

**Instruction manual
for ribbing attachment**

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Accessories

2



Connecting arm assembly



Needle presser brush, R & L



Table clamps



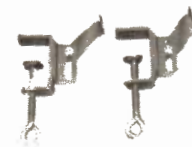
Cast on comb, long(200 stitches)
short(100 stitches)



Large weights



Small weights



Reinforcing clamps



Wire-loop type weight hangers



Claw type weight hangers



Spanner



Screw driver



Work hook



Spare needles



Case



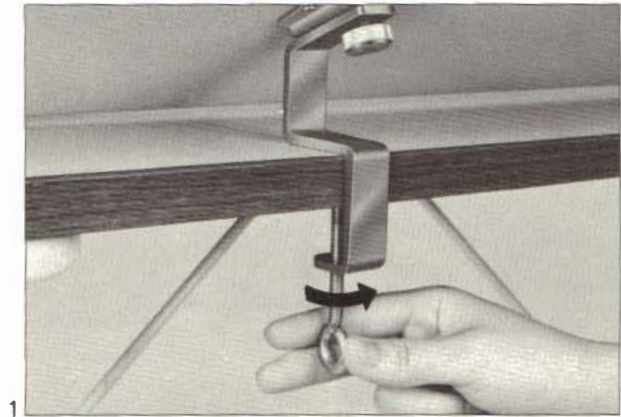
Transfer needle



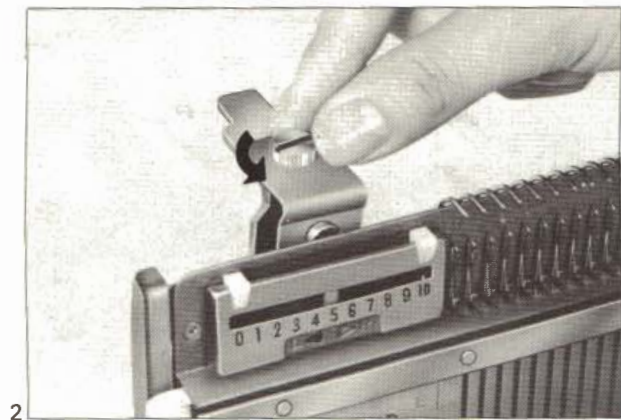
1/1 x 2/2 needle pusher

Setting up your ribber to the knitter

1. Secure the knitter onto a flat table using the Table clamps provided as an accessory for the ribber.



2. Remove the thumb screws from the brackets on both sides of the ribber.



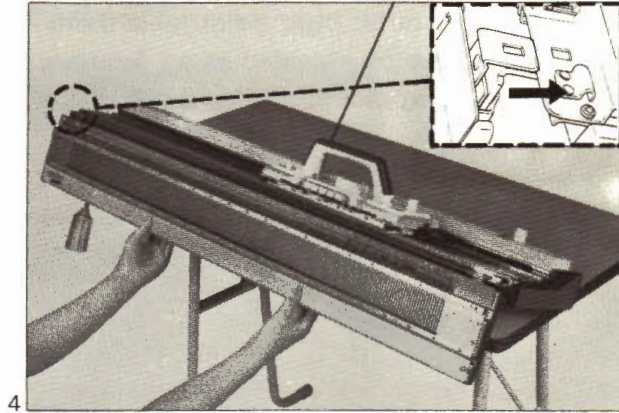
3. Insert the Grip shaft into the Racking grip shaft holer, and turning the grip handle, push it in until you hear the "click".

* After setting the grip handle, please check the working of the racking grip handle by turning it.



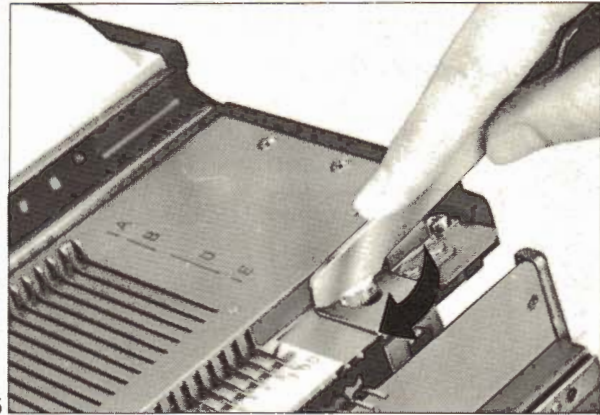
4. Holding the ribber with both hands so that the gate pegs of the ribber are up and the purl needle butts are toward you.

Insert the lips of the brackets beneath the knitter bed as far as they will go.



4

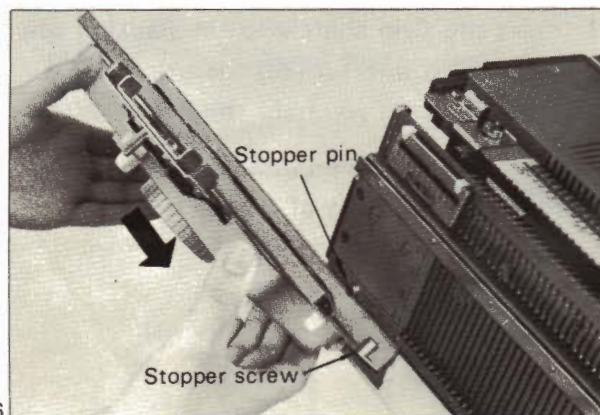
5. Using the Spanner, put the thumb screws to both brackets of the ribber.



5

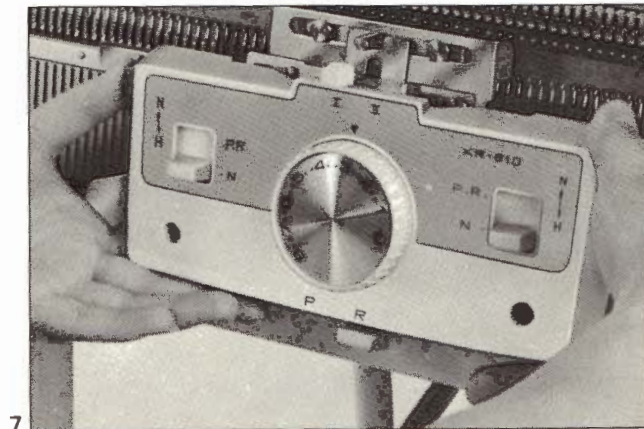
6. Place the rear foot of the KR carriage into left end of the rear rail of the needle bed, and keeping off the front foot from the front rail, move the KR carriage to right as shown in the photograph.

* The KR carriage is packed in an accessories box.



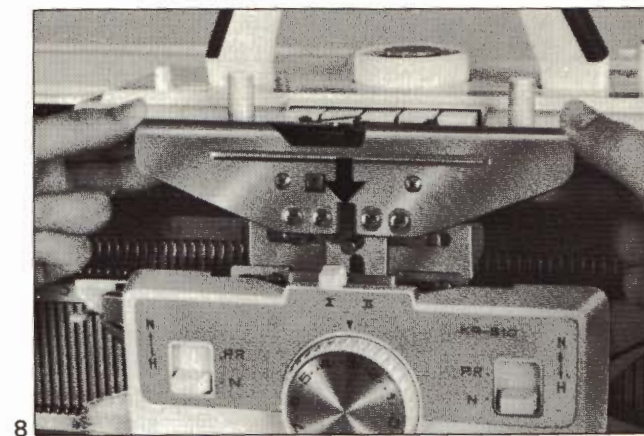
6

7. Depress the Release button and set the front foot of the KR carriage to the front rail of the needle bed.
Please check whether the KR carriage moves on the needle bed smoothly.



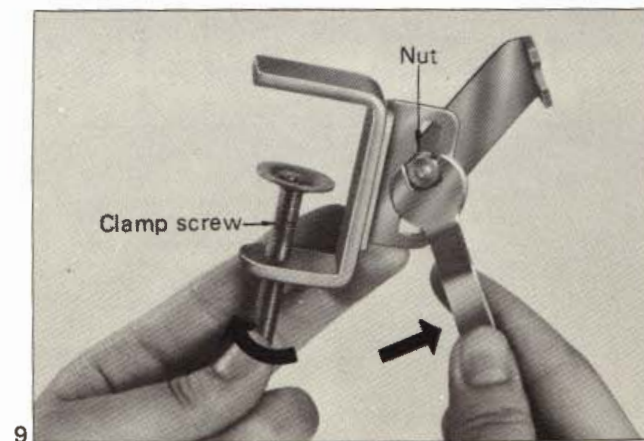
8. Fit the Connecting arm to the KH carriage, and join both carriages by the connecting arm.

To join both carriages, see on page 13.

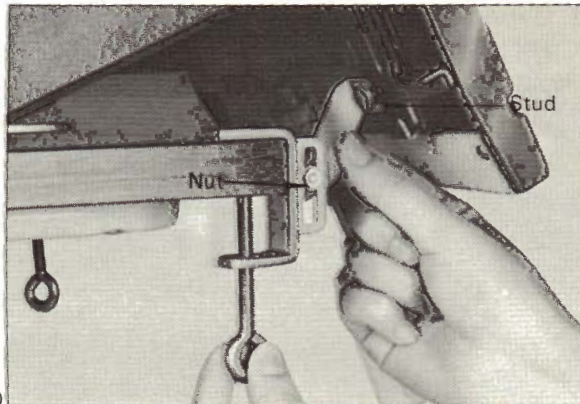


9. Take out the Reinforcing clamps from the box, and unscrew the clamp screw to set on the table.

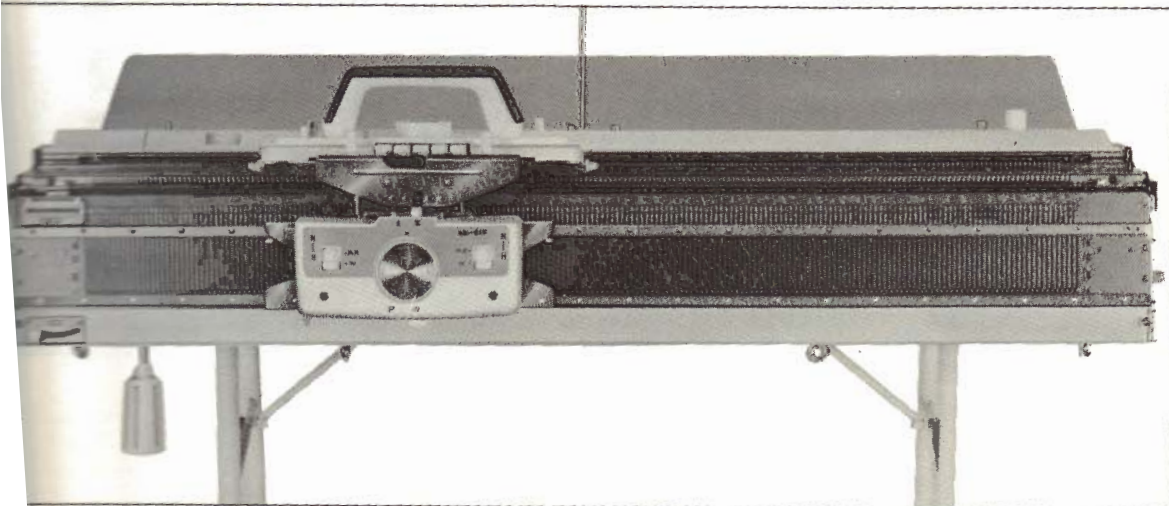
Loosen the Nut by the spanner.



As shown in the photograph, slide the
hook of the clamp holder into the groove
of the stud on the back of the bracket
and fasten the clamp screw.
Then, fasten the nut.



Now you have finished to set up the ribber to the knitter.



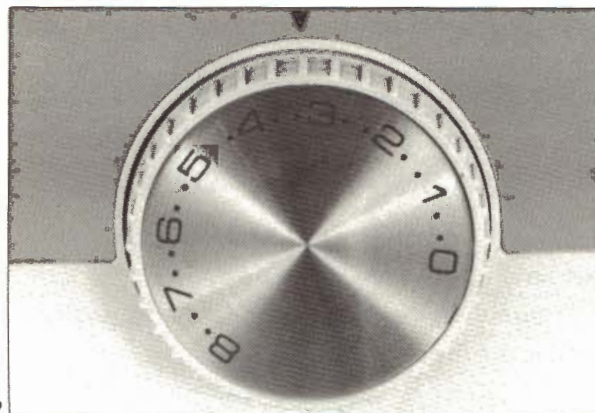
Here are a few important points to remember before you start knitting

TENSION DIAL

The tension in knitting denotes the size of the stitch. The tension dial on the KR carriage is graduated from "0" to "8", each space between numbers being subdivided into three parts. The figure "0" denotes the tightest tension, i.e. the smallest stitch and the "8" denotes the loosest or largest stitch.

The tension at which a garment is knitted depends not only on personal taste, but also on the type of garment required and the thickness of the wool.

The following tension chart is a guide for your reference.



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Yarn	Slide lever	Pattern			
		1 × 1 Rib	2 × 2 Rib	Full needle	Circular
Fine (ex.2ply)	II	1 ~ 3	3 ~ 4	2 ~ 3	
Medium(ex.3ply)	I	1 ~ 3	1 ~ 3	2 ~ 4	3 ~ 4
	II	2 ~ 4	4 ~ 5	4 ~ 5	
Medium(ex.4ply)	I	1 ~ 3	2 ~ 4	3 ~ 5	4 ~ 6
	II	3 ~ 5	6 ~ 7		
Bulky (ex.5ply)	I	3 ~ 6	6 ~ 7		6 ~ 7

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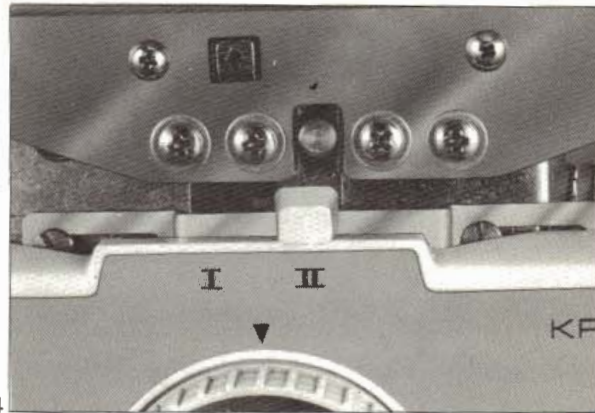
For the circular knitting, please set the Slide lever on position I.

SLIDE LEVER

The slide lever has two positions, I and II. If a firm automatic cast-on edge is required on plys up to 5 ply, use Slide lever position II. Position I is for thicker plys.

Elasticity and firmness of fabric is also determined by Slide lever position.

Position I is for a softer result and position II for a firm one.



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NEEDLE POSITION

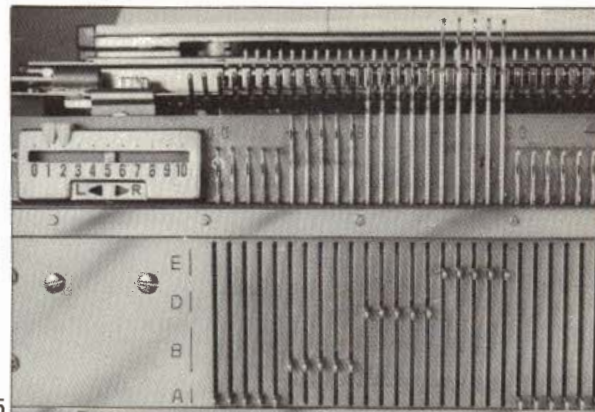
There are 4 positions on the needle bed of the ribber.

Position A : Resting or non-knitting position. (against the base of the needle grooves.)

Position B : Knitting or working position.

Position D : When the needles are brought in this position from the position E, they will automatically back to the position B by operation of the carriage.

Position E : Holding or partial knitting position.



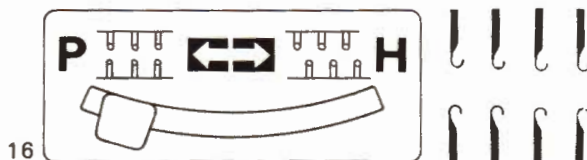
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HALF PITCH LEVER

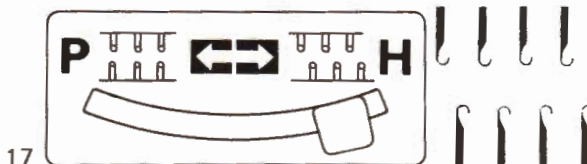
Half pitch lever is on the left end below the needle bed. Two positions of the Half pitch lever are shown on the indicating plate as P and H.

Position P : Plain needles and purl needles directly opposite to each other.

Position H : Purl needles are halfway between two plain needles.



