



Dear Knitter,

The "Pine Star" model K-153 is a knitting machine in which you will take pride of ownership.

You will find that it is extremely easy and light to operate — so never use force at any time.

Take good care of your machine and it will serve you well.

The designers and makers of the "Pine Star" wish you many years of pleasureable knitting.

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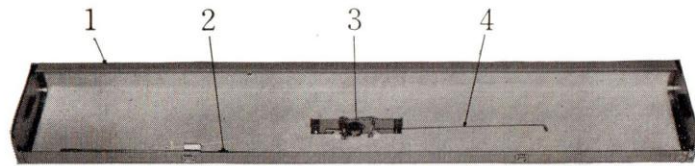
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## PART I THE MACHINE AND ACCESSORIES

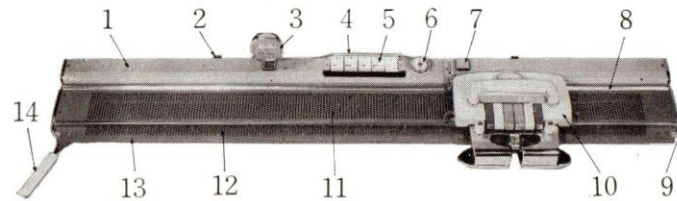


MACHINE COVER (Inside View)

Fig. I

Fig. I

1. Machine Cover
2. Overhead Feed-Control Support Rod
3. Spring Clips for Carriage Feeder Unit
4. Overhead Feed-Control Unit



MACHINE (with Cover removed)

Fig. II

Fig. II

1. Machine with cover removed
2. Cover Fastener
3. Row Counter
4. Socket for Overhead Feed-Control Support Rod
5. Pattern Unit
6. Needle Pitch Dial
7. Row Counter Bracket
8. Rear Track
9. Needle Retaining Bar
10. Carriage
11. Needle Bed
12. Latch Needles
13. Stitch Divider Posts
14. Needle Selector Lever

## PART I (THE MACHINE AND ACCESSORIES CONTINUED)

### CARRIAGE

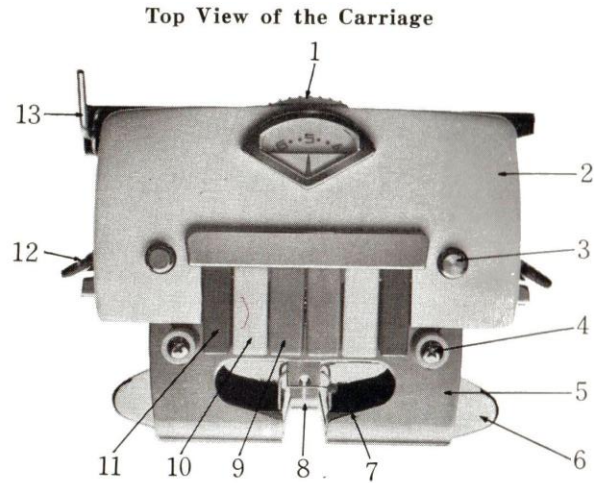


Fig. III

- |                               |                            |
|-------------------------------|----------------------------|
| 1. Tension Change Wheel       | 8. Feeder                  |
| 2. Carriage Cover             | 9. Pass Key (Brown)        |
| 3. Studs for Operating Handle | 10. Tucking Key (Ivory)    |
| 4. Feeder Unit Securing Nuts  | 11. Pull-up Key (Red)      |
| 5. Feeder Unit Frame          | 12. Return Cam Lever       |
| 6. Fabric Presser             | 13. Row Counter Trip Lever |
| 7. Latch Brush                |                            |

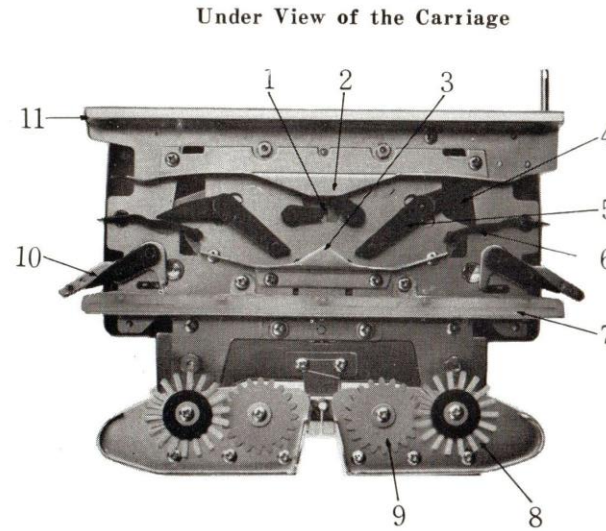


Fig. IV

- |                      |                 |
|----------------------|-----------------|
| 1. Tucking Cam       | 7. Front Slider |
| 2. Rear Guide Plate  | 8. Rotary Brush |
| 3. Front Guide Plate | 9. Pinion Wheel |
| 4. Subsidiary Cam    | 10. Return Cam  |
| 5. Knitting Cam      | 11. Rear Slider |
| 6. Pull-up Cam       |                 |

