

(No Model.)

J. H. JOHNSON.

HOSE NOZZLE.

No. 385,757.

Patented July 10, 1888.

Fig. 1.

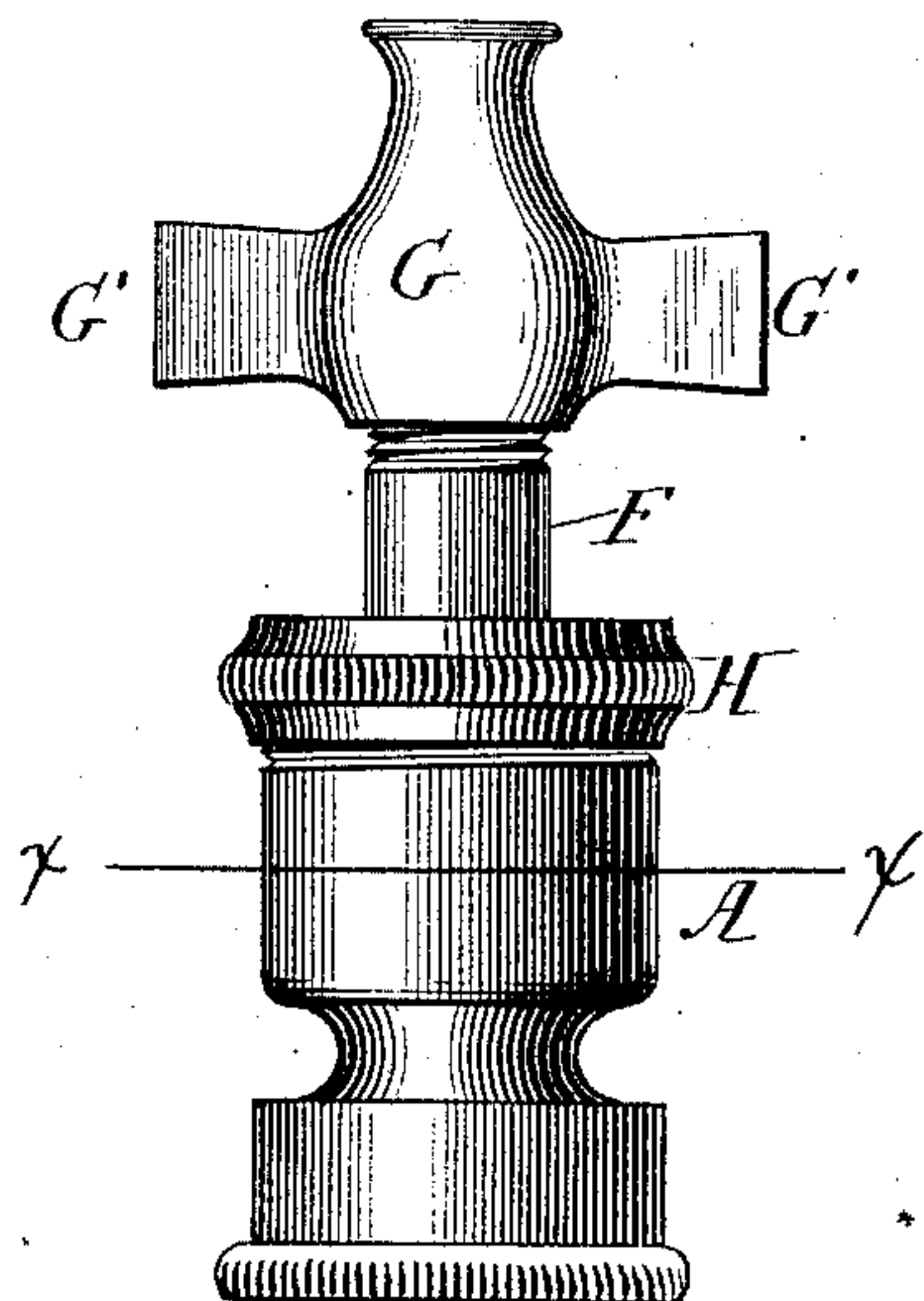


Fig. 2.

