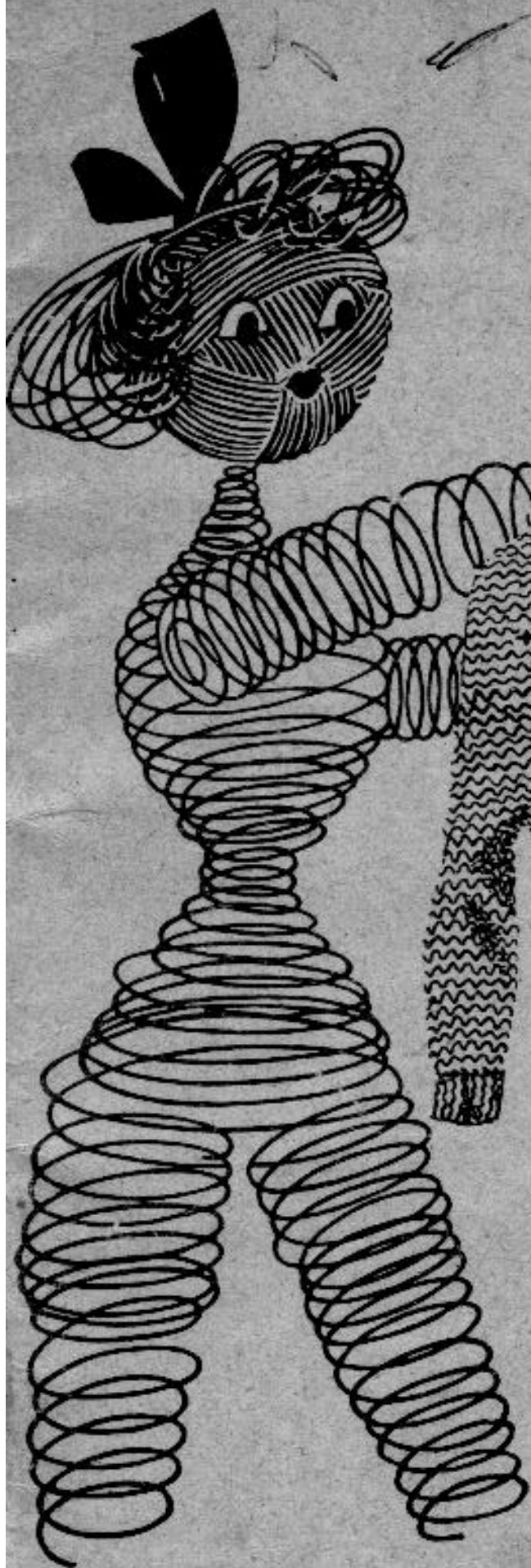


PASSAP® | 12



**DOUBLEBED KNITTING
MACHINE**

PASSAP® 12

I N S T R U C T I O N B O O K

Nr Z 2228

- I Description of Passap 12
- II General knitting instructions
- III Shaping
- IV How to knit a sock
- V Calculation of models
- VI Technical hints

I. DESCRIPTION OF PASSAP 12

ASSEMBLING

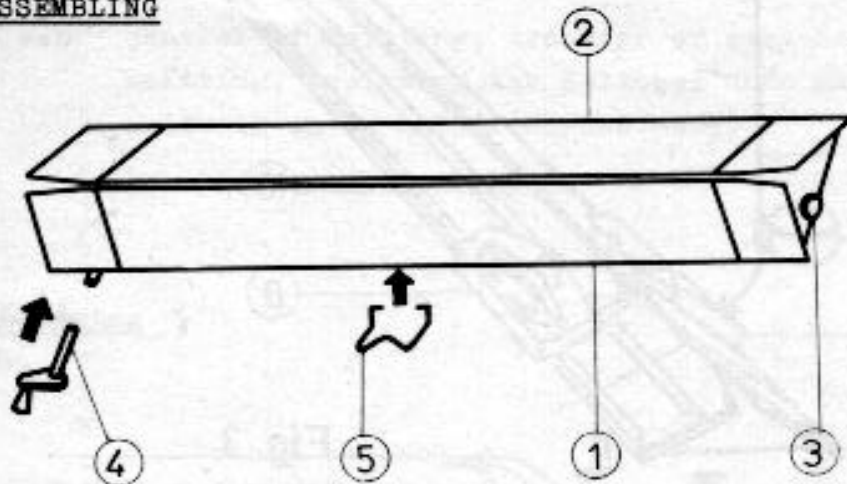
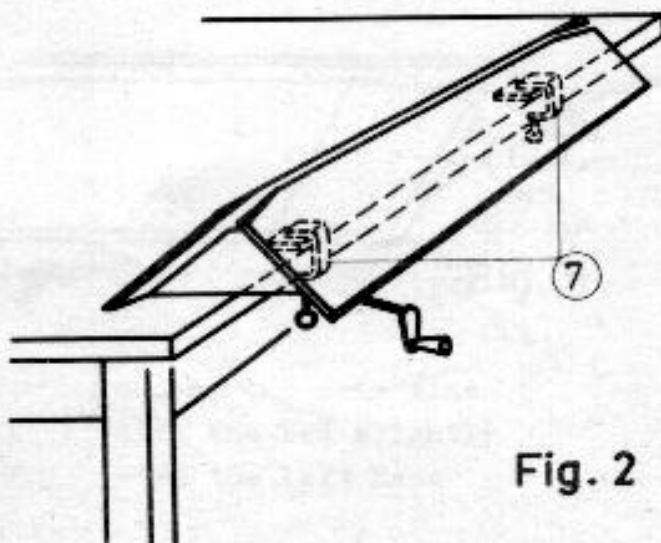


Fig. 1

- ① Front needle bed
- ② Back needle bed
- ③ Knob for lowering the front bed (s.page 5, fig.4 & 5)
- ④ Slide racking handle into tube
- ⑤ Set up trip wire (s.page 8, fig.12)



- ⑦ Clamps for fixing to the table

Fig. 2

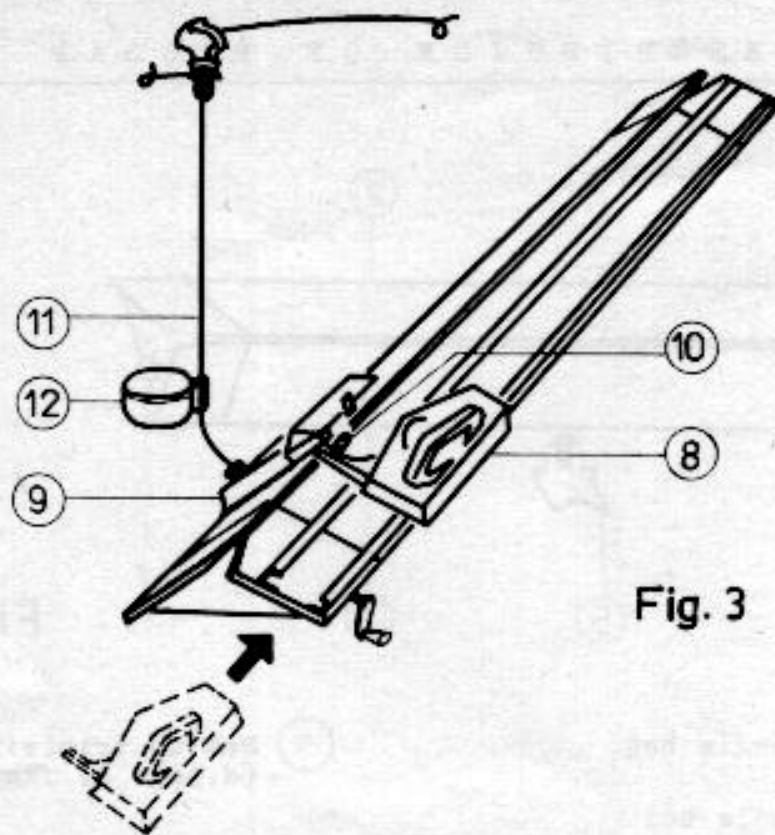


Fig. 3

- ⑧ Front lock with handle
- ⑨ Back lock
- ⑩ Handle for linking the lock connection
- ⑪ Fix wool feed to back lock
- ⑫ Set up yarn holder

Slide unto the guiding rails from the side (back lock first)

DESCRIPTION OF THE PASSAP 12

Lowering mechanism (lowering of front bed)

Use: control of knitting, transfer of stitches for tubular knitting, replacing the stitches unto machine for knitting on to half finished work.

Lowering



Fig. 4

Pull out the knob on the right of the machine to its fullest extent.

Raising

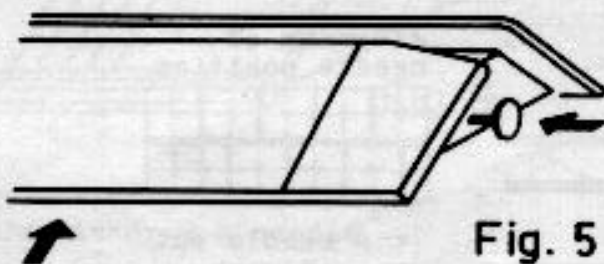


Fig. 5

Press the knob in

and at the same time lift the bed slightly with the left hand

Racking

Use: casting on with racking
 stitch patterns with racking

Normal position of beds:

Needle facing tooth, for knitting with all needles



diagramm of
needle position

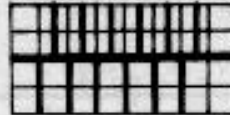


Fig. 6

1 complete circuit of handle: back bed is racked over 1 needle
either to the left or to the right.

