Jan. 5, 1954 M. M. LIHN 2,664,726

STOCKING AND METHOD OF MAKING SAME

Filed Dec. 22, 1949

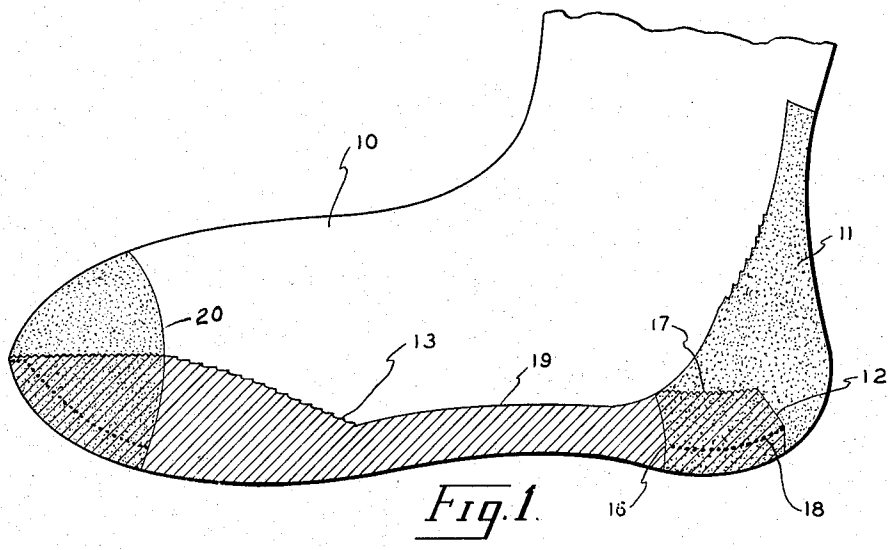


Fig. 1.

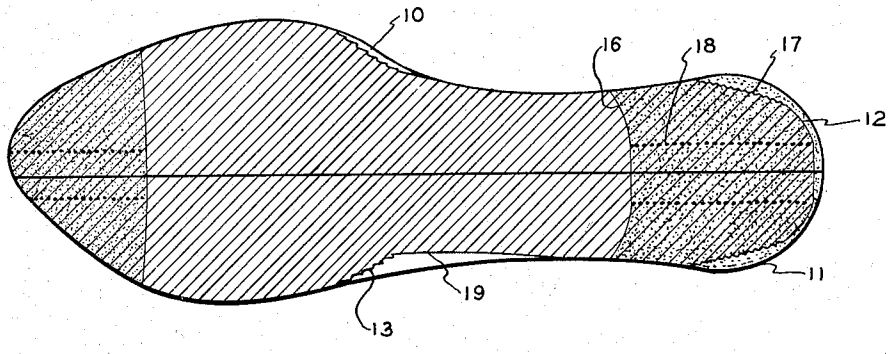


Fig. 2.

INVENTOR
MANUEL M. LIHN

BY Jacobi & Jacobi
ATTORNEYS

Patented Jan. 5, 1954

2,664,726

UNITED STATES PATENT OFFICE

2,664,726

STOCKING AND METHOD OF MAKING SAME

Manuel M. Lihn, Clementon, N. J.

Application December 22, 1949, Serial No. 134,479

7 Claims. (Cl. 66—182)

1

My invention relates to stockings and it is an object of the same to provide a novel full-fashioned stocking and a method of making the same on a single unit machine in such manner that the sole reinforcement shall be limited to the walking surface of the foot and shall not be visible either from the side or from the rear when the stocking is in use, i. e., when the foot is in standing position.

Another object is to provide a nylon stocking with a reinforcement of improved character, such that the sole shall be effectively reinforced with yarn of such a character as to avoid the clammy feeling of nylon in the summer, yet shall avoid the cold feeling of nylon in the winter.

Referring to the annexed drawing, which is made a part of this application and in which similar reference characters indicate similar parts:

Fig. 1 is a side elevation of a stocking that is laid out flat, as seen on the counter for sale, and

Figure 2 is a bottom plan of the stocking on the foot of the user.

In the drawing, reference character 10 indicates the leg of a knitted stocking, consisting of nylon yarn, and usually consisting of a single knitted nylon yarn as customary in sheer hose. The knitting continues down to the beginning of the high spliced area 11, where another nylon yarn is added for the purpose of reinforcing the area at and above the heel of a wearer's foot, the heel of the stocking here shown being the stippled portion at the rear of the stocking.

This area may be of the shape commonly known as the "Pointex" heel, or of any other conventional or desirable shape, and is shown dotted or stippled to indicate the presence of two nylon yarns, i. e., a main or body yarn and a splicing yarn.

