Feb. 13, 1923. 1,445,041.

C. H. REDMAN.

HAIR CLIPPER.

FILED OCT. 27, 1920.

Fig. 1.

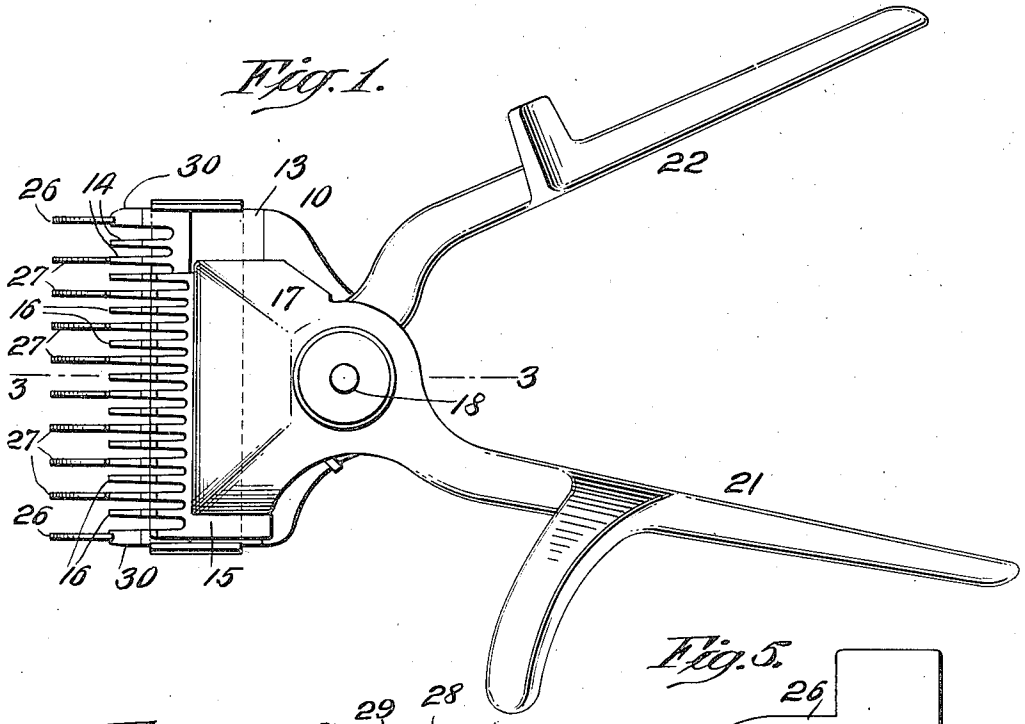



Fig. 2.

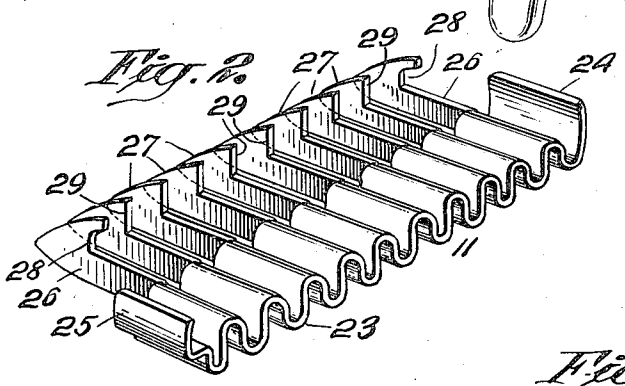



Fig. 5.

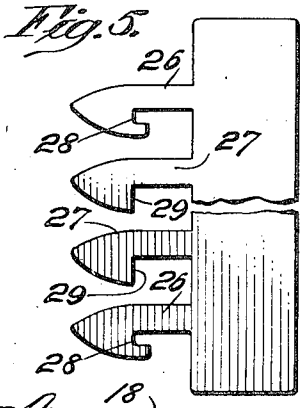



Fig. 4.

