

Feb. 16, 1943.

O. FREGEOLLE

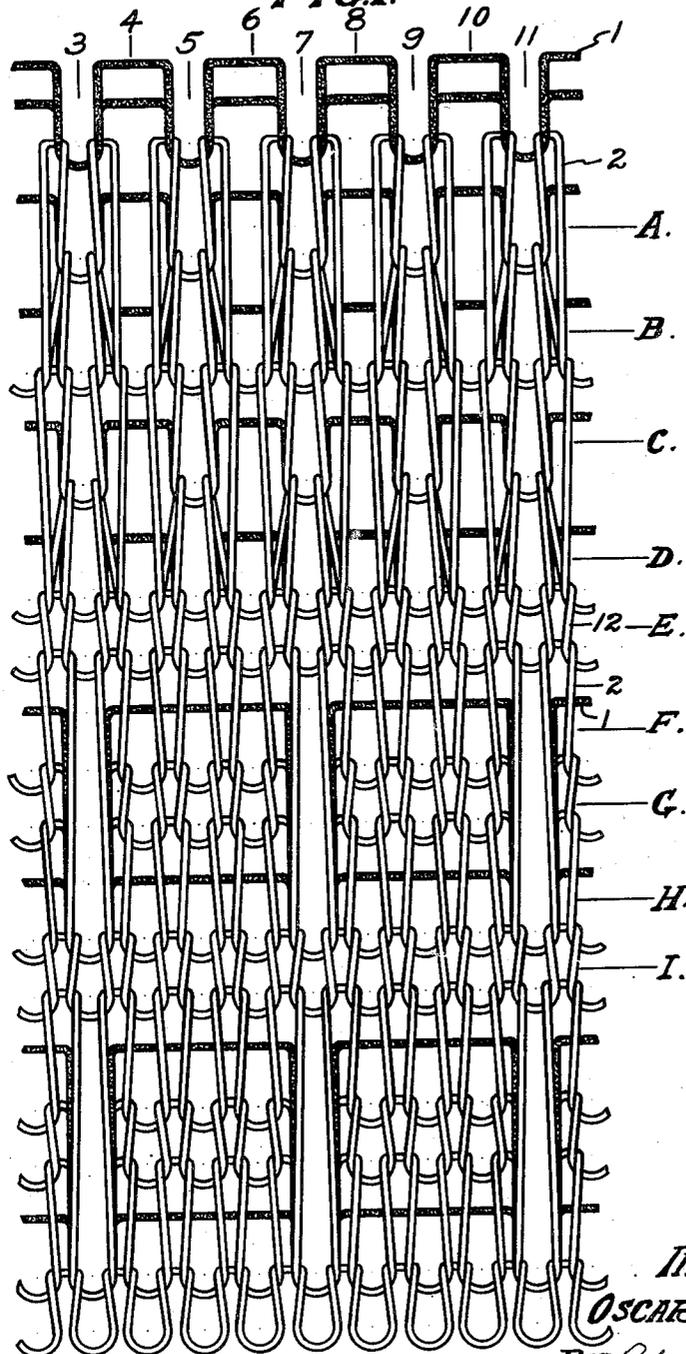
2,311,166

KNITTED FABRIC AND METHOD

Filed March 28, 1942

4 Sheets-Sheet 1

FIG. 1.



INVENTOR:  
OSCAR FREGEOLLE  
BY Rodney C. Southworth  
ATTY.

Feb. 16, 1943.

