Aug. 24, 1926. 1,597,410

R. HINCHLIFF

KNITTED TIE

Original Filed Sept. 1, 1922

Fig. 1.



Fig. 2.

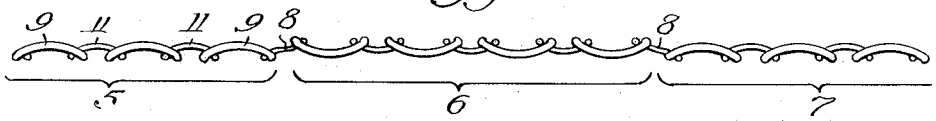
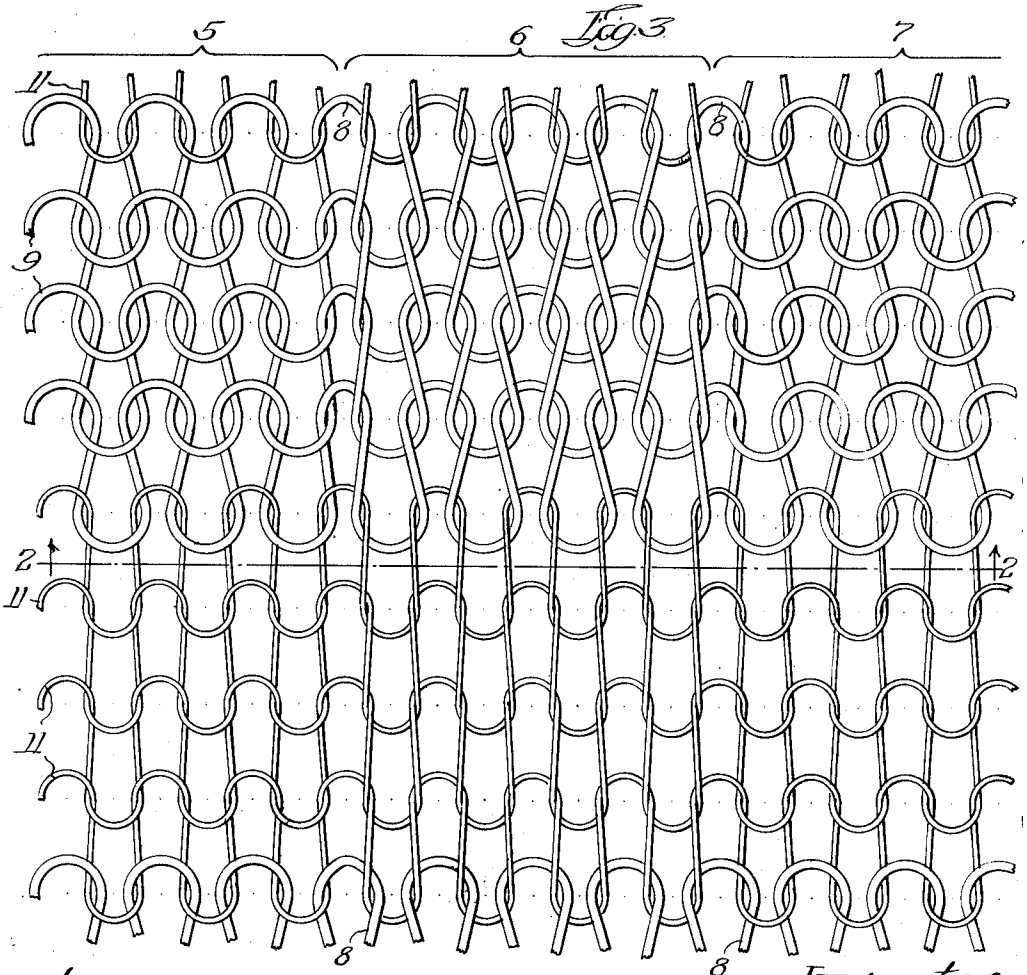


Fig. 3.



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Patented Aug. 24, 1926. 1,597,410

UNITED STATES PATENT OFFICE.

