

Feb. 21, 1928.

1,659,934

J. D. WILLMOTT
THERAPEUTIC GARMENT
Filed July 12, 1926

FIG. I.

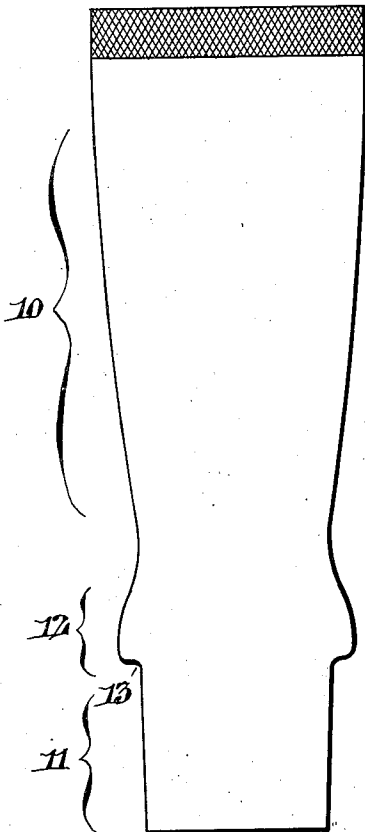


FIG. II.

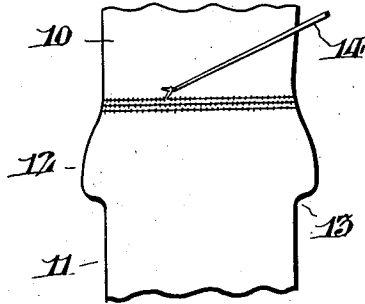


FIG. III.

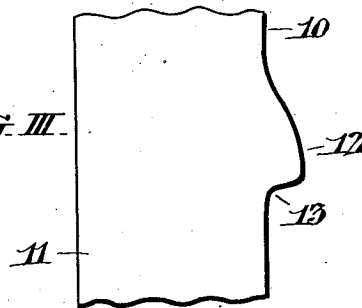


FIG. IV.

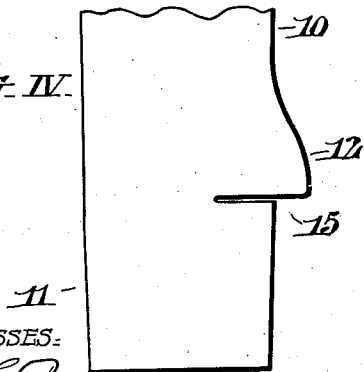
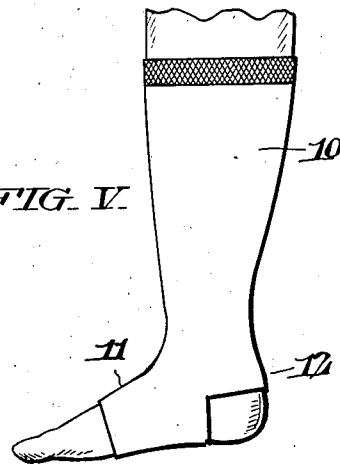


FIG. V.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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THERAPEUTIC GARMENT.

Application filed July 12, 1926. Serial No. 121,745.

This invention relates to therapeutic garments and their manufacture, and is more particularly concerned with the production of seamless tubular therapeutic garments such as stockings and the like.

The object of my invention is to secure in garments of the type referred to, a more accurate approximation to the members upon which they are to be worn—especially in areas adjacent lateral openings provided, as for example in stockings, to permit protrusion of the heel—so that the contractile effect of the elastic is uniformly distributed and equalized to the end of avoiding excessive contraction at any localized point.

With reference to the drawings herewith, Figs. I, II, III and IV are diagrammatic views illustrating successive steps in the production of a therapeutic stocking in accordance with my invention; and,

Fig. V is a view illustrating the manner in which the stocking is worn.

