

June 24, 1941.

O. FREGEOLLE

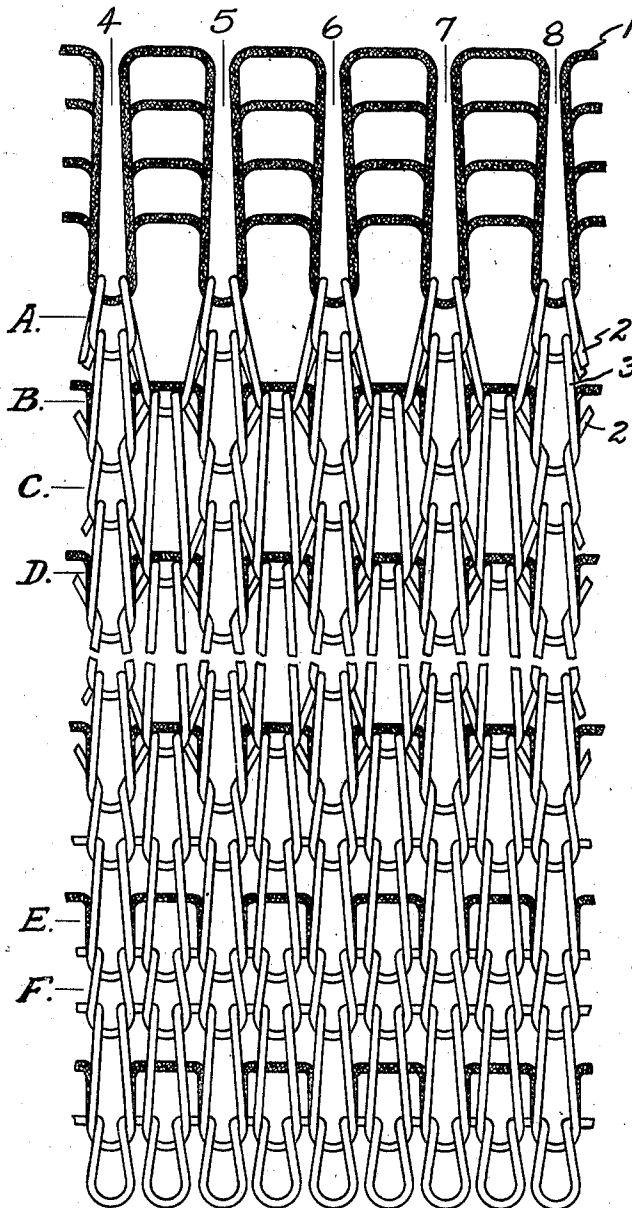
2,247,343

KNITTED FABRIC AND METHOD

Filed April 29, 1940

3 Sheets-Sheet 1

*FIG. 1.*



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FIG. 2.

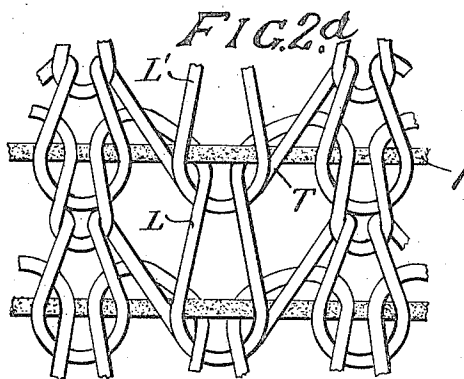
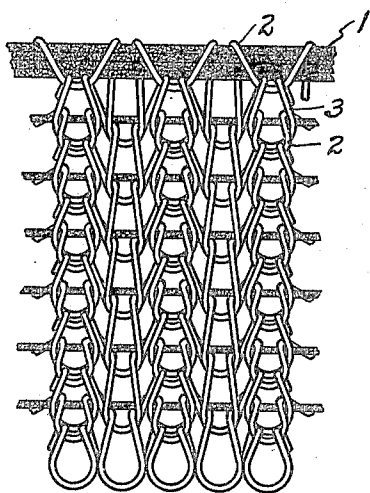


FIG. 5.

FIG. 3.

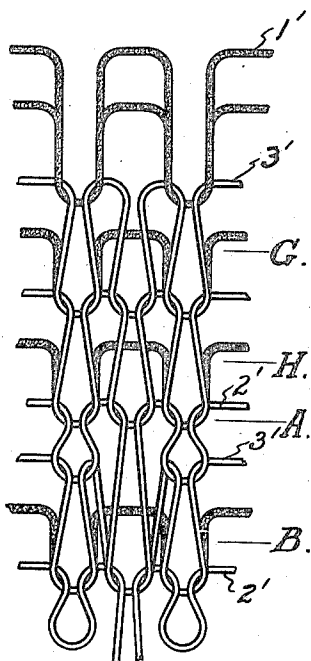
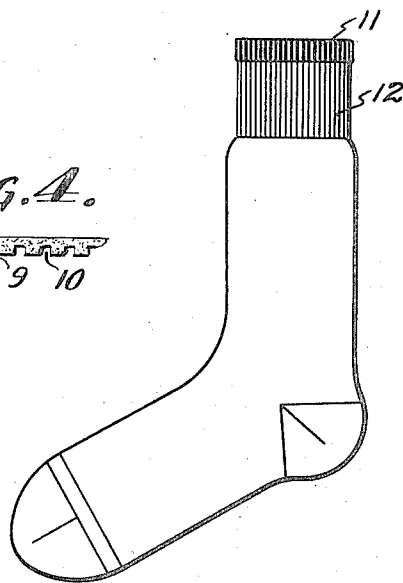
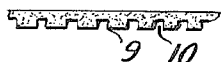


FIG. 4.



