

G. L. HENARD
COMB BLADE STRUCTURE AND ARRANGEMENT
FOR ADJUSTABLE HAIR CLIPPER
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FIG. 1

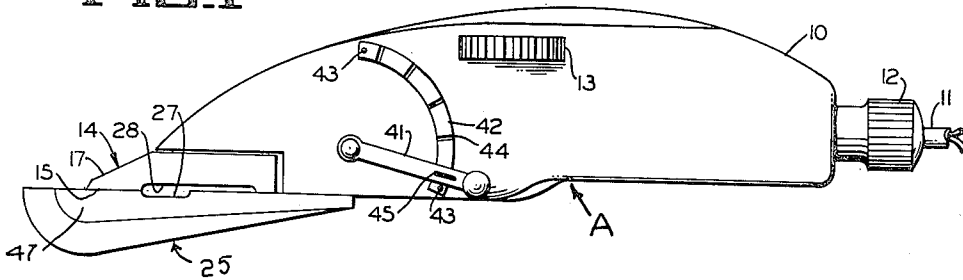


FIG. 2

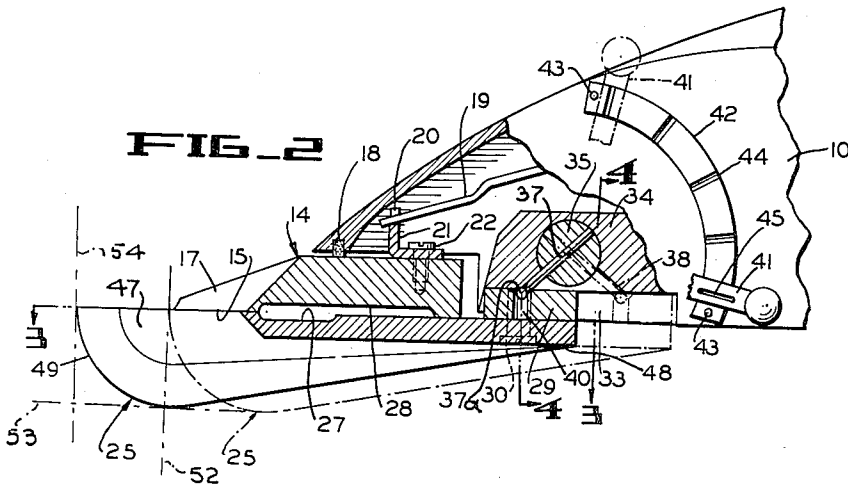


FIG. 3

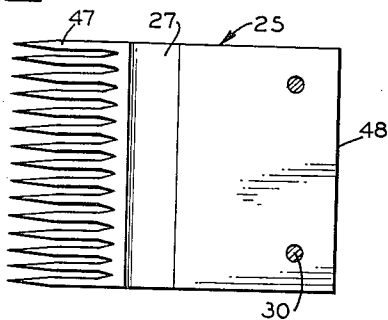
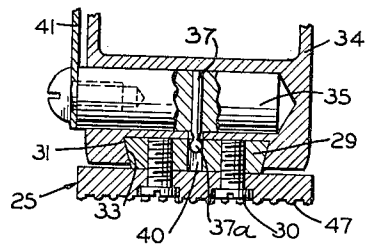


FIG. 4



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COMB BLADE STRUCTURE AND ARRANGEMENT FOR ADJUSTABLE HAIR CLIPPER

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2 Claims. (Cl. 30-201)

The present invention relates to hair clippers, and pertains more particularly to an improved construction and arrangement of an adjustable comb plate for such clippers.

A popular type of hair cut for men is one in which the hair on the sides and back of the head are cropped rather closely, while the top hair is brushed back so as to stand erect, and is cut so as to either conform to the contour of the crown of the cranium, or to be substantially flat on top. These hair cuts have acquired popular names among men and boys throughout the country, such as "butch" or "crew" type hair cuts.

While it has been customary in the past to trim the hair on the sides and back of the head with clippers, it has been common practice to cut the hair on top of the head with scissors. The present invention contemplates the provision of an improved structure and arrangement for a comb plate for clippers whereby the clippers may be used throughout an entire hair cutting process to produce a cut of the type mentioned previously herein.

