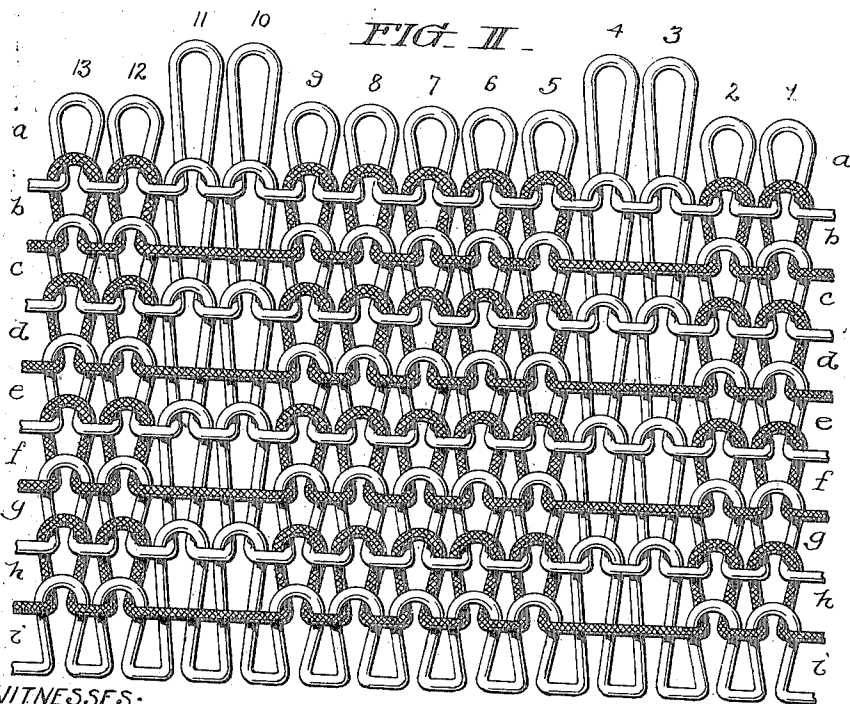
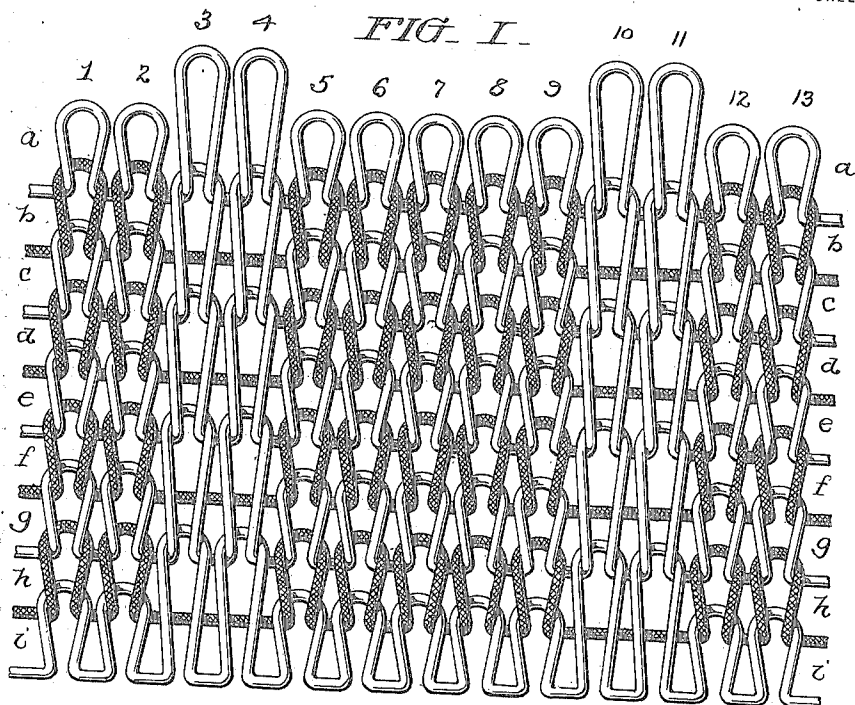


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APPLICATION FILED MAR 18, 1921.

Patented Oct. 10, 1922.

2 SHEETS—SHEET 1.



WITNESSES:

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James H. Bell

INVENTOR:

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ATTORNEYS.

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FIG. IV.

