

Nov. 9, 1937.

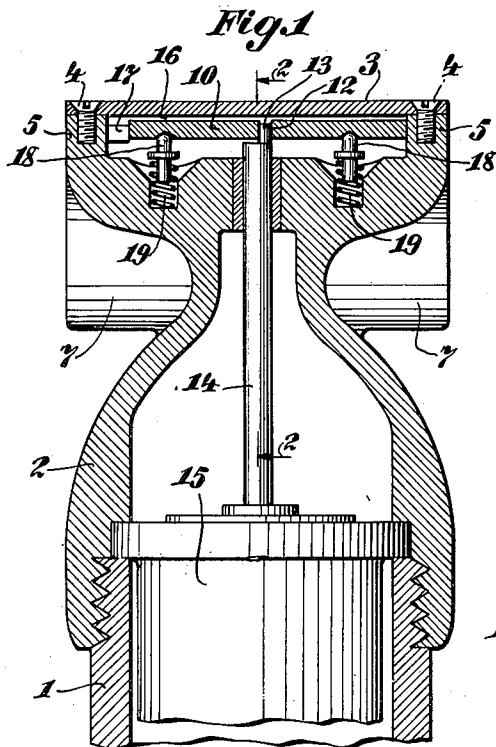
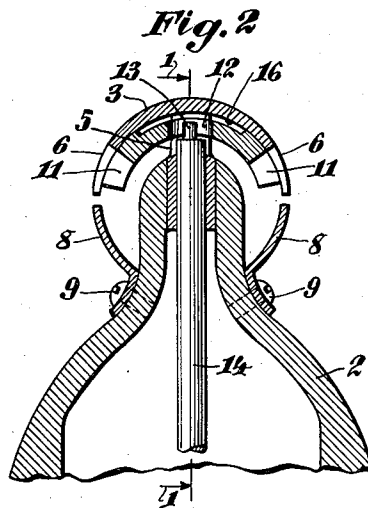
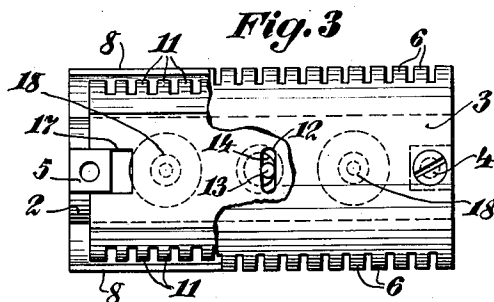
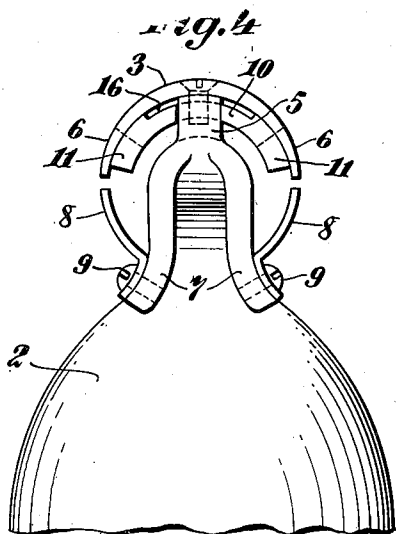
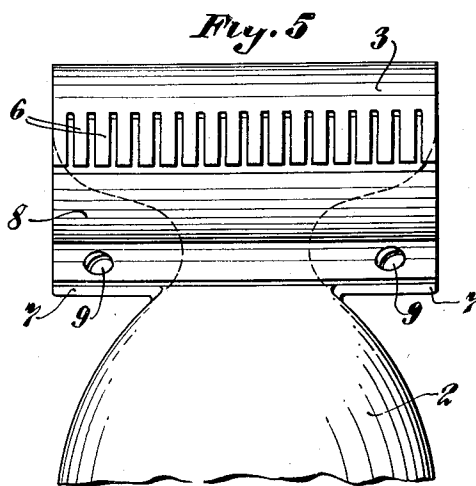
T. STEINBACH

