No. 625,102. Patented May 16, 1899.

J. E. FERLAND.

HAIR CUTTER.

(Application filed Sept. 29, 1898.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1.

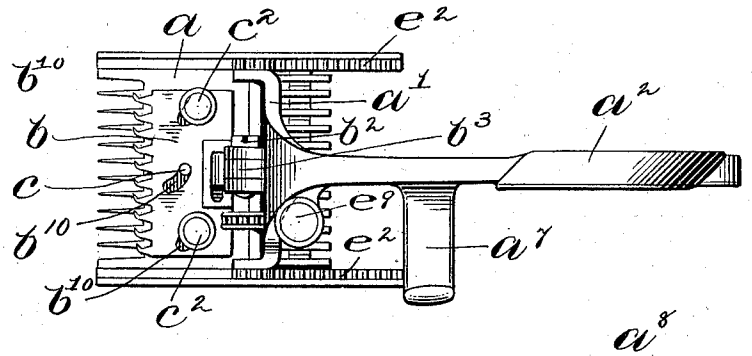


FIG. 2.

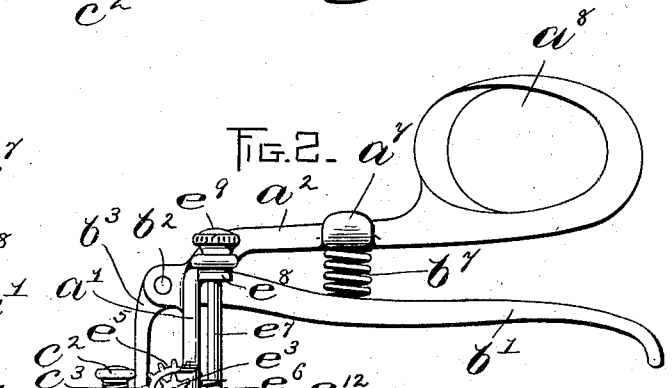


FIG. 3.

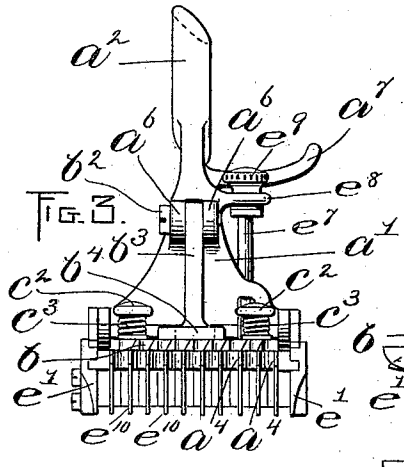


FIG. 7.

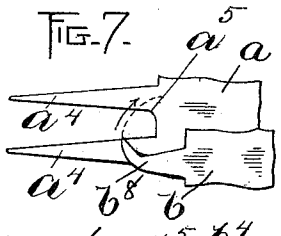


FIG. 6.

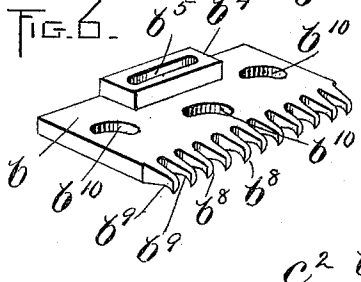


FIG. 4.

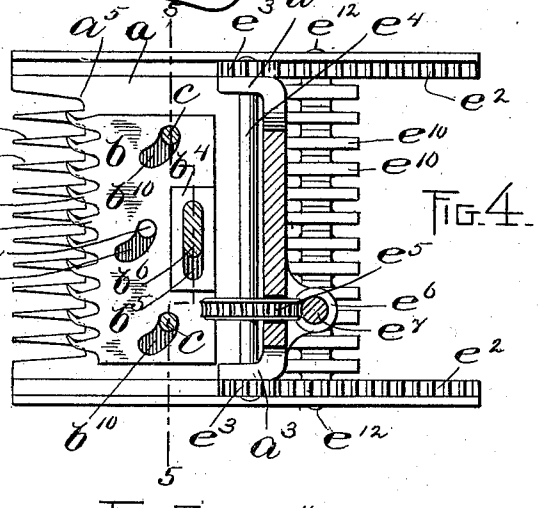
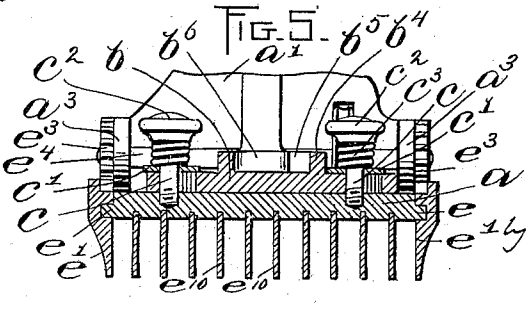


FIG. 5.



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(No Model.) 2 Sheets—Sheet 2.

FIG. 8.

