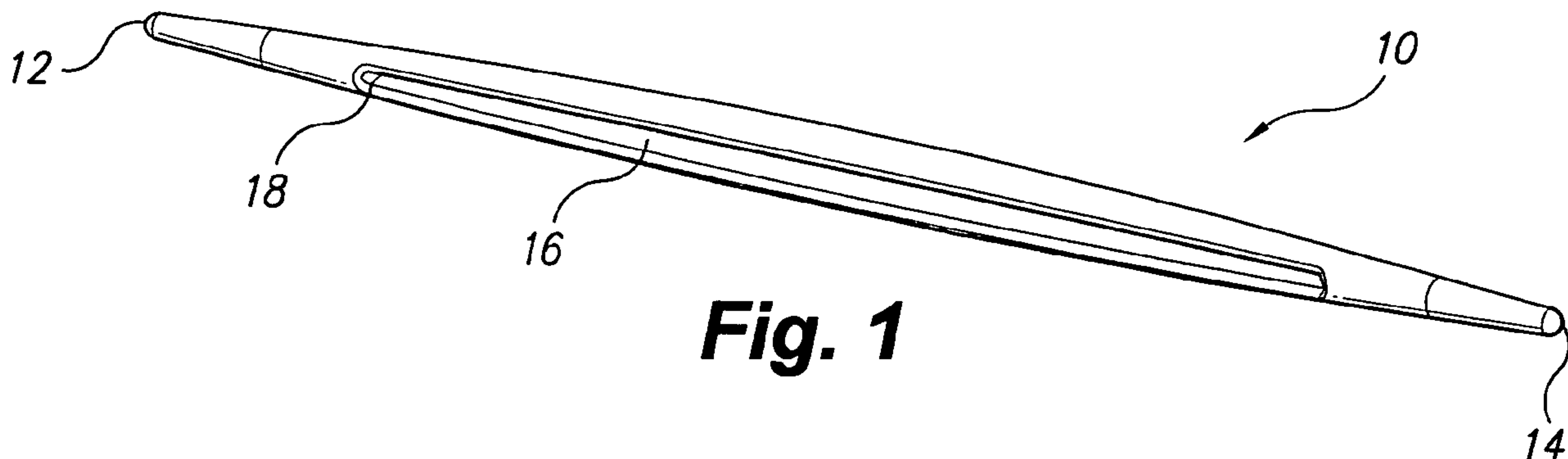




(86) Date de dépôt PCT/PCT Filing Date: 2009/05/14
(87) Date publication PCT/PCT Publication Date: 2010/02/04
(85) Entrée phase nationale/National Entry: 2011/01/05
(86) N° demande PCT/PCT Application No.: US 2009/003006
(87) N° publication PCT/PCT Publication No.: 2010/014131
(30) Priorité/Priority: 2008/07/30 (US12/219,926)

(51) Cl.Int./Int.Cl. *D05B 91/02* (2006.01),
D04B 35/02 (2006.01), *D05B 85/00* (2006.01)
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(54) Titre : AIGUILLE D'APPRET
(54) Title: FINISHING NEEDLE



(57) Abrégé/Abstract:

The finishing needle (10) is a hand sewing tool used for weaving loose ends (20) of yarn (21) back into a hand-knitted item when finishing a knitting work. The finishing needle (10) is a long needle with two ends (12, 14) that taper to a semi-point at each end. The needle (10) has a single eye (16) that extends through the length of the needle (10). The eye (16) has a beveled edge (18) that provides for easier threading and to hold the yarn (21) securely. The finishing needle (10) can weave loose ends (20) of yarn (21) into a knitted item when finishing without stopping to turn the needle (10) around, and with no need to re-thread, when weaving in the opposite direction.



(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
4 February 2010 (04.02.2010)



(10) International Publication Number
WO 2010/014131 A1

(51) International Patent Classification:

D05B 91/02 (2006.01) *D05B 85/00* (2006.01)
D04B 35/02 (2006.01)

(21) International Application Number:

PCT/US2009/003006

(22) International Filing Date:

14 May 2009 (14.05.2009)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

12/219,926 30 July 2008 (30.07.2008) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,

CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: FINISHING NEEDLE

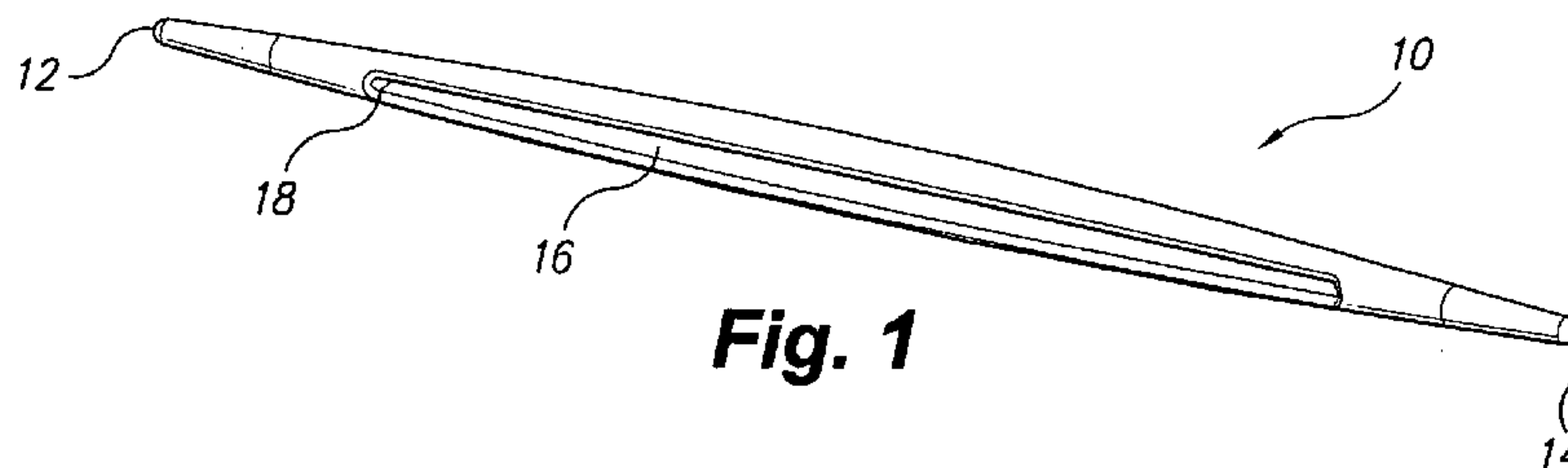


Fig. 1

(57) Abstract: The finishing needle (10) is a hand sewing tool used for weaving loose ends (20) of yarn (21) back into a hand-knitted item when finishing a knitting work. The finishing needle (10) is a long needle with two ends (12, 14) that taper to a semi-point at each end. The needle (10) has a single eye (16) that extends through the length of the needle (10). The eye (16) has a beveled edge (18) that provides for easier threading and to hold the yarn (21) securely. The finishing needle (10) can weave loose ends (20) of yarn (21) into a knitted item when finishing without stopping to turn the needle (10) around, and with no need to re-thread, when weaving in the opposite direction.



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FINISHING NEEDLE**TECHNICAL FIELD**

The present invention relates to sewing needles, and more particularly to a finishing
5 needle for use with yarn or other like materials for weaving ends of yarn back into a knitted
item when finishing the work.

BACKGROUND ART

Knitting is a technique for producing a two-dimensional fabric from a one-
dimensional yarn or thread. In weaving, the threads are always straight, running parallel
10 either lengthwise (warp threads) or crosswise (weft threads). By contrast, the yarn in knitted
fabrics follows a meandering path (a course), forming symmetric loops symmetrically above
and below the mean path of the yarn. These meandering loops can be stretched easily in
different directions, which gives knitting much more elasticity than woven fabrics; depending
on the yarn and knitting pattern, knitted garments can stretch as much as five hundred
15 percent. For this reason, knitting was initially developed for garments that must be elastic or
stretch in response to the wearer's motions, such as socks and hosiery.

