

(No Model.)

E. G. O'DONNELL.
WATER PIPE OR HOSE NOZZLE.

No. 603,487.

Patented May 3, 1898.

Fig. 1.

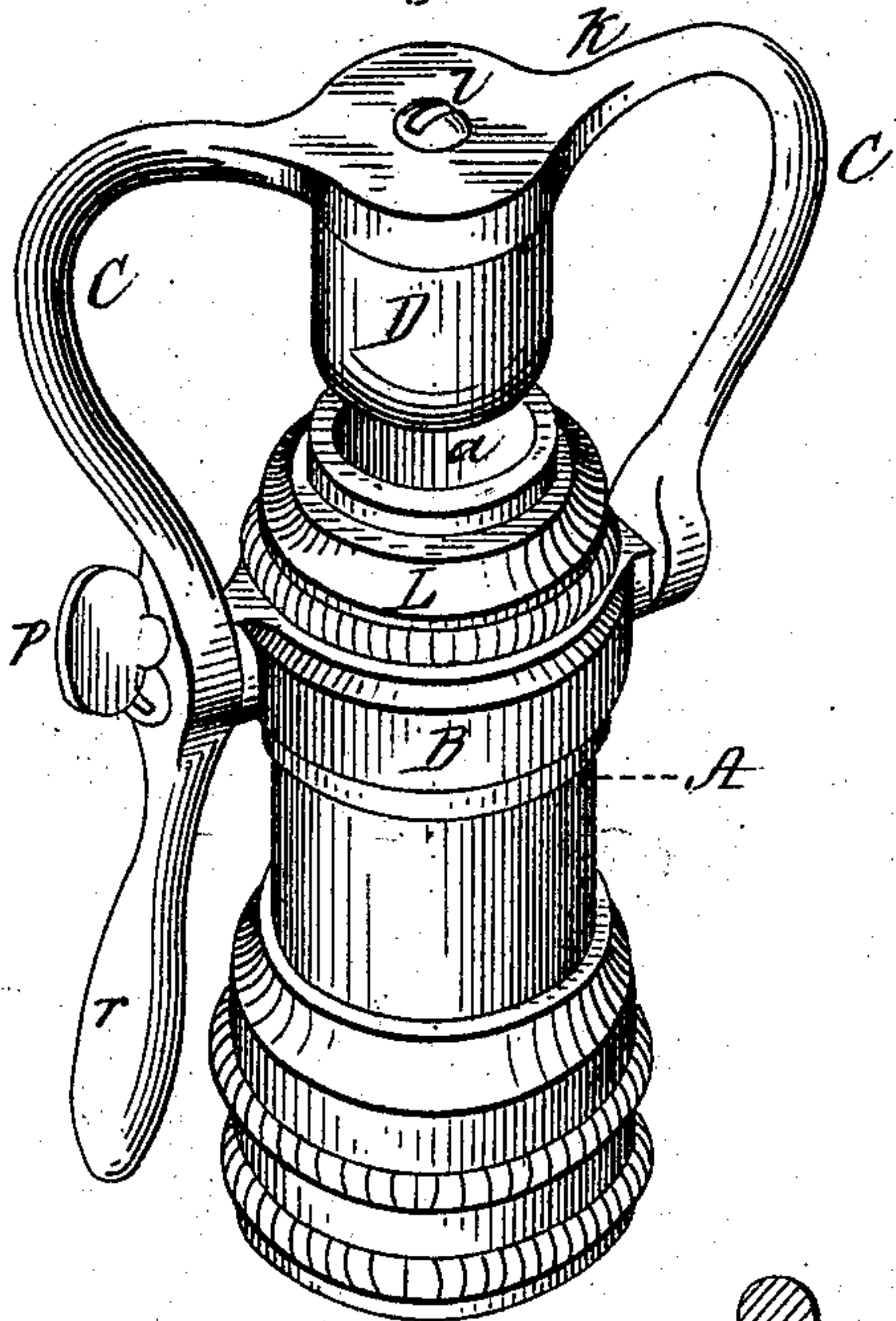


Fig. 2.

