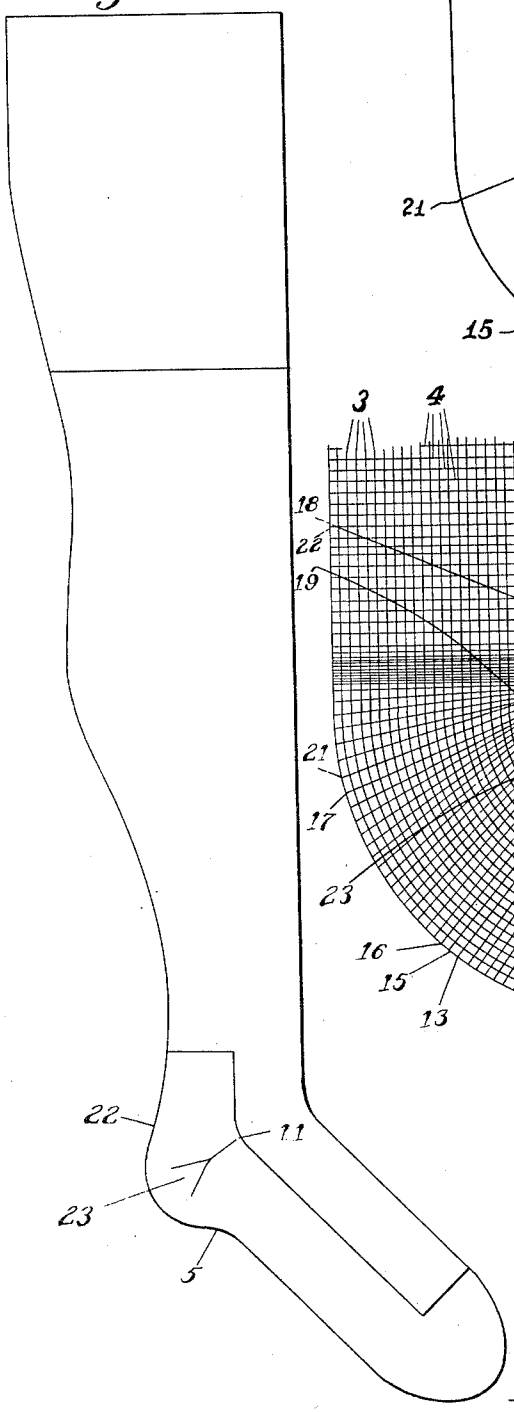
March 31, 1931. W. S. PARKER 1,798,804

FASHIONED HEEL AND METHOD OF KNITTING

Filed Dec. 15, 1924

Fig. 1.



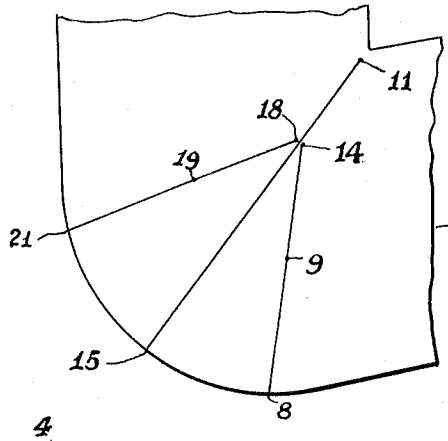


Fig. 3.