For comparison, woven garments stretch mainly along one direction (the bias) and not
very much, unless they are woven from stretchable material such as Lycra. Knitted garments
are often more formfitting than woven garments, since their elasticity allows them to follow
20 the body's curvature closely. By contrast, curvature is introduced into most woven garments
only with sewn darts, flares, gussets and gores, the seams of which lower the elasticity of the
woven fabric still further. Extra curvature can be introduced into knitted garments without
seams, as in the heel of a sock. The effect of darts and flares can be obtained with short rows
or by increasing or decreasing the number of stitches. The thread used in weaving is usually
25 much finer than the yarn used in knitting, which can make the knitted fabric bulkier and have
less drape than a woven fabric.

If they are not secured, the loops of a knitted course will come undone when their
yarn is pulled. This is known as ripping out or unraveling knitting. To secure a stitch, at
least one new loop is passed through it. Although the new stitch is itself unsecured
30 ("active"), it secures the stitches suspended from it. A sequence of stitches in which each
stitch is suspended from the next is called a wale. To secure the initial stitches of a knitted
fabric, a method for casting on is used. To secure the final stitches in a wale, one uses a

method of binding off. During knitting, the active stitches are secured mechanically, either from individual hooks in the case of knitting machines, or from a knitting needle or frame in hand knitting.

5 The process of knitting involves holding the active stitches so that the stitches do not drop, releasing the stitches after they are secured and passing new bights of yarn through the fabric, usually through active stitches. In very simple cases, knitting can be done without tools, using only the fingers to do these tasks. However, knitting is usually carried out using instruments, such as knitting needles, knitting machines or rigid frames. Other accessories are used to prepare yarn for knitting, to measure and design knitted garments, or to make
10 knitting easier or more comfortable.

The knitting project must be “finished.” Finishing is the process of weaving ends of the yarn back into the project. If not done correctly, the yarn can unravel and cause the knitted item to fall apart, or cause a weak or uncomfortable spot on the item that leads to premature wear.

15 For every knitting project it is necessary to weave in at least two ends when finishing the work; the excess yarn at the cast on edge and the excess yarn at the bound off edge. More complicated or larger projects, such as blankets or multi colored or striped sweaters, may have many end pieces of yarn that must be woven back into the work.

Items that are commonly used by knitters to weave the loose ends of yarn back into
20 the project are darning needles and crochet hooks. Darning needles are similar to sewing needles except that they are larger and have a larger eye. Darning needles work effectively to weave the ends of the yarn back into the project. When weaving in the ends, at least two changes of direction are needed to secure most kinds of yarn. However, when the yarn pieces become short, each change of direction can require re-threading the needle. This process can
25 be very tedious, especially when working with large numbers of yarn ends. Crochet hooks are often used, but they can snag the intervening rows of stitches, and are no less tedious to use with a large number of yarn ends. There is a need, therefore, for a finishing needle that can be used to quickly and efficiently weave in a large number of yarn ends with minimal turning and re-threading. Thus, a finishing needle solving the aforementioned problems is
30 desired.

DISCLOSURE OF INVENTION

The finishing needle is a sewing tool used for weaving loose ends of yarn or like threaded materials back into a hand-knitted item when finishing knitting work or other hand-sewn items. The finishing needle is a long needle with two ends that taper to a semi-point at each end. The needle has a single, elongated eye that extends through the length of the needle. The eye has a beveled edge that provides for easier threading and for holding the yarn securely. The finishing needle can weave loose ends of yarn into a knitted item when finishing without stopping to re-thread the needle or to turn the needle around when weaving in the opposite direction. The needle can make easy use of shorter lengths of yarn than a conventional needle or hook, and can finish a large knitted item or one with multiple colors much faster than a conventional needle.

The finishing needle may be manufactured from a variety of materials, such as wood, steel, plastic or bamboo, and may be made in a variety of sizes to accommodate different types and thickness of yarn. These and other features of the present invention will become readily apparent upon further review of the following specification and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of a finishing needle according to the present invention.

Fig. 2 is an exploded view of a finishing needle according to the present invention.

Fig. 3 is a side view of a finishing needle according to the present invention.

Figs. 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, and 4J illustrate sequential views of a method for using the finishing needle according to the present invention.

Similar reference characters denote corresponding features consistently throughout the attached drawings.

BEST MODES FOR CARRYING OUT THE INVENTION

The present invention relates to sewing needles, and more particularly, to a finishing needle with a single, elongated eye for weaving loose ends of yarn or like threaded material back into a knitted item, or other sewn work, when finishing the work.

Fig. 1 is a perspective view of a finishing needle 10 that tapers to a first end 12 and a second end 14. The first end 12 and second end 14 each have a semi-pointed or rounded contour. The finishing needle 10 has a single eye 16 formed between the first end 12 and the second end 14 that extends substantially along the entire length of the finishing needle 10.

As best shown in Fig. 3, eye 16 is positioned centrally and symmetrically with respect to finishing needle 10, and preferably has a substantially elliptical contour. It should be understood that the degree of sharpness (or rounding) of ends 12, 14 may be varied, dependent upon the particular needs of the user. Similarly, the overall contouring, or angling, of the forward and rear ends may be varied dependent upon the needs of the user.

Fig. 2 is an exploded view of the finishing needle 10, showing the beveled edge 18 of the eye 16. Although the finishing needle 10 resembles a double-pointed knitting needle, it should be understood that the needle 10 is a hand-sewing needle, and is not intended for use as a knitting needle. Needle 10 may be formed from any suitable material, such as any suitable type of metal, plastic, wood, bamboo or the like.

Fig. 3 is a side view of the finishing needle 10, showing the eye 16 extending substantially the length of the finishing needle 10. It should be understood that the relative dimensions illustrated in Figs. 1-3 are shown for exemplary purposes only, and may be varied dependent upon the particular needs and desires of the user. For example, the ratio between the length of needle 10 and the thickness thereof (or the central height of eye 16) may be varied without departing from the spirit or scope of the invention as claimed. Similarly, with regard to Fig. 2, the cross-sectional shape of needle 10 is shown as being substantially circular. It should be understood that this shape may be varied, depending upon the particular needs and desires of the user. Further, the shape or configuration of eye 16 may be varied, including the degree of beveling of portion 18, as well as the overall length of eye 16 with respect to the length of needle 10.

Although the overall shape of the needle 10 may be varied, as noted above, without departing from the spirit or scope of the invention as claimed, it should be noted that both ends 12, 14 must remain pointed, thus allowing for insertion of needle 10 through the fabric material in either direction, as will be described in detail below. Similarly, although the configuration and length of eye 16 may be varied, the formation of a single eye 16 extending centrally across a substantial length of needle 10, contoured such that needle 10 may be smoothly inserted through a relatively thick material without breaking, is an important aspect of the present finishing needle 10.

Figs. 4A-4J illustrate a method of using the finishing needle 10 to weave in the loose yarn when finishing a knitting project. In Fig. 4A, starting with the rear face of the piece of knitted fabric F facing upwardly, the loose end 20 of a piece of yarn 21 is threaded into the eye 16 of the finishing needle 10. Next, in Fig. 4B, the finishing needle 10 is passed under the threads 22 of fabric piece F in the direction of the front end 12. In Fig. 4C, the finishing

needle 10 then pulls the loose end 20 of yarn 21 out the opposite side of the threads 22. Next, in Fig. 4D, without turning the needle 10 around, needle 10 is passed under a different set of threads 23 in the direction of the back end 14 of the needle 10.

5 In Fig. 4E, the loose end 20 slides within the eye 16 to the trailing end of the eye 16 (adjacent end 12 of needle 10) as the finishing needle 10 passes under threads 23. In Fig. 4F, the finishing needle 10 pulls the loose end 20 out from under the threads 23. Next, in Fig. 4G, once again without turning needle 10 around, the finishing needle 10 is again passed under another set of threads 25 in the direction of front end 12. In Fig. 4H, the loose end 20 slides to the trailing end of eye 16 (adjacent back end 14) as finishing needle 10 passes under
10 threads 25.

In Fig. 4I, the finishing needle 10 pulls the last remaining length of yarn 21 under the set of threads 25. In Fig. 4J, as the finishing needle 10 is pulled out from under threads 25, the loose end 20 of yarn 21 is completely woven into the threads 25 on the back side of the knitting project.

