

PATENT SPECIFICATION



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228,917

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COMPLETE SPECIFICATION.

Improvements relating to Round and Figured Pearl Knitted Articles.

I, EMILIE ELSA MÜLLER, a citizen of the German Republic, of 57, Fürstenstrasse, Chemnitz, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

Pearl stitch fabrics made at the present time on straight bar or circular knitting machines, when used as articles of clothing, have certain drawbacks.

In order to finish the articles they must be sewn and obviously cost more than when they are completed on the machine. Also, the stitching is effected by means of templets so as to allow the parts to conform as approximately as possible to the figure. This conformation is facilitated by narrowing, but does not prevent the breaking of the thread and the coming undone of the loops where the proportions are outside the ordinary sizes.

Although the stitching is obviated by the use of circular machines, a greater drawback arises from the difficulty of narrowing the parts to conform to the particular shape required.

Also, it has not previously been possible to insert the cutting out lines during the formation on the machine of a fabric in the tubular form so that it can be immediately finished off.

The subject of the present invention is a knitted fabric, manufactured in the tubular form, which obviates these drawbacks.

Since, in this case, narrowing is not easily effected, a pearl stitch design is formed. The pearl stitches have the property of contracting the fabric and therefore imparting to it an additional elasticity, so that it will adapt itself to the shape of the body. The contraction

is due to the fact that the back loops stand out behind the face loops when the fabric is taken off the machine frame and is, therefore, no longer under tension. In order to ensure such contraction, the fabric must be knitted in short ribs, situated side by side and running in the same direction, for example, singly or in pairs (one-and-one, two-and-two, or two-and-three).

These ribs can be worked not only longitudinally as shown at A, B, C, D in Figs. 1 and 2, but also transversely. This is especially advisable in making stockings, gaiters, cuffs, sleeves, sweaters, vests and all kinds of knitted fabrics, especially articles of clothing, which require narrowing.

The invention also has the advantage that the introduction of the pearl stitches enables the lines E along which the fabric is to be cut to be indicated (Fig. 3). This saves a good deal of labour, because, in the existing practice, the fabric has to be stretched on a shape, marked thereon and then cut. These operations, which involve considerable waste of time, are necessary in order to obtain a satisfactory result, since the fabric curls when unstretched and prevents a smooth cut conforming to the templet from being made.

All these defects can be obviated by pearl stitch design. In the case of woven fabrics, it is already known and recognised as an advantage to weave into the fabric the lines along which it is to be cut. Therefore, the insertion of the lines of cut into the knitted fabric must be of still greater advantage, because, unlike woven fabrics, knitted goods do not lie flat, the tension is uneven and they curl up when cut.

An example of a fabric according to

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the invention is illustrated in the accompanying drawing, in which:

Fig. 1 represents a knitted tube with pearl stitch design in the frame; Fig. 2 the same tube out of the frame turned through 90°; Fig. 3 the tube with the lines of cut and also illustrates several forms of patterns; Fig. 4 the appearance of the loops when in the frame, and Fig. 5 the appearance of the loops when taken out of the frame (contracted). Fig. 6 shows how the loops are formed.

The pearl stitches are formed in the same way as in the straight bar machine and as shown diagrammatically in Fig. 6, the needle *n* drawing the thread *f* alternately from outside towards the inside and then from inside towards the outside through the old meshes *m*. The final appearance is shown, in the stretched condition, in Fig. 4 and in the loose state, after removal from the frame, in Fig. 5. To make the matter clearer, one row of threads is shown as a single thick line and the others as narrow double lines. The contraction is due to the "turning" of the pearl stitches. Whereas, ordinarily, the mesh is linked

over and over, so that the heads of all the loops face one side and all the tails face the other side, in this case the construction is reversed, that is, the thread passes over the face of one branch of the loop and round the back of the other.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. Pearl stitched tubular knitted fabrics, in which according to the construction of the loops, either the face or the back loops are used for indicating the lines for cutting out.

2. Tubular, fancy pearl stitched knitted fabrics according to the preceding claim, in which the pearl stitches are inserted either parallel or transverse to the wales, which contract the fabric to fit the figure and obviate narrowing.

Dated this 5th day of February, 1925.

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W.C. 2,
Agents for the Applicant.

Fig.1.

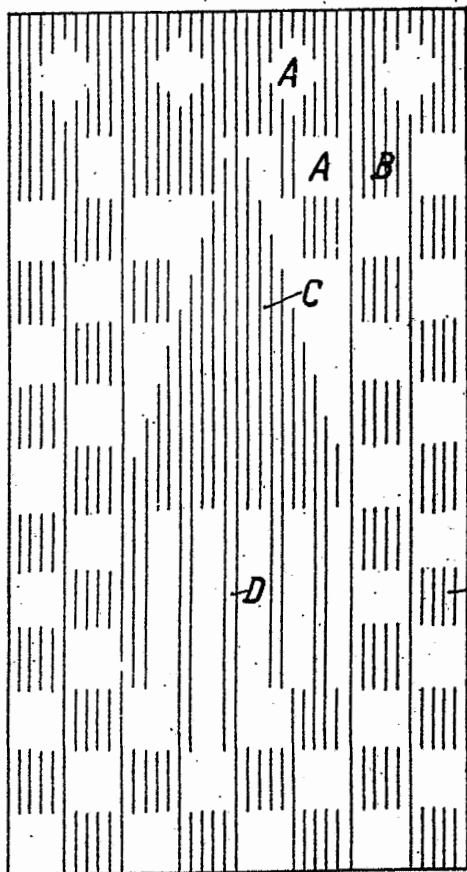


Fig.2.

