March 31, 1942. G. DALKOWITZ 2,278,061

ILLUMINATING DRY SHAVER

Filed April 25, 1938

Fig. 1.

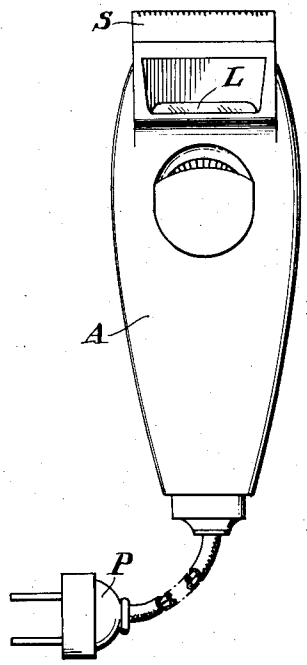


Fig. 2.

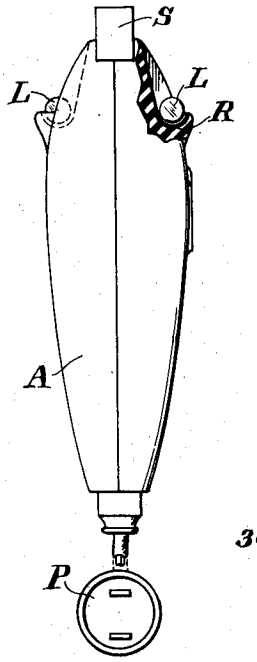


Fig. 3.

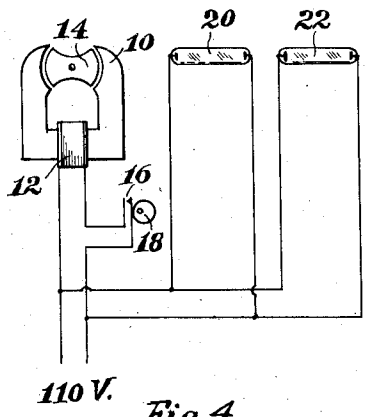


Fig. 4.

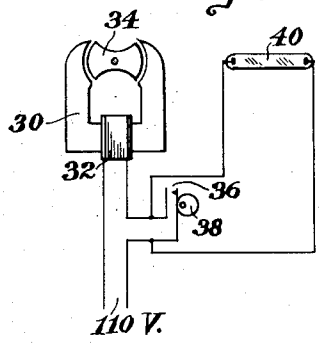


Fig. 5.

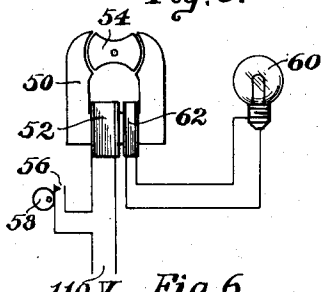


Fig. 6.

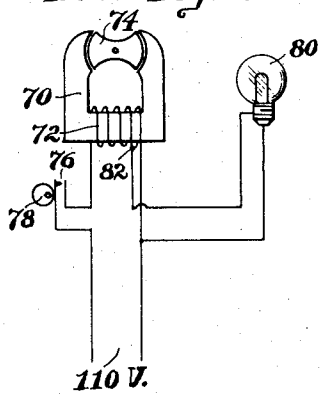


Fig. 7.

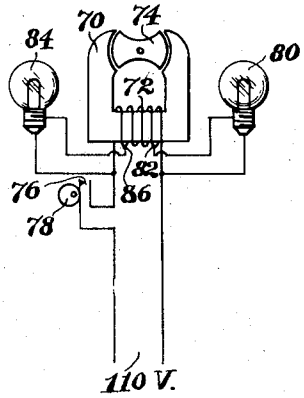
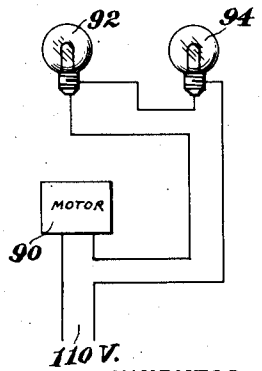


Fig. 8.



