

(No Model.)

2 Sheets—Sheet 1.

F. B. BROWNING.
WATER CLOSET OR URINAL.

No. 532,945.

Patented Jan. 22, 1895.

Fig. 1.

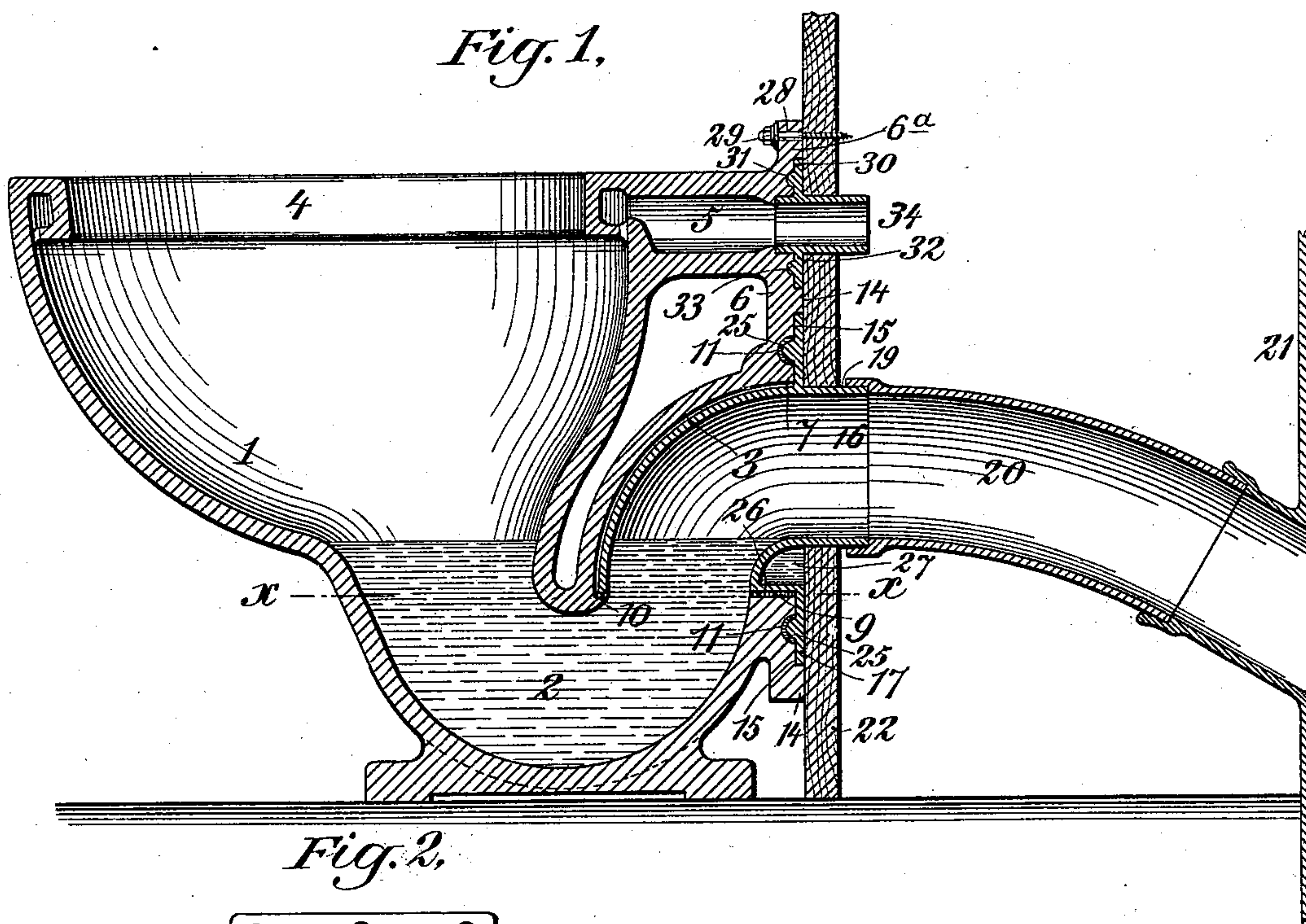
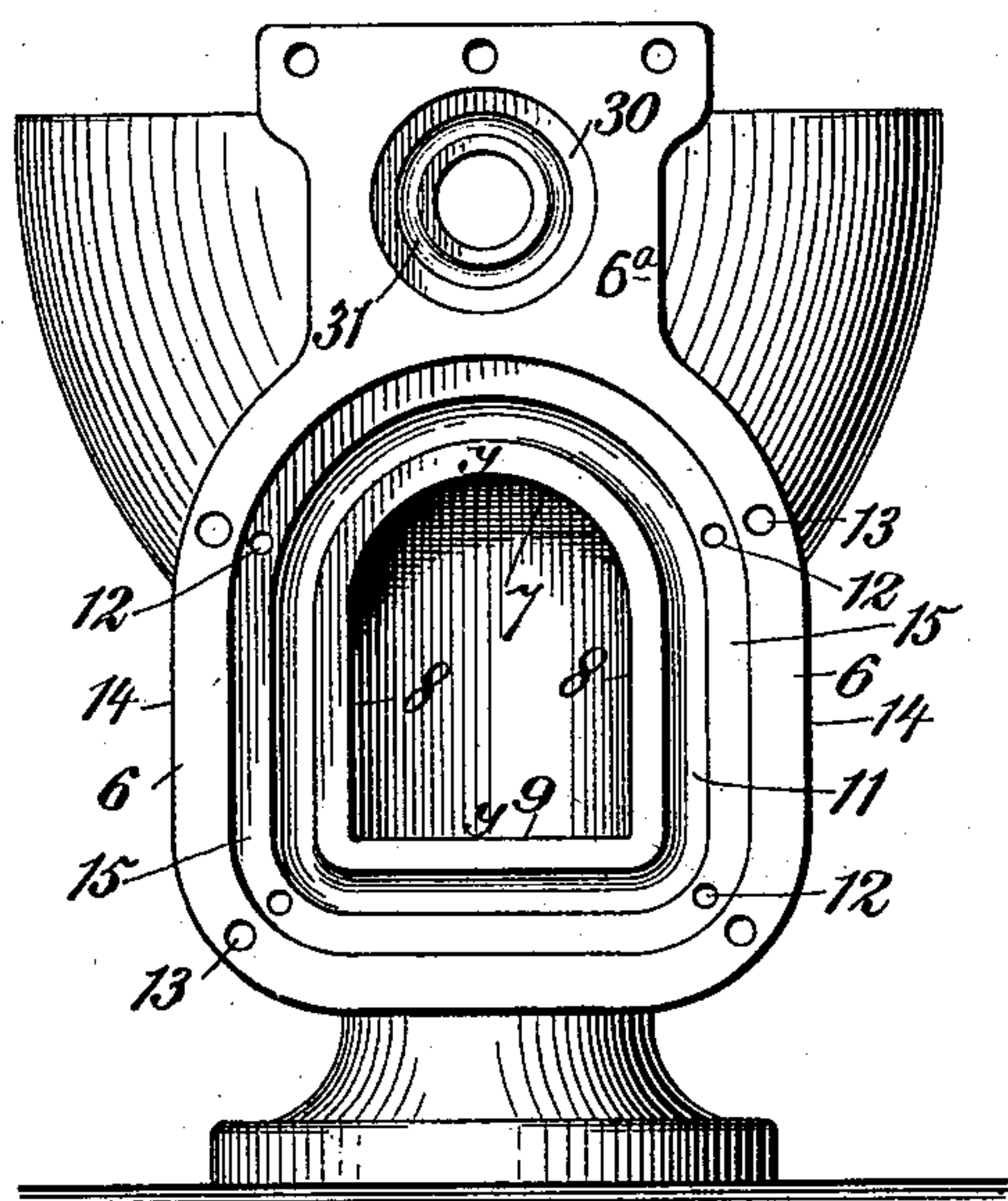