Special position of beds:

Needle facing channel, for knitting with every 2nd needle

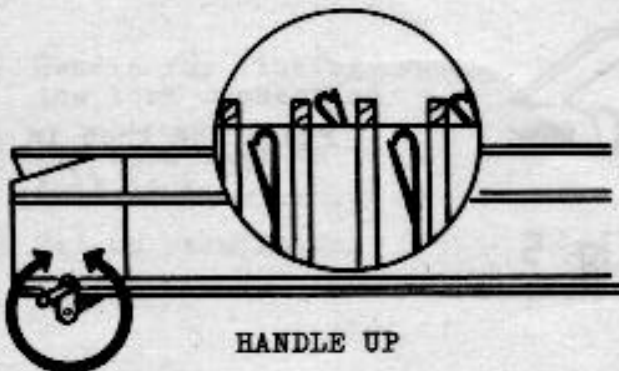
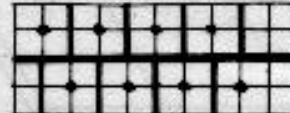


diagramm of
needle position



• = needle out
of work

Fig. 7

Attention: 2 complete circuits of handle = racking over 1 needle

The needles in working position must never face each other
directly.

Needle positions:

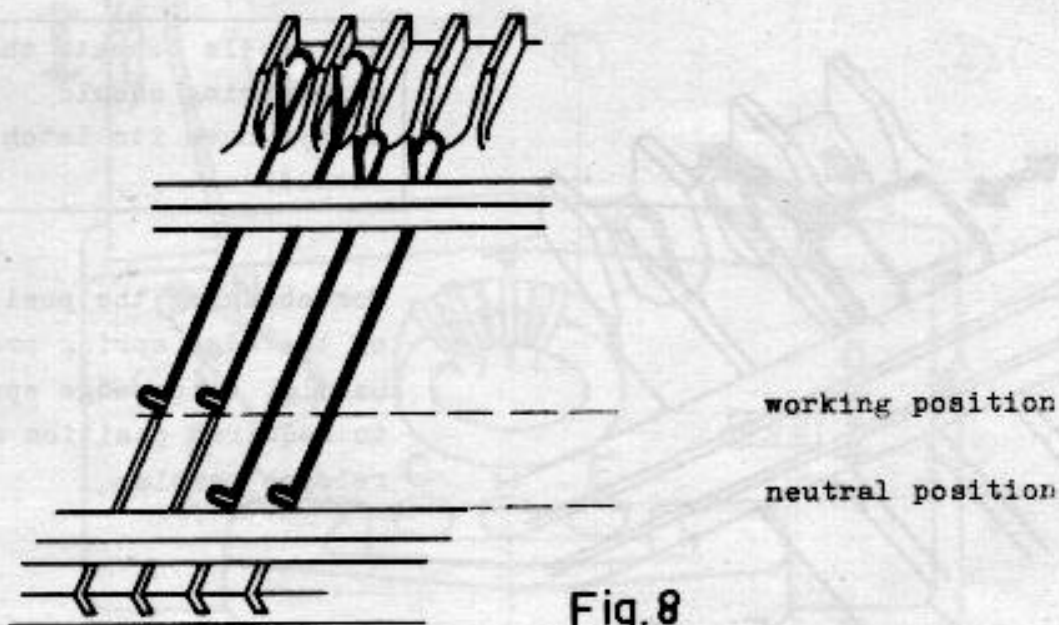


Fig. 8

How to change a needle

Pull out securing bar

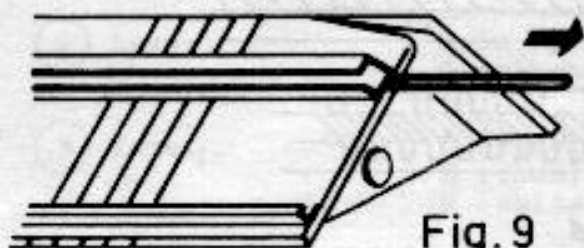


Fig. 9

close latch

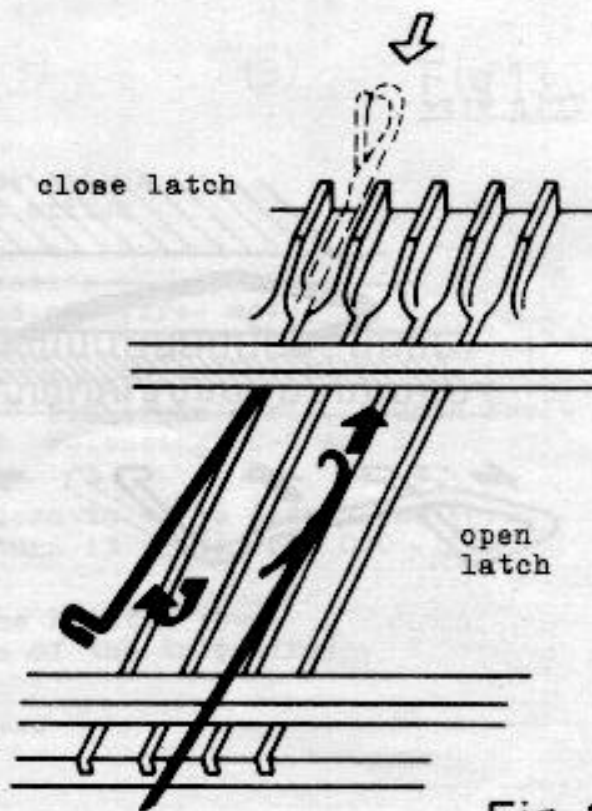


Fig. 10

To withdraw a needle
latch must be closed

To insert a new needle
latch must be open

If needle head is damaged
brake head completely before
removing the needle.

Edge springs

Use: securing of border stitches

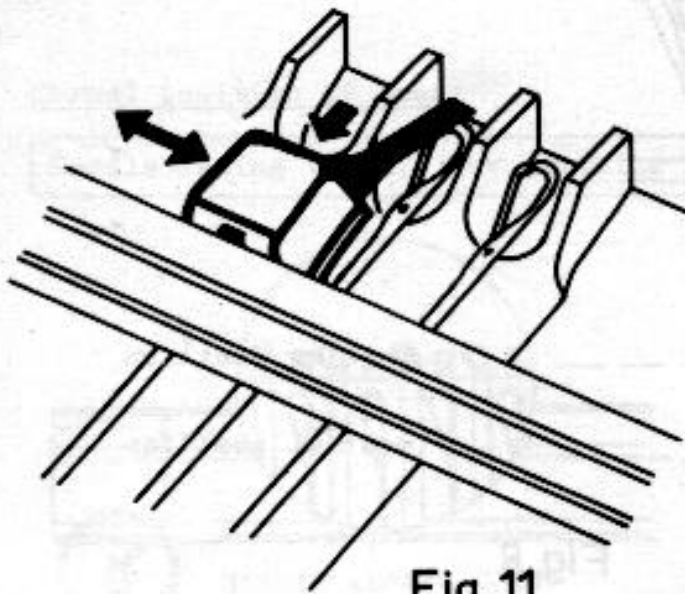


Fig.11

The needle beneath the edge spring should always have its latch closed

For changing the position of the edge spring press handle, slide edge spring to required position and release handle.

Trip wire

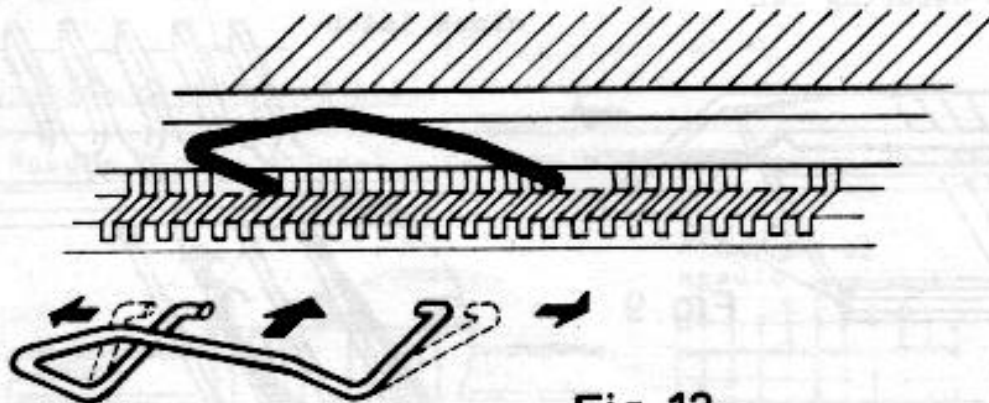


Fig.12

Spread ends of trip wire apart and insert them into their respective slots on front bed (large space)
There are 8 possibilities to insert the trip wire.

