Oct. 25, 1955 L. J. JENARD ET AL 2,721,464

ELASTIC STOCKING AND METHOD OF PRODUCING SAME

Filed July 1, 1950 3 Sheets-Sheet 1

Fig. 1

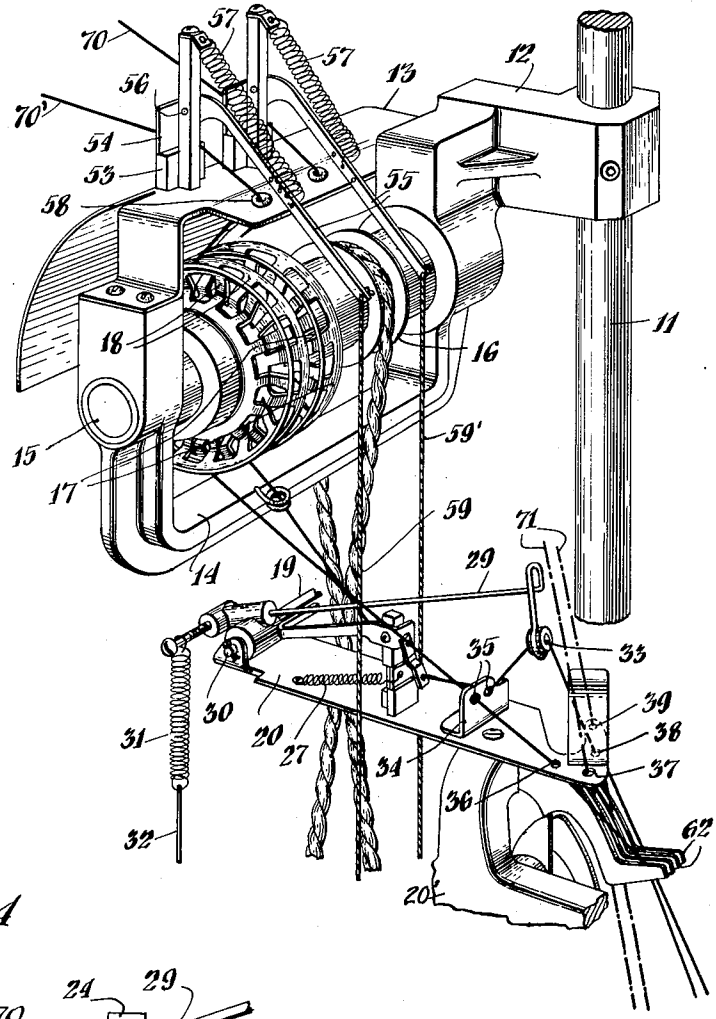
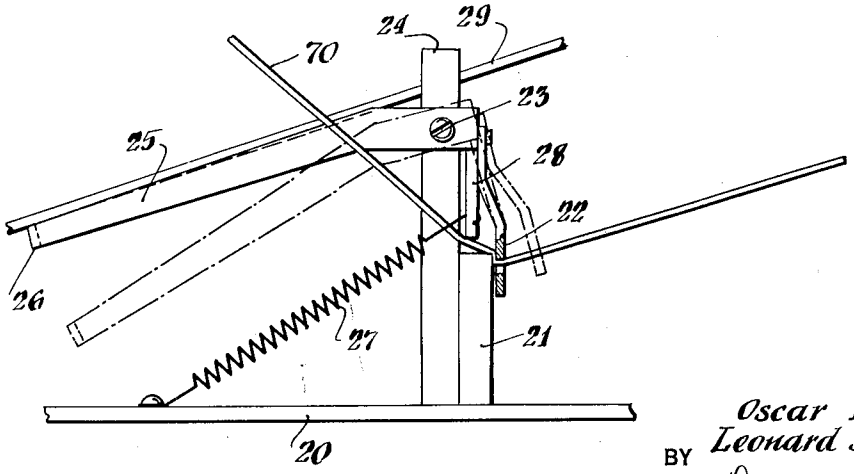


