

UNITED STATES PATENT OFFICE.

THEODORE DOST, OF BALTIMORE, MARYLAND, ASSIGNOR TO WILLIAM WILKINS, OF SAME PLACE, HERMAN H. GRANE, G. ADOLPH SCHLEUS, AND LOUIS WILKINS, EXECUTORS OF WM. WILKINS, DECEASED.

IMPROVEMENT IN METHODS OF PREPARING BRISTLES FOR DYEING.

Specification forming part of Letters Patent No. **220,468**, dated October 14, 1879; application filed May 20, 1879.

To all whom it may concern:

Be it known that I, THEODORE DOST, of Baltimore city, State of Maryland, have invented a new and Improved Process of Manufacturing Bristles; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists of an improvement in the process of dyeing bristles after they have been washed and straightened and made ready for dyeing; and that it may be more clearly understood, I will describe the manner in which the dyeing has heretofore been done.

After the bristles have been cleaned, washed, and straightened in the usual way and made ready for dyeing, they are placed with the butts on the outside in concentric layers in round baskets until the basket is filled, when it is covered with some suitable coarse fabric sewed to its edge. The baskets are then placed in the dye-vats, and when the dyeing is completed the bristles are taken out, washed, laid on frames, and dried, when they become crooked, and have to be straightened again and combed before they are fit to be bundled. This process requires seven distinct manipulations, each occupying time and requiring labor: first, the placing of the bristles in the basket; second, sewing on the cover; third, placing the baskets in the vats; fourth, washing the bristles when taken from the vats; fifth, spreading them on frames to dry; sixth, combing and straightening them; seventh, placing them in bundles. During these successive manipulations at least ten per cent. of the bristles are lost.

By my improvement the bristles, instead of being placed on their sides in the baskets, are placed on end in an iron box as deep as the bristles are long, the sides of which are perforated for the free admission of the dye. Two boxes are then put one on top of the other, the bottom of the upper serving as a cover for the lower, and the upper one having an iron cover.

The two boxes, with the cover, being clamped together in any suitable manner and put into the dye-vat, taken out, and placed in the drying-room until the bristles are dried, when removed from the boxes will be found to have been kept straight by their pressure against each other, and ready to be bundled.

In this way I save, first, the sewing on of the cover of a basket; second, the removal of the bristles from the basket; third, the spreading and drying of them on frames; fourth, the final combing and straightening—being four out of the seven manipulations now employed.

In the foregoing specification I have referred to an iron box; but the object of my invention may be effected with willow boxes, which were the first boxes I used, wooden or wire; and I have spoken of two boxes and a cover clamped together; but three or more may be put together, with a cover to the uppermost.

I have also spoken of my invention as applied to keeping the bristles straight while being dyed; but it is applicable to straightening bristles, whether white, gray, or any other color, which are not intended to be dyed.

Bristles, when first washed, are straightened on the sticks, to which they are bound for a time with twine, which leaves marks upon them; or, even when they are not so marked, they are not in all cases perfectly straight.

If, when removed from the sticks, they are then placed in the boxes above described, wetted and compressed, and then dried, all irregularities will be removed, and the bristles, when dried, will be found to be perfectly straight.

Also, I have described my invention where the bristles are placed on end; but they may be placed on their sides in the boxes, and the top made to press them down sufficiently to keep them in the same contact with each other as when placed on end, when the same object will be accomplished, though I prefer stand-

ing the bristles on end, as above described, and there will be the same saving of manipulations.

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

The subjection of bristles, after they have been straightened in the usual manner on sticks, to such a degree of pressure while wet

as will retain them while being dried in contact with each other, by the means substantially here described, for the purposes set forth.

THEODORE DOST.

In presence of—

J. H. B. LATROBE, Jr.,
GUSTAV SIEGMUND.