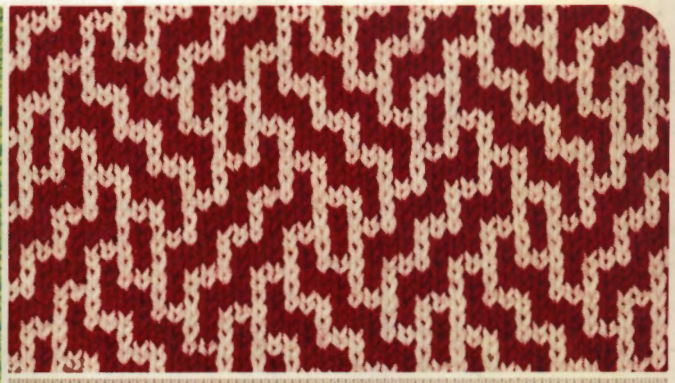
Memo-Matic*

Model 328/228













SINGER

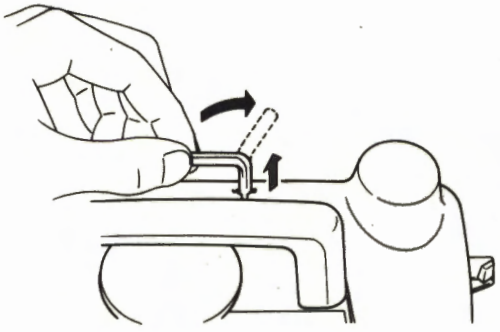
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We thank you for puchasing our
Knitting Machine Model 328 / 228

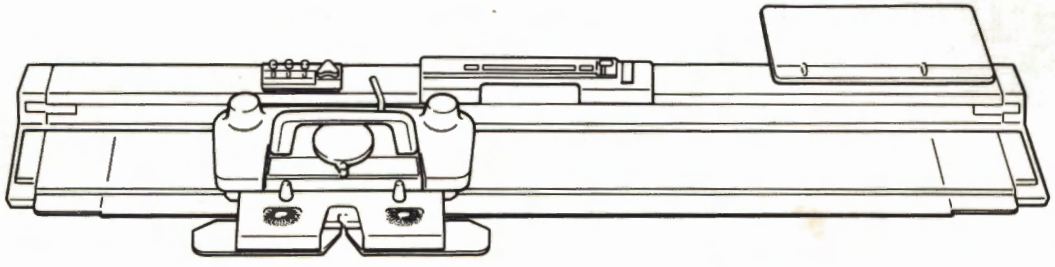
Before starting to knit on this machine, we recommend you carefully reading this Instruction Book. By using these "Easy-to-follow" directions, you will be able to take full advantage of the excellent performance of this machine.

For the Model 228 machine, the Knit Contour, Pattern Paper and Stitch Scale set are not included. When using the 228 machine, read the instruction below.

You will find Row Counter Lever by the Handle on the Carriage.
To set the Row Counter Lever to active position, lift it as illustrated.



Install the Accessory Box Cover at the right end of the machine by fitting its opening to the stud. You can use this Cover as an useful tray while knitting.



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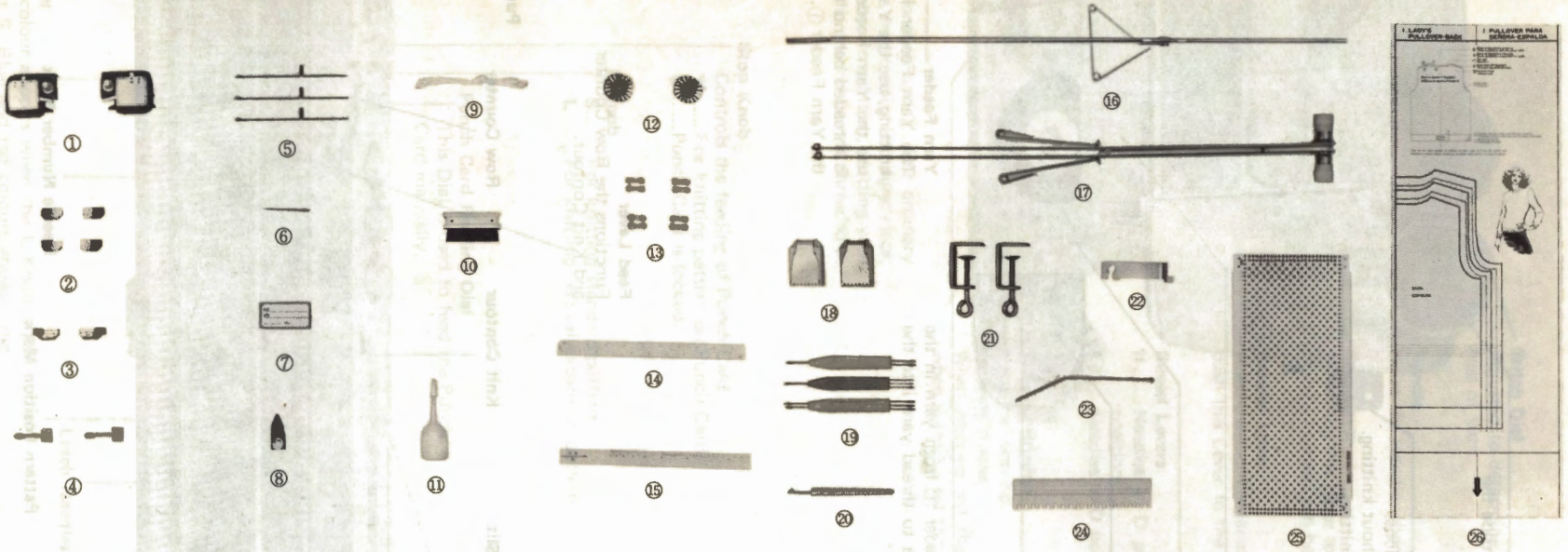
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* NAMES AND FUNCTION OF COMPONENT PARTS *

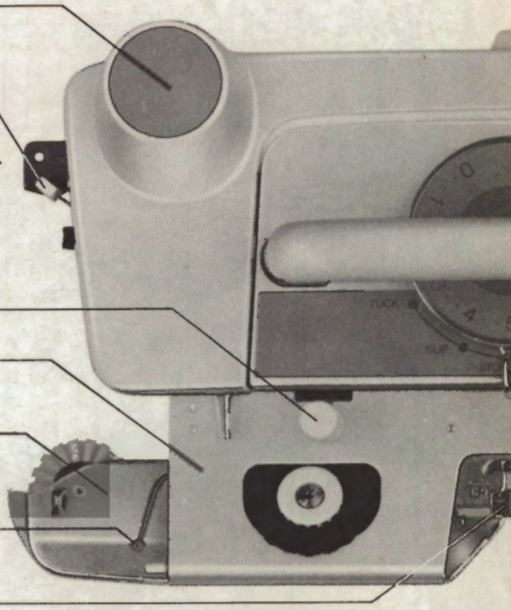
* ACCESSORIES *



① New Magic Cams..... Used for Magic Point (Motif).
② Point Cam M..... Placed on the Needle Bed behind the needle butt to cover the range of the magic point.
③ Point Cam E ..... Placed on the Needle Bed behind the needle butts for Knit-in and Weaving.
④ Yarn Separators ..... Used to work Magic Point.
⑤ Spare Needles ..... For replacement of damaged needles.
⑥ Tapestry Needle..... Used to work stitches.
⑦ Name paper..... Used for identification of the possessor of the machine.
⑧ Auxiliary Feeding Cam Used to knit with thick yarn.
⑨ Ravel Cord..... Used for cast-on and separating the waste knitting from main knitting.
⑩ Brush..... Used to clean the machine.
⑪ Oil container ..... Contains oil for machine lubrication.
⑫ Extra Round Brush..... Used for tuck knitting.
⑬ Card Snaps..... Used to join both ends of the Punch Card.
⑭ Stitch Scales ..... Used for counting stitches on Knit Contour.
⑮ Gauge Scale ..... Used for measuring a tension swatch.
⑯ Yarn Rod..... Holds the Auto-Tension.
⑰ Auto-Tension ..... Adjusts the tension of yarn automatically.
⑱ Weights ..... Used to prevent stitches from being floated.
⑲ Transfer Tools..... Used to transfer stitches for increasing and decreasing. (1 x 2, 1 x 3, 2 x 3)
⑳ Tappet..... Used for picking up dropped stitch or reforming stitches.
㉑ Clamps..... Used to secure the Knitter to a table.
㉒ Carriage Fastener..... Used to fasten the Carriage to the Needle Bed.
㉓ Card Guide..... Holds the Punch Card in position.
㉔ Needle Pusher..... Two sided plastic plate, one edge smooth and the other 1 x 1. Used to select the needles.
㉕ Punch Cards..... Perforated vinyl sheets used for pattern knitting. A set of 20 sheets come with the Knitter.
㉖ Pattern Paper..... Used on Knit Contour, 20 sheets come with the Knitter.

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＊CARRIAGE＊



Memory Bank
The Memory Bank is installed inside the Carriage Cover.

Side Levers
The Side Levers have two positions.
■ For moving the Carriage without knitting.
▲ For stockinet and pattern knitting.

Arm Nut

Arm

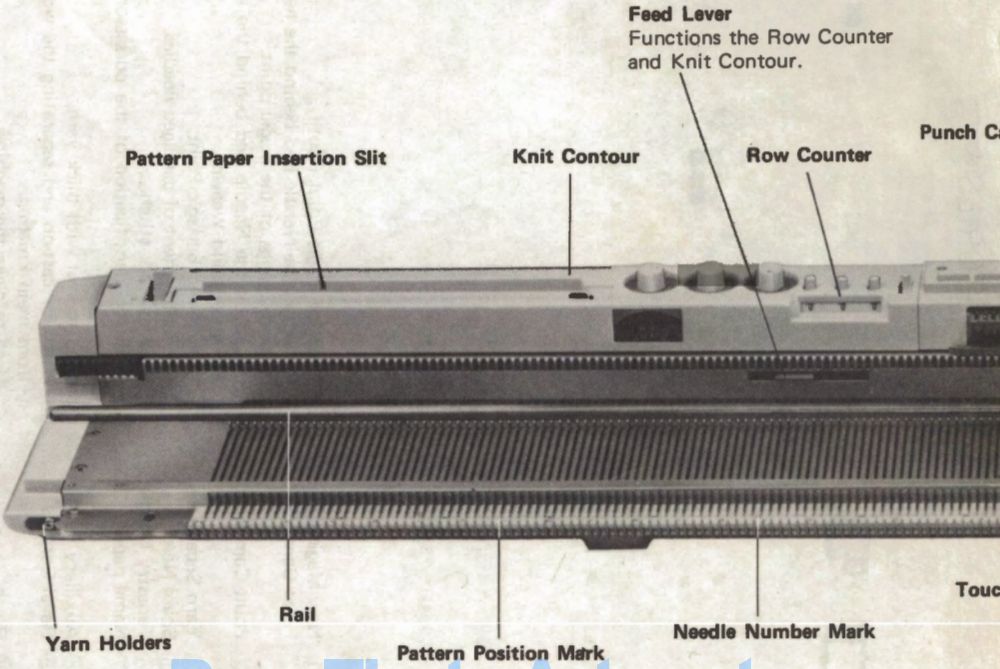
Fabric Presser

Weaving Yarn Holders
Hold weaving yarn.

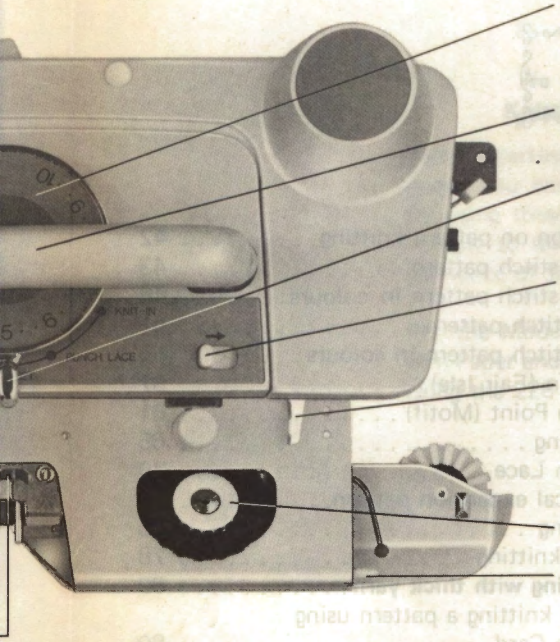
Yarn Feeder Gate
Separates yarn in the Yarn Feeder ① from yarn in the Yarn Feeder ②. Open the Gate to thread yarn into the Yarn Feeder ①.

Yarn Feeder
The Yarn Feeder is dev
knitting, use the Yarn Fe
use the Yarn Feeder ①
is threaded behind the Y
the Yarn Feeder ①.

＊MAIN BODY＊



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Stitch Dial
Adjusted to determine a stitch size or according to thickness of yarn.

Handle
Raise the Handle when using the machine.

Cam Lever
By setting this Lever to a desired position on the Carriage, pattern knitting can be worked.

Release Lever
When Carriage has jammed or to move it without knitting, push this Lever to the right.

Russel Levers
II..... Needles in D position will be knitted back to B position.
I ..... Needles in D position will remain non-working.

Weaving Brushes
Used for weaving.

Weaving Knobs
When weaving, set these Knobs to the ∿ mark. (Except when weaving, set the Knobs to the ○ mark.

vided into two sections, ① and ②. For ordinary eeder ①. For knit-in, magic point and punch lace, and ② simultaneously. In platting, platting yarn arn Feeder ① and the ground yarn is threaded in

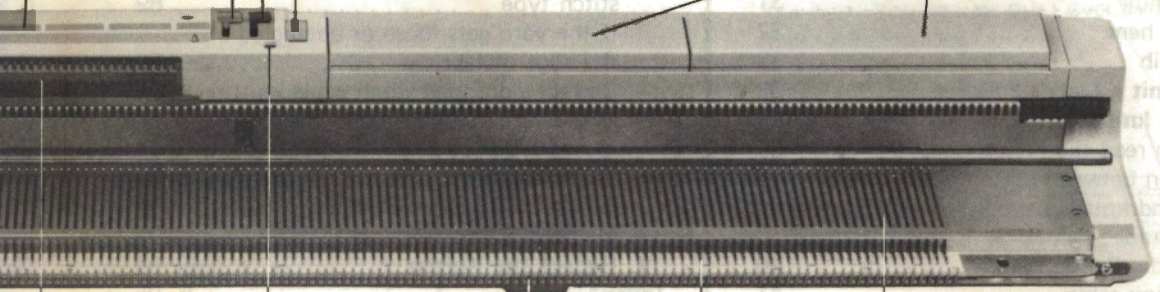
Stop Knob
Controls the feeding of Punch Card.
▼..... For knitting pattern on Punch Card.
●..... Punch Card is locked.

L Knob
S..... For knitting standard pattern.
L..... For knitting vertical expansion pattern.

Card Insertion Slit

Punch Card Feeding Dial
This Dial is used to feed the Punch Card manually.

Accessory Keeper



ch Lever

L Indicator
The blue colour, appears when the L Knob is positioned at S. Blue and red colours appear alternately when the L Knob is positioned at L.

Latch Needles

Needle Bed

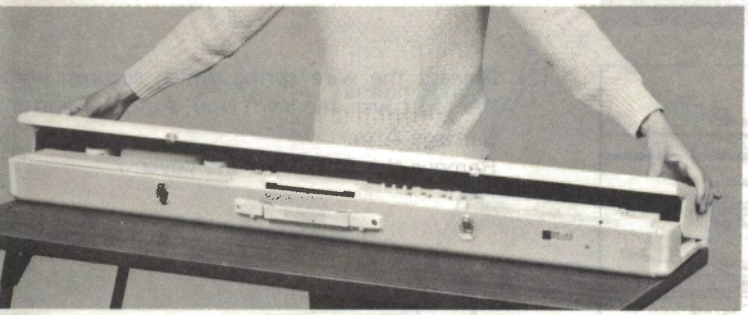
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I. ASSEMBLING PROCEDURE

Set the Knitter on a table.

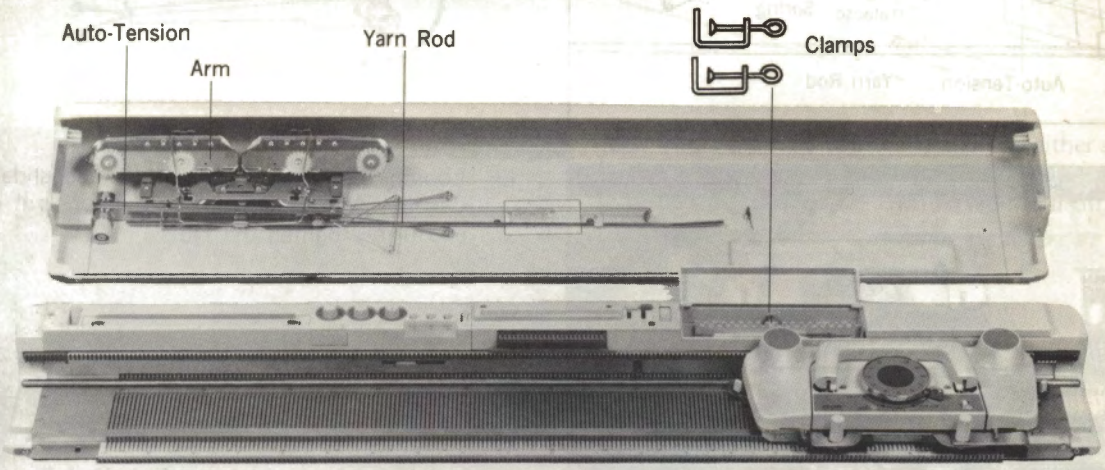


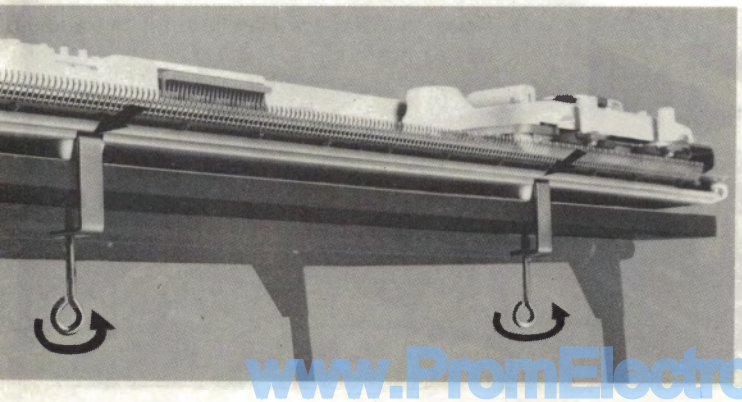
(1) Place the Knitter on a table with the handle on your opposite side and unfasten the latches.



(2) Lift the upper case slightly and pull the cover towards you to free it from the Knitter. (The Arm, Yarn Rod and Auto-Tension are housed in the Top Cover.)

(3) Remove the protective packings.

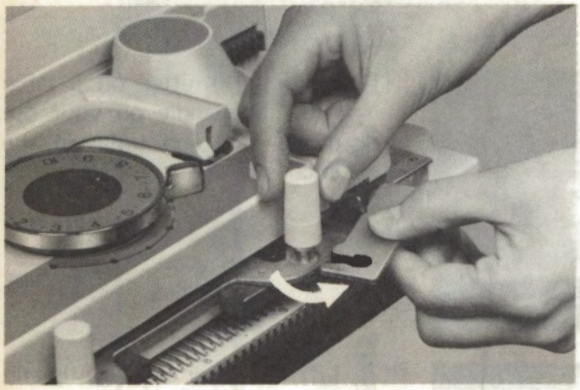




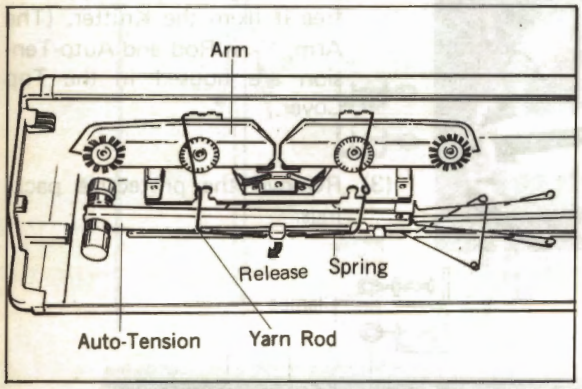
(4) Insert the Clamps into the slots at the bottom of the casement. Fasten the Clamps by tightening screws.

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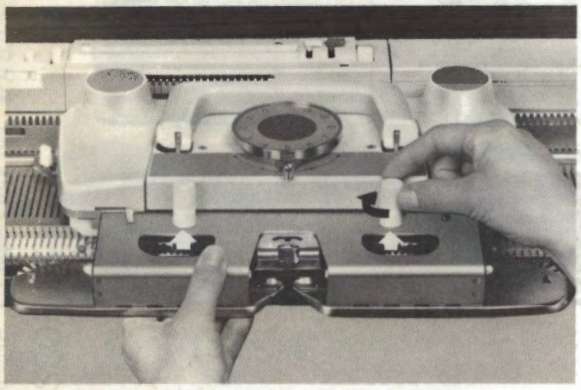
Complete the Carriage.



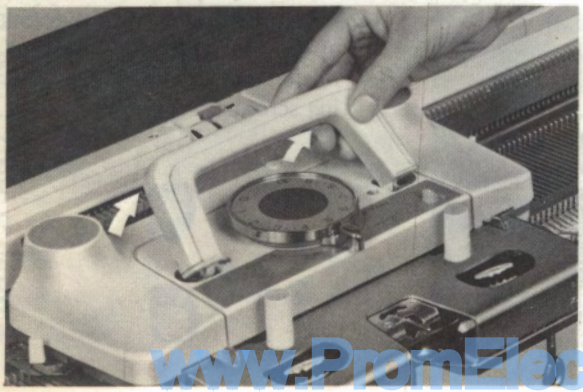
(1) Loosen the right Arm Nut and remove the Carriage Fastener. (Be very careful not to lose the Carriage Fastener, as this is used for securing the Carriage to the Needle Bed when the Knitter is stored or handled.)



(2) Release the wire spring which secures, inside the top cover, the Yarn Rod, Auto-Tension and Carriage Arm.
Remove the Arm from the cover.



(3) Loosen the Carriage Arm Nuts and slide the Carriage Arm under the Nuts as far as it goes and firmly tighten the Nuts.



(4) Raise the Carriage Handle until it stands in a locked position.

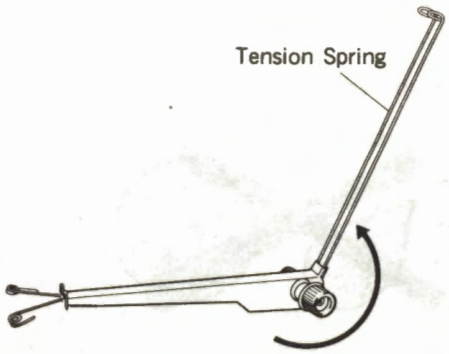
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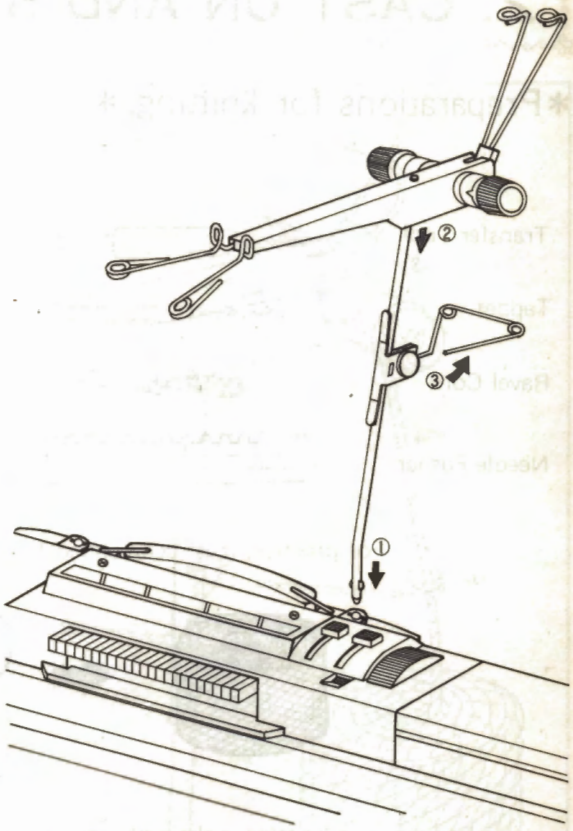
*Install the Auto-Tension. *

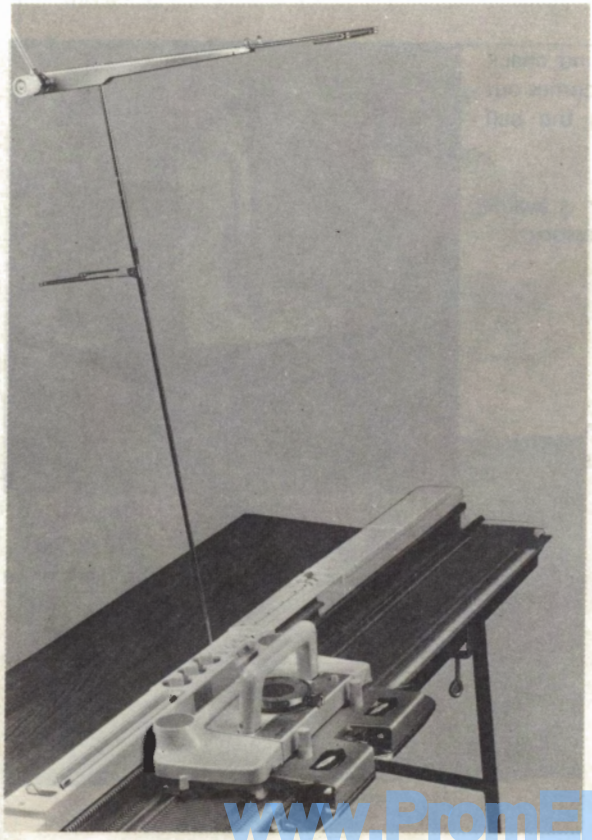
(1) Install the Auto Tension in the order ①②③ as illustrated.

Note:* The Tension Spring must be turned until it comes to a stop, making a clicking sound.

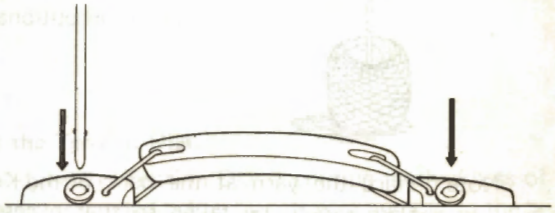
* When using the Ribber, insert the Yarn Rod in reverse direction. In this case, push the yarn guide forward in a twisted manner to bring it behind the Yarn Rod.







(2) The Yarn Rod can be installed on either side of the Case Handle. An optional Auto Tension can be used together for knitting with four different-colour yarns.

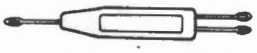


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2. CAST ON AND STOCKINET KNITTING

Preparations for knitting.

Transfer Tool



Tappet



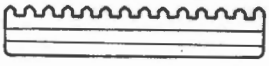
} Used to transfer or pick up stitches.

Ravel Cord



Used for cast on. (in case of Method 2)

Needle Pusher



Used to push or align needles.

For practice, it is recomended to used a medium size, 4 ply yarn in light colour.

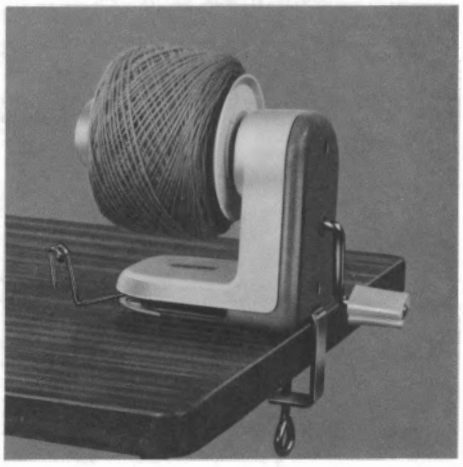


For machine knitting, a skein of yarn or a hand wound yarn must be rewound into a ball using a Yarn Ball Winder.

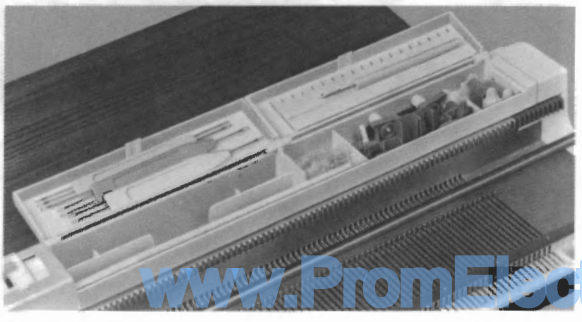


When the yarn is rewound, check to see if the yarn end comes out freely without lifting the ball from the table.

* The Yarn Ball Winder is available as an optional accessory.



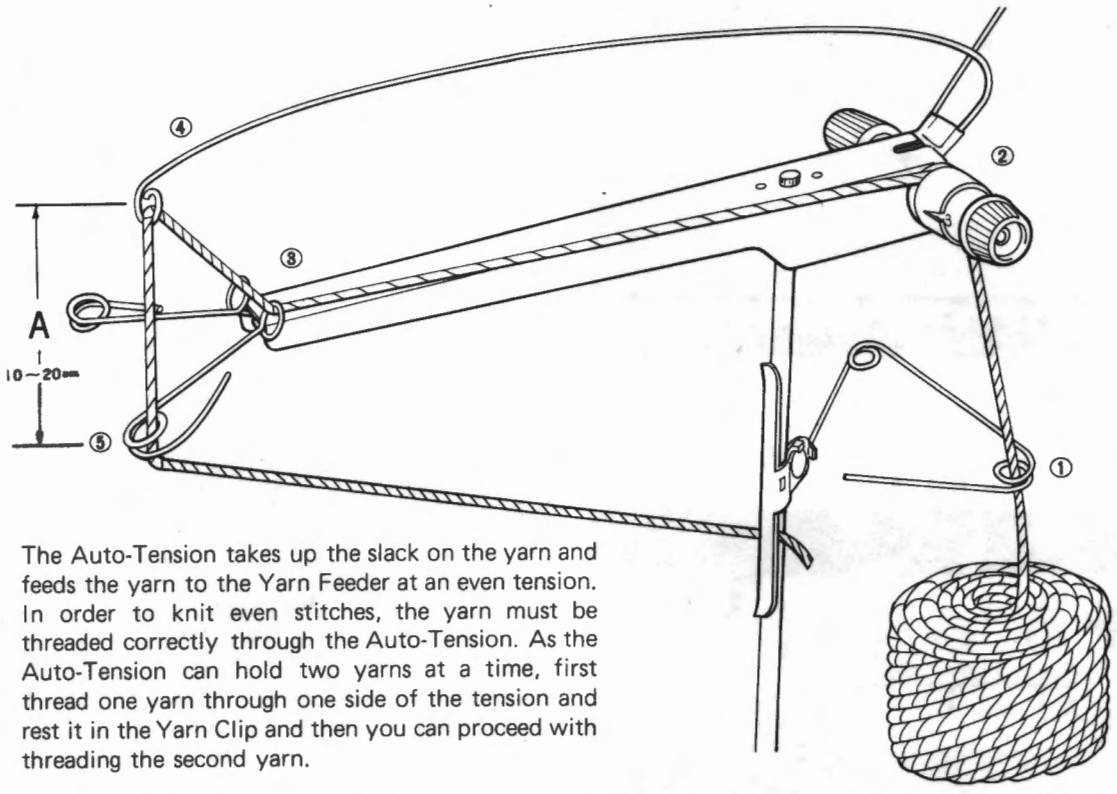
Note:* Place the yarn at the back of the Knitter. Care should be taken so that excess yarn will not be entangled with the Drum units of the Carriage.



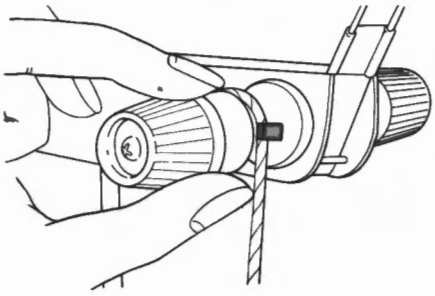
* Place the Accessories such as Transfer Tools, Tappet, Needle Pusher, etc. on the lids of the Accessory Keeper.

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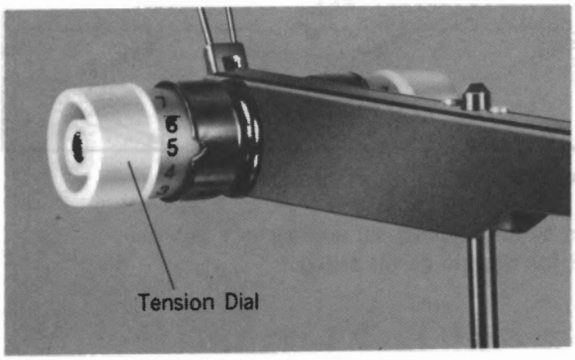
Thread the Auto-Tension.



The Auto-Tension takes up the slack on the yarn and feeds the yarn to the Yarn Feeder at an even tension. In order to knit even stitches, the yarn must be threaded correctly through the Auto-Tension. As the Auto-Tension can hold two yarns at a time, first thread one yarn through one side of the tension and rest it in the Yarn Clip and then you can proceed with threading the second yarn.



* Be sure that the yarn is threaded under the copper coloured Guide Pin.



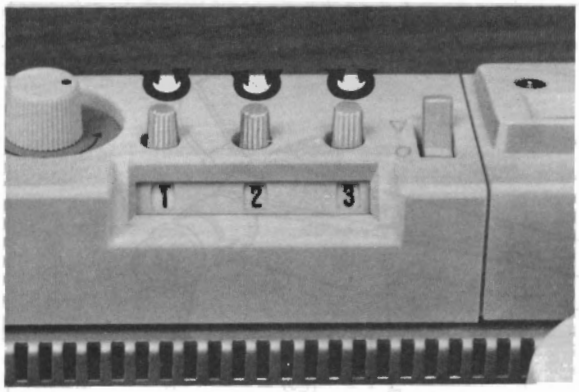
Set the Tension Dial.

Adjust the Tension Dial according to thickness of yarn as guided below by setting a number to the > shaped cut-out. The higher the number, the more pressure the Tension Dial gives to the yarn.
In this instance, the Tension Dial is set to 5 for thin yarn.

Fine yarn Nylon thread	6–7
Thin yarn	4–5
Medium yarn	3
Thick yarn	1–2

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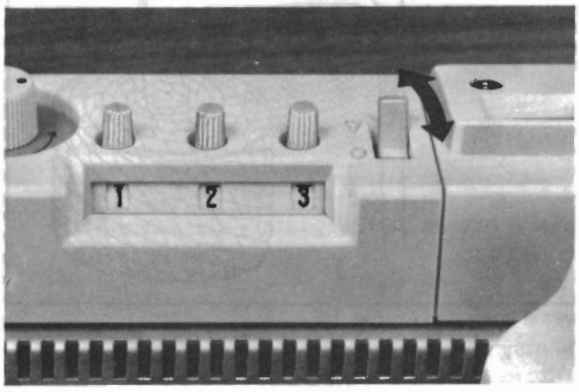
*Row Counter *



* As you knit by moving the Carriage back and forth, the number of rows knitted can be read in the row number window.

* To reset the Row Counter, turn the knobs in either direction.

The Row Counter Set Lever controls the Row Counter.

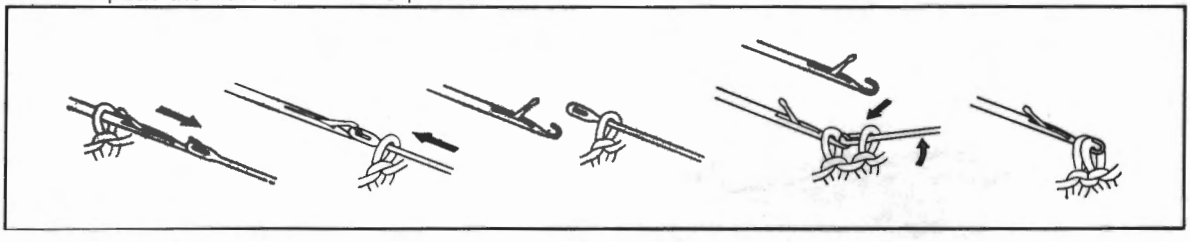


▼.....Operating position

●.....Locked position

*Transfer Tools and Tappet *

* The Transfer Tools are used for increasing or decreasing stitches, open-work, cable stitch, and transfering stitches. In pattern knitting, they are also used to bring the stitch behind the latch onto the hook and push the needle back to B position.

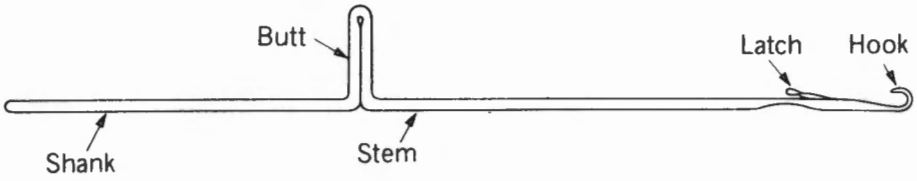


* The Tappet is used for picking up dropped stitches or for working rib and garter stitches.
Refer to page 90 for dropped stitches and page 83 for rib and garter stitch.

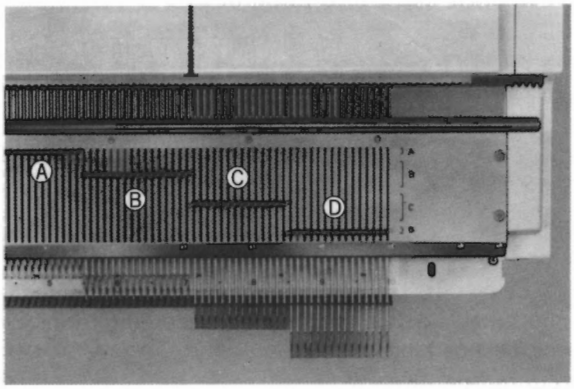
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Latch needle and needle positions

Latch needle



Needle positions



The letters A, B, C and D associated with brackets "]" are engraved at the both ends of the needle bed. The needles covered by each bracket function as below.

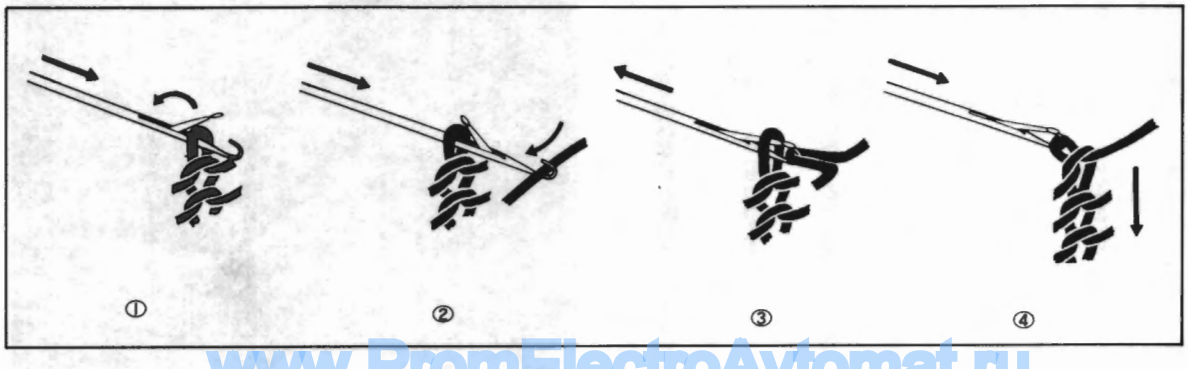
A position.....The needles in this position do not operate when the Carriage is moved across the needle bed. Align the needles in this position for resting or when the Knitter is not in use.

B position.....On most occasions the needles are positioned in B position for stockinet and pattern knitting, with the required Cam Lever and Side Lever settings.

C position.....The needles in this position knit stockinet only.

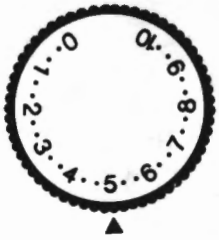
D position.....Holding position. The needles in this position are knitted back to B position when the Russel Levers are at **II** position.

How a stitch is formed on the machine.



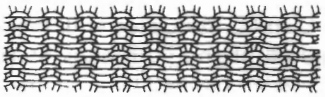
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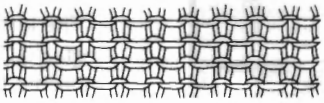
✻ Relation between the Stitch Dial and yarns ✻

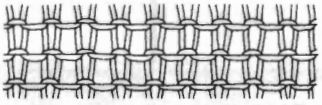


1. The Stitch Dial regulates the size of stitch. The Dial gives the numbers 1 through 10 and there are two dots in between each number, 30 different settings in total.
   The higher the number, the bigger the stitch size, and each selected number or dot must be set at the ▲ mark.