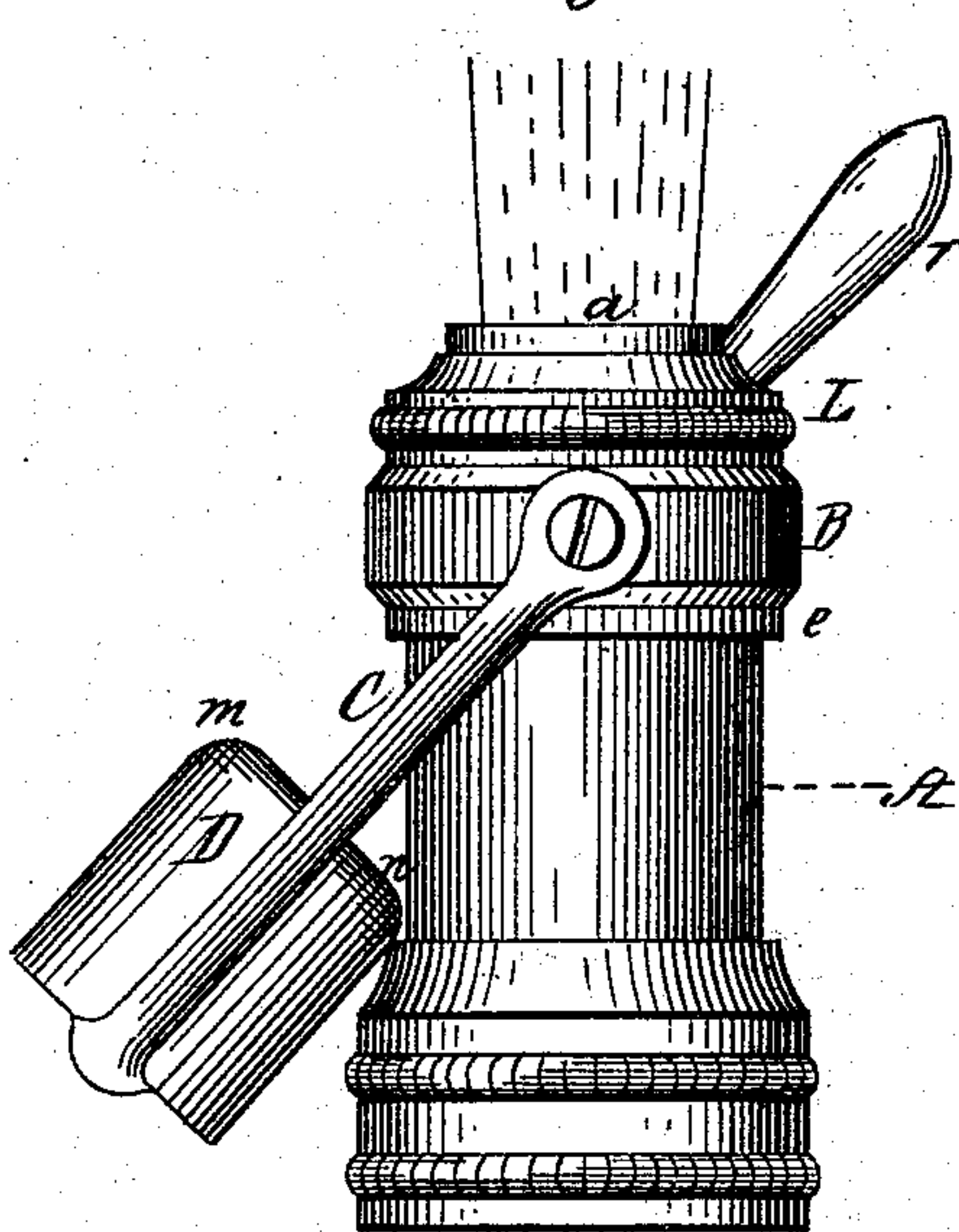


Fig. 3.

