Oct. 1, 1946. G. NORMAN 2,408,440

SEAMLESS STOCKING

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FIG. 2.

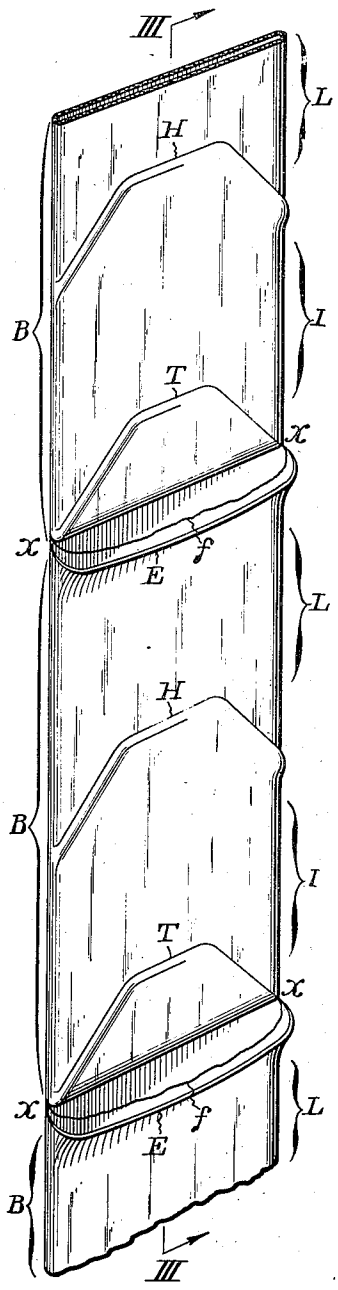


FIG. 3.

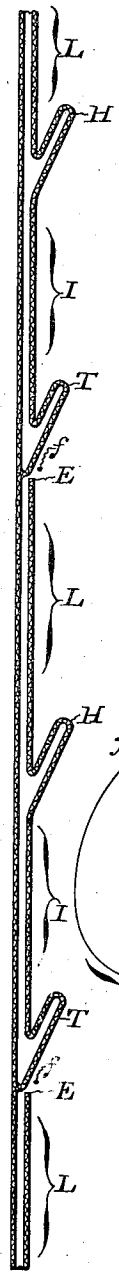
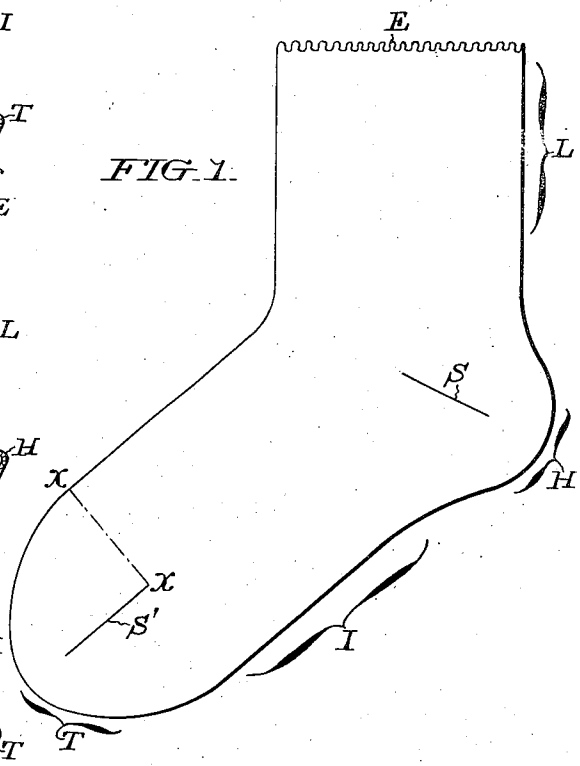


FIG. 1.



