J. H. COTTLE.

NOZZLE.

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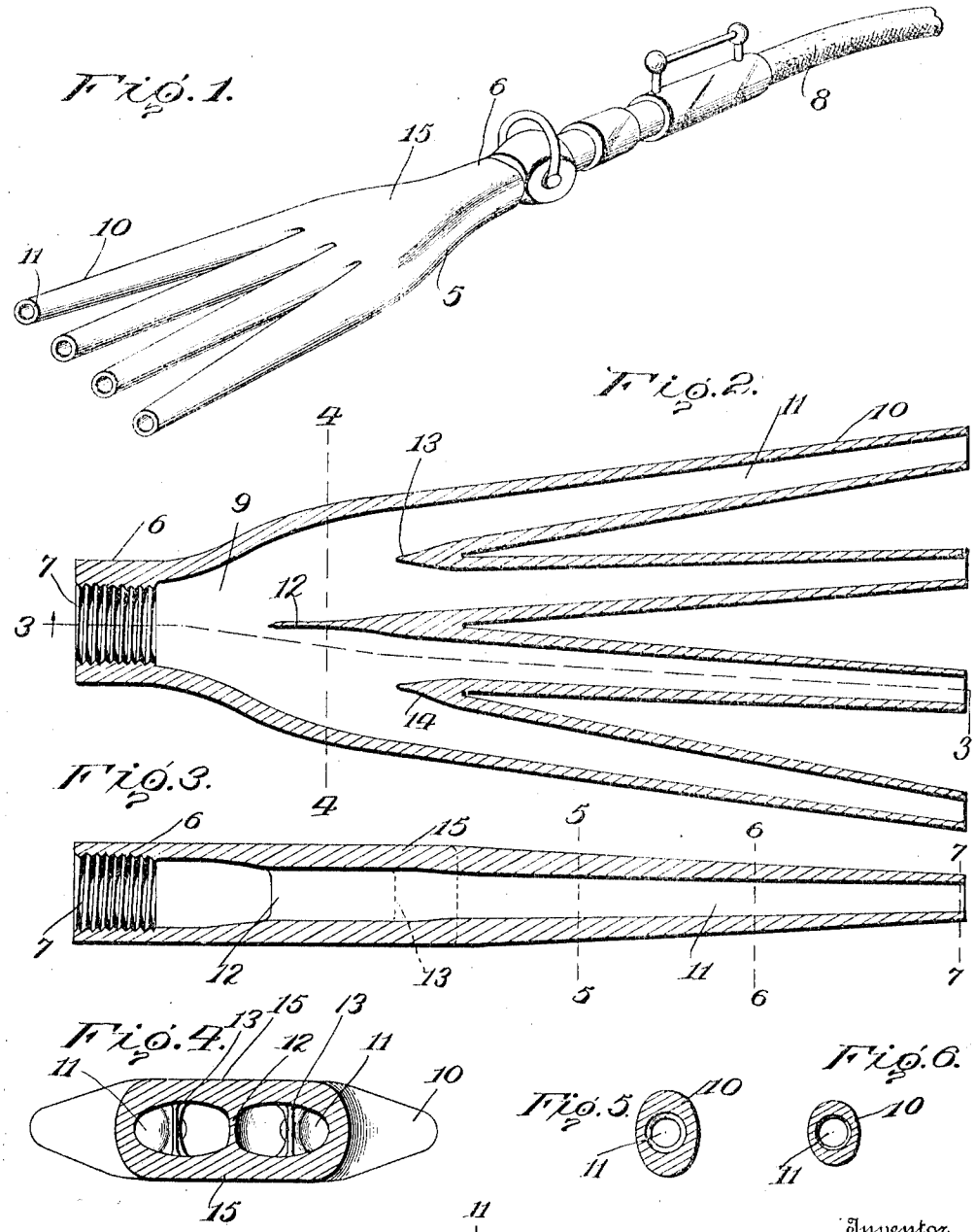

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UNITED STATES PATENT OFFICE.

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NOZZLE.

1,073,963. Specification of Letters Patent. Patented Sept. 23, 1913.

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To all whom it may concern:

Be it known that I, JOHN H. COTTLE, citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Nozzles, of which the following is a specification.

This invention relates to nozzles and has for its object the provision of a comparatively simple and thoroughly efficient device of this character especially designed for attachment to fire hose and by means of which a plurality of streams of water may be discharged from the nozzle at one time.

