Oct. 19, 1937. C. J. PEAK 2,096,379

RAZOR

Filed June 9, 1936

Fig. 1

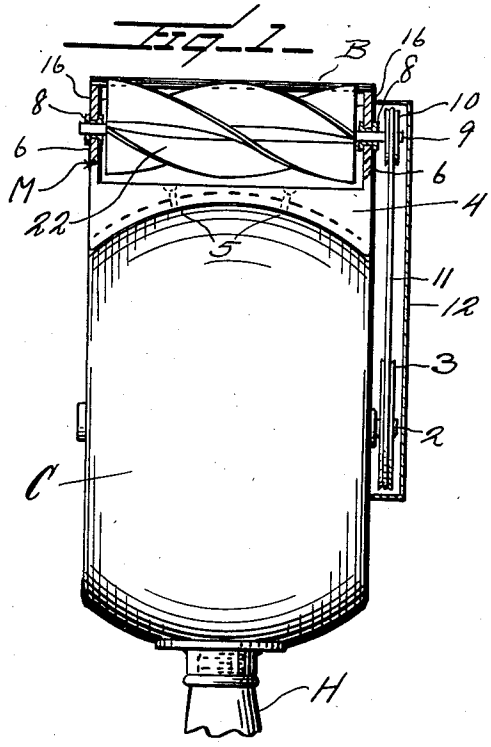


Fig. 2

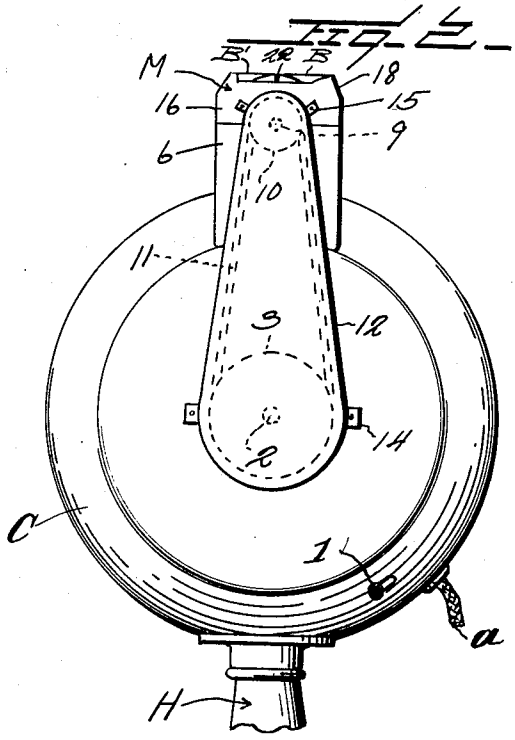


Fig. 5

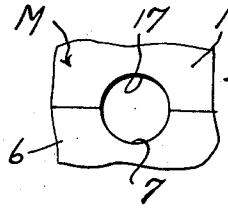


Fig. 4

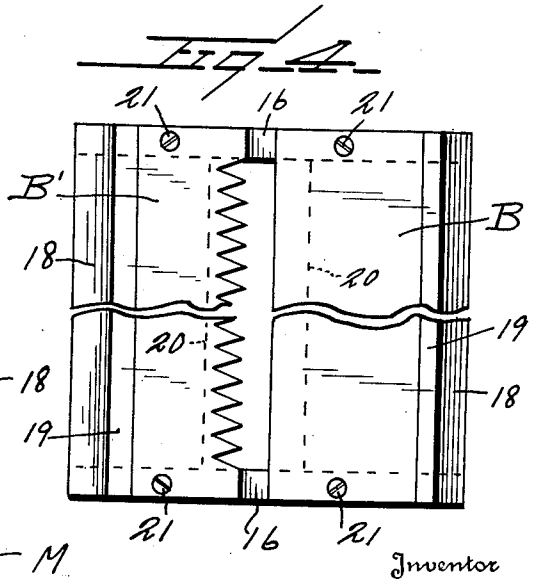
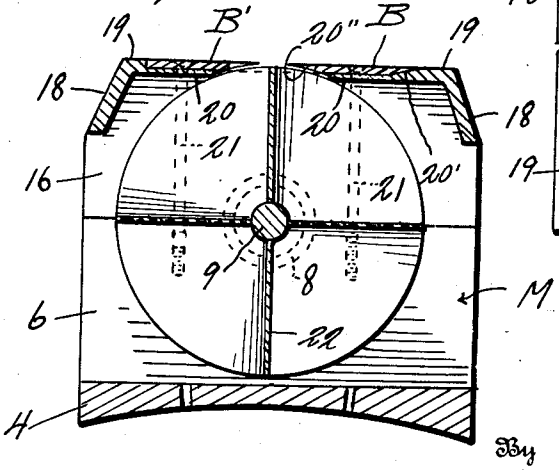


Fig. 3



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RAZOR

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Application June 9, 1936, Serial No. 84,344

1 Claim. (Cl. 30—43)

This invention relates to a razor, and it is primarily an object of the invention to provide a device of this kind embodying a rotary blade operating by mechanical means and more particularly from the power shaft of an electric motor.