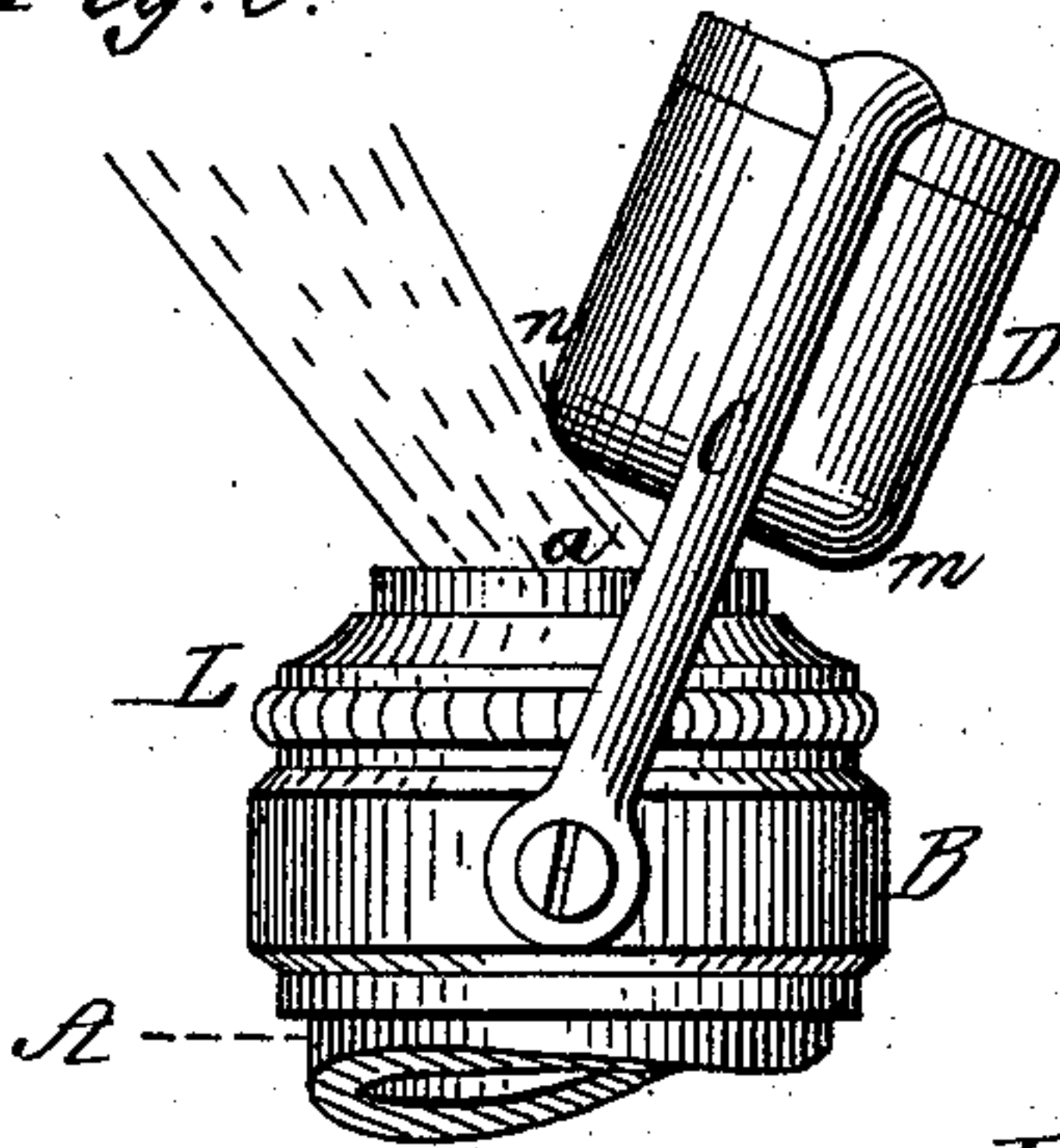


Fig. 9.