A further object is to provide a nozzle including a hollow body portion having means at one end thereof for attachment to a fire hose and provided at its other end with spaced diverging discharge tubes, there being main and auxiliary partitions disposed within the body portion for directing the water to the several discharge tubes.

A further object is to provide a nozzle, the construction of which is such that by holding the nozzle in a horizontal plane, water may be discharged in diverging streams, and by holding the nozzle in a vertical plane, the several streams may be concentrated at a given point.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a perspective view of a nozzle embodying the present invention; Fig. 2 is a horizontal sectional view of the same, the hose being omitted; Fig. 3 is a vertical sectional view; Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 2; Fig. 5 is a similar view, taken on the line 5—5 of Fig. 3; Fig. 6 is a transverse sectional view, taken on the line 6—6 of Fig. 3; Fig. 7 is a transverse sectional view taken on the line 7—7 of Fig. 3.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

The improved nozzle forming the subject matter of the present invention comprises a body portion 5 having one end thereof reduced and provided with a cylindrical extension 6, the interior walls of which are threaded at 7 for detachable connection with a fire hose, indicated at 8. The body portion 5 is provided with an interior chamber 9 and a plurality of spaced diverging tubes 10 having longitudinally disposed liquid passages 11 communicating with the chamber 9, and through which water is discharged in a plurality of streams at the free end of the nozzle. Disposed within the chamber 9, is a longitudinal partition 12, preferably arranged at the center of the nozzle and having its free end terminating short of the threaded end 7 of the cylindrical extension so as to divide the volume of water and direct a portion thereof through the passages 11 of the discharge tubes on each side of the partition.

Disposed at the junction of adjacent discharge tubes 10, are auxiliary partitions 13 for directing a portion of the water divided by the main partition 12, through the adjacent passages 11. The side walls of the passages 11, at the auxiliary partitions 13, are preferably curved or flared laterally, as indicated at 14 so as not to offer any obstruction to the flow of water through said passages.

The body portion 5 is preferably provided with oppositely disposed flat faces 15, the discharge tubes 10 being disposed in alinement with each other and arranged entirely within the lines of the flat faces 15 of the nozzle.

Thus it will be seen that by holding the nozzle with either flat face up, the water from the hose 8 will be directed through the several passages 11 and discharged in the form of a plurality of diverging streams, thereby directing the water over a relatively large area and permitting one fireman to perform the work of four. By supporting the nozzle with the flat faces thereof in a vertical plane, the several streams may be concentrated at a given point, when desired.

It will of course be understood that the nozzles may be made in different sizes and shapes and provided with any number of discharge tubes without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new is:

1. A nozzle including a body portion having an interior liquid receiving chamber and provided with means for attachment to a hose, a plurality of independent diverging discharge tubes extending laterally from one end of the body portion and provided with liquid passages communicating with the chamber, the axes of said passages lying in the same plane with that of the hose attaching means, and a partition for directing a portion of the water to the discharge tubes on each side of said partition.

2. A nozzle including a body portion having means at one end thereof for connection with a hose and provided at its other end with a plurality of spaced independent diverging discharge tubes, there being a chamber formed in the body portion and longitudinal liquid passages in the discharge tubes communicating with said chamber, the axes of the liquid passages lying in the same plane with that of the hose attaching means, a main partition extending longitudinally of the nozzle at the junction of two of the tubes, and auxiliary partitions of less length than the main partition arranged at the junction of other of said tubes.

3. A nozzle including a body portion having one end thereof provided with a threaded extension for attachment to a hose and its other end provided with spaced diverging discharge tubes, there being a chamber formed in the body portion and longitudinal passages in the tubes communicating with said chamber, the axes of the passages in the tubes lying in the same plane with that of the hose attaching means, a longitudinal partition disposed at the junction of two of the tubes and having its free end terminating short of the threaded extension of the nozzle and centered with respect thereto, and auxiliary partitions of less length than the main partition disposed at the junction of other of said tubes, the side walls of the tubes at said partitions being curved laterally to provide a clearance for the water.

4. A nozzle including a body portion having substantially flat upper and lower faces, one end of said body portion being reduced to form an extension for attachment to a hose, and its other end provided with spaced independent diverging discharge tubes disposed between the planes of the flat faces of the nozzle, the axes of the discharge tubes lying in the same plane with that of the hose attaching means, said body portion being provided with an interior chamber communicating with the discharge tubes and hose, respectively.

In testimony whereof, I affix my signature in presence of two witnesses.

JOHN H. his × mark COTTLE. [L. S.]

Witnesses:
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