(No Model.)

C. C. ELLIS.

INHALER.

No. 330,970. Patented Nov. 24, 1885.

Fig. 1.

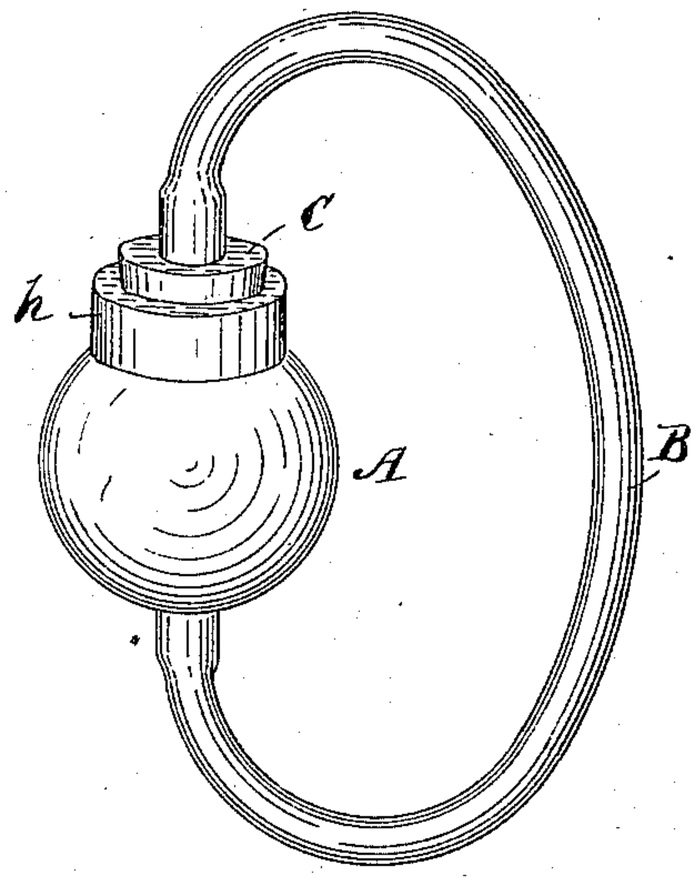
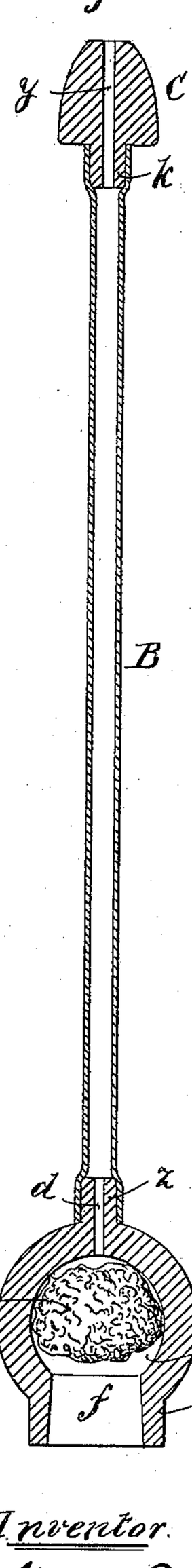


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

CLIFFORD C. ELLIS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO CHARLES ALBERT SHAW, OF SAME PLACE.

INHALER.

SPECIFICATION forming part of Letters Patent No. 330,970, dated November 24, 1885.

Application filed May 14, 1885. Serial No. 165,498. (No model.)

