

No. 725,494.

PATENTED APR. 14, 1903.

L. P. SETZLER.  
SIPHON FILLING APPARATUS.

APPLICATION FILED MAR. 20, 1902.

NO MODEL.

Fig 1

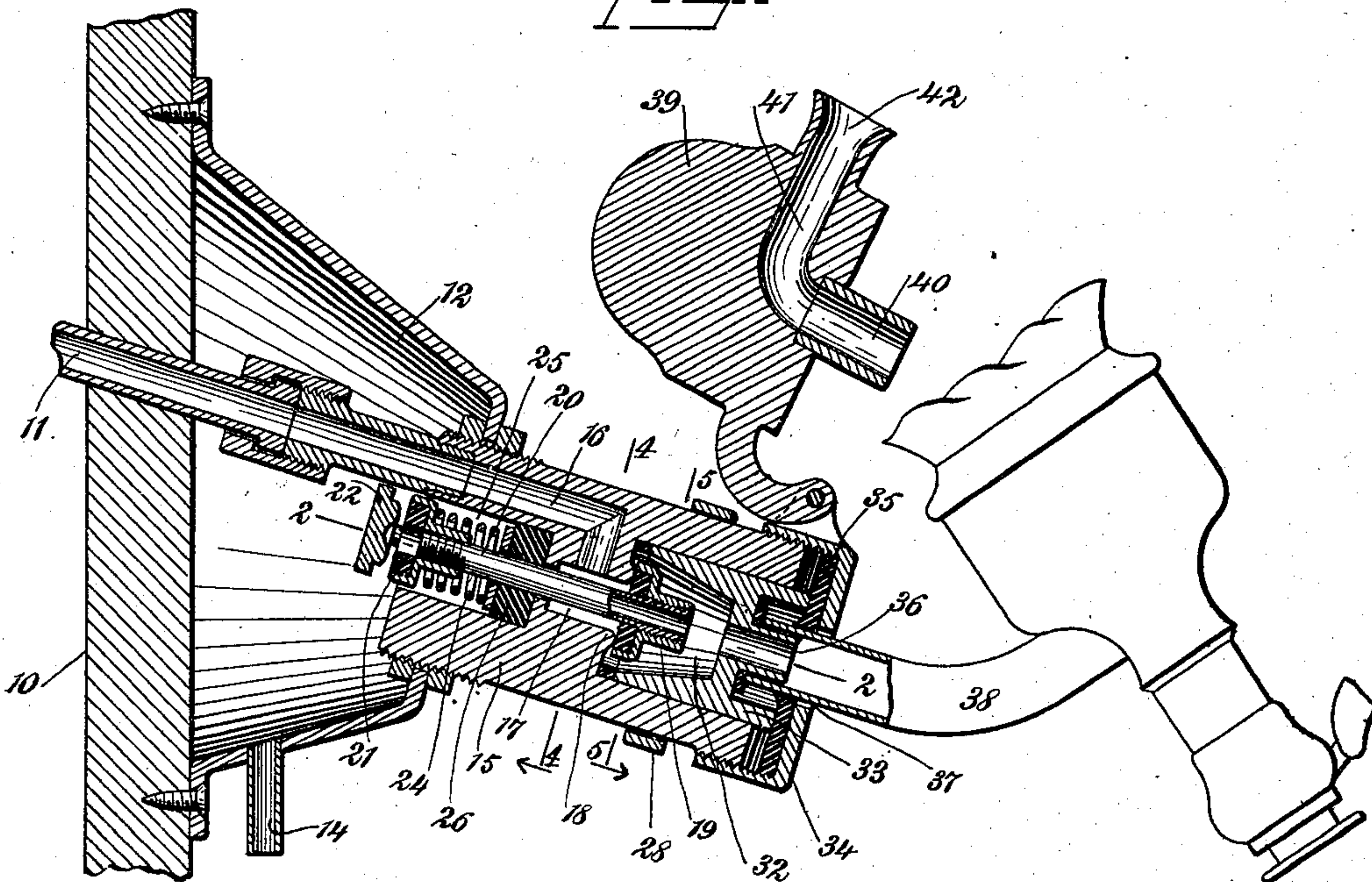


Fig 4

