Nov. 15, 1949 A. SANTORO, SR 2,488,436

COMBINATION HAIR TRIMMER AND RAZOR

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Fig 1.

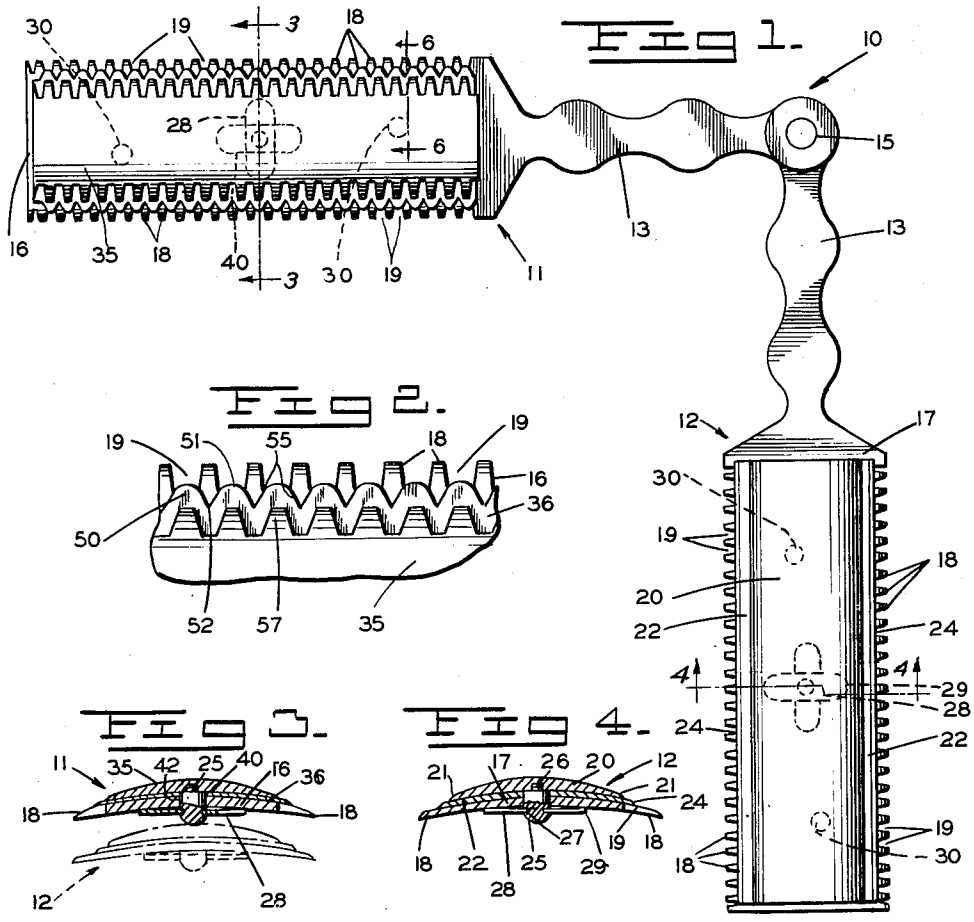
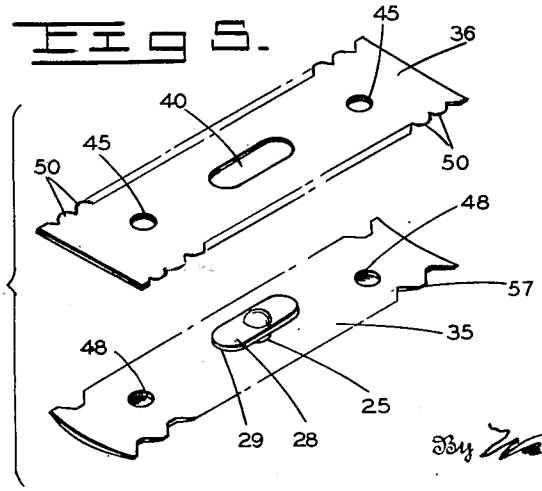


Fig 2.

Fig 3.

Fig 4.

Fig 5.



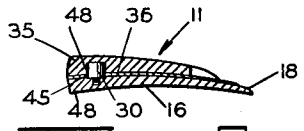


Fig 6.