Another object of the invention is to provide an adjustable comb plate for hair clippers wherein the comb blade is shaped and arranged to be easily useable for performing a wide range of adjustments and manipulations so that the clipper on which the comb plate is provided may be used for cuts varying from a very close cut to one wherein the cut is of substantial length but is still supported and guided by the cranium of the one whose hair is being cut.

These and other objects and advantages of the invention will be brought out more fully in the following description and accompanying drawings, wherein:

Fig. 1 is a side elevational view of a hair clipper embodying the present invention.

Fig. 2 is an enlarged side elevational view of the head or forward portion of the clipper shown in Fig. 1, portions thereof being broken away.

Fig. 3 is a sectional view taken along line 3-3 of Fig. 2, comprising essentially a top view of the comb plate.

Fig. 4 is a sectional view taken along line 4-4 of Fig. 2.

The clipper body and actuating and adjusting mechanism of the illustrated embodiment A of the present invention is generally similar to that shown in Patent No. 2,006,439. The angle of the plane of shearing contact of the cutting blades however is parallel to the longitudinal axis of the combined body and motor housing 10 which may be cast or molded from suitable material, such as metal or plastic. A usual electrical conductor cord 11 (Fig. 1) and connector fitting 12 are provided, and a motor control switch 13 is mounted to project through an opening provided therefor in the side of the housing 10 and is connected to control the operation of the usual drive motor (not shown) mounted within the housing.

An upper cutter blade 14 is mounted for lateral reciprocation in the forward end of the housing 10 with its lower planiform face 15 substantially parallel to the longitudinal axis of the housing 10 and with its cutting

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teeth 17 projecting beyond the forward end of the housing. A sealing strip 18, which may be of felt, is mounted in a recess provided therefor transversely of the forward end of the housing 10 to ride on the upper surface of the upper blade 14 to seal the space between the upper blade and the housing against the entrance of hair clippings into the housing.

The upper cutter blade 14 is actuated for lateral reciprocation by a laterally oscillated motor driven arm 19, the forward end of which rides in a notch 20 (Fig. 2) in the upper end of a bracket 21 which is secured by screws 22 to the upper cutter blade 14.

A stationary comb blade 25 is formed from a single piece of suitable tool steel, as is also the upper cutter blade 14. The upper surface of the comb blade 25 is planiform with the exception of a transversely extending hair channel 27 therein, and is honed to a smooth finish to provide bearing, shearing support for the upper cutter blade 14.

The hair channel 27 is located to register with a wider hair channel 28 provided to extend transversely of the planiform lower face of the upper cutter blade 14 throughout the entire range of adjustment of the comb blade 25 between its solid and broken line positions in Fig. 2.

A combined comb support and adjusting block 29 is mounted on the rear end of the comb blade 25 by screws 30. The side edges 31 of the block 29 are beveled (Fig. 4) and are fitted for slidable adjusting movement in a dovetail track 33 in the lower side of a mounting block 34 secured to the housing 10. A comb blade adjusting shaft 35 is journaled in a transversely extending opening in the mounting block 34, and a ball-end control pin 37 is mounted to extend diametrically through the shaft 35 and to project radially therefrom. The control pin 37 is mounted to swing in an arc limited by an angular recess 38 provided therefor in the mounting block 34. The free ball end 37a of the control pin 37 rides in a hole 40 in the adjusting block 29 secured to the comb plate 25.

A control lever 41 is secured to an end of the comb adjusting shaft 35 which projects laterally beyond the housing 10. The free end of the control lever 41 rides on an arcuate plate 42 secured to the housing 10 by pins 43. Notches 44 are provided at desired intervals throughout the length of the arcuate plate 42, and a detent 45 is provided in the lever releasably to engage a selected notch 44 to hold the lever and its associated parts in adjusted position. Swinging the lever 41 rotatively moves the shaft 35 and thereby swings the ball headed pin 37 to slidably move the adjusting block 29 and the comb blade 25 attached thereto to desired positions of adjustment between the solid and broken line positions of Fig. 2.

The comb blade 25 has cutter teeth 47 formed thereon of the same width and spacing as the cutter teeth 17 of the upper cutter blade 14. The comb teeth 47 however are sufficiently longer than the teeth 17 of the upper blade 14 to remain in shearing engagement therewith throughout the entire range of adjustment of the comb blade 25 between its solid and broken line positions shown in Fig. 2. The comb teeth 47 are thickened at their forward ends in the form of ribs, which are tapered toward their rear ends 48. The forward ends of the comb teeth 47 are rounded on a circular arc 49 having its center of curvature at the forward ends of the teeth 17 of the upper blade 14 at their lower or shear faces defined by the bottom plane 15 of the upper blade.

