(No Model.)

E. L DAY.

HOSE NOZZLE.

No. 577,616. Patented Feb. 23, 1897.

FIG. 1

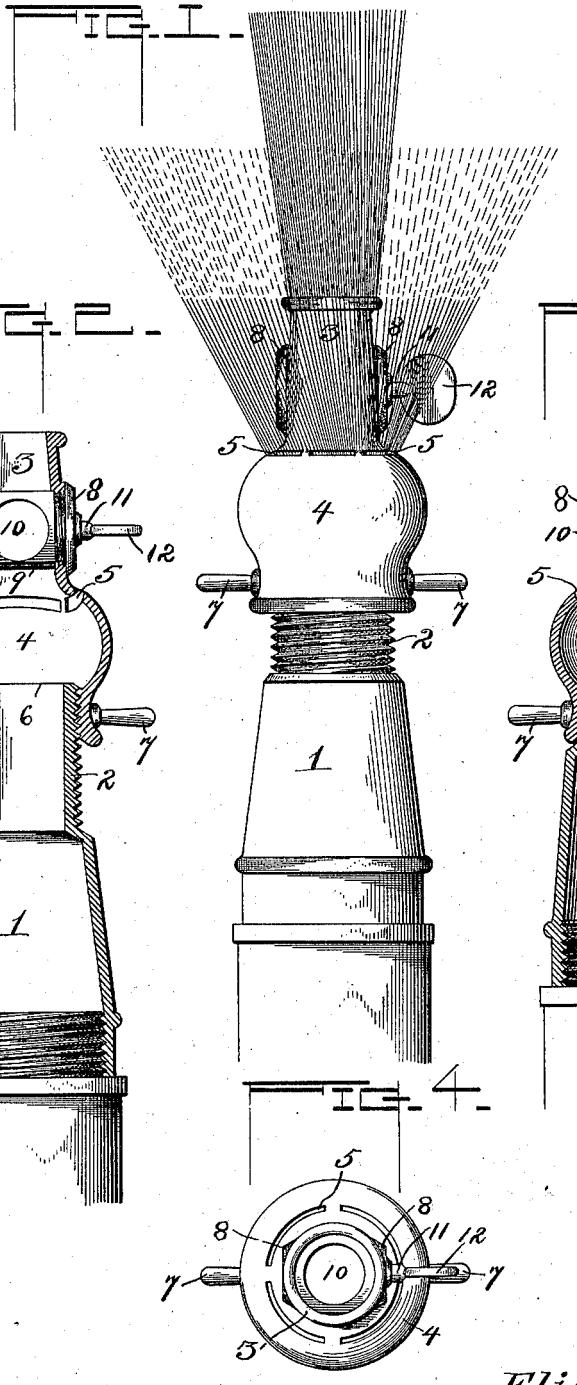

FIG. 2

FIG. 3

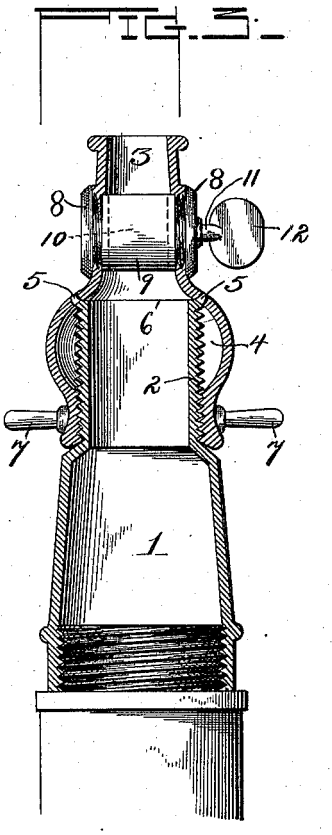

FIG. 4

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Witnesses

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UNITED STATES PATENT OFFICE.

ELISHA LITTLE DAY, OF BRENHAM, TEXAS.

HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 577,616, dated February 23, 1897.

Application filed April 15, 1896. Serial No. 587,684. (No model.)

To all whom it may concern:

Be it known that I, ELISHA LITTLE DAY, a citizen of the United States, residing at Brenham, in the county of Washington and State of Texas, have invented a new and useful Hose-Nozzle, of which the following is a specification.

