No. 822,546. PATENTED JUNE 5, 1906.

H. F. NEWMAN.

DISTRIBUTING NOZZLE.

APPLICATION FILED APR. 24, 1905.

Fig. 1.

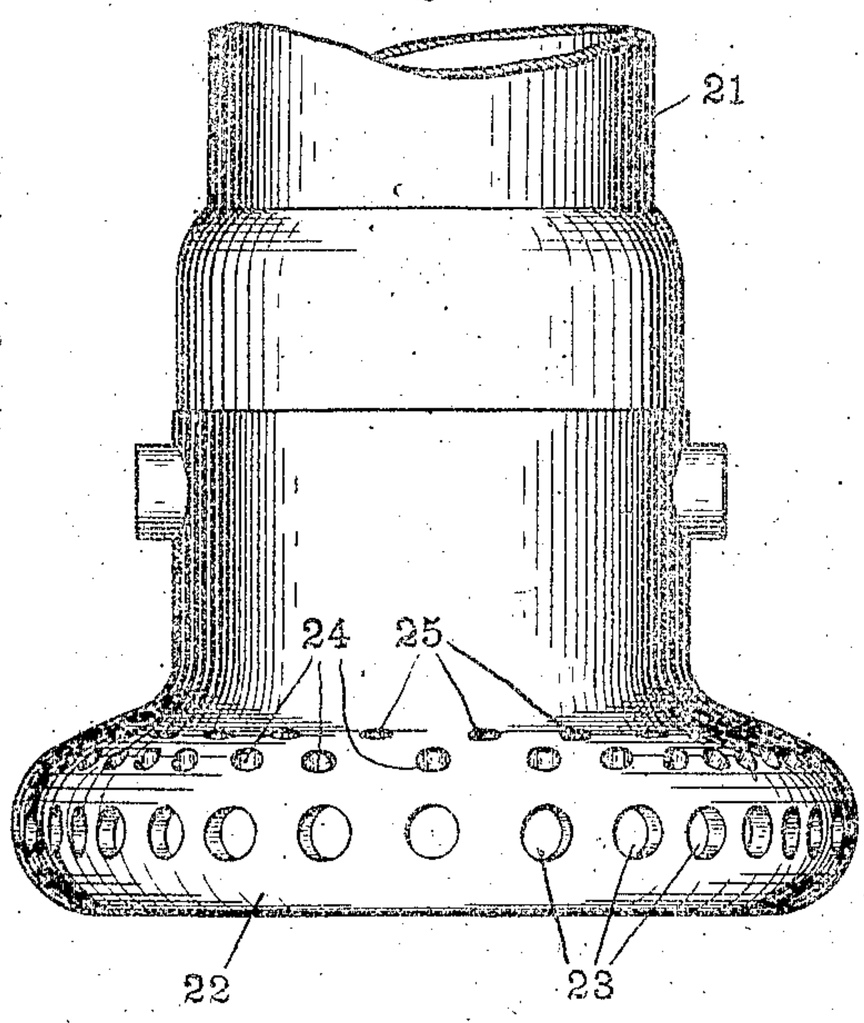


Fig. 2.

