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METHOD OF HAND KNITTING AND KNITTING NEEDLE

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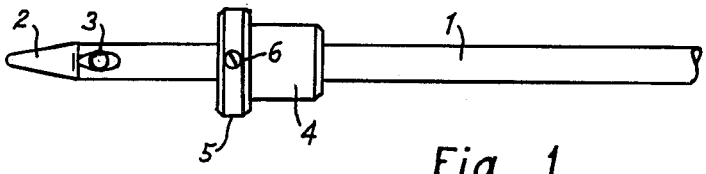

Fig. 1

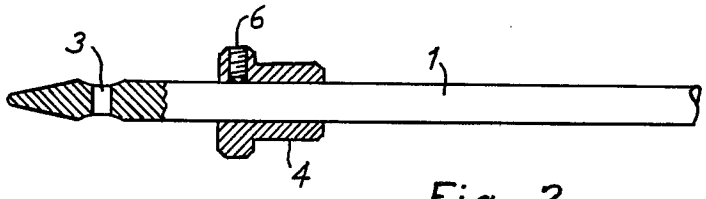

Fig. 2

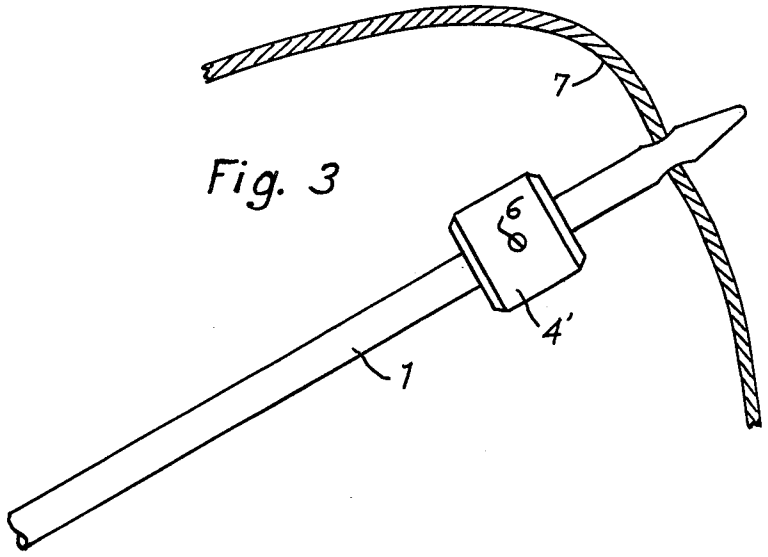

Fig. 3

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Fig. 4

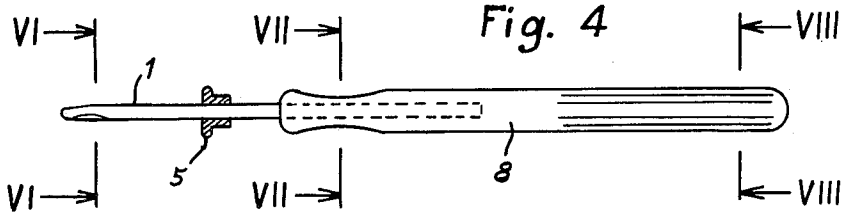


Fig. 5

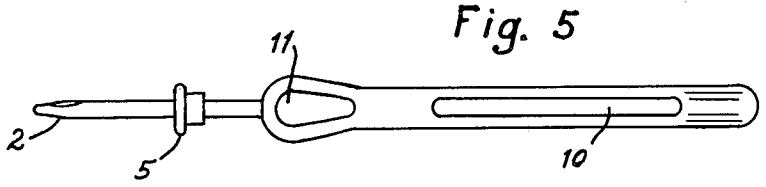


Fig. 6

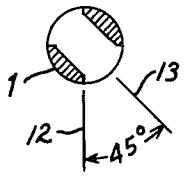


Fig. 7

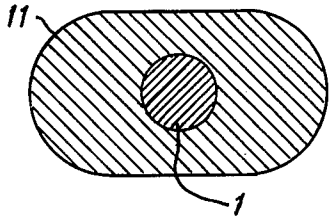
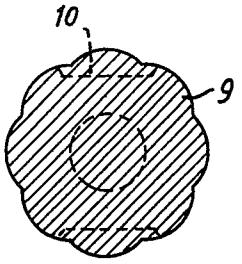


