

(No Model.)

C. A. SIMPSON.  
INHALER.

No. 454,142.

Patented June 16, 1891.

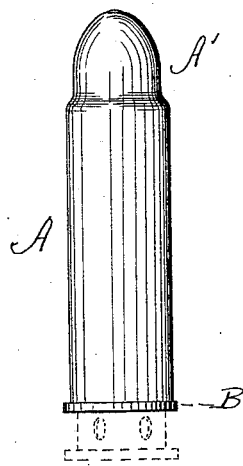


Fig. 1

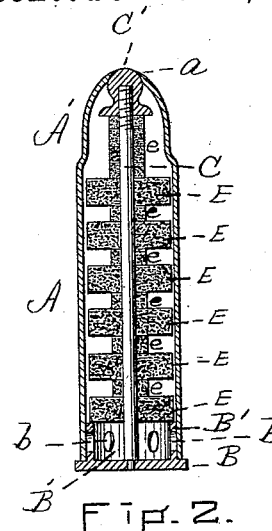


Fig. 2.

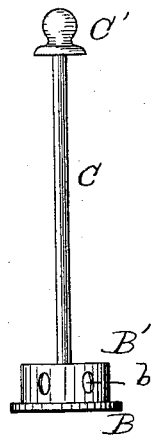


Fig. 3.

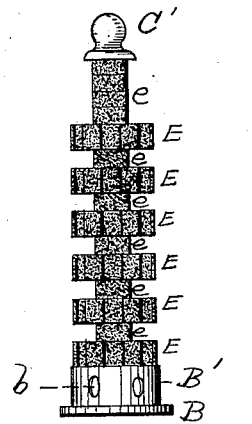


Fig. 4.

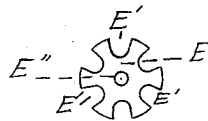


Fig. 5.



Fig. 6.

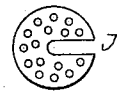


Fig. 7.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## INHALER.

SPECIFICATION forming part of Letters Patent No. 454,142, dated June 16, 1891.

Application filed April 6, 1891. Serial No. 387,720. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. SIMPSON, of Saxonville, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Inhalers, of which the following is a specification.

This invention relates to that class of inhalers known as "pocket" or "portable" inhalers, and adapted for the inhalation of medicinal inhalants, pungents, perfumes, &c.

The nature of the invention is fully described below and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of my improved pocket-inhaler. Fig. 2 is a vertical section of the same. Fig. 3 is an elevation of the charger or the spindle on which the disks of absorbent material are to be placed. Fig. 4 is a similar elevation of the charger with the disks and the washers separating them in position thereon. Fig. 5 is a plan view of one of the disks removed. Fig. 6 is a similar view of one of the washers removed. Fig. 7 is a plan view of a disk, showing a modification.

A represents a case made of any suitable material, such as glass, metal, celluloid, or rubber. This case is of size to be carried conveniently in the pocket, and is preferably cylindrical in shape. Its lower end is open, and its upper end extends into a conoid shape at A', which is provided at its end or tip with an orifice *a*. The lower end of the case A rests on the part B, which forms the circular base of the charger. This base has fixed to it or integral with it a vertical flange or ring B', perforated at intervals at *b*. The case A fits normally over this flange B' and against the base B. Extending upward centrally and vertically from this base is the spindle C, to the upper end of which is screwed a knob C' of size and shape to fit under and close the orifice *a* when the case A is upon the base B, as shown in Fig. 2. Placed centrally on this spindle C are disks E, of suitable absorbent material—such as felt or asbestos—charged or impregnated with any desired inhalant. These disks are separated from each other by washers *e*, and when a sufficient number of disks and washers are placed around the spindle the knob C' is screwed down and holds them in place. Furthermore, the absorbent disks are provided with spaces or re-

cesses E' (see Fig. 5) in their peripheries, the shape not being essential, by which the free passage of air is allowed through them or by them, so that access may be had to every disk.

In practice, when the device is not in use, the parts are in the position shown in the drawings, and as the bottom of the case A rests on the base B, and the knob C' fits under the orifice *a*, it is practically air-tight and no odor can escape. When it is desired to use the inhaler, the base B is drawn down from the case A until the perforations *b* appear, thus withdrawing the knob C' from the orifice *a*, when by applying the lips or nostrils to the orifice *a* a free passage of air is had through the holes *b*, spaces or recesses E', and orifice *a*, and the air is received impregnated by every disk.

The separated disks E serve to thoroughly impregnate the air drawn through them with any volatile substance with which they may be charged, and also to free the air inhaled from dust and floating particles. They also serve to regulate the amount of vapor inhaled, for by placing the inhalant in one or more of the disks the amount of vapor inhaled will depend on the number of disks impregnated. By means of this construction two or more inhalants may be used and their vapors combined by drawing air through the inhaler. For example, one disk may be charged with a disinfectant and another with a perfume, or a variety of inhalants or perfumes may be used and kept apart by the washers until the device is used, when they are combined and received by the user.

I do not limit myself to the exact means shown of attaching the knob C' to the spindle, nor to any particular material to be used in constructing the disks or washers; nor do I confine myself to any particular shape of indentations or cuts or passages in said washers for the passage of the impregnated air. These passages or openings may be of any suitable shape and may be cut in the peripheries of the disks, as shown in Fig. 5, or may be in the form of perforations, as shown in Fig. 7. The disks may be placed on the spindle C by means of central openings E'', Fig. 5, or by a passage from the periphery, as shown at J, Fig. 7.

As will readily be seen, the closed ends of

the inhaler effectually prevent the admission of dirt or dust, and that without the aid of stoppers or an extra case, while evaporation or odor from the case is impossible, as both ends are closed and opened simultaneously. Its portability and convenience for carrying in the pocket are apparent.

The washers are preferably of non-absorbent material the better to separate the disks and their contents.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an inhaler, the combination, with the case A, of the spindle C and a series of disks E, of absorbent material, each of said disks being separate from and independent of the others and supported by said spindle, substantially as set forth.

2. In an inhaler, the combination, with the case A, of the spindle C and a series of disks E,

said disks being separated from each other by washers *e* and said disks and washers being supported by said spindle, substantially as described.

3. In an inhaler, the combination, with the case A, of the spindle C and a series of disks E, of absorbent material, said disks being separated from each other by washers *e* and said disks and washers being supported by said spindle and held in place by the knob C', substantially as set forth.

4. The combination of the case A, open at its lower end and provided with the orifice *a* at its upper end, and the charger comprising the plate B, provided with the perforated ring or flange B', the spindle C, and knob C', substantially as described.

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Witnesses:

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