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HATTING FUR TREATMENT

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This invention relates to the treatment of hatting fur and has for an object improving the felting properties of the fur and improving the quality of the hat, and also adding weighting to the fiber. It will thus give a better quality of hat with a given fur, or it will give the same quality hat with the use of less fur and with a poorer quality of fur, so that a good or as good a quality of hat can be produced at less cost. Hatting fur is scarce and high priced, and I have found that by treating hatting fur or mixtures of good fur with other materials, such for example as short stock, roundings and so forth, with certain materials I can secure better felting properties and can improve the quality and feel of the hat as well as increase its weight without increasing the quantity of fur.

In the preferred method of carrying out the treatment, the fur or fur mixture is blown and the hat body formed in the usual manner and the shrinking process partially completed, preferably about three-quarters completed, and then the body is dipped into a solution which improves the felting properties of the fur and improves the feel and quality of the hat. It also adds weight to the body, preferably about ten per cent, but it could be anywhere from about one to twenty-five per cent, although if added weight is small there is not much advantage gained as far as weighting is concerned, but there is an improvement in the felting qualities and in the feel and quality of the hat. After the body is so treated it is colored or dyed in the usual manner, as this treatment does not interfere with the dye, and then the shrinking and other finishing operations are completed.

The preferred bath or solution in which the body is dipped is an oil bath in which is mixed quebracho powder dissolved in water. The oil is castor oil treated with sulfuric acid, commonly called sulfonated castor oil. The quebracho powder is dissolved in water and this solution then mixed with the sulfonated oil. The solution or mixture ordinarily used for one dozen hats is about ¼ to 1 ounce of the sulfonated oil and from about 4 to 16 ounces of quebracho powder, all mixed in about 6 gallons of water. These are the right proportions for about 10 per cent weighting effect. If the hat is too mellow and it is wished to bone it up somewhat, the amount of sulfonated oil would be reduced. For a greater weighting effect more oil and quebracho powder would be added. Ordinarily the quebracho powder is dissolved in the water and then the solution is mixed with the sulfonated oil. The oil is not necessary

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to secure the effects of the quebracho, but it aids the action and it is desirable as it opens up the felt permitting the quebracho extract or powder in solution to penetrate the felt and adhere to the fibers.

Quebracho extract powder is procurable as such on the market. It is prepared from an extract of the quebracho wood, bean or bark. It is made up in large part of tannin or tannic acid and other substances extracted from the quebracho wood, bark or bean. The quebracho extract could be used but the powder is readily available on the market and can be more easily handled.

As the hat is dipped in this bath or solution the quebracho material enters the fur and tightens the felt. It makes a fur of tighter felting properties, and a hat of better feel and improved quality as well as greater weight. It forms a sort of coating on the fibers and to a certain extent stiffens up the fibers, but does not interfere with the felting qualities, and on the other hand improves these felting qualities. It adds weight, felting qualities and feel, and generally improves the quality of the hat, and best results are secured by adding about 10 per cent to the weight. However, it could be carried to about 25 per cent and still secure a good marketable quality of hat. It can be added to pure fur or any of the ordinary hat fur mixtures, including fur mixtures containing casein fiber, so-called short stock, roundings and the like, and it could also be used in wool hats. In short, it improves the all around quality of the hat and has weighting properties in addition so that as good or a better hat can be produced at less cost in fur, and it also permits the use of somewhat cheaper fur mixtures without objectionable reduction in the quality of the hat. That is, it permits the use of a greater proportion of such materials as short stock, roundings and the like in the fur mixture. As suggested, it allows the use of casein fiber and permits the use of a greater amount of this casein fiber than has been heretofore permissible for a given quality of hat. Hats of marketable quality have been produced using as high as 30 per cent of casein fiber.

The percentage of quebracho powder, extract or solution and the sulfonated oil in the mixture depends on the quality of the materials used and the effect and weighting desired on the hat material or felt. The oil has a tendency to open up the fiber permitting the quebracho solution to adhere to the fiber and tends to mellow the felt and keep it from getting too stiff and gives it a finer feel or texture.

