

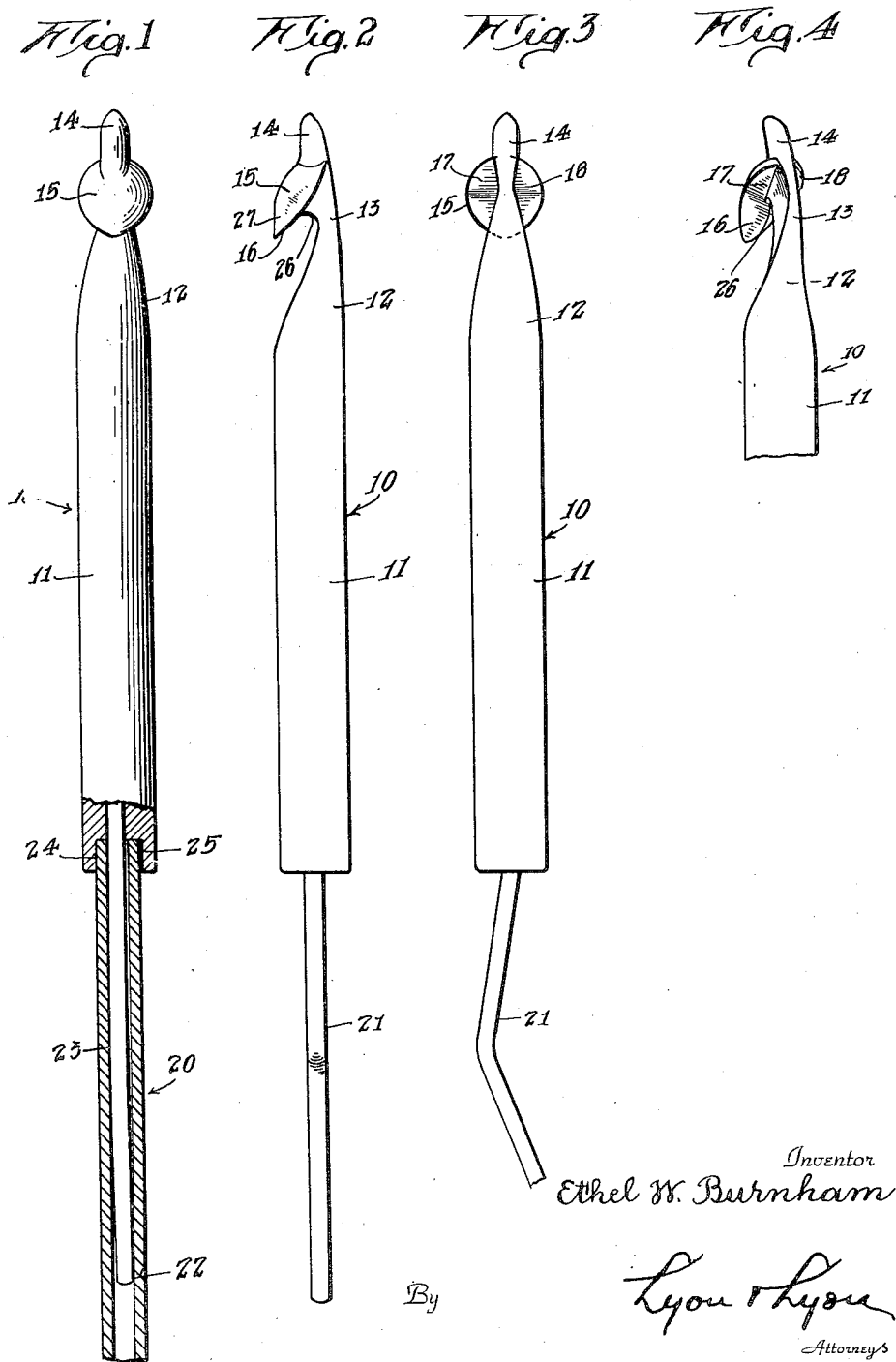
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KNITTING NEEDLE

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KNITTING NEEDLE

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3 Claims. (Cl. 66—117)

This invention relates to knitting needles and has as an object to provide a needle point or tip of special shape that will make it possible to knit with increased speed and accuracy and fewer motions.

In my Patent No. 2,093,631, granted September 21, 1937, on a Knitting needle, I disclosed a knitting needle having a double pronged hook on one end instead of the conventional smooth tip. I discovered that the use of such a hook simplifies the knitting operation because it permits the use of a crochet action instead of the usual knitting movement and enables the knitter to hold the thread in the left hand instead of the right and thereby eliminate the movement required for throwing the loop over the needle. Furthermore the use of the double pronged hook in which both prongs are on the same side of the needle instead of a conventional single hook such as is used in crocheting facilitates the knitting operation because one prong is employed in the knitting operation and the other in purling.

