

No. 640,340.

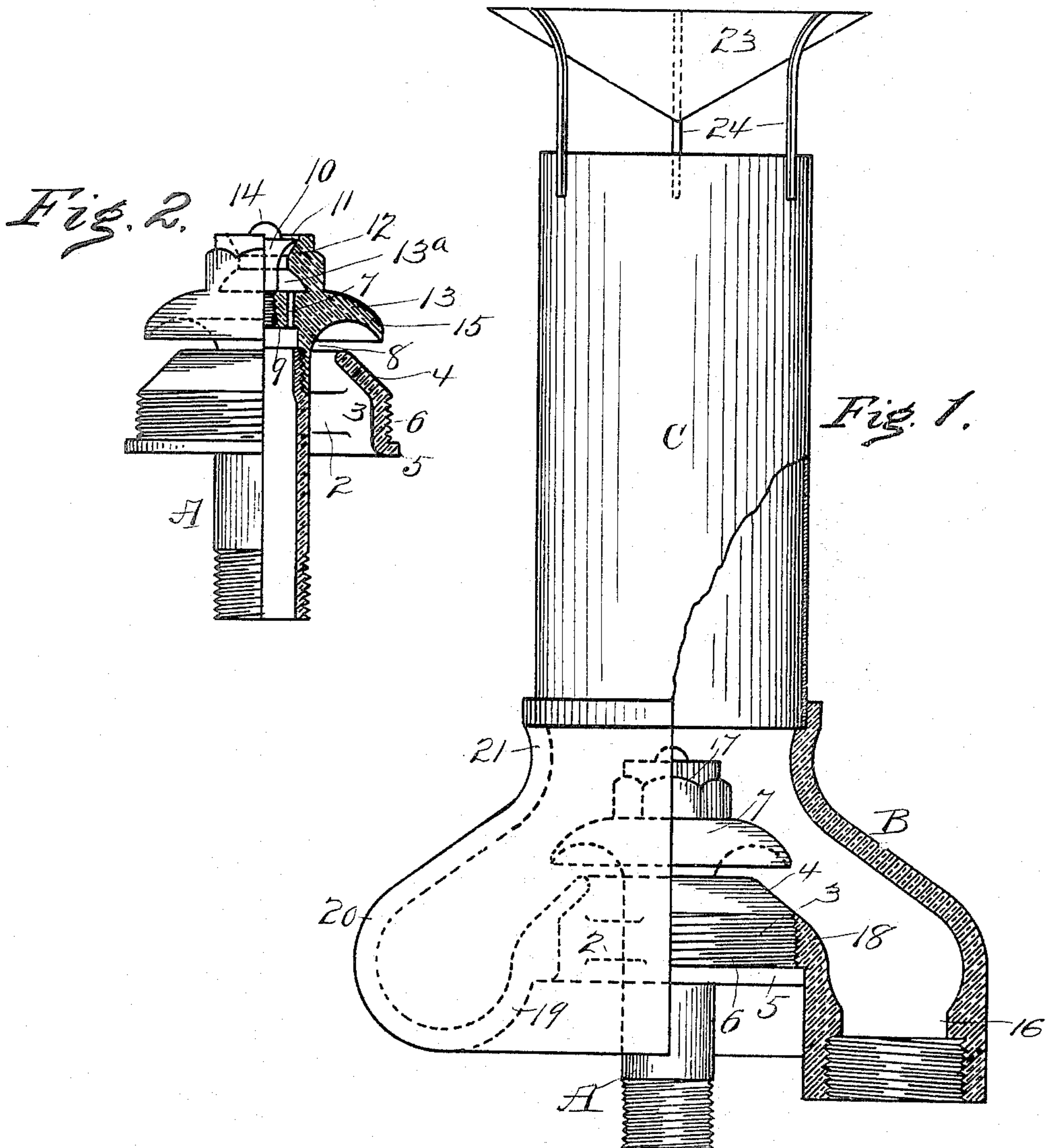
Patented Jan. 2, 1900.

W. B. S. WHALEY.

AIR MOISTENER.

(Application filed May 3, 1899.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM B. SMITH WHALEY, OF COLUMBIA, SOUTH CAROLINA.

## AIR-MOISTENER.

SPECIFICATION forming part of Letters Patent No. 640,340, dated January 2, 1900.

Application filed May 3, 1899. Serial No. 715,441. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM B. SMITH WHALEY, a resident of Columbia, in the county of Richland and State of South Carolina, have invented certain new and useful Improvements in Air-Moisteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in air-moisteners, the object of the invention being to provide a device of the above character which can be placed in any room and operated to effectually mix moisture and air and supply same to the room or apartment.

A further object is to so construct an air-moistener that the condensed moisture will be carried off without disturbing in any way the operation of the device.

