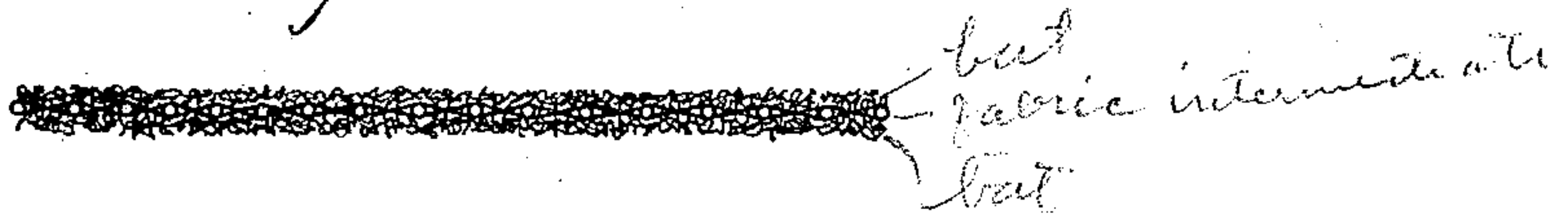


L. W. WHIPPLE.  
Napped Fabric.

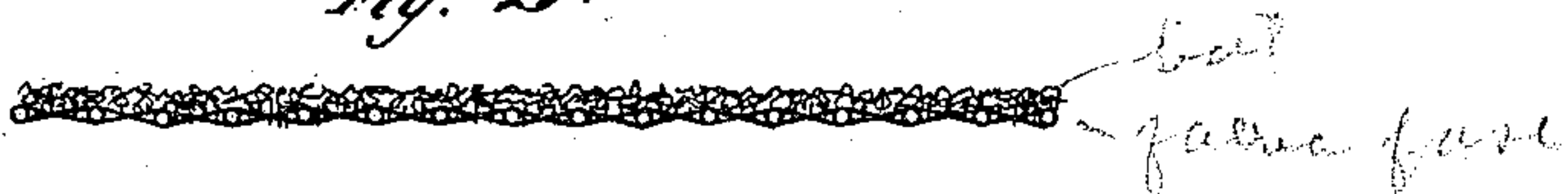
No. 164,626.

Patented June 15, 1875.

*Fig. 1.*



*Fig. 2.*



*Witnesses:*

*Geo. T. Smallwood Jr.  
John Robey Jr.*

*Inventor:*

*Lyman W. Whipple  
By John J. Mottet,  
Atty.*

# UNITED STATES PATENT OFFICE.

LYMAN W. WHIPPLE, OF NEW YORK, N. Y.

## IMPROVEMENT IN NAPPED FABRICS.

Specification forming part of Letters Patent No. **164,626**, dated June 15, 1875; application filed May 27, 1875.

*To all whom it may concern:*

Be it known that I, LYMAN W. WHIPPLE, of the city, county, and State of New York, have invented an Improvement in Napped Fabrics; and I hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

My invention relates to a new fabric or cloth suitable for blankets and other articles, in which a napped or woolen surface is required; and it consists in a compound or duplex fabric, of which the body or base is an ordinary woven or other fabric of cotton or other material, into or through the texture of which the fibers of a sheet or bat of other material, preferably wool, are pricked or thrust by means of suitable puncturing-needles or barbed instruments.

A practical and efficient mode of practicing my invention to produce this new article of manufacture is as follows: I take an ordinary woven goods, say, common unbleached muslin, and a sheet or roll of woolen batting as it comes in the form of a lap from the carding-machine, and, laying the lap on the surface of the woven fabric, incorporate the two together by employing a series of fine reciprocating pins or needles, having roughened or barbed ends to penetrate the lap, and force or push the fibers more or less into the muslin, and, upon retiring, leave such fibers interlocked with the muslin.

The result is a very cheap fabric, which is much stronger and more durable than one in which the nap is made by combing or teasing the surface of the woven goods, for by my invention I can not only use as strong a fabric as desired, and with its threads of any strength or degree of twist preferred, but I entirely avoid that weakening or destroying its strength which is always consequent upon such ordinary napping or teasing.

Another advantage is, that I can save the expense of wool for the main body of the goods, needing none except for the napped surface or surfaces.

The wool may be forced through the woven goods to any extent desired, dependent entirely upon the use to which the completed

article is to be applied; the extent of pushing motion given to the fiber-pushing needles determining the distance it shall project through the woven body.

The wool may if desired be pushed into and not entirely through the woven or textile fabric, especially where the latter is of considerable thickness, thus forming the nap upon one side only, instead of upon both.

The drawings show an edge view of a fabric made in accordance with my invention, Figure 1 showing the bat pricked or pushed entirely through a woven goods to form a nap on both sides, and Fig. 2 shows the bat pricked in to form a nap on one side.

The strength and general character of the woven part or body of the completed goods is not impaired by my process of fabricating any more than sewed goods are injured by the act of sewing by hand or by a sewing-machine; in fact, much less, inasmuch as the punctures made by the pushing needles may be and usually are much farther apart than the stitch of ordinary sewing, as the wool only needs to be interlocked with the textile goods at such points as will enable it to hold and give a satisfactory napped surface.

When thus made, and without any further finish, this compound fabric is suitable for blankets or any other purpose where a fabric of the general nature of a blanket is applicable.

Either or both surfaces may, however, have a subsequent finish if desired, after the manner of finishing napped goods, so as to resemble and be a good substitute for pilot cloths, beaver cloths; and the opposite sides, if desired, may have each a different finish.

The completed fabric may, of course, be dyed of any desired color or colors.

While I have mentioned a cotton woven goods for the base or body, it is evident that for some purposes, when desired, the body may be of any other material; or, I may use felted goods for the central part or body, and instead of a bat of wool a bat of other fiber may in some cases be incorporated with a previously-made fabric, in the manner above described.

I am aware that a portion of a bat of fibrous material has been condensed and interlaced

with another portion of itself, by means of needles or pins, in order to make a wadding or carpet-lining; such a fabric I do not claim.

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

The improved fabric described, consisting of a body of woven or textile goods, into or

through which the fibers of a bat are incorporated, substantially in the manner set forth.

LYMAN W. WHIPPLE.

Witnesses:

JOHN J. HALSTED,

G. F. SMALLWOOD, Jr.