COMBINED SAFETY RAZOR AND HAIR TRIMMER

INVENTOR

Charles Sabiers

BY

Attorney
This invention relates to combined safety razors and hair trimmers and the device disclosed herein is an improvement over the safety razor of my United States Patent No. 2,059,172, dated October 27, 1936.

An important object of the invention is to provide a combined safety razor and hair trimmer in which the head portion thereof, like the head of my razor referred to above, is free floating, but may be latched into a non-floating position for the purpose of using the device as a hair trimmer and the conversion is accomplished without removing the blade but simply by shifting a part of the head portion and shifting a latch member from one position to another position.

Another important object is to provide a device as described having means selectively to secure the blade-carrying head portion thereof against rotation with respect to the handle or to permit rotation of the head portion with respect to the handle portion.

A further important object is to provide a head portion which, with a single double-edged razor, may be employed in shaving or hair trimming operations.

Additionally, an important object is to provide a head portion for a safety razor which may be employed in shaving or hair trimming and includes means to trap hair cut off in trimming.

Another important object is to provide safety features in connection with the use of the device for shaving and for hair trimming.

Other objects and advantages of the invention will be apparent during the course of the following detailed description of the invention, taken in connection with the accompanying drawings, forming a portion of this disclosure and in which drawings:

Fig. 1 is an elevation of the combined safety razor and hair trimmer with the parts in positions for hair trimming.

Fig. 2 is a vertical section of the combined safety razor and hair trimmer, with the parts positioned as in Fig. 1.

Fig. 3 is a transverse section, substantially on the line 3—3 of Fig. 2 but on an enlarged scale.

Fig. 4 is an enlarged fragmentary elevation of the latch means of the new device in position so that the head portion may rotate with respect to the handle portion.

Fig. 5 is a fragmentary vertical section substantially on the line 5—5 of Fig. 4.

Fig. 6 is a top plan view of a head plate assembly on the new device, consisting of two plate portions slidably secured together by bent-over retaining lugs.

Fig. 7 is a top plan view of the inner portion of the plate assembly of Fig. 6 but with the lugs of Fig. 6 unbent.

Fig. 8 is a longitudinal section of the outer portion of the plate assembly of Fig. 6 and showing a coupling lug for connection with a handle portion.

Fig. 9 is a plan view of an example of a double-edged blade which may be employed with the new device.

Fig. 10 is a top plan view of a head plate employed in association with the head plate assembly of Fig. 6 and the blade of Fig. 9.

Fig. 11 is a top plan view of the head portion of the new device, comprising the head plate assembly of Fig. 6, blade of Fig. 9 and head plate of Fig. 10 in positions for shaving.

Fig. 12 is a top plan view somewhat along the lines of Fig. 11 but with the parts in positions for hair trimming.

Fig. 13 is a fragmentary longitudinal section of a handle portion for coupling to the lug of Fig. 8.

In the drawings, wherein for the purpose of illustration is shown a preferred embodiment of the invention and wherein similar reference characters designate corresponding parts throughout the several views, the razor is designated as A and a blade as B.

The razor A includes a hollow handle portion 15 having a preferably tubular wall 16 defining a compartment, 20 being knurled over a portion of its outer face and closed at its free end portion 17 by a suitable closure 18 preferably with a press fit. The closure 18 has a reduced inner end portion 19, within the handle compartment, for a purpose later detailed. The opposite end portion 20 of the handle has a smooth outer face and terminates in an outwardly-extending annular bead or shallow flange 21.

Mounted at the end portion 20 is a neck 22 which comprises an outwardly-extending generally cylindrical neck portion 23 and an inwardly-extending cylindrical neck portion 24 of a diameter less than that of the portion 23 whereby a shoulder is provided which will be described in connection with the latch means 49. It will be noted that there is a part of the portion 23 which is normally within the wall 16. A part of the outer face of the portion 23 may be knurled and the outermost end part of this portion is provided with an axially-extending screw-threaded socket 25.

The neck 22 is rotatably and reciprocably mounted upon the handle portion 15 by means of a helical retraction spring 26 which is suitably secured, at one end, to the innermost portion 24 and suitably secured, at its other end, to the reduced inner end portion 19 in a substantially retracted condition.

