No. 673,756.

Patented May 7, 1901.

T. F. BURKE.

NOZZLE.

(No Model.)

(Application filed Sept. 7, 1900.)

2 Sheets—Sheet 1.

Fig. 1.

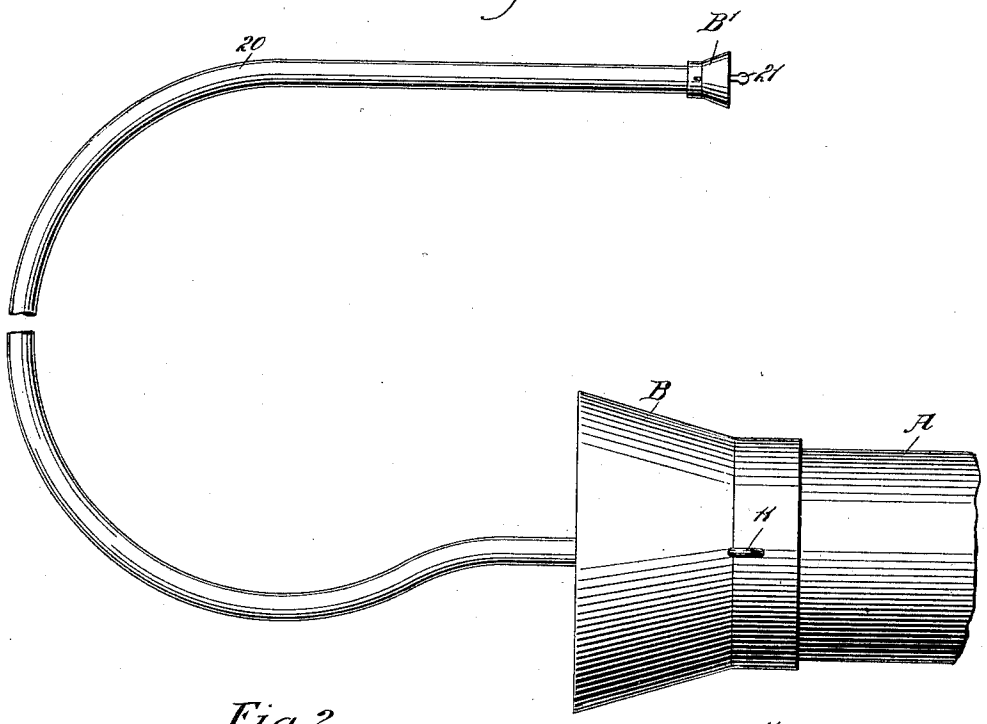


Fig. 2.

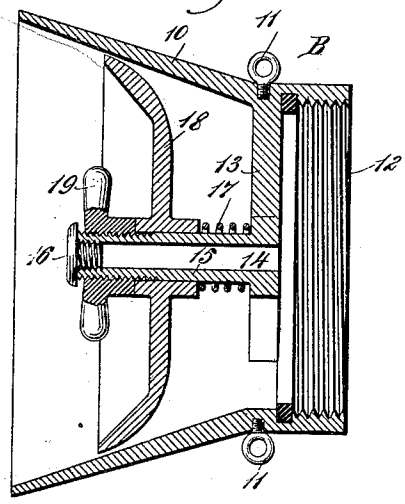
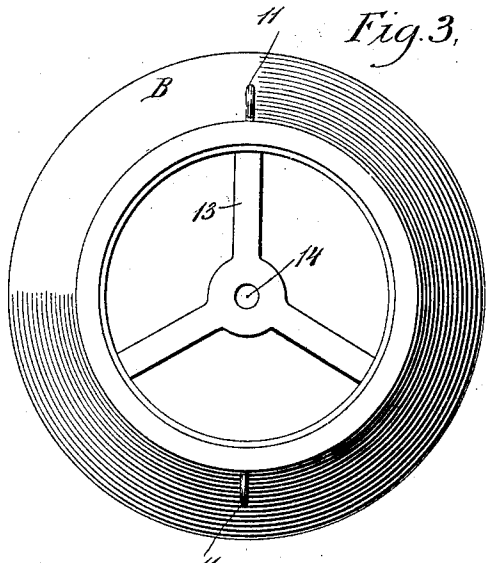


Fig. 3.



WITNESSES:

Edward Thorpe

Alfred Ackers

Fig. 4.



INVENTOR

Thomas F. Burke

BY Munn & Co.

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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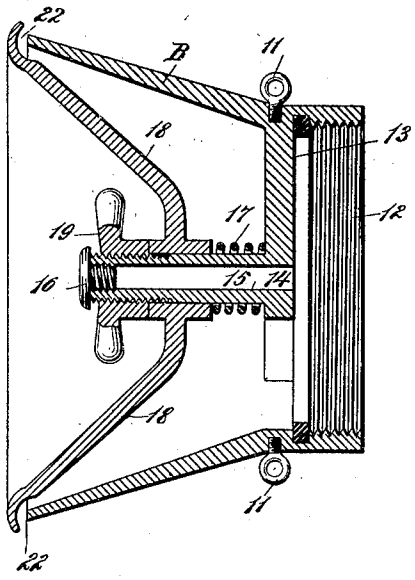
T. F. BURKE.

NOZZLE.

(Application filed Sept. 7, 1900.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 5,



WITNESSES:

Edward Thorpe.

J. Redlicker.

INVENTOR

Thomas F. Burke.

BY Munn & Co

ATTORNEYS.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS F. BURKE, OF NEW YORK, N. Y.