0.....5.....10



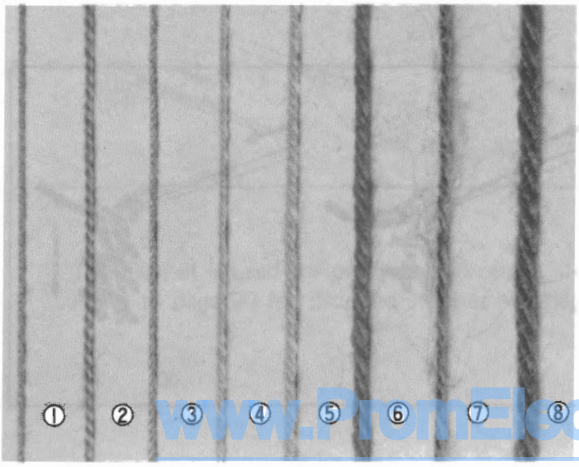




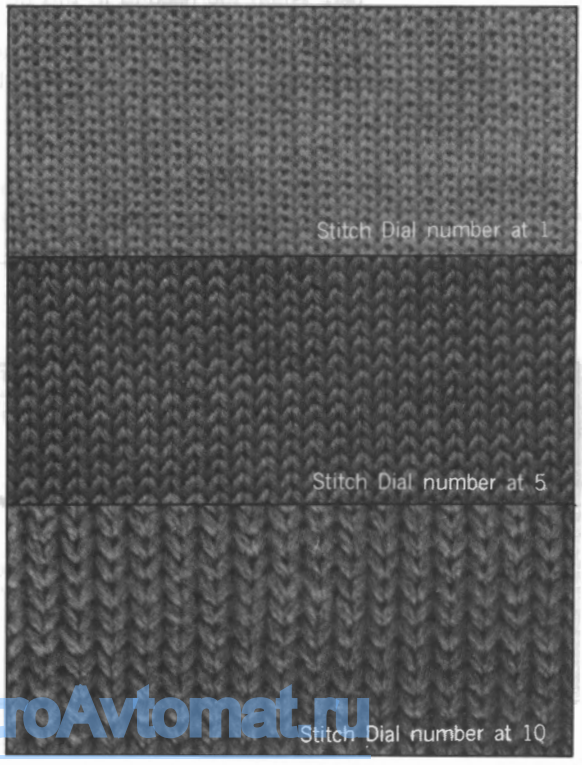
Kind of yarn	Stitch Dial number
① Cotton thread	2–3
② Thin yarn (2 ply)	2–3
③ Summer yarn	3–4
④ Light yarn (3 ply)	3–5
⑤ Medium yarn (4 ply)	4–6
⑥ Boucle	5–6
⑦ Thick yarn	6–9
⑧ Very thick yarn (Use every other needle)	6–7

2. The left table is a guidance for selecting a suitable Stitch Dial number according to thickness or kind of yarn.

(Actual size)

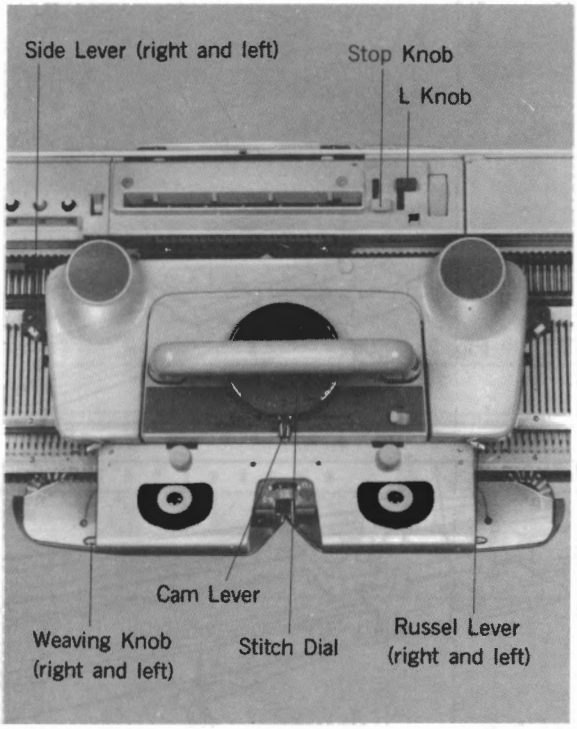


(Yarns and required Stitch Dial numbers)



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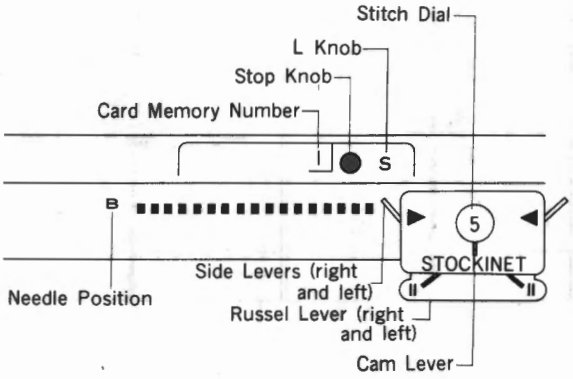
Start knitting



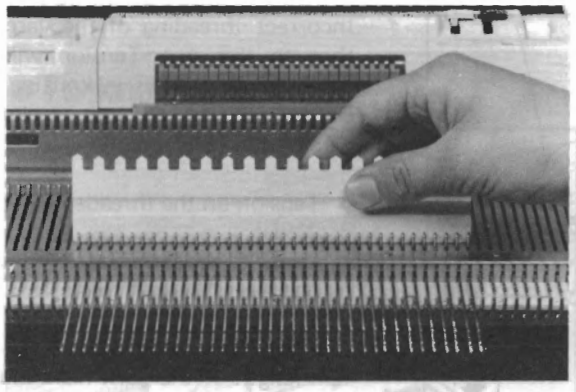
* Set the Carriage and pattern controls as follows.

Stop Knob .....● mark
L Knob .....S mark
Cam Lever.....STOCKINET
Stitch Dial.....5 (for medium yarn)
Side Levers.....▲ mark (Both)
Russel Levers.....II (Both)
Weaving Knobs....O (Both)

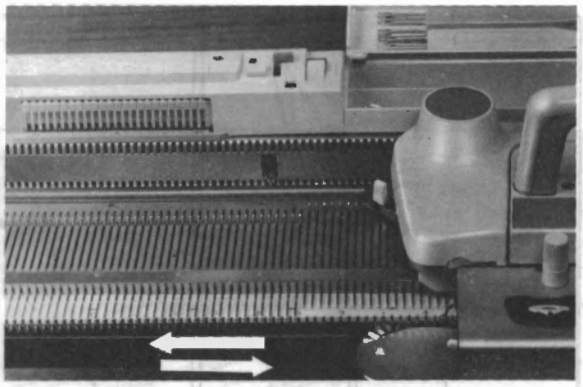
* The Stop Knob should be set at the ● mark. (Do not position it half way.)



Align the needles.



* Using the smooth side of the Needle Pusher, bring the required number of needles to D position on both sides of the centre 0 mark on the needle bed.



* Move the Carriage slowly from side to side across the Needle Bed to line the needles in B position, leaving it on the right side of the needle bed.

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＊Thread the Yarn Feeder＊

* The Yarn Feeder is divided into two sections, ① and ②. In stockinet knitting, thread the Feeder ①.

(1) Open the Yarn Feeder Gate, as shown, towards the left. (Fig. 1)

(2) Take yarn from the Yarn Clip. (Fig. 2) With both hands, insert yarn into the round opening in Yarn Feeder ① (Fig. 3) and close the Gate. (Fig. 4)

(3) Pull the yarn to the Clamp and tie it around the Clamp Screw. (Fig. 5)

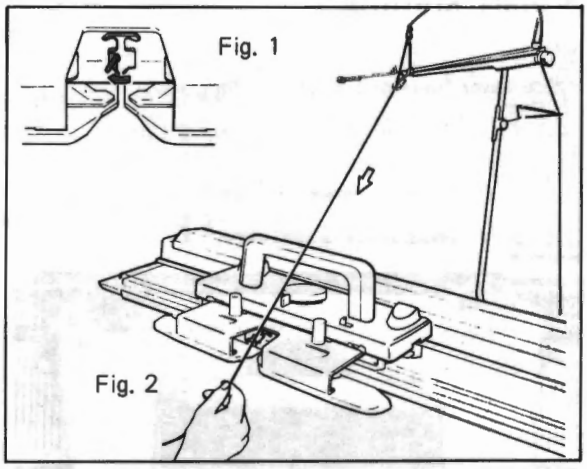


Fig. 3

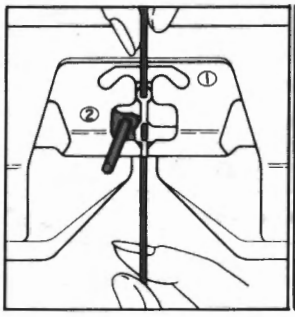
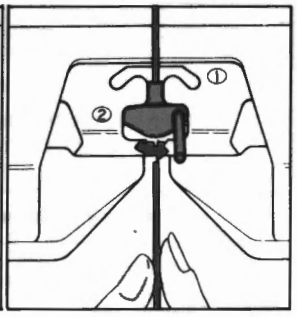
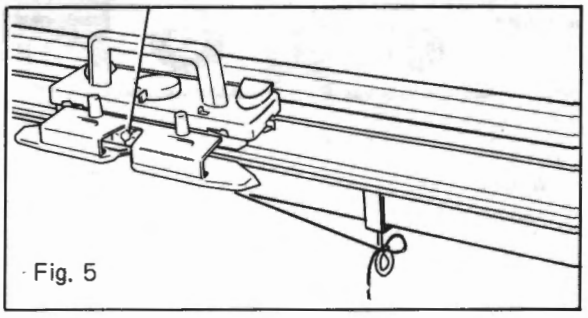
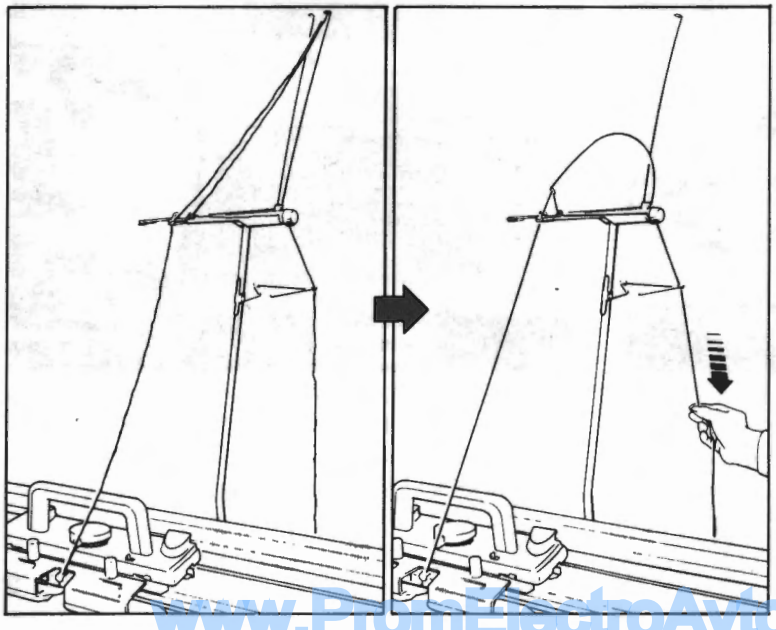


Fig. 4





TO THREAD YARN CORRECTLY ON THE MACHINE



Incorrect threading of the yarn through the Auto-Tension will never assure success in knitting. Before starting to knit, make sure of the following.

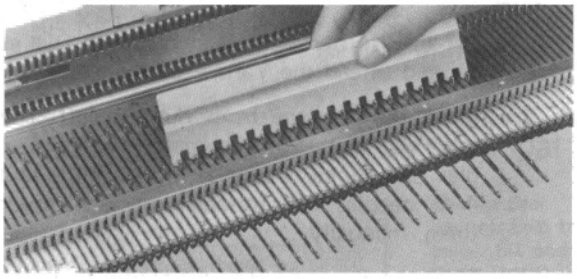
* Tension on the threaded yarn.

* Check to see if the yarn comes out from the ball freely.

It is advisable to pull out a certain length of the yarn from the ball before starting to knit.

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✻Cast on – Method 1 (Closed edge cast on)✻

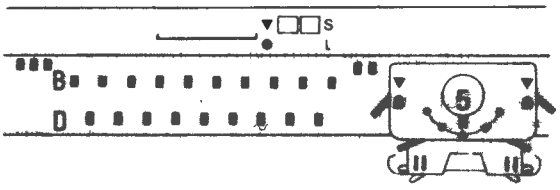


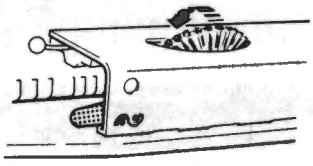
(1) Using the Needle Pusher, align the needles in B position and D position alternately as shown.

(2) Set the Carriage controls.

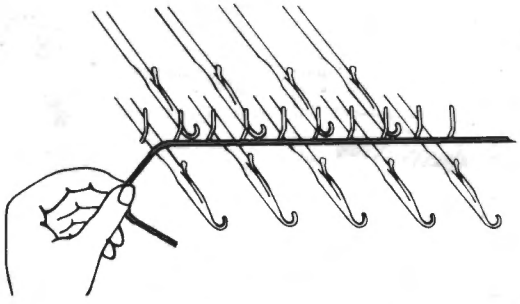
Cam Lever.....STOCKINET
Stitch Dial..... 5
Russel Levers II
Side Levers..... ■
Weaving Knobs.....

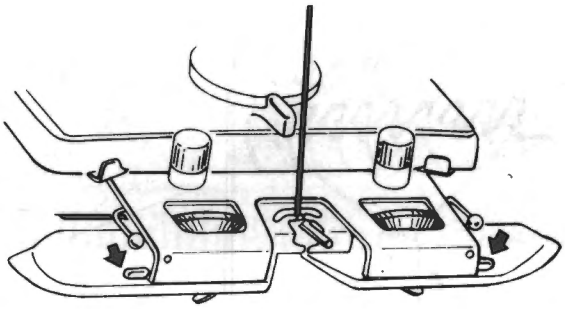
* To set the Weaving Knob to mark, slightly push it forward, then it falls down.





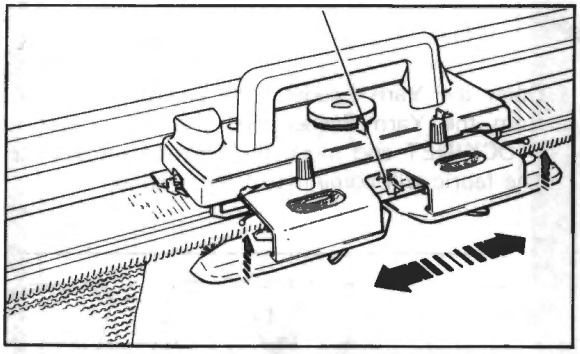
(3)–1 Hold the yarn end and lay it over the needles in D position.





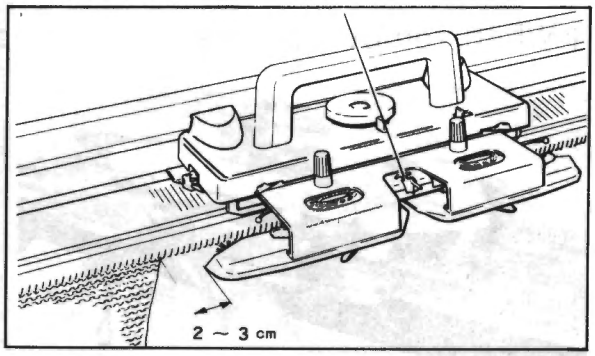
(3)–2 Slowly move the Carriage across four times. Now you have completed the cast on.

✻To knit in stockinet✻



Side Levers.....▲
Weaving Knobs.....○

Keep moving the Carriage back and forth.

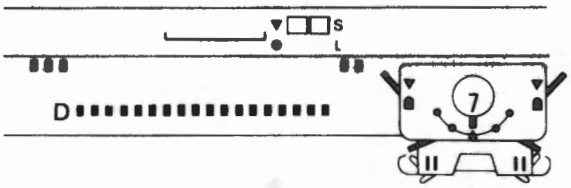


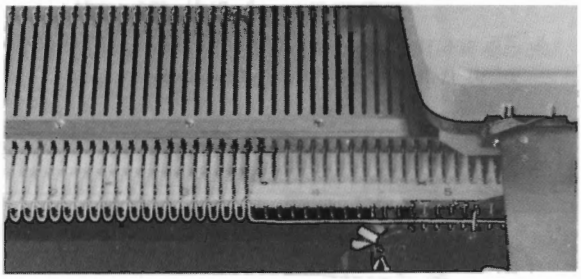
Move the Carriage at an even speed ensuring it has passed the last knitted needle by 2–3cm. before changing direction.

If the Carriage has jammed and will not move, push the Release Lever. (Refer to 86)

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＊Cast on – Method 2 (Open edge cast on)＊





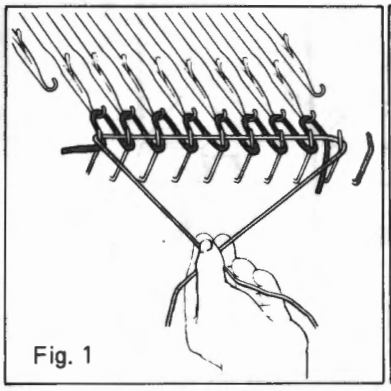
(1) Set the Knitter as illustrated (Stitch Dial at 7), and thread the Yarn Feeder.

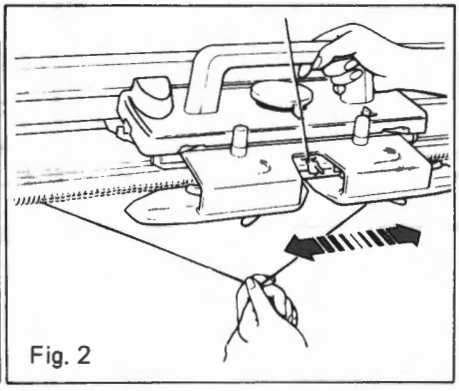
(2) Move the Carriage from right to left. The yarn will be hooked alternately by the needles and Sinker Posts. If loops of the end 4–5 needles are formed smaller, correct them. manually.

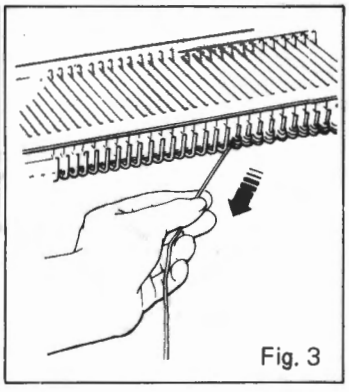
(3) Place the Ravel Cord across the knitted yarn between needles and Sinker Posts and hold the both ends. (Fig. 1)

(4) Pull the Ravel Cord tight and slowly move the Carriage knitting 6–7 rows. (Fig. 2)

(5) Pull out the Ravel Cord. (Fig. 3)

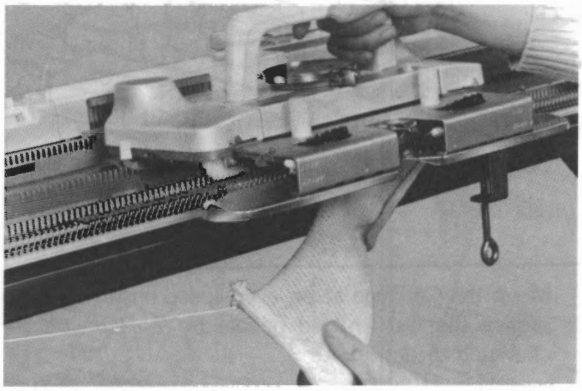

Fig. 1


Fig. 2

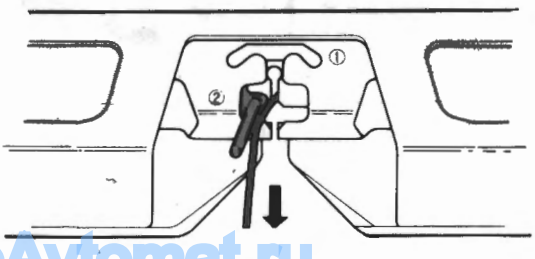

Fig. 3

* To continue to knit in stockinet, set the Stitch Dial back to 5 for medium yarn.

＊When removing the knitted fabric＊



Open the Yarn Feeder Gate and pull yarn out from the Yarn Feeder. Set the Cam Lever to STOCKINET and move the Carriage across once. The fabric will come off of the needles.



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3. KNIT CONTOUR

The Knit Contour tells you where to increase/decrease stitches or the number of stitches to be increased/decreased while knitting a garment with the use of the Pattern Papers.

✻Names and function of principal parts✻

Pattern Paper Insertion Slit

Paper Holder
Holds the Pattern Paper against the roller while knitting with the Pattern Paper.

Clip
Holds the Stitch Scale.

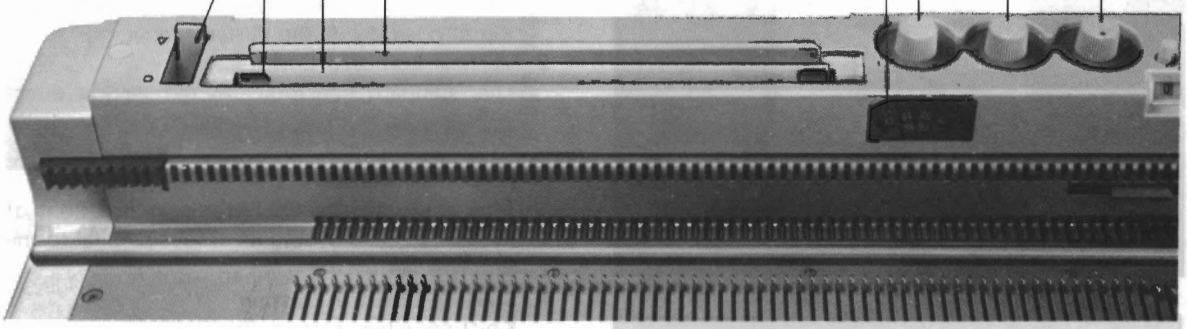
Paper Lever
Used to set the Pattern Paper in position.

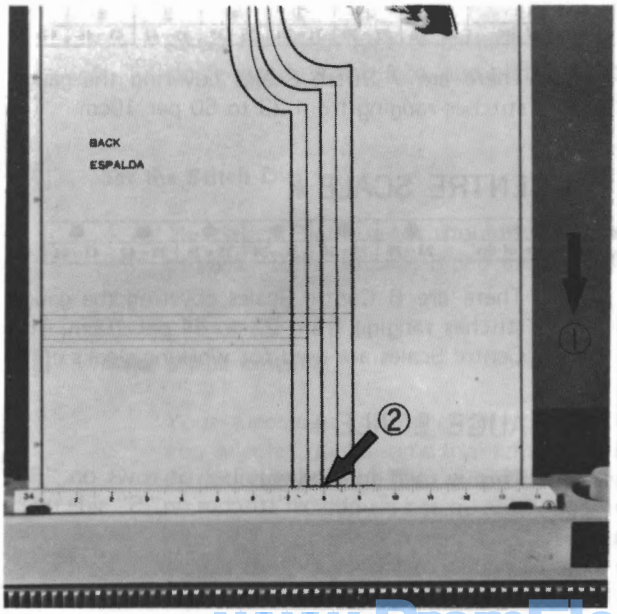
Change Dial
Set this Dial to 30–60 when you are going to knit at gauge rows below 60, and set at 61–120 when the gauge rows are above 61
Set this Dial to ◀ mark to turn the Row Number Dial or to stop the feeding of the Pattern Paper.

Feeding Dial
The Pattern Paper is fed to either direction by turning this Dial.

Row Number Dial
The number of rows are adjusted by this Dial to the gauge rows counted on the tension swatch.

Row Number Window
Indicates the gauge rows.



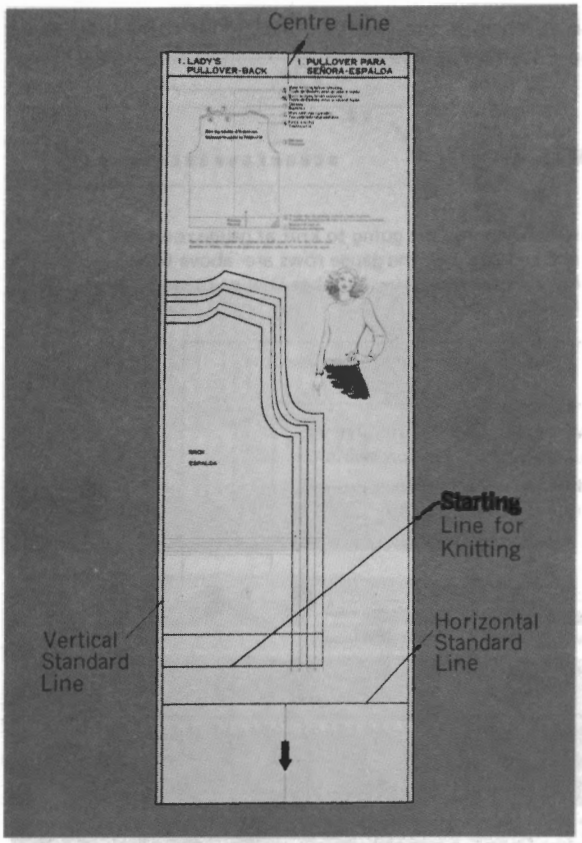


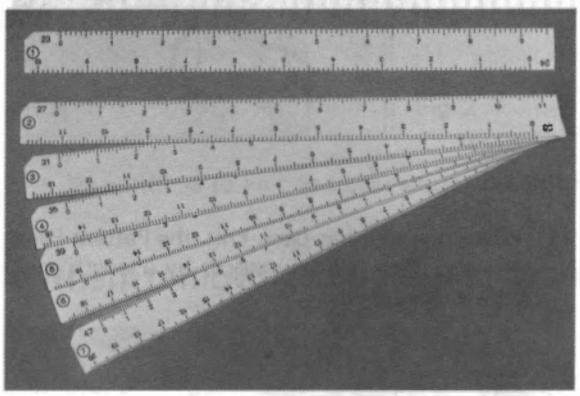
① When one row has been knit, the Pattern Paper has also been fed downwards by a length equal to a stitch length.

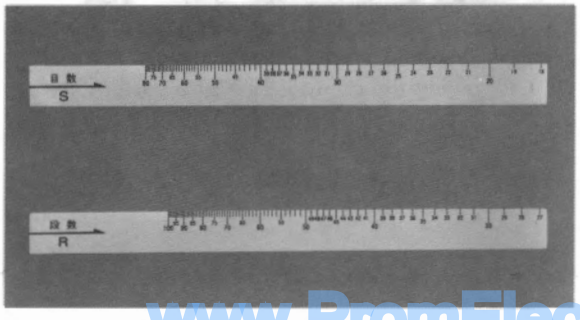
② Read the number of stitches you are knitting on the Stitch Scale. Decrease or increase stitches following the contour line of a pattern style.

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* Accessories *







* PATTERN PAPER *

* 20 sheets of Pattern Paper representing 19 different patterns come with the Knitter. Each pattern is drawn to ½ scale with 2–5 sizes which are classified ABCD & E.

Lady's .....Pullover, cardigan, raglan sleeve pullover, skirt (2 panelled and 4 panelled) one-piece dress, slacks.
Man's.....Pullover, cardigan, raglan sleeve pullover.
Child's.....Pullover, cardigan, raglan sleeve pullover, skirt, top, leggings, briefs, slacks coat.
Baby's.....Rompers.

* The following standard lines are drawn on the Pattern Paper.

1. **Centre Line**
   This line is used as a guide to adjust the horizontal position of the Pattern Paper.
2. **Vertical Standard Line**
   This standard line indicates the vertical directions on the pattern. This line should be adjusted so as it meets with the 0 on the Stitch Scale.
3. **Horizontal Standard Line**
   This line indicates the horizontal directions of the pattern and should be always parallel to the Stitch Scale.
4. **Starting Line for knitting**
   Knitting is begun from this line.

* STITCH SCALE *

Scale No.	①	②	③	④	⑤	⑥	⑦
Range of Sts.	23~26	27~30	31~34	35~38	39~42	43~46	47~50

There are 7 Stitch Scales covering the gauge stitches ranging from 23 to 50 per 10cm.

* CENTRE SCALE *

Scale No.	●	●	●	●	●	●
Range of Sts.	23~26	27~30	31~34	35~38	39~42	43~44

There are 6 Centre Scales covering the gauge stitches ranging from 23 to 44 per 10cm. The Centre Scales are used for working slacks etc.

* GAUGE SCALE *

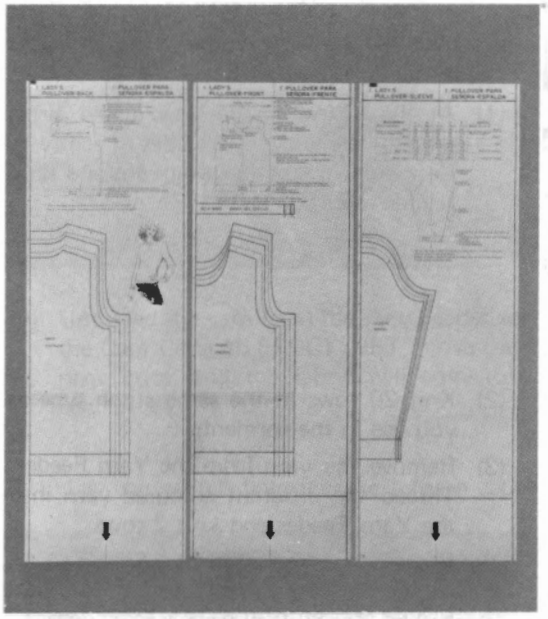
This is used to read number of rows on "R" side up and number of stitches on "S" side up.

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Knit a garment on the Knit Contour.

The following information [1] – [11] is a guidance for knitting a garment.
For actual knitting, refer to page 33 – LET'S KNIT LADY'S PULLOVER.

[1] Select a pattern style and pattern size.



* Select a pattern style to your choice.
* Mark the selected pattern size with a colour pencil to distinguish the size from the other sizes.

Optional Knit Pattern Paper sets are available.

[2] Prepare yarn

Yarn of your choice and sufficient amount of yarn.

[3] What stitch type do you prefer?

Select the stitch type or pattern knitting you prefer to use among stockinet, tuck, slip, knit-in, single motif, punch lace, and platting, etc.

[4] Set the Stitch Dial

The Stitch Dial number should be determined according to the type of knitting and the kind of yarn. (Refer to page 8 and the pages for pattern knitting.)

[5] Make a trial knitting.

Your success in knitting greatly depends on taking a correct tension gauge. So, with the yarn you selected, make some trial knitting to see if the recommended Stitch Dial number is suitable or not. If the Stitch Dial number is not suitable, the knitting would result in the following:

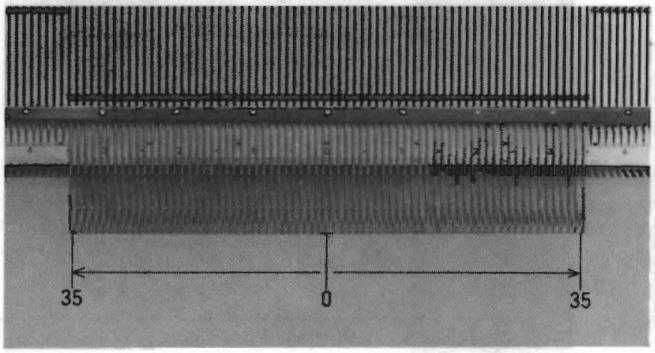
Higher number..... Looser knitting
Lower number..... Tighter knitting

Adjust the Stitch Dial to obtain suitable stitch formation.

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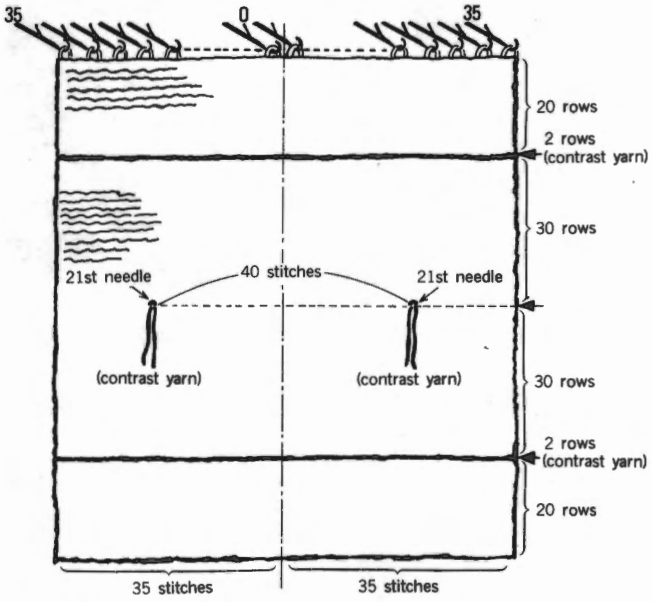
Knit a tension swatch.

Tension gauge (number of rows and stitches) is measured by use of the Gauge Scale as follows.



* Prepare the same yarn as you knit a garment and some amount of different coloured yarn for marking.

(1) At the centre of the Needle Bed, bring out 35 needles on both sides of centre 0. Cast on with the knitting yarn and knit. (Refer to page 11–12.)



(2) Knit 20 rows in the same stitch type as you use in the garment.

(3) Remove the yarn from the Yarn Feeder. Thread the different coloured yarn into the Yarn Feeder and knit 2 rows.

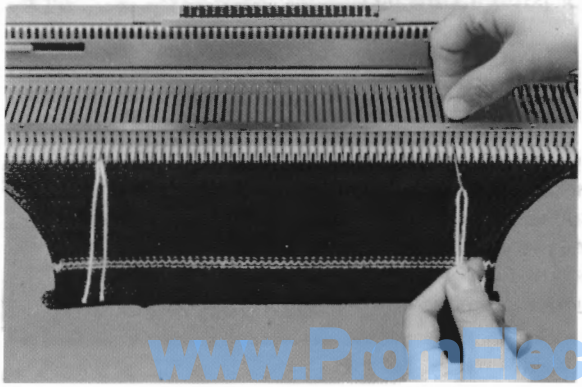
(4) Remove the yarn from the Yarn Feeder. Re-thread the knitting yarn into the Yarn Feeder and knit 30 rows.

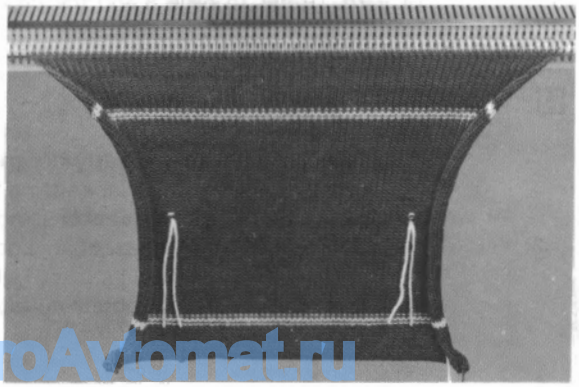
(5) Bring out the 21st needle on both side of 0 to D position by hand. Put a different coloured yarn, cut in a short piece, onto the hook of each needle and push the needles back to B position. Consequently the stitches on the 21st needles have been knitted in a different coloured yarn.

(6) Continously knit 30 rows.

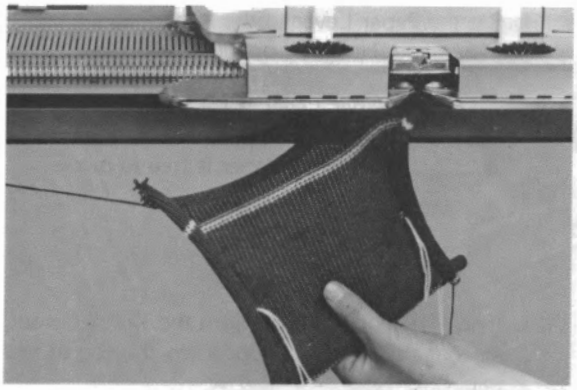
(7) As in (3), knit 2 rows with a different coloured yarn.

(8) Remove the different coloured yarn and knit 20 rows with the knitting yarn.

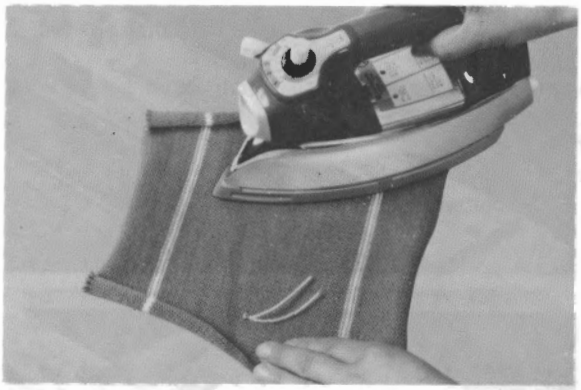




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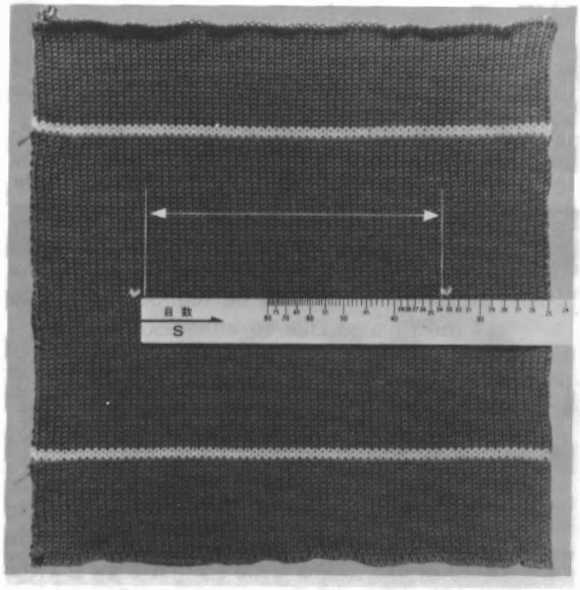


(9) Unthread the yarn from the Yarn Feeder, setting the Cam Lever to STOCKINET, move the Carriage once, and the fabric will come off the needles.



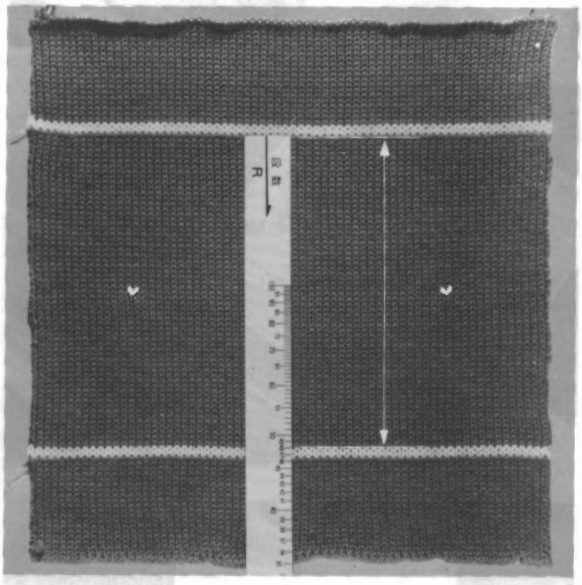
(10) Steam iron the tension swatch and make it as if a finished garment.

(11) Lay the swatch flat and take tension gauge using the Gauge Scale.



Stitch (Horizontal)

Place the Gauge Scale, with the "S" side up, onto the fabric so as the left end of the Scale is touching the inside of the stitch in a contrast yarn. Measure to the point of the other contrast stitch and the number which corresponds with this stitch. The Scale should be read from the side indicated by the arrow, i.e. from the left side.

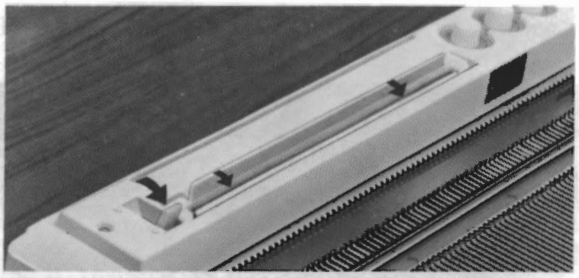


Row (Vertical)

Place the Gauge Scale, with the "R" side up, onto the fabric so as it covers the length in between the rows knitted in a contrast yarn. Measure this length and the number indicated on the Scale. The Scale should be read from the side indicated by the arrow.

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6 Set the Pattern Paper.



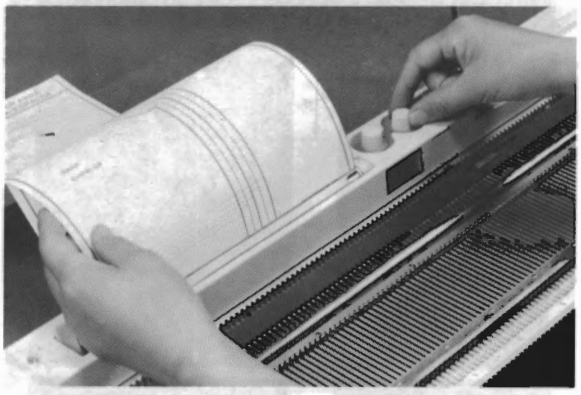
(1) Set the Paper Lever to the ● mark.
(The Paper Holder is opened.)

When the Paper Lever is set at
▼.....the Pattern Paper is securely held.
●.....the Pattern Paper is free to move.



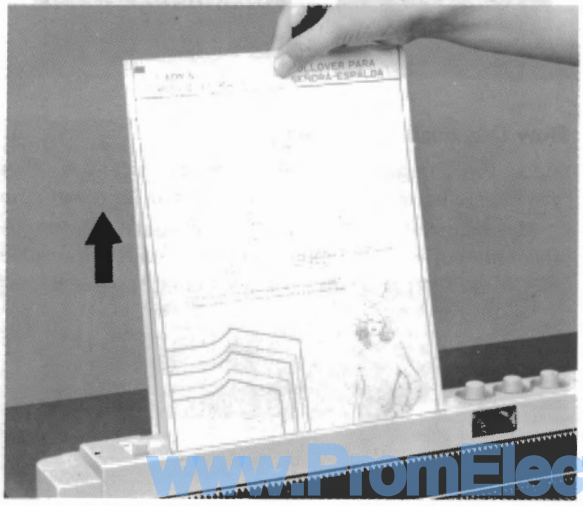
(2) Insert the Pattern Paper into the Knit Contour so that the title will appear on the top of the paper.

Note: * The Pattern Paper should be inserted vertically.

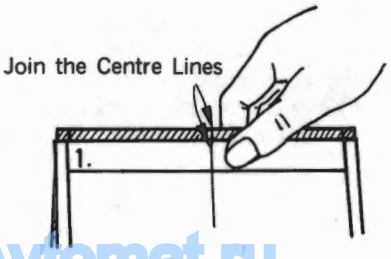


(3) After you have inserted the Pattern Paper 5–6 cms., set the Paper Lever back to ▼ mark. Feed the Pattern Paper by turning the Feeding Dial until the bottom end of the Pattern Paper comes out from the back.

* If the Change Dial is set at ◀ mark, the Pattern Paper can not be fed. So, be sure to set the Change Dial to either 30–60 or 61–120.

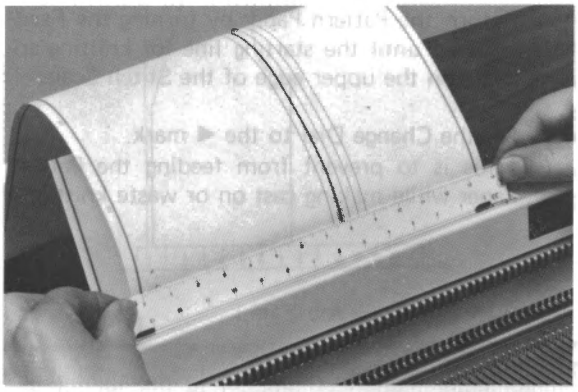


(4) Place the Paper Lever to the ● mark. Hold both ends of Pattern Paper, joining the Centre Line of front and back so that they are in a straight line. Afterwards, set the Paper Lever to the ▼ mark.



