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M. WIELAND

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PROCESS FOR THE MANUFACTURE OF FASHIONED STOCKINGS

Filed Nov. 15, 1927

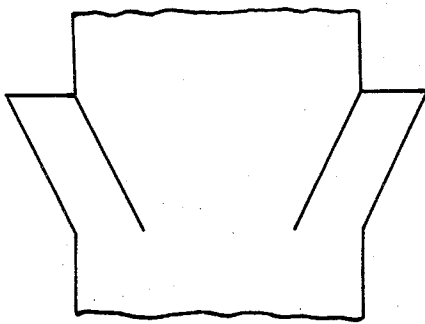


Fig. 1.

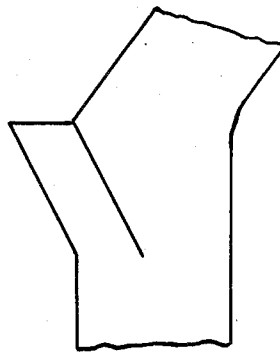


Fig. 2.

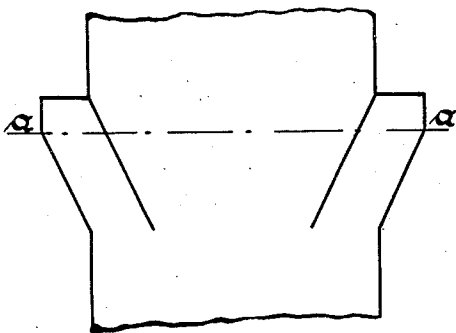


Fig. 3.

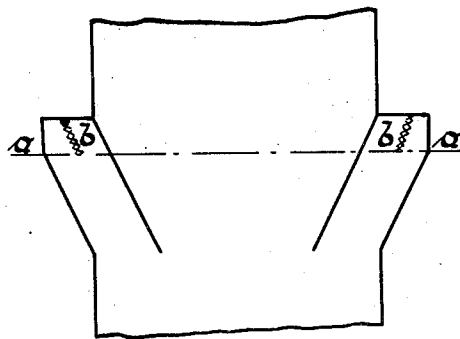


Fig. 4.

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UNITED STATES PATENT OFFICE

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PROCESS FOR THE MANUFACTURE OF FASHIONED STOCKINGS

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The present invention has for its object the manufacture of a stocking knitted in the shape of a leg, the heel-portions of which are produced by a simultaneous lateral widening during the manufacture of the foot-portion situated between said heel-portions. In said process known up to now the fabric was widened by outwardly conveying the meshes to adjacent meshes during the manufacture of the heel-upper parts whereupon it was narrowed by inwardly conveying the meshes to adjacent meshes during the formation of the lower parts of the heel.

Now the novelty of the object of the present invention consists in that the heel-planes are formed only by widening with a corresponding enlargement of the fabric, and, after the full length of the heel is obtained, a suitable number of meshes is separated on both sides, the number of the widened heel-meshes in the lower heel-part being gradually reduced. A narrowing in the lower portion of the heel will therewith become superfluous, whereby an essentially simplified manufacture will result inasmuch as the direction of movement of the covering needles constantly remains the same and tensions in the fabric during the manufacture of the heel-portions are avoided.

A diagrammatic representation of results obtained in following this process appears in the drawings, in which

Fig. 1 represents in outline a heel portion knit in accordance with this invention.

Fig. 2 represents the heel portion shown in Fig. 1 after the stocking has been separated and its edges connected together in the usual manner.

Fig. 3 represents a heel portion knit by modification of the process employed in connection with the stocking of Fig. 1, and

Fig. 4 represents a heel portion in which a result similar to that shown in Fig. 3 is obtained by a somewhat different procedure.

The mode of operation for the manufacture of stockings according to the new process is as follows:

The heel-portions are altered in their hanging position sideways and outwards for one or more needles by means of the known broad

covering needles, for instance by a jacquard petinet device with a corresponding enlargement of the fabric after one or more mesh-rows until they have reached a sufficient length and the fabric a sufficient extension. Hereafter a suitable number of meshes are separated in a known manner and on both sides from the frame needles, for the purpose of narrowing the fabric to the width of fabric necessary for the foot. The result of said procedure is the shape of heel represented in Fig. 1. After the foot has been finished, the stocking is separated and its edges are connected with another in a known manner by sewing and joining the meshes, as represented in Fig. 2.

For the purpose of obtaining a good shape to the heel, only a part of the heel meshes is, during the manufacture, continued outwards after passing a certain point—for instance that indicated by the line *a-a*, Fig. 3,—in such a manner that less and less meshes are transferred outwards after passing the conveying-line. Thus the fabric is not widened beyond the line *a-a*, Fig. 3, and for the purpose of the formation of a regular fabric-edge one or two edge-meshes are allowed to remain hanging on their frame needles, so that the corners broken off, as represented in Fig. 3 will result.

Another possibility of construction consists in that the work is generally done in quite the same manner as in the example of procedure shown in Fig. 3, but that the heel-portions are not more outwardly widened in their entire width, viz: up to the outermost edge of the fabric, whereas a greater number of edge-meshes are left on their frame-needles. In this manner so-called small covering-flowers *b, b*, Fig. 4, will result near the inner remaining mesh-rows or bars, said flowers being a characteristic feature of the known French heel and improving the appearance of the heel.

In using the new process it is quite immaterial whether the heel-portions are outwardly widened by one or more needles and whether the widening is repeated in each row of meshes or only after several rows. Furthermore, it is immaterial whether the heel-portion

tions are reinforced by the insertion of special additional yarns or whether said reinforcement is effected by the so-called split reinforcement, whether the base-thread runs
5 across the entire width of the fabric or whether the fabric-piece is formed by several threads which may join or bind each other in any suitable manner.

What I claim is:

10 A process for the manufacture of a stocking knitted in the shape of a leg, the heel-portions of which are produced by lateral widening during the working of the foot-portion situated between the heel-portions,
15 which consists in that the heel-planes are only formed by outwardly conveying the meshes to adjacent meshes with a corresponding enlargement of the fabric, by an outward widening, and that after the finishing of the
20 full heel-length a suitable number of meshes are separated from both sides, the number of the widened heel-meshes being gradually decreased in the lower portion of the heel, one or more edge meshes being left on their
25 frame needles for forming a regular fabric edge within the lower part of the heel.

In testimony, that I claim the foregoing as my invention, I have signed my name this 3rd day of November, 1927.

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MAX WIELAND.

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