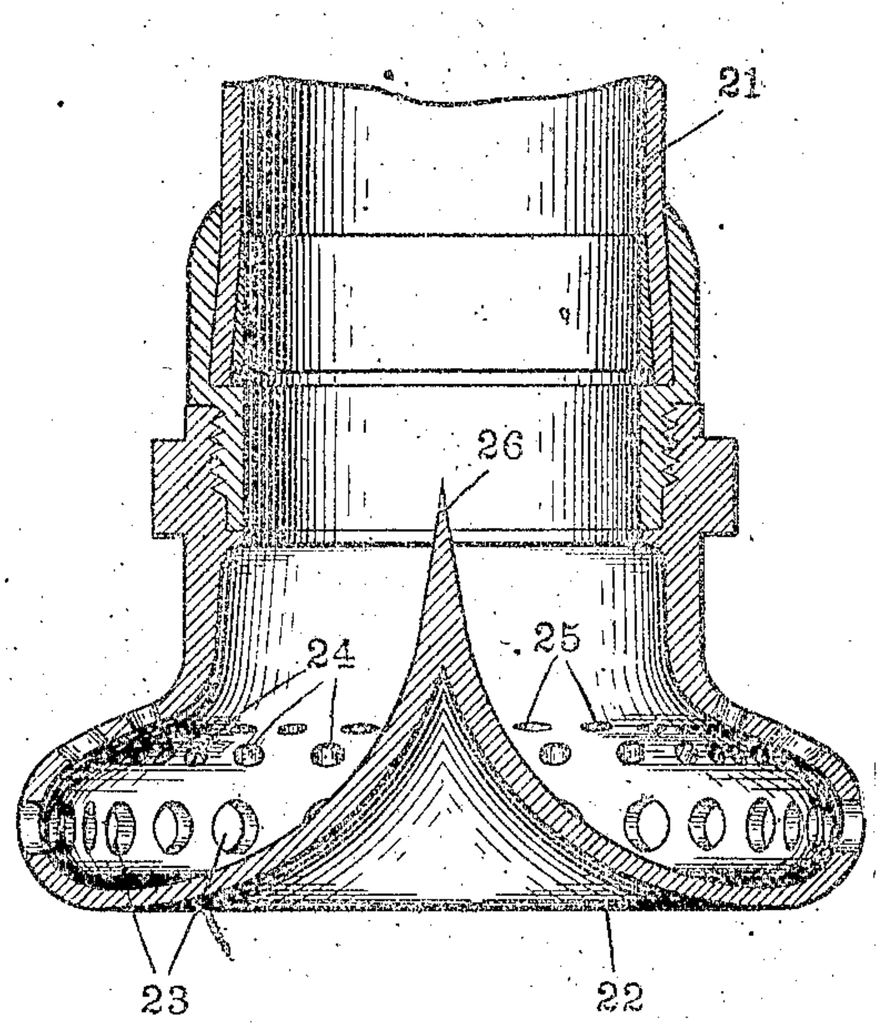
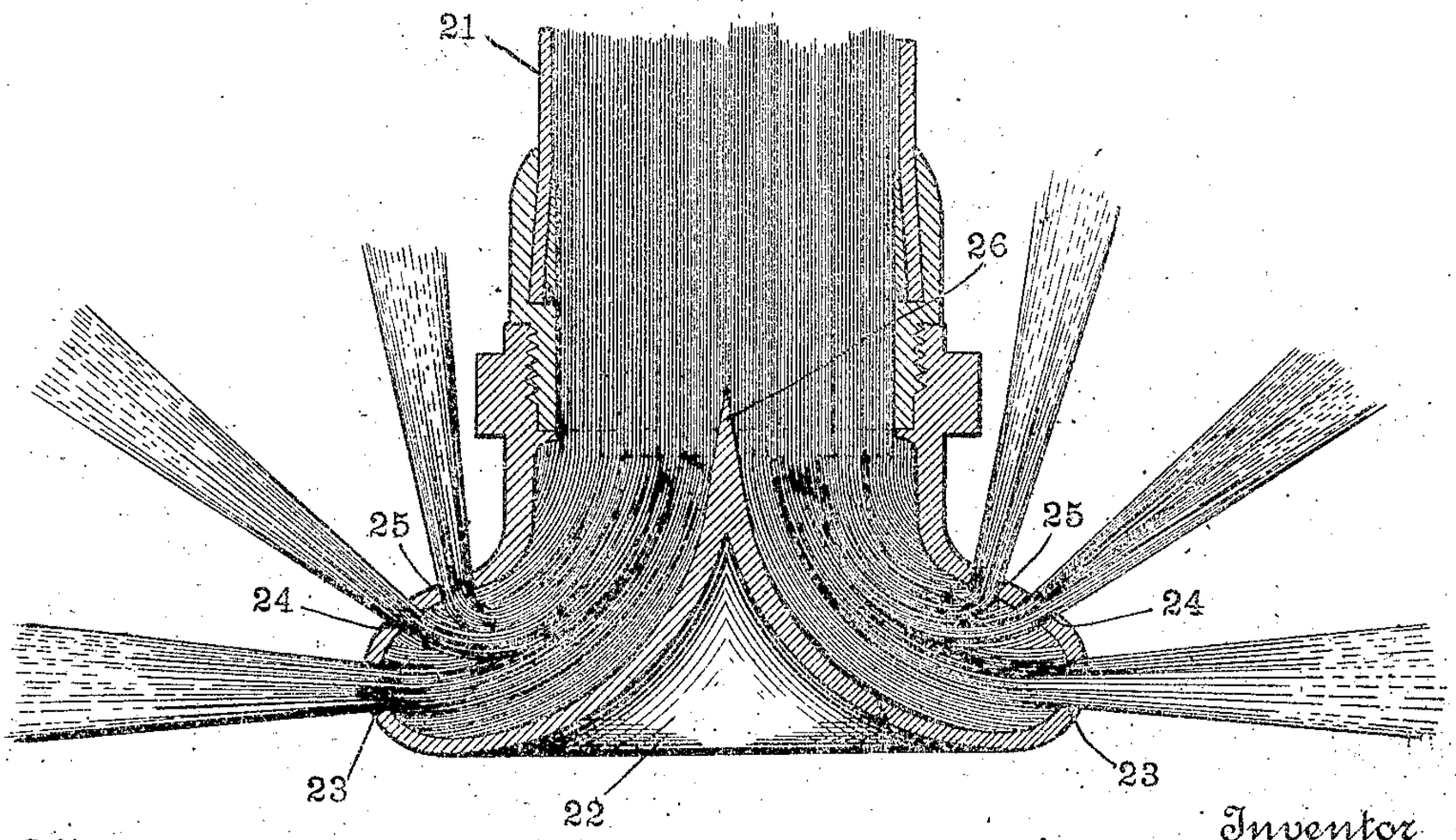


Fig. 3.