O. FREGEOLLE

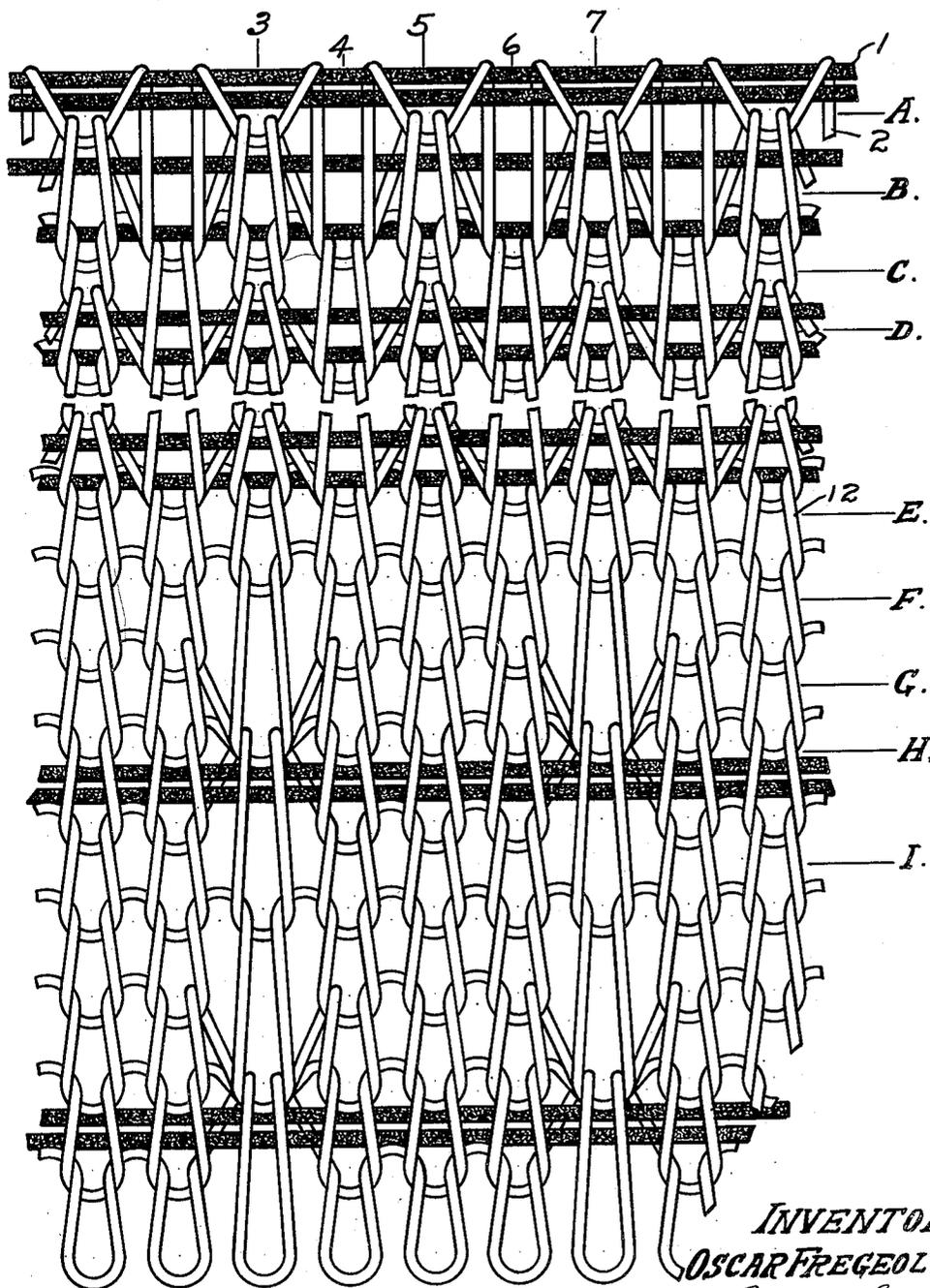
2,311,166

KNITTED FABRIC AND METHOD

Filed March 28, 1942

4 Sheets-Sheet 2

FIG. 2.



INVENTOR:  
OSCAR FREGEOLLE,  
By Rodney C. Swarthoutt  
ATT'Y.

Feb. 16, 1943.

