

(No Model.)

H. R. ALLEN.
DISINFECTING APPARATUS.

No. 569,596.

Patented Oct. 20, 1896.

Fig. 1.

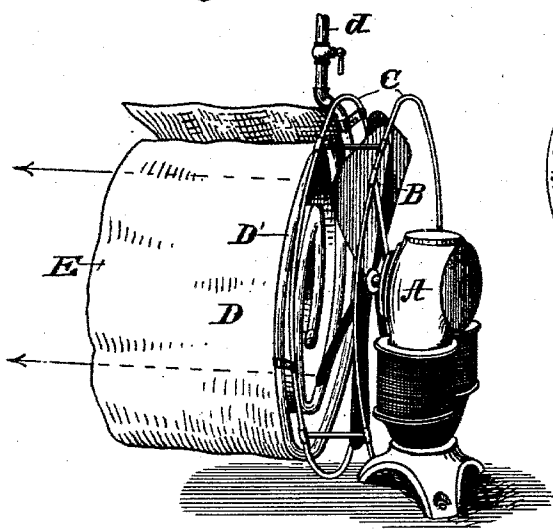


Fig. 2.

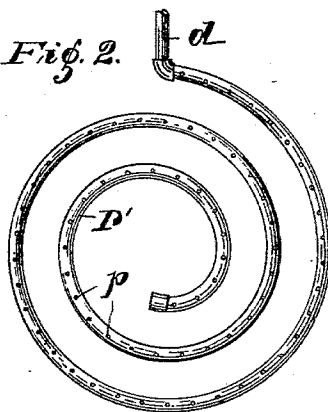
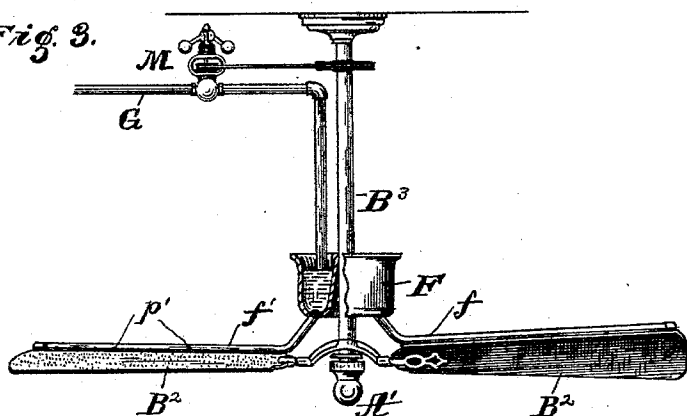


Fig. 3.



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DISINFECTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 569,596, dated October 20, 1896.

Application filed June 3, 1895. Serial No. 551,509. (No model.)

To all whom it may concern:

Be it known that I, HORACE R. ALLEN, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Devices for Distributing Disinfectants; 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.

The object of this invention is to provide means for the thorough distribution of disinfectants, deodorizers, &c., throughout the atmosphere of a room, and is specially adapted for use in hospitals, sick-rooms, and like places.

The invention consists, primarily, in producing a current of air by means of a fan and impregnating the current with moisture containing the disinfecting or deodorizing material in the manner as will hereinafter be fully described, and specially pointed out in the claims.

Referring to the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a view in perspective of a vertical rotary electrically-propelled fan provided with my attachment for moistening the air-current produced by the fan and impregnating it with the liquid disinfectant. Fig. 2 is a detail in front elevation of the tube through which the water or liquid disinfectant will be supplied; and Fig. 3 is a view in side elevation, partially in section, of the modified construction required for horizontally-rotating fans.

Referring to Fig. 1, A is an electric motor of usual construction, B the fans, and C the guard, such as is usually employed on machines of this class. D is my attachment, which consists of a coiled tube D', having its inner end closed and having its outer end connected by means of the pipe $\bar{d}$ with a reservoir containing the supply of disinfectant. The outer side of the coiled tube will be provided with a series of perforations p , through which the liquid admitted into the tube will be ejected. E is an absorbent material, preferably cotton or cloth, which is made to cover the tube and will be loosely extended for a

suitable distance on that side of the coiled tube having the perforations.

The liquid supplied through the pipe $\bar{d}$ will be ejected through the openings p in the coiled tube D' and will saturate the absorbent material E. The current of air set in motion by the fan will pass between the coils of the tube D' and between the layers of the absorbent and saturated material and will cause the said material to stand out in the manner clearly shown in Fig. 1, allowing free passage of the air therethrough. The current of air passing between the layers of moistened cloth will cause rapid evaporation of the moisture and consequent absorption of the heat contained in the air, so that a cool and refreshing stream of air will be given off from the fan and the temperature of the room very appreciably reduced, and the air at the same time thoroughly intermixed and saturated with the disinfectant.

In the device shown in Fig. 3, A' is a ceiling-fan of usual construction having horizontal rotary movement of the blades B³. F is a reservoir secured to the revolving post B³ in a manner to revolve with the post, and f and f' are tubes conveying the contents of the reservoir to the blades and by extending along the blades distributing the contents uniformly throughout the whole length of same. To this end the parts of the tubes f and f' , resting on the blades, will be provided with a series of perforations p' , and the tops of the blades will preferably be covered with an absorbent material, such as cloth. G is a pipe connected with the water or other liquid supply to be deposited on the blades, and is arranged so as to empty the contents of the pipe into the open mouth of the reservoir in the manner as clearly shown in the drawings.

The quantity of the liquid used will depend on the speed of the fan, and I have shown in Fig. 3 a means for regulating the supply. This consists of a valve in the supply-pipe, which will be controlled by means of the governor M, and the governor will be connected with some rotary part of the fan or motor, whereby the speed of the fan will control the opening and closing of the valve.

I do not wish to limit this invention to the details of mechanism shown and described,

as many modified constructions can be adopted to furnish the liquid disinfectant to the current of air from a rotary fan; but

What I do claim as new, and wish to secure by Letters Patent of the United States, is—

1. In a rotary fan having blades covered with an absorbent material adapted to be kept moist by the continual supply of liquid disinfectants thereto, the combination with said covered blades of means for moistening the absorbent surface consisting of a reservoir to contain the liquid to be applied to the blades, a perforated pipe running the whole length of each of the blades and revolving therewith, valves for regulating the discharge of liquid through the pipe and tubular connection of the pipes with the reservoir, substantially as described and specified.

2. The combination with the blades B² covered with an absorbent material, of the reservoir F, pipes *f* and *f'* leading from the tank to the blades, said pipes being perforated to discharge liquid matter contained in the reservoir onto the absorbent material of the blades, and the supply-pipe G emptying into the reservoir and having a governor M to open and close a valve in the pipe G substantially as described and for the purposes specified.

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

HORACE R. ALLEN.

Witnesses:

JOSEPH A. MINTURN,
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