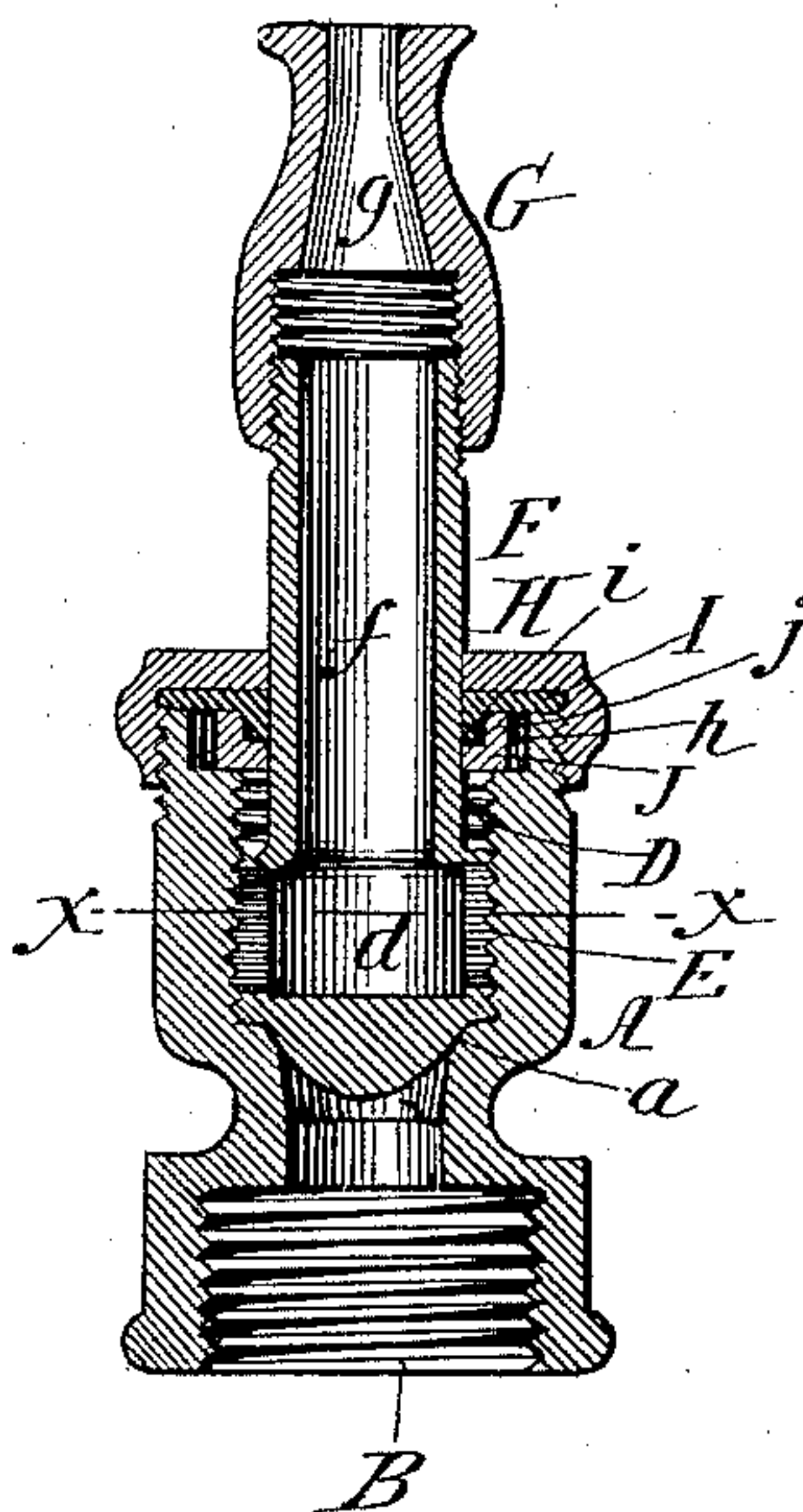


Fig. 3.