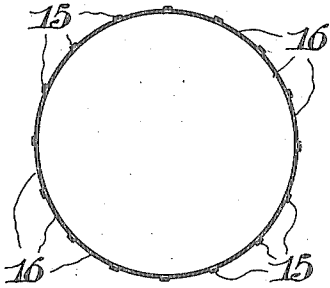
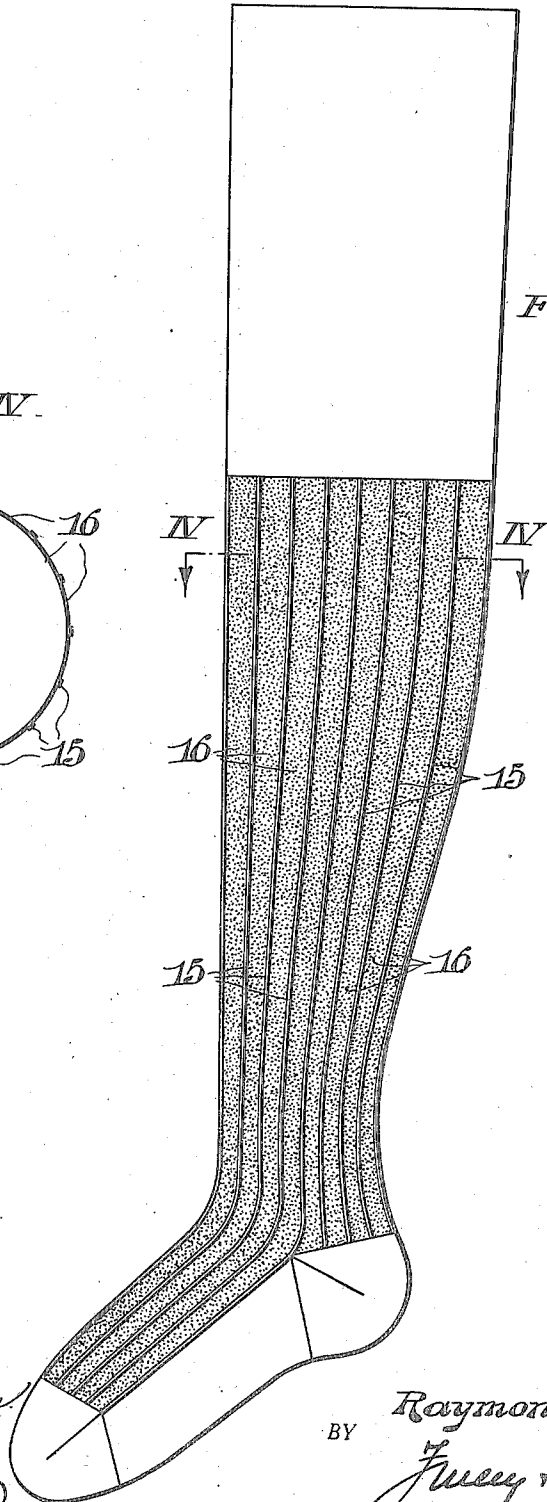


FIG. III.



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UNITED STATES PATENT OFFICE.

RAYMOND FISHER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO
OSCAR W. WEISEL, OF PHILADELPHIA, PENNSYLVANIA.

VERTICALLY-STRIPED KNIT FABRIC.

Application filed March 18, 1921. Serial No. 453,255.

To all whom it may concern:

Be it known that I, RAYMOND FISHER, a citizen of the United States, residing in Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Vertically-Striped Knit Fabrics, whereof the following is a specification, reference being had to the accompanying drawings.

My invention relates to knit fabrics of the type which are produced by knitting alternate courses of yarns differing in kind: i. e., in color or texture. Such fabrics are well known as "two-tone" or "heather-tone" mixtures. By reason of the alternation of the two yarns they are substantially indistinguishable to the eye.

The object of my invention is to produce a knit fabric which will place upon such a two-tone or heather-tone background, a vertical stripe of a solid color. While the fabric may be used for other purposes, it is convenient for me to describe it as applied to knit hosiery, and it is so illustrated in the accompanying drawings.

Fig. I is a view of the face of my knit fabric.

Fig. II is a view of the back of my knit fabric.

Fig. III is a diagrammatic side view of hosiery comprising my knit fabric; and

Fig. IV is a diagrammatic cross sectional view of the same along the line IV—IV in Fig. III.