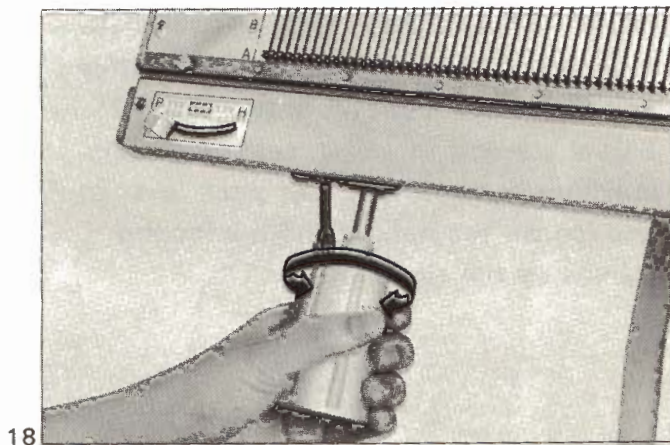
16



17

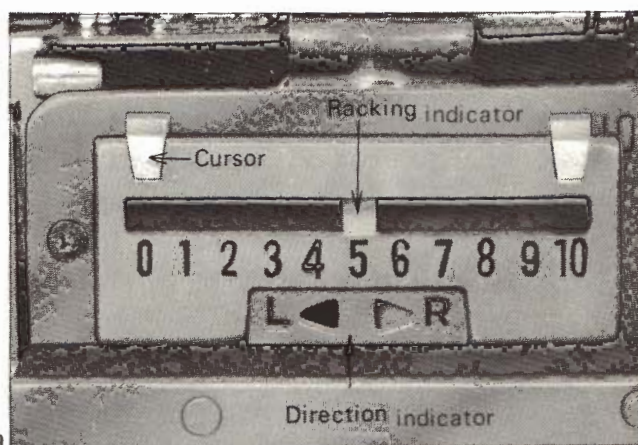
RACKING GRIP HANDLE

Racking grip handle is used for making the "Racking patterns" and "Zigzag patterns". The racking position is indicated on the racking indicator. By turning the Grip handle, ribber bed is moved right or left. Normally, set the indicator to No. 5 which shows centre position.



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The two cursors on the indicator plate are used as an index of the racking range. The arrow head indicates the direction of racking movement.



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BRACKET LEVER

The bracket lever is used to let down the ribber.

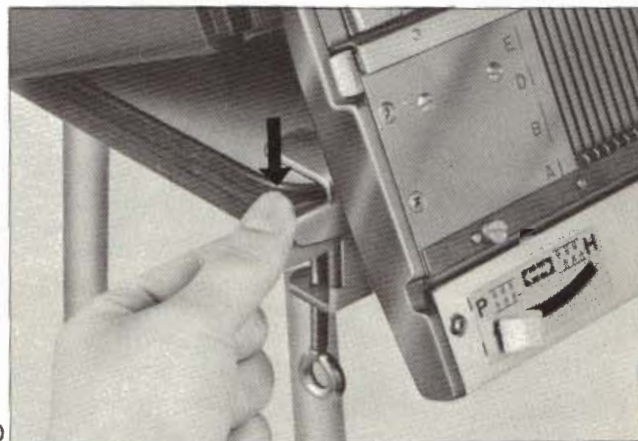
With both thumbs, push down the levers of the bracket, the ribber will come down one step.

This position is used for picking up dropped stitches.

Note : Before pushing the levers, disconnect the carriage.

Push down the levers again and the ribber will come down one more step. At this position the ribber is at rest and single bed knitting work can be done without removing the ribber.

To return to working position, lift up the ribber with both hands as high as it will go until it stays in position without holding.



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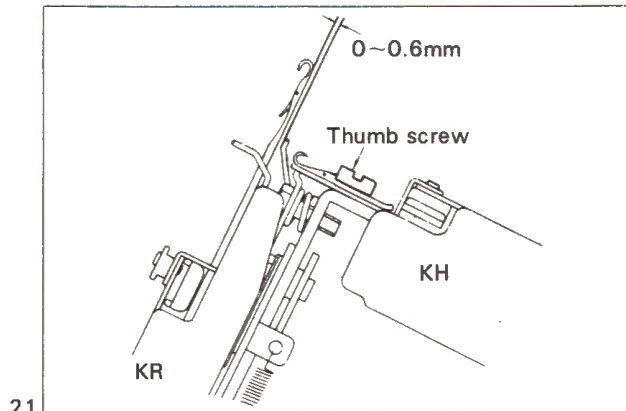
Adjustment of the ribber

You can use the ribber without adjusting, but if you need the adjustment, please correct according to the following instructions.

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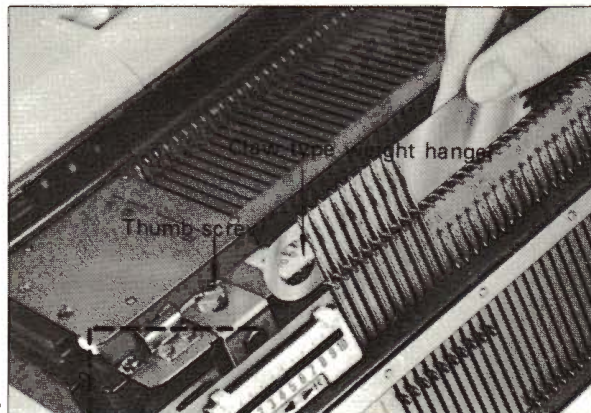
HOW TO ADJUST THE DISTANCE.

The correct distance between the knitter and the ribber is shown in the figure 21. Before starting to adjust, set the racking indicator to No. 5 and half pitch lever to P, and loosen the nuts of the reinforcing clamps by the spanner.



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1. Raise up a few needles on both ends of the ribber to position E, and put the Claw type weight hanger between the gate pegs of the KH and the back of the needles of the KR.

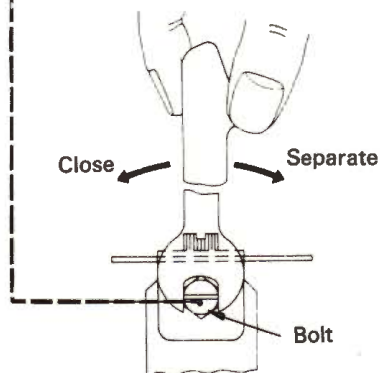


22

2. Loosen both thumb screws by the spanner. To obtain the proper distance (0~0.6mm), adjust by turning the Bolts of both sides by the spanner.

* The thickness of the Claw type weight hanger is 0.6mm.

After adjusting, go back the needles to A position and fasten both thumb screws and nuts of the reinforcing clamps by the spanner tightly.



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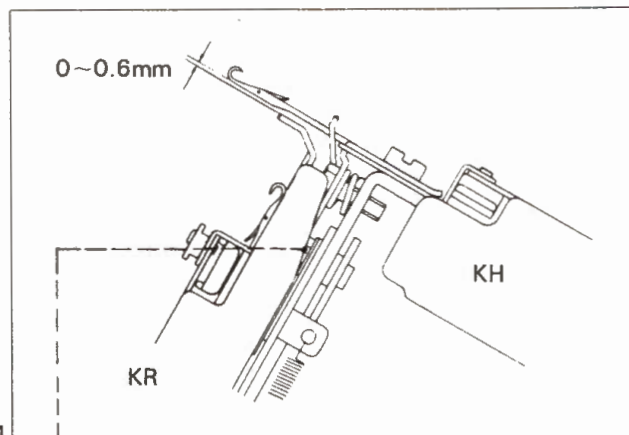
HOW TO ADJUST THE HEIGHT

The correct height is shown in the figure 24.

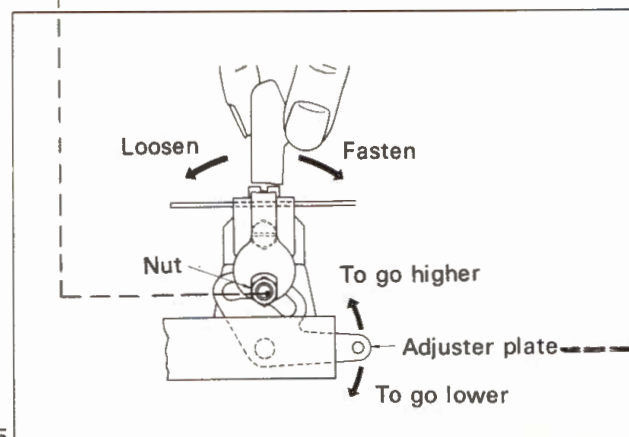
1. By pushing down the levers on both brackets, let down the ribber one step. At the back of the ribber, you will find out the nuts and loosen these nuts by the spanner. Then return the ribber to normal position.

2. Bring forward a few needles on both ends of the knitter to position E, and put the Claw type weight hanger between the gate pegs of the KR and the back of the needles of the KH.

3. By moving both height adjusters, obtain the proper height (0~0.6mm). After adjusting, let down the ribber one step, and fasten the nuts by the spanner. Then lift up the ribber to normal position.



24



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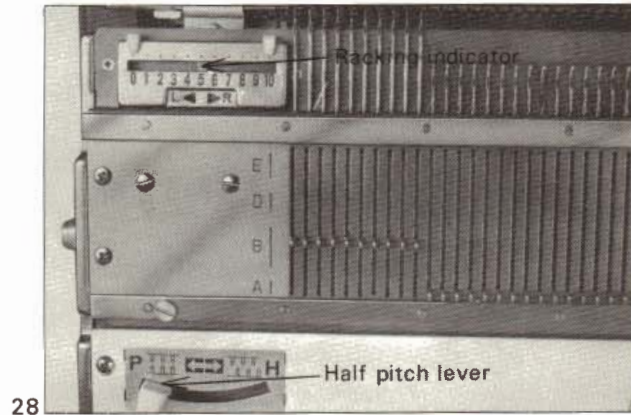
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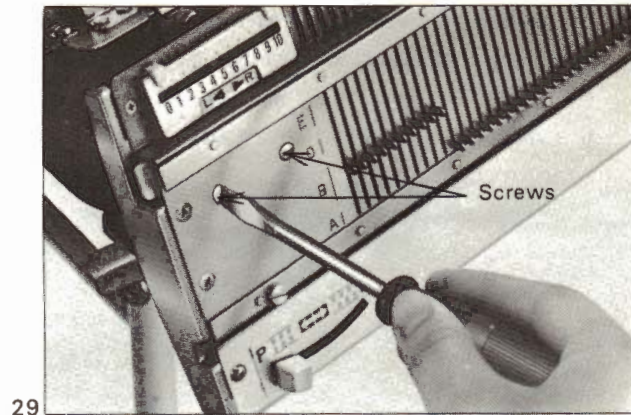
HOW TO ADJUST THE MEETING OF NEEDLES

The plain needles and purl needles are directly opposite to each other. If were not, please adjust the position of the ribber. Set the racking indicator on No.5. Set the half pitch lever on P.



28

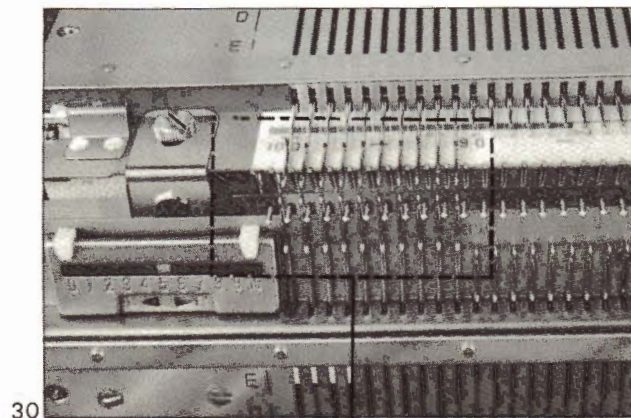
1. Loosen two screws(—) which are beside the mark D on the left end on the KR needle bed by the screw driver provided in the accessories.



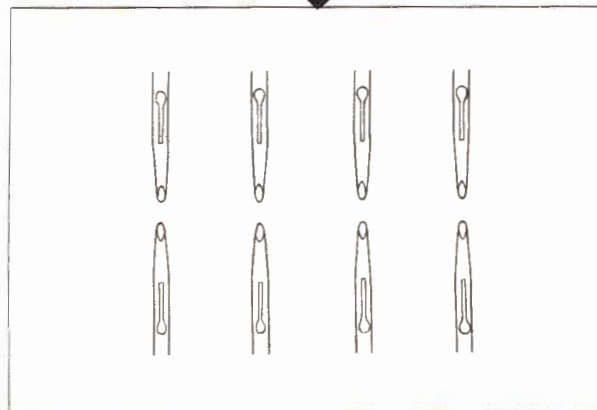
29

2. By turning the grip handle, adjust to get the proper position as shown in the figure 30, 31.

After adjusting, fasten these two screws tightly.



30

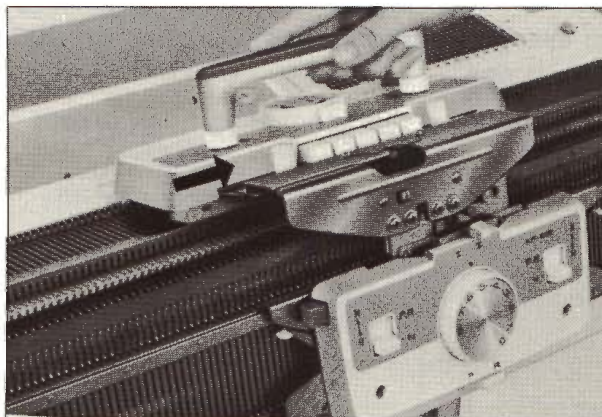


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Joining the carriage

In case of Knitter is previous model, KH-800 or KH-588.

- * Move the KH carriage slowly to the side of KR carriage until the connecting hook catches the pin of KR carriage. The KR carriage is automatically connected by the arm.

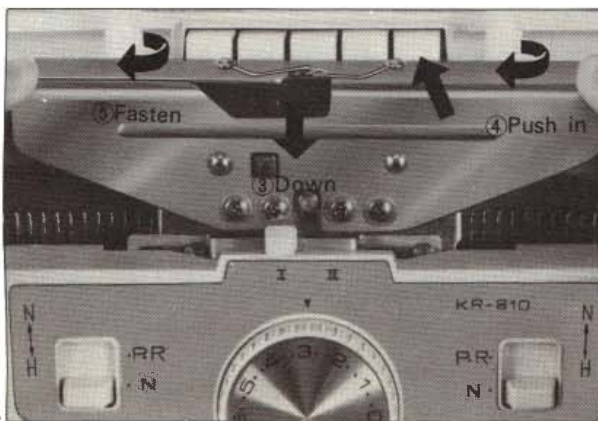


In case of Knitter is KH-810/820.

1. Place the KR carriage the same side as the KH carriage, and loosen the Thumb screws on KH carriage. Put the Connecting arm to the KH carriage.



2. Let down the connecting arm to catch the pin of KR carriage. Push in the connecting arm as far as it will go, and fasten the Thumb screws tightly.



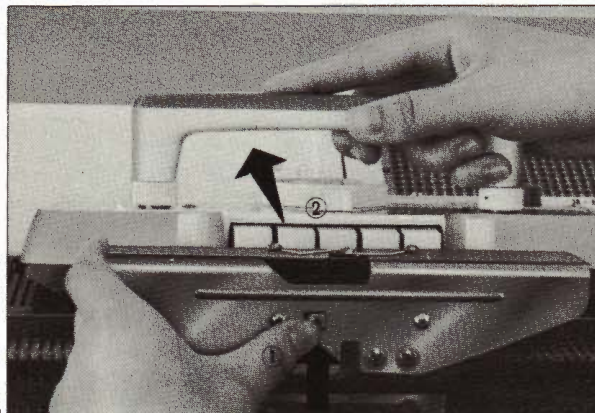
Disconnecting the carriage

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In case of Knitter is previous model, KH-800 or KH-588.

- * By pressing the connecting hook release button, left up the front of the KH carriage so that you can disconnect the carriage.

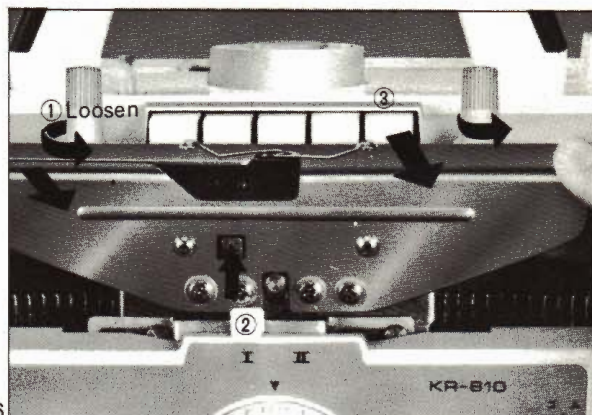
35



In case of Knitter is KH-810/820.

