

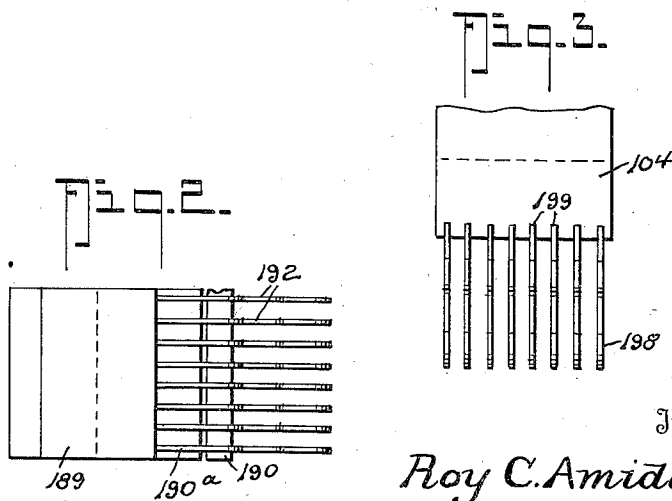
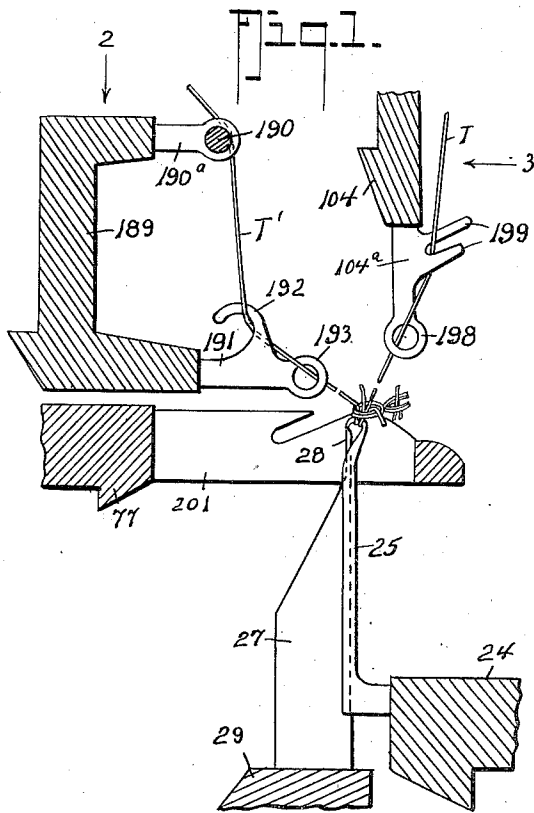
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THREAD GUIDE FOR KNITTING MACHINES

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THREAD GUIDE FOR KNITTING MACHINES

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5 Claims. (Cl. 66—86)

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My invention relates to knitting machines and particularly to the thread guides therefor.

Primarily the invention has for its objects to provide back and front guides for use when knitting with two or more threads per needle having the following characteristics:

1. The threads will be guided, particularly during the laying of the thread or threads about or around the needles in a manner that will not permit the threads becoming tangled or interfering one with the other in that space which is used by the guides in passing between the needles.

2. The threads will be held to the sides of the guides in a manner that will prevent the guides when passing between the needles in a back and forth motion from hooking or interfering with the needles which the guides are feeding at a point above the guide hole, or interfering with the needles next in line.

3. In the case where the guides are stationary and the needles are passed back and forth or up and down between the guides, the thread for each guide will be held to the side of the guide through which it is threaded in a manner that will not permit the threads to tangle or interfere with one another in the spaces in which the needles move in order to pass between the guides in the proper knitting motion for the needles to hook the threads above the guide holes of the feeding guides or the guides next in line.

Other objects will in part be obvious and in part be pointed out hereinafter.

To the attainment of the aforesaid objects and ends the invention also resides in those novel details of construction, combination and arrangement of parts all of which will be first fully described hereinafter and then be specifically pointed out in the appended claims, reference being had to the accompanying drawing in which like numerals and letters of reference indicate like parts in all the figures and in which

Fig. 1 is a cross section of a portion of a knitting machine showing my invention therein.

Fig. 2 is a detail plan view of the rear thread guide taken in the direction of the arrow 2 in Fig. 1.

Fig. 3 is a detail front elevation of the front thread guide taken in the direction of the arrow 3 in Fig. 1.

In the drawing T' indicates the thread which is guided by the rear or back thread guide, and T indicates the thread which is guided by the front thread guide.

201 designates the blades of the sinkers 77;

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25 indicates the needles which are carried by the blocks 24; and 27—28 indicate the tongues which are carried by the blocks 29.

The guides which comprise the subject matter of the present application include a front guide block 104 that carries blades 104a. From the forward edges of the blades there projects upwardly and forwardly two finger-like elements 199 constituting a fork between which the threads T pass. The lower ends of the blades 104a have eyes 198 through which the threads T also pass. Each thread T lies against one side of an upper furcation 199 of a blade and the opposite side of the lower furcation and then passes back along the first mentioned face of the blade and through the eye of the same, as shown in Fig. 1.

In practice the front guide may, for example, be mounted so as to swing in an arc back and forth, in any approved way, as for instance as is done in the machine constituting the subject-matter of my application filed October 16, 1943, Serial No. 506,561, of which application the present one is a division.

The back thread guide block 189 carries two sets of blades 190a and 191 which lie parallel to the sinkers 201 and are, in practice, mounted for movement back and forth while remaining parallel to the sinkers. Any approved mechanism may be employed for the purpose, preferably that disclosed in my application aforesaid. The back thread guide includes a block 189 on which is mounted the upper set of blades 190a (that carries a rod 190) and a lower set of blades 191 which have eyes 193 and rearwardly curved or extended hooks 192. The rear thread T' passes between a pair of blades 190a and over the rod 190, then down about the hook 192 and through the eye 193.

By construction the back and front thread guides as herein described and shown in the accompanying drawing, it will be seen that the threads lie flat against the blades and in a manner to prevent the threads of one guide tangling or interfering with those of the other guide as back and forth movement takes place, relatively, between the needles and the guides during the laying of the thread about the needles.

From the foregoing description taken in connection with the accompanying drawing it is thought the construction, operation and advantages of the invention will be clear to those skilled in the art to which it appertains.

What I claim is:

1. In a knitting machine: a thread guide comprising a block having a bank of parallel guide

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blades, each of said blades having an eye and means for holding a thread passing through said eye flat against the blade for a substantial distance from the eye toward the block, said means including at least one projection from the edge of each blade at a substantial distance from the eye about which projection the thread passes.

2. In a knitting machine: a thread guide comprising a block having a bank of upper blades with a thread guide rod and a bank of lower blades, each lower blade having an eye and a hook located between the eye and the block.

3. In a knitting machine: a thread guide comprising a block having a bank of upper blades with a thread guide rod and a bank of lower blades, each lower blade having an eye and a hook located between the eye and the block, there being one upper blade to each lower blade, by virtue of all of which the threads that pass over said guide rod are separated before reaching the lower blades and held flat against the lower blades.

4. In a knitting machine: a thread guide comprising a block having a bank of parallel guide blades, each of said blades having an eye and means for holding a thread passing through said eye flat against the blade for a substantial dis-

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tance from the eye toward the block, said means comprising furcations extending from the front edge of the blade and between which furcations the thread passes on its way to the eye.

5. A thread guide for knitting machines comprising a block; a plurality of blades carried in spaced relation by said block and each blade comprising a flat body whose free end is provided with an eye and from whose front edge forwardly-upwardly-inclined elements project as a fork, the fork being located between the eye and the block.

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