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FIRE HOSE NOZZLE

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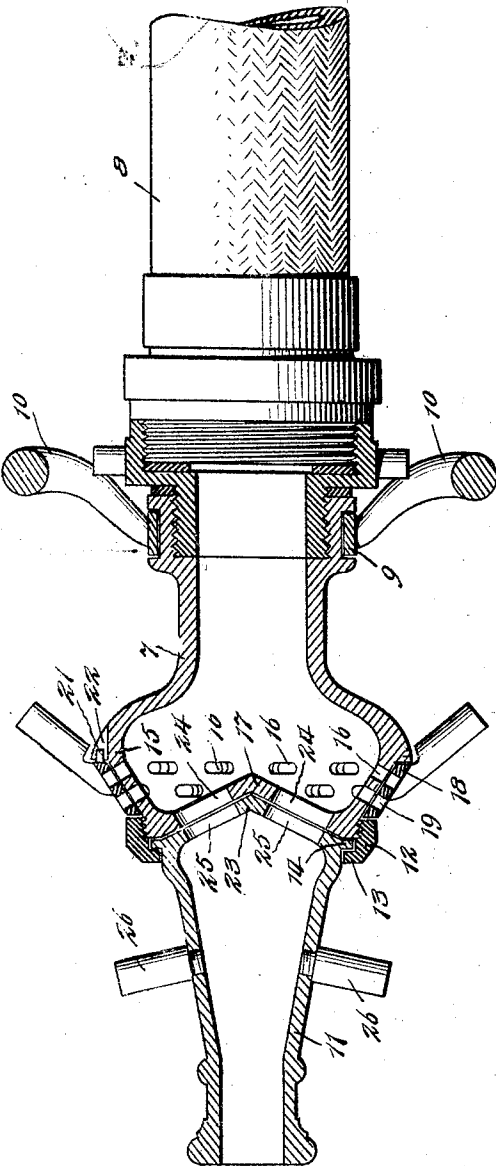


Fig. 1.

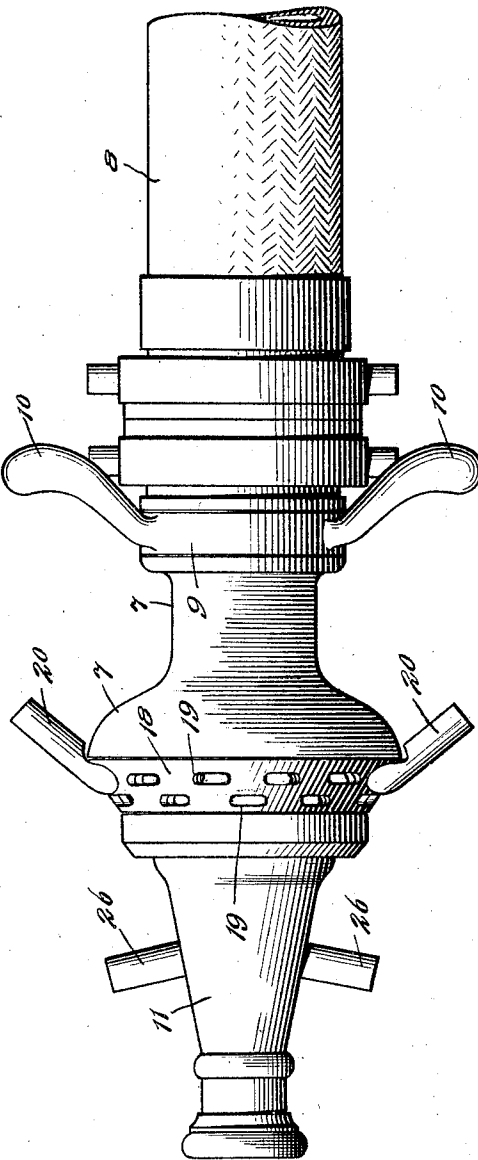


Fig. 2.

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FIRE-HOSE NOZZLE.

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Among the principal objects which the present invention has in view are: to make more effective the work of the fireman by allowing a closer approach of the fire, by providing means for protecting the firemen from the heat thereof while using a hose to extinguish the fire; to provide means for distributing water over widened areas when the hose is introduced into an apartment from above as through the ceiling thereof, or when introduced from below as through the floor thereof; to vary the screen at the will of the firemen; and to simultaneously direct a stream of water upon the fire and provide a heat screen for protecting the firemen, said arrangements being under the control of the firemen.

Drawings.

Figure 1 is a longitudinal section of a hose nozzle constructed and arranged in accordance with the present invention.

Figure 2 is a side view of the same.

