

# UNITED STATES PATENT OFFICE.

ENOCH WAITE, OF FRANKLIN, MASSACHUSETTS.

## IMPROVEMENT IN THE MANUFACTURE OF FELTED FABRICS.

Specification forming part of Letters Patent No. **216,986**, dated July 1, 1879; application filed April 14, 1879.

*To all whom it may concern:*

Be it known that I, ENOCH WAITE, of Franklin, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in the Manufacture of Felted Fabrics for Garments and other Purposes, of which the following is a specification.

The invention relates to a method and device for strengthening and ornamenting the goods to which it is applied.

Felted fabrics intended to be cut for garments are made by laying a number of slivers of wool, as it runs from the doffer of the carding-engine, one over another, until enough wool is laid up to make the required thickness when felted and finished. The wool so laid up is termed a "bat." The bat is then hardened and felted to the consistency desired, and the surface finished ready for market.

I introduce into the bat during the process of laying it up metallic threads or wires, either in the middle of its layers or near to either surface. These metallic threads will be made flat or square, and twisted or not, as may be found desirable, and if twisted a thread of woolen or other fiber yarn may be twisted with them. The object of twisting the metallic thread or wire either with or without the woolen or other fiber thread joined with it is to make the fibers of wool engage it more closely and adhere to it more firmly. These metallic threads tend to strengthen the fabric in the direction of their length, and, when placed near the outer sliver or layer of wool of the bat, will show at intervals on the surface and produce an ornamental effect.

For strengthening the fabric the metallic threads should be laid in the bat in straight lines, in as many directions and at such angles to each other as the re-enforcement desired may require. If only ornamentation is desired, the metallic threads may be laid in the bat to produce the effect or design on the surface. Metallic threads of any color which metal have or will take may be used.

I claim as new—

1. Strengthening felted fabrics by laying metallic threads or wires in the wool bat as it is made up of slivers from the carding-engine, substantially as described, and for the purpose specified.

2. The use of metallic threads in wool bats, prepared for working into fabrics for garments by hardening, fitting, and finishing, substantially in the manner and for the purpose specified.

3. The use of metallic threads in felted fabrics for purpose of ornament, when the metallic threads are placed in the bat before the hardening.

4. As an article of manufacture, felted fabrics having metallic threads in the body of the fabric, either wholly covered by the wool or partially exposed on the surface, for the purposes specified.

ENOCH WAITE.

Witnesses:

JABEZ A. SAWYER,  
CHS. HOUGHTON.