Fig 2

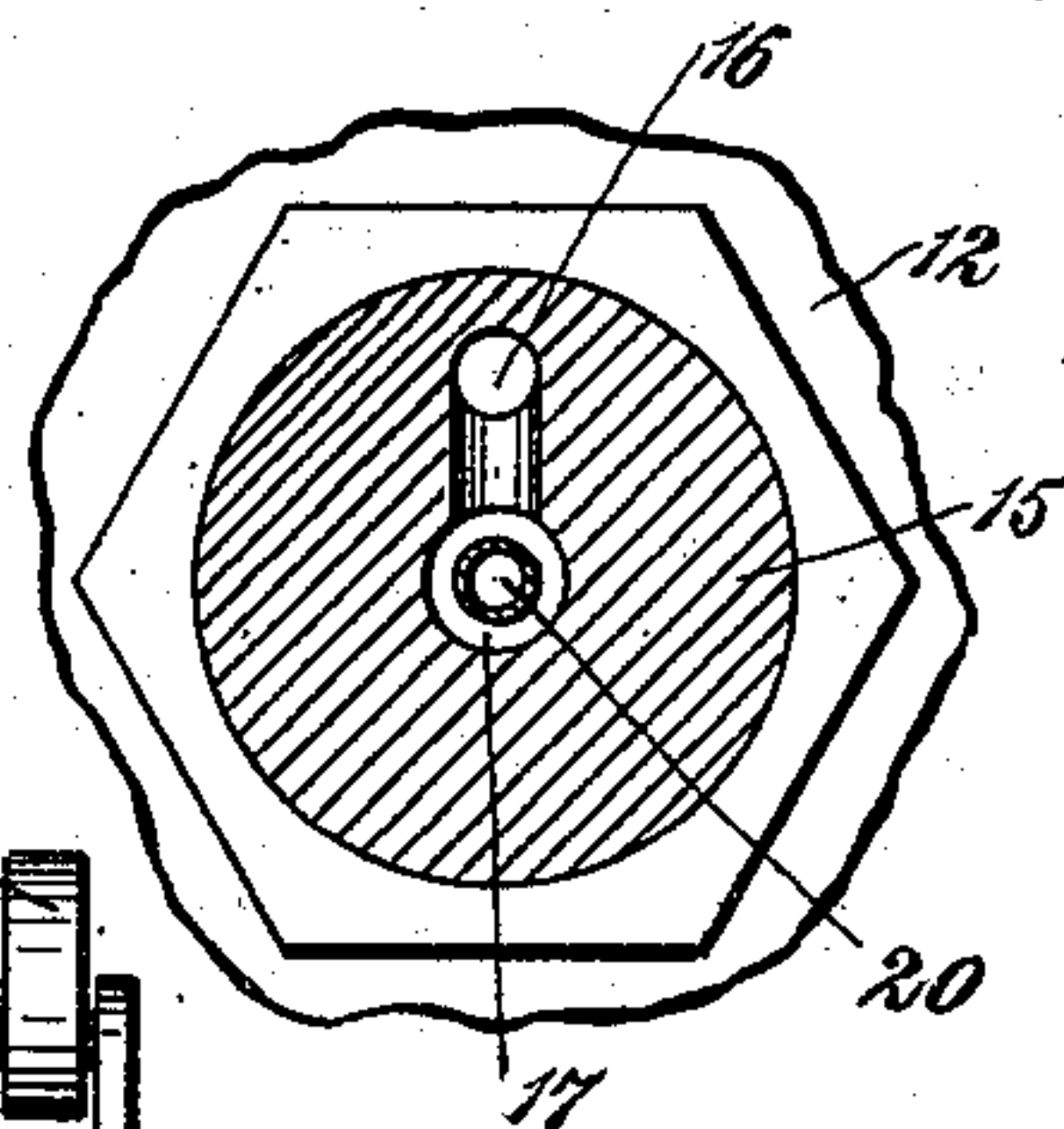
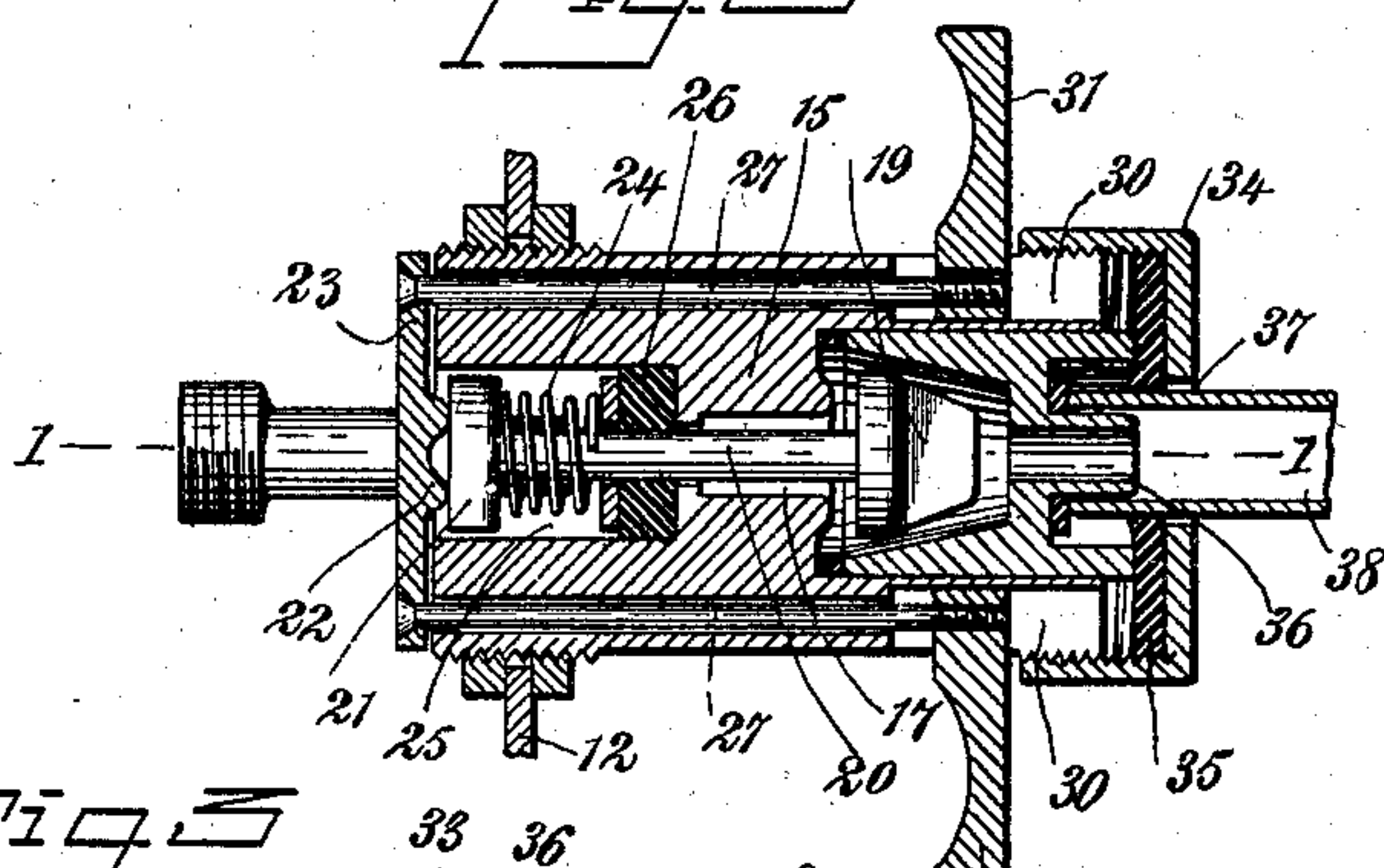


