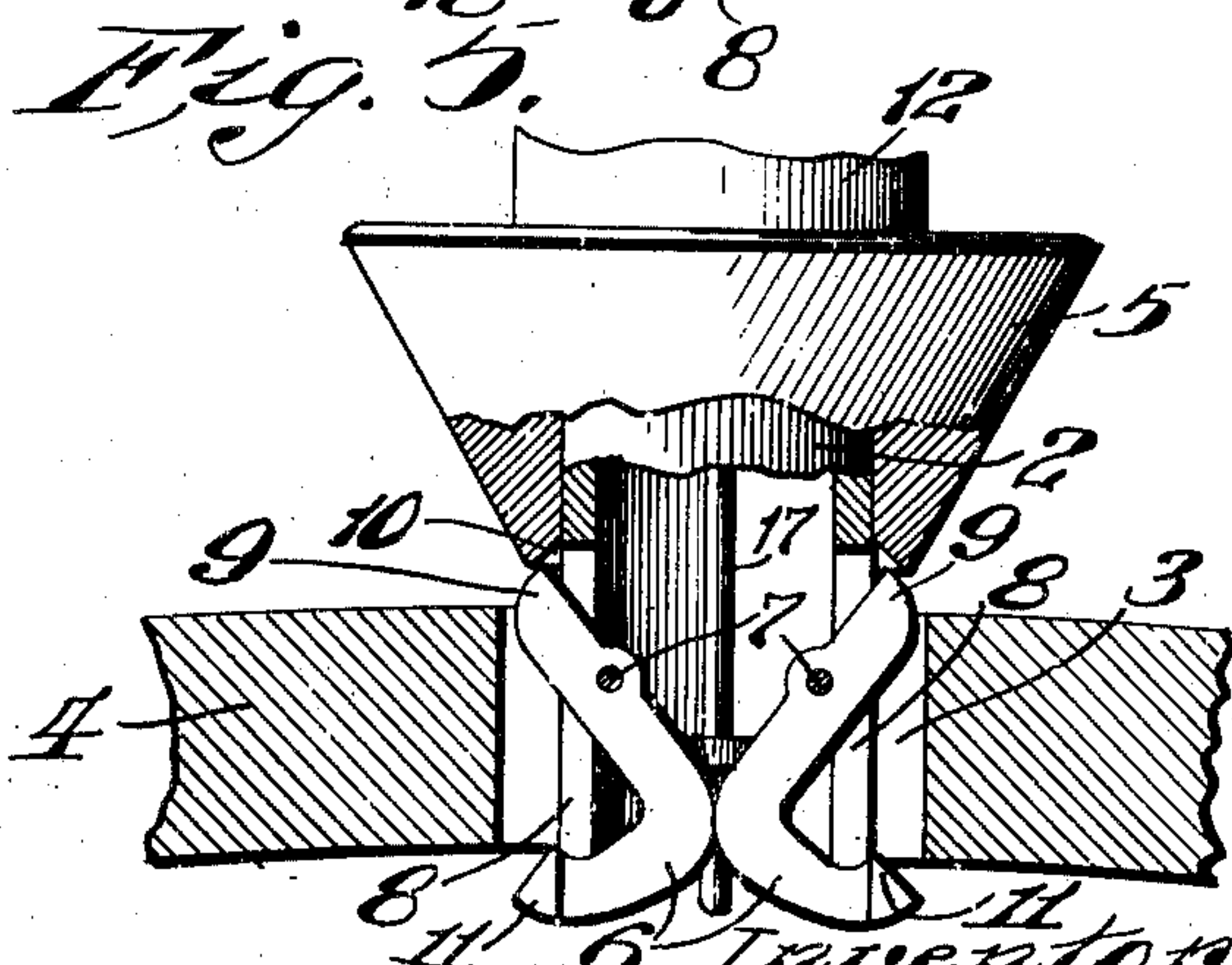