2,098,437

HAIR CLIPPING IMPLEMENT

Filed Aug. 10, 1936

2 Sheets-Sheet 1



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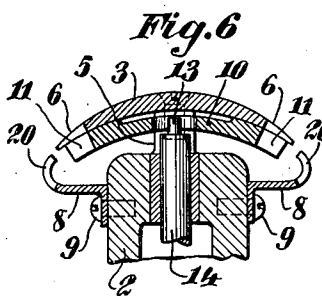
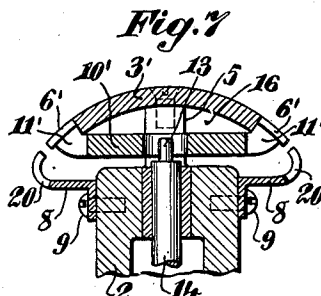
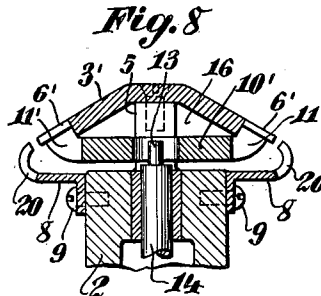
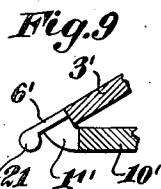
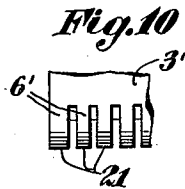
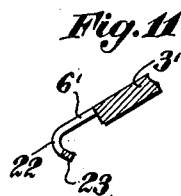
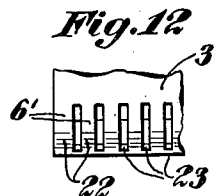
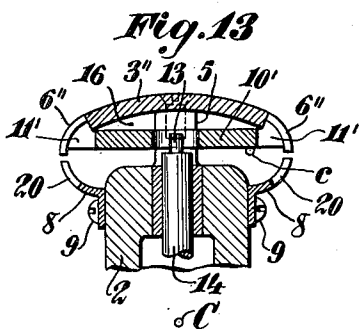
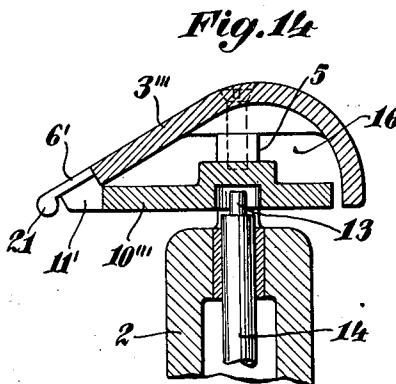
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2,098,437

HAIR CLIPPING IMPLEMENT

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,098,437

HAIR CLIPPING IMPLEMENT

Theodore Steinbach, Millburn, N. J.

Application August 10, 1936, Serial No. 95,055

18 Claims. (Cl. 30-43)

My invention relates to hair clipping devices used in lieu of safety razors and operated without the necessity of softening the surface operated upon by soap and similar preparations.

The particular object of the present invention is to provide a hair clipping implement which is operated in close similarity with standard safety razors of today. Pursuant to this object, the device is given a form which accords with the desired similarity of action. It is also an object of this invention to facilitate the passage of the hair filaments into the area of shearing action and the passage of the hair, after it is cut, out of the implement. A further object is to provide an implement having the above characteristics in a simple and convenient manner, easy to manufacture. Other objects will become apparent from the specification which follows and from the accompanying drawings, in which:

Figure 1 is a cross section of one form of the invention taken along the line 1-1 of Figure 2.

Figure 2 is a cross section of the same structure taken along the line 2-2 of Figure 1.

Figures 3, 4, and 5 are, respectively, a top, an end, and a side view of the same structure.

Figures 6 and 7 are cross sections similar to that shown in Figure 2, but of a modified form of the invention in each case.

