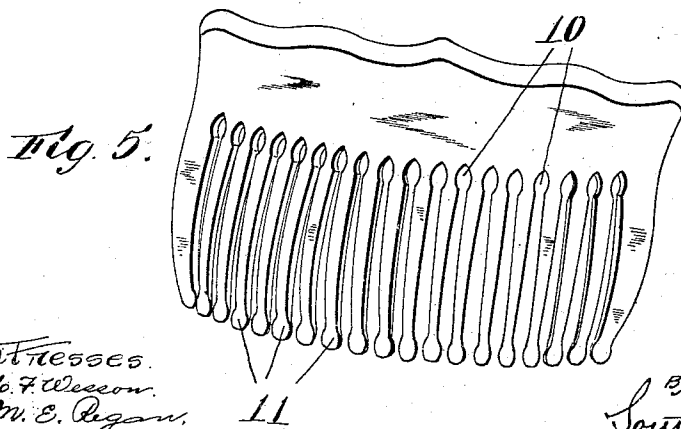
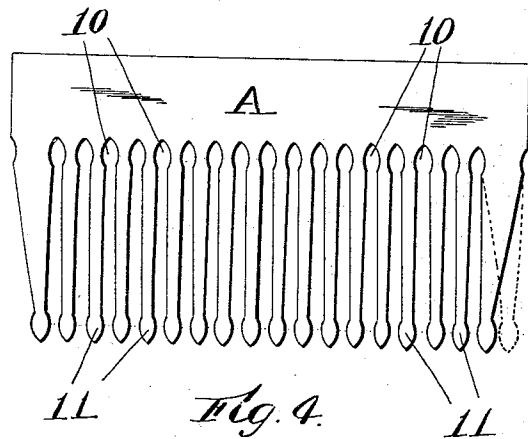
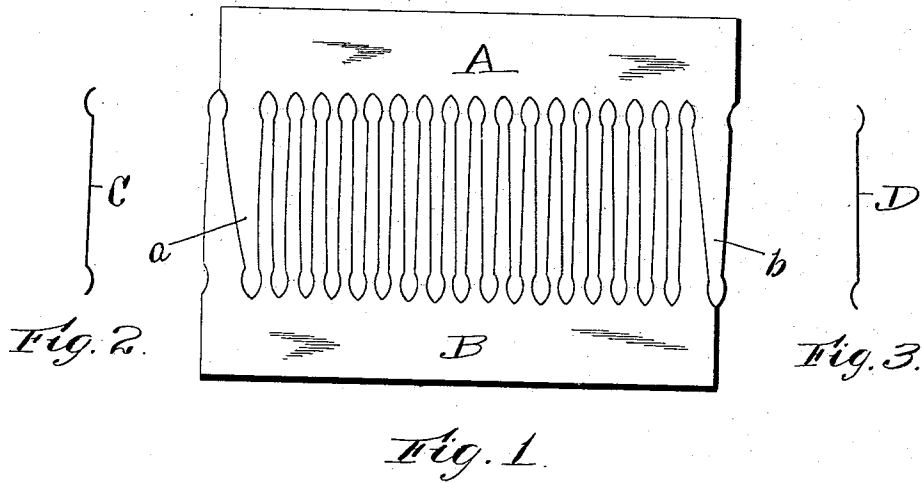


E. B. KINGMAN.

COMB.

APPLICATION FILED MAY 2, 1903.

NO MODEL.



Witnesses.
G. F. Wilson.
M. E. Rigdon.

Inventor:
E. B. Kingman.
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UNITED STATES PATENT OFFICE.

EDWARD B. KINGMAN, OF LEOMINSTER, MASSACHUSETTS.

COMB.

SPECIFICATION forming part of Letters Patent No. 735,115, dated August 4, 1903.

Application filed May 2, 1903. Serial No. 155,305. (No model.)

To all whom it may concern:

Be it known that I, EDWARD B. KINGMAN, a citizen of the United States, residing at Leominster, in the county of Worcester and State of Massachusetts, have invented a new and useful Ball-Pointed Comb, of which the following is a specification.