15 It should be understood that needle 10 is not limited to use with knitted products only. Needle 10 may be used in combination with, for example, handmade, hand-assembled or hand-embellished textiles, including crocheted, woven or knitted fabrics. Further, needle 10 is not limited to the exemplary size illustrated in the Figures, and may be dimensioned accordingly for use with other fabrics and projects, such as tapestries, cross-stitch projects,
20 needlepoint, crewel work or embroidery.

It is to be understood that the present invention is not limited to the embodiment described above, but encompasses any and all embodiments within the scope of the following claims.

CLAIMS

1. A finishing needle, comprising an elongate body having opposed first and second ends, the elongate body having a single axis extending between the first and second ends, the first and second ends each tapering to a semi-pointed shape, the elongate body having a single, elongate eye defined therein extending between the first and second ends along the single axis, the eye having a forward side and a back side proximate the first and second ends of the elongate body, respectively, the eye extending substantially the length of the elongate body.

10

2. The finishing needle according to claim 1, wherein the forward side and the back side of the elongated eye are each substantially U-shaped.

3. The finishing needle according to claim 1, wherein the forward side has a beveled edge extending in the direction of the first end and the back side of the elongated eye has a beveled edge extending in the direction of the second end of the elongate body.

15

4. The finishing needle according to claim 1, wherein the elongate body is symmetric about a transverse axis.

20

5. A method of using a finishing needle to finish a textile item, the finishing needle being elongated and having a forward side, a back side, a first end, an opposing second end, and an eye defined therein extending substantially the entire length of the needle between the opposing first and second ends, the method comprising the steps of:

25

inserting a short end piece of yarn through the eye;

passing the first end of the finishing needle under several threads on a back of the textile item in the direction of the first end;

pulling the needle out an opposite side of the threads;

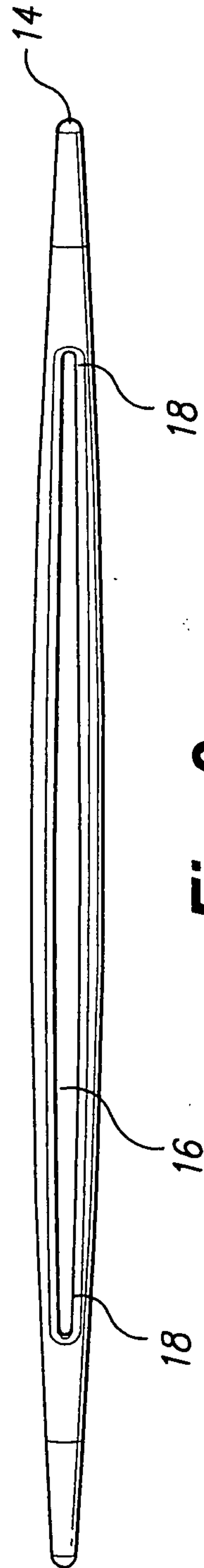
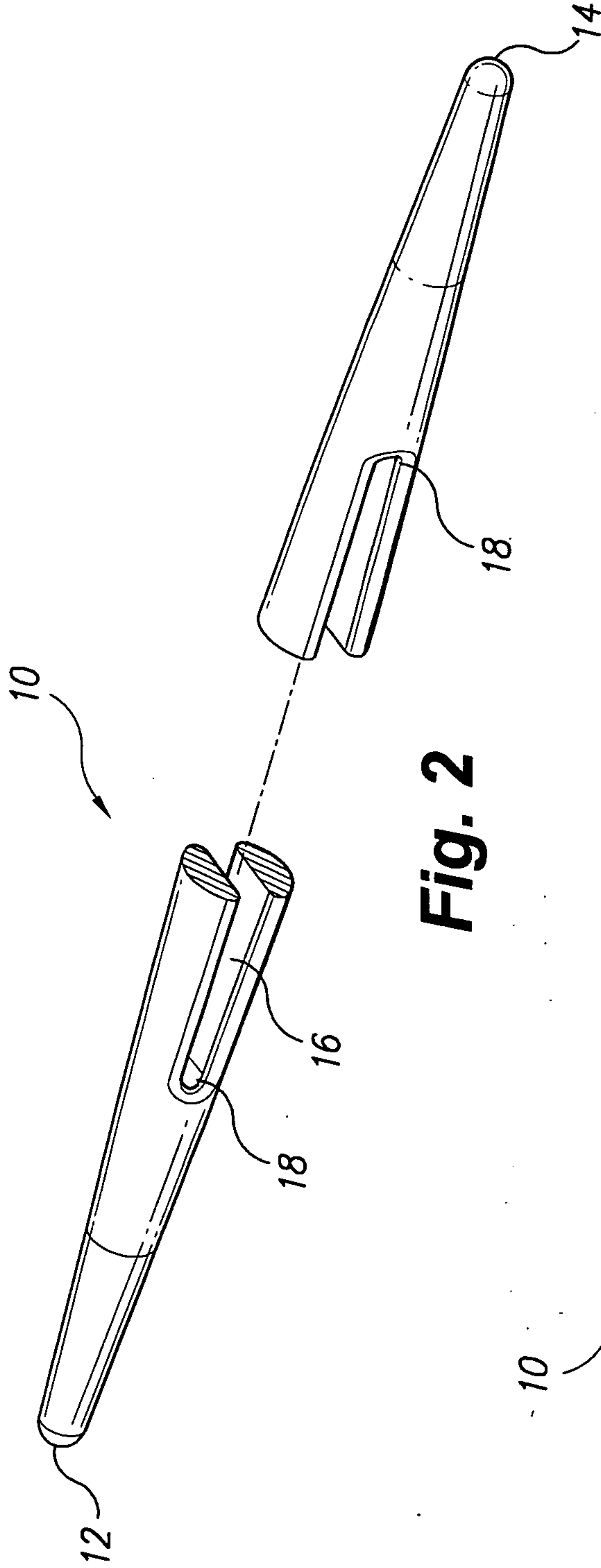
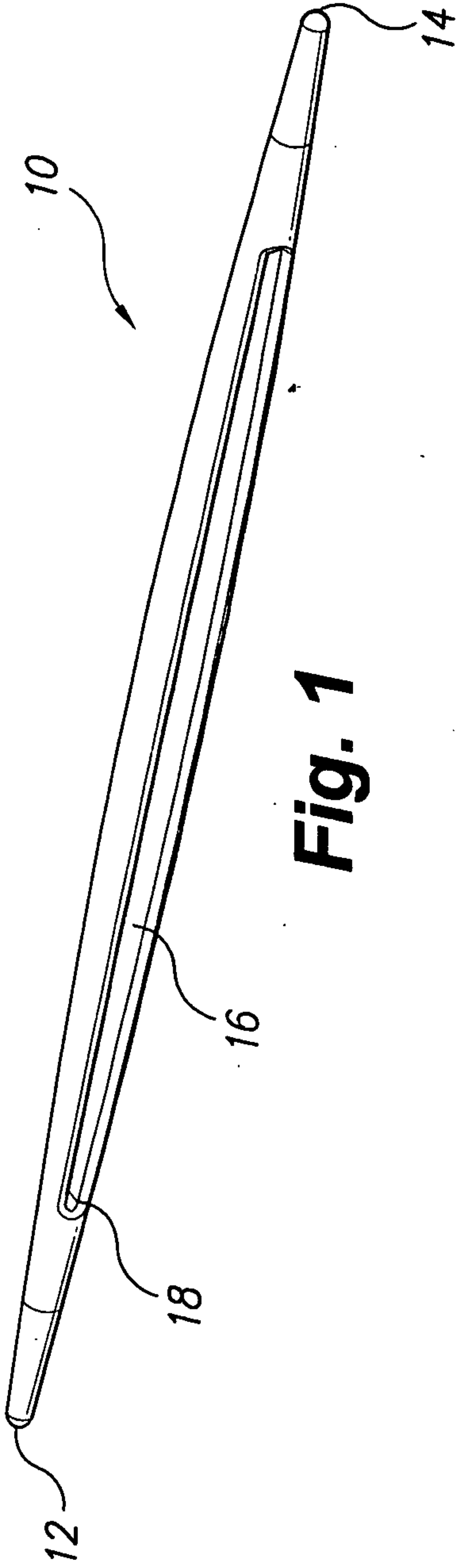
passing the second end of the finishing needle under several threads on the back of the textile item in the direction of the second end, whereby the end piece of yarn moves to the back side of the eye;

