

March 3, 1931.

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1,795,131

CIRCULAR KNIT HOSIERY AND METHOD OF MAKING SAME

Filed Jan. 28, 1929

2 Sheets-Sheet 1

Fig. 1.

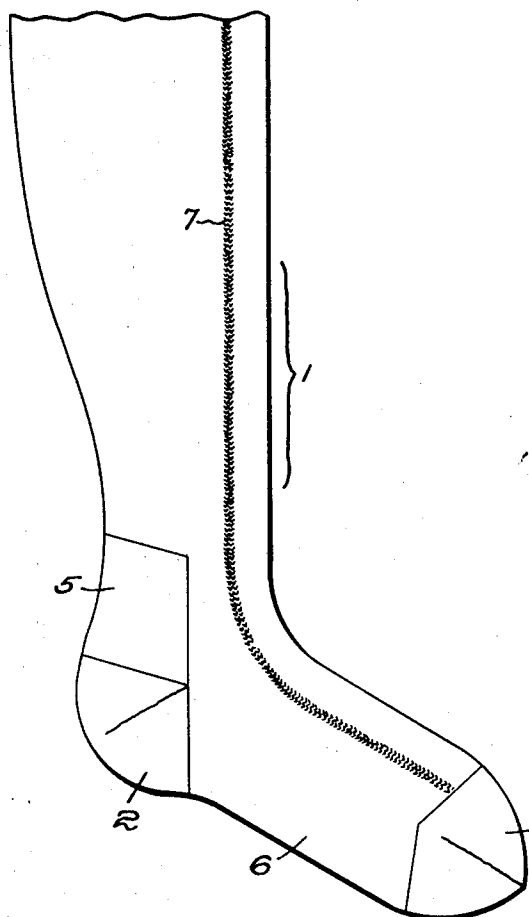


Fig. 2.

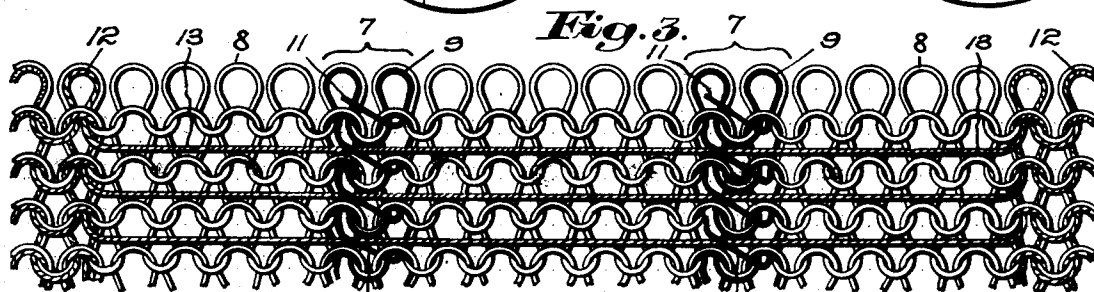
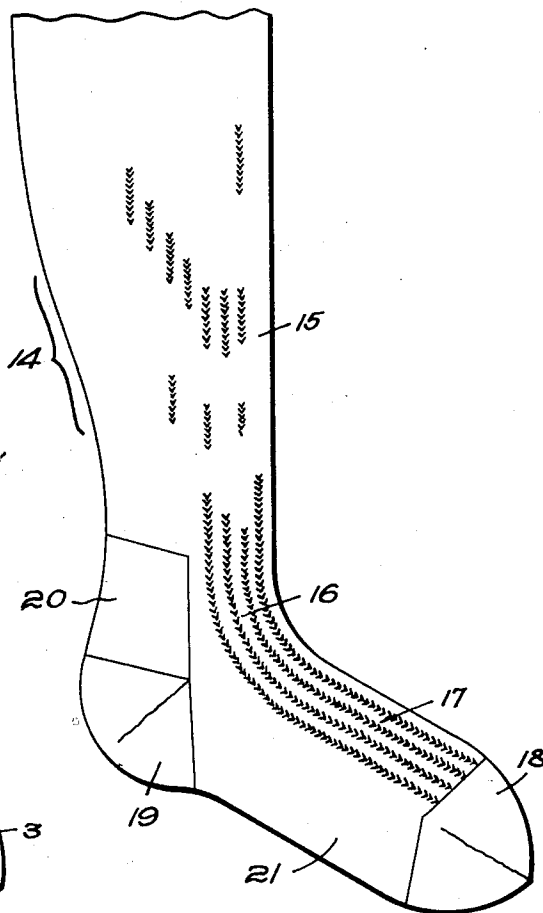
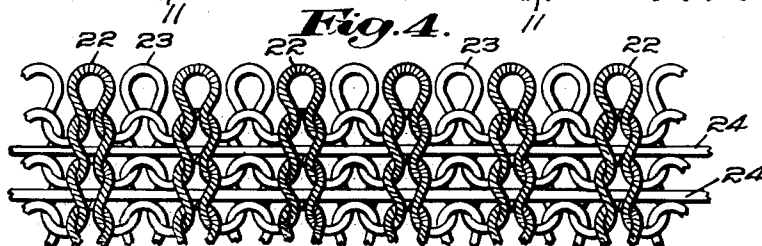