- * Loosen the Thumb screws, and pressing the connecting hook release button, pull out the connecting arm.

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1. Cast-on comb

Cast-on comb is used for casting-on the first stitches which is the selvedge of the knitting. Choose long or small comb depending on the knitting width.

2. Weights

Number of weights to be used depends on the width of knitting and pattern. Hang the weights on the cast-on comb so that they hold the knitting work in balance.

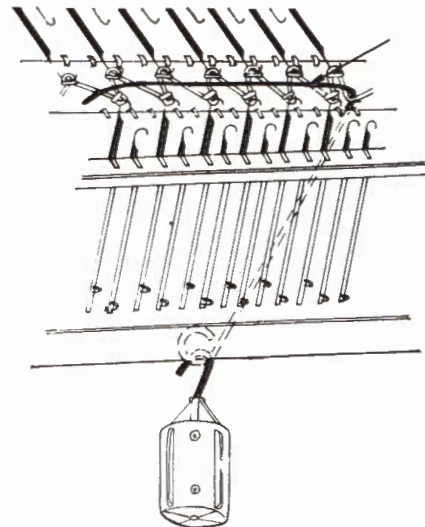
Standard weights chart

No. of stitches	Large weight	Small weight
~ 50	1	—
50 ~ 100	2	—
100 ~ 150	3	2
150 ~ 200	4	2

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3. Wire-loop type weight hangers

The wire-loop type weight hangers are used for hanging small weights to give tension to the edges of the knitting work and also used as a small cast-on comb for casting-on work of less than 20 stitches.



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4. Work hook

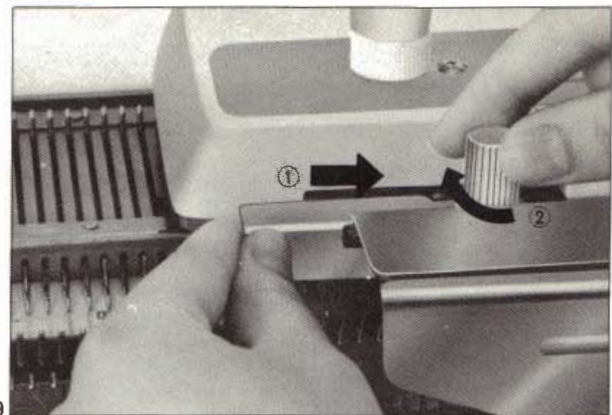
The hook is used to pick up dropped stitches.

5. Claw-type weight hangers

The claw type weight hangers are used to hang the small weights to give tension to the edge of the knitting work.

6. Needle presser brushes

When the "TUCK" buttons on the KH carriage are depressed for the pattern, put the Needle presser brush (right and left) onto the carriage by thumb screws.

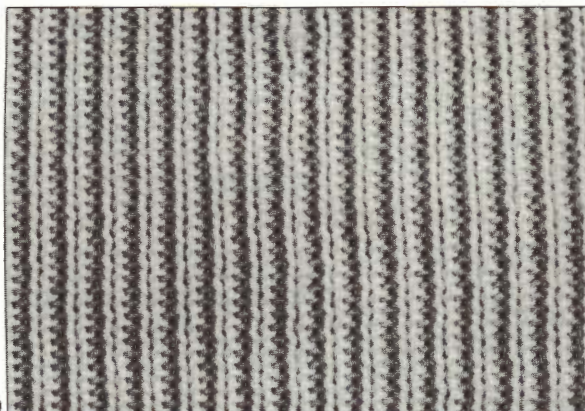


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How to knit 1 × 1 rib

1 × 1 rib is most widely used for waist bands, cuffs, collars, pockets and for other decorative purposes.

It is produced by having knit stitch over knit stitch and purl stitch over purl stitch in vertical lines, and is soft and elastic. In the following example, medium thickness is used for the practice.



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SETTING-ON FOR 1 × 1 RIB

Setting of carriage

Carriage (KH)

Change knob : NL

Position dial : 1

Holding cam lever : N

Pattern selector button : PLAIN

Carriage (KR)

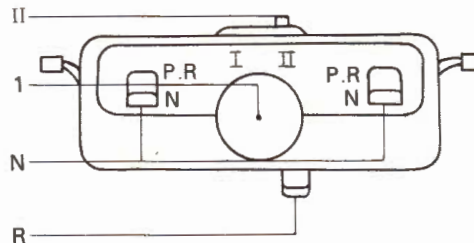
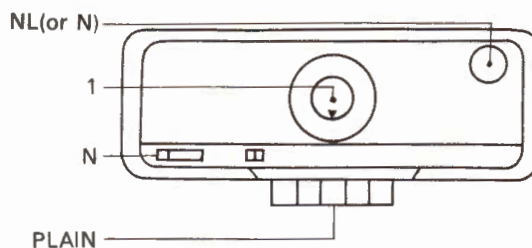
Slide lever : II

Position dial : 1

Slide lever : (L) N, (R) N

Locking lever : R

Holding cam lever : (L) N, (R) N



41

The instruction manual is explained for KR-810 joined with KH-820.

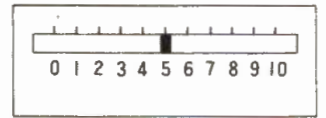
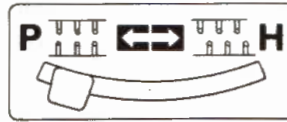
If you use the KR-810 together with previous model, KH-810, KH-800 or KH-588, please note the following special instructions.

KH-810	Change knob	N
KH-800	Change knob	N(plain)
	Holding cam lever	3(normal)
KH-588	Change knob	N(plain)
	Holding cam levers	both on I

In the following various rib knitting, please set the carriage the same manner as above.

2. Needle arrangement

- a. Set the half pitch lever on "P".
- b. By using 1/1 needle pusher, arrange the plain needles and purl needles in position B of each bed. (See fig. 43.)
Note : Both end needles must be plain needles.
- c. By operating the connected carriage a few times over all arranged needles, the needles on KH and KR needle beds will be set in a line on position B.
- d. Place the connected carriage at right end of the needle beds.



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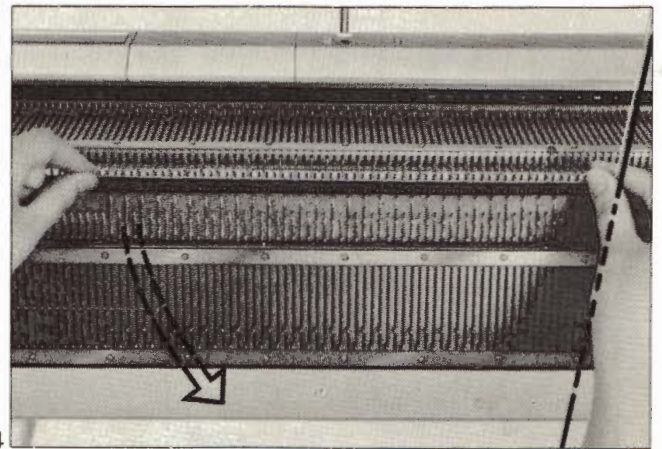


43



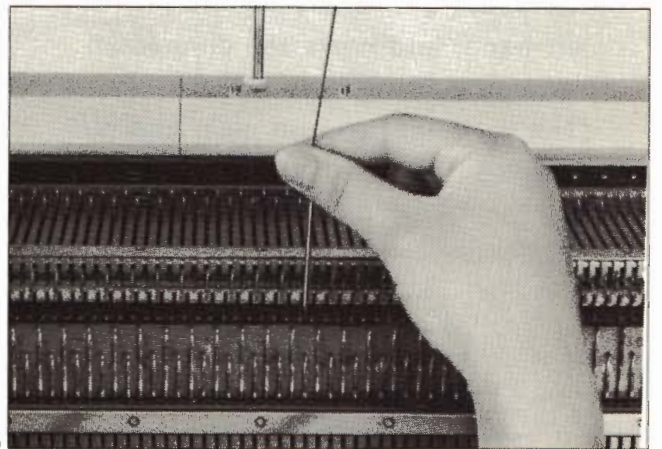
3. First row knitting

- a. Thread the yarn into the Yarn tension unit, and hold the end of yarn as shown in the Fig. 44.



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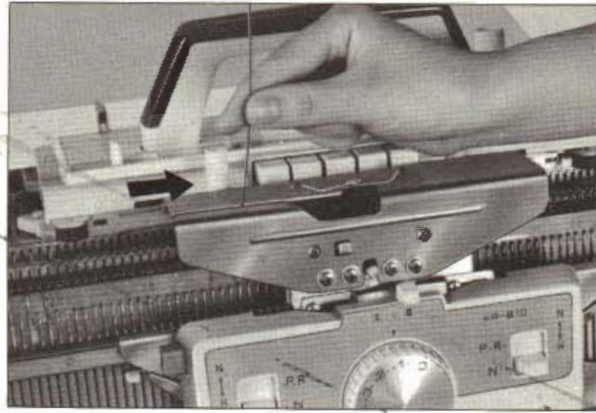
- b. Pass the yarn between both gate pegs, and catch the end of yarn with left hand.



45

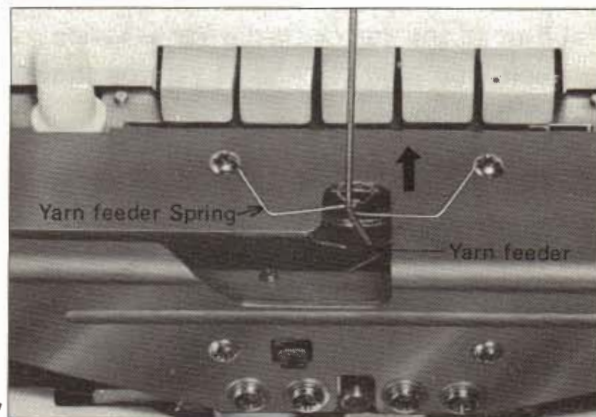
- c. Hold the yarn with right hand (continue to hold the end of yarn with left hand), pass to the yarn feeder. (see Fig. 46.)

46



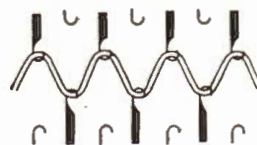
- d. Push the yarn into the loop of yarn feeder spring.

47



- e. Continue to hold the end of yarn with left hand, and move the connected carriage from right to left. (The yarn will hang on plain and purl needles.)

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4. Hang on the cast-on comb

- a. Pull out the wire from the cast-on comb. (Choose long or short one depending on the knitting width.)

Hold the cast-on comb with the face having the protrusions facing you and the comb on top.

- b. Put the cast-on comb between the knitter and the ribber from underneath and insert the comb between the plain and purl needles in such a way that the top of the comb does not disturb or drop the yarn hanging the needles.

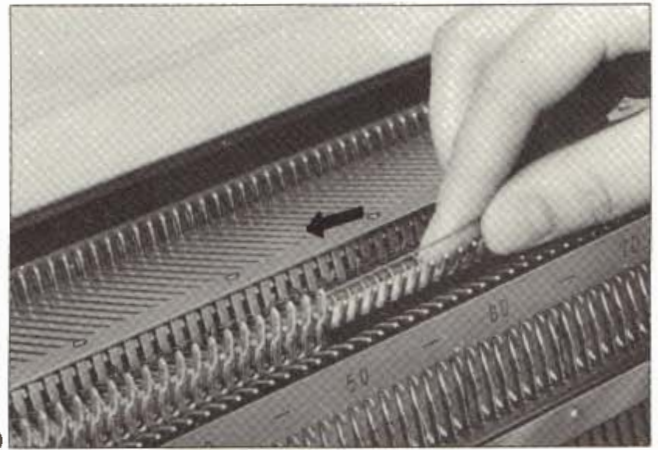
- c. Hook the loose end of the yarn around the yarn clip to keep it out of the way and to tense the first stitch.

5. Hang on the weights

Hang the weights as per Standard weights chart on page 15 on the cast-on comb to keep balance.

6. Perfect selvedge

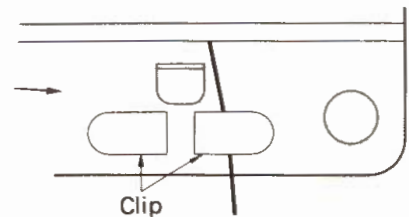
- a. Set the carriages as shown in the Fig.53.
- b. Move the connected carriage from left to right. (Only the plain needles knit.)



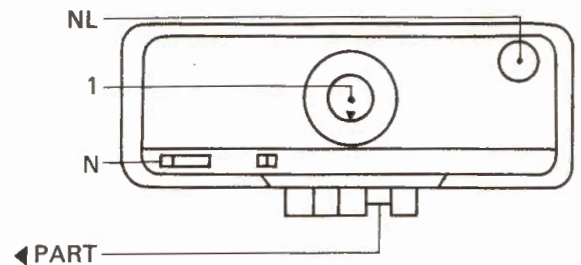
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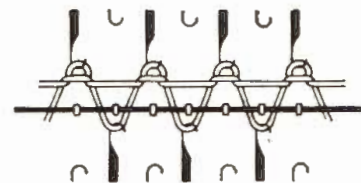
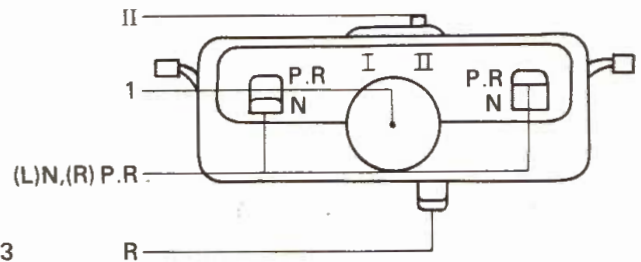
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52

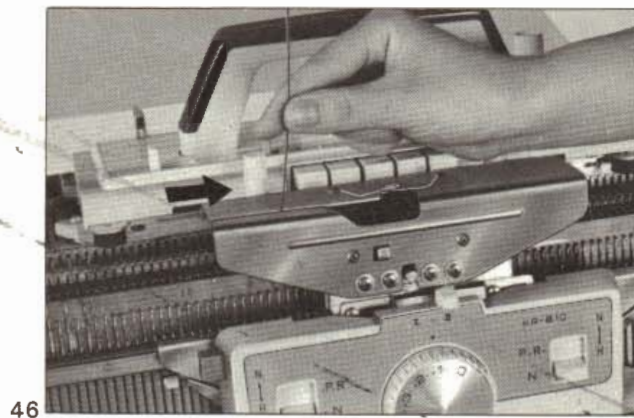


53



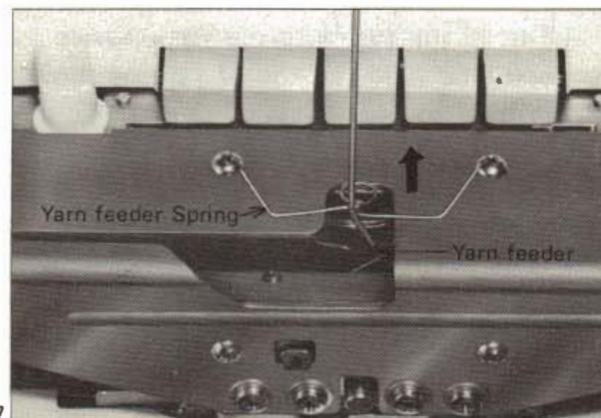
54

c. Hold the yarn with right hand (continue to hold the end of yarn with left hand), pass to the yarn feeder. (see Fig. 46.)



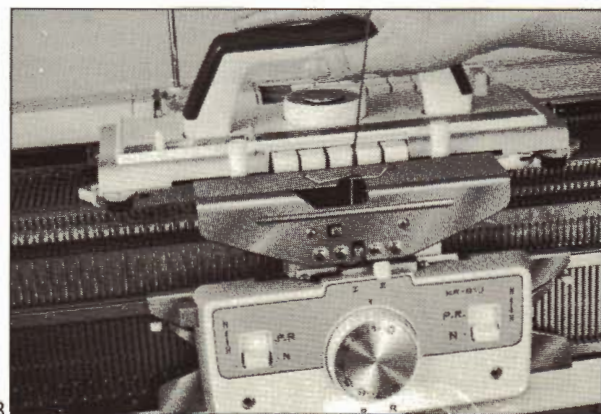
46

d. Push the yarn into the loop of yarn feeder spring.

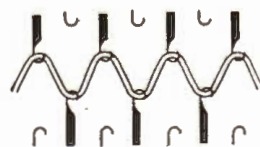


47

e. Continue to hold the end of yarn with left hand, and move the connected carriage from right to left. (The yarn will hang on plain and purl needles.)