Figure 8 is still another modification embodying the present invention, also shown in cross section.

Figures 9 and 10 are details showing a cross section and side view, respectively, of a different type of guard for the teeth forming a part of the invention.

Figures 11 and 12 are details showing similar views of still another modification of the guards.

Figures 13 and 14 are cross sections similar to that illustrated in Figure 2 of further modifications of the present invention.

Referring more particularly to Figures 1 to 5, 1 is the handle of a hair clipping implement embodying the present invention. The head, or operating part, of this device comprises the base 2, shown here as removably attached to the handle 1, and the slanting roof 3. The roof 3, in this particular embodiment of the invention, has a crescent cross section. It is attached to the posts 5 on the base 2, as by means of screws 4. The arcs defining the crescent cross section of the roof 3 are less than semi-circles, for a reason explained below. The term "roof" is used here in the same sense as in the case of a building, and, as in certain forms of house roofs, it is provided with "eaves", i. e., projections beyond the walls

of the house. The eaves, in the present case, are in the form of very thin longitudinal strips 6 and have teeth formed by slots therein. Since these teeth are identical with the slotted strips 6, the same numeral 6 is applied to both. Guards 8 for the teeth 6 are attached to skirts 7 on the base 2, as by means of screws 9. Between the base 2 and the roof 3, a cutter 10, having teeth 11, in sliding contact with the teeth 6, is given a reciprocating motion by the action of the eccentric 13 moving in the oblong aperture 12 at the bottom of the cutter 10. The eccentric 13 is on the shaft 14 of a motor 15 in the handle 1. The cutter 10 is provided with apertures 17 for the passage of the posts 5 therethrough, the posts 5 also acting as guides for the cutter 10, and the apertures 17 being long enough to permit the reciprocating motion of the cutter. In order to reduce the friction between the roof 3 and the cutter 10, I may reduce the thickness of the cutter 10 at the top, thus creating an open space 16, between the cutter and the roof 3. The teeth 11 of the cutter 10 are urged against the teeth 6 of the roof strips by the resilient action of the studs 18 and springs 19, which oscillate in unison with the reciprocating motion of the cutter 10. It is in order to secure proper pressure between the teeth 11 and the teeth 6 that the arcs of the crescent cross section of the roof 3 are made less than semi-circles, a fact mentioned but not explained above.

In Figure 6, the roof 3 is less curved than in the case illustrated in Figures 1-5, giving the implement a form closer resembling a well known, standard safety razor, so that it may be moved over the surface of the skin operated upon in a manner to which the users of such safety razors are accustomed. The guards 8, in this case, have a curvature differing from that of the roof, whereas, in the case illustrated in Figures 1-5, as shown in Figure 2, the roof 3 and the guards 8 have the same curvature. In addition, the guards 8, in this case, illustrated in Figure 6, are slotted, forming, at 20, interrupted extensions of the teeth 6; or, to put it in another way, the slots in the strips 6 are extended into the guards 8. It should be noted that, at 20, the guards 8 and the teeth 6, on each side of the implement, have a common tangent plane, for better protection of the skin operated upon. In the case illustrated in Figures 1-5, the guards 8 and the roof 3 have the same curvature so that, in that case also, the guards and the roof have a common tangent plane on each side of the implement.

In Figure 7, the cutter 10' is flat instead of being cylindrically formed, as in Figures 2 and

6. As a result, contact between the cutter 10' and the roof 3' is effected only at the teeth 6' and 11'. Moreover, in this case, the thin strips 6 are replaced by thin flanges 6' formed by longitudinal recesses at the edges of the roof 3'. The teeth in the slotted flanges 6' are again denoted by the same numeral as the flanges themselves. The guards, as shown, are as in Figure 6.

In Figure 8, the roof 3' has flat, instead of curved, slanting surfaces. Otherwise, this embodiment of the invention does not differ from the one illustrated in Figure 7.

