

W. H. PERKINS.
WROUGHT METAL FITTING FOR PLUMBERS' USE.
APPLICATION FILED MAR. 22, 1909.

944,046.

Patented Dec. 21, 1909.
2 SHEETS—SHEET 1.

Fig 1

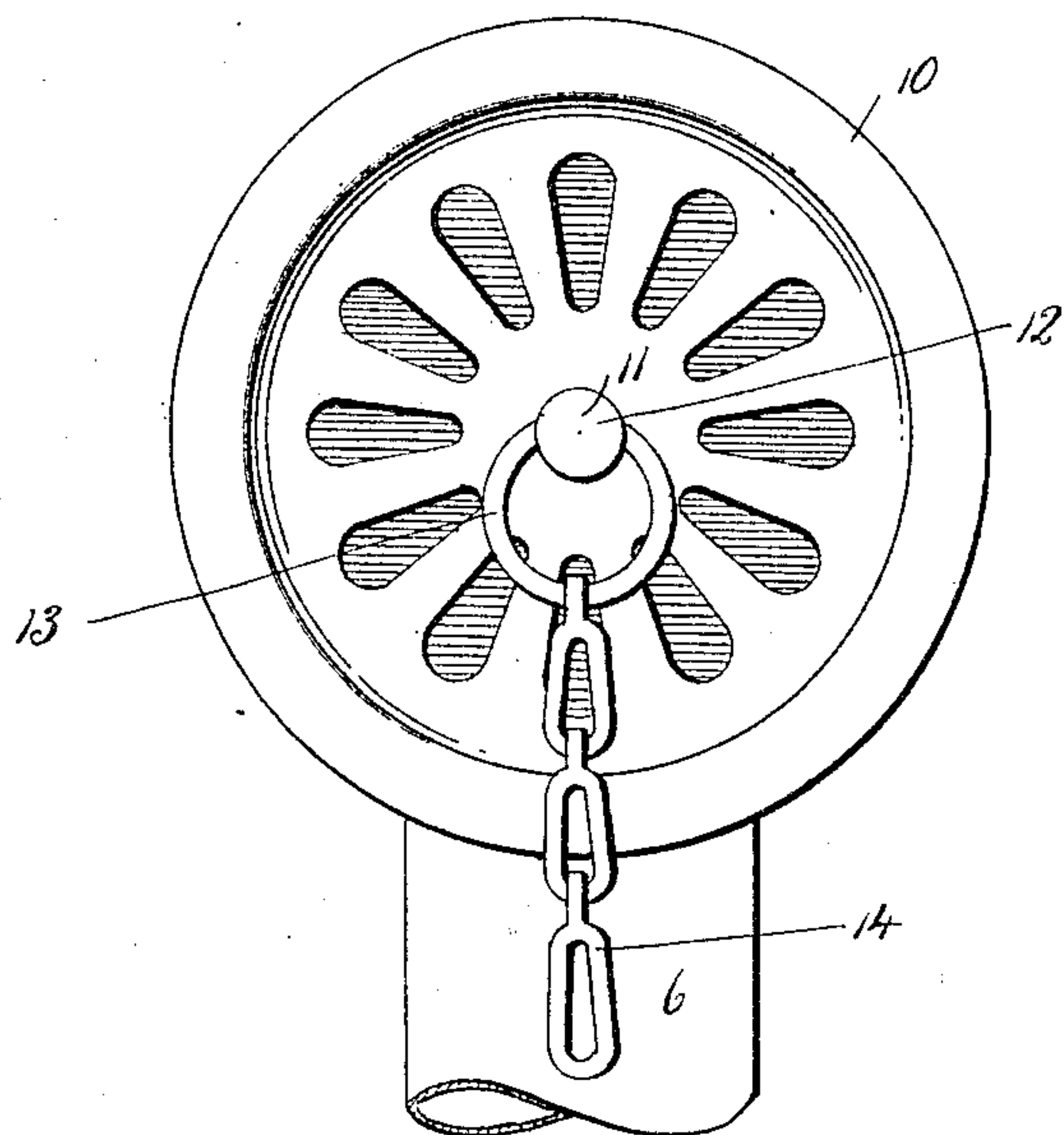


