April 1, 1930. W. A. BROWN ET AL 1,752,778

COOLING, DRYING, AND LIGHTING FIXTURE

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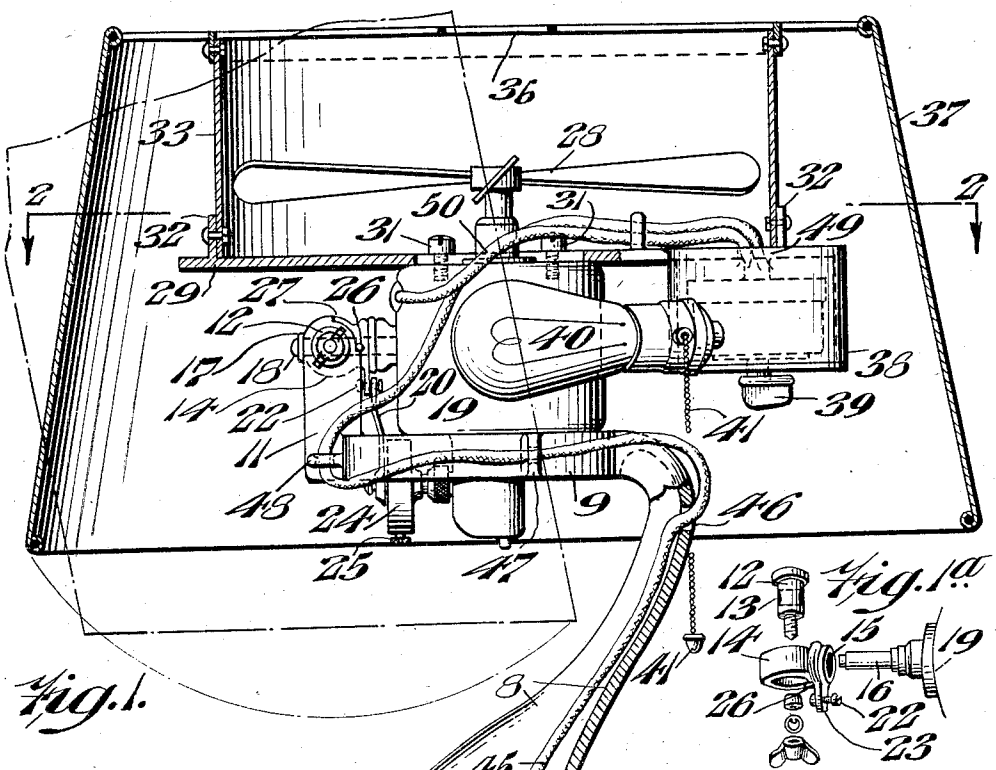


Fig. 1.

Fig. 1a.

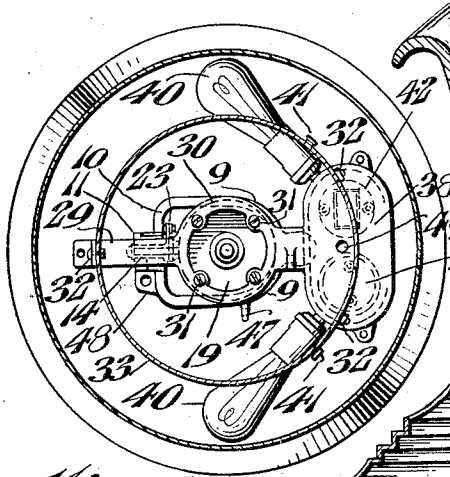


Fig. 2.

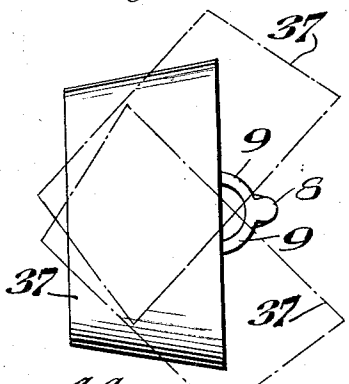


Fig. 3.

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Fig. 4.

