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Brenneman et al.

[11] **3,811,188**

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[54] **SHAVER WITH REMOVABLE HEAD**

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[73] Assignee: **Schick Incorporated,** Lancaster, Pa.

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[52] **U.S. Cl.**..... **30/34 R,** 30/34.2, 30/43.92

[51] **Int. Cl.**... **B26b 19/46,** B26b 19/42, B26b 19/06

[58] **Field of Search**..... 30/34 R, 34.2, 43, 43.1, 30/43.91, 43.92, 346.51

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Primary Examiner—Al Lawrence Smith
Assistant Examiner—Gary L. Smith

[57] **ABSTRACT**

An electric shaver particularly adaptable for use as a lady's shaver, having a detachable pop-out shaving head which is snugly positioned between fixed end walls. The detachable shaving head includes an integral base having a slot into which an outer cutter is releasably secured. The entire head assembly is pivotally released from between the end walls by a user operated head ejector which causes the head to pivot about axes perpendicular to said end walls. In a preferred embodiment, the shaving head includes rows of brushes extending along both sides of the cutter. Also, in a preferred embodiment, the head portion of the shaver includes a special lighting assembly adjacent the shaving head for illuminating the skin adjacent the shaver.

18 Claims, 6 Drawing Figures

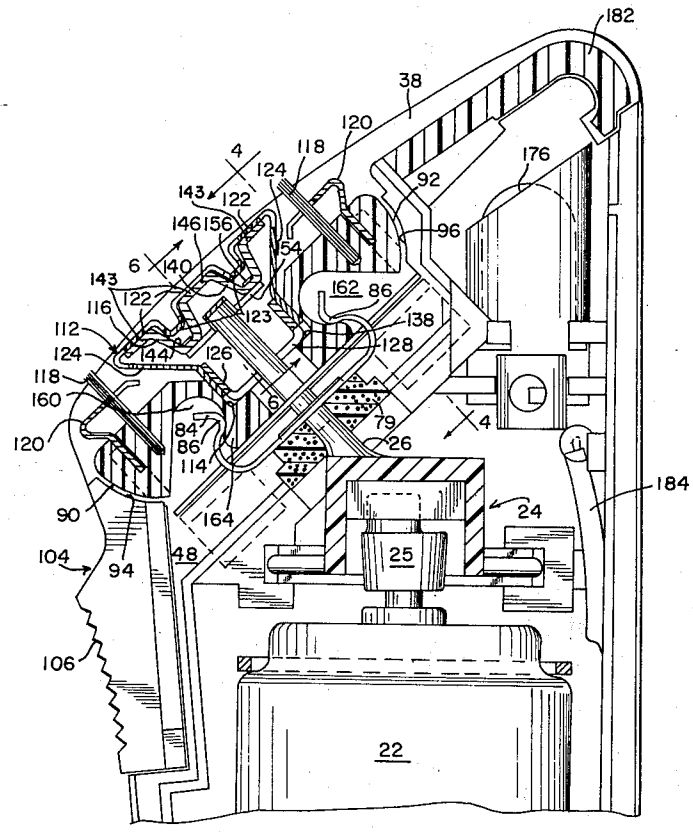
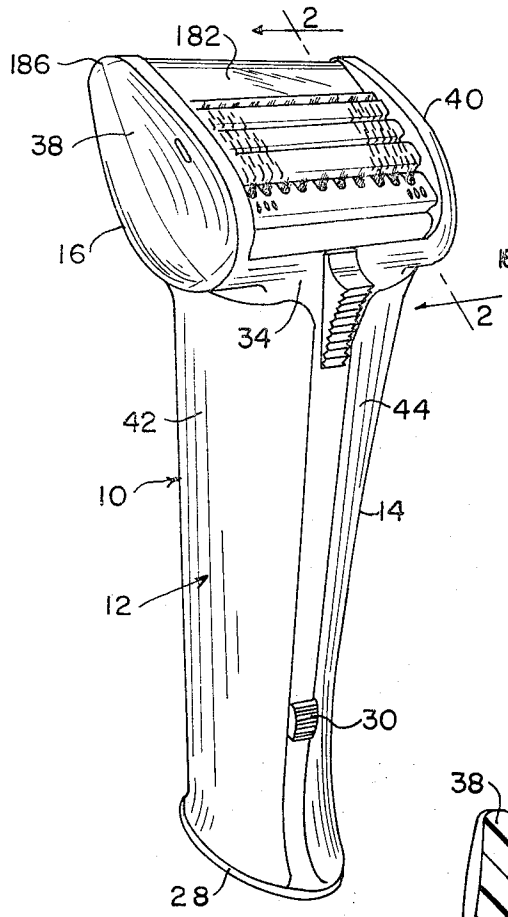


