M. S. CURTIS.

HOSE-NOZZLE.

No. 186,310. Patented Jan. 16, 1877.

fig. 1.

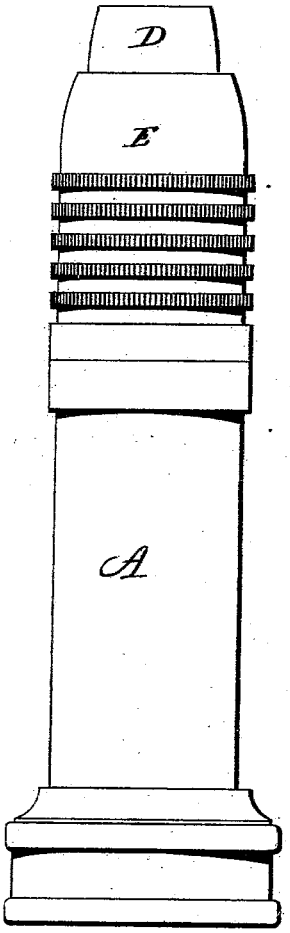


fig. 2.

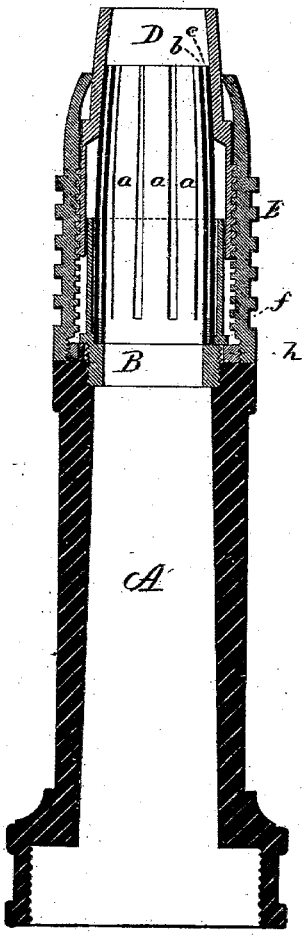
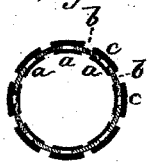


fig. 3.



Witnesses.
J. H. Shumway
Clara Broughton.

Mosely S. Curtis,
Inventor.
By Atty.
John E. Earle.

UNITED STATES PATENT OFFICE.

MOSELEY S. CURTIS, OF ANSONIA, CONNECTICUT, ASSIGNOR TO RICHARD R. COLBURN, OF SAME PLACE.

IMPROVEMENT IN HOSE-NOZZLES.

Specification forming part of Letters Patent No. **186,310**, dated January 16, 1877; application filed November 11, 1876.

To all whom it may concern:

Be it known that I, MOSELEY S. CURTIS, of Ansonia, in the county of New Haven and State of Connecticut, have invented a new Improvement in Hose-Nozzles; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent in—

Figure 1 a side view; Fig. 2, a vertical section, and in Fig. 3 a transverse section through the adjustable portion of the nozzle.

This invention relates to an improvement in that class of hose-nozzles which are designed to allow of the contraction or expansion of the area of the discharge during the flow.

It consists in several series of longitudinal staves, one series within another, the staves of one series overlapping the joints in the next, combined with an adjustable sleeve around said staves, and so as to move axially therewith, to draw closer together the said staves of each series to contract the stream, or allow them to expand, as more fully hereinafter described.

A is the body of the nozzle fitted for attachment to the pipe or hose in the usual manner. Attached to the end of this body by an internal ring, B, or otherwise, are two or more cylinders, formed from staves *a b c*, as seen in Fig. 3, one series within another, and the staves of one series overlapping the joints of the next, the joints of each being open at the outer end, so as to allow the staves of the several series to be drawn together to lessen the area, or to expand by their own elasticity to increase the area. Around the outside of these staves, at the outer end, a thimble, D, is arranged, contracting toward the outer end, so that by pressing the thimble down longitudinally upon the outer surfaces of the staves, they will be contracted as the internal diameter of the thimble decreases, and, forced from the staves, the elasticity of the staves will allow them to expand accordingly. In order to easily move the thimble a sleeve, E, is arranged in connection with the body A, so as to be rotated freely, but yet without longitudinal movement. The interior of this sleeve E is threaded, as seen in Fig. 2, and the exterior of the thimble D is correspondingly threaded; hence, by turning the sleeve E the thimble D will be moved out or in, according to the direction in which the sleeve E is turned, and will accordingly allow the expansion or serve to contract the internal diameter of the stave portion.

By this construction, when the water is flowing through the nozzle the hoseman has only to turn the sleeve E to increase or decrease the volume of discharge, as occasion may require.

The details of construction may be somewhat varied from that shown, as to the means of connecting the several staves to the body and holding the sleeve in its seat; but that shown in the drawing is believed to be the best. In this the staves are held by the ring B, the ring constructed with a flange, *f*, beneath which an internal flange, *h*, on the sleeve lies, the flange *h* thereby preventing longitudinal movement of the sleeve.

I do not, broadly, claim an adjustable hose-nozzle formed by a series of staves, when such staves overlap each other, as such, I am aware, is not new.

I claim—

1. In hose-nozzles, the combination of two or more cylindrical series of staves, with a thimble around said staves, and for the purpose of contracting or expanding the area within the said staves, substantially as specified.

2. In hose-nozzles, the combination of two or more cylindrical series of staves, with a thimble around said staves, and a sleeve internally threaded to correspond to an external thread on said thimble, for the purpose of adjusting said thimble, substantially as described.

MOSELEY S. CURTIS.

Witnesses:

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E. T. BARTLETT.