(No Model.)

J. W. ELLIOT.

FIRE PROOF GARMENT.

No. 334,360. Patented Jan. 12, 1886.

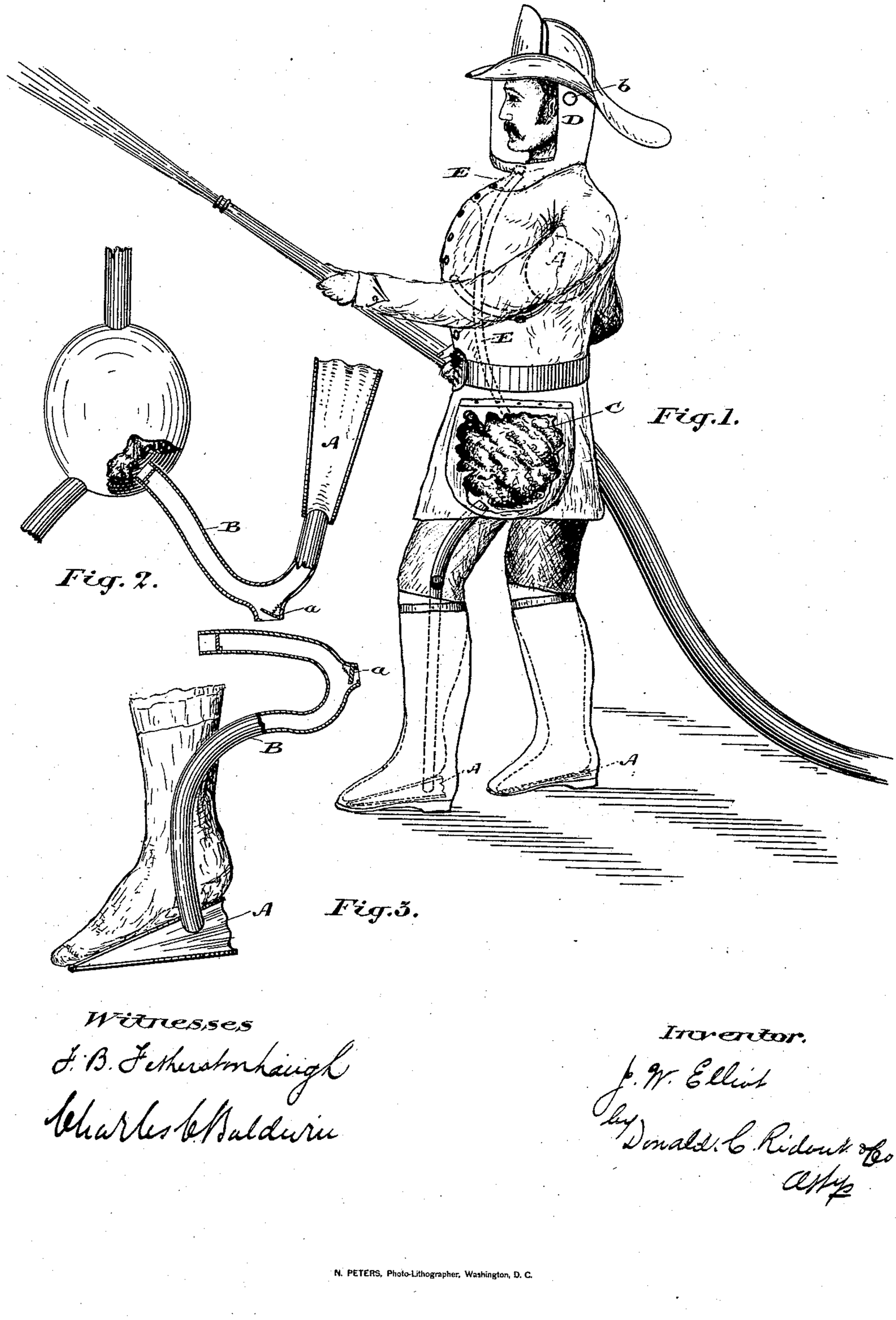

Fig. 1.

Fig. 2.

Fig. 3.

Witnesses
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FIRE-PROOF GARMENT.

SPECIFICATION forming part of Letters Patent No. 334,360, dated January 12, 1886.

Application filed July 3, 1885. Serial No. 170,659. (No model.)

To all whom it may concern:

Be it known that I, JOHN WHEELER ELLIOT, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, surgeon-dentist, have invented an Improved Smoke-Armor, of which the following is a specification.