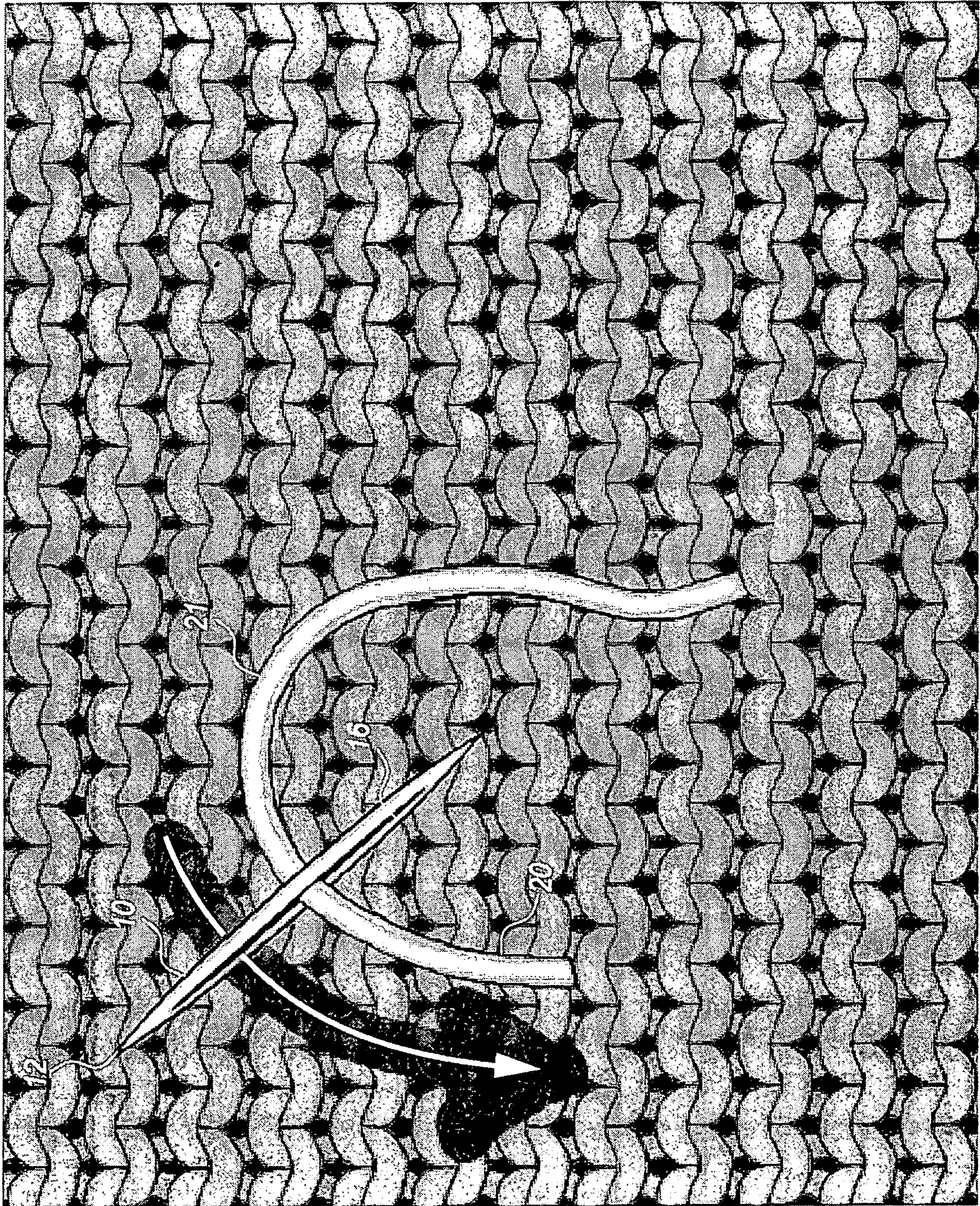
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passing the first end of the finishing needle under several threads on the back of the textile item in the direction of the first end, whereby the end piece of yarn moves to the front side of the eye;

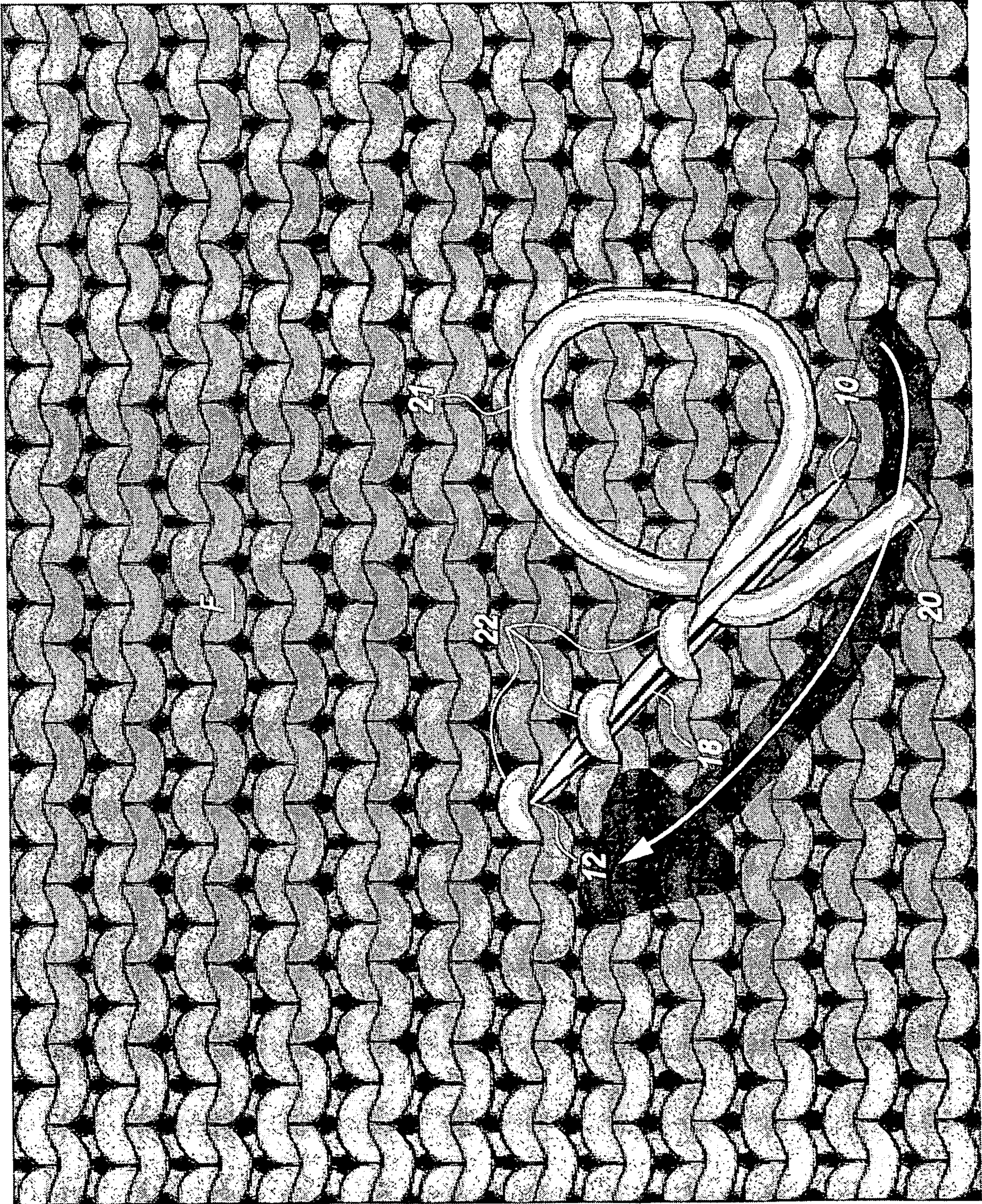
pulling the needle out the opposite side of the threads; and

5 securing the end piece of yarn under the threads on the back of the textile item.



