March 10, 1953 S. GAGAS 2,630,982

TENSION CONTROL FOR FULL FASHION HOSIERY MACHINES

Filed March 14, 1952

Fig. 1.

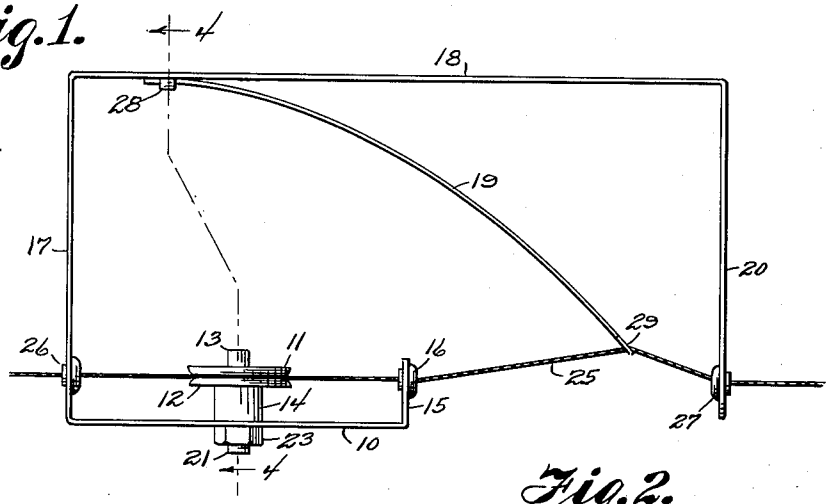


Fig. 2.

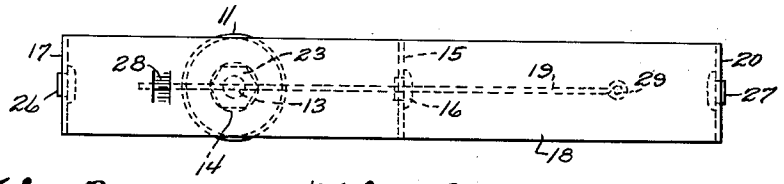


Fig. 3.

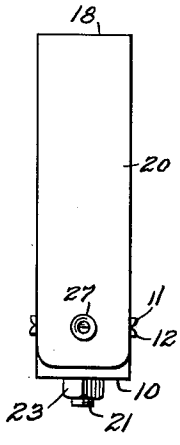


Fig. 4.

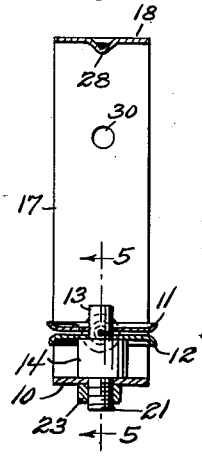
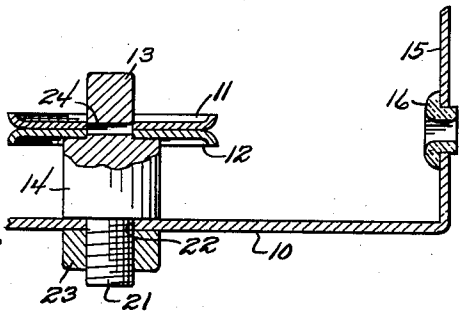


Fig. 5.



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TENSION CONTROL FOR FULL FASHION HOSIERY MACHINES

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5 Claims. (Cl. 242—153)

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This invention relates to tension attachments for knitting machines particularly for holding yarn in full fashion hosiery knitting machines, and in particular this invention relates to an attachment having tensioning means therein adapted to be bolted on a hosiery machine to replace the conventional hair pin tension wires.

The purpose of this invention is to provide a yarn or thread tensioning device for full fashion hosiery machines in which the tension is readily controlled.

With the conventional type of hair pin tension wires too little or too much tension on the thread or yarn results in ragged or rough selvages on full fashion hosiery. With this thought in mind this invention contemplates an attachment having a combination of tensioning discs with a spring arm whereby by increasing or decreasing the weight of an upper disc of the tensioning device the tension on the yarn is accurately controlled.

The object of this invention is, therefore, to provide a tension control or selvage master device for full fashion hosiery machines that provides means for accurately adjusting the tension of yarn being fed to the knitting instrumentalities of the machine.

Another object of the invention is to provide a tension control for full fashion hosiery machines that is adapted to be installed on machines now in use in place of a conventional tension device.

A further object of the invention is to provide a tension control or selvage master device for full fashion hosiery knitting machines which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a substantially rectangular shaped frame having a base with a pair of discs positioned on a spindle thereon and having an inverted U-shaped section extended from one end of the base with an eye in the extended end thereof and with a spring wire arm also having an eye in the extended end thereof carried by an upper section thereof.

Other features and advantages of the invention will appear from the following description taken in connection with the drawing wherein:

Figure 1 is a side elevational view illustrating the improved tension control attachment.

Figure 2 is a plan view of the attachment.

Figure 3 is an end elevational view of the attachment looking toward the end thereof suspended from the base.

