

**March 27, 1945.**

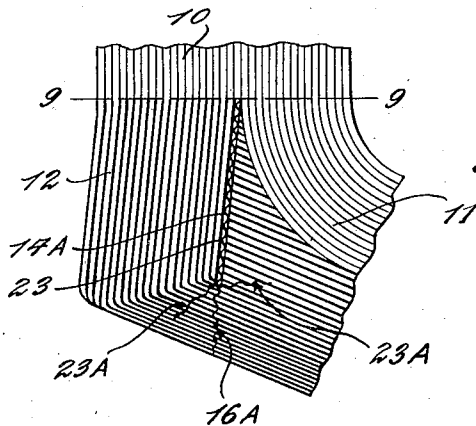
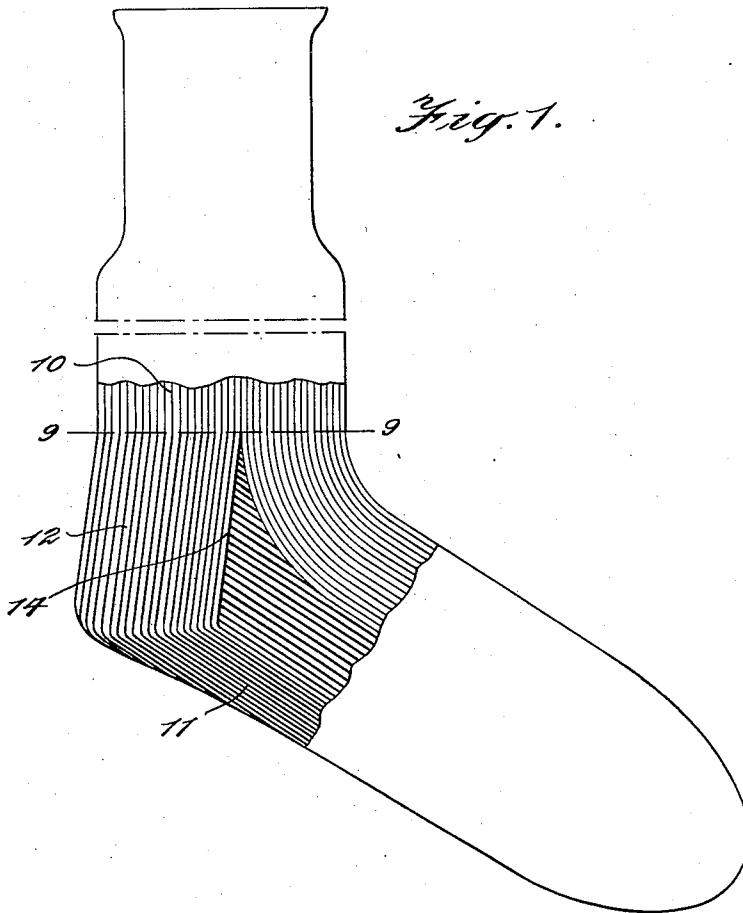
N. J. ALLEN

**2,372,468**

# KNITTED SOCK AND METHOD OF MAKING

Filed March 6, 1943

2 Sheets-Sheet 1



INVENTOR.

