(No Model.)

J. J. LEDDEN.

HOSE NOZZLE.

No. 571,048. Patented Nov. 10, 1896.

Fig. 1.

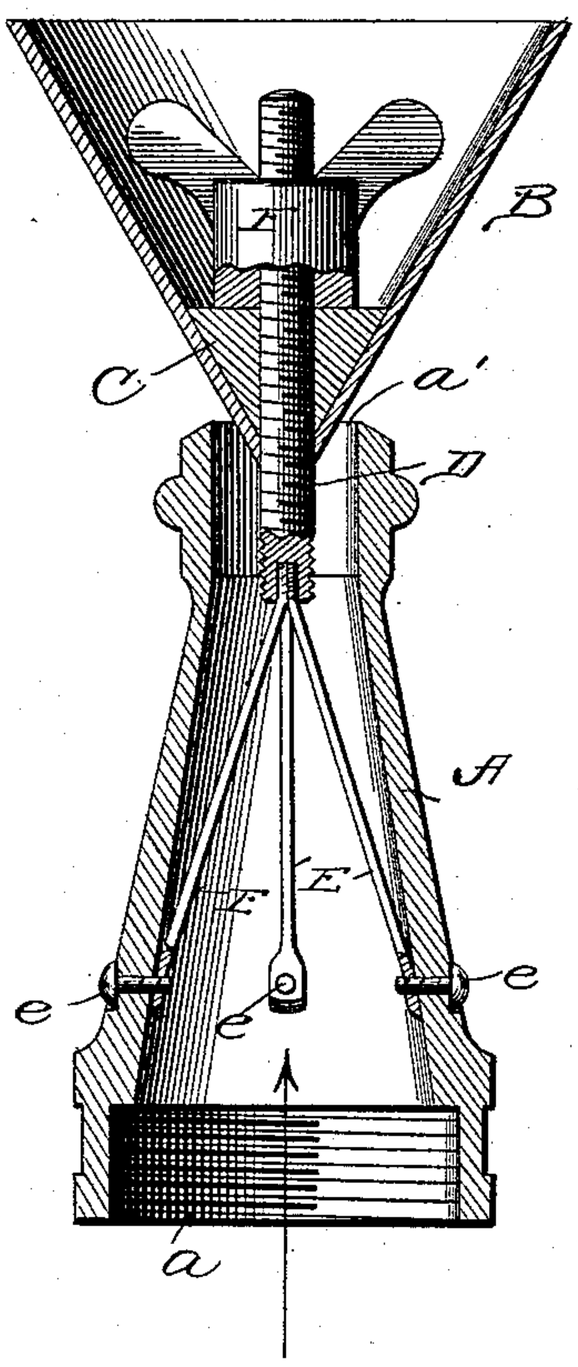
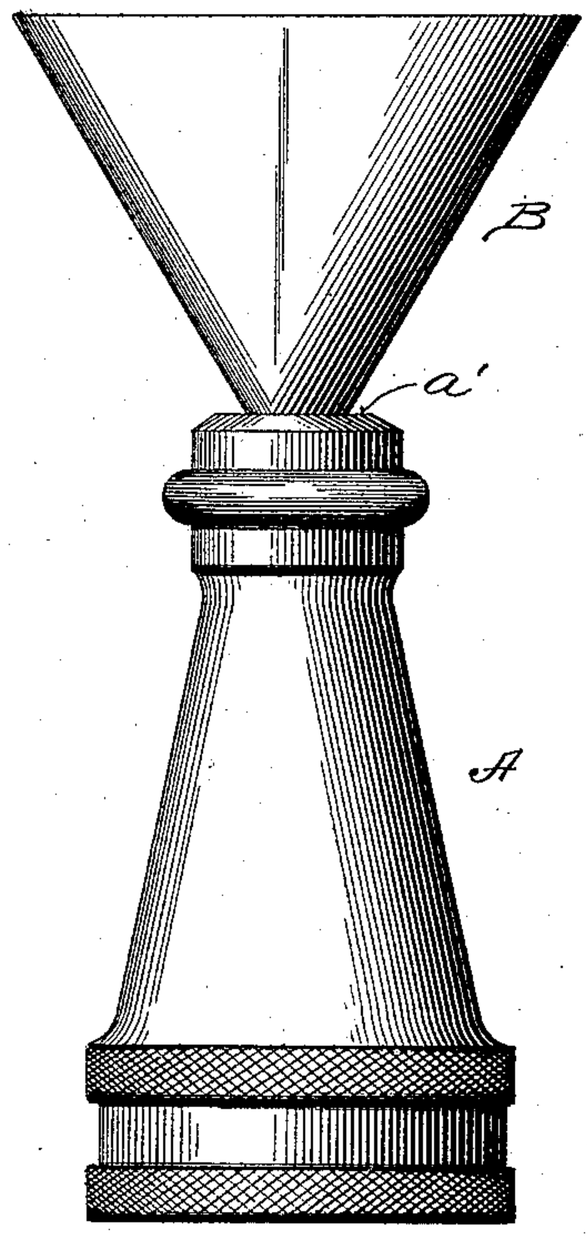


Fig. 2.



