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MAGNETIC COMB ASSEMBLY FOR USE WITH A HAIR COMPOSITION HAVING MAGNETIZABLE PARTICLES

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Fig. 1.

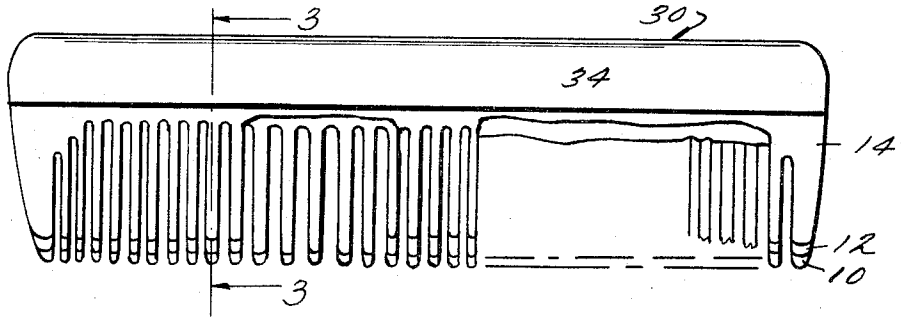


Fig. 2.

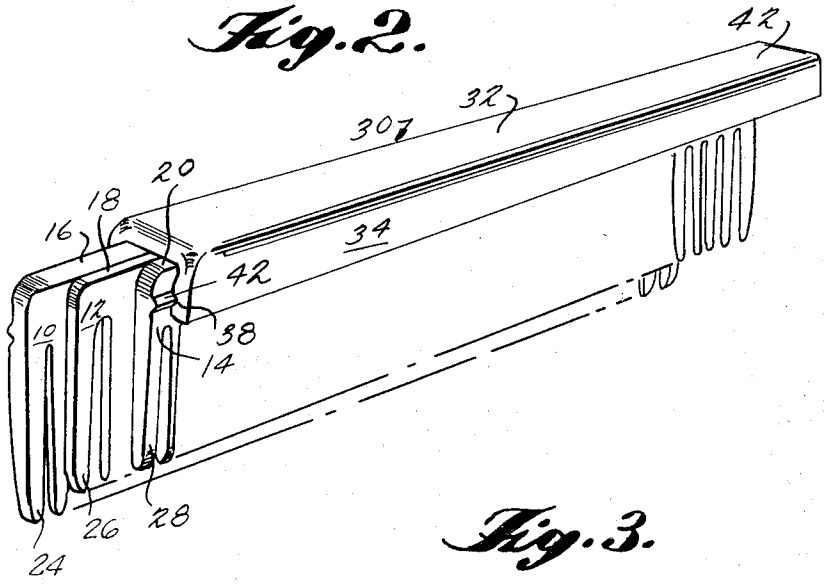
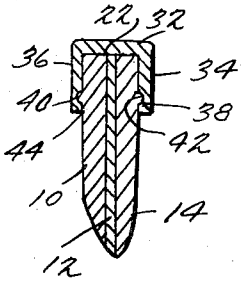


Fig. 3.



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MAGNETIC COMB ASSEMBLY FOR USE WITH A HAIR COMPOSITION HAVING MAGNETIZABLE PARTICLES

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ABSTRACT OF THE DISCLOSURE

A comb made up of a plurality of comb members which are held in juxtaposition by a separable back member. The comb members are slidably inserted into the back member and when so assembled, the teeth of immediately adjacent comb members are in staggered relationship with each other. Further, the teeth of one comb member extends outwardly from the back member to a distance greater than the outward extent of the next adjacent comb member.

This invention relates to improved hair control compositions which impart body to hair and tend to maintain the hair in a desired coiffure and to a method and means for treating hair in such a manner as to impart to the hair improved maintenance of a desired configuration.

