

No. 771,481.

PATENTED OCT. 4, 1904.

W. H. LLOYD.
CLOSET CONNECTION.

APPLICATION FILED JAN. 14, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

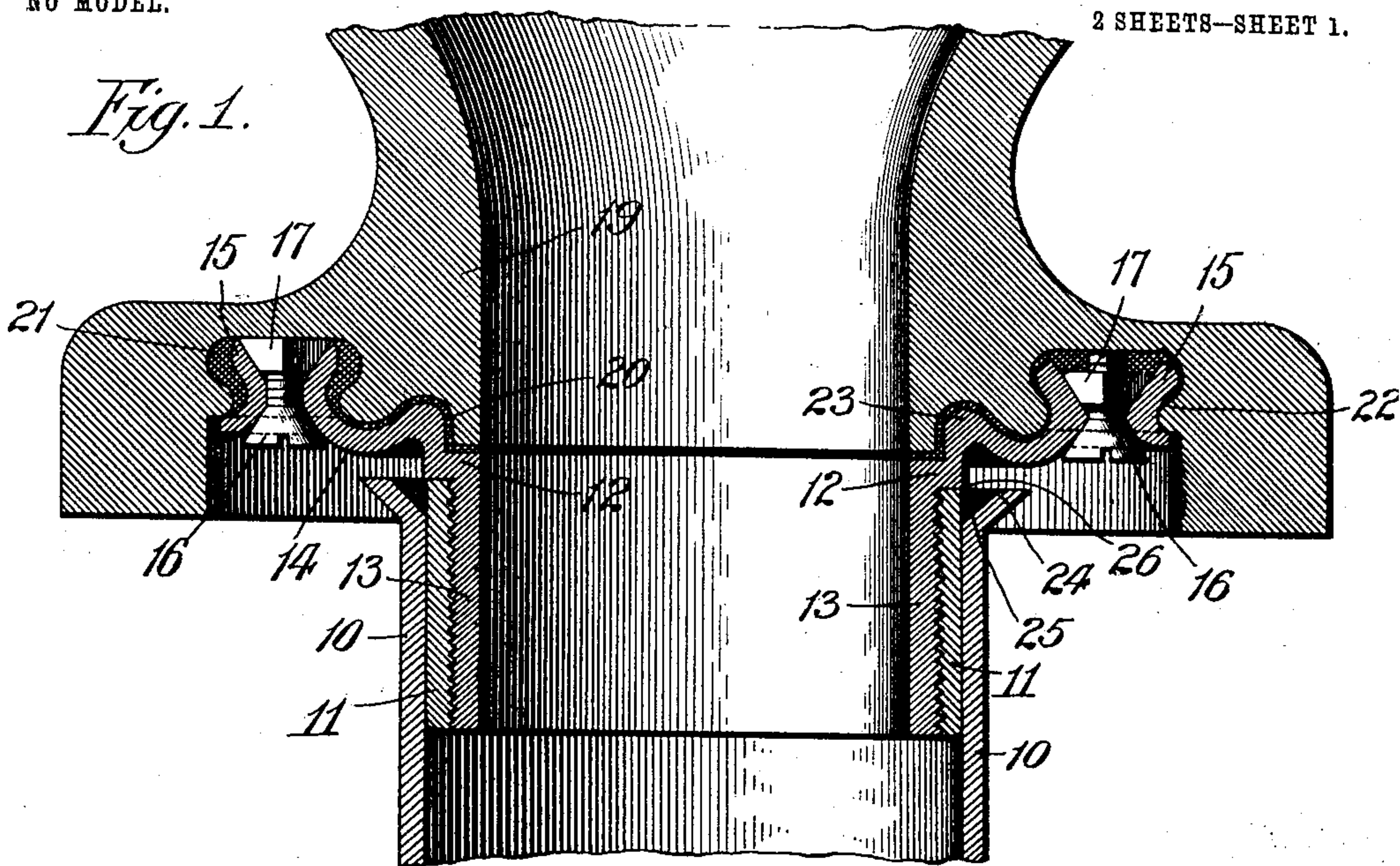


Fig. 2.

