June 1, 1954 P. VIRCHAUX 2,679,738

KNITTED ELASTIC (RUBBER) STOCKING

Filed Sept. 29, 1951

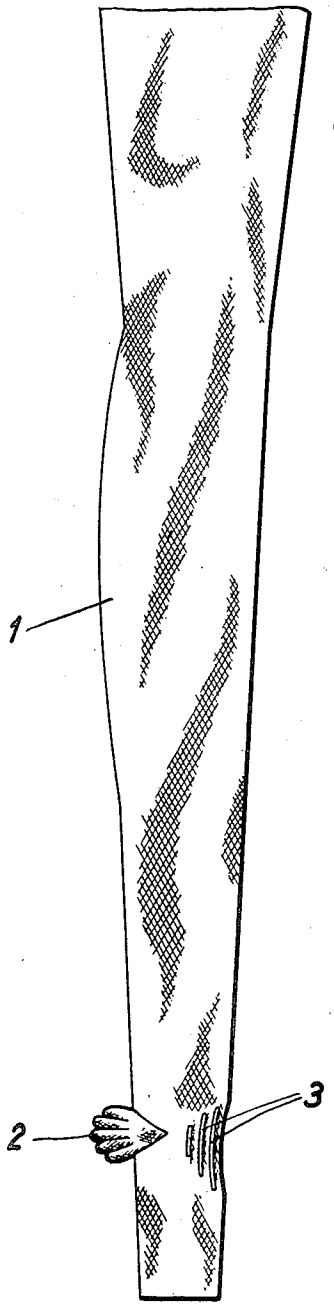


Fig. 1

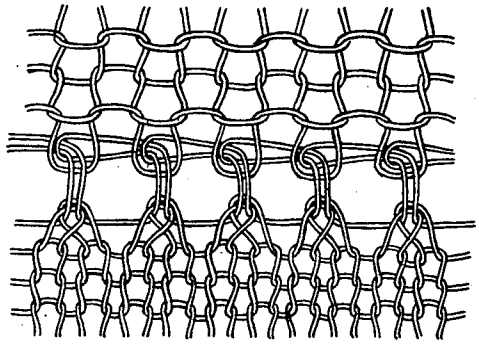


Fig. 2

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Patented June 1, 1954

2,679,738

UNITED STATES PATENT OFFICE

2,679,738

KNITTED ELASTIC (RUBBER) STOCKING

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Application September 29, 1951, Serial No. 248,896

Claims priority, application Switzerland May 22, 1951

2 Claims. (Cl. 66—178)

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This invention relates to elastic (rubber) stockings and to a process of producing them.

The bodies of rubber stockings are knitted with an elastic (rubber) thread. Hitherto the thin rubber stockings were made from thin rubber threads knitted jersey fashion on a machine for knitting on fine gauge. The main drawback characteristic of these stockings was that their stitches were tightly closed and only little elastic, thereby hindering the passage of air through the body of the stocking and were not only heavy but too hot. Many persons are loath to wear them, more especially in summer and the drawback mentioned above is a grave one because in hot weather one suffers more of the legs and is quite particularly in need of having his legs supported.

It is an object of this invention to remedy these defects and drawbacks and to provide a stocking that is not only light in weight, but also allows the air to pass through its stitches.

This is effected, in accordance with this invention, by knitting the body of the stocking with purl stitches between which passages are left for the air even if the stocking is not under tension. On the other hand the heel is knitted with non-elastic threads and is inserted in the elastic body by means of an elastic thread.

The process according to the invention for producing these stockings is characterized thereby that the body of the stocking is knitted on a gauge so large that even in a state where no tension acts on the body of the stocking, passages are left for air.

In a preferred embodiment the body of the stocking is formed with several ribs in the section opposite the heel and the length of these ribs diminishes from one rib to the adjoining one, starting from the middle towards the two sides.

In a preferred mode of execution of the process according to the invention, the elastic thread used for inserting the heel in the body of the stocking is passed by means of chain stitches through the adjoining borders of the body of the stocking and the heel.

In the drawing affixed to this specification and forming part thereof one embodiment of a stocking according to this invention is illustrated diagrammatically by way of example, Fig. 1 showing the stocking as a whole in elevation, while Fig. 2 illustrates on an exaggerated scale the chain-stitch connection established between the heel and the shaft of the stocking.

In the stocking here shown 1 is the body and 2 is the heel inserted in the body. The body 1 is very narrow so that, when it is pulled on the leg it must expand strongly in the peripheral direction. It is knitted with elastic threads exclusively, i. e. with thread having a core of rubber, in purl stitches. It is thus constituted of a knitted fabric of the kind called purl knit fabric which is obtained on rib-knitting machines with two dials and double-latch needles in which the work passes alternately from one dial to the other. It is important to note that one knits on

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a gauge so coarse, more especially in relation to the fineness of the elastic thread used, that the body of the stocking presents air passages between the stitches even in the not-distended state. One knits for instance on a gauge No. 32 with an elastic thread No. 100. When the body of the stocking is placed under strong tension, for instance at the same degree as when it is pulled on the leg, it presents the appearance of a net with very large air passages between the stitches.

The heel 2 is knitted, as in the ordinary socks, with a non-elastic thread, for instance in wool or cotton, with or without the addition of synthetic material which may serve for reinforcing. This heel is knitted by itself and then placed into the body of the stocking. In order to effect the insertion of the heel 2 into the body 1 of the stocking, one provides in the body an opening by forming during the knitting process a notch of approximately triangular shape in each one of the longitudinal borders which are afterwards sewn or otherwise connected together and in this operation one also uses elastic thread. Preferably this thread is passed in chain stitch through the adjoining borders of the body and the heel. One then obtains a connection of particularly great elasticity between the heel and the stocking body.

The body shown in the drawing has several ribs 3 formed in that section which is opposed to the heel. These ribs are of gradually diminishing length, in the direction from the middle towards the two sides. The stocking section formed with these ribs possesses a high elasticity which facilitates its being pulled over the calf of the leg. It thus diminishes the risk of being torn or entirely distended.

I wish it to be understood that I do not desire to be limited to the details shown and described in the foregoing specification for obvious modifications may occur to a person skilled in the art.

I claim:

1. Knitted elastic (rubber) stocking comprising a body section consisting of purl stitches providing space for the air to pass through even if not under tension, and a heel knitted of non-elastic thread, said heel forming an insert in an opening of said body, an elastic thread fixing said heel to said body.

2. The stocking of claim 1, in which a plurality of ribs are provided in the section of the stocking body opposite the heel, said ribs decreasing in length from the middle towards the sides of the stocking.

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