

PATENT SPECIFICATION

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DRAWINGS ATTACHED

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(54) IMPROVEMENTS IN OR RELATING TO CUTTER ASSEMBLIES FOR DRY SHAVERS

(71) We, BRAUN AKTIENGESellschaft, a German Body Corporate, of 22 Rüsselheimer Strasse, 6 Frankfurt-am-Main, Germany, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 The invention relates to cutter assemblies for dry shavers having for an array of cutter blades a support made of synthetic resin, more especially synthetic resin with glass-fibre reinforcement.

15 Such cutter assemblies usually consist of an arrangement of parallel aligned cutter blades which are attached to a plate-shaped support, or to a support comprising individual strut-like members, to form a unit to be enclosed in a housing with a cooperating fixed cutting foil and driven by the shaver motor. It is already known to fabricate the support for the cutter blades of synthetic resin, usually with glass-fibre reinforcement, instead of metal, in order to decrease as far as possible the oscillatory mass of the cutter head and the forces which arise due to inertia.

20 In cutter assemblies utilising synthetic resin instead of metal for the supports, it is necessary, for technical reasons to do with manufacture, for the outer edges of the cutter blades to protrude from the associated surfaces of the support, since otherwise during the required follow-up honing work on the cutter blades the honing discs would get choked with particles of synthetic resin and, especially in mass-production, the honing discs would become unusable after a short period of use.

25 A disadvantageous feature of the aforesaid formation of the cutter assembly is that the protruding edges of the cutter blades may damage the associated cutting foil of the cutter system if, when the shaver

is being used, the cutter assembly should be deflected by external pressure from its normal position to such an extent as to press on one side against the cutting foil. Because of the exposed sharp edges, there is also a risk of injury when the cutter assembly is being cleaned.

The invention is concerned with the problem of overcoming these difficulties and providing a cutter assembly of the foregoing general character in which the deficiencies of the existing designs are largely obviated.

According to the invention a cutter assembly comprises a support made of a synthetic resin and an array of blades projecting outwardly from surfaces of the support to present cutting edges standing clear of said surfaces, the support having, upon the surfaces thereof, ribs or rows of studs which shroud end tip portions of the blades projecting from said surfaces. The ribs or rows of studs may be integrally formed on the support or may be subsequently applied for example by adhesive means. Continuous smoothly contoured ribs may be used or rib formations castellated or otherwise presenting stud-like parts. In particular, the end tip portions of the blades may be individually shrouded in separate studs or stud-like parts of the ribs.

75 The formation of the support according to the invention achieves in a simple manner the effect that the sharp edges of the cutter blades are prevented from damaging the cutting foil, with which the cutter assembly or comb is operatively associated, when the dry shaver catches or stops as a consequence of a knock, impact or pressure, or of undue ripping motion or external pressure during use of the shaver. The choking of the honing discs with particles during manufacture of the cutter assembly is limited to a considerable extent, and protection against injuries caused during the cleaning of the cutter assembly in use is

provided.

When the shaver is being used, the synthetic-resin rib-like members also lessen any up-and-down and tilting movements of the cutter assembly that may occur, and the path of the reciprocatory movement of the assembly is consequently stabilized.

An illustrative embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:—

Figure 1 is a perspective view of the cutter head of a dry shaver, and

Figure 2 illustrates a modified form of the cutter shown in Figure 1.

The support consists of two side struts 1, 2 and an upper strut 3, all of synthetic resin, to which are fastened steel cutter blades 4 projecting outwardly so that the cutting edges stand clear of the strut surfaces. Integrally formed on the outer surfaces 5, 6 of the struts 1, 2 are rib members 7, 8 in which the end tip portions 9, 10 of the cutter blades are shrouded. As an incidental result of the subsequent honing of the blades, the end tip portions terminate substantially flush with the surfaces of the rib members so as to be harmless. The rib members 7, 8 may alternatively be separately formed and secured in position. As indicated in Figure 2, the rib members may be castellated or otherwise formed with stud-like projections to provide recesses between the blades, or the rib may be represented by a row of projecting studs. Thus

the end tip portions of the blades may be individually shrouded in studs or stud-like parts of the ribs.

WHAT WE CLAIM IS:—

1. A cutter assembly for a dry shaver comprising a support made of a synthetic resin and an array of blades projecting outwardly from surfaces of the support to present cutting edges standing clear of said surfaces, the support having, upon the surfaces thereof, ribs or rows of studs which shroud end tip portions of the blades projecting from said surfaces.

2. A cutter assembly according to claim 1, wherein the ribs or rows of studs are integrally formed on said support.

3. A cutter assembly according to claim 1, wherein the ribs are separately formed and attached to said support.

4. A cutter assembly according to any of the preceding claims, wherein said end tip portions of the blades projecting from said surfaces are individually shrouded by separate studs or stud-like parts of the ribs.

5. A cutter assembly for dry shavers substantially as herein described with reference to the accompanying drawings.

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