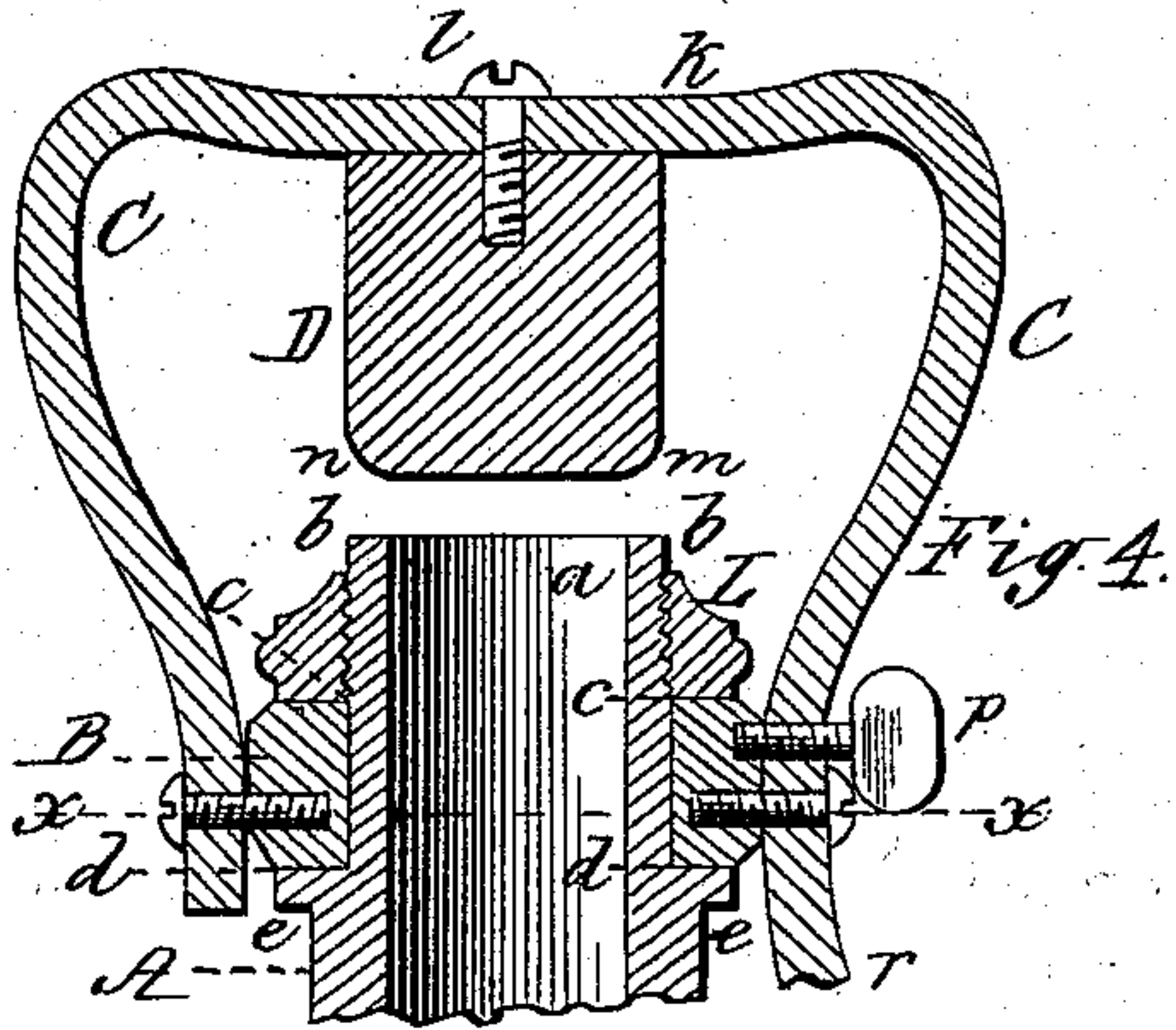
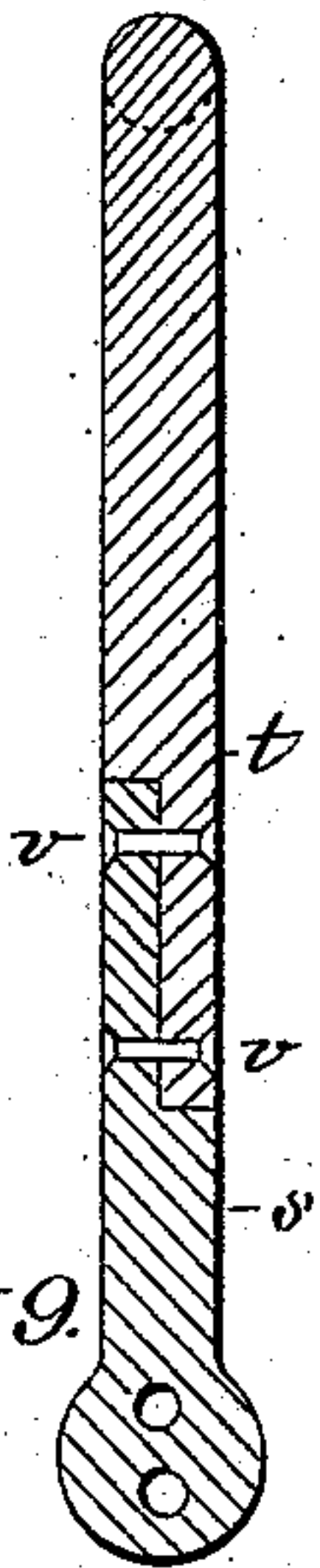


Fig. 6.

