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HOSIERY

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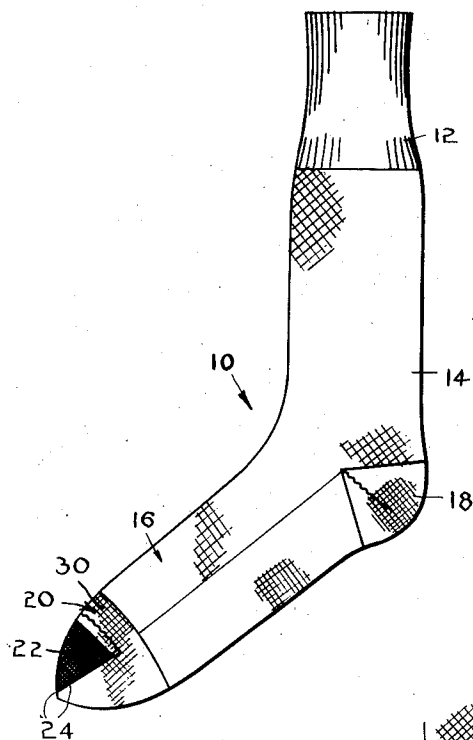


Fig. 1.

Fig. 3.

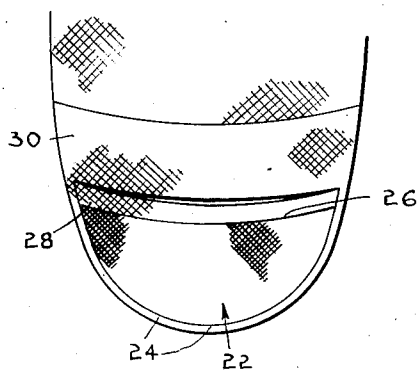
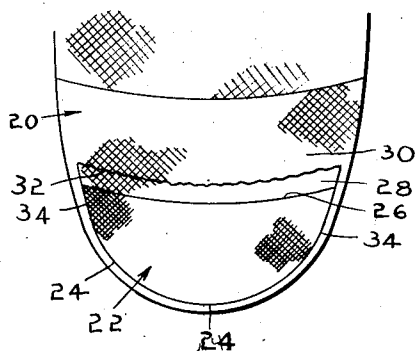


Fig. 2.

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HOSIERY

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3 Claims. (Cl. 66—185)

This invention relates to hosiery and more particularly to hosiery which is designed to improve the fit, comfort, and wearing qualities thereof.

5 One object of the invention is to provide a stocking having a toe portion which can stretch both longitudinally and laterally on the wearer's foot in response to the movements of the foot when the wearer is walking whereby to reduce
10 wear on said toe portion and to provide added comfort to the wearer.

Another object of the invention is to provide a stocking with a portion of the toe thereof knit from elastic yarn in integral relation with other
15 parts of the foot of the stocking with the wales of the knit elastic yarn extending in the same direction as the wales of the knit textile yarn whereby said knit elastic toe portion can stretch and contract in a direction longitudinally of the
20 wales thereof, that is, in a direction longitudinally of the foot of the stocking as well as in a transverse direction.

A further object of the invention is to provide a stocking having an elastic toe portion which
25 may be formed in the stocking in the process of knitting the stocking substantially completely on the knitting machine, without cutting or stitching operations other than the finishing looping operation utilized generally in the manufacture
30 of certain types of stockings which are knit on circular knitting machines.

A further object of the invention is generally to provide a stocking having an elastic toe portion so constructed and arranged in the stocking
35 that the production of the latter may be facilitated.

The above objects of the invention and other objects which might hereinafter appear will be fully understood from the following description
40 considered with reference to the accompanying drawing.

In the drawing,

Fig. 1 is a side view of a stocking, here shown as a sock, embodying the present invention;

45 Fig. 2 is a plan view on a larger scale of the toe portion of the stocking;

Fig. 3 is a view similar to Fig. 2, showing the front portion of the stocking in the stage of manufacture thereof just prior to the looping
50 operation.

Referring now to the drawing in detail, the stocking 10, here shown as a sock, comprises in integrally knit relation the usual ribbed top 12, the leg 14, and the foot section 16 including the
55 heel and toe, 18 and 20 respectively. The stock-

ing 10 is formed on a circular knitting machine being preferably flat knit throughout except in the ribbed top 12. Except as hereinafter stated, the stocking may be knit from any textile or inelastic yarn, such as silk, rayon, cotton, wool, 5 etc., or mixtures thereof.