A long sought goal of the cosmetic art has been to provide a cosmetic preparation which when applied to the hair would give body to the hair and would maintain a predetermined configuration thereof. Effects of humidity, inclement weather, wind and the like have necessitated the application to the hair of various cosmetics in order to minimize the displacement of the hair from its original configuration. Further, a predetermined configuration has at times been difficult to impart to the hair due to the nature of the hair itself, for instance, it lacks body or it is excessively curly or kinky. Existing cosmetics while to some degree impart stability or maintain a predetermined configuration to the hair they are generally disadvantageous in that they fail to impart to the hair the ability to be shaped initially into such configurations especially where the very nature of the hair resists such shaping procedures. Efforts to overcome the disadvantages of such prior art cosmetics have been directed to cosmetics which have a chemical action on the hair to modify its natural properties or characteristics. Such cosmetics, however, if repeatedly used, tend to harm the hair, deplete it of its natural oils, cause splitting of the hair and at times induce premature alopecia and certain skin and scalp disorders.

It is therefore a primary object of the present invention to provide a hair cosmetic which overcomes the disadvantages of prior art cosmetics and which imparts body to the hair, provides better control of a predetermined configuration of the hair and permits the hair, regardless of its nature, to be so shaped.

Another object of this invention is to provide a means for treating hair to which has been applied the novel cosmetic of this invention to shape the hair in a desired configuration.

A further object of this invention is to provide a method which imparts body to hair, tends to straighten out excessively curly hair and which maintains hair in a desired configuration.

A still further object of this invention is to provide means by which hair, having applied thereon the novel cosmetic of this invention, is, with facility, shaped into a predetermined configuration, said means consisting of a novel comb comprising a plurality of removably attached comb members having their teeth in staggered relation with one another.

Other objects and the entire scope of applicability of the present invention will become apparent from the detailed description given hereinafter. It should be understood, however, that the detailed description and specific examples, while indicating preferred embodiments of the invention, are given by way of illustration only, since various changes and modifications within the spirit and scope of the invention will become apparent to those skilled in the art from this detailed description.

It has now been found that these objects can be obtained by applying to the hair a novel cosmetic comprising a magnetizable material in an inert carrier to impart body to the hair, shaping the hair containing the cosmetic with a comb provided with metal-containing teeth members to provide thereto a predetermined maintainable configuration.

The novel cosmetic hair treating composition of this invention consists essentially of an inert base as a carrier having, dispersed or suspended therein, finely divided particulate magnetizable material which in the process of shaping the hair forms a film thereon, shapable and maintainable in a desired configuration or coiffure. The magnetizable material may be of any desired kind. Some examples are black or red magnetic iron oxide, carbonyl iron, ferro magnetic alloys, nickel and its magnetic alloys, cobalt and its magnetic alloys, or any mixture of the aforementioned. The specific naming of these materials is not to be deemed to limit the invention as other solid magnetic or magnetizable powders will do. These magnetic powders may be permanently magnetized prior to inclusion in the base carrier or they can be magnetized by magnetic fields applied to the base carrier containing them. The finely divided magnetizable material generally has a particle size ranging, preferably, up to about 0.005 inch. The choice of a particular particle size, of course, will depend on a number of factors such as the type of base carrier employed and the strength of the magnetic field desired. Thus, the fineness of the material is that sufficient to produce the results desired, i.e. to impart to a cosmetic preparation in which it is incorporated the ability to control hair in a predetermined configuration.

The base carrier can also be of any desired kind such as petrolatum, beeswax, pomade, salve, cream, ointment, lotion, etc. and can include various other ingredients such as perfumes, hair grooming agents and the like. Additionally, the novel cosmetic can be provided in a low pressure "aerosol bomb" as a means of dispensing it on the hair. Suitable propellants for such "bombs" are CCl_3F and CCl_2F_2. Generally, the novel cosmetic of this invention contains sufficient base carrier to coat the particulate magnetizable material therewith. It has been found that the finer the magnetizable material the greater the amount of base carrier is needed to properly coat the particulate material. Thus, the amount of magnetizable material incorporated into the base material can vary widely, depending upon a number of easily ascertainable factors such as the type of magnetizable material, the particulate size chosen and the choice of a base carrier. Amounts up to 95 weight percent magnetizable material based on the total composition have been found effective. It will be obvious that the amount present need only be sufficient to impart body to the hair thereby providing better control of a predetermined configuration of the hair.

