

R. L. HEPLER.
BOTTLING DEVICE.
APPLICATION FILED OCT. 22, 1909.

956,704.

Patented May 3, 1910.

Fig. 1.

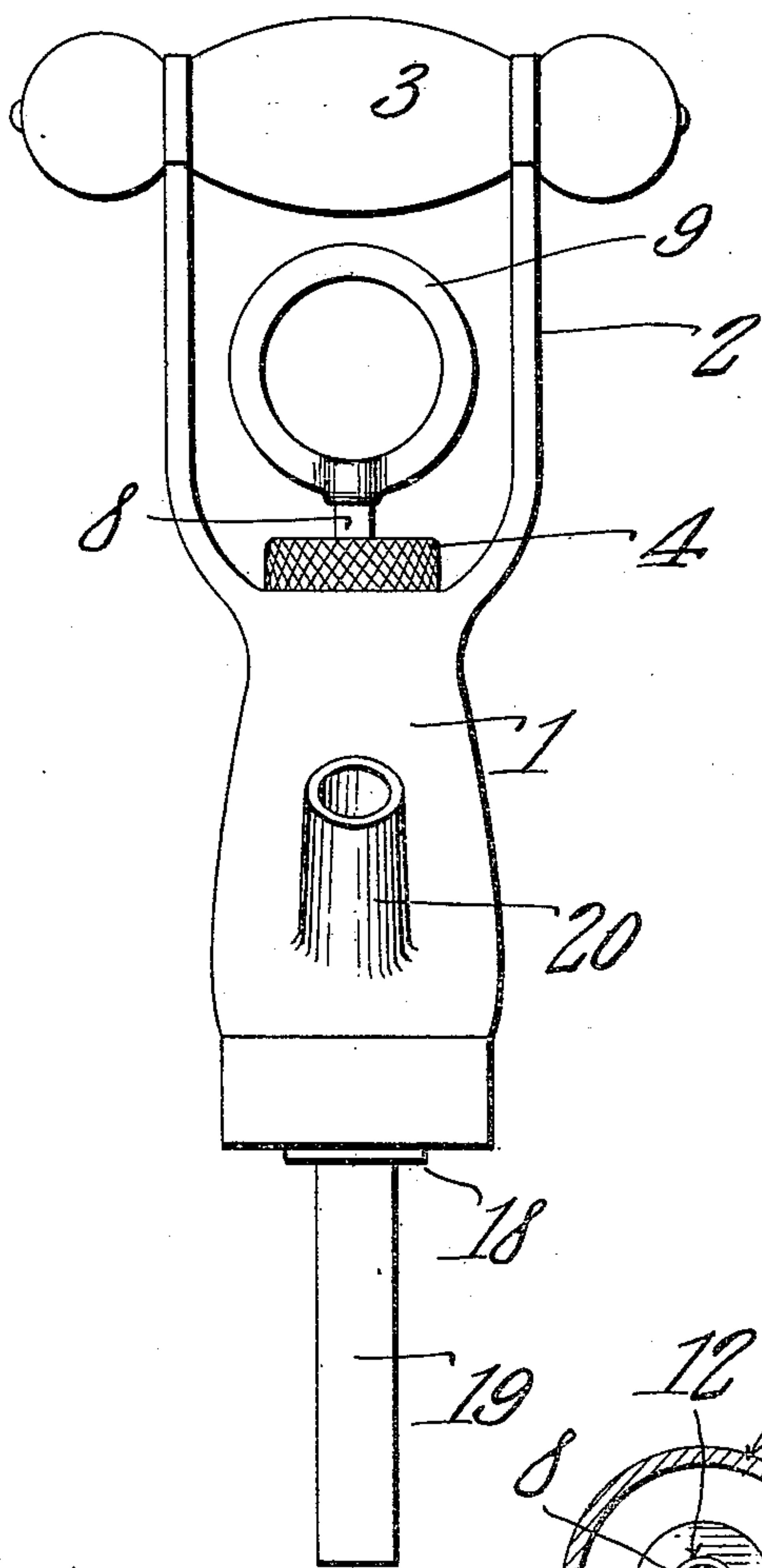


Fig. 2.