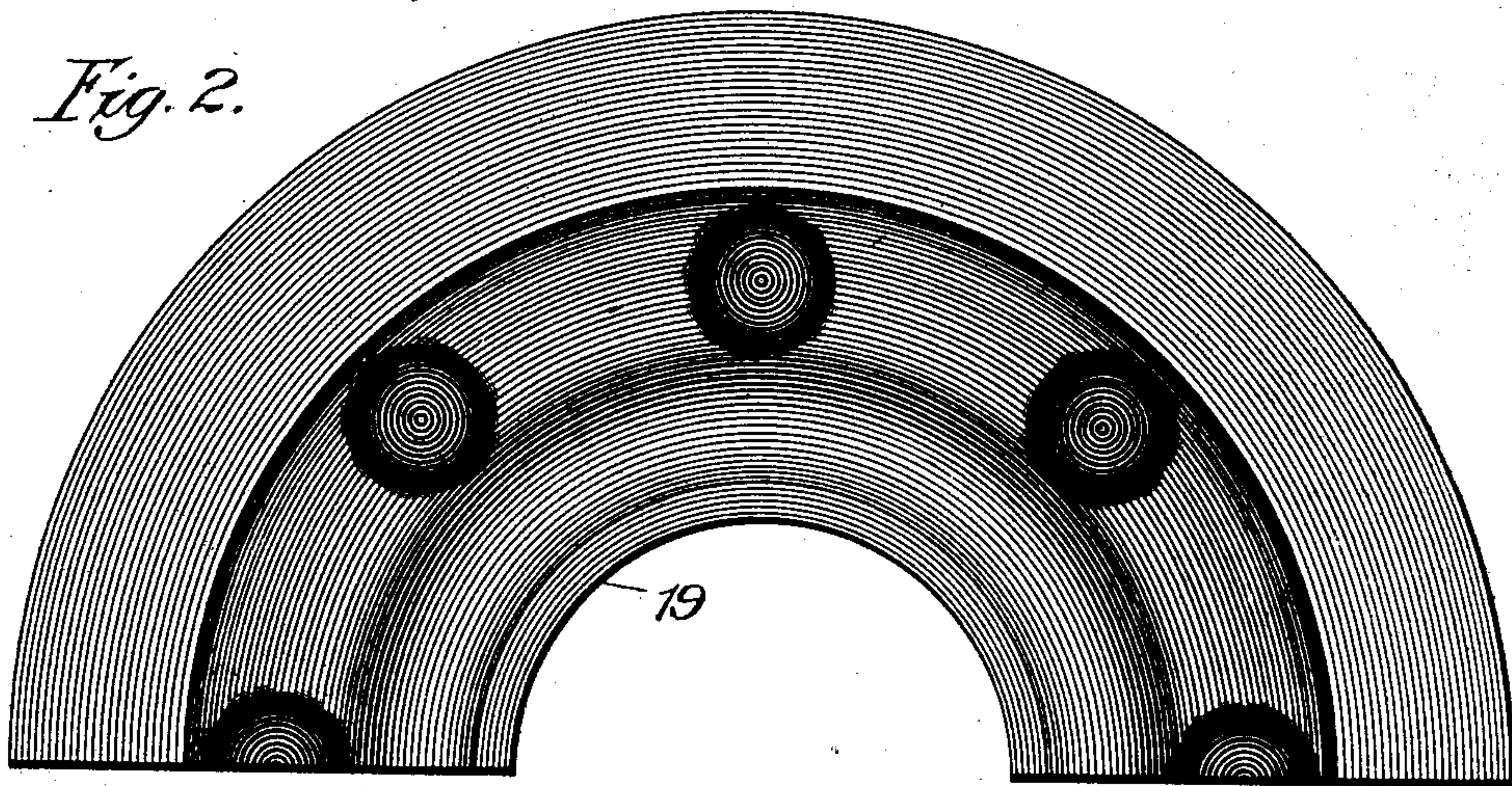