At the rearmost point of the walking surface of the foot, there is added a silk reinforcing yarn, this yarn being incorporated in the knitted fabric according to a novel method of operation of a single unit full-fashioned knitting machine. The width of the silk reinforcement at the point of introduction is governed by the width of the sole at the arch or instep of the foot, the sole of the stocking, as the term is here used, being that part of the stocking below line 19 in the drawing, and extending from the line 16 to the rear end of the toe portion, at line 20. This width will likewise afford sufficient coverage for the sole at said rearmost point.

In the drawing, the presence of silk is indicated by the shading in the sole of the stocking, and

2

thus the combined stippling and shading in the area at the bottom of the heel between lines 12 and 16 indicates reinforcement with a silk yarn and also a nylon splicing yarn. The width of the sole reinforcement at the line 12 to a position just beyond the last sole narrowing at 18 is uniform because of a special movement of the silk yarn carrier. This uniformity is maintained by widening along the line 17 as narrowing is taking place along a parallel line at 18. Each time the stocking narrows two needles, the "Pointex" widens the silk carrier two needles, so that it will maintain a constant width for the silk sole reinforcement. During the widening process of the silk carrier, it is constantly approaching the inside selvage of the nylon reinforcement along line 19. After the last heel narrowing, the silk carrier is feeding the silk yarn exactly the same width as the nylon reinforcement carrier is feeding the nylon yarn. The nylon reinforcement carrier is eliminated at this point and the sole reinforcement is provided by the silk carrier throughout the remainder of the sole. From this point on, the knitting operation of the foot is carried on in a conventional manner.

It will be noted that no part of the sole reinforcement of this specially constructed stocking will be visible from the side, rear or front of the foot when the stocking is in use. This is particularly desirable when being worn with shoes having open toes, sides and/or heels.

In practicing my invention, I prefer to use silk yarn which is degummed. A degummed silk has been found to be the most practicable because it eliminates bleeding of oils and gums from the silk to the nylon during the preboarding of the stocking.

Silk yarn is preferable to nylon in this part of the stocking by reason of its better absorptive powers, cushioning action and because it avoids the clammy feeling of nylon in the summer and the cold feeling of nylon in the winter. However, the special knitting process still permits the sheer beauty of nylon to be maintained throughout all visible parts of the stocking. It may be here stated that in tests performed by competent scientists, comparing moisture absorption of stockings made entirely of nylon and those made of nylon plus silk, the saturation point of the special stocking employing nylon and silk was found to be much higher than that of the stocking made entirely of nylon. Obviously, moisture absorption is a most desirable quality in a stocking.

It will be obvious to those skilled in the art that variations in the features herein disclosed

may be made, all without departing from the spirit of the invention; and, therefore, I do not limit myself to what is shown in the drawing and described in the specification, but only as indicated in the appended claims.

Having thus fully described my invention, what I claim is:

1. A single unit full-fashioned stocking having a nylon leg and instep, a nylon reinforced heel and toe, and a sole portion reinforced with silk yarn over its walking surface only, no part of said reinforced sole portion being visible when in use.

2. A full-fashioned stocking having a leg and instep of nylon yarn, a sole reinforced with silk yarn, and a heel and toe each reinforced with nylon and silk yarn.

3. A full-fashioned stocking having a leg and instep of nylon yarn, a heel and toe each reinforced with nylon yarn, and a sole reinforced with degummed silk yarn to prevent bleeding of gums and oils from the silk to the nylon during the preboarding of the stocking.

4. A full-fashioned stocking having a leg and instep of nylon yarn, a heel and toe each reinforced with nylon yarn, and a sole reinforced with silk yarn, no part of the sole reinforcement being visible from the side or rear when the stocking is in use.

5. A single unit full-fashioned nylon stocking having a sole reinforcement of silk extending over the walking surface of the foot, no part of said reinforcement being visible when the stocking is in use.

6. A single unit full-fashioned nylon stocking having a silk sole reinforcement extending over the walking surface of the foot and the bottom of the heel, no part of said reinforcement being visible when the stocking is in use, said reinforced sole portion including parallel heel narrowings, and the reinforcement being widened at its upper margin in step with the heel narrowings so as to maintain the reinforcement of uniform width.

7. A method of knitting from a single unit full-fashioned stocking blank comprising the steps of knitting a leg and instep from a nylon yarn, adding a nylon reinforcing yarn in the high splice and sole, adding a silk yarn at the rearmost margin of the walking surface of the foot, forming a heel portion with narrowings at opposite sides of the midline of the blank, and widening the reinforced area at opposite margins as the narrowings are formed so as to keep the width of the reinforced area constant.

MANUEL M. LIHN.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,169,416	Mettler	Jan. 25, 1916
1,941,171	Hamel	Dec. 26, 1933
2,000,615	Roth	May 7, 1935
2,251,268	Clawson	Aug. 5, 1941
2,305,218	Hemmerich	Dec. 15, 1942
2,563,082	Thompson	Aug. 7, 1951

FOREIGN PATENTS

Number	Country	Date
124,713	Australia	June 24, 1947