Fig. 8



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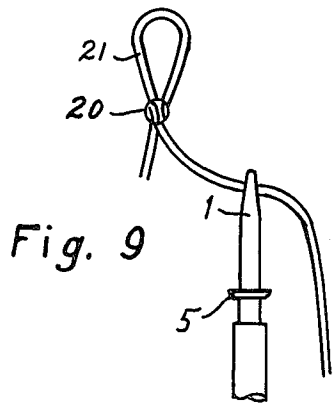

Fig. 9

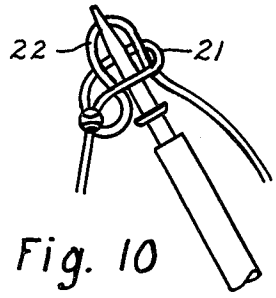

Fig. 10

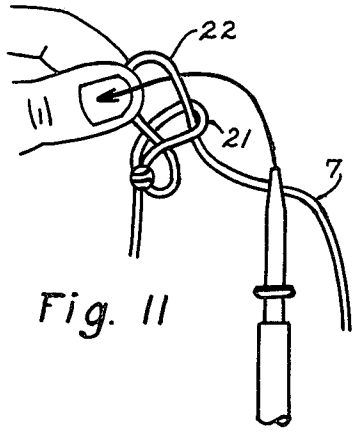

Fig. 11

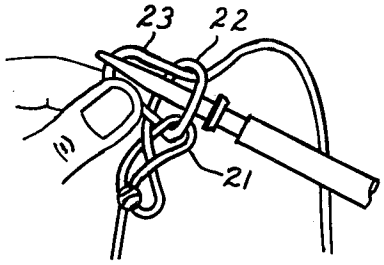

Fig. 12

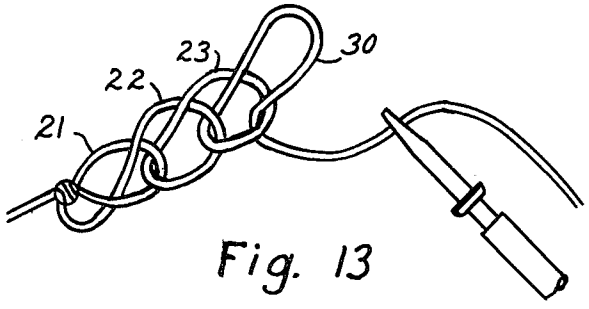

Fig. 13

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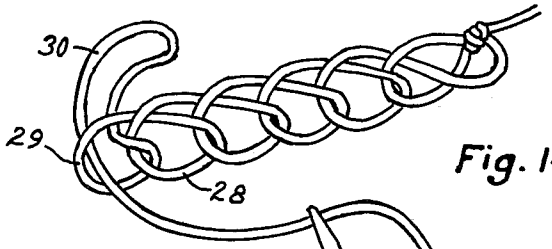
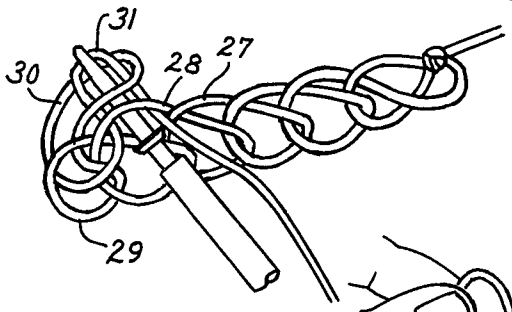
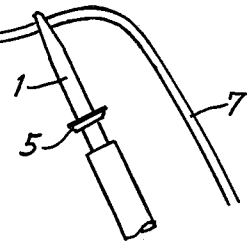


Fig. 14

Fig. 15





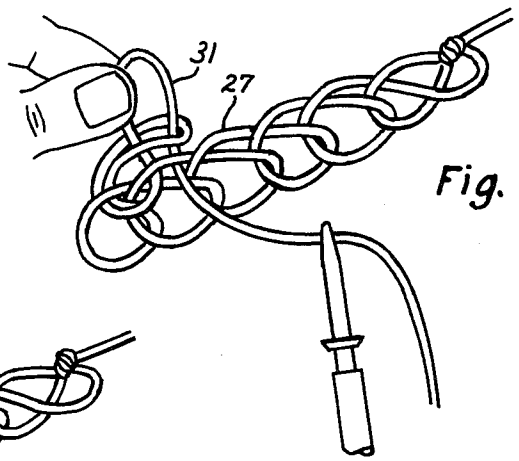
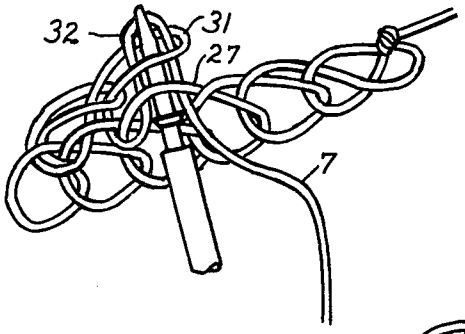


