

J. K. PRIEST.
Instrument for Clipping and Cutting Hair.
No. 220,416. Patented Oct. 7, 1879.

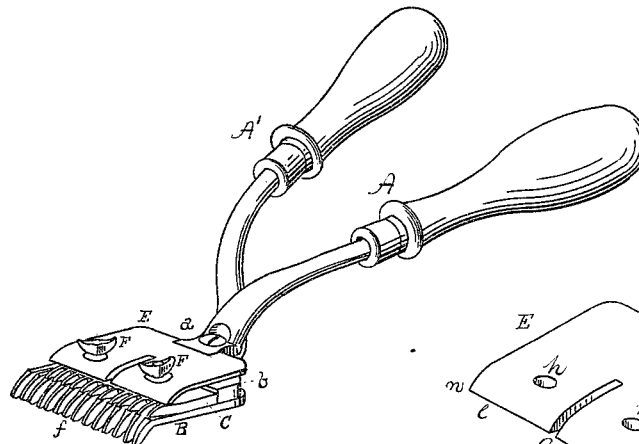


Fig. 1.

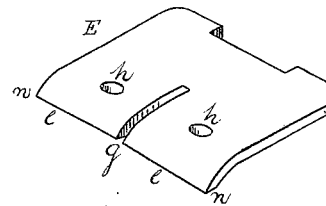


Fig. 5.

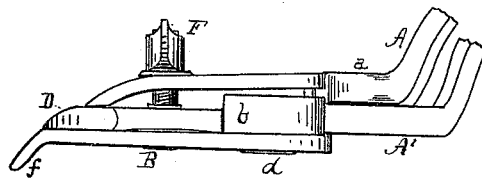


Fig. 2.

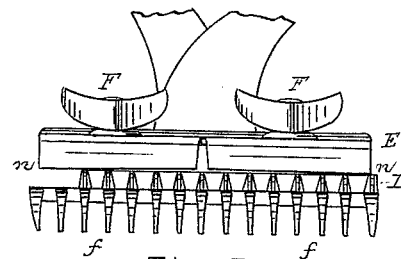


Fig. 3.

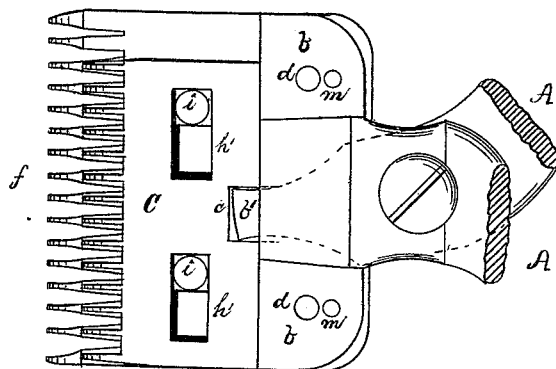


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOSEPH K. PRIEST, OF NASHUA, N. H., ASSIGNOR TO THE AMERICAN
SHEARER MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN INSTRUMENTS FOR CLIPPING AND CUTTING HAIR.

Specification forming part of Letters Patent No. **220,416**, dated October 7, 1879; application filed
April 9, 1879.

To all whom it may concern:

Be it known that I, JOSEPH K. PRIEST, of Nashua, New Hampshire, have invented an Improvement in Instruments for Clipping and Cutting Hair, of which the following is a specification.

My invention relates to instruments for clipping and cutting hair, and consists, first, in a certain novel construction whereby the cutters are prevented from approaching the skin too closely, and are retained at an equal distance therefrom at all points; and, second, in a certain novel construction of the cap-plate, whereby a more perfect frictional bearing is given to the reciprocating cutter, and the effectiveness, simplicity, and cheapness of the instrument are enhanced.

These points will first be described, and then more particularly pointed out and defined in the claims.

Referring to the drawings which accompany and form part of this specification, Figure 1 is a perspective view of the instrument as a whole. Fig. 2 is a side elevation, the handles being removed. Fig. 3 is a front elevation of the same. Fig. 4 is a plan view, the cap-plate being removed to show the operative parts. Fig. 5 is a view of the cap-plate detached.

A A' indicate the handles of the instrument, which are bent downward and slightly inward, in order that they may be pivoted together at the point *a*, the handle A being placed at the pivotal point above and upon the handle A'. Upon the extremity of the upper handle, A, is cast or otherwise attached a metal block, *b*, (see Figs. 2 and 4,) having a wide central slot cut transversely in its lower surface directly beneath the point where the handle A unites with block *b*, through which slot the prolonged extremity *b'* of the lower handle, A', passes, extending forward to enter and engage with a notch, *c*, formed in the rear edge of the cutter-plate C. To this metal block *b* is rigidly secured a steel supporting-plate or comb-plate, B, by means of screw-bolts *d d*, inserted from below, their upper ends being shown in Fig. 4. The comb-plate B is flat, and is ground to a true flat bearing upon its upper face. The front edge of this plate is serrated, as shown at *f*, the serrations resembling an ordinary

comb, excepting that the teeth are shorter and the intervals between them somewhat wider. About midway of their length these teeth are bent downward at an angle of about forty-five degrees (more or less) with the surface of the plate B. The body of each tooth is also slightly beveled off from the upper toward the lower surface, in order that both the horizontal edges may be cutting-edges.

