

G. NEALLY.
SMOKE-EXCLUDING MASKS.

No. 195,300.

Patented Sept. 18, 1877.

Fig. 1.

Fig. 2.

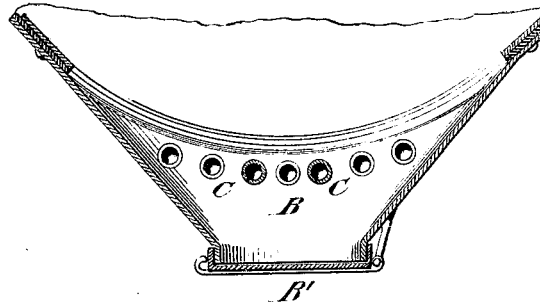
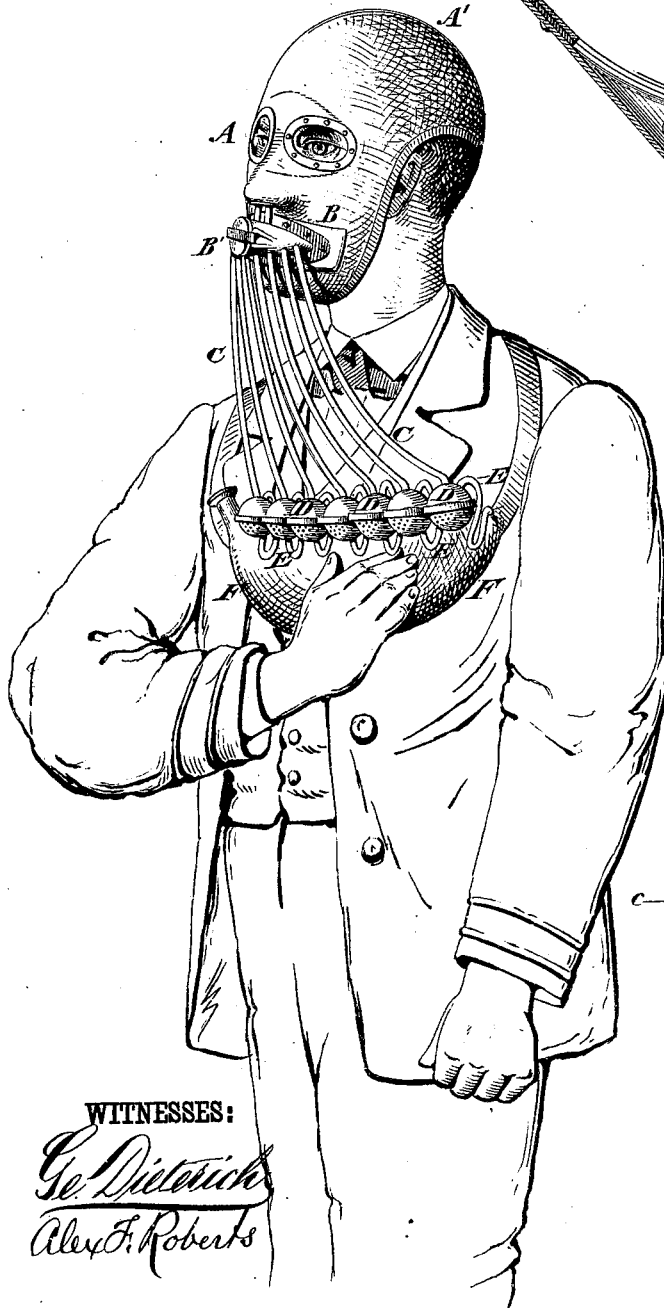


Fig. 3.

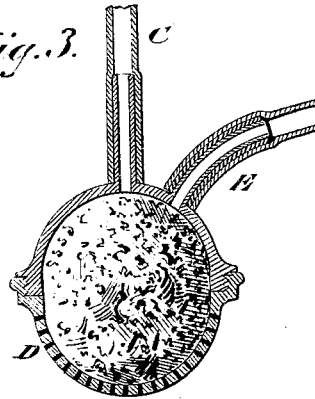
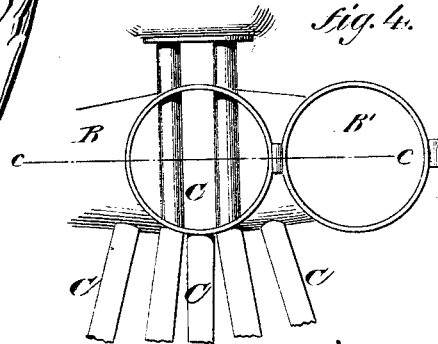


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE NEALLY, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND CHARLES W. BLOOMINGDALE, OF SAME PLACE.