Fig 2

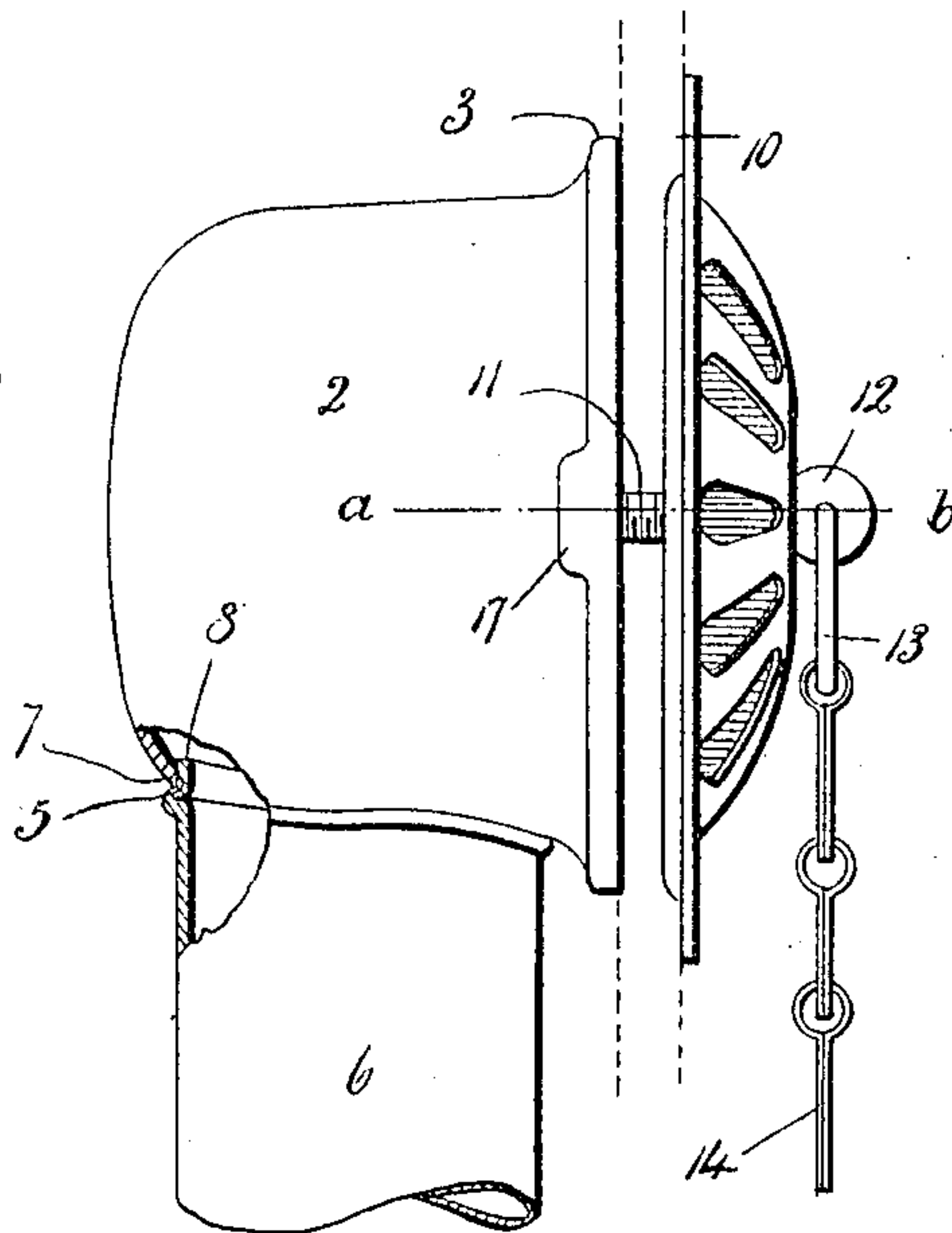


Fig 3

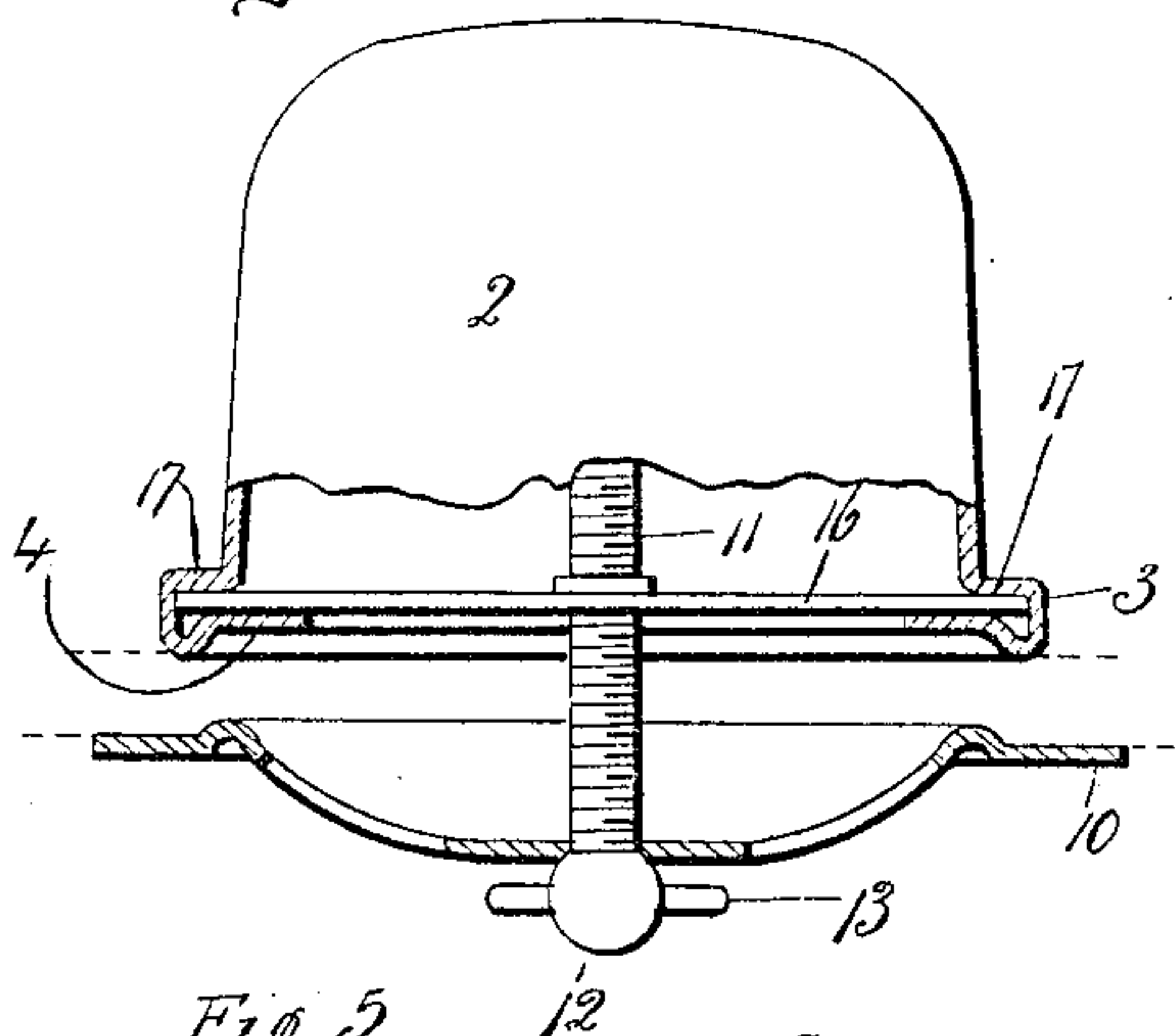