Fig. 4



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ELASTIC STOCKING AND METHOD OF PRODUCING SAME

Filed July 1, 1950 3 Sheets-Sheet 2

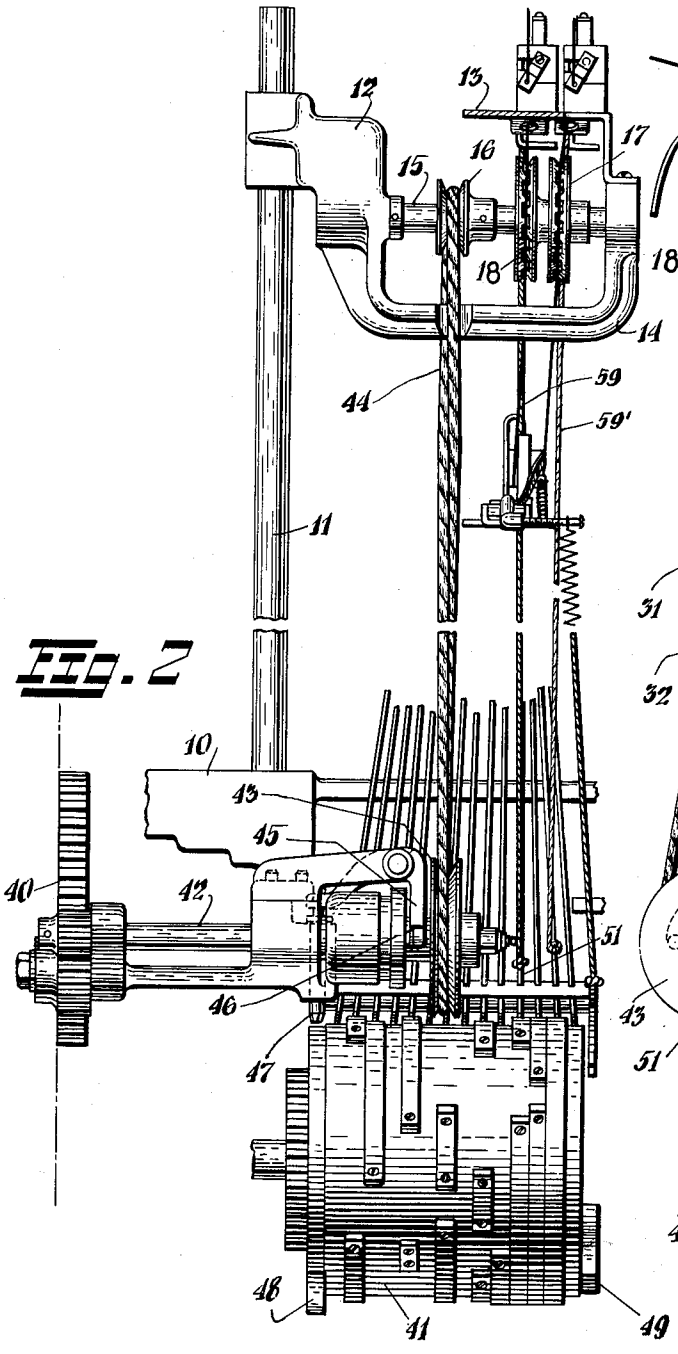


FIG. 2

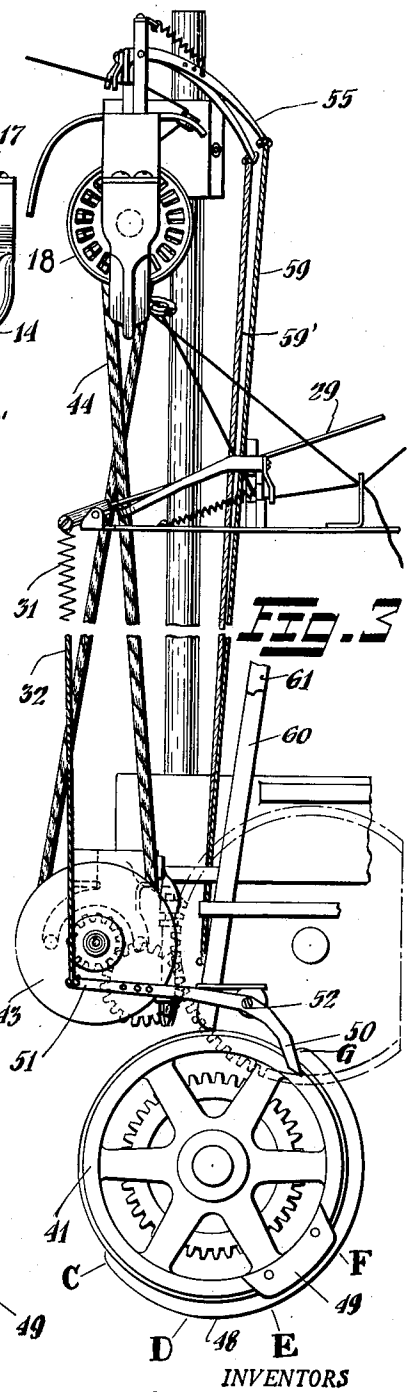


FIG. 3

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ELASTIC STOCKING AND METHOD OF PRODUCING SAME

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Fig. 5

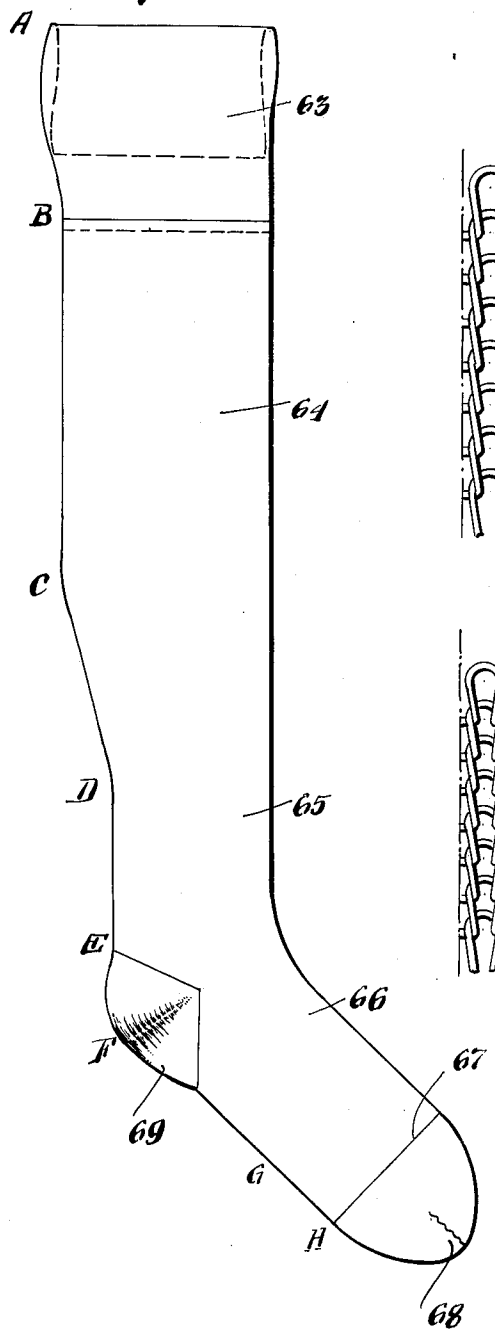


Fig. 6

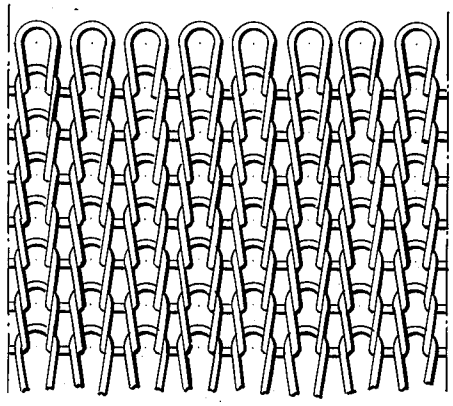
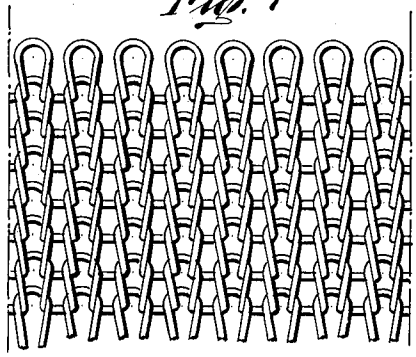


Fig. 7



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2,721,464

ELASTIC STOCKING AND METHOD OF PRODUCING SAME

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Application July 1, 1950, Serial No. 171,708

6 Claims. (Cl. 66—184)

This invention relates to a structurally and functionally improved stocking and especially elastic or surgical stocking; the present invention also embracing the method of manufacturing such a stocking.

It is a primary object of the invention to produce an elastic stocking which will have a pleasing and sheer appearance and which will therefore not require the use of a covering stocking. A unit embodying the present teachings will be free from objections to bunching and wrinkling and aside from being relatively inexpensive will have a full fashioned appearance. Additionally, the stocking will exert a substantially even and comfortable tension throughout its entire effective length so that the limb portions will be evenly supported.

Still another object is that of teaching a method which may be practiced by the machine and by means of which the stocking may be produced. This method will permit of the rapid and economical production of stockings having a long effective life and which stockings will be more desirable than stockings produced according to more expensive techniques.

With these and other objects in mind, reference is had to the attached sheets of drawings illustrating practical embodiments of the invention, and in which:

Fig. 1 is a fragmentary perspective view of a grouping of apparatus providing an accessory assembly or attachment for a knitting machine which may otherwise embrace more or less conventional structure;

Fig. 2 is a fragmentary front view of such a machine and assembly;

Fig. 3 is a side view thereof;

Fig. 4 is a fragmentary enlarged side view of a portion of the assembly as especially shown in Fig. 1;

Fig. 5 is a somewhat diagrammatic representation of the stocking which is produced; and

Figs. 6 and 7 are greatly enlarged fragmentary views of portions of the stocking body.

