G. A. BRUG.

Atomizer.

No. 207,849. Patented Sept. 10, 1878.

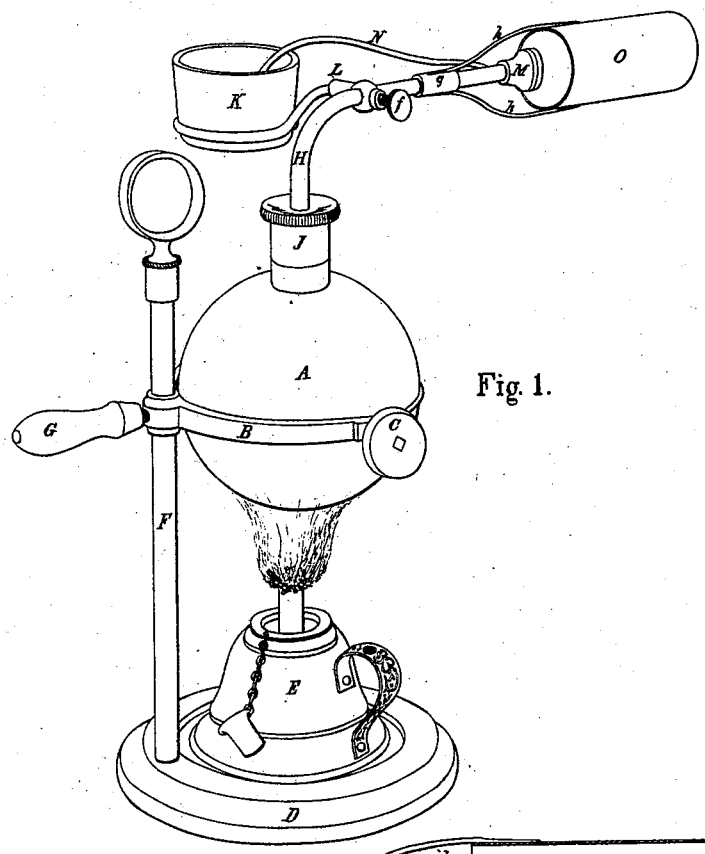

Fig. 1.

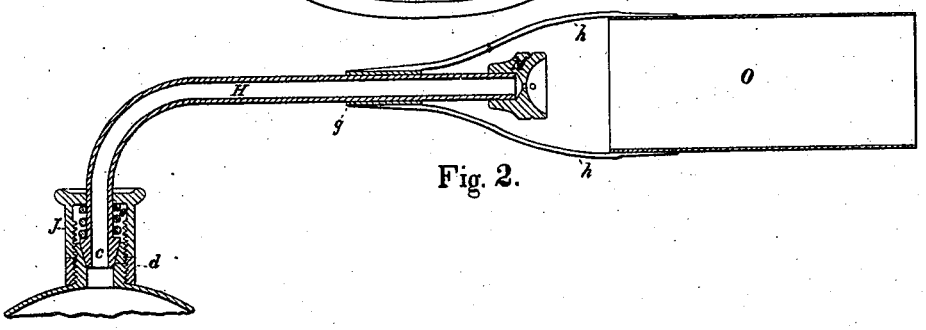

Fig. 2.

WITNESSES.

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GEORGE A. BRUG, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN ATOMIZERS.

Specification forming part of Letters Patent No. **207,849**, dated September 10, 1878; application filed March 25, 1877.

To all whom it may concern:

Be it known that I, GEORGE A. BRUG, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Atomizers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

My invention relates to that particular class of atomizers which are designed more especially for medicinal purposes, and in which a jet of steam is employed to raise the medicated fluid and convert it into a spray or vapor for inhalation or otherwise.

My invention consists in a novel arrangement of the various parts, so as to admit of the apparatus being made light, compact, and of convenient form for handling. The construction is also such that the different portions of the apparatus are adjustable, and may be readily adapted to the various positions in which it may be necessary to apply them.

It also provides for the convenient removal of the atomizing-tube and liquid-receptacle when steam alone is to be used.

In the drawings, Figure 1 is a perspective view of my apparatus, and Fig. 2 a longitudinal section of the boiler, connecting-tube, and atomizer.

A represents the chamber for generating the steam. It is made, preferably, in spherical form from sheet metal, and is pivoted in the forked frame B by two pins, one of which is threaded and provided with the thumb-nut C, by means of which the generator may be secured at any desired angle. D is the base, made also from sheet metal, and provided with a central depression for retaining the lamp E in position, and also with the standard F, terminating in a loop at the top for convenience in carrying. To this standard the frame B is fitted so that it can slide vertically. By this arrangement the distance between the boiler and the lamp may be regulated, and also a more varied range is given to the adjustment of the inhaling-tube.

The frame is secured at any point by the set-screw G, which also forms a handle, by means of which the position of the apparatus may more readily be controlled when in use. This handle and also the thumb-nut C are covered with wood or other non-conducting material, as the metal portions adjacent to the boiler necessarily become considerably heated.

The connecting-tube H is secured to the generator by the cap J, being swiveled so as to permit its being set in any desired radial position.

A valve, *c*, is formed upon the end of the tube next the generator, fitted to the seat *d*, and held thereto by the spring *e*. The construction is such that when the cap J is screwed down to the shoulder the spring will have sufficient tension to hold the valve to its seat until a point of undue pressure is reached, when it will lift and give relief.

K is the cup for containing the liquid set in the holder L, which is secured to the connecting-tube by the set-screw *f*. M is the atomizer, constructed so as to form a cross-jet in the well-known manner, and fitted snugly to the end of the connecting-tube. Attached to the atomizer is the suction-tube N, curved into proper shape to dip into the cup K.

O is the inhaling-tube, attached rigidly to the sleeve *g* by the rods *h h*. The sleeve slides freely upon the tube H, thus affording a ready means of controlling the temperature of the vapor at the point of inhalation by varying the distance between the inhaling-tube and the discharge-orifice of the atomizer or connecting-tube.

I am aware that atomizers have been made with adjustable inhaling-tubes; but, so far as I know, they have never before been constructed so as to permit the jet to be thrown from the atomizer at any desired angle without moving the base or resorting to the use of flexible connecting-tubes.

It is frequently advantageous to dispense with the atomizing arrangement and inhale the steam alone. The construction of my apparatus is such that the atomizer can be speedily removed for that purpose.

I am aware that steam-generators for a similar purpose have been heretofore proposed, constructed so as to admit of their vertical adjustment upon a standard. I therefore do not claim this feature broadly.

Having thus described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. In an atomizing apparatus, the steam-generating chamber A, pivoted in the frame B so as to be adjusted at various angles to a plane at right angles to the standard F, by means of the thumb-nut C, or other suitable clamping device, substantially as described.

2. The combination of the base D, the standard F, the set-screw G, either with or without the projecting handle, and the steam-generator A, adjustably pivoted in the sliding frame B, and provided with the thumb-nut C, or other suitable clamping device, substantially as shown.

3. The combination of the steam-generator A and the swiveled connecting-tube H, one end of which is arranged to operate as a safety-valve, substantially as shown.

4. The combination, in an atomizer, of the inhaling-tube O, the sliding sleeve *g*, and the connecting-rods *h h*, or their equivalent, substantially as shown.

5. The combination of the adjustably-pivoted steam-generator A, the connecting-tube H, and the inhaling-tube O attached thereto, the atomizer M, with suction-pipe N, the cup K, and holder L, all arranged to operate substantially as described.

GEO. A. BRUG.

Witnesses:
ALANSON WORK,
SAML. G. COLWELL.