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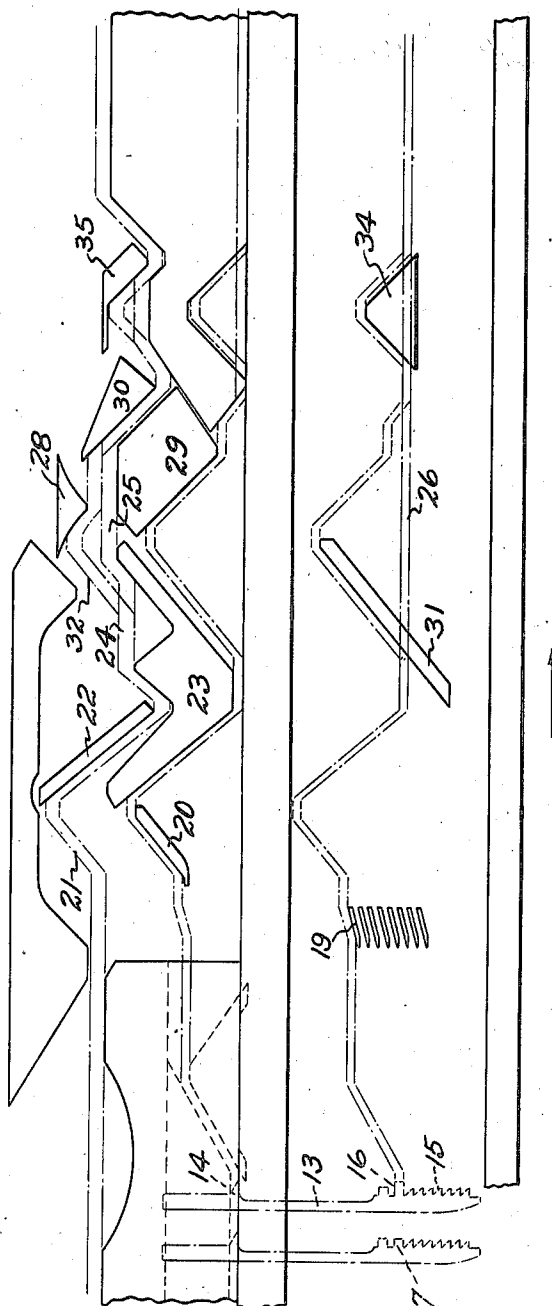
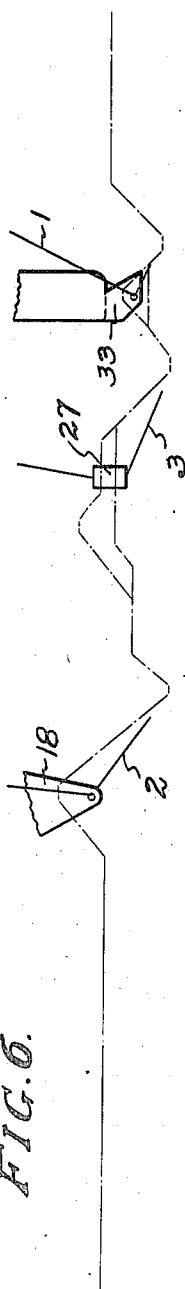
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KNITTED FABRIC AND METHOD

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3 Sheets-Sheet 3

FIG. 6.



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## UNITED STATES PATENT OFFICE

2,247,343

## KNITTED FABRIC AND METHOD

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Application April 29, 1940, Serial No. 332,161

35 Claims. (Cl. 66—172)

This case deals with an invention applicable to the edges of knitted fabric, especially to hosiery or stocking tops. According to the invention, elastic yarn is incorporated at the edge of the fabric to form a selvage and is so knitted in conjunction with non-elastic yarn for a few courses adjacent the edge of the fabric as to render the same substantial and resistant against curling.

In the figures of drawings:

Fig. 1 is a conventional showing of the outer face of a section of fabric, greatly enlarged, and illustrating the manner in which elastic is incorporated according to a preferred form of the invention;

Fig. 2 in a similar view illustrating to some extent the general appearance of the fabric after the elastic yarn has contracted when the fabric has been cast from the machine;

Fig. 2a is a fragmentary view of a portion of the fabric shown in Fig. 2 but upon an enlarged scale;

Fig. 3 is a view similar to Fig. 1 but illustrating a slight modification of the invention;

Fig. 4 is a view taken at the edge of the fabric and showing the manner in which the same is thickened or corrugated at certain points thereby becoming more substantial and resistant to distortion;

Fig. 5 is a conventional illustration of a half-hose to which the invention has been applied; and

Fig. 6 is a diagrammatic view showing cams, needles and jack butt pathways and certain other details incidental to the machine operation and method of knitting employed to produce the fabric.

