

UNITED STATES PATENT OFFICE.

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METHOD OF PREPARING CATTLE-TAIL HAIR.

SPECIFICATION forming part of Letters Patent No. 612,994, dated October 25, 1898.

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To all whom it may concern:

Be it known that I, MAXIMILIAN M. RUTTENAU, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented a Method of Preparing Cattle-Tail Hair, of which a full, clear, and exact description is set forth in the following specification.

My invention has for its object the treatment of the curly hair which grows on the ends of the tails of cattle by which the natural curl of the hair is removed and the hair is permanently straightened, and thus adapted for use as a substitute for bristles in the manufacture of brushes, &c., and also for all purposes for which the naturally straight hair of horses and other animals is adapted, such as the manufacture of hair-cloth, sieves, &c. Heretofore it has been considered impossible to utilize cattle-tail hair for these purposes, because no method of permanently removing the curl has been known; but by my process I am enabled to do so perfectly, and the hair thus treated is far superior for many purposes to horse and other naturally straight hair and commands a higher price in the market. It also answers in a great measure as a substitute for bristles, and it may be produced at a much lower cost than long bristles.

The following is a full, clear, and accurate description of the preferred way of carrying out my process.

The cattle-hair, having been cut from the tails of the animals, is thoroughly washed and dried. It is then run through combs, which separate the hairs from each other, but do not remove the curl. The hair is then done up in cylindrical rolls, with the hairs all running in the same direction. The rolls are preferably about two feet long and two to three inches in diameter at the center, tapering somewhat toward the ends, and are wound around from end to end with a cord or other suitable binder, so as to closely confine all the hairs in position.

The roll thus formed is then subjected to the combined action of heat and moisture for the purpose of softening the "kinks" of the curls and causing the fatty and gelatinous matter to exude, so that when the roll is dried

with the hairs bound closely together they will form a coherent mass. The preferred way of accomplishing this result is by placing the roll in a water-bath having a temperature just below the boiling-point and then gradually varying the temperature of the bath between that point and 180° Fahrenheit, continuing the process for from one to two hours, the length of this treatment varying, of course, necessarily with the size of the roll and the condition and character of the hair; but the period I have named is correct for average hair and rolls of the size indicated. A small amount of any suitable bleaching or deodorizing substance—as, for example, chlorid of lime—is preferably added to the water-bath before the roll is placed therein.

It will be understood, of course, that various modifications may be made in the last-described step in my process without in any way departing from the spirit of my invention, so long as the moisture and heat are employed in such manner as to render the hairs sufficiently sticky to cohere when the roll is dried.

Upon removing the hair from the bath the roll is placed in a drying room or receptacle and thoroughly dried at a high temperature, preferably not less than 150° Fahrenheit. When dried, the binder is removed and it will be found that the hairs form a closely-coherent mass, the roll retaining the shape given to it by the binder. The hairs are then separated from each other by passing the roll through combs, and the permanently-straightened hairs are then ready to be drawn for weaving or for any other purpose for which horse or similar hair or bristles are available.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described process of producing straight cattle-tail hair which consists in separating the hairs as by combing, arranging and confining the hairs in approximately parallel relation, subjecting them while so confined to the combined action of heat and moisture and then drying them to form a coherent mass, and finally separating the hairs, substantially as described.

2. The herein-described process of produc-

ing straight cattle-tail hair which consists in
separating the hairs as by combing, arranging
and confining the hairs in approximately par-
allel relation, subjecting them while so con-
5 fined to the action of a heated water-bath hav-
ing a temperature under the boiling-point and
drying them to cause the hairs to cohere and

finally separating the hairs, substantially as
described.

MAXIMILIAN M. RUTTENAU.

Witnesses:

S. G. METCALF,

A. F. THOMPSON.