O. FREGEOLLE

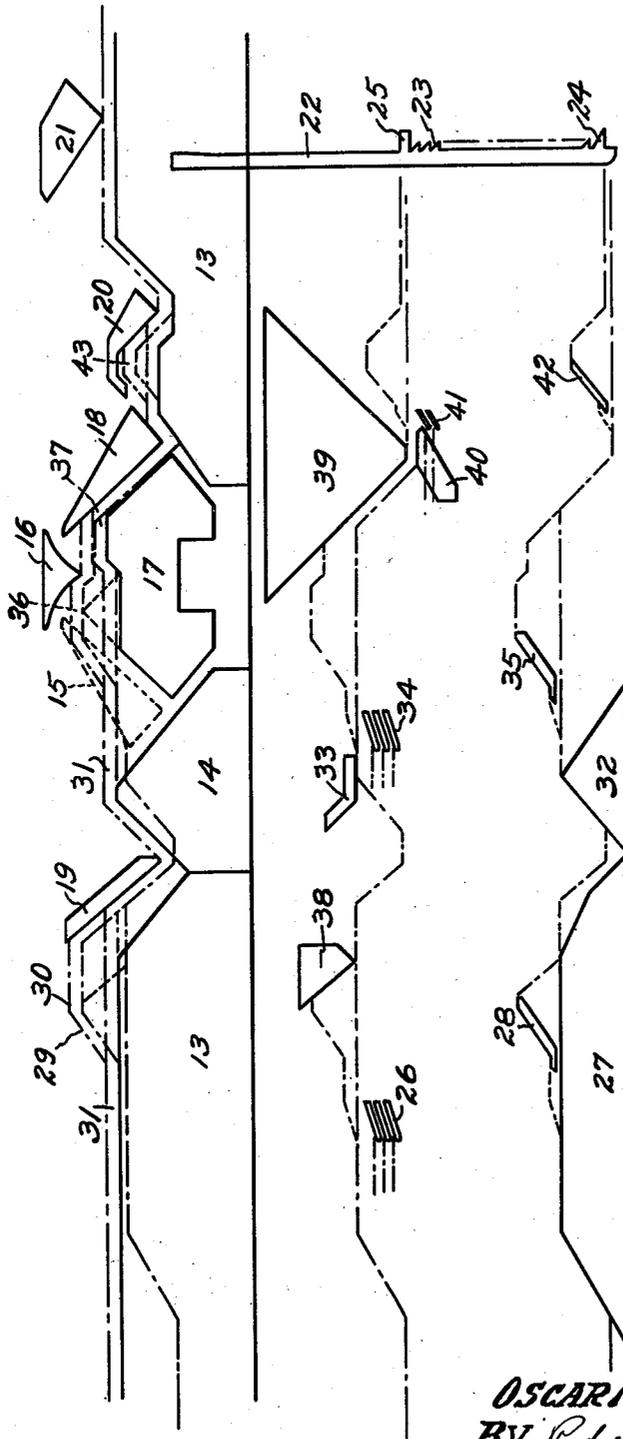
2,311,166

KNITTED FABRIC AND METHOD

Filed March 28, 1942

4 Sheets-Sheet 3

FIG. 3.



INVENTOR:  
OSCAR FREGEOLLE,  
BY Rodney C. Smith  
ATT'Y.

Feb. 16, 1943.

O. FREGEOLLE

2,311,166

KNITTED FABRIC AND METHOD

Filed March 28, 1942

4 Sheets-Sheet 4

FIG. 4

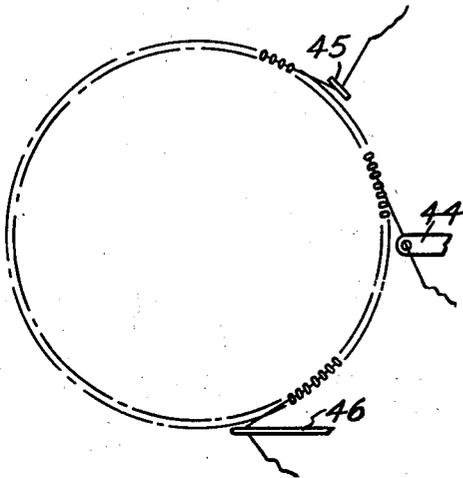


FIG. 6.

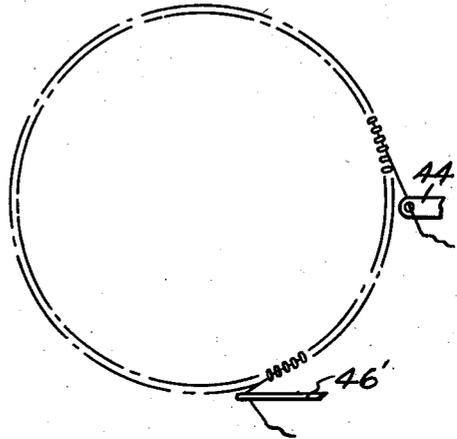


FIG. 5.

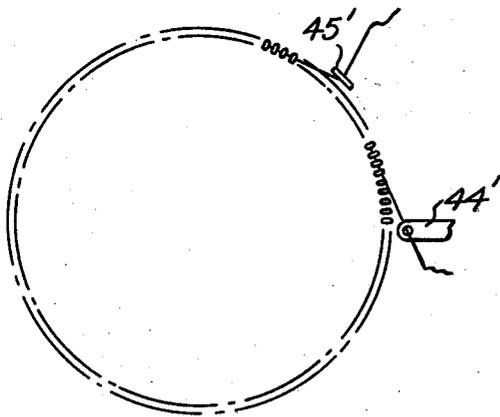
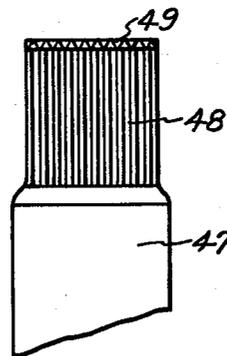


FIG. 7.



*INVENTOR:*  
*OSCAR FREGEOLLE,*  
*By Rodney C. Smithworth*  
*ATT'Y.*

## UNITED STATES PATENT OFFICE

2,311,166

## KNITTED FABRIC AND METHOD

Oscar Fregeolle, Pawtucket, R. I., assignor to  
Hemphill Company, Central Falls, R. I., a cor-  
poration of Massachusetts

Application March 28, 1942, Serial No. 436,644

13 Claims. (Cl. 66—172)

This application has for its subject matter certain improvements in knitted fabrics and method of knitting especially as applied to elastic type hosiery tops in which an elastic yarn is incorporated along with inelastic yarn for the purpose of rendering the top self-supporting and imparting to it a ribbed appearance.