RALPH HINCHLIFF, OF ROCKFORD, ILLINOIS, ASSIGNOR TO BURSON KNITTING COMPANY, OF ROCKFORD, ILLINOIS, A CORPORATION OF ILLINOIS.

KNITTED TIE.

Application filed September 1, 1922, Serial No. 585,727. Renewed July 11, 1925.

This invention relates generally to knitted fabrics, and I have chosen to illustrate as a specific embodiment thereof a knitted necktie, although it should be understood that my invention contemplates in a generic sense a knitted fabric comprising wide and narrow portions irrespective of the purpose for which the fabric is utilized.

The invention contemplates the provision of knitted fabric comprising wide and narrow portions adapted in the present instance to constitute the knot-forming portion and the neck back portion of a tie, the fabric being flat as distinguished from a tubular structure, and containing the same number of wales in the neck band portion as in the knot-forming portion, the neck band portion, however, being narrower than the knot-forming portion as will presently appear.

In the production of my improved fabric, I employ a straight machine, commercially known as the Lamb type, and arrange and manipulate the needle so as to produce a substantially flat fabric consisting of a series of longitudinally extending webs, alternate ones of which have the faces of the stitches presented at one face of the fabric and the intervening ones of which have the faces of the stitches presented at the opposite face of the fabric. In the production of the wider portions of the fabric I utilize two yarns, one a relatively heavy yarn and the other a relatively light yarn, and these yarns are employed alternately at regular or irregular intervals, as preferred, with the result that the wider portion of the fabric is made up of courses of heavy yarn, alternating with courses of light yarn producing thereby a transversely striped effect in the fabric. In the production of the narrower portion of the fabric, which in a tie becomes the neck band portion, the light yarn only is employed which results in a narrower fabric portion embodying, however, the same number of wales as the wider portion.

My improved fabric consists therefore of a narrower portion formed of light yarn and a wider portion formed of alternately arranged light and heavy yarns, giving a transverse striped effect to the fabric, while the whole fabric from end to end presents the appearance on both faces of a heavy multiply fabric made up of longitudinally extending webs of appreciable width disposed in contiguous relation.

The accompanying drawings illustrate a preferred embodiment of my invention, and referring thereto:—

Fig. 1 is a face view of a fabric characterized by my invention;

Fig. 2 is a fragmentary transverse sectional view on the line 2—2 of Fig. 3; and

Fig. 3 is an enlarged face view of a fragment of the fabric illustrating the arrangement of stitches when the fabric is transversely stretched.

The fabric of my invention comprises a series of longitudinally extending webs, alternate ones of which are knit by the needles on one bed of the machine, while the intervening alternate webs are knit by the needles on the opposite bed of the machine. The needles of the machine are therefore arranged in groups, each group comprising a series of needles of any desired number, and for the production of the specific fabric herein illustrated, each group would comprise four needles. These groups of needles are disposed in staggered relation across the machine alternately upon opposite beds and they are manipulated in succession across the machine so that the first portion of each course is knit by group number one on one bed of the machine, the next portion by group number two on the other bed of the machine, the third portion by group number three on the first bed, the fourth by group number four on the opposite bed, and so on across the machine. The united stitches of each group form in the completed fabric a web comprising a plurality of wales, in the present instance four in number.

The webs knitted by the needles on one bed of the machine have the fronts of the stitches presented on one face of the fabric, while the intervening webs knitted by the needles on the opposite bed of the machine have the fronts of their stitches presented on the opposite face of the fabric, so that in the completed fabric, the stitches in adjoining webs are alternately faced. Referring to Figs. 2 and 3 wherein the arrangement of the stitches is shown, it will be observed that web 5 has the faces of its stitches presented at the back of the fabric, viewing Fig. 3, and at the bottom, viewing Fig. 2, web 6 has the faces of its stitches presented toward the observer in Fig. 3, and at the top of the fabric in Fig. 2, and web 7 has its stitches faced similarly to those in web 5, and thus