The invention also has for an object to provide a razor of this kind embodying a structure whereby one or more blades may be detachably held in working position.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved razor whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein:—

Figure 1 is a view in side elevation with portions broken away of a razor constructed in accordance with an embodiment of my invention;

Figure 2 is a view in end elevation of the device as illustrated in Figure 1;

Figure 3 is a fragmentary vertical sectional view taken through the cutting mechanism detached from the motor casing;

Figure 4 is a view in top plan of the structure as illustrated in Figure 3;

Figure 5 is a fragmentary elevational view of a coacting block plate and end plate of the cap member.

As disclosed in the accompanying drawing, C denotes a casing for an electric motor, said motor in its entirety being of a size which can be readily held by the hand of a person grasping the handle H secured to and extending outwardly from the casing C. The electric motor is of a conventional type and is adapted for connection with a suitable source of electrical energy through a conductor *a* and which operating circuit is under control of a switch having an operating member 1 extending exteriorly of the casing C and in such position with respect to the handle H to be readily engaged and operated by a digit of the hand grasping the handle H.

The motor also comprises in its construction a drive shaft 2 having an extremity extending beyond an end of the casing C and which extended portion has mounted thereon for rotation therewith a pulley 3.

Disposed transversely across the periphery of the casing C is a block or saddle 4, the under face of which being of such formation and design as to have close contact with the peripheral face of the casing.

This block or saddle 4 is fixedly secured to the casing C by the bolts 5 or otherwise as may be preferred. The opposite end portions of the block or saddle 4 have extending upwardly therefrom the transversely disposed plates 6, each of which in its central portion having a cut out portion 7 which partially receives a bushing 8.

Rotatably disposed through the bushings 8 are the extremities of a shaft 9, one end portion of which extending beyond its adjacent plate 6 and having fixed thereto for rotation therewith a pulley 10. This pulley 10 as herein disclosed is in driven connection with the pulley 3 by an endless belt 11. Normally the pulleys 3 and 10 and belt 11 have disposed thereover a guard housing 12 suitably anchored, as at 14, to the adjacent end of the casing C and, as at 15, to an end plate 16 of a cap member M. The lower edge of each of the plates 16 of the cap member M contacts from above with the upper edge of the plate 6 and the lower marginal portion of each of the plates 16 is provided with a cut out portion 17 which registers with the cut out portion of the adjacent plate 6 and which accommodates a part of a bushing 8.

The upper and outer portions of the plates 16 of the cap member M are connected by the side strips 18, said strips having their outer faces converging on predetermined angles toward the top of the end plates 16, and the upper marginal portions of these strips 18 are continued by the inwardly disposed top plates 19. The inner marginal portions of these top plates 19 are spaced apart and are provided along their upper faces with the relatively broad rabbets or grooves 20. The inner wall 20′ of one of said rabbets or grooves is curved in a cross section to closely conform to the cutting edge portion 20″ disposed along each longitudinal marginal portion of the blade B. A second blade B′ is positioned within the second rabbet or groove 20 and both the blades B and B′ are of widths to have cutting edges overlying the space between the top plates 19. The blade B is of a reversible type while the blade B′ has its cutting edge preferably serrated as is particularly illustrated in Figure 4 of the accompanying drawing.

The blades B and B′ are held in applied or

working position by the elongated screw members 21, said members also extending through the end plates 16 and into the plate 6. By this means the members 21 serve to effectively hold the cap member M in applied position as well as to maintain the blades B and B' in place.

The inclined surfaces of the strips 18 are provided to produce the area of contact of the outer surfaces of the plates 19 with the skin during a shaving operation and by providing a serrated cutting edge the razor can be employed to better advantage with a beard which is particularly tough.

The shaft 9 has disposed therealong the series of spiral blades 22 equidistantly spaced around the shaft 9 and herein disclosed as four in number. These blades each extend along the shaft 9 for a distance substantially equal to the space between the bearings 8 and the pitch of each of the blades 22 is such as to extend substantially one-half around the shaft 9 from one end of the blade to the other.

When the razor is in use the motor operates to rotate the shaft 9 at a desired speed and as a result of such rotation there is a rolling travel at all times of an outer edge of a blade 22 along the working cutting edge 20'' of the blade B and each of the blades 22 is of a width to bring its outer edge in close proximity to the cutting edge of the blade B as well as the serrated edge of the second blade B'. The inner surface of the cutting edge portion of each of the blades B and B' is rounded on a radius closely approaching the radius of rotation of the outer edges of the blades 22.

The handle H is preferably in screw or other detachable engagement with the casing C so that said handle can be removed when desired to facilitate packing the instrument in its entirety within a small space. It is also believed to be obvious that if desired the device can be used without the handle H.

From the foregoing description it is thought to be obvious that a razor constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

An electric razor comprising an electric motor including a casing and a shaft extending outwardly of said casing, a handle secured to and extending outwardly of the casing at right angles to said shaft, a block secured to said casing diametrically opposite from said handle, parallel plates secured at their inner ends to the ends of said block, a second shaft journalled in said plates and parallel to said motor shaft, a drive means connecting said shafts together, a slotted flat plate secured to the outer ends of said plates, said slotted plate having recesses on opposite sides of the slot therein, a stationary cutting blade engaging in one of the recesses of said slotted plate, a guard engaging in the other recess of said slotted plate and disposed with an edge thereof in spaced relation to said cutting blade, and a rotary blade member secured to said second shaft and coacting with said stationary blade to cut hair engaging therebetween.

CLYDE J. PEAK.