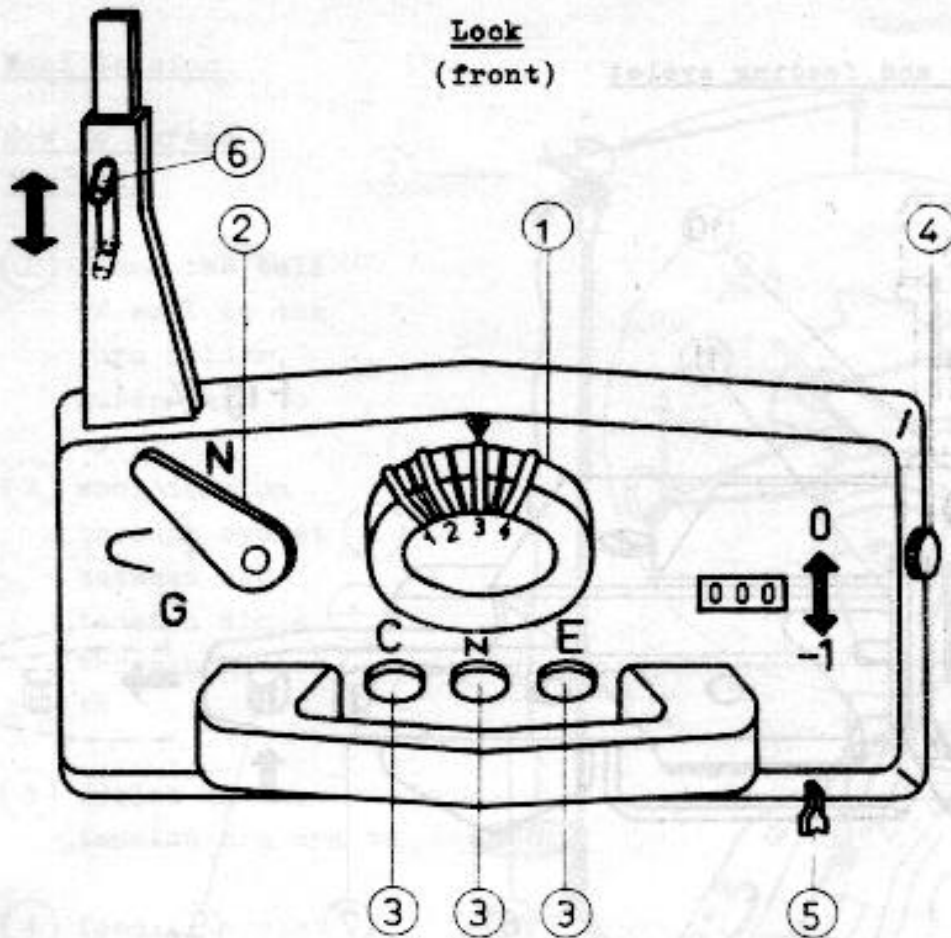


Fig.13

- | | | |
|---|-------------------------------|---|
| ① | Stitch size: | 1 smallest stitch
8 largest stitch |
| ② | Lever: | N in operation
G switched off (free move) |
| ③ | Keys: | C (black) tubular
E (blue) Fisherman's rib, French Perle
N (white) releasing of C and E |
| ④ | Knob for
row counter: | turn it down to -1 to deduct one
number, turn it up to read 000 |
| ⑤ | Trigger of
row counter: | counts the knitted rows
(by means of the trip wire) |
| ⑥ | Knob for connecting the locks | |

Strippers and feeding eyelet

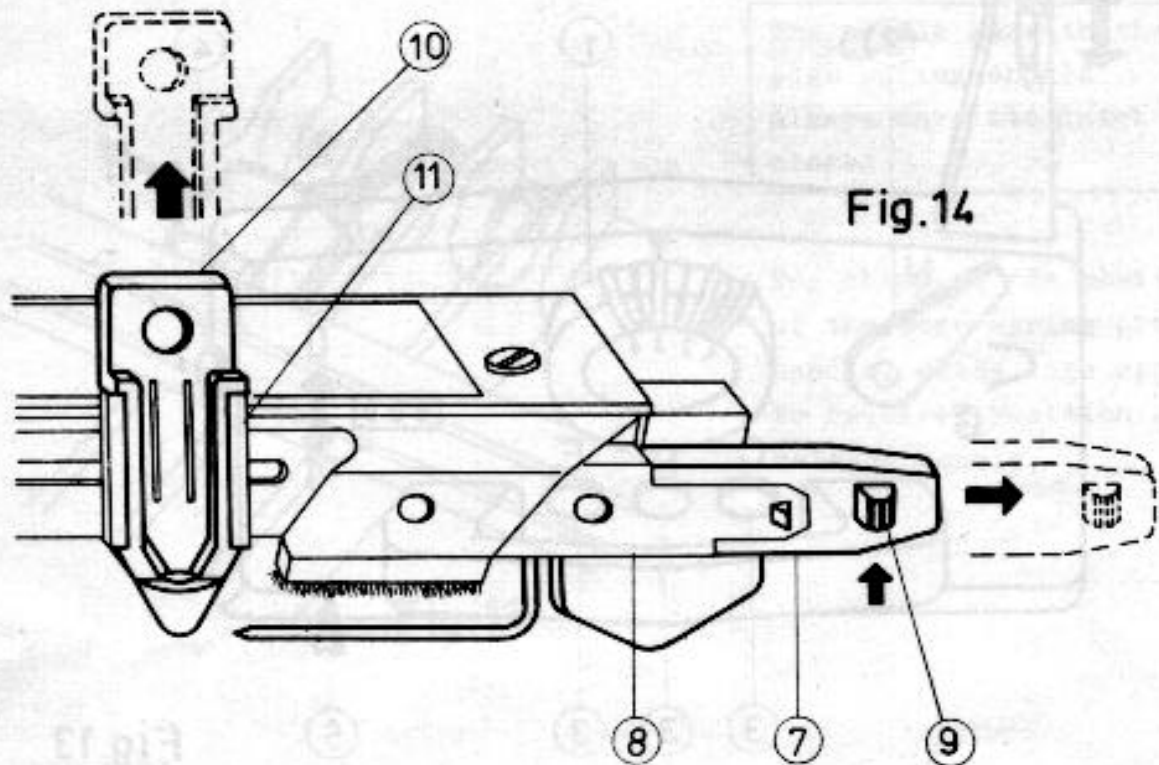


Fig.14

- ⑦ Slide strippers in
- ⑧ holder
- ⑨ to remove: press knob and pull out stripper
- ⑩ Place eyelet in its
- ⑪ socket.

Blue strippers for double-bed knitting,
black strippers for single-bed knitting or tubular.

Wool tension

How to thread
the yarn

- ① Place the ball of wool in the yarn holder, guide yarn to
- ② wool tension through eyelet (a) between the tension discs (b) through eyelet (c) to
- ③ eyelet on the tension arm and to
- ④ feeding eyelet

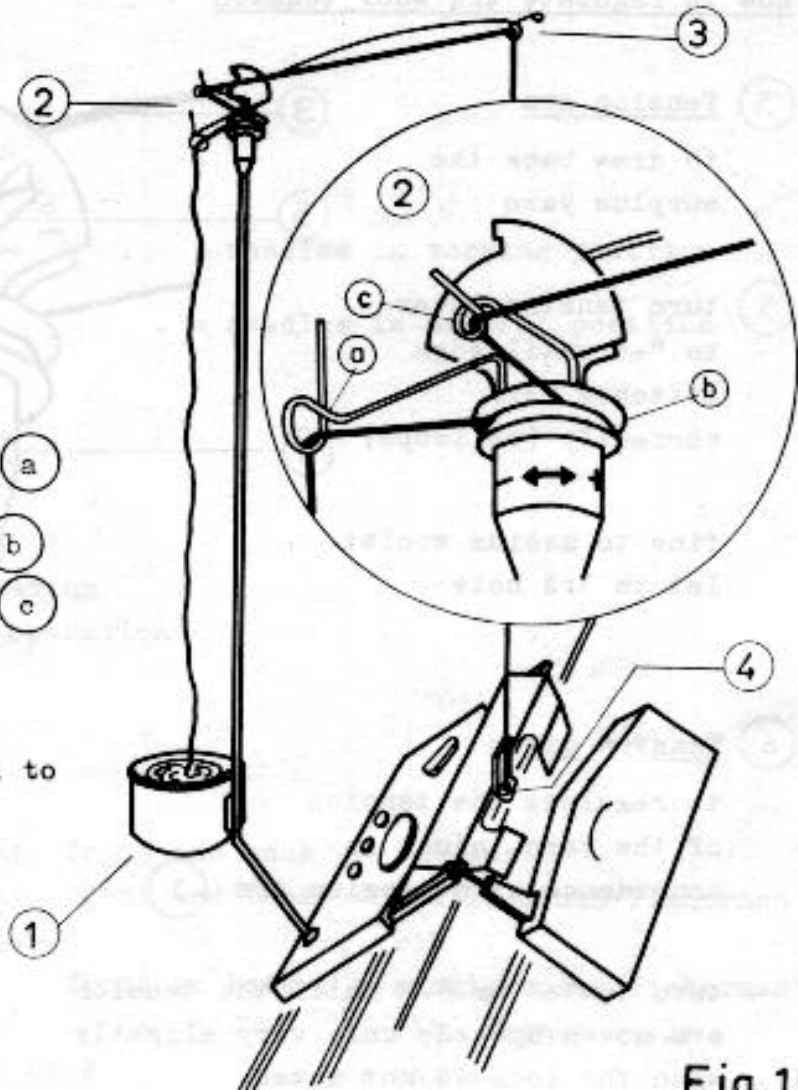


Fig.15

How to thread a new ball:

Before the old ball is finished knit one complete row, thread new ball like first one and start to knit from the edge.

Wind your wool carefully by means of a wool-winder. It saves you trouble!

The yarn should run easily from the centre of the ball.

Balls wound by hand are not recommendable.

How to regulate the wool tension

- ③ Tension arm
to draw back the surplus yarn
- ⑤ turn tension lever to "+" until edge stitches form correctly (no loops)

fine to medium wools:
1st to 3rd hole

- ⑥ Tension discs
to regulate the tension of the yarn, adjust in accordance with tension arm ③

turn to "+" or "-" until the tension arm moves upwards only very slightly when the lock is not moved.

Faults and their causes:

adjusted too loose:	edge loops
adjusted too tight:	edge stitch breaks

Attention:

Once adjusted the wool tension must no more be altered until the knitting is finished, so that all parts of the knitting show the same measures.

