No. 791,690. PATENTED JUNE 6, 1905.

F. W. GRELL.

COMB.

APPLICATION FILED DEC. 29, 1903.

Fig. 1.

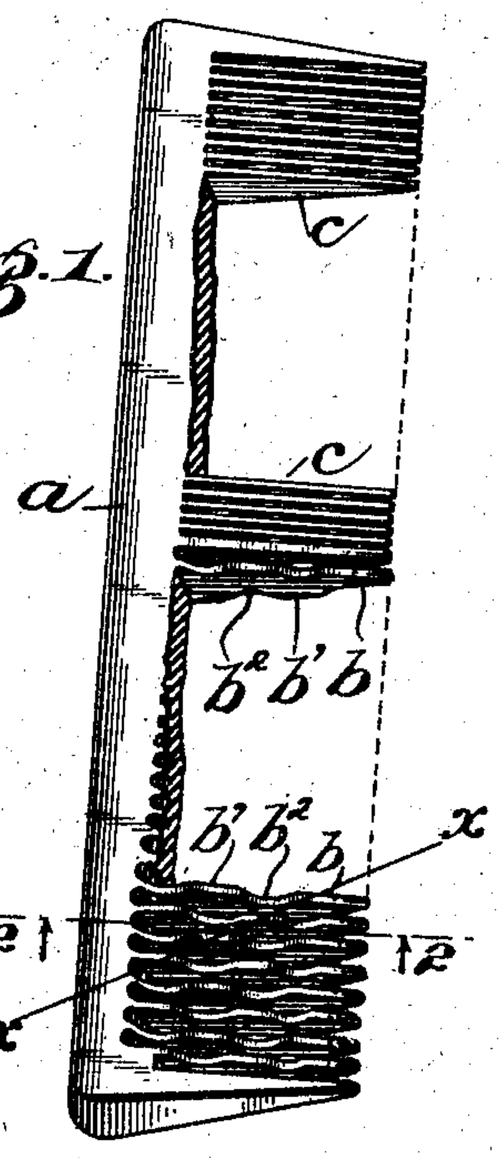


Fig. 3.

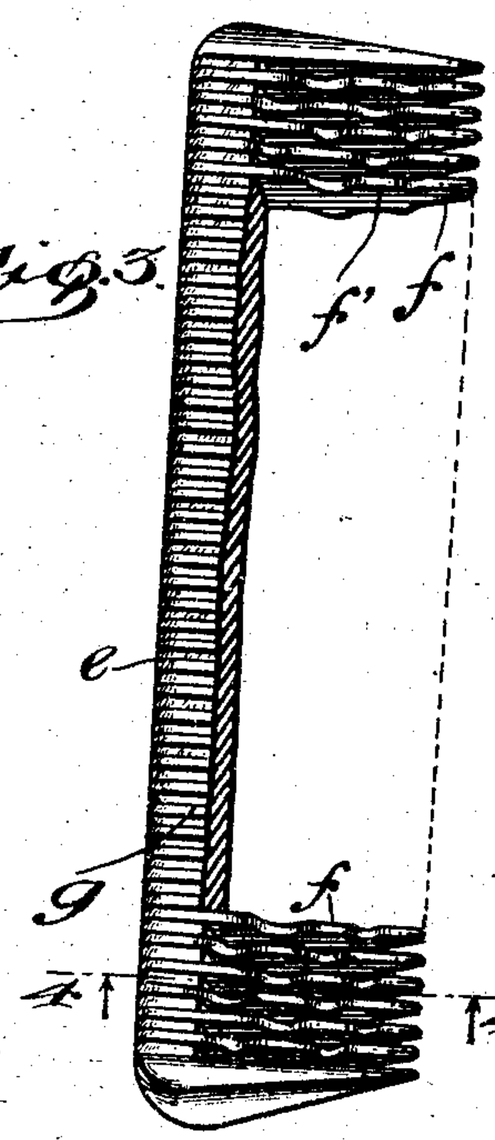


Fig. 2.

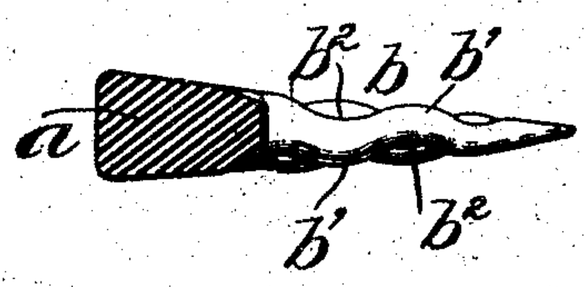


Fig. 4.