Referring to Fig. 1, a description will now be given of the fabric and the method of knitting the same, it being understood that this illustration is of a preferred embodiment, but certain variations and changes are contemplated and will be apparent to those skilled in the art. Initially the elastic yarn 1 is fed to the hooks of alternate needles of a circle of needles in an independent needle knitting machine such as a typical hosiery machine. This elastic yarn is preferably fed for about four revolutions of the machine and is not cleared below latches nor cast off during these initial steps. The yarn will merely be taken in the hooks of needles and, as commonly stated, will be "loaded up". The elastic yarn 1 will be fed at some point in advance of a knitting point or main feeding station at which a non-elastic yarn 2 is to be

fed, that yarn 2 being introduced and knitting started at the said main feeding station after a requisite number of courses of the elastic have been loaded. The yarn 2 is taken in the hooks of all needles and the plurality of courses of elastic are cast off as the first course A of non-elastic yarn is drawn, thus constituting courses or rounds of elastic thread in the selvage course.

The elastic will continue to be fed, either to the hooks of needles as in the initial courses, or beneath needle latches, preferably the former. Throughout the remainder of the fabric it is contemplated to incorporate the elastic by laying in in contrast to knitting in, although so far as the invention herein described and claimed is concerned, at the termination of knitting the curl resisting edge, other methods of incorporation of the elastic may be used. If the elastic is first taken in the hooks, it is later to be passed below needle latches in a known manner before reaching the next succeeding main knitting point so that it is laid in rather than knitted. In the construction of the particular top herein described two main knitting stations are preferably employed at one of which the elastic will be inlaid, the other main knitting station merely being an additional station for feeding non-elastic yarn. Thus the elastic ultimately appears in spaced courses, for example, every other course.

Course B is knitted from a second inelastic yarn 3 which is fed at a so-called main yarn feeding station. All needles rise to take this yarn 3, but only alternate needles have their latches cleared so that it is those needles only which cast off previously drawn stitches, intermediate needles merely taking the yarn 3 in addition to previously drawn loops.

At the next course C yarn 2 is again taken by all needles and is drawn through previously held stitches. The elastic 1 was of course taken by alternate needles at the elastic yarn feed and, although taken in the hooks, is cleared below latches before the inelastic yarn is taken and thus merely casts off to be inlaid. Alternate wales 4, 5, 6, 7 and 8, etc., are those knitted by needles into the hooks of which the elastic thread is fed, the said elastic thread thus being inlaid at the said alternate wales. The intermediate wales (not numbered) are the wales knitted by the needles back of which the elastic thread is floated. As this course C is knitted all needle latches are cleared and all previously drawn loops are cast off. In intermediate wales tuck stitches are formed so long as only alter-

nate needle latches are cleared at the main feeding station.

As just described, the elastic yarn or thread is engaged in the hooks or alternate needles which also have therein inelastic yarn loops of course B. The said needles then cast off all loops during the knitting of course C. The foregoing results, in the completed fabric, in an in-laid elastic yarn in course B, i. e., in the second or tuck course of the two-course tuck.

The next course D is a duplicate of course B. It will be noted that in this particular form of the invention described the elastic yarn is first fed throughout several revolutions of the machine at the start of the fabric and that succeeding feeding stations are then brought into action in the order of travel of needles about the machine. For certain reasons this is slightly less desirable from a viewpoint of the machine or method of operation and a modified method resulting in the fabric of Fig. 3 will later be described.

Preferably about six courses of elastic are knitted in the manner described with respect to courses A, B, C and D, it being quite likely that in certain instances with different materials and under different conditions, more or fewer courses may serve effectively. Normally six courses will be found satisfactory in producing a substantially straight and curl resistant edge. After the edge has been knitted in this manner, continuing fabric may be made in which the elastic yarn will merely be inlaid at alternate courses, the distinction being that the tucking in intermediate wales is discontinued. Courses E and F show knitting of the non-elastic yarn on each needle and in each course, and in the course F the elastic yarn is inlaid at every other wale. Naturally the elastic yarn will straighten out since the same is incorporated under a knitting tension. The tension may be varied according to the amount of stretch desired and according to the type of extensibility of the elastic yarn employed. While certain loops in the fabric section of Fig. 1 have been shown much longer than others, and especially longer than they would actually be, this has been done for purposes of distinguishing and identifying the courses in which the elastic is inlaid, it being understood that normally stitches drawn at each of the feeding stations will be substantially of the same length. During the tucking for the courses A, B, C, D, etc., the tuck stitches have their usual effect of drawing the fabric together along the direction of the wales and the elastic courses will be more closely spaced in this initial section of the fabric than will be the case in the continuing part knitted according to the method of courses E, F, etc.

Now referring to Fig. 2, a section of fabric corresponding to the fabric of Fig. 1 is shown wherein the elastic yarn 1 has contracted and has straightened out as it does in actual practice. The contraction of the elastic naturally draws wales in which it is incorporated more closely together and will render the resulting product rib-like in nature. At the very edge, the first four courses of elastic will be drawn into somewhat of a bead, the size of the same depending upon the size of the elastic and the number of courses loaded within needle hooks. The lateral contraction of the fabric is not shown in this Fig. 2 since stitch structure would not be as well illustrated if the

figure were so drawn. Depending upon the tension employed, wales in which the elastic yarn is held will be drawn more or less closely together and thus the rib appearance may be varied within certain limits.