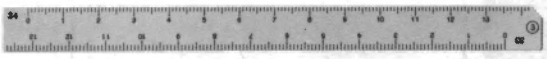
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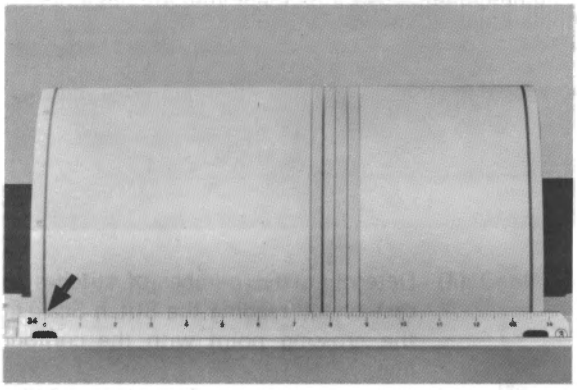
7 **Select a Stitch Scale and set the Row Number Dial according to the tension gauge taken.**



*** Set the Stitch Scale.**

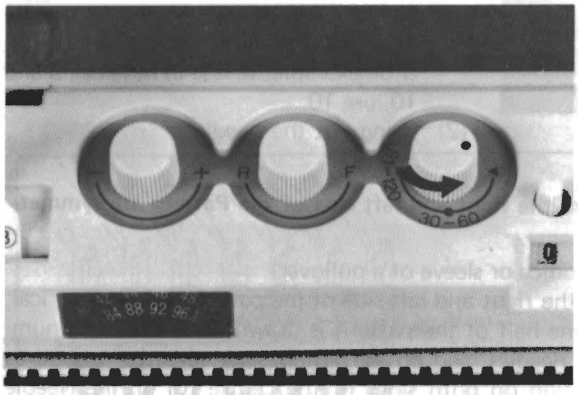
(1) Select the Stitch Scale with the number equal to that of the stitches counted on the swatch. (For example, if the number of stitches read on the Gauge Scale was 34, the Stitch Scale having 34 at the end should be selected.)





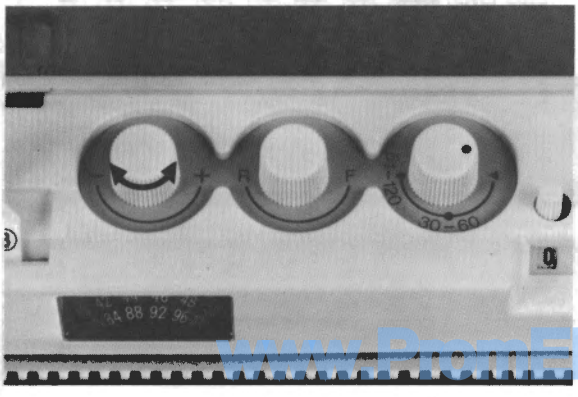
(2) Insert the selected Stitch Scale into the Clips of the Paper Holder so as the selected number is facing you.

(3) Adjust the Stitch Scale to fit its 0 mark with the Vertical Standard Line.



*** Set the Row Number Dial.**

(1) Set the Change Dial to ◀ mark.

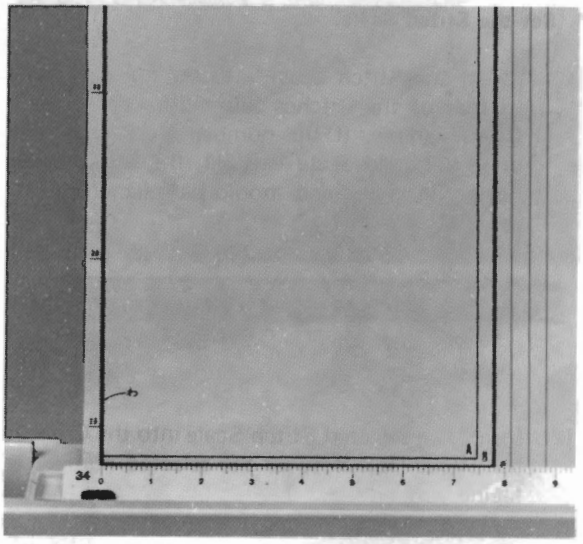


(2) Next, adjust the number of gauge rows to the pointer in red in the row number window, by turning the Row Number Dial. The row numbers are indicated in two sections. Be sure to read the section corresponding to the 30–60 or 61–120 rows depending on the gauge rows counted on your swatch.

Note: * When you turn the Row Number Dial, be sure to set the Change Dial at ◀ mark.

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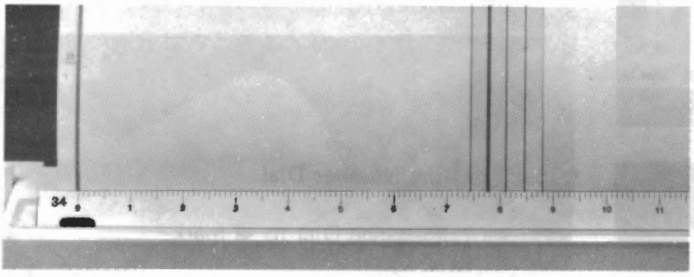
8 **Adjust the Pattern Paper using the starting line.**



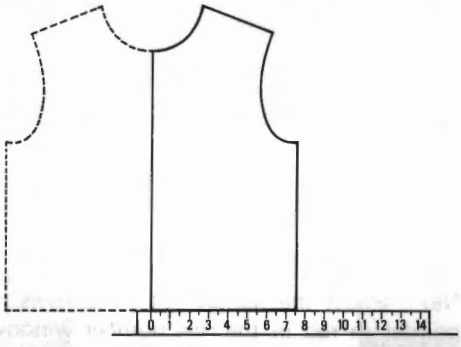
* Return the Pattern Paper by turning the Feeding Dial until the starting line for knitting appears on the upper edge of the Stitch Scale.

* Set the Change Dial to the ◀ mark.
(This is to prevent from feeding the Pattern Paper while making cast on or waste knitting.)

9 **Push up required number of needles.**

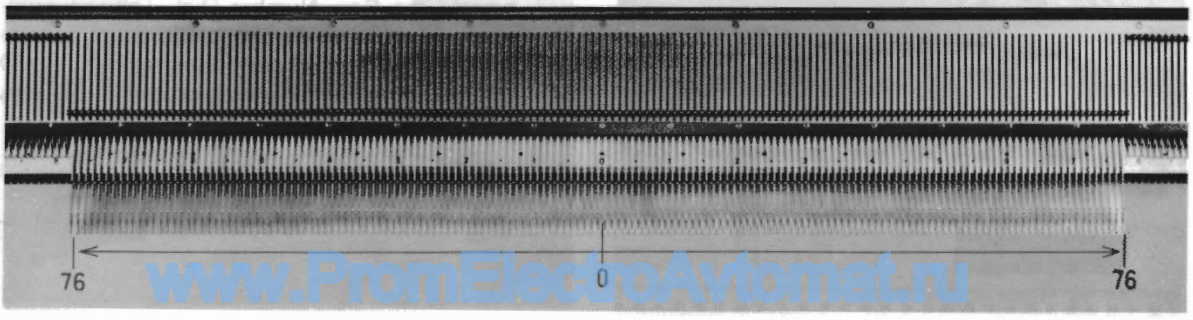


(1) Determine the number of stitches to cast on by reading the Stitch Scale at the crossing point with the contour line.
* If the contour line of the Pattern Paper comes in between two marks on the Scale, use the larger of the two marks. (For example, if it is in between 9 and 10, use 10.
(2) Bring out the needles.

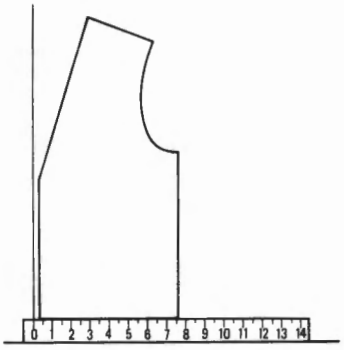


(In case the right and left side of the Pattern are symmetrical.)

(For bodice or sleeve of a pullover)
When the right and left side of the pattern are symmetrical, only one half of the pattern is drawn. Therefore, the number of needles read on the Stitch Scale must be pushed to B position on both sides of the centre (0) on the Needle Bed.



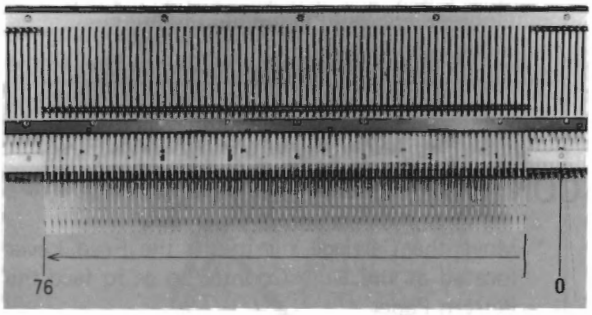
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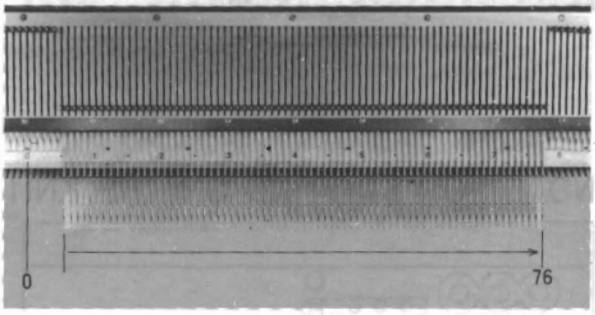
(In case the right and left side of the pattern are not symmetrical.)

(For the front of a cardigan, etc.)
Push up the number of needles read on the Stitch Scale either on the right or left side of centre (0) on the Needle Bed. It is advisable to knit the right front on the right side and the left front on the left side of the centre (0).

Left front ····· Knit side is used.



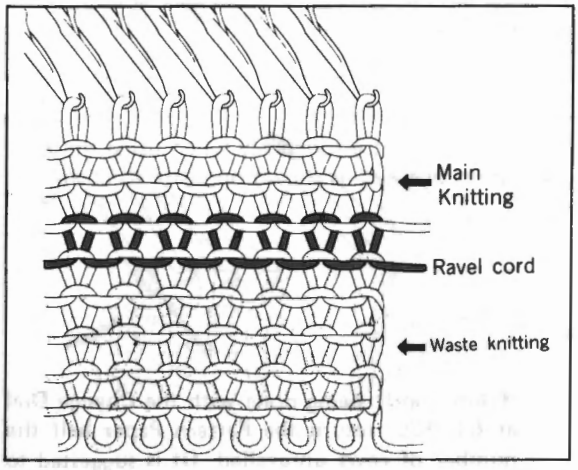
Right front····· Knit side is used.



Note:* For slacks and leggings, use the Centre Scale which has 0 in its centre.

10 **Cast on.**

Cast on referring to page 11.



If edge stitches for main knitting are required to be open, work as follows:—

(1) Cast on with waste yarn and knit 8—10 rows in stockinet.

(2) Thread the Ravel Cord and knit one row.

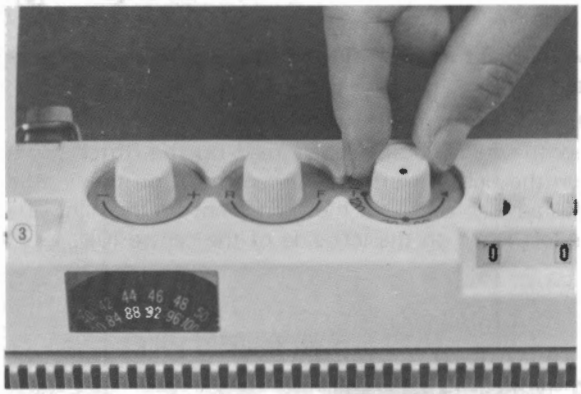
(3) Thread main yarn and start main knitting.

* When working ribbing, joining or picking up stitches, etc. pick up loops on the first row of the main knitting.

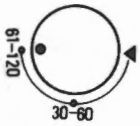
* By pulling out the Ravel Cord, waste knitting can be separated from main knitting.

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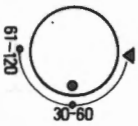
Prior to the main knitting, be sure to set the Change Dial as follows.



When the gauge row is within 61–120.....

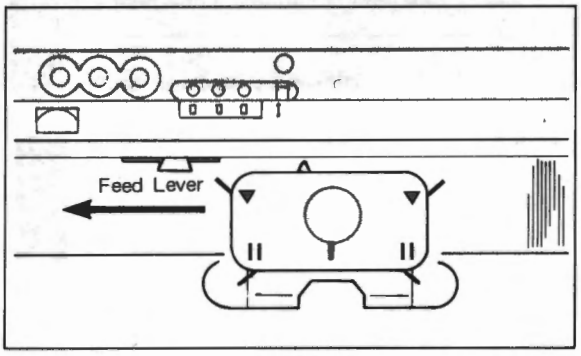


When the gauge row is within 30–60.....

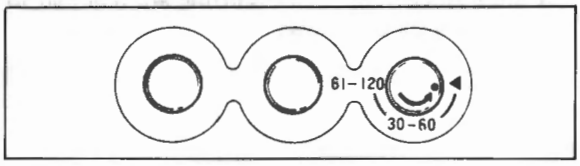


Note: * When making waste knitting in the middle or at the end of knitting, or stopping the Pattern Paper, set the Change Dial to the ◀ mark.

NOTE FOR KNITTING ON THE KNIT CONTOUR



* Move the Carriage till it hits the Feed Lever located at the Row Counter so as to feed the Pattern Paper.



* Set the Change Dial to the ◀ mark in stopping the advance of the Pattern Paper and for waste knitting.

If you have knit erroneously when using the Knit Contour, proceed as shown opposite to correct it.

(1) Unravel the rows incorrectly knitted.

↓

(2) If pattern knitting is being done, memorize the pattern for the row to be corrected.

↓

(3) Return the Pattern Paper as many rows as the rows unravelled counting clicking sound by turning the Feeding Dial in the "R" direction.



* **If knitting is being done with the Change Dial at 61–120, return the Pattern Paper half the number of rows unravelled. (It is suggested to unravel even number of rows.)**

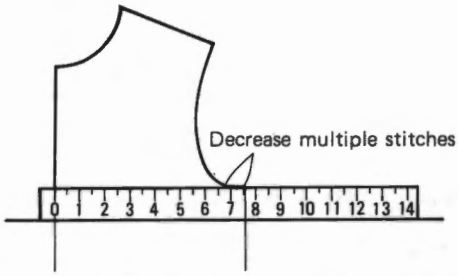
* **If the Auxiliary Feeding Cam is in use, return the Pattern Paper twice the number of rows unravelled.**

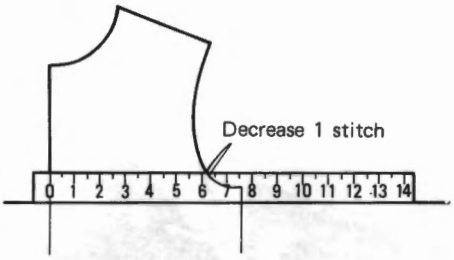
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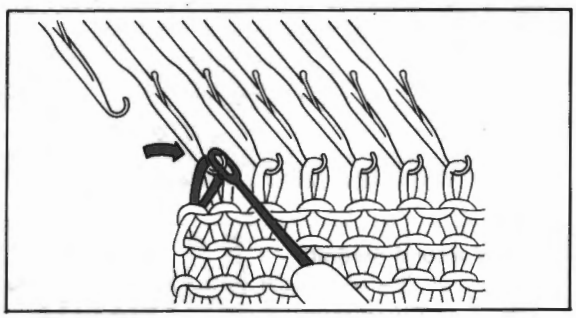
11 **Knit following the contour line on the Pattern Paper.**

Decrease stitches for the arm hole and neck opening. Increase stitches for the sleeve seam.

Decreasing stitches

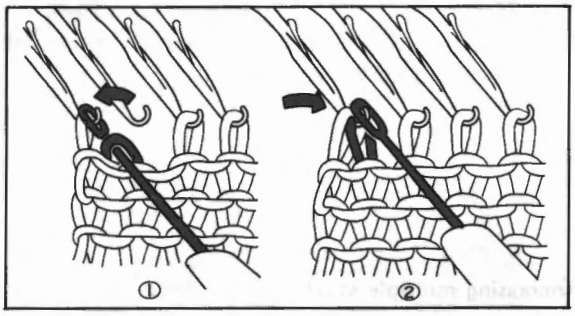






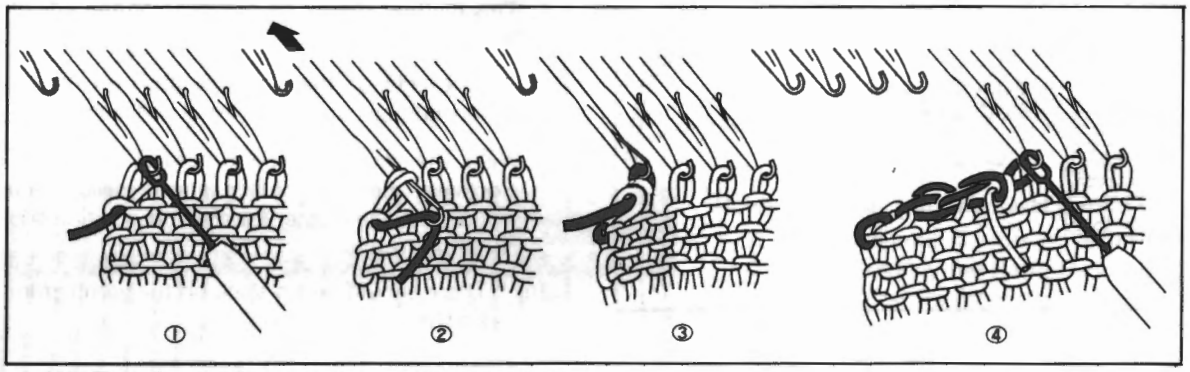
(Decrease 1 stitch at the end.)

* **The first method.**
With a Transfer Tool, place the end stitch onto its adjacent needle. Push back the empty needle to A position.



* **The second method.**
(1) Transfer the second stitch onto the end stitch.
(2) Transfer both sitches onto the inside empty needle. Push the end needle to A position.

(Decreasing multiple stitches at the end.)

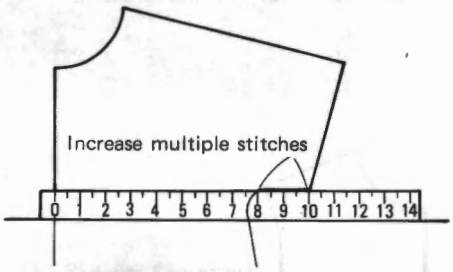


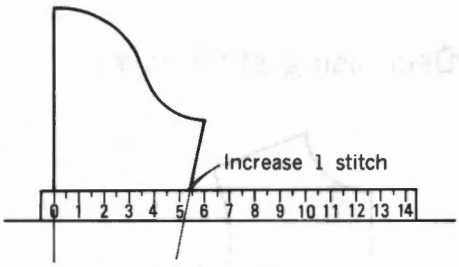
(1) Transfer the first stitch onto the second stitch.
(2) Push the second needle to D position to have the double stitch behind the latch, and lay the yarn inside the needle hook.
(3) Push back the needle.
(4) Repeat (1)—(3) as many times as required for the stitches to be decreased.

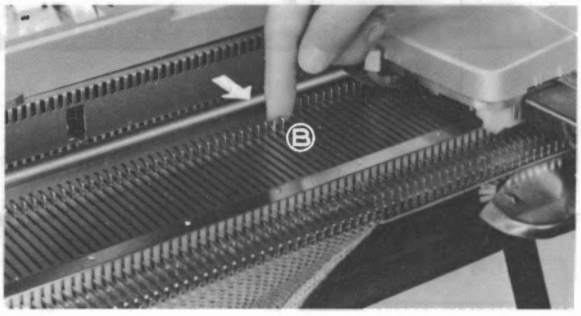
* For the side without the yarn end, use another yarn to do the above procedure.

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Increasing stitches

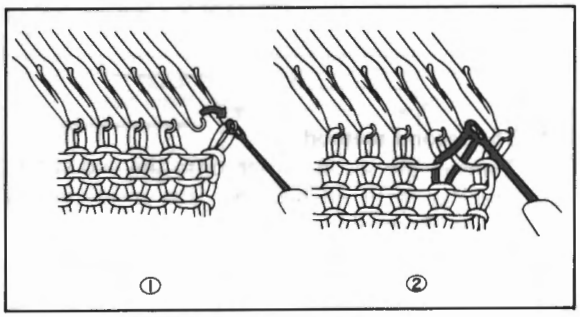






(Increase 1 stitch at the end.)

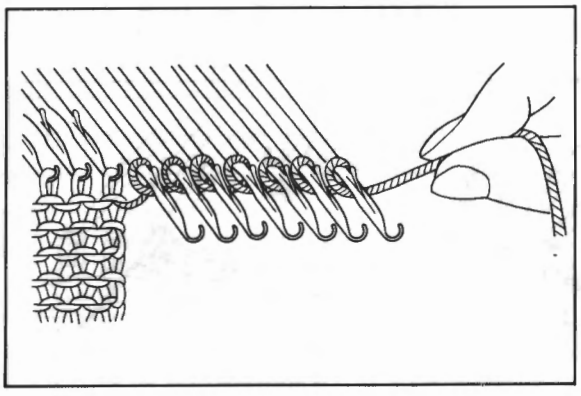
* **The first method.**
Push up 1 empty needle to B position on the side of Carriage and continue knitting.



* **The second method.**

(1) Transfer the end stitch onto the hook of the next empty needle leaving the second needle vacant.

(2) Pick up the loop below the second stitch and place it onto the empty needle.



(Increasing multiple stitches at the end.)

* This method should be practiced on the side of the Carriage.

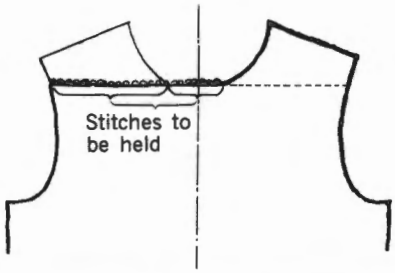
(1) On the side of the Carriage, push up the required number of needles to D position.

(2) Wind the yarn around the needles in an anti-clockwise direction. After all the needles are wound, set the Russel Levers to **II** position and continue to knit.

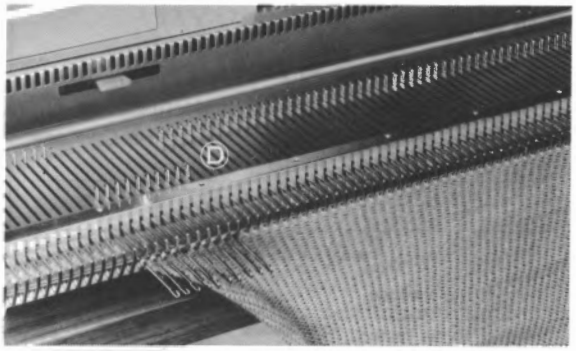
Note: * There should be no slack on the yarn before knitting.

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Holding stitches

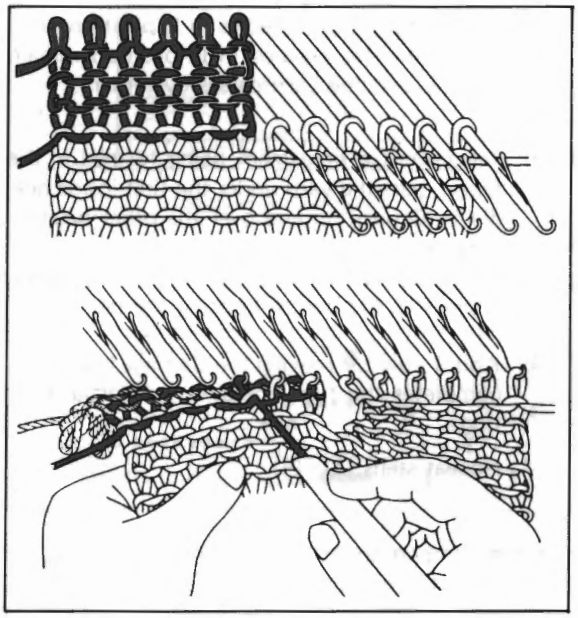


* When knitting separately as for the neckline, etc. the holding stitch method should be applied for the stitches not to be knitted for a time.



(In case of holding stitches with needles in D position.)

* Push up to D position the required number of needles not to be knitted. Set the Russel Levers to **I** position.



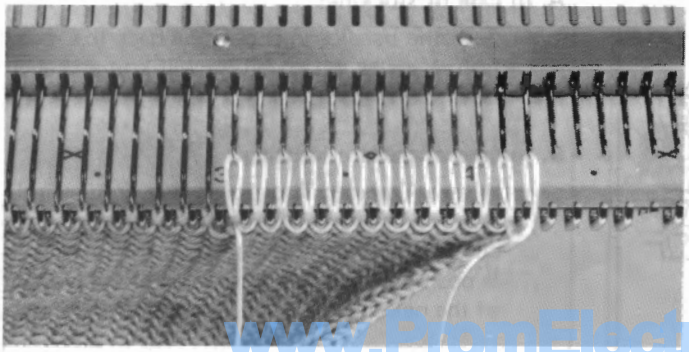
(In case of holding stitches with waste knitting.)

* Set the Cam Lever at STOCKINET, Russel Levers at **I** position.

(1) For the stitches that are to remain on the Knitter, push up the needles to D position, leaving the needles for those to be removed in B position.

(2) Thread the Yarn Feeder with a waste yarn of different colour and knit several rows of waste knitting. Then remove the waste knitting.

(3) When re-knitting the stitches held with waste knitting, pick up the stitches on the last row of the main knitting and place them on the Knitter and continue knitting.

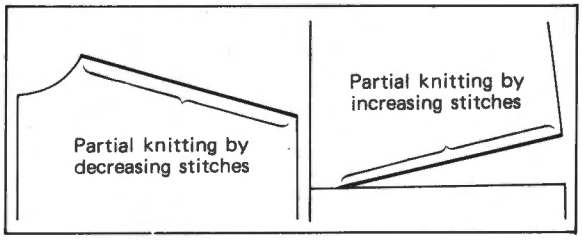


Holding stitches with the Ravel Cord.

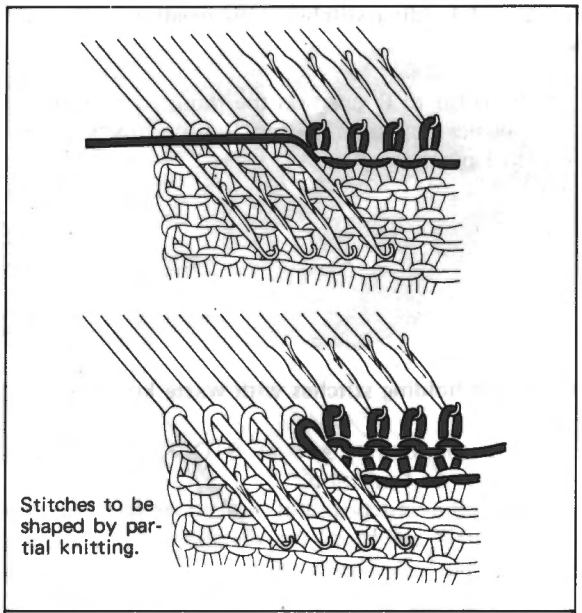
* Push the required number of needles to D position and lay the Ravel Cord across the hooks. Starting from the end needle, manually knit the needles one by one to A position.
In order to knit again, with both hands pull both ends of the Ravel Cord bringing the needles to B position and remove the Ravel Cord.

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＊Partial knitting＊



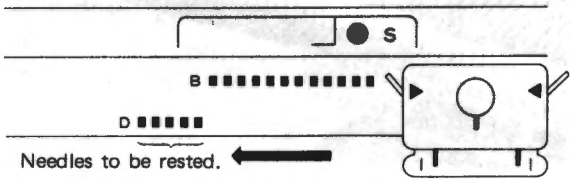
Partial knitting is a practical method for shaping a gentle slope, such as a shoulder, back of slacks and so on, by decreasing or increasing stitches.



How to decrease.

Set the Russel Levers to the **I** position.

(1) Push up the needles to be decreased, to D position, on the opposite side of the Carriage.

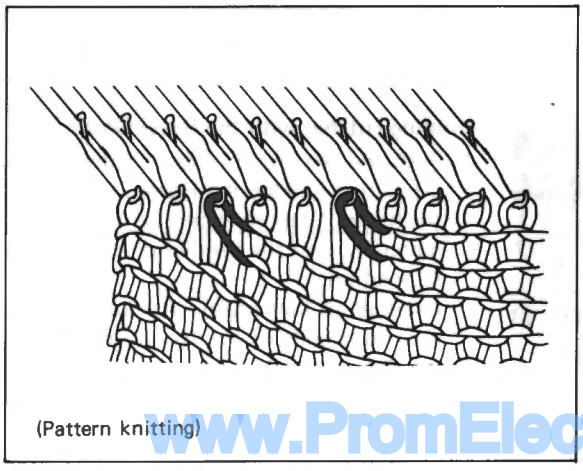


(2) Knit 1 row. (The needles in B position knits the yarn. The needles in D position remain inactive and the yarn passes over them.)

(3) To prevent a hole from being formed in the fabric, pass the yarn under the first inside needle in D position and over the other needles. (Fig. A)
(If partial knitting is required on both sides, apply step (1) before knitting the next row.)

(4) Knit 1 row by moving the Carriage back. This completes the first operation of partial knitting.

* Repeat steps (1)–(4).



At the completion of partial knitting, work as follows to knit continuously.

A. In case of stockinet

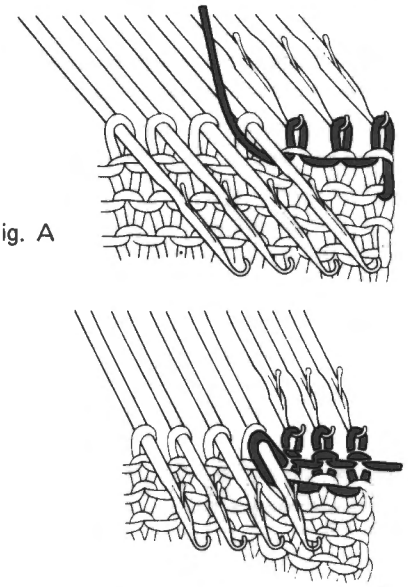
Push the needles in D position back to C position. Needles in C position will knit and align in B position.

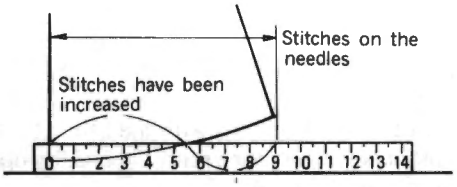
B. In case of pattern knitting

With a Transfer Tool, push the needles in D position towards B position placing their stitches onto the hooks. Align the needles in B position. (See the illustration at the bottom of the next page.)

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Fig. A





Stitches in D position.

How to increase.

Set the Russel Levers to the **I** position.

(1) On the side opposite the Carriage, push up the needles for the width to be shaped by partial knitting to D position.

* In case of casting on with waste yarn, knit one row with main yarn before performing this manner.

(2) Knit 1 row.
(The needles in B position knit the yarn. The needles in D position remain inactive and the yarn passes over them.)

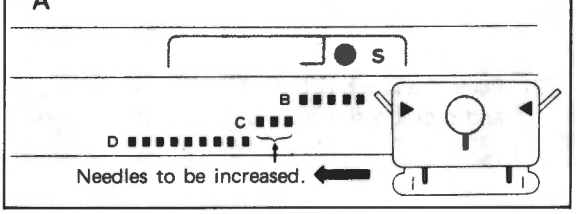
(3) To prevent a hole from being formed in the fabric, pass the yarn under the first inside needle in D position and over the other needles. (Fig. A)

(If partial knitting is required on both sides, apply step (1) before knitting the next row.)

(4) Knit 1 row by moving the Carriage back.

(5) Before knitting the next row, work on the side opposite the Carriage as follows.

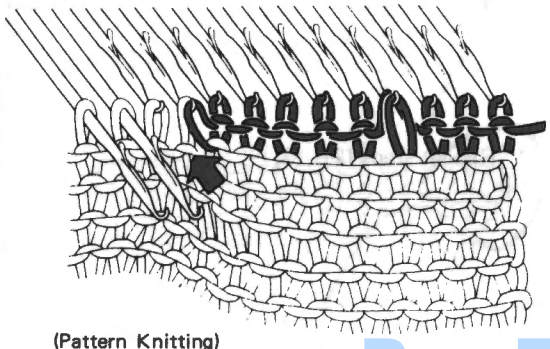
A



A. In case of stockinet.

Push the needles to be increased back to C position.

B

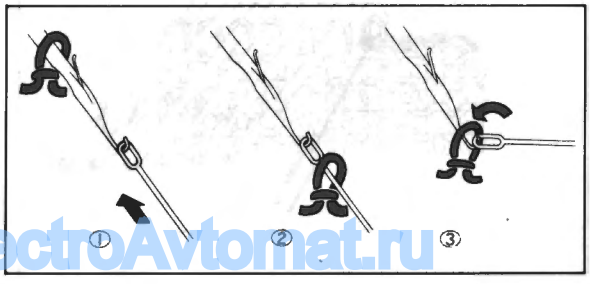


(Pattern Knitting)

B. In case of pattern knitting.

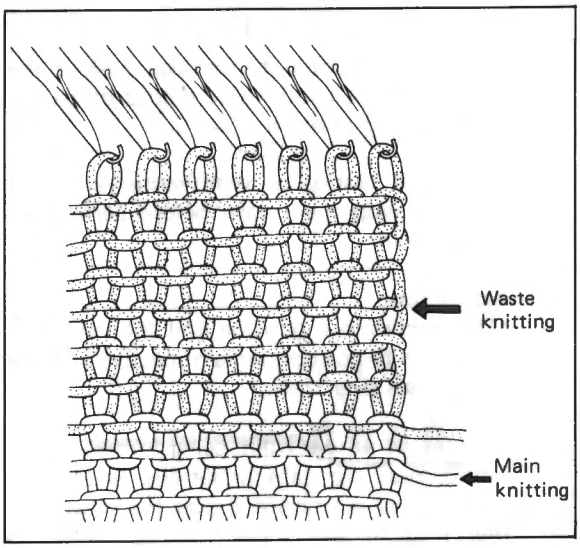
With a Transfer Tool, push the needles to be decreased towards B position placing their stitches onto the hooks. Align the needles in B position. (See the illustration below.)

* Repeat steps (2)–(5).



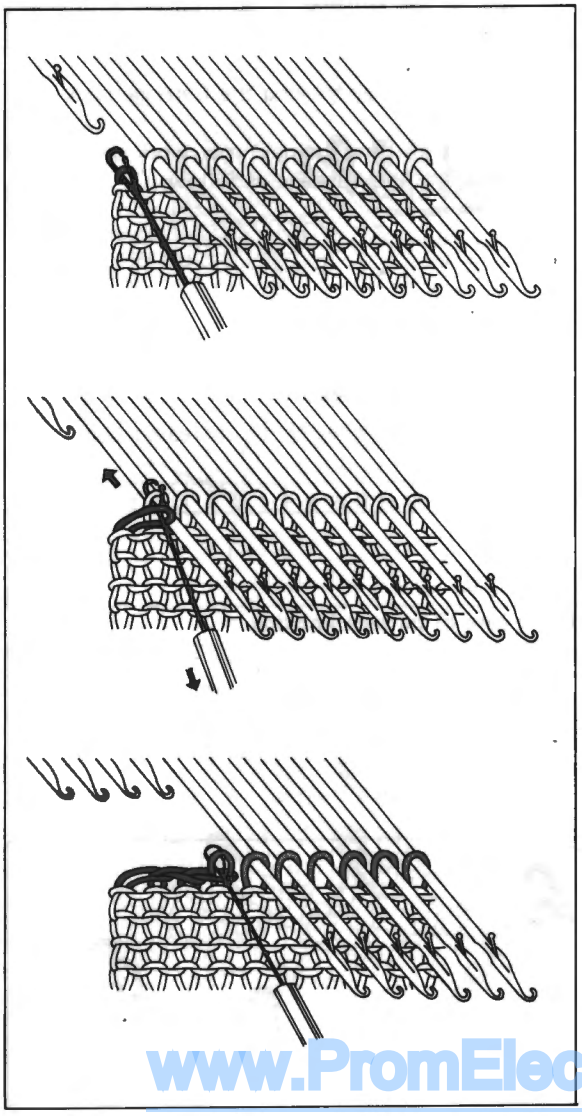
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＊Cast off＊



(Using waste knitting)

* After main knitting has been completed, knit 7–8 rows with a contrast waste yarn.



(Using the Tappet – Chain Method)

This is used for closing the stitches when main knitting is completed.

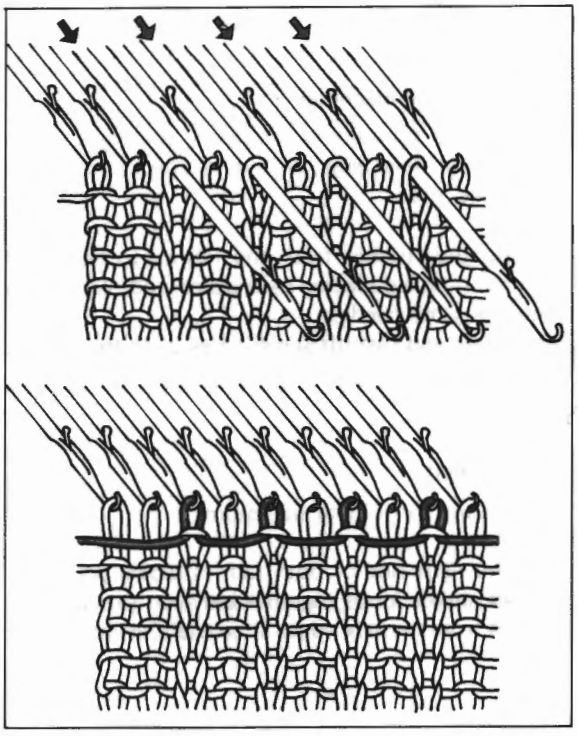
(1) Knit the cast off row with the Stitch Dial 3–4 numbers higher, then push the needles up to D position.
Starting from the side opposite the Carriage, transfer the first stitch onto the Tappet.

(2) Place the stitch behind the latch of the Tappet, and pick up the second stitch with its hook.

(3) With the second stitch in the hook of the Tappet, slip the first stitch off of the Tappet.

* Repeat steps (2)–(3).

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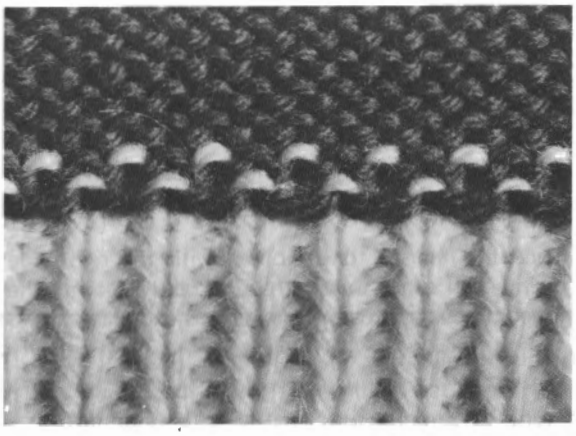
(Binding off — K1. P1. rib)

* This method is used for the K1.P1. rib worked using the Tappet. (Refer to page 83.)

(1) After K1.P1. rib has been completed, cut yarn leaving the end three times the width of the knitting. Push the needles that have the re-formed stitches to D position.

(2) Set the Carriage as follows and knit one row with waste yarn.

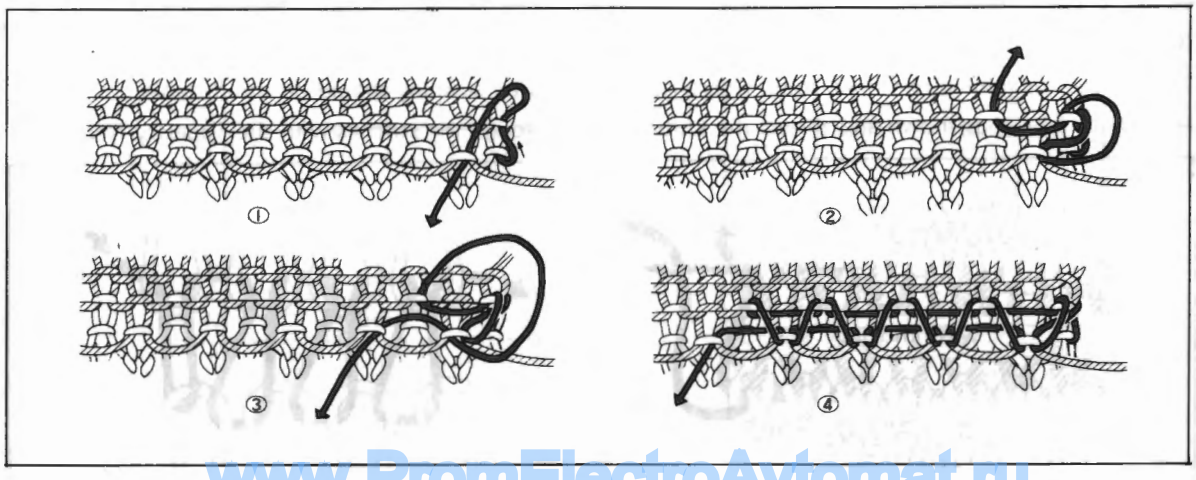
Russel Levers II
Cam Lever..... SLIP
Side Levers..... ■
(The needles in D position only knit.)



(3) Set the Cam Lever back to STOCKINET and knit 7—8 rows.

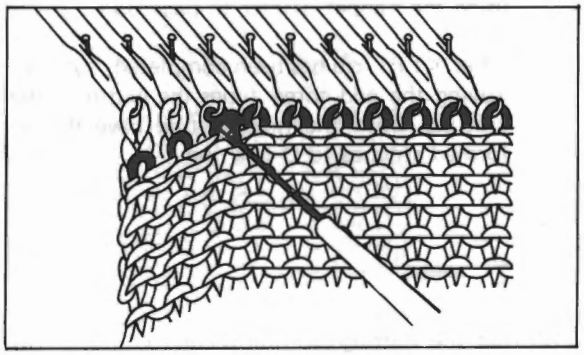
Loops of knit and purl stitches are aligned as shown.

(4) Thread the Tapestry Needle with the main yarn and bind off stitches as illustrated below.



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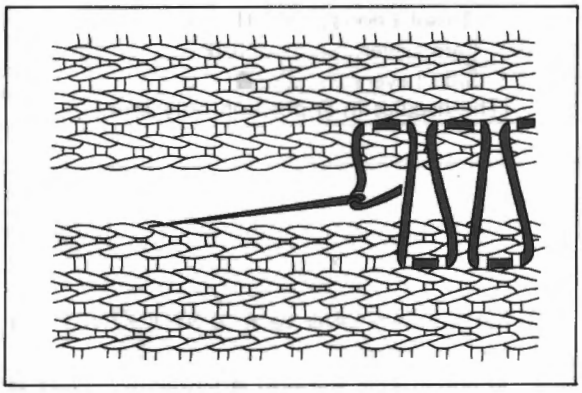
* Joining *



(Joining on the machine)

This is used for joining shoulders, joining a waist-band to the waist edge, or joining a neckband to the neck edge, etc.

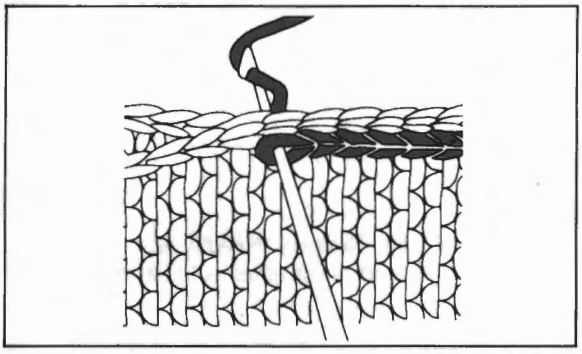
Pick up the stitches from the fabrics to be joined with the right side facing each other, and place them onto the same needles.
Knit 1 row and cast off the stitches using the Tappet Tool. (Refer to page 28)



(Blind stitch)

This is used for joining side seams.

