I. S. KAUFMAN.

TAPER CUT MECHANISM FOR HAIR CUTTERS.

APPLICATION FILED AUG. 15, 1919.

1,364,559. Patented Jan. 4, 1921.

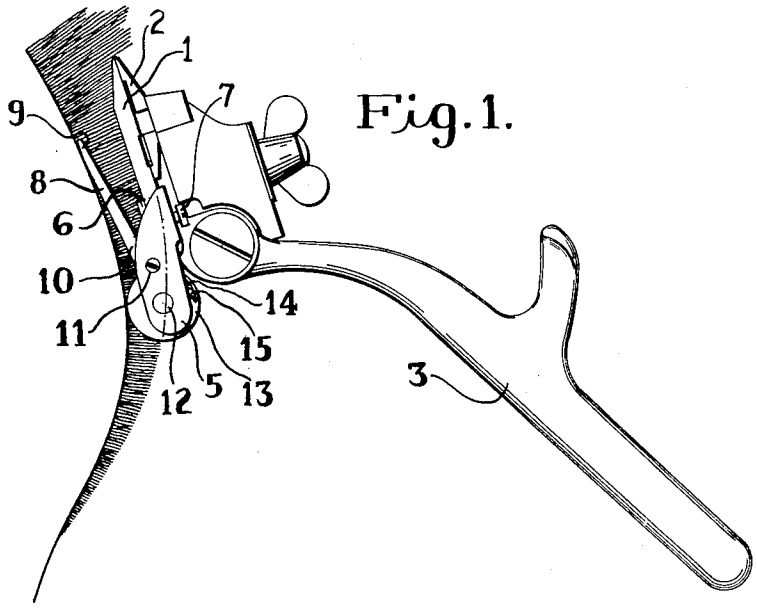


Fig. 1.

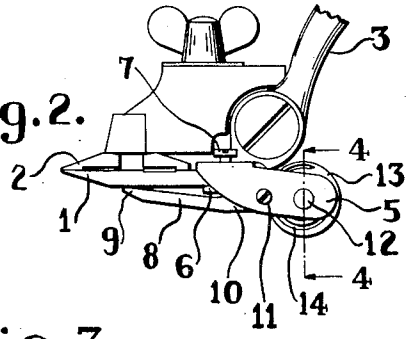


Fig. 2.

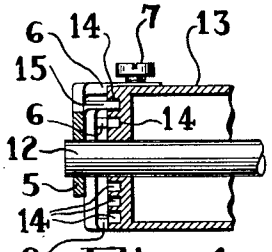
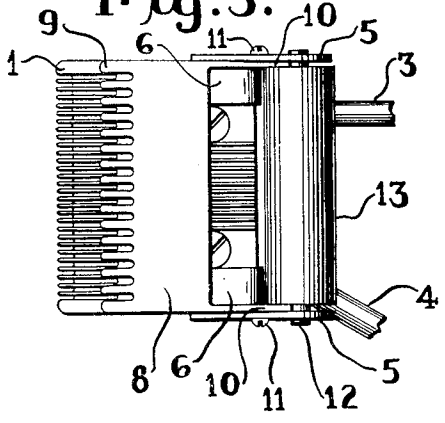


Fig. 4.

Fig. 3.



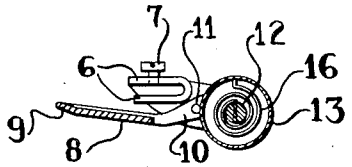


Fig. 5.

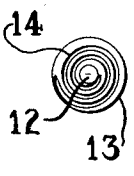


Fig. 6.

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TAPER-CUT MECHANISM FOR HAIR-CUTTERS.

1,364,559. Specification of Letters Patent. Patented Jan. 4, 1921.

Application filed August 15, 1919. Serial No. 317,659.

To all whom it may concern:

Be it known that I, ISAAC S. KAUFMAN, a citizen of the United States, and resident of the borough and county of Bronx, in the city and State of New York, have invented a new and useful Taper-Cut Mechanism for Hair-Cutters, of which the following is a specification.

The object of the invention is to provide a simple, efficient, and easily manufactured taper cut mechanism for hair-cutters. A further object is to enable the invention to be applied as an attachment to existing clippers. It has been proposed to provide a hair clipper with a plate beneath for lifting the clipper as it advances, a roller and connections for positively operating the plate and springs for restoring it. According to this invention a hinged plate is operated by the roller through a cam. A restoring spring is connected with the roller and cam, and housed within the roller.