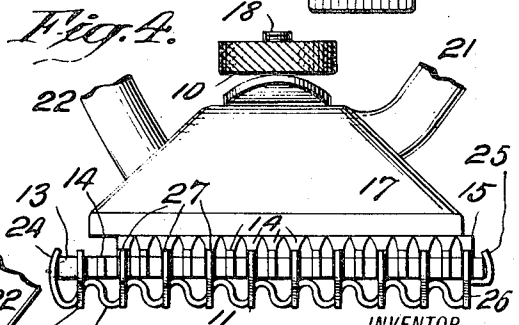
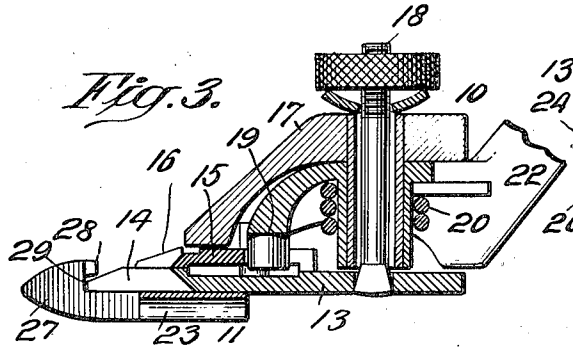



Fig. 3.




INVENTOR

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BY

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Patented Feb. 13, 1923. 1,445,041

# UNITED STATES PATENT OFFICE.

CHARLES H. REDMAN, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO BOKER CUTLERY & HARDWARE COMPANY, INC., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## HAIR CLIPPER.

Application filed October 27, 1920. Serial No. 419,822.

*To all whom it may concern:*

Be it known that I, CHARLES H. REDMAN, a citizen of the United States, and a resident of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Hair Clippers, of which the following is a specification.

The invention relates to improvements in clippers of the character employed by barbers and others for clipping the hair, and the object of the invention is to provide a novel and advantageous construction of comb for detachable application to hair clippers whenever desired. My invention is directed particularly to a novel comb as an attachment for hair clippers regardless of the detail construction of the clipper itself, and my comb is formed from one integral piece of sheet metal machined and bent to form a corrugated base or back member, flanges on the ends thereof to engage with a spring action the ends of the stationary cutter plate of a clipping machine and forwardly extending properly spaced-apart teeth set on edge for dividing the hair and holding the cutting features of the clipper a predetermined distance from the head or other surface over which the clipper is to be operated. My comb may be slid onto a clipping machine and will be self-holding thereon, no extra part or parts being required for securing the comb in place, and my comb possesses several other advantages among which it may be mentioned that it may be formed from one integral piece of sheet metal, that its features are strong and not at all likely to become distorted or injured by ordinary use or handling, that it presents the minimum contact with the head or other surface over which the clipper is to be operated and that it is highly efficient for its intended purposes.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

Fig. 1 is a top view of a hair clipping machine of known type with the comb of my invention applied thereto;

Fig. 2 is a perspective view of my new comb;

Fig. 3 is a vertical section through the clipping machine and comb taken on the dotted line 3—3 of Fig. 1;

Fig. 4 is a front elevation, partly broken away, of the clipping machine and comb, and

Fig. 5 is a top view, partly broken away, of a sheet metal blank indicating one stage of the manufacture of the comb and from which the completed comb is formed.

In the drawings 10 designates a hair clipping machine of usual type, and 11 the comb of my invention.

The clipper 10 comprises a stationary base or cutter plate 13, teeth 14 on the front edge thereof, a reciprocating cutter plate 15, teeth 16 on the front edge thereof, a top or cover plate 17, a bearing post 18 connecting said base plate and cover plate, a driving crank 19 for the reciprocating cutter plate, a spring 20 for actuating said reciprocating plate in one direction and operating handles 21, 22, one of which is rigid with the cover plate 17, while the other is mounted for oscillatory movement about the post 18 and is integral with the crank 19 and pressed against by one end of the spring 20, all the parts just identified of the cutting machine being of known character and not therefore requiring further specific description.

The comb 11 is in one integral piece of sheet metal and comprises a corrugated base or back member or plate 23, clip-flanges 24, 25 on the ends thereof and forwardly projecting teeth or fingers 26, 27, all of which are of the same length and stand on edge and have corresponding pointed forward head ends whose upper and lower edges are on diverging curved lines. The teeth 26 are formed at the back of their heads with hooks 28 and the teeth 27 are formed at the back of their heads with plain vertical edges 29 and otherwise all the teeth 26, 27 are alike.