## PART I (THE MACHINE AND ACCESSORIES CONTINUED)

### STANDARD ACCESSORIES

Fig. V

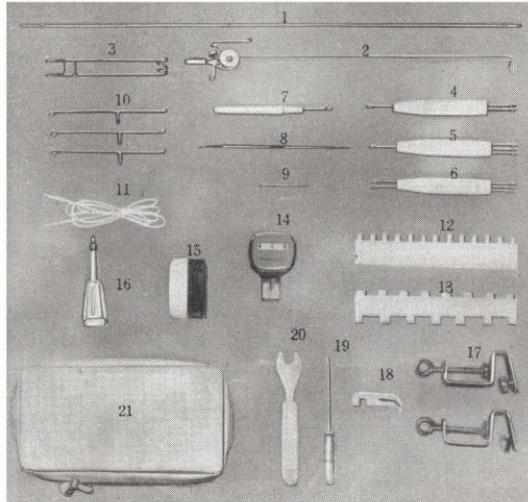
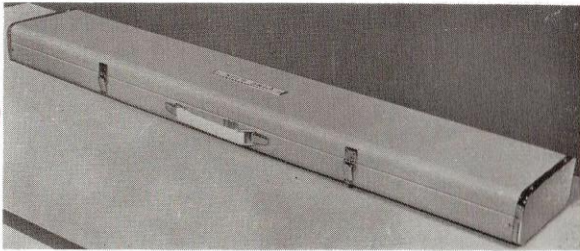


Fig. V

1. Overhead Feeder Rod
2. Overhead Feeder Unit
3. Yarn Guide Wire
4. Transfer Tool 1×2
5. Transfer Tool 1×3
6. Transfer Tool 2×3
7. Latch Needle Tool
8. Crochet Needle
9. Seaming Needle
10. Spare Latch Needles
11. Divider Thread
12. Needle Selector Plate 0-1×2
13. Needle Selector Plate 2×4-2×3
14. Row Counter
15. Cleaning Brush
16. Rust-Proof Lubricant
17. Clamps
18. Carriage Locking Plate
19. Screw Driver
20. Needle Selector Lever
21. Accessory Case

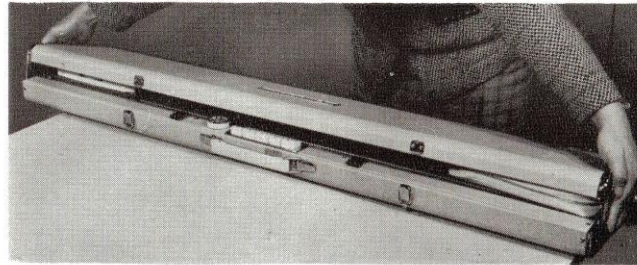
## PART II HOW TO PREPARE FOR KNITTING

Fig. 1



1. Place the machine on a table as in Fig. 1.

Fig. 2



2. Unfasten both clasps. Remove cover, lift and pull forward—Fig. 2.  
Remove from inside cover (Fig. I Part I) the Carriage and Overhead Feed-Control Units and the Overhead Feed-Control Support Rod.

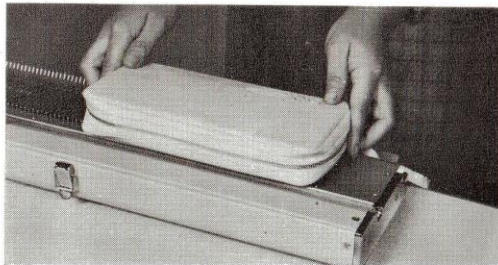


Fig. 3

3. Untie the cord and take out the Accessory Case — Figs. 3 & 3a.

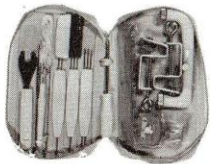
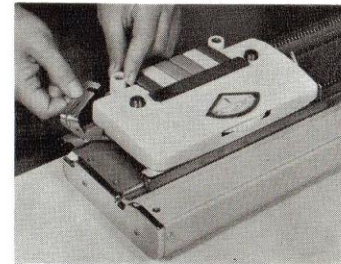


