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GUARD FOR RAZORS AND HAIR CLIPPERS

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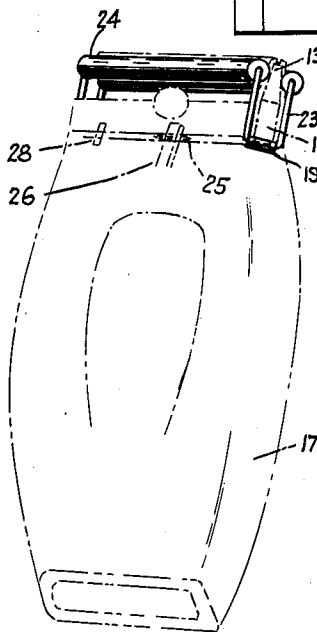
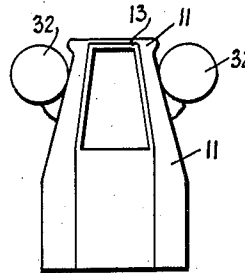
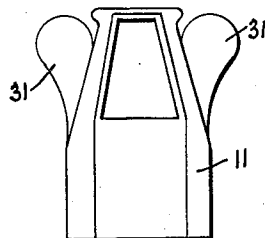
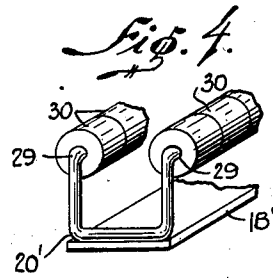
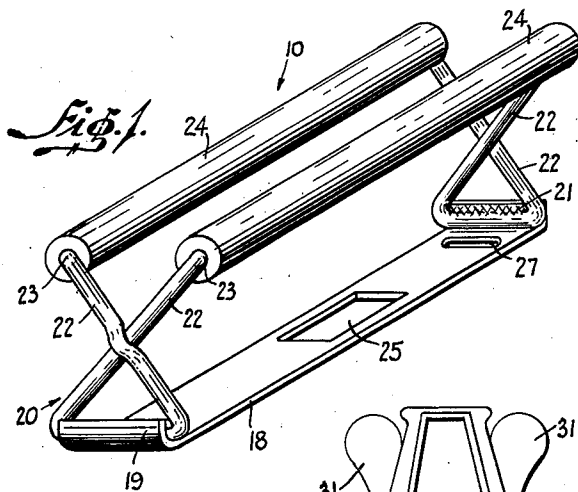


Fig. 5.

Fig. 6.

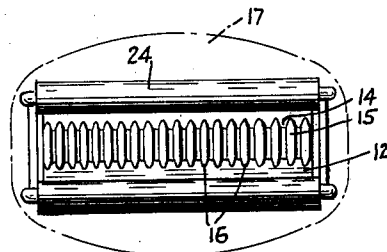


Fig. 3.

Fig. 2.

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# UNITED STATES PATENT OFFICE

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## GUARD FOR RAZORS AND HAIR CLIPPERS

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3 Claims. (Cl. 30-77)

This invention relates generally to guards for razors and hair clippers and particularly to guards for razors and clippers of the power-driven class.

Power-driven shaving or clipping devices in vogue today usually employ a skin-engaging plate or member having a series or plurality of slots forming blades between the slots and a cutter having a plurality of cutting edges, located at the rear of said slotted member. The blades of the slotted member and the cutting edges of the cutter cooperate to do the cutting or nipping of the hairs without the use of soap or a beard softener. The operating power is usually supplied to the cutter by means of an electric motor or coil and through intermediary connection or connections.

Amongst the prior art are to be found, in particular, two types of power-driven razors. In both these types the cooperating cutting members comprise a skin-engaging slotted shear plate and a slotted cutter. In one of these types the skin-engaging surface of the shear plate is flat or substantially so, and in the other type the skin-engaging surface is arcuate. Both these types have certain desirable features but are encumbered with grave disadvantages resulting in a lack of utility and of efficiency to bring about the desired result, namely, to accomplish a very close cutting of the hairs without discomfort and pulling of hairs and without subjecting the skin to scraping action or irritation when the skin-engaging shear plate is moved along the skin.

For example, a skin-engaging slotted shear plate of arcuate or cylindrical form presents a smooth, non-irritating surface for engagement with the skin but has not the cutting hair-guiding qualities of a flat surfaced slotted shear plate, especially of the type having the ends of the slots open for hair admission purposes; whereas, the flat surfaced slotted shear plate lacks that smooth, gliding effect upon the skin, and in fact, irritates and sort of "digs into" the skin and causes pulling of the hairs upon manipulation of the instrument.

My invention, among other important features, supplies the aforementioned advantageous feature of the arcuate surfaced skin-engaging shear plate to the flat surfaced one to produce a very efficient, comfortable and effective hair cutter. This is accomplished by providing a pair of guards having arcuate surfaces and between which the flat surfaced shear plate is disposed. The advantageous features of this invention

are attained by the novel design, construction and arrangement of parts, as hereinafter described and illustrated in the accompanying drawing, constituting a feature of this disclosure, and in which:

Fig. 1 is a perspective view of a razor or hair clipper guard embodying the invention.