The invention also provides means and a method of forming or shaping hair to which has been applied the novel cosmetic preparation of this invention. Thus, the invention embodies a comb having a back member and at least one comb member having metal-containing teeth. Preferably, a plurality of comb members are utilized, said comb members being juxtaposed and slidably mounted in a holder having a back member and a pair of spaced parallel side bars. The outer comb members can be provided

with a tongue complementary to a longitudinal groove in each of the side bars to hold the combs in juxtaposition during its path of travel through a head of hair. The teeth of one of the combs are, preferably, in staggered relation to the teeth of an adjacent comb and in a preferred embodiment the teeth of the outer combs are aligned with each other. Preferably, also, the teeth of the juxtaposed comb members extend laterally and outwardly from the back member to a progressively increasing extent.

Other features of the invention include fabricating the comb in whole or in part from a synthetic resinous material such as polystyrene, polypropylene, etc. or from magnetizable material, i.e. one which is a permanently magnetic material or which can be magnetized in a magnetic field. In the latter instance, preferably, the comb can be provided with electrical means to magnetize the comb when in use. When using a plastic material in the formation of the comb, preferably, the teeth of such a comb are metal of the same nature described above. Further, the teeth can be made of plastic but in such an instance they should contain metal as described above. Such metal can be provided to the teeth in various ways such as imbedding it in the plastic material or coating such plastic teeth as by spraying, dipping or other conventional ways. The exact configuration or design of the comb can be any desired, and such characteristics as color, length, etc., can be determined to suit the market and therefore come within ordinary skill or usage.

One embodiment of the comb contemplated for use with the novel hair cosmetic of this invention is fully described and illustrated in the accompanying drawings in which:

FIGURE 1 is a side selevation of a preferred embodiment of the invention;

FIGURE 2 is a perspective view of the device of FIGURE 1; and

FIGURE 3 is a sectional view of the device of FIGURE 1 taken on the line 3—3 thereof.

Referring to the drawings in detail, a plurality of comb members **10**, **12** and **14** are arranged in juxtaposed parallel relation with their back members **16**, **18** and **20**, respectively, disposed adjacent one another to form a complanar surface **22** as will be readily understood upon reference to the drawings. The comb backs **16**, **18** and **20** carry comb teeth **24**, **26** and **28**, respectively, which project laterally outwardly therefrom. The comb members are supported by a holder **30** such that the rows of teeth of the comb members are in staggered relation to the teeth of the adjacent comb members. Preferably when so supported in the holder **30**, the teeth **24** of comb member **10** are in alignment with the teeth **28** of the comb member **14**.

The holder **30** comprises back member **32** and a pair of spaced parallel side bars **34** and **36** extending laterally outwardly therefrom to slidably engage the comb members **10**, **12** and **14** adjacent their back members **16**, **18** and **20**, respectively.

The side bars **34** and **36** are provided at the interior surface of the holder **30** with a pair of longitudinally extending grooves **38** and **40**, which slidably engage a pair of complementary longitudinally extending tongues **42** and **44** provided on comb members **10** and **14** adjacent their respective back members **16** and **20**. The tongues and grooves serve to hold the comb members in assembled relation, permit them to slide longitudinally one upon the other, if desired, but prevent them from being displaced laterally from the holder **30**. One or more intermediate comb members **12** can be provided and will be held in position in the holder **30** by frictional engagement with the contacting surfaces of forward and rearward comb members **10** and **14**, respectively.

The comb of this invention preferably is made from a magnetic or magnetizable metal although it can be fabricated from a plastic with the teeth thereof containing such metal. Examples of permanent magnet steels useful

with the instant invention are found in the following table.