Fig. 4.



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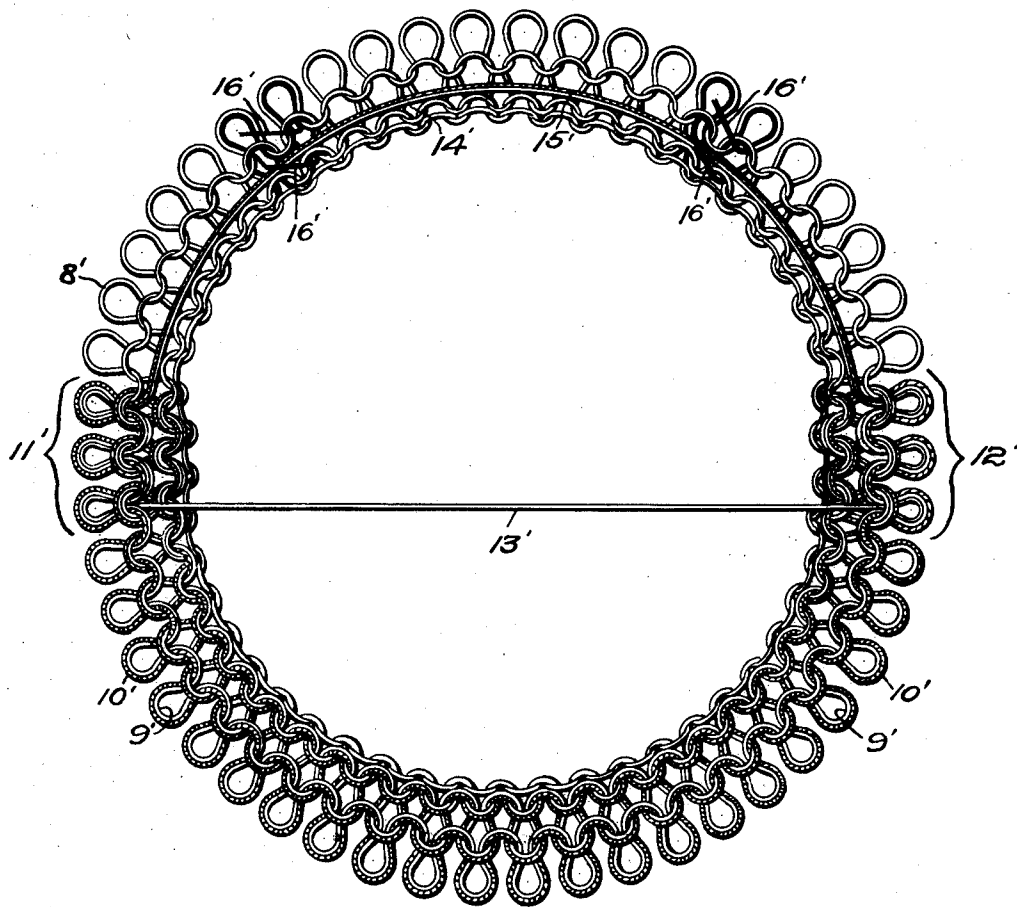
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CIRCULAR KNIT HOSIERY AND METHOD OF MAKING SAME

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2 Sheets-Sheet 2

Fig. 5



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UNITED STATES PATENT OFFICE

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CIRCULAR-KNIT HOSIERY AND METHOD OF MAKING SAME

Application filed January 28, 1929. Serial No. 335,635.

This invention relates to circular knit hosiery and method of making the same.

In order that the principle of the invention may be readily understood, I have shown in the accompanying drawings two embodiments of the invention and shall describe the best mode known to me for practising the method of my invention.

