

B. J. McGEE.
Knit-Fabrics.

No. 144,915.

Patented Nov. 25, 1873.

Fig. 1.

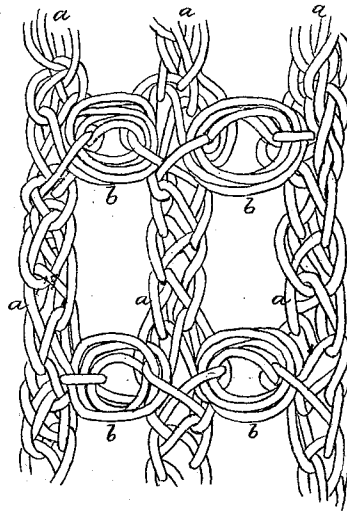


Fig. 2.

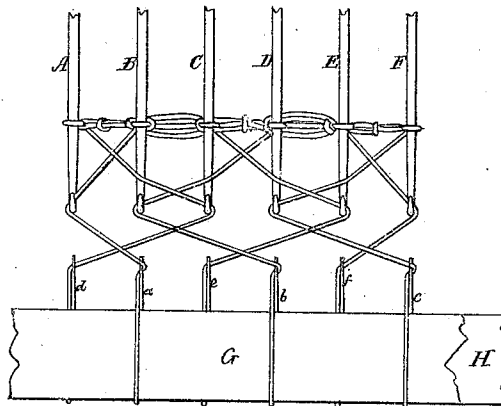
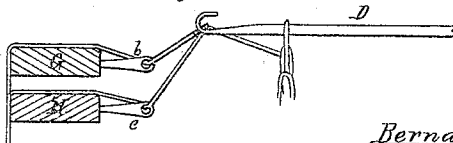


Fig. 3.



Witnesses:

S. W. Piper.
R. W. H. H. H.

Bernard J. McGee.

by his attorney.
R. H. Sney

UNITED STATES PATENT OFFICE.

BERNARD J. MCGEE, OF WATERTOWN, MASSACHUSETTS, ASSIGNOR TO
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IMPROVEMENT IN KNIT FABRICS.

Specification forming part of Letters Patent No. **144,915**, dated November 25, 1873; application filed
October 31, 1873.

To all whom it may concern:

Be it known that I, BERNARD J. MCGEE, of Watertown, of the county of Middlesex and State of Massachusetts, have invented a new and useful Manufacture or Knit Fabric; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a view of a piece of such fabric, and Fig. 2 a diagram to aid in explaining the mode of effecting the manufacture.

The said manufacture is composed of a series of bands, *a a*, &c., of what is termed chain-looping, and a series of connection-tufts, *b b*, &c., arranged as represented in Fig. 1. The bands of chain-looping are at equal distances apart, and parallel, and the tufts are disposed in ranges parallel to each other, and at equal distances apart, and at right angles with the ranges or bands *a a*.

In producing the said fabric by a knitting-loom, the following process is to be substantially adopted: Suppose A B C D E F, Fig. 2, to represent six of the series of needles of the needle-bar of such machine, and G and H to be two yarn-guide bars, each provided with a set of yarn-guides, *a b c d e f*, those of each bar being situated at distances apart double those of the needles. The guides *a b c* are to extend from the upper, and the guides *d e f* from the lower, of the two bars G H, one of which is directly underneath the other.

Fig. 3 denotes a vertical section of the two bars G H, their guides, and the series of needles.

The first part of the process of knitting the fabric, supposing loops to have been formed on the needles, is to knit the bands of chain-looping the requisite distance. This is to be done by moving one of the guide-bars, viz., H, so as to cast in one direction, viz., to the right, its yarns over every other one of the needles, viz., B, D, and F, the other guide-bar, G, being at the same time moved so as to cast its yarns in the opposite direction, or to the left over the other needles, A, C, and E. Next, the loops are to be cast off all the needles, so as to form upon them, by the yarns laid on them, new loops. Next, the bar H is to be moved to the left, so as to lay the yarns of its guides across the needles A, C, and E, the other guide-bar, G, being in the meantime moved to the right, so as to lay its yarns over

the needles B, D, and F. Next, the loops are to be cast off the needles, so as to form the new loops.

This process repeated sufficiently forms the chain-looped bands the necessary distance preparatory to the carrying in of the next part of the knitting, viz., that of a range of connection-tufts, to intervene between the bands and connect them.

Next, the bar G is to be moved to the left, so as to lay each yarn over two of the needles—for instance, so as to lay the yarn of the guide *c* across the needles D and E, and the yarn of the guide *b* across the needles B and C. At the same time the bar H is to be moved to the right, so as to lay each yarn over the same needles as just previously overlaid with yarns. Next, the bar G is to be moved to the right, so as to carry its yarns under the pairs of needles last overlaid by them, and next is to be moved upward and to the left, so as to lay its yarns again on the pairs of such needles. In the meantime the bar H is to be moved to the left, so as to carry its yarns under the pairs of needles, after which it is to be moved upward, and next to the right, so as to lay its yarns again upon the pairs of such needles.

The mode of laying the yarns over pairs of the needles may be thus carried on until a sufficient number has been laid to form the tufts of the range.

The next part of the process is to secure the tufts by interlooping them with the chain-bands. To accomplish this, the bar G is to be moved to the right, so as to lay its yarns over and across the needles A, C, and E. At the same time the bar H is to be moved to the left, so as to lay its yarns over and across the needles B, D, and F. Next, the tufts are to be cast off all the needles, so as to form loops of yarn on the latter.

By continuing to so form the chain-bands and ranges of tufts at the proper intervals, the fabric will be produced.

What I claim as my invention is—

The new fabric composed of the chain-stitch bands and the ranges of tufts, made and combined substantially as described.

BERNARD J. MCGEE.

Witnesses:

R. H. EDDY,
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