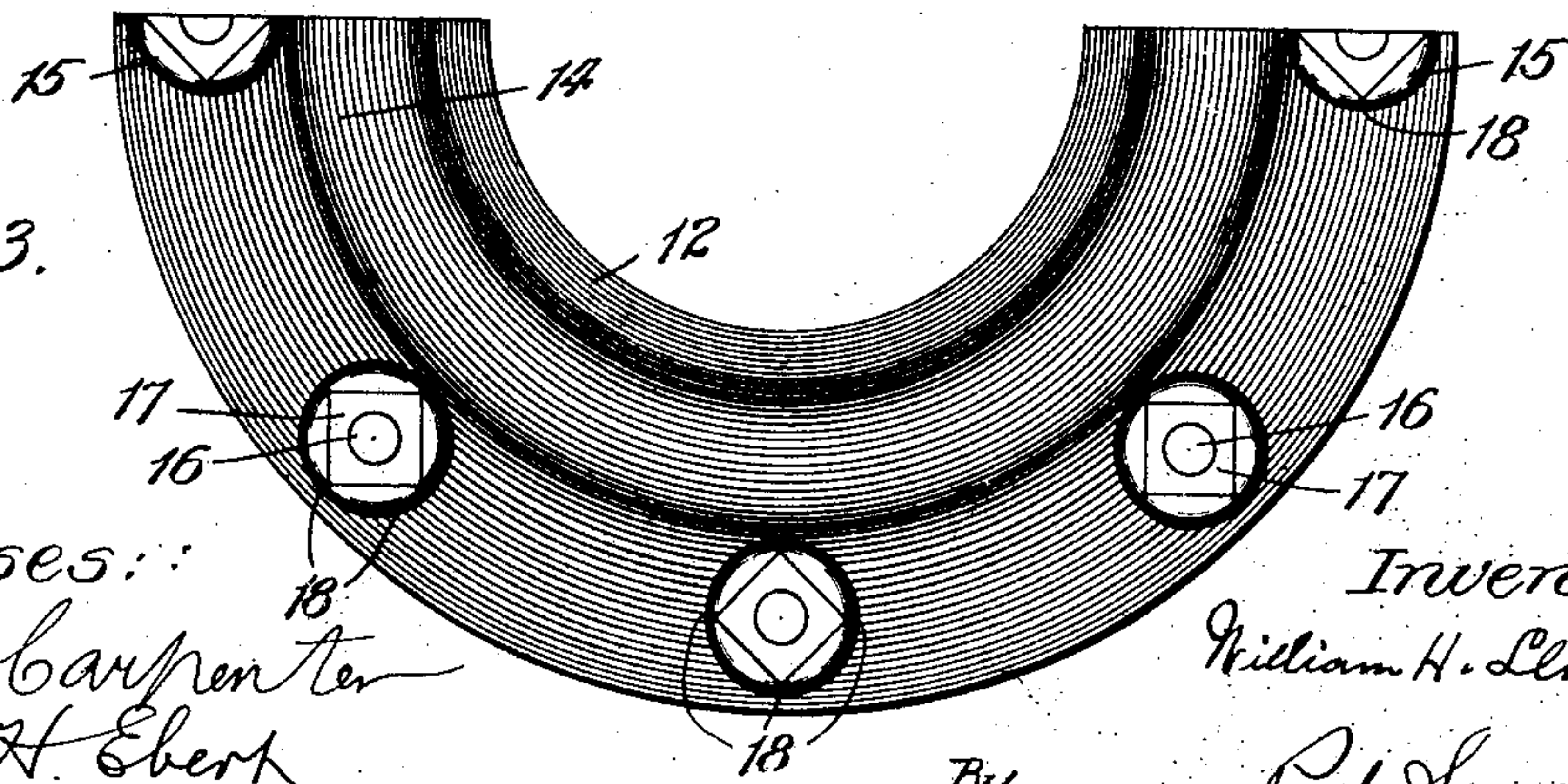