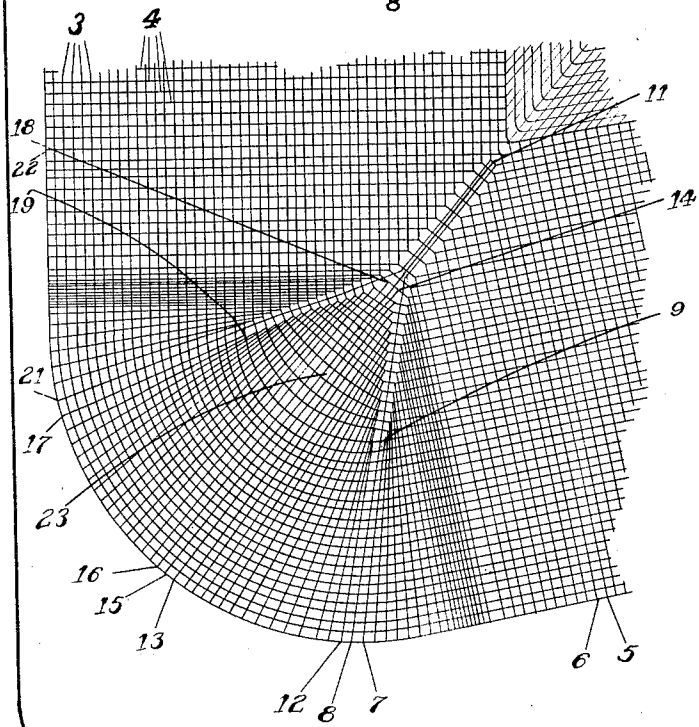


Fig. 2.

Inventor:
William S. Parker
By Wilson & McCanna
Attys.

Patented Mar. 31, 1931

1,798,804

UNITED STATES PATENT OFFICE

WILLIAM S. PARKER, OF ROCKFORD, ILLINOIS, ASSIGNOR TO BURSON KNITTING COMPANY, OF ROCKFORD, ILLINOIS, A CORPORATION OF ILLINOIS

FASHIONED HEEL AND METHOD OF KNITTING

Application filed December 15, 1924. Serial No. 755,820.

This invention relates in general to the knitting of hosiery and has more particular reference to knitting the heel of a sock or stocking.

The primary purpose of my invention is to provide an improved method of knitting a fashioned heel, whereby to produce a gore in each side of the heel or heel pocket as it is commonly known, to give greater fullness to the heel.

Another purpose is to knit the heel by narrowing and widening in such manner as to produce at each side of the heel a suture commencing near the point of the greatest widening and diverging so as to define between the diverging sutures the gore above-mentioned, the diverging sutures also providing reenforcements in the lines of greatest strain on the heel portion imposed especially when pulling a sock or stocking on.

I have also aimed to provide an improved method of knitting a heel having greater fullness and strength than the ordinary heel knit by narrowing and widening and without sewed seams required by certain methods of knitting a heel.

Other objects and attendant advantages will be appreciated by those skilled in this art as the invention becomes better understood by reference to the following description when considered in connection with the accompanying drawing, in which—

Figure 1, is a view of a stocking the heel of which is knit in accordance with my invention;

Fig. 2, is an enlarged diagrammatic view illustrating the method of knitting the heel; and Fig. 3 is a diagrammatic view showing a modified form of the invention.

My invention is applicable to the knitting of a heel for either a sock or stocking on either a circular or straight knitting machine.

Heretofore fullness in the heel pocket has been attained in some instances by methods which necessitate joining separated portions of the fabric by sewing or otherwise, but the conventional method is to knit the heel pocket by narrowing and widening as a continuation of the foot portion of the sock or stocking. This latter method however does not give the desired degree of fullness in the heel pocket and leaves a single suture at each side of the heel pocket directly in line with the greatest strain when pulling the sock or stocking on. This suture is considerably less elastic than the surrounding fabric with the result that the yarns at the juncture of the widening and narrowing or along the suture are strained and sometimes broken because of the excessive strain at this portion. These objections are overcome by my present invention which not only provides increased fullness in the heel pocket but also a greater degree of strength in the fabric because of the manner in which the strains across the sides of the heel pocket are distributed, as will be presently more fully described.

According to my invention the sock or stocking might be knit either from the toe to the top or vice versa. In the present case the stocking shown is a tubular seamless fabric fashioned by knitting, as knit on a straight, parallel row machine, the knitting commencing at the toe.