Fig. 16

Fig. 17



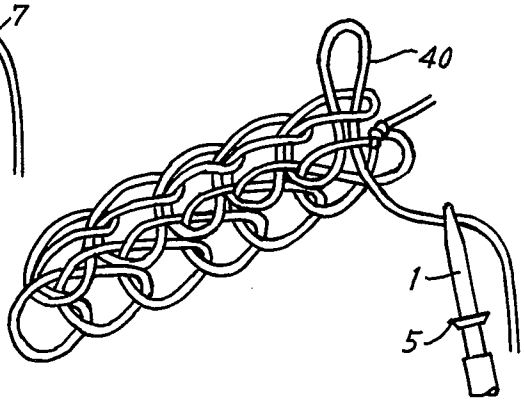


Fig. 18

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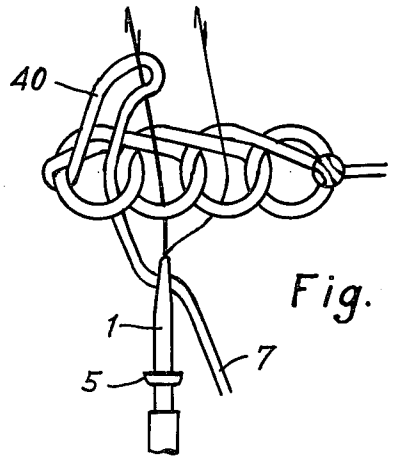

Fig. 19

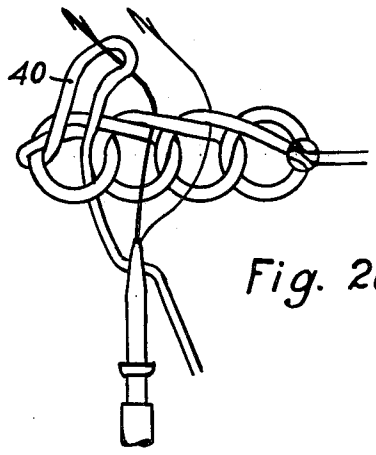

Fig. 20

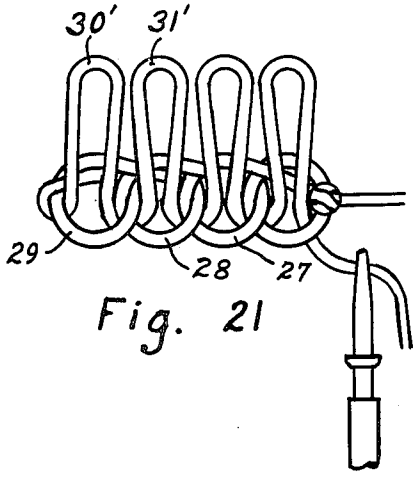

Fig. 21

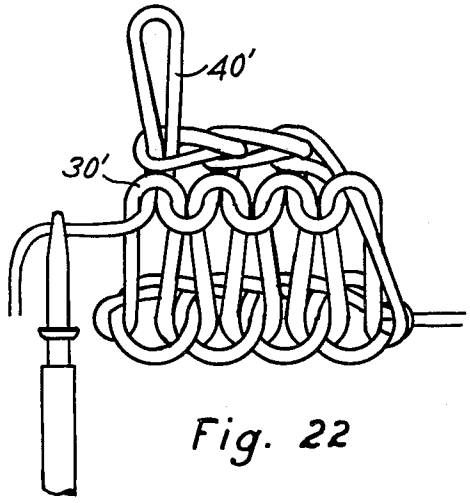

Fig. 22

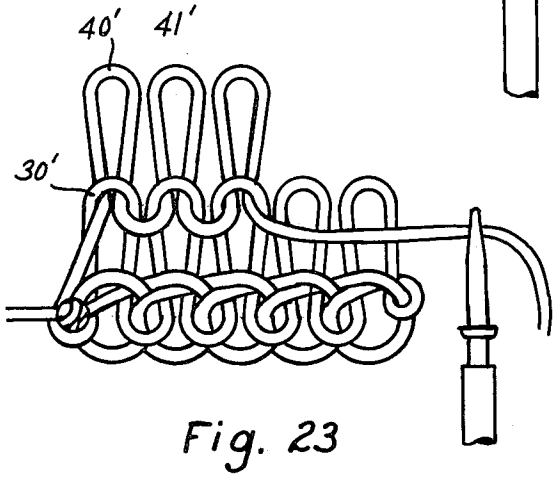

Fig. 23

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United States Patent Office 3,228,212
Patented Jan. 11, 1966