Fig. 3.



Witnesses:

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2 SHEETS—SHEET 2.

Fig. 4.

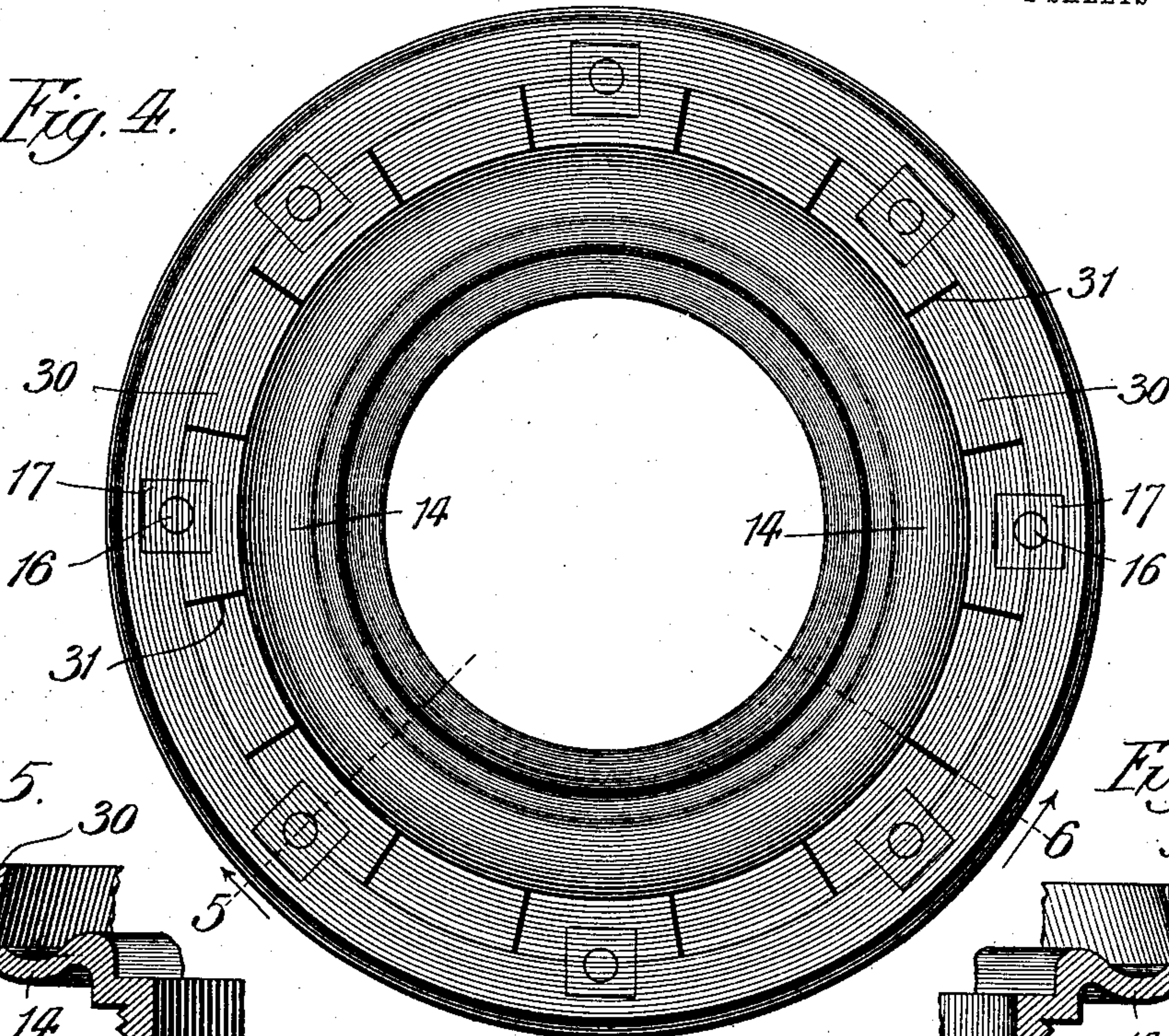


Fig. 5.

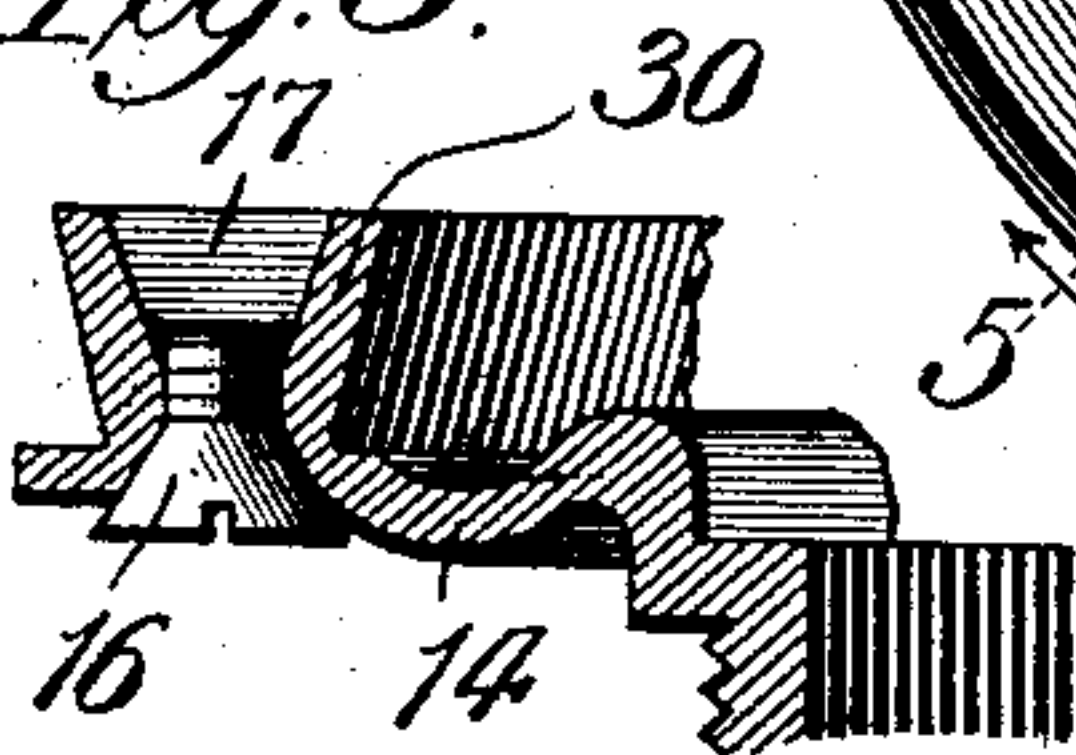


Fig. 6.