**Fig. 4A**

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**Fig. 4B**

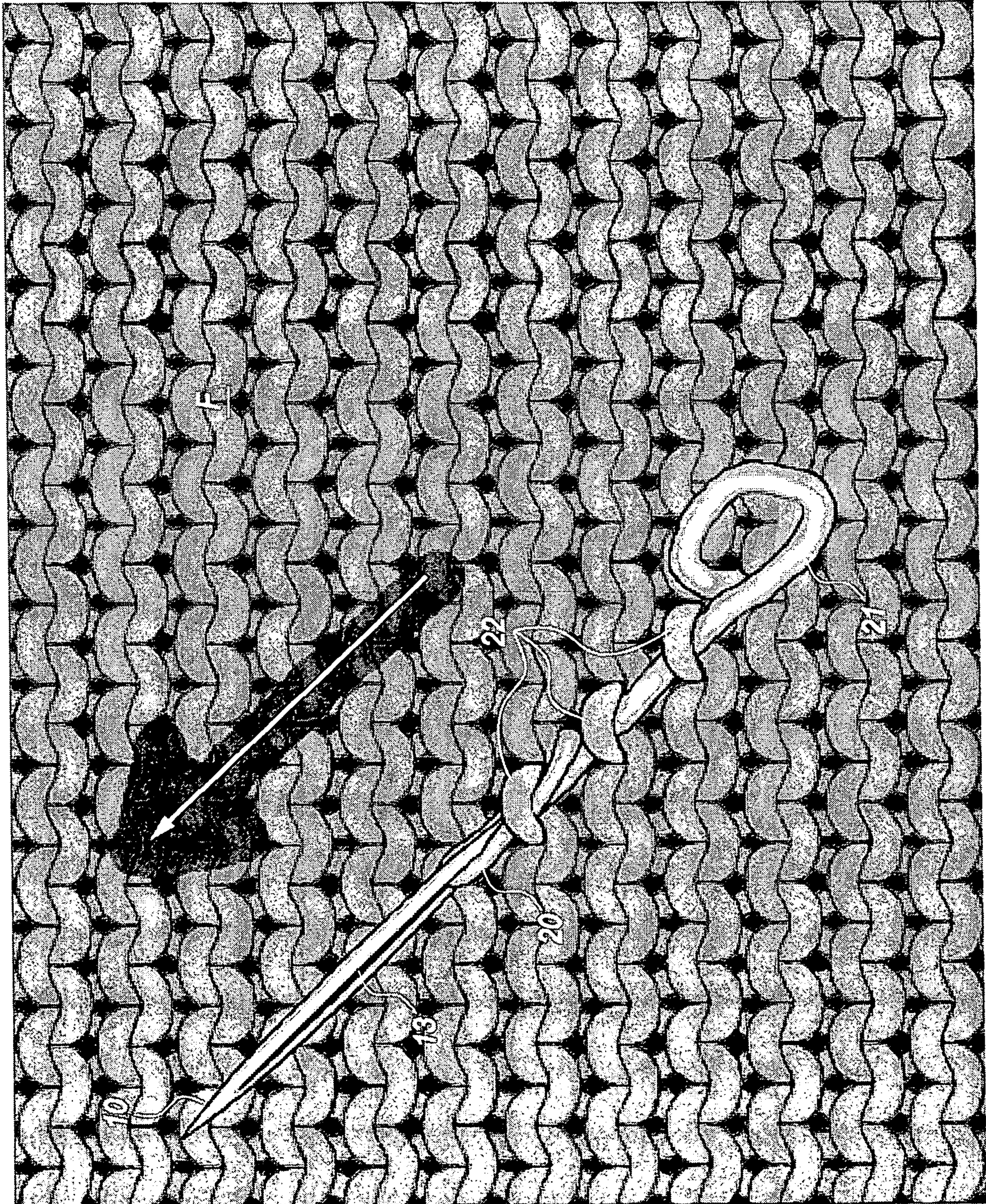
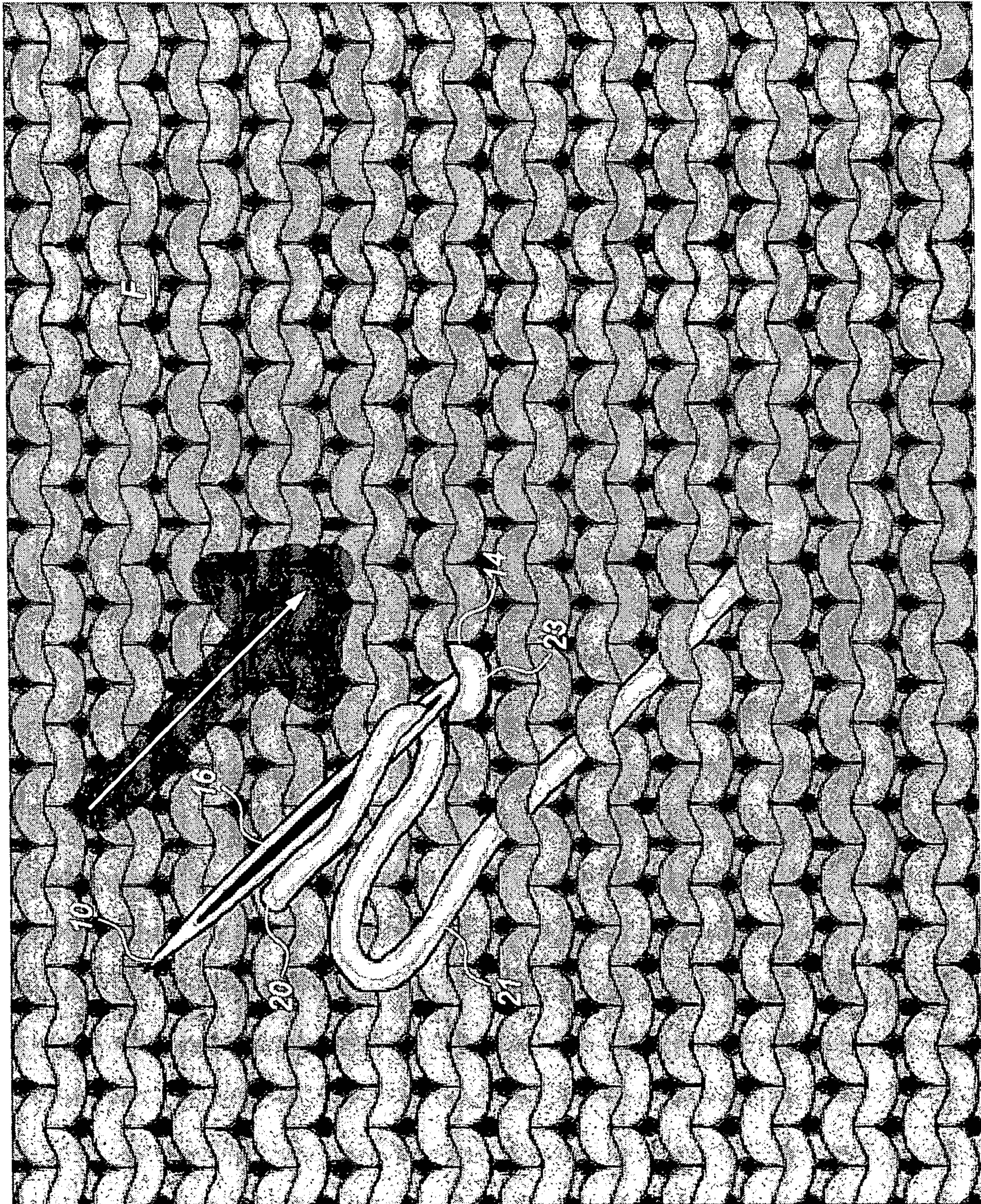