48



49

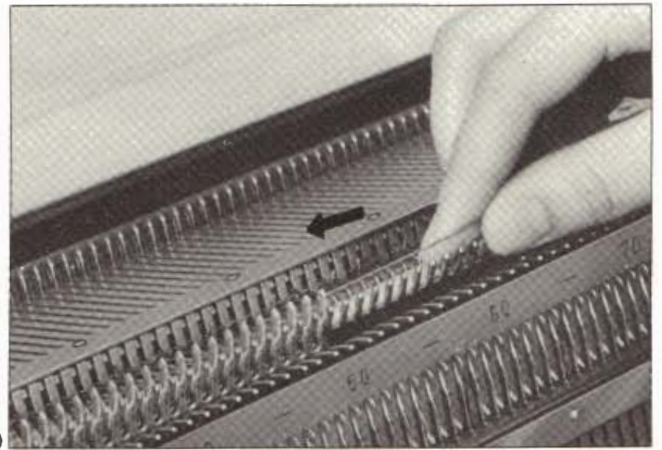
4. Hang on the cast-on comb

- a. Pull out the wire from the cast-on comb. (Choose long or short one depending on the knitting width.)

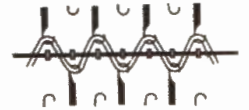
Hold the cast-on comb with the face having the protrusions facing you and the comb on top.

- b. Put the cast-on comb between the knitter and the ribber from underneath and insert the comb between the plain and purl needles in such a way that the top of the comb does not disturb or drop the yarn hanging the needles. Pass the wire through the top of the combs with your right hand, while holding the comb with your left hand.

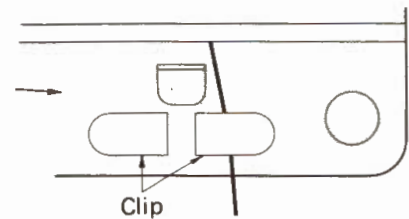
- c. Hook the loose end of the yarn around the yarn clip to keep it out of the way and to tense the first stitch.



50



51



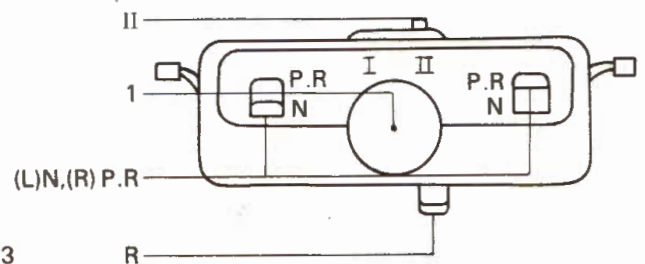
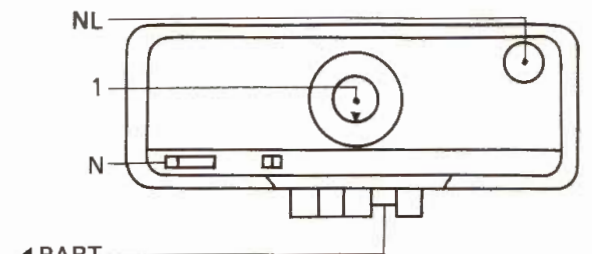
52

5. Hang on the weights

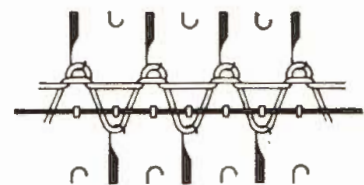
Hang the weights as per Standard weights chart on page 15 on the cast-on comb to keep balance.

6. Perfect selvedge

- a. Set the carriages as shown in the Fig. 53.
- b. Move the connected carriage from left to right. (Only the plain needles knit.)



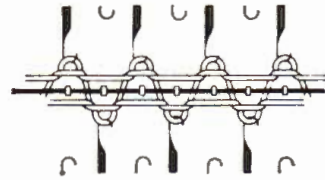
53



54

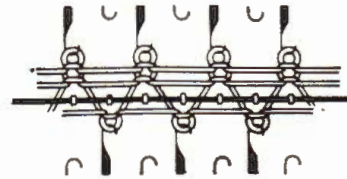
- c. Move the connected carriage from right to left.
(The purl needles knit.)

55



- d. Move the connected carriage from left to right.
(The plain needles knit.)
The perfect selvedge has completed.

56

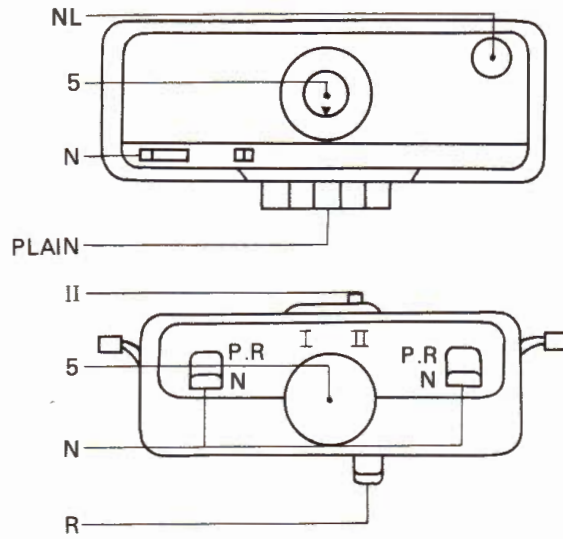


1 × 1 RIB KNITTING

* After knitting the selvedge, set the carriages as shown in the Fig. 57.
Then, continue the knitting.

Note : Don't back the carriage until you hear the "click" or the carriage passes the last working needle.

57



**IF THE CARRIAGE SHOULD JAM DURING KNITTING,
PLEASE REFFER TO PAGE 46 TO RELEASE IT.**

How to knit 2 × 2 rib

2 × 2 rib is 2 knit and 2 purl rib.

In one row, 2 knit stitches alternate with 2 purl stitches and vertically form knit stitch over knit stitch and purl stitch over purl stitch.

In the following example, medium thickness wool is used.



CASTING-ON FOR 2 × 2 RIB

1. Setting of carriage

- Carriage (KH)
 Change knob : NL
 Tension dial : 1
 Holding cam lever : N
 Pattern selector button : PLAIN

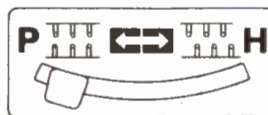
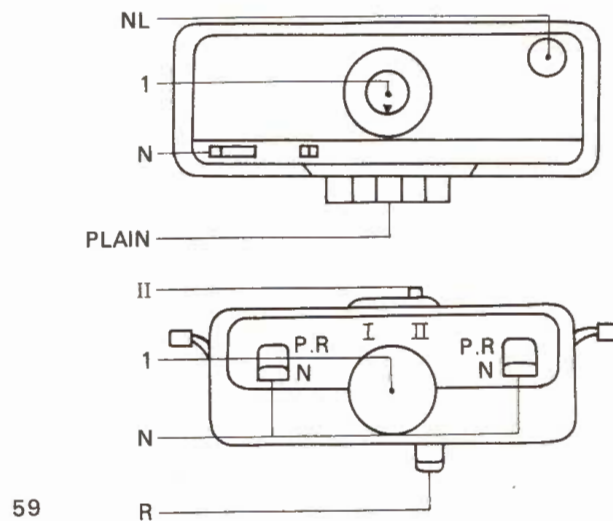
- Carriage (KR)
 Slide lever : II
 Tension dial : 1
 Cam lever : (L) N, (R) N
 Tucking lever : R
 Holding cam lever : (L) N, (R) N

2. Needle arrangement

- Set the half pitch lever on "P", and racking indicator on No 5.
- By using 2/2 needle pusher, arrange the plain needles and purl needles in position B of each bed. (see Fig. 62.)

Note : Both end needles must be plain needles.

- Set the half pitch lever on "H".
- Set the racking indicator on No 4. (see Fig. 63.)

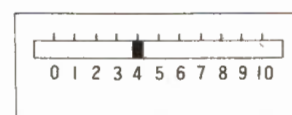
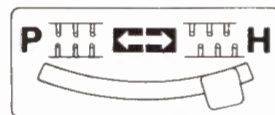


60

61



62

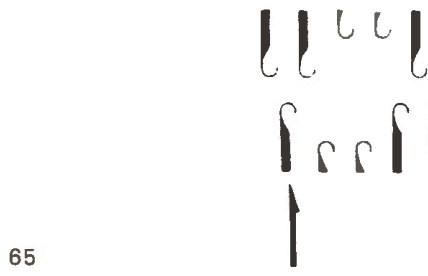


63



64

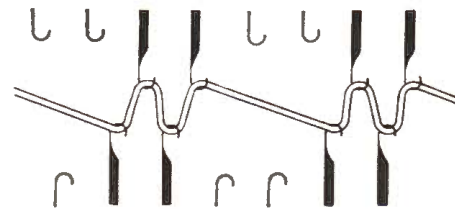
- e. Raise a purl needle in the left side to position B.
- f. Move the connected carriage a few times over all arranged needles to set them in a line.
Then, place the carriage at right end of the bed.



65

3. First row knitting

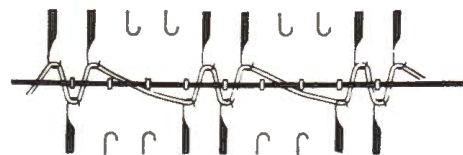
- a. Thread the yarn into the yarn feeder.
- b. Move the connected carriage from right to left. (The yarn will hang on plain and purl needles.)



66

4. Hang on the cast-on comb

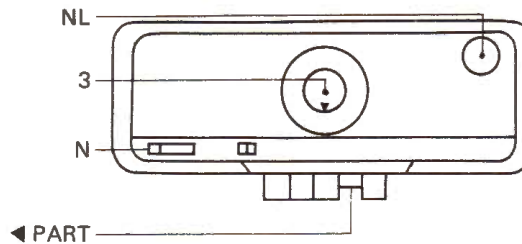
- * This is the same way as 1 × 1 rib.
- a. Hold the cast-on comb with the face having the protrusions facing you and the comb on top.
- b. Put the cast-on comb between the knitter and the ribber from underneath and insert the comb between the yarn hanging on the needles. And pass the wire.
- c. Hook the loose end of the yarn around the yarn clip.



67

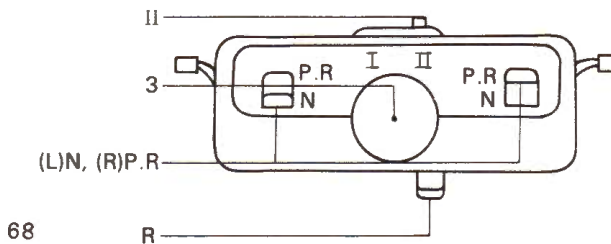
5. Hang on the weights

Hang the weights as per Standard weights chart on page 15 on the cast-on comb to keep balance.

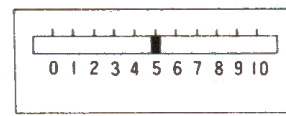


6. Perfect selvedge

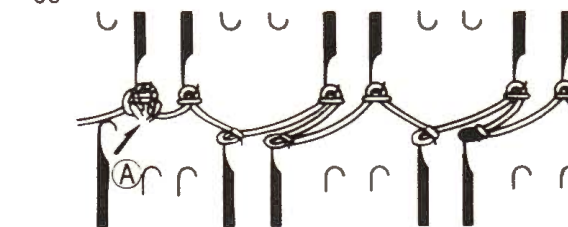
- a. Set the carriages as shown in the Fig. 68.
- b. Move the connected carriage from left to right.
(Only the plain needles knit.)
- c. Move the connected carriage from right to left.
(The purl needles knit.)
- d. Move the connected carriage from left to right.
(The plain needles knit.)



68



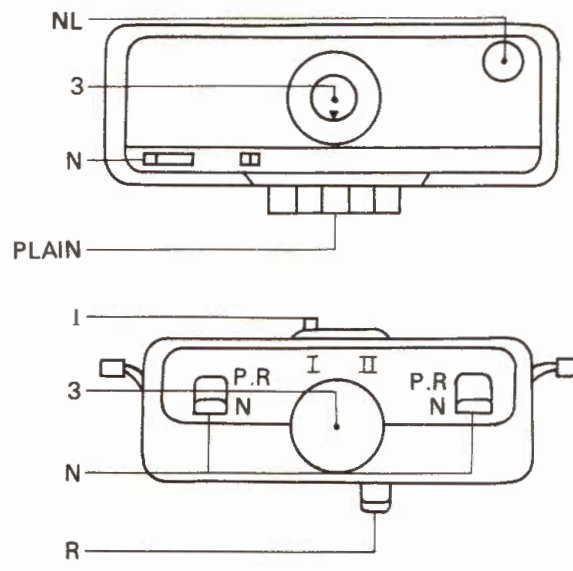
69



70

Return to position A

- 7. Needle arrangement to change from selvedge of the 2 × 2 rib knitting.
 - a. Set the half pitch lever to position "P".
 - b. Set the racking indicator on No 5.
 - c. By using the Double eyelet transfer needle, transfer the stitch of left end purl needle to the left end plain needle and return the empty purl needle to position "A" of KR bed. (See Fig. 70)
- * How to transfer.....see on page 43.



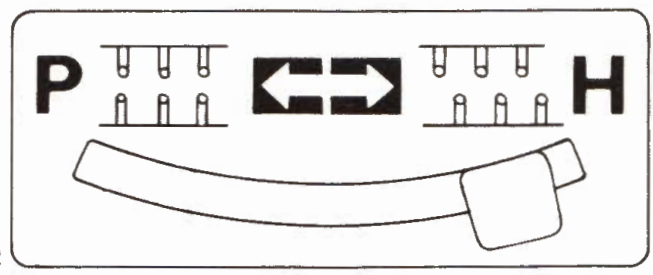
2 × 2 RIB KNITTING

- * After knitting the selvedge, set the carriages as shown in the Fig. 71. Then, continue the knitting.

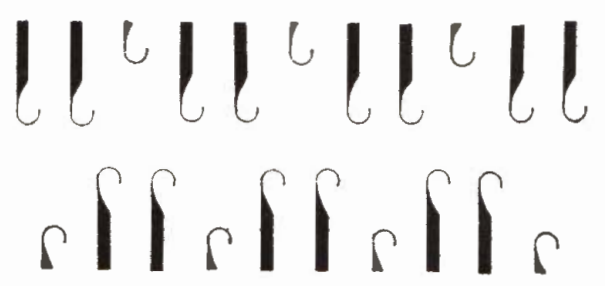
71

DIFFERENT METHOD OF 2 × 2 RIB KNITTING

- a. Set the half pitch lever to "H", and arrange the needles as shown in the Fig. 73.
- b. Set the racking indicator on No 4. Raise the left end purl needle to position B of KR bed.
- c. From the step "first row knitting" to "selvedge" are the same as original method. After selvedge, set the racking indicator on No 5.
- d. Transfer the left end purl stitch to the plain needle, and return the empty needle to A position of KR bed.
- e. The knitting is the same as original method.



72



73

How to knit full needle rib

24

Knitting method of full needle rib is the same as for 1 × 1 rib. Difference is the needle arrangement only. In 1 × 1 rib, every other needles are used but in full needle rib, all needles are used. Fine wool (ex. 2ply) is suitable for this rib knitting.



74

CASTING-ON FOR FULL NEEDLE RIB

1. Setting of carriage

Carriage (KH)

Change knob : NL

Tension dial : 1

Holding cam lever : N

Pattern selector button : PLAIN

Carriage (KR)

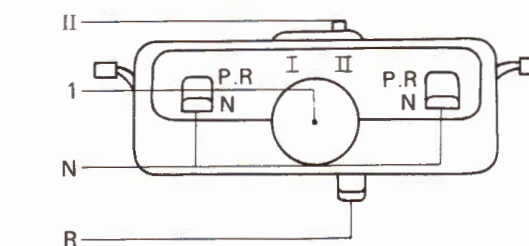
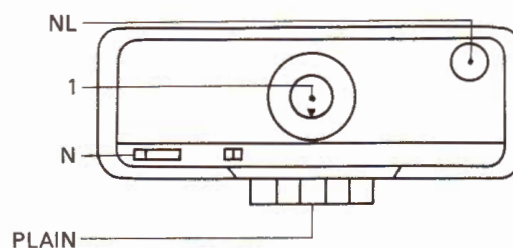
Slide lever : II

Tension dial : 1

Cam lever : (L) N, (R) N

Tucking lever : R

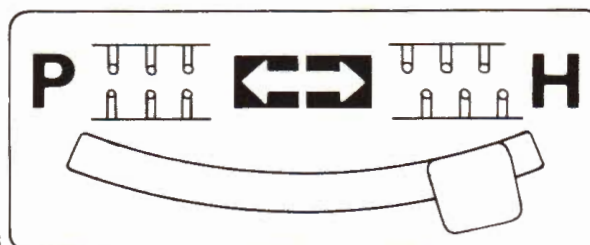
Holding cam lever : (L) N, (R) N



75

2. Needle arrangement

- a. Set the half pitch lever to "H".