Fig. 3a

Fig. 4

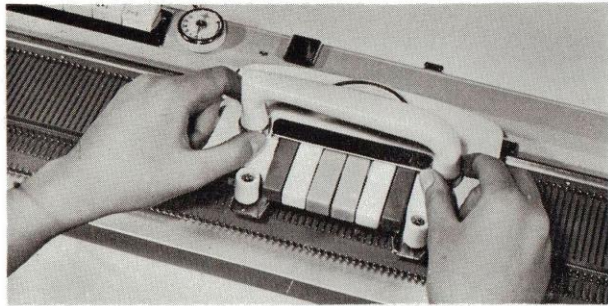


4. **Carriage Locking Plate**  
Unfasten and remove—(Fig. 4.)



## PART II (HOW TO PREPARE FOR KNITTING CONTINUED)

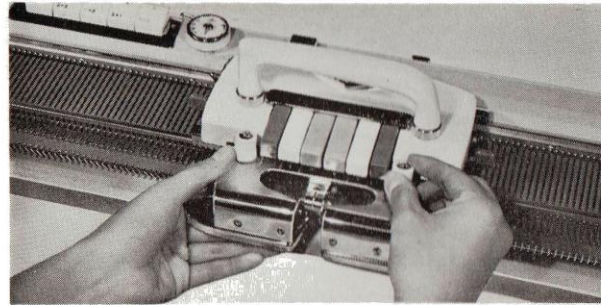
Fig. 5



**Operating Handle**

5. Screw in position (Fig. 5)

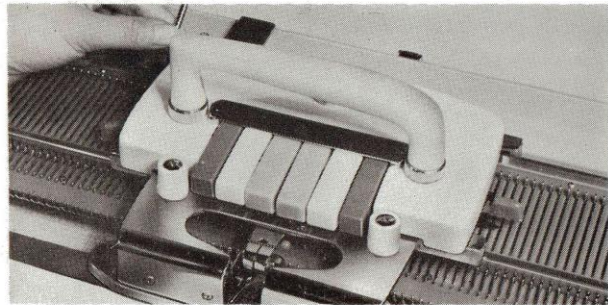
Fig. 6



**Carriage Feeder Unit**

6. Place in position and tighten nuts (Fig. 6)

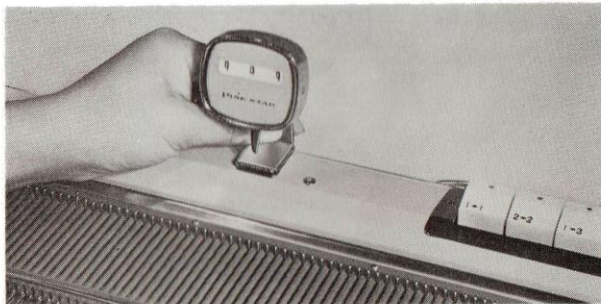
Fig. 7



**Row Counter Trip Lever**

7. Pivot into position (Fig. 7)

Fig. 8

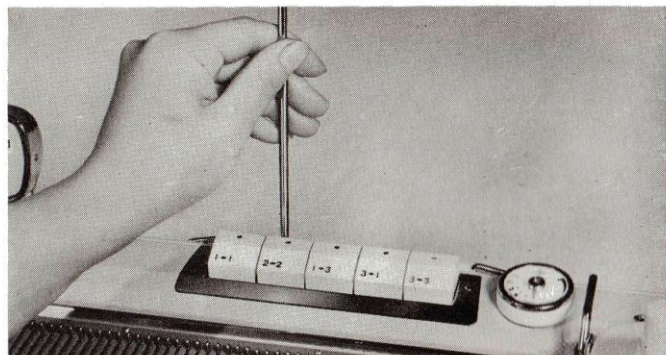


**Row Counter**

8. Slide base into one or other of the two brackets.

## PART II (HOW TO PREPARE FOR KNITTING CONTINUED)

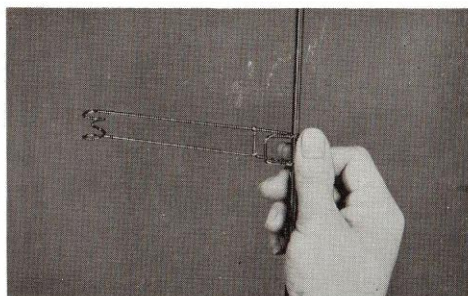
Fig. 9



**Overhead Feed-Control Support Rod**

9. Push either end into socket.

Fig. 11



**Yarn Guide Wire**

11. Clip to rod.

**Overhead Feed-Control Unit**

10. Place in position on top of the Rod—Figs. 10 & 10a

Fig. 10

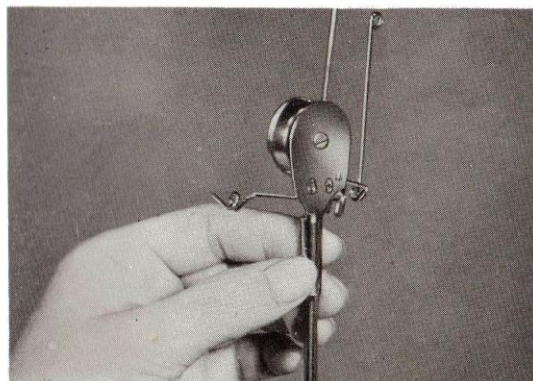