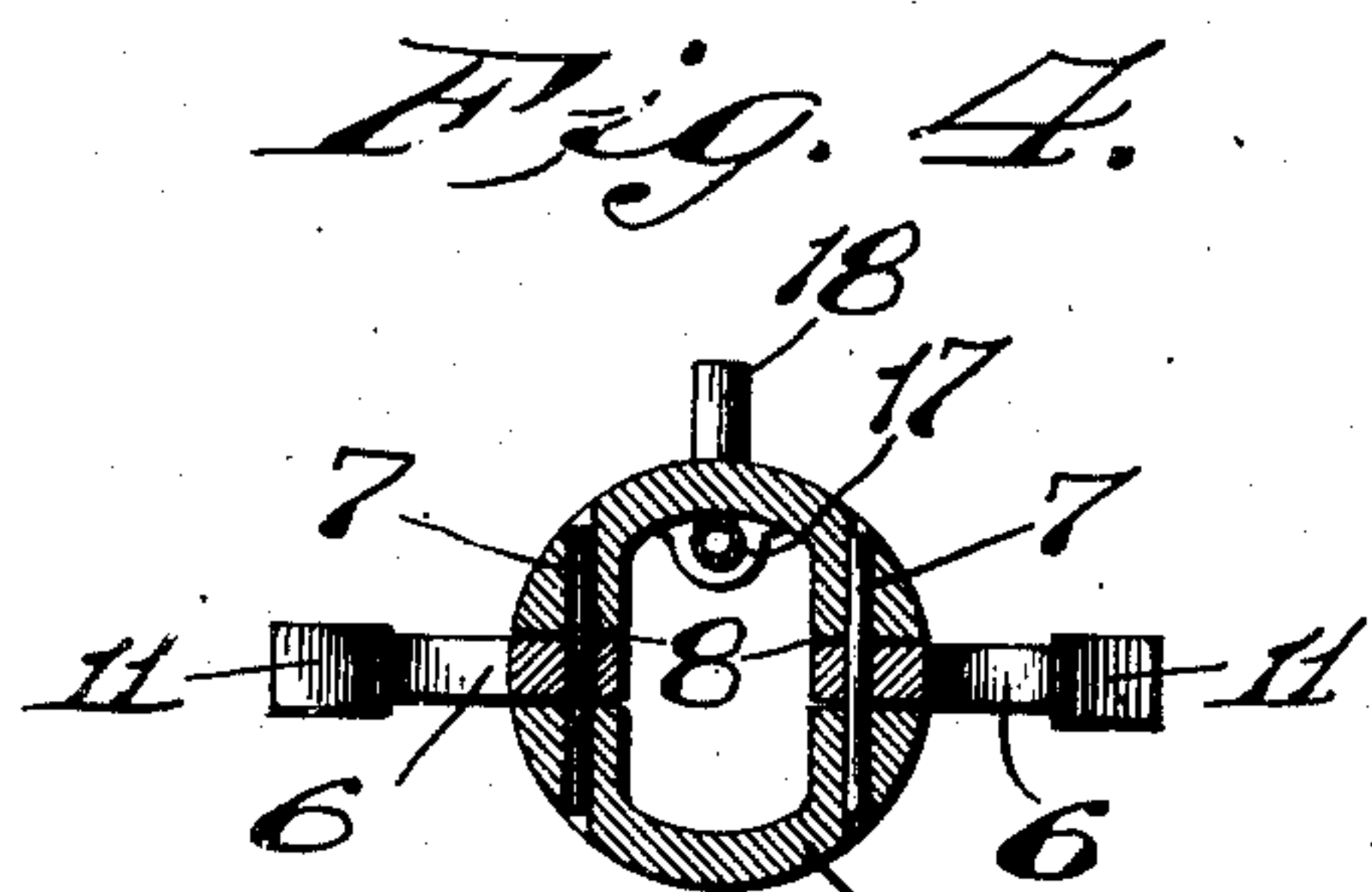
