

No. 618,188.

Patented Jan. 24, 1899.

P. S. ROGERS.
NOZZLE OR FAUCET.

(Application filed Apr. 7, 1898.)

(No Model.)

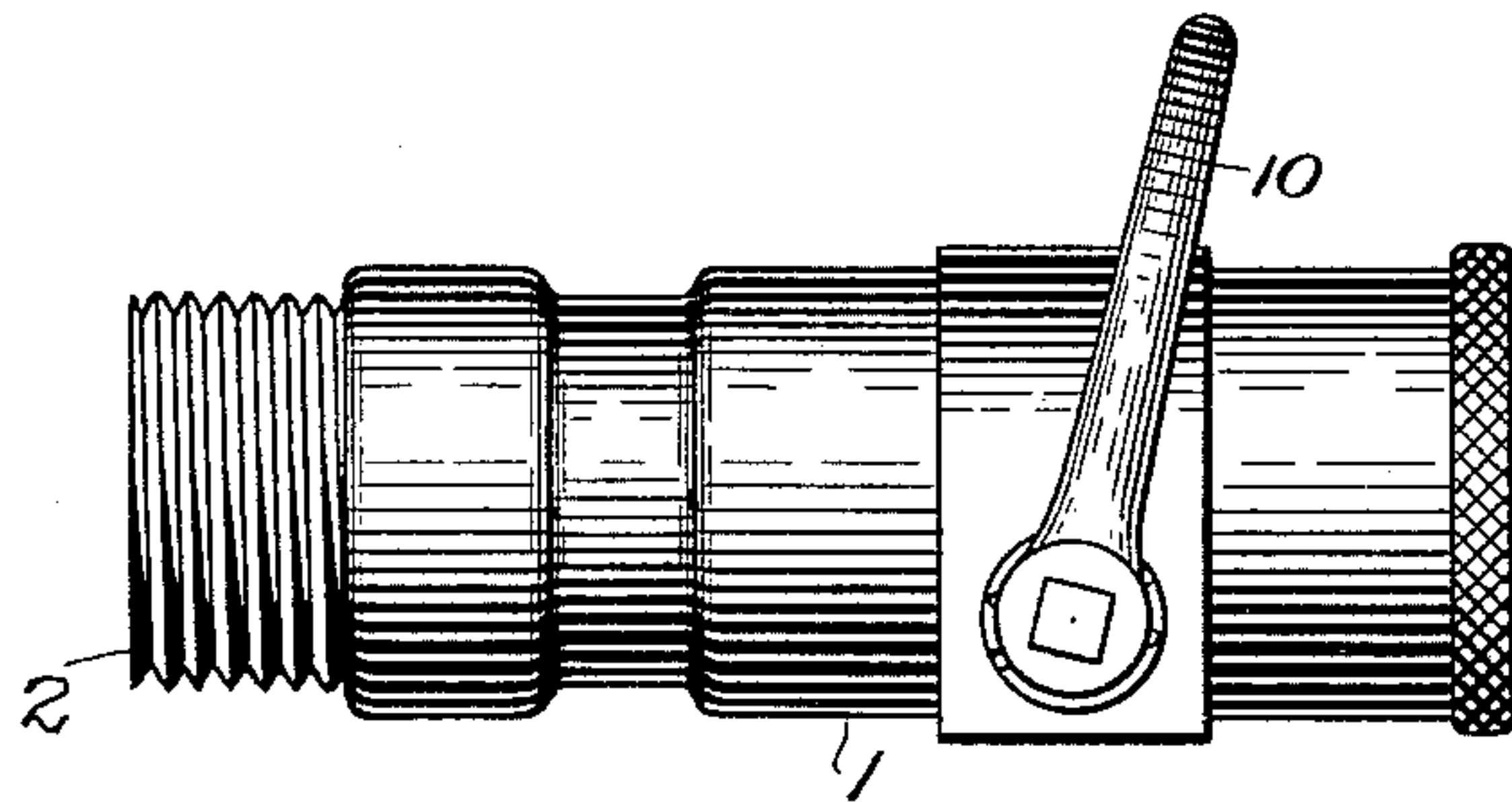


Fig. 1.

