

(No Model.)

J. J. HARTNETT.  
INHALER.

No. 513,924.

Patented Jan. 30, 1894.

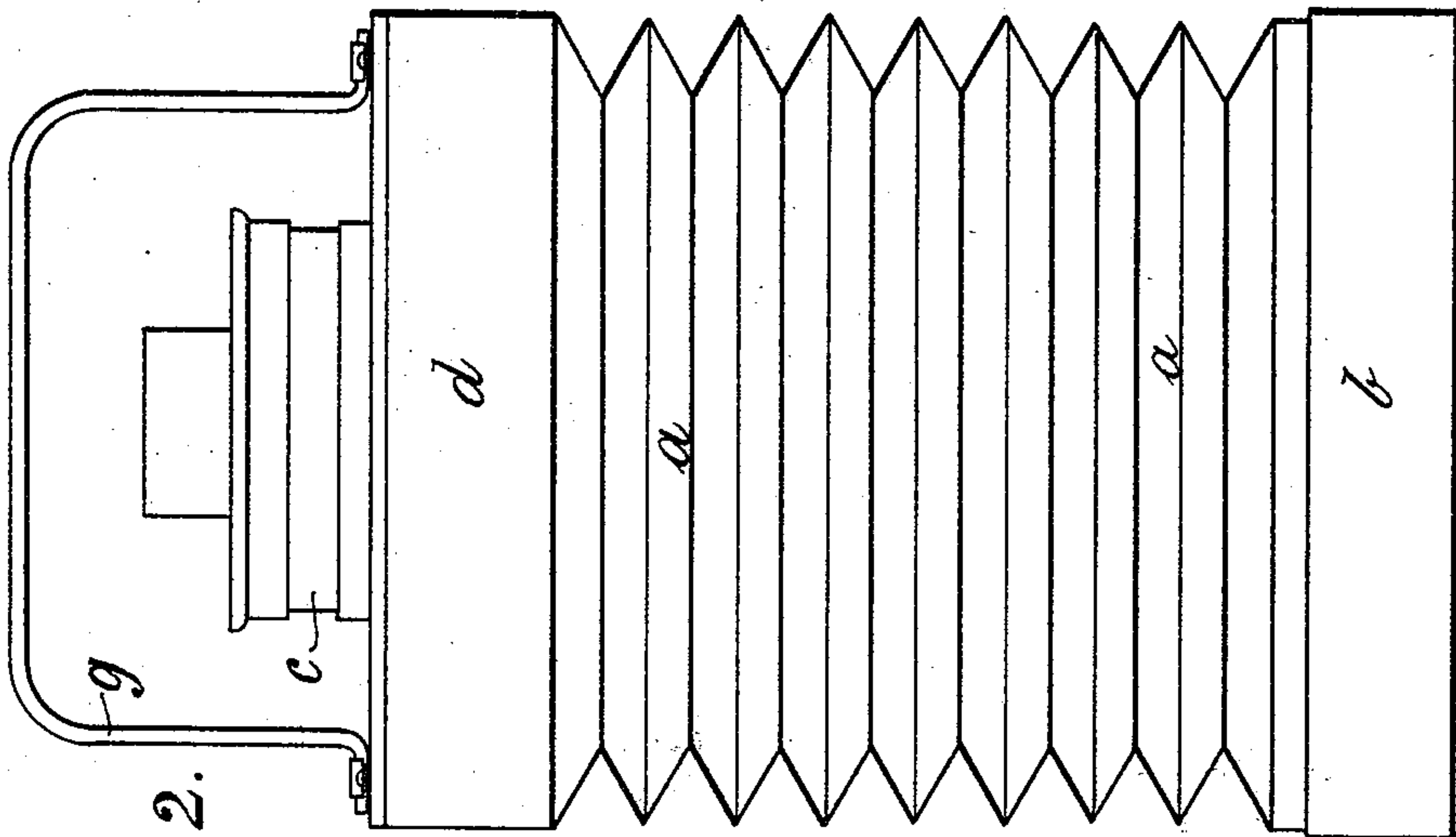


Fig. 2.