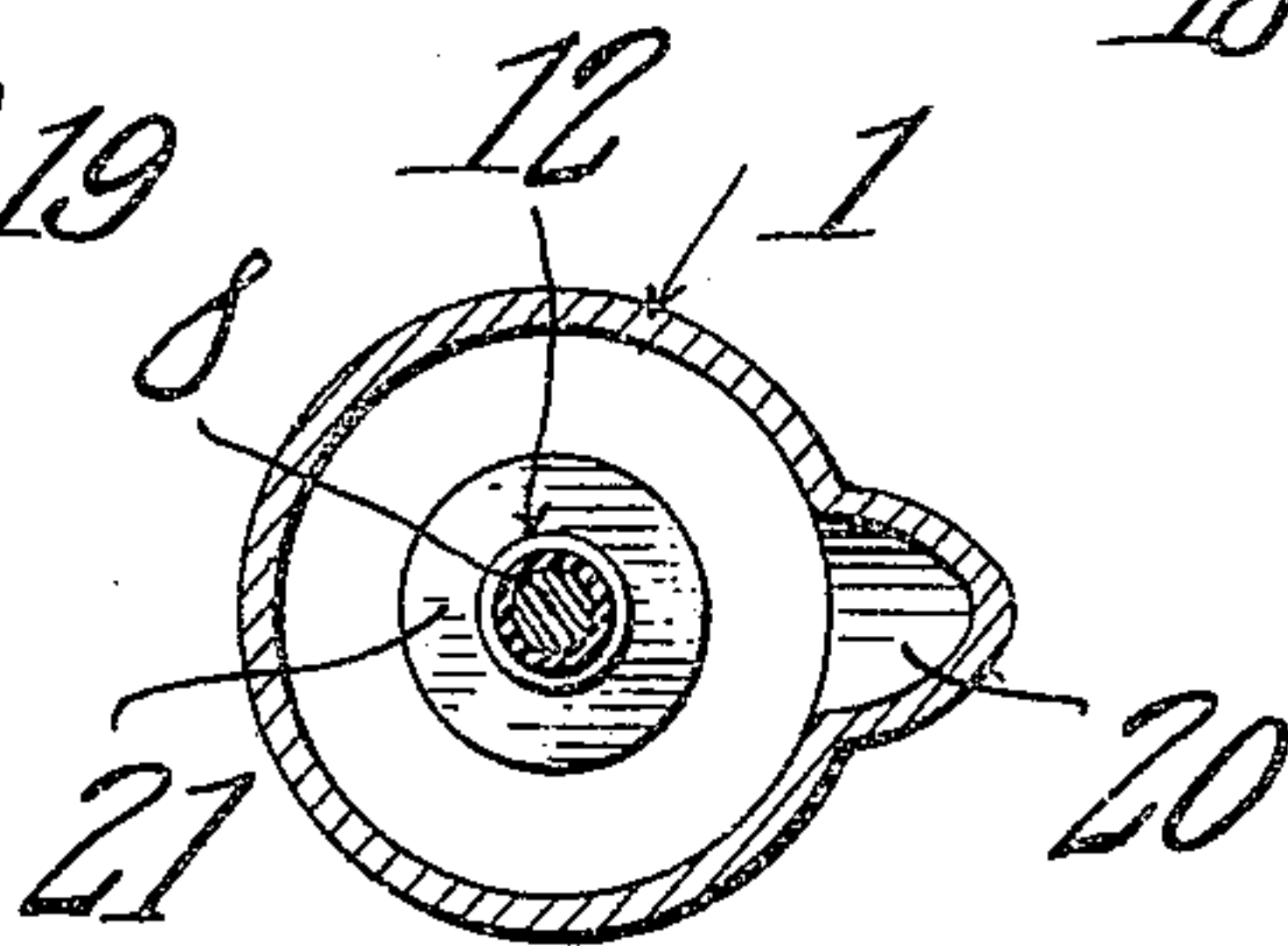
