

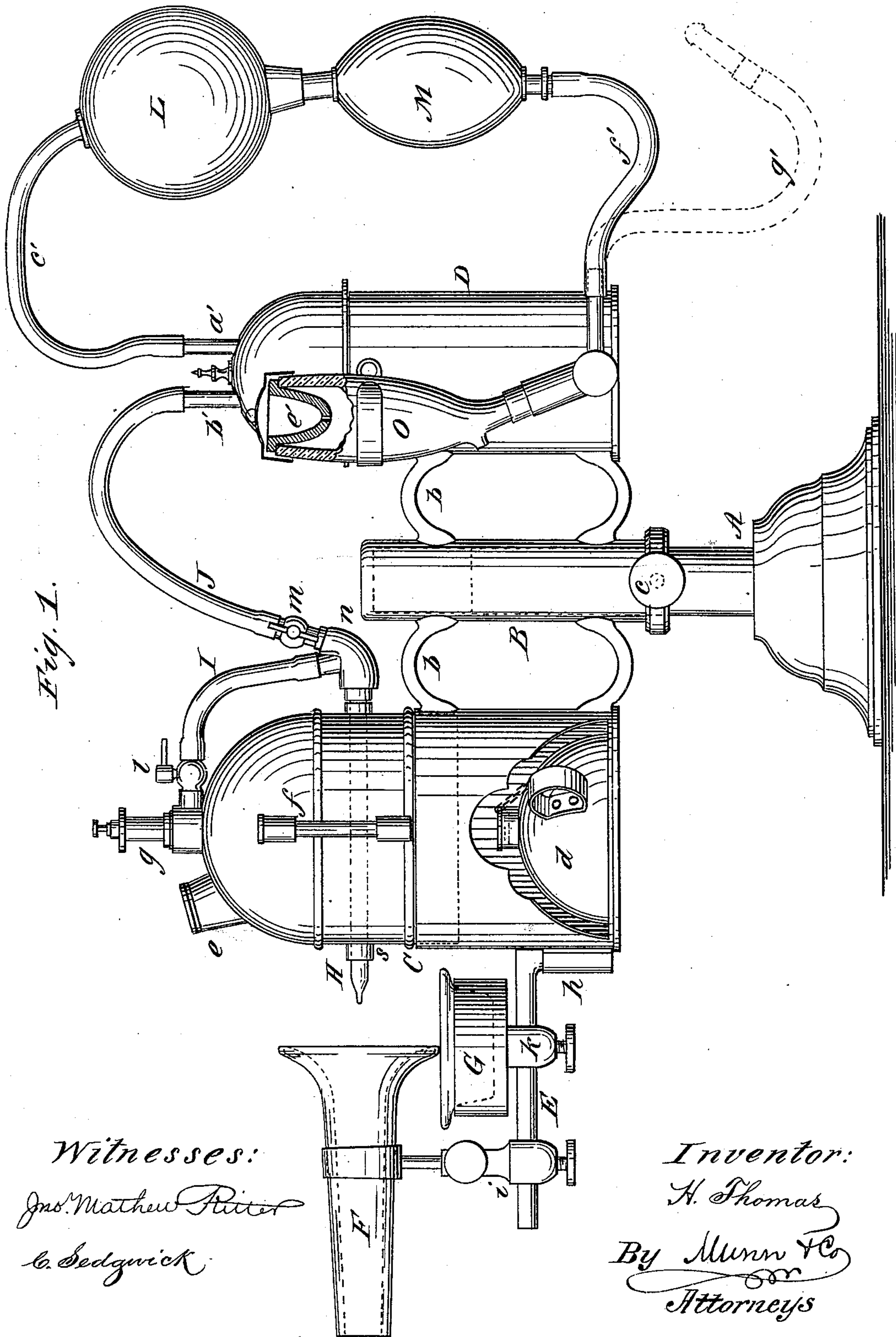
(No Model.)

2 Sheets—Sheet 1.

H. THOMAS.  
COMBINED INHALER AND ATOMIZER.

No. 335,322.