*Nora Jarvis Allen*

**BY**

BY  
Officer Keller Buzen

**ATTORNEYS**

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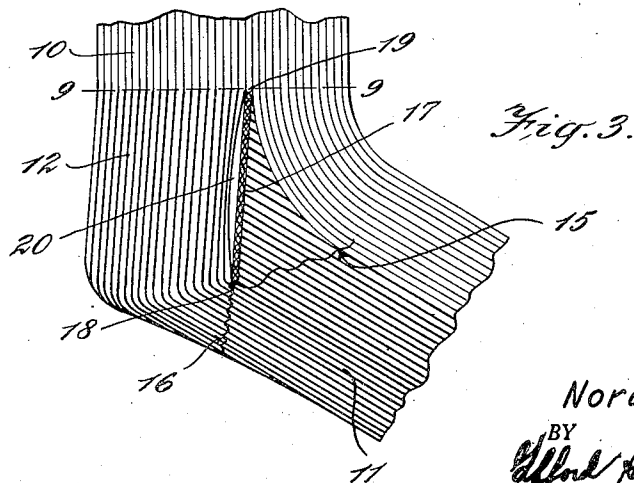
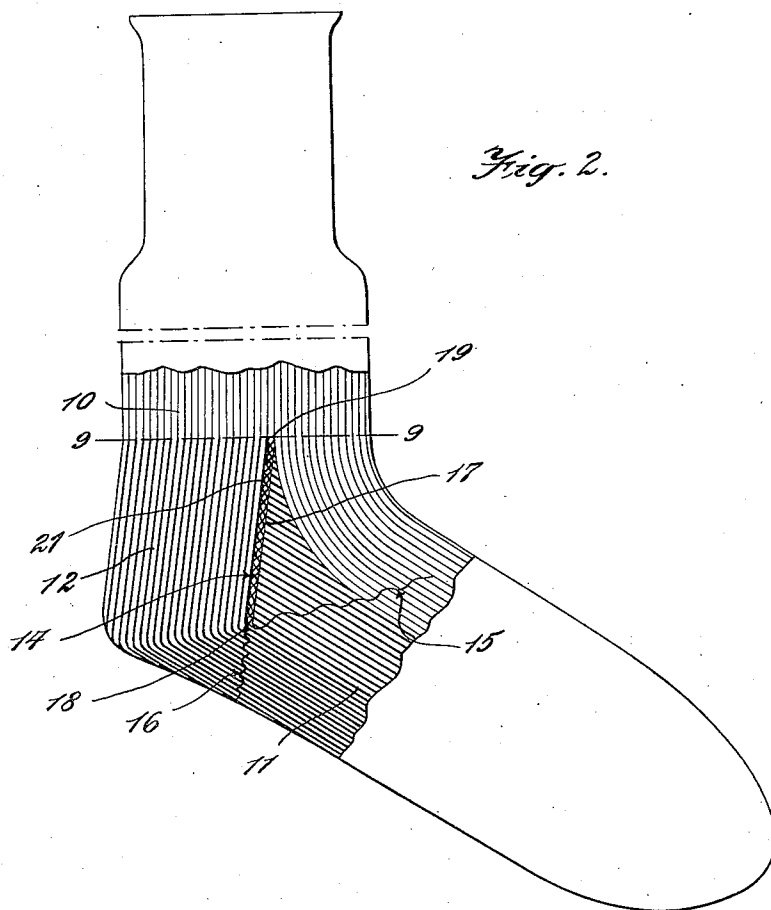
N. J. ALLEN

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KNITTED SOCK AND METHOD OF MAKING

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2 Sheets-Sheet 2



INVENTOR.  
Nora Jarvis Allen  
BY  
*Edmond H. Burgess*  
ATTORNEYS

## UNITED STATES PATENT OFFICE

2,372,468

## KNITTED SOCK AND METHOD OF MAKING

Nora Jarvis Allen, Toronto, Ontario, Canada, assignor, by mesne assignments, to Patons and Baldwins Inc., Newark, N. J., a corporation of Delaware

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7 Claims. (Cl. 66—187)

My invention relates to a method of knitting socks and the like and to the product of such method.

As is well known, the portion of a sock or stocking subjected to the most wear is the heel. Thus, almost invariably, the heel portion needs mending when the remaining portions are still intact or in a satisfactory and usable condition.

As is well known also, a sock or stocking often has to be discarded because the heel portion is beyond repair, although the remaining portions are still intact or in a satisfactory or usable condition.

