T. E. CROSBY.

FLOOR CONNECTION.

APPLICATION FILED NOV. 29, 1912.

1,112,360.

Patented Sept. 29, 1914.

2 SHEETS—SHEET 1.

Fig. 1.

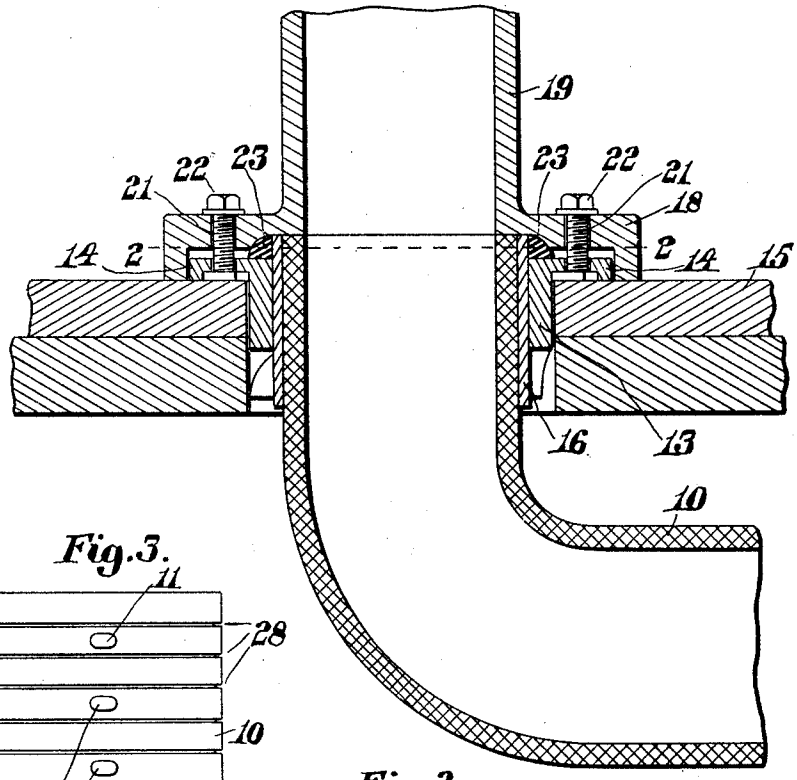
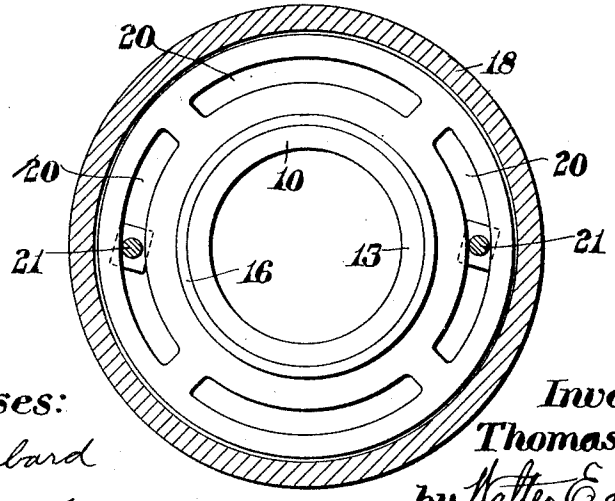


Fig. 3.

Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 4.

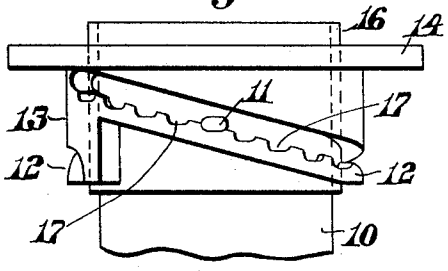


Fig. 5.

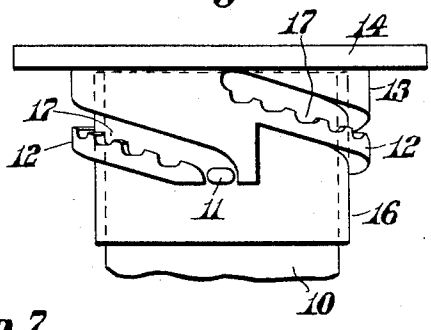


Fig. 7.