Witnesses
Harry D. Arthur.
James A. Lawrence.

John J. Ledden.
Inventor
by F. F. Fraikear Jr.
Attorney

UNITED STATES PATENT OFFICE.

JOHN J. LEDDEN, OF BALTIMORE, MARYLAND.

HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 571,048, dated November 10, 1896.

Application filed October 5, 1895. Serial No. 564,750. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. LEDDEN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Hose-Nozzles; and I do hereby 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.

My invention relates to hose-nozzles, and has for its object to improve the operation and economize the construction of that class of nozzles from which the water being discharged is spread into a conical-shaped sheet.

With this object in view my invention consists in the improved construction, arrangement, and combination of devices hereinafter fully described, and afterward specifically pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a longitudinal central sectional view of a hose-nozzle constructed in accordance with my invention, and Fig. 2 is a view in side elevation thereof.

Like letters of reference mark the same parts in both figures of the drawings.

Referring to the drawings by letter, A is the ordinary hose pipe or nozzle provided with the usual interior thread *a* to engage the thread of the ordinary hose end piece, whereby the nozzle is attached thereto.

B is a funnel-shaped device which I denominate the "spreader," the apex of which is filled in solid, as at C, forming the base of the spreader when in position. This base C has a central bore having in it a screw-thread which engages the exterior thread of a stem D, threaded on its exterior from end to end.

E E E are legs, of which there may be any desired number and which are secured inside the nozzle A by means of screws *e*, as shown, or in any other suitable manner. These legs are arranged to come together at the top and have an exterior thread to engage an interior thread in a hole or pocket in the lower end of the stem C, whereby the stem and legs may be rigidly secured together.

F is a thumb-nut having interior thread to engage the exterior thread of the stem C.

To put the devices in their operative relation, the legs E are attached to the stem by screwing their upper ends into the lower end of said stem. Their lower ends are then inserted in the hose-pipe until they are in their proper positions, where they are secured by means of screws *e*. The spreader B is now screwed down on the stem D until its proper position is reached, (this being determined by the extent of opening desired between the spreader and the outer edge *a'* of the hose-pipe,) where it is secured against being accidentally turned outward by screwing the thumb-nut F down tightly against its base C.

The water passing through the hose-pipe A will be converted into a conical sheet by means of the spreader, and as the pressure is always outward, in the direction of the arrow in Fig. 1, there is no necessity for any special means for preventing the accidental movement of the spreader inward; but the thumb-nut, acting as a lock-nut, will, when tightly turned up against the base of the spreader, hold the spreader against being turned either inward or outward.

If it is desired to adjust the position of the spreader to an inner position, it is only necessary to screw it inward to the desired position and then turn the thumb-nut up against it; but if the adjustment is to be outward the thumb-nut is first turned outward to a position beyond that to which the spreader is to go. The spreader is then turned to the desired outer position and the thumb-nut then turned up against it to hold it in such position.

My device is primarily intended to be used in hose-pipes of fire-engines or where similar heavy pressure is applied, such as by large force-pumps or heavy city pressures, but may be used in smaller hose-pipes or for fountains and lawn-sprinklers with good results. Its operation with fire-engines will cause the water to be delivered in shape of a cone with the hose-pipe as the apex, the special object in delivering such a shape being to spread the sheet of water in close quarters, so that it will quickly drench all the parts reached, especially the interior of buildings, and at the same time break the immense force of a compact stream in close quarters, which sometimes does great damage to furniture or other contents and is not necessary in such close quarters. The spreading sheet will form a wall or diaphragm entirely across an apart-

ment and will drive or push the smoke before it, effectually cleaning an interior of smoke in a very short space of time and greatly facilitating the work of the firemen.

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

The combination of the hose-pipe A, the connecting-legs E, E, having their outer ends threaded and their inner ends secured to the interior of the hose-pipe by screws *e*, the stem D, exteriorly threaded and having in its inner end a threaded bore to receive the threaded ends of legs E, the spreader B, having its apex-base C, threaded upon the stem D, and projecting into the hose-pipe A, and the thumb-nut F, threaded upon stem D, and serving to lock the spreader in any desired position on the stem, substantially as and for the purposes set forth.

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

JOHN J. LEDDEN.

Witnesses:

FRANK DE S. BENZINGER,

JAMES W. HENTZ.