

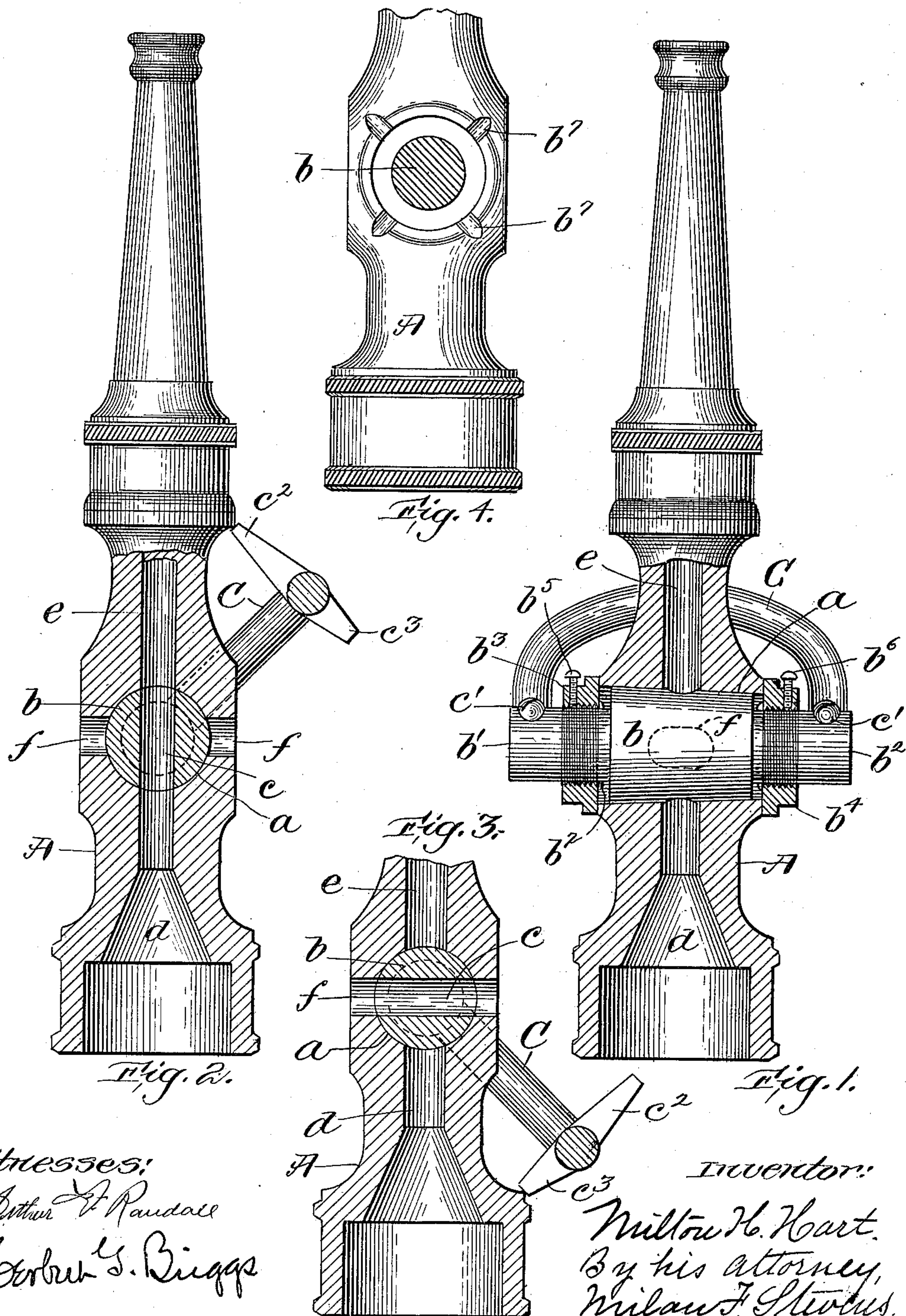
No. 628,907.

Patented July 11, 1899.

M. H. HART.
HOSE NOZZLE.

(Application filed Mar. 8, 1899.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

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HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 628,907, dated July 11, 1899.

Application filed March 8, 1899. Serial No. 708,178. (No model.)

To all whom it may concern:

Be it known that I, MILTON H. HART, a citizen of the United States of America, and a resident of Winchester, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Hose-Nozzles, of which the following is a specification.

This invention relates to hose-nozzles; and it has for its object to improve the construction thereof.

