S. MARCOVITZ.

DEODORIZING ATTACHMENT TO ELECTRIC FANS.

APPLICATION FILED MAY 10, 1918.

1,321,535. Patented Nov. 11, 1919.

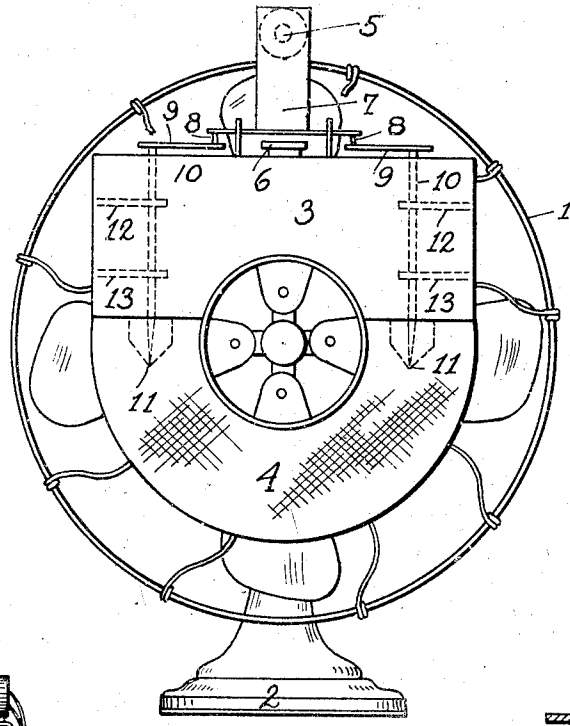


Fig 1

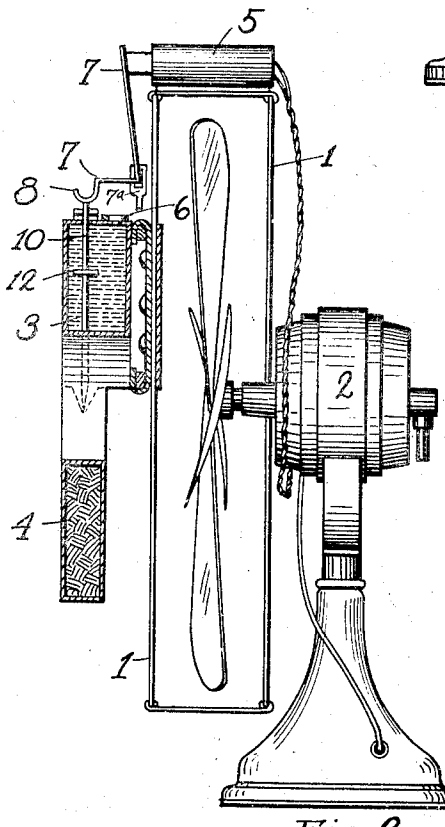


Fig 2

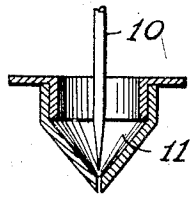


Fig 3

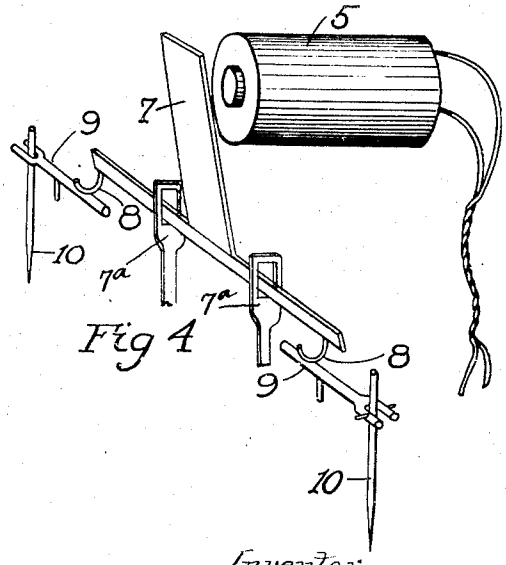


Fig 4

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UNITED STATES PATENT OFFICE.

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DEODORIZING ATTACHMENT TO ELECTRIC FANS.

1,321,535. Specification of Letters Patent. Patented Nov. 11, 1919.

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To all whom it may concern:

Be it known that I, SAMUEL MARCOVITZ, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Deodorizing Attachments to Electric Fans, of which the following is a specification.

My invention relates to improvements in deodorizing attachments for use in connection with electric fans and the principal object of my invention is to provide such an attachment for presenting liquid to the draft of the fan whereby the same is readily vaporized and distributed for the purpose of disinfecting, fumigating and deodorizing and is applicable for use in public buildings such as theaters and the like and for a variety of other purposes.