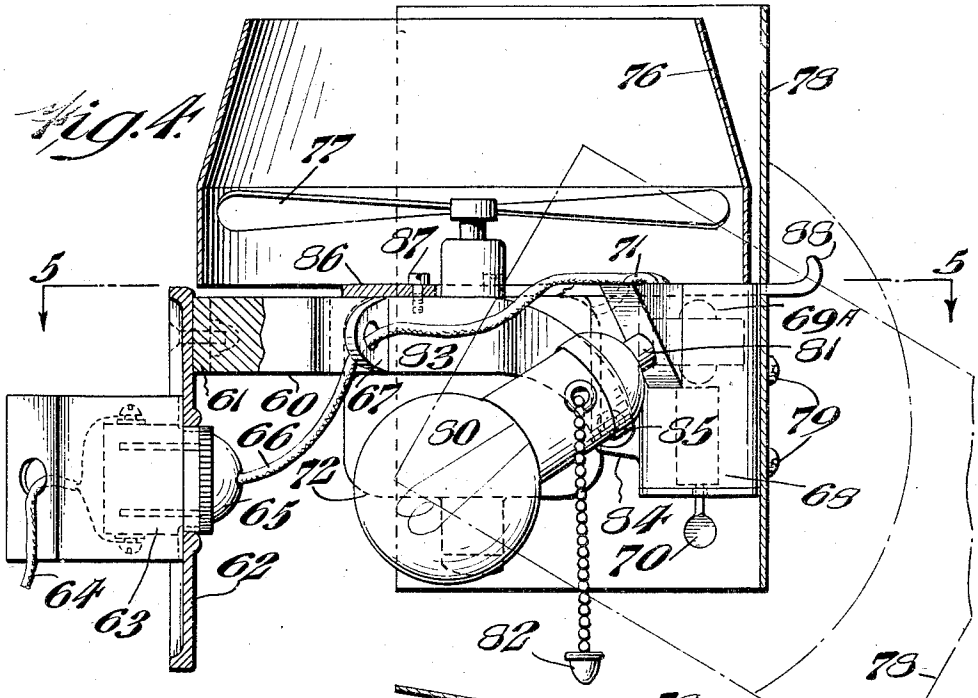


Fig. 5.

