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3,513,602

CLIPPER BLADE SHARPENER

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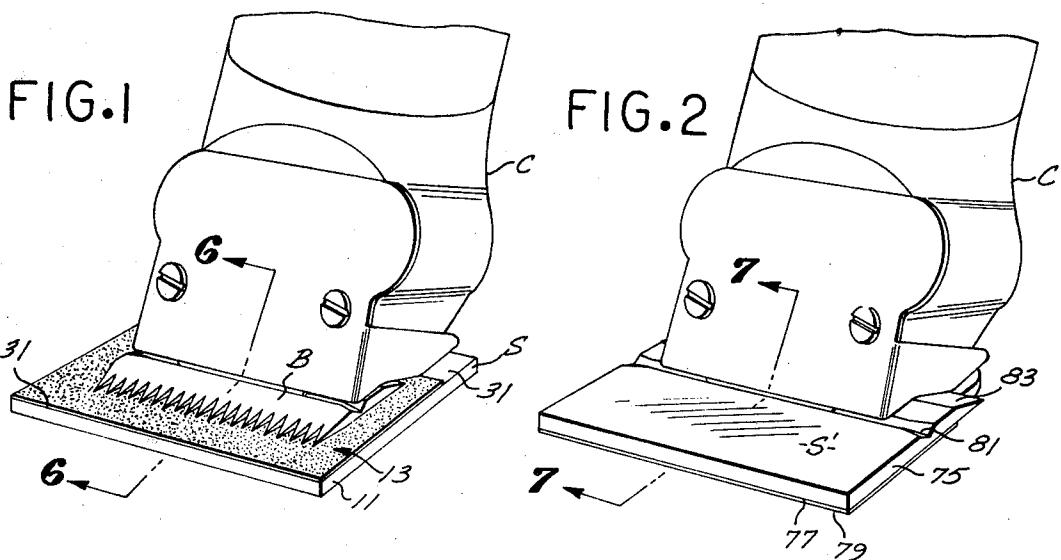


FIG. 3

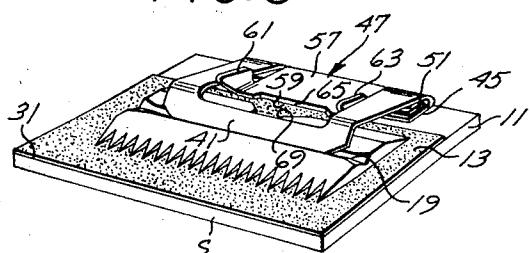


FIG. 4

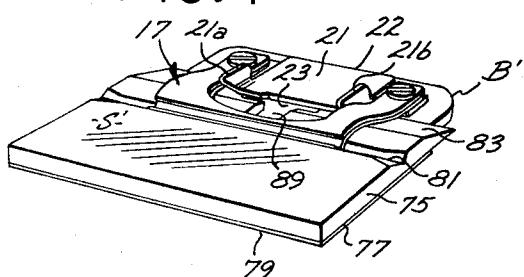


FIG. 5

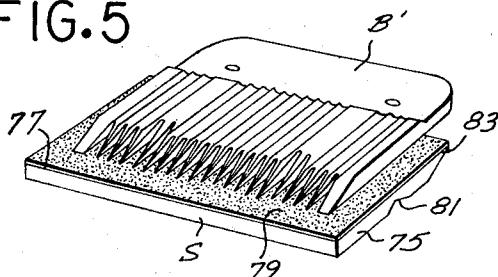


FIG. 7

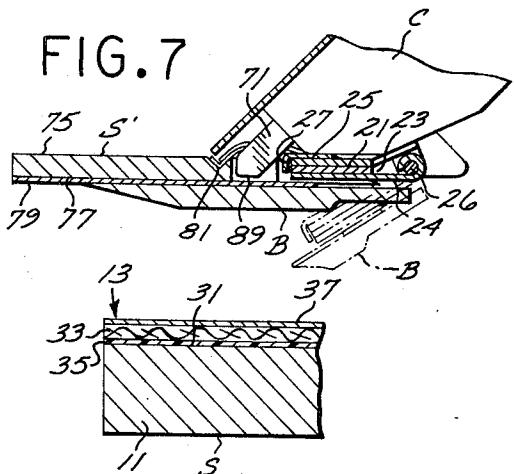


FIG. 6

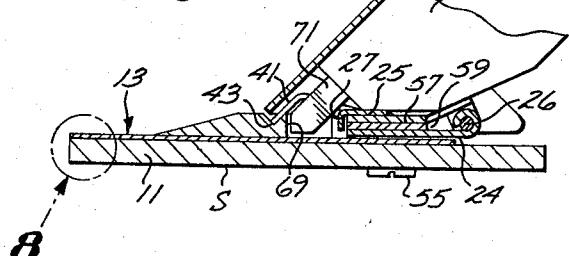


FIG. 8

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1 Claim

ABSTRACT OF THE DISCLOSURE

A clipper blade sharpener to be substituted for a first blade of a pair of clipper blades for sharpening the second blade of the pair of blades. The sharpener includes a base plate of substantially the same thickness as the first blade of the pair of blades. The plate includes a flat surface and an abrasive sheet is removably affixed thereto. Means are provided for attaching the plate to the clippers whereby the first blade of the pair of clipper blades can be removed, the sharpener substituted therefor, and the clippers operated to cause relative reciprocation between the abrasive sheet and the second blade.