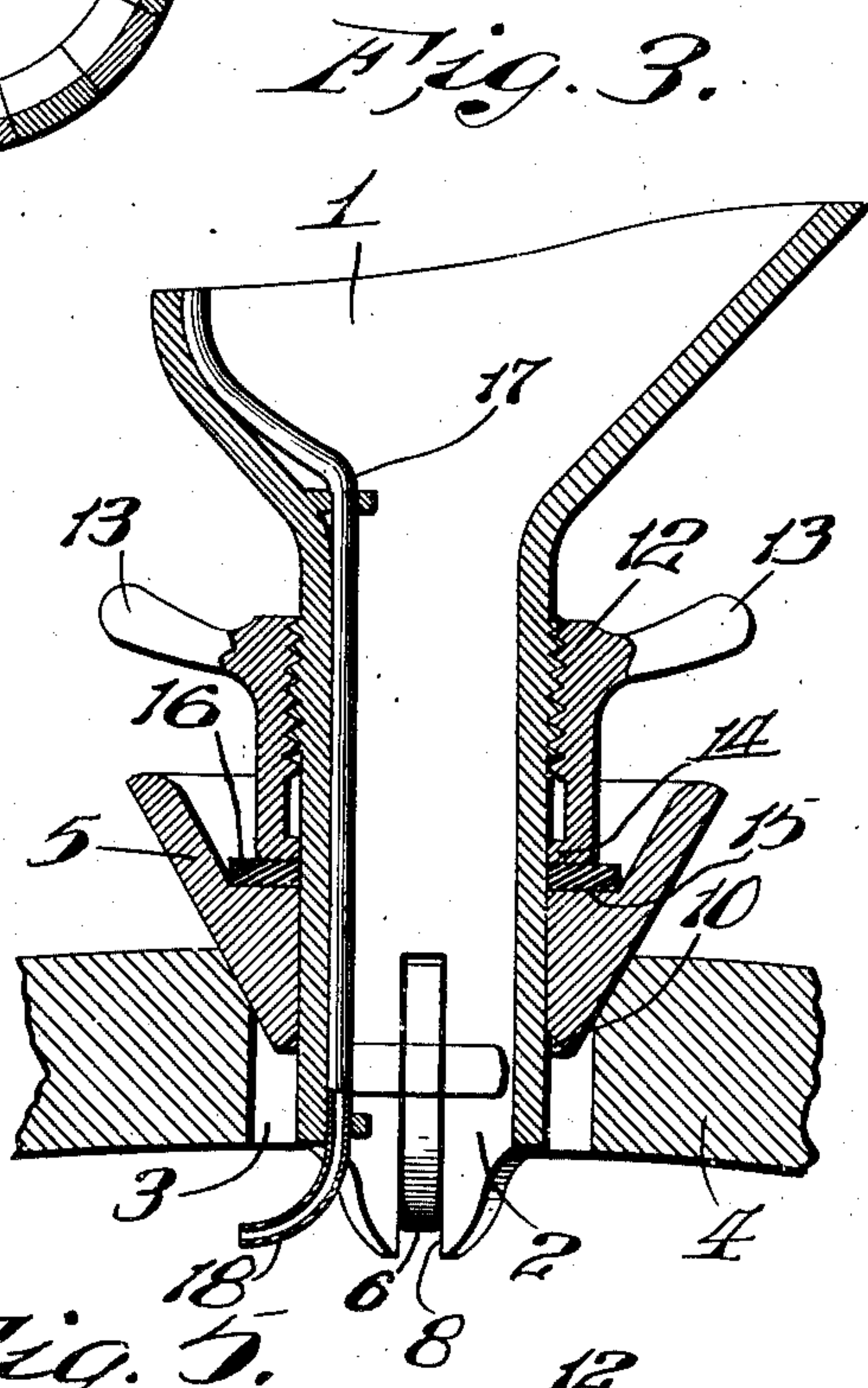