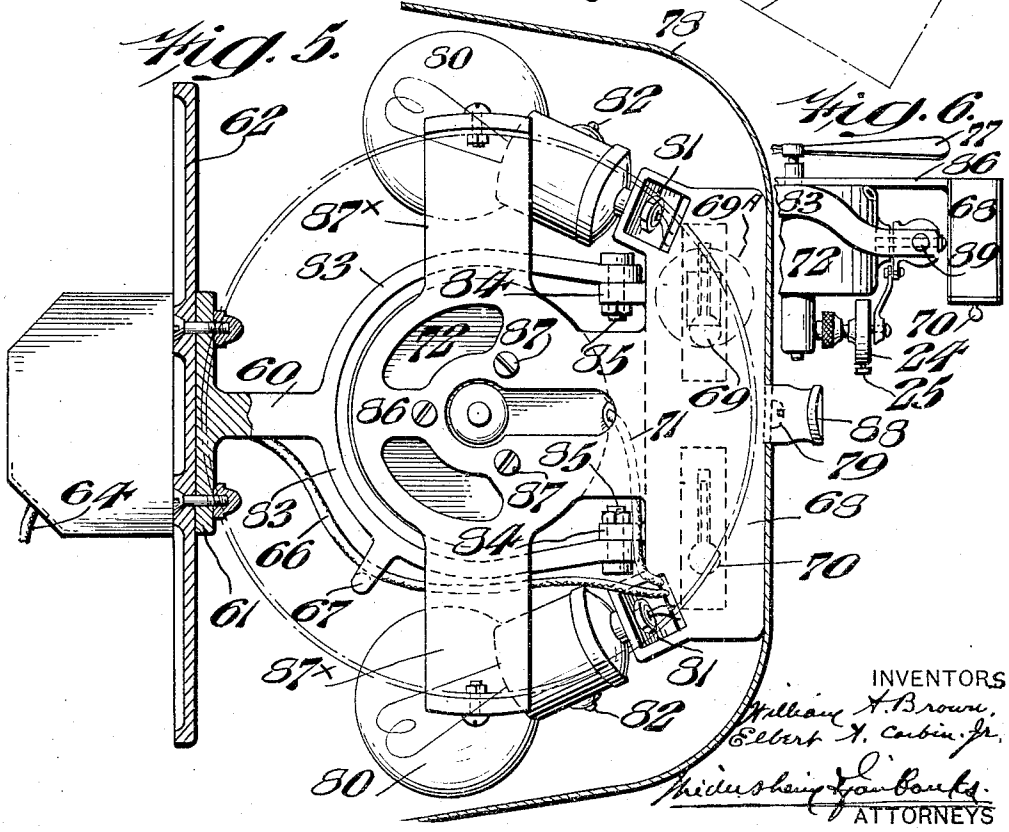


Fig. 6.

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UNITED STATES PATENT OFFICE

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COOLING, DRYING, AND LIGHTING FIXTURE

Application filed May 27, 1926. Serial No. 111,905.

Our invention consist of a novel cooling, lighting and drying fixture having novel features of stability and functioning, wherein the assembly of an electrically operated blower, and control devices in conjunction with a shade and lights forming a compact and close-coupled combination of parts, is supported, so that the axis of the support does not pass through the center of gravity of the assembled movable parts in any position that can be occupied by said movable parts and wherein the rotating movement caused by gravity is limited by a mechanical stop at any desired position, thereby obviating the necessity of frictional positioning devices or the use of counterbalancing weights, or the like.

It further consists of a novel construction or assembly wherein the switch box and switches are mounted on the blower and are movable in unison with the blower, as a unit.

It further consists of a novel construction of supporting arms, a blower mounted thereon and carrying a frame from or upon which is supported a junction box, carrying a plurality of lights, and an inner cylinder or guard, said cylinder or guard also supporting a shade, said blower, junction box, cylinder and shade being manually adjustable as a unit.

It further consists of other novel features of construction and advantage, all as will be hereinafter pointed out in the specification and claims appended hereto.

For the purpose of illustrating our invention, we have shown in the accompanying drawings, forms thereof which are at present preferred by us, since they will give in practice satisfactory and reliable results, although it is to be understood that the various instrumentalities of which our invention consists can be variously arranged and organized, and that our invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents a vertical sectional view of a novel cooling, drying and lighting fixture, embodying our invention, certain parts being shown in elevation. Fig. 1ª represents a detached view of a portion of the motor oscillating means.

Figure 2 represents on a reduced scale, a horizontal section on line 2—2 Figure 1, certain of the parts being shown in elevation.

Figure 3 represents on a reduced scale a top plan view of Figure 1, showing the shade in an inverted position with the extreme positions of oscillation shown in dotted lines.

Figure 4 represents a vertical sectional view of another embodiment of our invention, certain of the parts being shown in elevation.

Figure 5 represents a horizontal section on line 5—5 Figure 4.

Figure 6 represents a fragmentary side elevation of another embodiment of our invention, wherein certain of the parts are shown as being adapted to oscillate.

Similar numerals of reference indicate corresponding parts. Referring to the drawings:—

Referring first to Figures 1 and 2, 1 designates the base having the weight 2 therein, from which base extends the tubular upright member 3 having its lower end in threaded engagement with the horizontal wall 4 and secured therein by the nut 5. The tubular upright member 3 may be composed of a single tube or of two tubes, as seen at the lower portion of Figure 1, and the upper portion of one of said tubes may be threaded and provided with a nut 6 resting upon a shoulder 7 in the upper offset portion 8, which may be of any desired contour or ornamental shape, so as to simulate at the front a lily or the like, as seen in Fig. 1. The upper portion of the offset member 8 is bifurcated or provided with a pair of side arms 9, which are joined by the front transverse member 10 so as to form a yoke from which extends upwardly, the clevis 11 which comprises a pair of forked arms through the upper portion of which passes transversely the pin 12 having a transverse hole 13 therethrough as seen in Figure 1ª. The eye 14 is positioned in said clevis and through said eye passes the pin 12, which when in position has its hole 13 in alignment with the hole 15 and through said holes 13 and 15 extends the rod 16, on whose outer