With the right side of both fabrics facing you, pick up two sinker loops together between the last two stitches from the side edges alternately, as illustrated.



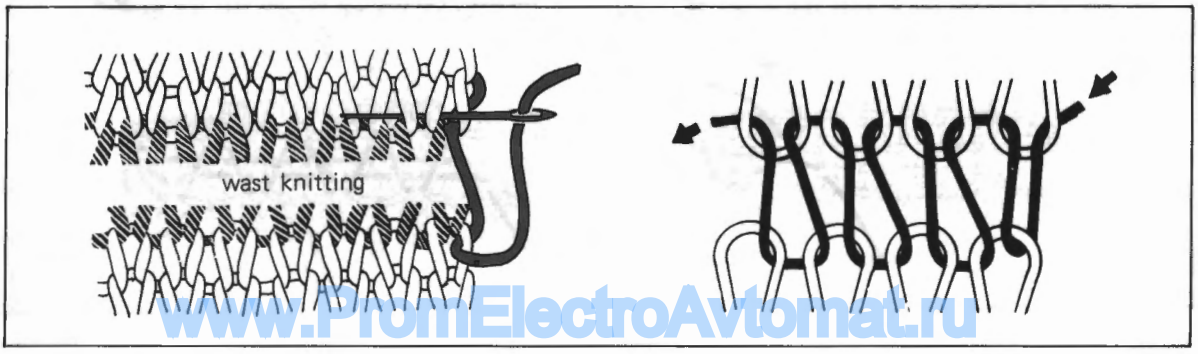
(Slip stitch)

This is used for setting in the sleeves or joining side seams.

Place the fabrics to be joined with the right side facing each other. Insert the Crochet Hook into the edge stitches and catch the yarn as shown.

(Grafting)

This is used for joining two open rows, where ridges formed by seaming should be comfortable.
Align both fabrics as shown and thread the knitting yarn through the stitches with the Tapestry Needle.



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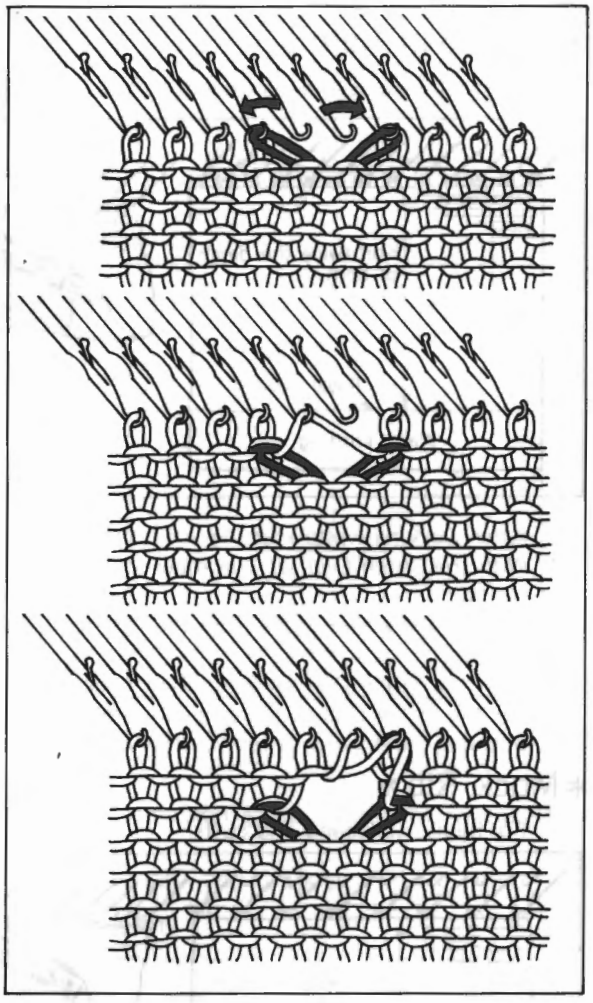
* Buttonhole *

(1) Transfer 2 stitches onto their adjacent needles respectively.

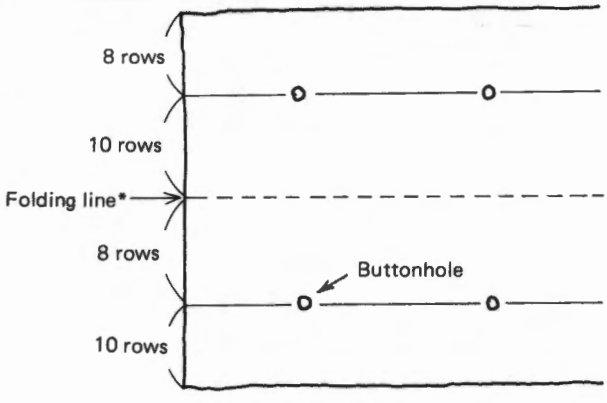
(2) Knit 1 row and remove the hooked yarn from the right side needle.

(3) Knit 1 row.
Pick up the yarn crossing above and place it onto the needle.

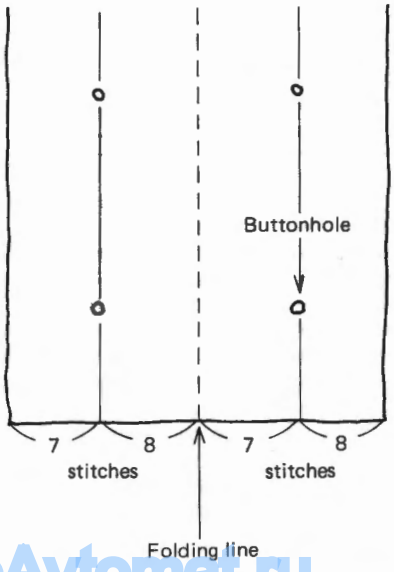
* Continue to knit up to the next buttonhole.



When making buttonholes on a double border, adjust the number of rows or stitches in between the inside buttonholes and outside buttonholes so that they come at the same position when the border is folded.



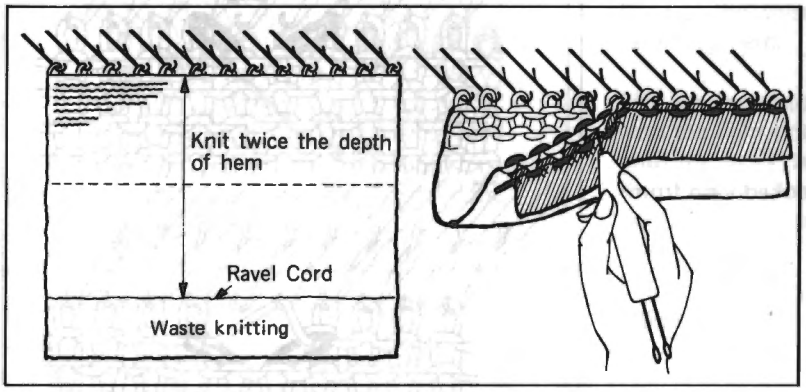
*1 row with the Stitch Dial 2 numbers higher

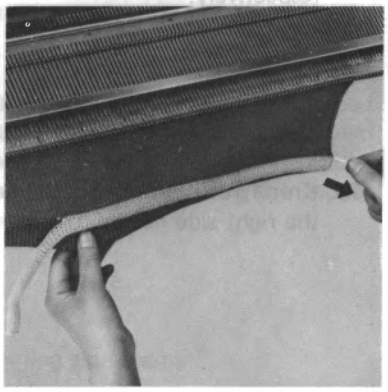


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＊Knitted-in hem＊

This is used for hems and waistbands.

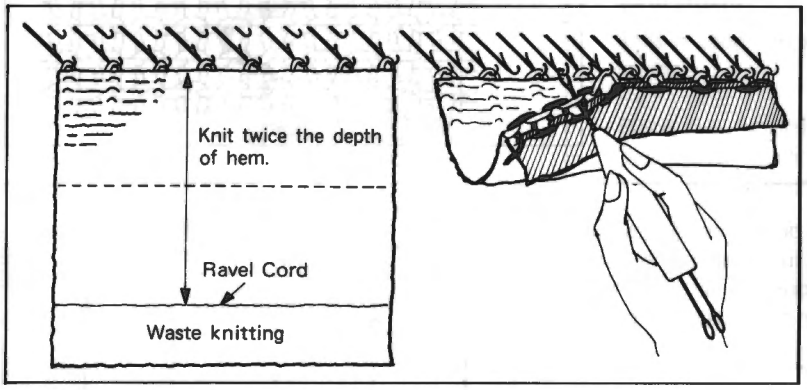


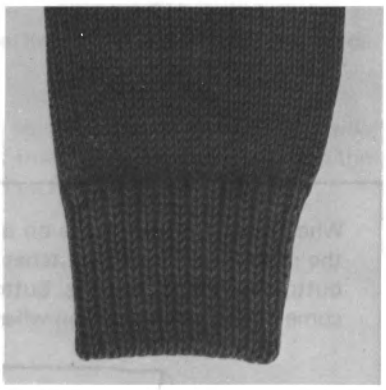


(1) After working waste knitting, knit one row with the Ravel Cord.
* With the Stitch Dial set 1 number lower (if the original number is 5, set at 4.), knit twice the depth of the hem.
(2) Pick up the sinker loops from the first row of the main knitting and place them onto the corresponding needles.
* With the Stitch Dial set 2 numbers larger, knit one row.
(3) Set the Stitch Dial to the original number and continue to knit. After the knitting has been completed, pull the Ravel Cord to remove the waste knitting.

＊Mock Rib＊

For hems, waistband and cuffs.



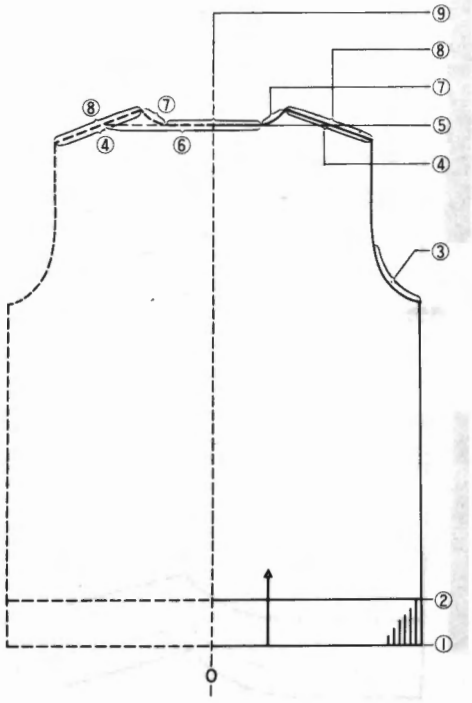


(1) Push up the required number of needles to B position. With the aid of Needle Pusher, push every-other needle back to A position.
* Cast on and knit several rows of waste knitting, knit one row with the Ravel Cord.
* Before starting to knit, set the Stitch Dial 3–4 numbers lower than the original number. Knit twice the number of rows than those required for the depth of the welt.
(2) Push up the needles that were pushed back to A position to B position. Pick up the sinker loops on the first row and place them onto the empty needles in B position.
(3) Re-set the Stitch Dial to the original number and continue to knit in stockinet. Pull out the Ravel Cord to remove the waste knitting.
* In order to shape the welt beautifully, insert a ruler-like object into the side opening and stretch it vertically, then iron it.
* By varying the needle selection, K2. P1 rib and K3. P1 rib can also be made. (Recommended Stitch Dial number for K2. P1 rib is 3 and for K3. P1 rib is 4.)

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4. LET'S KNIT A LADY'S PULLOVER

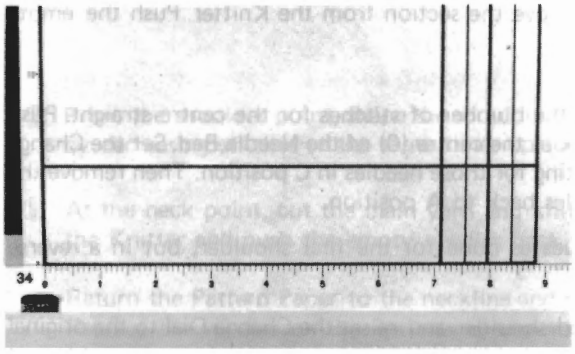


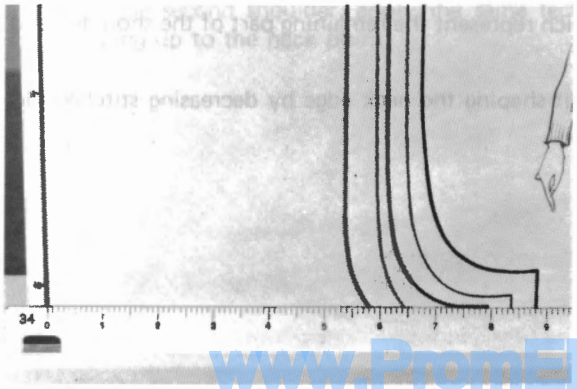


Before knitting, make sure of the following:—

(1) Select a pattern size or adjust its size if necessary, (2) Take a tension gauge, (3) Set the Knit Contour correctly and (4) read the note on page 22.

Amount of yarn required for knitting in stockinet is medium sized yarn 350 – 500gs.





How to Knit

Follow the knitting guide given on each pattern style.

BACK:

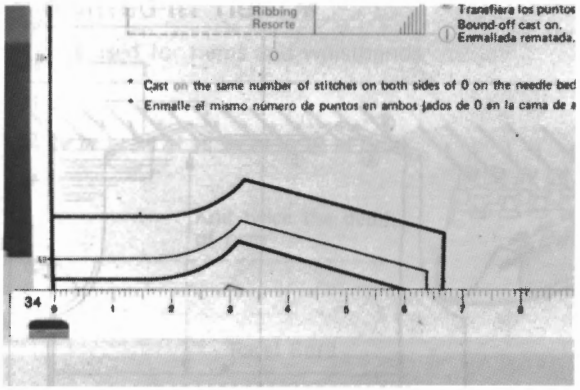
① Set the Pattern Paper to the starting line for knitting and read the number of stitches required for cast on. Push up the same number of needles to B position on both the Knitter and Ribber. Arrange the needles for knitting K1. P1. rib by using the Needle Pusher. (Refer to the Ribber Instruction Book.)
Knit the length of the waistband in K1. P1. rib.

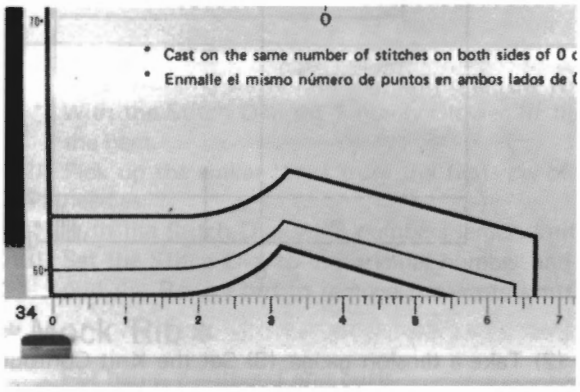
* **If you are knitting only on the Knitter, work the mock rib instead of K1. P1. rib referring to page 32.**

② Transfer the Ribber stitches onto the Knitter and knit straight up to the armhole.

③ For the armhole, stitches must be decreased equally on both sides following the contour line . (Refer to page 23 for decreasing stitches.) Continue to knit up to the shoulder point.

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④ To knit the shoulder, apply partial knitting by decreasing (Refer to page 26.) and knit up to the neckline.

⑤ At the neckline, divide into three sections, right, centre straight and left to work each section separatley.

⑥ Read on the Stitch Scale the number of needles for centre straight and either of right or left sections, opposite the carriage and push up those needles to D position for holding stitches. (Refer to page 25.)

⑦ For the needles in B position, decrease the stitches at the neck and continue partial knitting on the shoulder, up to the neck point.

⑧ At the neck point, break the yarn leaving the end three times the width of the shoulder, and unthread the yarn. With waste yarn knit several rows and remove the section from the Knitter. Push the empty needles back to A position.

* Return the Pattern Paper to the neckline and read the number of stitches for the centre straight. Push those needles back to C position and put a yarn mark at the centre (0) of the Needle Bed. Set the Change Dial to ◀ mark and knit several rows of waste knitting for those needles in C position. Then remove the section from the Knitter and push the empty needles back to A position.

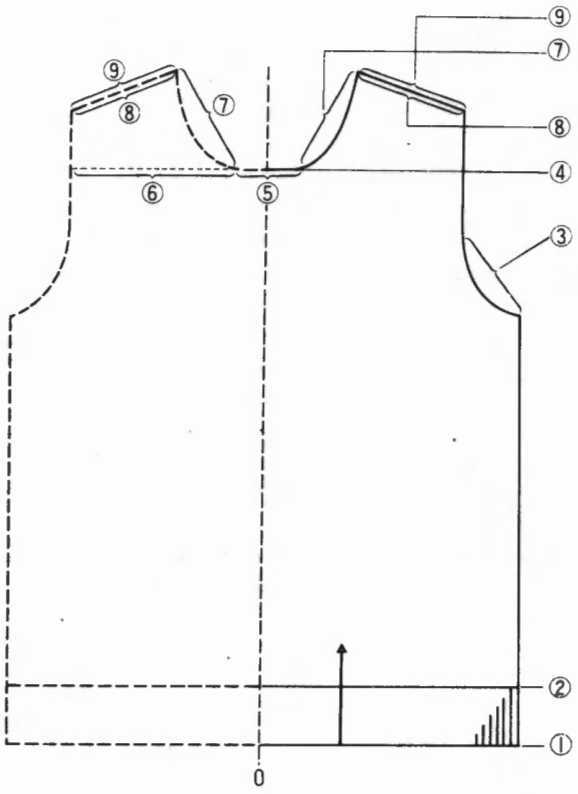
* For the second shoulder, apply the same techniques as done for the first shoulder, but in a reverse shaping manner as follows.

a) Have the Carriage on the side of the first completed shoulder and re-set the Change Dial to the original setting.

b) Read the number of needles on the Stitch Scale which represent the remaining part of the shoulder, and push them back to C position.

c) Thread the main yarn into the Yarn Feeder and knit shaping the neck edge by decreasing stitches and the shoulder by partial knitting by decreasing.

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FRONT:

①—③

Set the Pattern Paper for the front and knit in the same manner up to the neckline as done for the back.

④ At the neckline, put a yarn mark at the centre (0) of the Needle Bed and divide into three sections, right, centre straight, and left, to work each section separately.

⑤ Read on the Stitch Scale, the number of needles for centre straight and either of right or left sections on the side of the Carriage, and push up those needles to D position for holding stitches.

Set the Russel Levers to I position and the Change Dial to ◀ mark. With waste yarn knit several rows for the needles in B position. Then remove the section from the Knitter and push the empty needles back to A position.

⑥ Push the needles for the centre straight section of the neckline back to C position and knit several rows of waste knitting. Then remove the section from the Knitter and push the empty needles back to A position.

⑦ Bring the Carriage to the side of yarn and push the needles in D position back to C position. Re-set the Change Dial to the original setting and continue to knit shaping the neck edge by decreasing stitches up to the shoulder point.

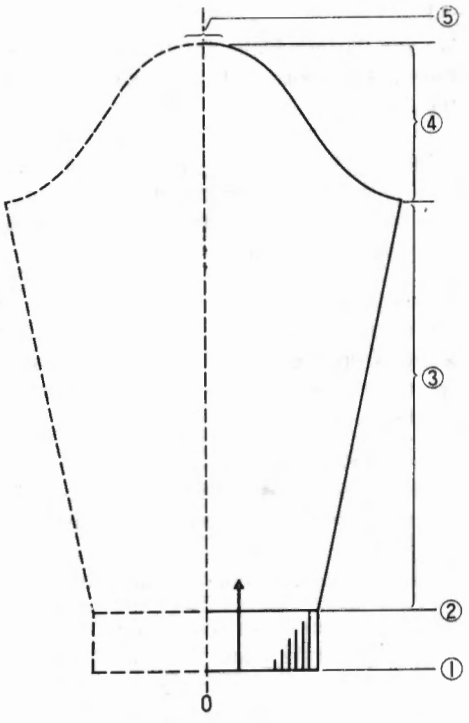
⑧ From the shoulder point, shape the shoulder by partial knitting by decreasing stitches and the neck edge by decreasing stitches at the same time, up to the neck point.

⑨ At the neck point, cut the main yarn and knit several rows with waste yarn. Remove the section from the Knitter and push the empty needles back to A position.

* Return the Pattern Paper to the neckline and push up the needles for the second shoulder to B position. Replace the stitches on the last row of the main knitting onto the emty needles.

* For the second shoulder, apply the same techniques as done for the first shoulder, but in a reverse shaping up to the neck point.

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SLEEVE:

① Set the Pattern Paper for the sleeve to the starting line for knitting and read the number of stitches for cast on.
Knit the length of the cuff in K1. P1. rib in the same manner as done for the waistband.

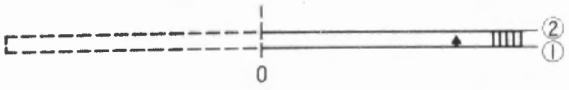
② Transfer the Ribber stitches onto the Knitter.

③ Knit the sleeve underarm by increasing stitches on both sides at the same time.
(Refer to page 24)

④ Shape the top by decreasing stitches.
(Refer to page 23.)

⑤ Put a yarn mark at the centre of the top. Knit an additional 1 row with the Stitch Dial number 8–9 and cast off.

* Knit the second sleeve in the same manner as done for the first sleeve.

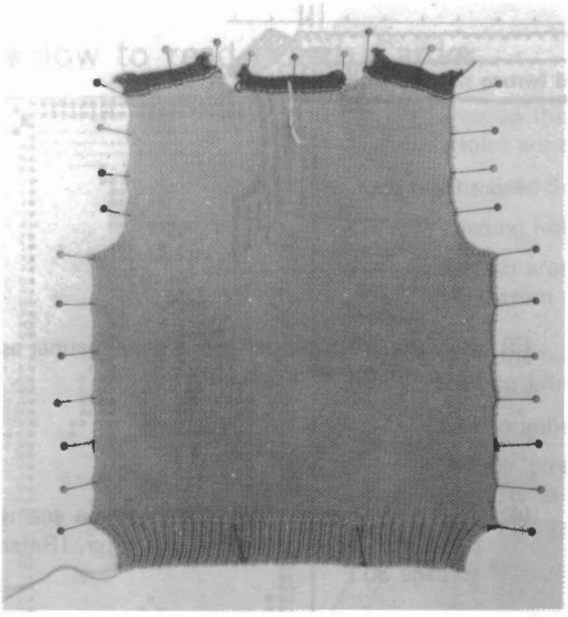


NECKBAND:

① Set the Pattern Paper for the neckband to the starting line and knit the length of the neckband in K1. P1. rib as done for the waistband.

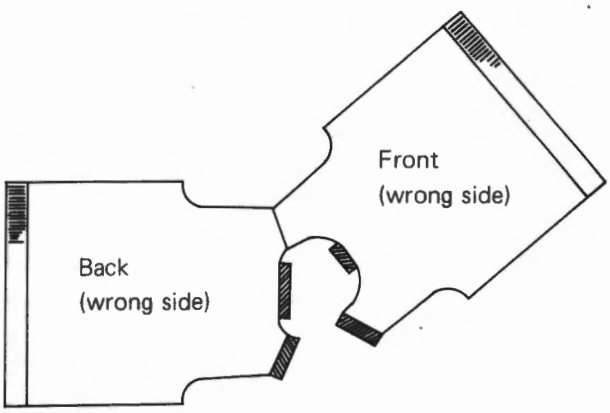
② Transfer the Ribber stitches onto the Knitter and knit several rows of waste knitting, then remove it from the Knitter.

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HOW TO MAKE UP
(Blocking and pressing)

(1) After knitting the pieces of your garments, you must lay them flat and pin them out to their correct shape and size. Then press them lightly with a warm iron over a damp cloth and leave the pieces to dry before removing the pins.



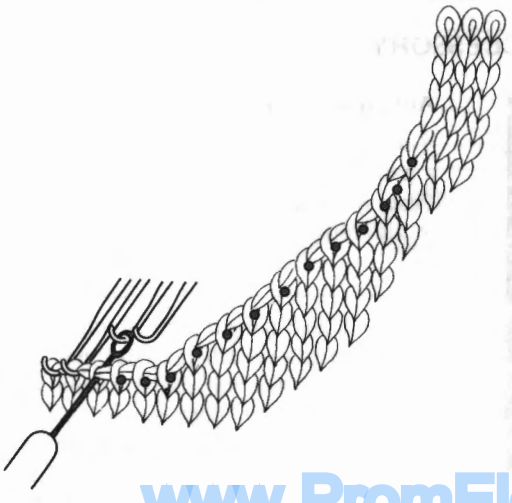
(Joining pieces)

(1) Join the right shoulder as follows.

a) Pick up the stitches of the right shoulder of the back with its right side facing you and place them onto the needles in B position.

b) Pick up the stitches of the right shoulder of the front with its wrong side facing you and place them onto the needles holding the back shoulder.

c) Knit one row with the main yarn setting the Stitch Dial at 8–9 and cast off using the Tappet or Linker. (Refer to page 28.)



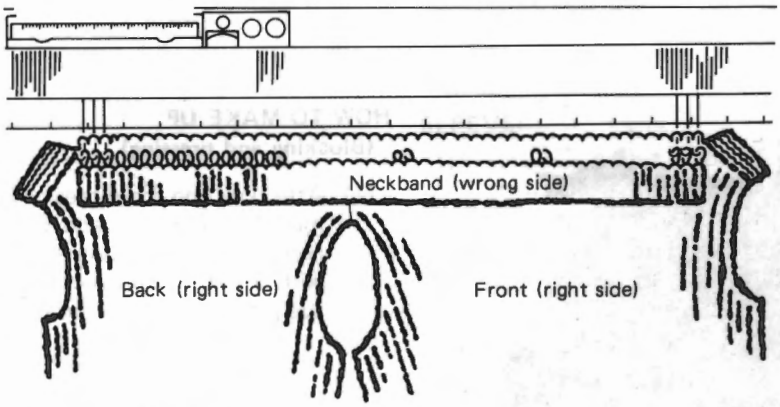
(2) Join the neckband to the neck edge as follows.

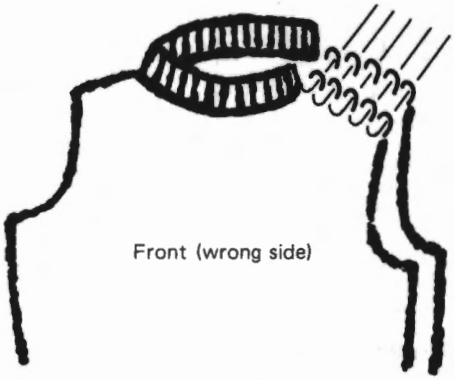
a) Place the stitches on the neck edge evenly with the right side facing you, onto the needles.

b) Hold the neckband with its Ribber side (wrong side) facing you and place the stitches on the last row of the main knitting onto the needles.

c) Knit one row with the main yarn setting the Stitch Dial at 8–9 and cast off using the Tappet or Linker. (Refer to page 28.)

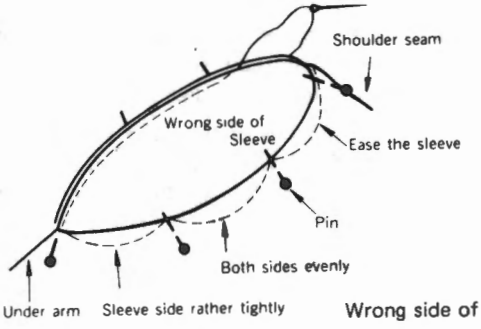
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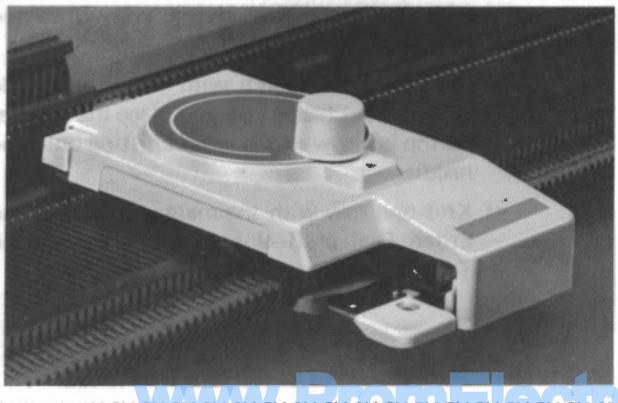
(3) Join the left shoulder in the same manner as done for the first shoulder.

(4) Join the side, neckband and sleeve seams using the Tapestry Needle or Linker. (Refer to page 30.)



(5) Turn the garment to the wrong side and slip the sleeve into the armhole. Pin them as illustrated and work slip stitch along the edges using the Crochet Hook or Linker. (Refer to page 30.)

AN OPTIONAL ACCESSORY



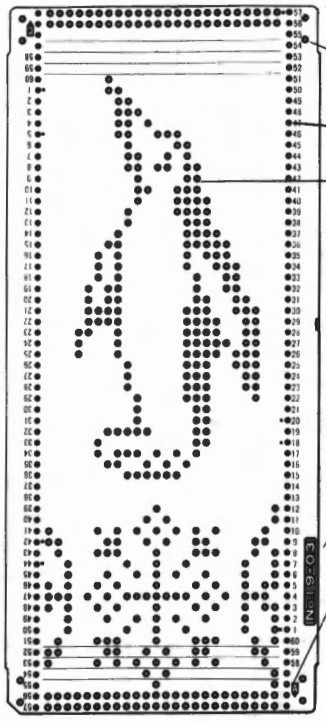
Automatic Linker

You can save much of time in making up a garment!
Casting off and joining knitted pieces can all be done on the machine so quickly.

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5. PATTERN KNITTING

＊How to read Punch Card＊



Overlap this portion when joining Card.
(Holes are aligned in two rows).

For Card Snap (2 holes)

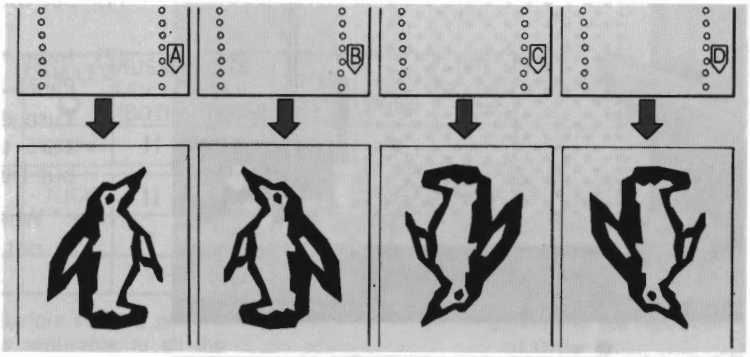
Feeding holes.

Pattern area.
(A pattern up to 24 stitches and 60 rows can be perforated.)

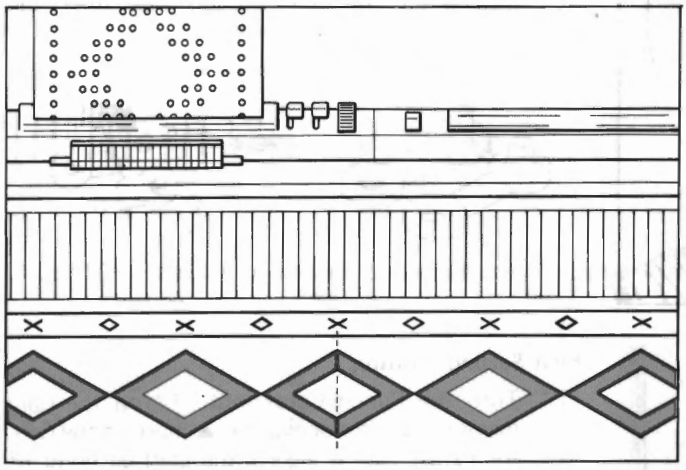
Row memory number (There is a five-row difference between the hole to knit and its correspondent number.)

Card number

Setting direction mark (Each Card has four directions and their usage is as shown below.)



＊Relation between pattern on Punch Card and knitting needles＊



* On the Needle Bed are X and ◇ marks and also needle number mark. Pattern is knitted over X and ◇ mark repeatedly.

X mark..... Indicates the centre of pattern on Punch Card.

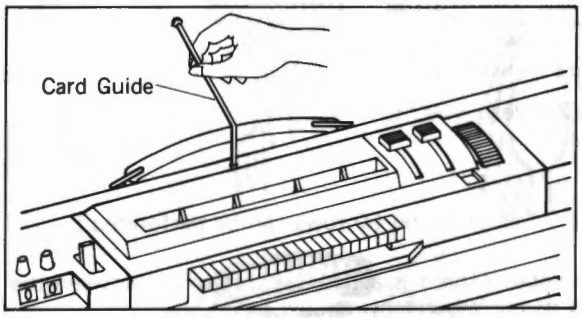
◇ mark..... Indicates the end of pattern on Punch Card. The pattern on Punch Card is knitted between two ◇ marks (24-needle wide)

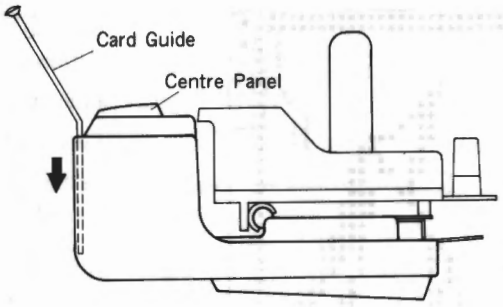
Note:* The vinyle tape having needle selection marks (X ◇ and needle number mark) is removable on the Needle bed. While knitting, if your garment requires change of centre 0 position either to the right or to the left, alter the 0 position by removing the tape. After the tape has been removed, read the X and ◇ mark engraved on the Needle Bed for pattern position.
If the tape is caught by the needles, pull out the Needle Retainer then remove the tape. (Refer to page 92)

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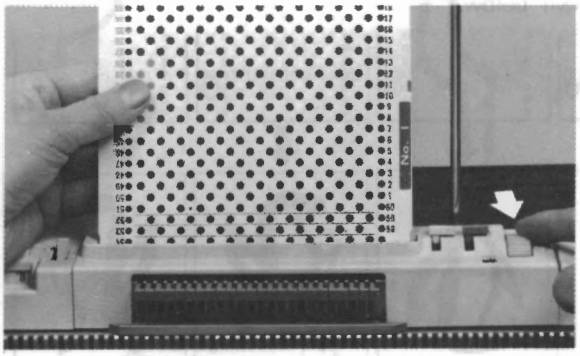
Card Guide

* Insert the Card Guide vertically as illustrated into the receiving hole in the centre of the case behind the Centre Panel.





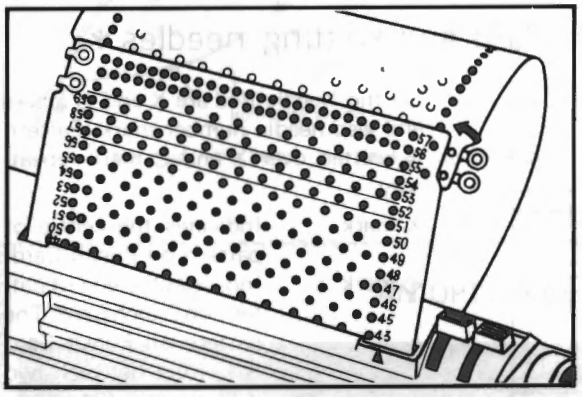
Insert Punch Card



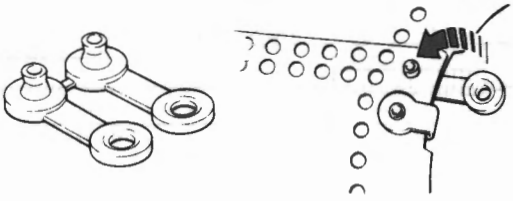
(1) Set the Stop Knob to the ▼ mark.

(2) Insert the Punch Card into the slit in the Centre Panel by holding it straight with your hand. Turn the Feeding Dial toward you. Turn the Dial until the end of the Card comes out from the back of the Centre Panel.

Note: * When inserting the Punch Card, be sure it is not crooked or folded.



(3) Overlap the ends of the Card, with the end of your side on top of the other as illustrated and line up the two holes on each side. Insert the Card Snaps and join the ends.





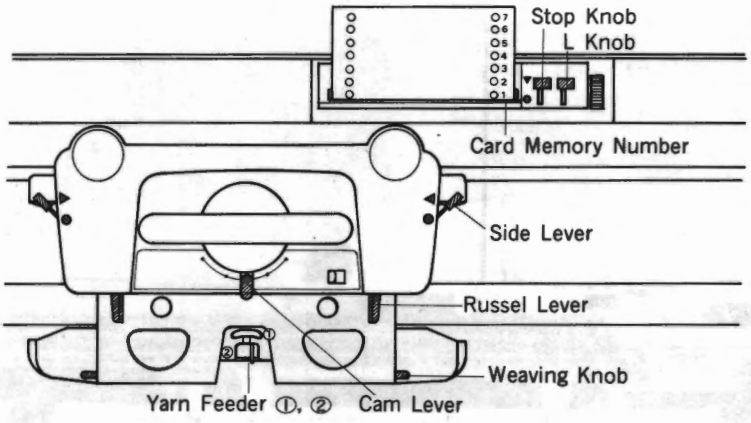
First Setting Position.

* Turn the Punch Card until "1" on the Card memory appears above the ▲ mark of the Centre Panel. "1" is always the starting point of knitting when a Punch Card is used.

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* Operation Table. *

The operation table is divided into two sections, Order ❶ and Order ❷ Order ❶ is the preparatory step to memorize the pattern. The actual pattern knitting begins with Order ❷ .



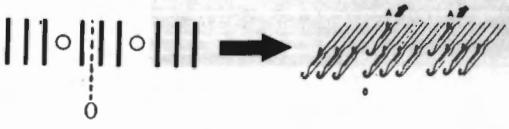
ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A	B	TUCK	II	▲	▼	S	←
	2	〃	〃	〃	〃	〃	〃	〃	→
	⬇	〃	〃	〃	〃	〃	〃	〃	⇄)※

❶ is the preparatory row before starting pattern knitting. (This operation is applicable to all the pattern knittings.)

❷ shows the setting of the controls for pattern knitting.

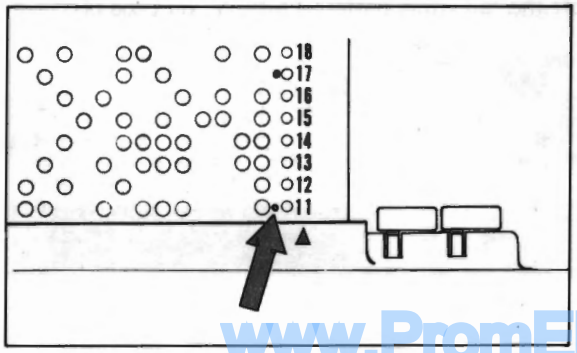
※Indicates the repetition of Order ❷.

Needle Resting Diagram (N.R.D.)



Select the needles to knit and the needles to rest beginning at the zero (0) mark in the centre of the Needle Bed. The circle (○) indicates the needles to be pushed back to A position and the bar (I) mark the needles to be used.

Note:* The preparetory operation before starting pattern knitting in Order ❶ is the same for all pattern knitting.



Indication for changing yarn to the contrast yarn.

* The Punch Cards include those which have ● marks inside the feeding holes. The ● mark indicates the row where the yarn should be changed with the contrast yarn.
  When the ● mark appears above the ▲ mark, change the yarn as instructed in the operation table.

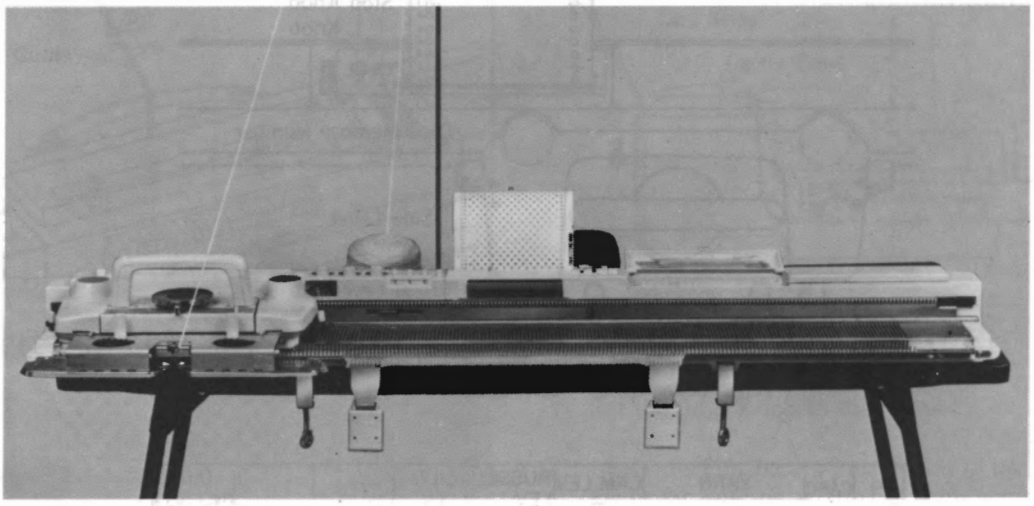
(Weaving Knob)

* Always set the Knobs at the ○ marks, except when knitting weaving.

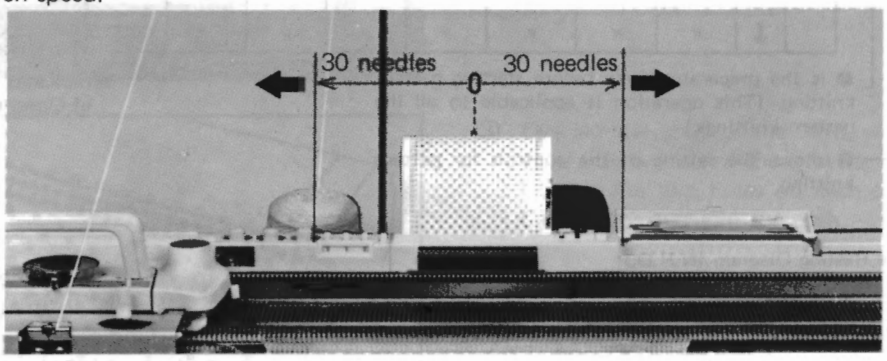
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Caution on pattern knitting.