Fig. 2.

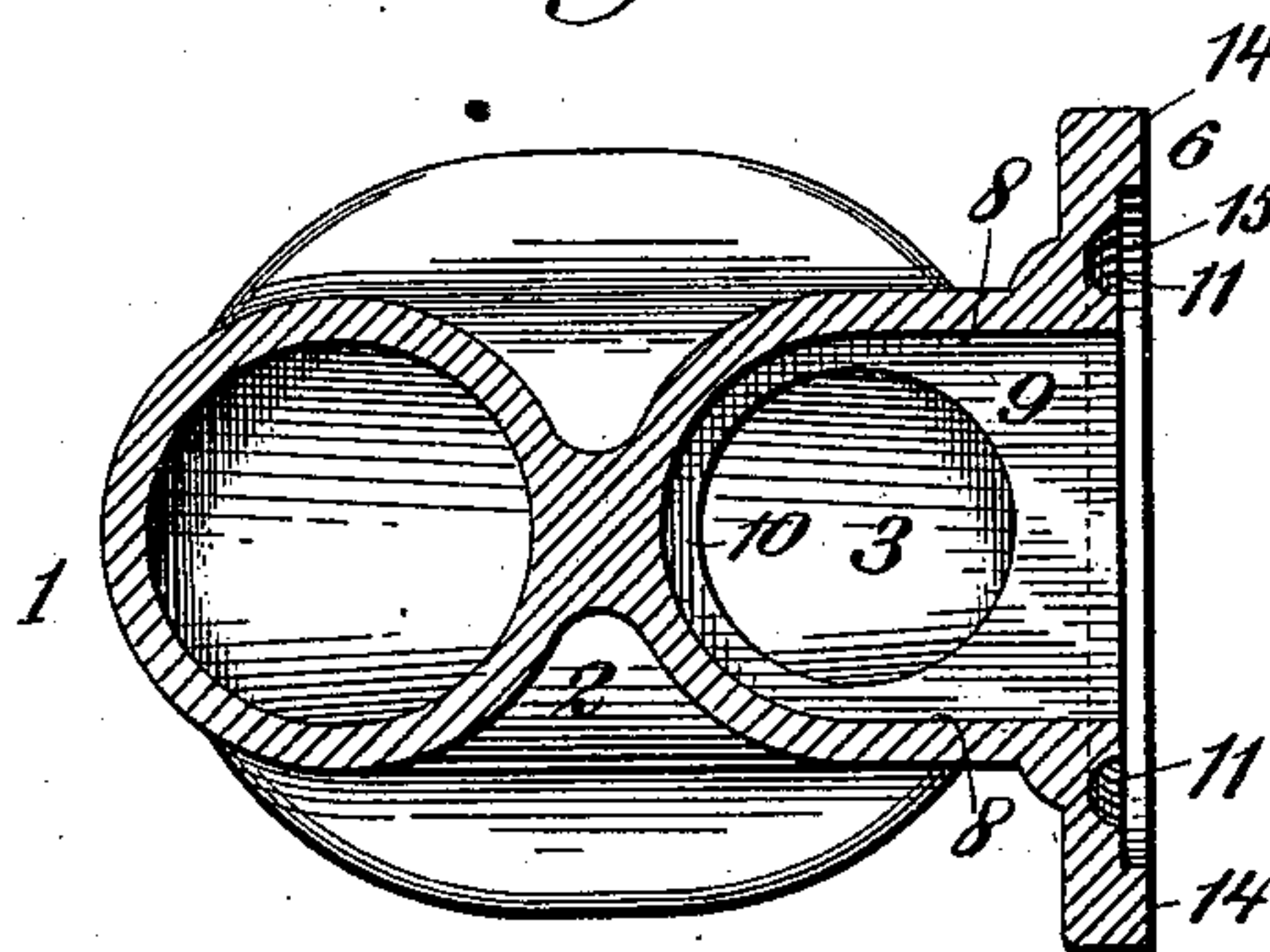


WITNESSES:

N. H. Hayward

J. Mac Donald

Fig. 3.



INVENTOR

Frederick Bancroft Browning

BY

Jacob Felbel

ATTORNEY

(No Model.)

2 Sheets—Sheet 2.

F. B. BROWNING.
WATER CLOSET OR URINAL.

No. 532,945.

Patented Jan. 22, 1895.