end is the washer 17 and the screw 18, which comprises the fastening device therefor. The rod 16, the pin 12 and the eye 14 function as a swivel when the parts are assembled. The rod 16 projects from or is a part of the casing of the electric motor 19, and an oscillatory motion is imparted thereto by means of the link 20 whose upper end is pivotally connected by the bolt 22 to the ear 23 of the eye 14. The lower end of the link 20 is pivotally connected to the rotor 24, whose movement is controlled by the manual adjustment of a set screw 25. The pin 26 seen in Fig. 1 is fast in a side wall of the eye 14, as will be understood from Figs. 1 and 1ª, and when the parts are in the position seen in Fig. 1, the motor rests upon the yoke formed by the arms 9. When the parts are inverted or turned into the position seen in dotted lines in Fig. 1, said pin 26 abuts against the shoulder 27 seen in Fig. 1 and arrests the further movement of the blower and its adjuncts, so that the parts appear in the position seen dotted in Fig. 1, when inverted. The motor 19 drives the fan 28, said motor and fan being hereinafter described as a blower, and to the top of the casing of said motor is attached a frame 29 composed of the apertured or circular shaped member 30, (see Fig. 2) which is secured to the top of the motor casing by bolts 31. The frame 29 carries upwardly extending lugs 32, within which is positioned the inner cylinder or guard 33.

36 designates the top grid or guard. The shade 37 which is preferably of conical or other shape, may be composed of any suitable material and is supported at its upper end from the grid or grid members 36, as will be understood from Fig. 1. 38 designates a junction box which is bolted or otherwise secured to the rear end of the frame 29 and is provided with a button or switch member 39, and with electric lights 40, which are preferably two in number, and are controlled by the pull chains 41. The junction box 38 is provided with a reactance or speed control coil 42, as well as the switch 43, which is controlled by the button or manually operated member 39. The source of electrical energy can be taken from any suitable point, but we preferably plug into any convenient base board outlet or electric light socket by means of the plug 44 which may be of the usual conventional type as seen at the lower portion of Fig. 1, said plug having the electric conductors 45, which pass upwardly through and are concealed in the tubular member 3 and in the present instance pass out therefrom through the aperture 46 and thence through the eyes 47 and 48 and enter the junction box 38 at the point 49. From the junction box leads the cable 50 to the motor 19, said cable 50 leaving the junction box through the hole 49.

The operation is as follows:—

The parts normally appear as seen in Figs. 1 and 2. To obtain light, the chains 41 are pulled, and to obtain air, the shade 37 and its attached adjuncts may be rotated into the position seen in dotted lines in Fig. 1. The fan or blower is then in its inverted position or turned 90 degrees from its normal position as seen in Fig. 1, and the movement of the blower and its adjuncts is obviously arrested by the contact of the pin 26 with the shoulder 27, see Fig. 1. By adjusting the set screw 25, the operator can start the oscillation of the geared control device of the motor 19, so that the motor and its adjuncts will be oscillated and moved alternately from side to side. The fan may be used for cooling or drying purposes in hot weather or in conjunction with electric lights. It will thus be seen from the foregoing that our novel device is applicable for lighting, drying and cooling purposes simultaneously or independently of each other.

It is to be understood that our novel device can also be operated in an upright, inclined or inverted position under all the foregoing conditions.

In Figs. 4 and 5, we have shown another embodiment of our invention, wherein the yoke 60 has its base 61 bolted or otherwise secured to the wall panel 62, in the rear of which is attached the socket 63 to which the cable 64 leads from the source of power. 65 designates the plug which is in detachable connection with the socket 63, as is customary, said plug having the cable 66 leading therefrom through the eye 67 to the junction box 68, which is of substantially the same construction as the junction box 38 already described, and is provided with the two switches 69 and 70, one of such switches as 70 controlling the flow of the current to the cable 71 which leads to the motor 72, the other switch 69 serving to interpose the reactance or speed control coil 69ª between the switch 70 and the cable 71 if a change of speed of the motor 72 is desired.