In using the device for making a close cut as is required for example on the neck and at the sides of the head, the lever 41 is swung in a counterclockwise direction toward its broken line position of Fig. 2 to retract the comb blade 25 to its broken line position of Fig. 2. With the parts thus adjusted, the clipper A is held at substantially right

angles to a plane tangent to the curvature of the customer's head at the zone of clipper contact, represented by the broken line 52 in Fig. 2. It will be apparent that during the marginal trimming phase of the hair cutting operation, the mounting of the cutting blades 14 and 25 with their plane of shearing contact parallel to the longitudinal axis of the clipper body 10 facilitates manipulation of the clipper thus held at right angles to the area of clipper application, since if the shearing plane 15 of the blades were disposed at an acute angle relative to the body portion 10 thereof it would be necessary to hold the body portion tilted beyond the perpendicular in order to bring the shearing plane of the blades perpendicular to their zone of application.

As the cutting proceeds up the neck and the sides of the head toward the crown, the comb control lever 41 may be moved to advance the comb blade 25 a required distance toward its solid line position of Fig. 2 to increase the length of the cut as required.

In cutting the hair on top of the head to a uniform length equal to the radius of curvature of the forward ends of the teeth 47 of the comb blade 25, the comb blade 25 is moved to its extreme forward limit of adjustment as shown in solid lines in Fig. 2. During this latter phase of operation the clipper A may be held at any desired angle between one wherein the bottoms of the comb teeth 47 rest flat on the head, as represented by the broken line 53 in Fig. 2, to one wherein the shearing plane 15 of the blades is perpendicular to the surface of the head at the zone of clipper application as represented by the broken line 54 in Fig. 2.

Thus the clipping operation may be continued over the entire top portion of the customer's head with the assurance that a uniform length of cut will be accomplished throughout this top area regardless of the angle at which the clipper is held with respect to the head within the limits set forth in the present paragraph hereof.

From the foregoing, it will be apparent to one familiar with the art of hair cutting that hair may be cut in "crew" or similar styles in substantially less time and with materially less effort by means of the present invention than by using scissors, in the previously conventional manner.

The structure and arrangement of the novel comb blade of the present invention permits easy manipulation of the clipper for cutting the hair to required varying lengths over the entire contour of a customer's head.

While I have illustrated and described a preferred embodiment of the present invention, it will be understood however, that various changes and modifications may be made in the details thereof without departing from the

spirit and scope of the invention as set forth in the appended claims.

Having thus described the invention, what I claim as new and desire to protect by Letters Patent is defined in the following claims.

I claim:

1. In a power driven hair clipper having an elongated housing and a laterally reciprocable power driven upper cutter blade with a row of forwardly projecting shearing teeth aligned along its forward edge, a comb blade mounted on the housing beneath the upper blade, a plurality of shearing teeth aligned along the forward edge of the comb blade in shearing contact with the teeth of the upper blade, the comb blade teeth being of substantially greater length than the teeth of the upper cutter blade, means for relatively adjusting the blades from a position wherein the forward ends of the teeth of both blades are substantially aligned to a position wherein the rear ends of the teeth of both blades are substantially aligned, in which latter position the teeth of the comb blade project beyond the teeth of the upper blade by a distance equal substantially to the desired maximum length of the hair to be cut on the crown of a person's head, and a rib formed integrally with each comb blade tooth the forward end of each rib being rounded off on a circular arc having its axis of curvature located on a line along the forward ends of the teeth of the upper cutter blade with the comb blade in its maximum position of relative forward adjustment, and the outer end of such radius located at the forward ends of the comb teeth in such forward limit of adjustment, whereby with the comb blade in its forward position of adjustment, the clipper may be swung from a position with the bases of the ribs riding on the scalp of a person whose hair is being cut to a position with the rounded ends of such ribs riding on the scalp without changing the length of cut.

2. An arrangement according to claim 1 wherein the blades of the clipper are in shearing engagement along a common plane and the clipper is provided with an elongated handle extending parallel to the shear plane of the blades.

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