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ILLUMINATING DRY SHAVER

Godfrey Dalkowitz, Brooklyn, N. Y., assignor to American Safety Razor Corporation, Brooklyn, N. Y., a corporation of Virginia

Application April 25, 1938, Serial No. 204,131

2 Claims. (Cl. 240—2)

This invention relates generally to dry shavers and more particularly to dry shavers provided with means forming a part thereof or auxiliary thereto whereby the surface to be shaved may be illuminated.

When using shaving devices of any type it is a common experience to find that available sources of illumination are not properly placed in relation to the mirror and consequently it is difficult for the shaver to observe the effects of the shaving operation.

A particularly aggravating situation may arise where a number of people are attempting to shave at the same time, as might happen in the dressing room of a railroad train, when some of the shavers are relegated to more undesirable places.

Where the shaving device is electrically operated it may also happen that only one electrical outlet is available and where that is used for attaching the dry shaver there is no other outlet available for a source of illumination.

Among the general objects of my invention therefore is the provision in association with a dry shaver of illuminating means that will adequately illuminate the surface to be shaved.

Among the objects of my invention is further the provision of a lighting arrangement integral with a dry shaver.

It is also among the objects of my invention to provide illuminating means energized from circuits interrelated with the power circuits of the motor of a dry shaver.

These objects and such other objects as will hereinafter appear or be pointed out are attained by the illustrative embodiments of my invention shown in the drawing, in which:

Figure 1 is a front elevational view of a dry shaver having a lighting arrangement associated therewith;

Figure 2 is a side elevation of the device of Figure 1, portions being broken away; and

Figures 3 to 8 inclusive are diagrammatic views illustrative of various illuminating arrangements adapted for association with a dry shaver.

Referring to the drawing in detail, I have shown at A in Figures 1 and 2 a dry shaver of the conventional type provided with motive power means confined within a casing and actuating a shaving head, indicated at S, mounted in the casing. A plug P enables connection to a source of electric power for the purpose of energizing the motive means and also to supply energy to a lighting arrangement such as is indicated at L.

As appears from Figure 2 I have shown two lighting arrangements L, one on the left side and the other on the right side of the casing of the shaver, and these arrangements L are so positioned that the light thereof will be directed on to the surface to be shaved, and this surface is consequently illuminated on both sides of the shaving head S. In order to make them highly effective they may be placed sufficiently close to the shaving head to provide illumination of sufficient intensity, and further, if desired, a reflecting arrangement R may be provided in back of the lighting arrangement L to distribute the light thereof most effectively.

While two lights L have been shown in Figure 2 it is to be understood that this is an arbitrary number selected by way of example for purposes of illustration, and that for certain purposes more than two lights, or again only one light, may be found desirable. It is also to be understood that I do not intend to restrict myself to the exact type of shaving device shown, nor to the exact positioning of the lights L in relation thereto.

In Figures 3 to 8 inclusive I have shown a number of electrical circuits adapted for use with an electrically operated shaving device provided with electrically energized illuminating means.

Referring first to Figure 3 I have therein shown a motor of the magnetic type having a field magnet 10 energized intermittently by the field coil 12, a rotating armature 14 and a make and break device 16 to control the field coil circuit that is intermittently closed in synchronism with the rotation of the armature 14, as for example by an eccentric 18 carried by or coupled to the armature shaft. The illuminating arrangement has been shown in the form of two neon lights 20 and 22 connected in parallel to each other and to the motor across the line, which may be conventional 110 volt house lighting circuit. Neon lights have the advantage that they are sufficiently rugged to withstand the handling to which a dry shaver is subjected, and the conditions of its operation, and this is true both of their mechanical as well as electrical characteristics. In the latter respect they are better able to withstand the fluctuations in voltage due to the action of the make and break device of a magnetic motor than are incandescent filament bulbs intended for operation on 110 volt circuits of sufficiently small size to be suitable for use in association with a dry shaver. However I do not intend to restrict myself in

connection with the circuits shown to the use of neon lights as these are shown by way of example merely, and any suitable or preferred type of electric light source may be used.