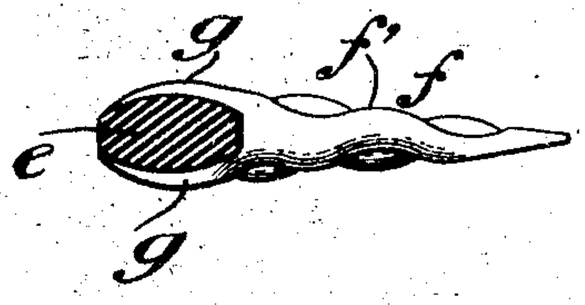


Fig. 5.

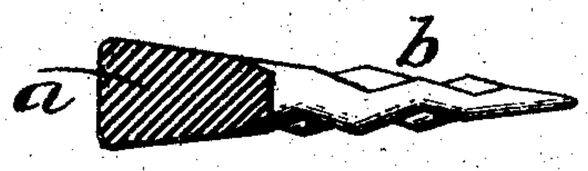
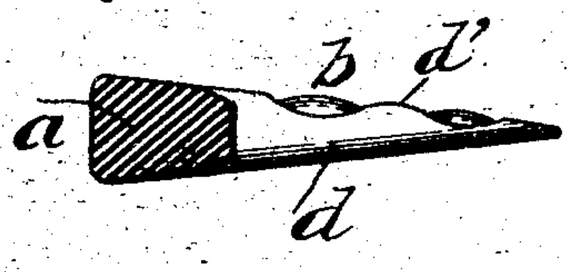


Fig. 6.



Witnesses
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PHOTO-LITHOGRAPHED BY SACKETT & WILHELMS LITHO. & PTG. CO. NEW YORK.

No. 791,690. Patented June 6, 1905.

UNITED STATES PATENT OFFICE.

FREDERICK W. GRELL, OF NEW YORK, N. Y., ASSIGNOR TO AMERICAN HARD RUBBER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

COMB.

SPECIFICATION forming part of Letters Patent No. 791,690, dated June 6, 1905.

Application filed December 29, 1903. Serial No. 186,944.

To all whom it may concern:

Be it known that I, FREDERICK W. GRELL, a citizen of the United States, residing in the city of New York and State of New York, have invented certain new and useful Improvements in Combs, of which the following is a specification.

This invention relates to combs; and the object of the invention is to provide a comb which is desirable in combing or straightening out the hair and is particularly desirable by females.

To these ends my invention consists of certain features of construction to be hereinafter described and then claimed, with reference to the accompanying drawings, in which several constructions embodying my invention are shown, and in which—

Figure 1 is a perspective view, parts broken out, of a desirable form of comb embodying my invention in which some of the teeth are plain and tapered, as usual. Fig. 2 is an enlarged transverse section of the same on the line 2 2, Fig. 1. Fig. 3 is a perspective view, parts broken out, of another form of comb embodying my invention. Fig. 4 is an enlarged transverse section of the same on the line 4 4, Fig. 3. Fig. 5 is a section of a comb, showing a further modification; and Fig. 6 is also a section of a comb, showing a still further modification.

Referring to the drawings, in Figs. 1, 2, 5, and 6 the back of the comb *a* is provided with teeth *b*. In Figs. 1 and 2 the teeth *b* are provided at each side with undulatory or sinuous transverse edges formed by elevations b' and depressions b^2 extending lengthwise of each tooth, which is preferably tapered. The elevations and depressions of each tooth are disposed so that the elevations on one edge alternate with those on the other edge, and so with the depressions—that is to say, considering the tooth with reference to its width there is an elevation b' on one edge and a corresponding depression b^2 on the other edge of the tooth. Not only are the undulations on one edge of the tooth alternate to those on the other edge, but the undulations of one tooth *b* are alternate to those on the next teeth. This disposition is advantageously secured by arranging the elevations b' so that they extend at a slant or angle, such as indicated by line *x x*, Fig. 1, which is less than a right angle relatively to the longitudinal axis of the comb, or, in other words, to the axis of the back *a*. With this disposition the series of elevations b' and the series of depressions b^2 will extend in parallel lines. The width of each tooth in the combs shown as desirable types embodying the invention extends transverse to the back bar—that is to say, the longer axis at the base of the tooth is at right angles to the back bar, the tooth being tapered from the ends of the said axis to its extremity. In Figs. 1 and 2 the elevations and depressions are formed by compound curves; but it is evident from Fig. 5 that the edges of the teeth may instead be serrated, so that the elevations and depressions are angular. In all the figures, with the exception of Figs. 1 and 2, the teeth are coarse and are assumed to extend from end to end of the comb, although not necessarily, nor need any teeth be coarse. In Fig. 1, however, the coarse teeth *b* extend throughout but half the length of the comb, while the other half of the comb contains fine teeth *c*, and although these fine teeth are shown as plain tapered they may evidently be provided with undulatory or serpentine edges the same as the coarse teeth *b*. In Fig. 6 the teeth *b* are shown as each having one straight edge *d* and an undulatory edge d'.