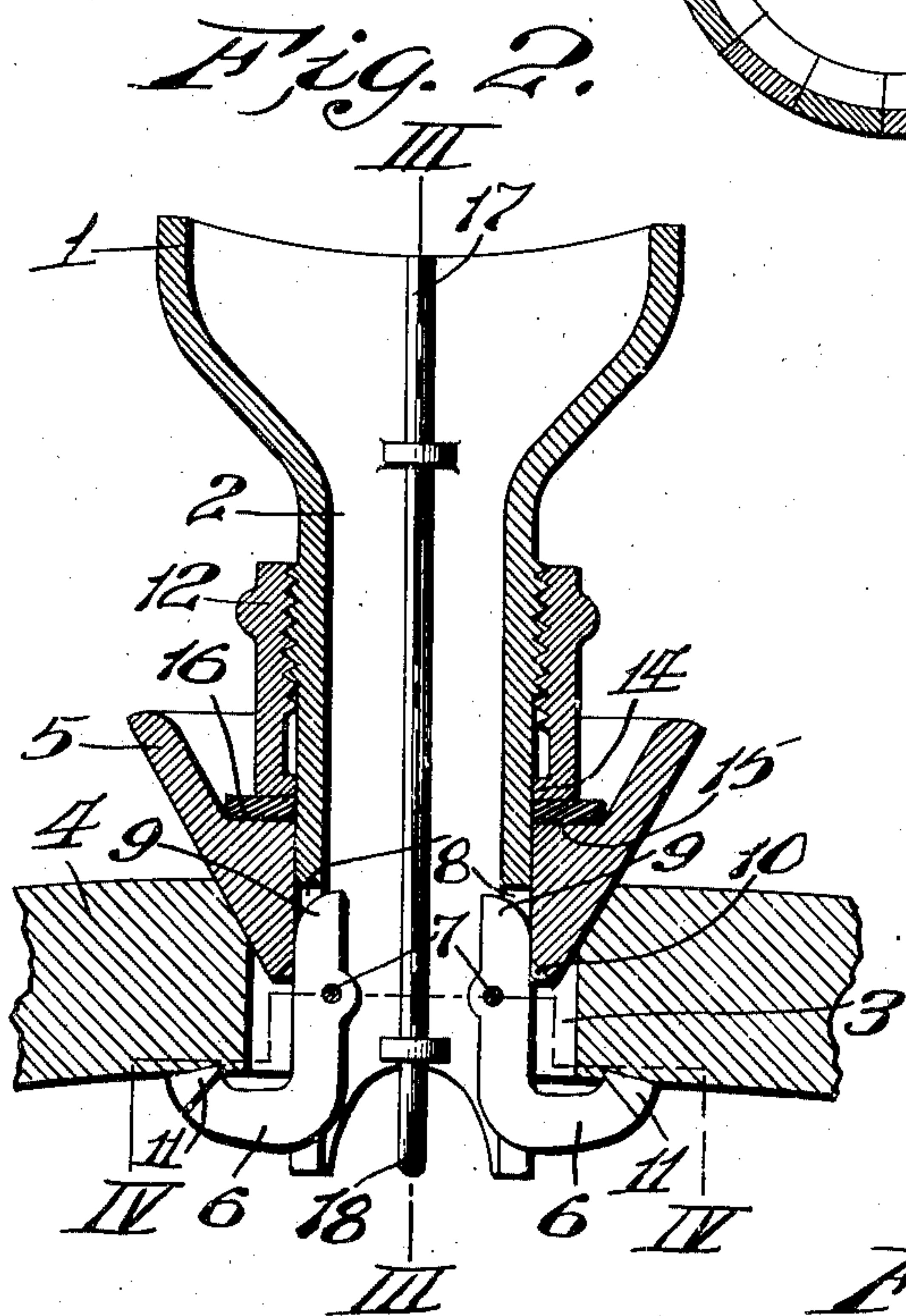