In Figs. 1 to 4 inclusive the apparatus has been illustrated as incorporating an attachment or accessory assembly to be operatively connected to a more or less standard type of knitting machine such as may be purchased on the open market. In many respects it is preferred that the present teachings be thus employed in that with only minimum expense and minor modifications of the knitting machine the apparatus will function in an eminently satisfactory manner. However, it will be understood that in lieu of incorporating the machine parts in an assembly largely provided as an attachment to a standard machine, that machine itself could be modified to incorporate the desired structure.

Thus, referring primarily to Figs. 1, 2 and 3 it will be seen that the body or frame of a standard machine has been indicated by the numeral **10** and from which a support **11** extends upwardly. Suitably secured upon this support is a head **12** mounting a platform **13** at the end of a bracket portion **14**. Rotatively disposed between the arms of such bracket portion is a shaft **15** which may be driven by a pulley **16**. Also secured to shaft **15** are thread-feeding wheels **17** and **18**. The latter are preferably of a design such as has been shown especially in

Fig. 1 and including apertured side walls with the bars or material of adjacent walls bent to extend in the direction of or actually into the annular series of apertures in the opposed wall. Wheels of this type embody the functional desirable characteristics of effectively feeding thread under certain operating conditions. However, should the movement of the thread be interrupted while rotation of the wheel is continuing, then the thread will ride out of the crotch or gripping portion of the wheel so that relative movements of the latter surfaces of such wheel and the thread may occur without damage to the latter.

A support **19** extends downwardly from the machine head. Conveniently a mounting is provided at **20'**. This suports a member **20** which may extend in a substantially horizontal direction. Mounted upon this supporting surface is a fixed plate **21** with the operating edge of which a plate **22** cooperates by being pivotally mounted as at **23** upon a support **24** affixed to the platform **20**.. Plate **22** may form a part of or have attached to it an arm **25**. The latter is conveniently provided with an offset end portion **26**. Also secured to plate **22** or forming a part of the same is an arm **28** which moves with that plate. A spring **27** has one of its ends attached to this arm **28** and its opposite end is secured to the platform or support **20**. Therefore, plate **22** is normally urged to a position such as has been shown in full lines in Fig. 4.

A yarn take-up lever in the form of a wire **29** and relatively heavy rear portion is also pivotally mounted as at **30** by the platform **20**. The rear portion of the lever is continued beyond the point mounting **30** and has secured to it a spring **31** to which a cord or tensioning member **32** is attached. An eyelet or ring-shaped guide **33** is secured to the outer end of wire **29**. A plate **34** is mounted on the upper face of platform **20** and provided with a pair of openings **35** acting as thread guides. Platform **20** is also formed with openings **36** to **39** inclusive adjacent its outer end and serving similar functions as will hereinafter appear.

The machine proper includes a suitable drive such as has been indicated at **40**. By means of this drive the cam drum **41** is caused to rotate. Also the several other operating parts of the machine are caused to function in usual and accepted manners. Rotated by drive **40** is a shaft **42**. Secured to rotate with this shaft is a pulley **43** of the "Reeves" type. A spring (not shown) normally maintains the parts of this pulley in a position where a maximum diameter of the latter is assured in the drive of a cable or other connecting device **44**. That cable extends around pulley **16** of shaft **15**. A control in the nature of a bell crank lever **45** bears against the hub assembly **46** of pulley **43**. A follower **47** bears against bell crank lever **45**. When this follower is projected upwardly as viewed in Fig. 2 it causes lever **45** to be rocked to shift assembly **46** and reduce the operative driving diameter of pulley **43**. To effect this result an operating cam **48** forms a part of the drum assembly **41** and is disposed in a position where it cooperates with follower **47**.

In order to control the operation of lever **29** by tensioning and releasing the cord or connector **32** a cam **49** is conveniently coupled to drum **41**. This cam cooperates with the follower portion **50** of a lever **51** pivotally supported as at **52** by the frame of the machine. The lower end of the connecting member or cord **32** is attached to the outer end of lever **51**. It is therefore obvious that when cam **49** rotates to engage and shift follower portion **50**, lever **51** will rock to exert a pull on cord **32** to elevate the end or arm of lever **29** which carries the eyelet **33**. It is apparent in this connection that under certain circumstances it might be unnecessary to include a spring **31** in the coupling assembly. For example the cord **32**

might be elastic or the parts might be proportioned and arranged so that this tensioning provision is unnecessary. However ordinarily some yielding should be incorporated in the connection.