Fig 3

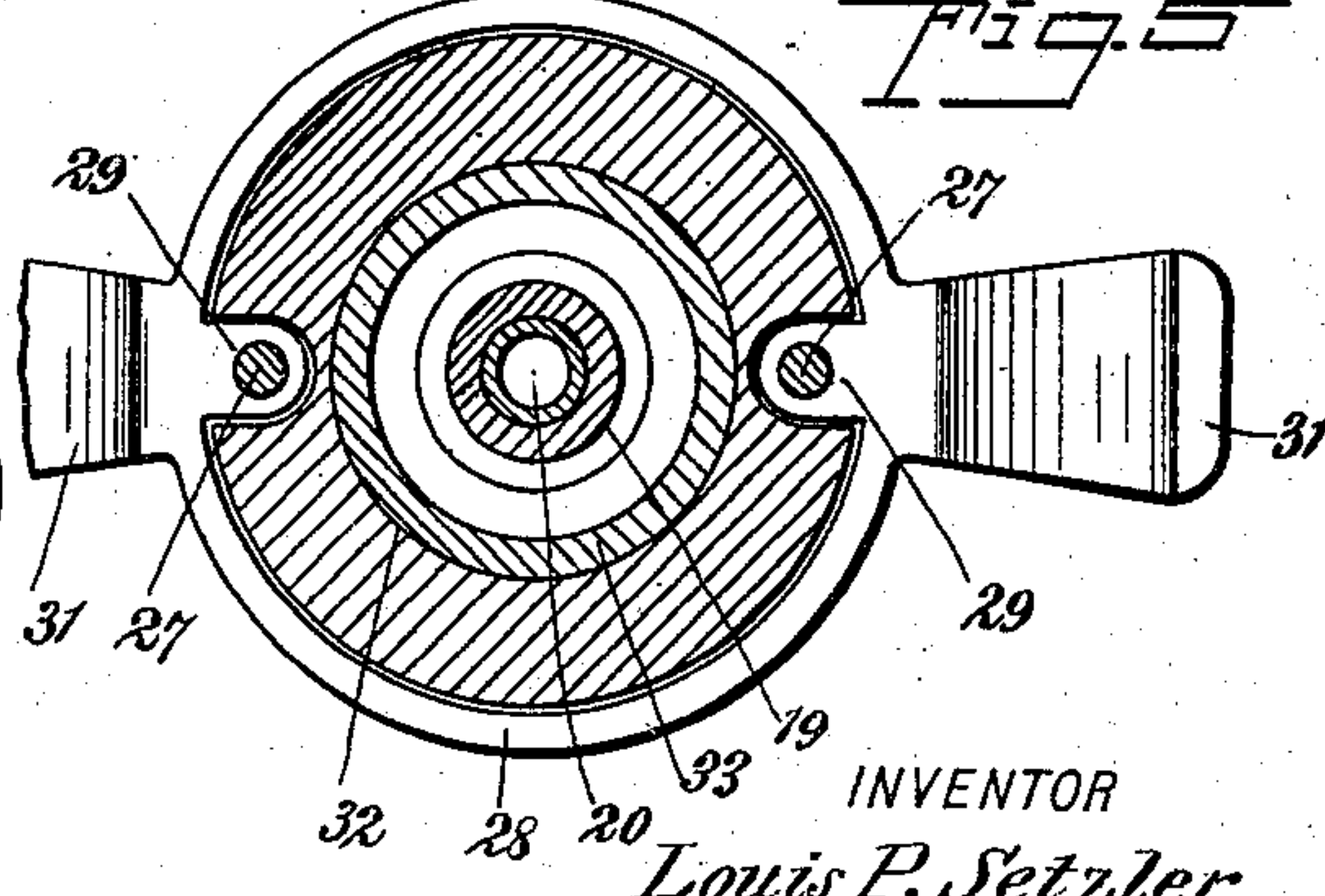
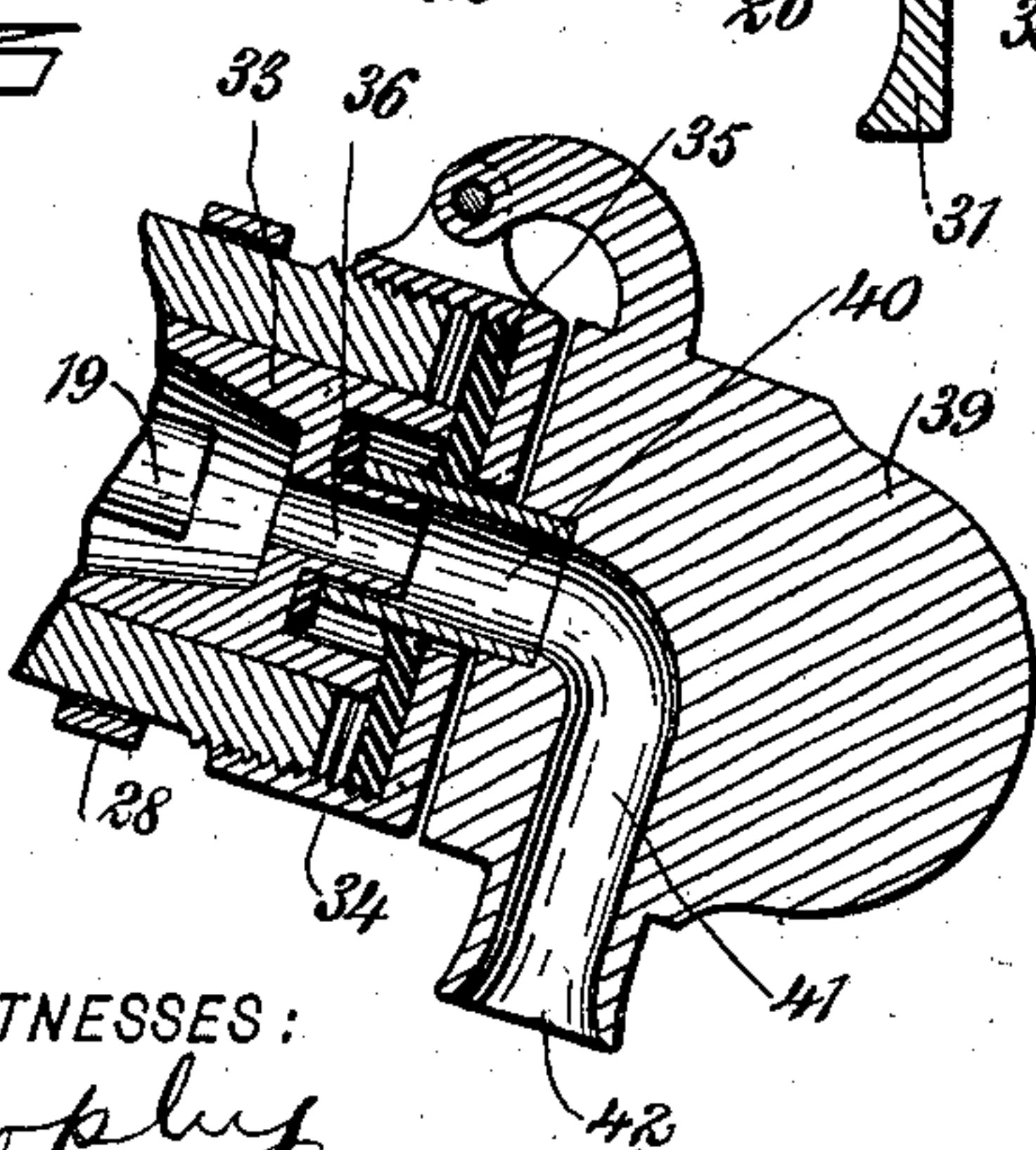


Fig 5

WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## SIPHON-FILLING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 725,494, dated April 14, 1903.