Fig 4

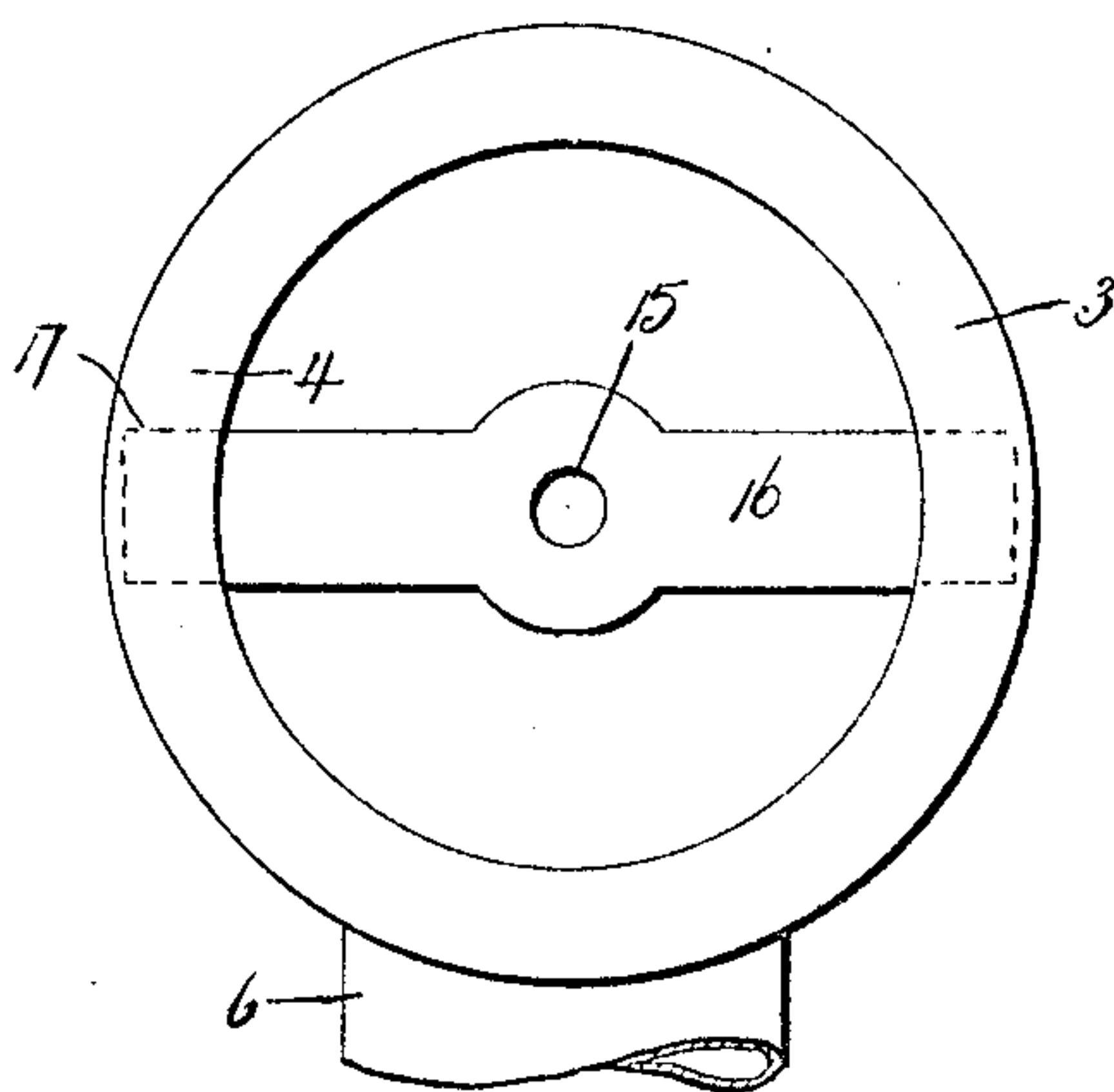
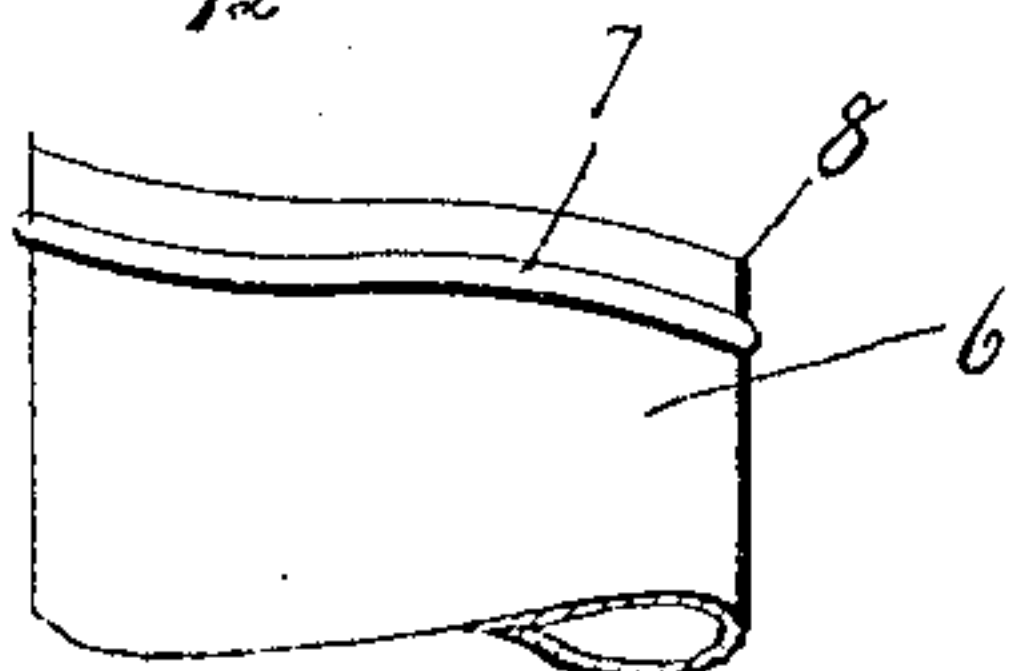