As the forward arm of lever **29** rises it will permit of a similar movement on the part of arm **25**. This will be because the offset end portion **26** of the latter arm engages the underface of lever arm **29** and is urged into such engagement by spring **27**. Accordingly, as arm **25** rises, plate **22** will be swung to the position shown in full lines in Fig. 4 and in which it cooperates with plate **21** to prevent the passage or feed of a yarn disposed in operative position with respect to these plates.

Additional yarn locking devices are mounted upon the support or platform **13**. These conveniently include fixed plates **53** with which plates **54** cooperate to provide a yarn-clamping structure. Plates **54** are secured to or form part of arms **55** pivotally mounted as at **56**. Springs **57** cooperate with arms **55** to normally raise the latter and thus bring the plates **54** into cooperative relationship with plates **53**. Under these circumstances a movement of yarn through these assemblies is prevented. To the rear of plates **53** and **54** platform **13** may be provided with eyelets **58** for the passage of yarn.

Connecting elements such as wires or cords **59** and **59'** may extend from the ends of arms **55** opposite those supporting plates **54** in a downward direction. At their lower ends these connecting elements are coupled to cam levers **60** and **61** as shown especially in Figs. 2 and 3. These levers are caused to function by cooperation with cam portions forming a part of the drum assembly **41**. As afore brought out springs **57** normally tend to shift arms **55** to positions at which a clamping or arresting action of plates **53** and **54** occur. However when levers **60** and **61** move downwardly they will carry with them the lower ends of connectors **59** and **59'**. Therefore, the outer ends of arms **55** will be swung downwardly against the action of springs **57** to freely permit of the passage of yarn past the plates **53** and **54**.

From the foregoing it will be understood a circular type knitting machine has been generally shown and that the apparatus providing for the functions herein desired is in the nature of attachments or accessory assemblies to be associated with such a machine. Obviously, and as afore brought out, the several mechanical parts necessary to produce the desired functions herein contemplated could be incorporated as part of the machine and that machine could be of a type different than herein shown. In order to avoid unnecessary and confusing illustration, various conventional parts such as the cylinder, sinkers, needles, etc. which form a part of the machine have not been illustrated. However, the yarn levers have been generally indicated in Fig. 1 under the reference numeral **62**.

A stocking constructed in accordance with the present teachings has been somewhat schematically shown in Fig. 5. That stocking will include a welt portion **63**, a thigh and calf encircling portions **64** and angle portion **65**, a foot portion **66**, a ring-toe portion **67**, a toe portion **68** and a heel portion **69**. The portions **64**, **65**, **66** and **69** will be formed of elastic yarn the core of which will be colored to embody a tint corresponding to that of the finished stocking. The yarn will be composed approximately of 58% nylon and 42% core with an elongation of, for example, between 100 and 115%. This will assure sufficient width and strength being incorporated in the fabric without having the resultant unit embodying too much bulk. The welt portion **63**, the ring-toe portion **67** and toe portion **68** are conveniently formed of nylon thread, cotton thread, or a mixture of cotton and nylon with the nylon thread outside of the cotton. It is especially preferred that the welt portion be formed of such a mixture.

Returning to a consideration of Figs. 1 to 4, the numerals **70** and **70'** indicate the elastic yarns as afore described which pass through the arresting or locking structures provided by plates **53** and **54** and thence through the eyelets **58** over the feed wheels **17** and **18**. Thereafter, yarn **70'** passes directly through opening **35** of plate **34** and so through opening **36** to its yarn lever **62**. Yarn **70** passes from its feed wheel through a guide, then over plate **21**, through the openings of plate **22** and eyelet **33** to its yarn lever or feeder. The yarns are fed from bobbins or spools, providing a source of supply. The inelastic yarns have been indicated at **71**. They pass through eyes **37** and **39** of the support or plate **20**; the yarn **70** incorporating elastic properties passes through the eye **33** extending through the opening **38**. The mechanism for feeding and controlling the inelastic yarns has not been shown. Suffice to say it may embody any desired and acceptable construction.

Two elastic yarns are used. This is because of the desirability of having a heel formed of a yarn more resistant to abrasion than the yarn providing the leg and foot portions. Conveniently the leg yarn **70'** is composed of a 100 core covered with two ends of 40 denier nylon yarn. The heel yarn **70** may also be composed of a 100 core but covered with two ends of 70 denier nylon yarn. Different non-elastic yarns are also preferably employed. In this connection it will be understood that the yarn providing the welt portion of the stocking should not be too heavy but at the same time should embody a certain amount of stretch. Conversely the non-elastic yarn providing the toe should have a high abrasion value and be relatively inelastic.