Application filed March 20, 1902. Serial No. 99,081. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS P. SETZLER, a citizen of the United States, and a resident of Kansas City, in the county of Jackson and State of Missouri, have invented a new and Improved Siphon-Filling Apparatus, of which the following is a full, clear, and exact description.

This invention relates to a device for filling siphon-bottles from tanks containing carbonated liquids, and also for permitting the liquids to be drawn off into glasses or other receptacles, as may be desired.

The leading objects of the invention are, first, effectively to dispose of the "sniff"—that is to say, the quantity of liquid remaining in the spout after the bottle is filled—and, second, to enable excess gases to be exhausted from the siphon-bottle during the filling thereof.

This specification is an exact description of one example of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional view of the invention taken vertically, which is to say on the line 1 1 of Fig. 2. Fig. 2 is a sectional view on the line 2 2 of Fig. 1. Fig. 3 is a partial sectional view, the same as Fig. 1, this view showing the action of the nozzle-block for drawing off the carbonated liquid into glasses or other receptacles. Fig. 4 is a section on the line 4 4 of Fig. 1 looking in the direction of the arrow at said line, and Fig. 5 is a section on the line 5 5 of Fig. 1 looking in the direction of the arrow at said line.

10 indicates a suitable support, which may be a case or counter, serving also to contain or to conceal the tank in which the carbonated liquid under pressure is placed. 11 indicates a tube passing from this tank through the support 10, and 12 indicates a hollow base fastened rigidly to the support 10 and into which the tube 11 projects.

14 indicates a drip-tube running from the base 12 to carry off the drip to any suitable point.

15 indicates the barrel or body portion of the siphon-filler, which is fastened rigidly to

the base with its left-hand end projected thereinto, the barrel extending from the base at preferably a downward slant, as Fig. 1 indicates. The barrel 15 is formed with a passage 16, communicating with the tube 11, and this passage extends along one side of the barrel and then turns laterally to a central chamber 17, forming a continuation of the passage and terminating in a valve-seat 18. This valve-seat 18 is commanded by a valve 19, which opens outward—i. e., toward the outer end of the barrel—and the stem 20 whereof is hollow and extended rearward centrally through the barrel and beyond its inner end into the base 12. The inner end of the stem 20 is provided with a valve-seat 21, and with this valve-seat coacts a valve 22, formed on a bar 23, extending transversely across the inner end of the barrel within the case 12.

24 indicates an expansive spring acting between the back of the valve-seat 21 and the barrel 15, normally to seat the valve 19, this spring being located in a cavity 25, formed centrally in the barrel.

26 indicates a packing-gasket, which is placed in the outer end of this cavity 25 to prevent leakage between the chamber 17 and said cavity.

The ends of the cross-bar 23 are connected to rods 27, which extend outward longitudinally of the barrel and are freely mounted in passages formed in the side portions thereof, as Fig. 2 indicates. An annulus 28 loosely encircles the outer portion of the barrel and has inward extensions 29, projecting into suitable cavities 30 in the barrel, such extensions 29 being joined to the rods 27.

31 indicates finger-pieces located opposite each other and projecting outward from the annulus 28. The valve 19 is located in a chamber 32 in the outer extremity of the barrel 15, and in this chamber is located a collar 33, this collar being held securely in place by a screw-cap 34, mounted on the outer end of the barrel. Within this cap 34 is a rubber or like gasket 35, which presses against the collar 33 and holds it rigidly in place and which also serves a further function, as will be hereinafter specified. The collar 33 has a nipple-like boss 36 surrounding its central opening and communicating therethrough with the space in which is located the valve