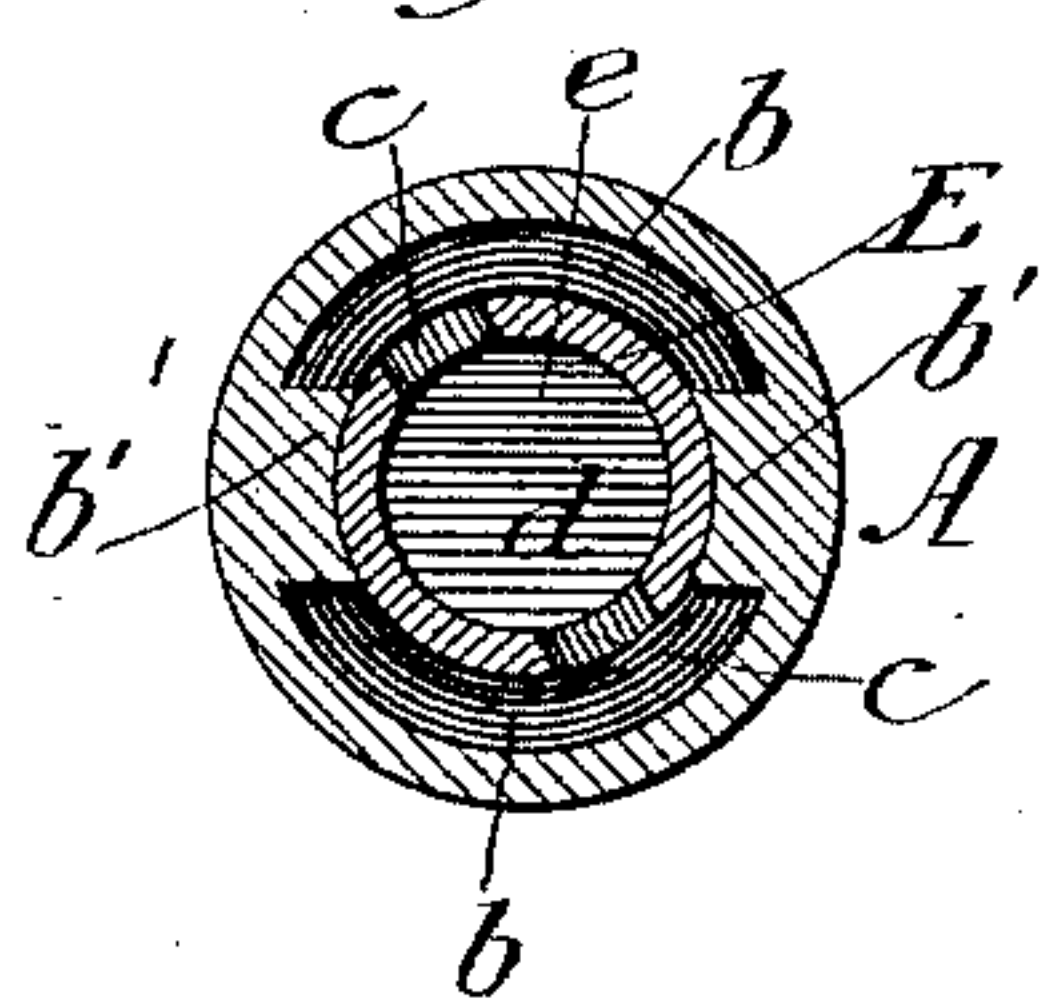


Fig. 4.