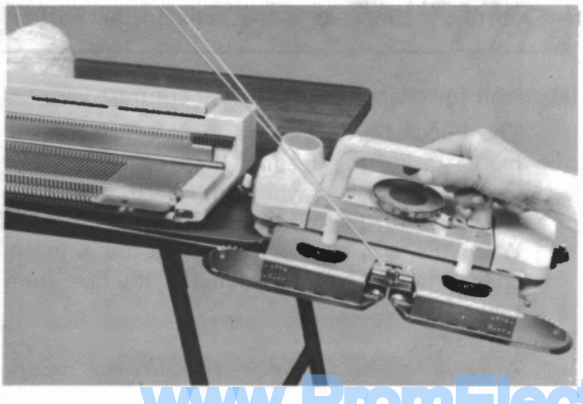
(1) Before practicing pattern knitting, knit 7–8 rows of stockinet, ending with the Carriage on the left side of the Needle Bed. Always use the accessory Weights at both sides of the knitting to prevent stitches from being floated. Move the Weights up as knitting progresses.



(2) When moving the Carriage, ensure at all times that the Carriage has passed the centre portion of the Needle Bed (about 30 needles on both sides of the centre 0 mark). The Carriage must always be moved at an even speed.



(3) Do not pull the Carriage off the Needle Bed.



If this is done, it is the same as a mistake in knitting. Refer to "When the Carriage is accidentally pulled off the rail while pattern knitting" on page 88.

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TUCK STITCH PATTERN

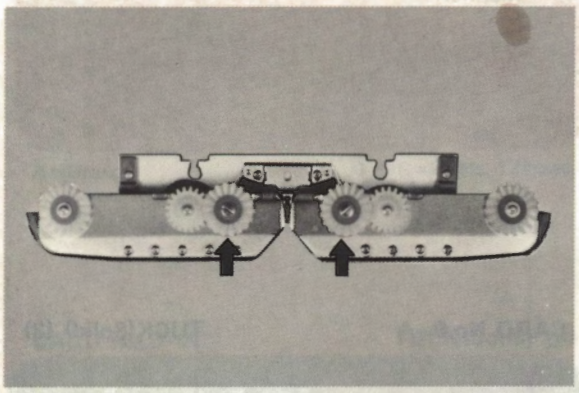
CARD No.12–A **TUCK(Solid) (1)**

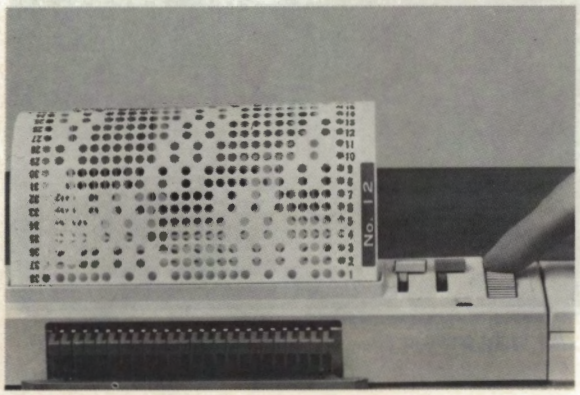


A = Pink 1 Pat. = 12 sts, 24 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A		TUCK	II	▲	▼	S	←
	2	〃		〃	〃	〃	〃	〃	→
	↓	〃		〃	〃	〃	〃	〃	⇄ *

Set the Weaving Knobs at the O mark.





Tuck stitches are formed when selected needles hold the yarn but do not knit. The new yarn forms a loop over the yarns held on the needles on the subsequent row, making tuck stitches.

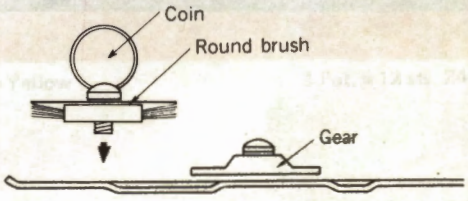
* Attach the accessory Weights to both edges of the knitted fabric.

Install the Round Brushes for tuck knitting.

(1) Remove the Carriage Arm and turn it over.

(2) Take two Round Brushes from the Accessory Keeper.

(3) Screw the Round Brushes into the holes located next to the white Fabric Gears, as illustrated. Tighten the screws with a coin.



How to knit patterns following the instructions on the operation table.

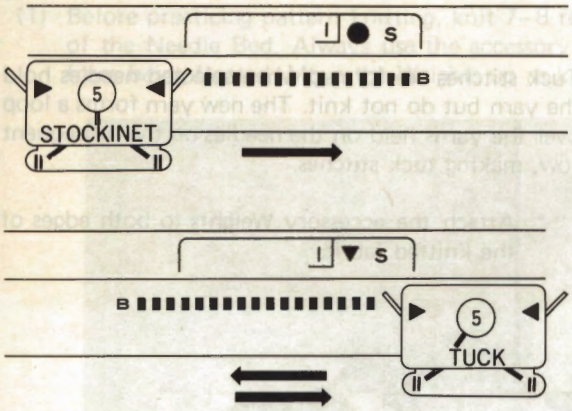
(1) Insert Punch Card No.12 into the Centre Panel with the A mark at the lower right. Join both ends using the Card Snaps. (Refer to Page 40.)

(2) Turn the Feeding Dial until the Card memory No.1 appears above the ▲ mark on the Centre Panel.

Note: * If the Stop Knob is set to the ● mark, the Punch Card will not feed. Do not try to pull the Card by force, but be sure to set the Stop Knob to the ▼ mark before turning the Dial.

* When inserting the Punch Card be sure that it is neither crooked nor folded.

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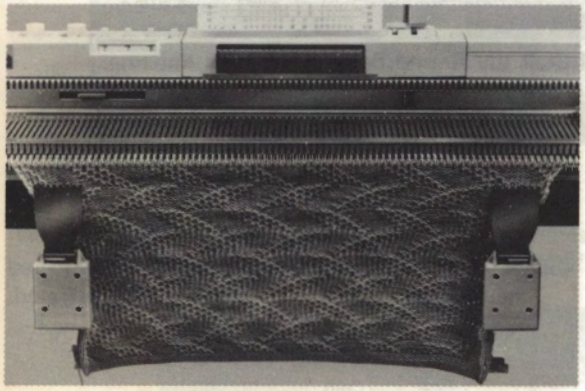


(3) Thread the yarn through the Yarn Feeder ①.

(4) Set each regulating part of the Carriage following Order ❶ of the operation table. Knit one row by moving the Carriage in the direction indicated by the arrow.

* The operation in Order ❶ is a preparatory step before knitting in pattern stitch. Therefore, this one row of stockinet is not counted in the required number of rows of pattern stitch.

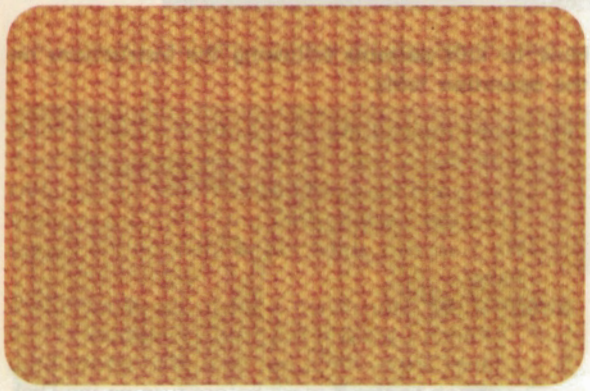
(5) Change the setting of the regulating parts of the Carriage following Order ❷ of the operation table and start knitting.



Note:* If the end stitches on the fabric are incompletely knitted, depending on the material and pattern, set both Russel Levers to the II mark and continue knitting, bringing 2 needles to D position at the side opposite the Carriage. (For partial knitting, the needles are brought out to C position.)

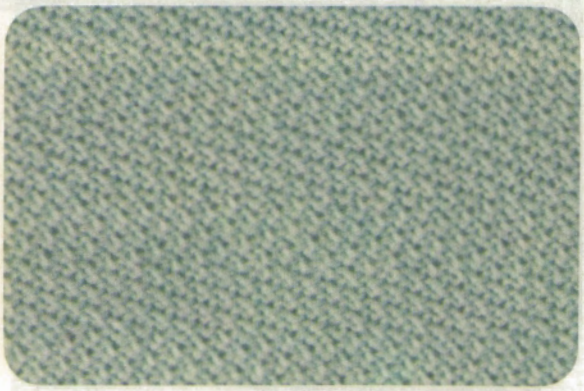
* The following patterns are knitted in the same manner.

CARD No.1–A **TUCK(Solid) (2)**



A = Yellow 1 Pat. = 2 sts, 2 rows.

CARD No.8–A **TUCK(Solid) (3)**



A = Light green 1 Pat. = 3 sts, 18 rows.

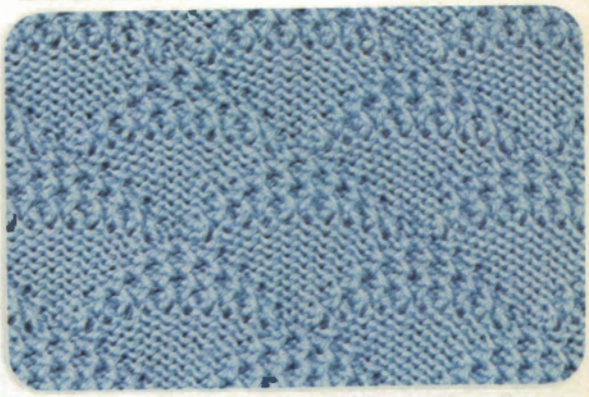
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CARD No.7–A **TUCK(Solid) (4)**



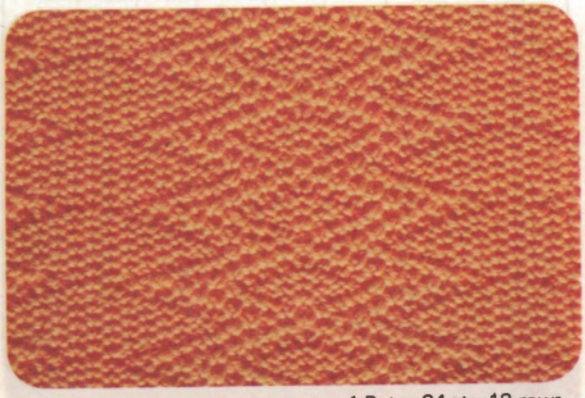
A = Green 1 Pat. = 2 sts, 4 rows.

CARD No.10–A **TUCK(Solid) (5)**



A = Light blue 1 Pat. = 12 sts, 20 rows.

CARD No.14–A **TUCK(Solid) (6)**



A = Orange 1 Pat. = 24 sts, 12 rows.

CARD No.9–A **TUCK(Solid) (7)**



A = Yellow 1 Pat. = 12 sts, 24 rows.

CARD No.3–A **TUCK(Solid) (8)**



A = Emerald green 1 Pat. = 4 sts, 8 rows.

CARD No.11–A **TUCK(Solid) (9)**



A = Light blue 1 Pat. = 8 sts, 24 rows.

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CARD No.18–A **TUCK(Solid) (10)**



A = Light green 1 Pat. = 24 sts, 44 rows.

CARD No.4–A **TUCK(Solid) (11)**

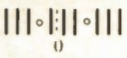


A = Light blue 1 Pat. = 4 sts, 4 rows.

CARD No.3–A **TUCK(Resting Needles) (1)**



A = Red brown (N. R. D.) 1 Pat. = 4 sts, 8 rows.



CARD No.4–A **TUCK(Resting Needles) (2)**



A = Mustard (N. R. D.) 1 Pat. = 6 sts, 4 rows.



CARD No.7–A **TUCK(Resting Needles) (3)**

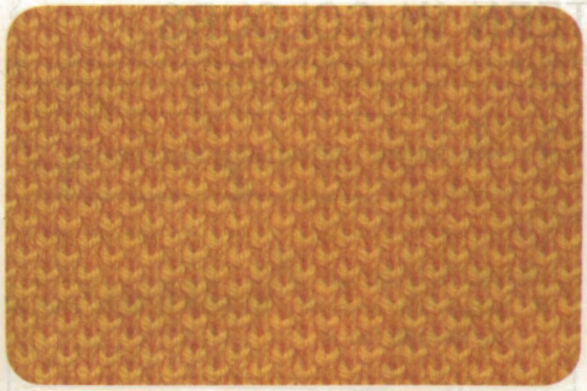


A = Green (N. R. D.) 1 Pat. = 6 sts, 4 rows.



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CARD No.7–A TUCK(Appli.) (1)



A = Yellow 1 Pat. = 2 sts, 4 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	→
❷	I	A		TUCK	II	▲	▼	S	←
	2	〃		STOCKINET	〃	〃	〃	〃	→
	⬇	〃		※	〃	〃	〃	〃	⇄ ※

Set the Weaving Knobs at the ○ mark.

CARD No.1–A TUCK(Appli.) (2)

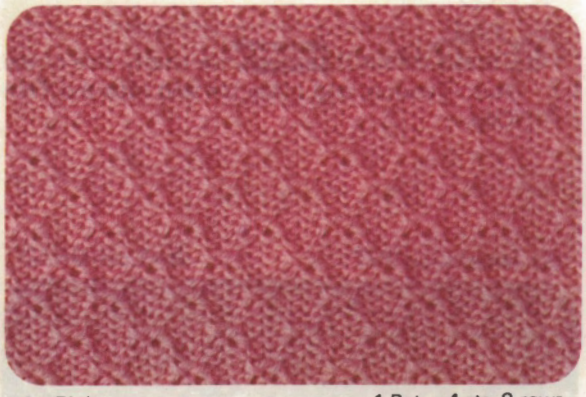


A = Light Green 1 Pat. = 2 sts, 2 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	→
❷	I	A		TUCK	II	▲	●	S	←
	〃	〃		STOCKINET	〃	〃	〃	〃	→
	〃	〃		※	〃	〃	〃	〃	⇄ ※

Set the Weaving Knobs at the ○ mark.

CARD No.3–A TUCK(Appli.) (3)

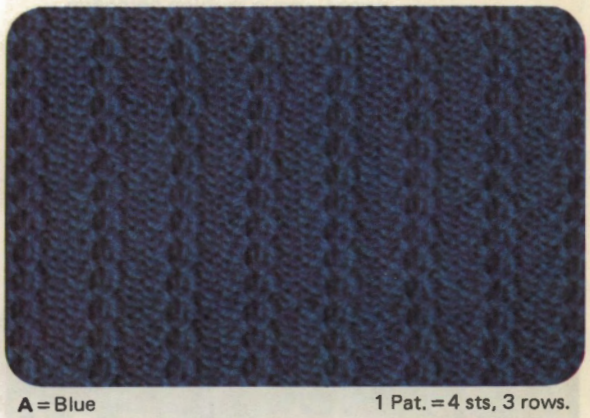


A = Pink 1 Pat. = 4 sts, 8 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	→
❷	I	A		TUCK	II	▲	▼	S	←) 2
	2	〃		〃	〃	〃	〃	〃	→
	3	〃		STOCKINET	〃	〃	〃	〃	←) 2
	4	〃		〃	〃	〃	〃	〃	→
	⬇	〃		※	〃	〃	〃	〃	⇄) ※

Set the Weaving Knobs at the ○ mark.

CARD No.3–A TUCK(Appli.) (4)



A = Blue 1 Pat. = 4 sts, 3 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	→
❷	I	A		TUCK	II	▲	●	S	←) 2
	〃	〃		〃	〃	〃	〃	〃	→
	〃	〃		STOCKINET	〃	〃	〃	〃	←
	〃	〃		※	〃	〃	〃	〃	⇄) ※

Set the Weaving Knobs at the ○ mark.

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TUCK STITCH PATTERN IN COLOURS

CARD No.12–A **TUCK(Colours) (1)**

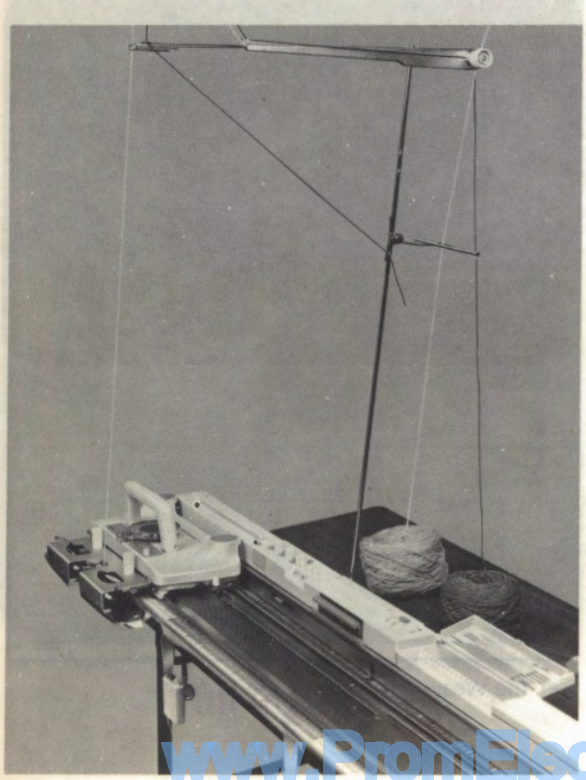


A = Green
B = Yellow

1 Pat. = 12 sts, 24 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A		TUCK	II	▲	▼	S	←→) 2
	2	〃		〃	〃	〃	〃	〃	←→) 2
	3	B		〃	〃	〃	〃	〃	←→) 2
	4	〃		〃	〃	〃	〃	〃	←→) 2
	⬇	※		〃	〃	〃	〃	〃	⇄ ※

Set the Weaving Knobs at the ○ mark.



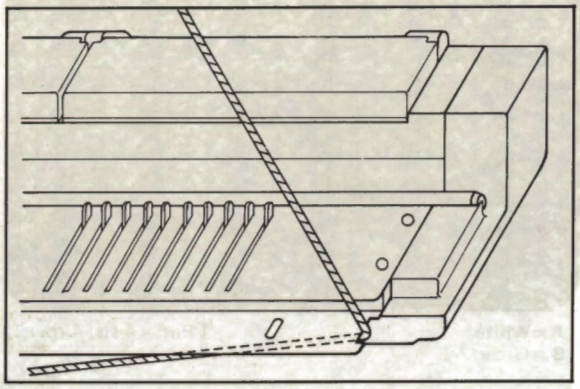
Let's learn pattern knitting using two colours.

* Attach the accessory Weights to both ends of the knitted fabric.

* Install the Round Brushes onto the underside of the Carriage Arm. (Refer to page 43 "TUCK STITCH PATTERN.")

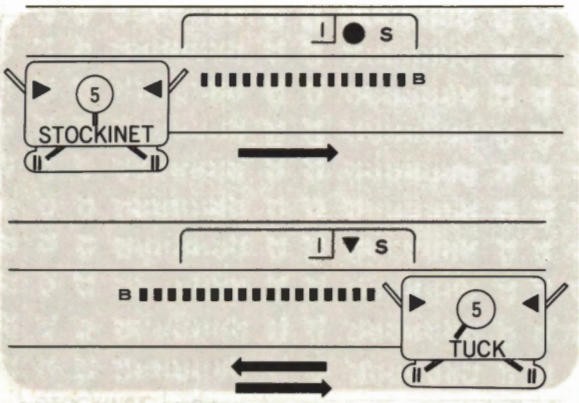
* Thread colour B through the empty side of the Auto-Tension, and place the end into the Yarn Clip.

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* As the yarn in the Yarn Feeder is to be changed at the mentioned row, rest the yarn (colour B) as illustrated at the end of the Needle Bed. Be sure the two yarns do not become entangled with each other. Also be sure the yarn is threaded correctly through the Yarn Feeder to prevent it from coming unthreaded.

* Thread the Yarn Feeder ①.



(1) Insert card No.12–A in the Centre Panel.

(2) Set the Carriage and the Stop Knob following the instructions in Order ❶ of the operation table and knit 1 row in colour A. (This is a preparatory row for starting pattern knitting.)

(3) Change the setting of the Carriage and the Stop Knob according to Order ❷ and start knitting. Knit 2 rows in colour A then change the yarn to colour B; and knit 2 rows. Continue knitting, changing colours every 2 rows.

Note: * When the end stitches can not be well knitted, due either to the nature of the material or patterns, refer to the Note on page 44.

* The following patterns are knitted in the same manner.

CARD No.7–A **TUCK(Colours) (2)**



A = White
B = Green

1 Pat. = 2 sts, 4 rows.

CARD No.7–A **TUCK(Colours) (3)**



A = White
B = Purple

1 Pat. = 2 sts, 4 rows.

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CARD No.1–A **TUCK(Colours) (4)**



A = White
B = Brown

1 Pat, 1 Pat. = 2 sts, 4 rows.

CARD No.4–A **TUCK(Colours) (5)**



A = White
B = Green

1 Pat. = 4 sts, 4 rows.

CARD No.3–A **TUCK(Colours) (6)**



A = White
B = Cherry red

1 Pat. = 4 sts, 8 rows.

Change the two colours every 4 rows.

CARD No.12–A **TUCK(Appli) (1)**



A = Red
B = White

1 Pat. = 12 sts, 4 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	→
❷	I	A		TUCK	II	▲	●	S	← →) 2
	〃	〃		〃	〃	〃	〃	〃	
	〃	B		STOCKINET	〃	〃	〃	〃	← →) 2
	〃	〃		〃	〃	〃	〃	〃	
	〃	※		※	〃	〃	〃	〃	⇄ ※

Set the Weaving Knobs at the ○ mark.

CARD No.3–A **TUCK(Colours) (7)**



A = White **B** = Green
C = Red

1 Pat. = 4 sts, 24 rows.

Change the three colours every 4 rows.

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SLIP STITCH PATTERN

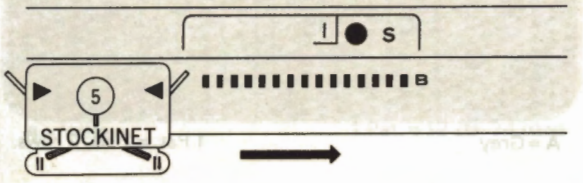
CARD No.18–A **SLIP STITCH(Solid) (1)**

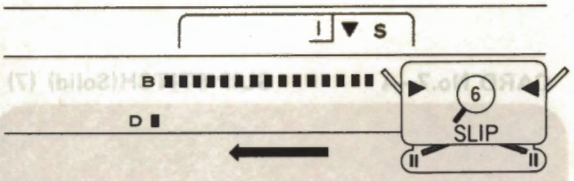


A = Emerald green 1 Pat. = 24 sts, 44 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A		SLIP	II	▲	▼	S	←
	2	〃		〃	〃	〃	〃	〃	→
	⬇	〃		〃	〃	〃	〃	〃	⇄ *

Set the Weaving Knobs at the O mark.





Slip stitch patterns are formed by the yarns crossing at the back of the loops which were not knitted and pulled up by needle selection.

* Attach the accessory Weights to both ends of the knitted fabric.

(1) Insert Punch Card No.18 in (A) direction.

(2) Thread through Yarn Feeder ①.

* The Stitch Dial should be loosened by one number from that number used for stockinet at this point.

(3) Knit 1 row following instructions in Order ❶ of the operation table.

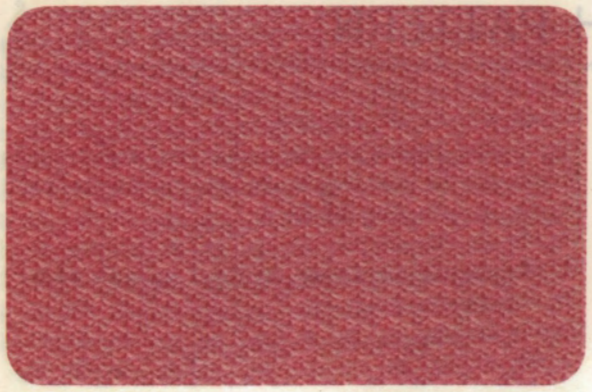
(4) Change the setting of the Carriage as indicated in Order ❷ of the operation table and continue knitting. At the beginning of every row, bring one end needle, on the side opposite the Carriage, to D position.

* When partial knitting, bring the end needle on the side opposite the Carriage to C position every row.

* The following patterns are knitted in the same manner.

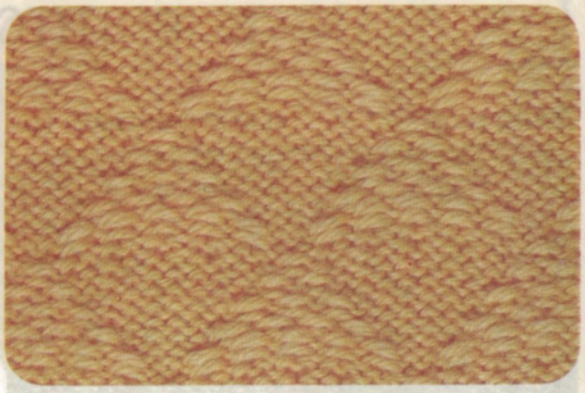
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CARD No.8–A **SLIP STITCH(Solid) (2)**



A = Pink 1 Pat. = 3 sts, 18 rows.

CARD No.10–A **SLIP STITCH(Solid) (3)**



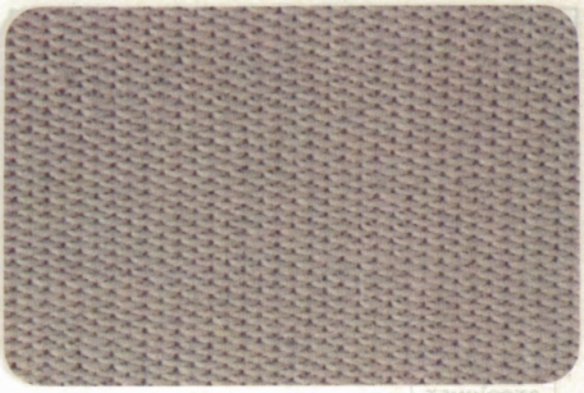
A = Yellow 1 Pat. = 12 sts, 20 rows.

CARD No.9–A **SLIP STITCH(Solid) (4)**



A = Light blue 1 Pat. = 12 sts, 24 rows.

CARD No.1–A **SLIP STITCH(Solid) (5)**



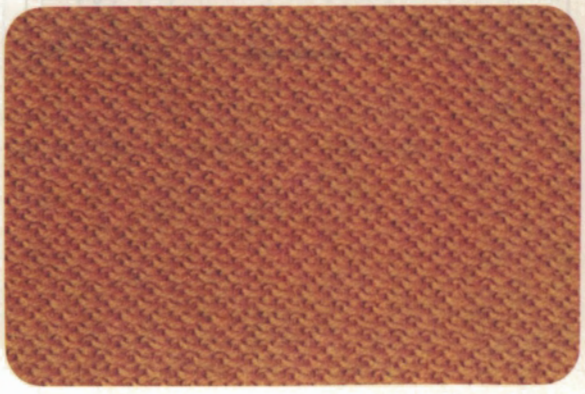
A = Grey 1 Pat. = 2 sts, 2 rows.

CARD No.2–A **SLIP STITCH(Solid) (6)**



A = Light blue 1 Pat. = 4 sts, 4 rows.

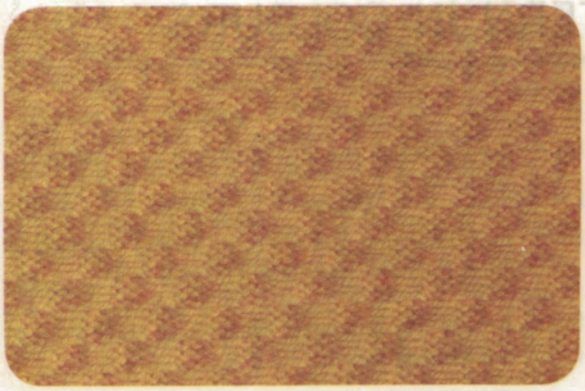
CARD No.7–A **SLIP STITCH(Solid) (7)**



A = Mustard colour 1 Pat. = 2 sts, 4 rows.

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CARD No.3–A **SLIP STITCH(Solid) (8)**



A = Yellow

1 Pat. = 4 sts, 8 rows.

CARD No.11–A **SLIP STITCH(Solid) (9)**



A = Brown

1 Pat. = 8 sts, 24 rows.

CARD No.12–A **SLIP STITCH(Solid) (10)**



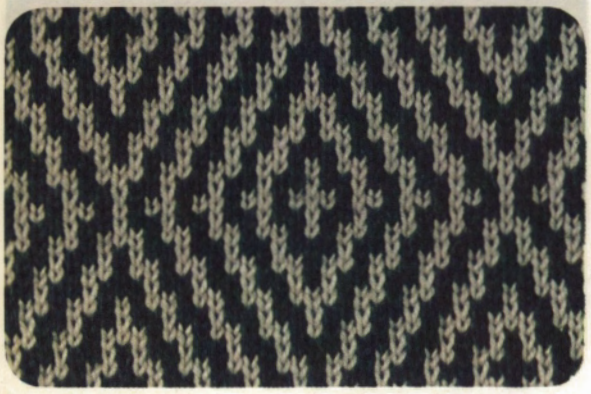
A = Yellow

1 Pat. = 12 sts, 24 rows.

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SLIP STITCH PATTERN IN COLOURS

CARD No.18–A **SLIP STITCH(Colours) (1)**

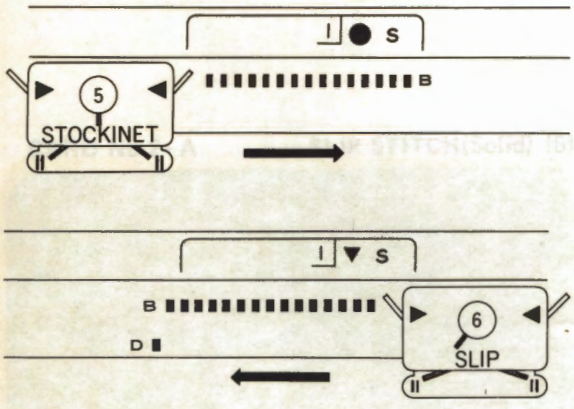


A = Green
B = Grey

1 Pat. = 24 sts, 44 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A		SLIP	II	▲	▼	S	← →) 2
	2	〃		〃	〃	〃	〃	〃	
	3	B		〃	〃	〃	〃	〃	← →) 2
	4	〃		〃	〃	〃	〃	〃	
	⬇	※		〃	〃	〃	〃	〃	⇄ ※

Set the Weaving Knobs at the O mark.



* Let's practice the slip stitch patterns using two colours.
* Knit changing the yarn in Yarn Feeder ① as done for coloured Tuck knitting.
* Attach the accessory Weights to both sides of the knitted fabric.

(1) Insert Punch Card No.18–A in the Centre Panel.

(2) Knit 1 row following the instructions given in Order ❶.

* The Stitch Dial should be loosened by one number from that number used for stockinet at this point.

(3) Change the Carriage setting as instructed in Order ❷ of the operation table and bring the end needle at the side opposite the Carriage to D position. Continue knitting.

* When partial knitting, bring the end needle at the side opposite the Carriage to C position every row.
* The following patterns are knitted in the same manner.

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CARD No.12–A **SLIP STITCH(Colours) (2)**



A = White
B = Red

1 Pat. = 12 sts, 24 rows.

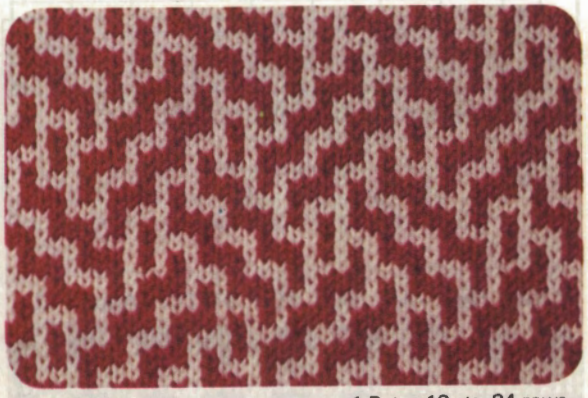
CARD No.3–A **SLIP STITCH(Colours) (3)**



A = Light blue
B = Brown

1 Pat. = 4 sts, 8 rows.

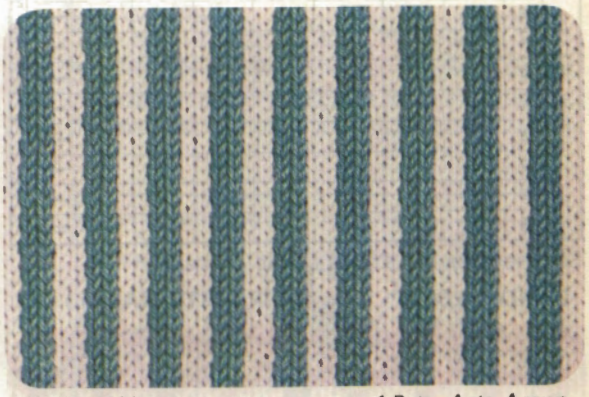
CARD No.9–A **SLIP STITCH(Colours) (4)**



A = White
B = Red

1 Pat. = 12 sts, 24 rows.

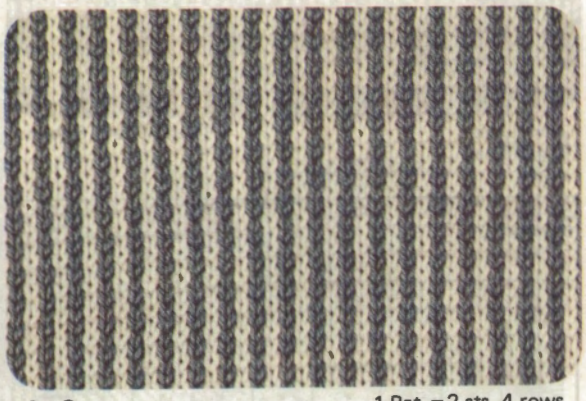
CARD No.2–A **SLIP STITCH(Colours) (5)**



A = Emerald green
B = White

1 Pat. = 4 sts, 4 rows.

CARD No.7–A **SLIP STITCH(Colours) (6)**



A = Grey
B = White

1 Pat. = 2 sts, 4 rows.

CARD No.10–A **SLIP STITCH(Colours) (7)**

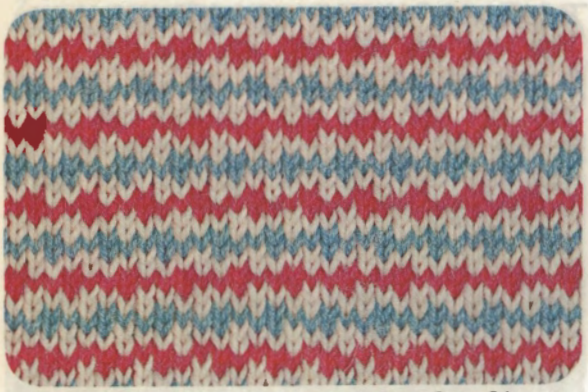


A = Pink
B = Navy blue

1 Pat. = 12 sts, 20 rows.

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CARD No.8–A SLIP STITCH(Colours) (8)



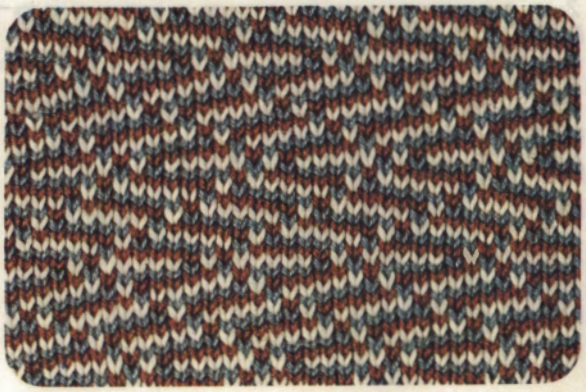
A = Red
B = White
C = Blue

1 Pat. = 8 sts, 24 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	⟶
❷	I	A		SLIP	II	▲	▼	S	⟵
	2	〃		〃	〃	〃	〃	〃	⟶ ×2
	3	B		〃	〃	〃	〃	〃	⟵
	4	〃		〃	〃	〃	〃	〃	⟶ ×2
	5	C		〃	〃	〃	〃	〃	⟵
	6	〃		〃	〃	〃	〃	〃	⟶ ×2
	7	B		〃	〃	〃	〃	〃	⟵
	8	〃		〃	〃	〃	〃	〃	⟶ ×2
	⬇	※		〃	〃	〃	〃	〃	⇄ ※

Set the Weaving Knobs at the O mark.

CARD No.11–A SLIP STITCH(Colours) (9)



A = Light blue
B = White
C = Brown

1 Pat. = 8 sts, 24 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	⟶
❷	I	A		SLIP	II	▲	▼	S	⟵
	2	B		〃	〃	〃	〃	〃	⟶
	3	C		〃	〃	〃	〃	〃	⟵
	⬇	※		〃	〃	〃	〃	〃	⇄ ※

Set the Weaving Knobs at the O mark.

CARD No.3–A SLIP STITCH(Appli.) (1)



A = White
B = Brick color

1 Pat. = 4 sts, 8 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	⟶
❷	I	A		SLIP	II	▲	▼	S	⟵
	2	〃		〃	〃	〃	〃	〃	⟶ ×2
	3	B		STOCKINET	〃	〃	〃	〃	⟵
	4	〃		〃	〃	〃	〃	〃	⟶ ×2
	⬇	※		※	〃	〃	〃	〃	⇄ ※

Set the Weaving Knobs at the O mark.

CARD No.2–A SLIP STITCH(Appli.) (2)



A = Purple
B = White

1 Pat. = 4 sts, 8 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	⟶
❷	I	A		SLIP	II	▲	●	S	⟵
	〃	〃		〃	〃	〃	〃	〃	⟶ ×4
	〃	B		STOCKINET	〃	〃	〃	〃	⟵
	〃	〃		〃	〃	〃	〃	〃	⟶ ×4
	〃	※		※	〃	〃	〃	〃	⇄ ※

Set the Weaving Knobs at the O mark.

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KNIT-IN (FAIR ISLE)

CARD No.20–A **FAIR ISLE (1)**

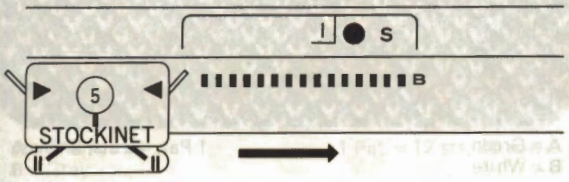


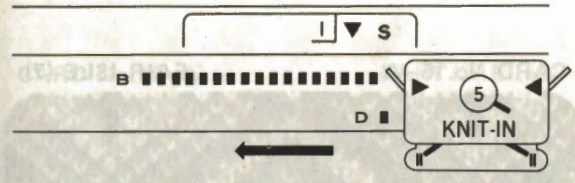
A = Purple
B = Yellowish green

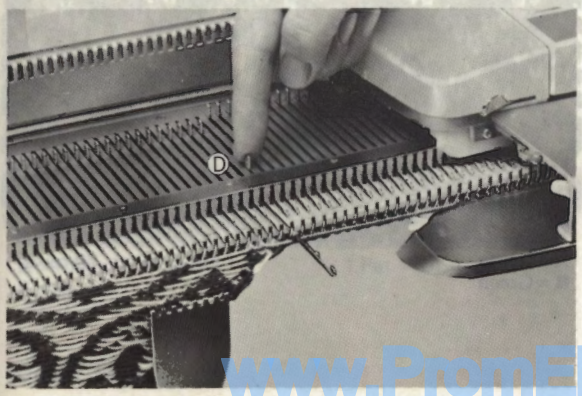
1 Pat. = 24 sts, 54 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A	B	KNIT-IN	II	▲	▼	S	←
	2	〃	〃	〃	〃	〃	〃	〃	→
	⬇	〃	〃	〃	〃	〃	〃	〃	⇄*

Set the Weaving Knobs at the ○ mark. (both)







* In Fair Isle knitting, two yarns of different colours are knitted simultaneously during one operation.

* The two yarns are threaded through Yarn Feeder ① and ② respectively.

* Thread the two yarns through the Auto-Tension. Place the yarn of colour B in the Yarn Clip and thread colour A through the Yarn Feeder ①.

* Knit several rows of stockinet and stop the Carriage on the left side of the Needle Bed.

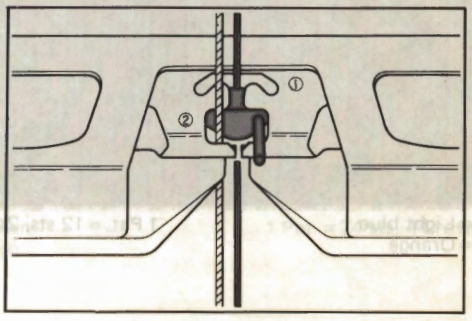
* Attach the accessory Weights to both ends of the knitted fabric.

(1) Insert Punch Card No.20–A into the Centre Panel.

(2) Set the Carriage according to Order ❶ of the operation table.

(3) Knit 1 row with colour A (in Yarn Feeder ①).

(4) Remove colour B from the Yarn Clip and thread it through Yarn Feeder ② as illustrated below. (Be sure that the yarn is threaded to the left of the Guide Pin.)



(5) Change the setting of the Carriage following the instructions given in Order ❷ of the operation table.

(6) Continue knitting by moving the Carriage back and forth each time bringing one end needle on the Carriage side to D position to prevent the knitted patterns from being shaped wrong.

* When partial knitting, bring the end needle at the Carriage side to C position every row. Using the New Magic Cams and the Point Cams **E** in Fair Isle knitting eliminates the need of your manually pushing the end working needles to D or C position. (Refer to page 82.)

Note: * In decreasing or increasing, move the Point Cams **E** following the stitches to be decreased or increased.

* The Weights which are attached on both sides of the fabric are to be moved up every 30–40 rows.

* The following patterns are knitted in the same manner.