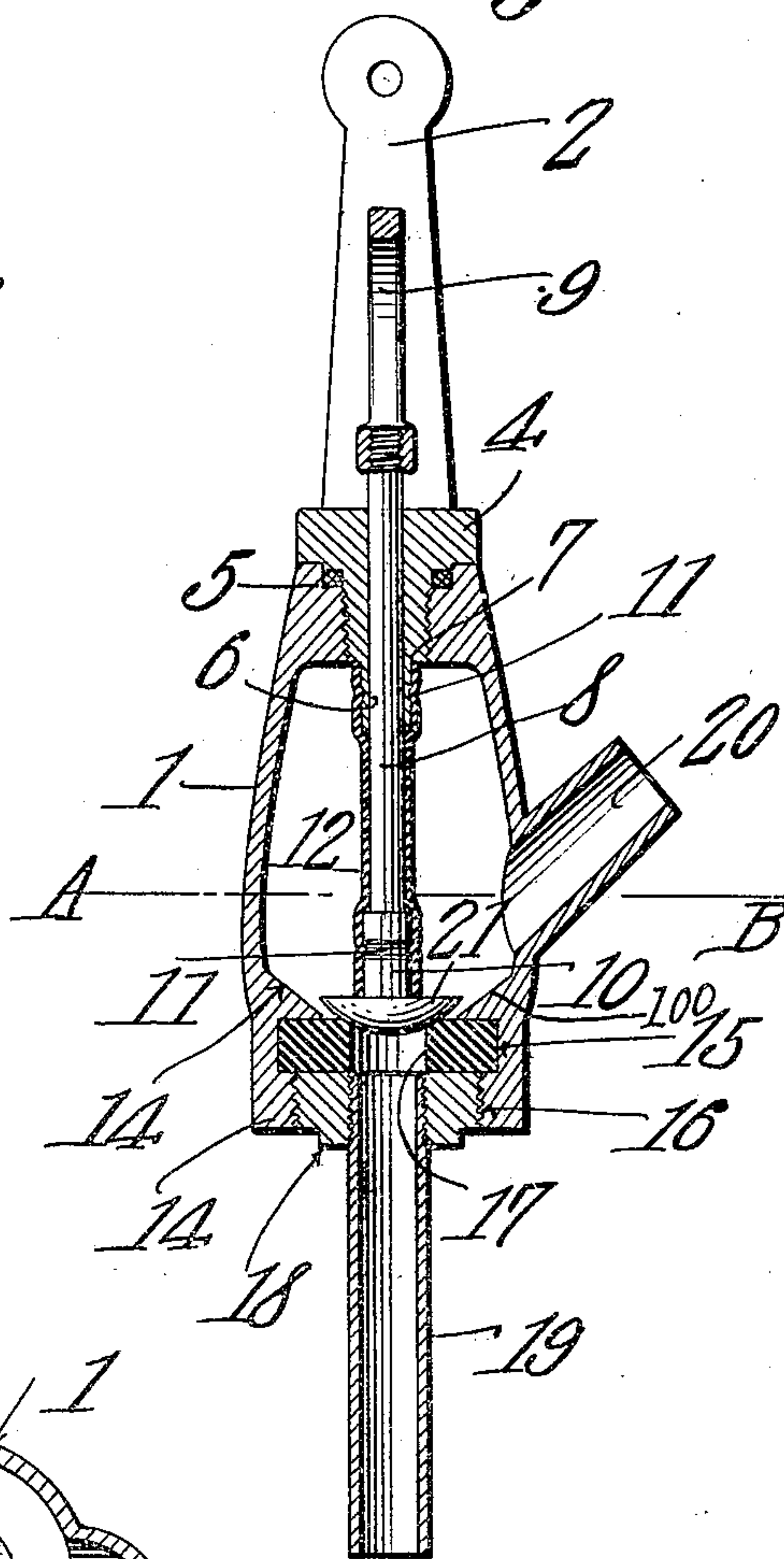


