J. Mee.

Knit Fabric.

No. 9,719. Patented May 10, 1853.

Fig. 1.

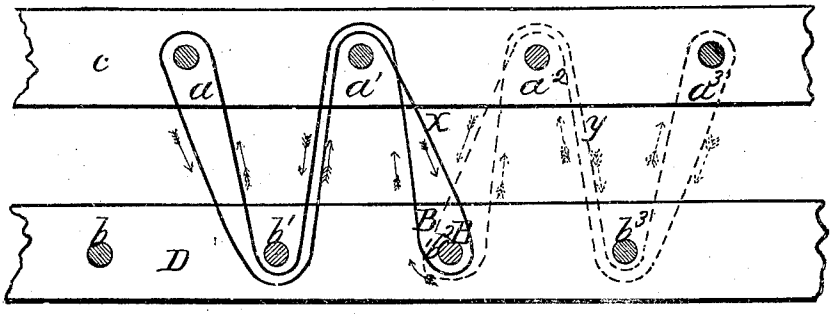


Fig. 2.

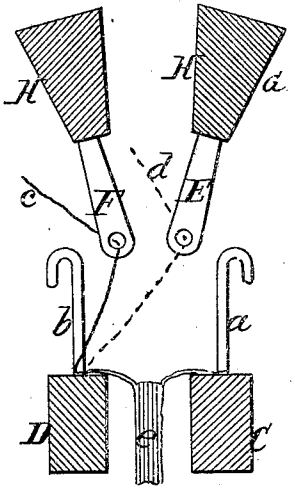
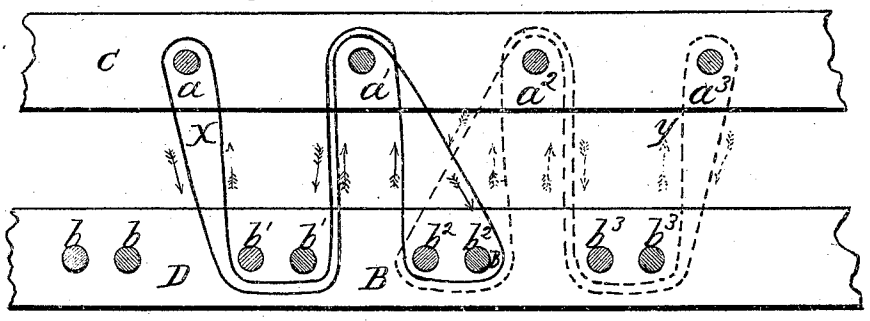


Fig. 3.



UNITED STATES PATENT OFFICE.

JOHN MEE, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO HIMSELF, JOHN ROURKE, AND GILBERT MACKENNON.

WARP NET FABRIC.

Specification of Letters Patent No. 9,719, dated May 10, 1853.

To all whom it may concern:

Be it known that I, JOHN MEE, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in the Manufacture of Warp Knit Fabrics; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

The nature of my invention consists in a new or improved fabric made by means of two sets of warp threads and two sets of needles or hooks, such fabric exhibiting a perfect rib on both sides of it, and which rib on one side shall be equal in width or double the width of that on the other side of the said fabric.

I am aware that there is nothing new in a warp knit fabric wrought by means of a single set of warp threads and two sets of needles or their equivalents. I therefore by no means consider such as my invention, but I have made an important improvement over such fabric, and this by using two sets of warp threads operating together and with two sets of needles or hooks as I shall hereinafter describe.

Figure 1 of the drawings may be supposed to represent the positions of two sets of needles or hooks, raised vertically upon two bars. Fig. 2 denotes an end view of the same, and two bars over them for carrying the thread guides of each set of warp threads.

In weaving the warp net fabric each thread of warp is carried from its bobbin or roller, on which it is wound, to and through a thread guide, seen at E, the thread being shown at *c*. From thence it passes partially or half around its needle and into the cloth or fabric *e*, see Fig. 2. Two sets of needles or hooks (whichever may be preferred) *a*, a', a^2, a^3, &c., *b*, b', b^2, b^3, &c. are extended upward respectively from two bars C D the said needles not being arranged directly opposite to one another but so that those of one bar may be opposite to the points midway between those of the other bar, as seen in Fig. 1. The cloth or fabric to be woven or knit hangs between the needle or hook bars C, D, as seen at *e*, and not only has one set of loops around the set of needles of the bar C, but another and similar set of loops around or upon the other set of needles or hooks of the bar D. We will suppose that such is the state of things and that there is the same number of thread guides as needles or hooks, they being arranged at equal distances asunder and in suitable holders or bars G, H. We will also suppose, for the sake of illustration, that all the threads of one set of thread guides are red threads or yarns, while all those of the other set are black in color. We will also suppose that the bars are so arranged that the second thread guide of the black warps and the second thread guide of the red warps may stand in the positions respectively in relation to the needle or hook b^2 as denoted by the black and red letter B, as seen in Fig. 1. Of course each of the other hooks of the set *b*, b', b^2, &c., will have a black and red thread guide standing in a similar relation to it. We next put each set of thread guides in simultaneous motion, so as to cause not only one set to carry or move each of its thread guides in such a path as to cause such guide to lay its thread around four hooks, as denoted in Fig. 1 by the black line *x* and its black arrows, but also to cause the other set to move each of its guides in such manner as will lay its thread around four hooks, as denoted by the red line and red arrows in said figure. At each time a black and a red thread or yarn is crossed around one of the hooks the loop of said hook, and which was underneath said crossing, is to be raised up and thrown over the upper end of the hook, so as to cause the said crossings of yarn to form another loop on the said needle. By such a mode of operation ribbed work may be formed having the rib showing of an equal width on both sides of the cloth.

By arranging double the number of hooks or needles on one bar that there is on the other bar, and so that those of one bar may stand in positions with respect to one another as seen at *a*, a', a^2, &c., *b* *b*, b' b', b^2 b^2, &c. in Fig. 3 and causing each of the thread guides of the two sets to travel around them as denoted by the red and black lines *x* *y*, and arrows in the said figure, that is to say each guide of one set traveling on a path as denoted by the black line *x*, while each guide of the other set moves on a red path *y*, and casting over the loops after each crossing of the threads around each of the hooks, (a loop being previously formed on each hook) we can form a fabric in which the rib on

one side will show a width twice as great as it does the rib on the other side.

What I claim as my invention is—

The above described new or improved manufacture of warp-knit ribbed fabric, the same being made by means of two sets of hooks or needles, and two sets of warps, or warp yarns, laid and looped together, and upon the said hooks or needles, substantially in the manner, as hereinbefore specified, and whether to exhibit ribs to equal or unequal widths on opposite sides of the fabric as explained.

In testimony whereof, I have hereto set my signature, this fifteenth day of May, A. D. 1851.

JOHN MEE.

Witnesses:

R. W. EDDY,

BENJAMIN EDDY.