

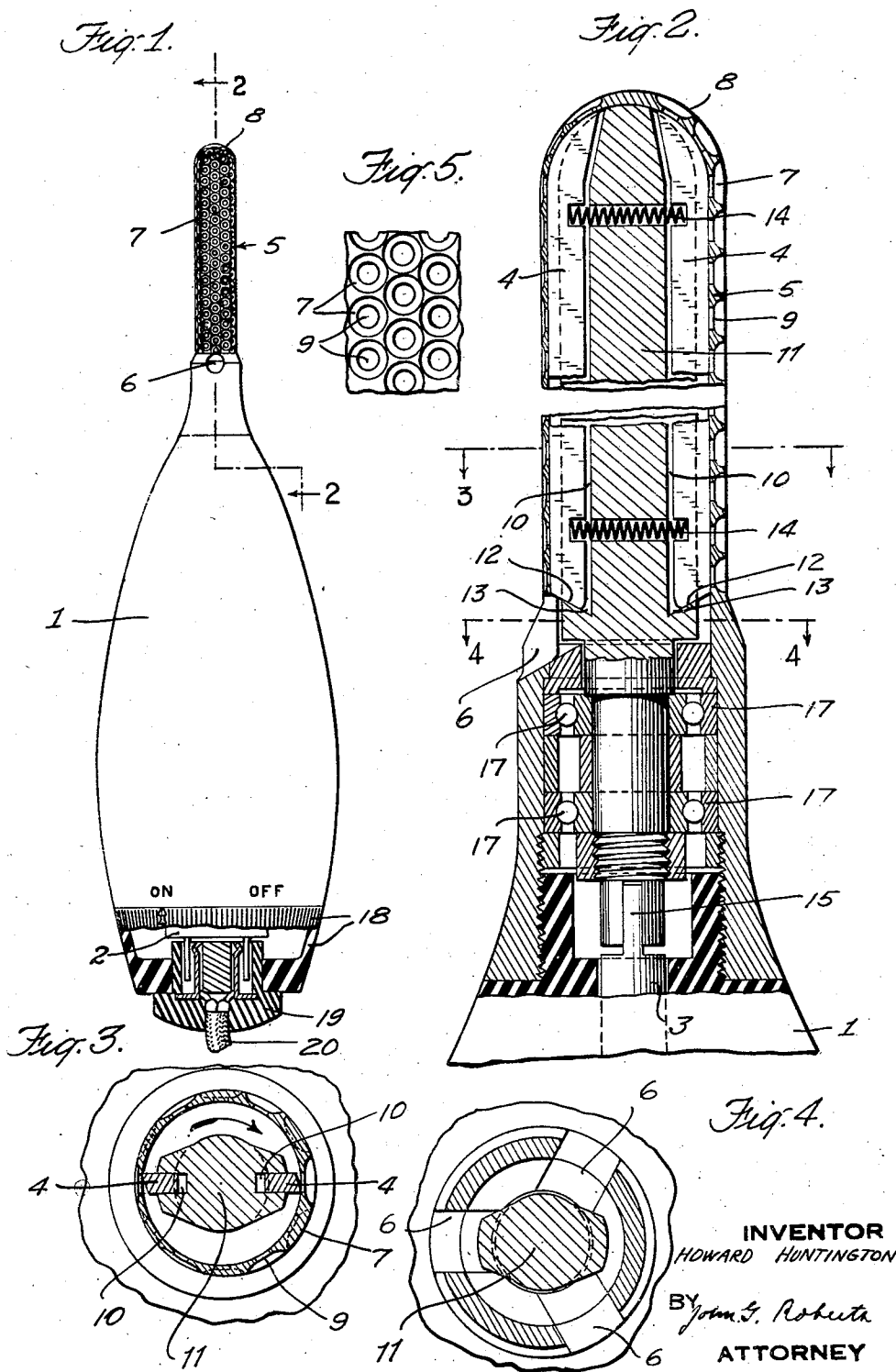
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POWER DRIVEN RAZOR

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POWER DRIVEN RAZOR

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3 Claims. (Cl. 30-43)

This invention relates to power driven razors and particularly to a type in which the hair cutting element is rotated within a perforated cylinder.

Its principal object is to enable the user in a single device to shave rapidly and closely regardless of the condition of his beard. It provides for ease of handling during the shaving operation, freedom from vibration, long life and ready accessibility to all bearded surfaces of the face.

