F. KOCHER.

HUMIDIFIER AND DISINFECTOR.

APPLICATION FILED JAN. 29, 1912.

**1,027,856.** **Patented May 28, 1912.**

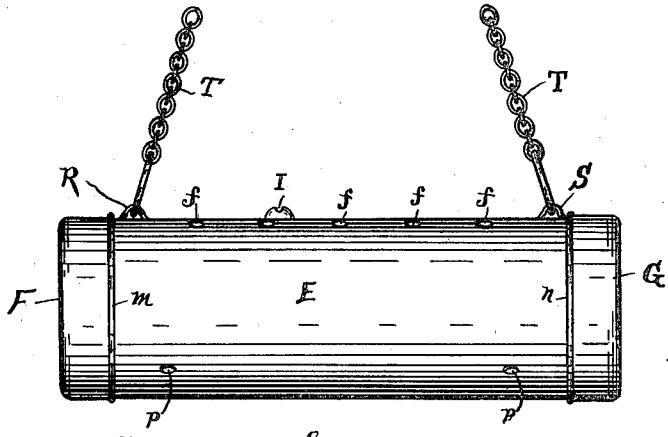


Fig. 1.

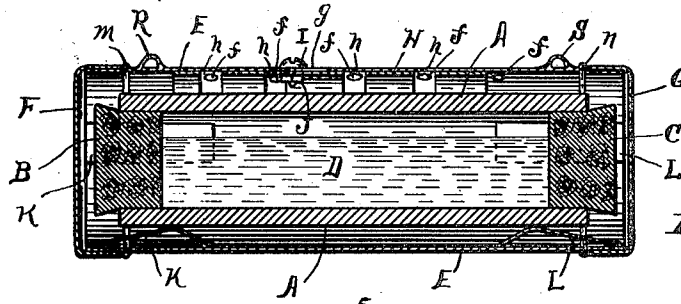


Fig. 2.

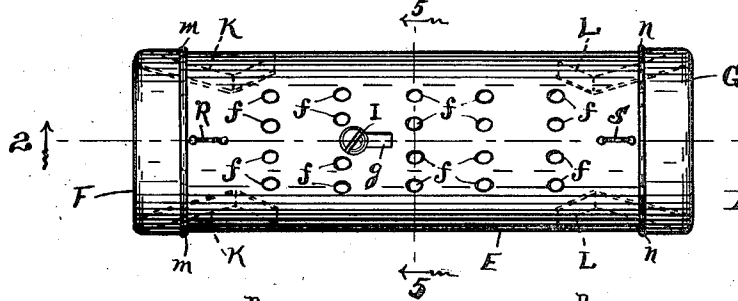


Fig. 3.

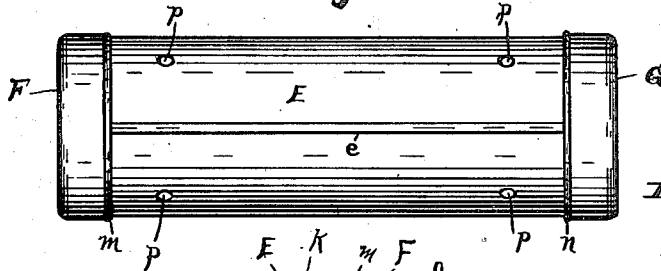


Fig. 4.

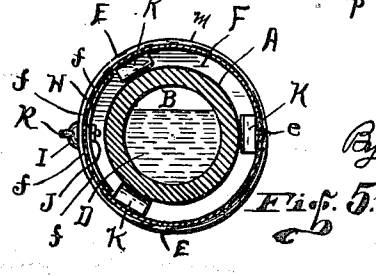


Fig. 5.

Witnesses:

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# UNITED STATES PATENT OFFICE.

FRANK KOCHER, OF EAST GERMANTOWN, INDIANA.

## HUMIDIFIER AND DISINFECTOR.

1,027,856. Specification of Letters Patent. Patented May 28, 1912.

Application filed January 29, 1912. Serial No. 674,187.

*To all whom it may concern:*

Be it known that I, FRANK KOCHER, a citizen of the United States, residing in East Germantown, in the county of Wayne and State of Indiana, have invented a new and useful Humidifier and Disinfector, of which the following is a full, clear, and comprehensive exposition and specification, being such as will enable others to make and use the same with absolute exactitude.

My present invention relates to the science of prophylaxis, without administering a curative agent.

The object of my invention, broadly speaking, is to provide a humidifier and disinfector which will be strong and durable in construction, easily operated and controlled, economical in use, adapted to provide a maximum of efficiency in use, and which can be manufactured and sold at a comparatively low price.

A more particular object is to provide a prophylactical device adapted to hold a liquid with means whereby the liquid is permitted to escape and aerify, under control, in order to diffuse the same throughout the surrounding air. And, finally, my object is to provide a device for aerifying water, medicine, perfumery, or other liquids and permitting them to escape into the air, with means for controlling the escape thereof.

Other objects and particular advantages of my invention will be made apparent in the course of the following specification, and that which is new will be brought out in the appended claims.

One manner for the accomplishment of my invention in a practical way is shown in the accompanying drawings, in which—

Figure 1 is a side elevation of my invention complete, as it would appear in actual practice. Fig 2 is a central longitudinal section of my invention, as taken on line 2—2 of Fig. 3. Fig. 3 is top plan view of my invention. Fig. 4 is a bottom plan view of my invention, and Fig. 5 is central cross section of my invention, as taken on line 5—5 of Fig. 3.

