Dec. 6, 1960 S. DOLINSKY 2,962,883

WARP KNITTING GUIDE

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Fig. 1.

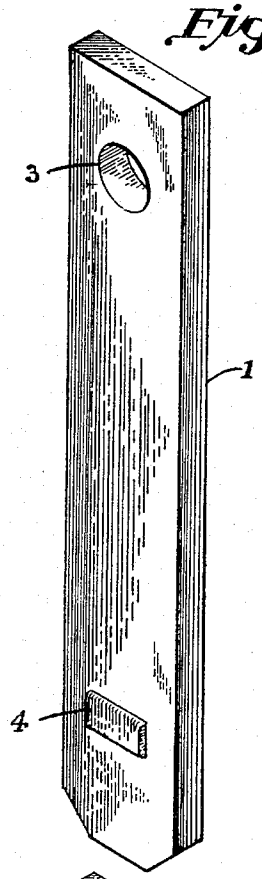


Fig. 2.

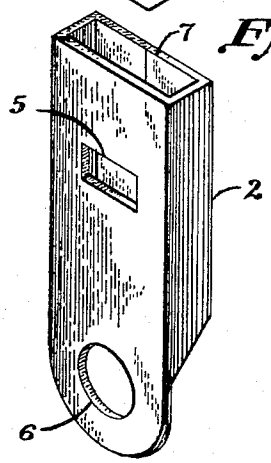
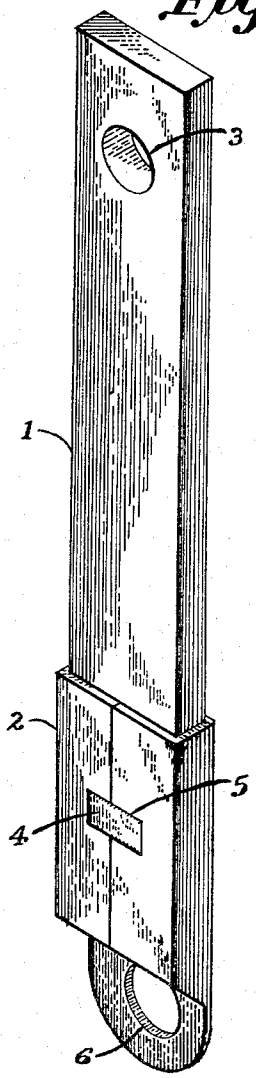


Fig. 3.



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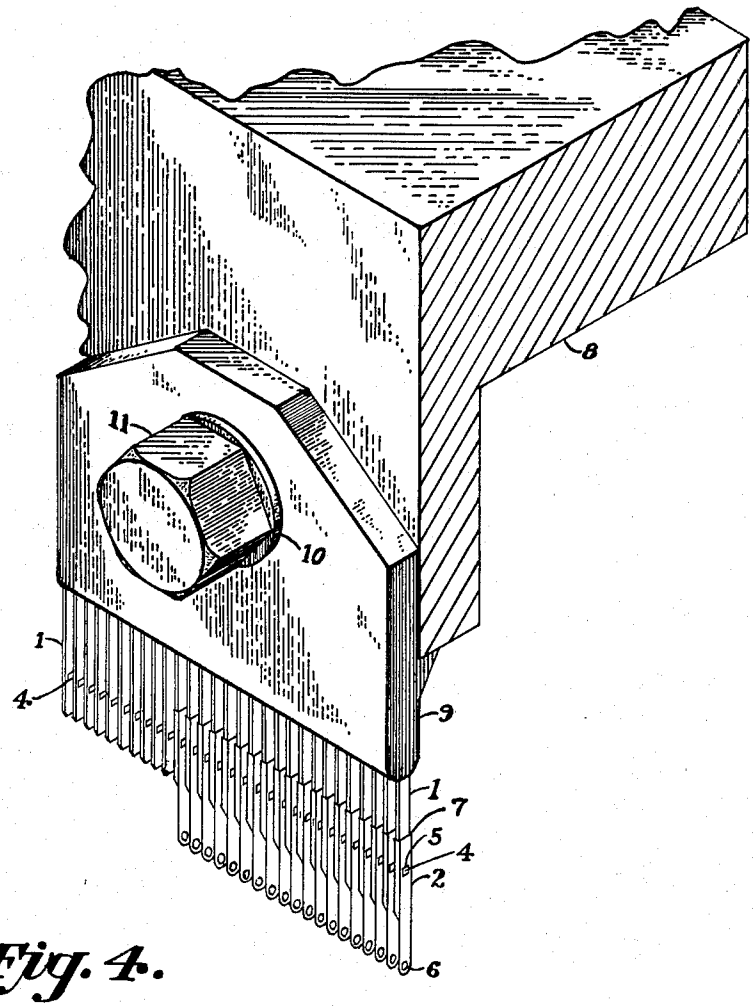


Fig. 4.

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WARP KNITTING GUIDE

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8 Claims. (Cl. 66—86)

The detailed description below relates to a novel thread guide for knitting machines, and especially to warp knitting machines. Each guide of my assembly is composed of two parts which interlock and is used in the knitting machine in plurality; either casted into a conventional type guide assembly made of lead or any other suitable metal or alloy, or used in the machine in any way which would make their use practical. My invention pertains to a guide shank which has a replaceable eye tip with one or the other having an indentation or hole and the other having a boss; or with any other complementary means or method which would enable the shank and the eye tip of the guide to interlock.

Guides are usually molded into the conventional type guide assembly. The assemblies are placed side by side on the guide bar and the guides are pliered into alignment, so that they may coordinate properly with the other workable parts of said machine. When one or more guides become worn or broken, it is necessary to replace the whole guide assembly. Said assembly usually consisting of from 9 to 36 guides per inch and being from 1 to 2 inches long.