3,228,212

METHOD OF HAND KNITTING AND KNITTING NEEDLE

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Filed Feb. 8, 1962, Ser. No. 171,908
Claims priority, application Austria, Feb. 8, 1961, A 1,033/61
3 Claims. (Cl. 66—117)

This invention relates to a method of hand knitting and a knitting needle for it. Both the method and the needle distinguish by being particularly simple because only a single thread and a single needle are employed.

The invention provides a method of hand knitting with a needle having an eyelet, which comprises forming a thread into a first loop, knitting each additional loop of a first course by pushing said eyelet having said thread inserted therein through the immediately preceding loop to form a further loop and retracting said eyelet while holding fast said further loop, and knitting each loop at least of selected subsequent courses by pushing said eyelet having said thread inserted therein through the immediately preceding loop and through the corresponding loop of the immediatey preceding course to form a new loop and retracting said eyelet while holding fast said new loop.

In one embodiment of the invention, each loop of a course preceding one of said selected courses is formed by pushing said eyelet having said thread inserted therein only through the corresponding loop of the immediately preceding course.

The knitting may be turned after a course has been completed.

The needle for carrying out the method according to the invention is superior to the previously usual knitting needle because it is shorter and only a single needle is required for knitting. This makes the work much easier than where the usual knitting needles are employed because the long needles are disturbing, particularly under conditions of restricted space, and are often dangerous. According to the invention, highly attractive patterns can be obtained in a very simple manner and all modes of knitting may be carried out according to the invention.

The knitting needle according to the invention is provided with an eyelet behind the tip of the needle. It is desirable to provide a stop behind the eyelet in order to insure a uniform penetration of the needle into the work during knitting. The stop may consist, e.g., of a circular annulus which surrounds the shaft of the needle and the stop may be arranged to be fixed on the shaft on the needle at a variable distance from the eyelet.

Some illustrative embodiments of a knitting needle according to the invention and of the knitting methods provided by the invention are diagrammatically shown on the drawing, in which

FIGS. 1 and 2, respectively, are an elevation and a central sectional view showing a first embodiment of the knitting needle.

FIG. 3 is an elevation showing a second embodiment into which the thread has been inserted.

FIGS. 4 to 8 are two elevations taken at right angles to each other and sectional views taken on lines VI—VI, VII—VII and VIII—VIII of FIGS. 4 and 5 and show a third embodiment of the knitting needle.

FIGS. 9 to 18 show various phases in the formation of a knitting.

FIGS. 19 and 20 show one and the same phase in two different modes of knitting, and

FIGS. 21 to 23 show various phases of the formation of another pattern.

In the embodiment shown in FIGS. 1 and 2, the shaft **1**

of the needle is provided as usual with a rounded tip **2**. As distinguished from the known knitting needles, an eyelet **3** for the thread is provided behind this tip. Behind the eyelet **3**, a stop is provided which consists of a cylinder **4** having on its side facing the eyelet **3** a flange **5** larger in diameter than the cylinder. By means of a set screw **6**, the cylinder **4** may be fixed to the shaft **1** of the needles at a selected distance from the eyelet **3**.

The embodiment shown in FIG. 3 differs from that shown in FIGS. 1 and 2 only in that the stop cylinder **4'** is of uniform diameter throughout its length. A thread **7**, particularly of wool, extends through the eyelet.

In the embodiment of the needle shown in FIGS. 4 to 8, the shaft **1** of the needle is inserted in a holder **8**, which has the basic shape of a cylinder provided with longitudinal ribs **9** (see FIG. 8). Two diametrically opposite surfaces **10** are recessed in its intermediate portion and may be used to bear an inscription and facilitate the holding of the needle.

At its front end, the holder **8** has a flat enlargement **11** having the cross-sectional shape of a flat, rounded rectangle (see FIG. 7). The axis **13** of the eyelet **3'** is at an angle of 45° to the main axes (such as **12**) of the rectangle. This will facilitate the control of the thread during knitting and will enable faster work.