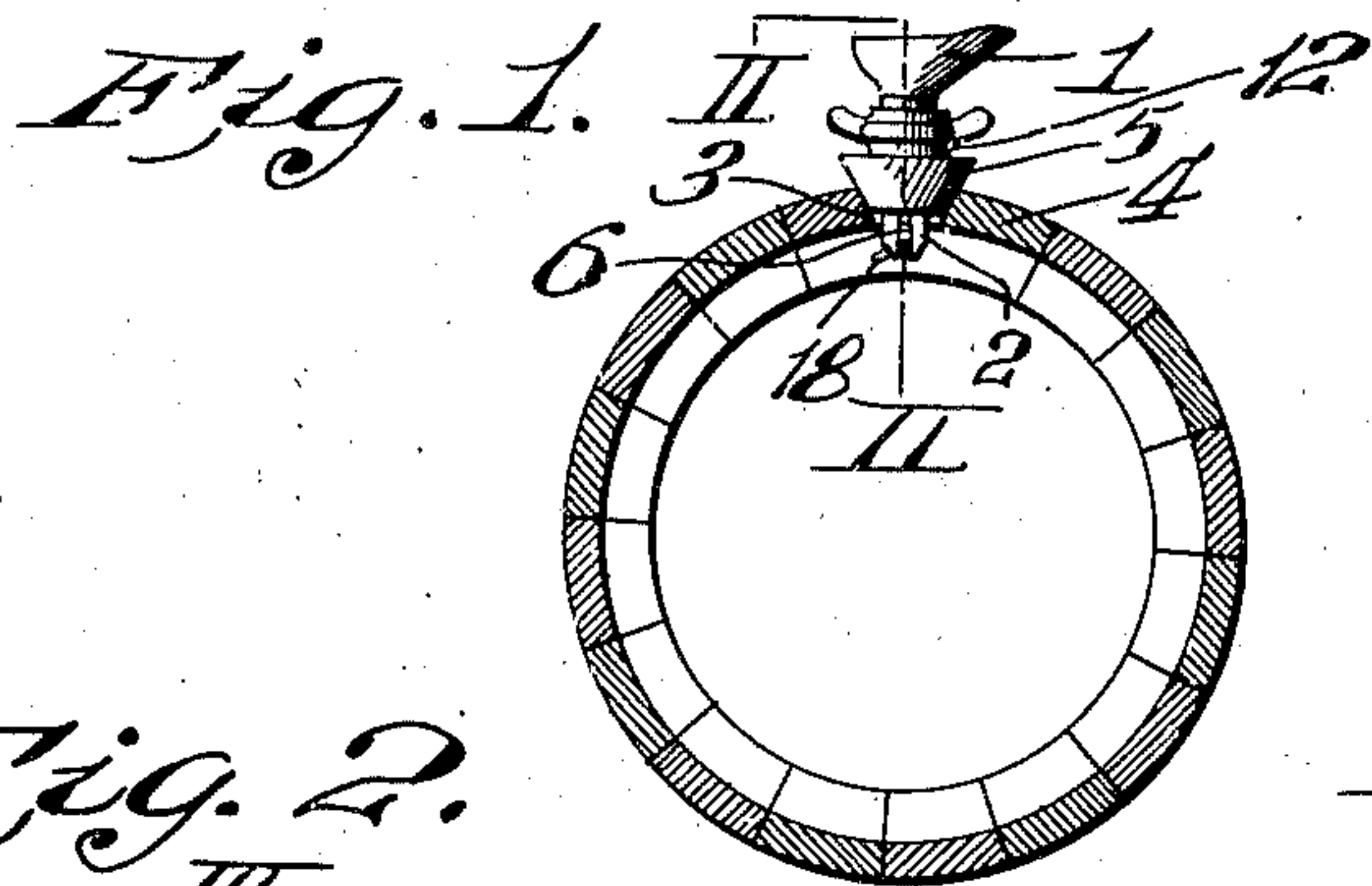