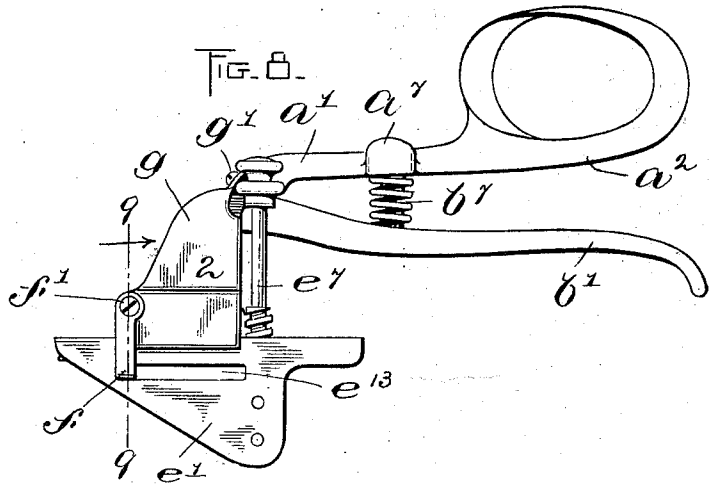
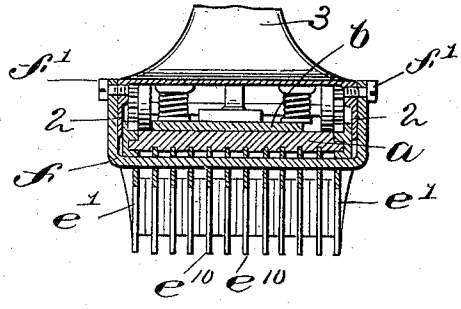


FIG. 9.



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UNITED STATES PATENT OFFICE.

JOSEPH E. FERLAND, OF LAWRENCE, MASSACHUSETTS.

HAIR-CUTTER.

SPECIFICATION forming part of Letters Patent No. 625,102, dated May 16, 1899.

Application filed September 29, 1898. Serial No. 692,198. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH E. FERLAND, of South Lawrence, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Hair-Cutters, of which the following is a specification.

This invention has relation to hair clippers or cutters, and has for its object to provide certain improvements in the same whereby they will be adapted for cutting hair to any desired length.

Another object of the invention is to provide improvements by means of which the general efficiency of the cutters may be increased.

The invention therefore consists of a clipper or cutter provided with certain improvements, all as illustrated upon the accompanying drawings and now to be described in detail and finally pointed out in the claims hereunto annexed.

Of the drawings, Figure 1 represents in plan view a cutter embodying my invention. Fig. 2 represents a side elevation of the same. Fig. 3 represents an end elevation. Fig. 4 represents an enlarged horizontal section through the cutter. Fig. 5 represents a transverse section on the line 5 5 of Fig. 4. Fig. 6 represents the cutting-blade detached. Fig. 7 represents an enlarged view of one of the teeth of the cutting-blade and a portion of the stationary or ledger blade. Fig. 8 represents a side elevation of a modified form of cutter provided with a member for directing the hair into the cutting-blades. Fig. 9 represents a section on line 9 9 of Fig. 8.

Referring to the drawings, a indicates the base or bottom plate, which at its rear end is extended upwardly, as at a', and then rearwardly, as at a^2, to form a handle, which may be of any desired shape. The portion a' is extended forwardly at the sides to form lugs a^3 a^3 for a purpose to be set forth. The handle a^2, on its rear end, is here shown as apertured at a^8 like scissors-handles, and in advance of said apertured portion is a thumb-rest a^7, projecting laterally from said handle a^2 and turned up slightly at the end to afford a secure hold for the end of the operator's thumb. The said thumb-rest projects from the thumb-handle a^2 in a direction substantially at right angles to the plane of the loop or aperture a^8 and on the opposite side of said handle from the direction of insertion of the thumb in said loop, so that the loop and thumb-rest coöperate to give the operator a firm and comfortable grip on the thumb-handle.

b is a moving cutting-blade resting upon the bottom or base plate a and reciprocated by means of a handle b', fulcrumed by a screw b^2 between forwardly-projecting ears a^6 a^6 on the portion a' of the handle a^2. The forward end of the handle b' is bent downwardly at an angle, as at b^3, and its lower end b^6 projects into a transversal slot b^5, formed in a raised boss b^4 on the movable blade b.

The bottom plate a, which is also the ledger-blade, is provided with forwardly-projecting teeth a^4, the inner top edges a^5 of which are sharp and coact with the edges of the teeth on the movable plate. It will be observed that the last-mentioned teeth, which are indicated at b^8, are hook-shaped, extending forward and then laterally, as illustrated in Fig. 7. Only one edge b^9 of each tooth is sharpened, and it is adapted to coact with the opposite edge a^5 of the teeth on the ledger-blade or base-plate a.