Normally one section of fabric knitted to contain about six courses of elastic will constitute enough of an edge to resist curling and to present a satisfactory appearance. In certain instances it may be desired to knit one such section, then to knit a course or a few courses of plain work with the elastic inlaid or otherwise incorporated, and to knit a second such section before continuing in the plain knitting and in-laying throughout the remainder of the stocking top. Elastic may be withdrawn and plain courses intervene between the first six or more courses constituting the edge and continuing elastic fabric, or between two such curl resisting sections.

In Fig. 3 a modification is shown wherein, instead of feeding the elastic yarn to load needles and thereafter introducing the following yarns in sequence, the next following yarn is not inserted until two or more courses of yarn fed at the main feeding station are first knitted. According to the first form of the invention tucking is started just as soon as the non-elastic yarns are introduced but in this form tucking is not started until both non-elastic yarns begin to feed, that is, until after the two or more courses above mentioned. The elastic yarn 1' is first loaded within needle hooks for any desirable number of revolutions of the machine, two revolutions being shown herein. Thereafter a yarn 3' corresponding to yarn 3, Fig. 1, is introduced to knit on every needle at a so-called main side of the machine. The elastic yarn continues to be inlaid and two non-tuck courses G and H are knitted in this main side of the machine with the elastic inlaid whereupon the second non-elastic yarn 2', similar to the yarn 2, Fig. 1, is brought into action. In actual practice something closer to two and one-half courses are knitted this being necessary due to the construction of the machine, although two courses are referred to since that is what is generally attempted to be approached.

The final disposition of the elastic threads, such as the thread 1, in the knitted fabric, is more clearly illustrated in the enlarged fragmentary fabric view, Fig. 2a. As shown in said Figure 2a, the elastic thread 1 is held or clamped at the tuck stitch wales, the said elastic thread 1 passing in front of a loop L and in back of the preceding course loop L' and tuck loop T. The consequent binding of the elastic at the tuck wales causes the said wales to be drawn to the back, i. e., inner face, of the fabric.

When the yarn 2' is introduced, tucking is started at the main feed by withdrawing the front stitch cam to prevent needle latches clearing and by introduction of a selective clearing cam functioning on jacks, or by any other satisfactory means. Thereafter knitting continues as in Fig. 1, courses A' and B' corresponding to courses A, B, C, D, etc.

Now referring to Figs. 4 and 5, the outward appearance of the edge is shown, there being in Fig. 4 certain projections 9 and indentations 10 at the face of the fabric, this giving a rib appearance, and since the tuck wales draw the fabric together along its length and shorten them relatively to those wales which stand out at the front of the fabric, the natural tendency of

plain work to curl and roll outwardly is practically eliminated. The actual and apparent thickness of the material is increased and thus the edge, as shown at 11 in Fig. 5, has the appearance of being greatly thickened as a welt or hem. In this Fig. 5 the top continues as at 12, the remainder of the stocking being conventional, or of any desired construction. Application of the invention is not limited to any particular type or class of hosiery, but the same may be used on anklets, half-hose, children's wear and ladies' stockings of knee or full length.

Now referring to Fig. 6, mechanism is shown which is adapted to produce the fabric structure herein described and claimed, although it is to be understood that other mechanism may be employed so long as suitable selectivity is available and so long as the elastic is inlaid on alternate needles in alternate courses while at the edge for six or more courses as described, the non-elastic yarns may be tucked. Preferably circular independent needle machines are to be used. It is a characteristic of inlaying that inlaid yarns are actually engaged by the needle and sinker loops and are held by those wales intermediate the wales knitted by needles below the latches of which the yarn w. to be inlaid. Thus it is the intermediate wales by which the elastic yarn is held and which wales are drawn to the back of the fabric, those being the wales which are tucked. The alternate wales come to the front of the fabric upon contraction of the elastic yarn.

Latch needles are preferably employed and jacks 13 are to be used below needles for accomplishing selection of the needles for taking the elastic yarn and for other selective purposes. These jacks each have a master butt 14, selective butts 15 and certain ones, namely, alternate needle jacks, a long butt 16. Intermediate needle jacks have a short butt 17. One inelastic yarn such as the yarn 2 is fed through a yarn guide 18 and all needles rise to take that yarn, being selected by their jacks as butts 16 and 17 rise up selector 19 after which master butts 14 contact cam 20 raising needle butts in a pathway 21. Cam 22 is a knitting cam and immediately draws down all needles so that they take the yarn 2 and knit it. A cam 23 has several functions, one of which is to raise the needle butts first to a pathway 24 and thereafter to a second height 25 which is incidentally high enough to cause needles to take yarn but not to clear their latches. Another function of the cam 23 is to return jacks to a lowermost position so that their butts travel along in a pathway 26. The yarn 3 is fed through a yarn guide 27 at a so-called main yarn feeding station at which cams 28, 29 and 30 control needle butts causing the needles to take yarn and knit.