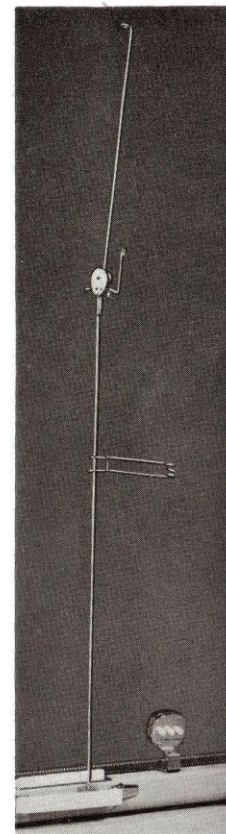


Fig. 10a



## PART II (HOW TO PREPARE FOR KNITTING CONTINUED)

Fig. 12

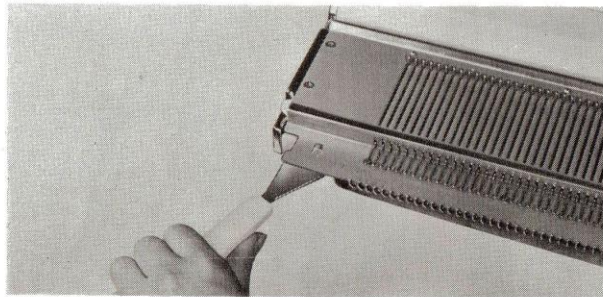
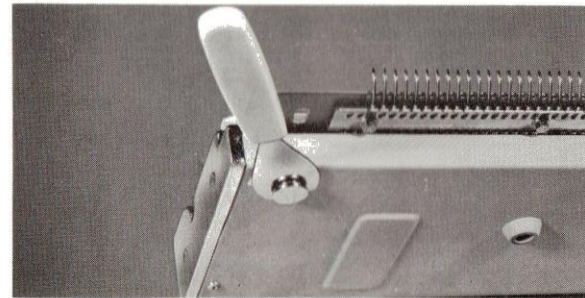


Fig. 12a



### Needle Selector Lever

12. Under the machine at the front left corner there is a stud with two flat faces to receive the fork-like Selector Lever — (Fig. 12a) — Push the Lever into position as in Fig. 12.

### NOTE

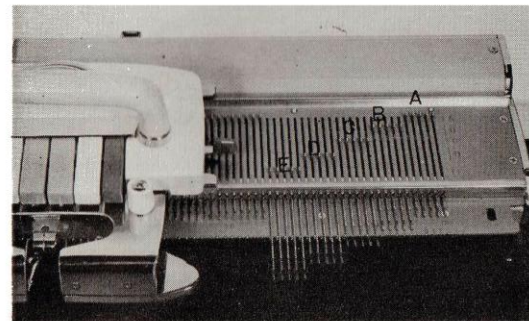
#### Needle Positions

See markings A. B. C. D. & E. at right hand end of needle bed (Fig. 13)

- A — Needles not in use
- B — Needles in Knitting Position
- E — Needles in Holding Position

The purpose of Positions C. & D. will be explained later in the book.

Fig. 13

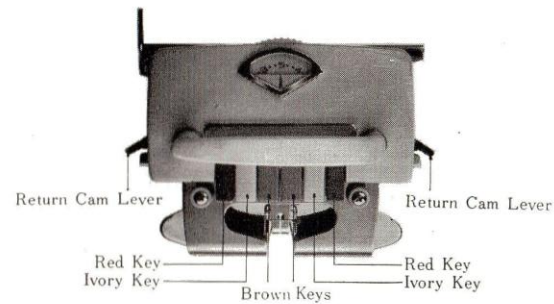


## PART II (HOW TO PREPARE FOR KNITTING CONTINUED)

Fig. 14

### Carriage Control Keys

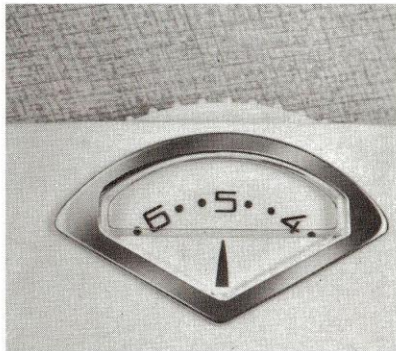
These are located at the Front of the Carriage and coloured RED, IVORY and BROWN.