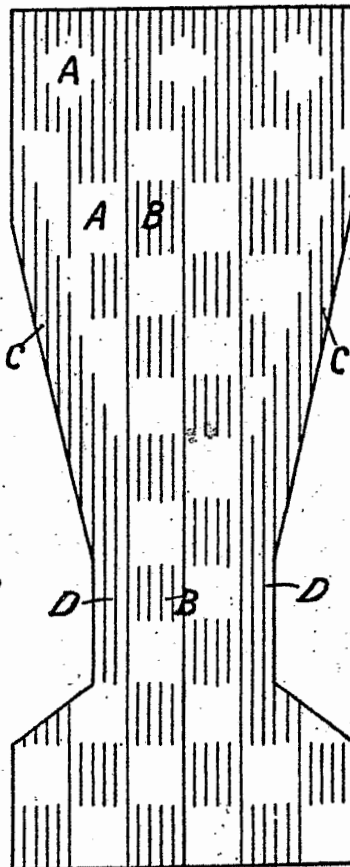


Fig.3.

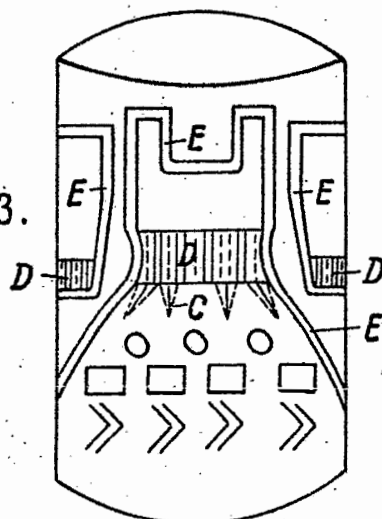


Fig.4.



Fig.5.



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Fig. 4.



Fig. 5.

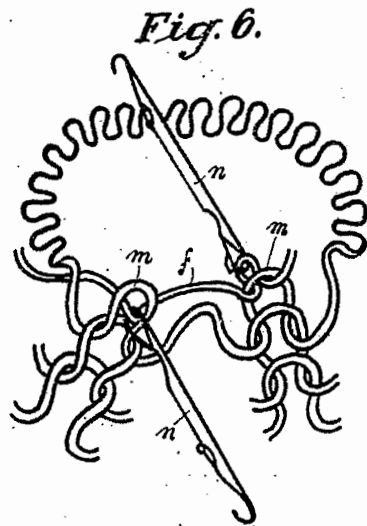


Fig. 6.

Fig. 1.

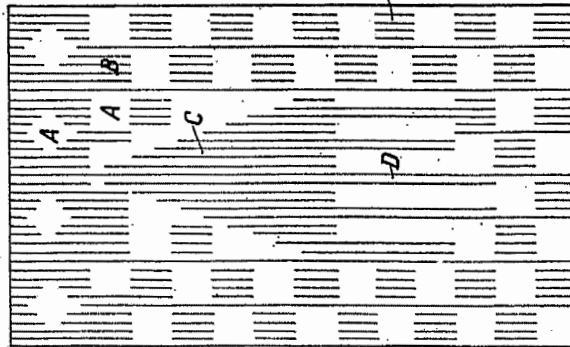


Fig. 2.

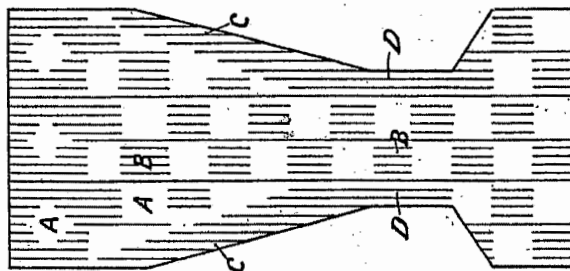


Fig. 3.

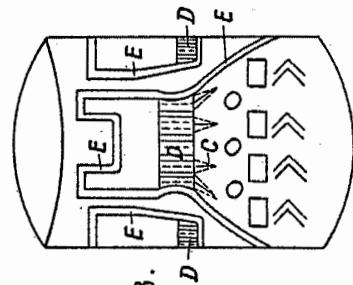


Fig. 4.

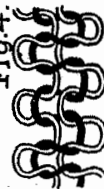
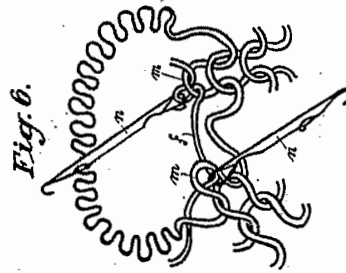
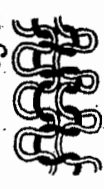


Fig. 5.



[This Drawing is a reproduction of the Original on a reduced scale]