

UNITED STATES PATENT OFFICE.

GEO. SHAW HARWOOD, OF NEWTON, MASSACHUSETTS.

IMPROVEMENT IN KNITTED FABRICS.

Specification forming part of Letters Patent No. 41,218, dated January 12, 1864.

To all whom it may concern:

Be it known that I, GEORGE SHAW HARWOOD, of Newton, in the county of Middlesex and State of Massachusetts, have invented a new Article of Woolen Broadcloth Manufacture, of which the following is a full, clear, and exact description, in which I have so set forth the process of producing the said article that others skilled in the art may understand and use my invention.

The object of my present invention is to produce an elastic and durable woolen broadcloth, applicable for making entire garments at a less cost than has heretofore been practicable; and my invention consists in the production of a new article of manufacture—viz., a cloth for entire garments, made by knitting, instead of weaving, the body of the cloth, and afterward subjecting it to the several processes which are usually applied to woven cloths. As these processes, subsequent to the production of the body of the cloth by knitting, will vary somewhat in degree according to the thickness of the cloth and the finish required, I will state in general terms the several steps taken in the production of the cloth, leaving the duration or extent to which each step is carried to the skill of the manufacturer. The broadcloth is knit, in a suitable knitting loom or machine, of a sufficient width to allow for the "milling up," which in this case will be to a greater degree than in woven goods. The knit fabric is now washed, fullled, or milled, teaseled, and dressed, sheared,

steamed, and pressed, if a finish or face is required; if not, the last operations may be omitted. As the knit fabric can be produced in the loom at a more rapid rate than a woven one, and the yarn does not require to be so tightly twisted as it does when it needs a sufficient strength to stand the throw of the shuttle and the beat of the lay of the loom, I am enabled to produce the cloth at a cheaper rate, while the greater elasticity which a knit fabric possesses renders the cloth durable and pleasant to wear.

I have here spoken only of woolen broadcloth; but I wish my invention to be understood as extending equally to all admixtures of wool and other articles—such as cotton and silk—to which it can be applied.

I am aware that a knit fabric composed of a wool body and a silk pile has been made that was applicable to the making of gloves and parts of garments. This I do not claim; nor do I claim a knitted fabric, such as described in John Hummel's English Patent No. 1,167; but

What I do claim as my invention, and desire to secure by Letters Patent as a new article of manufacture, is—

The knit broadcloth fullled and finished as herein described.

GEO. S. HARWOOD.

Witnesses:

THOS. R. ROACH,
EDMUND MASSON.