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BUNG SPOUT OR FUNNEL.
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Patented July 18, 1911.



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UNITED STATES PATENT OFFICE.

FREDERICK W. KUBLIN, OF ST. LOUIS, MISSOURI.

BUNG SPOUT OR FUNNEL.

998,352.

Specification of Letters Patent. Patented July 18, 1911.

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To all whom it may concern:

Be it known that I, FREDERICK W. KUBLIN, a citizen of the United States, residing at St. Louis, in the State of Missouri, have
5 invented certain new and useful Improvements in Bung Spouts or Funnels, of which the following is a specification.

This invention relates more especially to devices for filling and emptying casks and
10 other light receptacles and has for its primary object to provide an improved construction, combination and arrangement of parts in devices of this nature adapting them to be used with casks or other recep-
15 tacles provided with openings of different sizes.

One of the objects of the present invention is to provide improved means for locking the spout or funnel in position within
20 the bung hole or opening.

Another object is to provide improved means for forming a perfectly tight closure between the spout or funnel and the walls of the bung hole or opening.

25 Another object is to provide improved means for venting the interior of the cask or other receptacle.

Other and further objects will appear in the specification and be specifically pointed
30 out in the appended claims, reference being had to the accompanying drawings exemplifying the invention and in which—

Figure 1 is a transverse section of a cask or similar vessel showing my improved device in position within the bung hole. Fig. 2 is a section on the line II—II, Fig. 1, parts being shown in elevation. Fig. 3 is a section on the line III—III, Fig. 2, parts being shown in elevation. Fig. 4 is a section
40 on the broken line IV—IV, Fig. 2. Fig. 5 is a view similar to Fig. 2 showing the parts in release position.

Referring more specifically to the drawings and to the exemplification of the invention shown therein, the spout or funnel
45 proper comprises an outer bowl or basin 1 and a depending neck portion 2 which is adapted to extend downwardly through the bung hole or opening 3 in the curved wall

4 of the cask. Slidably mounted upon the
50 outer cylindrical wall of the neck portion 2, is a tubular frustoconical plug 5, which by reason of its shape is adapted when the device is locked in position in the manner to be hereinafter pointed out to form a per-
55 fectly tight closure between the spout or funnel and the walls of the bung hole or opening. In order to provide means for locking the spout or funnel to the wall 4 of the cask or other receptacle, a pair of
60 bent locking dogs 6 are pivotally mounted on pins 7 which, as shown most clearly in Fig. 4, are seated in the walls of a pair of oppositely disposed slots 8 in the lower end of the neck portion 2, said slots being pro-
65 vided to accommodate the dogs 6 and to permit said dogs to be oscillated about their pivots 7 into and out of locking position. By an inspection of Figs. 2, 3 and 5, it will be seen that the means for locking the de-
70 vice in position within a bung hole or other opening, consists of the tubular plug 5 and the dogs 6. In order to secure a suitable co-operation between the dogs 6 and the plug 5, said dogs are provided above with cam
75 arms 9 which are adapted to be engaged by the inner cylindrical wall of the plug 5. As shown in Fig. 5, the smaller end of the plug 5 is provided with an annular bevel 10 for engaging the cam arms 9 at the begin-
80 ning of the relative movement between the dogs 6 and the plug 5. When, therefore, the parts being in the position shown in Fig. 5, the neck portion 2 has been lowered through the bung hole, the plug 5 by a
85 downward movement is caused to engage the cam arms 9 and to force the dogs 6 into the position shown in Fig. 2, said dogs being provided with wedge-shaped lugs 11 which are adapted by their sharpened edges
90 to bite into the wall 4. In order to provide suitable means for moving the plug 5 along the neck 2 and for locking it in any position into which it may be adjusted, said neck portion 2 is provided above with a
95 threaded portion for the reception of a threaded wing nut or collar 12 whose wings 13 adapt it to be rotated about the neck por-

tion 2. The axial movement of the collar 12 is guided by an annular guide flange 14 integrally formed with the collar 12 and adapted to slidably engage the outer cylindrical wall of the neck portion 2. Interposed between the lower end of the collar 12 and an annular seat 15 formed within the upper face of the plug 5, is a packing washer 16 which may be of any suitable material to reduce the wear of the metallic parts and to provide a close joint therebetween.