Figure 4 is a cross section through the attachment taken on line 4—4 of Fig. 1.

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Figure 5 is a detail view taken on line 5—5 of Fig. 4 showing a longitudinal section through the lower part of the attachment and showing the parts on an enlarged scale.

Referring now to the drawing wherein like reference characters denote corresponding parts the improved tension control attachment of this invention includes a base 10 having discs 11 and 12 positioned on a spindle 13 extended from a cylindrical block 14, and the base is provided with an end 15 having an eye 16 therein and also a section 17 from the upper and of which a bar 18 extends, and the bar 18 is provided with a spring arm 19 and a depending section 20.

As illustrated in Fig. 5 the block 14 is provided with a threaded stud 21 which extends through an opening 22 in the base 10 and the stud 21 is provided with a nut 23 by which the block 14 and spindle 13 are secured in position on the base. The spindle 13 extended from the upper end of the block 14 is provided with an opening 24 through which a thread or yarn 25, which also extends between the discs 11 and 12 is threaded, as illustrated in Fig. 1, wherein the thread extends through an eyelet 26 on the section 17 of the base and also through an eyelet 27 in the depending section 20 of the bar 18.

The spring arm 19 is frictionally held in a clip 28, struck from the bar 18, as illustrated in Fig. 4 and the extended end thereof is provided with an eye 29 through which the thread or yarn passes.

With the parts assembled in this manner the frame is bolted, through an opening 30 in the section 17 thereof on the hosiery machine in place of the present hair pin tension wires and the yarn or thread is threaded through the eyelets and also through the opening 24 in the spindle 13 wherein the thread passes between the discs 11 and 12 and tension thereon may be adjusted by using discs of different weights in place of the disc 11.

The combination of the tensioning discs 11 and 12 with the spring arm 19 provides means for accurately adjusting and thereby controlling the tension of the thread.

With the yarn tensioning attachment of this invention the thread carrier tubes can be set above the sinkers, thereby eliminating much of the needle breakage and damage to the sinkers and carrier tubes.

Furthermore, because of the steady tension provided by this tension control device the stitch formation and appearance of the fabric is greatly improved.

It will be understood that modifications may be made in the design and arrangement of the

parts without departing from the spirit of the invention.

What is claimed is:

1. A tension control for hosiery knitting machines comprising a base, a spindle mounted on the base, tension discs positioned on the spindle, a bar extended upwardly from one end of the base, over the base and extended beyond the end of the base opposite to the end from which the bar extends, and eyelets carried by the ends of the bar and positioned to coact with the tension discs to guide thread through the discs.

2. A tension control for hosiery knitting machines comprising a base, a spindle mounted on the base, tension discs positioned on the spindle, a bar extended upwardly from one end of the base, over the base and extended beyond the end of the base opposite to the end from which the bar extends, eyelets carried by the ends of the bar and positioned to coact with the tension discs to guide thread through the discs, and a spring arm having an eye on the extended end, carried by the bar and positioned between the tensioning discs and extended end of the bar.

3. A tension control for hosiery knitting machines comprising a base, a spindle mounted on the base, tension discs positioned on the spindle, a bar extended upwardly from one end of the base, over the base and extended beyond the end of the base opposite to the end from which the bar extends, eyelets carried by the ends of the bar and positioned to coact with the tension discs to guide thread through the discs, a spring arm having an eye on the extended end, carried by the bar and positioned between the tensioning discs and extended end of the bar, and an eyelet carried by the end of the base opposite to that from which the bar extends and positioned in alignment with the eyelet of the bar.

4. A tension control for hosiery knitting machines comprising a base, a spindle mounted on the base, tension discs positioned on the spindle,

a bar extended upwardly from one end of the base, over the base and extended beyond the end of the base opposite to the end from which the bar extends, eyelets carried by the ends of the bar and positioned to coact with the tension discs to guide thread through the discs, a spring arm having an eye on the extended end, carried by the bar and positioned between the tensioning discs and extended end of the bar, and an eyelet carried by the end of the base opposite to that from which the bar extends and positioned in alignment with the eyelet of the bar, said spindle upon which the discs are mounted having an opening therethrough through which a thread threaded through the eyelets and eye of the spring arm is threaded.

5. A tension control for hosiery knitting machines comprising a base, a spindle mounted on the base, tension discs positioned on the spindle, a bar extended upwardly from one end of the base, over the base and extended beyond the end of the base opposite to the end from which the bar extends, eyelets carried by the ends of the bar and positioned to coact with the tension discs to guide thread through the discs, a spring arm having an eye on the extended end, carried by the bar and positioned between the tensioning discs and extended end of the bar, and an eyelet carried by the end of the base opposite to that from which the bar extends and positioned in alignment with the eyelets of the bar, said spindle upon which the discs are mounted having an opening therethrough through which a thread threaded through the eyelets and eye of the spring arm is threaded, said bar being substantially rectangular shaped and having an opening in a section thereof extended from the base by means of which the device is bolted to a hosiery machine.

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No references cited.