The construction is such that the cutting tool is driven directly by the motor in the handle. The handle may be ellipsoid in shape. The cutting head is of tubular formation, perforated and in alignment with the axis of the handle. The cutting tool contacts its inner surface which, preferably, is eccentric to its outer surface. Thus long hairs may thus be more readily clipped by holding the thicker walls to the face; the shorter hairs, by using the thinner side. On the thicker walls of the head, especially, the holes are preferably of larger outside than inside diameter or dimension, to permit the hairs more readily to approach the smaller size openings at the inner surface.

The housing has a rounded end. This enables the user to comfortably hold the razor to portions of his face that would not otherwise be so accessible. The entire or greater part of the surface of the cylinder and a part of its rounded end are perforated. The holes are preferably in staggered array thus presenting in a given stroke the maximum opportunity for cutting. To provide for long life the cutting portion of the rotating member may be an elongated blade fitting a longitudinal slot in the shaft. Two or more such blades may be provided. Thus, when the cutting edge of the blade or the inner wall of the cylinder wears, the blade slips outwardly in its slot to maintain the desired contact therebetween. Such a blade may also be arranged to slip longitudinally to maintain contact at the rounded end.

In the drawing Fig. 1 is a general view of the device, with certain parts broken away, and Fig. 2 an enlarged longitudinal cross section on line 2-2 of Fig. 1 of the cutting portion above the motor enclosing handle.

Fig. 3 is a transverse section on line 3-3 of Fig. 2; Fig. 4 a transverse section on line 4-4 of Fig. 2; and Fig. 5 a detail showing of an arrangement of perforations in the cylinder walls.

Referring to the drawing, the handle 1 encloses a motor 2, which provides power through a shaft 3 for driving the blades 4 within a tubular

head 5 of cylindrical shape. There is preferably one opening 6, or more, for the egress of clipped hairs.

Over the greater part of the head a multiplicity of perforations 7 provide for the entrance of the hairs to be cut. The outer end 8 is rounded and the perforated area includes a portion of such end. As shown the perforations are countersunk on the outside of the head or are otherwise made larger in dimension than the openings 9 to the inner surface.

The cutting head is preferably made so that its inside and outside surfaces are individually circular in section and relatively eccentric, to provide for a thick wall on one side tapering to a thin wall construction on the other. The thick wall side can be used to advantage for longer hairs or for a first stage in the shaving operation, and the thin wall side for short hairs or for finishing.

The blades may lie in longitudinal slots 10 of an integral or direct coupled extension 11 of the shaft 3. The lower ends 12 of such blades are bevelled to engage corresponding bevelled surfaces 13 at the ends of the slots so that under centrifugal force the blades not only tend to move radially in the slots to press against the inner surface of the cylindrical part of the cutting head but also press longitudinally against the rounded end. A further force to press the blades laterally may be supplied by springs 14-14 extending laterally through holes in the shaft 11. The motor shaft 3, Fig. 2, drives the blade holding extension 11 by the engagement of a tongue 15 on the former with a corresponding slot in the latter. Both the motor shaft 3 and the extension 11 may be carried in ball bearing 17. The motor 2 may be of the ordinary D. C.-A. C. type and controlled by a switch 18 at the base of the handle. This switch has a flat bottom so that the razor, as a whole, will stand upright, when not in use. When in use, a plug 19, Fig. 1, is inserted in the switch bottom to provide for an electric energy source through a conductor cord 20.

I claim:

1. In a razor the combination of a handle, a perforated head attached thereto having a tubular section and an end section, a power shaft within the head having a longitudinal slot, and a blade conforming to said head carried by said shaft within said slot and radially slidable therein into contact with the tubular section of said head, one end of said blade and the shaft at the corresponding end of said slot having comple-

mental bevelled surfaces adapted under the influence of centrifugal force to cam the blade longitudinally into engagement with the end section of said head.

2. In a razor the combination of a handle, a perforated head attached thereto having a tubular section and an end section, a blade within said head, and a power shaft having a bevel ended slot carrying said blade, said blade being movable radially in said slot under centrifugal force into contact with the tubular section of said head and terminating at one end in a camming surface complementing the beveled end of said slot and adapted thereby to be pressed simul-

taneously in a longitudinal direction into contact with the end section of said head.

3. In a razor the combination of a tubular shaving head comprising a cylindrical section and a rounded end section and being perforated over the surfaces of both said sections, a blade held within the head having a cutting edge conforming to an elemental line of the combined surfaces of said head, and driving means in angular engagement with said blade to rotate the same with said cutting edge in contact with said combined surfaces.

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