July 2, 1935. M. ANDIS 2,006,493

COMB PLATE ADJUSTING MECHANISM FOR HAIR CLIPPERS

Filed Oct. 8, 1931

Fig. 1.

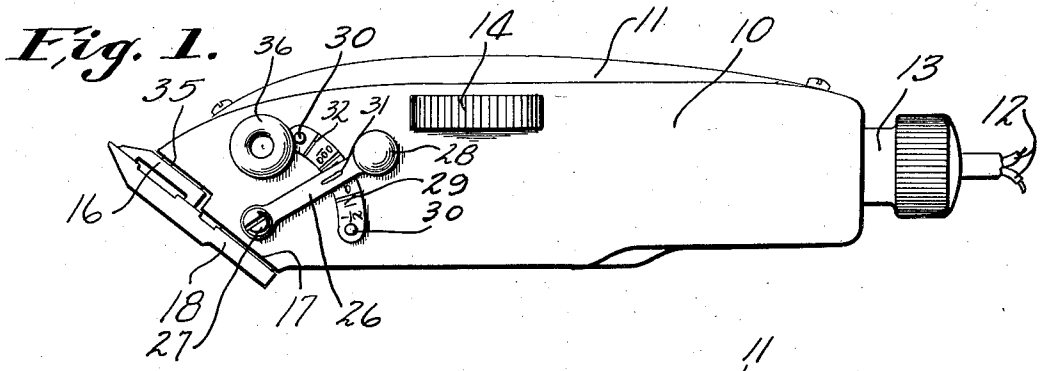


Fig. 2.

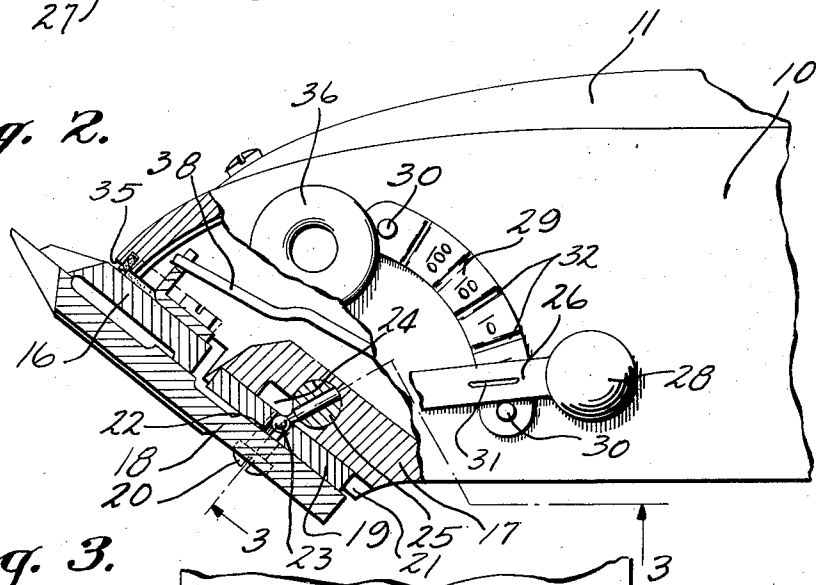
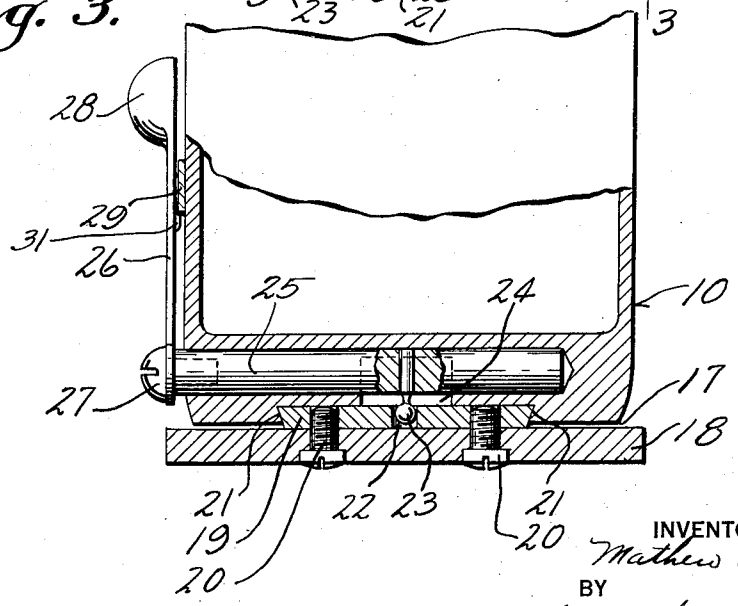


Fig. 3.