### Return Cam Levers

These levers will be seen one at each side of the Carriage near the front.

Fig. 15



### Tension Dial

This is located on the carriage cover, and the Tension Change Wheel is immediately behind.

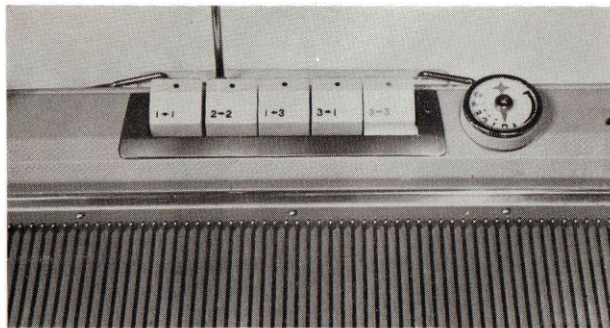
### Tension Settings

Tension Dial Setting	Thickness of Yarn
0 — 3	Thin (1/2 ply)
3 — 5	Medium (3 ply)
6 — 8	Thick (4 ply)
9 — 10	Very thick (4 ply double knitting)

NOTE : There are two intermediate Tension Settings between each number.

## PART II (HOW TO PREPARE FOR KNITTING CONTINUED)

Fig. 16

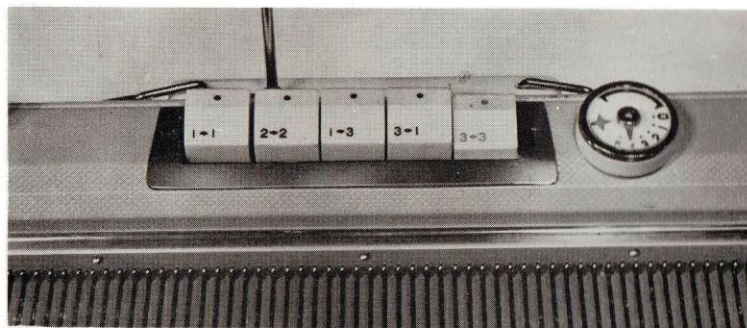


Pattern Unit

This consists of a row of 5 keys and a Dial.

(Figs. 16 & 17)

Fig. 17



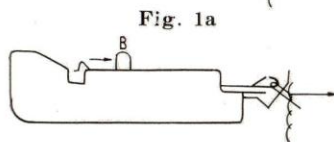
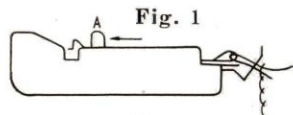
Needle Numbering

**NOTE :** The needles are numbered along the front of the needle bed from 0 in the centre to 100 on the left and 100 on the right.

## PART III HOW TO CAST-ON AND KNIT

Now that you have prepared the machine for knitting as fully described in Part II you are ready to thread up the machine and knit your first sampler.

Use a good quality 3-ply Botany Wool



1. With the Carriage on the right bring forward from Position 'A' (Fig. 1) into Position 'B' (Fig. 1a) 40 needles in the centre of the machine.

**NOTE :** Use the straight edge of the Selector Plate (No. 12 Fig. V Part I) to draw needles forward and align them in Position 'B'.

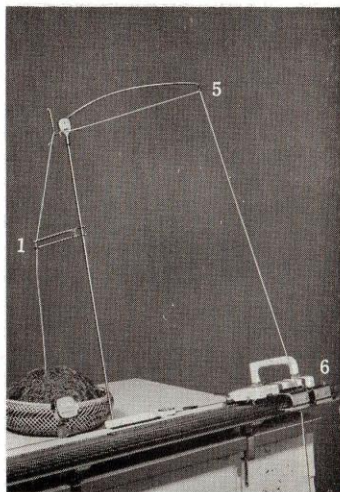


Fig. 3

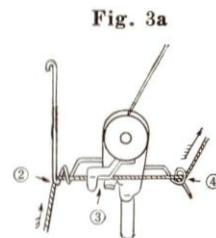


Fig. 3a

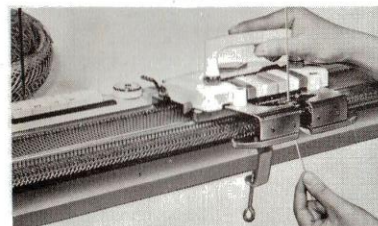


Fig. 3b

Fig. 2



2. Coil the wool into a bowl or basket. (Fig. 2)

3. Thread up the Overhead Feed-Control Unit and Carriage Feeder in the following sequence: Fig. 3-1, Fig. 3a - 2 - 3 & 4, Fig. 3 - 5 & 6.