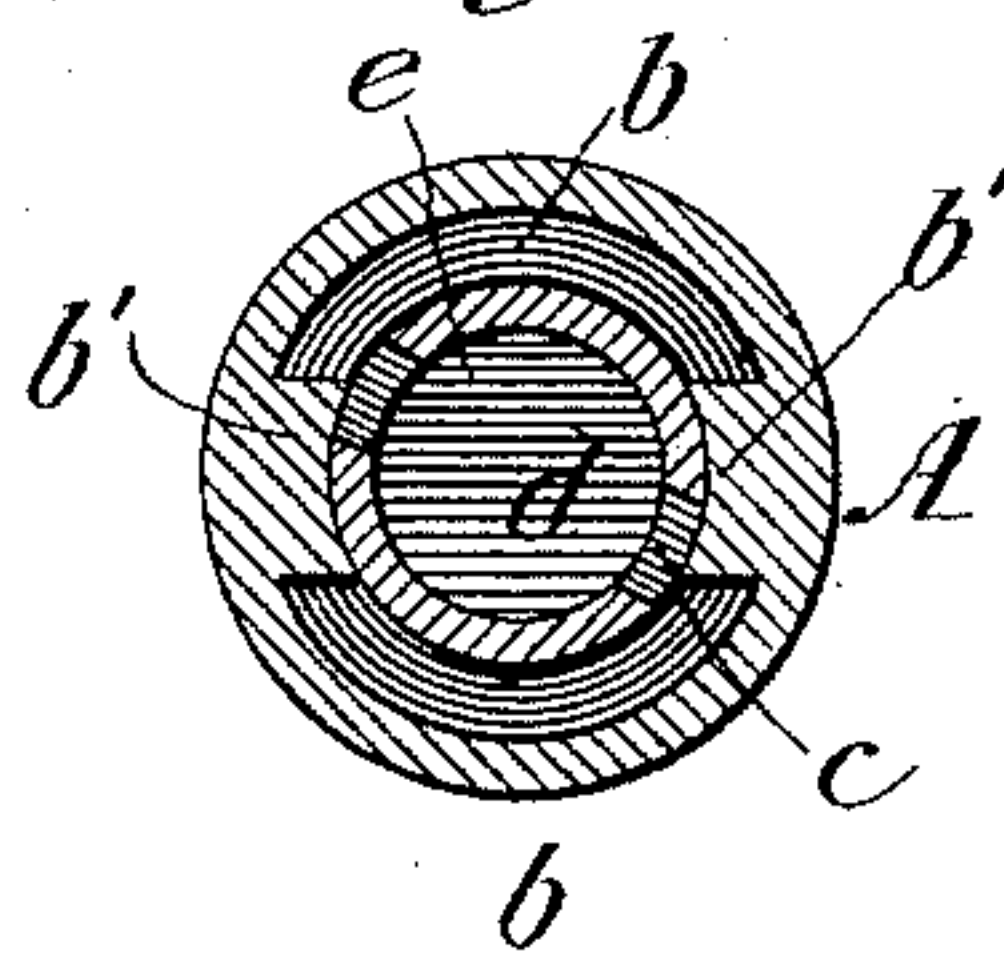


Fig. 5.