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COMB PLATE ADJUSTING MECHANISM FOR HAIR CLIPPERS

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8 Claims. (Cl. 30—1)

My invention relates to an improvement in comb plate adjusting mechanism for hair clippers.

The object of my invention is to provide improved means for adjusting the comb plate of a hair clipper to project or retract its teeth relatively to those of the vibratory cutter blade.

More particularly stated, it is my object to provide a hair clipper having an adjustable comb plate, with an operating piece for the adjusting mechanism, which can be easily reached by the thumb or finger of the operator without shifting his grasp upon the clipper frame or casing, and which may be moved under light pressure to adjust the comb plate without injury to the wet, tender skin of the barber's finger and without delaying the clipping operation.

A further object is to provide for moving an adjustable comb plate by means of a crank mechanism so constructed that the actuating arm may extend along the side of the clipper casing from a transversely extending rock shaft having an interior arm loosely connected with the comb plate, whereby a rocking movement of such arm may be transmitted to the comb plate with minimum frictional resistance and whereby said arm may also be utilized to retain the comb plate in its adjusted position and to indicate its position by association with an index carried by the clipper casing.

In the drawing:

Figure 1 is a side elevation of a complete power driven hair clipper showing the exposed portions of my comb plate adjusting device.

Figure 2 is an enlarged fragmentary view of the front end portion of the clipper shown in Figure 1, with parts broken away in vertical section.

Figure 3 is a section drawn to line 3—3 of Figure 2.

Like parts are identified by the same reference characters throughout the several views.

The drawing illustrates my invention as it is embodied in an electrically driven hair clipper. The casing 10 with its cap 11, electrical conductors 12 and adapter or conduit 13, switch operating piece 14, obliquely positioned movable blade 16, comb plate mounting or base 17, and adjustable comb plate 18 may be of any ordinary construction, well known in the art and require no further description, except as hereinafter set forth with reference to the features of invention herein disclosed.

In the construction shown, the comb plate 18 is shown with a dove tailed slide 19 secured to its upper face, which may be of less width than the comb plate and engaged in a dove tailed slide way or groove 21 in the base or mounting 17. It is not material whether the slide is an integral part of the comb plate or separately formed and attached as indicated by the screws 20. The material feature is that the comb plate is slidingly supported upon, or from the casing for adjusting movement forwardly or backwardly underneath the movable clipper blade 16 to vary the distance between the clipping zone and the surface over which the clipper travels and thus regulate the closeness of the cut.

In the illustrated embodiment of my invention, a cross shaft 25 is mounted in the base 17, the latter being recessed at 24 to allow a crank arm 23 to extend downwardly from the shaft into a suitable recess 22 formed in the upper surface of the comb plate, i. e., in its dove tailed portion or slide 19 in the construction shown. The lower end of the arm 23 is preferably spherically rounded and quite closely fitted within the recess 22 whereby the arm may co-operate with the guiding portions of the base 17 to hold the base in position.

One end of the shaft 25 projects through the casing wall and is provided with an exterior actuating arm 26 which preferably comprises a flat or half oval bar of resilient material secured to the shaft at 27 and extending along the side wall of the casing. Its upper or free end is provided with a hemispherical knob 28 to be engaged by the finger or thumb of the operator for the purpose of actuating the arm and transmitting motion to the comb plate through the associated shaft 25 and arm 23. An indexed arcuate friction plate or detent 29, concentric to the shaft 25, is secured to the casing between the actuating arm 26 and the adjacent casing wall. This plate 29 has stops 30 at its respective ends to limit the field of adjusting movements and the arm 26 may be made to resiliently bear against it for the purpose of maintaining the adjustment pending further manual actuation of the arm. If desired, the inner face of the arm 26 may have a slight longitudinal corrugation 31 engageable with corresponding grooves 32 in the plate whereby to hold the arm with additional security in a desired number of adjustments.