In said drawings:

Fig. 1 is a side elevation of a circular knit stocking constructed in accordance with my invention;

Fig. 2 is a side elevation of a circular knit stocking having ribbed work in the leg and in the front of the ankle and top of the foot, said stocking being constructed in accordance with my invention;

Fig. 3 is a very much enlarged diagrammatic view of a portion of the knitted fabric of a stocking shown in Fig. 1, and clearly showing the temporary binding in of the float threads of the high splice and double sole by the floated portions of the lap stripes;

Fig. 4 is a similar representation of a portion of the fabric of the stocking shown in Fig. 2; and

Fig. 5 is a transverse section through the foot of a stocking upon an enlarged scale showing a further embodiment of the invention.

In Fig. 1, I have represented at 1 a circular knit or so-called seamless stocking having the usual narrowed and widened heel 2 and toe 3. The stocking is also provided with a high splice 5 and a double sole 6 by introducing an additional or reinforcing yarn which is knitted in with the main yarn throughout substantially one half the circle of the needles for the high splice and for the double sole and is floated for the remainder of the circle of needles. Obviously the shape of the high splice may be varied within the scope of the invention as the latter is in no wise dependent upon the shape of the high splice. The principle of my invention applies regardless of the shape of said high splice and also regardless of the exact extent or shape of the sole reinforcement.

The stocking 1 is provided with lap stripes 7, interrupted or otherwise, of suitable num-

ber arranged at desired intervals. Said lap stripes are preferably made by introducing an additional thread or threads at the lap stripe areas and interknitting the said lap threads with the main knitting thread. In Fig. 3, I have represented at 8 the main knitting yarn and at 9 have represented one of the lap threads and have shown the same as knitted therewith for two wales. Obviously the number of wales included within each lap stripe may be greater or less than the number shown, and within the scope of my invention more than a single main yarn 8 may be employed. For example, two main yarns may be fed for the leg and foot of the stocking, in a plating relation.

As shown most clearly at 11 in Fig. 3, each lap thread is floated from each outgoing edge of a lap stripe across to the incoming edge thereof.

The high splice yarn is indicated at 12 in Fig. 3. It is, as stated, interknitted with the main yarn throughout the high splice area, and it or another suitable yarn is interknitted with the foot yarn in reinforcing the sole. Said yarn 12 is floated as indicated at 13 from the outgoing edge of the high splice and the reinforced sole in each course around to the ingoing edge. Heretofore in floating such yarn the same has extended directly across the fabric in a ladder effect to be subsequently cut out or said float thread lies directly against the inner face of the reinforced area. In accordance with my invention I supply an additional amount or length of yarn for each float portion so that in each partial course said float portion lies flat against the inner face or surface of the fabric from outgoing edge of the reinforcing area around to the incoming edge thereof, and in each such partial course each floated portion 13 is passed under the floated portion 11 of the lap stripe, so that each float 13 is temporarily bound in or held by said short float portions 11 of the lap stripes. This binding in occurs at each of the lap stripes whatever their number. After the stocking is completed and removed from the machine, each float thread 13 is cut at its two ends; that is, at the outgoing and incoming edges of the reinforced

areas of the high splice and double sole, and said cut floats are then entirely withdrawn from the fabric, it being evident that said floats are easily drawn out from beneath the short float portions 11 of the lap stripes inasmuch as said floats 13 are not interknitted with the lap stripes.

In Figs. 2 and 4, I have disclosed another embodiment of the invention. Therein is shown a stocking 14, a portion of which is formed by rib knitting, such rib knitted portion preferably being the upper part of the leg 15 and the front of the ankle 16 and the top of the foot 17 down to or about to the toe 18. The heel 19 is of the usual narrowed and widened character and the high splice 20 and the double sole 21 are of the same character as those disclosed in connection with Fig. 1 and may be varied in shape or extent as desired.

In Fig. 4 are shown alternate rib wales and plain wales, the rib wales being indicated at 22 and the plain wale at 23. In accordance with my invention the high splice and the double sole yarn where not interknitted with the main yarn (which desirably is there knitted plain as for example at the high splice and the sole) is floated as indicated at 24, but said floats do not extend straight across the fabric from side to side with a ladder effect, but they lie between the wales of the rib work and plain work, being temporarily bound in thereby, as clearly indicated in Fig. 4. After the knitting has been completed, the said float threads 24 may, if desired, be removed by cutting them at the outgoing and incoming edges of the high splice and double sole. In this embodiment of my invention, however, as shown in Fig. 4, said floats may be left uncut and not be withdrawn from their described position.

The stocking herein disclosed may be made upon any suitable circular machine, as, for example, upon the Banner machine having means (in making the fabric of Fig. 1) for incorporating lap threads or having means (in making the fabric of Fig. 2) for knitting rib work where desired, in which case a suitable dial will be provided with dial needles.