Fig. 4C

**Fig. 4D**

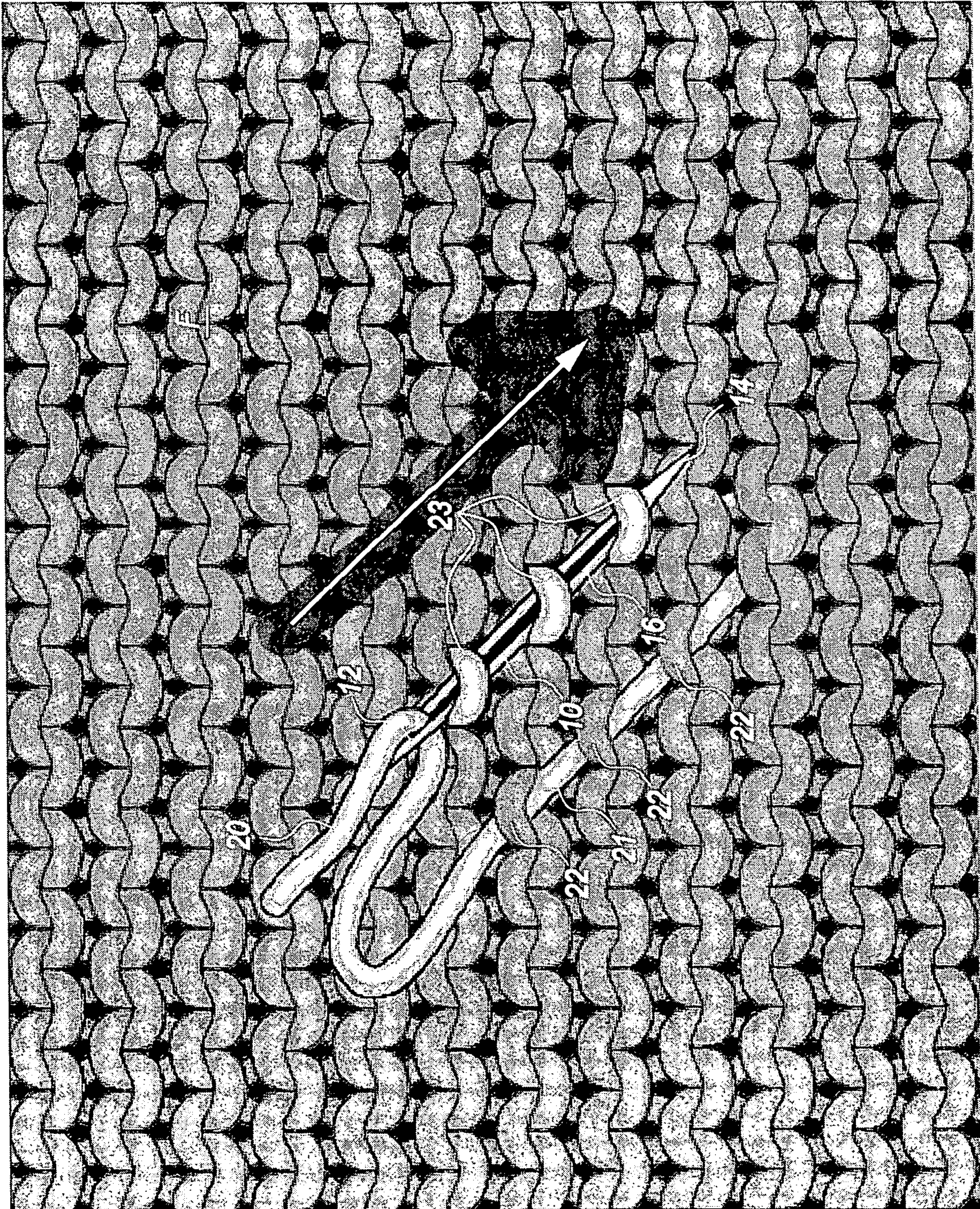
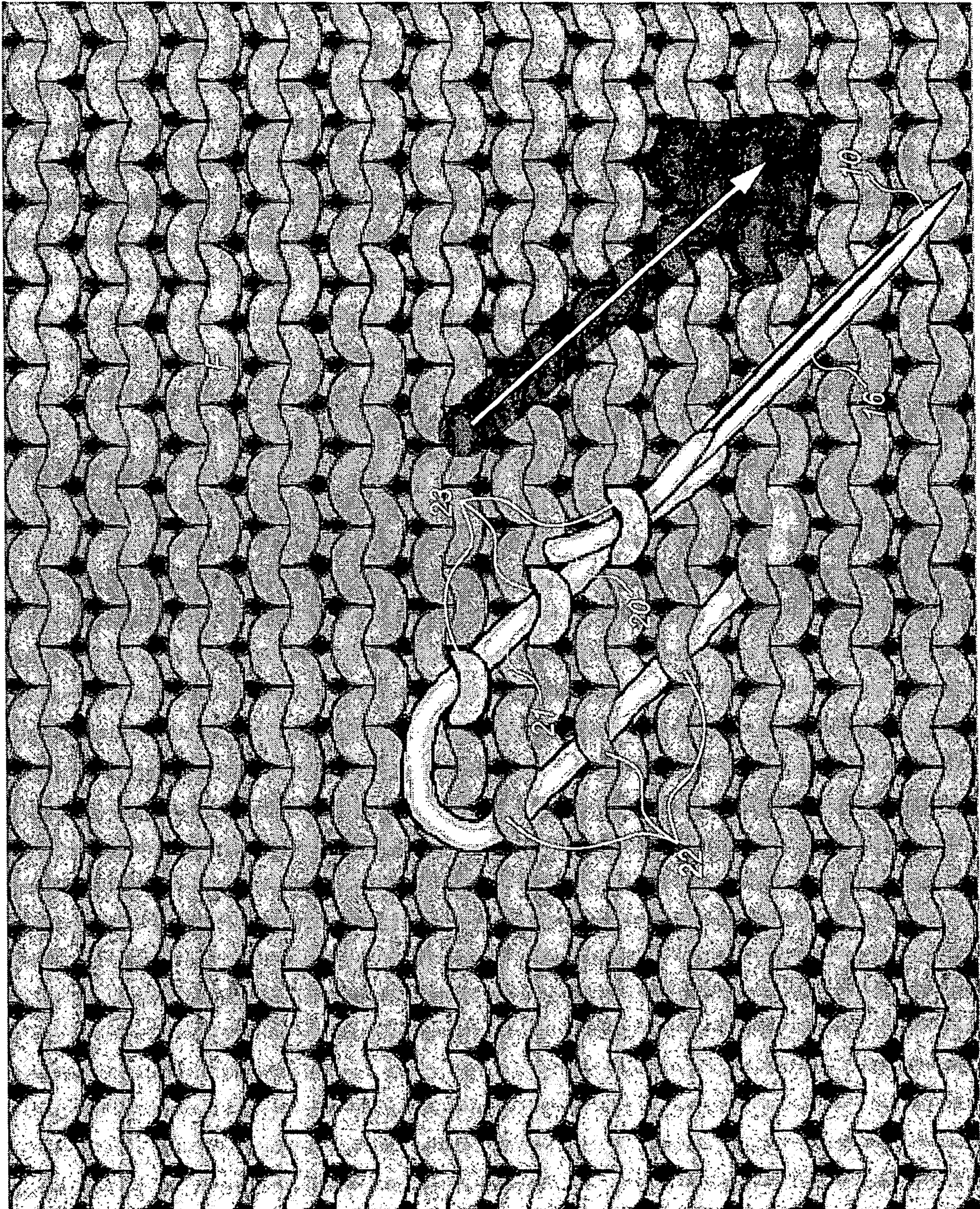