While I have shown a motor of the magnetic type in Figure 3, because such motors are customarily employed to operate dry shavers, it will be obvious that the circuits illustrated are equally suitable for motors of any type.

In Figure 4 I have shown a motor similar to that of Figure 3, having a field magnet **30**, a field coil **32**, an armature **34**, a make and break **36** and means for operating the make and break **38**. A light **40** shown illustratively as of the neon type is connected across the make and break so that the high tension, high frequency currents resulting from the sudden opening and closing of the make and break may be utilized to energize the light **40** and in turn the light **40** will serve to absorb these currents and improve the action of the motor, this action being similar to that of a condenser.

In Figure 5 I have again shown a magnetic motor provided with a field magnet **50**, energized by the field coil **52**, a rotating armature **54**, and a make and break **56** actuated by means **58**. The lighting arrangement in this case is shown as consisting of a low voltage incandescent bulb **60** drawing current from a coil **62** surrounding the field magnet. The coils **52** and **62** constitute in effect a transformer or induction coil whereby the periodically interrupted 110 volt current, whether alternating or direct, serves to energize the coil **62**. However during this transformation the potential of the 110 volt house lighting circuit is lowered so as to adapt it for operation of the lamp **60**.

In Figure 6 is shown a motor of the magnetic type having its field magnet **70** energized by a field coil **72** that has a make and break device **76** in series therewith, and this make and break device is operated by the eccentric **78** rotated in synchronism with the armature **74**. The lighting arrangement comprises a low voltage illuminating device, such as the incandescent bulb **80**, energized from a section of the coil **72** as by tapping off a lead at the point **82**. This arrangement may be considered either as an auto-transformer construction, in which the voltage is reduced as a result of the transformation of the potential, or it may be considered as a shunt arrangement, or as an arrangement in which a resistance constituted by the untapped section of the field coil **72** is in series with the light **80**.

In Figure 7 I have shown an arrangement similar to that of Figure 6, and for the sake of simplicity the similar parts have been similarly numbered. This figure shows, additionally to the showing of Figure 6, a second incandescent bulb **84** supplied with current by tapping the field coil **72** as shown at **86**. It will be observed that by this arrangement greater efficiency may be attained than if both lights were in parallel on the same tap, as overloading of a section of the coil is prevented by the more uniform distribution.

In Figure 8 I have indicated at **90** an electrical motor in series with a pair of incandescent bulbs **92** and **94**. This arrangement illustrates another manner of using incandescent bulbs, of voltages other than 110, rather than using 110 volt bulbs, which are apt to be too delicate in construction or excessively large for the purposes here intended. It further illustrates the use of the illuminating means in series with the motor used to actuate the dry shaver, whereby a motor designed for less than 110 volts may be used on a 110 volt circuit.

It is to be understood that the circuits of Figures 3 to 8 inclusive may be varied, as to the type of motor used, the number of lights, and the electrical circuits connecting them. For example, any suitable or preferred number of lights connected in series, parallel or series-parallel may take the place of those shown.

While I have herein disclosed several illustrative embodiments of my invention, it will be understood that my invention may be embodied in many other forms, as will be obvious to those skilled in the art, without departing from the spirit thereof, and that the disclosure herein is by way of illustration merely, and is not to be interpreted in a limiting sense, and that I do not limit myself other than as called for by the prior art.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent, is:

1. A dry shaver comprising a shaving head, an electrical motor of the magnetic type for actuating said shaving head, said motor comprising a make and break mechanism, and means for illuminating the area to be shaved connected across the make and break mechanism whereby it will serve to absorb the current surges on the making and breaking of said mechanism.

2. A dry shaver comprising a shaving head, an electrical motor of the magnetic type for actuating said shaving head, said motor comprising a make and break mechanism, and means for illuminating the area to be shaved connected across the make and break mechanism, said means being in the form of a gaseous electric discharge tube whereby said tube will absorb current surges taking place on the making and breaking of said mechanism.

GODFREY DALKOWITZ.