Patented Feb. 2, 1886.



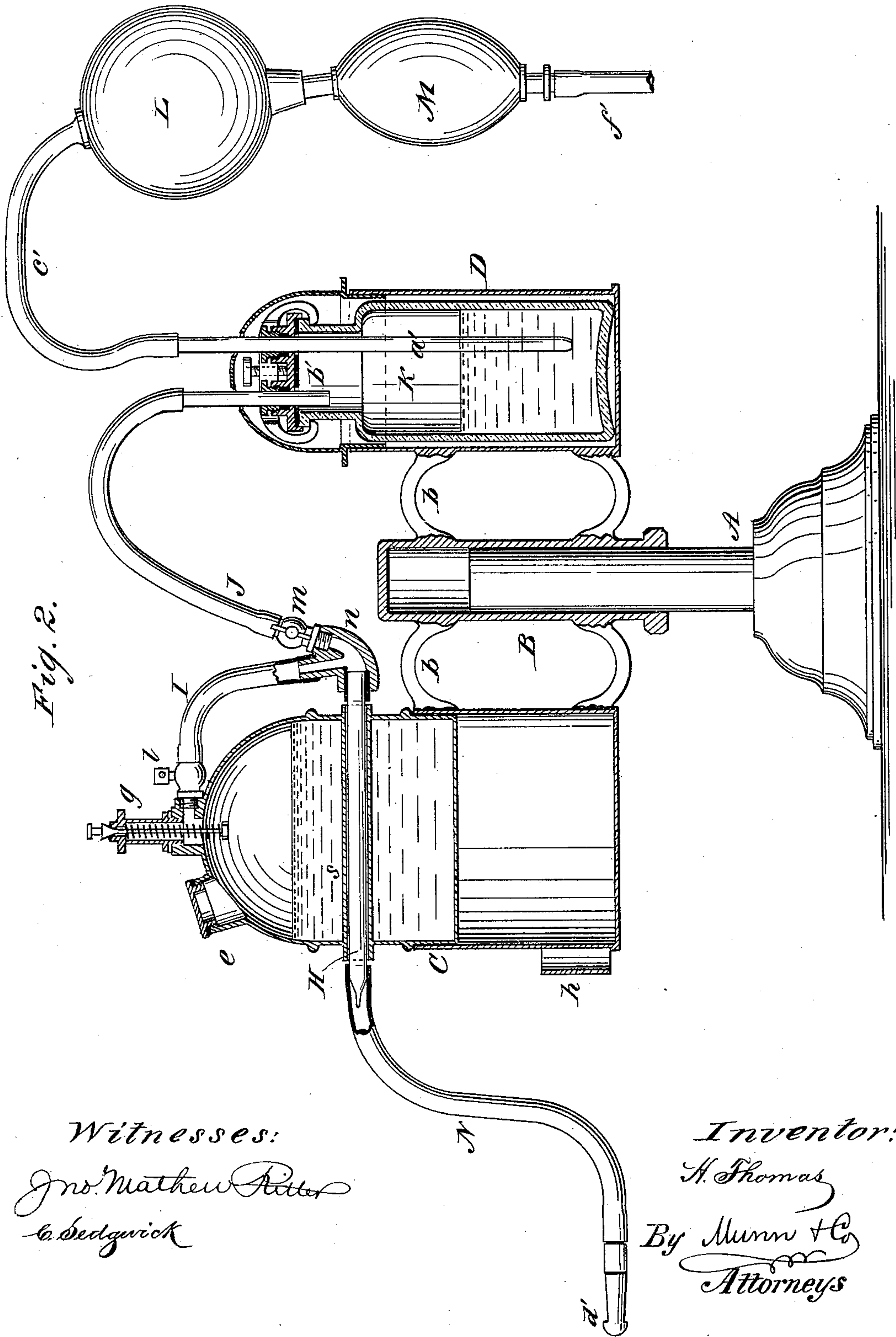
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Witnesses:

*John Mathew Ritter*  
*C. Sedgwick*

Inventor:

*H. Thomas*  
By *Munn & Co*  
*Attorneys*



# UNITED STATES PATENT OFFICE.

HUGH THOMAS, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO HIMSELF  
AND JAMES M. HENLEY, OF SAME PLACE.