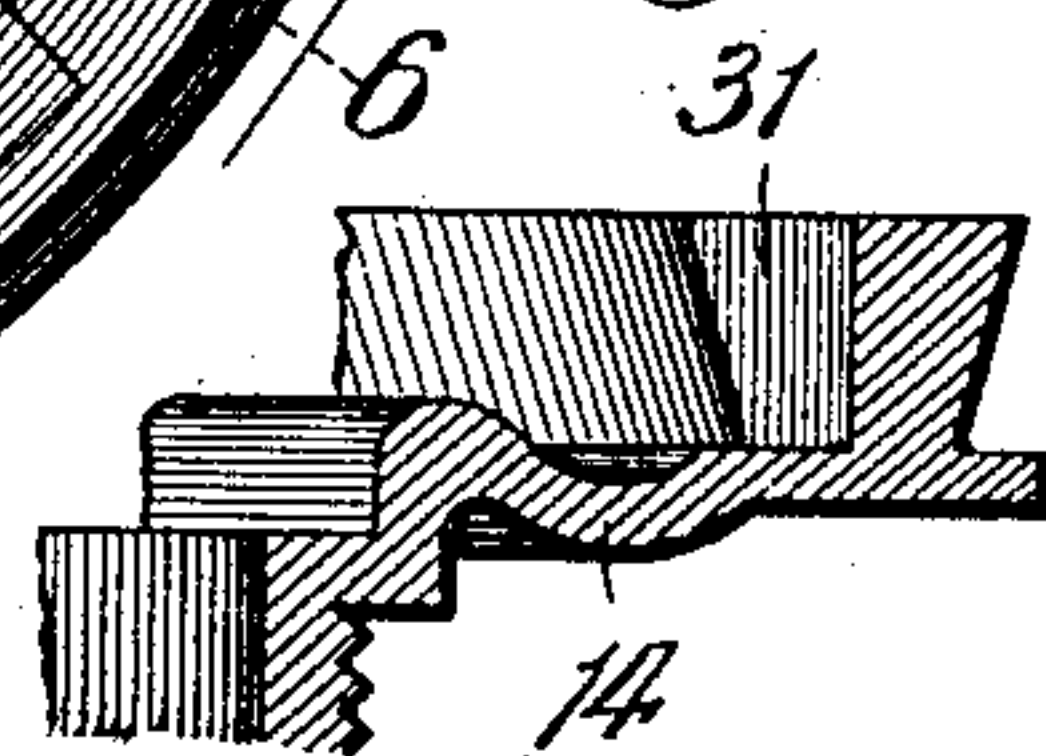


Fig. 7.