Carried by the neck 22 is the head portion 27 consisting of a head plate 28 and a head plate assembly 29, with a blade B adapted to be clamped between them.

The head plate 28 is curved in transverse section and differs from conventional safety razor guard plates in that the two spaced-apart openings 30 for the accommodation of the anchoring pins or lugs 38 of the head plate assembly 29 are not disposed with their axes substantially upon the longitudinal medial line of the plate but to one side of this line. For example, in a plate ¾" wide, these axes may be substantially ¾" from the longitudinal edge 31 of the plate 28 and ½" from the opposite longitudinal edge 32. Of course the center opening 33, spaced an equal distance from the axes of the openings 30, is also to one side of this longitudinal medial line.

Means 34 carried by the plate 28 to receive hair cut in trimming comprises the walls of preferably a plurality of elongated slots 35 in the plate 28 extending longitudinally of the plate between the edge 32 and openings 30 and 33.

In Figs. 1, 2 and 6, the head plate assembly 29 is best shown and comprises the portions 36 and 37. The outer portion 36 is preferably a transversely curved plate provided with a pair of spaced-apart anchoring pins or lugs 38 and a central screw-threaded lug 39. The pins 38 are of a size and disposed so that they may enter the openings 30 and the lug 39 disposed so that it may enter the
opening 33 and the screw-threaded socket 25 and the screw threads of the latter cooperate with those of the lug 39. Additionally, the pins 38 and lug 39 extend through openings 40 and 41 respectively in the head plate assembly portion 37 as will be explained.

The head plate assembly portion 37 is the inner portion and preferably comprises a plate, transversely curved in the same way as the plate 28 and portion 36. It is provided with a pair of spaced-apart elongated openings 40, shown best in Fig. 7 and a central opening 41 with their longitudinal axes normal to the longitudinal axis of the inner head plate portion 37. These openings 40 and 41 are not round but are oval so that the portions 36 and 37 may slide transversely when the pins 38 are within the openings 40. One side edge 42 of the portion 37 is substantially straight and has no indentations, recesses, teeth or the like, while the opposite side edge is provided with a plurality of comb teeth 43.

In order to provide means for retaining the portions 36 and 37 for relative transverse sliding, the portion 37 has a plurality of spaced-apart lugs 44 at its ends which are adapted to be bent over the sides and outer face of the portion 36. Intermediate the lugs 44 on each end, is a fingerhold lug 45, which extends outwardly from the body of the portion 37. It will be noted, particularly in Fig. 6, that the portion 36 is much narrower than the associated portion 37 and, as may be seen in Figs. 1 and 2, a rounded longitudinal edge portion 46 of the portion 36 substantially merges into the outer face of the portion 37 while the opposite edge portion 47, which is abrupt (substantially bevelled), meets the outer face of the portion 37 to provide a well-defined corner at the juncture, which I have discovered is particularly desirable when the device is employed in hair trimming.