Fig. 3.

Inventor

Roland L. Hepler.

Witnesses

Mason B. Lawton.

By

C. A. Snow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

ROLAND L. HEPLER, OF KEWANEE, ILLINOIS.

BOTTLING DEVICE.

956,704.

Specification of Letters Patent.

Patented May 3, 1910.

Application filed October 22, 1909. Serial No. 524,060.

To all whom it may concern:

Be it known that I, ROLAND L. HEPLER, a citizen of the United States, residing at Kewanee, in the county of Henry and State of Illinois, have invented a new and useful Bottling Device, of which the following is a specification.

The device forming the subject matter of this application for Letters-Patent, is, as its name indicates, adapted to be used for filling bottles from a tank, cask or the like, at any pressure.

It is the object of this invention to provide a valve-carrying plunger so constructed that it may be operated readily by one hand.

Another object of the invention is to provide a novel means for actuating the plunger to close the device, the means whereby the plunger is actuated, at the same time, being effective to prevent a leakage around the plunger.

Another object of the invention is to provide a novel means for receiving the valve which is carried by the plunger.

With these and other objects in view, the invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the accompanying drawings and specifically claimed, it being understood, that, since the drawings show but one form of the invention, changes, properly falling within the scope of what is claimed, may be made, without departing from the spirit of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings, wherein;—

Figure 1 shows my invention in side elevation; Fig. 2 is a vertical longitudinal section thereof; and Fig. 3 is a transverse section upon the line A—B of Fig. 2.

The invention includes, as a fundamental element, a hollow body 1, provided at its upper end, with upstanding, spaced arms 2, united by a transverse handle 3. The upper extremity of the body 1 is threaded to receive a plug 4, arranged to extend laterally over the upper end of the body 1, a packing ring 5, engageable by the plug, being mounted in a suitable seat in the interior of the body 1. The plug 4 is provided with a reduced lower end 6, defining a shoulder 7 in the plug.

Slidably mounted in the plug 4, is a plun-

ger 8, provided at its upper end with a finger-engaging element, in the present instance, shown in the form of a ring 9, located between the arms 1 of the body and beneath the handle 3. The plunger 8 is enlarged at its lower end, to form a head 10. Surrounding the reduced lower end 6 of the plug, and the head 10, is an imperforate resilient cylinder 12, preferably fashioned from rubber or the like. This cylinder 12 is adapted to be received, at its lower end, by a valve 21 which is assembled with the head 10 in any suitable manner, or, if desired, formed integrally therewith. The upper end of the cylinder 12 is adapted to abut against the shoulder 7 in the plug, defined by the reduced lower end 6. The intermediate portion of the cylinder 12 embraces the plunger 8 closely, between the portion 6 of the plug and the head 10. If desired, the head 10 and the portion 6 of the plug may be provided with circumscribing grooves, adapted to engage the cylinder 12, the grooves being denoted in the drawings, by the numeral 11.

The lower end of the body 1 is provided with annular, spaced inwardly extending shoulders 14, defining between them, a seat 15 in the exterior of the body, there being, in the lower end of the body, an axial opening 16, the diameter of which is less than the diameter of the seat 15. As denoted by the numeral 100, the upper face of the upper of the said shoulders 14, is downwardly inclined toward the central portion of said shoulders. The seat 15 is adapted to receive a resilient ring 17, of rubber or the like, which said ring, owing to the fact that the opening 16 is of less diameter than the seat 15, must be sprung into place within the seat. A cap 18 is provided, adapted to be threaded into the opening 16, against the ring 17, to hold the latter in place, the cap 18 being provided with an axial opening, in which is mounted, by threading or otherwise, a tube 19.