In the figures of the drawings:

Fig. 1 is a conventional illustration of a section of fabric knitted in accordance with one form of the invention and in which stitches are shown greatly enlarged;

Fig. 2 is a similar enlarged view of the said fabric section of Fig. 1, but showing the same more as it actually appears when completed;

Fig. 3 is a diagrammatic view showing cams, needle butt pathways and jack butt pathways as they apply to one method of producing the fabric.

Fig. 4 is a plan of a circle of needles and yarn feeds as they are set up to feed elastic and inelastic yarn for a so-called three-feed method;

Figs. 5 and 6 are similar views showing alternate forms of a so-called two feed machine; and

Fig. 7 is a conventional illustration of part of a stocking and a top applied thereto knitted in accordance with the invention.

In certain forms of the methods employed in knitting elastic topped hosiery the elastic yarn or yarns are so fed as to be held in spaced courses only. This has certain advantages in that there is a possibility of each individual convolution or course of elastic yarn which is incorporated under a suitable tension indenting the flesh on which the stocking top is to be held and thereby increasing the ability of the stocking top to maintain itself in position on the leg. Again, spacing of elastic yarn in this way allows less elastic yarn to be used and also renders the fabric more porous or open decreasing the tendency of the top to become uncomfortable especially when worn in warm weather.

There is one serious disadvantage, however, in spacing elastic yarn as above described, and that flows from the fact that unless a plurality of feeds are employed according to the method heretofore practiced, the elastic yarn must be floated from one point in which it is withdrawn to the termination of a course in which it is incorporated to that point at which it is again inserted at a following course. That means that the said elastic yarn must float across the needle circle, being drawn out and then being taken up as by the usual yarn take-up. The result is that if other yarns such as wrap yarns are extending

down into the needle circle, there will be interference between the floating elastic yarn and the wrap yarn unless the float of elastic yarn is cut and held in a binder. This latter is something not desired to be done since elastic yarn is more difficult to cut and hold in a binder and thereafter introduce to needles periodically than an inelastic yarn. The mechanism involved would also be objectionable as an added complication in a machine already very intricate, and it is desirable to keep the ends of elastic in the fabric limited to that end at which it is introduced and the opposite end at the termination of the top where it is withdrawn. Since the elastic stretches and contracts these ends are not permanently held but become displaced in many instances.

The other alternative has been to start the machine, retain the wrap yarns outside or above the needle circle until the top is completed and thereafter to stop the machine and drop the wrap yarns within the needle circle for commencing the pattern at the leg or other desired point. Of course, this means that the machine can not be run in string work or entirely automatically and that it has to be stopped at one point, at least, at which a machine, even operated by the method of running on or off does not ordinarily have to be stopped. By the method hereinafter described the advantages of spaced elastic and of complete automatic operation are realized, and furthermore, a fabric is produced which is more open than similar fabrics now commonly in production.

According to one preferred embodiment of the invention a top is made in which the elastic yarn is concentrated at every fourth course and held at spaced wales as at every fourth wale, this being accomplished in a three feed machine and entirely by automatic operation, that is, in string work, if desired, and with wrap yarns feeding at any desired part of the stocking. By a three feed machine it is meant that the knitting machine is provided with two inelastic yarn feeds and one elastic yarn feed. An alternate method may be practiced to produce the same fabric but employing only two feeds, that is, one inelastic yarn feed and one elastic yarn feed. While this produces the same fabric it is not entirely automatic insofar as machine operation goes if wrap yarns are to be employed.

The fabric may be started in any desired manner; preferably a selvage is to be knitted at the edge although the edge may be turned and sewed. One preferred form of selvage, that illustrated herein, is fully shown and described in United

States application Serial #391,231, filed May 1, 1941, or in United States Patent #2,247,343. Those particular edges are produced by inlaying in elastic yarn at every other wale but a knit in or other type selvage may be employed if desired.

After the selvage, and in some instances a few courses following the selvage, fabric according to the invention is knitted by feeding an elastic yarn at one feed to spaced needles, for example, every other needle, or at more widely spaced intervals, every fourth needle being the particular set-up herein shown and described by way of illustration. At the other two feeding stations in the so-called three feed machine inelastic yarns are to be fed, and for knitting the ordinary type of elastic stocking top, these yarns should be matched as closely as possible. Tucking means is employed so that the needles taking the elastic yarn may also tuck over any desired number of courses. If the elastic yarn is to be taken at every fourth needle, then so far as this part of the fabric goes, tuck control applies to every fourth needle likewise. Of course, if the top is to be tucked at alternate wales as herein illustrated, additional tucking means is provided by which alternate needles may selectively be controlled for the desired purpose. In tucking, the elastic and certain of the inelastic yarn stitches are held, the result being that the elastic yarn which might be expected to appear as incorporated in every other course in the so-called three-feed machine will actually be grouped or paired so that two strands of elastic yarn are actually incorporated or held at spaced wales in every fourth course.