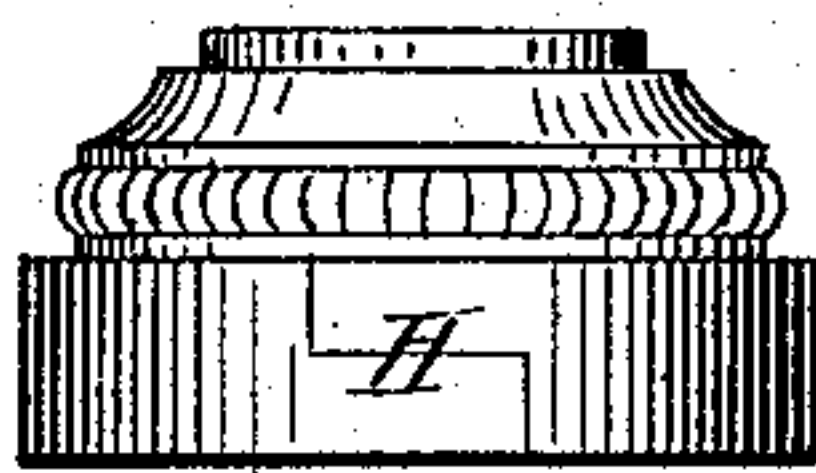
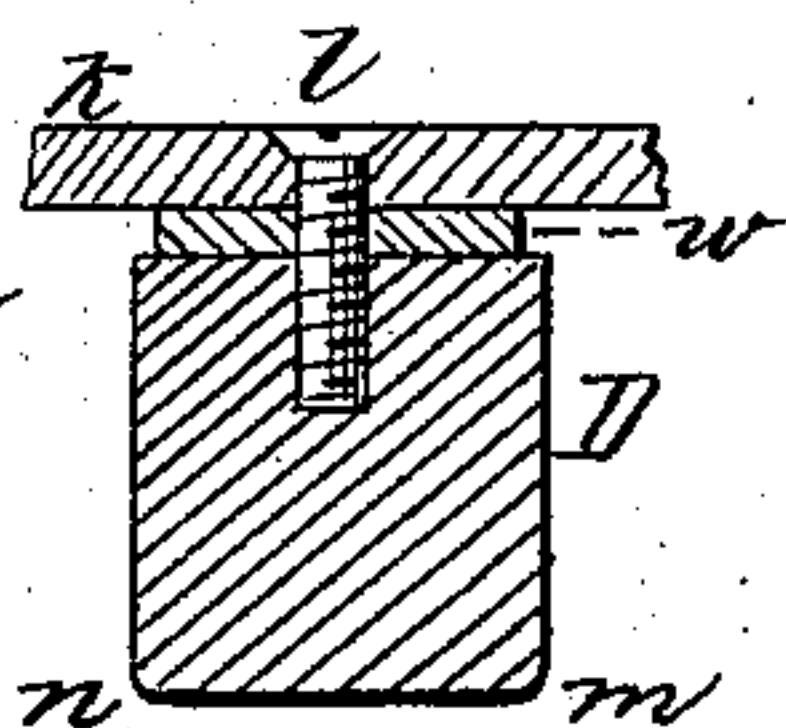


Fig. 8.

Fig. 5.