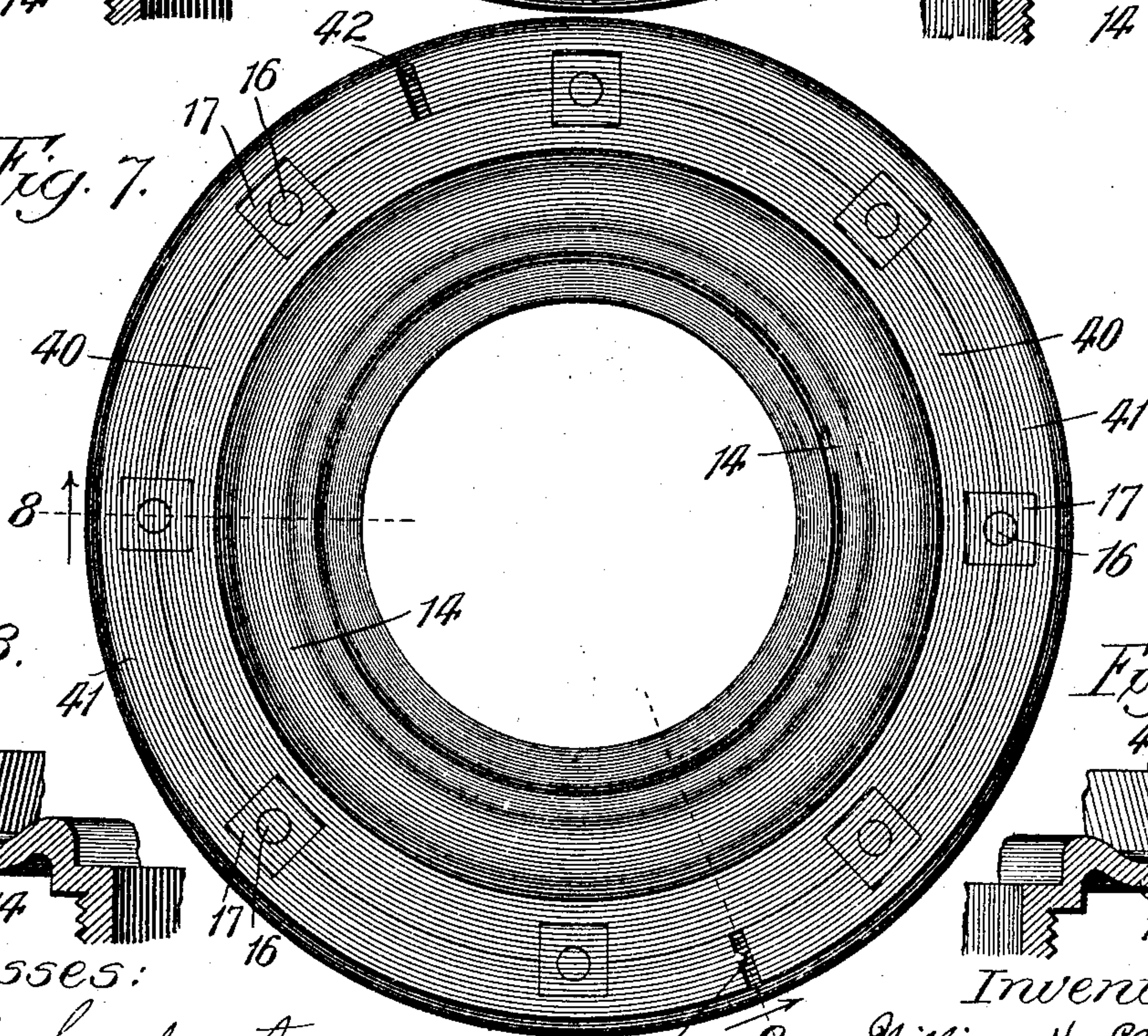


Fig. 8.