NOZZLE.

SPECIFICATION forming part of Letters Patent No. 673,756, dated May 7, 1901.

Application filed September 7, 1900. Serial No. 29,306. (No model.)

To all whom it may concern:

Be it known that I, THOMAS F. BURKE, a citizen of the United States, and a resident of the city of New York, (Riverdale,) borough of Bronx, in the county of New York and State of New York, have invented a new and Improved Nozzle, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide a nozzle capable of being applied to any hose, and especially adapted to be carried by a fireman or other person entering a burning building, the nozzle being so constructed that when the hose to which it is attached is connected with the force-pump of an engine and air is supplied by said pump to such nozzle the nozzle will distribute the air in the apartment entered by the fireman and will force the smoke away from the person entering the apartment, at the same time supplying a liberal amount of air to the person.

Another feature of the invention is to so construct the nozzle that water may be delivered therefrom when necessary and also whereby a tube may be attached to the nozzle and a smaller and duplicate nozzle be employed, having a grip-section to be held between the teeth of the fireman or operator, enabling the auxiliary nozzle to be held firmly at the mouth and nostrils of the operator.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improved device. Fig. 2 is a transverse section through the device. Fig. 3 is a bottom plan view of the body of the device. Fig. 4 is a detail view of a section of the device adapted to be held between the teeth of the person using it, and Fig. 5 is a section through a slightly-modified form of the device arranged for distributing powder or water into a ship's hold or into any apartment containing goods destructible by fire or by water.

A represents a section of hose which is adapted for attachment to a pump capable of supplying air or water, and B represents a main nozzle. This nozzle is preferably made of metal, and its delivery-section 10 is flared in an outward direction, and preferably the nozzle B is provided with eyes 11, through which straps may be passed for the purpose of suspending the nozzle from the body of the user, so as to leave the hands free. The nozzle is provided at its inner end with an interior thread 12, whereby it may be attached readily to the ordinary coupling of a hose, and just beyond this thread 12 a spider 13 is formed in the nozzle, as is shown in Figs. 2, 3, and 5. This spider is provided with a central opening 14, and around this central opening a tubular post 15 is located, which extends within a certain distance of the delivery end of the nozzle, the chamber in the post 15 being normally closed by a suitable cap 16. A spring 17 surrounds the post 15 at its rear portion, the said spring having bearing against the front surface of the spider 13 and against a disk 18, the outer face of which disk is concaved, and this disk at its marginal portion is made to approach the inner surface of the body portion 10 of the nozzle and may be adjusted to and from said surface by means of a thumb-nut 19, secured upon the exterior of the outer end of the post 15, as is particularly shown in Figs. 2 and 5. Thus it will be observed that the nozzle B may be suspended from the body of a fireman or other person and the air supplied to the nozzle will be forced out from the nozzle between the disk 18 and the flaring surface 10 of the body of the nozzle, thus forcing the smoke away from a person entering the apartment and supplying air to such person.

If the apartment entered is so filled with smoke that the air supplied through the main nozzle is not sufficient, an auxiliary nozzle B′ is provided, constructed in similar manner to the main nozzle B. This auxiliary nozzle B′ is much smaller than the main nozzle and is attached to a tube 20, which tube is connected with the chamber in the post 15, the cap 16 having been removed. The auxiliary nozzle B′ is provided with a section 21 of wood, rubber, or any suitable material, and this section, which is adapted to be held between the teeth of the operator, is screwed into that portion of the auxiliary nozzle B′ at which the cap 16 of the main nozzle is usu-

ally located, so that a fireman, for example, may hold the auxiliary nozzle close to the nostrils and at the mouth by simply holding the section 21 between his teeth, and under this arrangement air is supplied directly to the breathing organs.

In Fig. 5 I have shown a slight deviation in the construction of the nozzle as illustrated in Fig. 2. This deviation consists in the shape of the disk 18, the disk being made more cupped than shown in Fig. 2, and the modified form of the disk is made to extend out beyond and over the outlet of the body portion 10 of the nozzle, a suitable space 22 being provided between the outwardly-extending portion of the disk and the outlet end of the nozzle, so that when water is supplied to this form of nozzle it will be delivered from the nozzle in the form of a circular spray. This nozzle is particularly adapted to be introduced through an opening into a ship's hold, for example, or an apartment which cannot be conveniently reached by firemen, and it is evident that a powder may be forced through the nozzle instead of water and the material threatened by fire may be thereby saved from damage caused by the use of water, while if water is required it may be distributed to great advantage.

If desired, upon removing the plug 16 a whistle may be attached for the purpose of signaling to the outside of a building.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a nozzle provided with an interior spider-support at its inner end, a tubular post carried by said support, and a cupped disk adjustable upon said tubular post, of a tube communicating with the interior of said post, and an auxiliary nozzle carried by the tube, which auxiliary nozzle is provided with a section adapted to be held between the teeth of the person using the nozzle, as described.

2. The combination of a tube, a nozzle carried thereby, and a mouthpiece fastened to the nozzle and adapted to be held in the mouth of a person to hold the nozzle in proximity to the breathing organs.

3. The combination of a nozzle having tapered inner walls, a spider arranged in the nozzle, a hollow post carried by the spider centrally of the nozzle, a disk mounted on the post within the nozzle, a spring pressing the disk in one direction, and a nut fitted on the hollow post to hold the disk in opposition to the spring.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS F. BURKE.

Witnesses:
WM. J. RILEY,
DAVID E. POWERS.