Fig. 2 is a perspective view of a razor or hair clipper guard embodying the invention in a somewhat modified form and showing the position of the guard with respect to the cutter head, the latter and handle being shown in phantom outline.

Fig. 3 is a top view of Fig. 2.

Fig. 4 is a fragmentary perspective view of a guard in a still further modified form.

Figs. 5 and 6 are end views of respective razor cutter heads showing the guards as being joined to the stationary plate housing.

In Figure 1 of the drawing numeral 10 represents in general a preferred construction of a guard member capable of being applied to, for example, a form of power razor or hair clipper having a hollow, stationary member or housing 11 provided with a flat skin-engaging slotted shear plate 12 and which houses a reciprocable slotted cutter element 13 having the usual cutting edges (not shown). The shear plate 12 has a plurality of alternately arranged transverse slots and blades 14, 15, respectively, the cutter being located in the rear of plate 12. Each blade is provided with end projections 16, usually tapered, the slots 14 having open ends so that the hair is guided by projections 16 for reception or admission within slots 14 as the device is moved over the skin for the cutting operation. The hairs are admitted through the open ends of the slots between projections 16 and are cut or clipped by the cutter as the latter is made to reciprocate by any suitable means, such as an electric motor or coil (not shown) usually housed within handle 17.

The above general description is merely explanatory and does not form part of the invention.

The guard member may comprise generally a standard or frame having a base upon which are secured end brackets or supports carrying the preferably arcuately-sectioned guard elements. Figure 1 shows a preferred construction of guard member 10 having the base 18 with upturned ends 19 and brackets or supports 20 secured to ends 19 in any suitable manner, such as, for example, solder 21. Each support 20 has crossing legs 22, the upper ends 23 of which are

bent substantially at a right angle and parallel with respect to each other. Carried by the upper ends 23 of supports 20 are the spaced and parallelly disposed longitudinal guards 24.

5 These guards 24 are preferably rollers rotatably mounted on ends 23, but may be curve-surfaced elements, such as, for example, tubular or cylinder-like elements fixed to ends 23.

The brackets or supports 20 may be separate 10 parts or may form an integral unit. Instead of the legs of the supports being crossed they may be parallel as indicated by the number 23' in Figure 2. Base 18 has an opening 25 through which the conventional lever or eccentric pin 15 26 may pass for engagement with the movable cutter 13 to cause reciprocation of the latter. Base 18 may be also provided with a smaller opening 27 for extension of the conventional locating pin 28.

20 Figure 4 shows the base as being a flat plate 16' having the substantially U-shaped end supports 20', secured thereto. In this case the end supports 20' are joined together by the spaced parallel sections 29 upon which are mounted the individual beads or rollers 30. The supports 20' 25 and sections 29 may be formed out of a single piece of wire.

The top of handle 17 is usually channelled or grooved to receive the cutter head which com- 30 prises the housing 11 and cutter element 13. When the guard device is in position, base 18 or 18' is located between the bottom of the cutter head and the bottom of the channel, the top of the cutter head extending slightly above the 35 guards 24.

It can readily be seen that as the razor is moved over the skin, the guards 24 or 30 present a smooth, sliding or rolling surface in contact with the skin and prevent any possibility 40 of the projections 16 scraping or irritating the skin during the shaving operation.

Figure 5 is an end view of a razor cutter head showing guards 31. These guards are preferably 45 made of plastic composition molded onto the stationary shear plate housing 11 in any suitable manner. In Figure 6 the guards 32 may be rollers or stationary rods secured in any

suitable manner to the sides of the stationary housing 11.

Although I have described my improvements with respect to certain particular forms of my invention, I do not desire to be limited to such 5 details since many changes and modifications may well be made without departing from the spirit and scope of my invention in its broadest aspect.

Having thus described the invention, what is 10 claimed as new and desired to secure by Letters Patent, is:

1. The combination with a power razor having a handle and a slotted cutter head carried by the handle, said cutter head having a mov- 15 able cutter therein, of a guard device comprising a pair of parallel longitudinal guard members, and a frame carrying said guard members, said frame including a base interposed between the cutter head and the handle, said guard 20 members being spaced apart and receiving the cutter head therebetween.

2. The combination with a power razor having a handle and a slotted cutter head carried by the handle, said cutter head having a mov- 25 able cutter therein, of a guard device for said razor comprising a pair of parallel longitudinal guard members having smooth surface skin-engaging peripheral surfaces, a base interposed 30 between the cutter head and the handle and carried thereby, and means supported by opposite ends of said base and carrying the guard members in laterally spaced relation on opposite 35 sides of the cutter head and adjacent the cutter to prevent the cutter head from irritating the skin during the cutting operation.

3. The combination with a power razor having a handle and a slotted cutter head carried by the handle, said cutter head having a mov- 40 able cutter therein, of a guard device for said razor comprising a base interposed between the cutter head and the handle and carried thereby, and a longitudinal guard member carried by said 45 base and disposed beside the cutter head and adjacent the cutter in position to prevent the cutter head from irritating the skin during the cutting operation.

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