Thrifty housewives will sometimes repair a much mended heel portion by the long and tedious method of unravelling not only the heel portion but the foot portion forwardly of the heel and then knitting heel and foot portions. It is not possible to only unravel the worn or damaged heel portion of socks and stockings made by the known knitting methods but the portion forwardly of the heel also has to be unravelled.

The method of the present invention produces a sock or stocking with a heel portion such that the heel alone need be unravelled when it is desired to replace the same by a new knitted heel.

An object of the present invention, therefore, is to provide a method of knitting such that a sock or the like may be knitted in a manner to enable one to replace the heel by unravelling the heel portion only, and then knitting a new heel portion.

Another object of the invention is to provide in a sock or the like a length of yarn of a contrasting color to serve as a marker defining the juncture between a part of the heel portion and an adjoining part of the foot portion and also to serve as a means of separating the heel portion from the foot portion before unravelling the heel portion.

In the drawings, wherein like numerals of reference indicate corresponding parts in the various figures:

Figure 1 is a fragmentary side view of a typical sock made in accordance with the usual knitting method, the sock being shown in flattened condition;

Figure 2 is a fragmentary side view similar to Figure 1 but showing a sock, in flattened condition, made in accordance with the present invention;

Figure 3 is a fragmentary view of Figure 2, showing the knitted sock, with side gaps open and ready to be closed.

Figure 4 is a fragmentary side view of a sock, shown in flattened condition, made in accordance with a modified form of the invention.

To better explain the method of the present invention, it will be helpful to first refer to the usual method of knitting a sock, such as shown in Figure 1. The sock shown is a typical one, and it includes, like all socks, a leg portion 10, a foot portion 11, the upper approximate half of which merges into the front half of the leg portion, and a heel portion or flap 12 between the foot portion and the rear half of the leg portion. In knitting such a sock, and in accordance with the known method or methods of knitting a sock, the leg portion 10 is knitted down to an imaginary line indicated by the numerals 9—9, lying substantially transverse of the length of the leg and defining the base or upper part of the heel portion 12. The heel portion or flap 12 is next knitted, this portion being in part defined by parallel edges 14. When the heel flap has become so knitted, the stitches defining the edges 14 are picked up and knitting of the remainder or foot portion 11 is proceeded with in the usual manner.

In the method of the present invention, both the leg portion and the heel flap are knitted in the usual manner but before knitting the line or row of stitches intended to define the forward edge of the heel flap, a length of yarn 16 of contrasting color—hereinafter referred to as the colored yarn—is substituted, for the yarn stock used in knitting the sock, and the last line of stitches knitted with the colored yarn. The sock, or more particularly the heel flap thus far knitted, is made according to a usual or typical sock, such as shown in Figure 1, except that the last line of stitches 16 is made with colored yarn. The length of the colored yarn is preferably such that loose ends, shown at 15, project beyond the ends of the line of stitches 16. Only one end 15 is shown, the other end being on the other side of the sock.

After the last line of stitches—of colored yarn—has been completed as explained the colored yarn is again substituted by the yarn stock and a row of stitches 17 cast on each side of the heel flap to extend between the ends 18 of stitched colored yarn and the upper corners 19 of the heel. With the stitches of colored yarn defining the line 16 of the flap on the needles as well as the cast-on stitches 17, the knitting of the foot portion is proceeded with in the usual manner.

After the foot portion has been knitted, the

gaps, shown at 20, between the points 18 and 19, are closed, as by sewing 21. The sock is now complete ready for use.

If preferred, the loose ends 15 of the colored yarn may be made long enough to provide the sewing material with which to close the gaps 20.

Where it is desired to replace the heel portion of a sock made in accordance with the present invention, the parallel edges of the heel flap are severed or separated from the adjacent edges—defined by the previously cast-on stitches 17—by cutting the sewing thread or yarn used, to thus again open the gaps 20. The colored thread 16 being the last row of stitches knitted in the heel flap, is then withdrawn by pulling or unpicking each individual stitch, thus releasing the heel portion from the foot portion. The stitches of the foot portion so released are placed, temporarily, on a holder, while the heel portion is unravelled to the line 9—9, the other portions (leg and foot) remaining intact, following which a new heel may be knitted.