There are two possibilities insofar as taking elastic and tucking in the edge courses and in the main body of the top are concerned. Preferably, elastic yarn will be fed to spaced or nonadjacent needles, and insofar as some of those needles are concerned, the feeding of the elastic yarn will be carried down through the same wales in both parts of the entire top. That means that if intermediate wales are tucked at the first few courses, a change has to be made from those intermediate wales to tucking in the wales in which the elastic yarn is actually taken by needle hooks and drawn. The alternate system might be employed in which tucking would be continuously carried through definite wales and the elastic taking needles varied. The preferred form is herein described but there is no intent to limit to that particular method or set up for needle control.

To practice the invention, the elastic yarn may be incorporated as by inlaying, that is, being passed below the latches of needles taking the same at some time prior to taking the subsequent inelastic yarn in which event it will be cast off and the subsequently drawn course of stitches will actually be knitted through loops of inelastic yarn only.

This inlaid yarn is fed at the elastic yarn feed and is preferably fed to the hooks of needles first. After being taken in needle hooks, it is cleared below needle latches prior to the taking of the inelastic yarn which is of course fed at a subsequent feed. If desired, the elastic yarn may be taken below needle latches on those needles to which it is fed and in that event, needles merely travel around the needle cylinder and take the inelastic yarn, it not being necessary for those needles to go through the intermediate step of clearing latches. This applies

to the initial course only and later the elastic yarn is tucked resulting in a different and novel effect.

Referring to the figures of drawings and especially Fig. 1, the fabric will now be described, first as it would be knitted on the so-called three-feed machine. At the start one or more rounds of elastic yarn 1 are fed to hooks of alternate needles for setting up a selvage. Of course, any type of selvage may be knitted, elastic or inelastic, but that shown is a common and satisfactory way of effecting that result. Then after the said one or more courses, an inelastic yarn 2 is next taken by all needles and the elastic yarn is cast off and will be threaded through all sinker loops in the initial course of elastic yarn 2. In producing the particular selvage and following courses herein shown, the elastic yarn is inlaid as in the said United States application Serial #391,231, but may take the form shown in United States Patent #2,247,343. According to the first, only one inelastic yarn feed is to be employed for the first few courses and the yarn 2 fed at that feed will be drawn into knitted stitches at alternate wales 3, 5, 7, 9 and 11 but will be tucked at intermediate wales 4, 6, 8 and 10. The elastic yarn will be inlaid by passing the same below the latches of alternate needles prior to taking the inelastic yarn and will be cast off to be held as an inlaid elastic yarn at intermediate wales.

Thus in the course A the inelastic yarn is knitted at alternate wales and is drawn to be held or tucked at intermediate wales while the elastic yarn is subjected to an inlaying process by taking the same and passing it below latches of alternate needles at the proper point in the cycle. In course B the same applies and at that point needles knitting intermediate wales will have accumulated two stitches. In the next course C each needle clears at the inelastic yarn feed and all previously held loops are cast off, that completing the intermediate wale stitches. Of course, the elastic is inlaid as in courses A and B. Course D is a duplicate of course B. This may be carried on as long as desired to produce a short, tuck, curl resistant edge.

After the course D the third feed, so-called, is brought in and a second inelastic yarn 12 is introduced which, at the course E feeds to all needles. This is a sort of transition course between the tuck edge and the following part of the top in which elastic yarn is to be incorporated in accordance with principles of the invention. No elastic yarn is incorporated at this course.

Now a change is made so that the elastic yarn and two inelastic yarns are to be understood as feeding continuously and the set up of needles for the needle selection is such that from this point, the elastic yarn is to be taken by every fourth needle, that is, those needles knitting wales 3, 7 and 11. The intervening wales 4, 5, 6 and 8, 9, 10 are to knit inelastic yarn at each course. Control of elastic yarn and tucking are by the said fourth needle only. Of course, some other needle division may be employed as before suggested, but the illustrated needle set up or division is one found to be desirable.

The inelastic yarn 2 is taken within the hooks of all needles at the course F but only the needles intervening between every fourth needle clear and knit off. The elastic yarn 1 is then fed at the following elastic yarn feed to every fourth needle and is held within the hooks of those needles

along with the loop of yarn 2 just taken. Course C is then drawn at the next or so-called auxiliary feed being taken by all needles. It is merely held at every fourth needle in addition to previously taken loops of yarn 1 and 2, but at the intervening needles the last drawn loops are cast off. Course H is similar to course F and then a second strand of elastic is drawn at the elastic yarn feed so that at this time, every fourth needle holds three loops of inelastic yarn and two loops of elastic yarn. Then as the auxiliary feed is approached all needles clear their latches, yarn 12 is again taken and knitted forming the course I which is similar to course E. The result is that three accumulated loops in the wales 3, 7 and 11 are knitted off as tuck stitches and the strands of elastic yarn inlaid in the courses F and H as theoretically illustrated, are really associated in the finished fabric with the courses H and I.