My invention employs replaceable guide eyes which will interlock with permanent guide shanks, making it possible to remove and replace any damaged or worn eye tip without disturbing the alignment of the remaining guides.

Due to the present high-speed machines and the use of unthrown nylon yarn and other yarns which cause great wear on guide eyes and also for the purpose of changing the knitting pattern, it is necessary to replace the guides quite frequently. Also on the conventional type guide assembly it is necessary to cast the guides at intervals in the lead in order to knit a predetermined fabric pattern.

It is, therefore, an object of my invention to provide a method of fabricating guides with removable eye tips; making it possible to establish a fabric pattern by simply removing the unused eye tips. This refers especially to Raschel machines.

Another object is to maintain the guide assembly intact and in proper position relative to the needles when reguiding the machine with new eye tips.

Another objects of my invention is to construct a thread guide assembly which will eliminate the costly process of replacing the complete assembly when one guide is not functioning properly.

A further object of this invention is to lower the cost of reguiding a machine 50 percent or more.

Another object of my invention is to minimize the time consumed in reguiding a machine and also to facilitate the process.

Other objects of my invention are to provide an improved device of the character described, that is easily and economically produced, which is sturdy in construction, and which is highly efficient in operation.

With the above and related objects in view, my invention consists in the details of construction and combination of parts, as will be more fully understood from the following description, when read in conjunction with the accompanying drawings, in which:

Fig. 1 is a perspective view of the shank of the guide,
Fig. 2 is a perspective view of the eye tip of the guide,
Fig. 3 is a plan view of the assembled guide,
Fig. 4 is a perspective view of a part of a guide bar showing a guide assembly with replaceable eye tips.

Referring now in greater detail to the drawings in which similar reference characters refer to similar parts, I show a thread guide assembly comprising a shank, generally designated with the reference number **1**, and a replaceable eye tip, designated with the reference numeral **2**, each being complementary with the other.

The shank **1** is apertured at **3** so that when the shank is placed into a mold, and lead or other metal poured around it to form a casting, the metal can flow into the hole and embed the shank more securely. In order to provide interlocking engagement of the eye tip **2** with the shank **1**, the shank has a boss **4** which interfits with a complementary opening **5** in the eye tip. It is understood that the reverse may be true, as for example, the boss being on the eye tip and the hole on the shank or any other means which would bring about this interlocking. The eye **6** of the eye tip, like the rest of the structure, is smoothly polished in order to allow the yarn to run through it without damage to the yarn. Reference numeral **7** refers to a slot within the upper portion of the eye tip into which the shank is inserted. The guide assembly base **9** is mounted onto the guide bar **8**. The guide assembly base **9** may be of lead or an alloy, having a plurality of guides with removable eye tips or the guide assembly base **9** and the shanks **1** may be one unit, made of a steel plate of indeterminate length, the shanks being formed by slitting parallel lines into the plate and then their being smoothly polished. Washer **10** and hexagon head screw **11** are a means of attaching the guide assembly to the guide bar, however it is understood that any other means could be used for the same purpose.

It is my understanding that the above description is presented only as a means of illustration and that other variations could be made therein without deviating from the original idea of my invention.

I claim:

1. A thread guide for a warp knitting machine comprising a straight shank and a removable eye tip, said eye tip being shorter than said shank.

2. A thread guide for a warp knitting machine comprising a base, a plurality of shanks permanently affixed to said base and extending outwardly therefrom in mutually parallel relationship, and a plurality of removable eye tips having marginal walls and being respectively interlockably engageable therewith, each of said eye tips having a longitudinal aperture provided with an opening through the marginal wall thereof, the respective shanks being interfittingly receivable in said apertures and having side bosses complementary with and engageable in the openings through said eye tips.

3. A thread guide for a warp knitting machine comprising a straight shank and a removable eye tip, said eye tip being shorter than said shank, and means interlocking said eye tip upon said shank.

4. The invention of claim 3 wherein said interlocking means comprises a boss on said shank complementary with an indented portion in said eye tip.

5. A thread guide for a warp knitting machine comprising a shank and an interlocking removable eye tip having marginal walls, said eye tip having a longitudinal aperture provided with an opening through the marginal wall thereof, said shank being interfittingly receivable

in said aperture and having a side boss complementary with and engageable in said opening.

6. The invention of claim 5 wherein a plurality of said shanks are affixed to a base and extend outwardly therefrom in mutually parallel relationship.

7. The invention of claim 5 wherein one of the marginal walls of the aperture in said eye tip is provided with a longitudinal slit.

8. A thread guide for a warp knitting machine comprising a base, a plurality of spaced shanks machined from one surface of said base and extending outwardly therefrom in mutually parallel relationship, and a plurality of removable eye tips having marginal walls, said eye tips being detachably secured upon said shanks in interchangeable interlocking engagement therewith, each of said eye tips being of hollow oblong transverse section

providing a longitudinal aperture therethrough and having an opening through one of the broader marginal walls defining said aperture, and each of said shanks being interfittingly engageable in a respective aperture and having a boss complementary with and engageable in an associated opening.

References Cited in the file of this patent

UNITED STATES PATENTS

280,567	Broadbent	July 3, 1883
2,250,008	Carter et al.	July 22, 1941
2,375,473	Holmes et al.	May 8, 1945
2,406,525	Bardsley	Aug. 27, 1946
2,428,448	Broberg	Oct. 7, 1947
2,720,096	Feustel et al.	Oct. 11, 1955
2,759,344	Clark et al.	Aug. 21, 1956