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CARD No.4–A **FAIR ISLE (2)**



A = White
B = Light blue

1 Pat. = 4 sts, 4 rows.

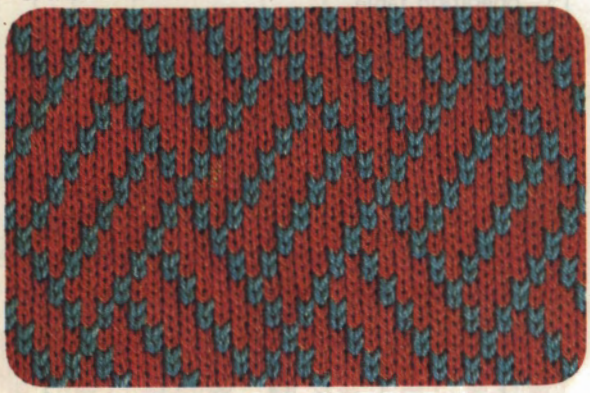
CARD No.15–A **FAIR ISLE (3)**



A = Light blue
B = Red

1 Pat. = 12 sts, 24 rows.

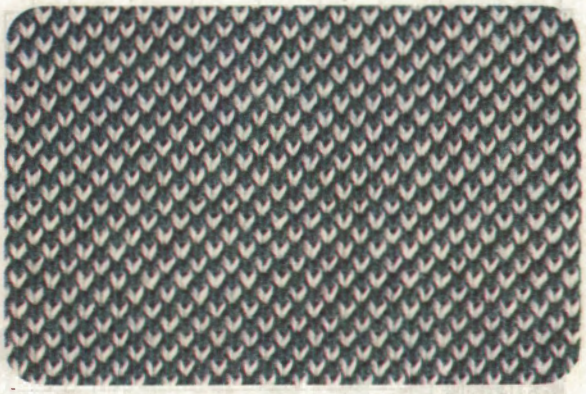
CARD No.9–A **FAIR ISLE (4)**



A = Light blue
B = Orange

1 Pat. = 12 sts, 24 rows.

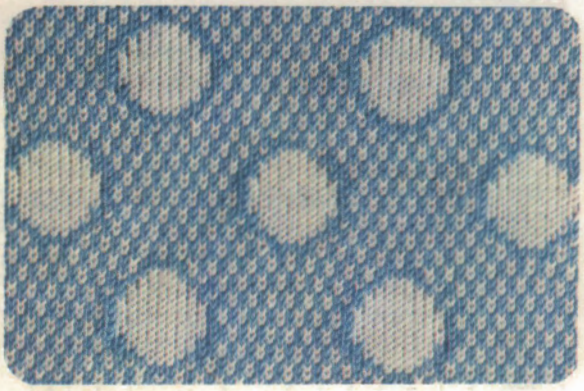
CARD No.1–A **FAIR ISLE (5)**



A = Green
B = White

1 Pat. = 2 sts, 2 rows.

CARD No.17–A **FAIR ISLE (6)**



A = White
B = Light blue

1 Pat. = 24 sts, 30 rows.

CARD No.16–A **FAIR ISLE (7)**

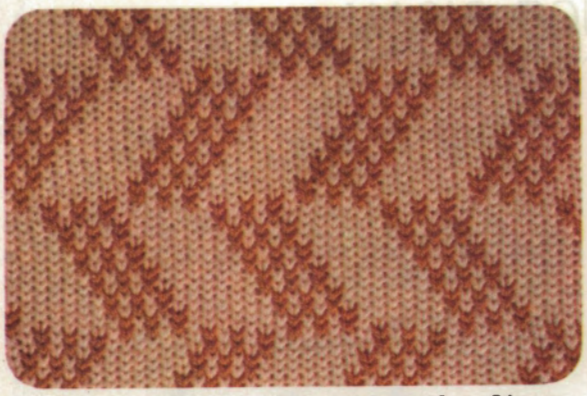


A = White
B = Green

1 Pat. = 24 sts, 30 rows.

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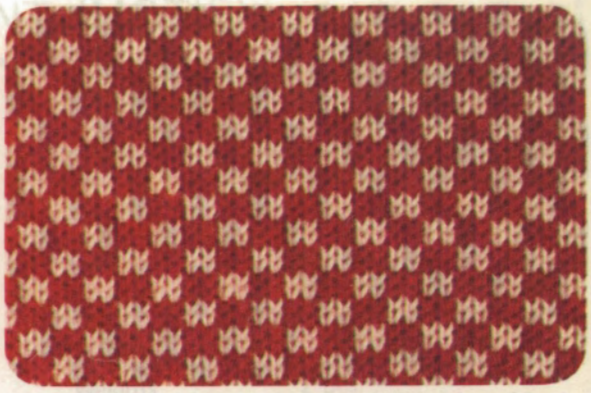
CARD No.12–A **FAIR ISLE (8)**



A = Yellow
B = Beige

1 Pat. = 12 sts, 24 rows.

CARD No.2–A **FAIR ISLE (9)**



A = Red
B = White

1 Pat. = 4 sts, 4 rows.

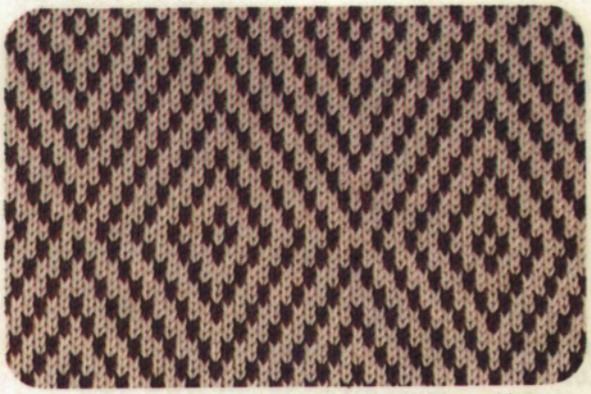
CARD No.10–A **FAIR ISLE (10)**



A = Cherry red
B = Grey

1 Pat. = 12 sts, 20 rows.

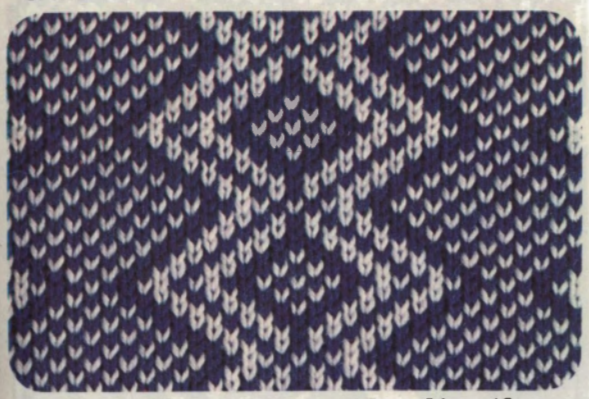
CARD No.18–A **FAIR ISLE (11)**



A = Brown
B = Beige

1 Pat. = 24 sts, 44 rows.

CARD No.14–A **FAIR ISLE (12)**



A = White
B = Blue

1 Pat. = 24 sts, 12 rows.

CARD No.13–A **FAIR ISLE (13)**

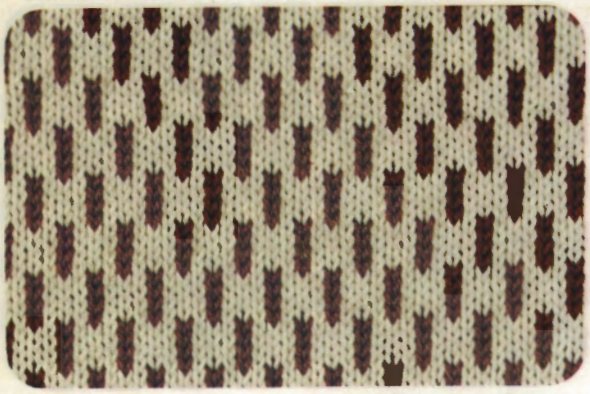


A = Green
B = Beige

1 Pat. = 8 sts, 8 rows.

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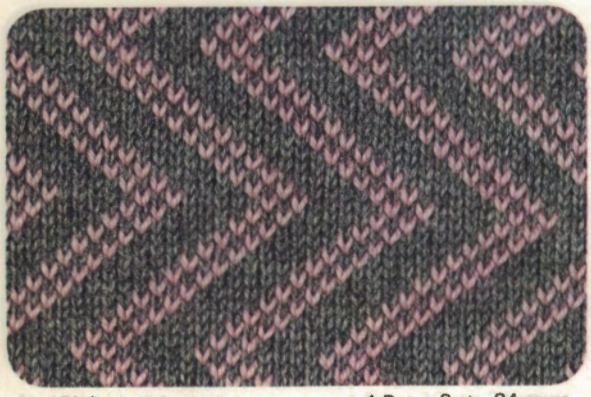
CARD No.3–A — FAIR ISLE (14)



A = Brown
B = Beige

1 Pat. = 4 sts, 8 rows.

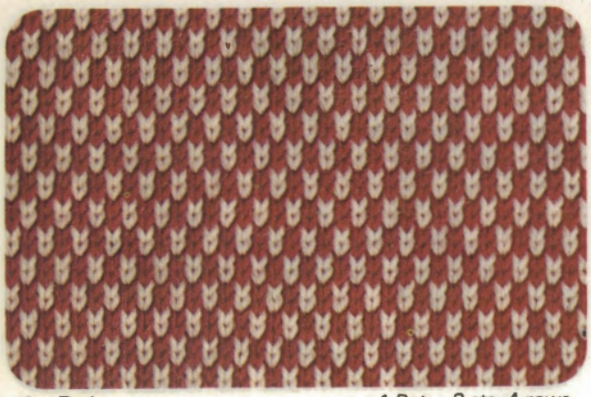
CARD No.11–A — FAIR ISLE (15)



A = Pink
B = Grey

1 Pat. = 8 sts, 24 rows.

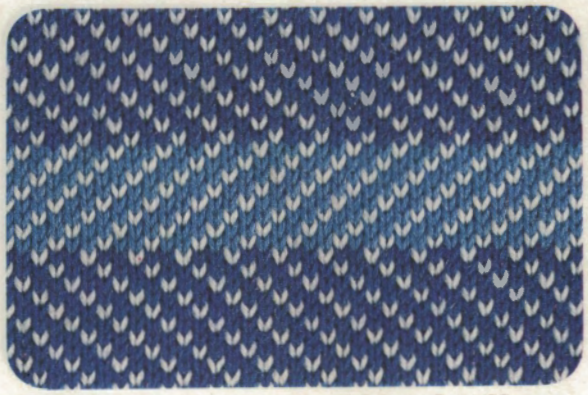
CARD No.7–A — FAIR ISLE (16)



A = Red
B = White

1 Pat. = 2 sts, 4 rows.

CARD No.8–A — FAIR ISLE (Appli.) (1)



A = White
B = Navy blue
C = Light blue

1 Pat. = 3 sts, 18 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A	B	KNIT-IN	II	▲	▼	S	←→ 10
	2–10	〃	〃	〃	〃	〃	〃	〃	
	11	〃	C	〃	〃	〃	〃	〃	←→ 8
	12–18	〃	〃	〃	〃	〃	〃	〃	
	↓	〃	※	〃	〃	〃	〃	〃	⇄ ※

*Knit 10 rows with colour B in the yarn feeder ② and 8 rows in colour C alternately.

Set the Weaving Knobs at the O mark. (both)

CARD No.2–A — FAIR ISLE (Appli.) (2)



A = White
B = Yellow
C = Red
D = Navy blue
E = Green

1 Pat. = 4 sts, 8 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A	B	KNIT-IN	II	▲	▼	S	←→ 2
	2	〃	〃	〃	〃	〃	〃	〃	
	3	〃	C	〃	〃	〃	〃	〃	←→ 2
	4	〃	〃	〃	〃	〃	〃	〃	
	5	〃	D	〃	〃	〃	〃	〃	←→ 2
	6	〃	〃	〃	〃	〃	〃	〃	
	7	〃	E	〃	〃	〃	〃	〃	←→ 2
	8	〃	〃	〃	〃	〃	〃	〃	
	↓	〃	※	〃	〃	〃	〃	〃	⇄ ※

*Change the four colours every 2 rows in the yarn feeder ②.

Set the Weaving Knobs at the O mark. (both)

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MAGIC POINT (MOTIF)

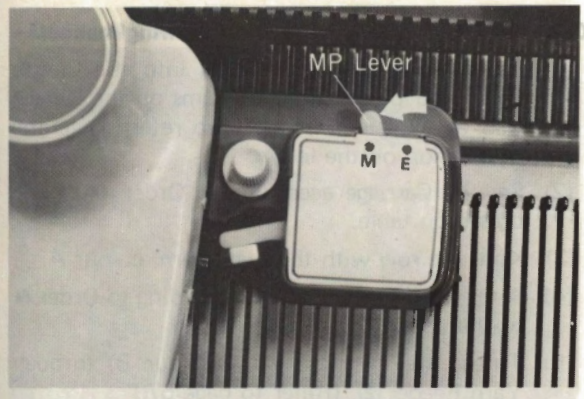
CARD No.19–03–A **MAGIC POINT (1)**

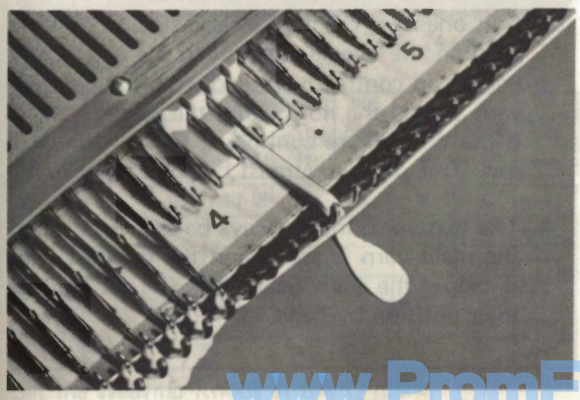


A = White **C** = Black 1 Pat. = 24 sts, 56 rows.
B = Blue

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV ○	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A	B	KNIT-IN	II	▲	▼	S	←→
	17	〃	〃	〃	〃	〃	〃	〃	←→) 17
	18	〃		〃	〃	〃	〃	〃	→
	19	〃		〃	〃	〃	〃	〃	←
❸	20	〃	C	〃	〃	〃	〃	〃	→←
	56	〃	〃	〃	〃	〃	〃	〃	→←) 37

Set the Weaving Knobs at the ○ mark.





* A single pattern in Knit-in (Fair Isle) stitch can be knit in any position, width and length desired.

* Prepare the following accessories:—

Magic Cam	Right & Left
Yarn Separator	2 pcs.
Point Cam M	Right & Left (2 pcs.)
Weights	2 pcs.

Note: * The Carriage setting is the same as that for Knit-in.

* The magic point can be also knit in punch lace with the Carriage setting exactly the same as that for ordinary punch lace. When knitting in this stitch the Separators are not required.

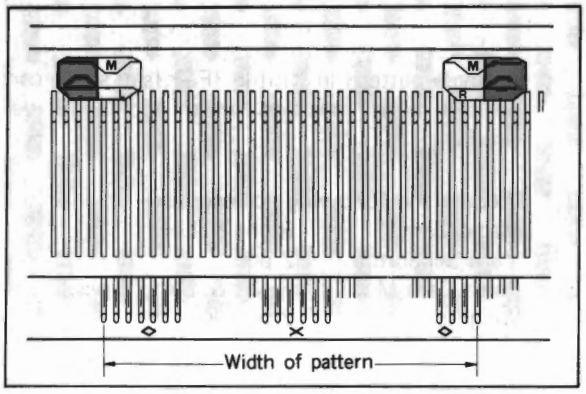
* Install the Magic Cams on both sides of the Carriage. To do this, set the Side Levers to the ☗ mark and insert the Magic Cams as illustrated, so that the ▲ marks on both sides of the Carriage and those on the Magic Cams meet at the same position. Fasten the Cams firmly with the screw caps and release the Side Levers from the ☗ position so that they hit the Magic Cams.

* Set the MP Lever to ● M mark.
(The Lever should slightly be raised upwards, before setting it.)

* Open the latches of the 4th, 5th and 6th needle on the outsides of knitting needles. Insert the Yarn Separators between three needles and the front edge as far as it goes on both sides. Be sure to keep the latches be open while Carriage operation.

* Arrange yarn above the Yarn Separator.

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* Select two neighbouring ◇ marks between which you would like the magic point (or Motif) to be knit.

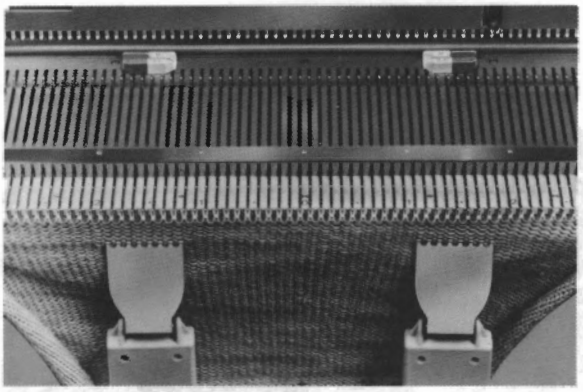
Note: * This penguin pattern is begun by knitting the base of the motif (Fairisle) wider than 24 stitches; it is knitted across 31 stitches.

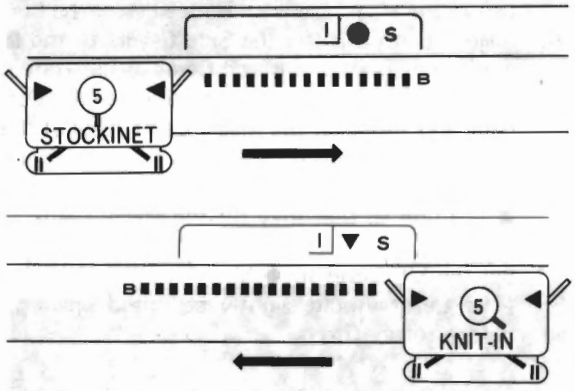
* The left Point Cam should be placed four needles to the outside of the left ◇ mark and the right Point Cam three needles to the outside of the right ◇ mark, with the letter M on both Point Cams covering the width for knitting the pattern.

Note: * The Point Cams are coloured in orange and white. Be sure to set the Point Cams so that the white covers the pattern and the orange faces to the outside.

* After placing the Point Cams on the Needle Bed, they must be pushed away from you as far as they go, as shown in the diagram.

* Suspend the Weights on the fabric in the positions below the Point Cams M.





Card No.19–A is knitted in the following manner:–

(1) Insert Punch Card No.19–A into the Centre Panel and place the Point Cams on the Needle Bed as explained above (also referring to the illustration on the left).

(2) Set the Carriage according to Order ❶ of the operation table.

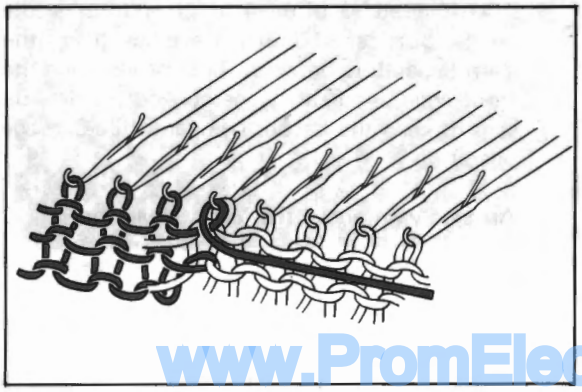
(3) Knit one row with the main yarn, colour A.

(4) Alter the Carriage setting according to Order ❷ of the operation table.

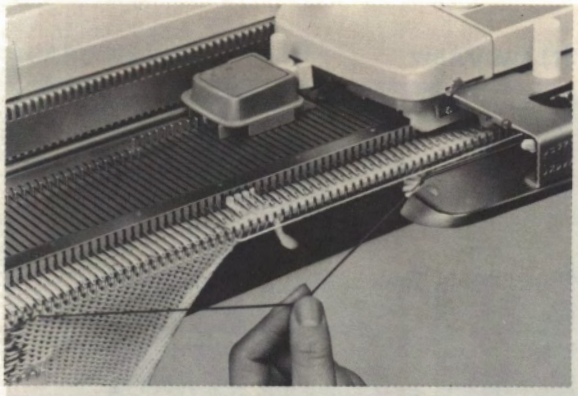
(5) Thread the contrast yarn (colour B) through Yarn Feeder ②. (Refer to page 57.)

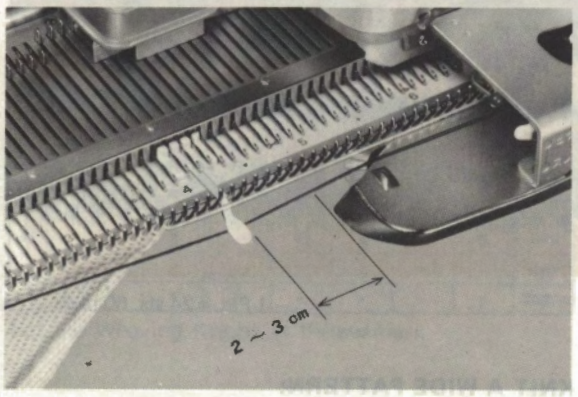
(6) Knit one row. On the Carriage side, bring to C position the needle adjacent to the end needle knitted in contrast yarn and wrap the contrast yarn around the hook. Push the needle back to B position before continuing to knit the next row. This procedure must be done every row.

* The two yarns must always be arranged so that the main yarn is above and the contrast yarn is below the yarn Separators. If not, correct their position by hand.



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(7) For the second row, hold the contrast yarn downwards and move the Carriage to the left. When the leading Round hass passed the Yarn Separator, release the contrast yarn.

(8) Continue to knit by repeating procedures (6) and (7) for each row.

(9) For the 18th and 19th rows, remove the contrast yarn from Yarn Feeder ②.

(10) Before knitting the 20th row, the Point Cams must be placed inside the ◇ marks bringing the pattern to a standard width of 24 stitches, in order to knit a complete penguin. Afterwards, thread a second contrast yarn (colour C) through Yarn Feeder ② as indicated in Order ❸ of the operation table. Knit following procedure (8).

* If you mis-knit in the middle of a row, before moving the Carriage, the Magic Cams must be removed from the Needle Bed.
* When the Carriaged is moved back and forth, it should be moved until it is at least 2–3 cms. off the Separators.
* After completing the Magic Point pattern and before starting to knit in stockinet, remove the Magic Cams from the Carriage, and the Separators and Point Cams from the Needle Bed.

Note: * It is recommended to knit patterns within 150 needles at the centre of the Needle Bed. If the position of the pattern is far from the centre of the Needle Bed or the pattern is too wide, the Auto-Tension cannot take up slack on the yarns.

CARD No.5–A **MAGIC POINT (2)**



A = Beige **C** = Pink
B = Green

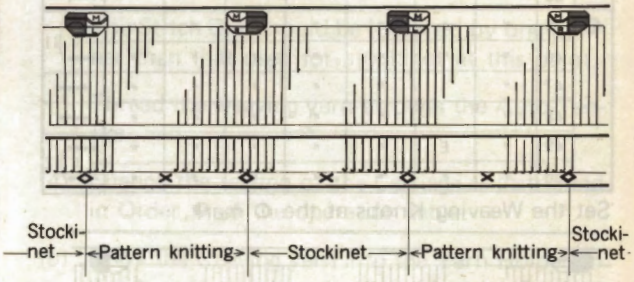
1 Pat. = 24 sts, 58 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	⟶
❷	1	A	B	KNIT-IN	II	▲	▼	S	⟵ 1 ⟶ 15
	15	〃	〃	〃	〃	〃	〃	〃	⟵
	16	〃	C	〃	〃	〃	〃	〃	⟶ 1 ⟵ 33
	48	〃	〃	〃	〃	〃	〃	〃	⟶
	49	〃	B	〃	〃	〃	〃	〃	⟵ 1 ⟶ 10
	58	〃	〃	〃	〃	〃	〃	〃	⟶

Set the Weaving Knobs at the O mark.

(KNIT A DOUBLE POINT PATTERN)

* Set two sets of the Point Cams M at the outsides of 4 ◇ marks covering two patterns separately as illustrated belows, and knit.



Note: * When changing contrast yarn in the Yarn Feeder ②, change it with another between the patterns knitted in stockinet. (If the same contranst yarn is used, long loops of the contrast yarn will be hanged on the back of fabric.)

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A = Yellow **D** = Dark Green
B = Green **E** = Grey
C = Red

1 Pat. = 24 sts, 60 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A	B	KNIT-IN	II	▲	▼	S	←→ 5
	5	〃	〃	〃	〃	〃	〃	〃	
	6	〃	C	〃	〃	〃	〃	〃	→← 3
	8	〃	〃	〃	〃	〃	〃	〃	
	9	〃	〃	〃	〃	〃	〃	〃	←
	10	〃		〃	〃	〃	〃	〃	→
	11	〃	D	〃	〃	〃	〃	〃	←
	12	〃	〃	〃	〃	〃	〃	〃	→
❸	13	〃	〃	〃	〃	〃	〃	〃	←→ 23
	35	〃	〃	〃	〃	〃	〃	〃	
❹	36	〃	〃	〃	〃	〃	〃	〃	→← 11
	46	〃	〃	〃	〃	〃	〃	〃	
	47	〃		〃	〃	〃	〃	〃	←
	48	〃		〃	〃	〃	〃	〃	→
	49	〃	E	〃	〃	〃	〃	〃	←→ 12
	60	〃	〃	〃	〃	〃	〃	〃	

Set the Weaving Knobs at the O mark.

KNIT A WIDE PATTERN:

(1) In accordance with Order ❷ of the operation table, on the left, set the Cam Lever to "KNIT-IN" and knit without using the Magic Cams or Point Cams.

(2) From Order ❸ of the operation table onwards, use the Magic Cams and Point Cams in order to knit the Magic Point. The Point Cams must be placed on the outside of the ◇ marks covering a width of 4 ◇ marks (72 stitches). (Diagram ①)

(3) From Order ❹ of the operation table, remove the left Point Cam and place it 48 stitches to the right bringing the pattern to a width of 24 stitches to complete the train engine pattern. (Diagram ②)

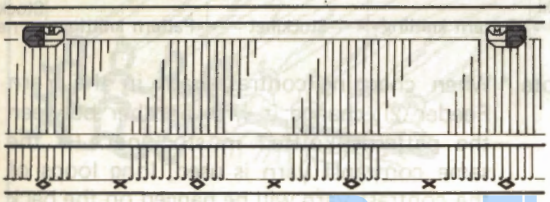


Diagram ①

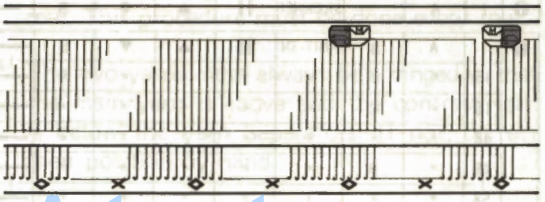


Diagram ②

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WEAVING

CARD No.14–A **WEAVING (1)**

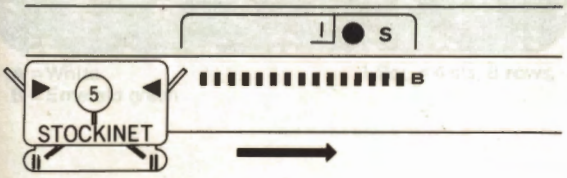


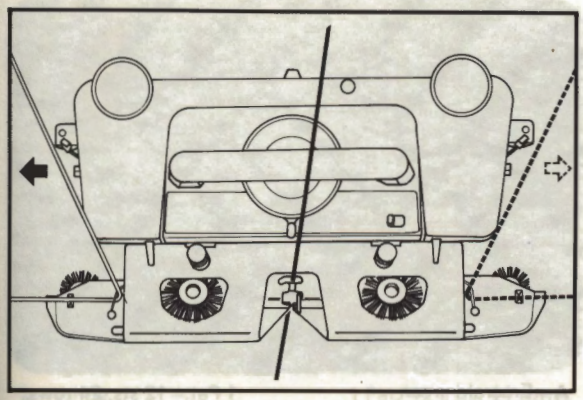
A = Black
B = Red

1 Pat. = 24 sts, 12 rows.

ORDER	CARD MEM.	YARN F. 1	YARN Y. H	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A	B	STOCKINET	II	▲	▼	S	←
	2	〃	〃	〃	〃	〃	〃	〃	→
	⬇	〃	〃	〃	〃	〃	〃	〃	⇄ *

Set the Weaving Knobs at the ∾ mark.

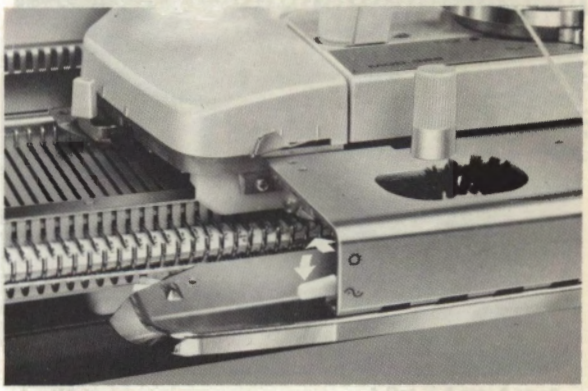




* This is the method in which a fancy yarn, or thicker or bulky yarn is knitted into the fabric bringing the pattern to the wrong side of the garment and giving it a weaving effect. In this case, a medium size yarn is used for main knitting and a thicker yarn for weaving.

* Attach the accessory Weights to both ends of the knitted fabric.

* Set the Weaving Knobs at the ∾ mark. Slightly push the Knob forward to set it. (When releasing the Knob, slightly push it upwards. Always keep the knobs at the O mark except when weaving.)



(1) Insert Punch Card No.14–A.

(2) Thread the knitting yarn (colour A) through the Yarn Feeder ①.

(3) Set the carriage following the instructions given in Order ❶ of the operation table and knit one row.

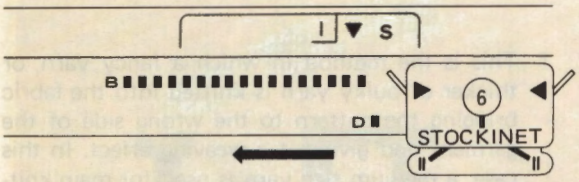
* The Stitch Dial should be loosened by one number than that used for stockinet at this point.

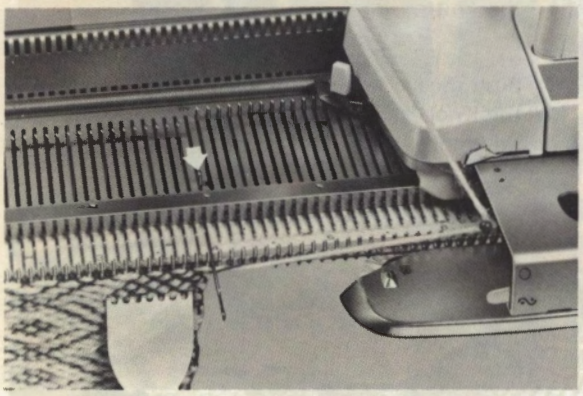
* Thread the weaving yarn through the Auto-Tension.

(4) Change the setting of the Carriage as instructed in Order ❷ of the operation table.

(5) Hook the weaving yarn into the Yarn Holder on the Arm in the direction in which the Carriage is to be moved.

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(6) To prevent the knitted patterns from being shaped wrong, bring the end needle nearest the Carriage to D position and knit one row.
When the Magic Cams and the Point Cams **E** are installed, you may perform knitting without bringing an end needle on the Carriage side to D or C position. (Refer to page 82.)

Note:* In decreasing or increasing, move the Point Cams **E** following the stitches to be decreased or increased.

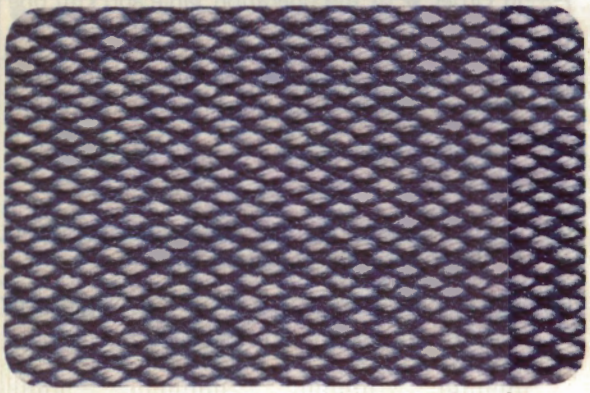
* In Lace knitting, rest the needles manually without using the Magic Cams.

(7) Repeat operation (5) (6).

Note:* The Auto-Tension Dial must be adjusted as follows for weaving yarn.
Medium yarn
(Ordinary 4 ply) } 2–3
Thick yarn

* The following patterns are knitted in the same manner.

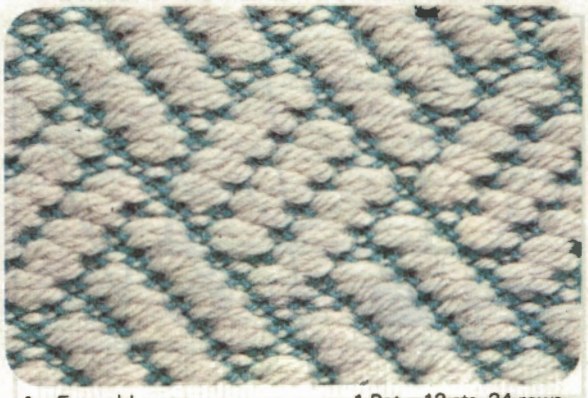
CARD No.1–A **WEAVING (2)**



A = Blue
B = White

1 Pat. = 2 sts, 2 rows.

CARD No.9–A **WEAVING (3)**



A = Emerald green
B = White

1 Pat. = 12 sts, 24 rows.

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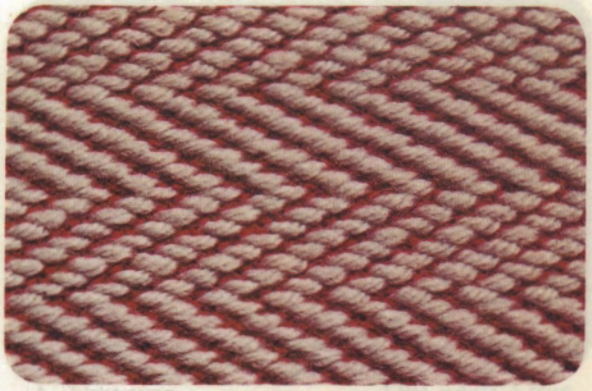
CARD No.2–A **WEAVING (4)**



A = Blue
B = White

1 Pat. = 4 sts, 4 rows.

CARD No.8–A **WEAVING (5)**



A = Red
B = White

1 Pat. = 3 sts, 18 rows.

CARD No.3–A **WEAVING (6)**



A = White
B = Emerald green

1 Pat. = 4 sts, 8 rows.

CARD No.4–A **WEAVING (7)**



A = White
B = Grey

1 Pat. = 4 sts, 4 rows.

CARD No.18–A **WEAVING (8)**



A = White
B = Navy blue

1 Pat. = 24 sts, 44 rows.

CARD No.16–A **WEAVING (9)**



A = Brown
B = White

1 Pat. = 24 sts, 30 rows.

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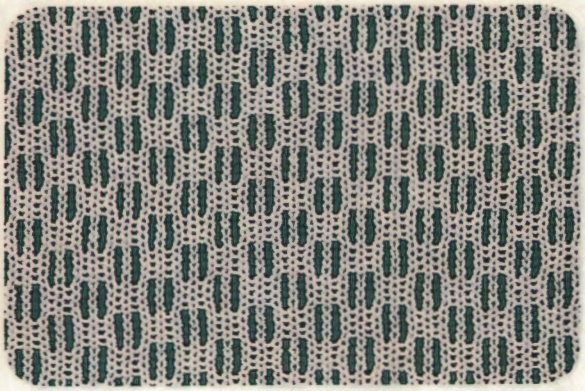
CARD No.7–A WEAVING (10)



A = White
B = Red

1 Pat. = 2 sts, 4 rows.

CARD No.3–A WEAVING (11)



A = Grey
B = Green

1 Pat. = 4 sts, 8 rows.

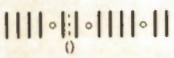
CARD No.4–A WEAVING(Resting Needles) (1)



A = Blue
B = Yellow

1 Pat. = 8 sts, 4 rows.

(N. R. D.)



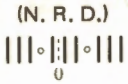
CARD No.3–A WEAVING(Resting Needles) (2)



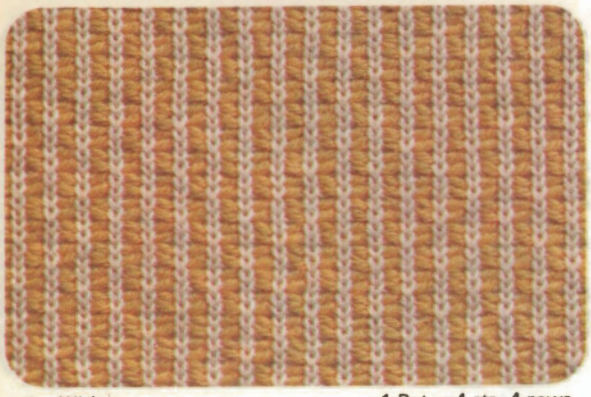
A = Yellow
B = Green

1 Pat. = 4 sts, 8 rows.

(N. R. D.)



CARD No.2–A WEAVING(Resting Needles) (3)



A = White
B = Yellow

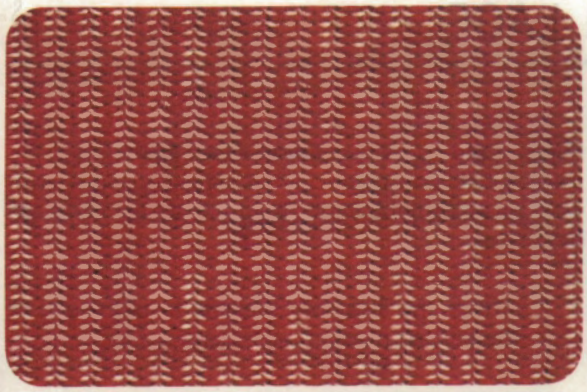
1 Pat. = 4 sts, 4 rows.

(N. R. D.)



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CARD No.1–A WEAVING(Appli.) (1)



A = White
B = Cherry red

1 Pat. = 2 sts, 1 rows.

ORDER	CARD MEM.	YARN F. 1	YARN Y. H.	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	⟶
❷	I	A	B	STOCKINET	II	▲	●	S	⟵
	〃	〃	〃	〃	〃	〃	〃	〃	⟶
	〃	〃	〃	〃	〃	〃	〃	〃	⇄ ✻

Set the Weaving Knobs at the ∾ mark.

CARD No.2–A WEAVING(Appli.) (2)



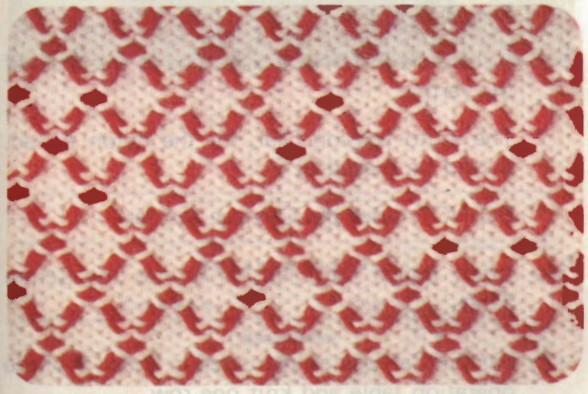
A = Light green
B = Green

1 Pat. = 4 sts, 1 rows.

ORDER	CARD MEM.	YARN F. 1	YARN Y. H	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	⟶
❷	I	A	B	STOCKINET	II	▲	●	S	⟵
	〃	〃	〃	〃	〃	〃	〃	〃	⟶
	〃	〃	〃	〃	〃	〃	〃	〃	⇄ ✻

Set the Weaving Knobs at the ∾ mark.

CARD No.3–A WEAVING(Appli.) (3)



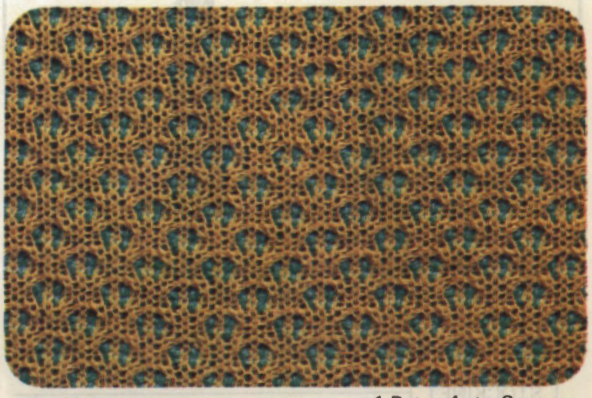
A = White
B = Cherry red

1 Pat. = 4 sts, 8 rows.

ORDER	CARD MEM.	YARN F. 1	YARN Y. H	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	⟶
❷	I	A	B	STOCKINET	II	▲	▼	S	⟵
	2	〃	〃	〃	〃	〃	〃	〃	⟶
	3	〃		〃	〃	〃	〃	〃	⟵
	Pick up 2 rows of yarn and put on center needle.								
	4	〃		〃	〃	〃	〃	〃	⟶
	⬇	〃	✻	〃	〃	〃	〃	〃	⇄ ✻

Set the Weaving Knobs at the ∾ mark.

CARD No.3–A WEAVING(Appli.) (4)



A = Yellow
B = Blue

1 Pat. = 4 sts, 8 rows.

ORDER	CARD MEM.	YARN F. 1	YARN Y. H	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	⟶
❷	I	A	B	STOCKINET	II	▲	▼	S	⟵
	2	〃	〃	〃	〃	〃	〃	〃	⟶
	3	〃		TUCK	〃	〃	〃	〃	⟵
	4	〃		〃	〃	〃	〃	〃	⟶
	⬇	〃	✻	✻	〃	〃	〃	〃	⇄ ✻

Set the Weaving Knobs at the ∾ mark.

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PUNCH LACE

CARD No.15–A **PUNCH LACE (1)**

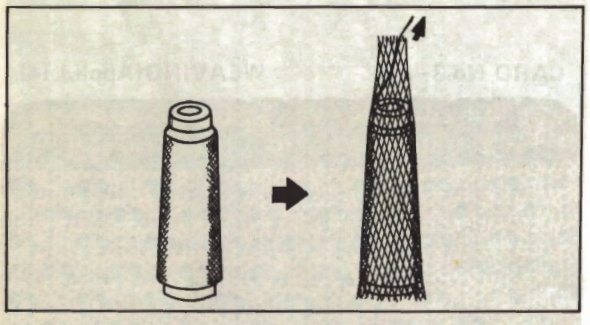


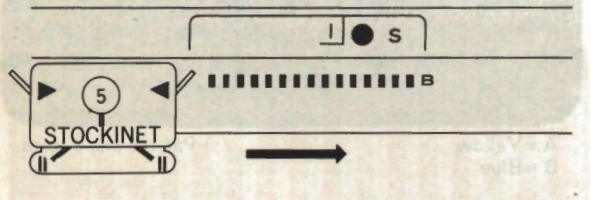
A = Cream color
B = Nylon thread

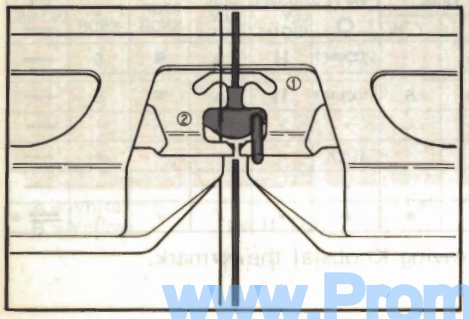
1 Pat. = 12 sts, 24 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A	NYLON	P. LACE	L·I·R·II	▲	▼	S	←
	2	〃	〃	〃	〃	〃	〃	〃	→
	⬇	〃	〃	〃	〃	〃	〃	〃	⇄ *

Set the Weaving Knobs at the O mark.







Punch Lace is a unique feature of this Knitter. By using a fine transparent nylon thread together with wool or a synthetic yarn, beautiful lace garments can be created.

* Attach the accessory Weights to both sides of the knitted piece.

* The nylon thread and the yarn to be used should be threaded respectively through the Auto-Tension. As the nylon thread becomes easily tangled, place the Stop Net (sold separately) over the spool.

The nylon thread should be placed in the Yarn Clip and the main yarn threaded through Yarn Feeder ①.

* Adjust the Stitch Dial according to thickness of the yarn.

* The Auto-Tension Dial, for the nylon thread, should be placed at 7.

* DO NOT move the Carriage too fast.