To all whom it may concern:

Be it known that I, CLIFFORD C. ELLIS, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Inhalers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an isometrical perspective view representing my improved inhaler closed, and Fig. 2 a vertical longitudinal section representing it open and in position for use.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of inhalers which are employed for inhaling medicated vapors for the alleviation or cure of headache, catarrh, bronchial diseases, &c.; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the body, B the tube, and C the nozzle, of the inhaler. The body is preferably round in form and composed of wood; but it may be made of glass, porcelain, or any other suitable materials, and also of any suitable shape to serve the purposes for which it is designed. A chamber, *x*, is formed in the body A, for containing a sponge, *m*, and opening through said body into said chamber there is a mouth or induction-flue, *f*, and also an eduction-flue, *d*. The tube B is composed of rubber or some other suitable flexible material, and is attached to the body A by means of a nipple, *z*, which projects from one side of said body, the nipple being inserted in one end of said tube, and the flue *d* passing through said nipple, which is preferably disposed opposite the flue *f*. The nozzle C is preferably composed of wood or rubber, and is provided with a nipple, *k*, and flue or hole *y*, the hole passing entirely through the body of the nozzle and also through its nipple, the nozzle being attached to the tube B by inserting its nipple in one end of said tube, as best seen in Fig. 1.

The chamber *x* is enlarged, or made of greater diameter than the mouth or flue *f*, through which the sponge *m* is inserted, for the purpose of holding said sponge in position or preventing it from falling out of the body A, although I do not confine myself to constructing it in this manner, as it may be made of the same diameter or any suitable size or form to retain the sponge or other porous absorbent which may be used instead of the sponge, such as cotton, wool, cloth, &c.

The nozzle C is employed as a stopper for closing the mouth or induction-flue *f*, as shown in Fig. 1, when the inhaler is not in use, and also as a nozzle, its tip or point being inserted or partially inserted in one of the nostrils of the nose of the patient, or placed over the nostril when the inhaler is used, thereby serving two important purposes.

An annular flange, *h*, is formed on the body A, around the flue *f*, to aid in supporting the nozzle C and keeping it in the flue or mouth *f* when said nozzle is used for a stopper, as shown in Fig. 1; but said flange may be omitted, if preferred.

A screw-cap may be combined with the nozzle and the flange *h* threaded to receive said cap, if desired, in order to more permanently and effectually close the inhaler; or a portion of the nozzle may be exteriorly threaded and screwed into the flue *f*, said flue being correspondingly threaded to receive the nozzle.

Instead of the nipple *k* for attaching the tube to the nozzle C, any other suitable means may be employed. Any suitable means may likewise be employed for attaching said tube to the body A.

In the use of my improvement the inhaler is first unstopped or opened, as shown in Fig. 2, and the sponge *m* inserted, after which a suitable quantity of the liquid from which the medicated vapor is to be formed is poured into the body of the inhaler through the mouth or flue *f* onto the sponge, by which it is ab-

sorbed. The point or tip of the nozzle C is then inserted or partially inserted in one of the nostrils of the nose or placed properly over the same and the air inhaled through said nostril, the other nostril being preferably closed. As the air is inhaled, as described, it is drawn into the body of the inhaler through the flue *f*, where it is brought into contact with the saturated sponge *m*, and becomes charged with the medicated vapor, after which it passes through the flue *d*, tube B, and flue *y* into the head and lungs in a manner which will be readily obvious without a more explicit description.

The nozzle C may be formed integral with the tube B, if desired, although I deem it preferable to make it separable, as described. It may also be employed as a mouth-piece when the inhaler is used for bronchial or lung diseases, the vapor being then inhaled through the mouth instead of the nose. The nozzle may also be detached from the tube and inserted in the flue or mouth *f*, the outer or free end of the tube being inserted in the nostril or mouth of the patient, as the case may be, when the inhaler is in use, and passed on over or attached to the nipple *k* when it is not in use, to completely close the chamber *x;* but when the parts are arranged as last described the air necessarily has to pass into said chamber through the flue *y*, which is smaller than the flue *f*, and will not admit it as freely as is sometimes desirable, and for that reason the arrangement of parts shown in Fig. 2 is deemed preferable.

Having thus explained my invention, what I claim is—

In an inhaler, the combination of the following instrumentalities, to wit: a body having a chamber adapted to hold a sponge or other absorbent material, and provided with an induction and an eduction flue, a nozzle or mouth-piece provided with a flue and adapted to serve as a stopper for or to close the induction flue or mouth of the body, and a flexible tube connecting said nozzle and body, through which tube the air passes when it is inhaled, substantially as described.

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Witnesses:
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