76

b. Arrange the plain and purl needles in position B of each bed.

Note : Both end needles must be plain needles.

c. Move the connected carriage a few times over all arranged needles to set them in a line. Then, place the carriage at right end of the bed.

3. First row knitting

- a. Thread the yarn into the yarn feeder.
- b. Move the connected carriage from right to left. (The yarn will hang on plain and purl needles.)

4. Hang on the cast-on comb

* This is the same way as 1 x 1 rib.

5. Hang on the weights

Hang the weights as per Standard weights chart on page 15 on the cast-on comb to keep balance.

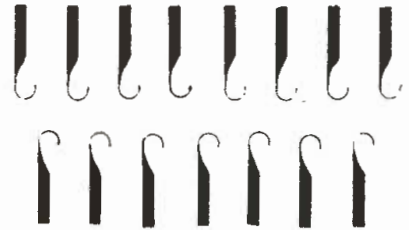
6. Perfect selvedge

- a. Set the carriages as shown in the Fig. 79.
- b. Move the connected carriage from left to right. (Only the plain needles knit.)
- c. Move the connected carriage from right to left. (The purl needles knit the stitches.)
- d. Move the connected carriage from left to right. (The plain needles knit.)

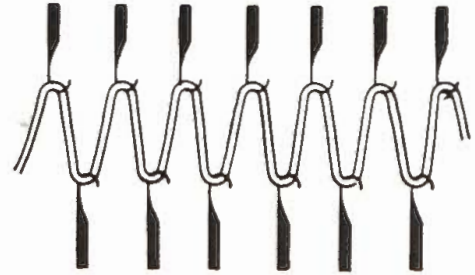
FULL NEEDLE RIB KNITTING

* After knitting the selvedge, set the carriages as shown in the Fig. 80. Then, continue the knitting.

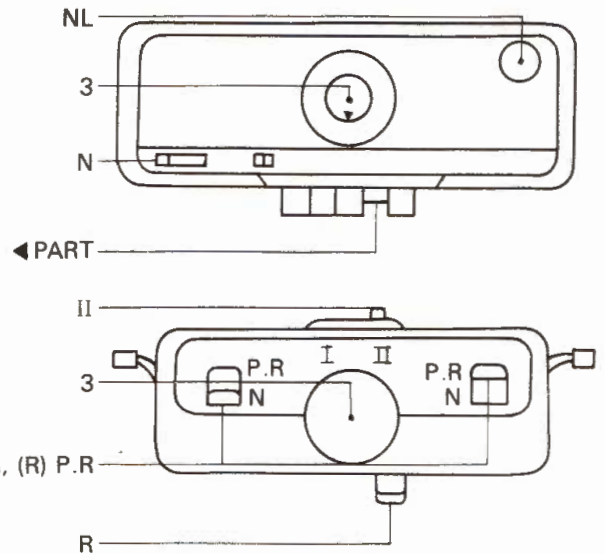
77



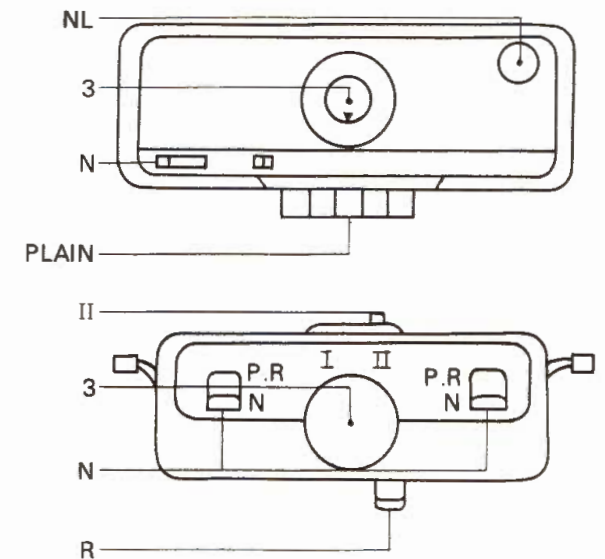
78



79



80

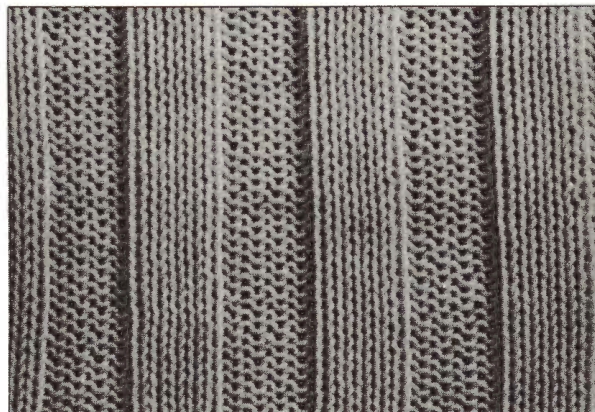


How to knit 5 × 5 rib

26

5 × 5 rib is called 5 knit 5 purl rib. In one row, there are 5 knit stitches alternating with 5 purl stitches, and vertically, from knit stitch over knit stitch and purl stitch over purl stitch.

The following example is knitted with medium thickness wool.



CASTING-ON FOR 5 × 5 RIB

1. Setting of carriage

Carriage (KH)

Change knob : NL

Tension dial : 4

Holding cam lever : N

Pattern selector button : PLAIN

Carriage (KR)

Slide lever : I

Tension dial : 4

Cam lever : (L) N, (R) N

Tucking lever : R

Holding cam lever : (L) N, (R) N

2. "Needle arrangement", "First row knitting", "Hang on the cast-on comb" and "Hang on the weights" are the same as full needle rib.

3. Perfect selvedge

a. Set the carriages as shown in the Fig. 83.

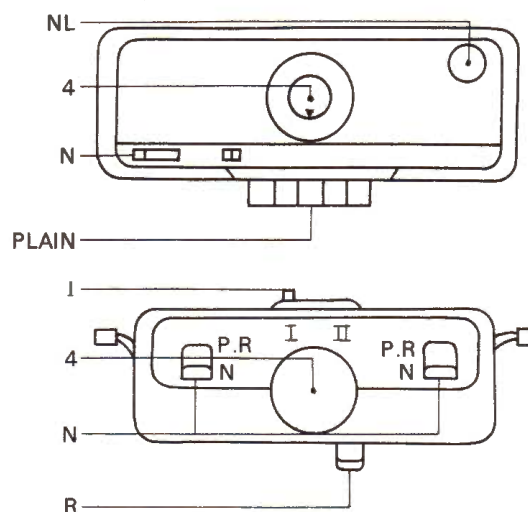
b. Move the connected carriage from right to left.
(Only the plain needles knit.)

c. Move the connected carriage from left to right.
(The purl needles knit.)

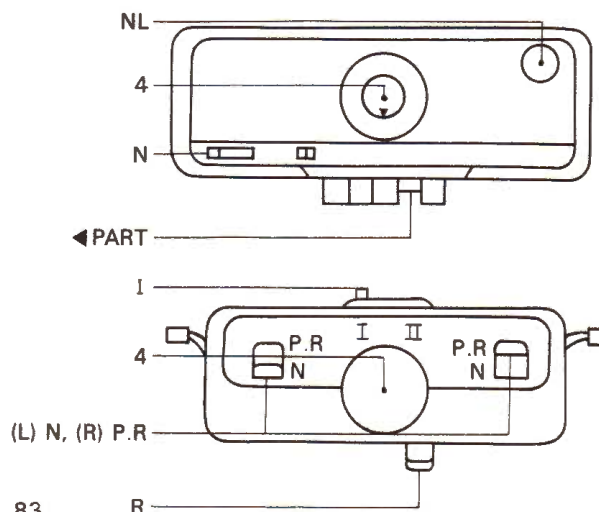
(The purl needles knit.)

d. Move the connected carriage from right to left.
(The plain needles knit.)

(The plain needles knit.)



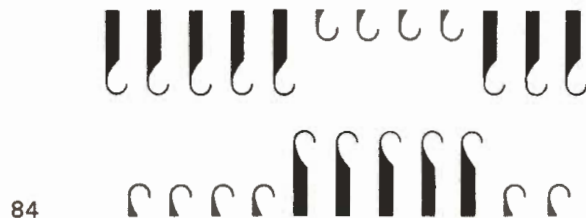
82



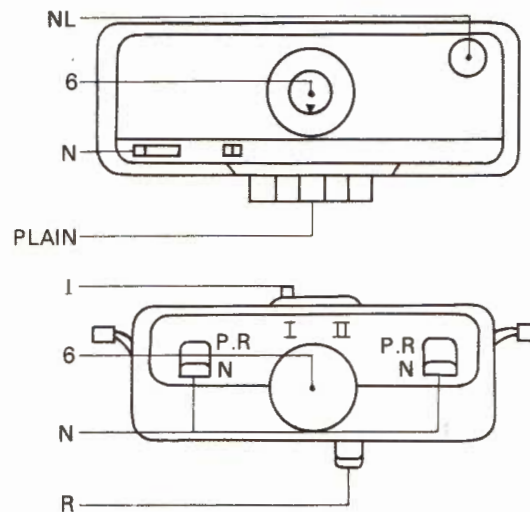
83

5 × 5 RIB KNITTING

1. After knitting the selvedge, by using the Double eyelet transfer needle, transfer the stitches to corresponded needles, and return the empty needles to position A of each bed. (see Fig. 84.)
2. Set the carriages as shown in the Fig. 85. Then, continue the knitting.



84



85

How to knit circular knitting.

Circular knitting is made up of only plain knit stitches, and is a jointless tube. Size of tube depends on the number of needles. Before you start to knit the garment, make the test piece to check the tension gauge. If there is slacken on the side, please adjust by the tension dial on the KR carriage. The example is knitted with medium thickness wool.



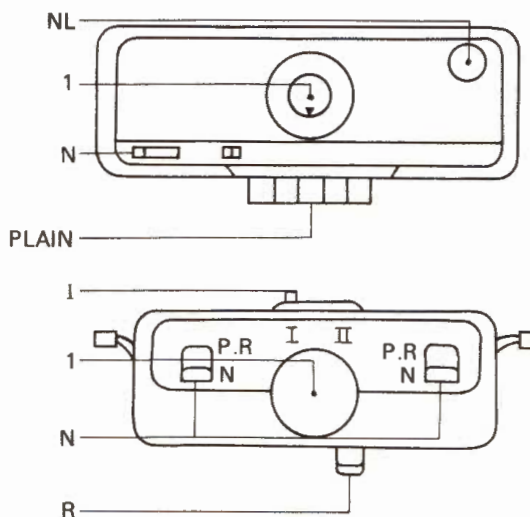
86

CASTING-ON FOR CIRCULAR KNITTING

1. Setting of carriage

Carriage (KH)
 Change knob : NL
 Tension dial : 1
 Holding cam lever : N
 Pattern selector button : PLAIN

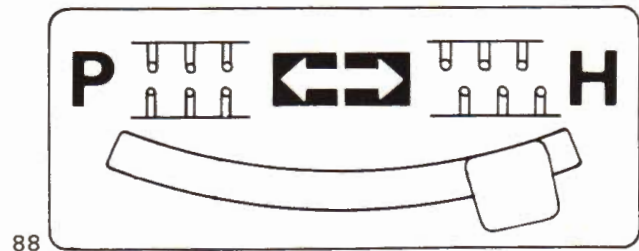
Carriage (KR)
 Slide lever : I
 Tension dial : 1
 Cam lever : (L) N, (R) N
 Tucking lever : R
 Holding cam lever : (L) N, (R) N



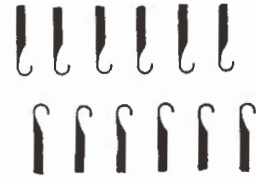
87

2. Needle arrangement

- Set the half pitch lever to "H".
- Arrange the plain and purl needles in position B of each bed. (see Fig. 89.)
Note : The number of needles between plain and purl needle must be same.
- Move the connected carriage a few times over all arranged needles to set them in a line. Then, place the carriage at right end of the bed.



88



89

3. First row knitting

- Thread the Cast-on thread provided in the accessories of KH into the yarn feeder.
- Move the connected carriage from right to left. (The cast-on thread will hang on plain and purl needles.)

4. Hang on the cast-on comb

- * This is the same way as 1 × 1 rib.

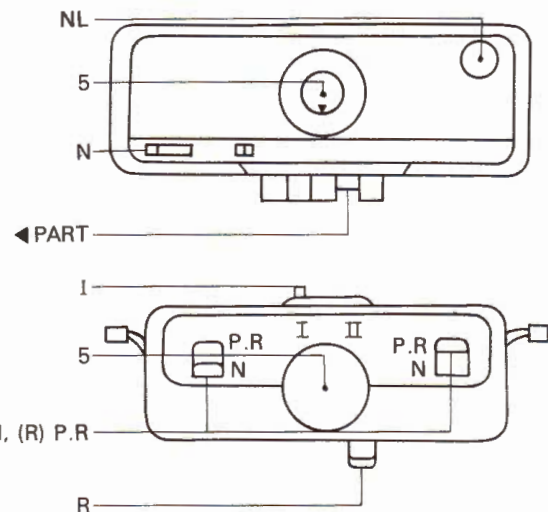
5. Hang on the weights

Hang the weights as per Standard weights chart on page 15 on the cast-on comb to keep balance.

- Remove the cast-on thread from the yarn feeder, and rethread the knitting yarn into the feeder.

CIRCULAR RIB KNITTING

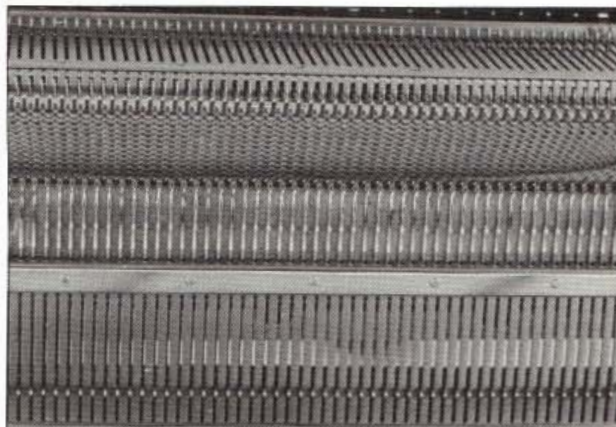
- * Set the carriages as shown in the Fig. 90. Then, continue the knitting.



90

How to knit "U" style knitting

This garment is made of all plain knitting stitches. The knitter side and the ribber side are connected at only one side. This knitting is used for work of more than 200 stitches width. In the following, the garment is knitted with closed right side and open left side.

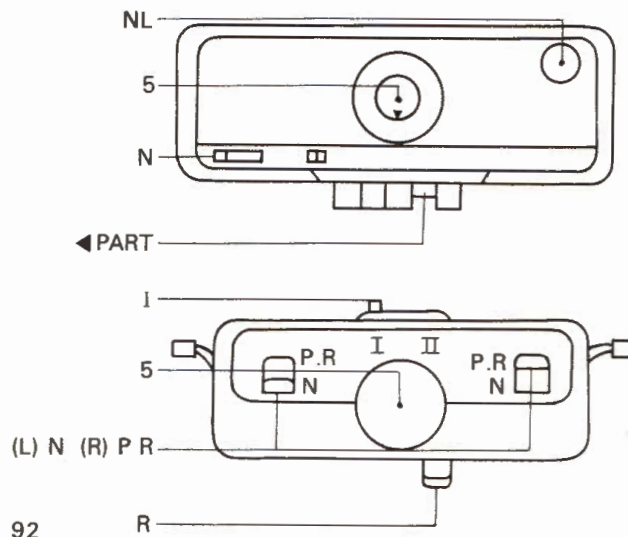


CASTING-ON FOR "U" STYLE KNITTING

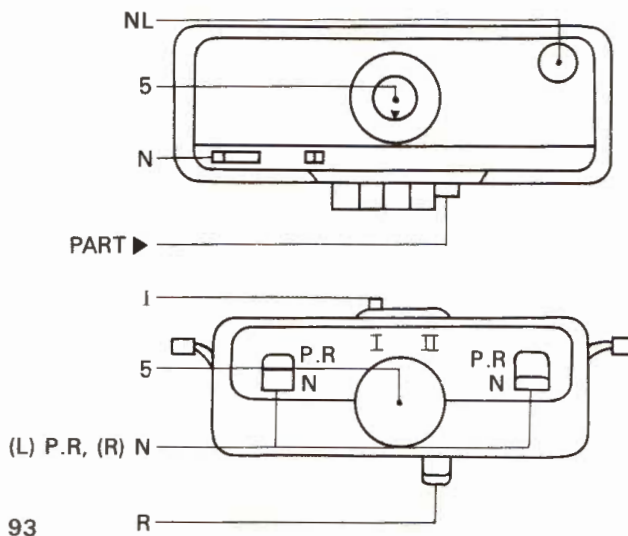
* This is the same as for circular knitting.
The connected carriages is on the left side of the bed after casting-on.

