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ROSENBERG

3,384,977

COMBINED LIGHT FIXTURE AND BLOWER

Filed May 25, 1966

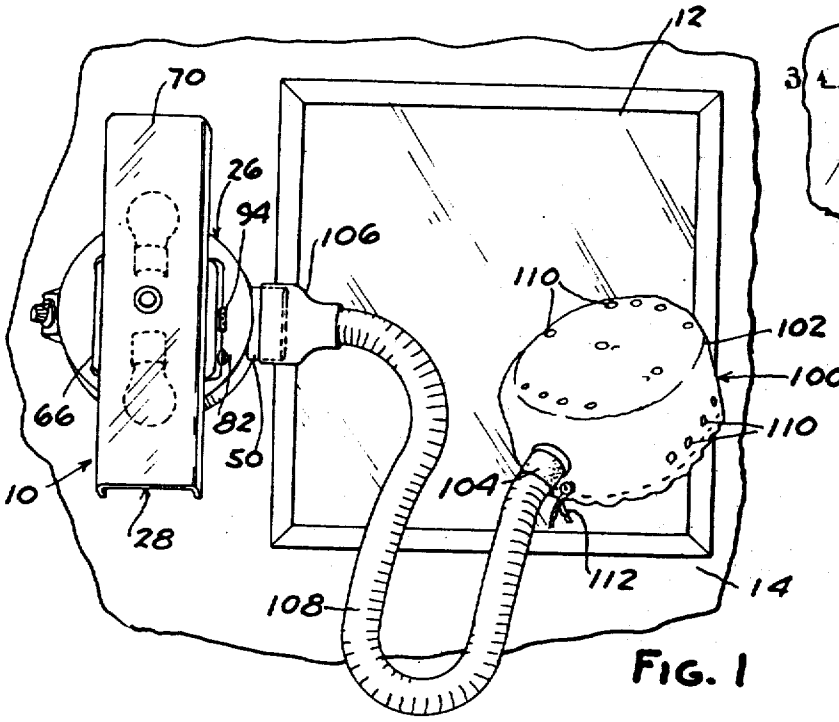


FIG. 1

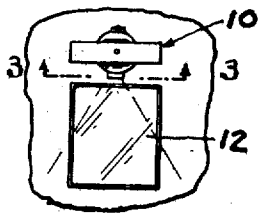


FIG. 2

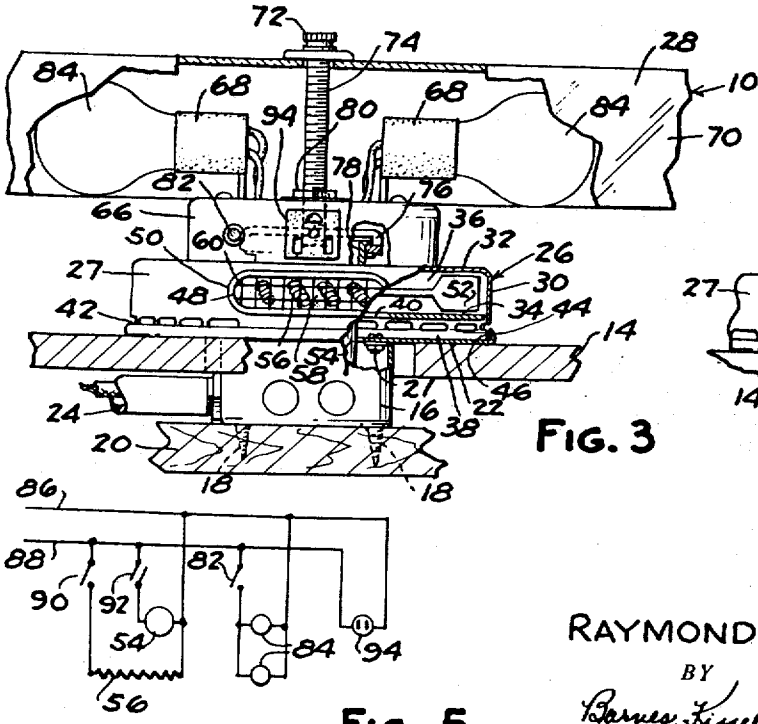


FIG. 3

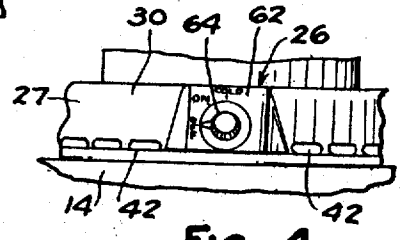


FIG. 4

FIG. 5

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COMBINED LIGHT FIXTURE AND BLOWER

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ABSTRACT OF THE DISCLOSURE

A light fixture for use with a vanity lamp and having a rotatable base in which is housed a heater-blower assembly for directing heated air through an outlet either over the surface of the mirror or through a conduit connected to the outlet and leading to a hair drying hood.

The present invention relates to light fixtures and more particularly to vanity light fixtures for use in conjunction with mirrors in bathrooms or other suitable locations.

An object of the present invention is to provide a compact fixture combination which will light the space in front of a mirror, and will maintain the outer surface of the mirror free from condensed moisture from the atmosphere around the mirror.

Another object of the present invention is to provide such a fixture for use selectively and alternatively to direct a stream of drying air onto the mirror surface or into a connected headpiece for drying the hair of a person, particularly when the person is using the reflective characteristics of the mirror.

Other objects and features of the present invention will be apparent from the following description taken in conjunction with the attached drawings in which:

FIGURE 1 is an elevational view of a vanity light fixture combination including a mirror, and a perspective view of a hood-like headpiece of the present invention.

FIGURE 2 is an elevational view, reduced in size, showing an alternate mounting relation between the mirror and a lighting and heating unit with the hood-like headpiece disconnected.

FIGURE 3 is a fragmentary enlarged view along the line 3—3 in FIG. 2, with parts broken away of the lighting and heating unit of the device shown in FIG. 1.

FIGURE 4 is a fragmentary view of the opposite side of the device shown in FIG. 3.