BACKGROUND OF THE INVENTION

Field of the invention

The present invention relates to sharpeners for hair clipper blades.

Description of the prior art

There are no clipper blade sharpeners known to the inventor that include abrasive means that are removable and replaceable. The sharpener of present invention also offers the advantage that it can be installed for sharpening without using a screw driver or similar tool.

SUMMARY OF THE INVENTION

The clipper blade sharpener of present invention is adapted for sharpening one blade of a pair of clipper blades and includes a base plate that is substantially the same thickness as the other blade of the pair of blades whereby it can be substituted for such other blade. The plate has one flat surface on which is disposed a sheet of abrasive material. Means are provided for removably securing the abrasive sheet to the plate so it can be replaced when worn. The sharpener includes coupling means for fastening it to the clippers so operation of the clippers will reciprocate the one blade relative to the abrasive sheet.

Other objects and features of the invention will become apparent from consideration of the following description taken in connection with the accompanying drawings.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a partial perspective view of one embodiment of a clipper blade sharpener of the present invention, the sharpener being shown attached to a pair of clippers;

FIG. 2 is a second embodiment of a clipper blade sharpener of the present invention, the sharpener being shown attached to a pair of clippers;

FIG. 3 is a perspective view of the clipper blade sharpener shown in FIG. 1;

FIG. 4 is a perspective view of the clipper blade sharpener shown in FIG. 2;

FIG. 5 is a bottom perspective view of the clipper blade sharpener shown in FIG. 4;

FIG. 6 is a horizontal sectional view taken along the lines 6—6 of FIG. 1;

FIG. 7 is a horizontal sectional view taken along the lines 7—7 of FIG. 2; and

FIG. 8 is a partial sectional view, in enlarged scale, taken from the circle designated 8 in FIG. 6.

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DESCRIPTION OF THE PREFERRED EMBODIMENT

The sharpener S shown in FIGS. 1 and 3 includes a rectangular base plate 11 which has a sheet of upwardly-facing emery paper, generally designated 13, removably attached to its upper surface. The sharpener S is affixed to the clippers C and the clippers operated to reciprocate the movable blade B on the emery paper 13 thereby sharpening the blade.

10 Hair clippers sold under the trademark "Oster Model 10" include a pair of blades comprised of a reciprocable blade B and a stationary blade B'. The reciprocable blade B is installed on the stationary blade B' and retained thereon by a U-shaped retainer 17 that includes a downwardly turned and slightly reversed free edge 18 which fits into a groove 19 included on the top side of the blade B.

15 A mounting clip, generally designated 21, is fastened between the legs of the U-shaped retainer 17 and includes a raised mid-portion 22 which defines an open-ended passage 23 for receiving a forwardly projecting flapper 24 (FIG. 7) included in the clippers C. The clip 21 includes a pair of spaced-apart ears 21a and 21b which receive a stop 25 (FIG. 7) therebetween when the sharpener S is installed on the clippers C. The flapper 24 is biased to the latched position, shown in solid lines in FIG. 7, and can be pivoted downwardly on its mounting pin 26 to the clip-receiving position shown in broken lines. When the blade B' is in the position shown in solid lines in FIG. 7, a latching lip 27 extends down in front of the clip 21 to retain the blade B' from forward movement.

20 The top surface, or face, 31 of the base plate 11 is lapped to provide a flat reference plane for the emery paper 13. Referring to FIG. 8, the emery paper 13 includes a thick paper 33 having an adhesive material 35 on its back side and abrasive material 37 on its face. The emery paper 13 is supplied with the adhesive material 35 covered by a pull tape (not shown) whereby a sheet of worn emery paper 13 can be easily removed from the plate 11 and a new sheet applied by merely removing the pull tape (not shown) and pressing the emery paper 13 onto the face 31 of the plate 11.

25 A U-shaped retainer, generally designated 41, is attached to the rear of the plate 11 and projects forwardly over the emery paper 13. The forward extremity of the retainer 41 is turned downwardly and terminates in a runner in the form of an edge 43 (FIG. 6) which is received in the groove 19 of the blade B when such blade is placed on the sharpener S for sharpening. The rearward extremity of the legs of the retainer 41 are turned back under themselves to form mounting tabs 45 (FIG. 3).