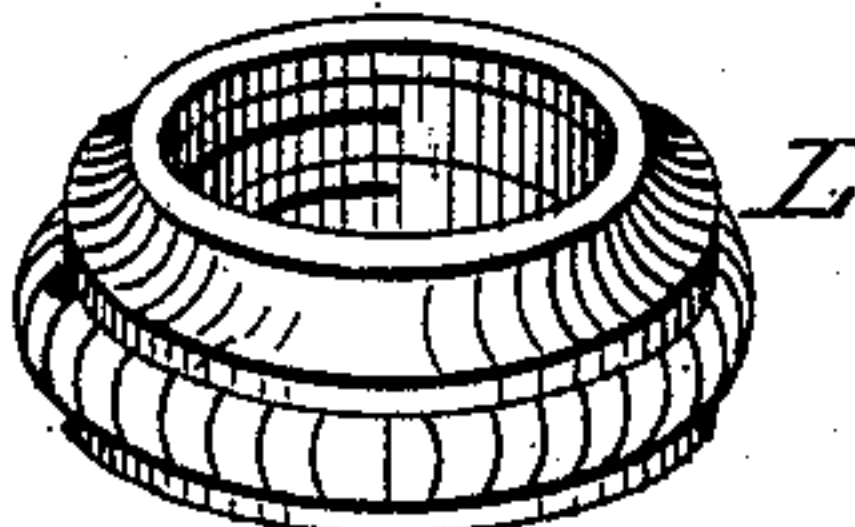
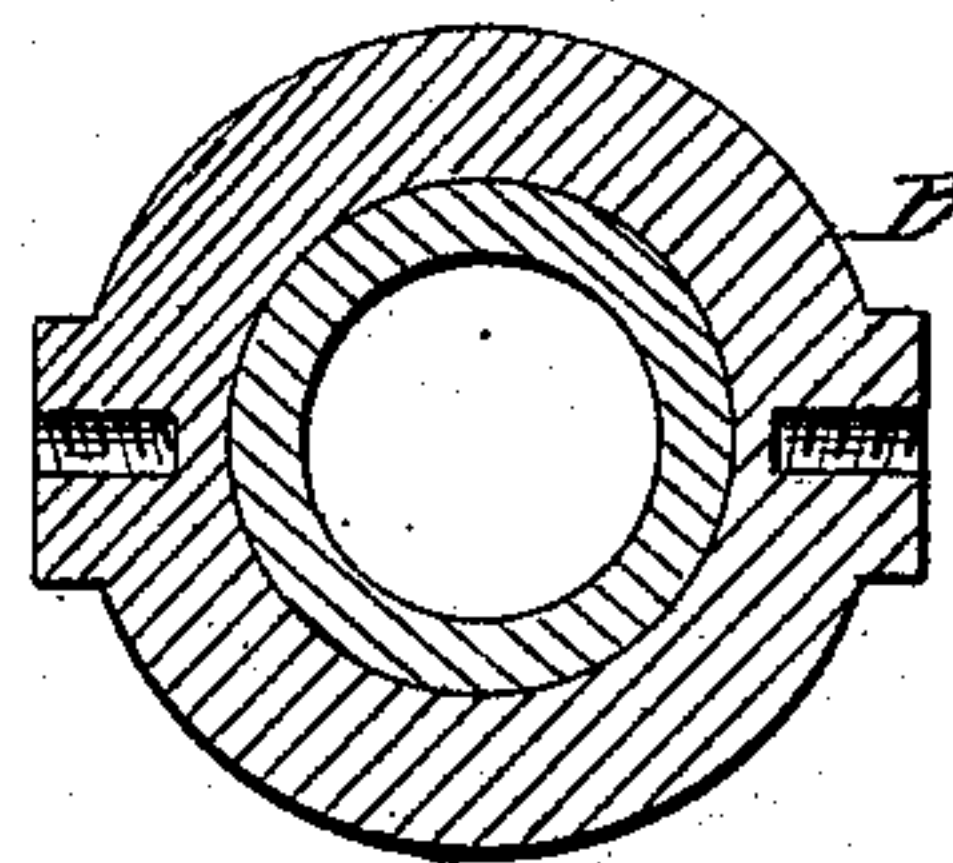


Fig. 7.

WITNESSES

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WATER-PIPE OR HOSE NOZZLE.

SPECIFICATION forming part of Letters Patent No. 603,487, dated May 3, 1898.

Application filed May 14, 1897. Serial No. 636,465. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. O'DONNELL, of Bennington, Bennington county, Vermont, have invented certain Improvements in Water-Pipe or Hose Nozzles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a hose-pipe nozzle constructed in accordance with my invention, my spreading device being located in the position which it would occupy when ready for use. Fig. 2 is a view in which my spreading device is represented as swung out of line with the axis of the nozzle in the position it would occupy when not in use. Fig. 3 represents my device swung into a position to insure the location of a spreading stream to one side only of the axis of the nozzle. Fig. 4 is a longitudinal central section. Fig. 5 is a transverse section on line *xx* of Fig. 4. Fig. 6 shows my spreading device detached. Fig. 7 represents a circular screw-nut which I apply to the end of the nozzle. Fig. 8 shows a collar made in two halves. Fig. 9 is a different construction of yoke, which, being divided, adapts my invention to any ordinary form of pipe or nozzle without change of construction and which may also be used with a nozzle having an exterior screw-thread for the reception of my screw-nut shown in Fig. 7.

