

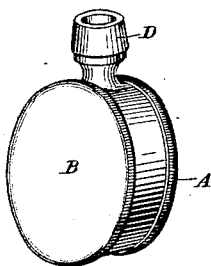
(No Model.)

F. L. UPJOHN.  
INHALER.

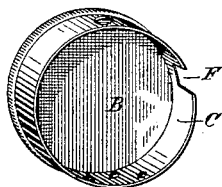
No. 453,677.

Patented June 9, 1891.

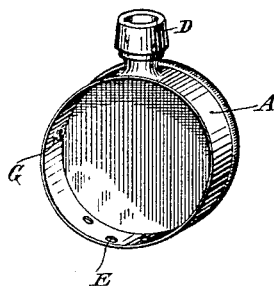
*Fig. 1*



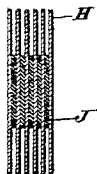
*Fig. 3*



*Fig. 2*



*Fig. 4*



*Witnesses:*

*Raphael Netter*

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*by*

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# UNITED STATES PATENT OFFICE.

FRED L. UPJOHN, OF BROOKLYN, NEW YORK.

## INHALER.

SPECIFICATION forming part of Letters Patent No. 453,677, dated June 9, 1891.

Application filed February 4, 1891. Serial No. 380,132. (No model.)

*To all whom it may concern:*

Be it known that I, FRED L. UPJOHN, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Inhalers, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

This invention, subject of my present application, is a device for facilitating the inhalation of any desired curative agent, and pertains to the general class of medicinal inhalers.

The object and effect of the invention are the production of a portable case or box that may be carried in the pocket, and composed of two parts, which may be separated to permit the insertion of a porous or other suitable body containing or composed of the substance to be inhaled, and which, by being turned one with respect to the other, open passages to permit air to be drawn freely through or around such body or close them to prevent a wasteful evaporation of the contents.

The invention resides, mainly, in certain features of construction new to devices of this kind, and the nature of which I shall now proceed to describe by reference to the accompanying drawings.

Figure 1 is a perspective of the improved inhaler. Fig. 2 is a perspective of the box, and Fig. 3 a similar view of the lid or cover detached. Fig. 4 is a vertical transverse section of the means for retaining a medicinal compound in the box.

The inhaler is composed of a box or containing-case composed of two parts A and B, the former for convenience being regarded as the box proper and the latter as a removable lid or cover. This case I prefer to make of flat circular shape of the general shape and appearance of a watch, so that it may be conveniently carried in the pocket or worn upon the person. To better adapt it to this latter purpose, I may make the case of gold, silver, or other valuable metal and ornament it in many ways.

The part B is formed with a flange C, that fits into the box A, said flange being of ap-

proximately the depth of the box, and the edges of both box and lid are preferably milled in order to facilitate the turning of one with respect to the other.

D is the inhaler-tube, which is to be applied to the nostrils. Its precise form may be varied in many ways, and it may be a simple exhaust-opening in the side of the box. Opposite to this tube are a number of air-inlets or perforations E in the side of the box, through which air is drawn into the box when the inhaler is in use. These perforations are at different points in the side of the box, so that the air drawn in will be well distributed through the pores or interstices of the absorbent material or medicinal compound. The flange of the lid B also contains perforations corresponding to D E and in position to register with the same, respectively, when the lid is in position for use. The case may be closed when not in use by turning the lid and closing all the perforations in the side of the box. To limit the movement of the lid, it is well to cut a notch F in the flange of the same and to provide a stop G on the inner surface of the side of the box A, which will register with the notch.

The device for retaining fluids or crystals consists of a number of sheets H of bibulous paper or any suitable absorbent material laid in a pile with interposed washers or smaller sheets J of the same or other material. These are secured together in any convenient manner and saturated with the desired compound. If the fluid be crystallizable, the crystals will form over the surfaces of the sheets, while other fluids will simply be retained by the absorbent sheets. In either case a very extended surface is presented to the current of air which is drawn through the case, so that it becomes well charged with the volatile components of the drug before it reaches the nostrils.

This device may also be used for containing perfumes, smelling-salts, and the like, and may be produced in various ornamental forms.

What I claim is—

1. In an inhaler, the combination, with a flattened containing box or case provided with openings in opposite sides for admitting

and exhausting the air, of an absorbent holder  
for medicinal compounds contained in said  
box and consisting of a pile of flat absorbent  
sheets and washers interposed between the  
5 same to form air-passages through the pile  
between the openings in the box, as set forth.

2. The combination, with a circular box  
provided with an inhaler-opening and tube on  
oneside and inlet-perforations opposite there-  
10 to, of a series of absorbent sheets separated by  
washers and adapted to contain a medicinal  
compound, and a lid or cover having a flange  
adapted to fit into the box, said flange being

provided with openings corresponding to and  
registering with the openings in the sides of 15  
the box, the cover being capable of limited  
rotary movement within the box, whereby it  
may be turned to open or close the openings  
therein, as set forth.

In witness whereof I have hereto set my 20  
hand this 28th day of January, 1891.

FRED L. UPJOHN.

Witnesses:

PARKER W. PAGE,  
M. G. TRACY.