This invention relates to hose-nozzles, and has for its object to simplify and improve the construction of articles of the character referred to and to provide a nozzle by means of which a single condensed stream of water may be thrown to a considerable distance or a widely-diverging spray be projected therefrom or both the central stream and spray be produced at one and the same time.

To this end the invention consists in certain novel features and details of construction, as hereinafter fully described, illustrated in the drawings, and finally incorporated in the claim hereto appended.

In the accompanying drawings, Figure 1 is a side elevation of the improved nozzle, showing the single central stream and the diverging spray in simultaneous operation. Fig. 2 is a longitudinal section through the same, showing the nozzle adjusted for throwing the spray only. Fig. 3 is a similar view showing the nozzle adjusted for throwing the central solid stream only. Fig. 4 is an end view of the nozzle.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates the inner or main portion of the improved nozzle, which is preferably cylindroconoidal in form, the rear or inner end thereof being threaded or otherwise adapted to receive the hose-coupling, and the advance end thereof being reduced and externally threaded, as indicated at 2, to receive the outer or terminal section of the nozzle. The terminal section of the nozzle (indicated at 3) is considerably smaller in diameter and capacity than the inner or main section 1 and is provided near its inner end with an expanded spheroidal chamber 4, provided with segmental openings 5, through which the water may be forced and caused to spread into an annular spray. The opposing walls of these segmental openings 5 are reversely inclined, as shown, so that the openings contract in width as they approach the outer surface of the chamber 4. By this means the current of water passing therethrough is condensed and thereby projected to a greater distance. By regulating the position and pitch of these openings the divergence of the spray may be correspondingly increased or diminished.

The inner end of the terminal section 3 of the nozzle is internally threaded to engage the threaded portion of the main section of the nozzle, so that the terminal section may be screwed inward on the main section until brought into the position shown in Fig. 3. Under this adjustment the edge 6 of the threaded portion 2 of the main section of the nozzle will abut against the inner wall of the chamber 4 and will close the segmental openings 5, thereby shutting off the spray. Projecting handles 7 provide for turning the terminal section of the nozzle. The section 3 is also provided with diametrically opposite threaded openings, into which are screwed plugs or caps 8, and between these plugs or caps is journaled a valve in the form of a cylindrical plug, as indicated at 9, said valve having a waterway 10 and being provided with a stem 11, which extends through one of the caps 8 and is provided outside thereof with a thumb-piece 12, by means of which the valve may be turned. This valve is arranged between the spheroidal chamber 4 and its openings 5 and the discharge end of the terminal section of the nozzle, so that by turning said valve into the position shown in Fig. 2 water will be prevented from passing through the central bore of the terminal section and will be caused to pass through the spray-openings 5. By adjusting the parts into the position indicated in Fig. 3, however, the water will be cut off from the spray-openings and will pass through the central bore of the terminal portion of the nozzle in a single solid stream. By adjusting the sections of the nozzle and the valve so as to open both the central bore of the terminal section and the spray-openings the large volume of water passing through the hose and main section of the nozzle will be compressed within the spheroidal chamber 4 and will be Siamesed or divided and caused to pass partly through the

central bore of the terminal section and the remainder through the segmental openings 5, thus affording both a single solid central stream and a diverging annular or conical spray, as illustrated in Fig. 1.

The nozzle above described is extremely simple in construction, cheap in manufacture, is strong and durable, and will be especially valuable to firemen, who can play the central stream upon the fire, while at the same time they can utilize the spray for driving back the flames and smoke, the said spray also serving as a non-conductor of heat and materially cooling the air adjacent to the conflagration.

It will be apparent that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

A hose-nozzle made in two sections, one screwing upon the other, the terminal section having an expanded spheroidal chamber between its threaded end and the discharge end, said chamber having a series of segmental openings the walls of which converge toward the outer surface of the chamber to discharge an annular spray in a direction forwardly with but divergently from the direction of the solid stream, said section having also a valve beyond the spheroidal chamber to control the central bore, and the end of the other section adapted to close the segmental spray-opening when extended into the spheroidal chamber, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELISHA LITTLE DAY.

Witnesses:

W. L. SALLIS,

B. F. TEAGUE.