Pull through enough wool Fig. 3b so that 6" or 8" will hang loosely below the carriage feeder.

### PART III (HOW TO CAST-ON AND KNIT CONTINUED)

4. Depress the 1 - 1 key of the Pattern Unit with the index finger. (Fig. 4)

NOTE : To release a Pattern Key press the back of the key forward. (Fig. 4a)

Fig. 4

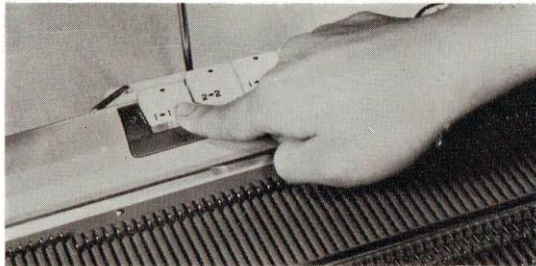
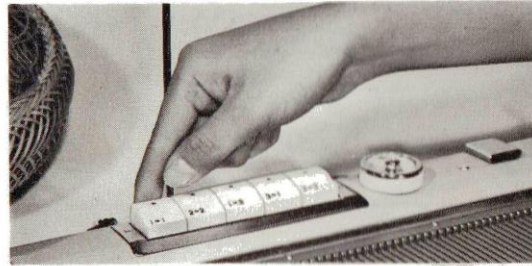
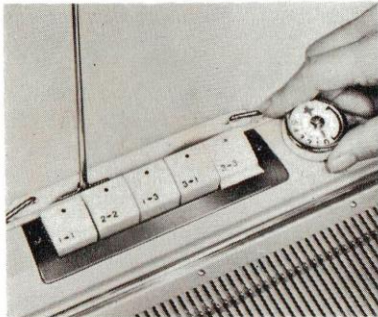


Fig. 4a



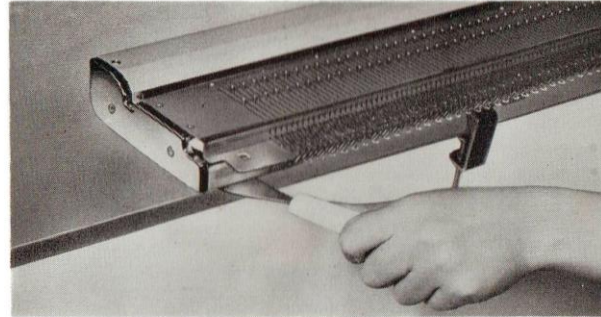
5. Turn the Needle Pitch Dial so that 0 is opposite the pointer. (Fig. 5)

Fig. 5



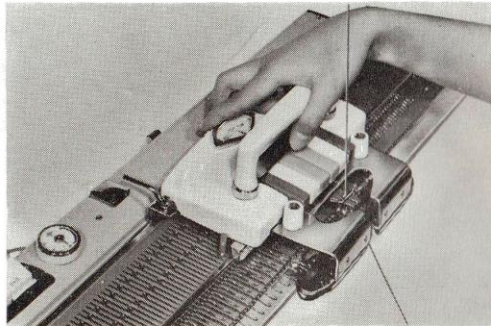
6. Move the Needle Selector Lever inwards until the bell rings. (Fig. 6)

