

F. B. COMINS.
HUMIDIFIER.
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900,356.

Patented Oct 6, 1908.

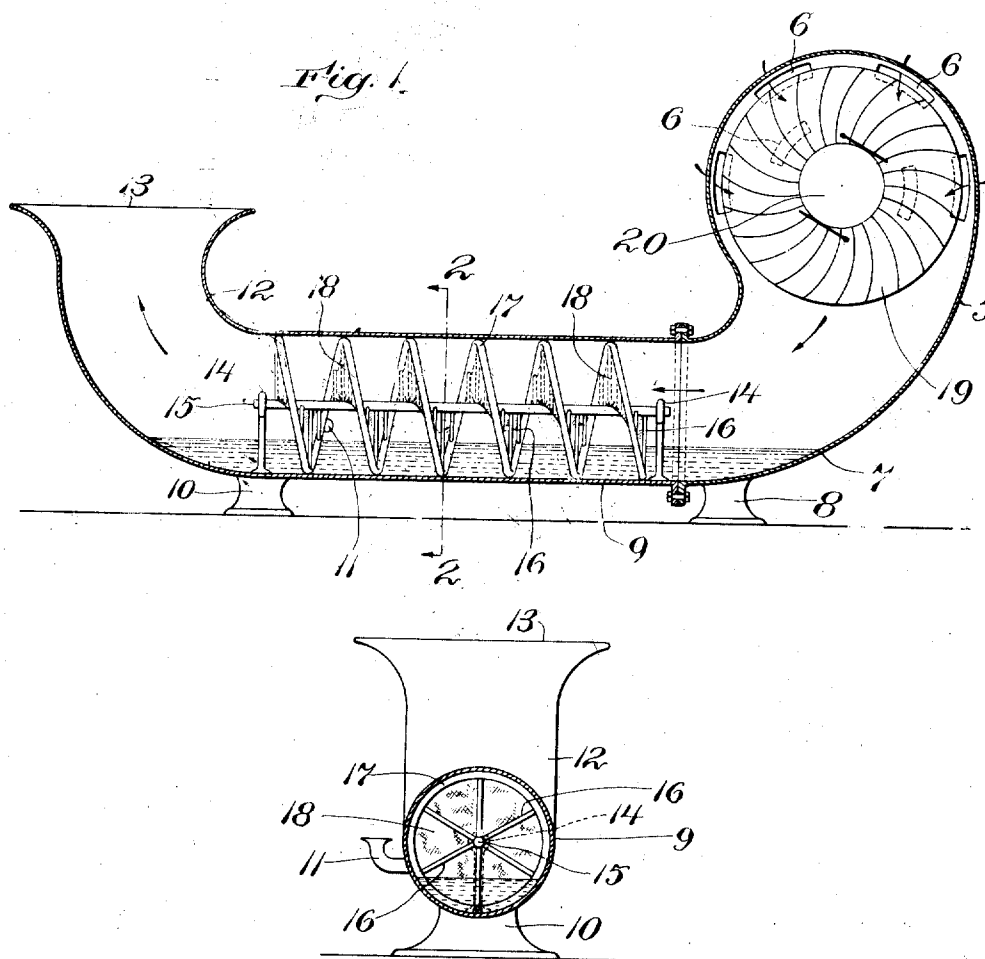


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

FRANK B. COMINS, OF SHARON, MASSACHUSETTS.

HUMIDIFIER.

No. 900,356.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed May 28, 1907. Serial No. 376,076.

To all whom it may concern:

Be it known that I, FRANK B. COMINS, of Sharon, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Humidifiers; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

10 This invention has reference to improvements in humidifiers or air moistening machines, designed to supply moisture to air forced or drawn through said machines.

One object of the invention is to construct a humidifier that air forced or drawn therethrough, to be moistened, may operate a movable moisture distributor, whereby moisture may be distributed to said air.

Another object of the invention is to simplify the construction of humidifiers.

The invention consists in a humidifier having a rotatable moisture distributing element, and means for directing a column of air against said element to effect its rotation.

25 The invention also consists in such other novel features of construction and combination of parts as shall hereinafter be more fully described and pointed out in the claim.

Figure 1, represents a longitudinal vertical sectional view of the improved humidifier. Fig. 2, represents a cross sectional view thereof taken on line 2—2 Fig. 1.

Similar numbers of reference designate corresponding parts in both figures.

35 In carrying this invention into practice, I construct a main casing having a fan casing 5 furnished with a series of air inlets 6—6 below which fan chamber, the casing is preferably slightly contracted and curved, to form the neck 7 having the support 8. Secured to the neck 7 of the main casing, in any suitable manner to form a water tight joint, is the humidifier chamber 9, preferably having a cylindrical wall and furnished with the support 10 and the water inlet funnel 11, while the end portion of this chamber 9 is curved upwardly to form the outlet 12 having the flaring opening 13. Within the chamber 9 are mounted the standards 14—14 having 45 bearings in which the shaft 15 is rigidly se-

cured, a series of arms 16—16 arranged in spiral series around said shaft, and having their outer ends connected by the wire 17. These arms 16—16 form a rigid spiral support for absorbent material 18, preferably 55 cloth, which is designed to absorb moisture contained in the lower portion of the chamber and carry the said moisture upward when the shaft 15 and its spiral distributor is rotated.

60 Within the fan chamber 5 is rotatably mounted the fan 19, of any suitable construction, which is designed to be rotated by any ordinary means, but preferably by an electric motor conventionally indicated at 20. 65

Air drawn into the fan chamber through the inlets 6—6 by the rotation of the fan 19 is forced through the neck 7 of the fan chamber 9, where said air acts against the spiral moisture distributor, formed by the absorbent material 18 and its support, and effects the rotation of said distributor, whereby the moisture taken up as the distributor passes through the water in the chamber 9, is constantly carried upward and is absorbed by 75 the air passing through said chamber.

The pitch of the screw formed by the spirally arranged moisture distributor may be greater or less than that shown in the drawing, and is preferably such, that this screw 80 may readily rotate under the action of the air forced through the chamber 9.

The spiral moisture distributor may be constructed of any material designed to receive moisture from the comparatively small 85 body of water contained in the lower portion of the chamber 9 and to carry said moisture upward, but said distributor is preferably formed of some absorbent material which will readily take up the moisture. 90

Instead of water in the chamber 9, any well known fluid disinfectant or germicide may be used, or medicated vapor may be supplied to such chamber to be mixed with the air passing therethrough by the rotation 95 of the rotatable spiral element.

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

A humidifier comprising a cylindrical 100

moistening chamber having upturned ends
one of which forms a fan chamber, a shaft
 journaled in bearings in said chamber and
having a spiral support, a moisture distrib-
5 ing element mounted on said support, and a
fan rotatably mounted in said fan chamber,
as and for the purpose described.

In testimony whereof I affix my signature
in presence of two witnesses.

FRANK B. COMINS.

Witnesses:

CHARLES B. CUMMINGS,
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