With this construction heretofore disclosed, it is now apparent that the inner head portion 37 may be shifted transversely of the rest of the head plate assembly 29 and, when the two-edge blade B (shown in Fig. 9 and of conventional shape, having the spaced apart lug or pin-receiving openings 55 and screw thread-receiving centers 65) is disposed between the head plate 28 and inner portion 37 of the head plate assembly 29, the portion 37 may be shifted transversely (by pressing the tips of the thumb and index finger against the outer edges of the lugs 44 and applying pressure transverse to the longitudinal axis of the head assembly) into the position shown in Fig. 11, so that the razor may be used for shaving, since one edge 57 of the blade B is closely adjacent the free ends of the comb teeth 43, the rounded edge portion 46 is inwardly of this edge of the blade and the sharp edge 58 of the blade is concealed. Without removing the blade B from the head portion 29 or the latter from the handle portion 15, the parts may be positioned for hair trimming simply by unscREWing the lug 39 slightly so that the outer portion 36 may be shifted to the position shown in Fig. 12 and then tightening the lug 39. Now, the edge 58 of the blade B is exposed in hair-trimming position with reference to the edges 32, edge 42 and edge portion 47, while the edge 57 is so far inwardly of the free ends of the comb teeth 43 that it cannot accidentally cut the scalp or hand of the trimmer, Fig. 12 illustrates how the portion 37 has cleared the edge 58 of the blade B, with an edge portion of the blade in said transverse position 28 beneath it. It will also be noted in Fig. 12 that the elongated slots 35 (of the means 34 to trap hair trimmed off by the edge 58) are closely adjacent the edge 58 so that such hair will find its way between the blade edge 58 and the portion 28 and into the slots 35. Referring now to means 49 to latch the neck 22 and head portion 27 against rotation relative to the handle portion 15, since it is desirable that the head portion 27 remain fixed with respect to the handle portion 15 during hair trimming operations, but that a head portion be permitted to rotate in shaving, as brought out in detail in my patent referred to above, this means 49 includes the walls of a short longitudinally extending slot 50 in the 31 16 of the handle portion 15 extending to and through the flange 21. The means 49 also includes a member 51 which engages the outer face of the neck portion 23 in a good frictional engagement. This member is preferably a split ring having good resiliency or spring characteristics and, while engaging the outer face of the neck portion 23 as described, it is possible to manually reciprocate the member 51 from its position in Figs. 1 and 2 to its position in Figs. 4 and 5. Projecting inwardly radially from the edge of the body of the member 51 nearest the neck portion 23 is a rigid tongue or lug 52 which extends through the slot 50 and thus the member 51 is retained against any independent rotation. At the juncture of the portions 23 and 24 is an annular shoulder 53 which the lug 52 is adapted to contact as in Fig. 5 when the member 51 is farthest removed from the neck portion 23. In this position of the parts, the neck 22 and head portion may rotate to a limited degree but restricted by the helical spring 26 against any decided rotation. It should be noted, in Fig. 5, that the one end of the slot 50 extends slightly below the horizontal plane of the shoulder 53. Carried by that part of the neck portion 23 which is normally within the handle wall 16, is a longitudinal extending groove 54, open at its ends and of a depth and width to accommodate the free end portion of the lug 52, as in Figs. 2 and 3. This free end portion may enter the groove 54 by manually rotating the head portion 27 while holding the handle portion 15 immovable until the groove 54 aligns with the free end and, finally, after the member 51 toward the head portion 27 so that this free end portion of the lug 52 enters the groove. The parts are now latched together. Upon forcing the member 51 along the slot 50 toward the free end 17 of the handle portion 15 until the lug 52 contacts the end wall of the slot 50, the free end portion of the lug 52 will leave the groove 54 and take its position as in Fig. 5, since the spring 26 will cause the head portion 27 and neck 22 to rotate until the groove 54 moves away from the lug 52 and the parts are again in the positions as in Figs. 4 and 5.

From the foregoing, it will be seen that the new combination device may be readily manipulated to employ it as a safety razor, a portion of the head disposed in one position and the head movable with respect to the handle portion so that the latter will follow facial contours, or the same portion of the head manipulated to render the device suitable for hair trimming and the head either rendered immovable with or movable with respect to the handle portion as is desired. Furthermore, the edge 58 of the razor blade B is concealed when the device is used for shaving and, thus, the shaver will not be cut if he happens to contact his face with the wrong edge of the device. On the other hand, when the device is used as a hair trimmer, the edge 57 is well removed, as is clear in Fig. 12, from the comb ends, so it cannot injure in the event the trimmer uses the wrong edge of the device.

While the edge portion 46 is conventional the opposite edge portion 47 of the outer portion 36 in part, the rounded edge portion 47 has been found to prevent the hair from being pressed against the scalp and thus defeat attempts to trim it successfully.

What is claimed is:

1. A combined safety razor and hair trimmer employing a double-edged safety razor blade, said combined safety razor and hair trimmer comprising an elongated handle portion having an outer wall defining a compartment, a shaving and trimming head, a double-edged safety razor blade carried by said head, means rotatably securing said head to said handle portion including a neck between said head and handle portion and provided with a shoulder within said handle portion, and means
to releasably latch said head against rotation upon said handle portion including an end portion of said wall of said handle portion, provided with a longitudinally-extending slot, a portion of said neck having a groove with one end thereof opening to said shoulder, said groove being normally out of alignment with said slot, said neck being rotatable to align said groove with said slot, and a reciprocable member having a rigid portion reciprocable to one position with said rigid portion within said compartment and against said shoulder and reciprocable to another position with said rigid portion out of contact with said shoulder and being within said groove and slot when said groove and slot are in alignment, whereby said rigid portion is positioned against said shoulder in shaving and positioned within said groove and slot when hair trimming.