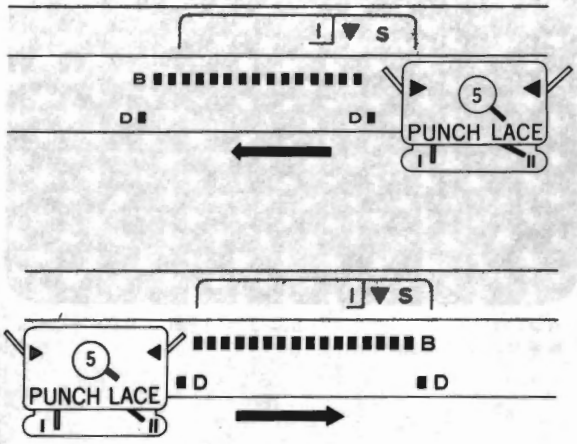
(1) Insert Punch Card No.15–A into the Centre Panel.

(2) Set the Carriage as instructed in Order ❶ of the operation table and knit one row.

(3) Alter the setting of the Carriage according to Order ❷ of the operation table.

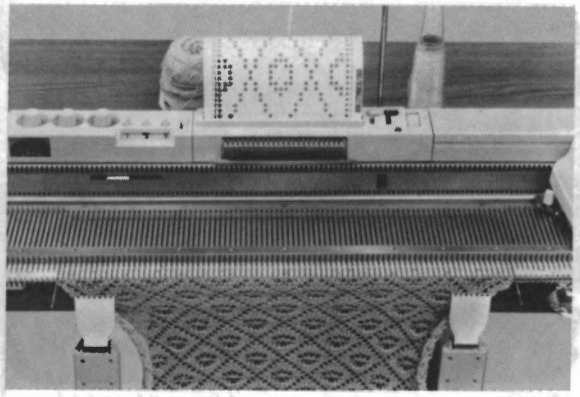
(4) The nylon thread should now be threaded through Yarn Feeder ②. (Be sure that it is threaded to the left of the Guide Pin.)

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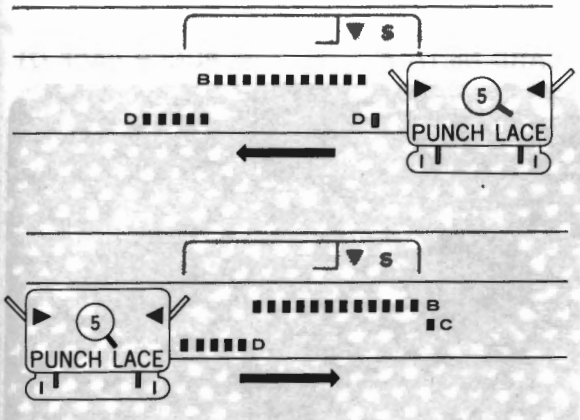


(5) When moving the Carriage from right to left, be sure to push up the end one needle on both sides to D position every time and knit.

(6) When moving the Carriage from left to right, the needles in D position will be brought back to B position.



Note: * If you wish to knit a certain number of rows in stockinet between Punch Lace knitting, adjust the Cam Lever to STOCKINET and remove the nylon thread from Yarn Feeder ② before knitting.



* When partial knitting, set both Russel Levers to the I position. Before moving the Carriage from right to left, bring one end needle on the side of the Carriage to D position.

  When operating the Carriage from left to right, bring one end needle, as above, to C position.

* The patterns on the following page are knitted in the same manner.

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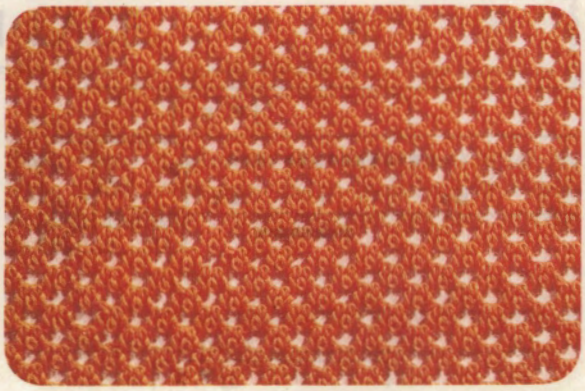
CARD No.14–A **PUNCH LACE (2)**



A = Purple
B = Nylon thread

1 Pat. = 24 sts, 12 rows.

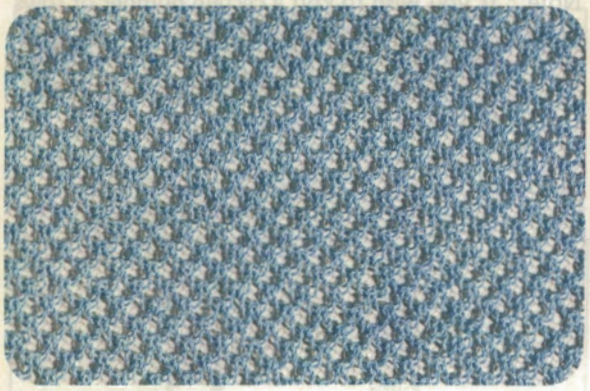
CARD No.2–A **PUNCH LACE (3)**



A = Orange
B = Nylon thread

1 Pat. = 4 sts, 4 rows.

CARD No.7–A **PUNCH LACE (4)**



A = Light blue
B = Nylon thread

1 Pat. = 2 sts, 4 rows.

CARD No.20–A **PUNCH LACE (5)**



A = Orange
B = Nylon thread

1 Pat. = 24 sts, 54 rows.

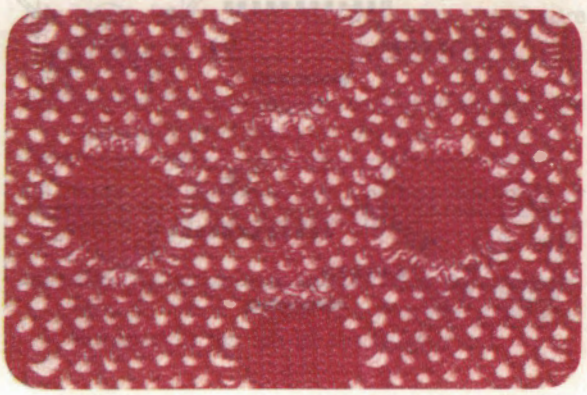
CARD No.1–A **PUNCH LACE (6)**



A = Yellowish green
B = Nylon thread

1 Pat. = 2 sts, 2 rows.

CARD No.17–A **PUNCH LACE (7)**



A = Pink
B = Nylon thread

1 Pat. = 24 sts, 30 rows.

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VERTICAL EXPANSION PATTERN

CARD No.16–A **KNIT-IN (V. E. P.) (1)**

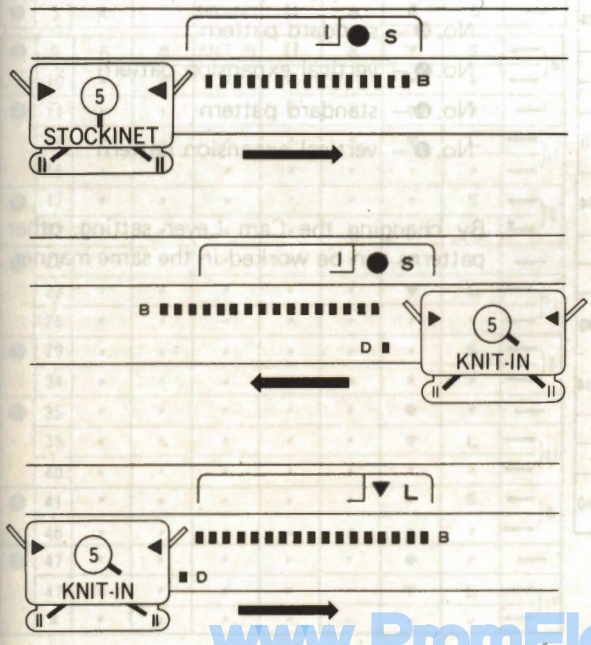


A = White
B = Red
E.O.R......Every-Other-Row Feeding Mechanism.

1 Pat. = 24 sts, 60 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	L INDICATION	DIR. (NO.RS.)
❶	I	A		STOCKINET	II	▲	●	S		→
❷	I	A	B	KNIT-IN	II	▲	●	S	Blue	←
	I	〃	〃	〃	〃	〃	▼	L	Blue	→
	2	〃	〃	〃	〃	〃	〃	〃	Red	←
	2	〃	〃	〃	〃	〃	〃	〃	Blue	→
	⬇	〃	〃	〃	〃	〃	〃	〃	Red	⇄*

Set the Weaving Knobs at the ○ mark.



* By the use of L Knob, Punch Card is fed only every other row and an expanded pattern, twice the standard pattern in length can be knitted. This knitting is used mainly for knit-in but also for slip, weaving or punch lace.

Standard pattern



* Knit this pattern in the same manner as for other pattern knittings except the use of L Knob and Stop Knob.

* When the L Knob is set the L position, blue and red colours appear alternately in the L Indicator.

* Blue colour indicates the Punch Card was not fed on the previous row and the same pattern will repeat.

* Red colour indicates the Punch Card was fed on the previous row and a new pattern will be knitted.

(1) Insert Punch Card No.16–A into the Centre Panel Unit.

(2) Set the Carriage as shown in Order No.❶ of the operation table.

(3) Knit one row with the main yarn, colour A.

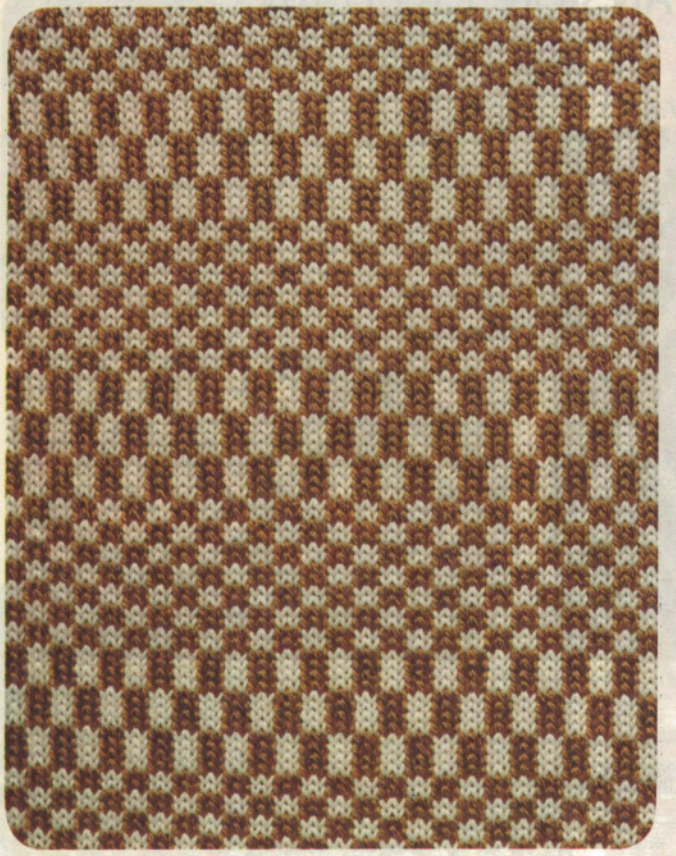
(4) Change the setting to that of line 1 of Order No.❷ in the operation table. Thread the contrast yarn, colour B, through Yarn Feeder ②and knit one row.

(5) Set both the Stop Knob and L Knob to that as shown in line 2 of Order No.❷ in the operation table. Bring to D position the end needle on the side of the Carriage and then knit the second row. (When knitted, the L Indicator turns to red.)

(6) Continue to knit in the same manner as that for knit-in. The L Indicator changes to blue and red alternately every row.

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CARD No.2–A **KNIT-IN (V. E. P.) (2)**



A = White
B = Ochre

1 Pat. = 4 sts, 24 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1 – 14	A	B	KNIT-IN	II	▲	▼	S	←→ 14
❸	15	〃	〃	〃	〃	〃	●	〃	←
	15	〃	〃	〃	〃	〃	▼	L	→
	16 – 20	〃	〃	〃	〃	〃	〃	〃	←→ 10
❹	21 – 34	〃	〃	〃	〃	〃	〃	S	←→ 14
❺	35	〃	〃	〃	〃	〃	●	〃	←
	35	〃	〃	〃	〃	〃	▼	L	→
	36 – 40	〃	〃	〃	〃	〃	〃	〃	←→ 10
❻	41 – 54	〃	〃	〃	〃	〃	〃	S	←→ 14
❼	55	〃	〃	〃	〃	〃	●	〃	←
	55	〃	〃	〃	〃	〃	▼	L	→
	56 – 60	〃	〃	〃	〃	〃	〃	〃	←→ 10

Set the Weaving Knobs at the O mark.

The following patterns are made up of standard sized patterns and vertical expansion patterns.

* When knitting vertical expansion pattern following standard sized pattern or viceversa, operate as follows:—

(1) Set the Stop Knob to ● mark and knit one row. (L Indicator ➡ blue)

(2) Set the Stop Knob to ▼ mark and knit one row. (L Indicator ➡ red)

(3) Continue knitting from the third row.

* To knit standard sized pattern following vertical expansion pattern, with the L Indicator in red, set the L Knob to S and knit continously.

Knitting order

No. ❷ — standard pattern
No. ❸ — vertical expansion pattern
No. ❹ — standard pattern
No. ❺ — vertical expansion pattern
No. ❻ — standard pattern
No. ❼ — vertical expansion pattern

* By changing the Cam Lever setting, other patterns can be worked in the same manner.

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CARD No.15–A — KNIT-IN (V. E. P.) (3)



A = Blue
B = White

1 Pat. = 12 sts, 36 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	5	A		STOCKINET	II	▲	●	S	→
❷	5	A	B	KNIT-IN	II	▲	▼	S	←→ 6
	10	〃	〃	〃	〃	〃	〃	〃	
❸	11	〃	〃	〃	〃	〃	●	〃	←
	11	〃	〃	〃	〃	〃	▼	L	→← 11
	16	〃	〃	〃	〃	〃	〃	〃	
❹	17	〃	〃	〃	〃	〃	〃	S	←→ 6
	22	〃	〃	〃	〃	〃	〃	〃	
❺	23	〃	〃	〃	〃	〃	●	〃	←
	23	〃	〃	〃	〃	〃	▼	L	→← 11
	28	〃	〃	〃	〃	〃	〃	〃	
❻	29	〃	〃	〃	〃	〃	〃	S	←→ 6
	34	〃	〃	〃	〃	〃	〃	〃	
❼	35	〃	〃	〃	〃	〃	●	〃	←
	35	〃	〃	〃	〃	〃	▼	L	→← 11
	40	〃	〃	〃	〃	〃	〃	〃	
❽	41	〃	〃	〃	〃	〃	〃	S	←→ 6
	46	〃	〃	〃	〃	〃	〃	〃	
❾	47	〃	〃	〃	〃	〃	●	〃	←
	47	〃	〃	〃	〃	〃	▼	L	→← 11
	4	〃	〃	〃	〃	〃	〃	〃	

Set the Weaving Knobs at the ○ mark.

CARD No.8–A — KNIT-IN (V. E. P.) (4)



A = White
B = Dark Green
C = Red

1 Pat. = 3 sts, 26 rows.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV.	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	→
❷	1	A	B	KNIT-IN	II	▲	▼	S	←→ 10
	10	〃	〃	〃	〃	〃	〃	〃	
❸	11	〃	C	〃	〃	〃	●	〃	←
	11	〃	〃	〃	〃	〃	▼	L	→← 15
	18	〃	〃	〃	〃	〃	〃	〃	
❹	19	〃	B	〃	〃	〃	〃	S	←→ 10
	28	〃	〃	〃	〃	〃	〃	〃	
❺	29	〃	C	〃	〃	〃	●	〃	←
	29	〃	〃	〃	〃	〃	▼	L	→← 15
	36	〃	〃	〃	〃	〃	〃	〃	
❻	37	〃	B	〃	〃	〃	〃	S	←→ 10
	46	〃	〃	〃	〃	〃	〃	〃	
❼	47	〃	C	〃	〃	〃	●	〃	←
	47	〃	〃	〃	〃	〃	▼	L	→← 15
	54	〃	〃	〃	〃	〃	〃	〃	

Set the Weaving Knobs at the ○ mark.

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PLATTING

CARD No.12–A **PLATTING (1)**

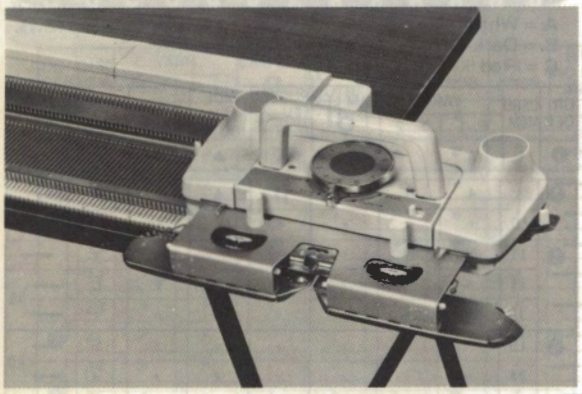


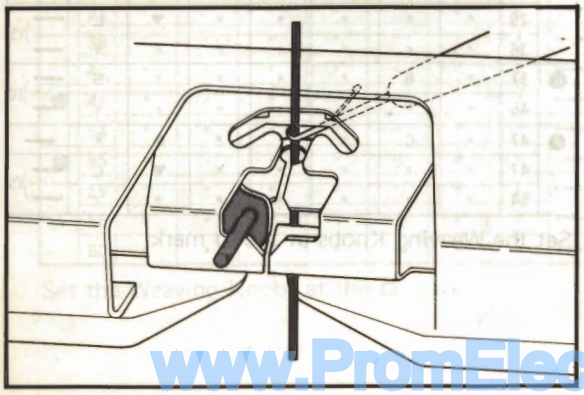
A = Red
B = Yellow

1 Pat. = 12 sts, 24 rows.

ORDER	CARD MEM.	YARN F. 1	YARN P. F	CAM LEV ○	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	1	A		STOCKINET	II	▲	●	S	⟶
❷	1	A	B	TUCK	II	▲	▼	S	⟵
	2	〃	〃	〃	〃	〃	〃	〃	⟶
	⬇	〃	〃	〃	〃	〃	〃	〃	⟷ *

Set the Weaving Knobs at the ○ mark.





* Platting is knitted with two different coloured yarns. One yarn appears on one side whilst the second yarn appears on the other side of the knitted fabric.

* Platting in stockinet is predominant but if you wish to knit this stitch in tuck stitch patterns, you will enjoy different effects on the knitted fabric.

* Platting in stockinet is easily made by threading one yarn through Yarn Feeder ① and the other yarn behind Yarn Feeder ① (Platting Holder). After this has been done, just knit.

* Platting in tuck stitch can be made exactly in the same way as for standard tuck stitch patterns, the only exception being that you must thread the platting yarn behind Yarn Feeder①. (Refer to page 43 for knitting in tuck stitch.)

* DO NOT fail to attach the extra Round Brushes to the Carriage Arm and the accessory Weights to both sides of the fabric.

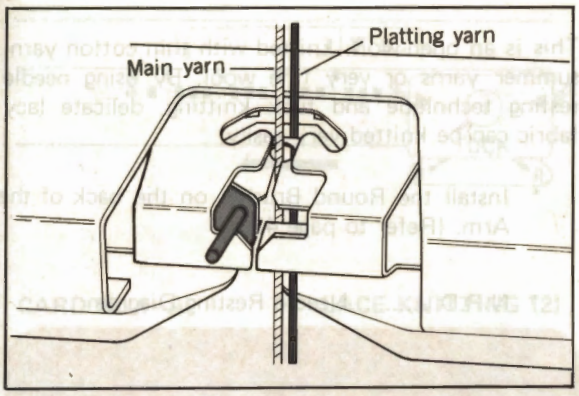
* Use a light yarn for the platting yarn, as two yarns are used simultaneously for platting.
  Example: Medium yarn with a thin yarn or a light yarn with a thin yarn.
  You can enjoy different effects if you use light yarns of a special material.

Thread the platting yarn.

(1) Bring the Carriage to either end of the Needle Bed, so as the back of the Yarn Feeder can be seen.

(2) Open the Yarn Feeder Gate and thread the platting yarn into Yarn Feeder①. The platting yarn must then be pulled, from the back, out of the Yarn Feeder① with the aid of a Tappet, to behind the Yarn Feeder①hole.

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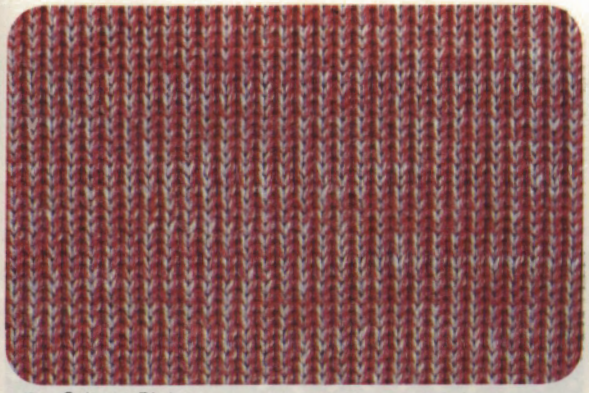
(3) After the platting yarn has been threaded correctly, as shown in the diagram, thread the main yarn through Yarn Feeder ①. Close the Yarn Feeder Gate and start knitting.

Each yarn appears as follows:—
Platting yarn.....on the purl side
Main yarn.....on the knit side

(If you prefer to use the knit side, the platting yarn must be threaded through Yarn Feeder ① and the main yarn should be behind the Yarn Feeder ① hole.)

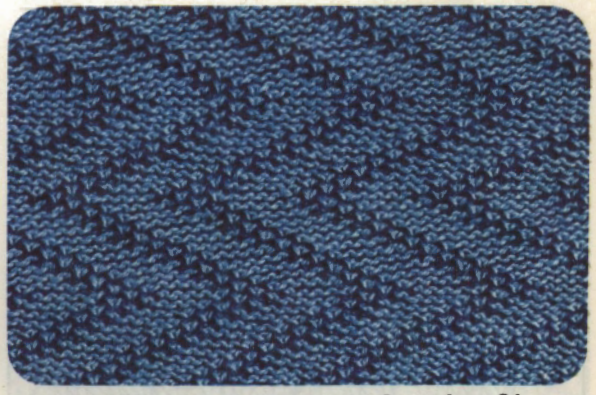
* The following stitch patterns are knitted in the same manner. (See photographs below.)

STOCKINET **PLATTING (2)**



A = Salmon Pink
B = Grey

CARD No.11–A **PLATTING (3)**



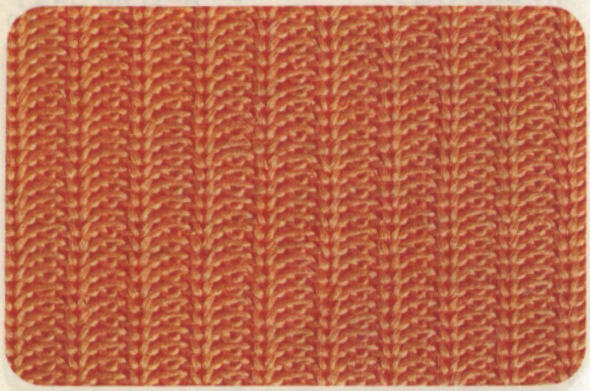
A = Navy Blue
B = Light Blue

1 Pat. = 8 sts, 24 rows.

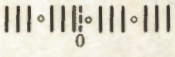
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LACE KNITTING

CARD No.1–A **LACE KNITTING (1)**

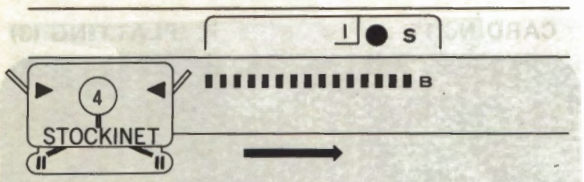


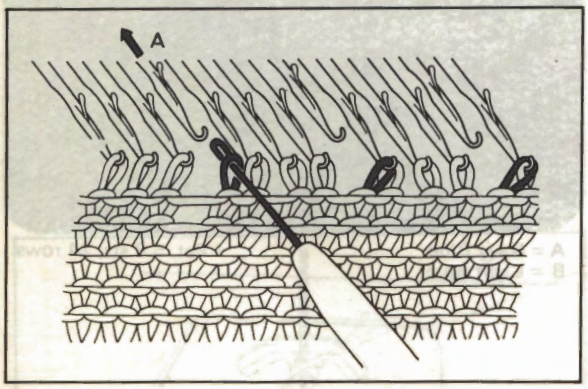
A = Orange (N. R. D.) 1 Pat. = 4 sts, 2 rows.

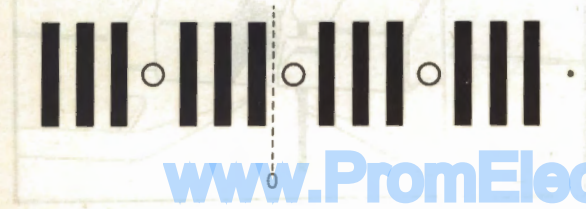


ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	→
❷	I	A		TUCK	II	▲	▼	S	←
	2	〃		〃	〃	〃	〃	〃	→
	⬇	〃		〃	〃	〃	〃	〃	⇄ *

Set the Weaving Knobs at the O mark.







This is an open-work knitted with thin cotton yarn, summer yarns or very fine wool. By using needle resting technique and tuck knitting, delicate lacy fabric can be knitted very easily.

* Install the Round Brushes on the back of the Arm. (Refer to page 43.)

* N.R.D. .....Needle Resting Diagram

(1) Insert Punch Card No.1–A in the Centre Panel.

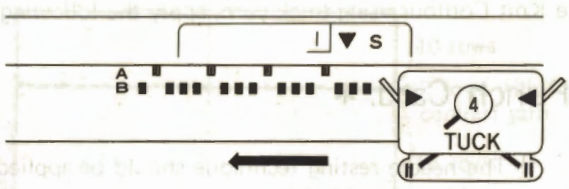
(2) Thread the yarn through the Yarn Feeder ①.

(3) Set the Carriage as instructed in Order ❶ of the operation table and knit one row.

(4) Arrange the needles as shown in the operation table (N.R.D.). With the (0) mark at the centre, transfer stitches on the needles at the O marks to their adjacent needles as in the diagram. Push the vacant needles to A position.

* You may also start knitting with the needles at the O mark being brought to A position.

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(5) After needle arrangement is completed, pattern knitting can begin. Change the setting of the Carriage as instructed in Order ❷ of the operation table and continue knitting.

* The patterns on the next page are knitted in the same manner.

CARD No.4–A **LACE KNITTING (2)**



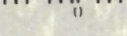
A = Yellow (N. R. D.) 1 Pat. = 4 sts, 4 rows.



CARD No.3–A **LACE KNITTING (3)**



A = Blue (N. R. D.) 1 Pat. = 4 sts, 8 rows.



CARD No.3–A **LACE KNITTING(Appli.) (1)**



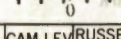
A = Blue (N. R. D.) 1 Pat. = 4 sts, 8 rows.



CARD No.2–A **LACE KNITTING(Appli.) (2)**



A = Light blue (N. R. D.) 1 Pat. = 4 sts, 4 rows.



ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	→
❷	I	A		TUCK	II	▲	▼	S	←→ 1–3
	3	〃		〃	〃	〃	〃	〃	←→
	4	〃		STOCKINET	〃	〃	〃	〃	→
	⬇	〃		※	〃	〃	〃	〃	⇄ ※

Set the Weaving Knobs at the ○ mark.

ORDER	CARD MEM.	YARN F. 1	YARN F. 2	CAM LEV	RUSSEL LEV. (BOTH)	SIDE LEV. (BOTH)	STOP KNOB	L KNOB	DIR. (NO. RS.)
❶	I	A		STOCKINET	II	▲	●	S	→
❷	I	A		TUCK	II	▲	●	S	←→ 1–3
	〃	〃		〃	〃	〃	〃	〃	←→
	〃	〃		STOCKINET	〃	〃	〃	〃	→
	〃	〃		※	〃	〃	〃	〃	⇄ ※

Set the Weaving Knobs at the ○ mark.

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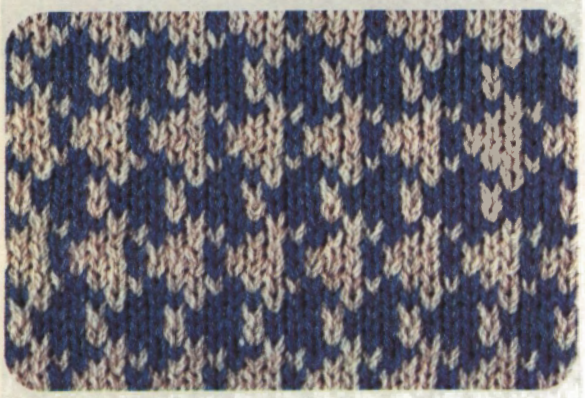
6. KNITTING WITH THICK YARN

* When pattern knitting or knitting a fabric using the Knit Contour using thick yarn, apply the following instructions.

When knitting a pattern using the Punch Card.

CARD No.13–A **KNIT-IN**





A = Blue
B = Grey

1 Pat. = 4 sts, 8 rows.

* The needle resting technique should be applied to this type of knitting.
* For ordinary thick yarn or for using 2–yarns, use every other needle. For very thick yarn, use every third needle.
* When knitting with the Punch Card, a pattern stitch is effected on every other needle used.
* As the Punch Card is not effected to the needles rested, if every other needles is used, the pattern on the Punch Card will be effected on every other needle only.
* By changing the position of resting needles, pattern effect will be changed accordingly. In case of every other needle resting, there are two kinds of effect as shown below.



The left upper photo.

The left lower photo.

* Be careful when you select the Punch Card.

Knit a garment using thick yarn.

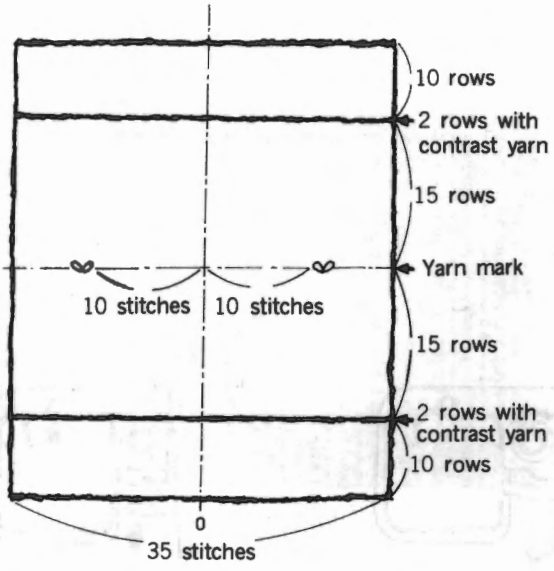
* If you use thick yarn, tension gauge does not comply with the standard usage of the Knit Contour. The number of stitch gauge will be below 22 and the number of row gauge will be below 29, both in 10cms. Therefore, in this case take tension gauge as follows.

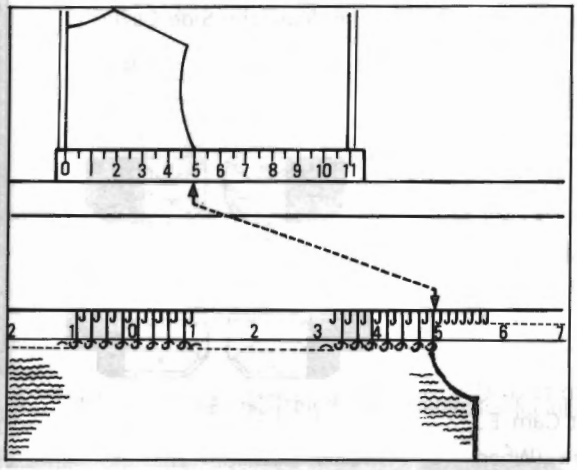
(Take tension gauge.)



* Push up every other needle to B position within the range of 70 needles (35 needles on both side of 0) and knit a tension swatch as when every needle is used. (Ref. to page 16.)

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* Knit tension swatch as instructed in the diagram left.
* After completion, steam iron it and read the number of stitches and rows using the Gauge Scale.

Note: * In case of an every 3rd needle arrangement, knit a tension swatch in the same manner as instructed on page 16 using every 3rd needle within the range of 70 needles (35 needles on both sides of 0). Knit the same number of rows as for every other needle arrangement.

(How to obtain stitch gauge.)

* Select the Stitch Scale having the same number as the stitch gauge number read on the Gauge Scale.
* Read the number of needles to be knitted including the resting needles. (Read the Stitch Scale graduations in relation with the needle number markings on the Needle Bed.)

(How to obtain row gauge.)

* Set the Row Number Dial to the number read on the Gauge Scale.
* Attach the Auxiliary Feeding Cam to the Carriage before knitting.

(How to knit.)

* When increasing or decreasing, read the number of stitches including the resting needles. If erroneously knitted and to feed the Pattern Paper back, feed it back twice the rows unravelled.

*Attach the Auxiliary Feeding Cam. *

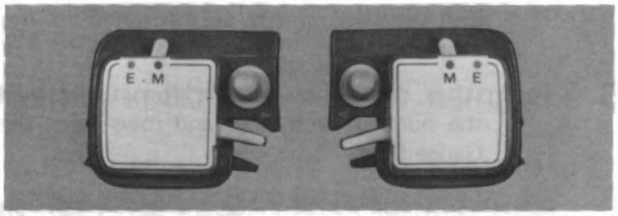


* When knitting with the tension gauge of 30 rows using thick yarn, the Pattern Paper is fed only half the lenth of a stitch size per row. Therefore, the Auxiliary Feeding Cam should be attached to the left side of the Carriage to feed it double the length per row.



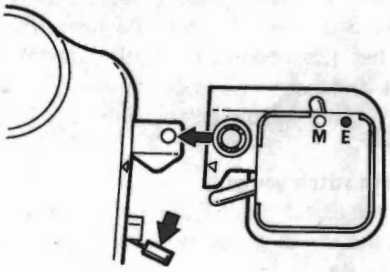
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6. NEW MAGIC CAMS

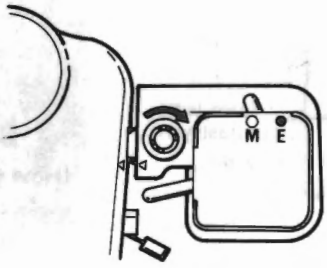


The New Magic Cams are used for working Magic Point knitting and also for controlling the end needles for the end stitches in knit-in (Fair Isle) or weaving pattern knitting.

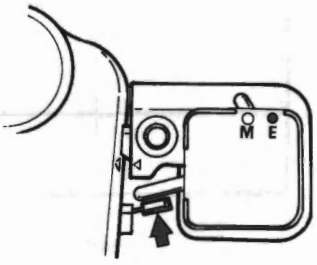
(Attach the Magic Cams.)



(1) Push the Side Lever of the Carriage to the ● position and place the New Magic Cam in position.
* Set the other Magic Cam to the left side of the Carriage in the same manner.



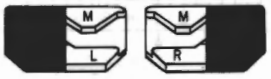
(2) Fasten the knob.



(3) Release the Side Lever.

(In case of magic point knitting.)

* Use with the Point Cam M. Refer to the Magic Point knitting on page 61.



Point Cam M



Point Cam E

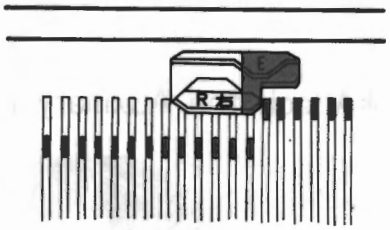
(In case of knit-in and weaving.)

* The Magic Cams push the end working needles to D or C position in combination with the use of the Point Cam E.

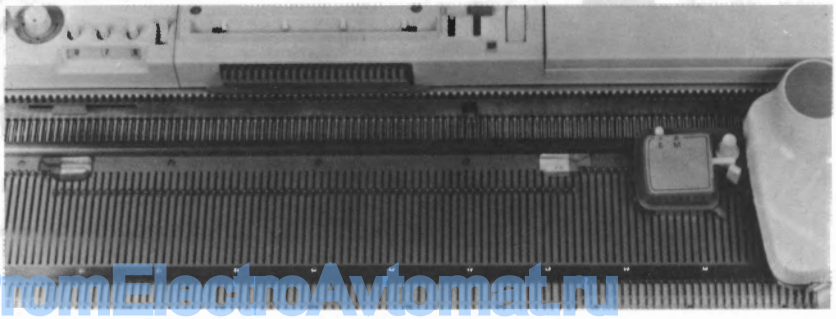
(1) Set the MP Lever of the Magic Cam to the E mark. (When moving, lift it slightly.)

(2) Place the Point Cams on the Needle Bed so that the division line between the white and blue portion is between the second to last and last needle of the needles in B position as illustrated.

(3) With those arrangements, knit-in or weaving can be done. In increasing or decreasing, move the Point Cam E following the stitches to be increased or decreased.



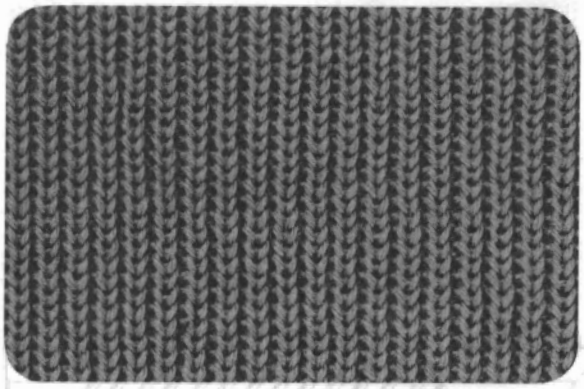




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8. PATTERN STITCHES WITHOUT USING PUNCH CARD

1. K1. P1. RIB



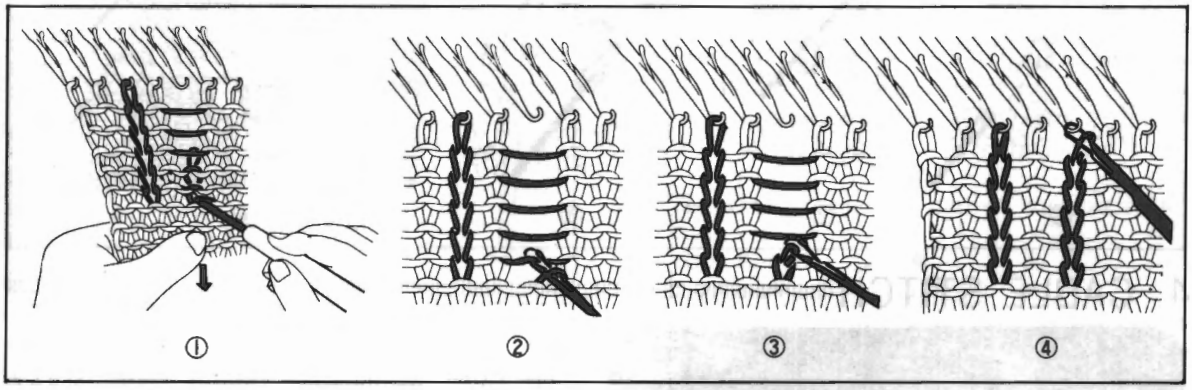
* For ribbing, use the Stitch Dial one number smaller than in stockinet.

(1) Knit 7–8 rows in stockinet and insert the Tappet into a stitch on the starting row. Bring the corresponding needle to D position and back to B position making its stitch slips off. Pull the knitting down to unravel stitches.

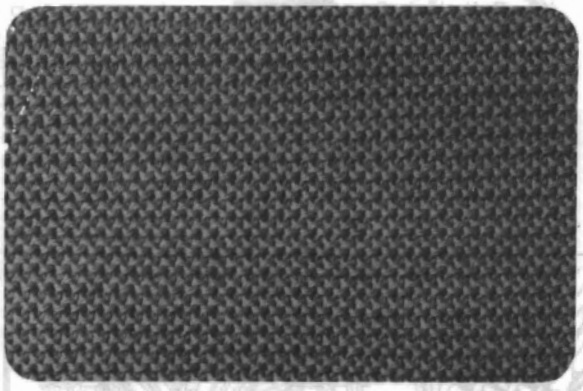
(2) With the Tappet, catch a loop above and pull the Tappet towards you until the loop slips into the first stitch. A purl stitch is reformed to a knit stitch.

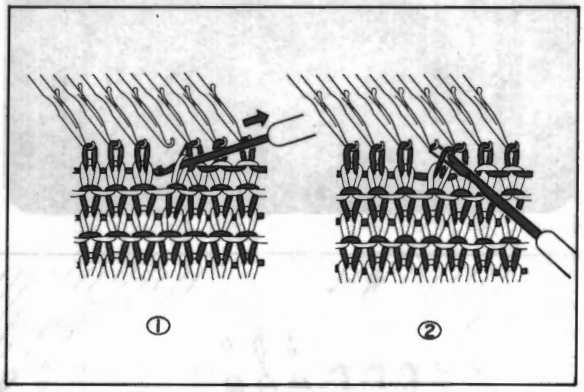
(3) Catch a loop above and work in the same manner as done for operations (1)(2)(3) until the last loop is reformed. Hook the last stitch on the needle.

(4) Repeat the operation (1)(2)(3) until the last cross yarn has been knitted, and place the stitch on its original needle.



2. GARTER STITCH





* For garter stitch, use the Stitch Dial one number smaller than in stockinet.

(1) Knit two rows in stockinet and insert the Tappet into the stitch below that which is hooked on the needle.

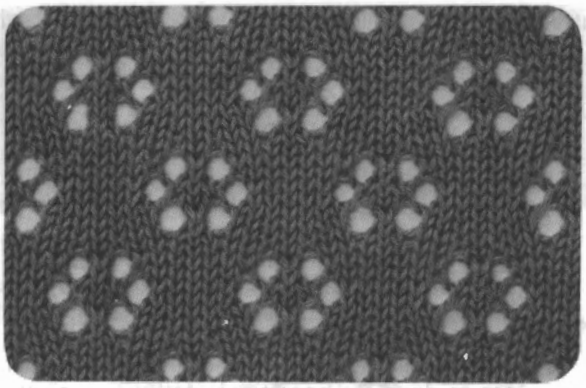
(2) Reform all the purl stitches into knit stitches using the Tappet.

(3) Repeat operations (1) and (2).

Note: * For quick working garter stitch, the use of Garter Bar, an aptional accessory, is recommended.

