

UNITED STATES PATENT OFFICE.

CHARLES T. YOUNG, OF LAWRENCE, MASSACHUSETTS.

IMPROVEMENT IN THE MANUFACTURE OF FELTED CLOTH.

Specification forming part of Letters Patent No. 48,757, dated July 11, 1865.

To all whom it may concern:

Be it known that I, CHARLES T. YOUNG, of Lawrence, in the county of Essex and State of Massachusetts, have invented an Improvement in Felted Cloth; and I do hereby declare that the following is a full and exact description of the said invention.

My invention relates to a new article of manufacture termed "linen-warp felt-cloth," the same being an improvement upon the felted cloth heretofore known and used.

In the goods of this class heretofore made the fibrous materials of which the cloth is composed are combined together and mixed in the card, several bats or sheets as they come from the card being lapped or placed upon each other until the requisite thickness is attained. When made in this way, the cloth, if cut off and examined at the edges, is found to have the same fibrous structure throughout its thickness, and whatever mixture of materials—such, for instance, as wool, hair, cotton, linen, jute, &c.—has been made in the cards is found uniformly distributed through the finished cloth or fabric.

My improved felted cloth is made as follows: The wool or other fibrous substance that is capable of being felted is prepared by the common preliminary processes of assorting, cleansing, picking, and carding, and during the latter process the fiber, in a thin sheet or bat, is wound upon a roller or long bobbin. I also prepare in a card provided with coarse teeth any non-felting substance—such as hemp, linen, jute, manila, China grass, &c.—and wind this fiber in a thin bat or sheet upon a suitable roller. Two rollers containing the woolen fiber and one roller containing the linen fiber are now so placed in a frame or holder that as the bats are drawn off and submitted to the process of felting the non-felting fiber shall

occupy a middle position inclosed between two bats of material capable of being felted—that is to say, two bats of woolen fiber form the outside of the fabric and a bat of linen fiber the inside, the relative position of the two kinds of fiber remaining the same after the operation of felting, which is performed in the common manner by the use of heat, moisture, and friction.

For the central bat or layer I prefer to use linen or other long and strong fiber, which, as it becomes partially incorporated and mixed with the wool or other felting fiber upon each side of it, serves to strengthen the felted cloth, these long fibers thus embraced by and intertwined among the fibers of wool serving to bind the parts together and compensate, to a certain extent, for the comparatively weak and tender fibers of the wool.

By this description I intend to define my invention as a felted cloth having both of its surfaces composed of a material capable of being felted, and inclosing or containing at the center a non-felting fibrous material having longer filaments and of greater strength than the fibers or filaments of which the exterior is composed, the same being a new article of manufacture.

I do not claim any specific mode or plan of felting or condensing the bats or layers to form a cloth, as this may be effected by manual labor and by various kinds of machinery.

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

The felted cloth herein described, the same being a new article of manufacture.

CHARLES T. YOUNG.

In presence of—

W. G. COLBY,
H. G. BEMIS.