Of course the elastic yarn is fed under tension, the amount of tension being regulated to provide proper contraction of the top, to simulate a ribbed appearance by drawing together spaced wales in which the elastic is held and to render the top sufficiently elastic or resilient to maintain itself in position on the leg of the wearer. The elastic yarn will straighten out as much as it can in the finished fabric as the same is cast from the machine, and when the same has straightened out, it will be held between certain of the loops in courses H and I. The result is that both strands of elastic lie parallel at that position and thus the tucking of the fourth or other spaced wales in which the elastic is inlaid forces the elastic to assume a position at each fourth course even though an elastic strand is fed at every other course.

The courses F, G, H and I are then repeated as many times as desired throughout the remaining portion of the stocking top, the length of the top thus knitted being largely dependent upon the amount of elastic yarn desired, the strength or weight of the same and the type of hosiery to which the same is applied.

Now referring to Fig. 2, the fabric of Fig. 1 is illustrated more as it actually appears after being cast from the machine. Of course, it is to be understood that these illustrations are conventional and stitches are shown greatly enlarged and much more open than they actually appear in a practical fabric. In Fig. 2 similar reference numerals indicate like yarns, wales and courses and in this figure the wales 3—7 cover one group of stitches including three alternate wales and two intermediate wales. Courses A, B, C and D correspond to like numbered courses in Fig. 1 while course E is the so-called transition course or the first course in which the yarn 12 is introduced. In this figure two extra courses similar to A and B are shown and the fabric is broken at this section merely indicating that any number of these tuck courses at the edge may be employed.

The courses F, G, H and I which constitute one complete cycle in the knitting of the novel fabric have two strands of elastic yarn held at the courses H and I. There is a distortion of the course I since the tuck stitches in wales 3 and 7 can not be elongated as much as would seem apparent from Fig. 1. However, these elastic strands have straightened out since that yarn is introduced under tension and since they can not be released into the fabric or held at any point above the point of casting off the three accumulated or tucked loops of inelastic yarn at wales 3 and 7.

The fabric has thus far been described as

though it were knitted on a three-feed machine. That is the preferred way of so doing and the fabric when thus produced can be knitted in hosiery produced entirely automatically (except for closing the toe). However, if it is not necessary or desirable to knit entirely automatically or if there are no wrap or other yarns to interfere with floating the elastic yarn across the needle circle, one of the inelastic yarn feeds may be dispensed with and thus a two-feed machine, diagrammatically illustrated in Figs. 5 and 6, may be used. In that event, the elastic yarn feeding finger will be periodically and automatically raised or withdrawn in some way so as to feed the elastic yarn for a course and then withdraw it for a course or courses. Other schemes may be employed for discontinuing the incorporation of the elastic yarn for a course or courses as by failing to select needles in which event the elastic yarn may remain in feeding position and yet will not be taken by needles until appropriate ones of the same are again raised for that purpose.

When thus operated a two-feed machine will produce the same fabric as shown in Figs. 1 and 2 but yarns 2 and 12 will not be different yarns, rather they will be the same yarn. The elastic yarn will not be fed continuously but will still be associated with every other course when considered from the viewpoint of the method by which the fabric is produced, yet in every fourth course in the ultimate product.

The elastic yarn is taken in hooks of alternate or every fourth needle right down through the top so that insofar as selection of needles goes for taking the elastic yarn, that selection applies to every other needle or every fourth needle. However, the intermediate needles are controlled to tuck through the edge or in courses A, B, C, D, etc., while thereafter, the tucking is controlled so that each fourth needle tucks wales 3 and 7 rather than the intermediate wales 4, 6, 8 and 10.

Now referring to Fig. 3, a diagrammatic or developed view illustrates cams and pathways of the various needle and jack butts. At the needle butt level there are raise cams 13 and 14 and a main cam block including front stitch cam 15, guard cam 16, center raise cam 17 and back stitch cam 18. At the so-called auxiliary feed there is a suitable stitch cam 19 while at the elastic yarn feed a stitch cam 20 is movable for controlling those needles raised to take the elastic yarn so as to draw it down for measuring the same either over throats of sinkers or over the nibs. A cam 21 functions at certain times during knitting a heel or toe and is not important for a disclosure of the present invention. The front stitch cam 15 is pattern controlled and is movable at desired courses for controlling clearing or tucking. Tucking may also be controlled by jacks as will hereinafter be described. This illustration covers the three feed machine, but it is to be understood that a two feed machine is arranged substantially the same except that the auxiliary feed for the second inelastic yarn is omitted. Jacks 22 have a plurality of saw tooth butts 23 or other selecting butts which are removable for setting up a pattern and a master butt 24 for raising selected jacks. A second butt 25 common to all jacks lowers them at appropriate times.