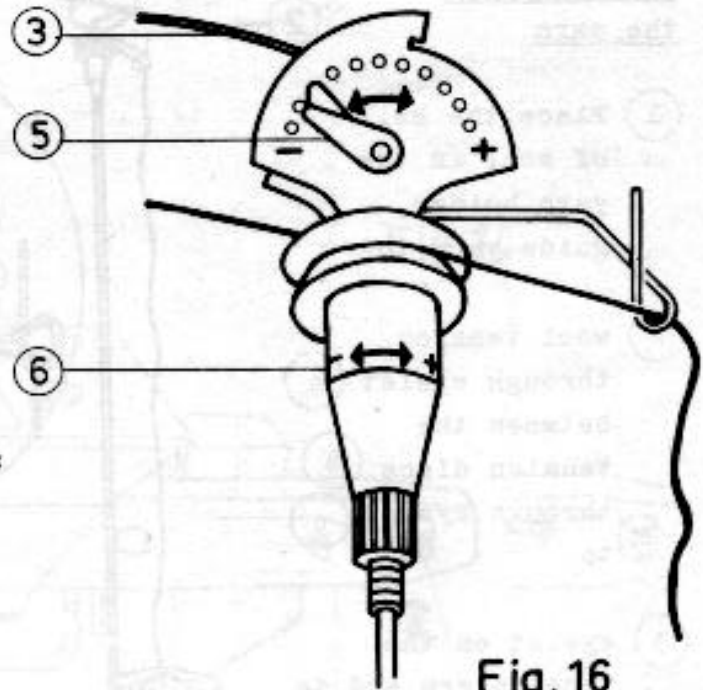
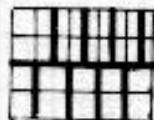


Fig. 16

II. GENERAL KNITTING INSTRUCTIONS

EXPLANATIONS

Needles



back:

needles in working position

front:

. = needles in neutral position

Lever

N = lock in operation

G = lock out of operation

Keys

C = pressed down: front and back = tubular

E = pressed down: front and back = double-sided Fisherman's rib

front or back = single-sided Fisherman's rib, French Perle

N = to release C or E = normal

Abbreviations

K/K = Knit/Knit: all needles in working position

1 x 1 = every 2nd needle in working position: K 1 x P 1 rib

2 x 2 = every 3rd needle in neutral position: K 2 x P 2 rib

Nd = needle

k = knit

R = row

incr. = increase

ST = stitch size

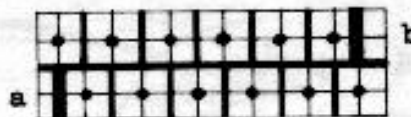
decr. = decrease

RC = row counter

R = racking

PREPARATION FOR KNITTING

Put needles into working position



Needle Rule:

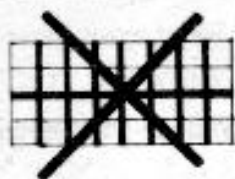
First needle "a" on the left of front bed,
last needle "b" on the right of back bed.

Also with racking patterns the edge needles must be placed according to this rule.

Place edge springs over edge needles.

Control position of beds

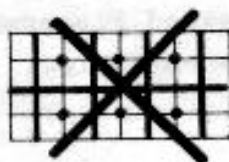
The needles must never face each other directly.



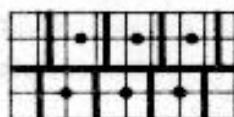
wrong
handle up



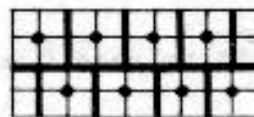
right
handle down



wrong
handle up



bad
handle down



right
handle up

Thread the yarn and control the wool tension

Guide the beginning of yarn from the feeding eyelet down between the needlebeds.

With the left hand hold yarn under the machine until the first four rows have been knitted.

A T T E N T I O N:

Before starting to knit: lock always at the right.

KNITTING ON BOTH BEDS

Blue strippers

K/K

Basic principle:

	<u>Lever</u>	<u>Key</u>	<u>ST</u>
back:	N	N	4
front:	N	N	4

handle down

Cast on

row	back lock			front lock			direction of lock	
	lever	key	ST	lever	key	ST		
1	N	N	2	N	N	2	←	zig-zag
2	N	C	5	N	C	2	→	tubular (back)
3	N	C	5	N	C	5	←	tubular (front)
4	N	C	5	N	C	5	→	tubular
5	N	C	5	N	C	5	←	tubular
	N	N	4	N	N	4	↔	K/K

Simple cast on for K/K

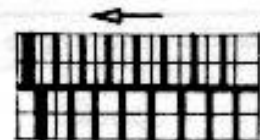
Locks N, ST 4

Rack back bed to the left over 1 needle

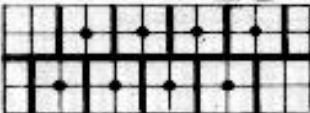
Knit one row

Rack back bed to the right again

Continue knitting

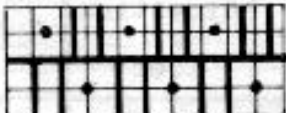


1 x 1

Basic principle:		<u>Lever</u>	<u>Key</u>	<u>ST</u>
	back:	N	N	4
	front:	N	N	4
handle up				

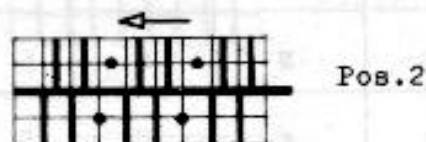
For casting on see K/K.

2 x 2 rib

Basic principle:		<u>Lever</u>	<u>Key</u>	<u>ST</u>
Pos.1				
	back:	N	N	3
	front:	N	N	3
handle down				

Cast on

Rack back bed over one needle to the left: Pos.2



1st to 5th row: see casting on for K/K;
then rack back bed to the right again (Pos.1) and continue normal knitting.

Fisherman's Rib

Casting on for K/K, 1 x 1 or 2 x 2 (for switching over to other stitch patterns, see page 18)

Basic principle:		<u>Lever</u>	<u>Key</u>	<u>ST</u>
lock	back:	N	E	3
	front:	N	E	3

A T T E N T I O N !

Adjust ST as low as possible, Fisherman's Rib can never be too tight but often too loose.

French Perle (single-sided Fisherman's Rib)

Cast on as for Fisherman's Rib.

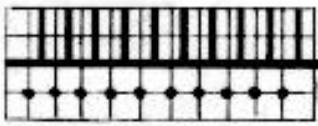
Basic principle:				
		<u>Lever</u>	<u>Key</u>	
lock	back:	N	E	Perle
	front:	N	N	at front
	back:	N	N	Perle
	front:	N	E	at back

front: the side of knitting turned towards front bed.
 back: the side of knitting turned towards back bed.

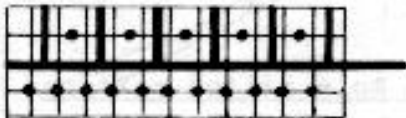
KNITTING ON ONE BED

Black strippers

Jersey stitch on back bed

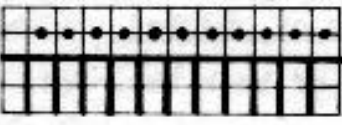
Basic principle:				
		<u>Lever</u>	<u>Key</u>	<u>ST</u>
	back:	N	N	5
	front:	G	-	-

Casting on directly



Place every 2nd needle in working position.
 Knit 1 row.
 Place all needles in working position.
 Continue knitting.



Jersey stitch on front bed

Basic principle:				
		<u>Lever</u>	<u>Key</u>	<u>ST</u>
	back:	G	-	-
	front:	N	N	5

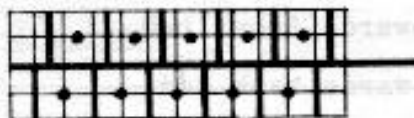
Cast on as for back bed.

TUBULAR KNITTING

Black strippers

Basic principle:		<u>Lever</u>	<u>Key</u>	<u>ST</u>
	back:	N	C	5
	front:	N	C	5
handle down				

Casting on directly (with open tube)



Place every 2nd needle in neutral position.

Knit 2 rows.

Put all needles in working position.
Continue knitting.

Closed casting on for double welt

Casting on: set both locks to N, ST 2 knit one row
both locks to C (tubular), ST 5, knit height of welt

Changing to transfer all stitches to needles on back bed.
Jersey stitch: continue knitting jersey stitch.

HOW TO CHANGE TO OTHER STITCH PATTERNS

From 1 x 1 and 2 x 2 rib to K/K

After having knitted the welt place all needles in working position, handle down. Knit 2 rows tubular (back and front C), set lock to N and continue knitting K/K.

From knitting normal (1 x 1, 2 x 2, K/K) to a stitch pattern

If the stitch pattern requires another needle position than the welt you have to transfer some stitches.

The stitches of those needles which have to be placed in neutral position are evenly distributed amongst the rest of the needles or transferred to new needles.

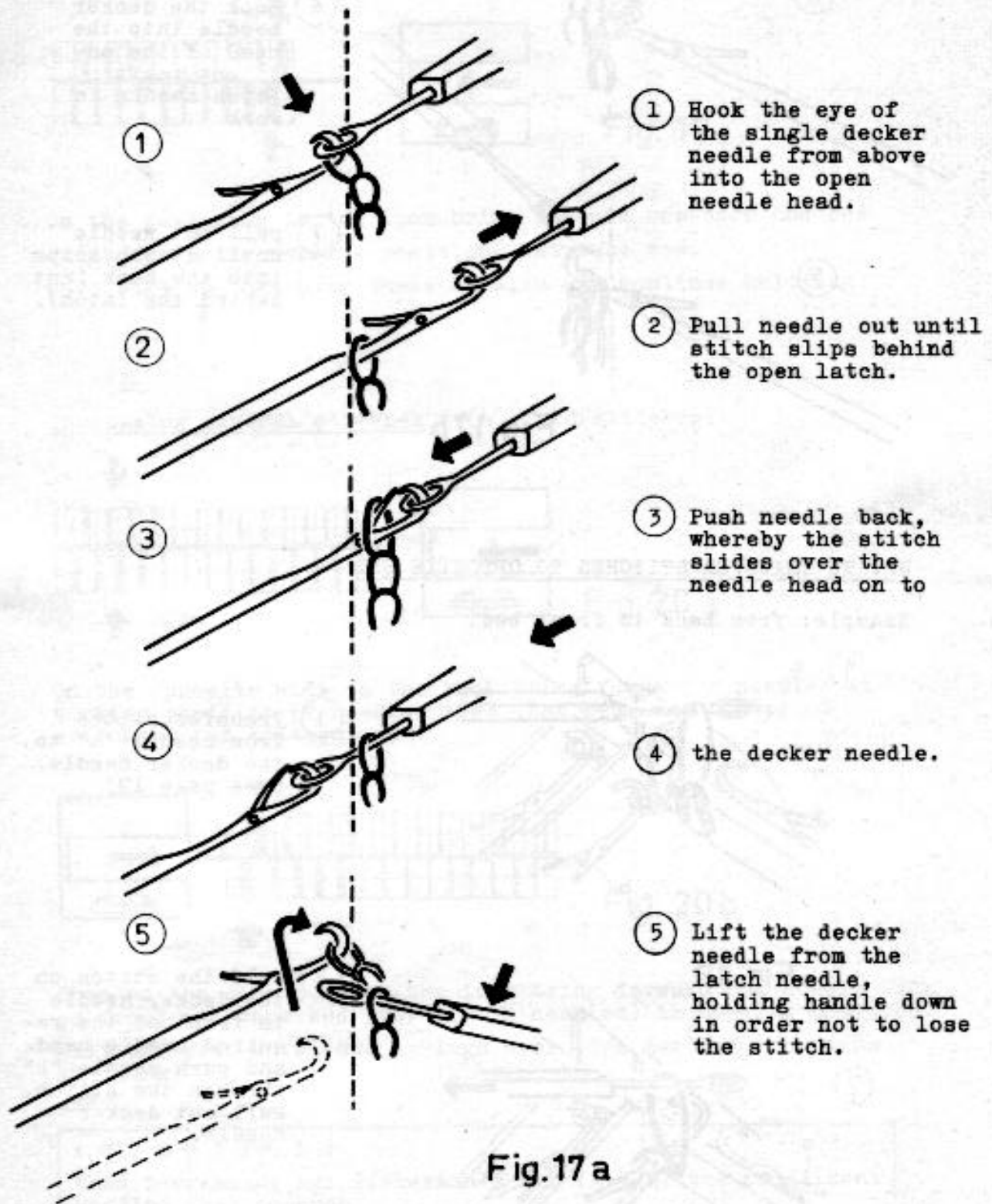
Change from knitting on two beds to knitting on one bed