Another object of the invention is to provide means whereby the same means which sets the fan in motion may be utilized for starting the flow of liquid from a container, reservoir or tank and for stopping the same concomitantly with the stopping of the fan.

Another object of the invention is to provide a new and improved magnet for controlling the flow of liquid.

With these and incidental objects in view the invention consists in certain novel features of construction and combinations of parts, the essential elements of which are set forth in the appended claims, and a preferred form of embodiment of which is hereinafter described with reference to the drawings which accompany and form part of the specification.

Of the said drawings,—

Figure 1 is a front elevation of an electric fan equipped with my improved deodorizing attachment.

Fig. 2 is a side elevation of the same, the attachment being shown in section.

Fig. 3 is the detached detail sectional view of one of the needle valves.

Fig. 4 is a detached fragmentary perspective view of the magnet and magnet-operator mechanism.

Like numerals refer to like parts in the several figures.

1 represents the guard of the fan, 2 the base thereof, which are of the ordinary type and construction. 3 represents a container, reservoir or tank mounted on the guard of the fan as shown in Fig. 2 and adapted to hold deodorizing or disinfecting liquid which it is desired to have the fan vaporize and distribute. 4 represents an absorbent pad situated below and in contiguity with said reservoir 3.

Needle valves 11, Figs. 1 and 3, permit escape of liquid from the reservoir to the pad 4 when the valve rods 10 are elevated. Normally the valve rods 10 are seated with their needle points closing the valves 11 and preventing escape of liquid from the reservoir. Means is provided for raising the rods 10 which means will now be described.

12 and 13 represent guides which support the rods 10 in a vertical position, while permitting vertical movement thereof; these guides are themselves secured to and supported by the walls of the container 3. Near its upper end each of the rods 10 is pivotally connected between the bifurcations of a respective rod or lever 9 pivoted to the main frame of the container. 7 represents a trip plate or armature pivoted on the container 3 as at 7^a and having elongated lateral portions, each provided with a crescent shape cam 8 in juxtaposition to the inner end of a respective one of said levers 9. 5 represents a magnet which may be of any suitable construction, such as that shown in Figs. 1, 2 and 4.

The operation of the above described mechanism is as follows:

When the electric current is turned on to set the fan in motion it effects a magnetizing of the core of the magnet 5 which draws up trip plate or armature 7 so that cams 8 press down the inner ends of levers 9 thereby raising the pins 10 and opening valves 11 so that the deodorizing or fumigating liquid may pass out into the absorbent pad 4. The fan forces air against the pad 4, thereby vaporizing the liquid and expelling the vapor and thoroughly mixing it with the surrounding atmosphere.

While the form of mechanism herein shown and described is admirably adapted to fulfil the objects primarily stated, it is to be understood that it is not intended to confine the invention to the one form of embodiment herein shown and described as it is susceptible of embodiment in various forms, all coming within the scope of the claims which follow.

What I claim as new and desire to secure by Letters Patent is:—

1. In a device of the nature described, the combination of a reservoir provided with

needle valves, valve rods therefor, and electro-magnetic means for operating said valve rods.

2. In a device of the character described the combination of a reservoir provided with valves, mechanism for opening said valves, and electro-magnetic means for operating said valve opening mechanism, and absorbent pad arranged adjacent to said valves for absorbing liquid emitted thereby.

3. In a device of the character described the combination of a reservoir provided with valves, rods for opening and closing said valves, pivotally mounted supporting members for said rods and electro-magnetic means for operating said supporting members to cause said rods to open and close said valves.

4. In a device of the character described, a combination of a reservoir provided with valves, valve rods therefor, levers for operating said valve rods, cams for operating said levers and electro-magnetic means for operating said cams.

5. In a device of the character described, the combination of a reservoir provided with valves, valve rods therefor, levers for operating said valve rods, cams for operating said levers, a trip plate for operating said cams, and electro-magnetic means for operating said trip plate.

6. The combination with an electric fan and means for supplying motor power thereto, of a reservoir adapted to hold and dispense liquids and provided with valves, a pad for receiving liquid from said valves and maintaining the same in the current produced by said fan, a magnet for opening and closing said valves, and means connecting said magnet with said motor power supplying means.

7. The combination with an electric fan and the means for supplying power thereto, of a reservoir adapted to hold and dispense liquids and provided with valves, mechanism for controlling said valves and comprising an electro-magnet, said magnet being energized from the first said means upon setting said fan in motion.

In testimony whereof I affix my signature.

SAMUEL MARCOVITZ.