It will be evident to those familiar with knitting that the presence of a colored yarn serves to clearly mark out the union or juncture between heel and foot portions, and this immeasurably aids in easily and accurately locating such juncture and in picking up the required stitches. This is even so when the yarn stock has become felted through wear or use.

After a new heel flap has been knitted, the adjacent lines of stitches defining, respectively, the forward edges of the heel flap and the adjacent portion of the foot portion (the stitches of which have been temporarily left on a holder) are grafted together, preferably as by a colored yarn which replaces the original colored yarn 16. The gaps 20, between the points 18 and 19, are again closed, as by sewing 21.

If the flap has been darned or has become felted, making it difficult to unravel the released stitches, the flap can be cut to within three or four rows of the beginning of the heel flap at line 9—9. It will then be a simple matter to unravel the few remaining rows of stitches ready to pick up the heel stitches.

While the method just described is the preferred one, there are two other slightly modified methods:

*Modified Method No. 1*—After the leg portion has been knitted, and the heel portion has been completed except for the last colored line of stitches 16, the stitches defining the edge 14 on one side of the heel flap are picked up in the same manner as these stitches are picked up when the usual or old method of knitting a sock is used, but picked up with a separate strand of contrasting color; the forward edge of the heel flap is next knitted with a separate strand of contrasting color to thus knit into the flap the last row of colored stitches 16; and the stitches defining the other edge 14 of the flap are picked up in the same manner as these stitches are picked up when the usual or old method of knitting a sock is used, but picked up with a separate strand of contrasting color; following which, knitting of the foot portion is proceeded with in the usual or old manner of knitting a sock. When the foot portion is completed, the strands of contrasting color with which the stitches of the parallel edges 14 have been picked up are withdrawn or removed, thus releasing the stitches defining the edges of the flap from the corresponding stitches of the foot portion, making the

gaps shown at 20. The stitches of the foot portion so released are picked up and with the yarn stock, cast off in the usual manner. The gaps 20 are then closed as by sewing with the yarn of contrasting color as in the preferred method previously described. The sock is now ready for use.

When it is desired to replace the heel portion made in accordance with the modified method No. 1 of the present invention, the parallel edges of the heel flap are severed or separated from the adjacent edges defined by the cast-off stitches, by cutting the sewing thread or yarn used, to thus again open the gaps 20. The colored thread 16 being the last row of stitches knitted in the heel flap, is then withdrawn by pulling or unpicking each individual stitch, thus releasing the heel portion from the foot portion. The stitches of the foot portion so released are placed, temporarily, on a holder, while the heel portion is unravelled to the line 9—9, the other portions (leg and foot) remaining intact, following which a new heel may be knitted, then grafted and sewn to the foot portion of the sock exactly as given in the preferred method.

Modified method No. 2 is best illustrated in Fig. 4 of the drawings. After the leg portion has been knitted, and the heel portion has been completed except for the last colored line of stitches shown at 16 in Figure 2, the stitches defining the edge 14A on one side of the heel flap are picked up in the same manner as these stitches are picked up when the usual or old method of knitting a sock is used, but picked up with a separate strand of contrasting color 23 thus leaving free ends 23A; the forward edge of the heel flap is next knitted with a separate strand of contrasting color to thus knit into the flap the last row of colored stitches 16A. Thus free ends 23A are left. The stitches defining the other edge 14A (not shown) of the flap are picked up in the same manner as these stitches are picked up when the usual or old method of knitting a sock is used, but picked up with a separate strand of contrasting color; following which, knitting of the foot portion is proceeded with in the usual or old manner of knitting a sock.