However, a defect of the construction shown in my prior patent is that the double pronged hook is relatively difficult to manufacture. This difficulty is overcome by the present invention which provides a hook of quite different shape but nevertheless having a plurality of hook or shoulder portions that are usable in the knitting and purling operations respectively. This new shape I find lends itself readily to manufacture.

A feature of the present invention is an assembly of a knitting needle with a detachable tip in which the needle portion is hollow and the tip portion has a curved or bent pin frictionally engageable with the hollow needle to hold the tip in place, in which the tip is of larger diameter than the needle and is counterbored to fit over the end of the needle so as to provide for smooth passage of the stitches from the tip onto the needle.

A full understanding of the invention may be had from the following detailed description which refers to the drawing.

In the drawing:

Fig. 1 is an elevation view partly in section showing a detachable knitting tip mounted on the end of a hollow needle or shank;

Fig. 2 is an elevation view of the knitting tip of Fig. 1 taken at right angles to Fig. 1;

Fig. 3 is a view of the knitting tip, the view being taken at a point displaced 180° from that of Fig. 1, and

Fig. 4 is a view of the upper end portion only

of the tip in a position intermediate the positions of Figs. 2 and 3, respectively.

Referring first to Fig. 1, there is shown an assembly of a knitting tip 10 and a hollow knitting needle 20, only a portion of the latter being shown in the drawing. The knitting tip 10 is of larger diameter than the needle 20 and has a bent pin 21 projecting from its lower end into the hollow of the needle 20. As shown in Fig. 3, the pin 21 has a substantial bend in it so that when it is forced into the hollow needle 20 it bears strongly against the inner surface of the needle at two points 22 and 23. The lower end of the tip 10 is provided with a counterbore 25 to receive the upper end of the needle 20 so that there is no shoulder present to prevent free movement of the stitches from the knitting tip 10 onto the needle 20. The counterbore fits the upper end of the needle snugly, and the spring force of the pin 21 forces the wall of the counterbore tightly against the needle at a point 24 in the same longitudinal plane with the point 23. Contact between the needle and the tip is therefore made at the three longitudinally spaced points 22, 23 and 24.

It is to be understood that the needle 20 may be a conventional straight needle or it may be merely a rigid end piece on a flexible cable. Both types of construction are shown in my prior Patent No. 2,093,631 and the construction just described relates only to the method of joinder of the tip to the needle.

The tip 10 comprises a straight cylindrical section or shank 11 merging at its upper end into a tapered section 12, the latter merging into a neck 13 of relatively small diameter as compared to the diameter of the shank 11. The neck 13 enlarges at its upper end and merges into a head 15 having a tip 14 on its extreme upper end. The under surface of the head 15 into which the neck merges is substantially flat and extends at an acute angle to the axis of the shank 11 so that the lowermost portion of the head constitutes a hook, the throat of which is indicated at 26. That side of the neck 13 opposite to the throat 26 is flush with the tip 14 and with the shank 11 and the outer portion 27 of the head opposite the throat 26 is also substantially flush with the extended surface of the shank 11.

The novelty of my particular hook structure resides in the fact that the under surface of the head, in addition to defining the hook surface 16, also defines shoulder surfaces 17 and 18, respectively, on opposite sides of the neck 13, which shoulders are adapted for use in purling while the hook surface 16 is used for knitting. How-

ever, only one of the shoulder surfaces 17 and 18 would be used by any individual knitter, one surface being particularly useful for right handed knitters and the other for left handed knitters. Thus, a right handed person would use the shoulder 18 for purling and a left handed person would use the shoulder 17 for purling, both persons using the hook 16 for knitting.

Obviously the exact shape of the knitting hook or tip shown in the drawing can be modified to suit individual preferences and the invention, therefore, is to be limited only to the extent set forth in the appended claims.

I claim:

1. In knitting equipment, a shank, a head, and a reduced neck connecting said head to one end of said shank, said head having a substantially flat under surface projecting in three directions from said neck and lying at an acute angle to the axis of said shank, the fourth side of said neck being flush with said shank and said head and forming a continuous surface therewith, the assembly consisting of said shank, neck and head having a longitudinal plane of symmetry, and the projection of said under surface laterally from said neck being approximately the

same as its projection in the plane of symmetry, whereby said lateral portions of said under face constitute shoulders capable of engaging a thread to purl it during a knitting operation.

2. A bi-laterally symmetrical knitting needle having a single hook on the end thereof, said hook extending laterally from the adjacent portion of said needle on each side of the plane of symmetry to approximately the same extent that it extends in the plane of symmetry, whereby it defines a pair of auxiliary shoulders capable of engaging the thread in purling when said hook is used in the knitting operation, one shoulder being adapted for use by a right handed knitter and the other by a left handed knitter.

3. A knitting needle comprising an open end hollow body portion and a removable tip of larger diameter than said body portion, said tip having a pin projecting from the end thereof into said hollow body portion for frictional engagement therewith to hold the tip thereon, and the end of said tip having a counterbore surrounding said pin for receiving the end of said body portion.

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