Fig. 6



### PART III (HOW TO CAST-ON AND KNIT CONTINUED)

Fig. 7



7. Set Tension Dial at 1 or 2 (for 3-ply wool) Fig. 7.

Fig. 8

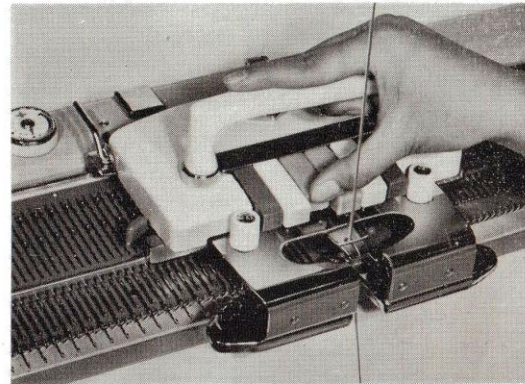
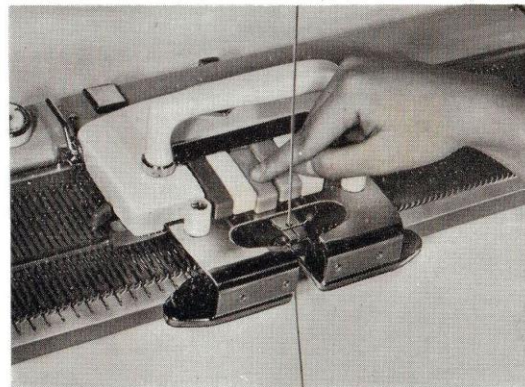


Fig. 8a

8. Push back the two BROWN Carriage keys as shewn in Fig. 8.

**NOTE :** To release, tap the key with the index finger as shewn in Fig. 8a.





### PART III (HOW TO CAST-ON AND KNIT CONTINUED)

9. (a) Take hold of the Carriage Handle and loose end of wool as shewn in Fig. 9.
- (b) Push the Carriage across the working needles from right to left - still holding the loose end of wool. Stop the carriage on the left when the right-hand end of it is about one or two inches past the last working needle on the left.
- (c) \* Turn the Pitch Dial so that 1 is opposite the Pointer and operate the Needle Selector Lever.

(You will note that by turning the Needle Pitch Dial from 0 to 1 the selection of needles has been 'pitched' one needle to the right when the Selector Lever is operated).

Knit one row by moving the carriage from left to right.

- (d) Turn Pitch Dial back to 0—operate Selector Lever—Knit one row by moving the carriage from right to left \*

Change tension to 4 or 5 and repeat (c) and (d) from \* to \* twice more and then repeat as follows :

10. With the Carriage on left, release the 1-1 Pattern Key and the two Brown Keys on the Carriage.
11. Adjust the Row Counter Reading, as shewn in Fig. 10.

Fig. 9

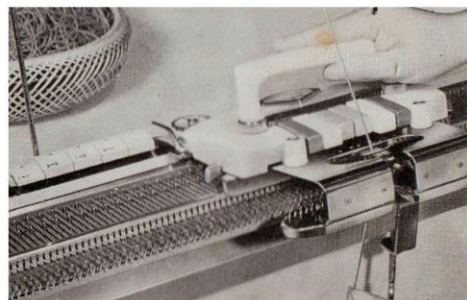
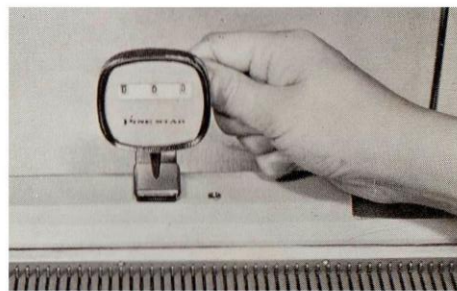


Fig. 10



12. Move Carriage backwards and forwards across working needles to knit in Stocking Stitch.

**NOTE:** For FORMING HEM - KNITTING MOCK RIB, etc - SEE UNDER 'GENERAL INFORMATION' PART V.

## PART IV HOW TO USE THE TRANSFER TOOLS AND LATCH NEEDLE TOOL

### TRANSFER TOOLS

These are used for transferring a stitch from one machine needle to the next when SHAPING or when producing FANCY PATTERNS involving the transfer of stitches, etc.

1. Place the eye of the tool into the hook of the needle. (Fig. 1a)
2. Draw the needle forward by pulling the transfer tool (Fig. 1b) until the stitch is behind the open latch.
3. Keeping the tool in line with the needle push the needle back until the stitch slides off the needle onto the stem of the tool. (Fig. 1c)
4. Lift the eye of the tool out of the needle hook and place it into the hook of the next needle. (Fig. 1d)
5. Tilt the tool upwards so that the stitch will slide down the stem and into the needle hook.

This completes the transfer of a stitch from one needle to the next.

