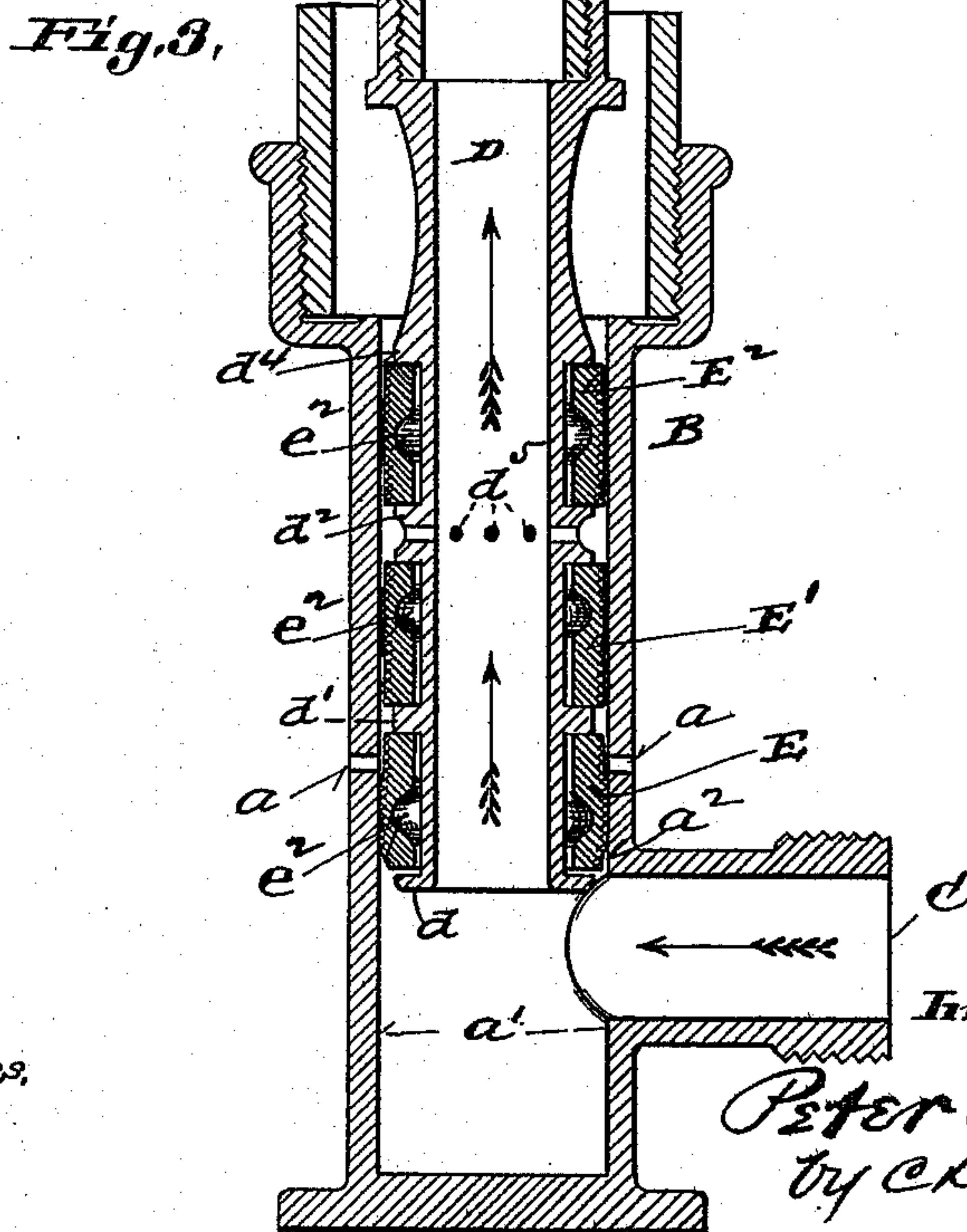
