cup *I*. This sealing-cup is of circular form and made of metal, although any other material may be employed. The sealing-cup is provided with a deep chamber *i*, and this cup is practically U-shaped in cross-section, although it is evident that the shape of the cup may be modified. The cup *I* is of such diameter that it will fit snugly over and around the upper projecting end of the pipe *A*, and the inner member or part of this cup is adapted to be fastened to said end of the

soil-pipe in a suitable way—as, for example, by soldering the parts one to the other.

The sealing-cup I is provided on the outer face of the outer leg or member with two groups of ribs $j'j'$, each group of ribs extending one-quarter way around the cup and said groups of ribs being separated by the intervening gaps or smooth faces j'' , as shown by the drawings. The ribs $j'j'$ of each group on the sealing-cup are of uniform thickness and arranged in parallel relation to produce a series of parallel grooves j'' between said ribs; but the sealing-cup is fastened to the pipe A in a position to bring its ribs $j'j'$ in reverse order to the ribs $f'f'$ on the bowl.

In the operation of setting a closet constructed in accordance with my invention the cup I is attached in a proper position to the upper end of the soil-pipe, and a suitable material, as J, is placed in the chamber i of this cup. This material may consist of graphite, putty, or any other substance which will resist the pressure and flow of water and also exclude the passage of sewer-gas. After the cup shall have been properly secured in position the bowl B is placed over the cup in the position shown by Fig. 5, so that the groups of ribs $f'f'$ of the bowl will pass through the spaces j'' between the ribs of the cup, while the ribs $j'j'$ of the cup will be received into the spaces f'' in the bowl. The operation of placing the bowl in position makes the web h extend into the sealing material J of the cup I, and it is now only necessary for the operator to give a quarter-turn to the bowl and make it take the position shown by Fig. 6. During this quarter-turn of the bowl the ribs $f'f'$ are moved into engagement with the ribs $j'j'$ of the cup, said ribs on the bowl being received in the grooves j'' of the cup, and in like manner the ribs of the cup fit into the grooves of the bowl. The two groups of ribs on the bowl and the cup are thus interlocked one with the other for the purpose of securely fastening the bowl in the adjusted position shown by Figs. 1, 2, and 6, and the enlarged base b of said bowl is adapted to bear firmly on the slab D or the floor C.

The described construction permits the bowl to be easily and quickly assembled and locked to the soil-pipe without the use of floor-bolts, screws, or other fastenings, although it may be desirable in some instances to employ short screws or bolts for holding the bowl against accidental displacement. The presence of the sealing material J in the cup and the embedding of the web h in such material secures a gas and liquid tight joint between the cup and the bowl, which effectually prevents the leakage of water or of sewer-gas.

In a prior application filed by me on May 28, 1903, Serial No. 145,147, I have disclosed a closet connection wherein the bowl is adapted to be bolted to a floor or slab, said bowl having

a flat base, a recess, a flange forming a continuation of the soil-passage, and a seal-flange between the wall of the recess and the first-named flange, said seal-flange producing two parallel channels or grooves. With the bowl and the soil-pipe is combined a seal-cup which has two members adapted to fit into the respective channels formed, as described, in the bowl, and into this cup is projected the seal-flange of the bowl, so as to be embedded in a sealing material adapted to be contained in the cup. I do not therefore in this application make any broad claim to the subject-matter just set forth.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of a soil-pipe, a seal-cup, a bowl having a recess, cooperating locking projections on the seal-cup and the bowl, said projections being engaged by a partial turn of the bowl and being effective in coupling said bowl and the seal-cup, and a member projecting from the bowl and adapted to be embedded in a sealing material to be contained in the seal-cup.

2. The combination of a soil-pipe having a cup rigid therewith, a closet-bowl, cooperating devices on the bowl and the cup for positively interlocking the parts by a quarter-turn of the bowl, and a gas-tight joint between the pipe and the bowl, said joint being located within said interlocked parts of the bowl and the cup.

3. The combination with a soil-pipe, of a seal-cup located externally with respect thereto, a bowl inclosing said cup, cooperating devices on the bowl and the cup for positively interlocking the bowl with said cup, a suitable sealing material in the cup, and a member projecting from the bowl and embedded in the sealing material for producing a gas and liquid tight joint between the bowl and the pipe.

4. The combination with a soil-pipe, of a seal-cup attached thereto and adapted to contain a suitable sealing material, a bowl having a socket and a member which is embedded in said sealing material, and complementary groups of ribs on the opposing surfaces of the cup and the socket of the bowl for positively interlocking said bowl with the cup, whereby the bowl may be coupled expeditiously with the soil-pipe and a gas and liquid tight joint is provided between the parts on the assemblage thereof.

5. The combination with a soil-pipe, of a seal-cup having an external series of ribs, a bowl having an internal series of ribs adapted for interlocking engagement with the ribs of said cup, and a member depending from the bowl and embedded in a sealing material of said cup and forming a gas and liquid tight joint between the parts.

6. The combination with a soil-pipe, of a seal-cup attached thereto and provided with

groups of ribs separated by intervening spaces, a bowl having a socket, and groups of ribs within said socket and disposed, by a quarter-turn of the bowl, to have interlocking engagement with the ribs of the cup.

5 7. The combination with a soil-pipe, of a cup having on its outside face two groups of parallel ribs separated by intervening spaces, a bowl having a socket and a web depending
10 into said cup, and two groups of ribs within the said socket of the bowl, and adapted for interlocking engagement with the ribs of the cup, said web of the bowl projecting into the chamber of said cup.

15 8. The combination of a soil-pipe, two

groups of ribs surrounding said soil-pipe, a bowl having complementary groups of ribs adapted for interlocking engagement with the first-named groups of ribs and a gas-tight joint between said pipe and bowl; said joint
20 being located within the interlocked parts of the soil-pipe and the bowl.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DENIS KEOHANE.

Witnesses:

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H. T. BERNHARD.