The object of the invention is to design a light fire-armor or protecting-dress, more especially adapted for firemen and others compelled by their occupation to enter buildings filled with smoke; and it consists, essentially, of a light armor or dress, preferably made of asbestus or other fire-proof material, and preferably arranged to incase the entire body and head, suitable bellows or pumps being provided in connection with the dress, so that the wearer of it is enabled to pump a constant stream of air through a filterer into the helmet portion of the dress, by which arrangement the wearer is enabled to enter a house filled with smoke, and at the same time supply himself with fresh air without the assistance of any other party.

Figure 1 represents the figure of a fireman incased in my improved smoke-armor. Fig. 2 represents a view of a bellows, to be placed below the arms of the wearer, and a pocket containing the filterer. Fig. 3 is a section showing the bellows located in the bottom of the sock to be worn by the wearer of the armor.

Although my invention is specially designed for the use of firemen and others compelled by their occupation to enter buildings full of smoke or noxious gases, I wish to state before describing in detail the exact construction and operation of my apparatus that it will also be found serviceable for medical treatment by inhalation, as the party to be treated may have his head protected by the helmet, and by the use of the bellows, as hereinafter described, force through a filterer saturated with the medical compound the air to be inhaled.

In the figure represented in the drawings I show the bellows A, placed below both arms and beneath both feet, the bellows for the feet being preferably placed upon the foot of the stocking, which is intended to form a portion of the armor or protecting-dress.

I claim nothing peculiar in the form of bellows used; but instead of placing the valve in the body of the bellows, I place a valve, *a*, in the tube B, which tube is intended to connect the bellows to the filterer formed by the pocket C. The tube B and the valve *a* are the same in character, whether employed for connecting the bellows A to the pocket C, placed in the body of the garment, or whether they are employed to connect the bellows A, situated in the bottom of the foot and leading to the pocket C on the side or tail of the garment. This pocket C is filled with some spongy substance, preferably saturated with water and charcoal, for the purpose of purifying the air in passing through the filterer before it reaches the helmet D through the tube E. The helmet D has a mica face formed in it, which not only forms a window, through which the wearer can readily see, but it also holds the material of the protecting-helmet away from the face of the wearer, so that a good supply of air shall always be ready for use. A valve, *b*, is placed in the helmet for the escape of the air, and as the air is supplied to the helmet by a bellows-pressure a constant stream of pure air will be forced through the helmet, escaping through the valve, as stated.

As the drawings indicate, each pair of bellows is provided with a separate tube, B, which tube is provided with a separate valve, *a*, so that each pair of bellows may be worked independent of the others, and the tube E, which connects the pocket C, situated at the tail of the garment, is independent of the tube E, which connects the pocket in the body of the garment to the helmet D.

While I believe that a spongy substance saturated with charcoal and water will be found the best purifier of the air to be supplied to the wearer of my dress, I do not confine myself to any particular disinfectant, the only object being to insure that the air supplied to the wearer shall be pure.

As stated in the commencement of this specification, my system of forcing air through a filterer by means of bellows may be used for the purpose of treatment by inhalation. In such case the filterer will be saturated with the particular medicants required to impregnate the air intended to be inhaled, and as the helmet protects the head from the outer atmosphere a consumptive or other patient

requiring air of a higher temperature than the outer atmosphere will be supplied with the medicated air required at a higher temperature than the outside atmosphere.

What I claim as my invention is—

1. An improved dress of fire-proof material provided with bellows beneath the feet, a pocket in said dress containing filtering material, a helmet, and a tube or tubes connecting the bellows and pocket with the helmet, substantially as described.

2. An improved dress of fire-proof material provided with a bellows forming a part thereof, a pocket containing filtering material, and also forming part of said dress, and a tube connecting said bellows and pocket with the helmet of the dress, substantially as and for the purposes specified.

3. An improved dress of fire-proof material provided with bellows A beneath the feet, and forming part of said dress, the pocket C, placed in the body of said dress and filled with spongy filtering material, the tubes B, connecting said bellows with said pocket, and the tubes E, connecting said pocket with the helmet D of the dress, substantially as and for the purpose specified.

Toronto, June 29, 1885.

J. W. ELLIOT.

In presence of—

CHARLES C. BALDWIN,

FREDERIC BARNARD FETHERSTONHAUGH.