July 14, 1925. 1,545,953

E. A. FEUSTEL

TENSION DEVICE

Filed June 9, 1924

Fig. 1.

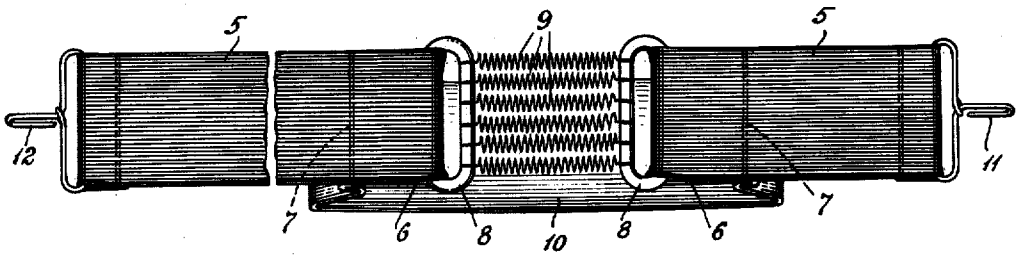


Fig. 2.

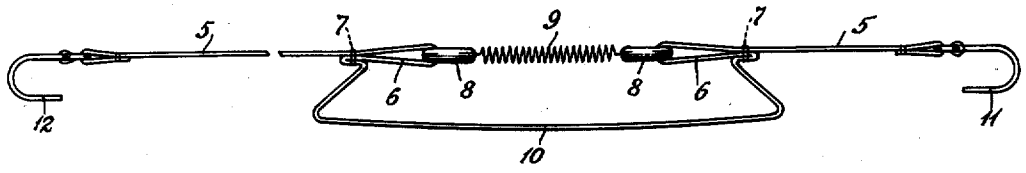
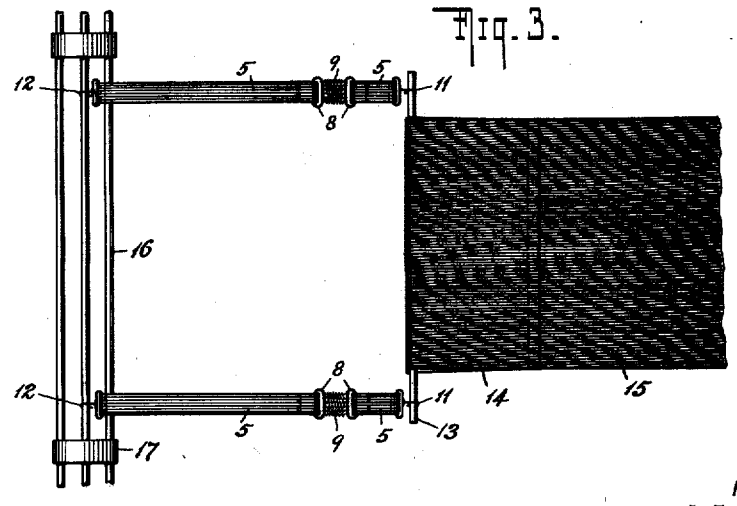


Fig. 3.



WITNESS

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Patented July 14, 1925. 1,545,953

UNITED STATES PATENT OFFICE.

ERNEST A. FEUSTEL, OF CARLSTADT, NEW JERSEY, ASSIGNOR TO ALFRED HOFFMAN, INC., OF UNION HILL, NEW JERSEY, A CORPORATION OF NEW JERSEY.

TENSION DEVICE.

Application filed June 9, 1924. Serial No. 718,707.

To all whom it may concern:

Be it known that I, ERNEST A. FEUSTEL, a citizen of the United States, and resident of Carlstadt, county of Bergen, State of New Jersey, have invented certain new and useful Improvements in Tension Devices, of which the following is a specification.

My invention relates to tension devices and more particularly to elastic wareroller straps for hosiery machines. In such machines, when a full fashioned stocking is being knitted and the first few rows of fabric called the double welt have been produced, it is necessary to attach the same to the wareroller in a manner to maintain the fabric under a uniform tension. Heretofore this has been accomplished by means of rubber straps which are objectionable for the reason that the rubber has a tendency to sag and become uneven and loses its life and therefore its efficiency as a tension device. The present invention has for its object to produce a novel wareroller strap in which the above objections and disadvantages are overcome, and which retains its efficiency throughout a maximum period of usefulness. Other more specific objects will appear from the description hereinafter and the features of novelty will be pointed out in the claim.

