A. S. CARLETON.

MANUFACTURING CANTON FLANNEL.

No. 16,870. Patented Mar. 24, 1857.

Fig. 2.



Fig. 1.

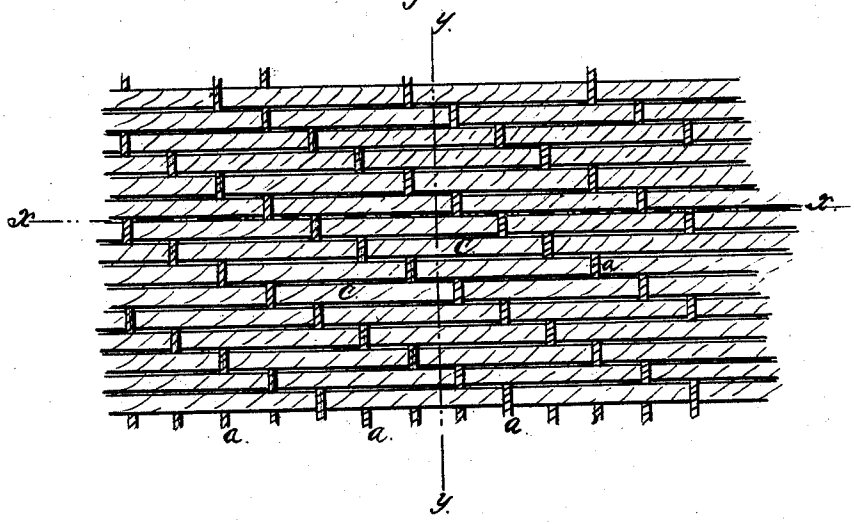
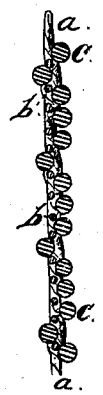


Fig. 3.



THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALBERT S. CARLETON, OF CLINTON, MASSACHUSETTS.

MANUFACTURING COTTON FLANNEL.

Specification of Letters Patent No. 16,870, dated March 24, 1857.

To all whom it may concern:

Be it known that I, A. S. CARLETON, of Clinton, in the county of Worcester and State of Massachusetts, have invented a new and Improved Method of Manufacturing Cotton Flannel and other Similar Napped Fabrics, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a plan. Fig. 2 represents a section (enlarged) through the goods in a direction parallel to the filling upon the line *x*, *x*. Fig. 3, a similar section through the same upon a line perpendicular to the filling upon the line *y*, *y*, cotton flannel and other similar fabrics have heretofore been manufactured by raising a nap upon an ordinary tweeled single ply cotton.

When this fabric is woven in the ordinary way, it is not found practicable upon fine goods to raise a sufficient nap without injuring the strength of the fabric and such fabric will also be deficient in warmth and thickness.

To remedy these evils and to produce an article of cotton flannel of fine texture that shall possess a heavy nap and great strength and thickness is the object of my present invention which consists in weaving a strong foundation for the fabric with a hard warp and filling and in throwing in at every other pick upon one side of this foundation a soft heavy thread from which the nap is ultimately raised. I am thus enabled to furnish a great amount of nap without weakening the fabric and to produce a flannel thicker, warmer, and stronger than has heretofore been practicable and of any degree of fineness required.

To enable others skilled in the art to understand my invention I will proceed to describe the manner in which I have carried it out.

In the accompanying drawings *a* are the warps, *b* the filling threads which may be tweeled or otherwise woven together. As the weaving proceeds, a heavy soft yarn filling *c* is thrown in upon one surface of the fabric to which it is tied by passing the warp threads at suitable intervals over it in a manner well known to weavers. Upon the surface of the fabric thus produced a nap is raised in the customary manner by means of teazles. According to the quality of the cloth required a greater or less number of the soft yarns *c*, may be used in proportion to the number of the foundation filling threads; this matter however being well understood by weavers need not here be further discussed.

If a fabric of extra thickness and warmth be required, a soft yarn may be laid upon both the upper and under surfaces of the foundation fabric and a nap raised upon both sides of the cloth.

I do not claim weaving a fabric with two species of fillings one only of which shows upon each face, but

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

The within described fabric or cotton flannel having a foundation of hard thread and an extra filling of soft yarn upon one or both sides from which a nap is raised as set forth.

ALBERT S. CARLETON.

Witnesses:

SAM. COOPER,

THOS. L. GLOVER.