FIG. 1



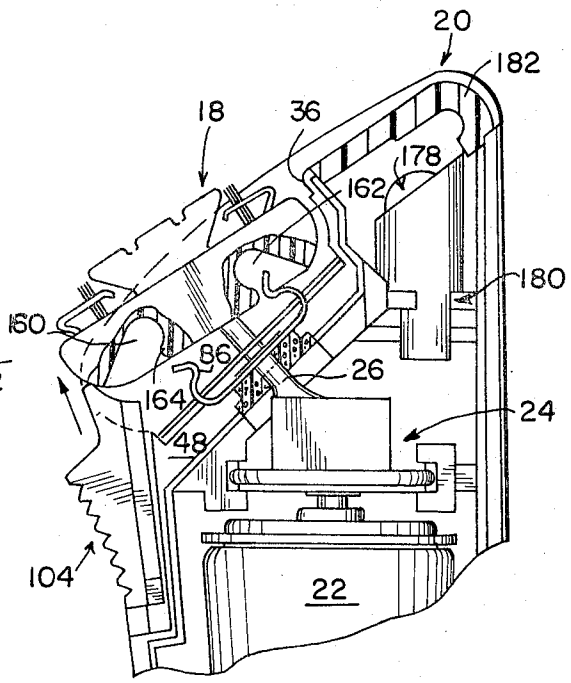


FIG. 3

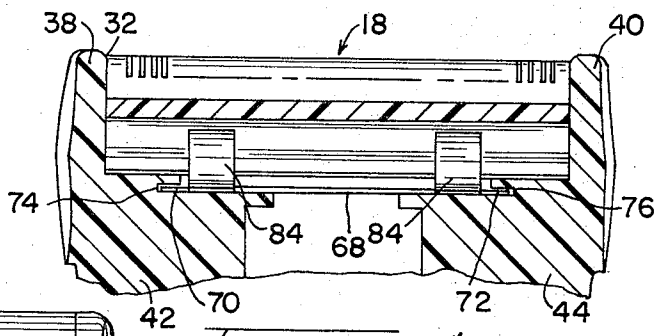


FIG. 4

FIG. 5

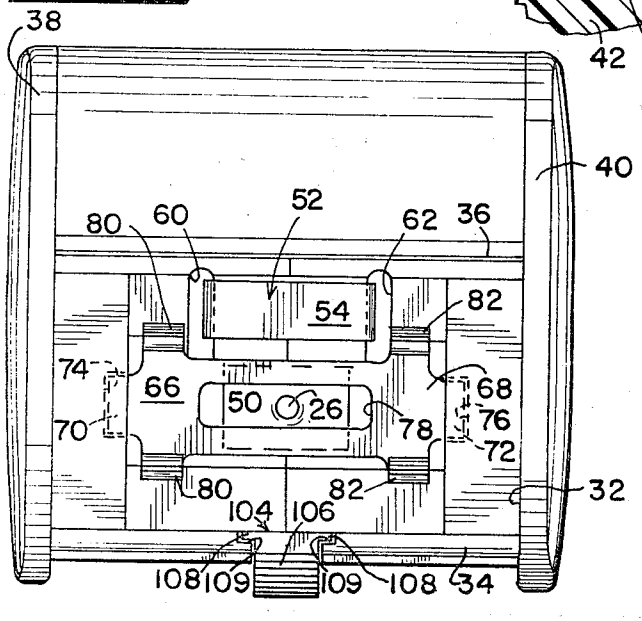
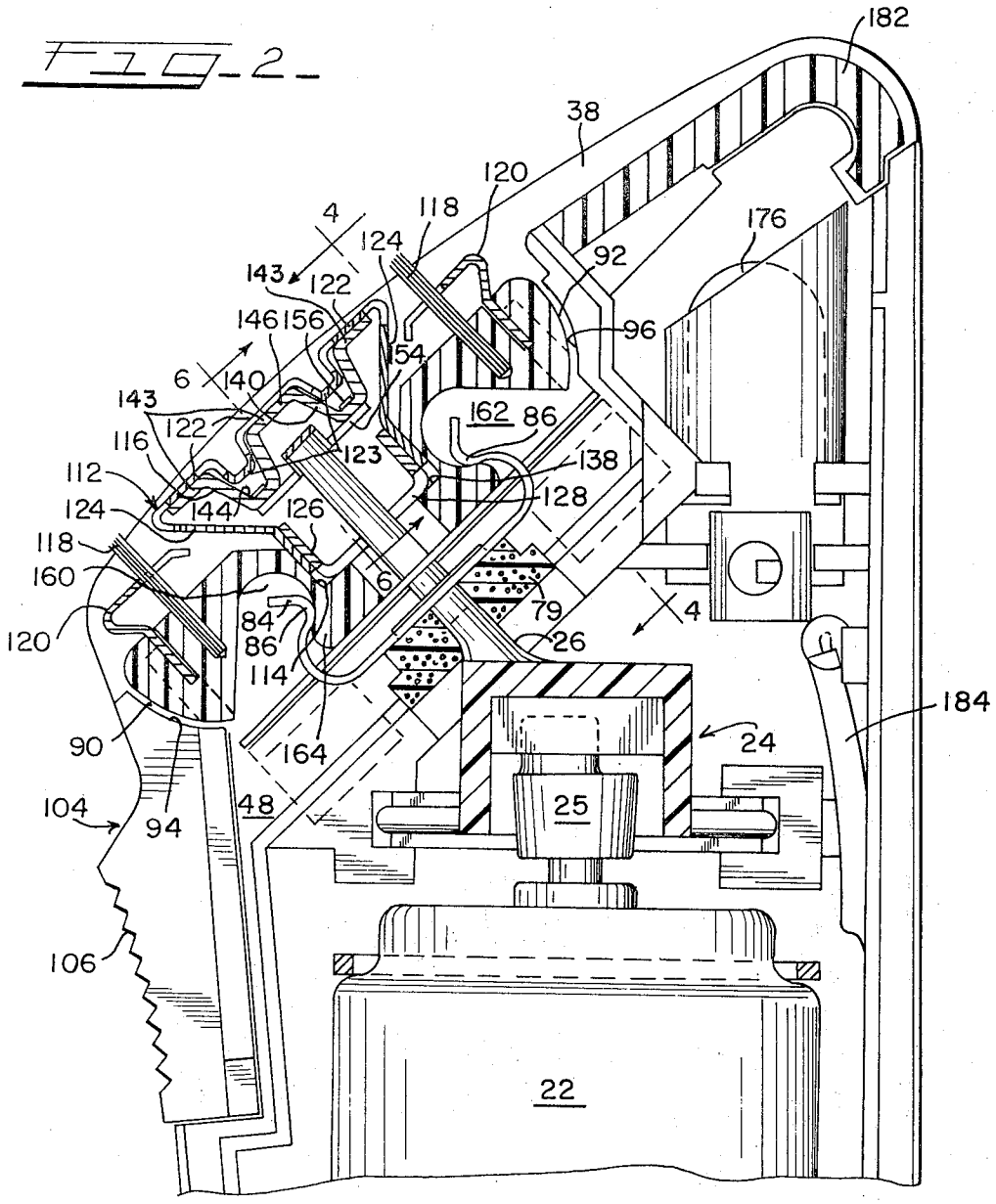