Extending laterally from the body 1, at an angle, is a spout 20, adapted to receive one end of a flexible tube, the other end of which may be disposed in the bung-hole of a cask, or mounted upon a faucet or the like. The spout 20, as seen to best advantage in Fig. 2, is positioned to discharge upon the inclined face 100 of the upper shoulder, the liquid thus being directed downwardly into the openings in the ring 17.

The cylinder 12 serves to maintain the valve 21 in place upon the ring 17, thereby effectively closing the tube 19. Owing to the fact, that, at one end, this cylinder 12 embraces the plug 4 closely, and that, at its other end, it engages the head 10 closely, the cylinder serves, not only as a means for actuating the valve 21 to its seat, but, as well, as a means for preventing the liquid which is contained in the body 1, from finding its way upwardly, between the plunger 8 and plug 4. By providing the plunger 8 with the head 10, and by causing the cylinder to engage the head at one end, in abutment with the valve 21, and by causing the cylinder, at the other end to engage the portion 6 of the plug, in abutment with the shoulder 7, and owing to the fact that, between the portion 6 of the plug and the head 10 of the plunger, the cylindrical member 12 engages the plunger 8 closely, it will be seen that the said member 12 cannot be displaced, when the plunger 8 moves upwardly, to unseat the valve 21. Owing to the fact that the ring 17 must be sprung slightly to engage the seat 15, and owing to the further fact that the ring 17 is sustained by the cap 18, the ring 17, although effecting a yieldable seat for the valve 21, will, nevertheless, be held firmly in place against downward displacement, under the action of the resilient cylinder 12.

The particular disposition of the ring 9 which is mounted upon the upper end of the plunger 8, is of importance, in that, since the said ring 9 is located between the arms 2, and beneath the handle 3, but one hand of the operator is necessary, to place the tube 19 in the bottle-neck, and to operate the valve 21, the hand of the operator engaging the handle 3 for the manipulation of the device as an entity, and one finger of the same hand readily engaging the ring 9, when it is desired to start the flow of liquid through the device. Moreover, owing to the fact that the ring 9 is inclosed by the arms 2 and by the handle 3, the ring is not likely to be struck accidentally, whereby the valve 21 might be lifted, causing an outflow through the tube 19.

The head 21 serves to receive the lower

end of the resilient cylinder 12, and to prevent the lower end of the said cylinder from being engaged between the head and the ring 17. Moreover, the plug 4 may be rotated, causing the shoulder 7 to bear against the upper end of the resilient cylinder 12, thus compressing the lower end of the resilient cylinder against the head 21. By this expedient, the effect of the resilient cylinder as a means for keeping the head 21 in the ring 17, may be increased, as the cylinder loses its resiliency, the parts of the device ultimately arriving in the positions shown in Fig. 2, wherein the plug 4 is shown as being seated firmly against the upper end of the body 1.

Having thus described the invention what is claimed is:—

A device of the class described consisting of a hollow body having, adjacent its lower end, an annular shoulder, the upper face of which is downwardly inclined; a resilient ring removably held against the lower face of said shoulder; a tube secured in the lower end of the body and communicating with the opening in the ring; there being an inclined spout in the body positioned to discharge upon the inclined face of the shoulder; a plug threaded into the top of the body and provided with a reduced lower end defining a shoulder in the plug; a plunger arranged to reciprocate in the plug and manipulable from the outside of the body; a resilient cylinder fitting closely about the plunger and the reduced end of the plug and abutting against the shoulder of the plug; there being a head upon the lower end of the plunger adapted to be advanced against the ring by contact with the cylinder, the head constituting a means for maintaining the cylinder against engagement between the ring and the head; the plug being rotatable to compress the cylinder against the head.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ROLAND L. HEPLER.

Witnesses:

CARLOS R. MINER,
JOHN EMMONS FISCHER.