FIGURE 5 is a schematic diagram of an electrical control circuit for the device of FIG. 1.

Referring now to the drawings, a vanity light fixture of the present invention is designated generally by the reference character **10**. The vanity light fixture is mounted adjacent a mirror **12** on a supporting wall or other support structure **14**, for example, a medicine cabinet or the like. The vanity light fixture **10** may be mounted to one side of the mirror **12** as is shown in FIG. 1 or above or below the mirror as is suggested in FIG. 2.

The vanity light fixture **10** mounts on the support structure **14** by means of a conventional electrical outlet box **16** secured as by screws **18** to a mounting board **20** nailed to studs (not shown) forming part of the wall **14**. The vanity light fixture **10** is fixed to the electrical outlet box **16** by means of conventional threaded fasteners **21** which extend through a base mounting plate **22**. An electrical supply conduit **24** extends from a conventional supply source (not shown) to the outlet box **16** to bring power to the outlet box for supplying electricity to the vanity light fixture **10**.

In the preferred form shown, the vanity light fixture **10** includes a heater and blower unit **26** and a lighting unit **28**. Referring to FIGS. 3 through 5, the heater and blower unit **26** includes a housing **27** having a substantially cylindrical wall **30** and a planar end wall **32**. An inner disc-like partition wall **34** divides the interior of the heater and blower unit housing into an impeller chamber **36** and an air intake chamber **38**. The partition wall **34** includes a central opening **40** which provides fluid communication between the impeller and intake chambers **36, 38**. A plurality of cool air or fluid intake openings **42** are provided in the cylindrical wall **30** to provide communication between the air intake chamber **38** and the atmosphere outside of the vanity light fixture **10**. The edge portion of wall **30** adjacent the open end of housing **27** is formed as a curved peripheral rib **44** which is adapted to snap over the curved peripheral flange **46** on base plate **22** so that heater and blower unit **26** is frictionally retained on base plate **22** and is rotatably adjustable thereon.