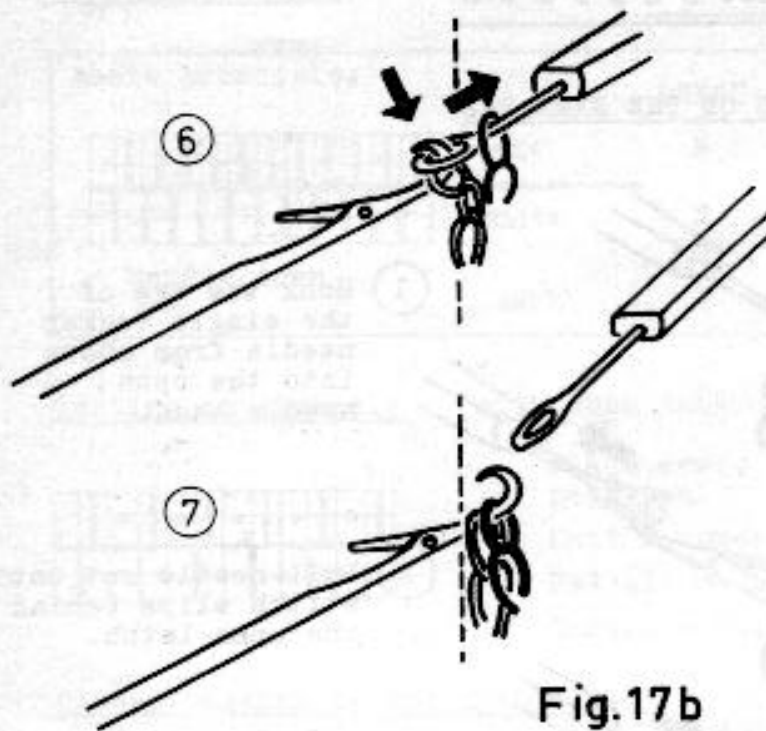
Transfer all stitches from front to needles of back bed. Set front lock to G.

Insert black strippers, continue knitting jersey stitch.

III. S H A P I N G

HOW TO TRANSFER STITCHES ON THE SAME BED





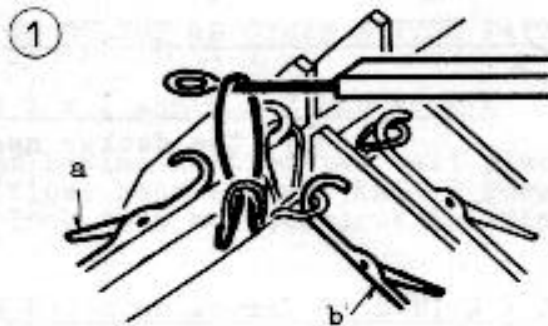
⑥ Hook the decker needle into the head of the adjacent (next) latch needle in work

⑦ pull out needle until stitch slips into the hook (not behind the latch).

Fig.17b

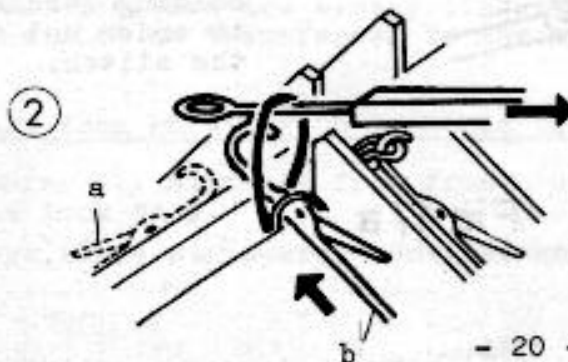
HOW TO TRANSFER STITCHES TO OPPOSITE BED

Example: from back to front bed.



① Transfer stitch from needle "a" to the decker needle. (see page 19)

Fig.18



② Hold the stitch on the decker needle in front of the required needle head and push needle "b" through the stitch. Pull out decker needle.

INCREASING ON DOUBLE BED WORK

Increasing one stitch

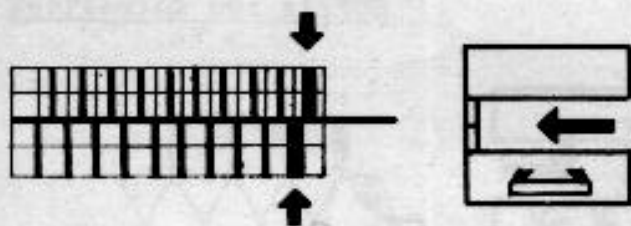


Fig. 19

On the same side as the lock bring forward one back and one front needle in working position. Knit one row. Move edge springs over these needles and continue knitting.

Increasing several stitches (e.g. 10 stitches)

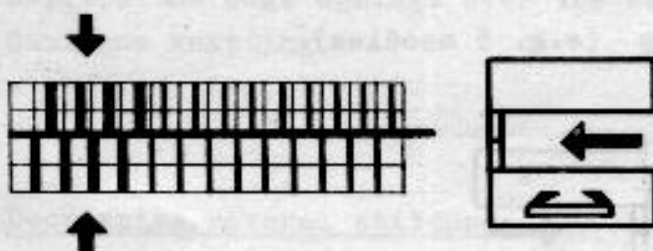


Fig. 20 a

On the opposite side to the lock bring forward 8 needles in working position (2 needles less than required number of stitches) and knit one row.

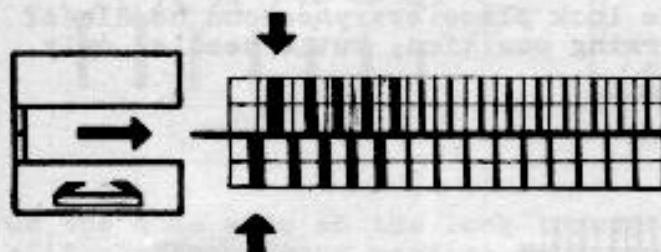


Fig. 20 b

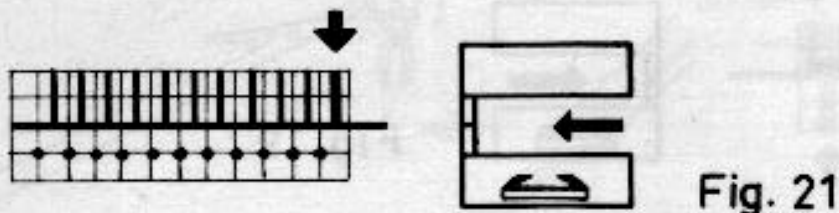
Then on the same side as the lock bring forward one needle each on front and back bed (totally 10 needles) in working position. Knit one row. Move edge springs over edge needles, continue knitting.

A T T E N T I O N !

When increasing for Fisherman's Rib (key E) the additional needles must be open.

INCREASING ON SINGLE BED WORK

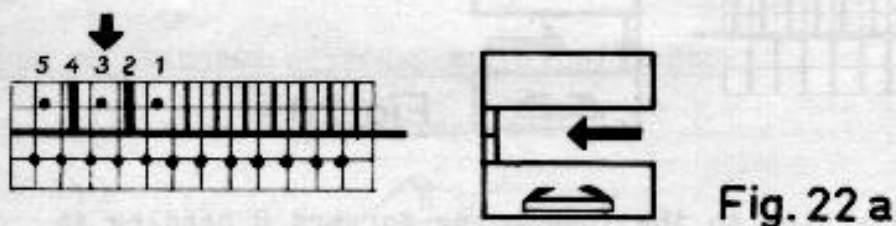
Increasing one stitch



On the same side as the lock bring forward 1 needle into working position.

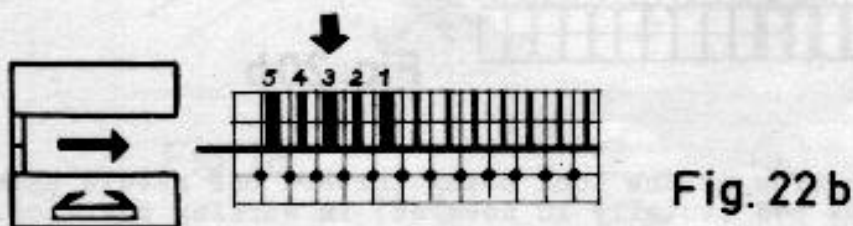
Knit 1 row, move edge spring and continue knitting.

Increasing several stitches (e.g. 5 needles)



On the opposite side to the lock place every second needle of the required needles in working position, but 4 needles only.

Knit 1 row.



Now bring forward in working position the 5th needle.

Knit 1 row, move edge spring and continue knitting.