While I have shown the reinforcing yarn knitted in at only one area about the stocking, it is evident that within the scope of my invention the reinforcing or other additional yarn may be interknitted at a plurality of points around the stocking, as, for example, at two opposite points and that the said yarn may be floated where not so knitted in. In such event the said floated portions would be temporarily bound in at and by the float portions 10 of the lap stripe 7 in the manner already described. For example, two opposite, relatively narrow, clocking areas may be provided by an additional yarn and said additional yarn would be floated from one clocking area to the other and

from said other clocking area back again to the first clocking area and so on until the clocking areas are completed. In such case I would or might employ the lap stripes such as 7 and the float portions of the extra yarn which makes the clocks would be temporarily bound in by the float portions 11 of the lap stripes 7. In such embodiment of my invention I might leave said float threads permanently bound in because of the fact that the floats are introduced at two areas. Also it is to be understood that to make such clocks I may use two or more different additional threads contrasting among themselves and also contrasting with the main or body yarn and in each case I would or might bind in temporarily or otherwise in a non-knitted relation the float portions of said several clocking yarns by the float portion of the lap threads or stripes 7.

In Fig. 5, I have shown a still further embodiment of the invention. In making what I term a mock split foot or mock split work stocking, the instep yarn or the front ankle yarn is knitted in one half the needle circle plus two or three needles at each side and then is floated across from side to side. The sole yarn is knitted in half the needle circle whereon the sole portion of the foot is made and overlaps by two or three needles at each side the instep yarn, and then is floated across from side to side. This makes an imitation seam at each side of the foot. My invention may be applied to a stocking constructed in this manner, and in Fig. 5 I have represented the instep yarn at 8' and the main yarn of the sole at 9'. I may in addition employ a reinforcing yarn 10' in the sole. The said several yarns overlap as indicated at 11', 12' to make mock seams on opposite sides of the foot. The instep yarn 8' is floated across, as indicated at 13', and will be cut out after the completion of the knitting. The two sole yarns 9', 10', if two yarns be here employed, are floated as indicated at 14', 15', and are tied in by the float yarns of the lap stripe 16'. If a plurality of lap stripes be employed, as is preferable, the said float yarns 14', 15' (one or both as employed) would be similarly bound in by the floats of the lap stripes. Preferably the said float threads 14', 15', after the knitting is completed, will be severed at the two ends and then drawn out from the stocking.

Having thus described my invention and the best mode known to me for carrying out the process of making the same, it is to be understood that although specific terms are employed, they are used in a generic and descriptive sense and not for purposes of limitation, the scope of the invention being set forth in the following claims.

Claims:

1. A knitted fabric having an additional

yarn interknitted therein at one or more areas and having means for binding, in a non-knitting relation, the floated portion of said additional yarn said means for binding being interknitted with the main yarn.

2. A stocking having one or more reinforcing areas each extending partway only about the stocking with floated portions, and means for temporarily binding, in a non-knitted relation, said floating portion said means for temporarily binding being interknitted with the body yarn of the stocking.

3. A stocking having one or more reinforcing areas each extending partway only about the stocking with floated portions, said stocking having additional threads knitted into the fabric, and binding in a non-knitted relation with floated portions.

4. A stocking having lap stripe areas produced by additional threads interknitted with the main thread, said stocking having a reinforcing yarn or yarns extending partway only about certain courses and floated in the remaining portion of each course, the said floated portions being bound, in a non-knitted relation, between the main yarn and the lap threads, whereby upon severance of said floats they may be pulled out from the lap thread area.

5. A stocking having lap stripe areas produced by additional threads interknitted with the main thread, said stocking having a reinforcing yarn or yarns extending partway only about certain courses and floated in the remaining portion of each course, said reinforcing yarn or yarns being floated from outgoing edge to incoming edge of each lap stripe upon the inner face of the fabric, the float portions of the reinforcing yarns being temporarily bound in by the floated portions of the lap stripe.

6. That method of knitting which comprises knitting plain work and at intervals knitting in a reinforcing or additional yarn and floating said reinforcing or additional yarn where not so interknitted, interknitting another thread with the main yarn and temporarily binding in said floats by portions of said thread.

7. That method of knitting a circular knit stocking which comprises knitting the leg with lap threads at intervals, introducing a high splice or other reinforcing yarn for partial courses only and floating in the remaining parts of courses, said reinforcing yarn, in such manner that the floats are temporarily bound in by the said lap threads.

In testimony whereof, I have signed my name to this specification.

ROBERT H. LAWSON.