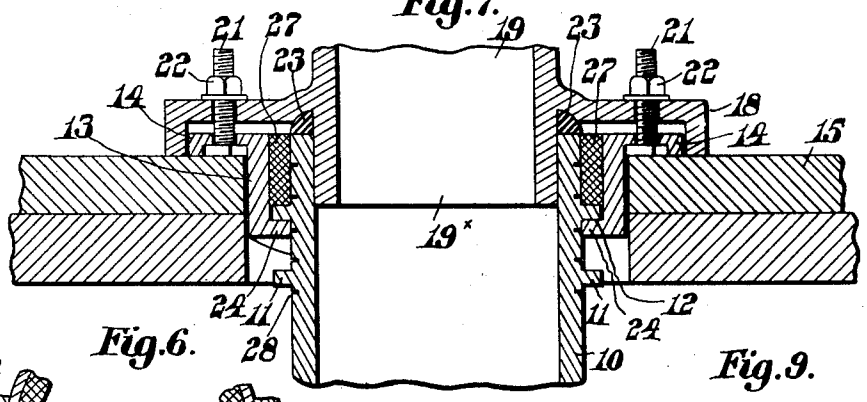


Fig. 6.

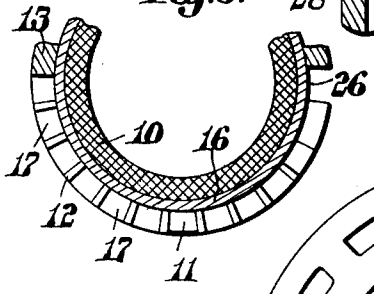


Fig. 8.

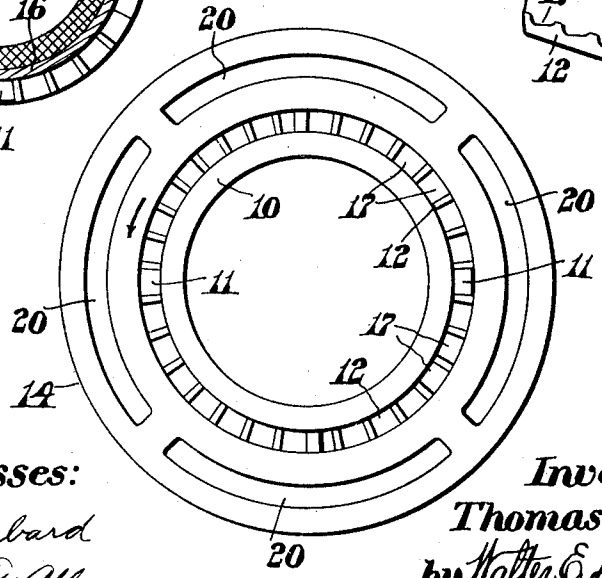
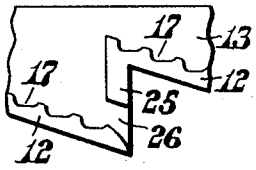


Fig. 9.



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UNITED STATES PATENT OFFICE.

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FLOOR CONNECTION.

1,112,360. Specification of Letters Patent. Patented Sept. 29, 1914.

Application filed November 29, 1912. Serial No. 734,192.

To all whom it may concern:

Be it known that I, THOMAS E. CROSBY, a citizen of the United States of America, and a resident of Allston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Floor Connections, of which the following is a specification.

This invention relates to means for connecting plumbing fixtures with closet bends, and is particularly adapted for floor connections of water closets.

The object of the invention is to provide a device of this class which will be gas and water tight.

The invention consists primarily in providing a closet bend with a plurality of diametrically opposed lugs in different horizontal planes, which lugs are adapted to be engaged by a plurality of inclined tracks formed upon a floor plate surrounding the discharge opening from the closet bowl.

The invention further consists in providing said inclined tracks with a plurality of lug engaging steps which are adapted to lock the floor plate in adjusted position and prevent retrograde movement thereof.

The invention consists further in certain novel features of construction and arrangement of parts which will be fully understood by reference to the description of the drawings and to the claims hereinafter given.

