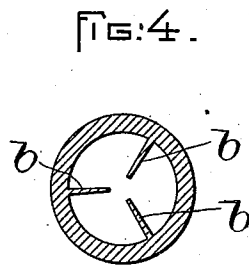
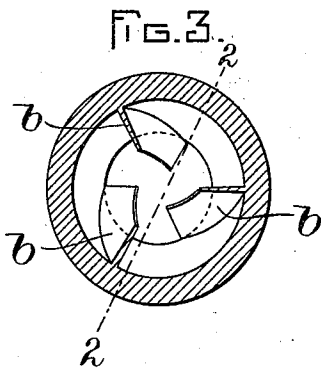
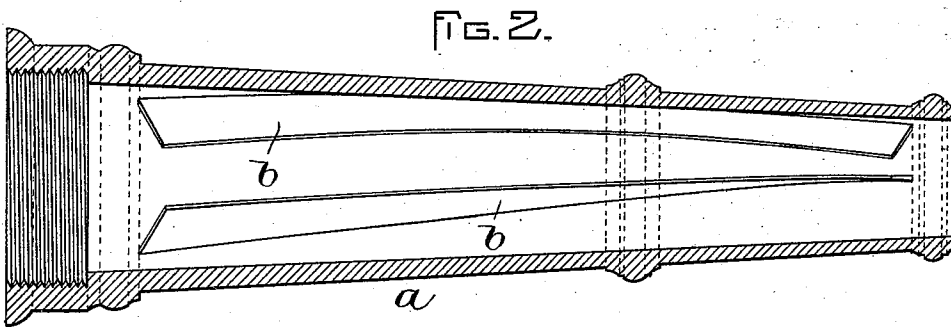
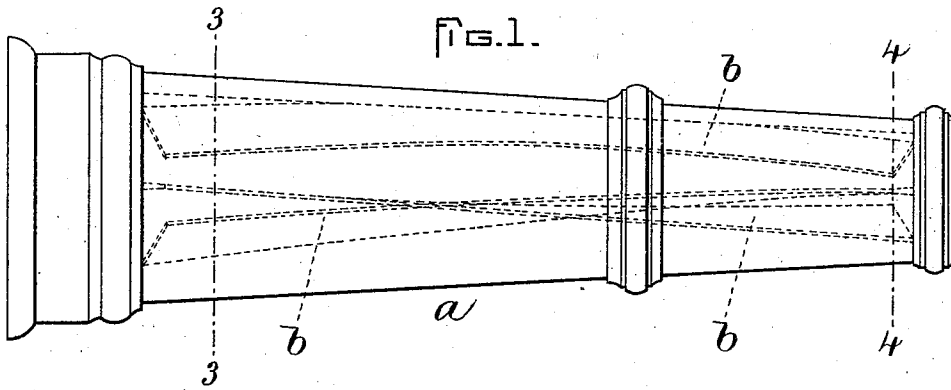


(No Model.)

T. H. WILLIAMS.
HOSE NOZZLE.

No. 550,336.

Patented Nov. 26, 1895.



WITNESSES:

A. J. Hanson
Rollin Abell

INVENTOR:

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by Knight Brown & Dunlop
Attys.

UNITED STATES PATENT OFFICE.

THOMAS H. WILLIAMS, OF LYNN, MASSACHUSETTS.

HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 550,336, dated November 26, 1895.

Application filed October 31, 1894. Serial No. 527,504. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. WILLIAMS, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Hose-Nozzles, of which the following is a specification.

This invention relates to an improvement in hose-nozzles, and has for its object to provide the interior of the nozzle with spiral blades extending substantially the entire length of the nozzle and extending inwardly substantially to the axis of said nozzle, whereby the blades can take a directive hold upon the stream passing through and give to it a slight twist.

My invention consists in certain novel features of construction and arrangement of parts, which will be fully hereinafter described, and particularly pointed out in the claim.

I am aware that it is old to form nozzles with interior grooves and with interior ribs; but these devices form no part of my invention.

Reference is to be had to the accompanying drawings and the characters marked thereon, which form a part of this specification, like characters designating like parts or features, as the case may be, wherever they occur.

In the drawings, Figure 1 shows a side elevation of a nozzle constructed in accordance with my invention. Fig. 2 shows a longitudinal section. Figs. 3 and 4 show cross-sections on the lines 3 3 and 4 4, respectively, of Fig. 1.

The letter *a* designates the shell of the nozzle, which is of the usual tapering form.

In carrying out my invention I form or secure on the interior of the nozzle a plurality of blades *b*, which extend radially of the nozzle in the direction of their width and longitudinally thereof in the direction of their length, and also spirally in the direction of

their length, said blades extending radially and inwardly approximately to the axis of the nozzle. By virtue of this construction the stream of water which passes through the nozzle is cut by the radially-extending blades and given a twist by reason of the spiral arrangement of said blades. The effect of this construction and arrangement is to throw the stream of water a much greater distance than it would otherwise be thrown, and to force the stream together, so that it leaves the hose-nozzle in a clean compact stream, without having any spurdy or jagged effect around the mouth of the nozzle.

The number of the blades and the pitch may be varied to suit different styles of nozzles without departing from the spirit or scope of my invention, which consists of a nozzle provided on its interior with a plurality of spirally-arranged blades which extend inwardly approximately to the axis of the nozzle.

Having thus explained the nature of my invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, what I claim, and desire to secure by Letters Patent, is—

A hose nozzle provided on its interior surface with a plurality of spiral blades extending in the direction of the length of the nozzle and inwardly approximately to the axis of the nozzle, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 29th day of October, A. D. 1894.

THOMAS H. WILLIAMS.

Witnesses:

HORACE BROWN,
WILLIAM QUINBY.