Cam 30 is the ordinary rear stitch cam and while there is a cooperating front stitch cam, it is withdrawn during the knitting of tuck work such as in the courses A, B, C, D, etc., and has not been illustrated in this Fig. 6. A cam 31 engages long butts 16 thereby elevating the jacks so as to raise needles so that their butts shall move in a pathway 32, which serves to clear needle latches. Since there are jacks 16 under alternate needles only, those needles will clear and will knit off at this main yarn feeding station while intermediate needles raised to a lesser height take yarn but do not clear their latches. After knitting at the main feeding station, alternate needles are elevated to take the elastic

yarn which is fed through a yarn guide 33. A cam 34 engages long jack butts 16 and elevates the appropriate needles just high enough to take the elastic yarn in their hooks. The remaining needles pass along at a level too low to engage the said yarn but pass in front of the elastic yarn which is thus floated behind these needles. A cam 35 moves needles downwardly in something like a stitch drawing wave, although no latches were cleared and no stitches are actually drawn through other loops. This drawing is merely for purposes of taking the elastic and for measuring a sufficient amount of the same so as to impart to the resulting fabric a requisite amount of lateral extensibility.

The elastic yarn 1 taken at this point is actually inlaid as needles are raised for clearing at the first described feeding station and upon taking the non-elastic yarn 3. In knitting the form of the invention illustrated in Figs. 1 and 2, the elastic yarn would first be moved to feeding position and cam 34 would be moved to engage butts 16 and to raise needles for taking that elastic yarn. Other cams which are movable would not be in position, or at least, no cams would be in position which would tend to cast off or clear latches as needles pass through the other two feeding stations. After the first courses of elastic have been loaded in the hooks of needles, yarn 2 is dropped in and thereafter the yarn 3. In the modification illustrated in Fig. 3 the yarn 3 is dropped in for two revolutions or approximately that, and the elastic is inlaid at each of these courses. Thereafter the yarn 2' is introduced whereupon knitting continues with all three feeds in operation. While tucking is being done, the front stitch cam (not illustrated) is withdrawn and cam 31 moved to butt engaging position. When discontinuing tucking the said front stitch cam would be moved back into active position and would raise all needles clearing their latches so that all would knit.

The feeding of the elastic is preferably to the hooks of needles, but the same may be fed below needle latches for clearing the same according to the method described in Getaz patent #2,054,217, and in Sturgess (Br.) Patent No. 4,418, of 1886. The elastic may be drawn in the throats of sinkers, but more preferably is to be drawn over sinker nibs so that a greater length of elastic may be incorporated in each course than would otherwise be the case. In drawing over the nibs, sinkers are to be provided with more or less horizontal surfaces above their nibs and are to be projected inwardly at the appropriate time so that the elastic yarn will be drawn over these horizontal surfaces or edges. Thus needles may be drawn downwardly and may measure off almost any desired amount of elastic depending upon the height of this drawing edge over the nibs. While the elastic is fed under as light tension as is commercially practicable, considerable stretch is imparted to it as it is taken by the needles especially in the use of relatively fine elastic. Since covered elastic has only a predetermined amount of stretch permissible, if very much stretch is imparted to the material before it is incorporated in the fabric, there will not be enough extensibility in the stocking top produced, this having been evidenced by tightness on the leg of the wearer, and more especially, as certain tops have been found very difficult to pull on over the heel.

This drawing of the elastic which is later to be inlaid or otherwise incorporated may be prac-

ticed at any point about the needle circle and in advance of that feed at which the said elastic is to be inlaid or knitted. Before reaching the inlaying or knitting point sinkers will be drawn radially outward enough to drop the elastic from the nibs, it then lying in the throats of sinkers. When dropped from said nibs the elastic will be more or less relaxed and tension therein will approach a minimum. Obviously if enough elastic is drawn it will have no tension after dropping from the nibs and will lie in completely relaxed condition. This is exceedingly advantageous when knitting plating work or any other type of work wherein placement of yarns in a needle hook or maintenance of their position is important. When an elastic yarn under considerable tension, is interlaced with needles as by feeding to alternate needles and floating behind intermediate, for example, the needles themselves will be bent to and fro so that their alignment is very materially disturbed. When feeding two yarns in plating relation to needles thus bent it is practically impossible to secure satisfactory results. When drawing over the nibs of sinkers as above described tension may be reduced to such a point that as the plating yarns are fed needles will be in nearly perfect alignment.

The form of the invention illustrated in Fig. 3 is the more practical form in that of elastic is to be loaded in the needles at the start for several courses before throwing in a non-elastic yarn, the needle hooks will retain that loaded elastic better if needles are in alignment. The inelastic yarn will also be taken within needle hooks more accurately if the yarn 3 is thrown in first rather than the yarn 2. At the feeding station at which yarn 2 is fed elastic still lies over the tops of sinker nibs and is in stretched condition so that there is a certain amount of misalignment or staggering of adjacent needles. At the main feeding station this is eliminated, or at least, diminished, and the main yarn may be taken in needle hooks with less chance of error than if knitting of non-elastic yarn were begun at the feeding station at which yarn 2 is fed.

Wherever in the claims references is made to "plain knitted" fabric, the intention is to distinguish from what is commonly referred to as rib knitted fabric, i. e., fabric knitted with two sets of opposed needles.

Wherever in the claims reference is made to "alternating tuck and knitted courses," the intention is to call for alternating courses such as B and C, Fig. 1, the course B being a tuck course and the course C being a knitted course.