In the accompanying drawings, which show an example of the invention without defining its limits, Fig. 1 is a perspective view of the strap; Fig. 2 is a side view thereof and Fig. 3 is a fragmentary view illustrating one way in which the device may be utilized.

As shown in the drawings, the strap 5 may be constructed of suitable material such as webbing and is made in the desired dimensions, adapting it for the hosiery machine with which it is to cooperate. At spaced points intermediate of the length of said strap, it is provided with attaching means preferably in the form of loops 6 made for instance by folding the strap upon itself and sewing it, as indicated at 7; the loops 6 serve to accommodate metallic or other rigid fastening members which may be in the form of elongated eyelets 8 and to which the opposite ends of a plurality of coiled springs 9 are attached. The loops 6 are so positioned upon the strap 5 as to produce a depending section 10 therein when the springs are not under tension; the length of this depending section 10, which results from the location of the loops 6, is such as to prevent the springs 9 from being expanded beyond a predetermined point as shown in Fig. 3 of the drawing. In other words, the extent to which the springs 9 may be expanded is so calculated as to prevent the expansion from harmfully affecting said springs or to cause the same to lose their tension producing qualities. At opposite ends the strap is provided with suitable attaching devices which are of predetermined suitable form; in the illustrated example the attaching devices are in the form of hooks 11 and 12 respectively.

With the arrangement, as illustrated and described, the strap 5 comprises two sections terminating in the attaching means, as exemplified by the loops 6, which are connected by means of tension devices illustrated in the form of the coil springs 9 in combination with means whereby separation of the strap sections is arrested to limit the expansion of said tension devices or springs; the limiting means is represented by the depending section 10 in the illustrated example.

In practice the strap is attached to the knitted fabric in any customary manner and to the wareroller in any well known way, so that the springs 9 are expanded and by their action produce a tension upon the fabric being knitted. For instance if the device is used in machines which produce the leg of the stocking, and commonly known as "leggers", a rod 13 may be inserted into the double welt 14 which has previously been knitted in the fabric 15 on the machine, said rod being of sufficient length to project in opposite directions beyond said fabric 15 as shown. To the projecting portions of the rod 13 are attached the hooks 11 of the straps 5, the hooks 12 of which are in turn connected to one of the bars 16 of the wareroller 17 which may be of any customary construction. It will be understood that two straps 5 are attached to the rod 13 at opposite ends thereof so that the fabric 15 is held symmetrically under tension as it gradually approaches the wareroller 17 upon which it is finally wound in the well known way.

In machines which produce the foot of the stocking and which are commonly termed "footers" the device is utilized with the same

efficiency and in an appropriate manner; generally only one strap is required for each foot being knitted in the "footer".

Various changes in the specific form shown and described may be made within the scope of the claim without departing from the spirit of my invention.

I claim:

An improved wareroller strap for hosiery machines comprising a strap of predetermined length, attaching devices at opposite ends of said strap, loops formed at intermediate portions of said strap by folding the latter upon itself and transversely sewing the folded portions, rigid eyelets connected with said loops, a plurality of springs extending between and connected with said eyelets, a continuing section of the strap extending between the tranverse sewings of said loops and being of greater length than the contracted springs and of lesser length than the fully expanded springs, whereby the expansion of the latter under tension on said strap ends is limited.

In testimony whereof I have hereunto set my hand.

ERNEST A. FEUSTEL.

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ERNEST A. FEUSTEL.

Certificate of Correction.

It is hereby certified that the name of the assignee in Letters Patent No. 1,545,953, granted July 14, 1925, upon the application of Ernest A. Feustel, of Carlstadt, New Jersey, for an improvement in "Tension Devices," was erroneously written and printed as "Alfred Hoffman, Inc.," whereas said name should have been written and printed as *Alfred Hofmann, Inc.*, as shown by the records of assignments in this office; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 1st day of September, A. D. 1925.

[SEAL.]

KARL FENNING,
Acting Commissioner of Patents.

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