Upon the upper surface of the comb-plate B is placed the cutter-plate C, formed (as is the comb-plate also) of a fine quality of steel. The edge of the cutter-plate is serrated, as shown at D, Figs. 1, 3, and 4, each tooth or cutter registering accurately with a corresponding tooth of the comb-plate B, the number of the cutting-teeth in plate C being somewhat less than the number of teeth in the comb-plate, in order to permit the reciprocation of the cutter without its ends projecting beyond the ends of the comb-plate. Like the latter, also, the teeth are beveled to form cutting-edges, which slide upon the corresponding cutting-edges of the teeth in the plate B, the lower face of the cutter-plate being ground to a true flat bearing coincident with the upper surface of the plate B. In the rear edge of plate C is formed a notch, *e*, to receive the prolonged free end of the handle A', by means of which said plate is reciprocated upon the plate B.

The cutter-plate is held in place by a steel cap-plate, E. (Shown in detached view in Fig. 5.) This plate is formed of a single piece of metal, with a slot, *g*, cut transversely at about the center of the plate, and extending to or nearly to the central longitudinal line, dividing the front half of the plate into two sections. At or near the central point in each section is drilled a hole, *h*, through which passes the threaded end of a squared bolt, *i*, said bolt passing from a fixed connection with the comb-plate B upward through a rectangular oblong aperture, *h'*, in the cutter-plate, the threaded ends of said bolts being adapted to receive thumb-nuts F F, by which the cap-plate E is drawn down upon the cutter-plate C, the slots *h' h'* in the latter being of sufficient length to permit its reciprocation.

The cap-plate E has a bearing upon the cutter-plate C nearly coincident with the apical

line *l l* of the former. Experience, however, has demonstrated that in order to obtain an effective instrument it is necessary that the points of greatest friction shall lie at or near the two extremities *n n* of that line, instead of being distributed equally throughout its whole extent. Therefore the bearing-edges *l l* of the cap-plate are so formed that they rise very slightly from the extremities *n n* toward the center of the plate. This construction is shown considerably magnified in Fig. 3.

The actual departure from a straight edge or true flat bearing is very small, being but a minute fraction of an inch; but it is nevertheless of the highest importance, this construction being absolutely necessary, in order to secure the perfect operation of the parts.

By slotting the plate E, as shown, the sections lying upon each side of the slot may be separately adjusted as to their bearing upon the cutter-plate C, while that portion of the plate in rear of the slot, being continuous, holds the two bearing-surfaces *l l* in their true relation to each other, as determined by the angle to which they are ground.

The relative bearing of each section is separately adjusted by means of the thumb-screws F F.

The cap-plate rests near its rear edge upon two small bosses, *m m*. (Seen in Fig. 2, and also shown, but not lettered, in Fig. 4.)

The operation of the instrument is as follows: The operator, holding it by the two handles, rests the rounded smooth points of the teeth *f* upon the skin and pushes them forward into the hair, at the same time moving the handle A' to and fro, by which the cutter-plate C is reciprocated. The hair, passing between the teeth of the comb-plate B, meets the cutters and is instantly severed, the plate C cutting at each reciprocation. The instrument is, in the same manner, moved over the whole surface where its operation is required, the bent teeth *f* preventing the cutting-edges from approaching too closely to the skin, and holding them at all points at the same distance therefrom, thus clipping the hair to exactly the same length throughout the whole surface over which the instrument passes, this being accomplished without depending upon the eye of the operator, and in a small part of the time required by the methods of clipping human hair now in use.

I do not confine myself to the form of comb-plate shown in Fig. 5, since I may employ a circular comb-plate with a continuously-rotating cutter, the teeth of said circular comb-plate being bent downward in the manner already described in this specification.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. An instrument for clipping hair having a series of cutting-teeth moving upon a second and similar series, the latter being prolonged, and having their extremities bent downward at a suitable angle, the points being adapted to rest upon the head and support the cutters in proper position, as set forth.

2. The combination, with the cutter-plate C, having teeth D, of the plate B, having a corresponding series of teeth with prolonged downwardly-bent extremities *f*, as set forth.

3. The combination, with the reciprocating cutter-plate, of a cap-plate partially divided by a central transverse slot, the bearing-edges of the sections upon each side of the slot being slightly inclined upward from the extremities toward the center of the plate, in order to locate the preponderance of friction at the ends of the cutter-plate, as set forth.

4. The combination, with the cutter-plate C and the slotted cap plate E, having the bearing-edges *l l*, slightly inclined upward toward the center, of the plate B, having cutting-teeth provided with prolonged downwardly-bent extremities *f*, as set forth.

5. The combination, with the plate B, having cutting-teeth with prolonged downwardly-bent extremities *f*, the reciprocating cutter-plate C, and cap-plate E, having slot *g* and inclined bearing-edges *l l*, of the threaded bolts *i i* and thumb-nuts F F, all as set forth.

6. A comb-plate for shearing - instruments having teeth whose extremities are bent downward at a suitable angle, as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH K. PRIEST.

Witnesses:

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CHAS. B. TILDEN.