(No Model.)

# G. E. WHITTAKER.

## HOSE NOZZLE.

No. 457,874. Patented Aug. 18, 1891.

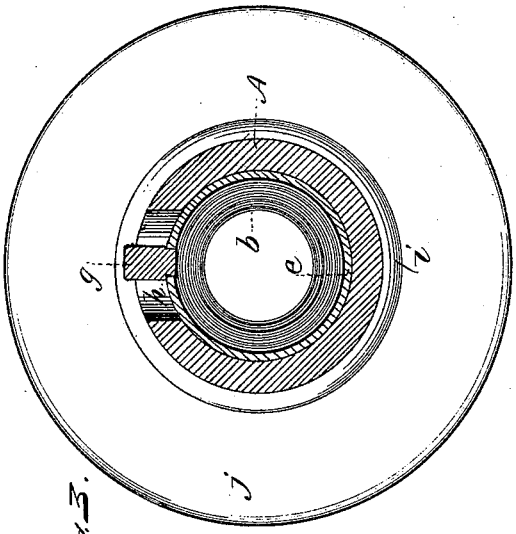


Fig. 3.

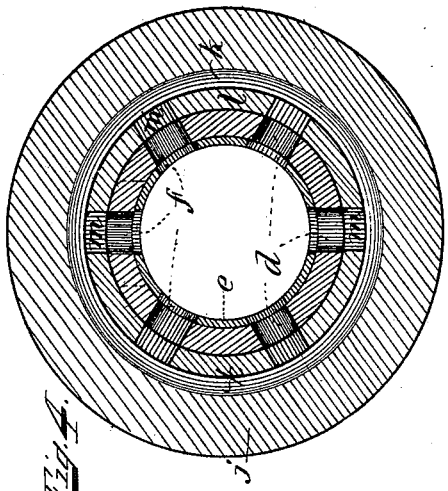


Fig. 4.

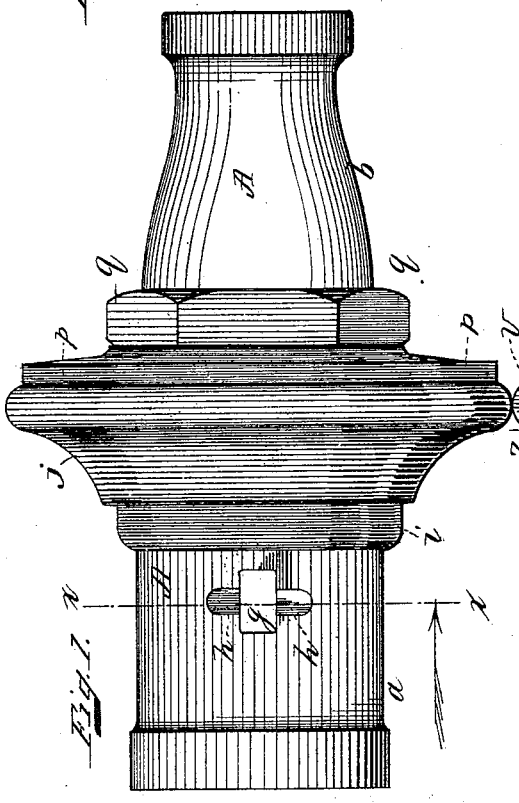


Fig. 1.

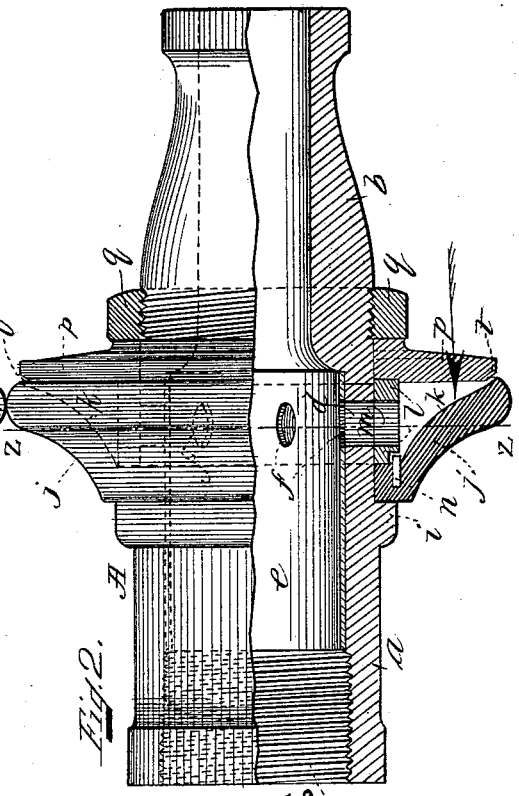


Fig. 2.

Witnesses:
Eugene Humphrey
Ralph W. Hopper.

Inventor:
George E. Whittaker
per T. W. Foster Atty

# UNITED STATES PATENT OFFICE.

GEORGE E. WHITTAKER, OF HUDSON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO HERMAN C. TOWER AND JOHN N. TOWER, OF SAME PLACE.

## HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 457,874, dated August 18, 1891.

Application filed September 25, 1890. Serial No. 366,098. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE E. WHITTAKER, of Hudson, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Hose-Nozzles, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claims.