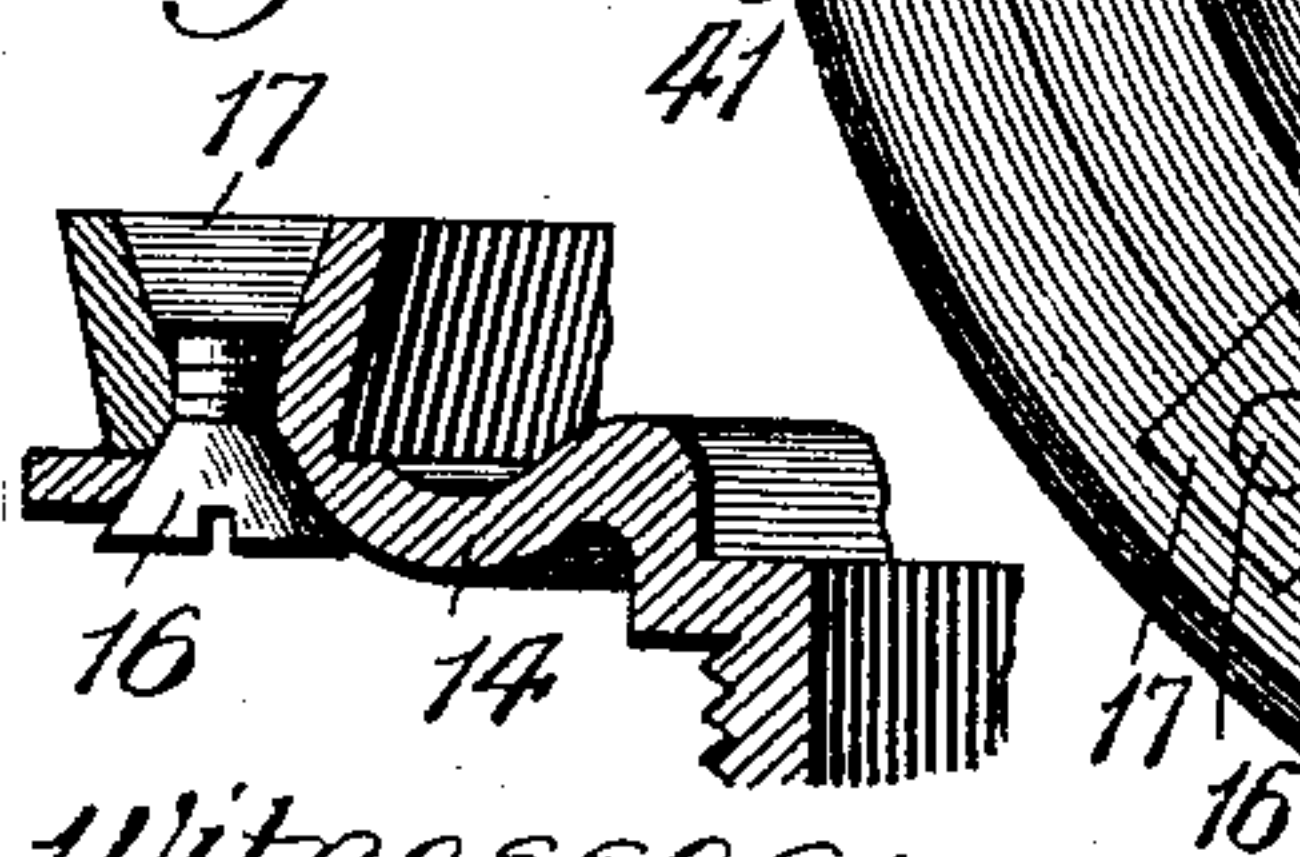
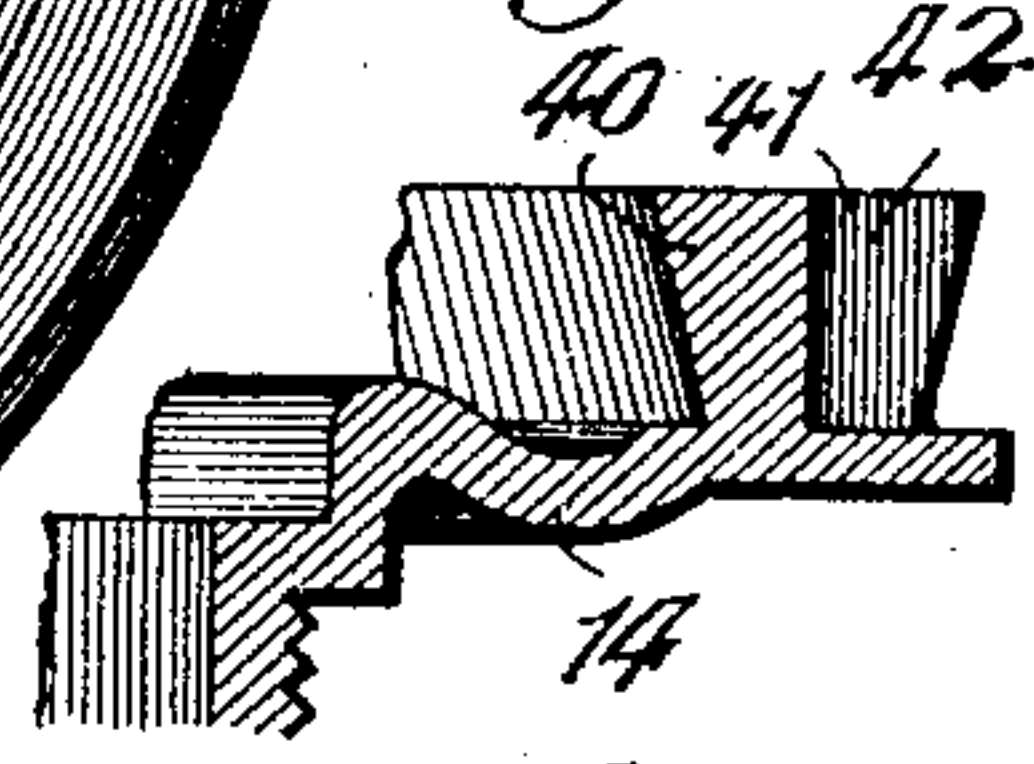


Fig. 9.



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UNITED STATES PATENT OFFICE.

WILLIAM H. LLOYD, OF CHICAGO, ILLINOIS, ASSIGNOR TO CRANE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CLOSET CONNECTION.

SPECIFICATION forming part of Letters Patent No. 771,481, dated October 4, 1904.

Application filed January 14, 1904. Serial No. 189,045. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. LLOYD, a citizen of the United States, residing at Chicago, in the State of Illinois, have invented certain new and useful Improvements in Closet Connections, of which the following is a specification.

This invention has reference to an improved form of connection to be used for attaching a closet bowl, or other like device, to a soil or other pipe, and has for its object, primarily, the provision of a connection of the kind specified which will be perfectly tight and secure, which can be easily and cheaply constructed, and which can be readily applied and disengaged as the occasion requires.

A further object of this invention is, the provision of means whereby a secure attachment to the bowl can be obtained without the attaching device being visible on the outside of the rim of the bowl and the attaching means being at the same time readily accessible.

The above, as well as such other objects as may hereinafter appear, I attain by means of a construction which I have shown in preferred form in Figures 1, 2 and 3, and in slightly modified form in Figures 4, 5, 6, 7, 8 and 9.

