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W. B. SMITH

2,331,741

NOZZLE

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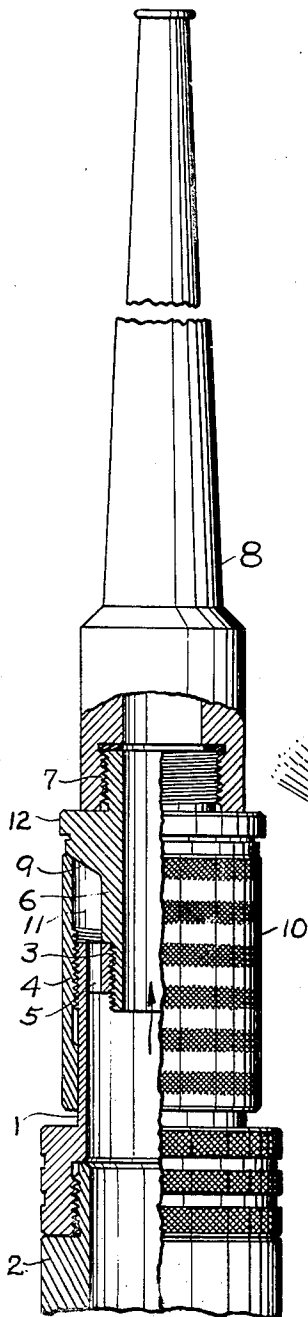


Fig. 1.

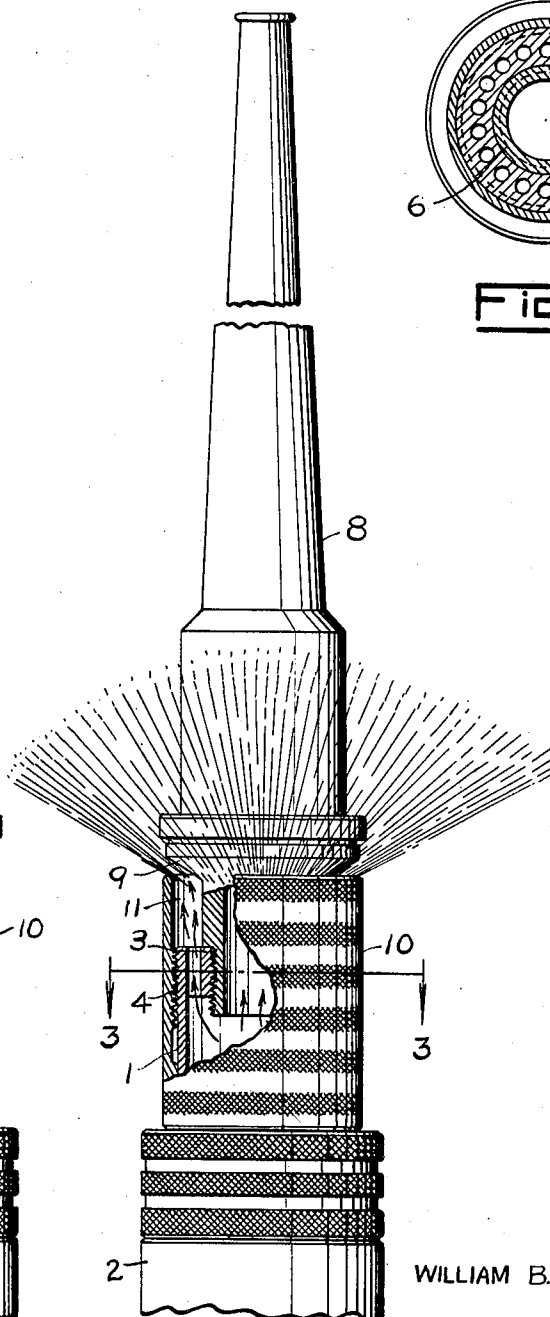


Fig. 2.

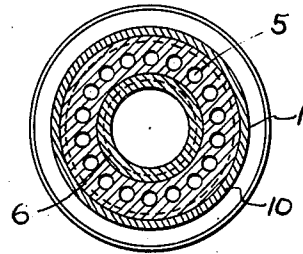


Fig. 3.