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3. OPENWORK



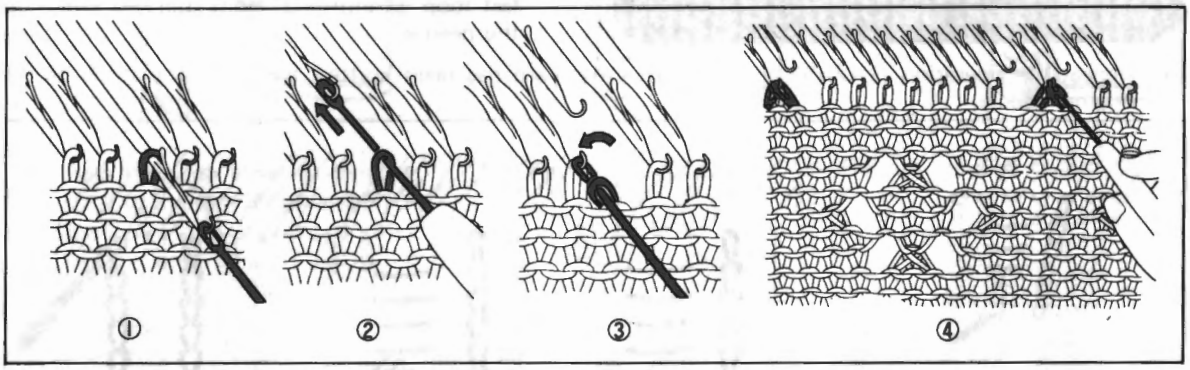
* This pattern is worked by transferring the stitches using a Transfer Tool.

(1) Knit two rows in stockinet. Put the eye of a Transfer Tool in the hook of the needle making a hole.

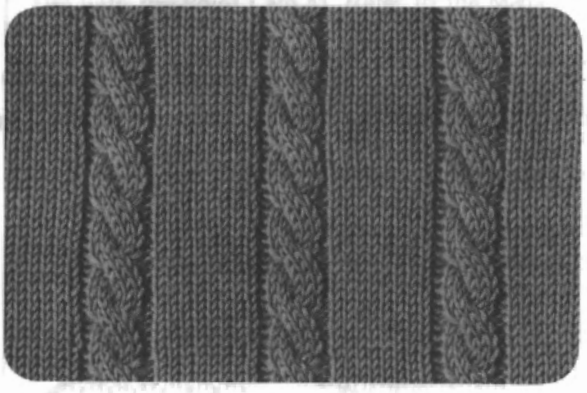
(2) Push the needle back to A position. The stitch will be transferred onto the Transfer Tool.

(3) Put the eye of the Transfer Tool onto the adjacent needle and transfer the stitch.

(4) Repeat operations (1) through (3).



4. CABLE STITCH



* Set the Russel Levers to II position.

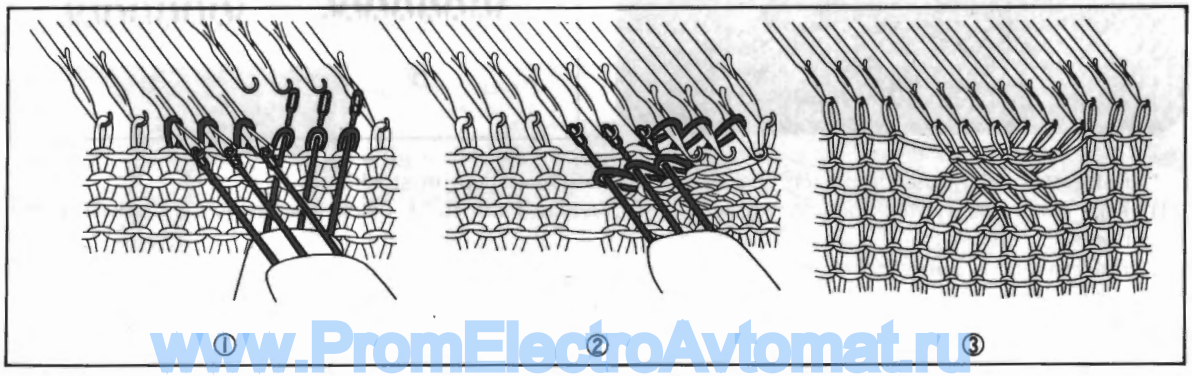
(1) Using two three-eye Transfer Tools, take six stitches from the needles as shown.

(2) Cross these stitches and hook them onto the empty needles.

(3) Pull these 6 needles to D position and knit 6 rows.

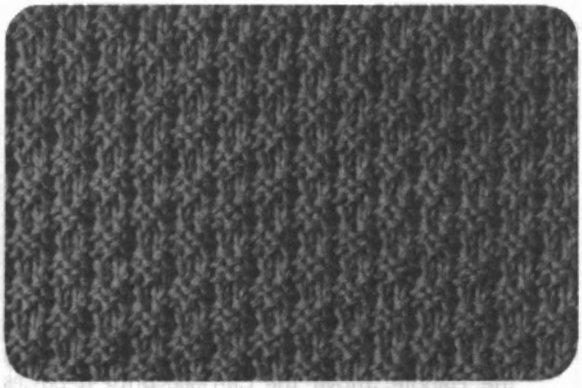
* Repeat operations (1)—(3) crossing stitches in the same direction.

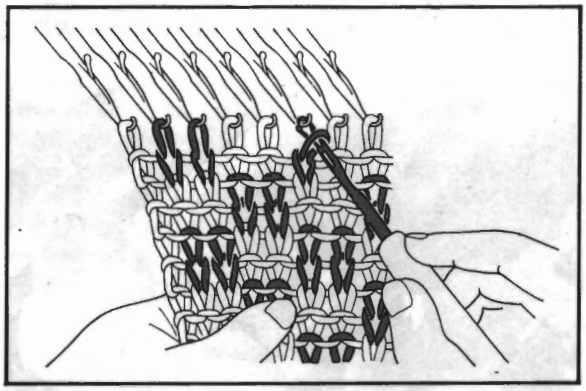
* After three or four patterns have been worked, reform two knit stitches, one at each outside of cable stitch into purl stitches all the way.



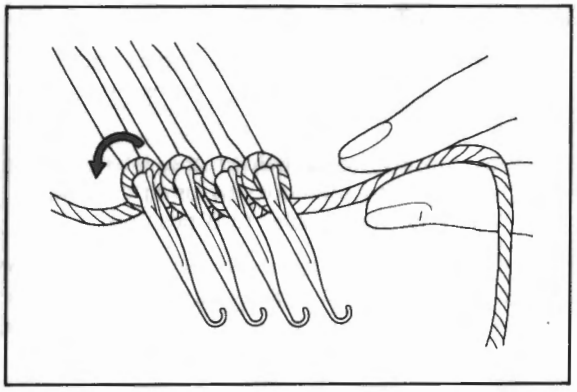
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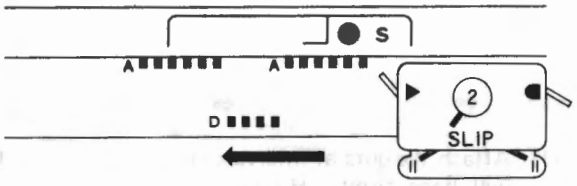
5. SOLID PATTERN OF KNIT AND PURL STITCH

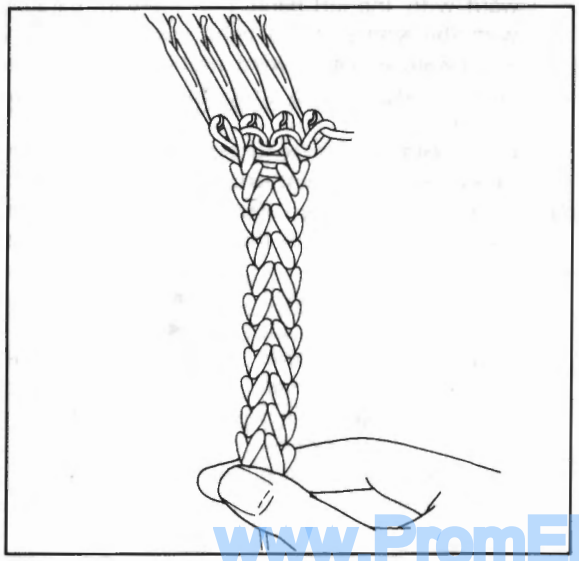




6. CORD KNITTING







* Knitted cords are often used for bands, capes and hoods, etc.

(1) Place the Carriage on the right side of the Needle·Bed. Depending upon the thickness of the cord, bring 3–5 needles to D position. Cast on the stitches by the winding method as illustrated.

(2) Set the Carriage and pattern controls as follows:–
Stop Knob..... ●
Cam Lever..... SLIP
Stitch Dial.....1–2 (for medium yarn)
Side Lever.....▲ at proceeding direction of the Carriage.
Side Lever..... ■ at rear direction of Carriage.
Russel Levers II

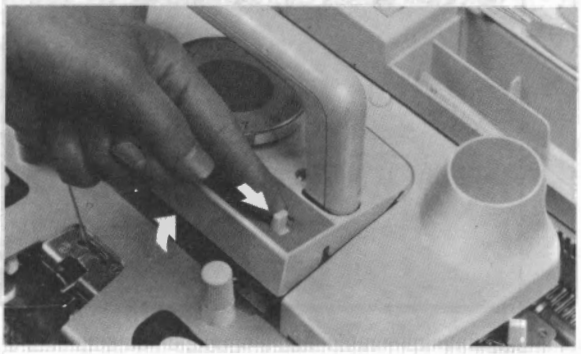
(3) Move the Carriage back and forth knitting one row. Holding the knitting with your fingers, bring the needles to D position.

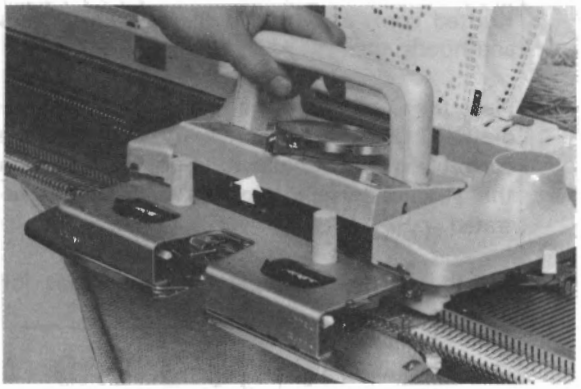
(4) Repeat (3) a few more times. Continue knitting by moving the Carriage back and forth while pulling the cord lightly downward with your hand for the desired length.

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9. HELPFUL HINTS

If the Carriage has jammed while knitting.





* If the Carriage jams while knitting, follow the instructions below, and do not move it by force.

(1) Remove the yarn from the Yarn Feeder.

(2) Push the Release Lever towards the arrowed direction (towards right), then the top of the Carriage will be lifted.

(3) With the top of the Carriage lifted by holding the Handle, move the Carriage until it passes the knitting needles. Place the handle downward so as the top of the Carriage is backed to its original position.

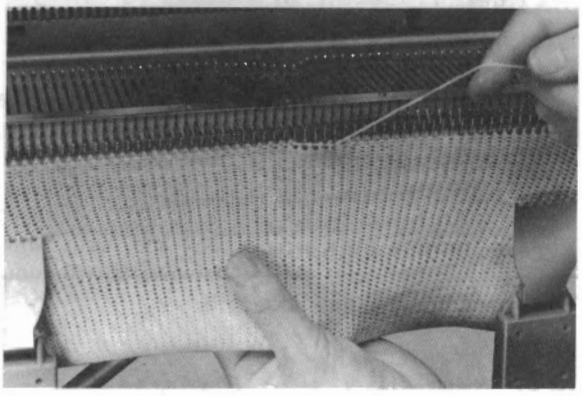
* When knitting with the New Magic Cams installed, remove the New Magic Cams firstly, then move the Carriage.

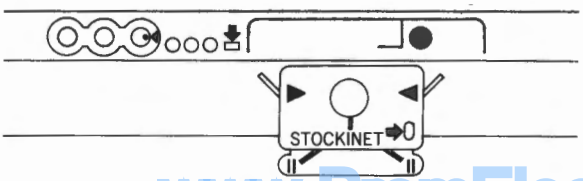
* For those stitches behind the latches, bring them back to the hooks by using the Transfer Tool. Push the Needles to B position.

* If yarn is entangled with the Yarn Feeder or Arm, loosen the Arm Nuts and remove the Arm. Push the Release Lever and move the Carriage.

Repair incorrect knitting.

(In stockinet.)





(1) Attach Weights at intervals on the garment so it will hang firmly. Holding the garment downward with the left hand, pull the yarn parallel with the Knitter for a tight row, then pull in an upward and backward motion to open the latches. Repeat this procedure for each row unraveled.
Push needles back to B position firmly when unravelling to prevent dropped stitches.

(2) If the Carriage is on the opposite side of the yarn after ripping out the rows, set the controls as follows:
Row Counter Lever.....●
Change Dial.....◀
Push the Release Lever and move the Carriage to the side of the yarn by lifting up the top of the Carriage. (The needles will be in C position.)

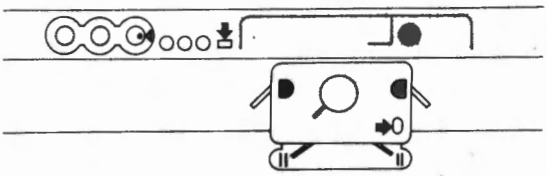
(3) Turn back the Row Counter and the Knit Contour the number of rows ripped and continue to knit.

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(In pattern knitting.)

To memorize pattern, set the controls as follows.

Stop Knob..... ●
Side Lever..... ■ (Both)
Row Counter Set Lever... ●
Change Dial..... ◀



With the top of the Carriage lifted, move the Carriage to the yarn side. If the Carriage is at the yarn side, move it twice and set for knitting.

Note: * In case of pattern knitting with the Stop Knob at ●, repair as in the stockinet.

This Knitter memorizes the pattern on the Punch Card on the preceding row in the rear Memory Bank. When the Carriage is moving back, the pattern memorized in the Memory Bank will be knitted and at the same time, the rear Memory Bank memorize the pattern on the Punch Card to be knitted on the next row. Therefore, if erroneously knitted, work as follows:—

(1) Unravel as many rows as needed for repair and align the needles in B position. (When the Knit Contour is in use, set the Change Dial to ◀ mark.)
(2) Return the Punch Card and Row Counter as many rows as unravelled.
(3) Set the Knitter controls as shown in the diagram on the left and move the Carriage to memorize the pattern to be knitted on the next row without knitting. (When the Knit Contour is in use, set the Change Dial to the original position and return the Pattern Paper as many rows as unravelled.
(4) Set the Stop Knob and Row Counter Set Lever to ▼ marks.
Set the Carriage controls to original position and start knitting.

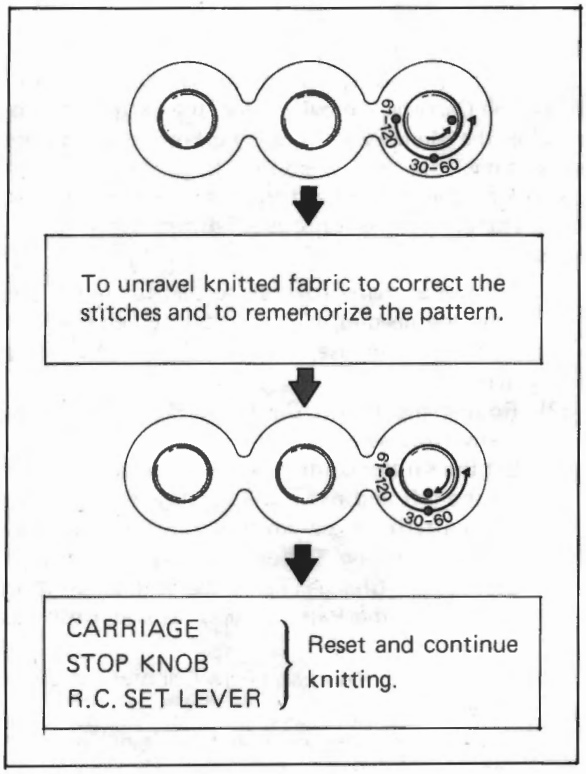
Unravel rows.
Align needles in B position.
Change Dial..... ◀
➡ Return the Punch Card and Row Counter by the number of rows unravelled.
➡ Memorize pattern.
➡ Re-set the Change Dial to the original position and return the Pattern Paper.
➡ Stop Knob..... ▼
R.C. Lever..... ▼
Side Lever..... ▲
⬇
Start knitting.

(When vertical expansion is effected.)

* Unravel even number of rows. When returning the Punch Card, return only half the number of rows unravelled. For instance, if three rows have been incorrectly knitted, unravel four rows and return only 2 rows. Other operations are same as done in ordinary returning.

Unravel even number of rows.
Align needles in B position.
Change Dial..... ◀
➡ Return the Punch Card half the number of rows unravelled.
Return the Row Counter by the number of rows unravelled.
➡ Memorize pattern.
➡ Re-set the Change Dial to the original position and return the Pattern Paper.
➡ Stop Knob ..... ▼
R.C. Lever ..... ▼
Side Lever ..... ▲
⬇
Start knitting.

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(In using the Knit Contour.)

(1) Set the Change Dial on the Knit Contour to the ◀ mark before unravelling the required number of rows and re-memorizing the pattern.

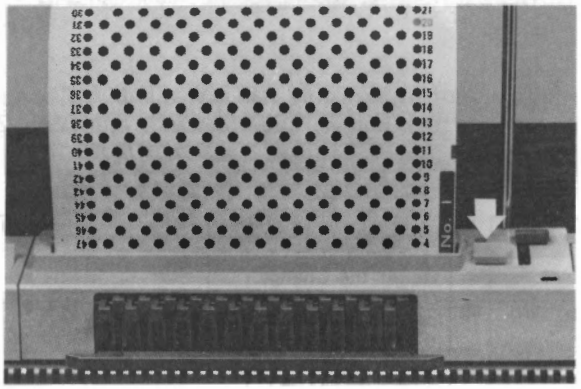
(2) Unravel the required number of rows on the fabric in order to repair the knitting. (Refer to the previous page.)

(3) Reset the Change Dial to its original position and then feed back the Pattern Paper as many rows that have been unravelled, by turning the Feeding Dial in the R marked (R=reverse) direction. (Refer to the Note on page 22.)

(4) Reset the Stop Knob, Row Counter Set Lever and the Carriage controls to their original positions and continue knitting.

*When the Carriage is accidentally pulled off the rail while pattern knitting. *

If the Carriage is pulled off the rail in the middle of pattern knitting, the pattern will be dislocated. To renew the pattern, work as instructed in previous chapter.



(The relation between the Punch Card and the Touch Levers.)

* If the Stop Knob is set to the ● mark, the pattern on the Punch Card is shown by the Touch Levers. This pattern will be knit when the Carriage is moved across.

* If you want to see the pattern of the last row, rewind the Punch Card by one memory number and set the Stop Knob to the ● mark. The pattern on the row will be shown by the Touch Lever.

Note:* If the Stop Knob is set to the ● mark the Feeding Dial will not operate.

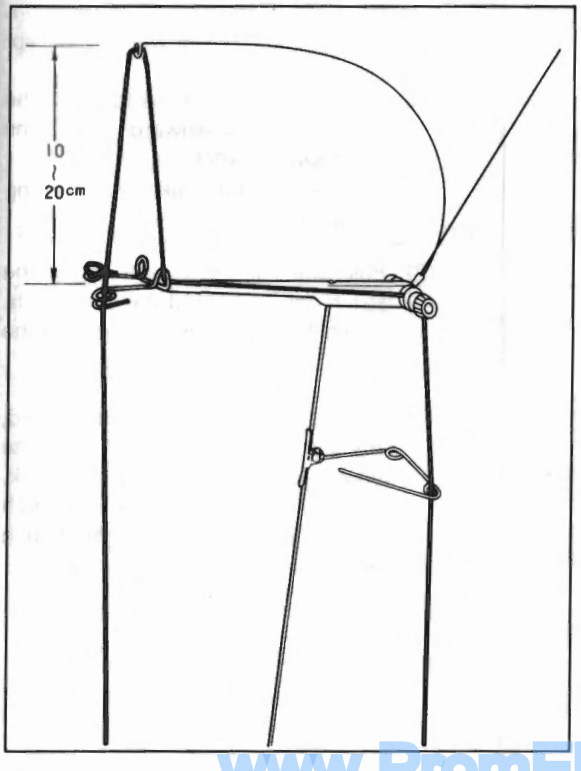
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Relation between Touch Levers and stitch type.

Operation of Touch Lever / Stitch type	Perforated area of Punch Card (Touch Levers rise) needles come out.	Unperforated area of Punch Card (Touch Levers lower) needles go back.
Tuck stitch	Knit	Tucked. (Non-knitting, yarn is over the hook)
Slip stitch	Knit	Slipped. (Non-knitting, yarn crosses in front)
Knit-in (Fair Isle)	Knit with yarn in Yarn Feeder ②.	Knit with yarn in Yarn Feeder ①.
Magic point	〃	〃
Weaving	Weaving yarn is threaded above.	Weaving yarn is threaded below.
Punch lace	Knit with nylon thread.	Knit with nylon thread & yarn together.
Lace knitting	Knit	Tucked

Note: * When knitting the magic point only the needles covered by the Point Cams respond to the Punch Card.

If the yarn gets loose or entangled at the edge of fabric.



* **Loose yarn.**

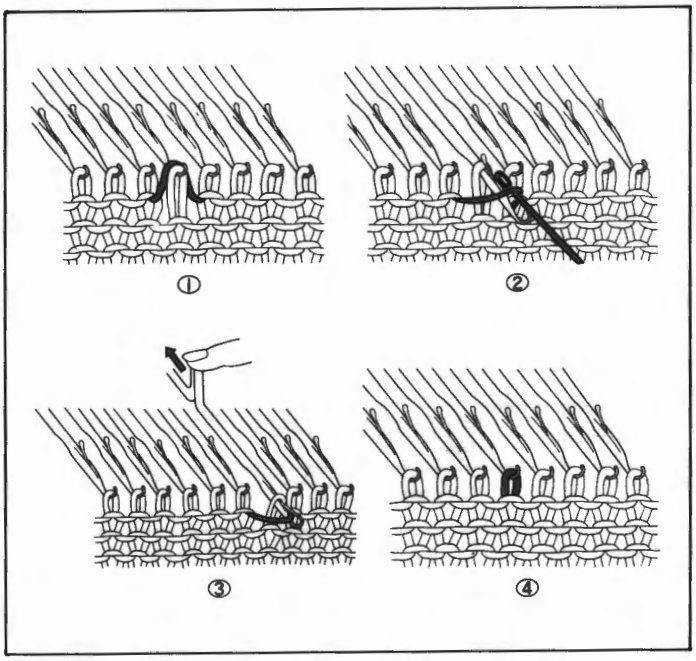
Check to see if the yarn is correctly threaded through the Auto-Tension. Be sure that the Tension Dial is correctly adjusted. (Refer to page 5.)

* **Entangled yarn.**

If the yarn is entangled in any part of the Knitter, or if the yarn does not pull smoothly from the yarn ball it will prevent proper operation for the Knitter. Therefore, the yarn should be prepared in good condition and the Knitter is cleared of disorder while knitting.

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Correct a dropped stitch while knitting.

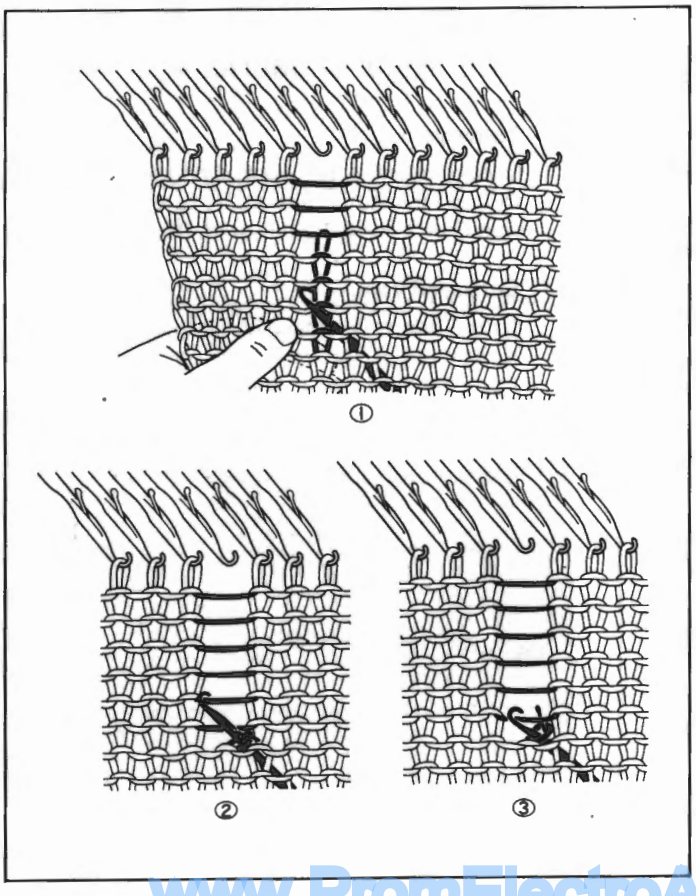


1. Correcting a dropped stitch.

(1) Insert a one eye Transfer Tool into the stitch below the dropped stitch, and replace the stitch into the hook of the needle together with the loose yarn.

(2) Slowly pull the needle out until the stitch is behind the open latch leaving the loose yarn in the hook.

(3) Push the needle back so the latch will close and the stitch behind will slide over the hook reforming a stitch as shown in ④.



2. Correcting a dropped stitch for several rows.

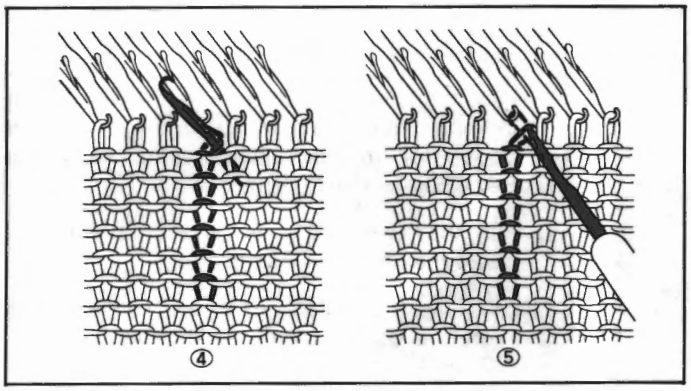
(1) Insert the Tappet into the stitch a few rows below the dropped stitch from the side away from you. Unravel the stitches down to the Tappet.

Note:* With the other hand, pull the garment downward near the dropped stitch.
This pulling makes unravelling easier.

(2) Push the Tappet toward you so the stitch will be behind the open latch. Catch the yarn crossing above in the hook.

(3) By pulling the Tappet backward, the latch will close and the loose yarn will be trapped in the hook. Continue pulling and the old stitch will slide down over the closed latch forming a new stitch in the hook.

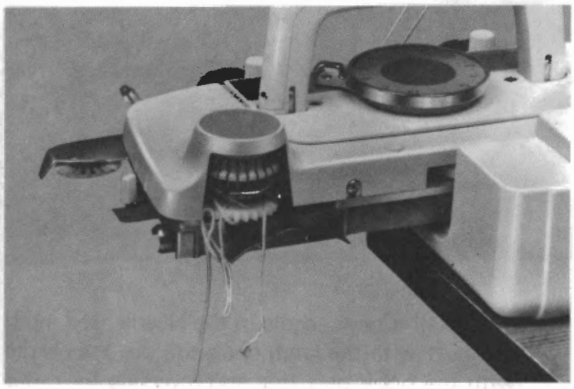
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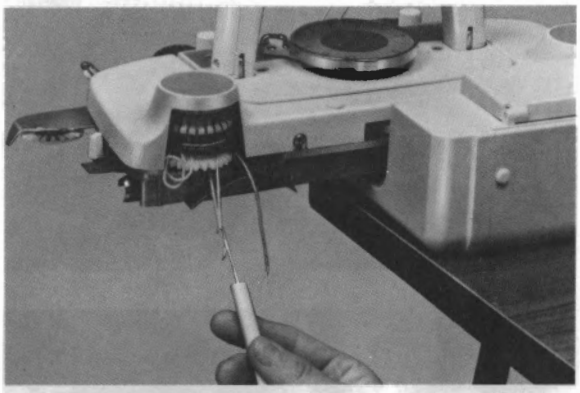
(4) Repeat this manner until reaching the end row.

(5) Pull the last loop rather tight and remove the Tappet. Insert the Tappet into the stitch from your side and put it onto the needle.

*If the yarn is entangled in the "Memory Bank". *

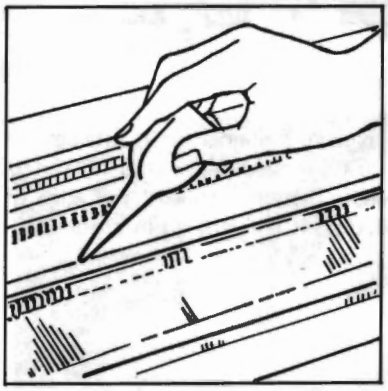


(1) If the yarn is entangled on the gear wheel of the "Memory Bank" move the Carriage to the side of the Knitter as illustrated.

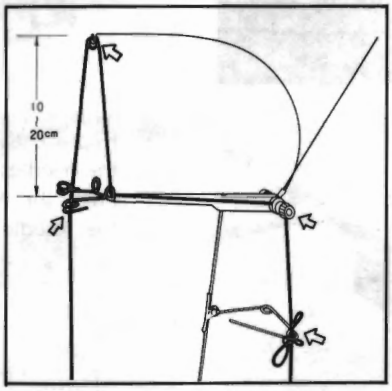


(2) Carefully disentangle the yarn using a Tappet.

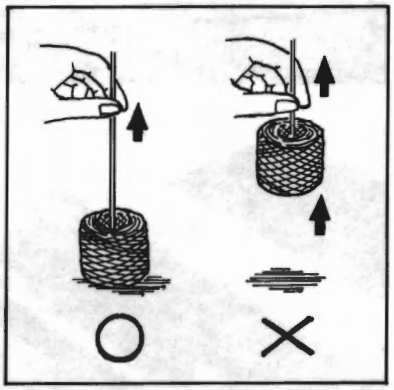
*If the Carriage will not move smoothly. *



* Is the Knitter lubricated or cleaned?



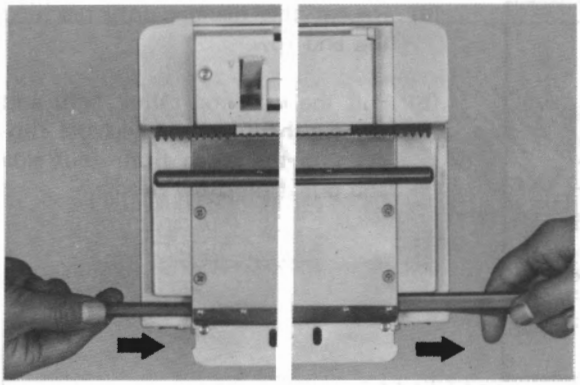
* Is yarn correctly guided through the Auto-Tension?



* Does yarn come out smoothly.

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Replace damaged needles.

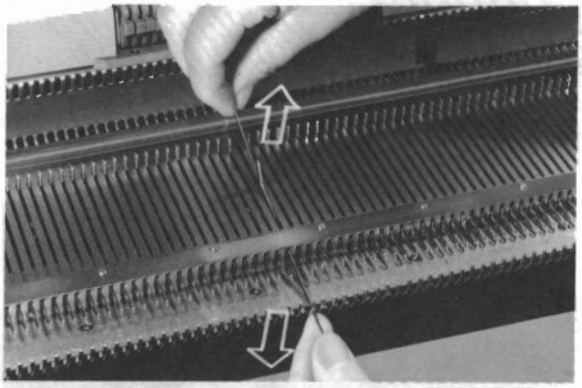


* When replacing damaged needles, follow the steps below.

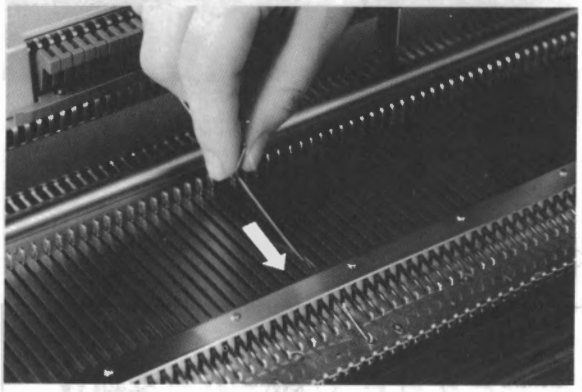
(1) Push the Needle Retainer under the Needle Bed in either direction using a pencil or a screw driver. Try to push upward along the Needle Bed when pushing it out.

(2) Pull the Needle Retainer at one end until it clears the needle to be replaced.

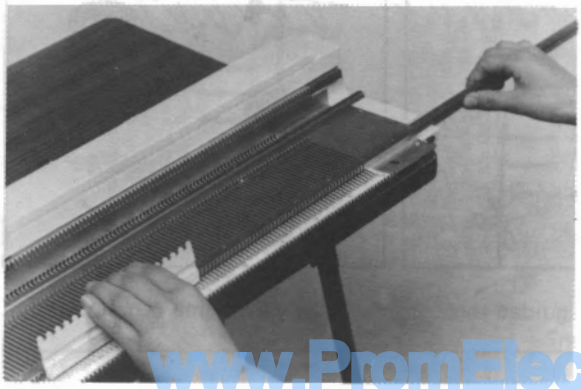
Note: * If the Separators are in use, remove them before taking out the Needle Retainer.



(3) Bring the damaged needle to D position. Close the latch and push the hook downward. The shank will come out of the Needle Bed. Pull the needle out of the Needle Bed lifting the shank upward. If the needle is removed in the middle of the Needle Bed, it will hit the Center Panel. In this case, pull the shank firmly upward, then pull the needle from the Bed.



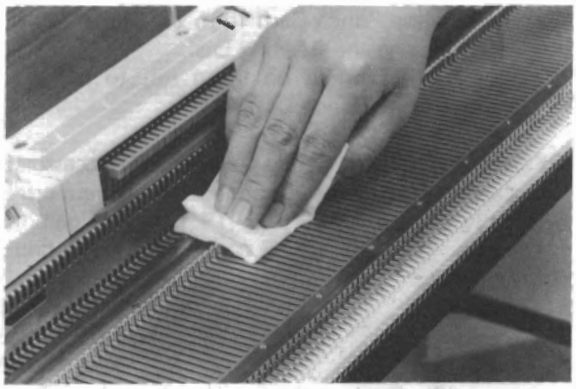
(4) To install a new needle in the Needle Bed, hold the butt with the latch open and slip the needle with the hook part first and reversing the order of the previous paragraph (3).



(5) Replace the Needle Retainer. If it hits against the needles, push the needles down as illustrated. Push the Needle Retainer toward the edge of the Needle Bed so it will not go in crooked.

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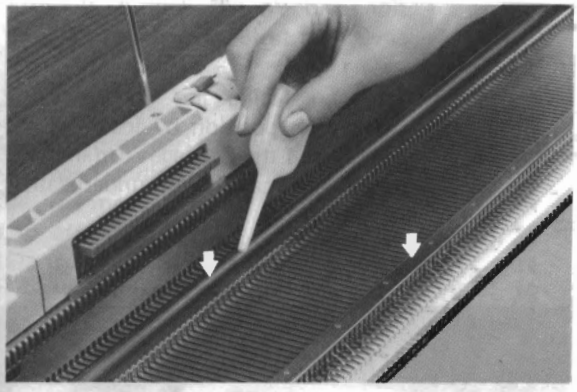
10. MAINTENANCE INSTRUCTION



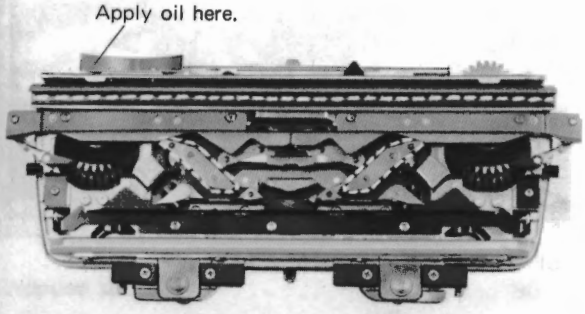
All types of machines need proper cleaning and lubrication for a long usable life. Keep this Knitter clean and well lubricated at all times for a happier lifetime of excellent performance.

*Lubrication *

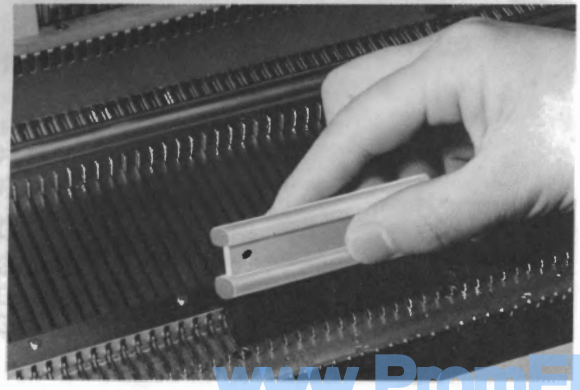
(1) Wipe the rail of Needle Bed and the bottom of the Carriage with a dry cloth.



(2) Apply lubricant to a clean cloth, wipe with the oiled cloth across the Needle Bed rail and the needle butts from left to right and right to left. Remember, excessive oil is not required.



(3) Wipe the places indicated by the dotted line in the photo with a piece of oiled cloth.



*After using the Knitter. *

(1) Use the accessory Brush to remove the yarn lints from all parts of the Knitter.

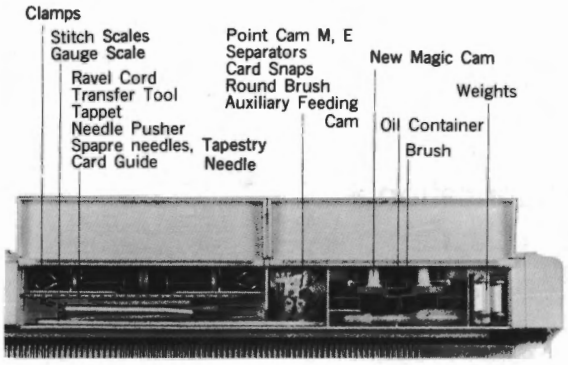
(2) Carefully wipe all the metal parts with an oiled cloth to remove lint and dirt.

(3) The case can be cleaned by wiping with a piece of soft cloth saturated with synthetic detergent.

(4) It is very important to store the Knitter in a dry place when it is not in use.

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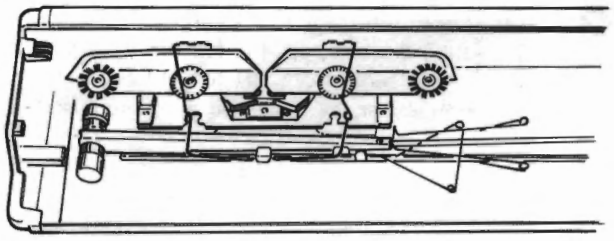
11. REPACK THE KNITTER



(1) Remove the Punch Card from the Centre Panel while turning the Feeding Dial.

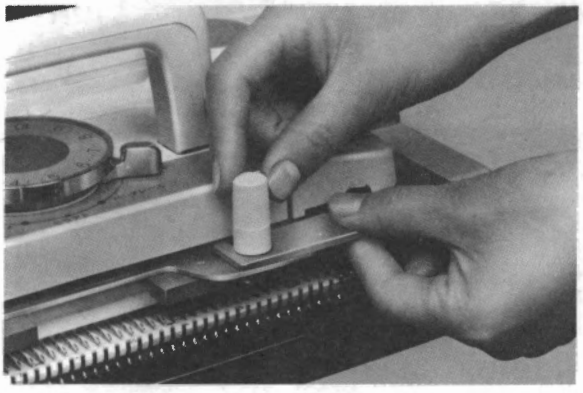
* Special care should be taken not to make a crease on the Punch Card.

(2) Replace all the Accessories in the Accessory Keeper in an orderly manner as they were originally packed.



(3) Replace the Carriage Arm, Auto-Tension, and Yarn Rod inside the case cover and fasten them with the wire spring.

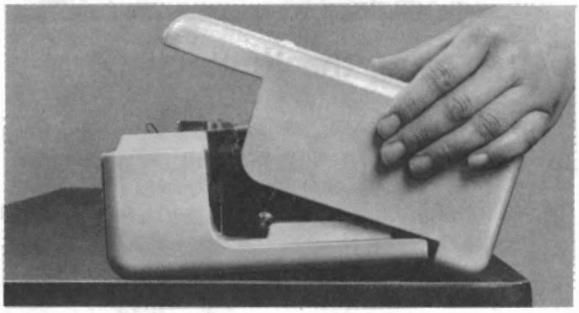
When replacing the Carriage Arm, place it in position by inserting the top part of the Carriage Arm into the key shaped catch from underneath.



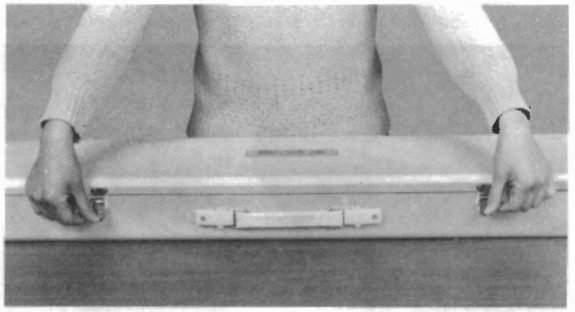
(4) Replace the Carriage Fastener to lock the Carriage securely.



(5) Fold the Carriage Handle.



(6) Replace the Cover.



(7) Fasten the Latches.

(8) Store the well cleaned Knitter in a dry place.

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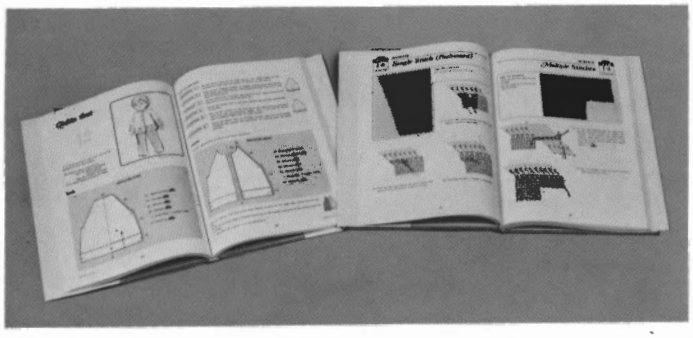
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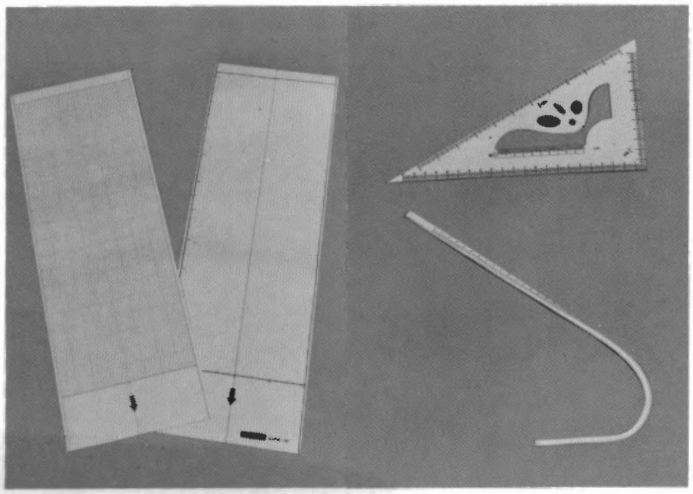
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