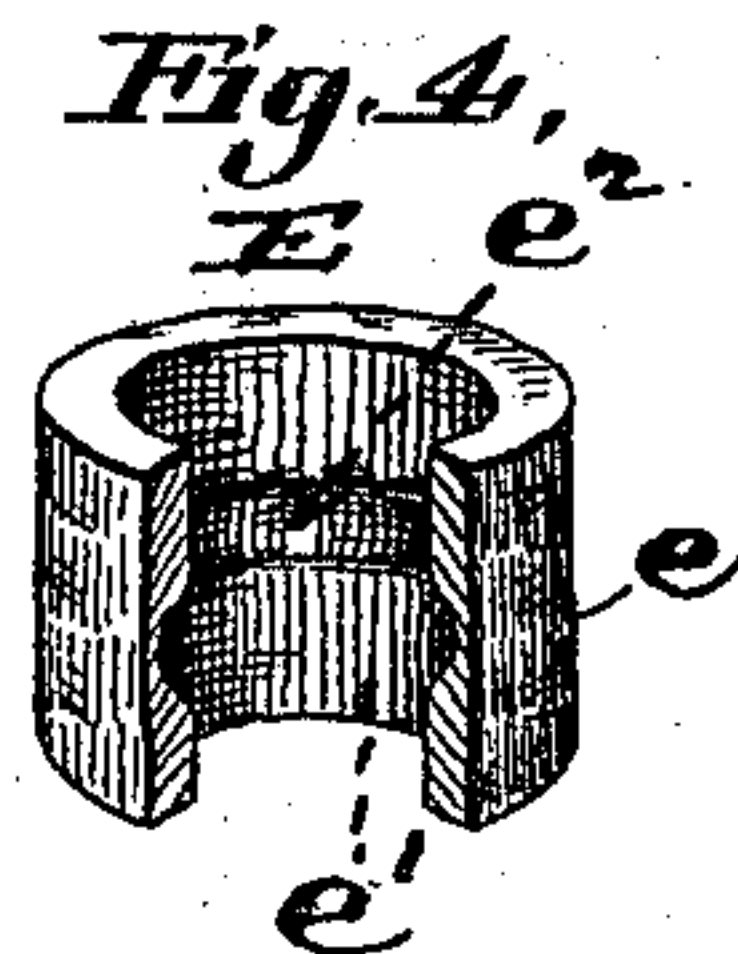
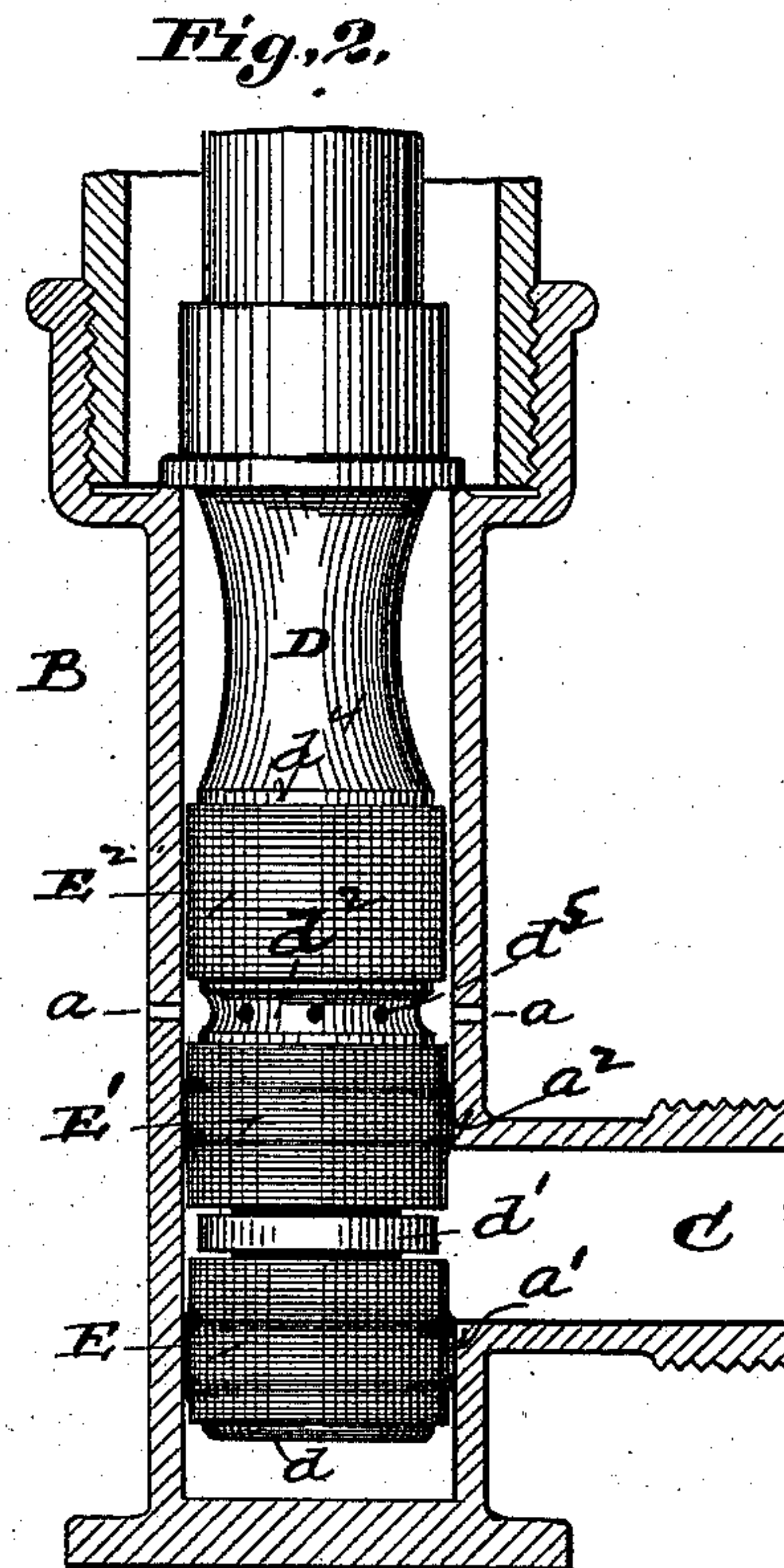
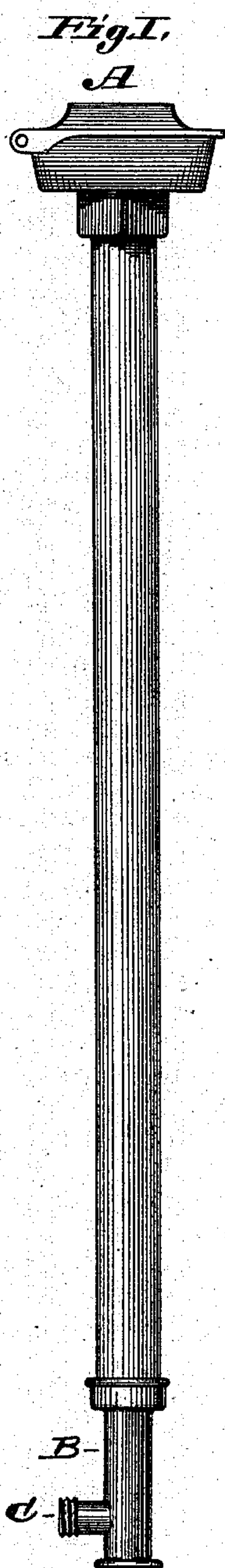