In knitted fabrics "the outer face" of the fabric is that face of the fabric to which loops are drawn, i. e., the face of the fabric illustrated in Figs. 1 and 2.

Wherever in the claims reference is made to "tuck stitches," it is the intention thereby to refer to such tuck stitches as are defined by accumulation loops or stitches, e. g., a two-course tuck.

The elastic thread is inlaid in the fabric by being fed to the hooks of the needles that knit the alternate wales 4, 5, 6, 7, 8, etc. Wherever in the claims reference is made to the elastic thread being inlaid at certain wales as distinguished from intervening wales, it will be understood that the alternate wales 4, 5, 6, 7, 8, etc. are the wales referred to specifically.

Wherever in the claims reference is made to a seamless knitted stocking or stocking top, it is

the intention to limit the claim or claims to stockings or stocking tops made on circular knitting machines as distinguished from full fashioned knitting machines.

The invention has been described with respect to certain more or less definite examples wherein spacing of wales and courses in which the elastic has been incorporated has been somewhat arbitrary, but this is not limiting since other combinations than a 1 x 1 spacing of needles and every other course in knitting are contemplated. The elastic might be so fed by introduction of more feeding stations as to be spaced three or four courses apart, and it is quite possible that a 2 x 1, 2 x 2 or a 2 x 2 relation of needles might be employed to obtain slightly different rib effects and yet the principles of the invention still apply. The invention is defined in the appended claims.

I claim:

1. A method of knitting an edge for a plain knitted fabric including the steps of drawing an elastic yarn so that a plurality of loops thereof will be held at alternate wales and then drawing a non-elastic yarn and casting off said loops of elastic yarn, thereafter, drawing several courses of non-elastic yarn while inlaying an elastic yarn at alternate wales and tucking the non-elastic yarn at intermediate wales.

2. A method of knitting an edge of a plain knitted fabric including the steps of drawing elastic yarn so as to form a selvage at the initial course, then forming a plurality of courses of non-elastic yarn by knitting at each course in alternate wales and tucking at intermediate wales only and inlaying the elastic yarn at alternate wales so that the same will be held between sinker and needle loops of stitches of intermediate wales which have been tucked.

3. A method of knitting at the edge of a plain knitted stocking top including the steps of forming a selvage by incorporating the elastic yarn to be held at all sinker wales of an initial course of non-elastic yarn, knitting following courses of non-elastic yarn so that at alternate wales stitches of the non-elastic yarn are knitted into plain loops while at intermediate wales they are tucked, and incorporating an elastic yarn in alternate courses only so that said elastic yarn will be inlaid to be held between sinker and needle loops of stitches which have been tucked at said intermediate wales.

4. A method of knitting at the edge of a plain knitted stocking top including the steps of forming a selvage by incorporating an elastic yarn to pass through all sinker loops of an initial course of non-elastic yarn, knitting following courses of non-elastic yarn so that at alternate wales in each course the said non-elastic yarn will be knitted off whereas at intermediate wales the said non-elastic yarn will be tucked so as to knit off at alternate courses only, and inlaying tensioned elastic yarn in alternate courses and at alternate wales.

5. A plain knitted fabric having an edge including elastic and non-elastic yarns, the initial course of non-elastic yarn having a plurality of courses of elastic yarn passing through each sinker loop thereof, following courses of non-elastic yarn knitted at each course at alternate wales and tucked at intermediate wales so that in alternate courses only the said non-elastic yarn is cast off, the elastic yarn being incorporated by inlaying under tension in alternate courses only and at the said alternate wales

whereby the same is held between sinker and needle loops at intermediate wales so that on contraction of the elastic the said intermediate or tucked wales will be drawn to the back of the fabric and the knitted wales will be forced to the face.

6. A plain knitted stocking top having an edge including an initial course of non-elastic yarn through the sinker loops of which several courses of elastic yarn are passed to form a selvage, following courses of non-elastic yarn knitted at alternate wales and tucked only at intermediate wales, and tensioned elastic yarn inlaid at alternate wales and in alternate courses only, the aforesaid construction being such that intermediate wales are drawn to the back of the fabric and alternate wales appear at the face.

7. A plain knitted stocking top, the initial courses of which are alternately tucked and knitted, the tuck courses comprising alternating tuck and knitted wales, tensioned elastic yarn being inlaid in the said courses and being held in sinker loops, the tuck wales being the inner face wales of the fabric.

8. A plain knitted stocking, elastic yarn passing through the selvage loops thereof, the following courses consisting of alternating two-course tucked and knitted wales, the two-course tuck wales occurring in repetition through a plurality of courses, tensioned elastic yarn inlaid and held by the sinker loops spanning the knitted wales, the said elastic yarn being in the tuck course of the two-course tuck, the tuck wales being on the inner face of the fabric, and the elastic yarn appearing as floats across wales on the inner face of the fabric, whereby to resist the natural outward curling tendency of the plain knitted stocking top.

9. A plain knitted stocking top having elastic yarn in the selvage course, courses adjacent to the selvage course including alternating plain knitted and tuck wales, and tensioned elastic yarn being inlaid at the plain knitted wales, the said tuck wales being at the back of the fabric and cooperating with the inlaid, tensioned elastic yarn materially to reduce the curling tendency of the plain knitted selvage.