In order to provide suitable means for venting the cask or vessel which is being filled by means of this device, a vent tube 17 is mounted upon the interior wall of the spout or funnel and made to conform thereto, being provided with a laterally projecting end 18 which projects to one side of the column of inflowing liquid.

The operation of my device is now apparent and briefly stated is as follows: The parts being in the position shown in Fig. 5, the lower end of the device is lowered through the bung hole or opening 3 and the wing nut or collar 12 rotated to force the plug 5 down into the position shown in Figs. 2 and 3. By this movement, the dogs 6 are thrown outwardly and caused to impinge the interior wall of the cask or other receptacle 4. It is to be noted that by means of this construction, the spout or funnel may be securely locked in position within any bung hole whose diameter is intermediate between the smaller and larger diameters of the plug 5. Moreover, by reason of the sliding engagement between the inner cylindrical wall of the block 5 and the cam arms 9 of the dog 6, this device is adapted to be used with walls of different thicknesses.

What I claim is:

1. In a device of the character described, the combination with a funnel, of means pivotally mounted in the wall of said funnel for locking said funnel within an opening in the wall of a receptacle.

2. In a device of the character described, the combination with a funnel provided with a depending neck, of means carried by said neck and movable into and out of locking position, and means movably mounted on said neck for operating the first said means.

3. In a device of the character described, the combination with a funnel provided with a depending neck, of dogs movably mounted on said neck, and means movably mounted on said neck and slidably engaging said dogs to move them into and out of locking position.

4. In a device of the character described, the combination with a funnel having a depending neck, of a locking dog pivotally mounted on said neck, and means reciprocable along said neck and engaging said dog

for moving it into and out of locking position.

5. In a bung hole funnel, the combination with a depending neck portion, of pivotally mounted dogs, and a tubular wedge-shaped plug slidable along the outer wall of said neck and operatably engaging said dogs, said plug being adapted to form a closure between the neck of said funnel and the walls of the bung hole.

6. In a device of the character described, the combination with a funnel provided with a depending neck, said neck being provided with longitudinal slots, dogs pivoted intermediately of their ends within said slots, and a wedging plug movable along said neck and impinging one end of each dog to move it into locking position.

7. In a device of the character described, the combination with a funnel provided with a depending neck, said neck being provided with longitudinal slots, dogs pivoted intermediately of their ends within said slots, a wedging plug movable along said neck and impinging one end of each dog to move it into locking position, and means for moving said plug axially of said neck.

8. In a device of the character described, the combination with the wall of a receptacle provided with a bung hole or opening, of a funnel provided with a neck portion depending through said bung hole or opening, locking dogs pivotally mounted intermediately of their ends within said neck portion, the lower end of each of said dogs being adapted to engage the inner wall of the receptacle, a tubular frustoconical plug slidably mounted on the outer wall of the neck of said funnel, said plug being adapted to center the device within the bung hole and operatably engaging the upper ends of said locking dogs, a nut or collar threaded to said neck and operatably engaging said plug to impart a relative locking movement between said dogs and plug.

9. In a device of the character described, the combination with the wall of a receptacle provided with a bung hole or opening, of a funnel provided with a neck portion depending through said bung hole or opening, locking dogs pivotally mounted intermediately of their ends within said neck portion, the lower end of each of said dogs being adapted to engage the inner wall of the receptacle, a tubular frustoconical plug slidably mounted on the outer wall of the neck of said spout or funnel, said plug being adapted to center the device within the bung hole and operatably engaging the upper ends of said locking dogs, a nut or collar threaded to said neck and operatably engaging said plug to impart a relative locking movement between said dogs and plug, and a tubular vent extending through the neck

portion of said funnel and having a laterally projecting inlet opening within the receptacle.

10. In a device of the character described,
5 the combination with a funnel having a depending portion, of dogs movable into and out of locking position, and means slidable

on said depending portion for operating said dogs.

FREDERICK W. KUBLIN.

In the presence of—

W. J. MIESSLER,
PETER J. BASLER.