In accordance with the present invention there is knit into the toe of the stocking an elastic section 22, knit from elastic yarn, for accomplishing the objects of the invention. Said elastic
10 toe section 22 extends from the tip line 24 of the stocking to a line 26 at its rear edge where it is knit with a few courses of ordinary textile yarn providing an intermediate section 28 which is looped to the rear upper toe portion 30 at the
15 line of juncture 32 on a looping machine in accordance with the usual practice. Said elastic section 22 extends laterally along the goring lines 34. In other words, said elastic section 22 extends from the tip of the toe of the stocking
20 rearwardly down the goring lines 34 to within a few courses of the looper line 32. Said section 22 is thus positioned in the stocking so that when the latter is worn said elastic section is engaged by the toes of the wearer, extending over and
25 engaged by the toe nails.

Elastic section 22 is preferably knit from textile covered elastic rubber threads such as the elastic yarn known as "Lastex". Fine "Lastex" yarn, that is, yarn of low gauge and of a degree
30 of fineness approximating that of the textile yarn of the other toe portion of the stocking is preferred. Said yarn is introduced into the stocking during the process of knitting the same on a circular knitting machine by providing an extra
35 yarn feeding finger in the circular knitting machine. It will be understood that in the process of knitting the stocking on the circular knitting machine the knitting of elastic section 22 is commenced at the tip line 24, in the advanced stages
40 of manufacture of the stocking, the first course of said elastic section being knit into the end course of textile yarn at the tip line 24, and the knitting of said elastic section being thereafter continued along the lines of goring 34 to the line
45 26 which defines the rear edge of said elastic section. When the last course of said elastic section has been knit, the knitting of the textile yarn is resumed with a course of knitting joined to the end course of said elastic section, a few
50 courses of textile yarn being knit forming an edge portion 28 which is subsequently looped, on a looping machine, with the rear edge portion 30 of the toe of the stocking for finishing the same.

Thus it is seen that the stocking herein shown and described is well adapted to accomplish the several objects of the present invention. It will be observed that elastic section 22 is relatively soft, highly resilient, and elastic in substantially all directions. Said elastic section is preferably knit flat with the wales thereof extending along the same lines as the wales of the other portions of the toe of the stocking, that is, in a direction longitudinal of the stocking. The knit material of section 22 is preferably flat, as contrasted with a ribbed knit, and while it is substantially no thicker than ordinary textile knit yarn, it possesses substantial strength and resistance to wear. Such resistance to wear is increased by reason of the capacity of said section to stretch longitudinally as well as transversely to accommodate the stocking to changes in the effective length of the wearer's foot and to the movements of the wearer's foot during walking. Also, said elastic section stretches transversely, as stated, as well as in other directions, and thus accommodates itself to the spreading of the wearer's foot which also occurs during walking. Moreover, the fit of the stocking is considerably improved by the provision of said elastic section, for the reasons hereinbefore stated in reference to the wearing qualities of the stocking. The comfort of the stocking on the wearer's foot is accordingly improved, an added reason for improved comfort residing in the fact that the stocking size may be more accurately determined, as excess length in the stocking with consequent wrinkling or folding of portions thereof is eliminated.

While I have shown and described the preferred embodiment of my invention, it will be understood that certain changes in the construction and arrangement of parts of the stocking and in the materials utilized in the different portions thereof may be made. For example, while covered rubber yarn is greatly to be preferred, uncovered rubber yarn or other elastic yarn capable of being knit into the stocking may be utilized.

Other changes may be made. Therefore, I do not wish to be limited precisely to the form of the invention herein shown or described, except as may be required by the scope of the appended claims. Also as used in the claims, the term "stocking" is to be taken and understood as meaning either a sock or a stocking proper of any leg length.

Having thus described my invention, what I claim and desire to secure by letters patent is:

1. A stocking comprising knit leg and foot portions, said foot portion having a knit toe comprising a top section of knit elastic yarn with the wales thereof extending longitudinally of the toe, said toe having side gore lines and a rear looping line, said top section of knit elastic yarn terminating at the gore lines of the toe and at the tip of the latter and terminating substantially at the looping line.

2. A stocking comprising knit leg and foot portions, said foot portion having a knit toe comprising a top section of knit elastic yarn with the wales thereof extending longitudinally of the toe, said toe having side gore lines and a rear looping line, said top section of knit elastic yarn terminating at the gore lines of the toe and at the tip of the latter and terminating substantially at the looping line, and a section of knit inelastic yarn between said section of knit elastic yarn and said looping line.

3. A stocking comprising knit leg and foot portions, said foot portion having a knit toe comprising a top section of knit elastic yarn with the wales thereof extending longitudinally of the toe, said toe having side gore lines and a rear looping line, said top section of knit elastic yarn terminating at the gore lines of the toe and at the tip of the latter and terminating substantially at the looping line, the remainder of said foot portion being knit substantially entirely of inelastic yarn.

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