In Figures 9 and 10 is illustrated a modification of the guards which, in this case, are in the form of rounded extensions 21 of the teeth 6'. The guards 8 are, of course, omitted in this case.

The modification of the guards illustrated in Figures 11 and 12 consists in connecting the ends 21 of the teeth 6' in Figure 9. The teeth 6', in Figures 11-12, are shown as bent down at 22 and the ends of the bent down portions connected by or into a bar 23. This construction greatly adds to the strength of the teeth 6'.

In Figure 13, the roof 3'' is cylindrically formed and composed of three parts, each of circular arc cross section, the center of the cross section in the middle part being at C, and the centers of the cross sections of the end parts at points c, only one of which is indicated in the drawings, so that the middle portion of the roof 3'' has a larger radius R than the radius r of the end portions. The flanges 6'' may be made by longitudinal recesses along the extreme portions of the roof, or, as in Figure 13, along the entire portion of radius r.

The last embodiment illustrated in the drawings, namely, in Figure 14, has the same relation to the embodiment shown in Figure 8, as the single edge safety razor has to the double edge safety razor. The roof 3''' has only one slotted flange 6' in this case, and the cutter 10''' only one set of teeth 11'.

Other modifications within the spirit and scope of the present invention may, of course, be made by those skilled in the art. To add such further modifications would only unduly lengthen this specification.

I claim:

1. A hair clipping implement comprising a handle and a head removably attached to said handle, said head having a base and a slanting roof, a thin strip forming the eaves of said roof and slanting at least as much as said roof, teeth formed by slots in said strip, a movable cutter between said base and said roof provided with teeth in sliding contact with the teeth in said strip, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

2. A hair clipping implement comprising a handle and a head removably attached to said handle, said head having a base and a slanting roof with a cylindrically formed outer surface of unidirectional curvature, a thin strip forming the eaves of said roof and having an outer surface curved in the same sense and continuously with said cylindrically formed surface, teeth formed by parallel slots in said strip, a movable cutter between said base and said roof provided with teeth in sliding contact with the teeth in said strip, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

3. A hair clipping implement comprising a handle and a head removably attached to said

handle, said head having a base and a slanting roof with an outer surface of circular arc cross section, a narrow, thin strip forming the eaves of said roof and having an outer surface curved in the same sense and at least as much as said roof, teeth formed by parallel slots in said strip, a movable cutter between said base and said roof provided with teeth in sliding contact with the teeth in said strip, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

4. A hair clipping implement comprising a handle and a head removably attached to said handle, said head having a base and a slanting roof of crescent cross section, thin strips being the eaves of said roof and forming the horns of said crescent, said strips slanting at least as much as said roof, teeth formed by parallel slots in said strips, a movable cutter between said base and said roof provided with teeth in sliding contact with the teeth in said strips, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

5. A hair clipping implement comprising a handle and a head removably attached to said handle, said head having a base and a slanting roof with a cylindrically formed outer surface composed of three contiguous parts, each of circular arc cross section, the radius of the middle section being larger than that of the end sections, thin longitudinal strips at the edges of said end sections, teeth formed by slots in said strips, a movable cutter between said base and said roof provided with teeth in sliding contact with the teeth in said strips, and means for giving said cutter a reciprocating motion.

6. A hair clipping implement comprising a handle and a head removably attached to said handle, said head having a base and a slanting roof with plane outer surfaces at an angle to one another, thin strips forming the eaves of said roof, each strip having an outer surface flush with the corresponding outer surface of said roof and slanting at least as much as said roof, teeth formed by a plurality of parallel slots in said strips, a movable cutter between said base and said roof provided with teeth in sliding contact with the teeth in said strips, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

7. In a hair clipping implement, a head comprising a base and a slanting roof having a plane outer surface and a thin strip forming the eaves of said roof, said strip slanting at least as much as said roof, the surface of said roof being rounded on the side opposite said eaves, teeth formed by slots in said strip, a movable cutter between said base and said roof provided with teeth in sliding contact with the teeth in said strip, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

