J. H. YATES & C. R. TREAT.

Nasal-Inhaler.

No. 167,209. Patented Aug. 31, 1875.

Fig. 1.

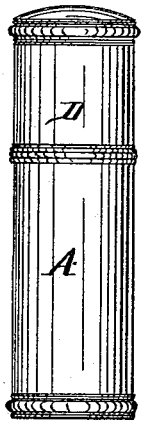


Fig. 2.

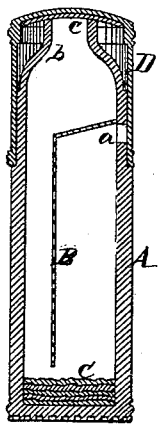
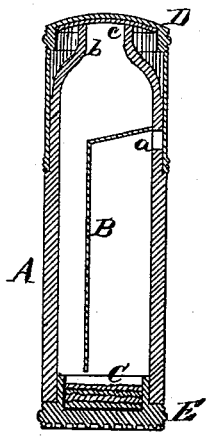


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN H. YATES AND CHARLES R. TREAT, OF SHARON, WISCONSIN.

IMPROVEMENT IN NASAL INHALERS.

Specification forming part of Letters Patent No. **167,209**, dated August 31, 1875; application filed January 19, 1875.

To all whom it may concern:

Be it known that we, JOHN H. YATES and CHARLES R. TREAT, both of Sharon, in the county of Walworth and State of Wisconsin, have invented certain Improvements in Nasal Inhalers, of which the following is a specification:

This invention is designed to furnish a neat, convenient, compact, and durable pocket nasal inhaler, and to avoid the inconvenience and multiplicity of manipulations usually required to change an inhaler from its closed condition in which it may be carried to its opened condition for use, and vice versa.

In our inhaler these objects are accomplished by partially dividing the space inside of the tube or shell of the inhaler by a partition, and combining with said tube and partition a lateral opening through the side of the tube or shell, and a cap by the removal or replacement of which said lateral opening is opened to admit air to the inhalent, or closed to prevent evaporation, as hereinafter more fully described; and these objects are further aided by the construction of the parts, as hereinafter described, by which the said cap is made not only to close said lateral opening, but also the opening to which the nostril is to be applied, substantially as hereinafter more fully set forth.

Figure 1 is a side elevation of our inhaler closed and ready to be carried in the pocket. Fig. 2 is a vertical central section of the same on a plane transverse to the partition above mentioned. Fig. 3 is a similar section, showing the addition of a removable bottom or cup to contain the bibulous paper or other substance used to absorb the inhalent and to facilitate its removal and change whenever it may be desirable to change the inhalent.

A is the outside shell of our inhaler, which shell may be made of hard rubber or of any other suitable material, hard rubber being preferred on account of the superior accuracy and durability with which the parts may be fitted, and also on account of the neatness with which it may be finished, its great strength, and its excellent wearing qualities. B is a partition, which may be made of the same or any other appropriate material which will not be affected by nor affect the inhalent. This partition should be fitted closely to the shell A, and should be extended down nearly to the bibulous paper C or other absorbent in the bottom of the inhaler. It should also be joined at the top to one side of the case A, and an opening, *a*, is made through that side of the case to allow the air to enter. D is a cap by which the inhaler is closed when not in use. This cap is preferably made of hard rubber, partly because of its adaptability to form a permanently-tight joint, and should be so fitted as to hermetically close the opening *a* when in place. The top of the case A terminates in a nozzle, *b*, suitable to apply to the nostril. *c* is a piece of soft rubber or other suitable packing placed in the top of the cap D, and when said cap is applied to close the inhaler said packing *c* comes in contact with the top of the nozzle *b*, and hermetically closes it; and, in addition to this provision, the cap D is made to fit hermetically all around the case A, and thus provide additional security against any possible leakage between the nozzle and the packing in the top of the case.

If preferred, a conically-fitted stopper attached to the cap and removable with it may be substituted for the packing *c*.

E is a cup, shown in Fig. 3, which cup may be hermetically but removably fitted into the bottom of the case A, as shown, to contain the bibulous paper or other absorbent, and facilitate its removal and the introduction of a fresh absorbent whenever it may be desirable to change the inhalent.

Common blotting or filtering paper may generally be used for the absorbent.

A pocket nasal inhaler constructed as we have described, besides being compact, efficient, and neat in its appearance, has the still further and important advantage that it may be completely and hermetically closed, both at the nozzle and at the opening for the admission of air, by simply putting the cap D in place; and, by removing the cap, both apertures are at once opened, and the instrument is ready for use.

Even without the provision herein described for closing the nozzle, this inhaler would possess considerable advantage over those which have preceded it.

We claim as our invention—

1. The combination of the case A, partition

B, lateral aperture *a* in the side of the single outer tube near its open end, and cap D, substantially as hereinbefore set forth.

2. The combination of the case A, partition B, lateral aperture *a*, cap D, packing *c* or its equivalent, and nozzle *b*, whereby both the aperture *a* and the nozzle *b* are opened and closed by the simple removal and replacement of the cap D, substantially as hereinbefore set forth.

3. The combination of the case A, partition B, and lateral aperture *a* in the side of the single outer tube near its open end, substantially as hereinbefore set forth.

JOHN H. YATES.
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