In the drawing forming a part hereof:

Figure 1 is a side elevation illustrating a clipper in use with the invention thereon;

Fig. 2 is a side elevation with the handles broken away, showing the normal position of the lifter plate;

Fig. 3 is a bottom plan;

Fig. 4 is an enlarged fragmentary section on the line 4—4 of Fig. 2;

Fig. 5 is a longitudinal section through the attachment; and

Fig. 6 is an elevation of the cam on the end of the roller.

The drawing illustrates a hair-clipper of known construction, comprising a frame including a bottom comb plate 1, a cutter 2 laterally movable on the bottom plate, a fixed handle 3 and a laterally movable handle 4 for operating the cutter.

A supplemental frame below and at the back of the main frame is provided for carrying the parts of the invention. Said supplemental frame is advantageously formed by two rearwardly extending arms 5, having jaw clips 6 with set screws 7 at their forward ends for attachment to the bottom plate 1. The supplemental frame may also be secured in other ways, or may form an integral part of the frame of the clipper.

A lifter plate, or automatically operated gage plate 8 is located beneath the clipper, its forward comb edge 9 normally lying close to the forward part of the bottom plate 1. Rearwardly extending side arms 10 on this lifter plate pass adjacent the inner sides of the frame arms 5, and are hinged thereto by pins 11.

In the supporting arms 5 behind the hinge is a fixed axle 12, and rotatable thereon is a hollow traction roller 13, adapted to roll upon the scalp. Duplicate spiral cams are united with the ends of this roller by having their grooves 14 cut therein, and engaging these grooves are follower lugs 15 bent inward from the ends of the arms 10.

A spiral spring 16 inside the roller has one end secured thereto and the other end fastened to the axle.

When the clipper is passed upward at the back of the head with the roller bearing thereon, the cam revolved by the roller swings the lifter plate through the followers, causing its forward edge to separate progressively from the bottom plate of the clipper, thereby automatically raising the clipping mechanism, so that the hair is cut longer as the movement proceeds. When the clipper is removed, the spring in the roller automatically restores the roller and the cam, and thereby the lifter plate.

While the preferred embodiment of the invention has been described in detail, it will be understood that I do not limit myself to the precise details and that changes in respect to form, proportion, arrangement and reversals may be made without departing from essentials.

What I claim as new is:

1. Taper cut mechanism for hair-cutters comprising a hinged gage plate, and a roller traction and a spiral cam, with means engaging the cam for controlling the lifter plate.

2. Taper cut mechanism for hair-cutters comprising a hinged gage plate, and a roller traction having a spiral cam on its end, with means engaging the cam for controlling the lifter plate.

3. Taper cut mechanism for hair-cutters comprising a hinged gage plate, a roller traction and a spiral cam, with means engaging the cam for controlling the lifter plate, and a restoring spring in the roller.

4. Taper cut mechanism for hair-cutters comprising a hinged gage plate, a roller traction at the rear of the plate, suitable means for supporting the plate and roller under the frame of a clipper, a cam operated by the roller, and a cam-follower connected with the plate.

5. Taper cut mechanism for hair-cutters comprising a hinged gage plate, a roller traction at the rear of the plate, suitable means for supporting the plate and roller under the frame of a clipper, a cam operated by the roller, a cam-follower connected with the plate, and a restoring spring connected with the cam.

6. Taper cut mechanism for hair-cutters comprising a hinged gage plate having a follower lug in rear of its hinge, a traction roller behind the hinge, and a spiral groove cam united with the roller and engaged by said lug.

7. Taper cut mechanism for hair-clippers comprising a frame having means for attaching it below and rearwardly to the frame of a clipper, a gage plate hinged in said attachable frame, a traction roller journaled in the frame behind the hinge, a cam and cam-follower whereby the roller operates the plate, and a spring for restoring the cam and plate.

8. In combination with a hair-clipper, a hinged gage plate beneath the clipper, a roller traction journaled behind the hinge, a spiral cam united with the roller and acting upon the plate, and a restoring spring connected with the cam and roller.

9. In a hair-clipper, rearwardly-extending frame arms on the base of the clipper, a gage plate hinged in said arms, a traction roller with spiral cam journaled therein to operate the plate, and a restoring spring connected with the roller and cam.

ISAAC S. KAUFMAN.