FIG. 2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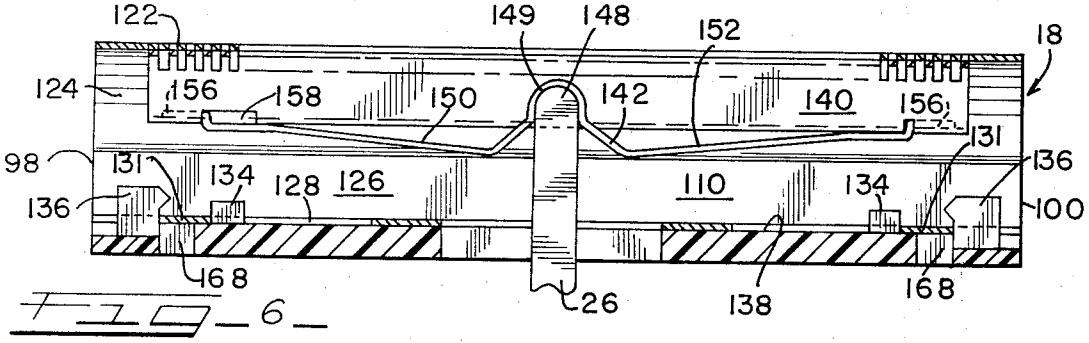
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26
138
168

FIG. 6

SHAVER WITH REMOVABLE HEAD

This invention relates to the field of electric dry shavers, and, particularly, to shavers having a detachable shaving head.

It is highly desirable to provide means for detaching the shaving head of an electric shaver for the purpose of brushing hair clippings out of the cutter assembly. Hair clippings are normally deposited within the shaving head, and would accumulate unless so removed. It would be highly desirable to provide a detachable head which is especially suitable for a lady's shaver, and which can be readily manipulated by someone with little mechanical skill, and with a minimum of likelihood that the shaver or the shaving head assembly would be damaged in the process, or that it would be reassembled improperly.

It is more likely that cleaning the cutter assembly will become part of the user's routine, if the manipulation steps involved are simple, almost instantaneously accomplished, and virtually error-proof. Hence, it is desirable to provide a shaver having these features.

Shaving heads in electric shavers are operatively connected to an electric motor, typically through a vigorously oscillating driving arm. Consequently, even though it is desirable that the head be easily and conveniently detached and easily re-attached to the shaver, it is imperative that the head be attached so as to withstand the vigorous mechanical action and vibration, as well as to withstand the dislodging forces which are encountered in normal use.