When it is desired to replace the heel portion made in accordance with this modified method, the parallel edges of the heel flap 14A are separated from the adjacent edges of the foot portion by pulling or unpicking each individual stitch formed by the intervening separate yarn of contrasting color 23, to thus form gaps such as shown at 20 in Figure 3. The released stitches now defining the edge of the foot portion, adjacent each gap 20, are placed temporarily on holders. The colored yarn 16A being the last row of stitches knitted in the heel flap, is then withdrawn or removed by pulling or unpicking each individual stitch, thus completely releasing the heel portion from the foot portion. The stitches of this part of the foot portion so released are also placed, temporarily, on a holder, while the heel portion is unravelled to the line 9—9, the other portions (leg and foot) remaining intact, following which a new heel may be knitted. When the new heel flap has been knitted, the adjacent lines of stitches defining, respectively, the forward edges of the heel flap and the adjacent portion of the foot portion (the stitches of which have been temporarily left on a holder) are grafted together, preferably as by a colored yarn which replaces the original colored yarn 16. With the stock yarn a number of stitches are

picked up along each edge of the flap 12 between the points 18 and 19 corresponding to the number of stitches which have been temporarily left on a holder and with a colored yarn grafted to said stitches on the holder, thus closing the gaps shown at 20.

I claim:

1. A knitted sock or the like including a heel portion and a foot portion presenting a continuous stitch pattern but incorporating a row of knit stitches made from a length of yarn separate from the yarn stock of which both the heel and the foot portions of the sock are made, between and uniting the adjacent rows of stitches of said heel and foot portions, respectively.

2. A knitted sock or the like including a heel portion and a foot portion presenting a continuous stitch pattern but incorporating a row of knit stitches made from a length of yarn separate from and of a color contrasting with the yarn stock of which both the heel and the foot portions of the sock are made, between and uniting the adjacent rows of stitches of said heel and foot portions, respectively.

3. The method of knitting a sock or the like, which comprises knitting the leg portion, knitting the heel flap, continuing the knitting of the flap with a row of knit stitches made from a separate length of yarn and leaving free the ends of the separate yarn, casting on parallel lines of stitches extending between the ends of the said row of knit stitches and the leg portion but free of the parallel edges of the flap to provide gaps between said edges and the rows of cast-on stitches, knitting the foot portion and closing the gaps.

4. The method of knitting a sock or the like which comprises knitting the leg portion, knitting the heel flap, continuing the knitting of the flap with a row of knit stitches made from a separate length of yarn of contrasting color and leaving free the ends of the separate yarn, cast-

ing on parallel rows of stitches extending between the ends of the said row of knit stitches and the leg portion but free of the parallel edges of the flap to provide gaps between said edges and the rows of cast-on stitches, knitting the foot portion and closing said gaps by sewing together the edges thereof.

5. The method of knitting a sock or the like, which comprises knitting the leg portion, knitting the heel flap portion, knitting the foot portion, and incorporating a row of knit stitches made from a length of yarn separate from the yarn stock of which both the heel and the foot portions of the sock are made, between and uniting adjacent rows of stitches of the heel and foot portions, respectively, of the sock.

6. The method of knitting a sock or the like which comprises knitting a leg portion, knitting a heel flap, knitting the forward edge of the flap with a row of knit stitches made from a separate length of yarn, picking up the parallel side edges of the flap with two separate lengths of yarn, continuing the knitting from said forward and side edges of the flap to form a foot portion from still another length of yarn, removing the said two separate lengths of yarn from the parallel side edges of the flap to form gaps between said parallel side edges and adjacent edges of the foot portion, picking up stitches on said adjacent edges and casting off, and closing said gaps.

7. A knitted sock or the like including a heel portion and a foot portion presenting a continuous stitch pattern but incorporating a row of removable knit stitches made from a length of yarn separate from the yarn stock of which both the heel and the foot portions of the sock are made, between and uniting the adjacent rows of stitches of said heel and foot portions, respectively.

NORA JARVIS ALLEN.