"U" STYLE KNITTING

1. Set the carriages as shown in the Fig. 92, and knit 2 rows.



2. Then, reset the carriages as shown in the Fig. 93, and knit 2 rows.



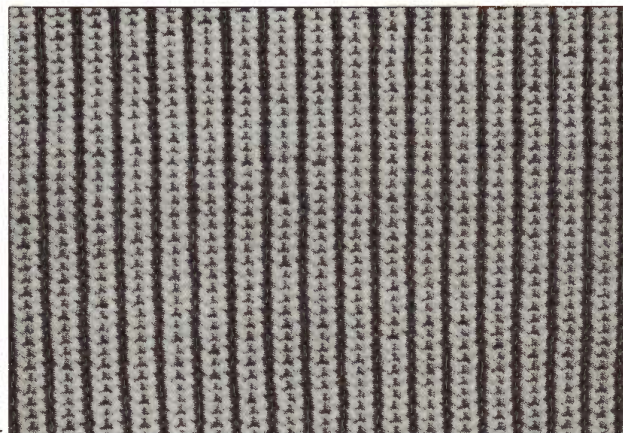
3. Repeat step (1) to (2), then you can make "U" style knitting.

How to knit English rib

30

English rib is a variety of 1×1 rib, and knitter side is plain stitch but ribber side is tuck stitch.

The example is knitted with medium thickness wool.



CASTING-ON FOR ENGLISH RIB

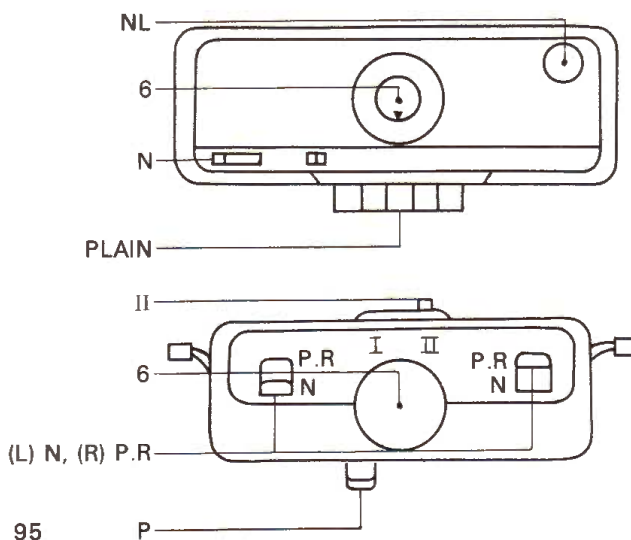
* This is the same as for 1×1 rib.

ENGLISH RIB KNITTING

* Set the carriages as shown in the Fig. 95, and continue the knitting.

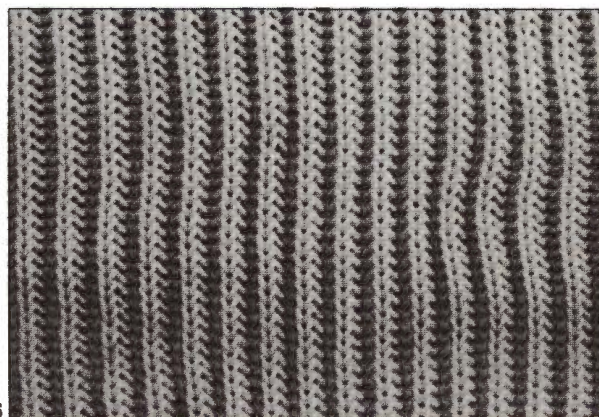
Note : Hang the Wire-loop type weight hanger and small weight on the edge of the knitting work to avoid stitch dropping.

How to use see on page 15.



Fisherman's rib is made of tucking stitches on both sides of garment.

The example is knitted with medium thickness wool.



CASTING-ON FOR FISHERMAN'S RIB

* This is the same as for 1 × 1 rib.

FISHERMAN'S RIB KNITTING

* Set the carriages as shown in the Fig. 97, and continue the knitting.

Note : Special instructions for previous models.

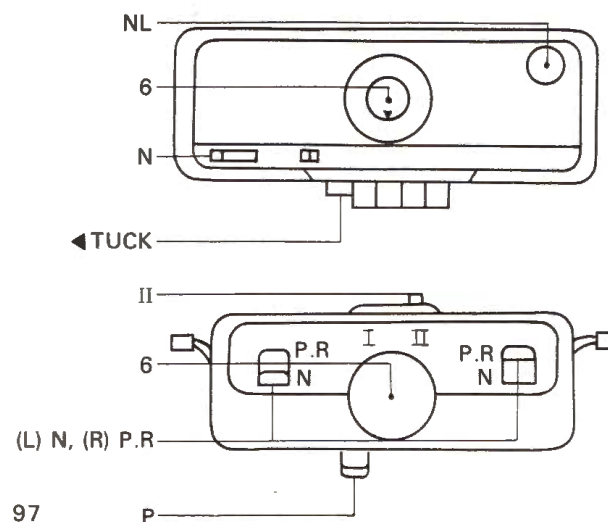
For KH-800, KH-588.

Put the Needle presser brushes onto the connecting arm as shown on the page 15.

For KH-588.

Bring forward the right end working needle of KH side to position E when the carriage moves to left.

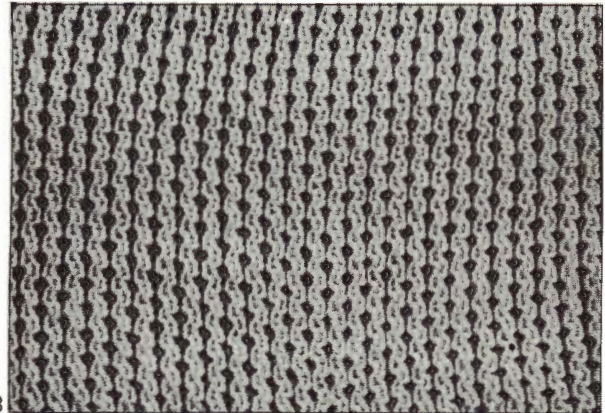
(If the right TUCK button is depressed, bring forward the left end working needle.)



How to knit tucking pattern

32

Tucking pattern is a variation of 1 × 1 rib or full needle rib. In the following description, tucking pattern of full needle rib is made. The example is knitted with fine wool (Ex. 2ply).



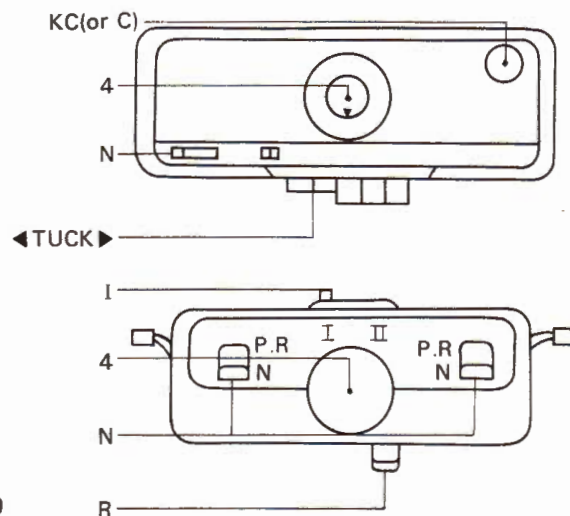
CASTING-ON FOR TUCKING PATTERN

* This is the same as for full needle rib.

TUCKING PATTERN KNITTING.

For KH-810/820.

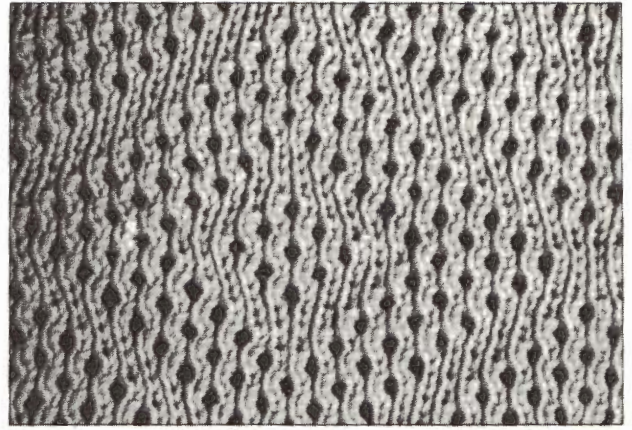
1. Take the No.2 punch card provided in the KH punch cards, and set it to the knitting machine.
2. After knitting the selvedge, move the connected carriage from right to left. (Remaining the carriage setting.)
3. Set the starting line of the punch card, and card lock lever to ●.
4. Set the change knob to "KC". (For KH-810, set to "C")
5. Move the connected carriage from left to right. (The plain needles knit, and corresponded needles to the punch card are brought to position D of KH bed.)
6. Set the card lock lever to ▼.
7. Set the carriages as shown in the Fig. 99. 99
8. Continue the knitting.



Note : If the end needles of KH bed is not brought by the carriage, bring to position D by hand.



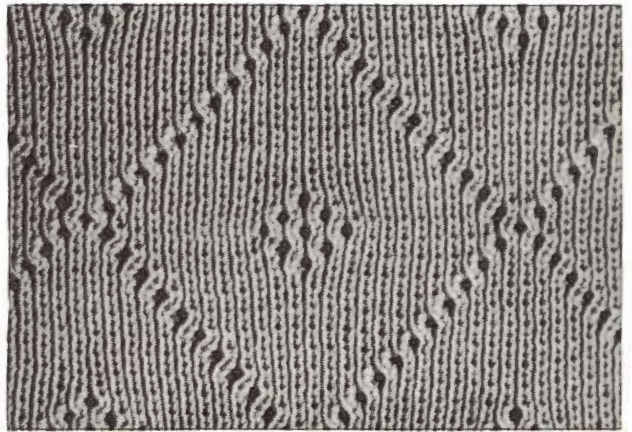
100 Card No. 8



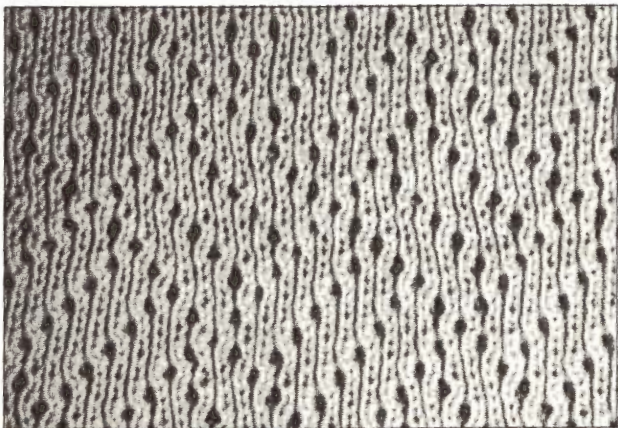
103 Card No. 14



101 Card No. 9



104 Card No. 15



102 Card No. 10

* Here are a few more examples of tucking pattern.
These patterns are knitted the same way as No. 2.

For KH-800

1. Set the carriages as shown in the Fig. 105.
2. Make the punch card as shown in the Fig. 106.
3. Set the above punch card on the pattern centre of KH-800.
4. Set the pattern repeat regulator on the the step 4, and swivel the set-lever.
5. Move the connected carriage from right to left.
6. Swivel the set-lever, and move the connected carriage from left to right.
7. Repeat step (4) to (6).

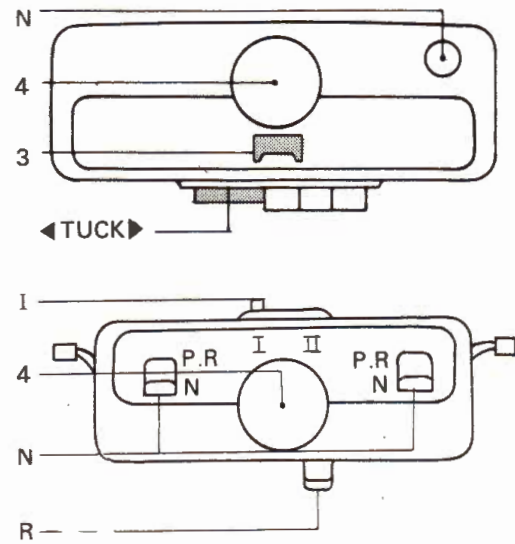
Note : If the end needles of KH bed is not brought by the set-lever, bring to position D by hand.

For KH-588

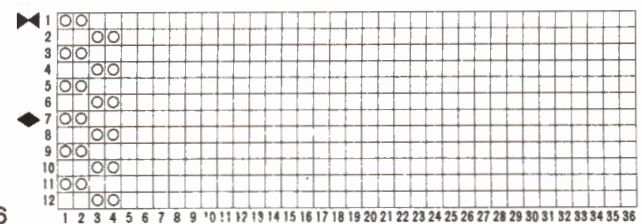
(Holding cam levers must be set on position I.)

1. Depress the Needle selector buttons, 1, 3, 5 & 7.
2. Set the reverse lever to A, and swivel the set-lever.
3. Move the connected carriage from right to left.
4. Swivel the set-lever.
5. Move the connected carriage from left to right.
6. Set the reverse lever to B, and swivel the set-lever.
7. Move the connected carriage from right to left.
8. Swivel the set-lever.
9. Move the connected carriage from left to right.
10. Repeat step (2) to (9).

Note : If the end needles of KH bed is not brought by the set-lever, bring to position D by hand.



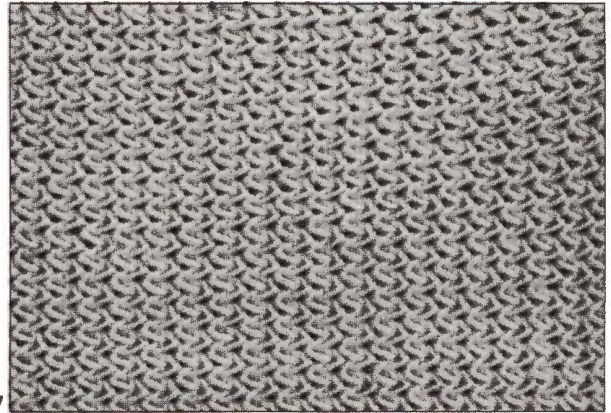
105



106

The example is knitted with medium thickness wool.

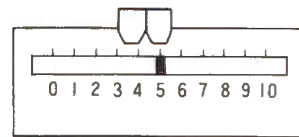
107



CASTING-ON FOR RACKING PATTERN OF ENGLISH RIB

1. Set the racking indicator on No. 5, and cursors on the indicator to No. 4 and No. 5.
2. The other steps are the same as for 1 × 1 rib.
3. After knitting the selvedge, set the half pitch lever on "H".

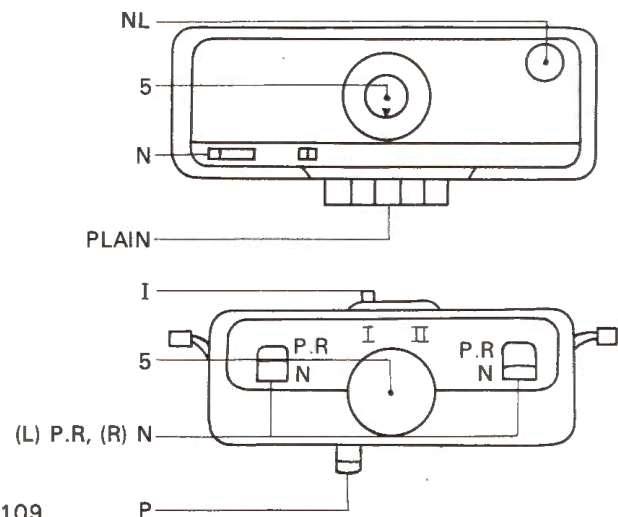
108



RACKING PATTERN KNITTING

1. Set the carriage as shown in the Fig. 109.
2. Move the connected carriage from right to left. (The plain needles knit and purl needles have two yarns on their hooks.)
3. Set the racking indicator on No. 4.
4. Knit two rows.
5. Set the racking indicator on No. 5.
6. Move the connected carriage from left to right.
7. repeat step (2) to (6).

109



How to knit racking pattern (I)

36

The example is knitted with medium thickness wool.