19. The cap 34 has an opening 37 therein, and this opening is designed to receive the nozzle 38 of the siphon-bottle. (Indicated in the drawings.) Mounted to swing on the cap 34 is the nozzle-block 39, having a nipple 40, adapted when the block is thrown down, as shown in Fig. 3, to pass through the opening 37 and to inclose the nozzle 36. This nipple 40 communicates with a passage 41 in the nozzle-block, and the passage 41 terminates in a nozzle 42, which is projected downward when the nozzle-block is in active position. (See Fig. 3.) When the apparatus is used for filling siphons, the nozzle-block 39 should be thrown up into inactive position; but when the liquid is to be drawn off into glasses the nozzle-block should be thrown downward, as shown in Fig. 3. When either of the parts 38 or 40 are projected through the opening 37 of the cap 34, the rubber gasket 35 fits tightly around said parts and prevents leakage past them into the atmosphere. If desired, a gasket may be placed at the base of the nipple-like boss 36, so as to prevent leakage outside the end of the spout or nipple 40.

In the operation of the device, assuming that it is desired to fill a siphon, the spout 38 thereof should be projected through the opening 37 of the cap 34 and pressed tightly against the gasket at the base of the boss or nipple 36. Then the finger-pieces 31 should be grasped, and while the siphon is held in the position explained the annulus 28 should be drawn outward. Fig. 1 shows the position of the parts when inactive—that is to say, the valve 19 is seated under the action of the spring 24 and the hollow stem 20 of the valve is open, since the valve 22 is moved away from its seat 21. Upon drawing outward the annulus 28 the parts assume the position shown in Fig. 2—namely, the valve 22 is seated—thus closing the hollow stem 20, and the valve 19 is open, thus placing the passage 16 in communication with the spout 38 of the siphon. The carbonated liquid then passes into the siphon. In the operation of filling siphons a difficulty is commonly encountered in that when the siphon gets partly full the pressure in the siphon equals that in the tank. This is due principally to the presence of atmospheric air in the siphon-bottle. Such air is wholly undesirable, and it must at all events be vented before the bottle can be completely filled. When this period of the operation occurs, the operator should merely relax the pressure on the annulus 28, whereupon the parts for an instant reassume the position shown in Fig. 1. This seats the valve 19 and opens the valve 22, and the excess pressure in the valve may then be exhausted into the base 12, where it will escape into the atmosphere, notwithstanding that the drip-pipe 14 may for convenience be led to some relatively remote point. When the venting has been completed, the annulus 28 should again be drawn outward to place the parts in the adjustment shown in Fig. 2 and continue the filling of the siphon.

When the siphon is full, the annulus 28 should be released, and the valve 19 will again be seated. This operation is attained by the opening of the hollow stem 20, and then the sniff is immediately exhausted into the base. This done, the siphon may be removed and handed to the customer in the proper condition without the liquor dripping therefrom, as heretofore. To draw the liquid from the tank into a glass, it is necessary to throw down the nozzle-block 39, causing its nipple 40 to be placed in communication with the nipple 36, and then the above-described operation should be repeated, the action of the parts being precisely the same as when filling a siphon, excepting that there is no excess gas to be exhausted.

Various changes in the form and details of my invention may be resorted to at will without departing from the spirit of my invention. Hence I consider myself entitled to all forms of the invention as may lie within the intent of my claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A siphon-filling apparatus, comprising a body with a liquid-passage therein, a valve commanding the passage, a hollow valve-stem, and means for operating the valve, said means including a valve commanding the hollow valve-stem.

2. An apparatus for filling siphons, comprising a body with a liquid-passage therein, a valve commanding said passage, a hollow stem attached to the valve and projecting beyond the body, a valve arranged to engage the valve-stem to operate the first-named valve and to close the said valve-stem, and means connected with the valve for moving the same, whereby to operate the apparatus.