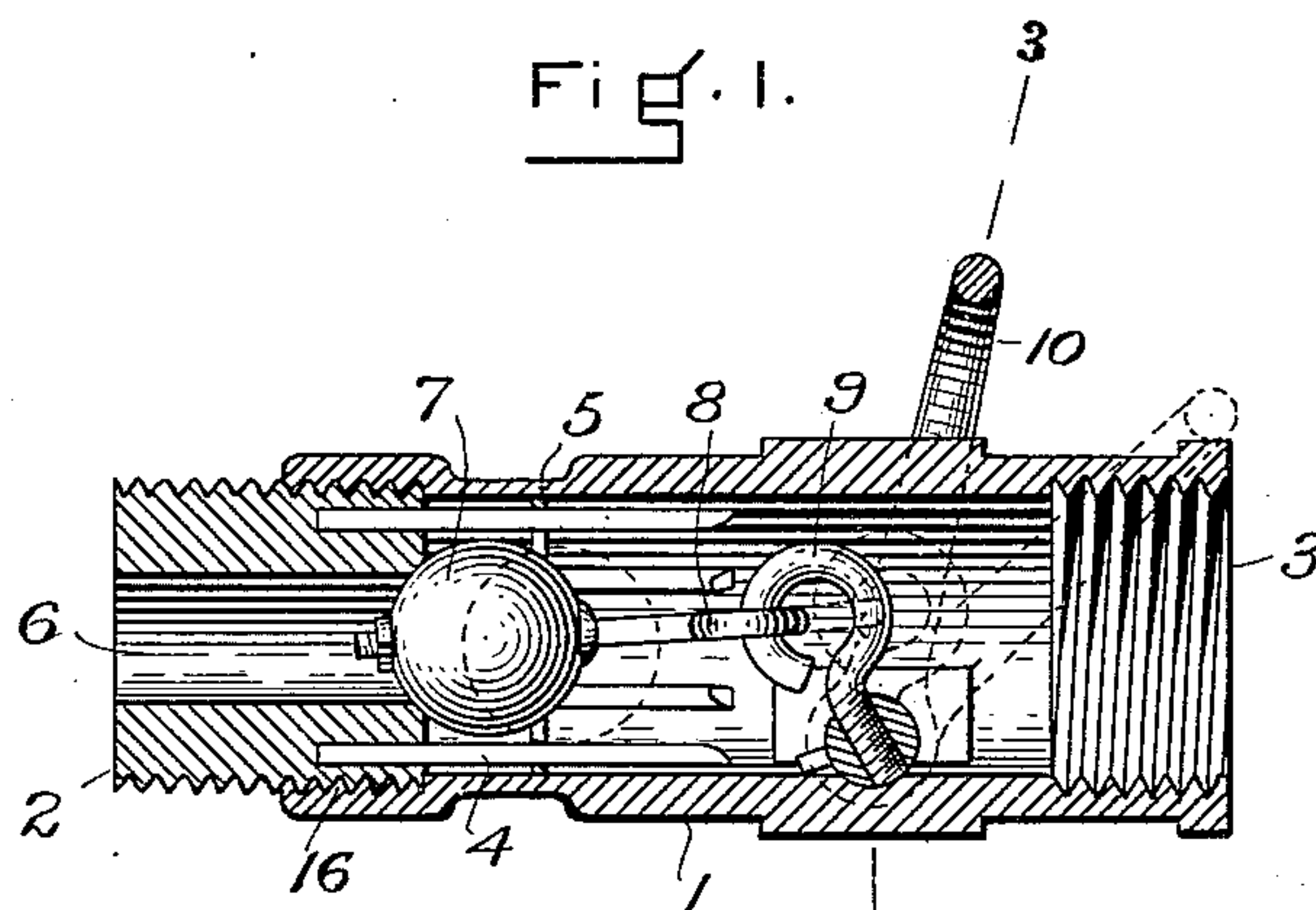


Fig. 2.