110

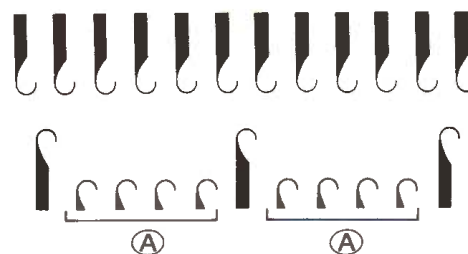
CASTING-ON FOR RACKING PATTERN (I)

- * Set the racking indicator on No. 0.
- The other steps are the same as for full needle rib.

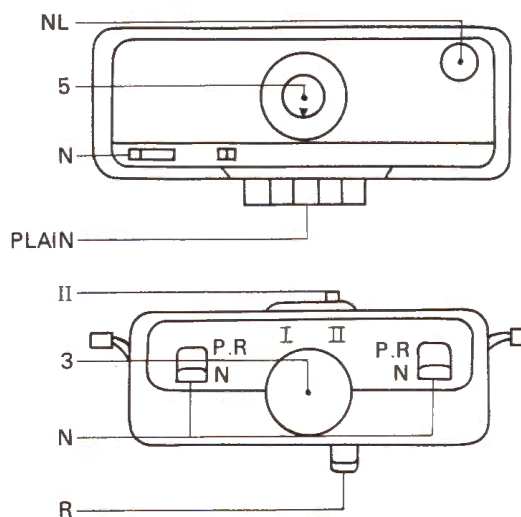
RACKING PATTERN (I) KNITTING

1. After knitting the selvedge, using the Double eyelet transfer needle, transfer the part (A) stitches to opposite plain needles, and return the empty needles to position A of KR bed.
- How to use.....see on page 43.
2. Set the carriages as shown in the Fig. 112.
3. Move the connected carriage from right to left. (The plain and purl needles knit.)
4. Set the racking indicator on No. 1.
5. Move the connected carriage from left to right.
6. Set the racking indicator on No. 2.
7. Continue the same manner until the racking indicator indicates No. 10.
8. Move the connected carriage from right to left.
9. Set the racking indicator on No. 9.
10. Continue the same manner until the racking indicator indicates No. 0.
11. The pattern knitted from step (3) to (10) is one cycle.

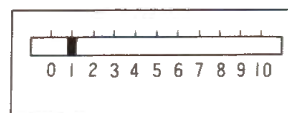
Note: Don't turn the racking grip handle when the needles are raised over the gate pegs.



111



112



113

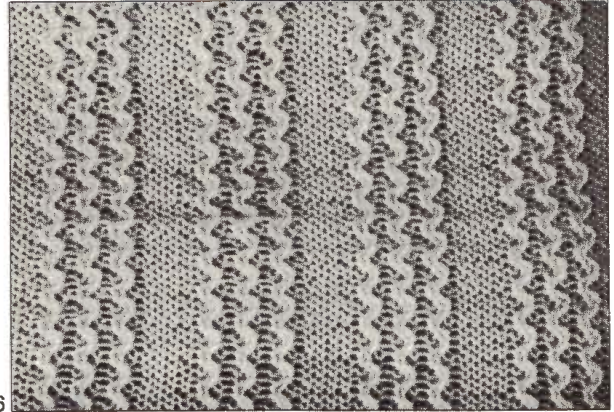


114



115

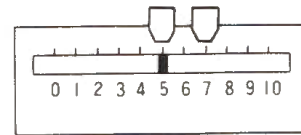
The example is knitted with fine (ex. 2ply) wool.



116

CASTING-ON FOR RACKING PATTERN (II)

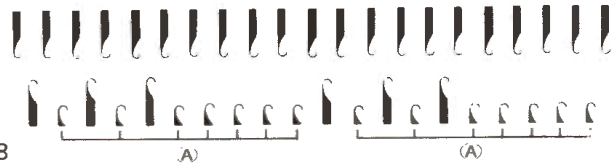
* This is the same as for full needle rib, and set the cursors to No. 5. and No. 7.



117

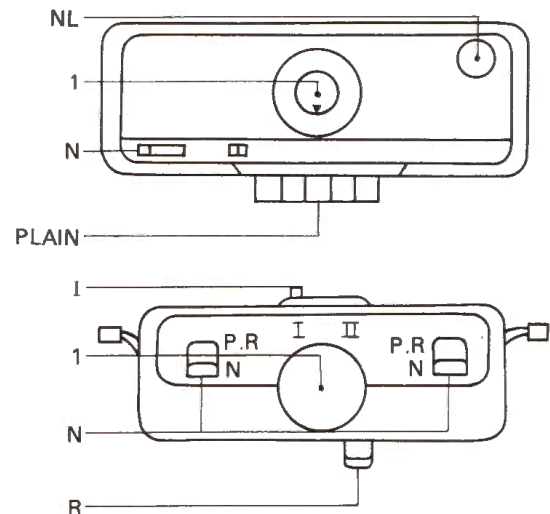
RACKING PATTERN (II) KNITTING

1. After knitting the selvedge, using the Double eyelet transfer needle, transfer the part (A) stitches to opposite plain needles, and return the empty needles to position A of KR bed.



118

2. Set the carriages as shown in the Fig. 119.
3. Move the connected carriage from right to left.
4. Move the connected carriage from left to right.
5. Set the racking indicator on No. 7.
6. Move the connected carriage from right to left.
7. Move the connected carriage from left to right.
8. Set the racking indicator on No. 5.
9. Repeat the step (3) to (8).



119

Increasing the stitches

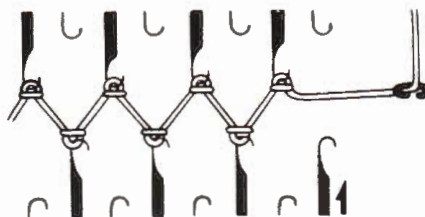
38

1. Increasing one stitch on one side of knitting width.

SIMPLE METHOD

- a. Place the carriage on the side which you want to increase.
- b. Raise the end needle to the working position B. (see Fig. 120.)
- c. The empty needle will pick up the yarn as it knits the next row.

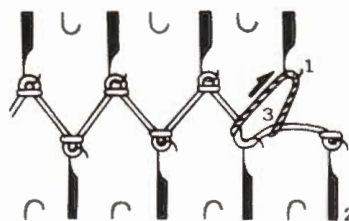
120



FULL FASHIONED METHOD

- a. Use the transfer tool, move the first stitch (1) out to the adjacent empty needle (2).
Now second needle from the end becomes empty.
- b. Pick up either neighbouring lower loop (3), and hook on the empty needle (1).

121



2. Increasing more than two stitches on either side of the garment.

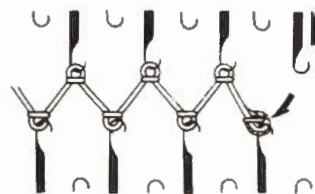
- a. Place the carriage opposite to the side you want to increase.
- b. bring into action on the side opposite to the carriage as many needles as the number of stitches to be increased.
- c. Move the carriage.
- d. The yarn will hang on the increased needles on both sides.
- e. Hang the weight hanger for side tension and small weight on the yarn which is shaping zigzag line.
- f. Continue the knitting.

1. Decreasing one stitch on either end.

SIMPLE METHOD

* By using the single transfer tool, transfer the end stitch to the second needle, and take the empty needle out of action.

122



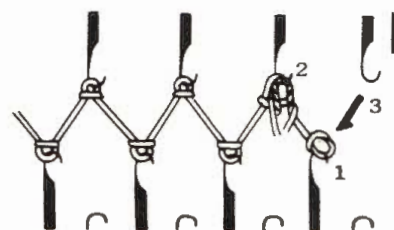
SECOND METHOD

a. Use two-needles transfer tool.

Transfer the end stitch to the second needle and the second needle to the third needle.

b. Take the empty needle out of action.

123



2. Decreasing more than two stitches.

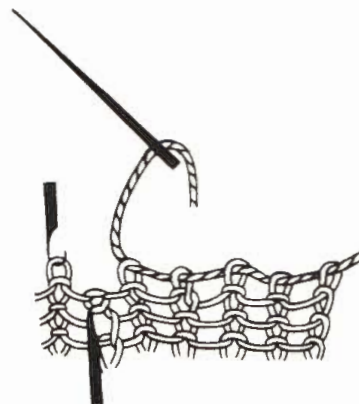
a. Place the carriage opposite to the side you want to decrease.

b. Use the tapestry needle.

Transfer the stitches which you want to decrease to the stem of the tapestry needle and pass through loops of stitches to be decreased.

c. Take the empty needles out of action.

124

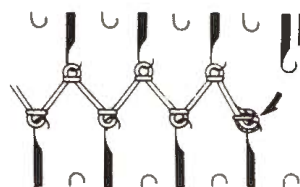


1. Decreasing one stitch on either end.

SIMPLE METHOD

- * By using the single transfer tool, transfer the end stitch to the second needle, and take the empty needle out of action.

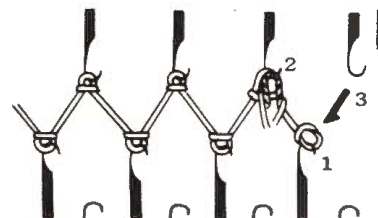
122



SECOND METHOD

- a. Use two-needles transfer tool. Transfer the end stitch to the second needle and the second needle to the third needle.
- b. Take the empty needle out of action.

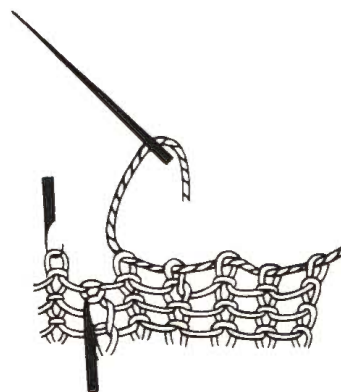
123



2. Decreasing more than two stitches.

- a. Place the carriage opposite to the side you want to decrease.
- b. Use the tapestry needle. Transfer the stitches which you want to decrease to the stem of the tapestry needle and pass through loops of stitches to be decreased.
- c. Take the empty needles out of action.

124



Partial knitting of ribbing

40

Partial knitting is used for shaping of garment, making darts, shaping of a heel, vertical and horizontal buttonholes, neck opening, pockets etc. There are two cases, one is decreasing of knitting part, another one is increasing of knitting part.

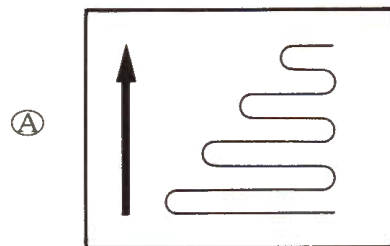
PARTIAL KNITTING OF 1 × 1 RIB

* The example is partial knitting of 1 × 1 rib, however, 2 × 2 rib, full needle rib, 5 × 5 rib, English rib, Fisherman's rib and Tucking pattern rib are the same manner as 1 × 1 rib.

1. Decreasing knitting part.

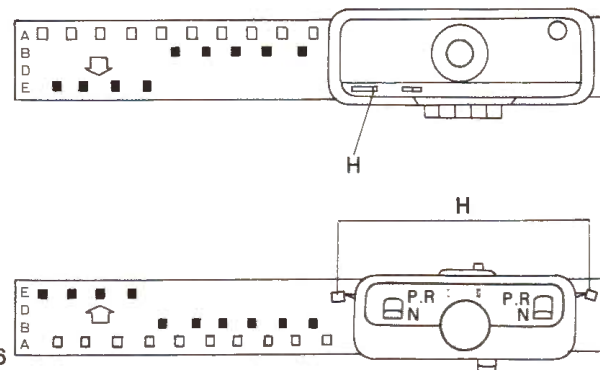
- a. Set the both carriages as shown in the Fig. 126.
For KH-800, set the H.C.L. on 1.
For KH-588, set the H.C.L.s. on II.
- b. Bring the nonknitting needles of KH and KR beds to position E.
- c. Move the connected carriage from right to left. (The needles on position B knit, and the yarn is across on the needles on position E.)
- d. To avoid a hole in the knitting, hook the yarn laying across on the needles on position E to the next needle to the knitting. (see Fig. 127.)
- e. Move the connected carriage from left to right.
- f. Repeat step (b) to (e) according to the shape of the garment.

* After partial knitting, if you want to knit all needles, simply set H.C.L.s. of both carriages to normal position. And move the carriage.

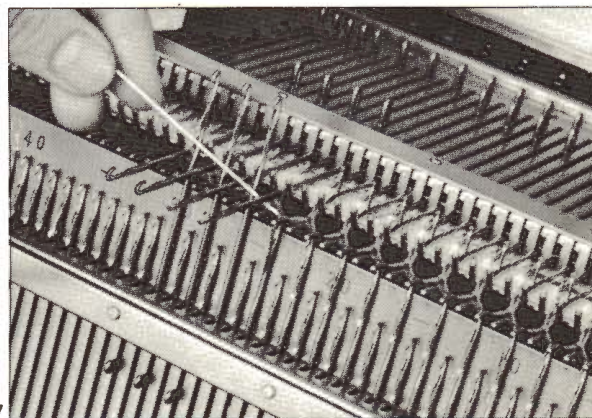


125

Decreasing knitting part



126



127

2. Increasing knitting part

a. Set the both carriages as shown in the Fig. 129.

* For 1 × 1 rib, 2 × 2 rib and full needle rib, bring back the required needles you want to knit to position D of each bed.
(see Fig. 129.)

* For English rib, Fisherman's rib and Tucking pattern rib, bring back the required needles you want to knit to position D, and using the transfer tool, place the stitch behind the latch into the hook. Then, return these needles to position B. (see Fig. 130.)

b. Move the connected carriage from right to left.

(The needles on position B and D knit, and the yarn is across on the needles on position E.)

c. To avoid a hole in the knitting, hook the yarn laying across on the needles on position E to the next needle to the knitting.

d. Move the connected carriage from left to right.

e. Repeat step (a) to (d) according to the shape of garment.

PARTIAL KNITTING OF RACKING PATTERN

* In the racking pattern, it is unable to bring both needles to position E, so, please knit partial knitting of racking pattern according to the following method.

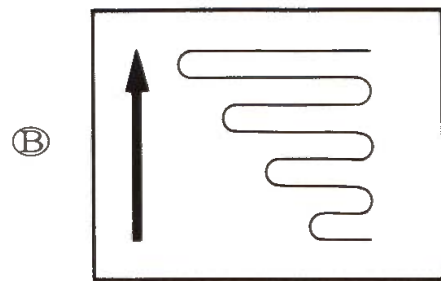
The example is racking pattern of English rib.

1. Decreasing knitting part.

a. Set the carriages as shown in the Fig. 131.

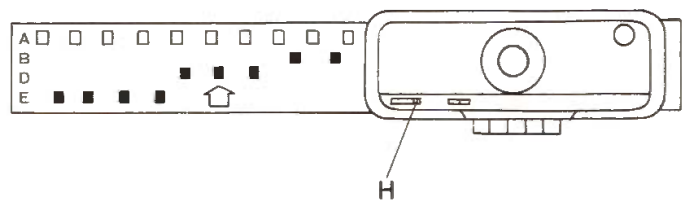
b. Bring the nonknitting needles of KR bed to position E.

c. Bring the knitting needles of KH bed to position E.