Furthermore, the manufacture and sale of electric shavers is a highly competitive business, and it is imperative that such shavers, including the shaving head retention and release features, be simple and economical to manufacture.

In addition, an electric shaver which is intended for use as a lady's shaver must be readily and safely adaptable for shaving angular surfaces and recessed regions, such as, for example, shaving legs, armpits, and the like, as well as lend itself to good styling features.

It is an object of the present invention to provide an electric shaver having a pop-out shaving head which can be simply and almost instantaneously removed from the shaver by the user, and which can be replaced as easily.

It is a further object of the present invention to provide a shaver in which the shaving head can be conveniently and simply removed from the shaver by a person with little mechanical skill for the purpose of cleaning, and in which the shaving head assembly can be reassembled by the user and re-attached to the shaver with virtually no likelihood of errors in re-assembly or re-attachment.

It is another object of the present invention to provide a shaver in which the cutter assembly can be removed from the shaving head and replaced from time to time by a person with a low leval of manual skill and with no special tools.

It is a further object of the present invention to provide a shaver which can be manufactured in a relatively simple manufacturing and assembly operation, and, which, because of the simplicity of the structures and the assembly sequence involved, can be manufactured economically.

It is another object of the present invention to provide a shaver which readily lends itself to a good styling feature, whereby the shaver, although utilizing a detachable head, presents a well-contoured, free-flowing unitary appearance.

These and other objects which will be apparant hereinafter are all achieved in accordance with the present invention which is described herein in connection with particularly preferred embodiments, and with the aid of the accompanying drawings in which:

FIG. 1 is a perspective view of a lady's shaver in accordance with the present invention.

FIG. 2 is an enlarged cross-sectional view taken approximately along the line 2—2 of FIG. 1.

FIG. 3 is a cross-sectional view taken as in FIG. 2 schematically showing the shaving head in the process of being removed from the shaver shown in FIGS. 1 and 2.

FIG. 4 is a cross-sectional view taken approximately along the line 4—4 of FIG. 2.

FIG. 5 is an end view of the shaver shown in FIG. 1.

FIG. 6 is a cross-sectional view taken approximately along the line 6—6 of FIG. 2 taken through the shaving head and a portion of the driving arm.

Referring now to the accompanying drawings, an electric lady's shaver is generally indicated by the numeral **10**, and includes a body or housing generally indicated by the numeral **12** comprising a handle portion **14** and head portion **16**. Head portion **16** houses and supports the shaving head assembly generally indicated by the numeral **18** and the lighting assembly generally indicated by the numeral **20**.

Shaver **10** includes an electric motor **22**, transmission means **24** including an eccentric **25** for converting the rotary drive of motor **22** to the oscillating drive of driving arm **26** which operates shaving head **18**. Conventional electrical cord plug-in means (not shown because conventional) are provided at the base **28** of handle **14** and an on-off switch **30** controls the operation of the shaver **10**.

Shaving head assembly **18** is mounted within upwardly facing recess **32**. The recess **32** is defined by upwardly projecting side wall **34**, a central wall **36** which is parallel to side wall **34**, and end walls **38, 40**. Central wall **36** divides recess **32** from lighting assembly **20**. Housing **12** is formed by a pair of cup-shaped members **42, 44** which are formed with opposing halves of side walls **34, 36** which abut in a common plane to form side walls **34, 36**. Generally speaking, members **42, 44** are mirror images, and it is apparent that switch **30** and motor **22** reside within hollow handle portion **14** formed by butting housing members **42, 44**.

End walls **38, 40** are integral extensions of members **42, 44** respectively. The bottom of recess **32** is defined by a wall **48** which is made of portions of housing members **42, 44** which extend inwardly in a common plane.

Central opening **50** extends through bottom wall **48** and motor drive arm **26** extends therethrough, as shown in FIGS. **2** and **3**. A heavy "C" clip **52** having a flat bridging portion **54** extending between members **42, 44** helps to maintain these members **42, 44** in proper butting position, and includes end hooking fingers **56, 58** extending downwardly into recesses **60, 62** in housing portions **42, 44**, respectively, to engage and secure these portions.

Shaving head **18** is retained in recess **32** by a resilient detent, generally **66**. Detent **66** includes a flat base por-

tion 68 which extends across housing members 42, 44 and includes end tab portions 70, 72 which reside in respective recesses 74, 76 in housing members 42, 44, respectively. It is noted that at least some gap exists between end 70, 72 and the adjacent walls of recesses 74, 76, respectively. (See FIGS. 4 and 5).

It is also noted that, due to the usual manufacturing tolerances, some gap also exists between the sides of ends 70, 72 and opposing portions of housing 42, 44 with the result that some play or movement of detent 66, both laterally and longitudinally along the elongated dimensions is possible. Moreover, some slight angular rotation with respect to a plane passing perpendicularly through the center of base 68, for example, is also possible.