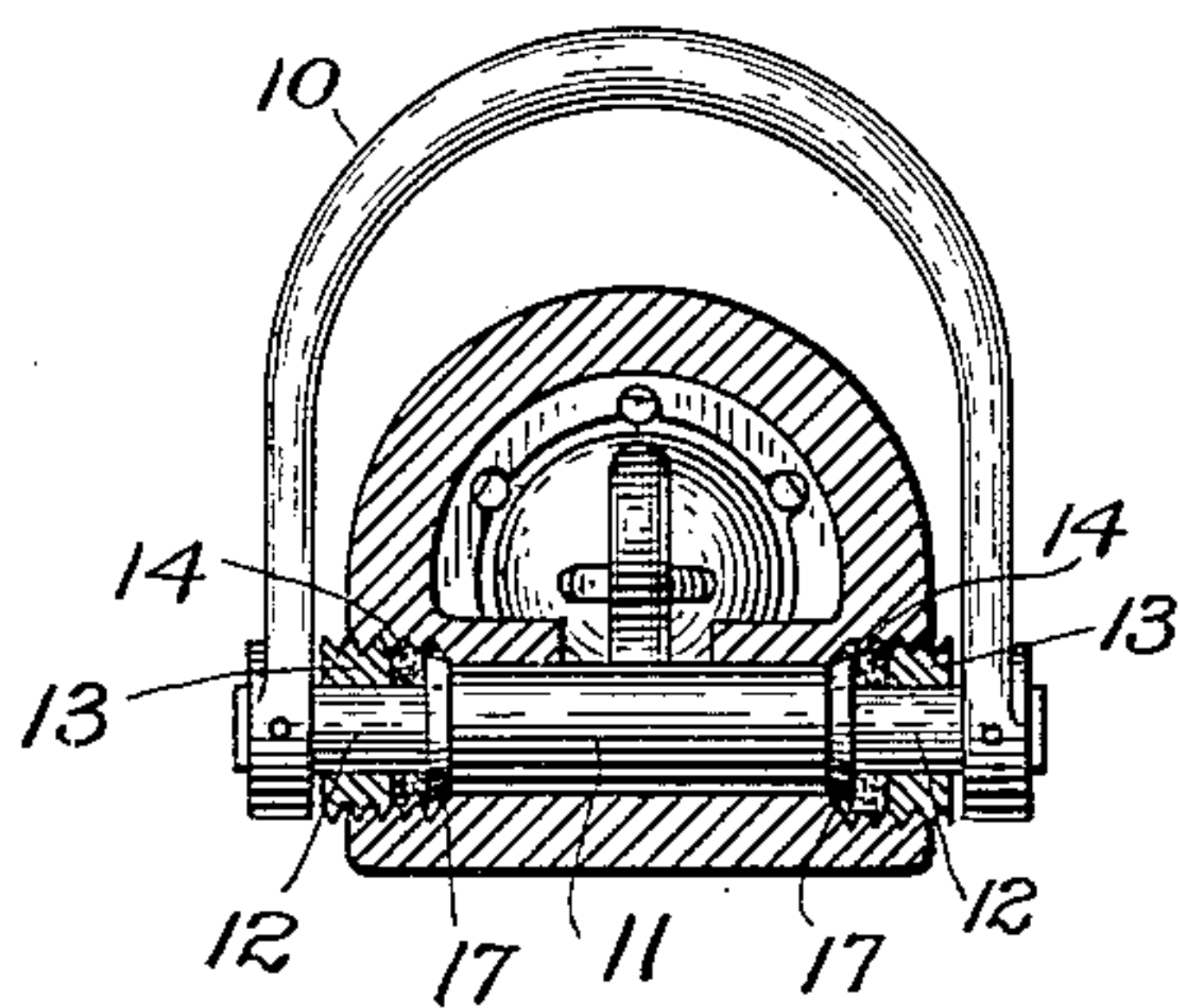


Fig. 3.