Referring to Fig. 2, the lines 3 indicate the wales and the lines 4 the courses. That is, each line 4 indicates the needles in action, knitting back and forth across a bed and, therefore, indicates two courses of knitting. When the course 5 is reached after knitting the foot portion a needle is dropped out of action at each end of each succeeding course from 6 to 7 respectively, thereby producing a narrowed fabric by the method well known in the art as narrowing. On the next succeeding course 8 that is, knitting back and forth, the needles from the narrow point 9 to approximately the point 11 will be brought into action, thereby picking up the held loops on the needles dropped out of action during the narrowing. This produces a distinct suture web which inherently has greater elasticity than an ordinary suture formed by knitting the succeeding widening directly onto the needles holding the narrowed fabric. On the next succeeding courses 12 and 13 inclusive the fabric will be widened from the wales 9 to 14 inclusive. The next following course 15 will be knit on all of the needles

to the point 11 of the greatest widening. Following this the fabric will be narrowed as indicated by courses 16 to 17 inclusive, the successive needles being dropped out of action from the wales 18 to 19 inclusive. On the following course 21 all of the needles will be brought into action to the point 11 of the greatest widening, and following this the fabric will be widened substantially to the course 22, indicating the end of the heel pocket.

As a result of the foregoing method of knitting a triangular gore indicated by 23 is produced at each side of the heel pocket. Furthermore, a reenforced suture is produced at each side of the gore 23, that is, between the points 9—14 and 18—19; and these sutures merge into a single suture reaching to the point 11 of greatest widening. By the addition of this gore in each side of the heel pocket greater fullness is provided and by the provision of a suture in each side commencing near the point of greatest widening and diverging in defining the shape of the gore the heel is reenforced and strengthened. In other words, heretofore the suture had extended in a straight line from the point of the greatest widening to the narrowest point, and this suture was comparatively inelastic lengthwise and coincident with the line of greatest strain on the heel. With the present construction this suture is divided so that greater elasticity is provided in the fabric by reason of the gore 23 and the reenforcing is along diverging lines which distribute the pull to the contiguous portions of the fabric, thus greatly strengthening the heel.

While I have illustrated but a single embodiment of my invention it should be understood that it contemplates broadly the provision of a gore knit in each side of a fashioned heel pocket by narrowing and widening, but that it should not be confined to the particular method disclosed herein which is merely for purpose of illustration. For example, I do not wish to be confined to the particular way in which the sutures are knit for the reason that they may be produced in many different ways, one of which is by having the courses 8 and 21 terminate at the points 14 and 18 respectively and by one or more of the courses 13, 15 or 16 continuing all the way through to the point 11, as shown diagrammatically in Fig. 3. Furthermore, the particular shape and proportion of the gore 13 may be varied. In the practice of my invention it is immaterial whether the fashioned heel pocket be produced by knitting from the toe end of the sock or stocking as described herein, which is customary on straight machines, or by knitting in the reverse direction as is done on circular machines. The claims, therefore, contemplate knitting in either direction.

It is believed that the foregoing conveys a clear understanding of the objects prefaced above and it should be understood that in putting my invention into practice considerable change might be made in the details of the method without departing from the spirit and scope of the invention as expressed in the appended claim, in which

I claim:

The method of knitting hosiery which consists in knitting the first part of the heel pocket by a narrowing operation to a given narrow course; knitting a desired number of courses back and forth to provide a first suture web at each side of the heel extending from said narrow course at least up to an intermediate point in the narrowing; knitting by widening up to said point; knitting a desired number of courses back and forth to provide a second suture web at each side extending from the inner end of the first suture web along the remaining narrowing courses of the first part of the heel; narrowing from a second intermediate point corresponding with the first mentioned intermediate point, to a given narrow course; knitting the next desired number of courses back and forth at least up to the second mentioned intermediate point to provide a third suture web at each side extending from the second given narrow course to the second intermediate point; and finally knitting the last part of the heel pocket by widening along the third and second suture webs, respectively.

WILLIAM S. PARKER.