30 With continued reference to FIG. 3, a mounting clip, generally designated 47, is disposed between the legs of the retainer 41 and includes a pair of oppositely projecting fastening tabs 51 which overlie the retainer mounting tabs 45. The base plate 11 includes a pair of mounting bores, with which pairs of bores in the respective retainer mounting tabs 45 and clip fastening tabs 51 are aligned, the clip fastening tab bores being threaded to receive thumb screws 55 extending up through the bores in the base plate (FIG. 6).

35 The clip 41 is formed with a raised central portion 57, which cooperates with the base plate 11 to form an open ended flapper receiving passage 59. The raised central portion 57 projects forwardly and is turned upwardly at its opposite extremities to form a pair of spaced apart ears 61 and 63 which fit on opposite sides of the above described stop 25 (FIG. 6) to prevent reciprocation of the sharpener S relative to the clippers C. A cutout 65 is included at the front of the raised clip portion 57 for receiving the downwardly turned latching lip 27 (FIG. 6). Referring to FIGS. 3 and 6, it is noted that the recip-

rocable blade B includes a keyway 69 extending in from its back edge which is engaged by a driver 71 projecting downwardly from the clippers C for reciprocating the blade B relative to the emery paper 13.

The sharpener S' shown in FIGS. 2 and 4 is intended for sharpening the stationary blade B' of the clippers C. The sharpener S' includes a base plate 75 that is of the same thickness as the reciprocable blade B' and which has a downwardly facing lapped surface 77. A sheet of emery paper 79, similar to the paper 13, is removably fastened to the lapped surface 77 by means of adhesive material. The plate 75 includes a runner receiving groove 81 which is flared on its ends to facilitate insertion of the sharpener S' under the retainer 19. The rear portion of the plate 75 is beveled at 83 to clear the downwardly and rearwardly sloping retainer 19.

Referring to FIGS. 4 and 7, a rearwardly opening keyway 89 is included in the rear portion of the plate 75 for receiving the downwardly projecting drive 71.

In operation, when it is desirable to sharpen the reciprocable blade B of a pair of clipper blades, the stationary blade B' is removed from the clippers C and the reciprocable blade B inserted under the retainer 41, as shown in FIG. 3. The sharpener S is then attached to the clippers C by fitting the mounting clip 47 over the flapper 24 and snapping the flapper upwardly around its pin 26 to bring the keyway 69 of the blade B into engagement with the driver 71, as shown in FIG. 6. With the sharpener S so assembled, the clippers C can be operated and the sharpener S will be held stationary by the stop 25 while the blade B is reciprocated by the driver 71. During such reciprocation, the blade B will be held tightly against the emery paper 13 by the resilient retainer 41 thereby effecting rapid sharpening of the blade B.

To sharpen the stationary blade B', the reciprocable blade B is removed therefrom and the sharpener S' slid under the retainer 19. The blade B' is then reinstalled on the clippers C by fitting the clip 21 over the flapper 24 and pivoting the flapper up to maintain the driver 71 engaged in the keyway 89. The clippers C will then be operated to reciprocate the sharpener S' while the blade B' is held stationary thus honing the top side of the blade B' on the emery paper 13.

From the foregoing it will be apparent that the sharpeners S and S' of present invention provide means whereby clipper blades B and B' may be sharpened without sending them to a professional sharpener. The sharpeners

S and S' have a flat reference surface for receiving abrasive emery paper and each time the emery paper is replaced such flat surface remains unaltered thereby assuring a true reference surface to back the emery paper. Further, the sharpeners S and S' can be utilized without any additional tools such as pliers or screw drivers.

Various modifications and changes may be made with regard to the foregoing detailed description without departing from the spirit of the invention or the scope of the following claim.

I claim:

1. A clipper blade sharpener for sharpening the reciprocable blade included in a pair of clippers of the type that includes a pivotably mounted flapper that is pivotable downwardly to an open position for receiving the stationary blade and is biased upwardly to a closed position urging said stationary blade against the underside of the reciprocable blade and, further, includes a stop, said sharpener comprising:
 - a base plate formed with an upwardly facing flat surface;
 - an abrasive sheet disposed on said flat surface;
 - means for removably attaching said abrasive sheet to said flat surface;
 - a mounting clip mounted on said plate and formed with an open ended passage for receiving said flapper; and
 - at least one ear mounted on said base plate for engaging said stop whereby said stationary blade may be removed from said pair of clippers, said flapper pivoted to its open position, inserted in said passage, and then pivoted to its closed position to urge said sharpener against said reciprocable blade and engage said ear with said stop so said reciprocable blade may be reciprocated by actuating said clippers to thereby sharpen said reciprocable blade on said abrasive sheet.

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