UNITED STATES PATENT OFFICE.

CONRAD BEYER, OF COLOGNE-RODENKIRCHEN, GERMANY.

HAIR-TONIC.

946,633. Specification of Letters Patent. Patented Jan. 18, 1910.

No Drawing. Application filed October 28, 1907. Serial No. 399,482.

To all whom it may concern:

Be it known that I, CONRAD BEYER, a subject of the King of Prussia, and resident of 53 Hauptstrasse, Cologne-Rodenkirchen, in the German Empire, have invented a Hair-Tonic, of which the following is an exact specification.

This invention refers to hair tonics and to the method of preparing the same.

The new substance according to the present invention by feeding the hair roots strengthens the growth of the hair, purifies it, lends it gloss and natural color; it is further applicable in those cases which suffer from loss and discoloration of the hair.

The invention consists in a hair tonic having in combination with a suitable diluent the horny substance of the human hair in colloidal form.

It is most important in all cases that the horny substance of the hair should be applied in what is known as a hyaline form, that is in a form in which it has properties similar to the colloidal precipitated oxids of iron or aluminium. This result can be effected in different ways but according to one example healthy hair as for instance that which falls from the head when the hair is cut, is first subjected to a thorough cleaning. This cleaning may be effected by sifting, threshing or passing air currents through it, so as to remove all dust and dirt. After this the hair is boiled for from 1 to 2 hours in water in order to dissolve the impurities and then washed several times in cold water. After drying the mechanically cleaned hair is defatted, that is deprived of its fatty substances by treating with ether, benzin, tetra-chlorid of carbon or other fat-dissolving substance. After running off the solvent for the fats the cleaning and defatting processes for the hair are then accomplished. The cleaned and defatted hair is then dissolved in a concentrated alkali lye, for example hydroxid of potash or soda, and heated during solution. I find that a 50% lye is best suited for this purpose and such a lye can easily dissolve an equal weight of hair. The hair-solution obtained in this way is then diluted with four times its volume of water allowed to cool and then the means used for precipitating the ceratin for instance either sulfuric or acetic acid is added in small quantities while the solution is being stirred. The additions are of course continued until the precipitation of the ceratin ceases. It is such precipitated ceratin which possesses the colloidal properties which are taken advantage of in the present invention to produce a hair cosmetic. If the alkali used for the lye is potash, then the ceratin (that is the horny substance of the hair) may be obtained by the addition of common salt. The ceratin is distinguished as a fleecy gray deposit which by filtering is separated from the lye and afterward thoroughly washed with cold water.

According to another method of producing the horny substance of the hair in colloidal form certain of the homologues of phenol are used. This method of production depends upon the fact that phenol possesses the properties of dissolving the ceratin in the hair; this appears to be a general reaction of the phenols that on heating it with hair or other ceratin-containing bodies these bodies dissolve. It will be understood that the poisonous bodies of this class that is phenol and its homologues, cannot be employed, but naphthol and its homologues as well as the phenol carbonic acids such as oxyquinolin carbonic oxid and its derivatives and the phenols which are richer in OH such as pyrogallic acid and resorcin. The ceratin of the hair can be best dissolved in these substances by melting the hair with naphthol and the melted product then mixed in alcohol. The alcoholic ceratin-solution may also be produced by heating the ceratin containing material under pressure together with an alcoholic solution of the suitable phenol.

According to a particular example of the process the hair after being cleaned and defatted in the manner described above is mixed with at least its equal weight of the suitable phenol to be used such as beta-naphthol and while constantly stirring is heated until the beta-naphthol is melted. During melting the hairs are softened or decomposed and are finally completely dissolved. This is best effected by heating to 180° C. The melted ceratin-holding substance and naphthol can now be prepared directly as an ointment by pulverizing and mixing with a paste or the like as a diluent in suitable proportions.

Suitable proportions for a hair wash are 80% alcohol, 1% ceratin, 1% beta-naphthol,

while the remainder may be made up with water. For an ointment suitable percentages are 2% beta-naphthol, 2% ceratin and 96% lanolin ointment. Other diluents than those mentioned may be employed and the proportions may be widely varied. The alpha-naphthol, pyrogallic acid and resorcin are treated in a similar manner as above described with reference to beta-naphthol. A characteristic of the ceratin treated in the manner herein described is that it is in a form in which it may be distributed through the diluent in an exceedingly finely divided form and in this form it possesses the hyaline or colloidal properties which are the characteristic properties necessary for rendering the ceratin effective as a hair improver.

I claim:

A hair tonic consisting of a solution of ceratin in a phenol and a suitable diluent substantially as described the ceratin being in a form readily absorbable by the hair and skin.

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

CONRAD BEYER.

Witnesses:
LOUIS VANDORN,
M. KNEPPERS.