Fig 5



Witnesses
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Fig. 6

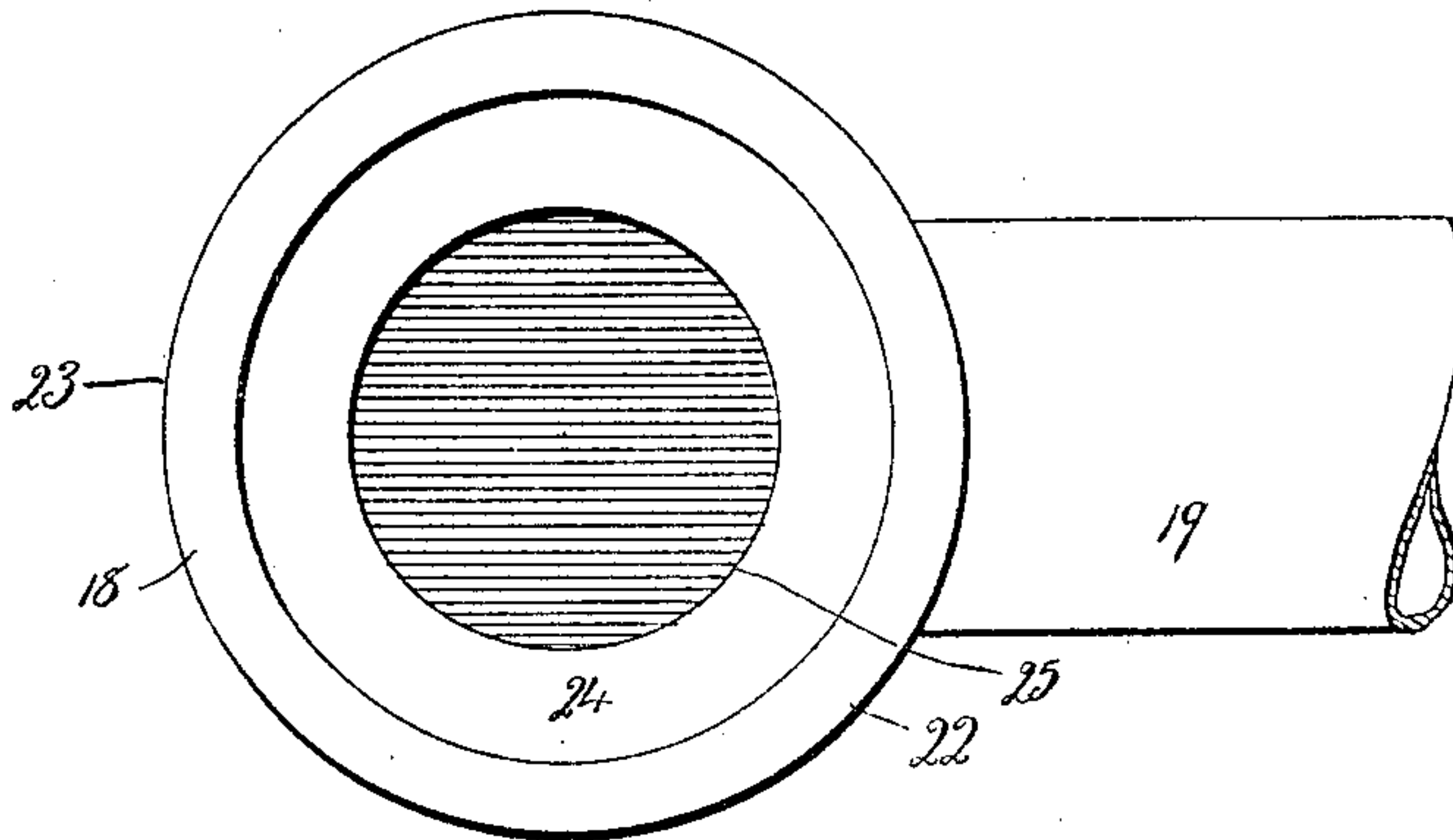