entirely across the fabric the stitches in the respective webs are alternately faced. The yarn in the stitch wales 8 where it is transferred from one bed to the other of the machine is under a greater tension than in the other wales of the webs, and by reason of the change of the yarn from one face to the other of the fabric, the web 6 and alternate webs having their faces presented toward the observer in Fig. 3, are not disposed in the same plane as the intervening webs 5, 7, etc., across the fabric, as will be apparent from Fig. 2. Furthermore, the natual tendency of each web to curl at its edges augmented by the change in stitch along the wales 8 and by the increased tension of the yarn in these wales, causes the connected edges of adjacent webs to curl both in the same direction so that when tension on the fabric is released, the edges of the webs will curl inwardly into a spiral formation, thereby drawing the similarly faced webs on each face of the fabric into contiguous relation so that the intervening webs are completely covered and are not visible from one face of the fabric. The fabric, therefore, presents the appearance of a series of flat ribs having their edges disposed in contiguous relation to each other. This characteristic of the fabric forms the subject matter of my copending application, Serial No. 585,724, filed September 7, 1922.

In order to present a striking and pleasing appearance and also to enable the production of alternate wide and narrow portions in the fabric without a fashioning operation, my invention contemplates the utilization in the production of the fabric of a plurality of weights of yarns. In the present instance I have employed two weights of yarns, the heavy yarn being indicated by reference character 9 and the light yarn by reference character 11. In knitting the fabric these yarns are used in alternation and either in regular or irregular sequence as preferred. In the specific fabric shown, however, the light yarn 11 is utilized in the production of four courses which are then alternated with four courses of the heavy yarn producing thereby stripes extending transversely of the fabric, the heavy yarn stripes being indicated in Fig. 1 by reference character 12 and the light yarn stripes by reference character 13. This method of knitting gives the fabric the appearance of being transversely striped, as well as longitudinally ribbed. When the narrow portion of the fabric is to be produced, which in a necktie will be the neck band portion and is designated in Fig. 1 by reference character 14, the heavy yarn is thrown out of operation entirely and the narrow portion is knit exclusively with the light yarn; with the result that while the narrow portion comprises the same number of wales as the wider portion, it is, because of the lighter yarn employed in its production, considerably narrower than the portion of the fabric embodying the heavy yarn. I am able, therefore, to produce a fabric consisting of wide and narrow portions which in the wide portion presents the appearance of being longitudinally ribbed and transversely striped and in the narrower portion is materially narrower and also lighter in weight, so that it will readily slide beneath the collar.

My improved fabric, because of its manner of production, possesses the weight and thickness of a tubular or a multi-ply fabric, whereas in fact it is a single ply flat fabric, and while consisting of a series of webs, it has the appearance, when not under tension, of being longitudinally ribbed, and furthermore because of the difference in the weights of the yarns employed, it presents the added attractiveness of being transversely striped. It should be obvious that the fabric is capable of considerable variation from the specific embodiment disclosed in that the width of the webs may be increased or diminished and the light and heavy yarns may be employed in a greater or less number of courses before being changed, all in accordance with the desired fabric to be produced, within the purview of my invention, as defined in the following claims.

I claim:

1. A single ply flat knitted fabric comprising, relatively wide end portions joined by a relatively narrow intermediate portion all of said portions being formed by the same wales extending from end to end of the fabric and made so as to produce a series of longitudinally extending alternately faced webs having appreciable lateral elasticity, the end portions being transversely striped by the alternate incorporation therein of light and heavy yarns and the intermediate portions being formed entirely of light yarn to produce a relatively thin and narrow connecting strip.

2. A single ply flat knitted neck tie comprising, relatively wide end portions formed of light and heavy yarns, and a relatively narrow neck band portion formed entirely of the light yarns which are incorporated also in the end portions, the end portions and the neck band portions consisting of the same number of wales knit to produce a series of longitudinally extending alternately faced webs, the tie possessing considerable lateral elasticity and the neck band portion thereof being thin and narrow to readily slide beneath the collar.

RALPH HINCHLIFF.