8. In a hair clipping implement, a head comprising a base and a slanting roof, thin strips forming the eaves of said roof and slanting at least as much as said roof, teeth formed by slots in said strips, a movable cutter between said base and said roof provided with teeth in sliding contact with said strips, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

9. In a hair clipping implement, a head comprising a base, posts on said base, a slanting roof

attached to said posts, thin longitudinal strips forming the eaves of said roof and slanting at least as much as said roof, teeth formed by slots in said strips, a movable cutter between said base and said roof provided with apertures for the passage of said posts, teeth on said cutter in sliding contact with the teeth in said strips, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

10. In a hair clipping implement, a head comprising a base and a slanting roof removably attached thereto, a thin flange being the eaves of said roof formed by a longitudinal recess therein and slanting at least as much as said roof, teeth formed by crosswise slots in said flange, a movable cutter between said base and said roof provided with teeth in sliding contact with said flange, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

11. A hair clipping implement comprising a handle and a head attached thereto, said head having a base and a slanting roof with a cylindrically formed outer surface, a thin, narrow strip forming the eaves of said roof and slanting at least as much as said roof, teeth formed by parallel slots in said strip, guards for said teeth attached to said handle and having a common tangent plane with the outer surface of said strip, a movable cutter between said base and said roof, teeth on said cutter in sliding contact with the teeth in said strip, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

12. In a hair clipping implement, a head comprising a base and a slanting roof, a thin flange being the eaves of said roof formed by a longitudinal recess therein and slanting at least as much as said roof, teeth formed by crosswise slots in said flange, guards for said teeth formed by rounded extensions thereof, a movable cutter between said base and said roof, teeth on said cutter in sliding contact with the teeth in said flange, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

13. In a hair clipping implement, a head comprising a base and a slanting roof, a thin, narrow flange being the eaves of said roof formed by a longitudinal recess therein and slanting at least as much as said roof, parallel teeth formed by crosswise slots in said flange, guards for said teeth formed by rounded extensions thereof, a bar connecting the ends of said guards, a movable cutter between said base and said roof provided with teeth slidable in said recess in contact

with the teeth in said flange, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

14. A hair clipping implement comprising a handle and a head attached thereto, said head having a base and a slanting roof, narrow, thin strips forming the eaves of said roof and slanting at least as much as said roof, teeth formed by parallel slots in said strips, a movable cutter between said base and said roof provided with teeth in sliding contact with said strips, said eaves extending laterally beyond the movable cutter, means for giving said cutter a reciprocating motion, and resilient means oscillating in unison with the said reciprocating motion for urging the teeth of said cutter against the teeth in said roof.

15. In a hair clipping element, a head comprising a base and a slanting roof, a thin strip forming the eaves of said roof and slanting at least as much as said roof, teeth in said strip formed by slots therein, a movable cutter between said base and said roof provided with teeth in sliding contact with said strip, said eaves extending laterally beyond the movable cutter, and means for giving said cutter a reciprocating motion.

16. In a hair clipping implement, a head comprising a base and a slanting roof removably attached thereto, a thin longitudinal flange being the eaves of said roof formed by a recess therein and slanting at least as much as said roof, teeth formed by slots in said flange, a movable cutter between said base and said roof provided with teeth in sliding contact with said flange, said eaves extending laterally beyond the movable cutter, means for giving said cutter a reciprocating motion, and means for guiding said cutter in said motion.

17. In a hair clipping implement, a head comprising a base and a slanting roof, a thin strip forming the eaves of said roof and slanting at least as much as said roof, teeth formed by slots in said strip, a movable cutter between said base and said roof provided with teeth in sliding contact with the teeth in said strip, said cutter being otherwise out of contact with said roof, said eaves extending laterally beyond the movable cutter and means for giving said cutter a reciprocating motion.

18. A hair clipping implement such as is described in claim 2, in which the curvature of the cylindrically formed outer surface of the roof is constant.

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