## COMBINED INHALER AND ATOMIZER.

SPECIFICATION forming part of Letters Patent No. 335,322, dated February 2, 1886.

Application filed June 20, 1885. Serial No. 169,266. (No model.)

*To all whom it may concern:*

Be it known that I, HUGH THOMAS, of the city, county, and State of New York, have invented certain new and useful Improvements in Combined Inhaler, Atomizer, and Douche, &c., of which the following is a full, clear, and exact description.

This invention relates to that class of apparatus for medical and other purposes which is capable at pleasure or as need requires, by the conversion of its parts or different employment of its details, to perform the duties of several and different instruments connected with the atomizing of various fluids or substances, likewise the inhaling or forced conveyance of medicated and other vapors, and, if necessary, of fluids in other than an atomized or vaporized form to the parts affected to be treated.

The invention consists in certain novel constructions and combinations of parts, whereby the versatility of such an apparatus is enlarged and the atomized or vaporized material may be discharged or administered either in a heated or cold condition; also, provision is made for inhaling steam or plain vapor, or steam mixed with atomized or vaporized medicated materials, or different atomized or vaporized materials alone, likewise different modes of inhaling are provided for, and the apparatus may be used as a douche when required, or as an inhaler and atomizer or vaporizer, &c., substantially as hereinafter described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 represents a partly-broken side elevation of an apparatus embodying my invention; and Fig. 2 a mainly sectional elevation of the same, said view showing different applications of its use.

A is the stand of the apparatus, which consists of a base and circular post erected on the base.

B is a sleeve fitted on and over the post, provided with opposite side brackets, *b b*, for carrying the main vessels C D of the apparatus, and made capable of adjustment both up and down and around the post, subject to re-

tention by a set-screw, *c*, for changing the working position of the apparatus, as required, without disturbing the stand.

The vessel C constitutes an upright steam-boiler, consisting of a lower heating-chamber adapted to carry a lamp, *d*, and an upper water and steam chamber fitted to slip into the heating-chamber from above and provided with a filling-nozzle, *e*, a water-gage, *f*, and a safety-valve, *g*. Said boiler is also provided with an outer side socket, *h*, in which is fitted the leg of an arm-piece or bracket, E, that serves to carry by suitable supports, *i k*, adjustable along it, a tubular inhaling-shield, F, and drip-cup G.

The adjustment of the supports *i k* along the arm-piece provides for setting the shield F, which is bell-mouthed at its inner end, and the drip-cup G at any desired distance from the spray or distributing tube or duct H for the steam or other vapor. This tube H is arranged to project transversely through the water-space of the boiler, or rather through a close sleeve, *s*, therein, and so as to point opposite the mouth of the shield F when the latter is used for inhaling steam from the boiler. When not required to be used, said shield may be removed and the tube H be used direct for general atomizing purposes or distributing into an apartment or elsewhere the medicated or other substances, either separately or mixed with steam from the boiler.

I is the flexible tube or pipe and its connections for passing steam from the boiler, and J a flexible tube with connections for passing the atomized, medicated, or other substances into the tube H, cocks *l m* serving to shut off or let on the steam from the boiler and the atomized, medicated, or other materials, accordingly as it is required to use them separately or combined, the tube H being connected by a common elbow, *n*, with both flexible tubes I J. This versatility will be found of great convenience in many cases; also, when desired to use the spray-tube H apart from the boiler, it may be readily drawn out of the sleeve fitting therethrough, the cock *l* closed, and the flexible tube I be disconnected from the boiler; or said tube H may be drawn out for replacement by another, when necessary, without disturbing or breaking any steam-



tight connection, the sleeve *s* providing for this.