The teeth 26, 27 are formed from one edge portion of a flat blank, as indicated in Fig. 5, and then the remaining portion of the blank is corrugated to form the back plate 23 and clip-flanges 24, 25, and in this corrugation of the blank particular care is exercised to have the teeth 26, 27 uniformly stand on edge and project forwardly from corresponding sides of the corrugations, as shown in Figs. 2 and 4, the other sides of the corrugations being caused to stand on uniform parallel planes between the vertical planes of the teeth. By uniformly corrugat-

ing the blank the teeth 26, 27 become evenly spaced apart, as is essential, and by turning said teeth on edge they are enabled to withstand considerable rough handling and in addition present the minimum surface contact to the head and may be relied upon to properly divide the hair preparatory to the action of the cutters. It is to be noticed also that the corrugations in plate 23 present at their lower edges smooth and minimum contact surfaces, that they materially strengthen the comb, that they aid in guiding the instrument from the fact that the hair passes between them and that they allow sufficient spring action to enable the flanges 24, 25 to operate as spring clips for securing the comb on the plate 13 of the clipper, it only being necessary in applying the comb to firmly slide it upon the plate 13 until the hooks 28 of the teeth 26 engage the broad end members 30 of the plate 13 and the plain edges 29 of the teeth 27 line up with alternate teeth 14 of said plate, as shown in Fig. 1.

The employment of a comb as an accessory to a hair clipping machine is familiar in this art and therefore it is not necessary for me to enter into any special details with respect to the general utility of a comb. My invention provides a new construction of comb for attachment to clipping machines, and the novel features of my comb have hereinbefore been pointed out. The clipping machine shown without my comb thereon would make a close hair-cut, whereas the comb of my invention applied to the machine will ensure a smooth even cutting of the hair at a different and predetermined distance from the head or other surface over which the clipper may be operated. My invention is not limited to any special construction incident to the clipping machine, all hair-clippers being very much alike as to the two cutting or comb plates, with which my invention is more directly concerned, and differing from one another in other mechanical details which are unimportant so far as my invention is concerned.

The plates 13, 15 of the clipper are both cutter plates and comb plates, and I have designated the plate 13 as a stationary base or cutter plate so as to avoid confusion with the subject of my invention, which is the comb plate 11. I may also call attention to the fact that the yielding of the gripping flanges 24, 25 is controlled by the spring action of the adacent corrugations acting at right angles to the line of the teeth.

What I claim as my invention and desire to secure by Letters Patent, is—

1. A removable comb for application to the stationary toothed cutter-plate of a hair clipper, said comb comprising in one integral piece of sheet-metal, machined and bent, a longitudinally corrugated horizontal base-member and a series of flat teeth projecting forwardly on edge from corresponding sides of the corrugations in said base-member.

2. A removable comb for application to the stationary toothed cutter-plate of a hair-clipper, said comb comprising in one integral piece of sheet-metal, machined and bent. a longitudinally corrugated horizontal base-member and a series of flat teeth projecting forwardly on edge from corresponding sides of the corrugations in said base-member and having pointed heads which align with alternate teeth of said cutter-plate.

3. A removable comb for application to the stationary toothed cutter-plate of a hair-clipper, said comb comprising in one integral piece of sheet metal, machined and bent, a longitudinally corrugated horizontal base-member and a series of flat teeth projecting forwardly on edge from corresponding sides of the corrugations in said base-member and having heads whose upper and lower edges converge forwardly and which heads at the back thereof align with teeth of said stationary cutter-plate, the back of the heads of the end comb teeth being of hook shape to hook over the end members of said cutter plate.

4. A removable comb for application to the stationary toothed cutter-plate of a hair-clipper, said comb comprising in one integral piece of sheet-metal, machined and bent, a longitudinally corrugated horizontal base member, yielding clip flanges on the side edges thereof to slide upon and grip the corresponding edges of said stationary plate and a series of flat teeth projecting forwardly on edge from corresponding sides of the corrugations in said base-member and having pointed heads which align with alternate teeth of the stationary cutter-plate.

5. A removable comb for application to the stationary toothed cutter-plate of a hair-clipper, said comb comprising in one integral piece of sheet metal, machined and bent, a longitudinally corrugated horizontal base member, a series of teeth projecting forwardly on edge from the corrugations in said base-member and clip flanges on the side edges of said base-member adapted with a spring action to engage the adjacent edges of said stationary plate, the yielding of said flanges being controlled by the spring action of the corrugations adjacent thereto acting at right angles to the line of said teeth.

Signed at Newark, in the county of Essex, and State of New Jersey, this 15th day of October A. D. 1920.

CHARLES H. REDMAN.