Fig. 4,

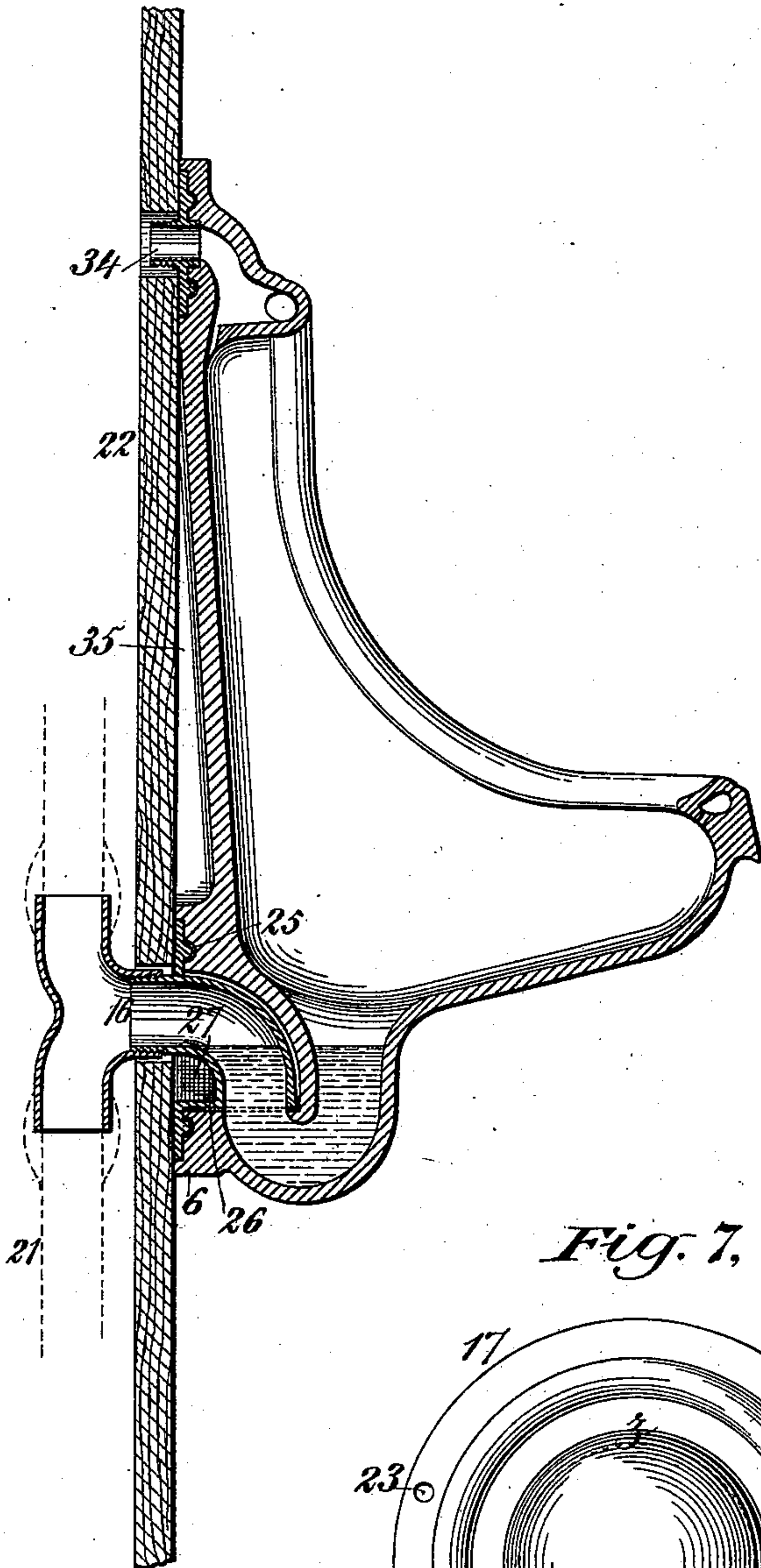


Fig. 5,

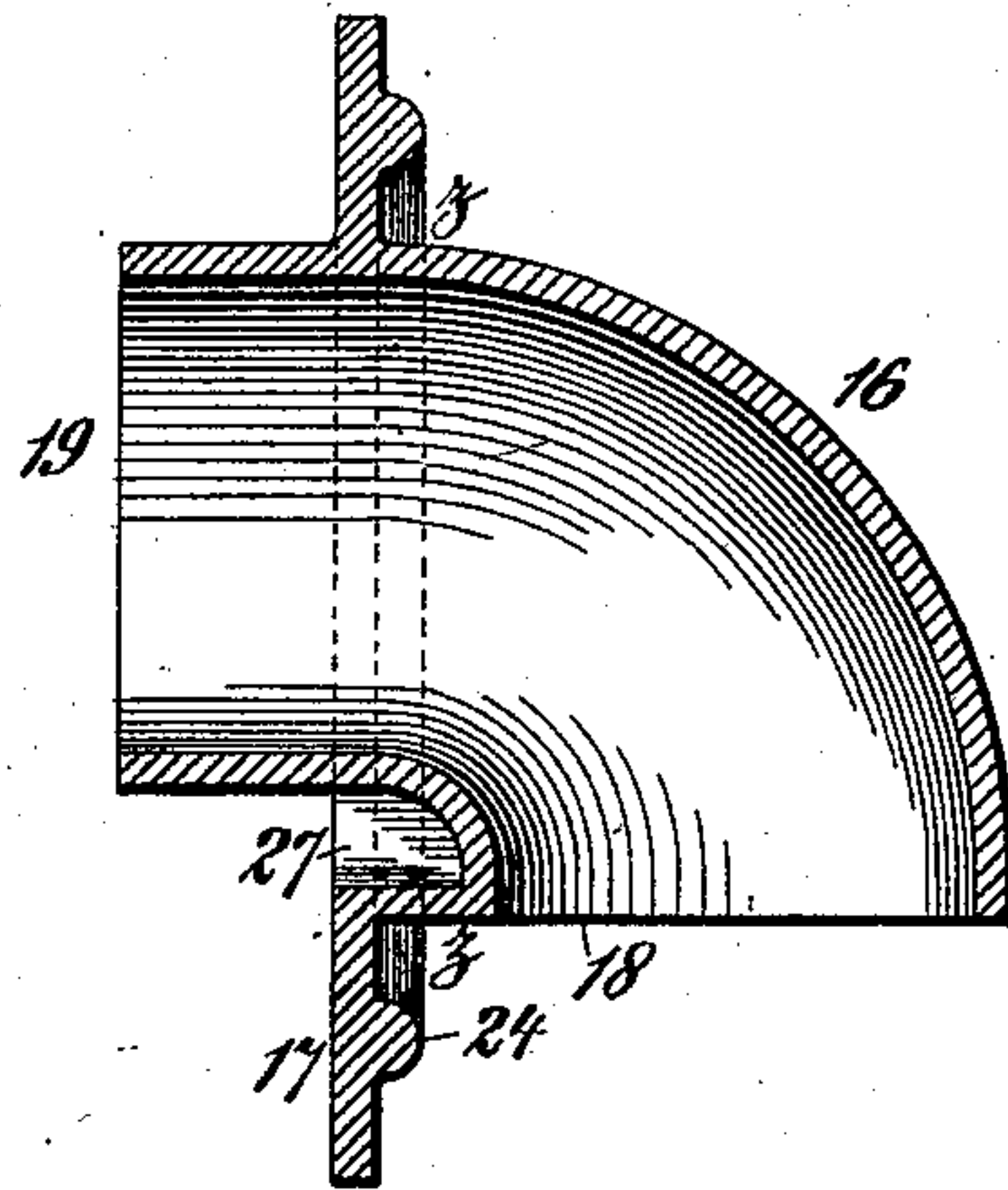


Fig. 6,