My present invention relates to a water-pipe or hose nozzle so constructed as to be capable of supplying interchangeable streams without shutting off or interrupting the continuous flow of water from the discharge-orifice; and my invention consists in a spreading device adapted by means hereinafter described and claimed for connection with the nozzle or end of the pipe, the said device when swung into line with the axis of the same converting the single (solid) stream issuing therefrom into an outwardly-expanding or spreading sheet or sheets of water, often desired when concentration of the water at one point would not prove as effective as the distribution of the same upon or over a larger superficial area; and my invention also consists in means for connecting said spreading device with the

nozzle or pipe to be hereinafter described and claimed.

In the said drawings, A represents the metal nozzle of a hose or water-pipe. *a* is its discharge-orifice, around the outside of which is cut an exterior screw-thread extending from *b* to *c*, from which latter point *c* to the point *d* the exterior of the nozzle has a smooth cylindrical surface.

At *d* is located a square shoulder, a circular flange *e* being formed thereby.

B is a cylindrical collar formed in one piece and having an inner diameter of such size as to correspond to the outer diameter of the cylindrical surface *c d* and permit of turning freely thereon. To the outside of this collar at points diametrically opposite are secured the inner (lower) ends of a bifurcated yoke C of the form seen in Figs. 1 and 4, these bifurcations being connected at the middle outer portion of the yoke by a bridge portion *k*, to the under (or inner) side of which is secured by a large long screw *l* a block D of peculiar form, the surface *m n* of which nearest the discharge-orifice *a* is rounded slightly at its outer periphery or of that conformation which best adapts it to perform its function, which is to convert the single (solid) stream issuing from the discharge-orifice *a* into a divergent spreading sheet or sheets of water, the outer line of which will form the circumference of a circle of large diameter, (see Fig. 4,) when the block D is swung and held by a thumb-clamp *p* in a position in line with the axis of the discharge-orifice *a*.

When it is desired to direct a diverging stream to one side only—for instance, upon the front or side wall only of a building or room—it is simply necessary to swing and clamp the spreading-block D into the position seen in Fig. 3. The bifurcation at one side of the yoke or saddle terminates in an extension which serves as a handle *r*, by manipulating which the yoke is caused to swing on its pivots, so as to throw the block D into the position shown in Fig. 2, when the single stream of the diameter of the outlet *a* again is restored in its solid (unbroken) shape and can be concentrated at any desired point.

After my collar B is seated on its flange *e* and the yoke secured thereto it is held in

place by turning my circular screw-nut L over the screw-threaded end of the nozzle.

My spreading-block besides being applicable to nozzles having screw-threads on their exterior for the reception of my screw-nut L, may, when the yoke is divided, as seen in Fig. 9, be also applied to ordinary pipes and nozzles without changing the construction of the latter. In that case I employ a collar H, formed in two parts, Fig. 8, pivoted together, and use in connection therewith a yoke having one of its bifurcations constructed as shown in Fig. 9, being formed of two pieces *s t*, overlapping each other, such division being necessary or convenient in order to facilitate the proper pivoting of said bifurcation to the divisible collar H, the lower piece *s* being first pivoted thereto and the upper piece *t* then laid on the reduced part of the lower piece and secured together by a couple of rivets or screws *v v*. The spreading-block D may be secured permanently directly to the under side of the bridge-piece *k*, or one or more washers *w*, Fig. 6, may be interposed between the block and the bridge-piece in order thereby to locate the bottom of the spreader nearer to or farther from the discharge-outlet, and thus conveniently regulate and adjust the form and character of the spreading stream.

My within-described improvements, besides

being capable of attachment to ordinary pipes and nozzles now in use without change of construction, may also be directly fitted to a hose or pipe without interposed connections.

I claim—

1. A hose-nozzle A with its exterior screw-thread *b c*; a screw-nut L turning thereover, a yoke C, a stream-spreading device D secured thereto and a collar to which the yoke is pivoted, combined and constructed to operate substantially as specified.

2. In combination, a pipe or nozzle, a stream-spreading device, a yoke formed with pieces *s, t*, a divided collar H having its portions secured together and to which the yoke is pivoted, constructed and arranged to operate as described.

3. In combination with a pipe or nozzle, a stream-spreading device, a yoke to which it is secured, a collar surrounding the pipe or nozzle and to which the yoke is pivoted, and a means for holding the yoke when adjusted relatively with the collar, substantially as set forth.

Witness my hand this 4th day of May, 1897.

EDWARD G. O'DONNELL.

In presence of—

N. W. STEARNS,
CHARLES A. MAURER.