

UNITED STATES PATENT OFFICE.

CARLO SELLA, OF BIELLA, ITALY.

COMPOSITION FOR OILING FIBER AND PROCESS OF MAKING SAME.

SPECIFICATION forming part of Letters Patent No. 704,939, dated July 15, 1902.

Application filed April 24, 1901. Serial No. 57,250. (No specimens.)

To all whom it may concern:

Be it known that I, CARLO SELLA, a subject of the King of Italy, and a resident of Biella, Italy, have invented certain new and
5 useful Improvements in Solutions for Fulling and Oiling Woven Fibers, of which the following is a specification.

This invention relates to a novel product and to its employment in fulling and oiling
10 woven fibers.

My improved product is obtained by taking or forming a soda soap of castor-oil, either solid or liquid, and dissolving it in olein or castor-oil and olein, then pouring pure water
15 into this solution and agitating the same until it assumes the density, fluidity, and oiliness adapted for its employment in fulling and oiling the fibers to be treated. This oily solution obtained in the manner above stated
20 and treated with water and its employment in the fulling and oiling of fibers constitutes the subject of this invention.

In order that my invention may be readily understood and carried into effect by one
25 skilled in the art to which it appertains, I will now describe, by way of example, a practical application of the same to the fulling and oiling of woolen fibers.

One hundred parts of hydrate of soda at
30 25° Baumé are mixed with two hundred parts of castor-oil. This mixture is now well agitated in a cold state (if a slow reaction is desired or with the application of heat, if it is wished to accelerate the reaction) until soap
35 is produced. To this soda soap of castor-oil is added four hundred parts of olein, the mixture being heated until completely dissolved. Upon allowing the mixture to cool a special oily substance is obtained, into
40 which is slowly poured up to four thousand two hundred parts of pure water, or less, the whole being constantly agitated in a cold condition, whereby the final substance is obtained which when employed in oiling woolen
45 fibers in the usual manner gives better and more economical results than the substances hitherto employed for this purpose. In the water of the last operation may advantageously be dissolved beforehand a certain quantity of glycerin, operating in a hot state, so
50 as to obtain a homogeneous solution. In the example given above there may be added

to the four thousand two hundred parts of pure water seven hundred parts of glycerin.

The employment of glycerin is more particularly useful for oiling substances which
55 it is desired shall remain greasy for a long time after treatment. According as it is wished that the appearance of these materials shall be more or less greasy, a larger or
60 smaller quantity of glycerin is employed.

The ratio between the castor-oil and hydrate of soda and the degree of this latter in the first soap may vary according to circumstances. For example, to one hundred
65 parts of hydrate of soda at 25° Baumé may be added five hundred or more parts of castor-oil, as, in the case of oiling cottons, there should be greater alkalinity, and, on the contrary, a greater preponderance of oil for oil-
70 ing wools. The ratio between the olein and the castor-oil soap is likewise variable, but, by way of example, it may be given as one hundred parts of olein, in which are dissolved three hundred or more parts of castor-oil
75 soap. For example, in the case of oiling cottons and silks the lower limits should be approached, while for oiling wools and for fulling the tendency should be toward the higher limits. Another factor causing varia-
80 tion in the ratio may be the quality of the olein employed. In general, if a white and odorless resultant product is desired white olein should be employed and in a minor proportion. The water which is added in order
85 to obtain the final product may also vary in proportion to the oil; but approximately for one hundred parts of oil one hundred to three thousand or more parts of water may be added. An abundance of water is desirable for
90 fulling stuffs, and, on the contrary, for oiling fibers the quantity of water should be reduced to the lowest limits.

I find it advantageous in certain cases—that is to say, for example, when very slight
95 and hairy, and therefore stiff and harsh fibers, such as cheviot wool, are to be oiled, or when dusty or very dry cloths liable to unravel are to be greased—to dissolve a certain quantity of resin in the solution. This imparts greater
100 viscosity to the resultant product, and therefore renders it more adapted to maintain fixed fibers such as those above referred to.

It is to be well understood that the pro-

portions indicated for the respective constituents are only given by way of example, and I do not desire to limit myself to the exact proportions above specified.

5 The soda soap of ricinum-oil dissolves rapidly in olein at the boiling temperature.

The product can be obtained without glycerin. This can be employed in any proportion according to the greater or lesser unctuousness desired on the fiber. For instance, 10 the employment of glycerin is necessary with mechanical wool if it is desired to preserve its soft and unctuous appearance while keeping it stored for a long time. The same is to 15 be said with reference to the resin, according if the product is desired to have more or less viscosity, so as to make the fibers to adhere more or less to each other, as in case of wools of long fiber. Resin dissolves perfectly in 20 olein where it is dissolved together with the soap. No alkaline bath is necessary to incorporate resin with the product.

Having now particularly described and as-

certained the nature of my said invention and in what manner the same is to be performed, 25 I declare that what I claim is—

1. A solution of soda soap of castor-oil in olein substantially in the proportions and for the purpose specified.

2. A solution of soda soap of castor-oil in 30 olein treated with pure water substantially in the proportions and for the purpose specified.

3. The process described consisting in dissolving soda soap of castor-oil in olein, add- 35 ing water or water and glycerin to this solution while agitating it, and subsequently adding pure water substantially in the proportions and for the purpose specified.

In witness whereof I have hereunto set my 40 hand in presence of two witnesses.

CARLO SELLA.

Witnesses:

MARIO CAPUCCIO,
HUGO PYGRUE.