Heretofore, so far as known to me, hose-nozzles have been so constructed that when the valve-plug of the nozzle occupies its closed position the valve opening or hole through the valve-plug is closed at each end by the casing of the nozzle, so as to form a closed compartment, within which liquid will be confined and will remain so long as the valve occupies its closed position. When the hose-nozzle is employed on fire-extinguishers, the soda or acid contained in the extinguisher will after it has remained in the valve-opening a comparatively short while corrode the metal with which it comes in contact and cause the valve-plug to stick or bind, thus preventing the nozzle from being readily manipulated. This is objectionable for obvious reasons, and it is the object of the present invention to improve the construction of hose-nozzles to the end that the above-noted objections may be obviated and also that the valve-plug may be readily adjusted to compensate for wear and also that the bearings of said valve-plug and adjacent parts may be readily lubricated.

The invention consists of a hose-nozzle so constructed that the valve when in its closed position is adapted to register with an opening formed through the casing, whereby any liquid contained in the valve-opening may be discharged therefrom.

The invention also contemplates other new and useful features of construction and arrangement of parts, all as is hereinafter more fully set forth in the following description and the novel features of which are particularly pointed out and clearly defined in the claims at the close thereof.

In the following description reference is had to the accompanying drawings and to the letters of reference marked thereon, like letters

representing the same parts or features, as the case may be, throughout the several views.

Of the drawings, Figure 1 is an elevation, shown partly in section, of a hose-nozzle embodying this invention. Fig. 2 is an elevation, shown partly in section, of the hose-nozzle shown in Fig. 1 as viewed from the right-hand side of said figure. Fig. 3 is a longitudinal sectional view of the lower portion of Fig. 2, showing the valve in its closed position. Fig. 4 is an elevation of the lower portion of the casing of the nozzle and illustrating certain features of this invention.

A represents the casing of the nozzle, which is formed or provided with a tapering valve-plug socket *a*, within which socket is arranged the tapering valve-plug *b*. The valve-plug *b* is formed with a transverse valve-opening *c*, which by rotating the valve-plug *b* may be caused to register with and connect the inlet-port *d* and outlet-port *e* or to close said ports, as is usual in nozzles of this character.

Ordinarily when the valve-plug of the nozzle is turned so as to close the ports *d* and *e* it is moved into that position with the valve-opening *c* full of the liquid which is passing through the nozzle, and no provision has heretofore been made whereby the liquid occupying the space of the opening *c* could be removed or discharged from said opening when the valve is closed, but said liquid has heretofore been confined in said opening until the valve is again opened. Where the nozzle is used on fire-extinguishers, the acid or soda contained therein will, after remaining in the opening *c* a comparatively short while, so corrode the metal with which it comes in contact as to cause the valve-plug to stick or bind, so that the nozzle cannot be manipulated. To obviate this objectionable feature, I provide one or more (two being shown in the drawings) ports *f*, formed or provided in the casing A, with which the opening *c* will register when the valve-plug *b* occupies its closed position, and through these ports *f* any liquid contained in the opening *c* may discharge therefrom to the outside of the casing. The ports *f* are closed by the plug *b* when the latter is moved into position to connect the ports *d* and *e*.

The valve-plug *b* is made tapering and fits into the tapering socket *a*, and it is desirable

that the said plug may be adjusted longitudinally to compensate for wear and that it should fit its seat very snugly. In order to effect this result, the valve-plug *b* is provided
 5 at each end with outwardly-projecting reduced portions or studs *b'* *b*², which are screw-threaded to receive upon them the nuts *b*³ *b*⁴, which latter bear against the side of the casing A, and after being properly adjusted upon
 10 the projections *b'* *b*² said nuts are secured in their adjusted position by means of set-screws *b*⁵ and *b*⁶.

As shown in Fig. 4, that portion of the casing A adjacent the socket *a* and against which
 15 the nuts *b*³ and *b*⁴ bear is cut away or grooved, as at *b*⁷, so as to provide an opening for the ready insertion of suitable lubricant for the bearing-surfaces of the casing A and the nuts.

To the projections *b'* *b*² is secured a handle
 20 C by means of set-screws *c'*, and by means of this handle the valve-plug may be operated. The handle C is provided with projections *c*² and *c*³, which by engagement with the casing A limit the extent of movement of the valve-plug in both directions and serve to position
 25 the valve-opening *c* with relation to the ports

d and *e* and *f*. The plug *b* may also be further lubricated by inserting the lubricant through the ports *f*.

What I claim is—

1. The combination of the casing A provided with the tapering socket *a* and having the ports *d* and *e* and *f* communicating therewith, the tapering valve-plug *b*, and means for adjustably securing said plug in position
 35 whereby said plug may be adjusted longitudinally to compensate for wear, substantially as described.

2. The combination of the casing A provided with a valve-plug socket; a valve-plug
 40 mounted in said socket having screw-threaded ends; nuts mounted on said ends and bearing against the casing A, the latter formed or provided with grooves or channels *b*⁷ at said bearing-points, substantially as described. 45

Signed by me, at Boston, Massachusetts, this 21st day of February, 1899.

MILTON H. HART.

Witnesses:

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