

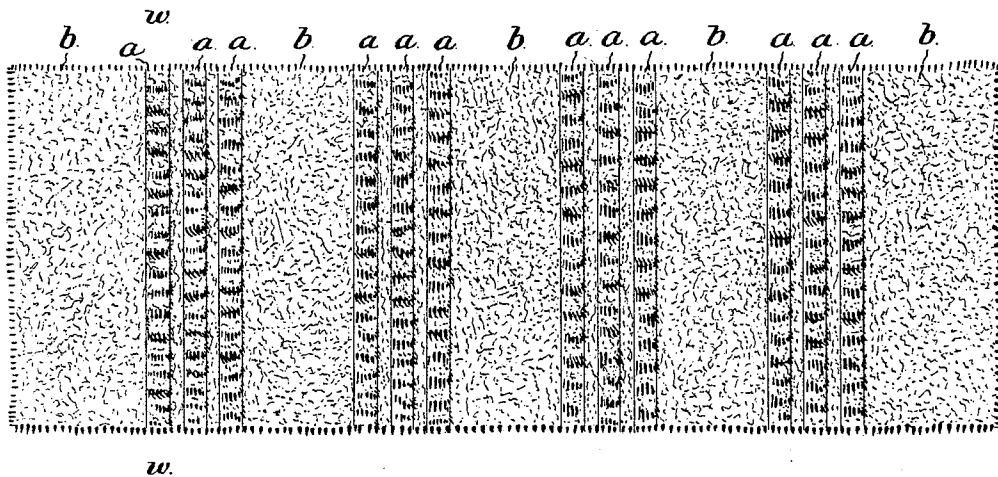
(Specimens.)

F. OTT.  
NAPPED COTTON FABRIC.

No. 435,445.

Patented Sept. 2, 1890.

*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FREDERICK OTT, OF GLOUCESTER CITY, NEW JERSEY.

## NAPPED COTTON FABRIC.

SPECIFICATION forming part of Letters Patent No. 435,445, dated September 2, 1890.

Application filed January 21, 1890. Serial No. 337,625. (Specimens.)

*To all whom it may concern:*

Be it known that I, FREDERICK OTT, of Gloucester City, State of New Jersey, have invented certain new and useful Improved Napped Cotton Fabrics, of which the following is a specification.

In the accompanying drawings, Figure 1 represents a view of the surface of the fabric. Fig. 2 represents a cross-section of the same, and Fig. 3 a longitudinal section along the line *ww* of Fig. 1.

My invention relates to that class of fabrics known as "crinkles"—that is, cotton fabric in which certain bands of warp-threads are let out more rapidly than are those of the main body of the fabric. Such fabrics are exceedingly common. They have a tendency, however, to a rather unpleasant roughness or stiffness common to all ordinary cotton woven cloth or muslin, and increased in this case by the lines of crinkles, which act as strengthening-ribs, so that a garment made of it does not readily conform to the figure of the body and is objectionable unless very loose.

The ordinary mode of softening a cotton cloth is to run it through a napping or gigging machine. It has always been thought impossible or impracticable to make use of this process in connection with crinkled fabric. The process of napping is performed by passing the surface of the cloth to be napped under a rapidly-revolving roller covered with minute hooks, called a "carding-roller," which naps or tears up its surface as it passes over it, and it has always been supposed that should a crinkled fabric be subjected to this process the lines of crinkles projecting, as seen in Fig. 2, some distance above the rest of the surface would be entirely torn out and the rest of the fabric left untouched. I have discovered, however, that this is not necessarily the case, and that by properly adjusting the napping-machine a fabric of great excellence may be

produced by running through the machine a crinkled cotton cloth.

In the drawings, *aaa* represent the lines of crinkles, and *b b b* the sections of plain cloth between the same. The upper surface of the cloth in Figs. 2 and 3 is represented as napped, while the lower surface is plain.

For the purposes of my invention I am able to use a finer and thinner muslin than has heretofore been napped. It is made having a number of lines of crinkles extending longitudinally, according to any desired pattern. It is then run through a napping-machine, during which process the bands of crinkles, being higher than the rest of the fabric, tend to raise the plain portions slightly from the surface of the napping-rollers, the result being that the rollers are sufficiently efficacious for napping, and yet do not shred the fabric, which, if fine or loosely woven, they would otherwise do. The finer the plain part of the cloth the more prominent must the crinkles be made, in order to protect the cloth from the otherwise too severe action of the napping-rollers upon it. This process may be repeated upon the reverse side of the fabric, or it may be confined to one surface, as shown in the drawings. The fabric thus made is of the softness and woolen-like finish of a napped woolen fabric, and yet the crinkles acting as ribs give it sufficient body and firmness, even though the main part of it be very fine and soft.

Having thus described my invention, I claim—

A cotton fabric having two or more longitudinal lines of crinkles and one or both surfaces napped, substantially as described.

FREDERICK OTT.

Witnesses:

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