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DEVICE FOR SUPPLYING FIREMEN WITH FRESH AIR.

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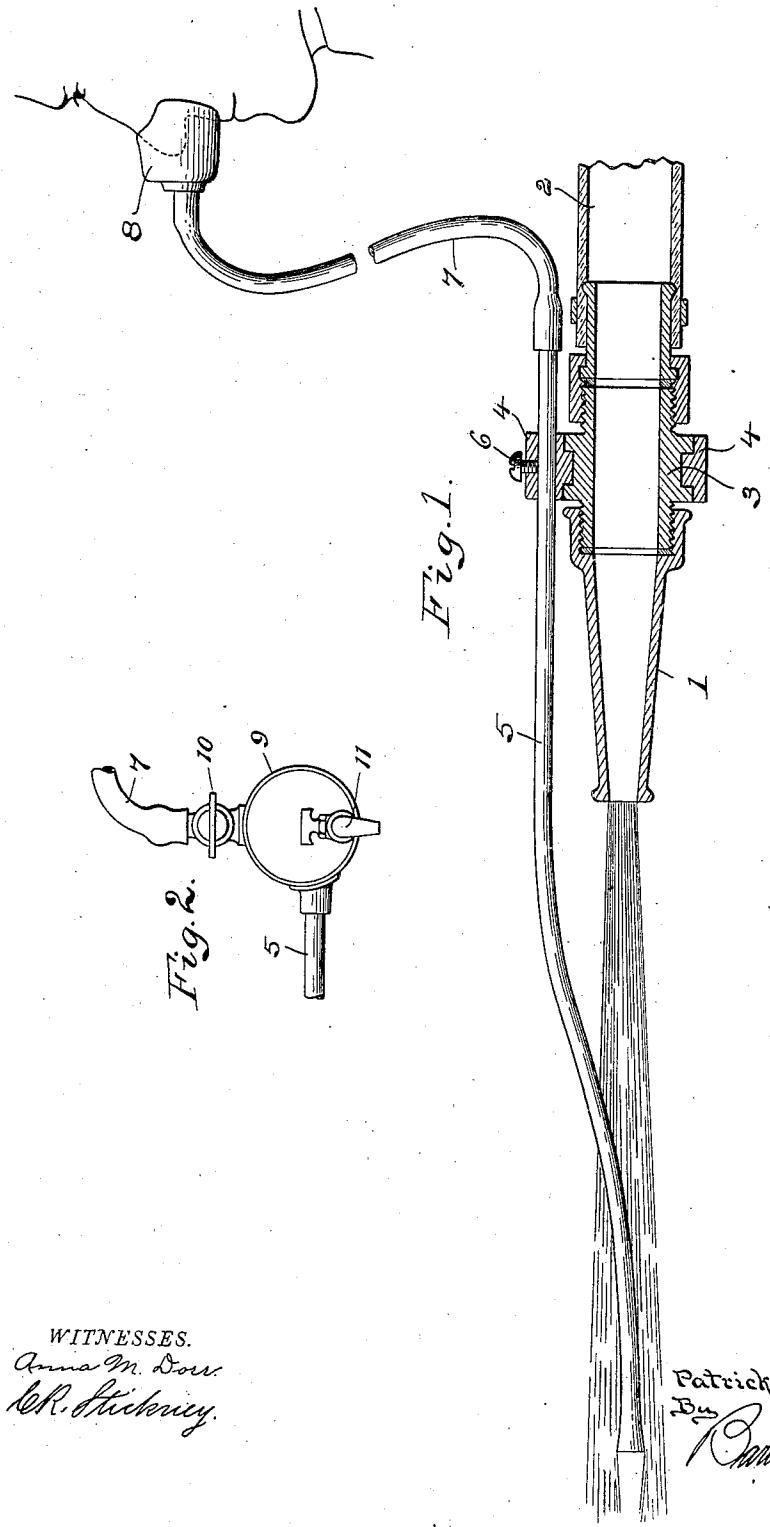


Fig. 1.

Fig. 2.

WITNESSES.

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DEVICE FOR SUPPLYING FIREMEN WITH FRESH AIR.

No. 898,524. Specification of Letters Patent. Patented Sept. 15, 1908.

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To all whom it may concern:

Be it known that I, PATRICK H. SULLIVAN, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Devices for Supplying Firemen with Fresh Air, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of this invention is to provide firemen with pure air for breathing when fighting a fire in an atmosphere filled with dense smoke or deadly fumes or gases and the invention is especially designed for the benefit of the pipeman at the hose nozzle whose life is most often placed in jeopardy as his duty compels him to enter the building or rooms in which the fire breaks out.

My invention is based upon the discovery I have made that the stream of water discharged from the nozzle may be used as the source of a supply of breathable air and this discovery I have utilized to carry out my invention in the form of an attachment to a nozzle as more fully described hereinafter and shown in the accompanying drawings in which:—

Figure 1 is a sectional elevation of a hose nozzle provided with my attachment in its simplest form. Fig. 2 is a modified detail.

In the drawings, 1 represents an ordinary nozzle for supplying a stream of water from a hose 2 attached thereto and which is supposed to be supplied with water under suitable pressure from a fire engine or other source of supply. Intermediate between the hose and nozzle I insert a coupling member 3 bearing a loose collar 4 which serves as a support or carrier for a pipe 5. This pipe projects forwardly and with a gradual bend enters into the stream and extends some distance therein. I preferably secure this pipe longitudinally adjustable to the collar, holding it in its adjusted position by means of a set screw 6 or otherwise. To the rear end of the pipe I secure a breathing tube 7 which terminates in a cup 8 which tightly fits around the nose or mouth and nose. It is preferably provided with suitable means (not shown) to fasten it to the head. In practice, a pipeman equipped with this device may fearlessly enter a room filled with the most suffocating fumes or gases and sustain his breathing wholly from the air drawn through this tube and the air will be fresh and pure and free from all contamination with the surrounding fumes or gases.

In explaining the operation of my device I believe that the tip of the pipe 5 that is the portion which projects into the stream acts as a spreader to the onrushing stream of water and tends to form a vacuum in front of it which is constantly destroyed by air entrained by the stream of water and rushing into the vacuum so that even if a slight suction remains it is not strong enough to prevent a man by vigorously breathing from drawing the air from it and if there is more than one man at the nozzle, the tube 5 may be provided at the rear end with several connections.

In the modification shown in Fig. 2 I have shown an air chamber 9 attached to the tube 5 to which one or more flexible tubes may be attached each controlled by a suitable stop cock 10 and the air chamber may also be provided with a drainage cock 11 to free it of any water which might get into it.

The object of the loose collar 4 is to allow the hose and nozzle to twist freely without displacing the device.

The drawings are merely intended to illustrate the underlying principle of my invention but its application to the various forms of nozzles in practical use will now be readily understood.

What I claim as my invention is:—

1. In a device for supplying the pipeman with fresh air for breathing, the combination with a water supply nozzle, of an air supply tube carried by the nozzle and extending forwardly therefrom to one side of the path of the stream and thence converging gradually towards and into the stream, the front end of said pipe being adapted to be wholly submerged within the stream and forming the inlet for the air into the tube.

2. In a device for supplying the pipemen with fresh air, the combination with a nozzle and hose for supplying it with water, of an intermediate coupling member bearing a loose collar, a pipe carried by the collar and projecting with its forward end into the stream from the nozzle and a breathing tube connected to the rear end of the pipe.

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

PATRICK H. SULLIVAN.

Witnesses:

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