Detent 66 also provides a central opening 78 through which drive arm 26 passes and in which drive arm 26 oscillates. Detent 66 also includes two pair 80, 82 of opposing resilient members of latching detents 84—84. It is noted that detent 66 is elongated, and that resilient members 84—84 are located near the respective ends 70, 72 of detent 66. As shown in FIGS. 2 and 3, detent 66 consists of spring stock which has been formed to include the laterally extending projections 84—84 which initially smoothly curve upwardly and reverse direction towards the direction of body portion 68, and then, smoothly curve upwardly again and reverse direction again to the direction generally away from body portion 68. It is the latter curved latching portions 86—86 which engage shaving head 18.

It will be appreciated that in spite of the "soft" latching by flexible latching detents 84—84, and in spite of the relatively loose mounting of detent 66, in accordance with the present invention, and because of structural relationships which will be apparant in this description, detent 66 nonetheless secures shaving head 18 in shaver 10 with substantially no play or movement with respect to housing 12 during operation other than that of the cutters which will be described hereinafter.

FIG. 2 shows that latch portions 86 not only assist in the proper aligning of head 18 along its long dimension, but, moreover, assists in drawing head 18 inwardly with respect to recess 32 to bring the sides 90, 92 which are smoothly curving, to rest against respective opposing and confining sides 94, 96 which constitute part of walls 34, 36. Moreover, in accordance with an important aspect of the present invention, head 18 is dimensioned so that ends 98, 100 thereof, fit snugly between end walls 38, 40. (See FIG. 4). Partly as a result of these structural relationships, cutter head 18 is very securely retained in recess 32 with substantially no motion during operation.

A shaving head ejector is generally indicated by the numeral 104 and includes an external finger gripping portion 106 and a pair of laterally extending lugs 108—108 which are retained in recess 109—109 in housing members 42, 44. Recesses 109, 109 are elongated and ejector 104 can move in the direction along the long dimension of the shaver handle to the extreme positions illustrated in FIGS. 2 and 3.

The shaving head assembly which is generally indicated by the numeral 18 comprises an integral molded plastic base 110, an outer cutter 112 which is received in a slot 114 in base 110, an inner cutter assembly 116, hair-raising brushes 118—118 disposed at both sides of outer cutter 112, and facing elements 120—120. Brushes 118—118 are made of tufts 119 bonded into base 110, and mid-portion 121 of facing plate 120 resembles a plurality of fingers which are spaced-apart from block 110, extending laterally to help maintain tufts 119 in desired perpendicular relationship with respect to base 110.

From a consideration of the drawings, it will be appreciated that cutter assembly 18 is bilaterally symmetrical with respect to a middle cross-sectional plane extending transversely across the narrow dimension, and also is bilaterally symmetrical with respect to a middle cross-sectional plane extending through the long dimension of cutter assembly 18.

Referring now to FIGS. 2 and 6, outer cutter assembly 112 includes a plurality of rows 122 of cutters, and inwardly directed side portions 124 which are bonded at the rearward extreme to the outside of an inner "U"-shaped bridging element 126. Outer cutter 112 is shaped from flat stock with elongated "U"-shaped recessed 113 extending between rows 122 of cutters. It is apparant from a consideration of FIG. 6 that bridging element 126 extends the entire length of outer cutter 112, and that the bottom portion 128 of bridging portion 126 includes a central opening 128 through which driving arm 26 passes, as well as a plurality of other openings which provide bridging bands 131 around which retaining bosses 134, 136 at the bottom of recess 114 in base 110 are snugly received, to fix outer cutter 112 with respect to base 110. The bottom portion 128 of outer cutter 112 presses against the bottom 138 of slot 114 and the sidewalls of slot 114 snugly rearwardly extending portions of sidewalls 124 to provide excellent stability characteristics. Inner cutter assembly 116 comprises a movable cutter 140 and a spring drive arm coupling element 142. The outer configuration of inner cutter 140 is adapted to mate with the inner configuration of outter cutter 112.

Inner cutter 146 includes a plurality of rows 143 of cutter blades and is shaped to include recessed regions 144 therebelow. Recessed regions 144 of inner cutters receive recessed regions 123 to maintain alignment between respective rows 122 and 143 of inner and outer cutters.

It is noted that when viewed from the underside of cutter 140 the central row 146 of inner cutter 140 appears as a recess and it is apparant from a consideration of FIGS. 2 and 6 that drive arm 26 extends into the region defined by the central row 146 of the inner cutter 140. End 148 of drive arm 26 is received in a "U"-shaped detent 149 in spring 142. Spring 142 also includes lateral arm portions 150, 152 having bridging detents 154 at each end which include clips 156 which pass through openings 158 in inner cutter 140. Inner cutter assembly 116 can move easily within cutter 112. Tensioning of spring 142 by insertion of end 148 into detent 149 uniformly urges cutting faces of cutter 140 against opposing operating surfaces on cutter 112.