I am aware that apparatus has before been used in which provision has been made for dispensing with the atomizing arrangement and for inhaling the steam alone; also, that means have been provided for heating the medicated vapor or atomized materials—as, for instance, by a vessel of hot water inclosing the chamber containing the medicated vapors; but my apparatus essentially differs from these, in structure, convenience, and versatility; and it is an important feature that the spray or distributing tube in my apparatus is combined with a steam-boiler capable of raising or lowering or adjusting the temperature as required, and of maintaining a fixed temperature when necessary, which is important.

The receptacle *D* on the opposite side of the stand to that occupied by the boiler contains the atomizing bottle or vessel *K*, in which the medicated material or other liquid to be atomized or otherwise utilized is placed. This bottle is fitted, as in the case of other inhalers, with a long leg, *a'*, descending into the liquid in the bottle, and with a shorter leg, *b'*, terminating at its lower end above said liquid and serving, when the apparatus is used as an atomizer or evaporator, for passing the atomized material or vapor by the flexible tube *J* to the spray-tube *H*. The other or larger leg, *a'*, is connected at its upper end by an elastic tube, *c'*, with an elastic bulb or air-reservoir, *L*, which in turn is connected with the flexible bulb *M*, that constitutes an air pump or bellows, as in other apparatus for administering aeriform fluids, the air drawn in by the bellows being afterward forcibly expelled by them down the leg *a'* through the liquid in the bottle *K*, and subsequently, charged with said liquid, up the leg *b'* to the spray-tube.

When requiring to use the apparatus as a douche, this operation is changed. Thus the bottle *K* is turned half round, the elastic tube *c'* connected with the shorter leg, *b'*, and the tube *J* with the longer leg, *a'*, when the liquid in the bottle, which may be medicated or not, will be forced out of the bottle into and through the tube *H*, that may in such case be fitted with an elastic tube, *N*, on its outer end, terminating in a douche nozzle or bulb, *d'*, as shown in Fig. 2, the shield *F* with its attachments being removed and steam from the boiler being shut off.

To further increase the versatility of the apparatus as an atomizer or inhaler, and to use medicated and other substances which could

not very well, if at all, be used in the bottle *K* or be atomized and discharged therefrom by the tubes in said bottle, I affix to the side of the vessel *D* a pipe or other similar bowl, *O*, having a perforated cup, *e'*, in its top, which cup may be charged with stramonium or other slowly-fusible vegetable material, while the lower part of the bowl may hold cotton or other fibrous material saturated with any desired medicated liquid. Light being applied to the fusible material in the cup *e'*, draft may be kept up by connecting a tube, *f'* on the outer end of the bellows *M* with the stem of the bowl, and the medicated fumes drawn from the bowl be discharged by the tube *c'* into the bottle in the vessel *D*, to be further charged with the liquid in the bottle, and for distribution as before; or the pump or bellows *M* may be disconnected from the stem of the bowl *O* and a tube, *g'*, with attached mouth-piece, be connected therewith for the purpose of inhaling the medicated fumes direct from the bowl.

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

1. In a combined atomizer and vaporizer for inhaling and other purposes, the combination, with the atomizing-vessel and its pump and atomizing devices, of a steam-boiler and a spray or discharge tube connected by tubes and valves both with the steam-boiler and the atomizing devices, whereby either steam or atomized medicated material, or the two combined, may be discharged through the spray-tube, substantially as specified.

2. In a combined atomizer and vaporizer for inhaling and other purposes, the combination, with the steam-boiler *C*, having a sleeve, *s*, through it, of the spray-tube *H*, arranged to pass through said sleeve, essentially as and for the purpose herein described.

3. The combination, with the atomizing-vessel, its pump and atomizing devices, of the steam-boiler *C*, having a sleeve, *s*, through it, the tubes *I* *J*, connection *n*, and valves *l* *m*, and the spray-tube *H*, arranged to pass through said sleeve, substantially as and for the purposes herein set forth.

4. The combination, with the atomizing-vessel, its pump and atomizing devices, of the bowl *O*, having a perforated upper cup, *e'*, substantially as and for the purpose herein set forth.

HUGH THOMAS.

Witnesses:

C. SEDGWICK,  
A. LURCOTT.