A further object is to provide an air-moistener which will be simple in construction, cheap to manufacture, neat in appearance, and most effectual when in operation.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view, partly in section, illustrating my improvements; and Fig. 2 is a view, partly in section, with the casing B removed.

A represents a tube or pipe externally screw-threaded at each end, the lower screw-threads adapted to mesh with internal screw-threads on any approved water-supply pipe. (Not shown.) The pipe or tube A is provided at points near its upper end with a series of radiating arms 2, around the outer ends of which and preferably integral therewith is provided a ring 3. The ring 3 is beveled or contracted at its upper end, as shown at 4, provided around its lower end with a peripheral flange 5, and said ring is externally screw-threaded, as shown at 6, for a purpose more fully hereinafter explained.

A cap 7, having a downwardly-projecting internally-screw-threaded sleeve 8 thereon, is secured to the upper end of the tube or

pipe A. The cap 7 is provided between its ends with an internal ring 9, (preferably integral with the cap,) having screw-threads on its face adapted to mesh with external screw-threads on the lower end of my improved valve 10. The valve 10 is made with an enlarged upper end having a sharpened arm or knife edge periphery 11, adapted to be disposed in close proximity to the upper internally beveled or conical portion 12 of the cap 7. The ring 9 is provided with a series of perforations 13, through which the water under pressure passes and enters a chamber 13<sup>a</sup> in the cap, from which it is permitted to escape past the valve 10 in the form of vapor by means of the close proximity of the sharp edge of the valve to the beveled or conical portion of the cap. The valve 10 is provided on its upper end with a recessed projection 14 to permit the use of a screw-driver or other tool for turning the same to regulate the discharge of vapor or to completely cut off the same, as desired. The cap 7 is provided on its outer edge between its ends with an outwardly and downwardly projecting peripheral flange 15, disposed over the open contracted upper end of the sleeve 3 and adapted to prevent the passage of condensed moisture through the air-inlet and direct said condensed moisture or water to a discharge-outlet 16, provided for it. The cap 7 is made angular around its upper portion, as shown at 17, to permit the use of a wrench or other tool for screwing same firmly on the tube or pipe A.

A casing B, having a screw-threaded contracted central portion 18 thereon, is screwed on the sleeve 3, and the flange 5 is adapted to abut against the contracted portion 18 of the casing and limit the downward movement of the casing.

The casing B curves from the contracted portion 18 downward and outward, as shown at 19, thence outward and upward and inward, as shown at 20, and then again upward and outward, as shown at 21, and has secured at its upper open end a large cylindrical vertical pipe or flue C, provided at its upper end with a conical deflector 23, held above the outlet of said pipe or flue by means



of suitable arms 24, secured, respectively, to said pipe or flue and deflector, as clearly shown in Fig. 1.

The casing B is provided in its lower portion at one side with a suitable outlet-spout 16, adapted to empty the water resulting from condensation into any approved drain-pipe, (not shown,) which may be screwed into the internally-screw-threaded lower end of said spout.

The operation of my improved device is as follows: Water under pressure passes upward through the tube or pipe A, through the perforations 13 in the ring 9, and between the sharp knife-edge of the valve 10 and beveled or conical portion 12 of the cap 7, and is ejected in the form of vapor into the casing B and pipe or flue C. Air passes upward through the sleeve 3, around the flange 15 into the casing and pipe or flue and intermixes with the vapor, and the mixed air and vapor passes out the upper end of the pipe or flue C and is deflected to all parts of the compartment by means of the deflector 23. The water resulting from condensation which may collect in the casing and pipe or flue will be carried off by the spout 16 and conveyed to any desired place by a suitable drain-pipe (not shown) connected with the outlet-spout 16.

Various slight changes might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I would have it understood that I do not wish to limit myself to the precise details set forth, but consider myself at

liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In an air-moistener, the combination with a supply-pipe, of a ring secured around said tube or pipe and spaced therefrom, a cap secured on the tube or pipe, a flange on the cap disposed over the open end of the ring, a ring in the cap having perforations therein, a valve movably mounted in the ring and having an enlarged sharpened upper outer edge adapted to regulate the spray issuing from the cap.

2. In an air-moistener, the combination with a casing, a flue communicating therewith and a deflector disposed above the upper end of said flue, the lower end of said casing having a threaded opening in its lower portion, of a ring in said opening, a pipe passing through said ring, spaced therefrom and adapted to discharge into the flue, a cap mounted on said pipe and having a flange or head overhanging the upper end of said ring, a conical valve-seat in the upper part of the cap and an adjustable valve having a knife-edge peripheral edge to cooperate with said conical valve-seat, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM B. SMITH WHALEY.

Witnesses:

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