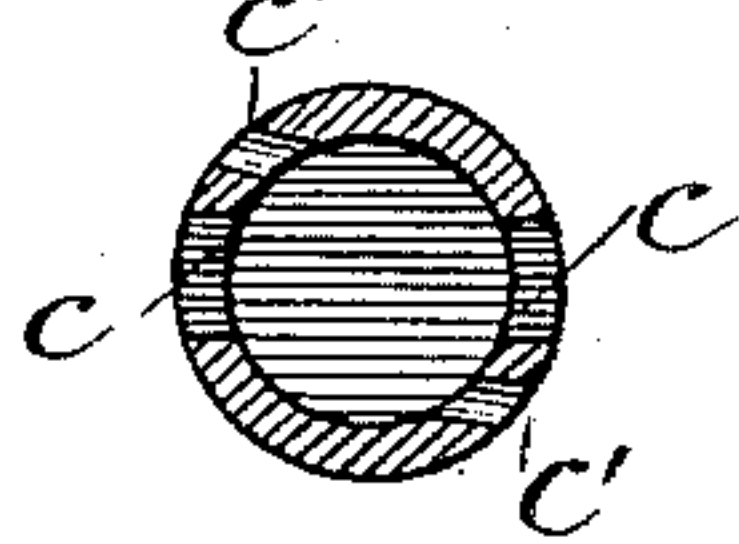
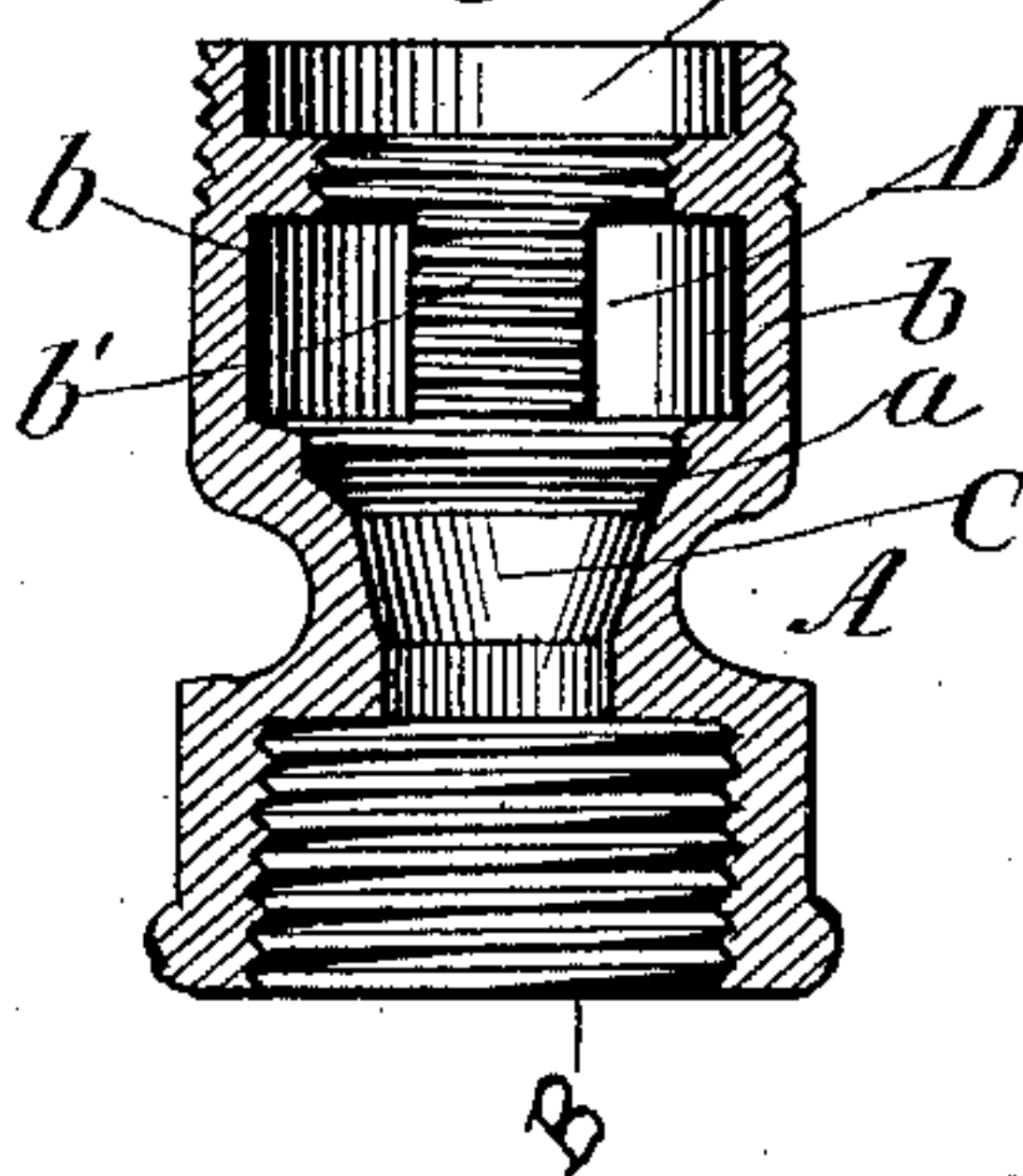


Fig. 6.



Witnesses:

Frank Blanchard.

Harry F. Jones.

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UNITED STATES PATENT OFFICE.

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HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 385,757, dated July 10, 1888.

Application filed October 11, 1887. Serial No. 252,017. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. JOHNSON, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Hose-Nozzles, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation. Fig. 2 is a longitudinal section. Fig. 3 is a cross-section on line *x x* of Fig. 1, showing the cut-off in position for a solid stream. Fig. 4 is a cross-section on line *x x* of Fig. 2, showing the cut-off in position for the spray. Fig. 5 is a detail showing a modification in the construction of the cut-off. Fig. 6 is a longitudinal section of the main or body portion of the device.

This invention belongs to that class of nozzles which are adapted to throw either a solid or spray stream, as may be desired, by simply changing the relation of the parts, and has for its object to construct a nozzle having a main or body portion and a cut-off and discharge portion so arranged that by turning the cut-off and discharge portion the supply will enter to produce a solid stream or to throw a spray; and its nature consists in the several parts and combinations of parts hereinafter described, and pointed out in the claim as new.