In said drawings, Figure 1 is a plan view of a hose-nozzle embodying my invention. Fig. 2 is a sectional plan view, the section being longitudinal and through the wall of the nozzle at one side thereof only. Fig. 3 is a sectional elevation, the section being taken on line X, Fig. 1, and the view as from the left therein, as indicated by the arrow. Fig. 4 is a transverse section taken as on line Z, Fig. 2, and viewed as from the right therein, as indicated by the arrow.

This invention has for its object the protection of "hosemen" from heat when their duty requires them (as is often the case) to assume a position so near burning buildings or material that they endure great suffering and injury from the intense heat to which they are thus exposed; and the invention consists in certain features of novelty and the combination thereof as will, in connection with the drawings forming a part of this application, be hereinafter described and claimed.

Referring again to said drawings, A represents the body or main portion of my improved nozzle, the butt or larger end *a* being formed, as shown, with the usual interior thread *c* for attachment to the hose-pipe. The front or smaller end *b* has a bore of lesser diameter than part *a*, as shown. In the wall of larger portion *a* are formed a series of radial passages *d*, and a short thin tube *e*, fitted in the bore of *a*, has formed in its wall a series of corresponding passages *f*, said sleeve with its radial passages being in fact a rotary valve, it being thus actuated by a thumb-piece or stud *g*, passing through slot *h* in the wall of *a* and secured in the sleeve, whereby the sleeve may be so rotated as to entirely or partially shut off the water from passages *d* in *a* or to let it on to the full or partial capacity of said passages. A concentric shoulder or enlargement *i* is formed upon *a*, and a collar *j*, fitting closely, is forced upon *a* and against said shoulder, the front face *k* of said collar being formed convex as well as oblique to the axis of the nozzle, as shown in Fig. 2. A flattened ring *l* is placed upon the nozzle and against the collar *j*, it having a series of holes *m* coinciding with holes *d* in the nozzle, the ring being locked from rotation on the nozzle by a pin *n*, secured in collar *j*, and projecting into a seat in the ring, as shown in Fig. 2.

A disk-like ring *p* is fitted upon part *a* of the nozzle, bearing against ring *l*, and locked by the screw-nut *q*. The inner or rear face of ring *l* is beveled at the periphery, forming the narrow face *t*, oblique to the axis of the nozzle, and coinciding with the opposite and coacting face *k* of collar *j*. The respective parts are so formed that the space, measured in the most direct line between face *t* and the face of collar *j*, directly opposite, is about the one-hundredth of an inch.

The practical operation is as follows: When the hosemen need protection from the heat of a fire, the valve *e* is rotated to bring its passages *f* wholly or partially, as may be needed, in juxtaposition with the passages *d* in the nozzle, thereby allowing the water, which is partially retarded in the larger bore of the nozzle, to escape through said radial passages into the concentric chamber formed between collar *j* and ring *p*, and thence radially outward in a sheet through the passage between said collar and ring, the water thus escaping moving in an oblique direction and away from the hosemen.

It will be obvious that the constantly-escaping sheet of water cannot by any heat so encountered be vaporized before it has passed outside a circle having the hosemen as its diameter, and that hence no radiated heat can pass this sheet of water to incommode the hosemen.

As shown, collar *j* has a rounded or bead-like edge extended beyond ring *p* in order to protect the corners of the faces that constitute the water-passage, as otherwise said corners would be liable to be battered, thereby

impairing their efficiency. Various changes in details of construction may be made without departing from the essentials of my invention.

If it be desired to protect only the upper part of the hosemen, the water-escape between collar *j* and ring *p* will extend but half the circumference thereof.

By forming and arranging the adjacent faces of collars *j* and disk *p* oblique to each other a comparatively large concentric water-chamber *v* is provided between them, thereby insuring the issuance of a solid though thin circular sheet of water from the escape-passage between said collar and disk at the periphery thereof.

I am aware of United States Patents No. 396,119 to Stebbins January 15, 1889, and No. 318,800 to Prunty May 25, 1885, and I claim nothing that is shown, described, or claimed therein, my invention differing therefrom in the essential features specified in the appended claims.

I claim as my invention—

1. In a hose-nozzle, the combination of the tube-like portion A, having an internal diameter greater at its inlet than at its outlet and having a series of radial holes through its shell at said greater diameter, a rotary sleeve-like valve fitted in said greater diameter with a series of radial holes coinciding with those in the outer shell, and means for actuating said valve, a water-chamber outside said outer shell and having walls or faces that converge outwardly and with a narrow concentric water-exit, all substantially as specified.

2. In a hose-nozzle, the combination of pipe A, having a differentiated diameter with holes *d* at the greater diameter, rotary valve *e*, having holes *f*, coinciding with holes *d*, and means to actuate it, collar *j*, having its front face oblique to the axis of the pipe, disk *p*, arranged relatively to said collar to form the outwardly-converging chamber *v* coincident with holes *d*, and a narrow water-passage between said collar and disk, substantially as specified.

GEORGE E. WHITTAKER.

Witnesses:
T. W. PORTER,
EUGENE HUMPHREY.