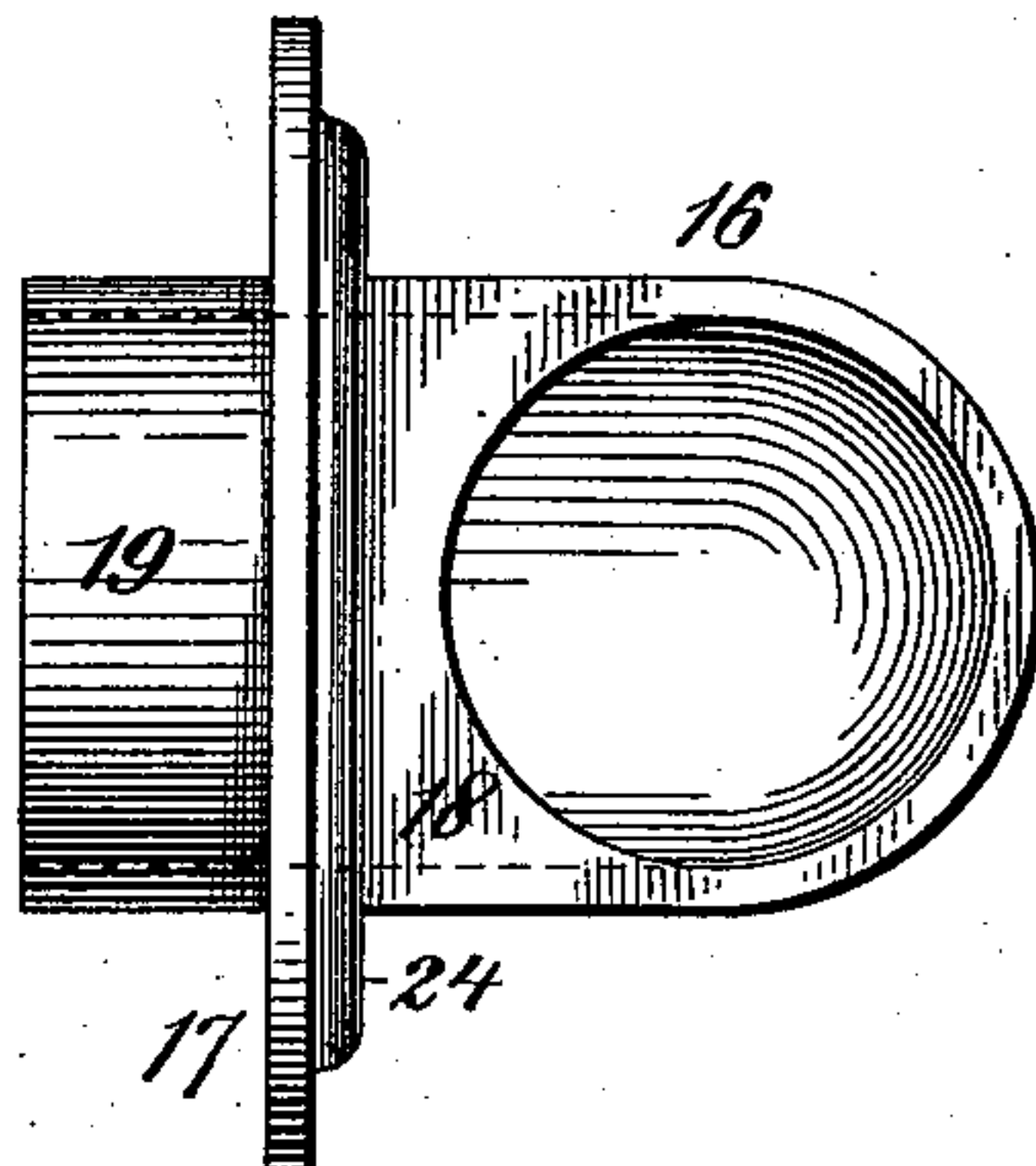
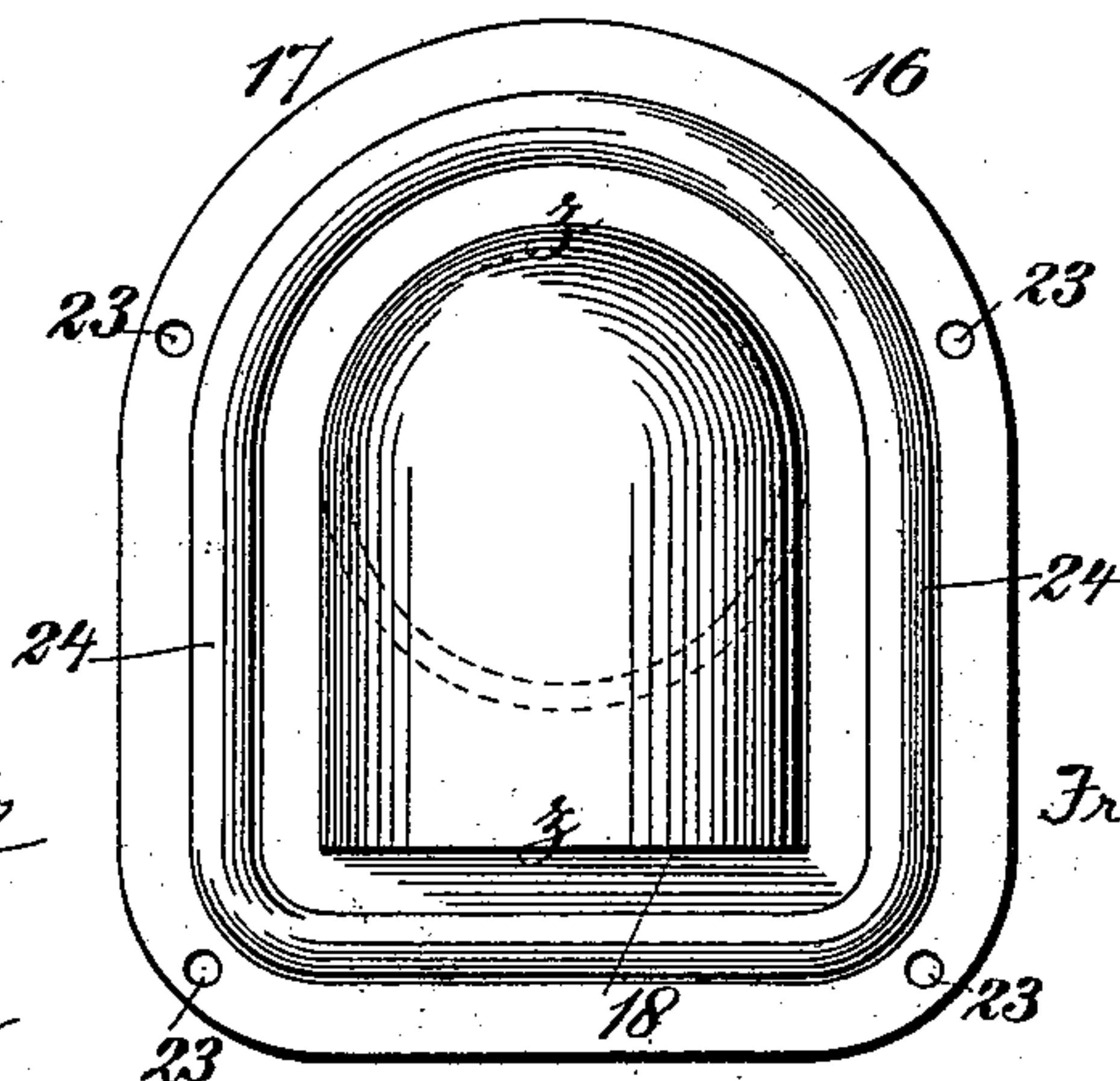


Fig. 7,



WITNESSES:

O. H. Hayworth
J. Mac Donald

INVENTOR

Frederick Bancroft Browning
BY *Jacob Felbel*
ATTORNEY

UNITED STATES PATENT OFFICE.

