May 18, 1965 Z. SZABÓ 3,183,589

BLADE COMB HAIR TRIMMER HAVING TOOTH STRUCTURE PERMITTING VARIABLE DEPTH OF CUT

Filed July 12, 1962

Fig. 1

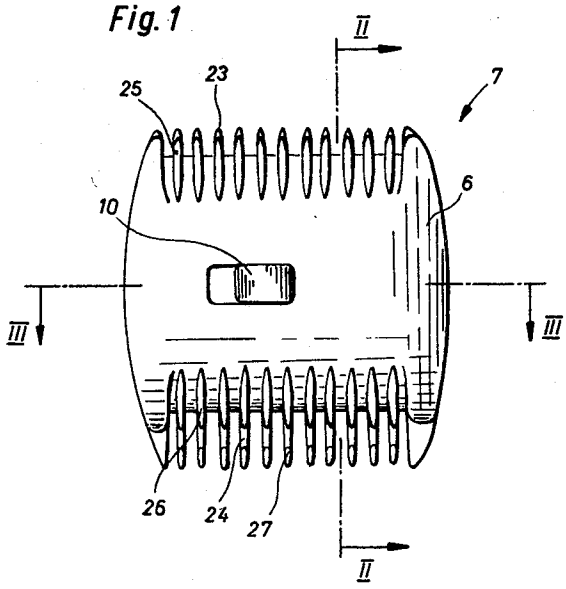


Fig. 2

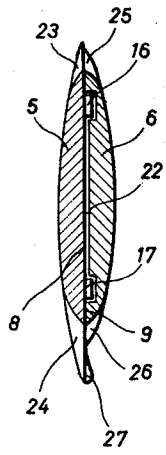


Fig. 4

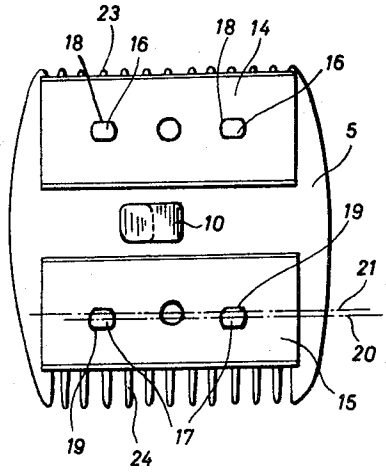
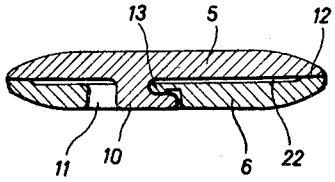


Fig. 3



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United States Patent Office 3,183,589 Patented May 18, 1965

3,183,589

BLADE COMB HAIR TRIMMER HAVING TOOTH STRUCTURE PERMITTING VARIABLE DEPTH OF CUT

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Filed July 12, 1962, Ser. No. 209,377
2 Claims. (Cl. 30—30)

This invention relates to a hair cutting apparatus having at least one stationary blade held within a frame, whereby the frame is divided into two plates in the plane of the blade and the blade is located between the two plates.

According to the invention, such a hair cutter has to be suitable both for cutting hair away as well as for shaving in a simple and handy manner. Without changing the blade, a variation of the type of hair cut desired at the time as well as of the cutting depth has to be possible with sure protection against injuries from cuts.

With the hair cutter according to the invention this problem is essentially solved in that the frame is a double comb, and each plate of the double comb comprises two rows of comb teeth, whereby the effective length of the comb teeth of one row differs from that of any other row, and the blade between the rows of one comb side is arranged as partially filling the gaps between the teeth of the comb.

Further features of the invention will appear from the following description and claims, taken in conjunction with the accompanying drawing, wherein there is shown, purely by way of example, one preferred form of embodiment.

FIG. 1 is a top view of the hair cutter without blades;

FIG. 2 is a sectional view of the hair cutter as taken on the line II—II of FIG. 1;

FIG. 3 is a longitudinal section of the hair cutter as taken on the line III—III of FIG. 1;

FIG. 4 shows a plate of the hair cutter with blades inserted.

The two plates **5** and **6** of the hair cutter **7** lie against each other with their faces **8** and **9** and are pressed against each other by a latch **10** adapted to exert a slight wedging action. The latch **10**, which is integral with the plate **5**, projects into an aperture **11** in plate **6**. By relatively displacing the plates **5** and **6** in the direction of their dividing plane **12**, the latch can be moved with slight angular displacement over a lug **13** of plate **6**. The two blades **14** and **15**, which are simply made like razor blades, are seated respectively with their holes **18** and **19** on the two pins **16** and **17** of plate **5**. As shown in FIG. 4, the cutter blades **14** and **15** may be made in two variants. In the case of blade **14**, the longitudinal axis thereof is at the same time the connecting median line of the two holes **18**. The connecting median line **20** of the holes **19** on the other hand is a parallel to the longitudinal median line **21** of blade **15** and a few tenths of a millimeter away from it.