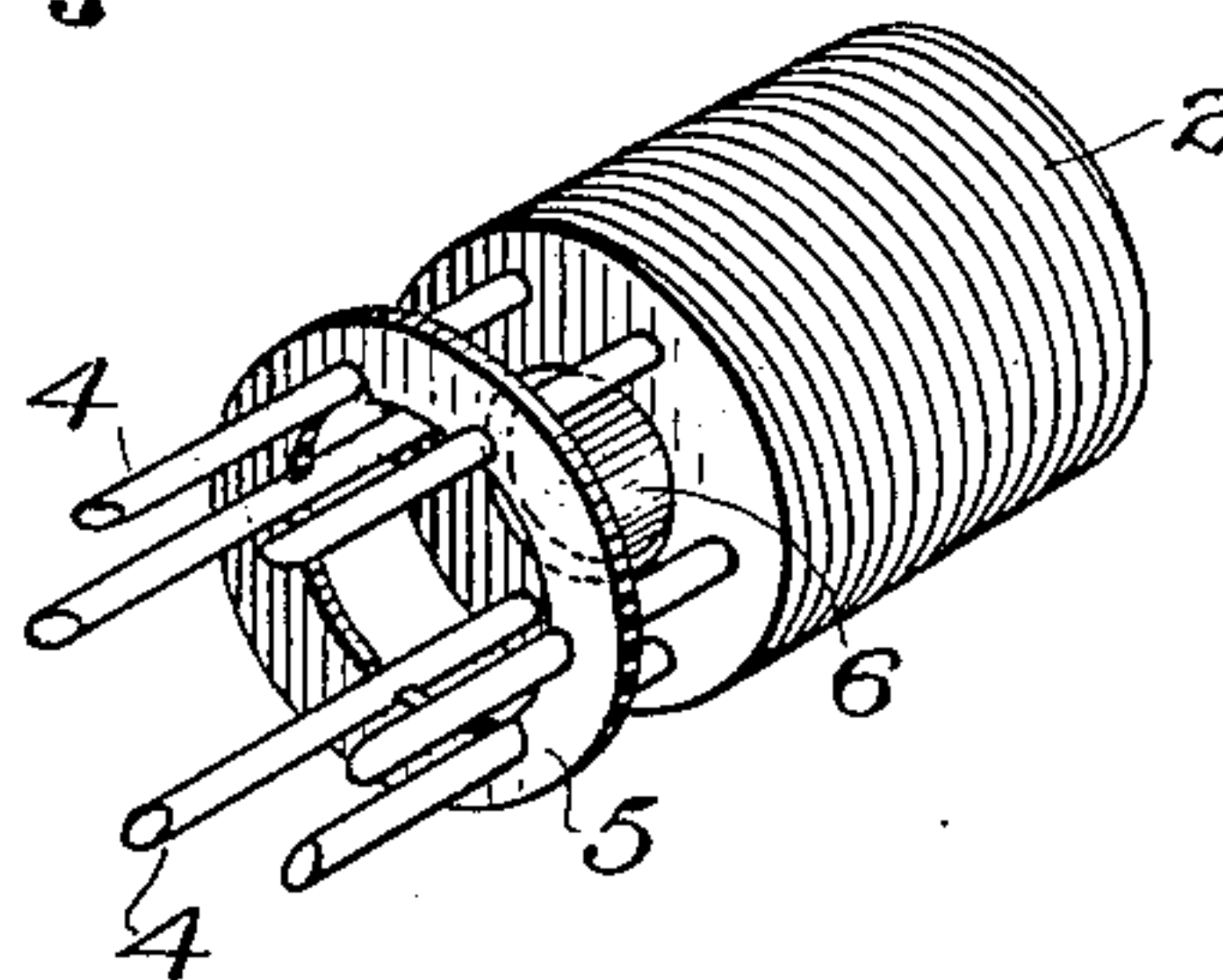


Fig. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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NOZZLE OR FAUCET.

SPECIFICATION forming part of Letters Patent No. 618,188, dated January 24, 1899.

Application filed April 7, 1898. Serial No. 676,766. (No model.)

To all whom it may concern:

Be it known that I, PERCY S. ROGERS, a citizen of the United States, residing at Boston, (Roxbury,) in the county of Suffolk and State
5 of Massachusetts, have invented certain new and useful Improvements in Nozzles or Faucets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in
10 the art to which it appertains to make and use the same.

This invention relates to a self-closing outlet for nozzles, faucets, cocks, and the like, the object being to simplify and perfect the
15 construction of devices of this character, and more especially to furnish an improved self-closing outlet for use in connection with the nozzles of hose-pipes employed for garden or livery-stable purposes, so as to prevent the
20 waste of water that so commonly occurs; and the invention therefore consists in the construction and combination of parts, substantially as will be hereinafter described and claimed.