DECREASING ON DOUBLE BED WORK

Decreasing one stitch

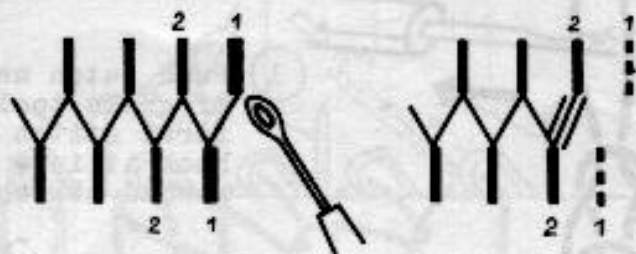


Fig. 23

Move edge springs to the side.

Transfer the edge stitches on front and back bed with the decker needle from needles "1" to the next needles "2".

Push the empty needles in neutral position.

Replace the edge springs over the edge needles.

Continue knitting.

Decreasing several stitches

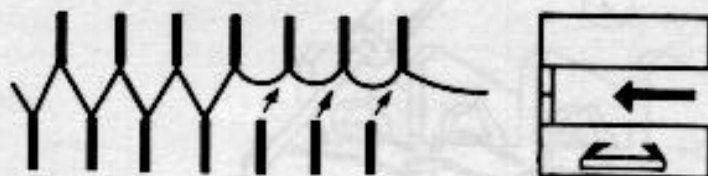


Fig. 24

On the same side as the lock transfer required number of stitches from front needles to back needles. Leave empty needles of front bed in working position.

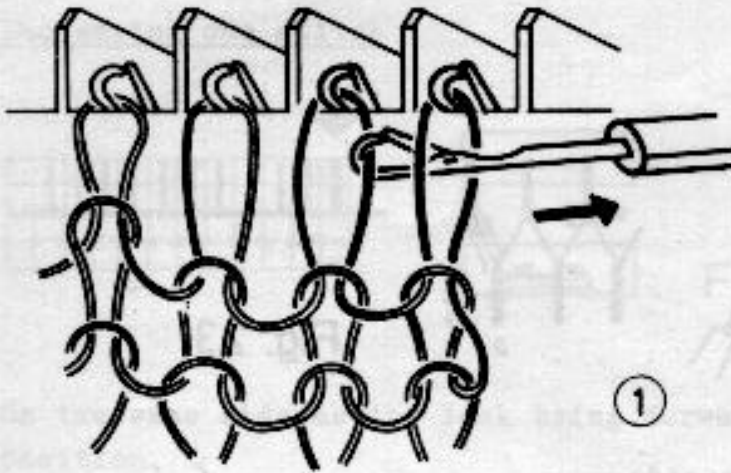
Knit one row.

The empty front needles have caught one loop each, release these loops by bringing the needles forward and then pulling backwards. Push empty needles into neutral position.

Pull knitting slightly downwards.

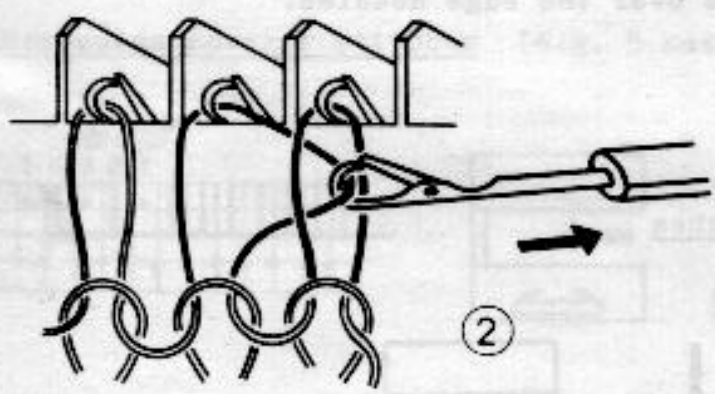
On back bed large stitches have formed which have to be cast off.

Casting off of the
large stitches:



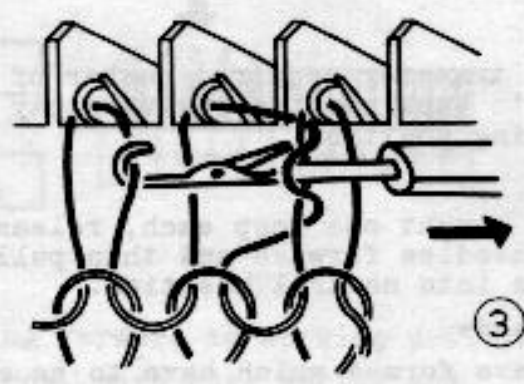
① Push latch needle of green tool through first stitch and hook it into the second stitch.

①



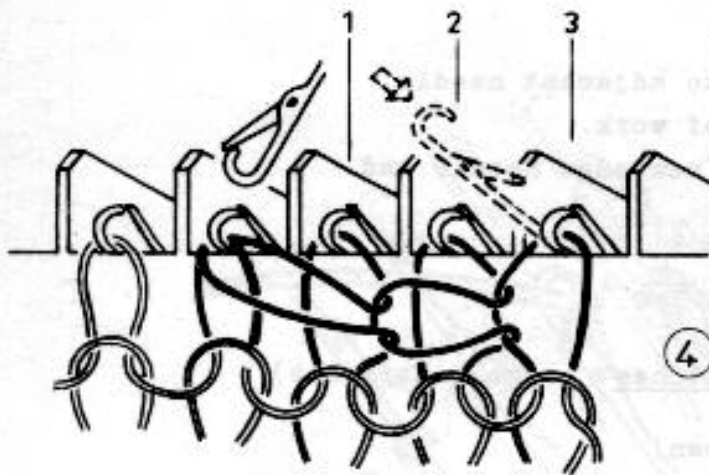
② Pull second stitch through first one.

②



③ Grasp the next one and pull through etc.

③



- ④ Place last loop onto the next needle.
 Release the crocheted stitches (1, 2 and 3) and push empty needles back into neutral position (replace the edge springs on the new edge stitches).

④

Fig. 25

CASTING OFF OF DOUBLE BED WORK

Work as for decreasing several stitches over all stitches.
 Begin when lock is on the right!

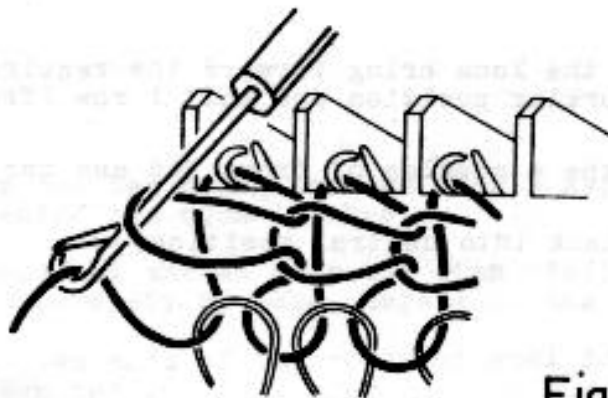


Fig. 26

Pull end of yarn through last stitch.
 Release the work.

DECREASING ON SINGLE BED WORK

Decreasing one stitch

Move edge spring.

Transfer edge stitch to adjacent needle.

Put empty needle out of work.

Move edge spring over new edge needle and
continue knitting.

Decreasing several stitches (e.g. 4 stitches)

Attention: handle down!



On the same side as the lock bring forward the required number of needles (4) in working position and knit 1 row (front lock to N).

Release loops from the 4 needles of front bed and cast off the large stitches.

Push empty needles back into neutral position.

Move edge springs.

CASTING OFF ON SINGLE BED WORK

Work as for decreasing several stitches, over all stitches.

Attention: Place all needles of second bed in working position when the lock is on the right.
If left-handed, you can also cast off from the left, i.e. start when lock is at the left.

BUTTON HOLE

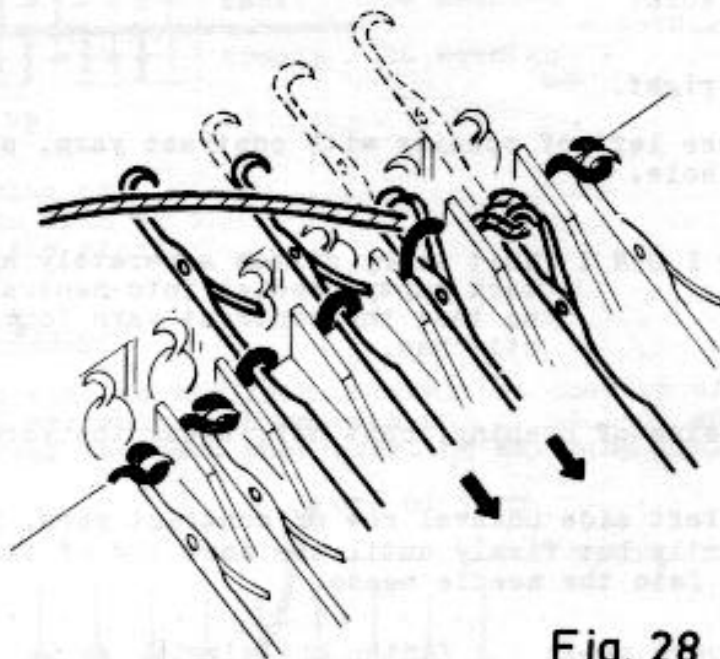


Fig. 28

First on one bed bring forward 3 or 5 needles until the stitches slide behind the open latches.

Place contrast thread over the open needles and knit every stitch separately by hand. Repeat on the other bed.

Pull the two ends of the contrast wool down between the beds with green tool. Continue knitting.

Once the knitting is done pull out the contrast thread. Catch the loose stitches with a darning needle and wool and finish with button-hole stitch.

VERTICAL OPENING FOR ZIPPER

Divide the work:

Lock is at right.

Knit stitches left of opening with contrast yarn, similar as for button hole.

A T T E N T I O N ! Knit every stitch separately and push back empty needles into neutral position, so that the contrast yarn forms large stitches.

Knit right side of opening, cast off, break the yarn.

Now on the left side unravel row of contrast yarn, i.e. pull the yarn gently but firmly until the next row of stitches slides back into the needle heads

Thread the yarn again and finish knitting.