Type of Steel	Nominal Composition, Percentage					
	C	M	Cr	W	Co	Mo
C-Mn	0.60	0.80				
Cr	0.60	0.40	0.90			
Cr	0.90	0.35	2.25			
Cr	0.95	0.20–0.60	3.00–4.00			
Cr	1.00	0.35	6.00			
Cr-Mo	1.00	0.35	4.00			0.35
W	0.70	0.30	0.20	5.50		
W-Cr	0.70	0.50	0.50	6.600		
Co	0.90	0.35	4.75	1.25	8.50	
Co	0 90	0.30–0.85	3.50–5.75	3.75–7.00	35–00–41.00	
Co-Cr	0.95	0.30	9.00		16.00	1.30
Co-W	0.85	0.50	2.00–5.00	8.75	17.00	

Other permanent magnetic materials as well as materials which are magnetizable in an electrical field can also be employed such as an alloy of iron, cobalt and molybdenum, known as Remalloy or Comal; various alloys of iron, nickel, aluminum and one or more other elements such as cobalt, copper and titanium and known as Alnico; a series of alloys of copper and nickel with iron or cobalt or both and known as Cunife or Cunico; an alloy of silver, manganese and aluminum known as Silmonal; an alloy of cobalt, iron and vanadium called Vicalloy and a mixture of iron and cobalt oxides called Vectalite. Iron-nickel base alloys such as Permalloy; Supermalloy (60 to 90% Ni and sometimes Cr or Mo); Numetal (approx. 76% Ni, 6% Cu and 1.5% Cr); Permafy (approx. 80% Ni) and 1040 alloy (72% Ni, 14% Cu and 3% Mo) can also be employed. These metals additionally are suitable for use, in powdered form, with the novel cosmetic of this invention.

The comb as described in any of the foregoing embodiments is employed with a hair treating composition described hereinbefore. The user applies the hair treating composition to the hair and thoroughly distributes it therein after which he combs his hair in the usual fashion with the magnetic comb of this invention. This procedure serves to orient the finely divided metallic particles in a wire-like fashion on the strands of hair causing the hair to assume a straight or elongated position which facilitates shaping the hair in a predetermined configuration. Additionally, because of the staggered relation of the row of teeth of one comb to the row of teeth of an adjacent comb, the tension and pressure created by such an arrangement aids in removing the excessive curliness from the hair when the comb is passed therethrough.

Preferably, the novel compositions of this invention are utilized on human hair although it should be recognized that it can be applied to animal hair as well and even, if desired, to filamentary textiles. Also while a comb has been described, equally advantageous results can be achieved with a brush fabricated in the manner described, the bristles thereof being made of a material similar to that from which the teeth of the comb are made.

While in the foregoing there has been shown and described the preferred embodiments of this invention, it is to be understood that minor changes in the details of construction, combination and arrangement of parts may be effected without departing from the spirit and scope of the invention as claimed.

What is claimed is:

1. A comb comprising (a) a holder having a back member and a pair of spaced parallel side bars, each of said side bars having a longitudinally extending groove and (b) a plurality of juxtaposed comb members comprising a forward and rearward comb member and at least one comb member intermediate said forward and rearward comb members, said forward and rearward comb members each having a longitudinally extending tongue complementary to said grooves whereby said forward, intermediate and rearward comb members are

slidably and retainingly received in said holder, the teeth of one comb member being in staggered relationship with the teeth of the next adjacent comb member and the teeth of each comb member containing a magnetizable material, the effective tooth length of each of said comb members being varied so that when received in said holder, the rearward comb member extends outwardly from said holder a distance greater than said intermediate comb member which in turn, extends outwardly from said holder a distance greater than said forward comb member.

2. The comb of claim 1 wherein said comb members are metal.

References Cited

UNITED STATES PATENTS

259,574	6/1882	Murdock	132—162 XR
504,979	12/1893	Guild	132—155
1,572,399	2/1926	Lewis	132—137 XR
1,706,583	3/1929	Meyer	128—393
2,106,882	2/1938	Betz	128—1.3
2,334,737	11/1943	Woodruff	132—136 XR
2,479,253	8/1949	Prediger	132—142 XR
2,626,618	1/1953	Collison	132—136

FOREIGN PATENTS

612,159	7/1926	France.
764,468	3/1934	France.
1,021,071	11/1952	France.
9,037	1885	Great Britain.
429,079	5/1935	Great Britain.
827,463	1/1938	France.
363,011	12/1931	Great Britain.

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