IMPROVEMENT IN SMOKE-EXCLUDING MASKS.

Specification forming part of Letters Patent No. 195,300, dated September 18, 1877; application filed July 9, 1877.

To all whom it may concern:

Be it known that I, GEORGE NEALLY, of the city, county, and State of New York, have invented a new and Improved Smoke-Excluding Mask, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a perspective view of my improved smoke-excluding mask, shown as applied to the head. Fig. 2 is a detail horizontal section of the mouth-piece of the mask; Fig. 3, a vertical central section of the sponge-receptacle on enlarged scale; and Fig. 4, a detail front view of the mouth-piece opened to admit speaking.

Similar letters of reference indicate corresponding parts.

A great many persons perish by being suffocated by the smoke and gases in attempting to escape from burning buildings, while also a large quantity of valuable property is destroyed by the inability of the firemen to determine the location of a fire on account of the smoke, so that it gains such headway that it is impossible to check it before a great deal of damage has been occasioned by throwing the water in localities where the fire does not really exist.

In order to obviate the effect of smoke and to overcome the difficulties mentioned, I have provided for firemen, and others that are engaged in occupations in which smoke or other irritating vapors or dust has to be breathed, an improved mask, that admits any one to remain or pass through the densest smoke without the least feeling of discomfort. This apparatus may also be used in hotels, factories, steamboats, &c., as a smoke-excluding device and fire-escape.

The invention consists of a novel combined mask and cap, of suitable elastic material, that fits tightly to the head, and whose mouth and nose are connected, by a mouth-piece and one or more tubes with suitable filters containing moistening-sponges, which filters are again connected, by one or more tubes, with an elastic water-receptacle strapped around the neck or body, so as to resupply from time to time the filters with the required degree of moisture by a slight pressure on the recep-

tacle, all as hereinafter more fully described and claimed.

Referring to the drawing, A represents a mask, which is extended by a cap-piece, A', over the crown of the head, and made of rubber, canvas, leather, or other suitable material of elastic nature, which may be readily adjusted to any sized head, so as to fit in air-tight manner over the head and prevent any entrance of smoke. The eyes of the mask are provided with glasses to enable the wearer to see, and the mouth is provided with a mouth-piece, B, of tapering shape, having a hinged lid, B', which may be opened, so that the wearer may speak through the mouth-piece. The mask protects, when the lid of the mouth-piece is closed, the eyes and lungs against smoke or any other irritating vapors or gases, while the air is supplied by one or more rubber tubes, C, which are connected either with a single or a series of air-filters, D, that are again connected by one or more rubber tubes, E, with a water-receptacle, F, that is strapped around the neck or body, as desired. One or more of the mouth-piece and filter-connecting tubes C pass also into the nose, so as to supply the same with purified air and facilitate breathing.

The filter or filters D are perforated and filled with sponge or other porous material, that is saturated from the water-receptacle or bag F by pressing thereon, so that the air, in passing through the filters, is purified, and the smoke and other obnoxious and irritating vapors excluded by the moistened sponge.

When the sponges in the filters get dry, a light pressure of the hand on the water-bag, or of the arm, when the bag is hung sidewise, is sufficient to refill the sponges with moisture, so as to make them efficient for use.

As, by the use of this apparatus, pure air is supplied to the lungs, it will enable any person to remain in the smoke with perfect safety.

The apparatus is so constructed as to be carried in the breast or other large pocket, taking up but a small space, and being quickly put on in case of danger, or when it is necessary to go through a building full of smoke. The origin of a fire may thus be ascertained,

and any danger of suffocation from smoke be avoided, so that the device forms an important protection for firemen and others.

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

1. The combination of elastic mask A A', tubes C, perforated air-filters D, containing moistened sponges or their equivalents, tubes

E, and water-receptacle F, all constructed and arranged as and for the purpose specified.

2. The hinged lip B' of the mouth-piece of mask, as and for the purpose set forth.

GEORGE NEALLY.

Witnesses:

PAUL GOEPEL,
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