As an example, 135 pounds of fur or fur mix-

ture could be weighed out for a certain number of hats. By treating with or adding this material this can be brought up to the same proportions or weight in the finished hats as if 150 pounds of fur had been used, and just as good or a better quality of hat is secured without adding more fur. Thus the resulting product is just as good in feel and weight, and in fact somewhat better, but is much more economical and less costly to produce.

Tannin or tannic acid constitutes a considerable portion of the quebracho powder and therefore material improvements are secured by using tannin or tannic acid powder, or an extract of sumac, or tara powder, which latter is an extract from the tara bean grown in Peru, may be used; but quebracho is the best and is preferred. Sumac gives a darker stain and has a harsher effect as it makes the fur or fur fiber too boardy and stiff, but it has a good weighting effect and can be used in small amounts. The tara powder extract has a less staining effect and the weighting property is not so good. In short, with sumac the weighting effect is greater but the staining effect is also greater, making the fur too dark except for a very dark colored hat. The staining effect and the weighting properties of the tara extract powder are both less. Quebracho is between the two and is much better and is preferred, because it has good weighting effect and materially improves the felting, feel and other qualities without objectionably stiffening the felt. In this treatment weight is added by adding a coating or weight to the fibers themselves which does not interfere with the felting effect or properties but in fact actually improves them.

The main objects of the invention are to improve the quality of the hat and also the adding of weighting or coating to the fiber. The quebracho extract powder is the best and gives the best results, although improvement is secured by tannin or tannic acid and the extract of sumac and tara extract powder, as previously described. There are evidently other salts or substances in the quebracho extract powder which modify somewhat the effect of the tannin or tannic acid, or act with it to secure the desired improvements in the felting properties, the improved feel and quality of the fur and the resulting hat, and in the weighting effect. For this reason the quebracho extract powder is preferred but the improved effects noted by the use of the other substances are material.

Having thus set forth the nature of my invention, what I claim is:

1. A method of increasing the weight and felting properties of the fur and improving the quality of the felt of fur hat bodies which consists in dipping the body after it has been formed of prepared fur and subjected to felting and shrinking operations and after the shrinking of the body has been about three quarters completed, in a solution of quebracho powder dissolved in water and sufficient in amount to increase the weight of the body from about one to about twenty-five per cent.

2. A method of increasing the weight and felting properties of the fur and improving the quality of the felt of fur hat bodies which consists in dipping the body after it has been formed of prepared fur and subjected to felting and shrinking operations and after the shrinking of the body has been about three quarters completed, in a solution of quebracho extract and sulfonated castor oil sufficient to increase the weight of the body from about one to about twenty-five per cent.

3. A method of treating formed fur hat bodies to increase the weight and felting properties of the fur and the quality of the felt, which consists in dipping the body after it has been formed from prepared fur and subjected to felting and shrinking operations and after the shrinking of the body has been about three quarters completed, in a solution of quebracho extract and sulfonated oil and with the quebracho sufficient in amount to increase the weight of the body from about one to about twenty-five per cent.

4. A method of increasing the weight and felting properties of the fur and improving the quality of the felt of fur hat bodies which consists in dipping the body after it has been formed of prepared fur and subjected to felting and shrinking operations and after the shrinking of the body has been about three quarters completed, in a solution of quebracho extract in the proportions of about four to sixteen ounces of quebracho powder dissolved in about six gallons of water to obtain an increase in weight of the body of from about one to about twenty-five per cent

5. A method of treating formed fur hat bodies to increase the weight and felting properties of the fur and the quality of the felt, which consists in dipping the body after it has been formed from prepared fur and subjected to felting and shrinking operations and after the shrinking of the body has been about three quarters completed, in a solution of the proportions of about one-fourth to one ounce of sulfonated castor oil and about four to sixteen ounces of quebracho powder in about six gallons of water to obtain an increase in weight of the body of from about one to about twenty-five per cent.

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