Fig. 7

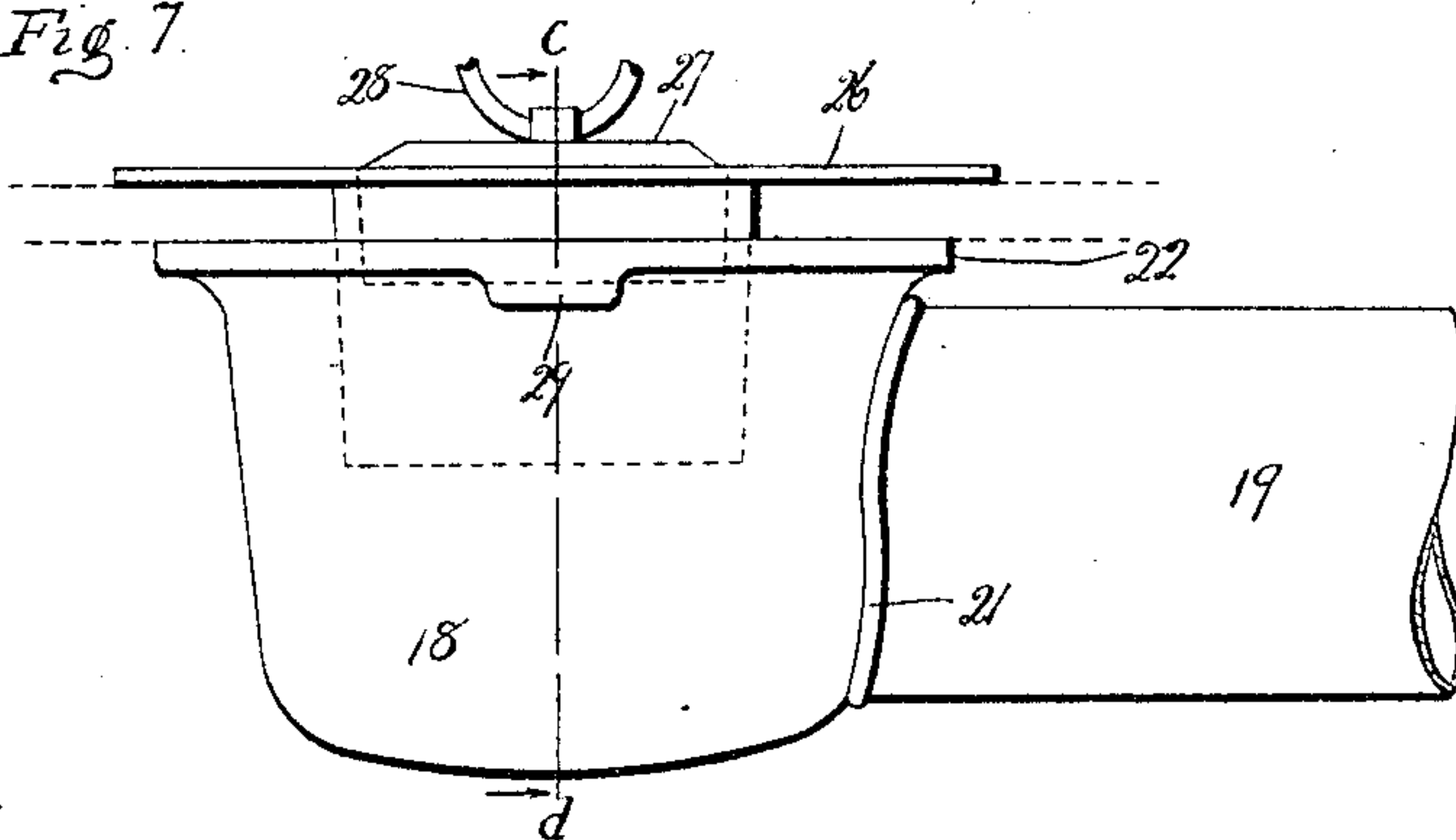
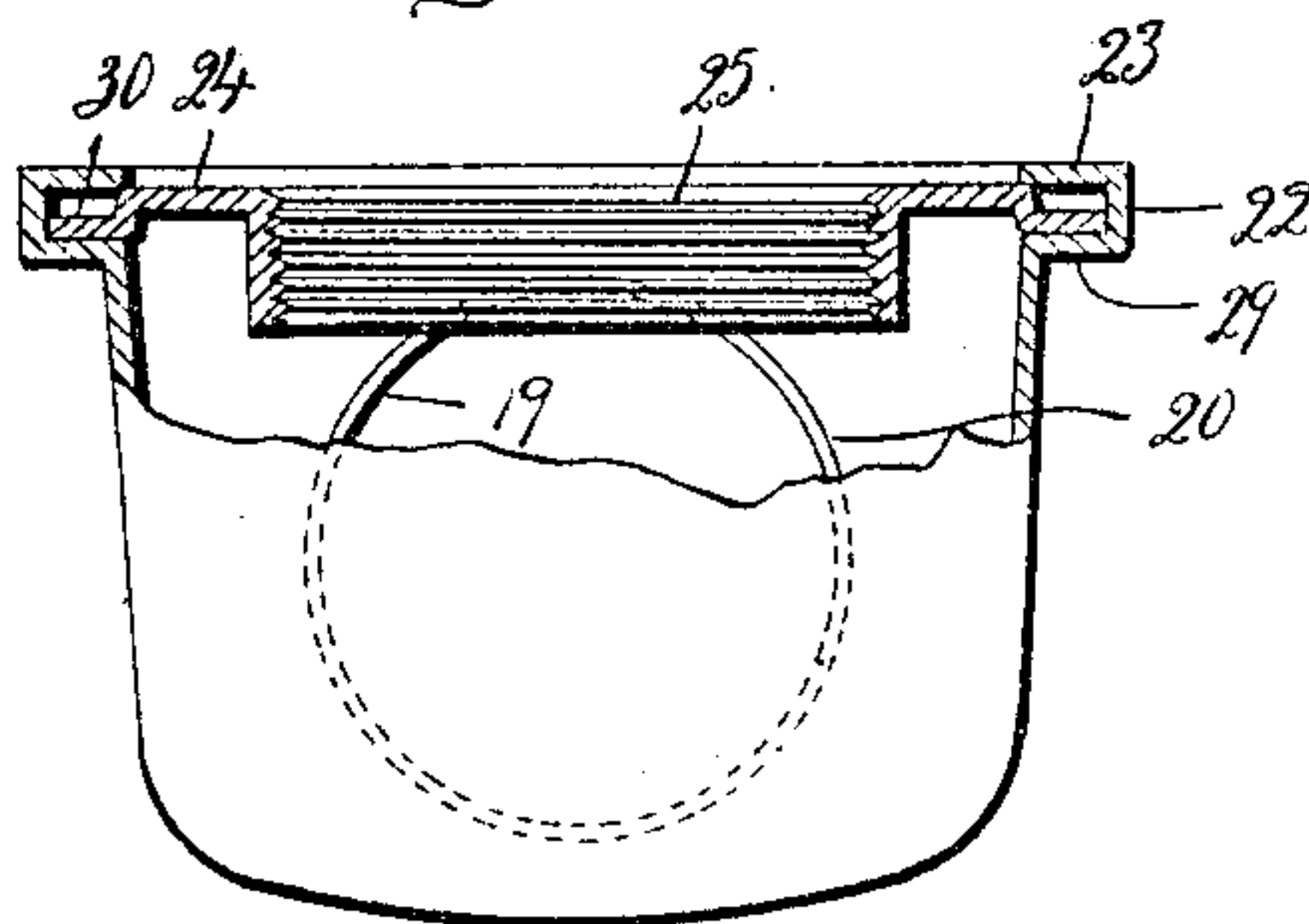