Inventor
WILLIAM B. SMITH

By
E. V. Hardway,
Attorney

UNITED STATES PATENT OFFICE

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NOZZLE

William B. Smith, South Houston, Tex., assignor
of one-half to Allen F. Clark, Harris County,
Tex.

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1 Claim. (Cl. 299—145)

This invention relates to a nozzle and has particular relation to a nozzle specially designed for fire fighting equipment.

An object of the invention is to provide a nozzle of the character described which may be used for directing a stream of water on the fire and which may, at the same time, be used for ejecting a shield of water between the fireman and the fire to protect the fireman against excessive heat.

At the present time, it is common practice for a fireman to use an ordinary hose nozzle for directing a stream of water onto the fire and in case of excessive heat, a shield is maintained between said fireman and the fire by the use of another specially constructed hose nozzle manipulated by another fireman. It is an object of the present invention to provide a single nozzle whereby the fireman may direct a stream of water onto the fire and, in case the heat becomes intense, so manipulate the nozzle that it will, at the same time, cast out a sheet of water which will form a shield between the fireman and the fire thus protecting the fireman against the heat.

With the above and other objects in view, the invention has particular relation to certain novel features of construction, operation and arrangement of parts, an example of which is given in this specification and illustrated in the accompanying drawing wherein:

Figure 1 shows a side view of the nozzle, partly in section, and showing the valve closed so as to eject the entire volume of water through the nozzle onto the fire.

Figure 2 shows a side elevation thereof, partly in section, showing the valve opened to eject a shield of water, and

Figure 3 shows a cross-sectional view taken on the line 3—3 of Figure 2.

Referring now more particularly to the drawing, wherein like numerals of reference designate the same parts in each of the figures, the numeral 1 designates a tubular fitting which, at one end is enlarged and internally threaded to receive the hose connection 2 whereby the hose and nozzle may be connected together. At its other end the fitting 1 is inwardly thickened and provided with the internal threads 3 and the external threads 4. This inwardly thickened portion is provided with an annular row of channels 5.

Threaded into the inwardly thickened portion of the fitting 1, there is a tubular fitting 6 which

is of a smaller diameter than the diameter of the fitting 1 and whose outer end is provided with the external threads 7 onto which the nozzle proper 8 is screwed.

Intermediate its ends the fitting 6 is enlarged and formed with a tapering valve seat 9.

Fitted around the fitting 1 there is a sleeve valve 10 having internal threads in mesh with the threads 4. This sleeve valve forms a chamber 11 between it and the fitting 6. The channels 5 lead into this chamber. The sleeve valve 10 may be turned in one direction into abutting relation with the seat 9 into closed position, as shown in Figure 1, or may be turned in the other direction to open the valve, as shown in Figure 2.

When the valve 10 is closed, all of the water will be ejected through the nozzle 8 in a stream for extinguishing the fire. However, in case the heat becomes intense, the valve 10 may be opened and part of the water from the hose will flow through the channels 5 into the chamber 11 and will be ejected out laterally in a thin sheet, as illustrated in Figure 2, and which will form a shield between the fireman and the fire and thus enable the fireman to work closer to the fire.

The enlarged intermediate portion of the fitting 6 is provided with an external annular guard 12 which projects out beyond the sleeve valve 10 and which will prevent said sleeve valve from being distorted when the nozzle is dropped onto or struck against a hard surface.

The drawing and description are illustrative merely while the broad principle of the invention will be defined by the appended claim.

What I claim is:

A nozzle comprising a tubular fitting adapted, at one end for the connection of a hose thereto, the other end of the fitting being inwardly thickened and provided with internal and external threads, the inwardly thickened portion being provided with longitudinal channels, a tubular fitting, one end of which is threaded through said inwardly thickened portion and whose other end is threaded, said last mentioned fitting having an external tapering valve seat, a tubular nozzle tip attached to the last mentioned fitting, a sleeve valve threaded onto said first mentioned fitting and adapted to contact with the valve seat to form a chamber into which said channels lead, said sleeve valve being adjustable from the seat to provide an annular discharge passageway through which water may be discharged laterally from the nozzle.

WILLIAM B. SMITH.