No Model.)

P. WHITE.
HYDRANT VALVE.

No. 413,638.

Patented Oct. 22, 1889.



Attest:
Charles Pickles,
Greensboro

Inventor,
Peter White
by C. O. Moody
his atty

UNITED STATES PATENT OFFICE.

PETER WHITE, OF ST. LOUIS, MISSOURI.

HYDRANT-VALVE.

SPECIFICATION forming part of Letters Patent No. 413,638, dated October 22, 1889.

Application filed May 20, 1889. Serial No. 311,439. (No model.)

To all whom it may concern:

Be it known that I, PETER WHITE, of St. Louis, Missouri, have made a new and useful Improvement in Hydrant-Valves, of which the following is a full, clear and exact description.

The improvement relates to hydrant-valves having flexible bands upon the valve-stem; and it consists, mainly, in the peculiar construction of the bands whereby when it is desired to cut off the passage of the water the band is enabled to buckle and readily pack the joint between the valve-stem and the inclosing valve-chamber, and when it is not desired to prevent the passage of the water the band can recede from the shell of the valve-chamber sufficiently to enable it to be freely moved through the valve-chamber, substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, in which—

Figure 1 is a side elevation of a hydrant to which the improvement is applicable; Fig. 2, a view showing the valve-chamber in vertical section and the valve in side elevation; Fig. 3, a vertical section of the valve-chamber and valve, and Fig. 4 a view in perspective of one of the bands of the valve. A portion of the band is cut away to show the groove in its inner face.

The same letters of reference denote the same parts.

The street-washer A, Fig. 1, is a form of hydrant to which the present improvement is especially adaptable.

B represents the valve-chamber. The inlet thereto is at C, and when the valve is unseated, as in Fig. 3, the water flows through the inlet C into the valve-chamber below the valve-stem D, and thence is delivered through the valve-stem, which is tubular, upward to the point of discharge at the upper end of the hydrant, substantially in the customary manner.

E E' E² represent a series of bands of rubber or leather or some analogous flexible material. They encircle the valve-stem and are held and are spaced apart thereon by means of the flanges or shoulders d d' d^2 d^4 , substantially as shown. The bands are substantially similar, having a smooth outer face e , and in

the inner face e' having a groove e^2 . The waste-openings from the valve-stem are shown at d^5 and from the valve-chamber at a .

The valve is shown seated in Fig. 2. The water circulates around the valve-stem between the lowest band E and the band E' next above, and the water-pressure causes the band E to be crowded downward against the shoulder d and the band E' to be crowded upward against the shoulder d^2 ; but it also causes the bands opposite the grooves respectively therein, and by reason of the bands being thus made thinner at those points respectively, to be bent outward and forced against the shell of the valve-chamber at the points a' and a^2 , respectively below and above the inlet C. The water-passage is thus effectually cut off. In this position of the valve-stem the water-pressure is not exerted against the uppermost band E². The waste water flows downward and outward through the openings d^5 into the annular space at that point around the valve-stem, and thence outward through the openings a in the shell of the valve-chamber to without the hydrant. When the valve is unseated, as in Fig. 3, the water-pressure is exerted against the lower end of the lowest band E, causing that band to be crowded upward against the shoulder d' and the water to be admitted between the valve-stem and the band E, whereupon, owing to the groove e^2 therein and the consequent thinness of the band at that point, the band is bent outward against the shell of the valve-chamber, and the water is thereby prevented from passing to the waste-openings a .

I do not claim novelty in the use of flexible bands, but in the thinning of the band between its upper and lower ends, thereby insuring its prompt and effectual flexure and the packing of the joint between the valve-stem and the shell of the valve-chamber.

I desire not to be limited to a hydrant-valve in the application of this improvement.

I claim—

1. The combination of the valve-chamber having the inlet C and the waste-openings a , the shouldered tubular valve-stem, and the flexible grooved bands E E' E², substantially as described.

2. The combination of the valve-chamber

having the inlet C, the shouldered tubular valve-stem, and the grooved flexible bands, substantially as described.

3. The combination, in a valve, of the valve-
5 chamber, the valve-stem, and the flexible bands E E', said stem being shouldered, and said bands fitting loosely between the stem

and chamber-shell and being grooved, substantially as described.

Witness my hand this 14th day of May, 1889. 10
PETER WHITE.

Witnesses:

C. D. MOODY,
D. W. A. SANFORD.