Fig. 8



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UNITED STATES PATENT OFFICE.

WALTER H. PERKINS, OF CHESHIRE, CONNECTICUT, ASSIGNOR TO WATERBURY MFG. CO., OF WATERBURY, CONNECTICUT, A CORPORATION.

WROUGHT-METAL FITTING FOR PLUMBERS' USE.

944,046.

Specification of Letters Patent.

Patented Dec. 21, 1909.

Application filed March 22, 1909. Serial No. 485,100.

To all whom it may concern:

Be it known that I, WALTER H. PERKINS, a citizen of the United States, residing at Cheshire, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Wrought-Metal Fittings for Plumbers' Use; and I do hereby declare the following, when taken in connection with the accompanying drawings and the numerals of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1 a view in front elevation of an overflow cup and pipe constructed in accordance with my invention. Fig. 2 a broken view thereof in side elevation, a portion of the cup and pipe being broken away. Fig. 3 a view thereof partly in plan, and partly in transverse section on the line *a—b* of Fig. 2. Fig. 4 a view in front elevation with the strainer removed, as well as the screw which holds it in place and forms a connection for the stopper-chain. Fig. 5 a detached broken view of the upper end of the pipe showing its provision with a winding abutment shoulder. Fig. 6 a plan view of the waste-cup and pipe. Fig. 7 a view thereof in side elevation. Fig. 8 a view thereof on the line *c—d* of Fig. 7, looking in the direction of the arrows.

My invention relates to an improvement in that class of articles known as plumbers' fittings, and more particularly to waste and overflow connections for bath tubs and basins, the object being to produce these parts in wrought metal, whereby I overcome all of those defects arising from porosity of cast metal, from mislocation of cores in casting, and secure a smoothness of surface for finishing impossible to get in cast goods. My improved waste and overflow connections are lighter, more uniform in thickness and stronger than when made of cast metal which, moreover, cannot be made to run in such thin sections as it is often desirable for one reason or other to employ in these fittings.