In Figs. 3 and 4 the comb will be seen to comprise a back bar *e* and teeth *f*, with undulatory edges f', which alternate the same as in Fig. 2; but the rear ends of the teeth are each continued across the sides of the back bar *e* in the form of ribs *g*. The teeth in this form of comb appear as to be intersected by a back bar *e* or to straddle the same. It is evident that instead of the elevations on the opposite edges of the teeth being disposed practically in a zigzag line extending throughout the length of the tooth and from edge to edge the elevations on the opposite edges may be directly opposite each other or they may be disposed on different slants or angles from those illustrated.

A comb for combing the hair should not only be straight, or substantially so, but it should be rigid or stiff to such extent, usually due to the thickness of the back bar, that when the comb is grasped at one end in one hand in the act of combing the comb will not flex or bend (if at all, but slightly) in passing through the hair. Combs in ordinary use for combing the hair possess the requisite qualities and characteristics when provided with the present improvements to meet the demands of the invention. Each tooth tapers from a comparatively wide base, the greater width being transverse to the comb-back, and the undulations or sinuosities are on at least one of the slanting or oblique transverse or side edges of the tapered tooth.

The word "firm" used in the claims is used for the purpose of distinguishing the back bar and teeth of the comb forming the subject of the present invention from those combs, such as round combs, in which the back bar and teeth are flimsy and yielding. The word is not used in its intensive sense, however, but only to comprehend that class of combs which are used for combing the hair in which the back bar and teeth must be substantially firm, rigid, or stiff.

Obviously some features of the invention may be used without others or used with others without departing from the spirit and scope of my invention.

I therefore claim as new and of my invention the following:

1. A comb for combing the hair, the same comprising a firm and substantially straight back bar, and tapered teeth with undulating edges, the undulations of one tooth being alternate to those of the next teeth and located upon at least one side of the comb.

2. A comb having undulating teeth, the undulations of one tooth being alternate to those of the next teeth, and the undulations of one edge of a tooth being alternate to those on its opposite edge.

3. A comb for combing the hair, the same comprising a firm and substantially straight back bar, and tapered teeth, the greatest width of the teeth at their bases being transverse to the back bar, and said teeth being provided with undulating edges at the side of the comb.

4. A comb for combing the hair, the same comprising a firm and substantially straight back bar, and tapered teeth, the greatest width of the teeth at their bases being transverse to the back bar, and said teeth being provided with alternate elevations and depressions arranged in lines, each line at an angle relatively to the longitudinal axis of the comb.

5. A comb for combing the hair, the same comprising a firm and substantially straight back bar and teeth having longer axes at the base, at right angles to the back bar, and being tapered from the ends of said longer axes to the extremities of the teeth, said teeth being undulatory on at least one of the converging edges, for substantially the purposes set forth.

6. A comb provided with a plurality of teeth each transversely tapered from the back to its point and having an undulatory transverse edge.

7. A comb provided with a plurality of teeth each transversely tapered from its back to its point and having an undulatory transverse edge, the undulations of adjacent teeth being alternately disposed.

8. A comb provided with a plurality of teeth, each having an approximately regular transverse taper from the back to its point and having undulatory transverse edges.

9. A comb provided with a plurality of teeth, each having an approximately regular transverse taper from the back to its point and having undulatory transverse edges, the undulations of adjacent teeth being alternately disposed.

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

FREDERICK W. GRELL.

Witnesses:
WM. W. WEISTING,
GEO. L. WHEELOCK.