

United States Patent Office.

WILLIAM W. SANBORN, OF LEWISTON, MAINE, ASSIGNOR TO HIMSELF AND
ARTHUR A. SANBORN, OF SAME PLACE.

Letters Patent No. 108,523, dated October 18, 1870.

IMPROVEMENT IN DYEING WOOLEN GOODS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, WILLIAM W. SANBORN, of Lewiston, county of Androscoggin, and State of Maine, have invented a new and useful Process of Dyeing Woolen and other Piece-Goods; and I hereby declare the following to be a full, clear, and exact description of the same, which will enable others to practice the process.

The difficulty or objection which my invention is intended to obviate is this: in coloring the kind of goods above named, it is found that the edges, or parts near the edges thereof, take on a darker hue and color than those portions further from the edges, or in or near the center. This is especially the fact with blues, dahlias, and browns. This I have found to be largely, if not wholly, ascribable, to the greater exposure, during the process of coloring, of those edges to the air than the other parts of the cloth, as when the cloth is passing over the reel.

My process is simply designed to make the coloring uniform, and similar in depth over the entire surface of the cloth.

This I have found can be effected by several modes, all, however, involving the same principle, viz., to have all parts of the surface of the right side or face side of the fabric either wholly excluded from the air, or to have the air equally in contact with all portions of the surface.

I have found the following methods successful:

The goods may be kept wholly submerged while being dyed, and the rollers or drums, over which it passes while in the coloring-tub or vat, be underneath the surface of the dyeing-liquor.

The top of the vat or tub may be covered or closed

in, so as to confine vapors, heat, &c., arising from the coloring mixture, closely within the top of the tub, in which case the reel or drum may be over the surface of the liquor.

The two edges of the goods may be sewed together, or otherwise connected, so as to bring the outside or face, or right side, as it is often called, within, and thus kept from the air.

Thus doubled and kept wholly or in part from the air, it may be wound over a reel, which is out of the liquor in the ordinary manner. This will also accomplish the object.

The equal distribution of air, by artificial means, over the whole surface of the cloth when exposed, is easily effected by many of the well-known methods.

I do not mean to specify that absolutely all air is excluded from the cloth, but practically sufficient to prevent any effect upon the uniformity and regularity of the color.

There are other methods of manipulating the cloth when in the vats, but if the general principle is followed, i. e., of exclusion from or equal distribution of the air, the effect will be the same.

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

The improvement in the process of dyeing woolen and piece-goods herein described, namely, the process of excluding the goods from the air, or subjecting all portions equally to atmospheric influence, as described.

WILLIAM W. SANBORN.

Witnesses:

WM. HENRY CLIFFORD,
GEORGE E. BIRD.