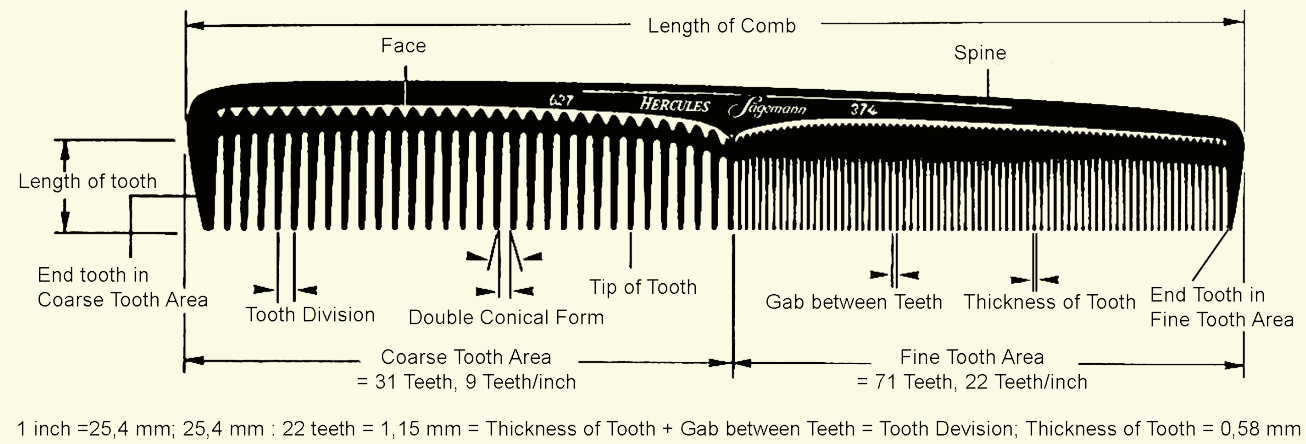


Not all combs are the same!

Description of the production process of the sawn and smoothed hard rubber combs of the well-known brand HERCULES SÄGEMANN.



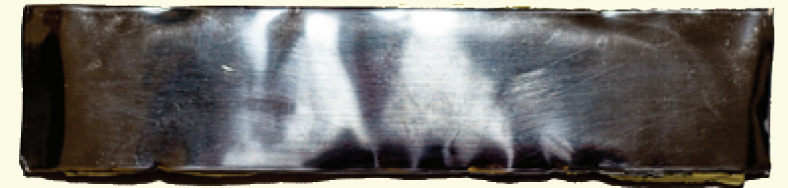
1. The raw rubber is obtained by coagulation of the milk (latex) of rubber trees, which thrives in the tropical regions of the earth's entire equatorial belt. The main areas of cultivation are Malaysia.



2. The raw rubber is masticated with the aid of rollers to make it smooth. Sulphur and linen oil are added to make the comb mixture.



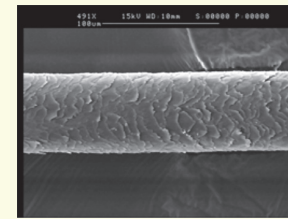
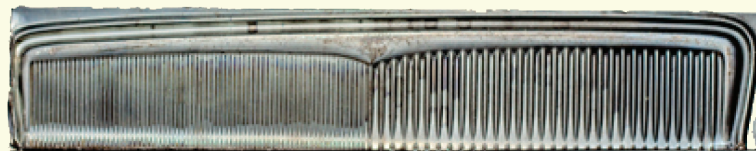
3. This mixture is rolled out into strips of various lengths and thicknesses depending on the type of comb. Strips are covered on both sides with metal foil equal to the size of the comb mould. These metal foils with the rubber mixture between them are known as „plaques“.



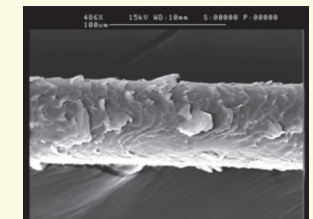
4. In special moulds, the „plaques“ are moulded to form combs at high pressure with additional heat.



5. The setting process (vulcanization) of the still soft mixture is performed in vulcanizing boilers (autoclaves) with the aid of superheated steam. The effect of the heat and pressure causes the large molecules of the rubber to vulcanize with the sulphur to form elastic hard rubber. The metal foil is then removed from the now hard „plaques“.