Before considering the operation of the apparatus as afore described it will be noted that as in Fig. 3 cam **48** has been shown as including portions C to G inclusive. Likewise as in Fig. 5 various zones of the stocking have been identified by similar reference letters. Thus, in the latter view, A indicates the end edge or zone of the welt portion **63**. B indicates generally the zone of termination of the inelastic yarn with which zone a flare is favored. From B to C a portion of generally constant width is present. From C to D the stocking is tapered to provide a calf portion. From D to E an ankle portion of substantially constant width is provided and at F the heel portion is present.

With the machine set up as shown and the yarn in position it will be understood that elastic threads **70** and **70'** will not be fed. This will be because the cams on drum **41** have raised levers **60** and **61**. Therefore the connectors **59** and **59'** will have permitted arms **55** to elevate under the influence of springs **57** to clamp the elastic yarns against movement. In the interim, however, inelastic yarn strands **71** will continue to feed and operate to form loop portions providing the desired welt **63**. Upon reaching zone B both the elastic and inelastic yarns will be fed to assure a zone of overlap and connection between these parts of the stocking. At this moment mechanisms which control a feeding of the inelastic yarn **71** will function to interrupt further feed of the latter.

Up to zone C cam **48** will not cooperate with follower **47** to reduce the drive effected by the pulley **43**. Therefore, a maximum operative diameter of the latter will be presented. Accordingly, shaft **15** and feed wheels **17** and **18** will rotate at maximum speed. With the initiation of this operation levers **60** and **61** will have lowered to exert tension on connecting elements **59** and **59'**. Therefore, plates **54** will have swung out of operative association with plates **53**. Accordingly a free feeding of elastic yarn strand **70'** may occur. With feed wheels **17** and **18** rotating at maximum speed, the loops of thread forming the courses of the stocking will have their greatest widthwise and lengthwise dimensions. Such a result has been shown in Fig. 6. This will continue from zone B to zone C. Therefore, throughout this portion of the stocking, each course of knitting embraces a maximum yarn length.

As particularly shown in Fig. 3, cam 48 presents a tapered surface of gradually increasing width which continues through to point D. As a consequence of this portion, follower 47 is gradually shifted to cooperate with the hub assembly 46 of pulley 43 to decrease the effective drive diameter of the latter. Therefore shaft 15 will be gradually rotated at slower speeds which will also be true of the yarns transmitted by feed wheels 17 and 18. Accordingly, the stocking will be narrowed down as has been indicated between C and D in Fig. 5. At point D and from that point through to E the rate at which the yarn is delivered to the needles is relatively quite slow. Therefore a minimum width is incorporated in the ankle portion of the stocking. In this connection and returning to Fig. 3, it will be observed that cam 48 is of uniform height between these points D and G.

Continued rotation of cam drum 41 causes the heel spring cam 49 to cooperate with the rear portion 50 of lever 51 thereby swinging the latter around its pivot and exerting tension upon the connecting element 32. This will cause the outer end of lever arm 29 to be moved downwardly thereby raising eyelet 33 and permitting arm 25 under the influence of spring 27 to elevate. Under these circumstances plates 21 and 22 will cooperate to arrest further movement of elastic yarn 70. Simultaneously levers 60 and 61 are shifted. This will cause the tension on connecting wires or cables 59 and 59' to be released. Therefore plates 53 and 54 will move into thread-engaging relationship.

As afore brought out yarn 70' is the thread which forms the leg and foot portions of the stocking. It is fed directly from the feed wheel through eyes 35 and 36 and the yarn feeder 62 with which it is associated. When moving this yarn shifts under a straight away motion. Under these circumstances yarn 70 is locked by its clamping plates 53 and 54; such yarn being used only during reciprocatory knitting. Plates 53 and 54 cooperate to lock the yarn only if lever 62 is inoperative. Therefore, there will be no tendency of the yarn to feed after the plates have shifted to locked position. As will be understood the connecting element 59' controls the shifting of the plates.

At this point the unit which functions to supply yarns back and forth over less than the full bank of needles is brought into operation. During reciprocation thereof in one direction the yarn is under tension. During reverse movement there is a considerable amount of slack in the yarn which must be taken up. In a machine which is working on inelastic yarn the take-up of slack is accomplished by suitable tension devices. However, these devices cannot be used with elastic yarn because that yarn cannot be controlled by variations in tension. It is for this reason that in the present machine the locking plates 21 and 22 are provided. During the forward movement of the unit the yarn is being drawn to the needles and is under a sufficient tension to flex the wire arm of lever 29 downwardly. This flexion will result in a sufficient strain being exerted to cause a partial swinging of the lever around pivot 30. Consequently arm 25 will be depressed to move plate 22 out of clamping relationship with plate 21.

