This invention relates to fire hose nozzles and more particularly to such nozzles for providing water curtains useful in fighting fires.

Hitherto various nozzles have been proposed for establishing vertically disposed water curtains useful in fighting fires. These nozzles, while providing a water curtain have been cumbersome, heavy, expensive to manufacture and difficult to use. The fire hose nozzle of the present invention for the first time provides a nozzle for establishing water curtains which is relatively cheap and easy to manufacture, which is compact and easy to use and which is easy to assemble and disassemble for servicing.

It is therefore among the objects of the present invention to provide a novel fire hose nozzle construction for establishing vertically disposed water curtains useful in fighting fires which nozzles are of simple construction, cheap and easy to manufacture, and of relatively light weight for ready and easy use.

Other and further objects of the present invention will appear from the following description of an illustrative embodiment of the invention.

The nozzles of the present invention are capable of various mechanical embodiments one of which is shown in the accompanying drawing and is described hereinafter to illustrate the invention. This illustrative embodiment of the present invention should in no way be construed as defining or limiting the scope of the invention.

In the accompanying drawings, in which like reference characters indicate like parts,

Fig. 1 is a view from above of an illustrative embodiment of the present invention showing the assembly of the several elements thereof;

Fig. 2 is a view from the side of the embodiment of Fig. 1; and

Fig. 3 is an enlarged detail of a portion of the embodiment of Fig. 1 showing the arrangement of the radially disposed slots in the discharge orifices of the nozzle.

Referring now to the several figures of the drawing,

10 is a hollow T-shaped casting of brass or other suitable metal forming the base of the nozzle. Base 10 is provided with a suitable fitting 11 to receive the male portion of the fire hose, in known manner, and fitting 11 communicates through shank 12 with the hollow T-head portion of the nozzle generally indicated as 13. Fitting 11 and shank 12 may have any suitable diameter required to fit standard hose sizes. T-head portion 13 is provided with enlarged terminals or ends 14 and 15 which are closed by plates 16 and 17, respectively, secured to ends 14 and 15 by suitable means such as screws 18. A watertight joint is secured between ends 14 and 15 and plates 16 and 17, respectively, by interposed gaskets 19 and 20, respectively.

As best seen in Fig. 2, each of ends 14 and 15 is provided with a plurality of radially disposed slots 21 extending over an arc of approximately 120°, this arc being disposed 60° on each side of the vertical extending from the center 22 of the circular end 14 or 15. Slots 21 are given any suitable depth and the depth of the slots increases toward the vertical line extending from center 22 to provide a heavier water curtain in the center portion of the 120° arc.

Each of end plates 16 and 17 is provided with a fan-shaped extension 22 extending beyond the outer ends of grooves 21 by a distance approximating the internal radius of ends 14 and 15. Fan-shaped portion 22 guides and deflects the streams of water passing outwardly through grooves 21 to assist in the formation of the water curtain.

Fan-shaped portion 22 is cut away at 23 and 24 to decrease the weight of the nozzle and each end plate 16 and 17 is provided with extensions 25 and 26 connected by an edge 27 which is disposed approximately parallel to the axis of shank 12. Spaced parallel bars 28 and 29 are secured at the extremities of edges 26 and 27 and are provided with downwardly turned feet 30 at their extremities. Feet 30 support the nozzle when in use.

The nozzles of the present concept may be made in any desired size for use with standard fire hose diameters. For a 2½ inch diameter fire hose and with a water pressure of 250 pounds the water curtain nozzle as above-described provides an area of protection 45 feet high and 55 feet wide. With a ¼ inch fire hose and a water pressure of 250 pounds the water curtain nozzle as above-described provides an area of protection 30 feet high and 100 feet wide.

It should now be apparent to those skilled in the art that several objectives described above have been obtained by the water curtain nozzle of the present concept.

Changes in or modifications to the above-described illustrative embodiment of the present concept may now be suggested to those skilled in the art without departing from the scope of the present invention. Reference should therefore be had to the appended claims for a definition of the present inventive concept.

What is claimed is:

1. In a water curtain nozzle, a hollow body, a cylindrical shank for said body, a base coupling mounted on said shank, two hollow cylindrical extensions for said body having a common axis at right angles to the axis of said shank, radially disposed grooves extending over a 60° arc on each side of the vertical formed in the end of each of said extensions, a plate secured to and closing each of said extensions and overlying said grooves, each of said plates having a fan-shaped portion extending beyond the adjacent one of said extension and having a side substantially parallel to the axis of said shank, spaced parallel bars secured at the extremities of said sides and feet disposed at the extremities of said bars.

2. A nozzle as described in claim 1 in which said grooves are deeper adjacent the vertical and are of successively shallower depth away from the vertical.

3. A nozzle as described in claim 1 in which said fan-shaped portion of said plate extends beyond the surface of the adjacent cylindrical extension by a distance approximating the internal radius of the cylindrical extension.

4. A nozzle as described in claim 1 in which said plates are removably secured to said extensions, said plates and said bars forming a unitary portion of the nozzle.

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