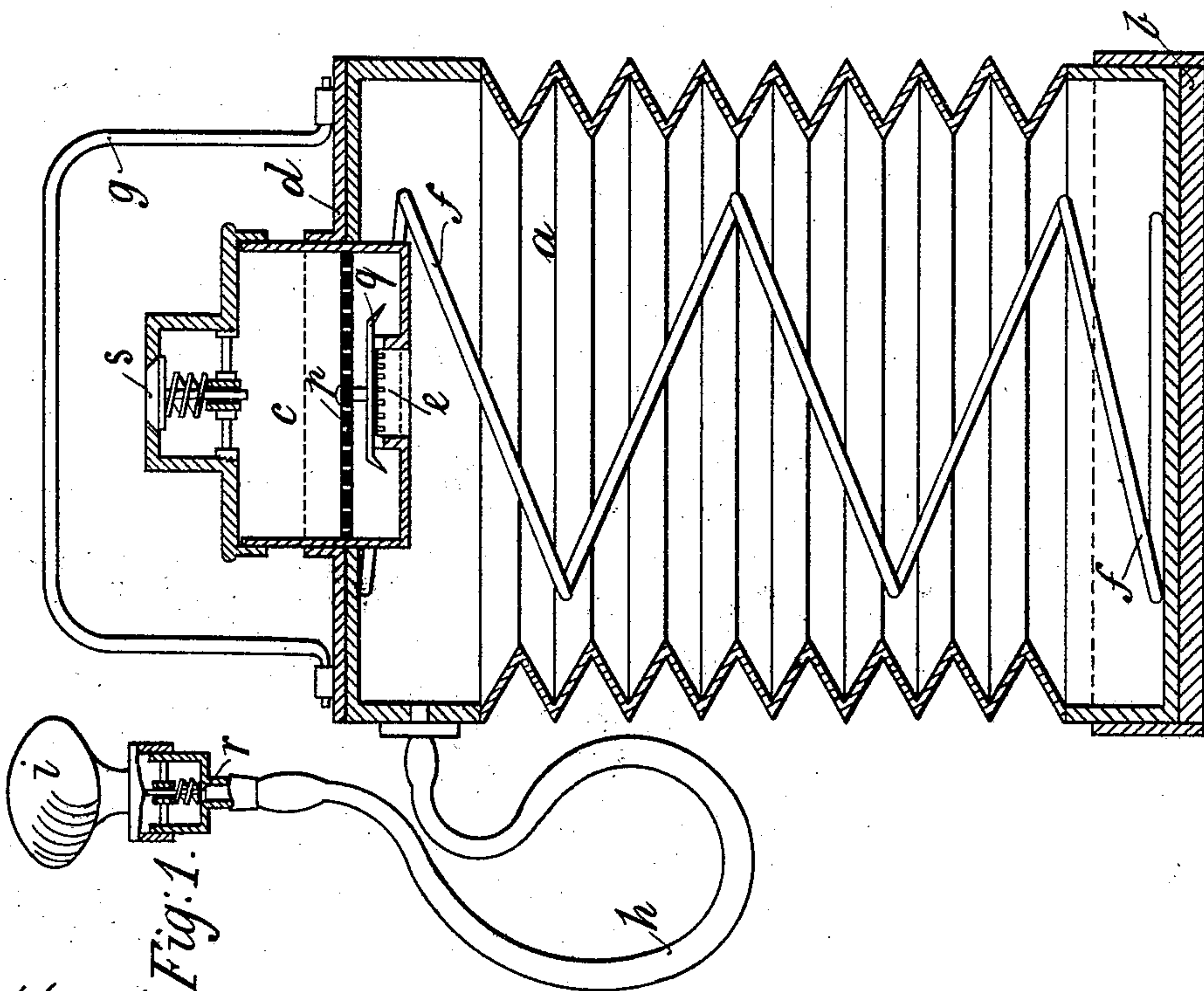


Fig. 1.