Of the drawings Figure 1 represents a vertical section of a connection embodying the features of the present invention. Fig. 2 represents a horizontal section thereof, the cutting plane being on line 2—2 on Fig. 1. Fig. 3 represents an elevation of the upper end of an iron closet bend, and showing a plurality of outwardly extending lugs thereon in different horizontal planes. Fig. 4 represents an elevation of the upper end of a lead bend having a collar secured thereto provided with outwardly extending lugs and a floor plate surrounding the same. Fig. 5 represents a similar view showing the floor plate about to be engaged with one of the outwardly extending lugs. Fig. 6 represents a horizontal section of a portion of one of said floor plates. Fig. 7 represents a vertical section of a modified form of closet connection in which the floor plate is provided with a downwardly extending cylindrical wall having extending inwardly therefrom inclined stepped flanges adapted to coact with the outwardly extending lugs on the closet bend. Fig. 8 represents a plan of the floor plate and the closet bend engaged therewith, and Fig. 9 represents an inside elevation of a portion of said floor plate.

Similar characters designate like parts throughout the several figures of the drawings.

In the drawings, 10 represents a closet bend preferably having formed integral therewith a plurality of outwardly extending lugs 11 in different horizontal planes, the lugs in one of said planes being adapted to be engaged by means of an inclined track formed upon a cylindrical hub 13 of a floor plate 14, the under face of which is adapted to rest upon the upper face of a floor 15. The cylindrical hub 13 is adapted to surround the upper end of the closet bend 10. When the hub 13 is provided with the inclined tracks 12 cut through the wall thereof as indicated in Figs. 4 and 5 of the drawings, the inner wall of said hub is adapted to fit closely to the outer wall of the closet bend 10 or the outer wall of a collar 16 fitted over and secured to said closet bend 10 when the latter is formed of lead.

It is obvious that when the closet bend 10 is made of lead, as indicated in Fig. 1 of the drawings, it is essential that a collar of brass or some other material be secured thereto, having formed thereon or secured thereto the outwardly extending lugs 11. Each inclined track 12 is provided with a plurality of depressions or steps 17 with which the lugs 11 are adapted to engage to lock the floor plate 14 in adjusted position relative to the closet bend 10 and clamp it against the floor. The floor plate 14 is inclosed by the recessed base portion 18 of a watercloset bowl 19, only the discharge portion of which is shown in the drawings. The outwardly extending flange of the floor plate 14 is provided with a plurality of slots 20 concentric with the cylindrical hub 13 thereof, and through these slots 20 extend the headed bolts 21 the outer ends of which are threaded to the nuts 22 by which the floor plate and base portion 18 of the watercloset bowl are securely clamped together, a packing member 23 being interposed between these two elements. Owing to the inclined or curved outer face of this packing member 23 it is obvious that it will be more firmly pressed into contact with the outer wall of the sleeve

16 or closet bend 10 as the case may be when the inner wall of the base portion 18 is moved toward the floor plate 14 by means of the adjusting nuts 22.

When the bowl is of the spigot type in which the cylindrical extension 19x is positioned within the end of the closet bend 10 it is preferable to provide the cylindrical hub 13 with inwardly extending flanges 24 on which are formed the inclined lug engaging tracks 12, each track having a plurality of steps or depressions 17 formed therein. From the upper end of each inclined flange 24 extends downwardly a wall 25 the lower end of which is separated from the lower end of the next track 12 a distance somewhat greater than the thickness of one of the outwardly extending lugs 11 as indicated at 26 in Fig. 9 of the drawings. This affords an opportunity for the lugs 11 to enter the annular hub 13 so that the floor plate 14 may be moved about its axis independently of the watercloset bowl 19 and the bend 10 sufficiently to adjust the upper end of the closet bend 10 above the upper surface of the floor 15 so that when the bowl 19 is positioned it will compress to some extent the packing 23 interposed between the upper end of the closet bend and the lower face of the recessed base portion 18. When this adjustment has been made the openings 26 may be closed up with oakum and then the space between the inner wall of the hub 13 and the outer wall of the closet bend 10 is filled with lead, as indicated at 27 in Fig. 7 of the drawings. Where an iron closet bend 10 is used it is provided with a plurality of annular incisions 28, these incisions being for the purpose of facilitating the shortening of the end of the bend 10 by removing one or more sections thereof. Where the closet bend is made of lead it is obvious that a section may be readily cut from the end thereof and the brass collar 16 soldered in any desired position thereon. This makes a very simple form of floor connection which is very effective in operation, securing as it does an absolutely gas and water tight joint.

It is believed that the operation and many advantages of the invention will be fully understood from the foregoing description.