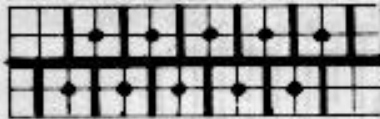
NECKLINES

Work as for vertical opening, decreasing according to shape.

IV. HOW TO KNIT A SOCK

Welt in 1 x 1

Blue strippers



back: 36 needles
front: 36 needles = totally 72 needles

handle up

Normal casting on.
Knit 40 rows with ST 3.
Lock is at the right!

Switch to tubular

On the same side as the lock unravel one quarter of the row of stitches (9 stitches each on back and front bed) so that you need not break the yarn when starting knitting again.

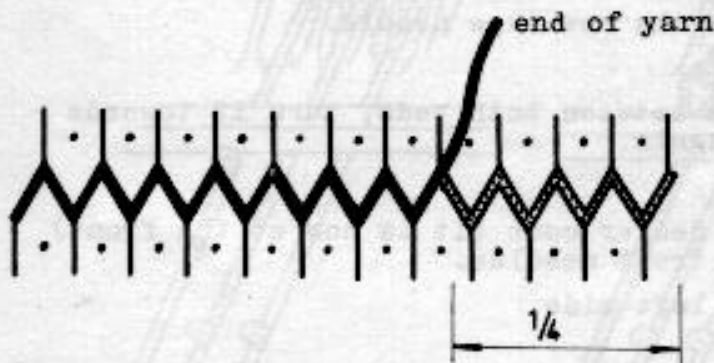


Fig. 29

Transfer all stitches from front needle bed to empty needles of back needle bed.

On back bed each needle (72) has a stitch now.

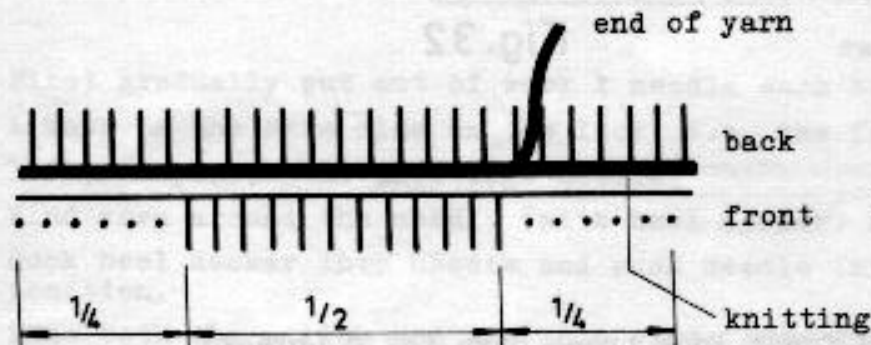


Fig. 30

In the middle of front bed place needles (36) in working position.
All latches must be open!

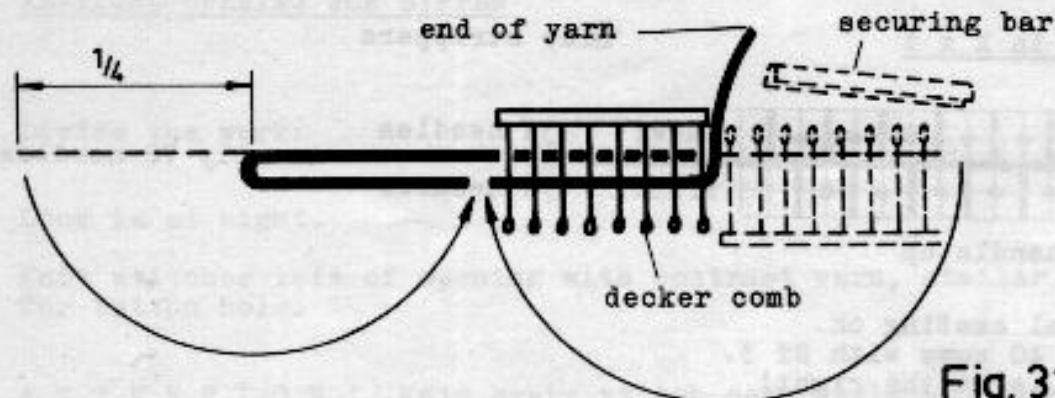


Fig. 31

Remove securing bar from decker comb.

First on right side take one quarter of the total number of stitches (18) onto the decker comb (work as with single decker: hook in, pull out, push back, pulling down knitting slightly).

Secure decker comb with its bar.

Move the edge spring over the new edge needle.

Lower front bed.

Let decker comb drop down between both beds, turn it towards the centre and raise it again.

Close beds.

Remove securing bar from decker comb (it is now at the front) and transfer stitches to front needles.

Repeat this procedure on left side.

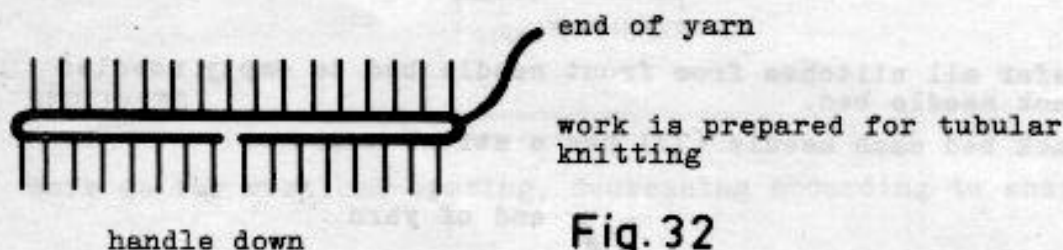


Fig. 32

Leg until heel

Handle down.

Black strippers.

Lock: on back and front lock press down key C (black).

ST 4½

RC 000

Knit 141 rows.

Lock is at the left.

Heel

on front bed

Lock: back lever to G (free move), front lever and key to N (normal)

For shaping the heel certain needles have to be put out of work and therefore transferred to special "heel deckers".

Fig. 33 a

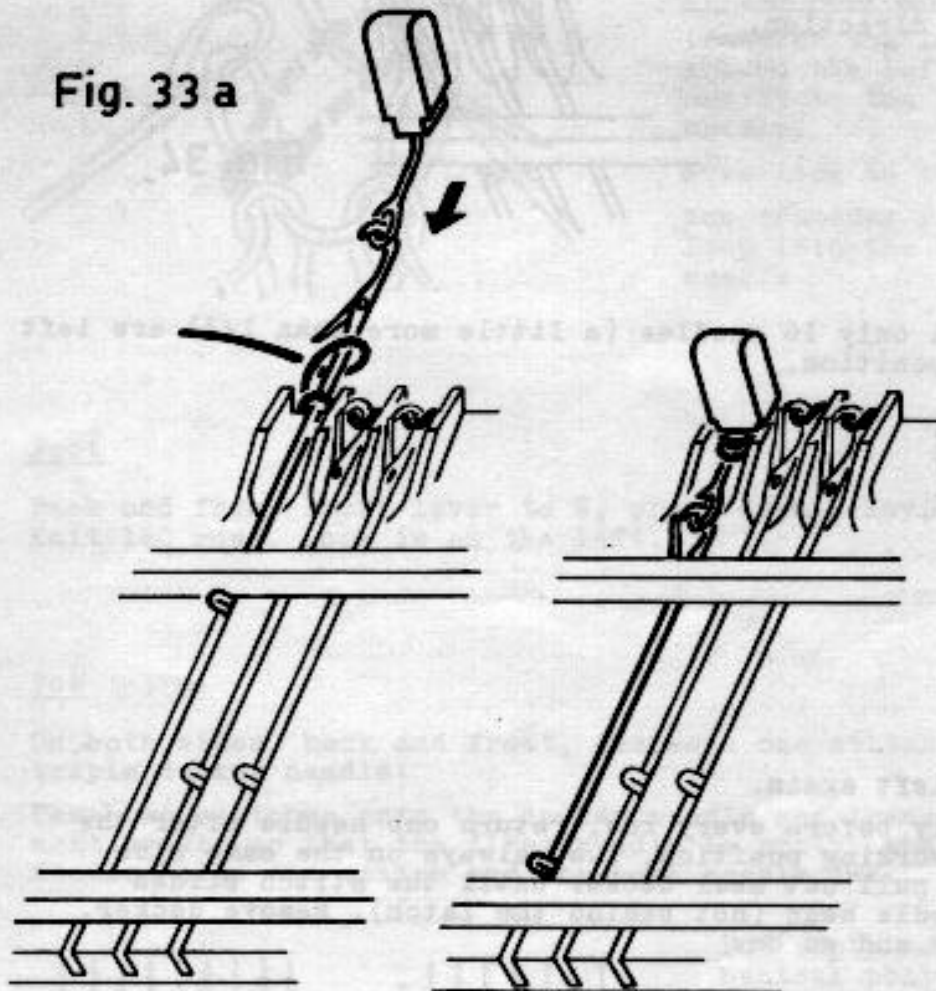


Fig. 33 b

First gradually put out of work 1 needle each before every row: Always on the same side as the lock, i.e. the first time on the left, completely advance edge needle.

Wind yarn around the needle (with heel decker) as shown in fig.33a. Hook heel decker into needle and push needle into neutral position.

Thus both the stitch and the loop slide onto the heel decker which rests in the striking comb.

Knit one row.

Repeat on the right.

Attention!

On the right side wind
yarn round the needle
in opposite direction.

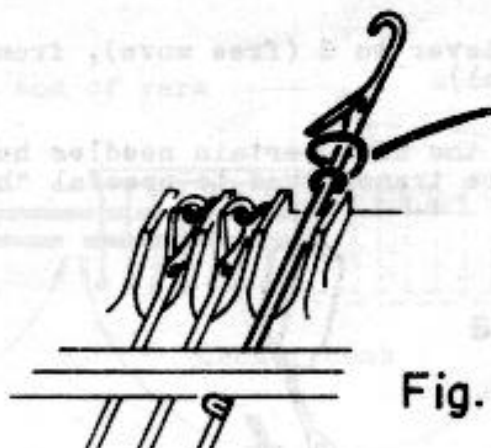


Fig. 34

Repeat until only 16 needles (a little more than 1/3) are left
in working position.