It will be appreciated that the tension necessary to accomplish this result is not extreme. This is because of the fact that the parts are relatively quite light. Therefore, no appreciable stretch in the yarn will be necessary to achieve the desired tension. The tension exerted by spring 31 is so light that the yarn need be tensioned to only a slight degree over its normal condition to cause a movement of plate 22. During reverse movement of lever 29 a considerable amount of slack will occur. Accordingly, spring 31 will swing lever 29 so that eyelet 33 assumes its uppermost position. This will take up the slack in a bight of yarn extending from the eyelet 35 of plate 34 to the take-up eye 33.

Under the circumstances thus described, it will be seen that the yarn necessary for the reverse movement of the lever is supplied from the slack in the bight referred to, i. e. from the slack generated by the reciprocating action itself. There being no feed of yarn at that time from the feed wheel 17 such yarn as is needed for the operation is supplied from the slack at a substantially constant tension. If the amount of slack is not sufficient to supply the amount necessary on any reverse movement of the reciprocator, the increase of tension when the slack is exhausted immediately pulls the eye 33 and lever 29 down. This results in an unlocking of plates 21 and 22. As soon as the yarn is released, the tension on the yarn causes it to be operatively engaged and shifted by the wheel 17 so that the feeding operation is resumed. In this manner a heel portion 69 is provided. Such portion will incorporate an amount of material in excess of that required to fill in the area of the heel portion. This excess is evidenced by the heel part of the stocking bulging to a slight extent when that stocking is not applied to the foot of the wearer. When so applied the heel portion is stretched and serves as an elastic constricting surface which will draw all adjacent parts of the stocking into firm contact with the foot, instep and ankle surfaces. At the completion of the heel forming operation the foot portion of the stocking is provided. This occurs incident to feeding the elastic yarns at minimum speed by the wheel 18 because the follower 47 has shifted the parts of the pulley 43 to a position of minimum effective driving diameter. As in Fig. 3 this portion of cam 48 is represented as the zone extending from parts F to G. Under these circumstances it will be understood that a minimum feed occurs and the stocking will therefore have its most reduced diameter.

As the machine functions to initially form the heel the lever 60 is shifted by its cam. Gradually the yarn lever 62 producing the leg portion of the stocking discontinues its operation. As soon as the yarn is out of association with the needles, the clamps controlling the locking of the feeding of yarn 70' function. The motion of lever 60 is adequate to provide for this result. Under these circumstances lever 61 is shifted and the yarn lever 62 controlling yarn 70 moves into feeding position. It follows that the clamping elements 53 and 54 cooperating with that yarn are out of engagement. As will be understood levers 60 and 61 thus control not alone certain of yarn levers but also the clamps which allow for arrest of feeding of yarn 70 and 70'.

Characteristic of the loops forming the courses throughout, for example, the ankle and foot portions of the stocking is the illustration in Fig. 7. As will be seen in that figure in comparison with Fig. 6 the same number of loops have been included in each course. However, the overall height and width of the resultant sections is appreciably different. This, of course, is attributable to the fact that the amount of yarn in each course as represented in Fig. 7 is substantially less than that present in each course of the fabric as illustrated in Fig. 6.

At the point indicated by the letter H in Fig. 5, the knitting of the elastic yarn is stopped. This occurs incident to the fact that lever 60 moves upwardly at this moment. Therefore the arm 55 cooperating with yarn 70 may swing upwardly and interrupt further feeding of that yarn. At this moment lever 60 moves upwardly, lever 61 having moved upwardly at the termination of the heel zone. Due to the heavier yarn employed throughout this zone, the excess heel material results which provides the bulge portion, as afore described, despite the fact that the loops throughout the heel portion are relatively tight in comparison with the loops throughout the self-encircling portion of the sheath. The unit being formed on a circular knitting machine, it is of course apparent that in effect the same aggregate number of loops will be present in any given course throughout the heel plus the adjacent interrupted course of the sheath, as exist

throughout the remaining courses of the latter. Inelastic yarn 71 now is fed towards the needles and the latter operates in conventional fashion to produce the toe portion 68 and the adjacent ring-toe portion 67.

It will be appreciated that by means of the present invention a stocking embodying an exceptional degree of fashioning may be produced by employing nylon covered elastic yarn. A stocking made of such yarn has an appearance comparable to that of a conventional nylon stocking. Furthermore, the fashioning is such as to produce a substantially uniform pressure on all parts of the wearer's leg. Due to the provision of the elastic heel portion not alone is it possible to provide a stocking having a pleasing appearance but also the adjacent portions of the stocking are maintained in firm, proper contact with the adjacent surfaces of the foot and ankle.

Thus, among others, the several objects of the invention as specifically afore noted are achieved. Obviously numerous changes in construction and rearrangement of the parts as well as the steps of the method might be resorted to without departing from the spirit of the invention as defined by the claims.