The underside of the plastic block or base 110 includes two pairs of opposing recesses 160, 162 defined by undercut latching surfaces 164—164 which engage the latching portions 86—86 of detent 66.

The underside of block 110 also includes a plurality of openings 168—168 through which a small pushing tool (not shown) can be brought to bear against the bottom 128 of bridge element 126 of outer cutter 112. This makes it possible to replace a set of outer cutters 112 and inner cutters 116 without necessitating the

purchase of a new base element **110**, and structures associated therewith. Hence, to remove cutter **112** from head **18**, head **18** is first removed as for cleaning and cutter **112** is snapped out of slot **114**, for example, by pressing the point of a pencil through openings **168—168** against bottom **128**.

FIG. **3** shows the cutter head **18** in a moved position, that is, in that position which is obtained during the ejection of head assembly **18** from recess **32** as for cleaning. As indicated above, the ejection mechanism, generally **104**, can move to several positions in a direction corresponding to the lengthwise direction of handle portion **14**. During ejection, surface **94** of ejector **104** bears under rounded side **90** of head **110** and urges shaving head **110** to pivot. Because of the mating configuration between the latching portions **164** of head base **110** and springlatching portions **86** of detent **66**, and because of the close proximity of lateral surface **90** of head **110**, and opposing surface **96** of recess **32**, shaving head **18** pivots as indicated in FIG. **3**. The pivot axis is substantially parallel to the direction of the elongated dimensions of head **18**, that is, perpendicular to ends **38, 40**. Shaving head **18** can be completely removed from recess **32** to permit cleaning or replacement.

It will also be appreciated that shaving head **18** is bilaterally symmetrical with respect to both transverse and longitudinal mid-sectional planes, and, consequently, there is no right or wrong way in which to orient, end for end, the shaving head **18** after cleaning.

Immediately upon release of shaving head **18** out of recess **32**, it will be appreciated that drive arm **26** is disengaged from detent **149** of spring **142** and, because of the resiliency of spring **142**, arm portions **150, 152** immediately flex downwardly. Inner cutter **116** can slide freely along the length of outer cutter **112**, but spring **142** and larger bosses **134** in base **110** cooperate so that bosses **134** serve as detents to keep inner cutter **116** from inadvertently separating from outer cutter **112** and falling to the floor, for example. When inner cutter **116** is in the position in which spring **142** encounters larger bosses **136**, portions of spring **142** are available for manual depressing whereby cutter **116** can be removed from outer cutter **112** by sliding it out axially. Alternatively, cutter **140** can be grasped by the fingers and simply pulled free, the spring **142** giving way due to the neutral flexibility and resilience.

Removal of inner cutter **116** greatly facilitates cleaning of both inner cutter **116** and outer cutter **112**, and a brush can be passed through the interior of outer cutter **112**, for example. Inner cutter **112** is replaced in operating relationship with outer cutter **112** by reversing the steps described immediately above, and, again, it is noted that because of the bilateral symmetry of the shaving head assembly generally, and particularly because of the bilateral symmetry of the outer cutter **116** and inner cutter **112** along the longitudinal mid-sectional plane, the inner cutter **116** can be inserted starting at either end thereof into either end of outer cutter **112**, and there is no right or wrong end-for-end insertion on re-assembly.

To replace the shaving head assembly **18** in recess **32**, either side **90, 92** of head assembly **18** can be placed approximately against either surface **94** or **96** of recess **32** in housing **12** to bring the resilient latch portions **86—86** of detent **66** into mating latching engagement with detents **164—164** at the underside of base **110** of cutter head **18**. Because of the rounded character of sides **94, 96**, and opposing surfaces on head **18**, inward or downward pressure on head **18** automatically causes a shifting about the long dimension until head **18** is secured by detent **66** in proper orientation.

Another aspect of the present invention involves the relationship between the lighting assembly generally indicated by the numeral **176** and the head portion **16**. Lighting assembly **176** includes a lamp **178**, a receptacle **180**, diffusion lens **182** and associated electrical supply components generally indicated by the numeral **184**. Emminently satisfactory lighting circuits and associated lighting circuit structures are disclosed in copending patent application Ser. No. 276,517 filed July 13, 1972 by Edward J. Brennaman et al. (Attorney Docket Case 720607) which application is assigned to a common assignee with this application.

In the illustrated embodiment, it is noted that head **18** is received in a low profile configuration, that is, with cutters **112** being no higher than, and, in fact, slightly recessed below, associated end walls **38, 40** of end portion **16** of housing **12**.

Cutter head **18** is positioned on an inclined portion adjacent diffuser lens **182**, with lens **182** being positioned to illuminate the user's skin immediately adjacent the upper portion **186** of head portion **16**. It is also noted that when shaver **10** is being operated in such a way that shaving head **18** is substantial **16** parallel with respect to the skin of the user, the portion **186** of head portion **16** of housing **12** will be elevated so that lens **182** is at an angle with respect to the skin, thereby permitting an increased illumination of the surfaces immediately ahead of the razor.