Similar indices denote like parts throughout the several views of the one sheet of drawings.

In order that the construction and the operation of my invention may be better understood, and its advantages appreciated, I will now take up a detail description thereof in which I will set forth the construction as briefly and as comprehensively as I may.

The essential requisite of my invention is a ceramic container A, which is preferably tubular as shown, being of such nature as to allow a fluid to gradually seep therethrough and aerify. The ends of the container A are adapted to be closed by the corks or stoppers B and C, in order to confine the fluid D. If the container were left thus without a case it is apparent that the fluid D would rapidly percolate or seep through the clay container A, therefore the case is provided, same having means for controlling the escape of moisture to a certain extent. The body of the case comprises the tubular body portion E, which is of greater diameter and of greater length than is the container A. The ends of the body portion E are adapted to be closed by the removable caps F and G. Said body E may be formed of a single sheet of metal with the edges joined forming the seam *e* on the under-side, or it may be formed seamless, or with a plurality of sheets joined together.

Formed through the upper face of the body E is a plurality of exit apertures *f*, which should be arranged in regular order.

Contacting with the inside of the body E along the upper portion thereof is the damper H, which has apertures *h* therethrough which correspond and are adapted to register with the apertures *f*. Said damper is adapted to slide endwise, being of less length than is the body E.

Formed through the central portion of the upper side of the body E is a slot *g* which is formed longitudinally of the body E and of about the same width as is the width of the stem of the screw I. Said screw is disposed through the damper H to which it is rigidly secured as by the nut J. The said screw and nut are adapted to retain the damper tightly against the inside of the upper portion of the body E, but in such manner as to allow the damper to be moved endwise within the limits of the slot *g*.

The outside diameter of the container A being considerably less than is the inside diameter of the body E it is important that the container be suspended midway of the case, for which purpose three spring tongues are provided in each end of the case as shown. The tongues in one end of the case are denoted by indices K; while those in the other end are denoted by L. Said springs are disposed at angles, being so

formed and arranged as to allow the container to slide into and out of the case, but holding it in the center of the case when in operative position.

Formed through the underside of the body E of the case are the inlet apertures *p*, through which air may enter the case, pass up around the container, and then pass out through apertures *f*, that is if the damper be open.

Letters R and S denote two rings, same being located near each end of the body E and in alinement with the screw I.

Connecting the rings R and S is a hanger or chain T, by means of which the entire device may be suspended from a nail or otherwise.

In order to make the lids F and G tight when in place I form the respective ridges *m* and *n* around the end portions of the body E against which the edges of the respective ends of the lids engage when they come to position.

In practice the container A is to be filled, or partly so, with any desired liquid, the ends of the container being closed by the corks B and C, after which the container is inserted inside the case between the various tongues K and L which hold the container in suspension. The caps F and G are then placed on the ends of the case, after which the device may be suspended from a nail or the like by means of the chain T. Now if the damper H be closed, that is closing the holes *f*, then the evaporation of the fluid will be very slow, but if it be desired to hasten the evaporation of the fluid then one has only to open the damper H, that is so that the apertures *h* will register with apertures *f*, which will allow a circulation of air around the container thereby hastening the evaporation of the fluid. The fluid employed in the container may be ordinary water, for humidifying the atmosphere of a room, a show case, or wherever it is desired that the air be moistened to a greater or less extent. If desired the fluid employed may be perfume, which may be used for a variety of purposes as desired. But perhaps the most important use to which my invention may be put is as a disinfector, the disinfectant being thus easily distributed and without contact with furniture, carpets, or clothing, but just the right amount may by this means be diffused into the atmosphere of an inclosure.

I desire that it be understood that various changes may be made in the several details of construction from that herein shown and described, particularly as to the outside case, without departing from the spirit of my invention and without sacrificing any of the many advantages thereof.

Having now fully shown and described my invention and the best means for its construction to me known at this time, what I claim and desire to secure at this time, is—

1. A humidifier and disinfector, comprising in combination a porous ceramic container for liquid, same being of tubular form, stoppers closing the ends of the container, a case for inclosing the container same being of greater length than is the container, caps for closing the ends of the case, a plurality of spring tongues secured on the inside and near the ends of said case and adapted to hold the container centrally of the case, means for suspending the case whereby it will hang in a horizontal position, there being a plurality of apertures formed through the upper side of the case, a damper mounted on the inside of the case and adapted to close said apertures in the case, and means for sliding said damper, all substantially as shown and described.

2. A humidifier and disinfector comprising in combination a porous earthenware container formed of a single length of material and formed tubular in form, corks for closing the ends of said container same being removable, a case of non-porous material adapted to surround and inclose said container, said case being larger both in length and diameter than the container, spring tongues adapted to retain the container central of said case, means located near each end of the case whereby it may be suspended horizontally, there being a plurality of apertures formed in the upper surface of the case, a sliding damper located on the inside of the case and adapted to be moved to open and close said apertures, there being inlet apertures formed through the underside of the case to allow air to enter, pass around the container, and escape through first named apertures, all substantially as set forth.

In testimony whereof I have hereunto subscribed my name to this specification in the presence of two subscribing witnesses.

FRANK KOCHER.

Witnesses:
R. E. RANDLE,
ROBT. W. RANDLE.