As seen in the drawings the nozzle is primarily constructed in two parts, the one part comprising the hollow body 7 which is non-rotatably disposed in service or attached to the hose pipe 8. A slidable collar 9 is suitably swung in an annular groove at the base of the body 7 to support the handles 10 with which the collar is provided, and by which the nozzle may be manipulated or directed.

The second of the parts mentioned is the spout 11 which is rotatably mounted on the body 7 by means of a clamp collar 12. The collar 12 is tapped to provide threads for engaging threads on the extremity of the body 7. To hold the spout 11 in position a flange 13 is provided on the collar 12 under which a flange 14 on the spout 11 extends.

The body 7 has an annular inclined wall 15. A series of apertures 16 are formed in the wall 15 said apertures being disposed in perpendicular relation to the wall 15, and inclined to the axis of the body 7. The body 7 is enlarged laterally to form the wall 15, and to direct the water to the apertures 16 the body 7 has an inverted conical end wall 17. The wall 17 serves to spread the stream of water coming from the neck of the body 7 to deliver the same to the apertures 16 in the body.

The apertures 16 of the body 7 may be closed by a ring collar 18. The collar 18 has

a series of perforations 19 which correspond in size with the apertures 16 in the body 7. For manipulating the collar 18 it is provided with handle lugs 20 and a pin 21. The pin 21 is mounted in a recess the end walls 22 whereof form stops for locating the ring 18 so that the perforations 19 coincide with the apertures 16 or are entirely removed therefrom. In the latter position it will be seen the apertures 16 are closed, and water is prevented from flowing there-through from the body 7. It will be seen from the direction of the apertures 16 and perforations 19, as shown best in Figure 1 of the drawings, when the water is delivered through the said apertures and perforations, it is spread radially and in slightly forwardly inclined streams which, being small, are broken by the air into a spray which forms a screen between the fire and the firemen. It will also be seen that in such cases where the fire is located in a cellar or in an apartment to which access can only be gained by driving a hole through the ceiling thereof, a nozzle such as herein disclosed with the spout 11 shut off, and with the apertures 16 and perforations 19 fully opened, could be lowered through the hole thus formed with the result that the water from the hose pipe 8 would be thrown over a wide area upon the burning material below.

The inverted end wall 17 while serving to effect or control the flow of water passing through the body 7 to the apertures 16 and perforations 19, also forms on its outer surface a cup-like recess to receive the end wall 23 of the spout 11. The end walls 17 and 23 are provided with passages 24 and 25. The passages 24 and 25 correspond in size and shape so that when in register with each other water is permitted to flow freely therethrough from the body 7 of the nozzle.

The spout 11 may be manipulated by means of the lugs 26 with which it is furnished, the purpose of the manipulation being to partly or entirely close the passages 24.

The construction incorporating the conical end walls 17 and 23 and the collar 12 provides for taking up whatever wear may occur between the two walls, thus avoiding leakage. The collar 12 operates in a similar manner upon the collar 18 which also has a cone-shaped bearing which facilitates the taking up of wear between the juxta-

posed surfaces to eliminate any leakage when the collar 18 and the spout 11 are moved to their shut-off positions.

From the foregoing it will be seen that
 5 when fire hose such as indicated by the numeral 8 is provided with a nozzle such as herein described, the fireman manipulating the same may throw a solid stream from the spout 11 by turning the said spout to a position where the passages 24 and 25 are in register and by turning the collar 18 to close the apertures 16. If during the operation of fighting a fire the heat thereof becomes trying or unbearable to the firemen he may
 10 turn the collar 18 to partly or entirely open the passages formed by the apertures 16 and perforations 19. When thus arranged the water will be driven radially from the said apertures and perforations to form a heat absorbing screen in front of the firemen. It is so arranged that the nearer the firemen approach the fire the larger quantity of water will be required for the screen and the proximity of the fire being such that the
 20 quenching stream is not required to carry so far. Or if it is desired to throw the quenching stream a greater distance the collar 18

can be moved to give the entire pressure of water to the spout 11, the screen being momentarily discontinued, but being resumed when again the heat cannot be borne. 30

Claim.

A hose nozzle comprising an inlet member having a plurality of annularly disposed forwardly inclined lateral discharge openings, an inverted cone-shaped end wall formed in said member and extending thereinto for directing a water stream toward said lateral openings, means externally rotatable over said lateral openings for closing the same, said end wall having discharge apertures extending therethrough, a discharge member for delivering a direct flow through and from said inlet member rotatably mounted on the end wall thereof, said discharge member having an apertured end wall shaped to register with the end wall of said inlet member, and means for rotating said discharge member for closing said direct flow delivery apertures through the end walls of said members. 35 40 45 50

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