FREDERICK BANCROFT BROWNING, OF WINCHESTER, MASSACHUSETTS,
ASSIGNOR TO THE MEYER-SNIFFEN COMPANY, LIMITED, OF NEW
YORK, N. Y.

WATER-CLOSET OR URINAL.

SPECIFICATION forming part of Letters Patent No. 532,945, dated January 22, 1895.

Application filed November 10, 1894. Serial No. 528,368. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK BANCROFT BROWNING, a citizen of the United States, and a resident of Winchester, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Water-Closets or Urinals, of which the following is a specification.

My present improvements relate to that kind of water closet structures and fittings made the subject matter of the Letters Patent granted to William Bunting, Jr., December 22, 1891, No. 465,609. The quadrantal outgo is at the back of the bowl and the quadrantal metal elbow which fits therein protrudes through the wall and must be fixed or placed in position therein before it is connected to the closet. In the Bunting construction this connection is difficult of attainment; but the more serious difficulty in the Bunting construction occurs when, after the building has settled or the system of pipes has expanded or contracted, it is desired to disconnect or detach the closet. In practice, with the Bunting construction this detachment is quite impossible without breaking the closet or disconnecting at the waste-pipe joints.

My invention has for its main object to provide a construction embodying the Bunting principle but wherein the objections recited are entirely overcome; and my invention has for a further object to provide a construction in which the elbow is adapted either for a closet bowl or a urinal bowl.

To these ends my invention consists in the devices, features of construction, and combinations and arrangements of parts hereinafter more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a central vertical section of a water-closet structure embodying my invention. Fig. 2 is a rear elevation of the earthenware water-closet alone. Fig. 3 is a horizontal section, taken at the line x, x of Fig. 1, of the trap portion and flange of the closet. Fig. 4 is a vertical central section of the urinal type of

water closets embodying my improvements. Fig. 5 is a vertical central section of the metallic elbow fitting, detached and enlarged. Fig. 6 is a bottom plan view thereof; and Fig. 7 is a rear elevation of said fitting.

In the several views the same parts will be found designated by the same numerals reference.

1 designates the bowl, 2 the trap, 3 the quadrantal outgo, 4 the flushing rim and 5 the inlet thereto, all made of a single piece of earthenware.

The outgo begins at a point within the trap and curving upwardly and outwardly terminates in a horizontal direction and in a vertical integral flange 6. The shape of the outgo at its junction with the flange will be seen at Fig. 2. The upper portion is semi-circular, as at 7, the vertical sides straight and parallel, as at 8, 8, and the bottom straight and horizontal. As will be seen at Figs. 1 and 3, the lower side of the outer extremity of the outgo presents a flat horizontal ledge or seat 9, formed integral with which is a circular horizontal lip 10, which conforms to the cross-section of the up-leg of the trap. In the vertical back flange 6 is formed a continuous groove 11, corresponding substantially to the contour of the outgo. Adjacent to this groove, exteriorly, are four perforations, indicated by 12 and beyond these holes are four other holes indicated by 13. The holes 12 and 13 in the flange 6 are made in vertical planes outside of the trap and the outgo, so that fastening bolts or screws may be conveniently inserted or provided with nuts in the setting of the bowl. The flange 6 is formed with a continuous rib 14 at its outer edge, thereby forming a continuous recess 15 between said rib and the edge of the outgo. In connection with said outgo and flange is employed a specially constructed metallic fitting comprising a quadrantal elbow 16 and a vertical attaching flange 17, preferably formed integral. At the mouth of the elbow and on its rear side is formed a horizontal flat flange or bearing 18 extending transversely and joining also the vertical flange 17 at its lower por-

tion. The elbow is preferably provided with a rearwardly extending horizontally projecting neck 19 for attachment to a connecting pipe or branch 20, of the soil-pipe 21, and this neck 5 may be either screw threaded or plain, as shown, according to the kind of joint which it may be desired to make.

The rear side of the flange 17 is made flat to lie squarely against the wall or partition 10 22 and at suitable points near its edge is provided with perforations 23, for the securement of the fitting by bolts or screws to said wall or partition with the neck projecting rearwardly therethrough toward the soil-pipe. 15 The front side or face of the flange 17 is provided with a continuous rib 24 adapted to match and enter the groove 11 in the earthenware flange 6, intermediate packing 25 being employed to form a tight joint. Between 20 the mouth of the elbow and the lip 10 and the seat 9 and the flange 18 packing 26 is also employed.