A heated air exhaust opening **48** is provided in the cylindrical wall **30** to provide fluid communication between the impeller chamber **36** and the atmosphere out side of the fixture **10**. Exhaust opening **48** is defined by a tubular duct **50** which projects radially from wall **30**. An impeller **52** is rotatably mounted in the impeller chamber **36**. Impeller **52** is operatively connected to a motor **54** carried by the housing **27** and is rotated when the motor is electrically energized.

A resistance type heater element **56** is disposed across the air exhaust opening **48**. Heater element **56** is mounted on and coiled around a ceramic support **58** which is mounted substantially within duct **50** of the blower and heater unit housing so as to heat the air emerging through opening **48** when the heater element is energized. A protective grill **60** is fixed to the outer end of the duct **50** to provide a protective barrier between the heater element **56** and the space outside of the vanity light fixture **10**.

An On-Off switch and heat control **62** is carried by a planar portion of the cylindrical outer wall **30** of housing **27**. The On-Off switch and heat control **62** includes an indicator control knob **64** movable between OFF, ON and COLD positions.

The lighting unit **28** includes a base **66**, light sockets **68** fixed to the base **66** and a translucent, glass shade **70** removably attached to the base **66** by a cap screw **72** threaded on the end of a threaded stem **74**. Stem **74** extends through base **66** and threads into a plate **76** which is supported by a bracket **78** for rotation in a plane parallel to end wall **32** of housing **27**. Bracket **78** is fixed on end wall **32**. Base **66** is adapted to be frictionally clamped in a desired position of rotative adjustment by a clamping nut **80** which presses base **66** against end wall **32**. An electrical On-Off switch **82** is provided to control energization of the light bulbs **84**.

Referring to FIG. 5, an electrical supply and control circuit for the vanity light fixture **10** includes electrical conductor wires **86, 88** which are disposed within the conduit **24** and are connected to a conventional 110 volt, 60 cycle supply. The heater element **56** and the impeller motor **54** each have one side connected to the supply conductor **6** and their other sides connected to supply conductor **88** through switches **90, 92** respectively, of control **62**. The switch **92** has a wiping type of fixed contact. When the control knob **64** of the control **62** is moved to the ON position, the movable contacts of switches **90, 92** engage their respective fixed contacts to connect the heater element **56** and the motor **54** across the supply lines **86, 88**. When the control knob **64** is moved to the COLD position, switch **90** opens and switch **92** remains closed because the movable contact of the switch **92** continuously maintains the blower motor **54** connected across the supply conductors **86, 88** by means of extended portions of the wiping type of fixed contact.

Light bulbs 84 are selectively connectable across the supply lines 86, 88 by means of the On-Off switch 82. A conventional supply socket 94 mounted on light base 66 is shown schematically in the electrical drawing in FIG. 5.

When control knob 64 is moved to the COLD position, only switch 90 is closed. Impeller motor 54 is thus energized so that the rotating impeller 52 draws air into and through the cool air inlet openings 42 into the intake chamber 38, through the central opening 40 in the partition wall 34 and into the center of the impeller 52. Impeller 52 then forces the air in chamber 36 out of the housing through the exhaust duct 50. When the control knob 64 is in the ON position, then both switches 90, 92 are closed to energize the heater element 56 as well as the blower motor 54 so that the air is heated as it is blown through duct 50.

Referring to FIGS. 1 and 2, the vanity fixture 10 is mounted on the support structure 14 with the exhaust air outlet duct 50 pointed toward the mirror 12 so that air blown from the ducts is directed into the space in front of the mirror 12. The air blown from the duct is therefore caused to sweep across the surface of the mirror drying the mirror to remove any condensed moisture on the mirror and to prevent the formation of additional condensed moisture.