INVENTOR:
George Norman,

BY Paul & Paul

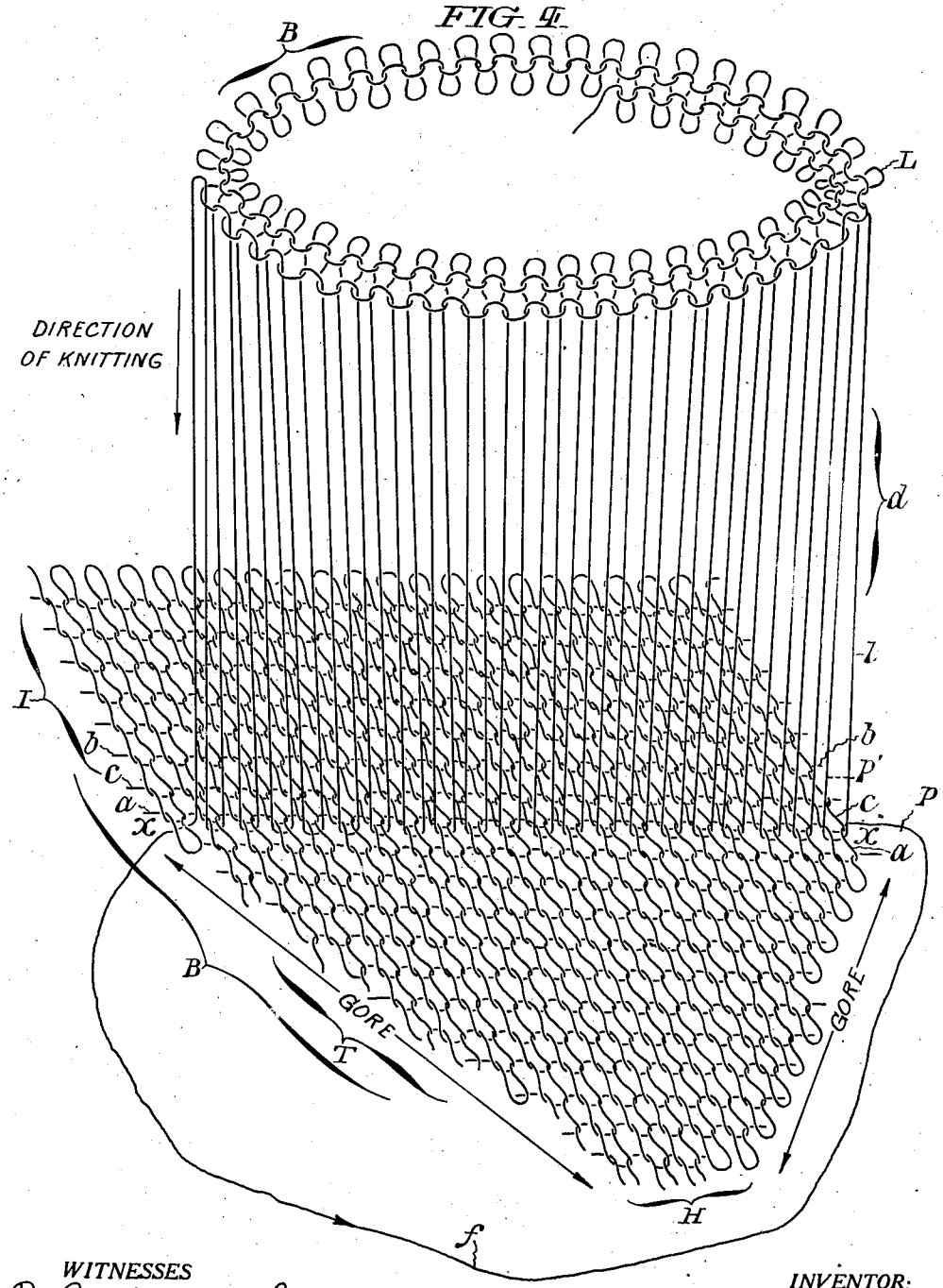
ATTORNEYS.

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FIG. 4.



WITNESSES

Thomas W. Kerr, Jr.

Hubert Fuchs

INVENTOR:
George Norman,

BY Paul Paul

ATTORNEYS.

Patented Oct. 1, 1946

2,408,440

UNITED STATES PATENT OFFICE

2,408,440

SEAMLESS STOCKING

George Norman, Griffin, Ga., assignor to Spalding Knitting Mills, Griffin, Ga., a corporation of Georgia

Application February 26, 1945, Serial No. 579,794

4 Claims. (Cl. 66—178)

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This invention relates to seamless stockings, and is also concerned with string work in which separable blanks for such stockings are serially incorporated during the knitting.

In the manufacture of seamless stockings according to methods heretofore prevalent, the strings were produced as tubes with toe and heel pockets at one side thereof, and the individual blanks were separated from the string by cutting it crosswise of the termini of the toe pockets. Completion of the stockings thus necessitated the use of looping machines to which the individual blanks had to be transferred for closure of the toe pockets. This subsequent operation was not only tedious and time-consuming, but entailed the employment of specially skilled artisans by reason of which large scale production was rendered correspondingly costly.