While I have shown a space, at 27, between the top of the flange 18 and the under side of 25 the horizontal portion of the outgo and prefer so to make the contrivance, this is not however essential to the main features of my invention.

The elbow fitting is first connected to the 30 soil-pipe and secured to the wall with the quadrantal portion projecting into the apartment with its mouth down and in a horizontal plane. The closet or urinal bowl is then connected thereto by a simple sliding or slipping movement, the quadrantal earthenware 35 outgo passing over the elbow, the seat 9 bearing the packing, coming under the flange 18, and the packed groove 11, fitting over the rib 24. The parts are then more firmly connected together by bolts or screws. The bolts 40 which pass through or into the wall and attach the fitting thereto at the holes 23, project through the holes 12 also into the room and are provided with nuts. Other bolts or 45 screws pass through the holes 13 and attach the flange 6 directly to the wall.

Upon examination it will be seen that the opening from the crown of the outgo, at its horizontal termination, to the horizontal seat 50 9, or the vertical distance from y to y , is greater than the distance vertically between the crown of the elbow and the mouth thereof, or from z to z , and that for this reason the outgo of the bowl may be readily slid or 55 slipped upon or from the elbow, without any tortuous movements or strains, and without the possibility of breakage of either the earthenware or the fitting or of disrupting the joints or connections of the latter; thereby overcoming the objections inherent in the Bunting construction in which the circular opening of the outgo forms a hook or ledge under the lower curved side of the elbow, not only rendering the attachment of the parts difficult 60 but practically precluding their detachment 65 when once got together. From this, it will be

observed that the gist of one part of the invention lies in having the vertical opening in the quadrantal outgo longer than the distance from the top of the crown of the quadrantal outlet to the horizontal mouth thereof. 70 Although I have made the top of said opening semi-circular to conform to the shape of the crown of the elbow, this is not essential.

By providing the horizontal seat 9 in the 75 bottom of the outgo and the horizontal flange 18 on the bottom of the elbow back of the mouth thereof and in the same plane therewith, a watertight joint may be readily formed between the outgo and the elbow below the 80 water line of the trap.

In the closet bowl shown at Figs. 1, 2 and 3, there is an extension of the flange 6, as the flange 6^a, which is perforated at 28 at its uppermost end for attachment by screws 29 to 85 the wall. This integral flange 6^a is recessed at 30 and grooved at 31, circularly, to receive an attaching plate 32 having a rib 33, and an inlet supply pipe 34.

In the urinal bowl shown at Fig. 4, triangular vanishing vertical ribs 35 extend up from the flange 6, to a recessed and grooved flange, which receives a ribbed attaching plate having an inlet-pipe, in substantially the manner described with reference to Fig. 1. 90 95

Instead of using packing between the horizontal seat or ledge 9 and the horizontal flange 18, the joint may be pointed up from the inside of the bowl.

What I claim as new, and desire to secure 100 by Letters Patent, is—

1. The combination of the quadrantal elbow, with the bowl and trap having a quadrantal outgo terminating in a horizontal direction at the wall side of the bowl, the said outgo at 105 its termination having an opening whose vertical measurement is greater than the distance directly between the horizontal plane of the crown of the elbow and the horizontal mouth of the elbow, whereby the outgo may 110 be slid on and off the previously fitted elbow, as and for the purpose set forth.

2. The combination of the quadrantal elbow having a horizontal flange or bearing back of the mouth thereof and a vertical attaching 115 flange, with the bowl and trap having a quadrantal outgo provided at its termination with a horizontal seat or ledge and with a vertical attaching flange, as set forth.

3. The combination with the bowl, trap, 120 quadrantal outgo and vertical attaching flange, the outgo having a horizontal seat or ledge, of the quadrantal elbow having a horizontal flange back of its mouth and a vertical attaching flange, and packing arranged 125 between the said vertical flanges, as set forth.

4. The combination with the bowl, trap, quadrantal outgo and vertical attaching flange, the outgo having a horizontal seat or ledge and the flange a groove, of the quadrantal elbow having a horizontal flange back 130 of its mouth and a vertical attaching flange

provided with a rib, and intermediate packing, as set forth.

5. The quadrantal elbow having the vertical attaching flange and the horizontal seat flange, for use in connection with a quadrantal outgo, substantially such as shown.

Signed at Boston, in the county of Suffolk

and State of Massachusetts, this 7th day of November, A. D. 1894.

FREDERICK BANCROFT BROWNING.

Witnesses:

GEORGE S. LITTLEFIELD,
FRANK T. BENNER.