In carrying out my invention I produce on a suitable circular rib knitting machine equipped with means for feeding elastic inlay yarn concurrently with formation of the opposing loops by the two sets of needles, a circular seamless blank such as depicted in Fig. I, having, in direct continuation, a leg portion 10 fashioned to taper configuration, (through regulation of the tension at which the elastic yarn is fed to the needles during knitting) a slightly attenuated narrower foot portion 11, and an appropriately shaped intervening circumferential protuberance 12 (for conversion into the heel as hereinafter explained) merging abruptly with the portion 11 as indicated at 13. With a blank thus prepared, I next proceed to displace the protuberance 12 all to one side by individually and progressively pulling the rounds of the elastic yarn within the bulged area, after the manner shown in Fig. II, with the aid of a suitable quill or point 14, until the forward portion of the foot 11 forms a substantially straight line continuous with the leg portion 10, the ultimate result being illustrated in Fig. III. A lateral incision is then made in the fabric as shown at 15 in Fig. IV directly beneath the displaced protuberance along the line 13 of abrupt merge with the foot portion 11. The edges of the cut may be finished in any suitable manner after cutting, as for ex-

ample, by over-edge stitching, or better still, by binding in the loops of the two adjacent courses marking the line of cut before actual severance, by use of additional elastic yarn drawn through the edge loops, thereby to predetermine a neater and more attractive appearance.

Consequent upon relaxation of the fabric after cutting, the displaced protuberance 12 takes an offset position in conformity with the shape of the human heel and overhangs the contiguous border edge of the foot portion 11 as shown in Fig. IV. Thus, when the stocking is worn, the contractile influence of the elastic is distributed and equalized crosswise of the heel to the same extent as in other parts of the garment, thereby according the wearer the utmost comfort consistent with maintenance of the desired pressure for attainment of the therapeutic effect.

Having thus described my invention, I claim:

1. The method of producing seamless therapeutic garments which comprises knitting a tubular blank with incorporated elastic inlay yarn and incidentally fashioning a circumferential protuberance; and thereafter transposing the fullness of the protuberance all to one side of the tube.

2. The method of producing seamless therapeutic garments which comprises knitting a tubular blank with incorporated elastic inlay yarn and incidentally fashioning a circumferential protuberance; and then drawing upon the rounds of the elastic yarn within the fashioned area to transpose the fullness all to one side of the tube.

3. The method of producing seamless therapeutic garments which comprises knitting a tubular blank with incorporated elastic inlay yarn and incidentally fashioning a circumferential protuberance; then transposing the fullness of the protuberance all to one side of the tube and forming an opening adjacent said protuberance by a lateral cut into the tube.

4. The method of producing a seamless therapeutic stocking which comprises knitting a tubular blank with incorporated elastic inlay yarn and incidentally fashioning a tapered leg portion, a narrow instep portion of substantially uniform diameter and an intervening circumferential protuberance; then transposing the fullness of the pro-

tubulance all to the back of the stocking and forming a heel opening by a lateral cut into the tube immediately beneath the protuberance aforesaid.

- 5 5. As a new article of manufacture, a tubular seamless therapeutic stocking having a lateral opening whereof one edge protrudes circumferentially beyond the other edge.
- 10 6. As a new article of manufacture, a tubular seamless therapeutic stocking having a lateral opening, whereof one edge forms the boundary of a partial circumferential protuberance and projects beyond the other
- 15 edge.
7. As a new article of manufacture, a tubular seamless therapeutic stocking with incorporated elastic inlay yarn having a lateral heel opening whereof the upper edge

protrudes circumferentially beyond the 20 lower edge.

8. As a new article of manufacture, a tubular seamless therapeutic stocking with incorporated elastic inlay yarn having a fashioned ankle, and a lateral heel opening 25 whereof the upper edge protrudes circumferentially beyond the lower edge.

9. As a new article of manufacture, a tubular seamless therapeutic stocking with incorporated elastic inlay yarn having fashioned leg and ankle portions, a narrow in-step portion, and a lateral heel opening 30 whereof the upper edge protrudes circumferentially beyond the lower edge.

In testimony whereof, I have hereunto 35 signed my name at Philadelphia, Pennsylvania, this 9th day of July, 1926.

JAMES D. WILLMOTT.