In the drawings, A represents the main or body portion of a nozzle, made of brass or other suitable material and of the shape shown or other shape desired.

B is an opening in the body A, having a screw-thread by which the body can be secured to the end coupling of a hose.

C is a passage leading from the opening B into the supply-chamber, and having, as shown, an inclined wall or seat, *a*, for the valve.

D is the supply-chamber formed in the body or main portion A, and having on opposite sides passages *b*, divided one from the other by walls *b'*, which walls and the wall of the chamber C above the passages *b* are screw-threaded.

E is a cut-off or valve having a depending conical end, *e*, to coact with the seat *a* and close the passage C. The wall of the cut-off or valve E, on opposite sides, is provided with ports *c*, which communicate with a chamber, *d*, in the interior of the valve and form a passage for the water from the passages *b* into the chamber *d* to be discharged.

F is a tube formed with the cut-off or valve E, and having a longitudinal hole, *f*, leading from the chamber *d*.

G is a nozzle screw-threaded onto the end of the tube F, and having on opposite sides wings G', by which the nozzle and tube can be turned to open and close the valve E.

H is a cap encircling the tube F and screw-threaded onto the end of the main or body portion A.

I is a packing of leather fitting within the interior of the cap H and encircling the tube F.

J is a packing-ring having a rim, *j*, and lying, when the parts are together, within an opening, *h*, in the end of the body A. This ring encircles the tube F, and between the exterior of the tube and the interior of the rim *j* is a space, into which a portion, *i*, of the leather packing is forced when the parts are screwed together, so that a tight joint is had around the tube F, and any leakage is prevented at this point.

The tube F, with the valve E, is screwed into the chamber D, the valve having an exterior screw-thread for this purpose. The ring J is dropped onto the tube F, and the packing placed thereover around the tube, after which the cap H is dropped into place and screwed down onto the body A, forcing the packing into the ring, as shown in Fig. 2. The nozzle G is then screwed onto the end of the tube F, forming a continuous passage by the hole *f* of the tube and the contracted hole *g* of the nozzle, when the nozzle as a whole is ready for use by being screwed onto the end of the hose.

In use the tube F is turned by the wings G' to open the valve E by raising the plug end *e* from the seat *a*, allowing the water to flow through the passage C into the passages *b*, and from these passages the water passes into the chamber *d* through the ports *c*, and when the ports *c* are turned so as to clear the cut-off walls *b'* and have full communication with the passages *b* on opposite sides, as shown in Fig. 3, a solid stream will be projected from the nozzle G, the water passing through the holes *f g*. When the parts are turned so as to only partly clear the cut-off walls *b'*, as shown in Fig. 4, the entering water from the passages *b* will have a diagonal direction, crossing each other and producing a whirl in the chamber *d*, which whirl will continue through the holes

f g, throwing the water in a spray form from the nozzle *G*, and the amount of water thrown can be regulated by opening the valve to a greater or less extent, and the spray can be
5 made fine or coarse by closing down or opening the ports *c*.

The cut-off or valve *E* can be operated for either a spray or a solid stream with the ports *c* only; but, if desired, the wall of the cut-off
10 or valve can be provided with ports *c*, and also with small holes *c'*, the ports being used for throwing a solid stream and the holes for throwing a spray.

The nozzle as a whole is very simple in its construction, and can be quickly adjusted to throw
15 either a solid stream or a spray, as all that is required to change from one stream to another is to turn the cut-off or valve *E* through the

tube *F*, nozzle *G*, and wings *G'* to have the ports *c* fully opened or only partially opened, 20 it being understood that when the ports *c* are in line with the walls *b'* the flow or discharge is shut off.

What I claim as new, and desire to secure by Letters Patent, is as follows: 25

The body *A*, having the opening *B*, passage *C*, and chamber *D*, provided with the passages *b* and cut off walls *b'*, in combination with the cut-off or valve *E*, having the ports *c*, and chamber *d*, for supplying the water for
30 a solid stream or a spray, substantially as specified.

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Witnesses:

ALBERT H. ADAMS,
HARRY T. JONES.