With these ends in view my invention consists in waste and overflow connections having certain details of construction as will be hereinafter described and pointed out in the claims.

In carrying out my invention as herein

shown, I employ a bell-shaped overflow cup 2 struck from a single sheet of metal and having its edge flared to form a chambered flange 3 the metal of which is returned upon itself to form a retaining lip 4. The lower face of the cup 2 is pierced directly in its side to form a large opening 5 for the reception of the upper end of the overflow pipe 6 which substantially corresponds in diameter to the diameter of the said opening which is unsymmetrical in form due to the taper of the cup. In other words, the entire edge of the opening is not located in the same horizontal plane, but follows the taper of the cup. For the purpose of making a simple and neat joint between the cup 2 and the pipe 6, I provide the pipe with a circumferential bead or abutment-shoulder 7 a trifle larger in its maximum diameter than the diameter of the opening 5. This shoulder, though circumferential, will not be located, as has been done heretofore, at a right angle to the longitudinal axis of the pipe, but will be pitched with respect to that axis as may be required by the pitch of the opening 5 in the cup 2 to the axis thereof. In other words, the shoulder will follow the external contour or taper of the cup and hence will have what might be called a "winding" arrangement on the pipe. When, therefore, the end of the pipe is inserted into the opening, the shoulder abuts against the edge of the opening at very point thereof, the extreme edge of the pipe being turned down upon the inner face of the cup to form the clenching edge 8. If desired, solder may be applied along the edge 8, though this is not essential. In this way I am enabled to produce a simple and workmanlike joint between an unsymmetrical overflow cup and the pipe leading from it.

The crowning strainer 10 of perforated sheet metal is held in place by means of a screw 11 the rounded head 12 of which carries a ring 13 from which the stopper-chain 14 is suspended. The said screw 11 passes through a threaded opening 15 in a heavy sheet-metal cross-bar 16 the ends of which are set into recesses 17 formed opposite each other in the flange 3, the retaining-edge 4 being closed down upon the ends of the bar so as to confine the same in the recesses 17, whereby the bar is confined in place and prevented from turning. The said bar forms, as it were, a coupling-piece for the

attachment of the strainer, stopper-chain and stopper.

In Figs. 6, 7 and 8, I have shown the application of my invention to the waste-cup 18 and waste-pipe 19 of the fixture, the said waste-cup being an unsymmetrical or tapering cup like the overflow cup 2 and like the same pierced directly in its side to form an opening 20 for the reception of the waste-pipe 19 which is formed with a circumferential "winding" abutment shoulder or bead 21 conforming in curvature to the taper or curvature of the cup as shown in Fig. 7. The said waste-cup is formed with a hollow flange 22 turned inward to form a retaining lip 23 and receiving the circular flange 24 of an internally threaded sleeve 25 which in turn receives the flanged sheet-metal strainer 26 which receives the stopper 27, the same having a bail 28 for the attachment of the chain 14 suspended from the head 12 of the screw 11. To prevent the flange 24 from turning in the flange 22, the same is struck downward at opposite points as at 29 for the reception of corresponding stop-lugs 30 formed by striking down portions of the flange 24 as shown in Fig. 8. The flanged sleeve 24 also forms, as it were, a coupling-piece for the attachment of the strainer to the waste-cup.

It is obvious that flaring wrought-metal cups other than overflow and waste cups, might be joined to pipes in the manner described, avoiding the shaping of the cups so as to secure an opening the edges of

which lie in the same plane for co-action with a symmetrical abutment shoulder encircling a pipe at a right angle to the axis thereof.

I claim:—

1. In a wrought-metal fitting for plumber's use, the combination with a flaring wrought-metal cup having an opening formed directly in its side and also having a hollow flange, of a pipe entered into the said opening and formed with a winding, circumferential abutment-shoulder conforming in curvature to the contour of the cup at the point where the pipe enters the same, and a coupling-piece inserted into the hollow flange of the cup and held in place against rotation therein by indentations in the said flange.

2. In a wrought-metal fitting for plumber's use, the combination with a flaring wrought-metal cup having a hollow flange indented at opposite points in its circumference, of a cross-bar inserted at its ends into the said flange and set into the said indentations therein, a screw entering the said bar, a strainer carried by the said screw, and a stopper-chain depending from the said screw.

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

WALTER H. PERKINS.

Witnesses:

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