

UNITED STATES PATENT OFFICE.

HENRY F. DIETZ, OF NEWARK, NEW JERSEY.

DYEING HAT-BODIES.

SPECIFICATION forming part of Letters Patent No. 341,409, dated May 4, 1886.

Application filed November 23, 1885. Serial No. 183,776. (No specimens.)

To all whom it may concern:

Be it known that I, HENRY F. DIETZ, a citizen of the United States, and residing in the city of Newark, county of Essex, and State of New Jersey, have made a new and useful Improvement in Dyeing Hat-Bodies; and I do hereby declare that the following specification is a full, clear, and complete description of my said invention, sufficient to enable others to practice and use the same.

The fur used by hatters is cut from the skins of various animals, and the color of the fur varies. It is necessary, therefore, in the manufacture of hats to dye the same, so that hats may be made of a uniform color.

Hats are sometimes made from fur which has the desired color for the finished article; but to do this requires care in selecting the fur, and it is therefore an expensive operation, while at the same time but little variety can be obtained in the product.

Hats are at present usually dyed after they have been fully felted. This necessitates the use of boiling water and a long treatment, for it is difficult for the dye to penetrate the compact felt.

Hats have been dyed during various stages of the felting operation; but the delicacy of the bodies in the early stages of the felting process makes their handling difficult. Fur has also been dyed while on the skin and after it has been cut therefrom; but such methods are unsatisfactory.

I am also aware that felted hats have been stretched upon a hat-block, and have then been submitted to the dyeing operation. In this case, as before mentioned, it is difficult for the dye to penetrate the compact felt.

My invention consists in dyeing the hat-body while it is upon the "cone" upon which it is formed.

Hat-bodies are formed by causing the fur, which has been picked apart by suitable mechanism, to be carried by moving currents of air and deposited upon a suitable perforated former or cone. When sufficient fur is deposited to form a hat-body of required weight and size, the cone, with the hat-body upon it, is covered with a wet cloth and an outer cone of perforated metal, and the whole

is then immersed in warm water. When the cone is taken from the water, the formed body is removed, and the felting or "sizing" operation is commenced. The water into which the cone bearing the hat-body after the forming operation is immersed is contained in a tub.

In the practice of my invention I put the dye in the water in the tub, adding alkalies, acids, or other material necessary to the dyeing operation, which latter needs no explanation, as dyeing processes are well understood, and I then immerse the cone bearing the formed body in the tub, and thus subject the fur to the dye. The length of time during which the body is immersed will depend upon the dye used and the color to be obtained. No period of time can be assigned for this part of the process, and, indeed, none need be stated, as it is within the knowledge of those skilled in the art of dyeing.

It will be seen that when the hat-body is upon the cone the fur composing it is not compacted closely, and will come in contact freely with the dye, and thus the dyeing is hastened, and, owing to the looseness of the texture, each fiber of the fur is dyed, and a more uniform color is thus obtained, and one which will resist the subsequent stages of manufacture, for when fully-felted bodies are dyed it is difficult to cause the dye to penetrate to the inner particles of the structure, and the subsequent processes of pouncing and finishing will remove the dye from the surface and cause a mottled and uneven appearance.

What I claim, and desire to secure by Letters Patent, is—

1. The process of dyeing hat-bodies, which consists in forming them on a cone or former and then submitting them, while upon the cone, to the dye, substantially as described.

2. As an improvement in the art of making and dyeing hat-bodies, the process of simultaneously dyeing and submitting to water the formed bodies while upon the cone.

HENRY F. DIETZ.

Witnesses:

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