The face **9** of plate **6** is provided with a recess so that the faces **8** and **9** lie with only a comparatively narrow contact surface along the whole length of the blades **14** and **15**, so that the two plates **5** and **6** with the interposed blades rest with great certainty along the entire length of the blades even if there is dirt in the hair cutter.

Plate **5** has two rows of comb teeth **23** and **24** at its opposite sides and plate **6** has two rows **25** and **26**. The teeth of any row are equal among themselves. The teeth of the four rows, however, are of such length and shape that the effective cutting depth of the razor may be selected depending upon the row of teeth that is held against the skin during cutting. In the illustrated embodiment the teeth **24** are longest, the teeth **23** next in length, and the teeth **25** and **26** the shortest and substantially identical in length.

In the cutting of hair with a device of this nature the cutter is normally held at an acute angle to the area of the body on which the hair is being trimmed and moved in the direction of the hair growth. The teeth **24** are curved as indicated and have cam portions **27** at their tips. The cam portions are rounded to avoid scratching the scalp and increase the effective length of the teeth when the cutter is held at an acute angle to the head with the cam portions engaging the skin and with the teeth **26** on the inner side of the angle. Such arrangement results in the longest cutting depth for ordinary cutting. Of course, if the cutter is held with the blade at substantially right angles to the scalp the apparatus acts as a comb with sharp teeth and the hair is only pinked. By varying the angle from the perpendicular to increasing acuity the effective depth of cut and the cutting action may be varied as desired.

By turning the cutter over so that the front sides of the teeth **24** are adjacent to the scalp the effective cutting deph is decreased somewhat as the edge of the blade is then spaced a lesser distance from the scalp due to the curvature of the teeth.

The next shorter cutting depth is obtained with the teeth **23** adjacent to the skin, and the finest, as in shaving, is obtained by holding the device with the teeth **25** resting on the skin.

The range of cutting depths may be further varied; for example, in the design of the blade **15** illustrated in FIG. 4 the connecting median line **20** of the holes **19** is displaced parallel to the longitudinal median line so that upon turning the blade outwardly with its cutting edge directed toward the latch the cutting edge lies nearer the ends of the comb teeth **24**. Blade **14** could be similarly constructed if desired.

Due to the construction described which permits the selection of cutting depths dependent upon the position of the cutter, and the projection of the comb teeth beyond the edge of the blade, the device may be easily and safely used either to cut one's own hair or by another. The cutter may initially be held in position for the maximum length of cut, to cut the longest hair and progressively shifted to the position affording shorter lengths of cut in order to achieve the desired contours, shaping, and finally shaving of the neck.

The plates **5** and **6** may be made of any suitable, inexpensive material, such as one of the known plastics, and the cutter is constructed in such configuration as to be conveniently held and manipulated manually, without the necessity for an additional handle.

Obviously, the hair cutting apparatus could be designed to hold only a single blade extending from one comb row to the other of plates **5** and **6**.

What I claim is:

1. Hair cutting apparatus comprising a pair of opposed plates, each of said plates having a row of teeth extending from its opposite sides, opposed teeth of the plates lying in superposed relationship, means on one plate for positioning a blade with the cutting edges thereof extending between the teeth at each of the opposed sides of the plates, means securing the other plate into face-to-face relationship with said one plate, the teeth of one plate separated from the opposed teeth of the other by an edge portion of said blade positioned therebetween, one of said plates having a row of teeth of substantially greater length than the teeth of any other rows, the opposed row of teeth of the other plate being of a length barely to extend beyond the edge of the blade, said longest row of teeth having an outer portion inclined toward the plane of the blade and having cam means on the tip portion projecting beyond the plane of said blade, whereby the cutting depth is longest with said cam means held against the skin and is slightly shorter with the inclined outer portion held

against the skin, the teeth at the opposite side of one of the plates being substantially shorter than said longest row of teeth, and the opposed teeth of the other plate barely extending beyond the edge of the blade, whereby the apparatus may be held with the substantially shorter teeth engaging the skin for a shorter cutting depth than that resulting from the previously described positions, and whereby with the shortest teeth of such side held against the skin, shaving may be accomplished.

2. Hair cutting apparatus as defined in claim 1, wherein the blade has at least two holes, one of said plates has pins projecting therefrom, said blade being mounted on said pins, the longitudinal median line of the blade being parallel to but spaced from the connecting median line

of the holes, whereby the protrusion of the blade between the teeth may be varied depending upon which edge is positioned outwardly.

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