The chief aim of my invention is to overcome the above drawbacks, which desideratum I attain in practice, as hereinafter more fully set forth, through provision of string work in which the toe pockets of the individual stocking blanks are integral and continuous all around with the instep portions, and from which the blanks can be readily and quickly removed intact by relatively inexperienced help.

Other objects and attendant advantages will appear from the following detailed description of the attached drawings, wherein

Fig. 1 is a view in side elevation of a seamless stocking conveniently embodying my invention.

Fig. 2 is a perspective view showing the string product of a knitting machine in which successive stocking blanks are detachably connected one to another in accordance with my invention.

Fig. 3 shows the string of Fig. 2 in longitudinal section taken as indicated by the angled arrows III—III in the latter illustration; and

Fig. 4 is a fragmentary diagrammatic detail view showing how the toe of one stocking blank is closed and how such stocking blank is connected to the top of the leg portion of an adjacent blank in the string of Figs. 2 and 3.

In carrying out my invention, by employing the method and the machine disclosed in a co-pending patent application Serial No. 554,350 filed by me on September 16, 1944, I produce string work such as shown in Figs. 2 and 3 consisting of a series of interconnected stocking blanks B each having a tubular leg portion L, a narrowed and widened heel pocket H, a tubular instep portion I and a narrowed and widened toe portion T. The toe and heel pockets are all formed at one side of the string, as ordinarily; but it is to be

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particularly noted that in accordance with my invention, the toe pockets T are attached to the string at the opposite side, and moreover that the top of the leg portion L of each blank B is open and defined in part by a raw edge E of cast loops extending, together with a segment *f* of loose yarn, from the opposite ends of the line *x—x* of attachment of such leg portion to the next adjacent blank B. As diagrammatically exemplified in Fig. 4, the string is produced from continuous yarn, and the terminal loop course *a—a* of the widened gore of each toe pocket T is joined at the juncture *x—x* with the corresponding terminal loop course *b—b* of the instep portion I by loops forming a part of course *c—c*. The course *d* which, for convenience of illustration, is shown as stretched or distorted, constitutes the actual tie between the two adjacent blanks B, and, as shown, is interlooped with the terminal course *a—a* of the widened gore of the toe T of the lower of the two blanks. To separate the blank from its immediate neighbor, the loose yarn segment *f* is cut adjacent the fabric at *p*, and the end loop *l* of the connecting course *d* cut at the point *p'*, whereafter said segment is pulled in the direction of the arrow head thereon, until said connecting course is completely withdrawn.

A stocking blank thus removed from the string will appear as shown in Fig. 1 with a closed toe T in integral continuation all around with its instep portion, and a raw edge extending all around the top of its leg portion L. As a consequence of being formed in the ordinary way by narrowing and widening operations, the heel and toe pockets H and T have the usual diagonal sutures S, S' characteristic of seamless hosiery. Each stocking may be finished by application thereto of a separately knitted top, or by oversewing the raw top edge to preclude subsequent ravelling, after a manner well known in the art. If desired, the heel, toe and foot sole may be reinforced by interknitting an additional yarn into these parts.

Having thus described my invention, I claim:

1. As a new article of manufacture, a knitted product in the form of a string consisting of a series of seamless stocking blanks with closed toes and the top of one blank detachably connected half way round along the crosswise closure line of the toe of an adjacent blank by a removable course of loops formed from yarn used in the knitting of the string.

2. As a new article of manufacture, a knitted product in the form of a string consisting of a

series of seamless stocking blanks with the top edge of the leg portion of one blank detachably connected to the foot of the next blank along the line extending crosswise of the toe pocket of the latter blank at the juncture between the terminal course of such pocket and the corresponding terminal course of the instep portion by a removable course of temporary connecting loops formed from yarn used in the knitting of the string.

3. As a new article of manufacture, a knitted product in the form of a string consisting of a series of seamless stocking blanks with closed toes, in which the leg top of one blank is detachably connected to the adjacent blank along the line of juncture between the terminal course of the toe pocket and the corresponding terminal course of the instep portion of the latter blank by a course of temporary connecting loops formed from yarn used in the knitting of the string.

4. As a new article of manufacture, a knitted product in the form of a string consisting of a series of seamless stockings with closed toes and the top of one stocking connected half way around along the crosswise closure line of the toe of an adjacent stocking.

GEORGE NORMAN.