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COMBINATION HAIR TRIMMER AND RAZOR

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2 Claims. (Cl. 30—30)

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This invention relates to tonsorial equipment and more particularly to hair cutting devices whether for use as razors or hair planers.

The principal object of the invention is to provide a novel and improved implement of the class described which is efficient in operation, comparatively simple in construction, requiring a minimum number of parts, and easy to assemble, manipulate, and dismantle for cleaning or sharpening.

The invention in its preferred embodiment contemplates the provision of a folding combination implement comprising a hair planer and a razor, each of such instrumentalities having a handle extending therefrom and pivotally or hingedly connected at their respective ends, whereby the instrumentalities may be folded together, one upon the other, when not in use.

One feature of novelty of the invention resides in the provision of novel locking means for securing the blades and guards to the body portions of the respective implements.

Another important feature of the invention is the provision, in the hair trimmer or planer, of a blade having a notched or serrated edge, and the clamping of such blade edge by novel means which not only attains a better angular shearing cut but serves to reinforce or back up the serrations or teeth during the cutting operation.

Other objects and features of novelty will be apparent from the following specification when read in connection with the accompanying drawings in which one embodiment of the invention is illustrated by way of example.

In the drawings:

Figure 1 is a plan view of a combination implement embodying the principles of the invention,

Figure 2 is a greatly enlarged fragmentary plan view of the hair planer portion of the device, showing the novel arrangement of blade teeth or serrations and the guard tines or projections,

Figure 3 is a transverse sectional view taken on line 3—3 of Figure 1, with the complementary portion of the implement indicated in broken lines in the position it occupies when the device is folded together,

Figure 4 is a transverse sectional view taken on line 4—4 of Figure 1,

Figure 5 is an exploded perspective view of a hair trimmer blade and one of the removable guard members; and

Figure 6 is a fragmentary transverse sectional view taken on line 6—6 of Figure 1.

The device as a whole is designated by the reference numeral 10 and will be seen to comprise

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two very similar instrumentalities hinged together for alternative use and for convenient disposal when not in use. The hair trimmer or planer portion of the device is designated by the numeral 11 while the razor portion is denominated 12. Each of the two instrumentalities may be provided with suitable handle portions 13, the ends of which are pivotally connected as at 15. Any suitable riveted or bolted hinge joint may be provided at this point, a most suitable one being a spring joint by means of which the two implements would be urged together when in closed position as suggested in Figure 3.

The body portion of each of the instrumentalities 11 and 12 are very similar in construction, each comprising a substantially rectangular plate of arched cross section, these plate-like body members being designated 17 in the case of the razor part 12 and 16 in the case of the hair planer 11. The arched or concavo-convex cross-sectional configuration of the members is clearly shown in Figures 3 and 4.

Along both longitudinal margins of the body portions 16 and 17 there are provided a number of tines, projections, or teeth 18 separated by the gaps or spaces 19.

Now referring more particularly to the lower right hand portion of Figure 1 and to Figure 4 of the drawings, it will be seen that the razor portion 12 of the device is further provided with a somewhat curved or arched guard or clamping member 20 which has a straight rectilinear edge along both lateral margins as indicated at 21. The guard plate or clamp 20 serves to firmly grip the razor blade 22 between its concave inner face and the convex face of the body member 17, the cutting edges 24 of the razor blade extending across the gaps 19 between the teeth 18 of the body plate 17 in the conventional way.

The clamping guard member 20 is provided centrally thereof upon its concave side with a post 25 which may be secured in any suitable manner as by a forced fit within an opening in the member 20, by welding, or by means of the threaded stud connection 26. The periphery of the post 25 near its outer end is provided with a groove 27 which rotatably receives the margins of a central opening in the swivelled locking bar 28. Conveniently, this connection may be made by forming an attenuated end upon post 25 which will readily fit within the opening in the bar 28 and then heading or peening over the end of the post 25.

Both the razor blade 22 and the frame member 17 are provided centrally with a longitudinally

elongated opening or slot of the same general shape as the locking bar 28 but slightly larger, so that when the bar 28 is turned to extend in a longitudinal direction it may pass through these openings and then be turned through an angle of 90° to the transverse position indicated in the Figures 1 and 4. The pressure of the curved ends 29 of the bar 28 against the concave undersurface of the frame member 17 of the razor 12 will serve to draw the guard member 20 into firm clamping relationship with the blade, and bend the normally flat blade into a curved configuration conforming to the surface of a cylinder of great radius.