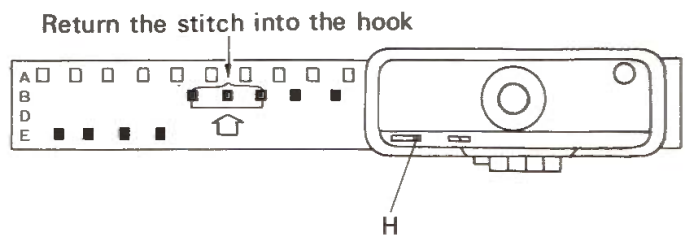
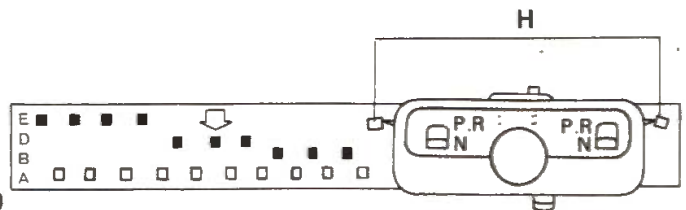


128

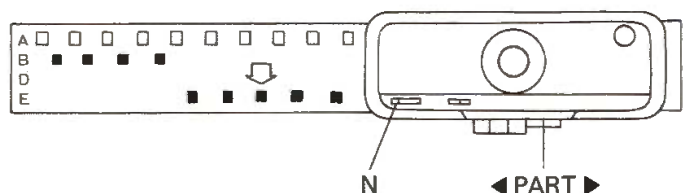
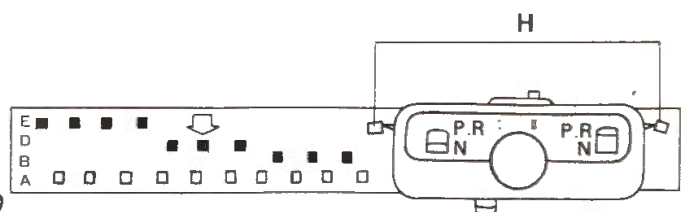
Increasing knitting part



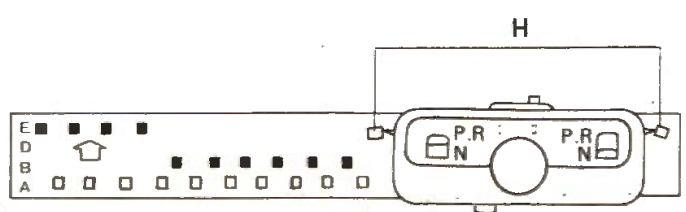
129



130



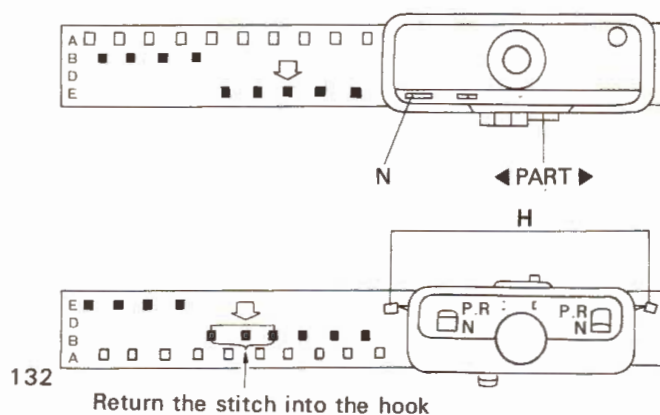
131



- d. Move the connected carriage from right to left. (The plain needles on Position E and purl needles on position B knit, and the yarn is across on the purl needles on position E.)
- e. To avoid a hole in the knitting, hook the yarn laying across on the purl needles on position E to the next needle to the knitting,
- f. Set the racking indicator on next number.
- g. Bring the knitting needles of KH bed to position E.
- h. Move the connected carriage from left to right.
- i. Repeat step (b) to (e).
- j. Set the racking indicator on next number.
- k. Bring the knitting needles of KH bed to position E.
- l. Move the connected carriage from left to right.
- m. Repeat step (b) to (l) according to the shape of garment.

2. Increasing knitting part.

- a. Set the carriages as shown in the Fig. 132.
 - b. Bring back the required needles you want to knit to position D, and using the transfer tool, place the stitch behind the latch into the hook. Then, return these needles to position B.
 - c. Bring the knitting needles of KH bed to position E.
 - d. Move the connected carriage from right to left. (The plain needles on position E and purl needles on position B knit, and the yarn is across on the purl needles on position E.)
 - e. To avoid a hole in the knitting, hook the yarn laying across on the purl needles on position E to the next needle to the knitting.
 - f. Set the racking indicator on next number.
- (Continued on page 43.)



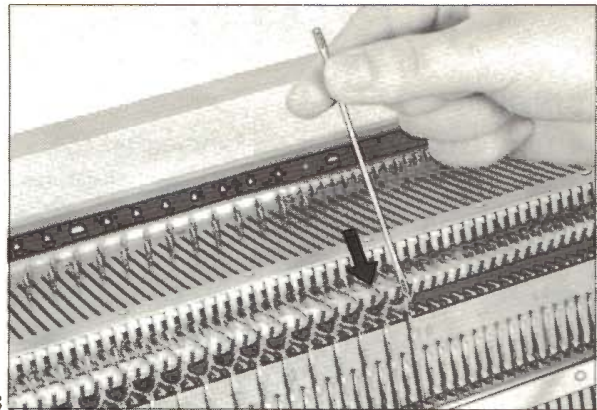
How to transfer the stitch from the purl needle to plain needle or from plain needle to purl needle.

- g. Bring the knitting needles of KH bed to position E.
- h. Move the connected carriage from left to right.
- i. Repeat step (b) to (e).
- j. Set the racking indicator on next number.
- k. Bring the knitting needles of KH bed to position E.
- l. Move the connected carriage from left to right.
- m. Repeat step (b) to (l) according to the shape of garment.

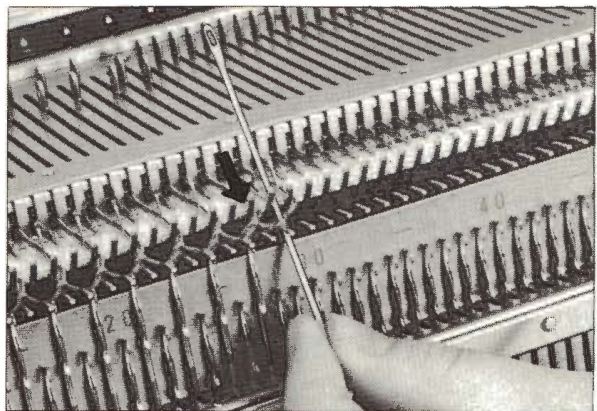
1. How to transfer from purl needle to plain needle.

- a. Raise the plain needle from position A to B, and open the latch.
- b. By using the transfer tool, transfer the stitch on the purl needle to the empty plain needle.

133



134

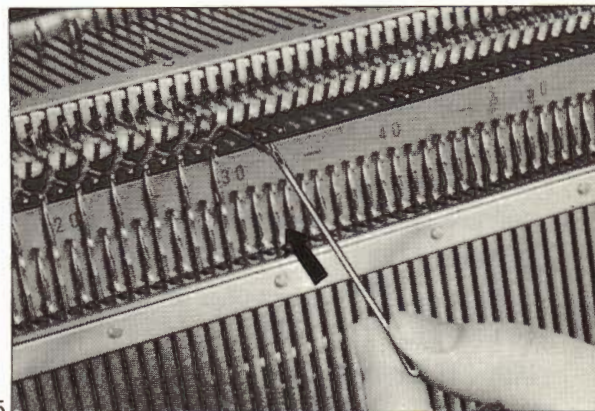


Binding up and finishing edge of rib knitting

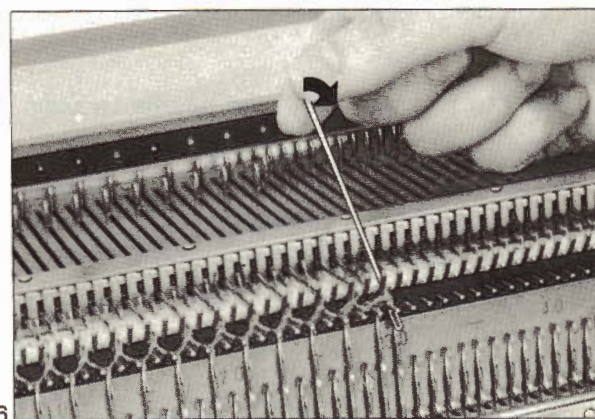
44

2. How to transfer from plain needle to purl needle.

- a. By using the transfer tool, transfer the stitch on every other plain needle to the corresponding purl needle.



135



136

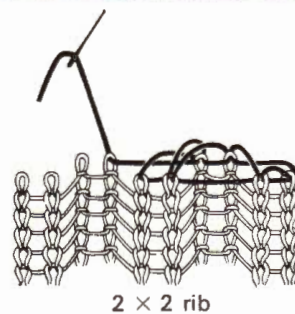
BINDING

* This method is used for binding up the stitches of the last row by using the yarn of rib knitting. Binding up is the same as selvedge.

When you finish rib knitting, knit one or three rows of circular knitting, then bind the last row by using the tapestry needle as shown in the figures.

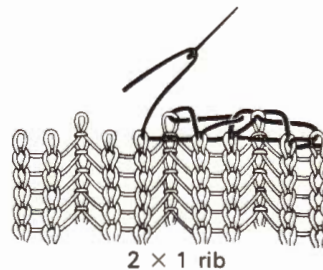
The length of the yarn for binding is 3 times the width of knitting.

137



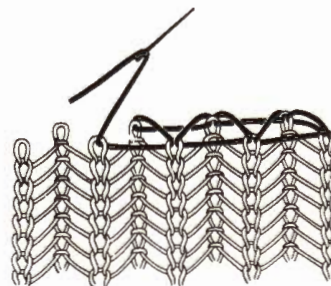
2 × 2 rib

138



2 × 1 rib

139



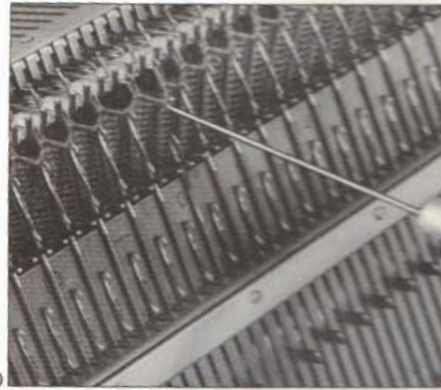
1 × 1 rib

How to pick up dropped stitch

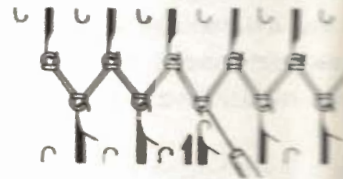
Unravelling the rows

* First, take off the weights and prevent dropping of multiple rows.

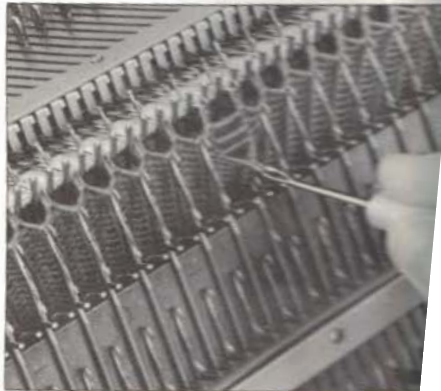
1. In case one stitch is dropped.
 - a. With the single transfer tool or work hook, pick up the stitch and the unknitted yarn and put them on the empty needle.
2. In case multiple rows are dropped.
 - a. Open the gate by pushing down both bracket levers, and catch the lowest loop of the dropped stitches with latch tool.
 - b. With the latch tool, make the stitches, and hang the final stitch on the empty needle.



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142



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Unravelling the rows

* If you have knitted more than necessary, do not remove the work from the knitter and ribber. Simply unravel one or several rows by doing the following. Pull the yarn slightly, drawing it out of the stitches.

The stitches of the previous row will slip into the hook of the needles automatically as the yarn is raised in an upward movement towards the needle bed.

If the carriage should jam.....

46

1. Disconnect the carriage.
(see on the page 14.)

In case of knitter is previous model, KH-800 or KH-588.

- a. Lift the front of the KH carriage and move to the side where the row commenced.

In case of knitter is KH-810/820.

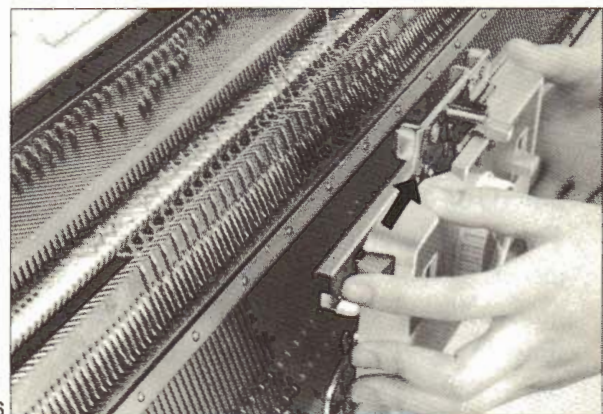
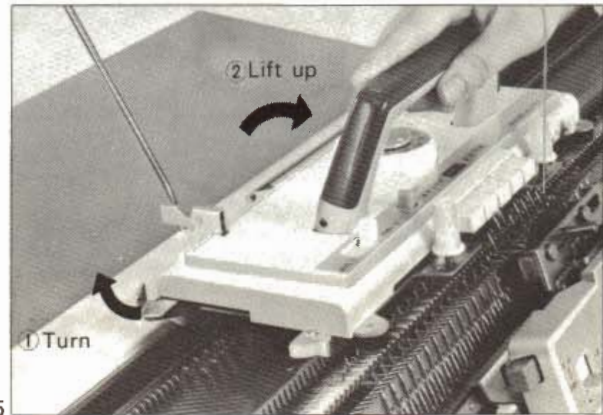
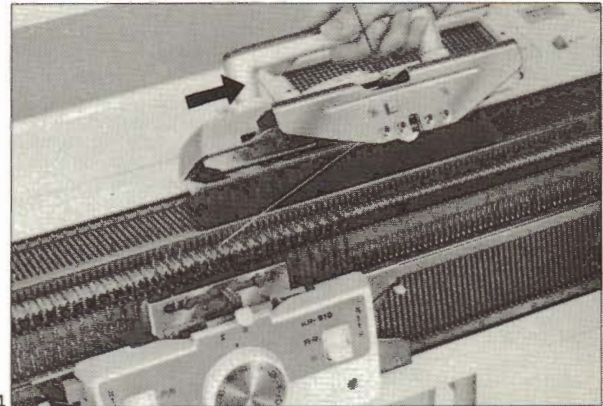
- a. Turn the carriage release levers of KH carriage as far as they will go, and lift up the KH carriage.
- b. Place the KH carriage at the side where the row commenced, and lock both carriage release levers of KH carriage.

2. Depress release button of KR carriage, and remove the front foot from the front rail of KR needle bed. And place the KR carriage at the same side of KH carriage.

3. Put the front foot of the KR carriage to front rail by depressing the release button.

4. Put the Connecting arm and connect both carriage.

5. Continue the knitting.



How to use the knitter as a single with the ribber attached

How to replace the purl needle

- a. Disconnect the carriage.
- b. Push down both bracket levers of the ribber and the ribber will come down one step.
- c. Take off the connecting arm from the KH carriage, and convert it to the sinker plate assembly of knitting machine.
- d. The knitter can be used as a single bed.



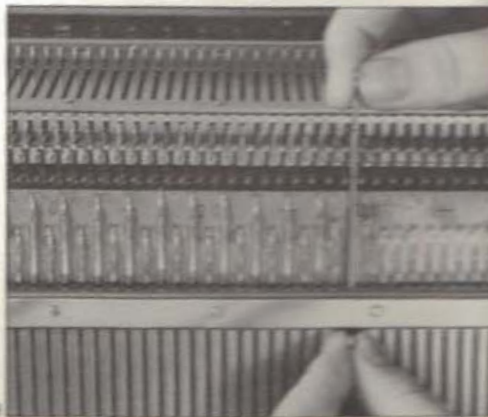
147

How to replace the purl needle.

- a. Push the plastic bar from either side.
- b. Draw out by hand from another side of the ribber until the needle you wish to change is free.
- c. Bring forward the needle as far as it will go.
- d. Push down the hook of the needles until the shank of the needle rises free of the needle bed.
- e. Grasp the shank and draw it out backwards.
- f. Replace new needle with latch opened.
- g. Push in the bar, making sure that the flat face is down.



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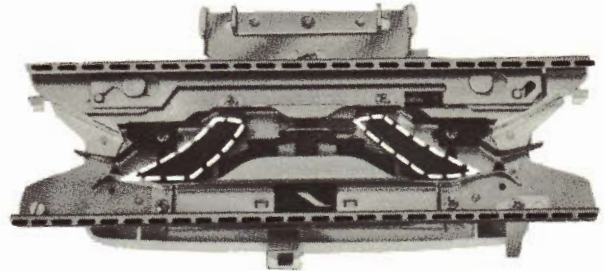
149

Maintenance

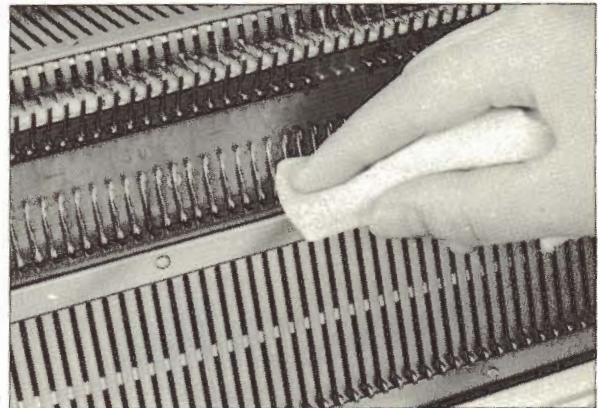
48

* Each time you finish work, service your machine as follows :

- a. Clean the machine of all wool lint with hand brush.
- b. Polish each part with soft oil cloth.
- c. Oiling the following parts.
 - * Back side of the carriage.
 - * Rails of the needle bed.
 - * Needle butts.
- d. Wipe off stained oil.
- e. Keep your machine in a dry place.



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