Fig. 4E

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**Fig. 4F**

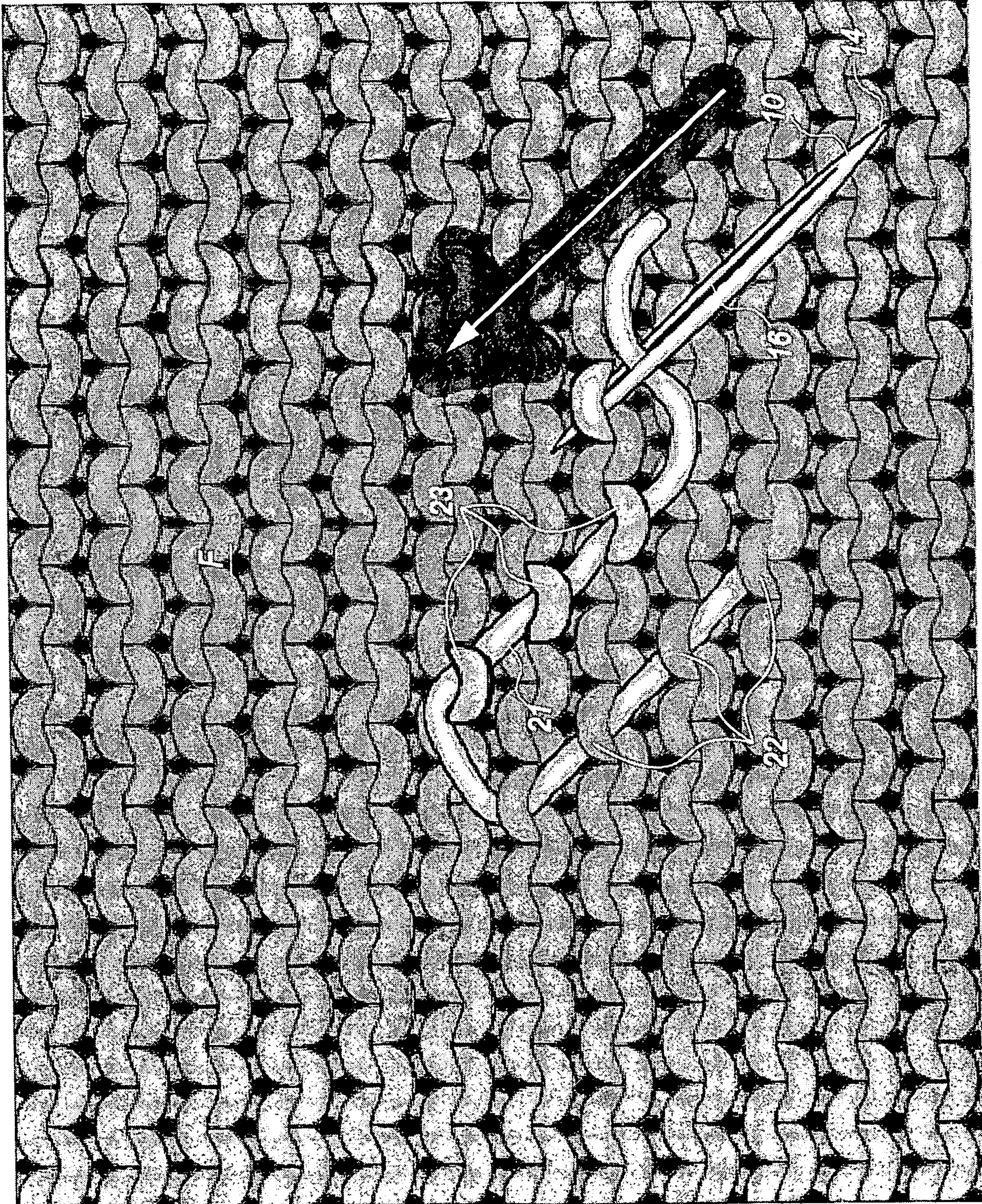


Fig. 4G

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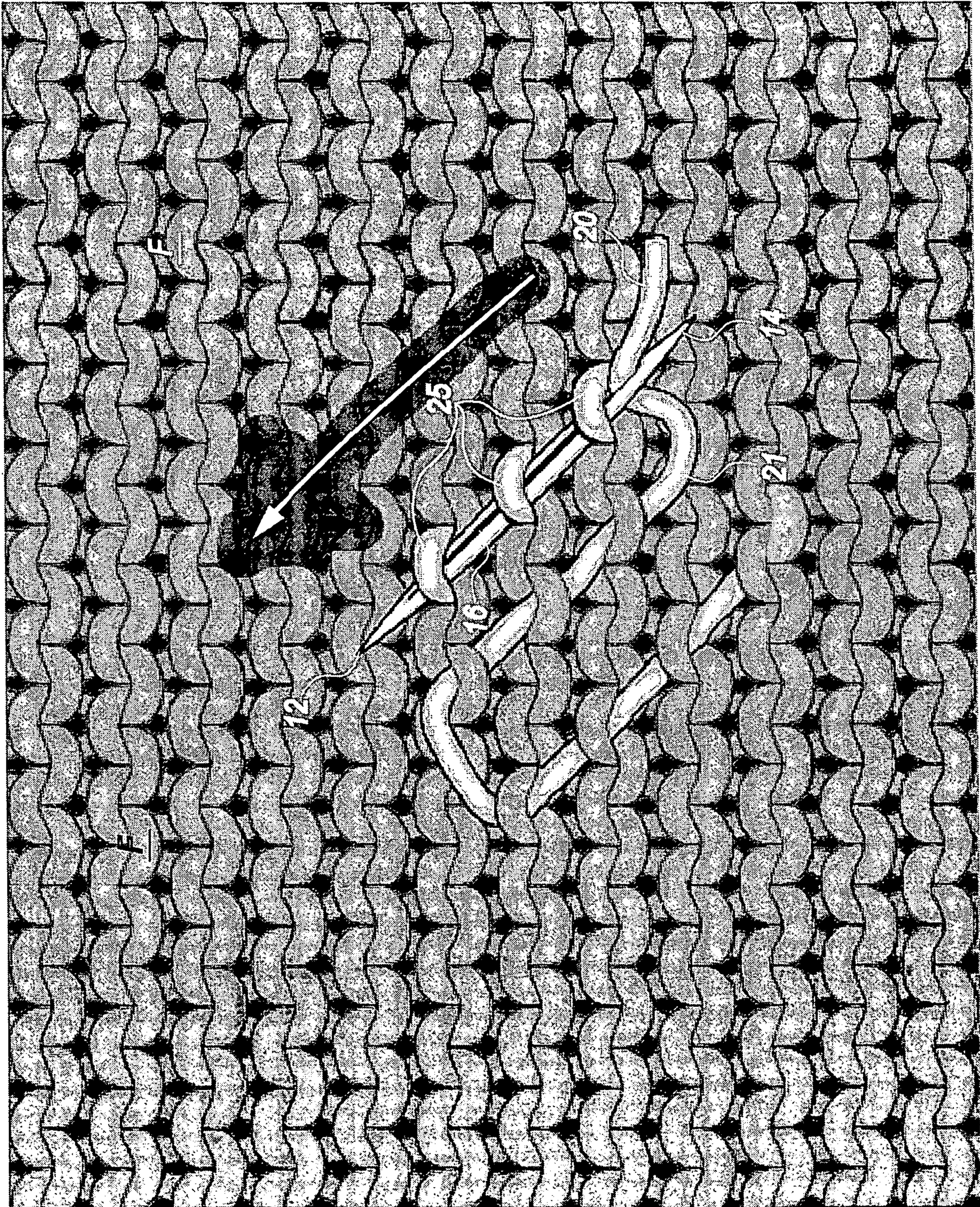