It will be appreciated from a consideration of the foregoing disclosure that the shaver of the present invention provides a head configuration which is readily used for shaving curves, angles, recessed areas, and the like, and is adaptable and highly satisfactory for use in connection with shaving legs, underarms, and the like. It is also extremely convenient to remove shaving head **18** for cleaning or replacement and to remove cutter **112** from base **110** for replacement. The invention is particularly suited for use in connection with a lady's shaver in that there is no need to exactly re-assemble head **18** in shaver **10**, or inner cutter **112**, or outer cutter **116** in base **110**, in any particular end-for-end orientation. Moreover, new cutters can be installed in head **18** conveniently and easily without any tools. For example, cutters **112** can be separated from block **110** by pressing the point of a pencil through opening **168** and a replacement cutter **112** is aligned in slot **114** and is snapped to secure attachment.

Moreover, the cutter assembly **18** is readily rolled free of detent **66**.

Moreover, the fact that cutter **112** is secured to a snap-out base **110** provides an additional advantage referred to hereinbefore. Because of the novel roll-out action imparted by the shaving head ejector **104** described hereinbefore, the shaving head **18** is disengaged from detent **66** in a motion which corresponds approximately to a roll or pivot around an axis which is parallel to the long dimension of head **18**. This is a substantial improvement over ejection systems which impart a roll or pivot around an axis which is parallel to a transverse or narrower dimension of a cutter head. As a consequence of this combination of structural elements, end walls **30, 40** can be and are spaced-apart to very snugly

receive therebetween the cutter head **18**. (See FIG. **4**). This greatly enhances the structural stability of cutter head **18** with respect to its being fixed with respect to housing **12**, and it is particularly preferred that outer cutter **112** be the same length as base **110** because this relationship better assures that end walls **38–40** provide immovable positioning support for cutter **112** during operation.

We claim:

1. A removable shaving head for use in an electric shaver having a recess for receiving said head, said recess being defined by a pair of fixed opposing end walls, and further having a drive arm, and means for oscillating said drive arm along a line extending between and normal to said pair of opposing end walls, said shaving head comprising:

a base having a first dimension and a second dimension, and an inner face and an outer face, said base being dimensioned to extend across substantially said entire recess, and having a first dimension such that said shaving head is snugly received between said end walls, and said outer face having a walled slot parallel with the direction of said first dimension;

an elongated outer cutter;

an elongated inner cutter adapted to be cooperatively received within said outer cutter;

means for biasing said inner cutter into shearing engagement with said outer cutter;

means in said base for snugly and releasably securing said outer cutter in said walled slot;

coupling means for coupling said inner cutter to said drive arm whereby said inner cutter is reciprocatively driven along the direction of said first dimension;

head retaining means comprising a pair of opposed resilient fingers mounted in said recess so as to exert opposing forces in a direction parallel to the direction of said second dimension, and a pair of recesses in said base member adapted to receive said resilient fingers in locking engagement.

2. A shaving head as defined in claim **1** wherein said outer cutter and said base have equal first dimensions, and wherein the ends of said outer cutter are also snugly received between said end walls.

3. A shaving head as defined in claim **1** wherein said outer cutter has a rearwardly facing member received in said walled slot, said rearwardly facing member having a plurality of openings, and wherein said base has means comprising a plurality of opposing bosses at the bottom of said slot for operatively engaging said openings to secure said outer cutter to said base.

4. A shaving head as defined in claim **3** in which said base has an opening passing through the bottom of said slot, said opening being adapted to provide access to the face of said rearwardly facing member for pushing said outer cutter out of said slot.

5. A shaving head as defined in claim **1** wherein said coupling means comprise an elongated generally downwardly arched spring, the ends of said spring being secured to said inner cutter at the rear thereof, and wherein said spring includes a downwardly-opening "U"-shaped bend adapted to operatively engage said drive arm, and wherein engagement of said resilient fingers by said recesses urges said shaving head downwardly over said drive arm against the bias of said spring, thereby biasing said inner cutter against said outer cutter.

6. A shaving head as defined in claim **1** wherein said shaving head further includes a row of hair-raising brushes mounted in said base in rows extending along said first dimension, and at both sides of said outer cutter.

7. A shaving head as defined in claim **1** wherein said shaving head is bilaterally symmetrical with with respect to a mid-sectional plane extending in the direction of said first dimension, and is also bilaterally symmetrical with respect to a mid-sectional plane extending in the direction of said second dimension.