In this embodiment the stop is built as a ring **5** with an annexed shell **5'**, these elements being hardly slidable on the shaft **1** of the needle.

Various modifications are possible within the scope of the invention. This applies particularly to the design of the stop, which might alternatively be entirely omitted or might consist, e.g., of a sleeve of rubber or plastic fitted on the shaft **1**.

The needle designed according to the invention may be made from any suitable material, such as metal or plastic. Apart from knitting, it may be used for weaving, embroidering and mending. Instead of wool, any other suitable material such as silk, twine or bast may be worked.

To make a knitting, a handmade loop **21** is formed first, either with a knot **20** as shown in FIG. 9 or by merely looping the end portion of the thread. In this case the thread **7** to be knitted should lie on the right. To begin knitting, the needle **1** is pushed through the first loop **21** (FIG. 10) until the stop **5** engages this loop **21**. The loop **22** thus formed is now held fast with the thumb and forefinger of the left hand and the needle is retracted (FIG. 11). To form the next loop **23**, the needle **1** is again pushed in the direction of the arrow in FIG. 11 through the preceding loop, again until the stop ring **5** engages the knitting, the resulting loop **23** is again held fast (FIG. 12) whereafter the needle is retracted. This procedure is repeated until the desired length of the knitting has been obtained (FIG. 13). The desired loop length for each knitting may be preset by an appropriate adjustment of the stop ring **5**.

The knitting is now turned as usual while holding the last loop **30** so that it protrudes from the knitting as shown in FIG. 14 and extends to the right. The needle is then pushed through the second loop **28** before the edge loop **30** and through the latter (FIG. 15) whereafter the needle is retracted, the loop formed last being held fast. Knitting is continued by pushing the needle through the next loop **27** of the preceding course and the newly formed loop **31** etc. (FIG. 17).

Before beginning the next course, the edge loop **40** must not be forgotten (FIG. 18). The knitting is then turned again, followed by knitting the next course as described hereinbefore.

Whereas a very loose knitting is shown in FIGS. 9 to 18 in order to facilitate the understanding of the

several operations, FIG. 19 shows substantially the same operation as FIG. 13 but with more tightly pulled stitches. The thick solid line indicates the path traversed by the needle in catching the first stitch and the thin line indicates the movement of the needle when catching the next loop.

FIG. 20 shows the same operation as FIG. 19 but with a somewhat different movement of the needle to form another pattern.

FIGS. 21 to 23 show the formation of another knitting. To make the same, the first course is knitted as shown in FIGS. 9 to 13. When the knitting has been turned, however, open loops are formed. To this end, the edge loop **30'** is allowed to stand upright and the needle is pushed only through the next loop **28** of the preceding course but is not pushed through this upright edge loop **30'**. The resulting loop **31'** is held fast while the needle is retracted and the needle is then pushed only through the next loop **27** of the preceding course (see FIG. 21) etc. When this open course is completed, the knitting is turned and the next course is knitted in the usual manner, the needle being always pulled through an open loop and the newly formed loop (see FIG. 22). At the end of this course again an open loop **40'** is allowed to stand upright. It is also possible to knit rearwardly, without turning the fabric.

After this course has been knitted, the fabric is turned and open loops **41'** are formed again (FIG. 23) etc.

Various knit patterns may be obtained by modifying the mode of operation. As is apparent from FIGS. 19 and 20, the needle may be pushed into the previously formed knitting from the front or rear or these two modes of inserting the needle may be alternated. Alternatively, e.g., one open loop or two of them may be inserted or loops may be skipped. This will enable the making of a very large number of patterns.

What is claimed is:

1. A method of hand knitting with a needle having an eyelet, which comprises forming a thread into a first loop, knitting each additional loop of a first course by pushing said eyelet having said thread inserted therein through the immediately preceding loop to form a further loop and retracting said eyelet while holding fast said further loop, and knitting each loop at least of selected subsequent courses by pushing said eyelet having said thread inserted therein through the immediately preceding loop and through the corresponding loop of the immediately preceding course to form a new loop and retracting said eyelet while holding fast said new loop.

2. A method as set forth in claim **1**, in which each loop of a course preceding one of said selected courses is formed by pushing said eyelet having said thread inserted therein only through the corresponding loop of the immediately preceding course.

3. A method as set forth in claim **1**, in which the knitting is turned after a course has been completed.

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RUSSELL C. MADER, *Primary Examiner.*