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UNITED STATES PATENT OFFICE.

HERMAN F. NEWMAN, OF INDIANAPOLIS, INDIANA.

DISTRIBUTING-NOZZLE.

No. 822,546. Specification of Letters Patent. Patented June 5, 1906.

Application filed April 24, 1905. Serial No 257,250.

To all whom it may concern:

Be it known that I, HERMAN F. NEWMAN, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Distributing-Nozzles, of which the following is a specification.

There are conditions in many cases of conflagration where it is desirable to project a sheet of water over or alongside a surface on a structure. For example, in cases of fires in basements, especially when oil or other inflammable material is stored therein, it is of the greatest importance that a sheet of water be thrown over the surface of the burning material and that the underside of the floor overhead be also drenched. In other cases where there are windows opening on narrow streets or alleys from which the flame is bursting it is of great importance that a sheet of water be thrown across such openings to protect adjacent property from the flames.

It is the object of my invention to produce a nozzle which shall be capable of throwing numerous streams of water laterally, so as to produce substantially a sheet of water over a considerable surface which may be used in the situations and under the conditions above indicated.

The accompanying drawings illustrate a spraying or distributing nozzle embodying my invention.

Figure 1 is a side elevation of such a nozzle; Fig. 2, a central vertical sectional view thereof; and Fig. 3 a view similar to Fig. 2, but illustrating the distribution of water by means of a nozzle embodying my said invention.

Said nozzle is coupled to the end of an ordinary fire-hose 21 by a screw-threaded coupling or connection in the usual and well-known manner, as is clearly apparent from an inspection of the drawings. The shell 22 of said nozzle flares outwardly as it approaches the end and in its flared-out portion contains a mutliplicity of orifices through which the water will escape under pressure, such as is commonly present in water-distributing systems provided for the purpose of fighting fires. I have shown three circumferential rows of such orifices 23, 24, and 25, and these are shown as arranged at different angles, so as to cause the discharge to travel in diverging directions, as best indicated in Fig. 3 of the drawings. The usefulness of this will be understood from the foregoing statements of where the device is to be used. The orifices which discharge at substantially right angles with the axis of the nozzle throw their streams to the greatest possible distance within the capacity of the device. The other streams, which are shown as pointing back somewhat, will thoroughly wet the adjacent side of the floor or wall which it is desired to protect from the flames beyond the point where the nozzle is held. I thus provide both a sheet of water covering the greatest possible area, so as to most effectually cut off the flames and at the same time to thoroughly drench the surfaces which are in the greatest danger from such flames. The shell of the nozzle continues beyond the orifice portion, and the sides approach each other, so as to meet in the center, the formation being a reverse curve, and said sides finally terminate in a sharp central point 26. The form of the central lower wall thus aids in the distribution of water through the orifices, the stream as a whole being thus split or divided and guided directly toward said orifices, so that the distance to which the various streams will reach is much increased, as I have demonstrated by actual test and experiment. The peculiar use of this nozzle makes it desirable that the force of the water being discharged should cause the nozzle to draw outwardly instead of pushing back. The direction of discharge (being either at right angles with the axis of the nozzle or toward the rear) effects this result, so that, for example, where the nozzle is placed through a hole in the floor it will keep itself down to the limit permitted without being held by hand or otherwise.

I claim as my invention—

1. The combination, with a flexible hose, of a distributing-nozzle having a multiplicity of perforations in its periphery some of which extend at a backward angle, and having its sides beyond said perforations formed on a reverse curve and terminating in a central apex, whereby the water entering the nozzle is divided and guided substantially directly toward said perforations, substantially as and for the purpose set forth.

2. A distributing-nozzle having an enlarged end with a multiplicity of orifices in its outer wall, certain of said orifices discharging at substantial right angles with the axis of said nozzle and others at an angle thereto, said nozzle being provided interiorly with an apex by which the water entering

said nozzle is divided and guided substantially directly toward said discharging-orifices.

3. A distributing-nozzle having an enlarged end formed by a gradual non-abrupt curvature of the outer wall outwardly from the cylindrical portion to the desired diameter and thence by a continuing curve inwardly and backwardly until the structure terminates in an apex by means of which the flow of water from the tube to which the nozzle is connected is divided and directed outwardly in all directions, said nozzle being provided with a multiplicity of orifices in its outer wall arranged to accommodate the discharge of water in the direction of its flow as governed by the curvature of the walls, whereby water is distributed in numerous directions under full pressure.

4. The combination, with a flexible hose, of a distributing-nozzle having a multiplicity of perforations in its peripheral portion, some of which are arranged to discharge at substantially right angles with the line of the hose to which the nozzle is attached and others of which are arranged to discharge backwardly and thus exert a pulling force on the flexible hose to which the nozzle is attached, whereby the nozzle is held forward with a pull on the hose and is thereby rendered effective when introduced in situations where the firemen would be unable to hold it, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 21st day of April, A. D. 1905.

HERMAN F. NEWMAN. [L. S.]

Witnesses:

CHESTER BRADFORD.

JAMES A. WALSH.