8. In combination in an electric shaver:

a housing including a recess at one end thereof for receiving a shaving head therein, said recess being defined, in part, along two opposing edges thereof by fixed end walls integral with said housing;

means including a drive arm extending upwardly into said recess;

means for oscillating said drive arm in a first direction along a line between, and normal to, said pair of fixed end walls;

a shaving head comprising an outer cutter, and an inner cutter adapted to be cooperatively received within said outer cutter, and including means for coupling said inner cutter with said drive arm;

said shaving head also including an integral molded base having a first dimension and a second dimension, said first dimension being in said first direction, said second dimension being transverse thereto, said first dimension being such that said base is snugly received between said end walls, said base having a walled slot in the outer face thereof, said slot running in said first direction, and means in said base for releasably securing said outer cutter in said slot, said base also having a pair of recessed detent means in the underside thereof;

means comprising a pair of opposed resilient fingers mounted in said recess and adapted to be releasably received by said recessed detent means, and to exert opposing forces along a direction parallel to the direction of said second dimension to grip at least a portion of said head therebetween; and

head ejector means comprising a user-operated traveller movably mounted in said housing and adapted to enter said recess and push against the underside of said shaving head at an edge thereof extending in said first direction and to pivot said shaving head outwardly around axes parallel to the said first direction and thereby pivotally release said shaving head from said resilient detent means.

9. The combination of claim **8** in which said shaving head is bilaterally symmetrical with respect to a mid-sectional plane extending in said first direction, and is also bilaterally symmetrical with respect to a mid-sectional plane extending in the direction of said second dimension.

10. The combination of claim **8** wherein said outer cutter and said base have equal first dimensions, and wherein the ends of said outer cutter are also snugly received between said end walls.

11. The combination of claim **8** wherein said outer cutter has a rearwardly facing member, wherein said rearwardly facing member is received in said slot, wherein said rearwardly facing member has a plurality of openings, and wherein said base has a plurality of op-

posing bosses at the bottom of said slot for operatively engaging said openings to secure said outer cutter to said base.

12. The combination of claim 8 wherein said base has an opening passing through the bottom of said slot, said opening being adapted to provide access to the face of said rearwardly facing member for pushing said outer cutter out of said slot.

13. The combination of claim 8 wherein said means for coupling said inner cutter to said drive arm comprise an elongated generally downwardly arched spring, the ends of said spring being secured to said inner cutter at the rear thereof, and wherein said spring includes a downwardly-opening "U"-shaped bend adapted to operatively engage said drive arm, and wherein engagement of said resilient fingers by said recesses urges said shaving head downwardly over said drive arm against the bias of said spring, thereby biasing said inner cutter against said outer cutter.

14. The combination of claim 8 wherein said shaving head also includes a row of hair-raising brushes mounted in said base in rows extending along said first direction and at both sides of said outer cutter.

15. The combination of claim 8 wherein said shaving head has a plurality of rows of cutters having cutting portions arranged substantially in a first plane and wherein said shaver also includes a lamp assembly and light diffusion lens, said lens being positioned along a second plane which forms an acute angle with the skin of the user when said first plane is in contact with and parallel to said skin of the user.

16. An electric shaver comprising a housing, a pop-out shaving head and a head ejector; said housing including a recess at one end thereof for receiving said shaving head, said recess being defined along two opposing edges thereof by end walls integral with said housing; said shaving head comprising an integral molded base element having a first dimension along the line extending between and normal to said end walls, said first dimension being such that said head is snugly received between said opposing end walls, said base having a second dimension along a line transverse to said first dimension and across the face thereof; head-securing means comprising flexible resilient opposing detent means mounted in said recess for grasping portions of said head therebetween with opposing forces being exerted in the direction parallel with said second dimension; said head ejector comprising means including a user-operated traveller movably mounted in said housing immediately adjacent said recess and adapted to enter into said recess and to engage a rearward portion of said shaving head adjacent an edge running along said first dimension for pivoting said shaving head around axes which are parallel to the direction of said first dimension and urging said shaving head out of engagement with said resilient detent means.

17. An electric shaver as defined in claim 16 wherein said head-securing means include means for biasing said shaving head inwardly into said recess, and wherein said recess is also defined by two additional opposing edges extending between said end walls, said additional opposing edges having a curved seating configuration for receiving mating seating surfaces on said shaving head.

18. A shaving head for use in an electric shaver having a recess for receiving said head, said electric shaver including a drive arm and means for oscillating said drive arm along a line extending in a first direction between and normal to a pair of opposing end walls, said shaving head comprising:

an integral molded base having a walled slot in the outer face thereof, said slot extending in said first direction;

an elongated outer cutter, and an inner cutter adapted to be cooperatively received within and biased outwardly against said outer cutter;

means in said base securing said outer cutter in said slot;

said shaving head also including a hair-raising brush positioned along the edge of said outer cutter, said brush comprising a plurality of closely associated tufts bonded in said base, and a facing element mounted in said base and including a portion thereof spaced-apart from said base, said facing element including a portion thereof having the configuration of fingers extending between said tufts and toward the edge of said base, said fingers terminating at the free ends thereof immediately adjacent said base.

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