25 In the annexed drawings, illustrating my invention, Figure 1 is an external side view of my improved nozzle or faucet. Fig. 2 is a longitudinal section. Fig. 3 is a transverse section on the line 3 3 of Fig. 2. Fig. 4 is a
30 detail perspective view of the outlet-nozzle proper removed from the pipe into which it normally screws in the example of my invention shown in the drawings.

Like numerals of reference designate like
35 parts in all the figures.

1 designates a sleeve coupling or casing having the internally-threaded end 3 for the attachment of any desired kind of hose-pipe and having also its opposite end internally
40 threaded at 16 to permit the nozzle 2 to be screwed thereinto, as shown in Fig. 2, said nozzle consisting simply of a centrally-bored externally-screw-threaded block, its central bore being indicated by the numeral 6. An
45 additional nozzle-piece, sprayer, or sprinkler may obviously be connected to the piece 2, if desired.

50 Within the casing 1 is a ball-valve 7, adapted to seat itself upon the end of the passage 6, and thus close the said passage against the outflow of water therethrough, or to be drawn away from the passage 6, so as

to allow the water a free exit through the latter. This ball-valve 7 is preferably of rubber or some similar elastic material, and it is
55 provided with an eye-shaped staple 8, that is engaged by a hooked arm 9, projecting from a transverse shaft 11, to the opposite external ends of which a loop or bail handle 10 is secured outside of the casing 1. The ends
60 of shaft 11 are reduced in diameter at 12 12, where they pass through packed bearings in the wall of casing 1, nuts 13, pressing against packing material 14, being used to make a tight joint and effectually prevent any leak-
65 age of water and washers 17 preventing the packing from working down on shaft 11. By manipulating the external handle 10 the internal connections with the ball-valve 7 will cause it to be lifted from its seat, as seen in
70 dotted lines in Fig. 2.

Secured rigidly to the inner end of nozzle-piece 2 and around the passage 6 are numerous pins or rods 4, which together constitute a sort of cage-like cylinder within which is the
75 ball 7, said pins serving to retain it in position and guide it when it is moved. At a short distance from the end of nozzle-piece 2 is an annular ring 5, whose external periphery fits the interior of casing 1, which ring is
80 securely fastened to the pins 4. The inner diameter of this ring 5 is substantially the same as the ball 7, and when said ball is withdrawn from its seat it passes into and through
85 the ring 5.

One object of my invention is to provide a self-closing nozzle or faucet which can be closed by the water-pressure alone without the assistance of springs such as are very
90 commonly employed in mechanisms having a similar purpose to mine. In the operation of my invention when the handle 10 is pressed against the side of casing 1 or the side of the hose, as the case may be—that is, when it is forced backward into the position shown in
95 dotted lines in Fig. 2 or into some similar position—the valve will then be lifted from its seat and the water can flow freely through passage 6, and this will continue so long as the handle 10 is held backward, as described;
100 but when the handle is released then the pressure of the water automatically returns the valve to its seat, and further outflow is temporarily prevented. This return of the

valve to its seat is accomplished by the pressure of the water directly upon the valve 7 at the point in the casing 1 where the diameter of said casing is reduced by means of the ring 5. The ring 5 serves the important function of enabling very nearly the whole force of the water to be concentrated upon the ball 7, which would not be the case if there were considerable annular space between the ball and the wall of casing 1.

My invention is equally well adapted to all kinds of water-outlets, (large or small,) nozzles, faucets, cocks, delivery-tubes, &c., and I am not to be restricted to any particular kind or style. Neither am I to be confined to the precise details herein set forth; but I reserve the liberty of varying the exact construction as much as may be necessary.

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

1. In a self-closing water-outlet, the combination with a ball-valve and its seat, of the

cage containing the ball, said cage having the annular ring, as set forth. 25

2. In a self-closing nozzle or faucet, the combination of the nozzle proper, having a water-passage and provided with a series of pins or wires, an annular ring secured on said pins, the ball-valve loose within the pins, and the handle for operating said valve, together with the casing. 30

3. In a self-closing nozzle or faucet, the combination with the valve-casing, the valve-seat, and the ball-valve, of a cage for containing said valve and having an annular ring secured to the wires thereof within the valve-casing, and a handle loosely connected with the valve. 35

In testimony whereof I affix my signature in presence of two witnesses. 40

PERCY S. ROGERS.

Witnesses:

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