A plurality of selecting plungers 26 functions upon butts 23 to raise certain of the needles at the so-called auxiliary feed, those raised needles clearing their latches before taking yarn so that as they are drawn down by stitch cam 19 they

will cast off previously held stitches. A cam 27 raises jacks to a pathway in which their butts 23 will properly approach plungers 26. The plungers raise the jacks slightly until master butts 24 contact cam 28 by means of which needle butts are elevated in the pathway 29 correspondingly elevating their needles so that needle butts follow pathway 30. Other needles move along in the pathway 31 and either group of needles will take yarn fed at the auxiliary feed, but selected needles only clear latches and knit; the others tuck.

After being drawn down by cam 19 all needles are raised to the level 31 by cam 14. All jacks are lowered by the needles as they move down the cam 19 and are then realigned by cams 32 and 33 as they approach a second group of selecting plungers 34. These plungers make a selection and a master cam 35 similar to the cam 28 will raise jacks and appropriate needles to the level 36. This is a clearing level and those needles thus selected will take the inelastic yarn at that feed and will knit off the previously held loops. Other needles move in the pathway 31, then upwardly to a higher pathway 37 where they take yarn and tuck.

All needles are then drawn down below cam 18 and move up slightly as affected by cam 13 prior to approaching the selection for taking the elastic yarn. Cams 38 and 39 act as safety cams to lower jacks in the event needles fail to do so while cam 40 aligns jacks for contact with plungers 41 for effecting a selection of needles to take the elastic yarn. A master cam 42 then raises jacks so that appropriate needles move to a level 43 at which they will take the elastic yarn, said needles then being drawn down by cam 20, thereby measuring a desired amount of elastic yarn, but not casting off the previously drawn stitches.

At the groups of plungers 26 and 34 there may be a great many more such plungers for effecting selection as for wrap striping or for other purposes. Three plungers at each point are sufficient for controlling needles and jacks in a manner to knit the fabric herein described. Two plungers 41 are sufficient to effect the drawing of elastic at alternate needles or at every fourth needle, however, at any of these points, as the occasion may require, more or fewer selecting plungers may be used depending upon the particular set up of needles which are to take the elastic yarn and also, the particular wales which are eventually to be tucked.

In Fig. 4 a yarn feeding lever 44 feeds an inelastic yarn at the so-called main feeding station, a lever 45 feeds the elastic yarn and a yarn feeding lever 46 at the so-called auxiliary side feeds the second inelastic yarn. In Figs. 5 and 6 two feeds only are employed and lever 44' feeds the inelastic yarn at the main side while a lever 45' in Fig. 5 feeds the elastic yarn and in Fig. 6, a lever 46' will feed the elastic yarn. To knit the fabric shown these levers 45' would preferably be controlled so as to move to and from a yarn feeding position.

In Fig. 7 a stocking generally indicated at 47 has a top 48 knitted in accordance with the invention described, the edge 49 being knitted as are the courses A, B, C, D, etc.

The fabric produced is relatively open due to the tucked wales 3, 7, etc., and the elastic yarn is concentrated at every fourth wale. Other spacing or control of needles for taking elastic or for tucking either at the edge or after the course E may be employed. More courses such as the

course E may be knitted intermediate the edge and the main body of the top or that course may be omitted if desired. More than a three feed machine may be used in which event the elastic yarn will be spaced throughout a number of courses greater than every fourth course. Changes as to wales and courses and to the number of wales tucked may be made without departing from the original concept and the invention is not to be limited other than as in the appended claims.

I claim:

1. A knitted fabric having in combination elastic and inelastic yarns, the elastic yarn being incorporated under tension and at non-adjacent wales for drawing said wales laterally together, and further being incorporated in predetermined courses but tucked at said nonadjacent wales, the inelastic yarn also being tucked with the elastic yarn at said nonadjacent wales.

2. A knitted fabric having in combination elastic and inelastic yarns, said elastic yarn being incorporated in said fabric under tension at nonadjacent courses and at nonadjacent wales so as to draw said nonadjacent wales laterally together, the construction being such that both the elastic yarn and the inelastic yarn are tucked at said nonadjacent wales and are knitted off as accumulated or tuck stitches whereby said elastic yarn will be positioned in the fabric at that course at which said accumulated or tucked loops are knitted.

3. A knitted fabric having in combination elastic and inelastic yarns, said inelastic yarn being knitted at nonadjacent wales throughout a plurality of courses and being tucked at the remaining wales, said plurality of courses being followed by a course of inelastic yarn which is drawn into a knitted stitch at each wale and the said elastic yarn being incorporated to be held at said tucked wales but floating over the said nonadjacent wales and further being tucked at the said tucked wales with the inelastic yarn so that it will be held at that course of inelastic yarn at which said tucked stitches are knitted off.