A hair drying hood 100 is provided for drying hair by means of the heated air blown from the blower and heater unit. Hood 100 includes a flexible headpiece 102, an air exhaust or outlet fitting 104, an air inlet connection fitting 106 and a flexible hose 108. The flexible headpiece 102 is a double layered piece of non-porous material, for example, a synthetic plastic resin such as polyethylene which fits over the user's head in the conventional manner. The headpiece has openings (not shown) in the inner material lining for permitting the heated air to penetrate the user's hair, outlet openings 110 in the outer layer to permit excess air to escape, and a drawstring 112 for drawing together the peripheral edge of the headpiece around its opening tightly around the user's head to effect an air seal. The outlet fitting 104 is fitted and connected to the headpiece 102 in an air-tight relation to deliver heated air to the space between the two layers of material making up the headpiece. The air inlet fitting 106 is a generally elliptical tubular duct piece shaped to conform generally to the exhaust duct 50 and sized to connect to duct 50 by telescoping over the outside thereof.

Thus, the present invention provides a vanity light fixture which includes a blower unit and an exhaust opening for providing a stream of heated air into the space in front of a mirror lighted by the fixture for removing condensed moisture from the mirror and maintaining it moisture free. Portions of the housing around the opening are formed to provide an air hose connector for connecting a hood-like headpiece which fits over the head of the user for drying the hair of the user while also using the light and the mirror. The blower unit 26 is rotatably adjustable on base plate 22 such that the exhaust duct 50 can be directed in any desired direction, depending upon the position in which the unit is mounted relative to a mirror and the use to which the air directed from exhaust duct 50 is put. Another feature of the present invention is that the whole fixture can be mounted on a conventional electrical outlet box in the same manner as an ordinary light fixture.

I claim:

1. A combined light fixture and blower unit adapted for use with a wall mounted vanity mirror comprising a centrally apertured base plate adapted for mounting on an electrical outlet box in a wall surface adjacent a vanity mirror, a housing mounted for rotative adjustment on said base plate, a motor-blower unit in said housing, said motor-blower unit extending through the central opening in the base plate and being adapted to project into the electrical outlet box when the unit is mounted on the outlet box, said housing having air inlet means and also having an exhaust duct projecting from the side wall thereof and adapted to direct a stream of air over the adjacently positioned mirror and a light fixture supported on said motor-blower unit housing.

2. A combined light fixture and blower unit adapted for use with a wall mounted vanity mirror comprising a base plate adapted to be mounted on a wall surface adjacent a vanity mirror, a housing mounted on said base plate for rotative adjustment, said base plate and housing being a circular shape, said base plate having a peripheral flange thereon frictionally engaged by a perpendicular edge of the housing, a motor-blower unit in said housing, said housing having air inlet means and also having an exhaust duct projecting from the side wall thereof and adapted to direct a stream of air over the adjacently positioned mirror, said exhaust duct comprising a tubular nozzle-like member projecting from the wall of the housing in a plane generally parallel to the plane of said base and a light fixture supported on said motor-blower unit housing.

3. A combined light fixture and blower unit adapted for use with a wall mounted vanity mirror comprising a base plate adapted to be mounted on a wall surface adjacent a vanity mirror, a housing mounted on said base plate for rotative adjustment, a motor-blower unit in said housing, said housing having air inlet means and also having an exhaust duct projecting from the side wall thereof and adapted to direct a stream of air over the adjacently positioned mirror, said exhaust duct comprising a tubular nozzle-like member projecting from the wall of the housing in a plane generally parallel to the plane of said base and a light fixture supported on said motor-blower unit housing, said light fixture being supported on said housing for rotative adjustment in a plane parallel to the plane of the rotative adjustment of the housing on the base plate.

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