ILL. A:

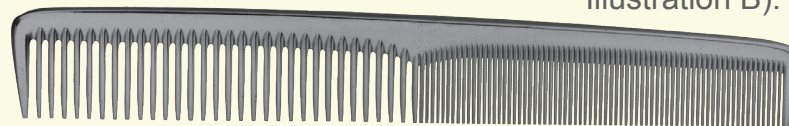


ILL. B : Photograph of a hair after having been combed 10,000 times

6. The raw comb form is degated and cut with the aid of rotating grinding stones.



7. Now comes the decisive face of the hair cuticle (See Illustration B).



Photograph of a hair after having been combed 10,000 times using a HERCULES Sagemann comb, magnified 750 times. The edges of the scales are not noticeably raised.

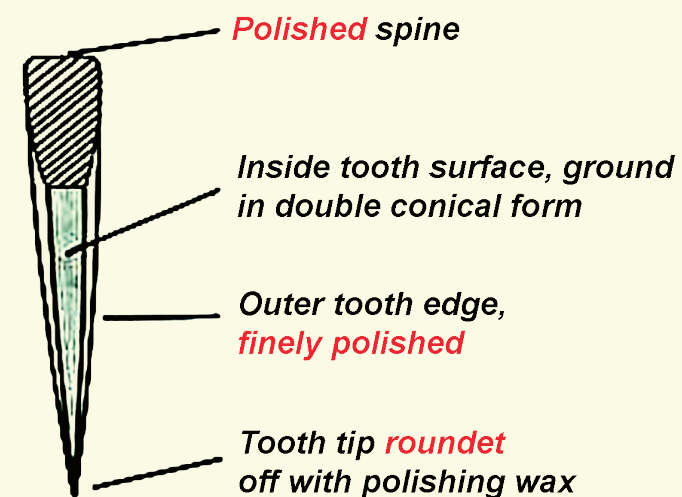
using a plastic comb, magnified 750 times. Considerable damage can be seen to have been done to the scale structure. The edges of the scales are greatly raised and some of them damaged or broken.

8. The spine, the outer tooth edge and the tip of each tine is smoothed and polished using pumice discs. Using cloth discs, the comb is buffed to produce a high gloss finish.

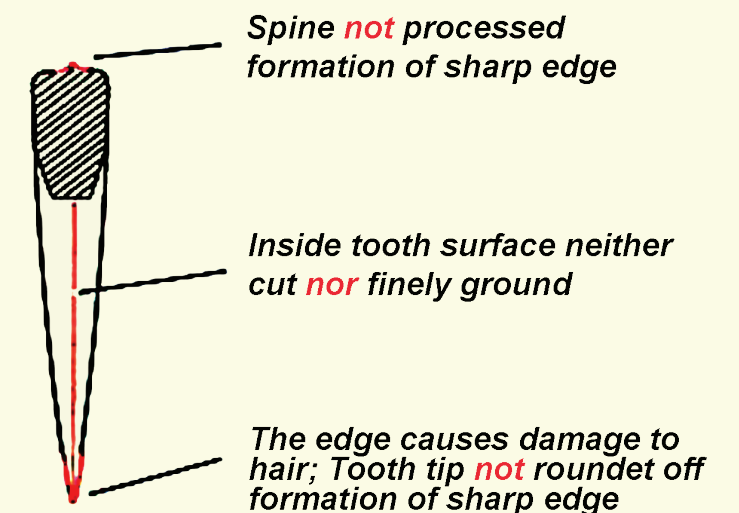


cutting or grinding process, which is all important in determining the quality of the HERCULES Sagemann hard rubber comb. The gaps between the teeth are now cut out using diamond profiling cutters. The inside surface of each comb tooth (tine) is ground in a double-conical form. (See Illustration A). Modern thermoplastic combs cannot be finished by grinding and polishing - that's why they very often show little ridges, which can damage the sur-

Cross section of a finely-ground hard rubber comb



Cross section of an extruded termoplast comb, for example made of nylon



9. Once quality control, high-temperature embossing with the HERCULES Sagemann trademark and packaging have been applied, the production process is complete. The combs are then despatched all over the world.