2. A combined safety razor and hair trimmer according to claim 1 characterized in that said reciprocable member is a split ring in frictional contact with a portion of the outer face of said wall of said handle portion.  

3. A combined safety razor and hair trimmer according to claim 1 characterized in that said reciprocable member is a split ring of resilient material in frictional contact with a portion of the outer face of said wall of said handle portion and said rigid portion extends from the side edge of said split ring disposed nearest said head.

4. A combined safety razor and hair trimmer employing a double-edged safety razor blade, said combined safety razor and hair trimmer comprising an elongated handle portion having an outer wall defining a compartment, a shaving and trimming head, a double-edged safety razor blade carried by said head, means rotatably securing said head to said handle portion including a neck between said head and handle portion and provided with a shoulder within said handle portion, and a retraction helical spring under tension within said compartment, said spring being secured at one end thereof to said neck and secured at the other end thereof to said handle portion, and means to releasably latch said head against rotation upon said handle portion including an end portion of said wall of said handle portion, provided with a longitudinally-extending slot, a portion of said neck having a groove with one end thereof opening to said shoulder, said groove being normally out of alignment with said slot, said neck being rotatable to align said groove with said slot, and a reciprocable member having a rigid portion reciprocable to one position with said rigid portion within said compartment and against said shoulder and reciprocable to another position with said rigid portion out of contact with said shoulder and being within said groove and slot when said groove and slot are in alignment, whereby said rigid portion is positioned against said shoulder in shaving and positioned within said groove and slot when hair trimming.

5. A combined safety razor and hair trimmer according to claim 1 characterized in that said reciprocable member is a split ring of resilient material in frictional contact with a portion of the outer face of said wall of said handle portion and said rigid portion extends from the side edge of said split ring disposed nearest said head.

6. A combined safety razor and hair trimmer employing a double-edged safety razor blade, said combined safety razor and hair trimmer comprising a handle portion, a head mounted upon the handle portion, said head comprising a head plate and a head plate assembly, a double-edged safety razor blade between said head plate and head plate assembly, said head plate assembly including an outer plate portion having opposite longitudinal edges, securing means removably securing said outer plate portion to said head plate against movement, one with respect to the other, including lugs carried by said outer plate portion, said head plate being provided with openings to receive said lugs, with the centers of said openings being offset from the longitudinal medial line of said head plate, and an inner plate portion having opposite longitudinal edges and being slidable transversely of said outer plate portion, said inner plate portion also having elongated openings having their longitudinal axes normal to the longitudinal axis of said inner plate portion, and means slidable securing said inner plate portion to said outer plate portion so that said inner plate portion may be manually slid to selectively position one of its longitudinal edges closely adjacent one of the edges of said head plate and of said blade, for shaving and to cover the other edge of said blade, and to selectively position the other of said longitudinal edges of said inner plate portion spaced well away from the other of said longitudinal edges of said head plate and the other edge of said blade, with the first-named edge of said blade well inwardly of the first-named edge of said inner plate portion.

7. A combined safety razor and hair trimmer according to claim 6 characterized in that said opposite longitudinal edges of said inner plate portion are a pair and said elongated openings have their longitudinal axes normal to said pair of opposite longitudinal edges of said inner plate portion.

8. A combined safety razor and hair trimmer according to claim 5 characterized in that said neck includes an inwardly-extending neck portion spaced from said handle portion and extending from said shoulder, and the first-named end of said spring is secured to said neck portion.

References Cited in the file of this patent

UNITED STATES PATENTS

1,013,805 Ocumpaugh .......................... Jan. 2, 1912
1,486,418 Clardy ............................. Mar. 11, 1924
1,555,961 Gillette ............................. Oct. 6, 1925

FOREIGN PATENTS

924,355 France ............................... Mar. 3, 1947