In the construction shown, 35 is a non-metallic cushioning pad to prevent dust and hair from entering the casing between the movable blade and the associated casing wall; 38 is an actuating arm for reciprocating the movable blade 16; and 36 is a controlling button for regulating the ac-

tion of the driving motor. Neither the motor nor the controlling connections are illustrated, and as no claim is made for the parts **35**, **36** and **38**, further description thereof is deemed unnecessary.

I claim:

1. In a hair clipper having a shearing comb plate and a support upon which the comb plate is slidably mounted, the combination with the support, of a transversely extending shaft mounted in the support above said comb plate and provided with a crank arm having operative connection with the comb plate to adjust the same, and another arm connected with the crank shaft and extending along one side of the support to provide means to permit the adjustment of the comb plate while the clipper is in operation.

2. In a hair clipper provided with an adjustable relatively stationary comb plate clipper blade provided with a blade guiding support, the combination with such support, of a crank shaft journaled therein and provided with a crank arm in engagement with the blade and an actuating arm secured to the end of the shaft and projecting along the side of the support to effect adjustment of the comb plate clipper blade when the clipper is in operation.

3. The combination with the casing, of a power driven hair clipper casing adapted to serve as a clipper manipulating handle, of a comb plate mounted for sliding adjustment along one portion of the casing, and a manually operable member, movable in a plane substantially perpendicular to the comb plate along one side of the casing and provided with comb plate adjusting connections within the casing above the comb plate.

4. In a power driven hair clipper provided with relatively fixed and vibratory cutter blades and a casing for the driving mechanism adapted to also serve as a handle, the combination therewith of an adjusting lever supported for swinging movement at the side of the casing in a plane substantially perpendicular to the comb plate and under manual pressure exerted by the thumb or finger of the operator, and means within the casing for transmitting the movement of said lever to vary the relative positions of the working margins of the cutter blades by advancing or retracting one of them with reference to the other.

5. In a hair clipper the combination with a handle having a comb plate mounting provided with a transversely disposed rock shaft adjacent to the comb plate receiving face, said mounting having a recess extending from the shaft to said face, a comb plate movably connected with said mounting in forward and back sliding relation thereto, an arm extending from the shaft through the recess and loosely connected with the comb plate for adjustment thereof upon the mounting, and an exterior actuating arm on said shaft adapted to swing along the side of the handle in a plane perpendicular to the comb plate.

6. In a hair clipper, the combination of a handle having at one end a comb plate mounting, a comb plate adjustably secured to said mounting, a transversely disposed rock shaft journaled in said mounting above the comb plate, said mounting and the associated portion of the comb plate being recessed, and said shaft having an arm extending through the recess in the mounting into the comb plate recess, said handle and comb plate completely enclosing said arm and the recesses and said shaft being provided with an exterior operating arm adapted for swinging movement about the axis of the shaft at one side of the handle.

7. In a clipper having a casing, a movable blade, a stationary blade, mounting means on which said stationary blade is adjustable to vary its projection beyond the front edge of the movable blade, an operating lever mounted on the casing in spaced relation to the stationary blade, and means connecting said lever and blade for adjusting the blade, said lever and casing being arranged to co-operate with each other to limit the range of movement of said lever.

8. In a hair clipper, the combination with a handle having a comb plate mounting permitting sliding adjustment of a comb plate thereon, a comb plate adjustable on said mounting, and comb plate adjustment mechanism carried by the mounting including a transverse shaft in the mounting having an interior comb plate actuating arm loosely connected with the comb plate and an exterior operating arm extending along one side of the handle to permit adjustment of the comb plate when the clipper is in operation, said handle having an associated index gauge adapted to also serve as a detent to retain the arm in various positions of adjustment.

MATHEW ANDIS.