We claim:

1. A method of forming a stocking which includes utilizing two different elastic yarns, forming a sheath from one of said yarns by providing courses of loops, maintaining the number, height and width of such loops for a number of courses to provide a leg-encircling portion of substantially constant diameter, gradually diminishing the height and width of such loops to provide a calf-encircling portion of decreasing diameter, maintaining the formation of courses with loops of diminished height and width to provide ankle and foot-encircling portions while continuing to provide the same number of loops in each course throughout the leg, calf, ankle and foot-encircling portions of said stocking, interrupting part of the formation of the sheath in a zone intermediate the foot and ankle-encircling portions, interconnecting the second elastic yarn with the loops of the first elastic yarn adjacent an edge of such zone, forming the second elastic yarn into loops arranged in courses throughout such zone to provide an integral elastic heel portion and in continuing the loop formation of such second yarn to furnish an excess of heel material such that the latter distends beyond the other portions of the stocking throughout the heel zone.

2. A method of forming a stocking which includes utilizing two different non-elastic yarns and two different elastic yarns, employing one of said inelastic yarns to form courses of loops to provide a welt for such stocking, forming a sheath from one of said elastic yarns by connecting said one elastic yarn with said welt and providing courses of loops of said one elastic yarn, maintaining the number, height and width of such loops for a number of courses to provide a leg-encircling portion of substantially constant diameter, gradually diminishing the height and width of such loops to provide a calf-encircling portion of decreasing diameter, maintaining the formation of courses with loops of diminished height and width to provide ankle and foot-encircling portions while continuing to provide the same number of loops in each course throughout the leg, calf, ankle and foot-encircling portions of said stocking, interrupting part of the formation of the sheath in a zone intermediate the foot and ankle-encircling portions, interconnecting the second elastic yarn with the loops of the first elastic yarn adjacent an edge of such zone, forming the second elastic yarn into loops arranged in courses throughout such zone to provide an integral heel portion, continuing the loop formation of the second elastic yarn to furnish an excess of heel material such that the latter distends beyond the other portions of the stocking throughout the heel zone, discontinuing the formation of loops by both of said elastic yarns, connecting the second inelastic yarn prior to such discontinuing adjacent the edge of the foot portion of said sheath and forming courses of loops by means of said second inelastic yarn to furnish a toe portion.

3. An elastic stocking including a sheath formed of one elastic yarn and embracing leg, calf, ankle and foot-encircling portions, loops arranged in courses throughout the length of said sheath, the loops in any given course being of the same number and the dimensions of said loops being varied to correspondingly vary the diameter of said sheath throughout the calf portion, the courses of loops of said yarn being partially interrupted intermediate said ankle and foot-encircling portions, a second elastic yarn arranged in loops providing courses secured adjacent the edges of said sheath defining the interruption to provide a heel, the loops of said second yarn being relatively tight in comparison with the loops providing the other portions of said sheath and the guage of said second yarn being heavier than that of said first-named yarn.

4. An elastic stocking including a sheath formed of one elastic yarn and embracing leg, calf, ankle and foot-encircling portions, loops arranged in courses throughout the length of said sheath, the loops in any given course being of the same number and the dimensions of said loops being varied to correspondingly vary the diameter of said sheath throughout the calf, the courses of loops of said yarn being partially interrupted intermediate said ankle and foot-encircling portions, a second elastic yarn arranged in loops providing courses secured adjacent the edges of said sheath defining the interruption to provide an elastic heel portion.

5. An elastic stocking including a sheath formed of one elastic yarn and embracing leg, calf, ankle and foot-encircling portions, loops arranged in courses throughout the length of said sheath, the loops in any given course being of the same number and the dimensions of said loops being varied to correspondingly vary the diameter of said sheath throughout certain of such portions, the courses of loops of said yarn being interrupted intermediate said ankle and foot-encircling portions, a second elastic yarn of a diameter greater than said one elastic yarn and arranged in loops providing courses secured adjacent the edges of said sheath defining the interruption to provide a heel portion of bulged configuration, and a welt and toe forming a part of said stocking and provided of loops of non-elastic yarn secured to the ends of said sheath.

6. An elastic stocking including a sheath formed of one elastic yarn and embracing leg, calf, ankle and foot-encircling portions, loops arranged in courses throughout the length of said sheath, the loops in any given course being of the same number and the dimensions of said loops being varied to correspondingly vary the diameter of said sheath throughout certain of such portions, the courses of loops of said yarn being interrupted intermediate said ankle and foot-encircling portions, a second elastic yarn arranged in loops providing courses secured adjacent the edges of said sheath defining the interruption to provide a heel portion of bulged configuration, a welt and toe forming a part of said stocking and formed respectively of non-elastic yarns having different characteristics and the loops of such non-elastic yarns being secured to said sheath at opposite ends thereof.

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