Instead of reciprocating the movable blade in a straight line I may arrange for its moving in a curved path, so that the point of each tooth b^7 will traverse the path illustrated in dotted lines in Fig. 7. To accomplish this, the movable blade b may be formed, as shown, with diagonal curved slots or apertures b^{10}, downward through which pass screws c c into the base-plate, as illustrated in Fig. 5. Washers c' surround the two end screws c c and rest upon the top of the movable blade, and between them and the heads c^2 of said end screws are placed spiral springs c^3, which hold the washers frictionally with yielding pressure against the movable blade.

When the handle or lever b' is swung upon its pivot to move the blade b back and forth, the latter is caused by the contact of the screws c with the curved edges of the slots b^{10} to move in a path similar in curvature to the said slots, but reversed, as shown in Fig. 7, as will be readily understood. The point of each tooth b^8 moves first transversely of the underlying tooth a^4, so as to shut in a bunch of hair in the smaller portion of the notches between two adjacent teeth a^4 a^4, and then severs said

hair with a drawing cut, the blade b then returning to original position in the same path. The slot b^5 is made longer than the width of the lower end b^6 of the handle b' to allow for lateral motion of the blade b.

A spring b^7 is placed between the handles a^2 b' to separate them after they have been caused to approach each other by the pressure of the thumb and fingers.

The side edges of the base-plate a are provided with tongues e e, which extend into grooves in two side plates e' e', which act as templets or gages, together with a gang of intermediate plates e^{10}, shaped similarly to the plates e'. These latter are thickened at their rear ends, as shown in Fig. 4, so as to abut each other, and are attached to each other and to the side plates e' e' by means of tie-rods e^{12} e^{12}, which are riveted or headed over at their ends. The two side plates e' e' are extended rearwardly and are provided on their upper rear edges with rack-teeth e^2, with which intermesh pinions e^3 on a cross-shaft e^4, journaled at its ends in the lugs a^3 a^3, hereinbefore mentioned. On the shaft e^4 is a worm-wheel e^5, with which a worm e^6 on a vertical shaft e^7 is intermeshed. This shaft e^7 is journaled in a lug or ear e^8, projected laterally from the handle a^2, and it has on its end a knob e^9, by which it may be rotated. The gage or templet plates e' e^{10} are wedge-shaped and their lower edges incline upwardly. In operating the cutter said lower edges are rested upon the human head at a point under the teeth of the movable blade, the height of the templet at that point regulating the length of the hair which it is desired to leave uncut. In case it is desired to leave the hair longer, as on the sides or top of the head, the knob e^9 is turned to advance the templets and lift the cutting-blade farther from the head.

In Figs. 8 and 9 I have represented a modified form of cutter particularly adapted for cutting hair *à la pompadour*. In this form the slant of the templet edges is quite abrupt, and an additional member is provided consisting of a horizontal bar f, extending transversely through elongated slots e^{13} in the templets and located behind and underneath the cutting edges of the blades a b. When the cutter is advanced and the hair comes between the templets, this bar acts to straighten up the ends of the hair and insure their entrance into the cutters. I have further represented in these figures a guard g for inclosing the working parts, said guard being composed of thin metal having sides 2 2 and a front portion 3 and attached at its upper end by screws g' g' to the upwardly-extending portion a' of the base-plate a. The horizontal bar f is turned up at its ends and attached by screws f' f' to the guard g.

Having thus explained the nature of the invention and described a way of constructing and using the same, although without having attempted to set forth all the forms in which it may be embodied or all the modes of its use, I declare that what I claim is—

1. A hair-cutter comprising a stationary toothed blade, a movable blade having hook-shaped teeth, and means for causing the last-mentioned blade to move transversely and longitudinally of said teeth to produce a drawing cut.

2. A hair-cutter comprising a stationary under blade having a plurality of teeth, a non-pivotal upper blade mounted to slide on said under blade and having a plurality of teeth, means for reciprocating said upper blade, and a series of pin-and-slot guides for said upper blade, the slots having curved sides to cause the teeth of said blade to reciprocate in curved paths.

3. A hair-cutter having suitable upper and lower cutting-blades, a templet or gage independent of said cutting-blades and having wedge-shaped plates as set forth, longitudinal guides for said templet, and an adjusting device for moving said templet longitudinally beneath the cutting-blades to vary the length of the clipped hair.

4. A hair-cutter having suitable cutting-blades, the stationary one of which is provided with tongues at its edges, parallel wedge-shaped templets or gages having grooves to receive said tongues, and means for moving said gages simultaneously, said means comprising rack-teeth on said gages, a shaft having pinions engaging said teeth, and means for rotating said shaft.

5. A hair-cutter having suitable cutting-blades, and a transverse hair-directing bar f located behind and underneath the cutting portions of said blades.

6. A hair-cutter having suitable cutting-blades, a gang of upright templets or gages located below the same, and a transverse bar f located behind and underneath the cutting portions of said blades and coacting with said templets to direct the hair into said cutting portions.

In testimony whereof I have affixed my signature in presence of two witnesses.

JOSEPH E. FERLAND.

Witnesses:
JOSEPH GAUMOND,
JOSEPH MONETTE.