Patented July 26, 1932

1,868,899

UNITED STATES PATENT OFFICE

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PROCESS OF KNITTING

No Drawing. Application filed March 12, 1931. Serial No. 522,176.

This invention relates to knitting, and more particularly to the process of knitting with coned yarn treated so that the convolutions of yarn on the cone are adhered to each other to resist too-ready unwinding from the package.

This application is akin to a co-pending application of these applicants filed May 14, 1930, Serial No. 452,515, and is a continuation in part of that co-pending application which has since ripened into Patent No. 1,799,230, dated April 7, 1931.

The object of the invention is to provide yarn more efficient for knitting.

Another object of the invention is to provide the required tension of the yarn between the package and the needles of a knitting machine.

Still another object of the invention is to provide such a tension as to eliminate or supersede the use of auxiliary tensioning devices for that purpose.

It is a well-known fact that in the ordinary knitting of yarn, unless auxiliary tension devices are provided, the yarn will balloon from the cone and therefore cause uneven knitting and oftentimes snarls and loops in the yarn itself.

Various tensioning means have been provided for relieving this condition but mechanical tensioning means are all of such a nature that they are likely to get out of order, or break the yarn, or prove ineffective for the purpose desired and, therefore, there is no little difficulty with the use of these devices.

According to the present invention, a yarn package is impregnated with size to cause the convolutions of yarn to adhere to each other, due to the cementing properties of the size, so as to resist being too readily unwound from the package.

The mucilaginous substance will cause the yarn to be drawn from the cone by the needles only in the exact quantity that such needle requires the same.

The mucilaginous sizing compound must be of such cementing strength only as to permit the yarn to be readily pulled from the cone by the needles without providing any tension of any moment, otherwise the strands will be broken. In other words, the mucilaginous compound must be of a cementing strength to produce a tension equal to the tension produced by the tensioning devices when the same are properly set.

By size is meant any suitable substance which will produce the desired amount of cohesion to effect the above stated result.

This invention has nothing whatever to do with the treatment of the yarn with conditioning oils and the like, and the mucilaginous compound must be of such a nature that it will produce exactly the proper amount of resistance to unwinding so that a slight pull on the yarn by the needles will cast only just enough thread for utilization by the needles, and allow no slack between the needles which causes uneven knitting.

The present invention is particularly applicable to the knitting of hosiery, and particularly full-fashioned hosiery.

Of course, the process of treating yarn described is susceptible of slight modification and changes without departing from the invention herein set forth and hereafter claimed.

The invention is hereby claimed as follows:

1. The process of knitting, comprising using a yarn package impregnated with a size to adhere the convolutions of yarn to each other to resist unwinding, where by means of such size a tension is applied to the yarn as it is fed between the package and needles.

2. The process of knitting, comprising using a yarn package impregnated with a soluble in water size to adhere the convolutions of yarn to each other to resist unwinding, where by means of such size a tension is applied to the yarn as it is fed between the package and needles.

3. The process of knitting hosiery, comprising using a yarn package impregnated with a size to adhere the convolutions of yarn to each other to resist unwinding, where by means of such size a tension is applied to the yarn as it is fed between the package and needles.

4. The process of knitting hosiery, comprising using a yarn package impregnated

with a soluble in water size to adhere the convolutions of yarn to each other to resist unwinding, where by means of such size a tension is applied to the yarn as it is fed between the package and needles.

5. The process of knitting full-fashioned hosiery, comprising using a yarn package impregnated with a size to adhere the convolutions of yarn to each other to resist unwinding, where by means of such size a tension is applied to the yarn as it is fed between the package and needles.

6. The process of knitting full-fashioned hosiery, comprising using a yarn package impregnated with a soluble in water size to adhere the convolutions of yarn to each other to resist unwinding, where by means of such size a tension is applied to the yarn as it is fed between the package and needles.

In testimony whereof we have signed our names to this specification.

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