For the purpose of properly positioning the blade and clamp upon the frame 17, guide pins or studs 30 are provided on the convex side of the frame plate 17. These pins pass through openings in the razor blade 22 and may be received in openings or recesses in the inner face of the guard member 20.

The fastening means for the hair trimmer or planer blade 36 is very similar to the means which has just been described in connection with the razor 12 and the same reference numerals will be applied to many of these parts. The clamping guard corresponding to the guard 20 of the razor, is designated 35 and is provided with the post 25 having the swivelled locking bar 28 thereon, which passes through the opening 40 in the blade 36 and thence through the similar opening 42 in the frame 16, whereupon it is swung to a transverse position and clamping pressure applied to the blade. The positioning studs 30 carried by the frame member 16 pass through the small, preferably offset, openings 45 in the blade 36 and thence through openings 48 in the guard member 20. This positioning or centering feature will be clearly understood by inspection of Figures 1, 5, and 6.

When the two instruments are swung around the pivot 15 to parallel positions they appear as suggested in Figure 3, and the folded device may be conveniently laid away or disposed in a suitable receptacle until ready for use.

One of the most important features of the invention relates to the configuration and arrangement of the hair trimmer blade 36, and this will now be described with particular reference to Figures 1 and 2 of the drawings. The blade 36 has its two edges provided with serrations or teeth such as shown at 50, these serrations preferably being rounded at their outer edges as at 51 and merging to form V-shaped notches 52 between each of the teeth or serrations. The blade teeth 50 are staggered with relation to the teeth or tines 18 of the base plate 16, the arcuate cutting edges 51 of the teeth extending across the gaps 19 between the tines 18, this arcuate cutting edge making an arcuate angle, as at 55, with the edges of the guard teeth 18, this provision affording a shearing arrangement whereby the strands of hair which are not cut by the intermediate portion 51 of the teeth will be cut when they are wedged into the angles or notches 55.

Unlike the razor guard member 20, the guard or clamp 35 for the hair trimmer 11 is provided along both its longitudinal edges with the serrations or teeth 57, which coincide with the teeth 50 of the cutting blade 36, but are set back slightly from the edges of the teeth as clearly indicated in Figure 2. Thus the guard teeth 57 serve to reinforce

the individual cutting teeth of the blade and keep them firmly in position with relation to the tines 18, thus insuring close contact at the angles or notches 55, and preventing pinching or pulling of the hair.

Various changes and modifications may be made in the embodiments illustrated and described herein without departing from the scope of the invention as defined by the following claims.

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

1. A tonsorial implement of the class described comprising, in combination, a pair of clamping guard plates, each of said plates being relatively flat, substantially rectangular, segmental section of cylinders of large radius, the plates being slightly concavo-convex in transverse section, at least one of said plates having guard teeth along at least one edge thereof, a cutting blade interposed between said plates and having a cutting edge disposed adjacent the teeth on said plate, a stud on one of said plates having a locking bar mounted on the end thereof for swivelling movement in a plane substantially parallel with the general approximate planes of said plates, elongated registering openings in said blade and the other of said plates through which said stud and said bar may be passed when the stud is in one position, said bar adapted to be swung through an angle of substantially 90° exerting increasing clamping pressure upon the blade as the ends of the bar move along the curved outer concave surface of said other plate to a final chordwise position.

2. A tonsorial implement of the class described comprising, in combination, a pair of clamping guard plates, one of said plates having guard teeth along at least one edge thereof, a cutting blade interposed between said plates and having a cutting edge disposed adjacent the teeth on said plate, and means for causing said plates to exert clamping pressure upon said blade, the cutting edge of the blade being provided with arcuate teeth, said teeth alternating with the teeth of the first guard plate, and the side edges of said respective adjacent teeth of the blade and guard plate converging to provide a substantially V-shaped notch, wherein hair may be cut by a shearing action, said guard plate teeth projecting outwardly beyond the teeth of said blade, the other of said plates also being provided with teeth along its edge adjacent the cutting edge of the blade, the last named teeth being staggered with respect to the teeth of the first named plate but registering with the teeth of said blade and bearing respectively against the blade teeth to apply clamping pressure close to the cutting edges thereof.

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