Referring to Fig. I, it will be noted that the fabric is knit of two kinds of yarn distinguished from each other by their color, and which, for the sake of convenience, I will speak of respectively as white and black. Alternate courses of the said fabric are knit from differing yarns: i. e., courses, *a*, *c*, *e*, *g* and *i* are knit of the white yarn, while the intervening courses *b*, *d*, *f* and *h* are knit of the black yarn. It will also be noted that of the wales of knitting, those numbered 1, 2, 5, 6, 7, 8, 9, 12 and 13 are formed by the ordinary interknitting of the loops of each course with the course succeeding, thus producing for the region of said wales, a two-tone or heather-tone background; while the wales 3, 4, 10 and 11 are produced by interknitting long loops of each white yarn course with the similar loops of the next succeeding white yarn course, thus interknitting only alternate courses while the black

yarn floats unknit behind these long loops, as seen in Figs. I and II.

To knit such a fabric, it is only necessary to vary the ordinary knitting operation by causing the needles upon which the long white loops are formed to hold their loops and fail to receive the black yarn.

By adopting the plan of knitting which I have just explained, the background of the fabric is formed by the parts which are knit in the ordinary way comprising multiple-wale sections and, as a rule, the majority of the wales, and by reason of the alternation of the yarns course by course in these sections, the two kinds of yarn are so intermixed as to prevent the eye from readily picking out and distinguishing them, thus producing the desired dominating two-tone effect to which I have referred above. On the other hand, the wales which carry the longer loops to alternating courses have the effect of one-tone vertical stripes contrasting strongly with the background and are composed on the face of the fabric of the one kind of yarn only.

It is to be understood that any desired combination of yarns differing in color, texture or other manner may be employed,—black and white being merely cited by way of example,—and it is likewise to be understood that the background sections and stripe sections may be of differing widths and proportions. But the heather-tone sections are multiple-wale sections and the stripe sections are narrow as compared with said sections. But to secure the desired effect, the two kinds of yarn must alternate practically course by course, as otherwise the eye is able to distinguish between the two kinds of yarn which compose the background sections, and the desired heather-tone effect is not secured.

The effect of these stripes may be enhanced by slightly varying the tension of the different yarns. In this way, the floats of the black yarn may be drawn across behind the long loops of the white yarn with sufficient tension to purse together the wales formed therefrom,—thus causing the vertical stripes to protrude slightly above the face of the fabric, as shown in Fig. IV, where 15—15 represents the protruding vertical stripes, while 16—16 represents the sections of two-tone background. The striped effect which is thus secured is also illustrated

in Fig. III where is represented long hosiery having the calf, ankle and top of the instep knit as I have described, the heather-tone background being shown at 16—16 and the
 5 vertical stripes 15—15 standing out in sharp contrast to said background.

Having thus described my invention, I claim:

1. A vertically striped knit fabric formed
 10 of two kinds of yarn alternating course by course, the loops of succeeding courses being interknit along certain sections each comprising a series of adjoining wales to form a two-tone background; the loops of the alternating courses of one kind of yarn being
 15 lengthened and interknit with each other along the remaining wales; and the alternating courses of the other kind of yarn being floated behind the long interknit loops
 20 which form the face of said wales.

2. A vertically striped knit fabric formed of two kinds of yarn alternating course by course, the loops of succeeding courses being interknit along certain sections, each section comprising a relatively large number
 25 of adjoining wales to form a two-tone background, the loops of the alternating courses of one kind of yarn being lengthened and interknit with each other to form sections
 30 alternating with the first mentioned sec-

tions and said second mentioned sections consisting of a relatively small number of wales, and the alternating courses of the other kind of yarn being floated behind the long interknit loops which form the face of
 35 the wales of the second sections, whereby the latter define narrow stripes of one color contrasting with a two-tone background defined by the first sections.

3. A vertically striped knit fabric formed
 40 of two kinds of yarn alternating course by course, the loops of succeeding courses being interknit along certain multiple-wale sections to form a two-tone background; the loops of the alternating courses of one kind
 45 of yarn being lengthened and interknit with each other along the remaining wales with the other kind of yarn floated behind them, the tension under which said latter yarn is knit being such as to purse together the
 50 wales formed by the long loops causing the vertical stripes thereby formed to protrude upon the face of the fabric.

In testimony whereof, I have hereunto signed my name at Philadelphia, Pennsylvania, this sixteenth day of March, 1921.

RAYMOND FISHER.

Witnesses:

OSCAR W. WEISEL,
 SARA I. HALL.