Attest  
Mellor Macleay  
Thos. E. Robertson.

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# UNITED STATES PATENT OFFICE.

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## INHALER.

SPECIFICATION forming part of Letters Patent No. 513,924, dated January 30, 1894.

Application filed March 29, 1893. Serial No. 468,219. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN JOSEPH HARTNETT, doctor of medicine, a subject of the Queen of Great Britain and Ireland, and a resident of 6 Grosvenor Street, in the city of London, England, have invented a certain new and useful Improved Apparatus for the Inhalation of Compressed Dry or Medicated Air, of which the following is a specification.

The object of my invention is to medicate by impregnating it with volatile preparations for inhalation by sick persons, and, in particular, by those afflicted with consumption.

Referring to the drawings which form a part of the specification Figure 1 is a vertical longitudinal section of the apparatus, and Fig. 2 is an elevation of same.

*c* is the medicating chamber, *a* the collapsible chamber, and *d* and *b* the top and bottom supports or heads of the collapsible chamber respectively.

*h* is a small tube through which the medicated air is inhaled, and *i* the mouthpiece.

The chamber or case *c* which can easily be removed or uncovered, is charged with cotton, wool or some other appropriate absorbent material impregnated with the medicaments or inhalants. The air is drawn through the valve *s*, mounted in the upper part of the case *c*, or its cover, by the suction caused by the expanding movement of the collapsible chamber worked by the spring *f*, passes through the sieve plate *p* in the case *c* and openings or slots *e* in a bottom flange, into the larger collapsible chamber *a*. The chamber *c* is provided with a mushroom-shaped plate *q* covering the bottom flange to prevent any fluid penetrating into the collapsible chamber. When the collapsible chamber has been thus filled with medicated air, and is closed up against the action of the spring *f*, the compressed air thus formed is compelled to pass through the tube *h* to the mouth-piece *i* owing to the automatic closing of the suction valve *s*. A back-pressure valve *r* is mounted near the mouthpiece *i* (Fig. 1) to prevent the air returning the reverse way into the collapsible chamber during the suction caused by the re-expanding of same.

The apparatus is further provided with a handle *g*, whereby its use is made very convenient, since, the bottom being heavy enough to counter-weigh the drawing move-

ment or expansion of the collapsible chamber during the suction of air, the patient can hold the mouth piece in position with one hand, while he works the instrument with the other, having time to exhale after each inhalation.

The operation may be briefly described as follows: Supposing the device in the condition shown in Fig. 1, with the chamber *a* filled with air and expanded, the operator by resting the bottom *b* on a table or other support and pressing down on the handle *g* collapses the chamber *a* and places the air therein under compression which immediately fills the tube *h* ready to be inhaled by using the mouth piece. The pressure is maintained on the handle *g*, to force out the air until it is practically exhausted and then the user by relieving the pressure on the handle allows the chamber *a* to expand under the action of the spring *f* and thus a fresh supply of air is drawn into the chamber through the valve *s* and the chamber *c* with its plates *p* and slots *e*. The medicated air now in the chamber may be again put under pressure for the inhaling process by pressing the handle *g* down again.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination, the expansible chamber *a*, the chamber *c* communicating therewith and containing the absorbent material the inlet valve *s* with its spring for controlling the inlet of air to the chamber *c*, and the mouth piece connected with the expansible chamber *a*, substantially as described.

2. In combination, the expansible chamber *a*, the absorbent chamber *c* connected therewith, the inlet valve *s*, the sieve plate in the chamber *c*, the flange having the slots *e* arranged between the two chambers, the tube connected with the chamber *a*, and the mouth piece having the back pressure valve *r*, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN JOSEPH HARTNETT.

Witnesses:

W. ROLAND MCKAY,  
Major.  
S. F. CHAMBERLAIN.