This invention relates to that class of combs which are made from shell, horn, celluloid, or similar sheet material. Combs of this class are ordinarily designated under the name of "shell" combs, although a considerable variety of material may be used in their manufacture.

The especial object of this invention is to furnish a comb each tooth of which is provided at its end with an enlargement or head and which is undercut near its base, said teeth being so proportioned that the blanks from which the combs are made may be meshed together, permitting two combs to be "pulled" from a single sheet of material.

To these ends this invention consists of the improved comb as an article of manufacture, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a plan view illustrating the manner in which two combs are cut from a strip of material according to this invention. Figs. 2 and 3 are detail views showing the outlines of the cutting-knives employed. Fig. 4 is a plan view of one of the comb-blanks, and Fig. 5 is a perspective view of the complete comb.

Combs manufactured according to this invention are characterized by a novel form of comb-tooth. This comb-tooth is provided at its end with an enlargement or ball, and at its upper end each tooth is undercut to provide notches or hair-receiving sockets, which assist in holding the comb in the hair of the wearer.

Combs manufactured according to this invention have the advantages that they will be securely held in the hair of the user, while the enlargements at the ends of the teeth will prevent the tooth-points from scratching or irritating the scalp of the user and from splitting or dividing the hairs.

The accompanying drawings illustrate the

steps in the manufacture of a comb according to this invention.

As shown in Fig. 1, two comb-blanks are cut from a single strip of material—that is to say, the teeth are arranged to intermesh. One edge A of the strip will form the body portion of one comb, and the other edge B of the strip will form the body portion of a second comb. The intermeshing teeth are cut or shaped by knives having the outline or cutting edges C and D illustrated in Figs. 2 and 3, respectively.

In cutting the end teeth the material is advanced twice the distance required to form an ordinary tooth and is turned at an angle, so that the parallel inclined cuts D will be made and oppositely-inclined end teeth *a* and *b* will be formed, the tooth *a* being of the normal or required shape, while the end tooth *b* will have its point separated or inclined away from the adjacent tooth. The blanks are then separated or broken apart, and each tooth of each blank, as illustrated in Fig. 4, will be provided at its end with an enlargement 11 and will be undercut at its base, as at 10, to provide hair-receiving recesses or locks for holding the comb in place.

To make the end teeth of each blank correspond, each blank after it has been separated from the strip is heated, so that the material will be softened, and its end tooth *b* will be set up or bent in, as indicated in Fig. 4, from the position shown by dotted lines to the position shown by full lines. This will form a comb-blank in which not only each of the middle teeth will be provided with a ball or enlargement at its lower end, but the end teeth as well will correspond in shape and position and will be provided with balls or enlargements.

After a flat comb-blank has been formed, as illustrated in Fig. 4, its upper edge may be trimmed and ornamented, as desired, and the blank pressed in suitable dies and formers, so that the same will assume the curved and ornamented shape of the completed comb illustrated in Fig. 5.

Combs constructed according to this invention are especially adapted for the ornamental or hair-retaining combs which are now extensively employed. It is to be understood,

however, that comb-teeth cut according to this invention, so as to be provided with balls or enlargements at their ends, may also be used to advantage in ordinary toilet-combs.

5 I am aware that numerous changes may be made in the manufacture of combs according to this invention without departing from the scope thereof as expressed in the claims, and I do not wish, therefore, to be limited to
10 the construction I have herein shown and described; but

What I do claim, and desire to secure by Letters Patent of the United States, is—

15 1. As an article of manufacture, a comb having the ends of its teeth provided with enlargements, and having the bases of said teeth undercut, the spaces between succes-

sive teeth corresponding in outline with said teeth.

2. As an article of manufacture, a comb 20 having the ends of its teeth provided with enlargements and having the bases of said teeth undercut, the spaces between successive teeth corresponding in outline with said teeth, and each end of said combs having a 25 large tooth which also has an enlargement at its end.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EDWARD B. KINGMAN.

Witnesses:

LOUIS W. SOUTHGATE,
PHILIP W. SOUTHGATE.