Figure 1 is a vertical sectional view of the lower portion of a closet bowl having my improvement applied thereto;

Figure 2 is a half plan view of a portion of the mechanism of Figure 1;

Figure 3 is another half plan view of the mechanism of Figure 1;

Figure 4 is a plan view showing a modified form of my improvement;

Figure 5 is a partial section taken on the line (5) of Figure 4;

Figure 6 is another partial section taken on the line (6) of Figure 4;

Figure 7 is plan view of another modified form of my invention;

Figure 8 is a partial sectional view taken on the line (8) of Figure 7; and

Figure 9 is a part section taken on the line (9) of Figure 7.

Referring to the drawing, particularly Figures 1, 2 and 3, it will be seen that I have

therein indicated at 10 the upper end of a pipe, which in this case would be a sewer pipe of some kind or drain, the same being provided with an interiorly threaded nipple 11 on top of which rests the shoulder of a connecting sleeve 12 which has a threaded extension 13 engaging the nipple 11 and has an outwardly extending flanged part 14 of the peculiar curved shape shown the said flanged part being provided with a number of upwardly projected bosses or extending parts 15 through which extend the threaded posts 16 having tapered nuts 17 fitting in the upper sides of the bosses 15 so as to operate to spread the bosses when the thread on the bolt is tightened the spreading of the bosses being permitted by the slotting of the same as indicated in Figure 3 at 18. Between the flanged part 14 and the bottom of the bowl 19 which rests upon the flange I use some kind of packing material, preferably litharge, indicated at 20.

In order to have the expansion or spreading of the bosses 15 operate to draw the bowl 19 down tightly against the flanged part 14 the recesses 21 are formed with an opening or neck of smaller size so that, as indicated at the right side of Figure 1, the outward movement of the extended boss will cause the edge thereof to come in contact with the neck of the opening as shown at 22 and tend to draw the bowl and the flange 14 on which it rests closer together, compressing the litharge or packing material and forming a tight joint. By forming the flange 14 with the upward curved projection 23 and making the recess in the under side of the bowl which fits over such projection of corresponding shape I get a secure joint and greater compression of the packing material.

In order to more securely pack the connection of the upper end of the pipe 10 I flare the extreme end of the same outwardly, as indicated at 24, and place some packing material, such as litharge, in the place indicated at 25 this being so disposed as to be pressed downward by the shoulder 26 when the part 12 is screwed down on to the part 11.

In Figures 4, 5 and 6 I have shown a slightly modified form of my improvement in which

in place of the plurality of radially disposed projecting bosses I have arranged the flange 14 with an upwardly extending tapered projecting rib 30, this rib being slotted radially as indicated at 31 so that the bolt 16 can act to spread the parts and secure a tight joint in substantially the same manner as the same object is accomplished in the constructions shown in Figures 1, 2 and 3.

10 In Figures 7, 8 and 9 I have shown a form of my improvement somewhat similar to that shown in Figures 4, 5 and 6, and also constructed on the same principles employed in the device shown in Figures 1, 2 and 3, but 15 still further modified, the means provided in the Figures 7 to 9 inclusive being the double tapered ring composed of the two parts 40, 41, the inner part 40 being integral with the flange 14 while the outer part 41 is made in 20 two separable halves split as indicated at 42 so that when the bolts 16 are tightened up the two halves of the ring 41 will be forced outwardly forming a tight joint in substantially the same manner as this object is accomplished 25 in the other forms of the construction.

Having thus described my invention and illustrated its use, what I claim as new, and desire to secure by Letters Patent, is the following:

30 1. A connection comprising a flange device for attachment to a pipe, projecting means on said flange device adapted to engage recesses in an article to be attached, and an expansion mechanism for spreading the projections to 35 secure the recessed article and the flange device together, substantially as described.

2. A connection comprising in combination a bowl having a recess therein with a restricted opening, a flange device having a projection thereon constructed to engage said recess, and mechanism for spreading said projection whereby to secure tight engagement between said bowl and said flange device, substantially as described. 40

3. A connection comprising in combination 45 a bowl having a plurality of recesses therein provided with restricted openings, a flange device for attaching said bowl to a pipe, said flange device being provided with projections designed to engage the openings in the bowl 50 and wedge mechanism for expanding the projections in said openings, substantially as described.

4. A connection comprising a flange device for attachment to a pipe, projecting means on 55 said flange device adapted to engage recesses, a bowl having recesses therein, a suitable packing, an expansion mechanism for securing the bowl and flange device together and compressing said packing, substantially as described. 60

5. In pipe connections, in combination with an article provided with dove-tailed recesses, a pipe flange having expansible projections to engage said recesses and a screw-operated wedge to expand said projections. 65

In testimony whereof I have hereunder signed my name in the presence of the two subscribed witnesses.

WILLIAM H. LLOYD.

Witnesses:

PAUL CARPENTER,
CHAS. H. PENNY.