

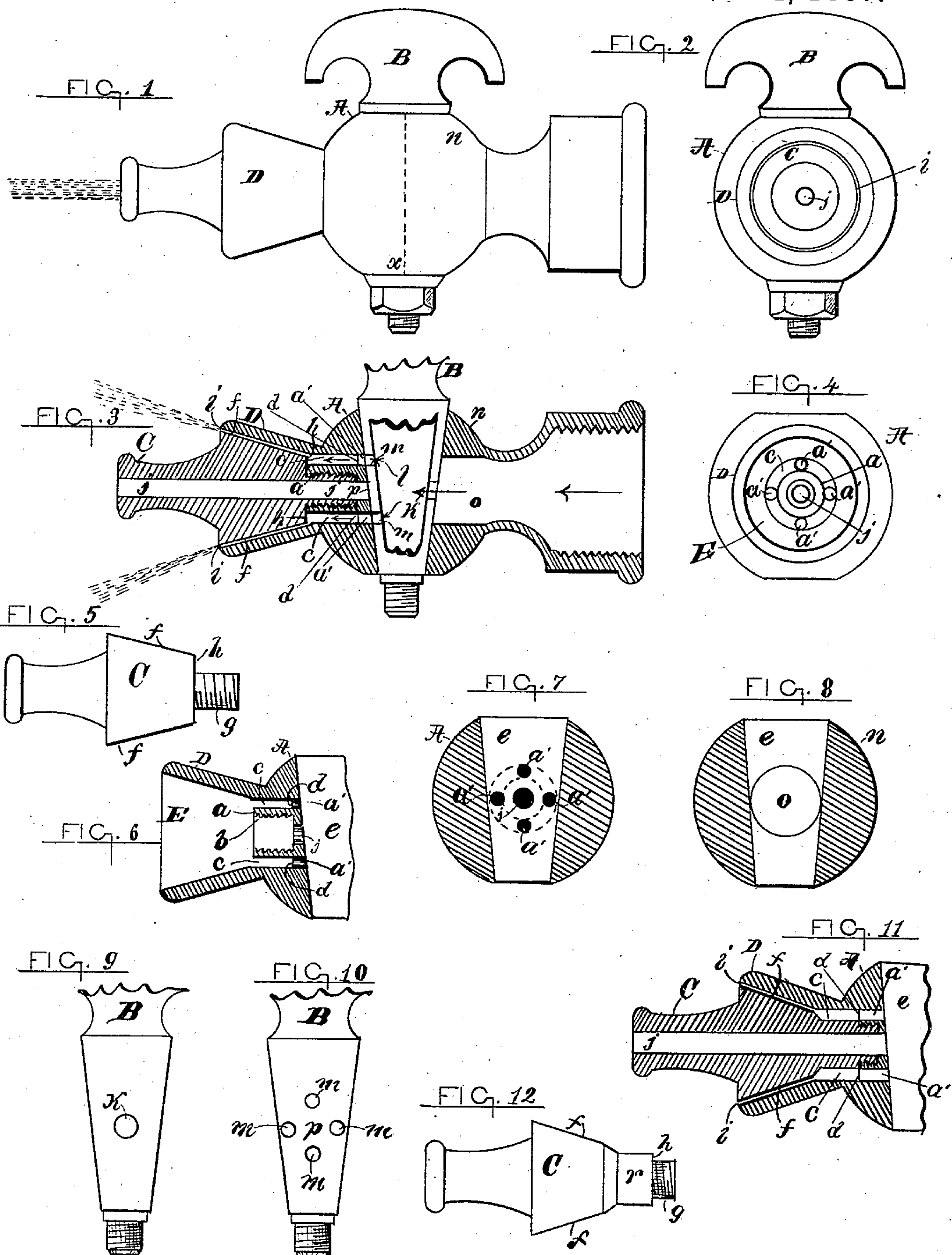
(No Model.)

W. WILKINS.

HOSE NOZZLE.

No. 370,836.

Patented Oct. 4, 1887.



Witnesses.

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UNITED STATES PATENT OFFICE.

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HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 370,836, dated October 4, 1887.

Application filed March 5, 1887. Serial No. 229,782. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WILKINS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Hose-Nozzles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to hose-nozzles, and to that class of nozzles which may be made at pleasure to throw a solid stream or a shower of spray; and the invention consists in the novel construction, as more particularly specified.

To more fully understand my invention, reference is had to the drawings, and to figures and letters of reference marked thereon.

Figure 1 represents a side elevation of the nozzle complete. Fig. 2 represents a front view of same. Fig. 3 represents a longitudinal section of Fig. 1. Fig. 4 represents a front elevation of the nozzle with end plug and water-key removed. Figs. 5, 6, 7, 8, 9, 10, 11, and 12 represent detail views.