Lock is at left again.

Now gradually before every row, return one needle after the
other into working position, i.e. always on the same side
as the lock pull out heel decker until the stitch slides
into the needle head (not behind the latch). Remove decker,
knit one row and so on.

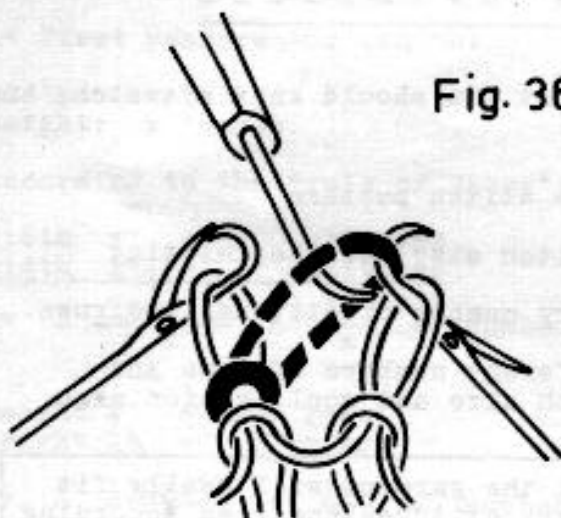


Fig. 36

Attention!

As soon as the last stitch on the right has been transferred to the needle (remove last heel decker)

before moving the lock

transfer the loop which runs around the left front edge needle to the back edge needle.

Move lock to the left.

Now transfer right side loop into the back edge needle

Foot

Back and front lock: lever to N, press down C-key, RC to 000. Knit 160 rows. Lock is on the left.

Toe

On both sides, back and front, decrease one stitch with the triple decker needle:

Take two stitches onto the decker needle and transfer to the next needle so that the first needle is empty, the new edge needle holds one stitch and the next needle two.

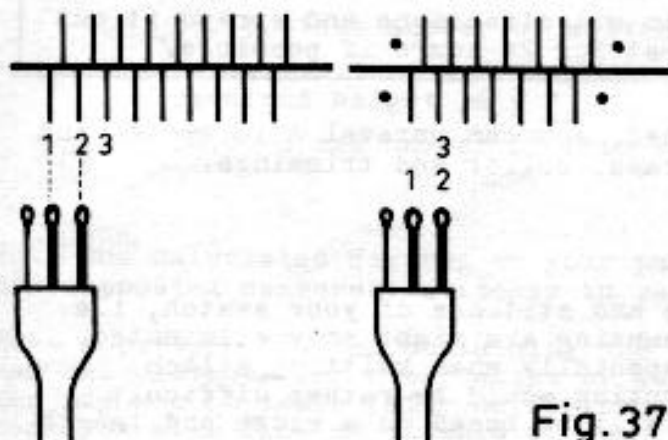


Fig. 37

Put empty needles into neutral position.

Knit 2 rows.

Repeat until only 4 needles are left in working position.

Transfer the four stitches to one single needle on back, press down N-key, set front lever to G, put empty needles into neutral position.

Knit 2 rows.

Break yarn and pull end through the last stitch.

V. CALCULATION OF MODELS

Before starting to knit a garment you should knit a swatch, and this for the following reasons:

1. for testing the wool and the stitch pattern
2. for testing the texture (stitch size) of the knitting
3. for calculating the necessary number of stitches and rows.

With every wool you get different numbers of rows and stitches, further more stitch size and wool tension also effect the result.

If you want to be sure that the garment will really fit well, calculate the necessary stitches and rows according to your proper wool and the adjustment of your machine.

How to knit a swatch

By testing you find the proper stitch size.

Then knit a swatch as large as possible with an exact number of stitches and rows, marking beginning and end by knitting with contrast yarn.

This is what you do:

cast on a total amount of 100 needles with contrast yarn and knit a few rows.

Then knit 100 rows with the wool you are intending to use for the garment.

Knit a few more rows with contrast yarn.

Remove from machine without casting off.

Stretch swatch slightly in all directions and spread it out on a table, letting it rest for 24 hours if possible.

Once the garment is finished, you can unravel this swatch and use the wool for making seams, collar and trimmings.

How to calculate

Knowing the number of rows and stitches of your swatch, i.e. 100 each, all errors in counting are right away eliminated. This is very convenient especially when knitting stitch patterns, where proper counting would be rather difficult. The calculation, however, will be based on a width and length of 1 inch.

Calculation for 1 inch

At first measure the swatch:

width: x inches
height: y inches

According to the "rule of three":

width x" = 100 stitches
width 1" = ? stitches

$$1" = \frac{100 \cdot 1}{x} = \frac{100}{x} = \text{number of stitches for a width of 1"}$$

height y" = 100 rows
height 1" = ? rows

$$1" = \frac{100 \cdot 1}{y} = \frac{100}{y} = \text{number of rows for a height of 1"}$$

For a swatch of 100 stitches and 100 rows always calculate:

100 divided by x (width of swatch) makes the number of stitches for 1"

100 divided by y (height of swatch) makes the number of rows for 1"

width: 100 : x = number of stitches/1"

height: 100 : y = number of rows/1"

Calculation of measures

After you have found out the number of stitches and rows for 1 inch it is easy to calculate how many stitches you have to cast on and how many rows you have to knit for your garment.

Example: required width 15 $\frac{3}{4}$ "

15.75 times number of stitches = required number of stitches for casting on

required height 16 $\frac{1}{2}$ "

16.5 times number of rows = required number of rows

Note the calculated figures on your pattern diagram for the corresponding measures: stitches in red, rows in blue.

Make a pattern diagram containing the required indications and calculations for every shape of garment you may knit. You may use it again later on for other garments. On the next page you will find an example of such a pattern diagram.

Example of a pattern diagram

MODEL:	<i>Lady's...jacket.....</i>		
Stitch-pattern:	<i>Fisherman's...Rib.....</i>		
Yarn:	1.	<i>4.ply..Belinda....</i>	
	2.	
	3.	
KNITTED SWATCH:			
		Stitch size	<i>4... ST</i>
100 stitches/100 rows		Yarn tension	<i>3rd hole</i>
Width	<i>11"</i>	100 :	<i>11" .9. stitches for 1"</i>
Height	<i>6 1/4"</i>	100 :	<i>6.25" 16 rows for 1"</i>
<p>The diagram shows four pattern pieces for a lady's jacket. The BACK piece is a trapezoid with a curved top. Dimensions include a top width of 19 3/4" (178 sts) and a bottom width of 11" (99 sts). The top edge is divided into three sections: 7" (63 sts), 5 3/4" (52 sts), and 7" (63 sts). The back is divided into three vertical sections: a top section of 3 1/4" (11 rows), a middle section of 21" (77 rows), and a bottom ribbed section of 2 3/4" (9 rows). The LEFT FRONT piece is a trapezoid with a curved top, matching the back's top edge. The SLEEVE piece is a trapezoid with a curved top and a ribbed cuff. The COL (collar) piece is a simple rectangle.</p>			

VI. TECHNICAL HINTS

Unravelling of rows

If in error you have knitted too many rows or you have made a mistake in patterning unravel rows as follows: Pull the yarn gently but firmly until it becomes taut. In doing so the stitches of the previous row ride up. Flick the wool towards the needle bed and the stitches slide back into the hook.

If the yarn is on the opposite side to the lock remove strippers, set both locks to G and make one free move.

Attention: Replace strippers before continuing knitting, reset locks and set row-counter back for each unravelled row and each free move of lock.

Lock jams

Remove strippers and feeding eyelet. Set both locks to G and carefully remove locks.

With decker needle replace stitches to needles. Unravel faulty row. Reset row-counter.

Attention: Before continuing knitting replace strippers and feeding eyelet and reset locks.

Dropped stitches

Reasons:	faulty needle:	change needle
	stitch size too small:	adjust stitch size

Irregular edges

1. Control needle position (needle rule)
2. Examine whether edge springs fit properly
3. Don't move lock too far
4. Check wool tension: border loops: adjusted too loose.
edge stitch breaks: adjusted too tight.
5. Check strippers: The bar of the left stripper has to slide along the back bed. The bar of the right stripper has to slide along the front bed.

Heavy moving of the lock

Wrong position of beds: Needles in working position face each other! (Only possible if handle is up)

Machine must be cleaned and oiled.

How to clean and oil your PASSAP 12

Cleaning

Every time a garment is finished or daily when the machine is in permanent use proceed as follows:

1. Carefully remove locks and turn them upside down.
2. With a soft dry cloth wipe off all surplus oil, or oil which has become black, from the underside of the locks and the needle beds.
3. With a dry brush remove remaining dust from both needle beds and the underside of the locks.
4. Polish inside rails of needle beds with a cloth. Dust and oil remainings may provoke heavy movement of the locks.

Occasionally, and should the machine appear to be unduly stiff in operation, additional cleaning should be carried out as follows:

5. Remove needles and rinse clean in methylated spirit.
6. When dry, rub needles with a lightly oiled cloth.
7. Clean both needle beds with a brush slightly dampened in methylated spirit.
8. Reinsert needles.

Special note: Never use petrol, petroleum or any other similar liquid which might harm the plastic material.

Oiling

Before starting a garment or daily when the machine is in permanent use proceed as follows:

1. Carefully remove locks and turn them upside down.
2. With cloth and brush clean all parts which are to be oiled.
3. On both locks drop and spread out 3 drops of Bellodor-Oil on and around the white guiding rails.
4. On the back lock turn axle with cog wheel, then drop 1 drop of PASSAP-Bellodor-Oil into each of the 2 marked red holes.
5. With an oily cloth lightly rub needle feet. (Beware! Never use too much oil, it might smear the needle channels and soil the knitting)

Special note: Always use PASSAP-Bellodor-Oil. Any other type of oil, even the best sewing machine oil, may contain essences which could harm the machine.

Never clean and oil your machine if there is any knitting on it.

Do not keep your machine uncovered when not in use. Protect it with a dust cover from dirt and dust.

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