Having thus described my invention, I claim:

1. In a floor connection for water closets, the combination of a closet bend immovably positioned and provided with oppositely disposed outwardly extending lugs integral therewith; a plumbing fixture having a recessed bottom flange adapted to rest on a floor and provided with concentric slots; a floor plate within the recess of said flange movable relatively to said bend and fixture and provided with downwardly inclined extensions surrounding said bend, said extensions having lug receiving depressions in their upper faces; and means extending from said plate through said slots for locking said plate in adjusted position.

2. In a floor connection for water closets, the combination of a closet bend immovably positioned and provided with a plurality of outwardly extending lugs integral therewith and in different horizontal planes; a plumbing fixture having a recessed bottom flange adapted to rest on a floor and provided with concentric slots; a floor plate within the recess of said flange movable relatively to said bend and fixture and provided with downwardly inclined extensions surrounding said bend, said extensions being adapted to pass between the lugs and having lug receiving depressions in their upper faces; and means extending from said plate through said slots for locking said plate in adjusted position.

3. In a floor connection for water closets, the combination of a plumbing fixture adapted to rest upon a floor and having a bottom flange provided with a recess in its under face; a fixed closet bend having its upper end positioned within said recess, said bend being provided with outwardly extending peripheral lugs in the same horizontal plane; a floor plate within said recess provided with an annular flange extending downwardly in an opening in the floor and surrounding said closet bend, said flange being provided with a plurality of continuously inclined tracks extending inwardly toward the periphery of said closet bend each having a series of lug-receiving depressions therein having horizontal bottoms; and means for securing said plumbing fixture to said floor plate.

4. In a floor connection for water closets, the combination of a plumbing fixture adapted to rest upon a floor and having a bottom flange provided with a recess in its under face; a fixed closet bend having its upper end positioned within said recess, said bend being provided with outwardly extending peripheral lugs; a floor plate within said recess provided with an annular flange extending downwardly in an opening in the floor and surrounding said closet bend, said flange being provided with a plurality of continuously inclined lug engaging tracks the upper and lower walls of which are parallel, while the lower wall is provided with a plurality of lug engaging depressions having flat horizontal bottoms; and means for securing said plumbing fixture to said floor plate.

5. In a floor connection for water closets, the combination of a plumbing fixture adapted to rest upon a floor and having a bottom flange provided with a recess in its under face; a fixed closet bend having its upper end positioned within said recess, said bend being provided with outwardly extending peripheral lugs; a floor plate within said recess provided with an annular flange extend-

ing downwardly in an opening in the floor and surrounding said closet bend, said flange being provided with a plurality of continuously inclined lug engaging tracks, the upper and lower walls of which are parallel, the upper end of each track being positioned above the lower end of another track and provided with an inwardly extending vertical rib the lower end of which is separated from the upper face of the lower track a distance slightly greater than the thickness of a lug; and means for securing said plumbing fixture to said floor plate.

6. In a floor connection for water closets, the combination of a closet bend provided with a plurality of outwardly extending lugs in different horizontal planes; a plumbing fixture; and a floor plate normally resting upon the floor and movable relatively to said bend and fixture, said plate being provided with inclined notched members adapted to enter between said lugs and engage certain of them to lock said plate when clamped to the floor after adjustment.

7. In a floor connection for water closets, the combination of a closet bend provided with a plurality of outwardly extending lugs; a plumbing fixture; and a floor plate movable about its axis relatively to said fixture and bend and provided with a downwardly extending cylindrical flange surrounding said bend having formed therein an inclined series of lug engaging steps for each of said lugs whereby said plate may be clamped to the floor and locked in position, each step having a flat horizontal surface with a substantially vertical wall at each end.

8. In a floor connection for water closets, the combination of a closet bend provided with outwardly extending lugs; a plumbing fixture; and a floor plate adapted to rest upon the floor and be adjusted about its axis independently of said fixture, said plate being provided with a plurality of continuously inclined lug engaging flanges and a flange extending downwardly from the upper end of each inclined flange toward the lower extreme end of another inclined flange and separated therefrom a sufficient distance to permit the passage of one of said lugs.

Signed by me at 4 Post Office Sq., Boston, Mass., this 23rd day of November, 1912.

THOMAS E. CROSBY.

Witnesses:
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NATHAN C. LOMBARD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."