4. A knitted stocking top having in combination a selvage and following courses in which elastic and inelastic yarns are incorporated, the elastic yarn being incorporated under tension and in a manner to draw spaced wales laterally together, the inelastic yarn being tucked at spaced or nonadjacent wales so that at said wales a plurality of accumulated loops may be knitted off at intervals, said elastic yarn being inlaid and also tucked along with the inelastic yarn so that it will be incorporated to be held at said spaced wales and at the courses at which the tuck stitches of inelastic yarn are knitted off.

5. A knitted stocking top having in combination elastic and inelastic yarns, said elastic yarn being incorporated with said inelastic yarn in a manner to form a selvage and thereafter being incorporated to be held at spaced wales and for drawing said spaced wales laterally together, the said elastic yarn being tucked at said spaced wales along with tucked stitches of inelastic yarn, said elastic and inelastic yarn tuck stitches being knitted off after a plurality of courses whereby a plurality of courses of elastic will be released to be held at those spaced courses at which said tucked stitches are knitted.

6. A knitted stocking top having in combina-

tion elastic and inelastic yarns, said elastic yarn being incorporated with said inelastic yarn in a manner to form a selvage and thereafter being incorporated by inlaying it to be held at spaced wales and for drawing said spaced wales laterally together, the said elastic yarn being tucked at said spaced wales along with tucked stitches of inelastic yarn, said elastic and inelastic yarn tuck stitches being knitted off after a plurality of courses whereby a plurality of courses of elastic will be released to be held at those spaced courses at which said tucked stitches are knitted.

7. A knitted stocking top having in combination a selvage in which elastic yarn passes through all loops of an initial course of inelastic yarn, following courses in which elastic yarn is incorporated to be held at alternate wales and in which said inelastic yarn is tucked at intermediate wales, a plurality of following courses in which inelastic yarn is tucked at every fourth wale for three consecutive courses, said elastic yarn being incorporated to be held at said fourth wale but inlaid in such a manner as to be tucked along with said inelastic yarn and to be released as said inelastic yarn tuck stitches are knitted off whereby at every fourth course two strands of elastic yarn will be held at every fourth wale.

8. A knitted fabric having in combination elastic and inelastic yarns, the said inelastic yarn being knitted in each course and the elastic yarn being incorporated to be held at spaced wales in alternate courses and said inelastic and elastic yarns both being tucked over a plurality of courses and in said spaced wales whereby the elastic yarn incorporated at alternate courses will actually be grouped in parallel relationship at each fourth course.

9. A knitted fabric having in combination elastic and inelastic yarns, the said inelastic yarn being knitted in each course and the elastic yarn being inlaid to be held at spaced wales in non-adjacent courses, and said inelastic and elastic yarns both being tucked for a plurality of courses and in wales in which the elastic yarn is held so that a plurality of elastic strands thus inlaid will be cast off and appear in the finished fabric

as grouped at courses spaced more courses apart than the courses in which the elastic yarn was originally inlaid.

10. A method of knitting including the steps of feeding and knitting an inelastic yarn to be tucked over a plurality of courses at nonadjacent wales and to be knitted at every course in intermediate wales and inlaying an elastic yarn at some of said plurality of courses over which said inelastic yarn is tucked and further tucking said elastic yarn and knitting it off at the courses at which said inelastic yarn is knitted off.

11. A method of knitting an elastic stocking top including the steps of forming a selvage by incorporating elastic in an initial course of inelastic yarn, thereafter knitting courses of inelastic yarn in which the said yarn is tucked over a plurality of courses and at nonadjacent wales and drawing said inelastic yarn into knitted stitches at intermediate wales, incorporating an elastic yarn to be held at said tucked wales and further tucking said elastic yarn and casting accumulated or tuck stitches of both yarns off at predetermined courses by drawing a course of inelastic yarn and knitting said inelastic yarn at each wale.

12. A method of knitting a weft knit stocking top including the steps of feeding and knitting an inelastic yarn for a plurality of courses in said top, inlaying an elastic yarn to be held at nonadjacent wales and at alternate courses, and further tucking both the elastic and inelastic yarns at said nonadjacent wales so that two strands of elastic will be cast off to be inlaid at each fourth course.

13. A self-supporting stocking top including knitted courses of non-elastic yarn having elastic yarn incorporated therein throughout recurrent groups of courses each group of courses comprising four courses knitted with the non-elastic yarn and two courses of elastic yarn, the non-elastic and elastic yarns being tucked at spaced wales and the two courses of elastic yarn being held by the last two non-elastic courses of each group.

OSCAR FREGEOLLE.