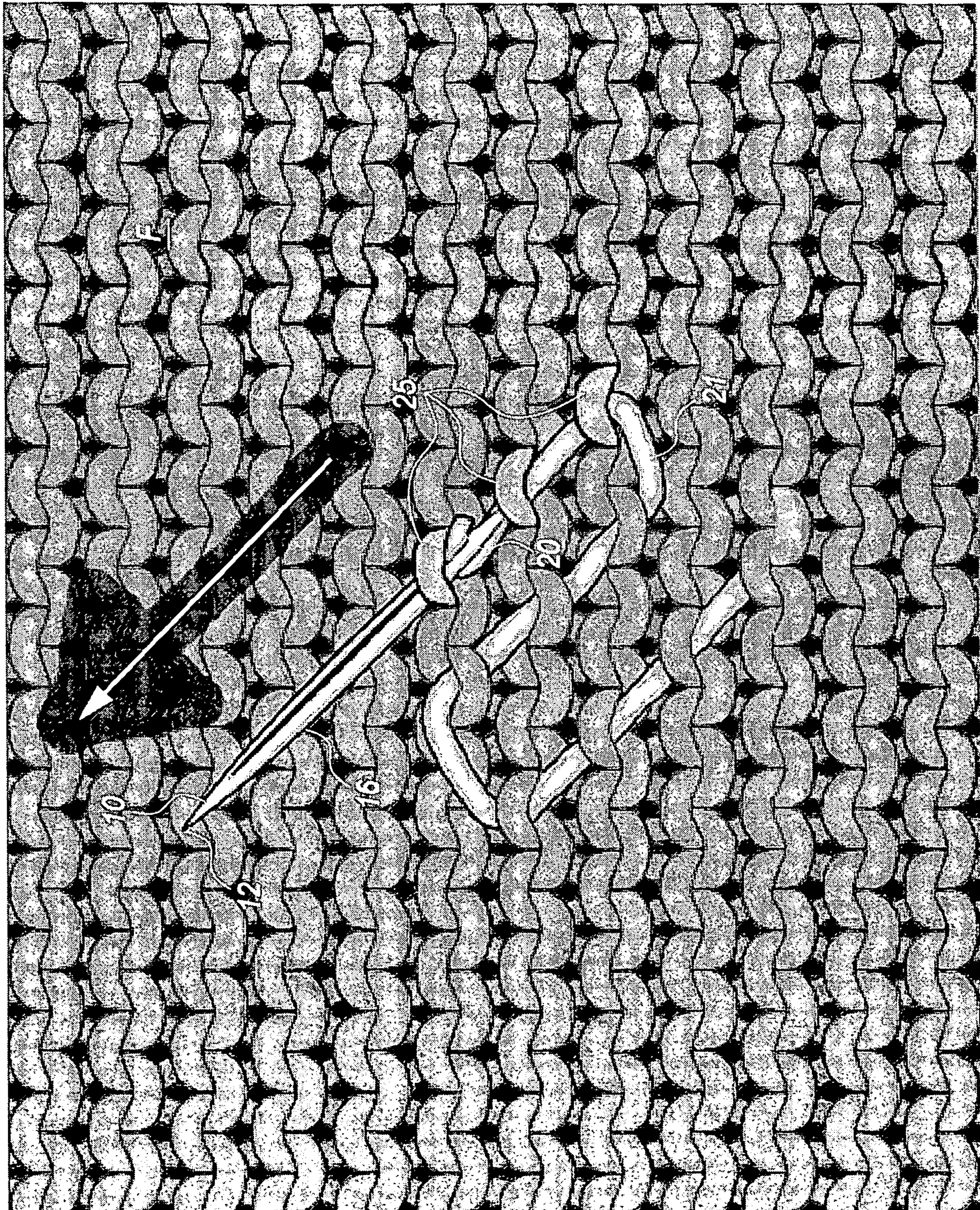
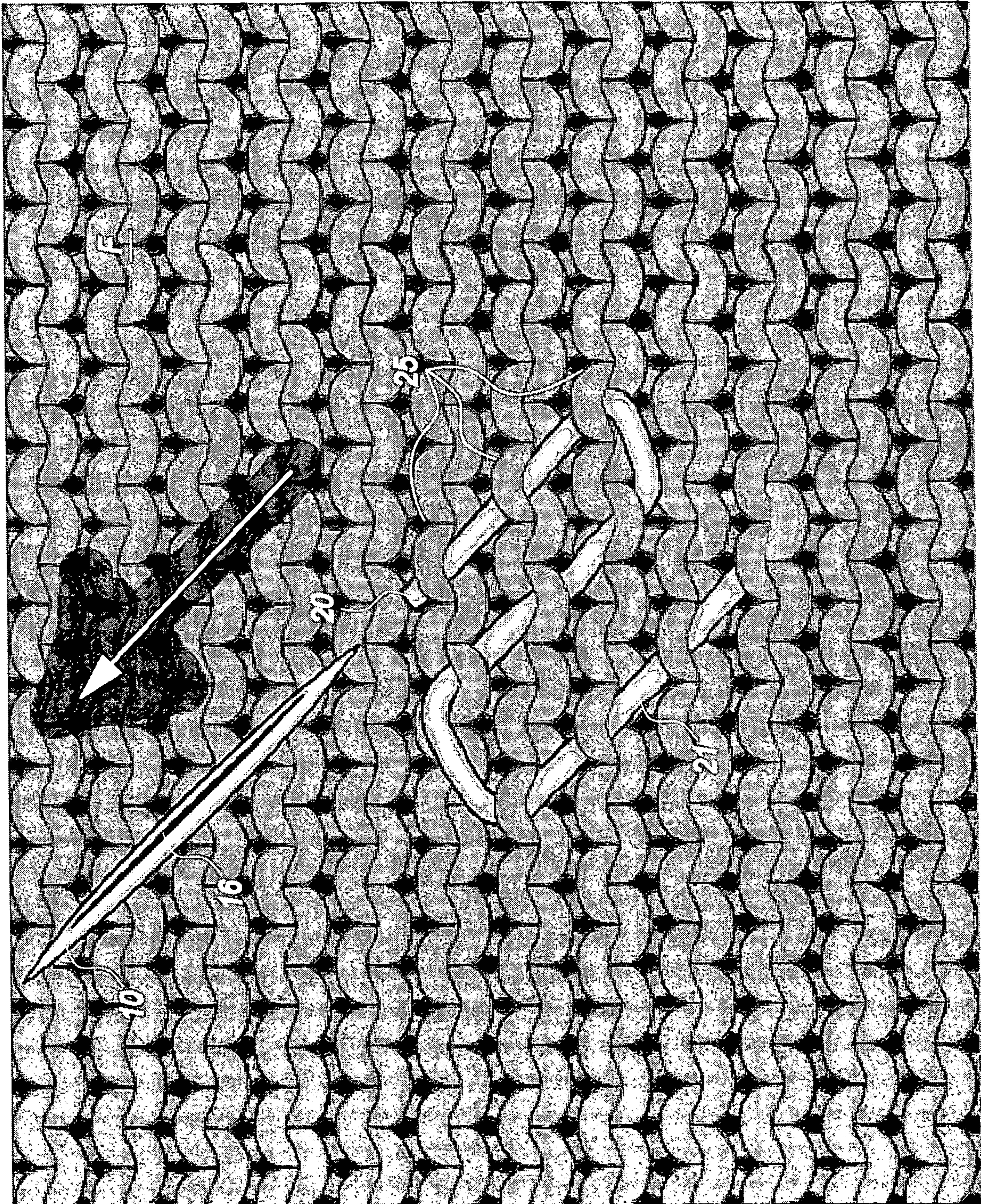


Fig. 4H

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**Fig. 4I**

**Fig. 4J**

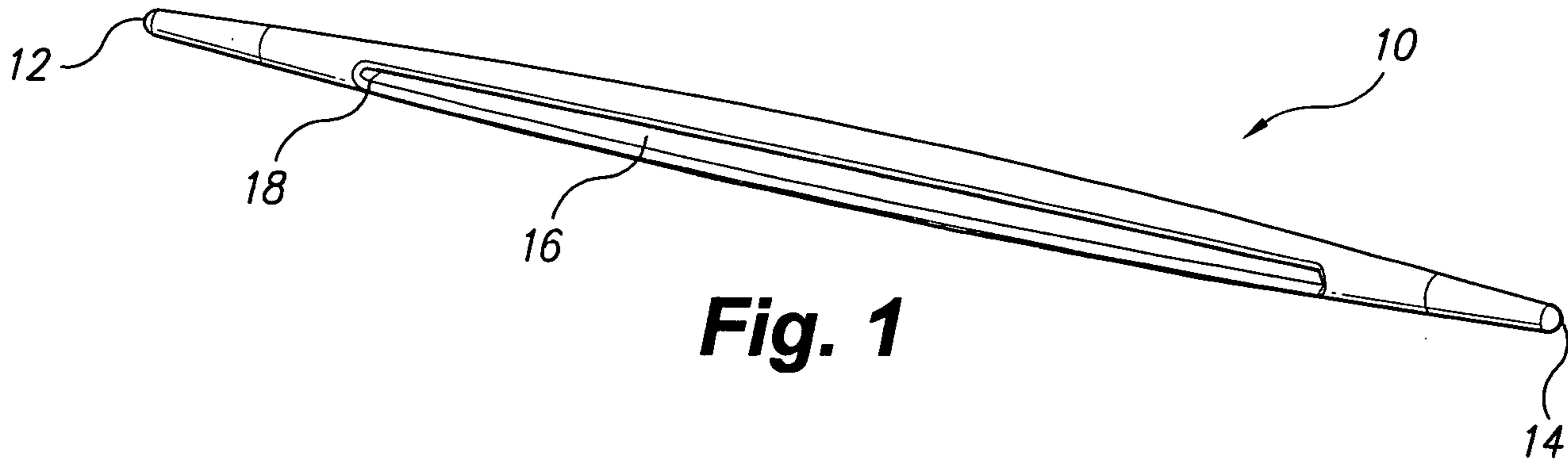


Fig. 1