10. A plain knitted stocking top having elastic yarn in the selvage course, courses adjacent to the selvage course including intermediate tuck stitch wales and alternate non-tuck wales with elastic yarn inlaid at the non-tuck wales, the said tuck wales and inlaid, tensioned elastic yarn cooperating to provide a rib top and materially reduce the curling tendency of the plain knitted selvage.

11. A plain knitted stocking top having elastic yarn in the selvage course, courses adjacent to the selvage course including tuck wales and inlaid, tensioned elastic yarn, the said tuck wales being at the back of the fabric and cooperating with the inlaid elastic yarn to materially reduce the curling tendency of the plain knitted selvage.

12. A plain knitted stocking top having elastic yarn in the selvage course, courses adjacent to the selvage course including intermediate tuck stitch wales and alternate non-tuck wales with inlaid, tensioned elastic yarn, the said tuck wales being at the back of the fabric and cooperating with the inlaid elastic yarn to materially reduce the curling tendency of the plain knitted selvage.

13. A plain knitted stocking top having elastic yarn in the selvage course, courses adjacent to the selvage including intermediate tuck wales

and alternate non-tuck wales at which tensioned, elastic yarn is inlaid, the said elastic yarn being held at the tuck wales, the construction being such that the said tuck wales appear at the back of the fabric.

14. A stocking, the top whereof is plain knitted and includes inlaid, tensioned elastic yarn, the said stocking top including courses having tuck stitches at recurrent wales only, tuck stitches being the first stitches of the said tuck wales, the tuck wales being at the back of the fabric and in cooperation with the inlaid elastic cooperatively resisting the curling tendency of the plain knitted stocking top.

15. A plain knitted stocking top, elastic yarn passing through the loops of the first course and constituting a selvage, courses adjacent to the selvage course including tuck courses consisting of alternating knitted and tuck wales, tensioned elastic yarn being inlaid at the knitted wales thereby causing the tuck wales to be at the back of the fabric of the stocking top, there being a non-tuck course intervening between the selvage course and the tuck courses, the tuck courses and inlaid elastic yarn cooperatively resisting curling of the selvage.

16. A plain knitted stocking top, elastic yarn passing through the loops of the first course and constituting a selvage, courses adjacent to the selvage course including tuck courses consisting of alternating knitted and tuck wales, tensioned elastic yarn being inlaid at the knitted wales thereby causing the tuck wales to be at the back of the fabric of the stocking top, there being a non-tuck course intervening between the selvage course and the tuck courses, the said intervening course including inlaid, tensioned elastic yarn, the tuck courses and inlaid elastic yarn cooperatively resisting curling of the selvage.

17. A plain knitted stocking top, elastic yarn passing through the loops of the first course and constituting a selvage, courses adjacent to the selvage course including tuck courses with inlaid, tensioned elastic yarn, the said tuck courses having tuck stitches in recurrent wales only, said tuck wales being at the back of the fabric, there being a non-tuck course intervening between the selvage course and the tuck courses, the tuck courses and inlaid elastic yarn cooperatively resisting curling of the selvage.

18. A plain knitted stocking top, elastic yarn passing through the loops of the first course and constituting a selvage, courses adjacent to the selvage course including tuck courses with inlaid, tensioned elastic yarn, the said tuck courses comprising tuck stitches in recurrent wales only, said wales being at the back of the fabric, there being a non-tuck course intervening between the selvage course and the tuck courses, the said intervening course including inlaid elastic yarn, the tuck courses and inlaid elastic yarn cooperatively resisting curling of the selvage.

19. A plain knitted stocking top, elastic yarn passing through the loops of the first course and constituting a selvage, courses adjacent to the selvage course including tuck courses comprising intermediate tuck wales and alternate non-tuck, knitted wales, the said tuck courses including tensioned elastic yarn inlaid at the alternate wales, the said elastic yarn being held at the intermediate, tuck wales, the said tuck wales appearing at the back of the fabric, there being a non-tuck course intervening between the selvage course and the tuck courses, the

tuck courses and inlaid elastic yarn cooperatively resisting the curling of the selvage.

20. A plain knitted stocking top, elastic yarn passing through the loops of the first course and constituting a selvage, courses adjacent to the selvage course including tuck courses comprising intermediate tuck wales and alternate non-tuck knitted wales, the said tuck courses including tensioned elastic yarn inlaid at the alternate wales, the said elastic yarn being held at the intermediate, tuck wales, the said tuck wales appearing at the back of the fabric, there being a non-tuck course intervening between the selvage course and the tuck courses, the said intervening course including inlaid elastic yarn, the tuck courses and inlaid elastic yarn cooperatively resisting curling of the selvage.

21. A plain knitted, seamless stocking top including elastic yarn in the selvage course, courses adjacent to the selvage course including recurrent tuck wales with inlaid, tensioned elastic yarn, said elastic yarn being in non-adjacent courses only, the said tuck wales and inlaid elastic yarn cooperating to form a rib top and materially to reduce the curling tendency of the plain knitted selvage.