3. An apparatus for filling siphons, comprising a body with a liquid-passage therein, a valve commanding said passage, a hollow stem attached to the valve and projecting beyond the body, a bar carrying a valve, said valve being arranged to engage the valve-stem to operate the first-named valve and to close the said valve-stem, means connected with the bar for moving the same, whereby to operate the apparatus, said means including rods connected to the ends of the bar and extending outward along the body, and an annulus mounted on the body and connected with the rods.

4. A siphon-filling apparatus, comprising a body having a passage therein for the liquid, a valve commanding the passage, a hollow valve-stem attached to the valve and projecting beyond the body, a valve serving to close the valve-stem, and means for alternately actuating said valves.

5. A siphon-filling apparatus, comprising a body having a passage therein for the liquid, a valve commanding the passage, a hollow valve-stem attached to the valve and projecting beyond the body, a valve serving to close



the valve-stem, and means for alternately actuating said valves, said means including a transverse bar, rods extending along the sides of the body, and an annulus attached to the rods and having finger-pieces projected outward.

6. A siphon-filling apparatus, comprising a body with a liquid-passage therein, means for controlling said passage, a nipple-like boss forming the termination of said passage, an orificed cap inclosing the said boss, a packing-gasket held inside of the orificed cap, a nozzle-block mounted to swing on the body, and a nipple carried by the nozzle-block and adapted to project through the orifice in the cap.

7. An apparatus for filling siphons, comprising a body with a liquid-passage therein, a valve commanding said passage, a hollow stem attached to the valve and projecting through the body, said body having a chamber in one end through which the hollow stem projects, a valve-seat carried by the outer end of the hollow stem, a spring acting between the back of the valve-seat and the body to normally close the said valve, said spring being contained in said chamber of the body, a valve adapted to cooperate with the valve-seat of the hollow stem, and means connected with the second-named valve for moving it toward and from the stem.

8. An apparatus for filling siphons, comprising a body with a liquid-passage therein, a valve commanding said passage, a hollow stem attached to the valve and projecting through the body, said body having a chamber in one end through which the hollow stem projects, a valve-seat carried by the outer end of the hollow stem, a spring acting between the back of the valve-seat and the body to normally close the said valve, said spring being contained in said chamber of the body, a valve adapted to cooperate with the valve-seat of the hollow stem, and means connected with the second-named valve for moving it toward and from the stem, said means including a transverse bar, rods connected with the bar and extending forward alongside of the body, and an annulus mounted to slide on the body and connected with the rods.

9. The combination of a body having a

liquid-passage therein, means for controlling said passage, and a nozzle-block mounted to swing on the body and having a nipple adapted to be engaged therewith to register with the said passage in the body.

10. The combination with the body of a siphon-filling apparatus having a liquid-passage therein, a valve for controlling the passage, and an opening in its end leading to said passage, of a nozzle-block pivoted to the body and having a nipple communicating with the nozzle thereof and adapted to enter the opening in the end of the body and register with the liquid-passage thereof.

11. A siphon-filling apparatus, comprising a body having a liquid-passage therein, a valve commanding the passage, a hollow stem secured to the valve and constituting a vent for said passage, a valve for closing the hollow stem, and means for operating said valves, whereby when one is open the other will be closed and vice versa.

12. A siphon-filling apparatus, comprising a body having a liquid-passage therein, a spring-pressed valve controlling the passage, a hollow stem secured to and leading through the valve, said stem constituting a vent for the said passage, a valve for closing the hollow stem, and adapted to operate the first-named valve, and means for operating the valve controlling the vent.

13. A siphon-filling apparatus, comprising a hollow base adapted to be secured to a support and provided with a drip-opening, a body secured in the hollow base with one end projecting therefrom and provided with a liquid-passage, a spring-pressed valve commanding said passage and provided with a hollow stem leading through the valve and having its inner end projecting beyond the inner end of the body, a valve for engaging the inner end of the valve-stem to close the same and at the same time operate the first-named valve, and means for operating the second valve.

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

LOUIS P. SETZLER.

Witnesses:

FRED A. SECKINGER,  
HENRY F. ROSE.