The cylinder or conical member 76 and the fan or blower 77 is positioned above the motor 72 as in the construction previously described. 78 designates the shade, which is secured to the junction box 68, by means of the screws or other fastening devices 79.

80 designates lights whose sockets are secured to the junction box 68, at the points 81, the manner of wiring being understood from Fig. 5, and said lights being operated by the pull chains 82 or other conventional devices. The yoke 60 hereinbefore referred to is composed in part of the arms or bifurcations 83, at whose outer ends are pivotally secured the lugs 84 attached to the junction box 68. 85 designates the bolts or pivotal supports common to the ends of the arms 83, and the lugs 84. 86 designates the frame secured to the top of the casing of the motor 72, by means

of bolts, screws or the like 87, said frame being provided with diametrically opposed arms 87×, it being apparent from Fig. 5, that said frame 86 may form the continuation of the top of the junction box 68, if desired. 88 designates a finger piece or handle which may be integral with the frame 86, if desired, and projects forwardly through the shade 78, so as to afford convenient means of inverting the blower, shade, junction box, lights and their adjuncts as a unit from the position seen in full lines in Fig. 4, to the position seen dotted therein.

It will be apparent that the yoke 60 and its arms 83 are fixed or stationary and that said arms 83 serve to support the frame 86 and its adjuncts, said frame 86, motor 72, junction box 68, blower 77, lights 80 and shade 78, will be movable in unison as a unit, when desired by a downward pull upon the handle 88.

It will be noted that the pivotal points 85 are offset with respect to the axis of the blower and the other elements and for this reason the device is stable when the arms 87× are brought down against the arms 83 which brings the device into its normal upright position. The operation in general is similar to that already described with respect to Figures 1 and 2. In the construction seen in Fig. 6 we have shown fragmentally substantially the same arrangement, as already described, the motor 72, the yoke arms 83, the junction box 68, the blower 77 and their adjuncts and the frame 86 being substantially the same. The pivotal point 89, seen in Fig. 6 is, however, the same construction as that seen in Fig. 1ª, and the means for effecting the oscillation of the motor 72 and its adjuncts are the same as already described with respect to Figures 1 and 1ª, so that a detailed description thereof is unnecessary. Our combined cooling and lighting device is of special advantage in hot weather in that it provides a reading lamp wherein the heat of the light or lights is carried away by the blower, through a guard or shade, or both guard and shade may be present. In surrounding the blower with an open-ended air conductor, a vacuum is created the minute the fan and motor are started and a positive, upward, widely effective flow of cool air takes place and a comfortable condition is possible in the hottest weather regardless of the capacity of the lights used in this device. Attention is called to the fact that an ordinary motor and fan with a regulation air guard inclosing the fan blades could not produce this effect for there is no baffling effect at the tips of blades of a standard motor and fan. The vacuum which is created underneath and around our device would not and could not be present without the shade inclosing a fan and its motor in combination when desired with a guard or shade serving to induce a vacuum when the motor is started and a positive flow of air upward is induced underneath and around the device.

It will now be apparent that we have devised a novel and useful construction of drying, cooling and lighting fixture, which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while we have in the present instance shown and described the preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

Having thus described our invention what we claim as new and desire to secure by Letters Patent, is:—

1. In a combined cooling and lighting device, a support, a blower and its motor mounted as a unit to oscillate on said support, a junction box and a light connected with and forming a part of said movable unit, the center of gravity of said unit being out of coincidence with the axis of said support in any position it can assume relatively to said support, and a shade contributing with the blower to direct heat from the light away from a person using the light.

2. In a combined cooling and lighting device, a support, a blower and its motor mounted as a unit to oscillate on said support, a junction box and a light connected with and forming a part of said movable unit, and a shade contributing with the blower to direct heat from the light away from a person using the light.

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