22. A plain knitted stocking top including elastic yarn in the selvage course, courses adjacent to the selvage course including alternate, non-tuck knitted wales and intermediate, tuck wales, tensioned, elastic yarn being inlaid at the alternate wales, said elastic yarn being in non-adjacent courses only, the tuck wales and inlaid elastic yarn cooperating to form a rib top and materially to reduce the curling tendency of the plain knitted selvage.

23. A plain knitted stocking top including elastic yarn in the selvage course, courses adjacent to the selvage course including recurrent tuck wales at the back of the fabric, said last mentioned courses including inlaid, tensioned elastic yarn, said elastic yarn being in non-adjacent courses only, the said tuck wales and inlaid elastic yarn cooperating materially to reduce the curling tendency of the plain knitted selvage.

24. A plain knitted stocking top including elastic yarn in the selvage course, courses adjacent to the selvage course including alternate, knitted wales and intermediate, tuck wales, said tuck wales being at the back of the fabric, tensioned elastic yarn being inlaid at the alternate wales, said elastic yarn being in non-adjacent courses only, the tuck wales and inlaid elastic yarn cooperating materially to reduce the curling tendency of the plain knitted selvage.

25. A plain knitted stocking top including elastic yarn in the selvage course, courses adjacent to the selvage course including alternate, knitted wales and intermediate, tuck wales, tensioned elastic yarn being inlaid at the knitted wales and held at the tuck wales, the construction being such that the tuck wales appear at the back of the fabric, the said elastic yarn being in non-adjacent courses only, the said tuck wales and inlaid elastic yarn cooperating materially to reduce the curling tendency of the plain knitted selvage.

26. A plain knitted stocking top having elastic yarn in the selvage course, following courses being alternately tucked and knitted, the tuck courses comprising alternating tuck and knitted wales, tensioned elastic yarn being inlaid in some, at least, of the said sinker courses and being held between cooperating sinker and tuck loops

whereby the tuck wales constitute the inner face wales of the fabric.

27. A plain knitted stocking having a selvaged top, the loops of the selvage course being of non-elastic yarn and having tensioned elastic yarn passing therethrough, the following course having loops of non-elastic yarn at all the wales and an inlaid elastic yarn, the next following course having knitted loops of non-elastic yarn at all the wales, and the next following course having an inlaid elastic yarn and knitted loops at alternate wales and tuck loops at intermediate wales.

28. A plain knitted stocking top, elastic yarn passing through the loops of the first course and constituting a selvage, courses adjacent to the selvage course including tuck courses with inlaid, tensioned elastic yarn, the said tuck courses comprising tuck stitches in recurrent wales only, said tuck wales being at the back of the fabric, the inlaid elastic yarn and tuck stitches cooperatively resisting curling of the selvage.

29. A plain knitted, seamless stocking top including elastic yarn in the selvage course, courses adjacent to the selvage course including recurrent tuck wales with inlaid, tensioned elastic yarn, said tuck wales and inlaid elastic yarn cooperating to form a rib top and materially to reduce the curling tendency of the plain knitted selvage.

30. A plain knitted, seamless stocking top including elastic yarn in the selvage course, courses adjacent to the selvage course including recurrent tuck wales with inlaid, tensioned elastic yarn, said elastic yarn being in adjacent courses, the said tuck wales and inlaid elastic yarn cooperating to form a rib top and materially to reduce the curling tendency of the plain knitted selvage.

31. A plain knitted stocking top having elastic yarn in the selvage course, following courses being alternately tucked and knitted, the tuck courses comprising alternating tuck and knitted wales, tensioned elastic yarn being inlaid in adjacent courses and being held between cooperating sinker and tuck loops whereby the tuck wales constitute the inner face wales of the fabric.

32. A plain knitted stocking top having elastic yarn in the selvage course, following courses being alternately tucked and knitted, the tuck courses comprising alternating tuck and knitted wales, tensioned elastic yarn being inlaid in non-adjacent courses and being held between cooperating sinker and tuck loops whereby the tuck wales constitute the inner face wales of the fabric.

33. A plain knitted stocking having a selvaged top, the loops of the selvage course being of non-elastic yarn and having tensioned elastic yarn passing therethrough, the said selvage course also having inlaid elastic yarn, the following course having loops of non-elastic yarn at all the wales and an inlaid elastic yarn, the next following course having knitted loops of non-elastic yarn at all the wales, and the next following course having an inlaid elastic yarn and knitted loops at alternate wales and tuck loops at intermediate wales.

34. A plain knitted stocking having a selvaged top, the loops of the selvage course being of non-elastic yarn and having tensioned elastic yarn passing therethrough, the following course having knitted loops at alternate wales and tuck loops at intermediate wales and an inlaid

elastic yarn, the next following course having knitted loops of non-elastic yarn at all the wales, and the next following course having inlaid elastic yarn and knitted loops at alternate wales and tuck loops at intermediate wales.

35. A plain knitted stocking having a selvaged top, the loops of the selvage course being of non-elastic yarn and having passing there-through a plural number of strands of elastic

yarn, the following course comprising loops of non-elastic yarn in all the wales and an inlaid elastic yarn, the next following course comprising knitted loops at all the wales, the next following course comprising knitted loops at alternate wales and tuck loops at intermediate wales and an inlaid elastic yarn.

OSCAR FREGEOLLE.