Its construction and operation are as follows:

A represents the body of the nozzle; B, the water-key; C, end plug to produce the spray or solid stream; D, end of nozzle, having taper mouth E to receive plug C.

In Fig. 6 is seen a sectional view of the nozzle through dotted line *x* of Fig. 1, showing the end D with taper mouth E, the key B and plug C being removed. At the bottom of the taper mouth E is the projection or shoulder *a*, having threaded interior *b*. Said projection is surrounded by the annular space or chamber *c*, leaving the partition *d* between space *c* and the taper chamber *e*. Through partition *d* are the holes *a'*, (see also Fig. 4,) opening a communication between chambers *c* and *e*. The taper sides *f* of plug C correspond approximately to the taper of mouth E, the threaded end *g* engaging with the threaded projection *a* of the nozzle, the end or shoulder *h* of plug C abutting firmly against projec-

tion *a*, (see Fig. 3;) but the taper sides or surfaces of plug C and mouth E are not brought in close contact, but by means of the shoulder *h* of said plug the narrow space *i* is left between said surfaces. The manner of attaching the plug C to the nozzle may be somewhat varied, but still embrace the same principles as above described. For instance, in Fig. 11 projection *a* is removed and partition *d* is made thicker and threaded to receive threaded end *g* of plug C. The shank *r* of said plug (see Fig. 12) is sufficiently reduced in size so as to leave chamber *c* substantially as shown in Figs. 3, 4, and 6.

Through the plug C is the channel *j*, communicating with chamber *e* for the solid stream. I prefer to make the taper key B, which fits the chamber *e*, hollow, or, in other words, with the interior chamber, *l*. Through one side of key B, and opening into chamber *l*, is the hole *k*, (see Figs. 3 and 9,) whose diameter is equal to the diameter of channel *j* of plug C. On the reverse side of the key B (see Fig. 10) are the holes *m*, opening also into chamber *l*, and corresponding as to position with holes *a'* of the nozzle. (See Figs. 4 and 7.) Fig. 7 is a sectional view of the front portion of the nozzle through dotted line *x* of Fig. 1. When the key B is turned in the position as shown at Fig. 3, the holes *m* of the key and holes *a'* of the nozzle will coincide, thus opening a direct communication between chambers *c* and *l*. Through the rear portion, *n*, of the nozzle is the water-way *o*, (see also Fig. 8, which represents a sectional view through dotted line *x* of Fig. 1,) whose diameter is equal at least to the space covered by the four holes *m* of key B. The incoming water, as indicated by the arrows, (see Fig. 3,) will pass through hole *k* to chamber *l*, thence through holes *m* and *a'* to chamber *c*, and out through space or aperture *i*, in the form of spray, in greater or less volume, according to the width of said opening *i*. The central space, *p*, (see Fig. 10,) between holes *m* will close the channel *j*, thus directing the full force of the water through holes *m* and *a'*, as described. Reversing the position of key B will bring holes *m* of the key in communication with water-way *o* and hole *k* with channel *j*. The incoming water, entering through holes *m*, will pass out through

hole *k* and channel *j*, issuing from the end of plug C in a solid stream, as seen at Fig. 1. To shut off the water the key B is given a quarter-turn, as shown in Fig. 2, the solid portion of said key closing holes *a'* and *o*. The number of holes in the nozzle, as represented by *a'*, may be increased or decreased, as required. All that is necessary is to keep the space *i* filled and sufficient pressure to produce the spray. In constructing the nozzle, the width of space *i* being determined, the plug C is screwed sufficiently firm against its seat in the nozzle so as to prevent its becoming accidentally loosened. Should the aperture or space *i* and holes *a'* become filled with sediment, the plug C can be readily removed and the nozzle cleaned.

Among the advantages of the nozzle above described over others of its class are its simplicity, cheapness of manufacture, and readiness with which it can be taken apart and cleaned.

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

In a hose-nozzle, the combination, with nozzle A, having taper mouth E, chamber *c*, and holes *a'*, connecting chambers *c* and *e*, of plug C, having threaded end *g* to engage with the threaded portion of the nozzle, said plug having taper sides *f*, corresponding approximately to the taper of mouth E of the nozzle, and water-channel *j* through said plug and communicating with chamber *e*, plug C so arranged in relation to the mouth E that aperture *i* is formed for the passage of water in the form of spray.

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

WILLIAM WILKINS.

Witnesses:

RICHARD LEOPKA,
SIGMUND LOEWITH.