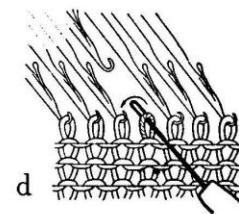
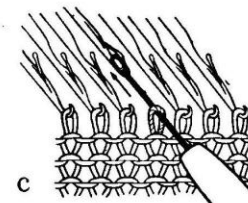
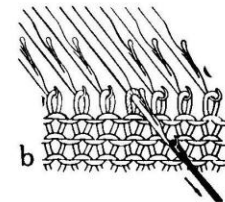
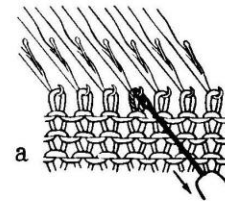


Fig. 1

## PART IV (HOW TO USE THE TRANSFER TOOLS AND LATCH NEEDLE TOOL CONTINUED)

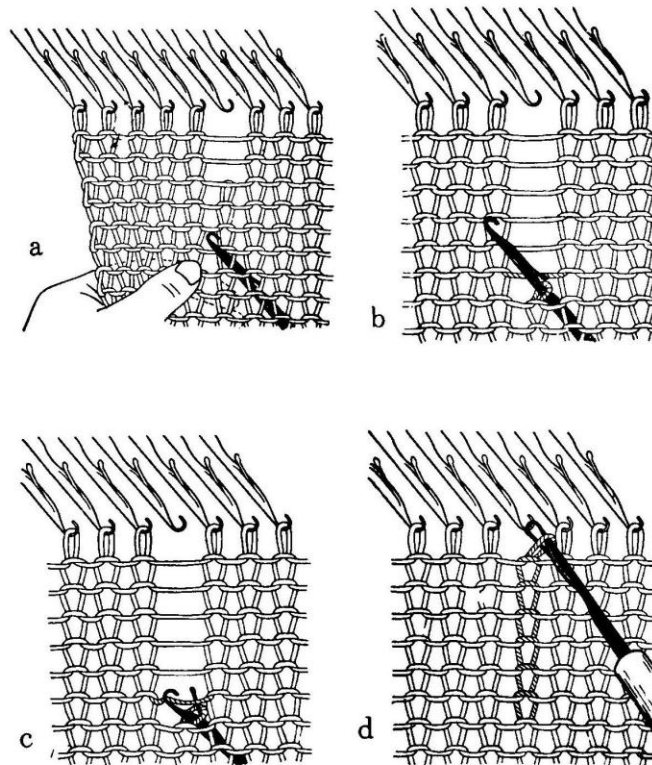
Fig. 2

### LATCH NEEDLE TOOL

The LATCH NEEDLE TOOL is used for knitting stitches, i. e. when knitting up a dropped stitch, when knitting a rib stitch, etc.

### FOR A DROPPED STITCH

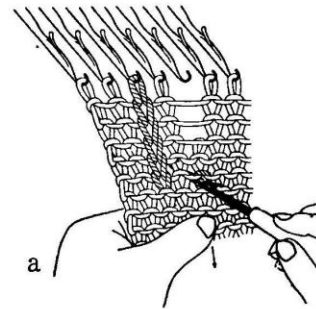
1. Insert Latch Tool from back of work through loop (Fig. 2a) with latch open.
2. Run stitch down (Fig. 2b). With loop behind open latch pick up strand in hook.
3. Knit through (Fig. 2c) and continue to knit up the strands of the "ladder".
4. Place final loop into hook of machine needle (Fig. 2d).



## PART IV (HOW TO USE THE TRANSFER TOOLS AND LATCH NEEDLE TOOL CONTINUED)

### FOR RIBBING

1. Drop a stitch from the machine needle and insert the LATCH NEEDLE TOOL through a loop directly below the dropped stitch. Pull downwards on the fabric so that the stitch will 'run' onto the Latch Needle Tool. (Fig. 3a)



2. Knit up the stitch as shown in Fig. 3 b. c. d. & e.

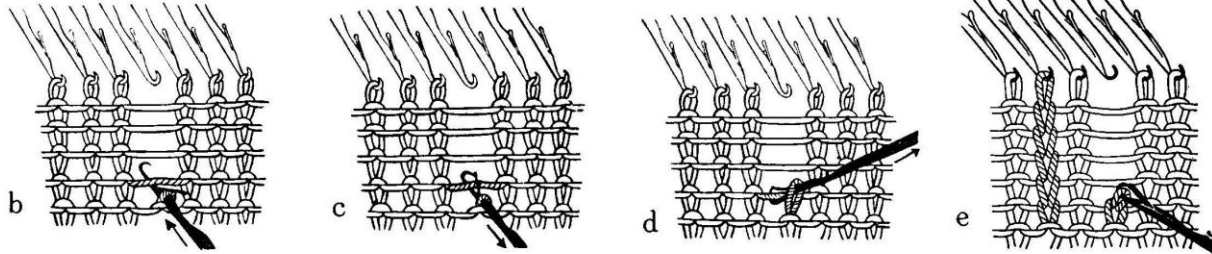
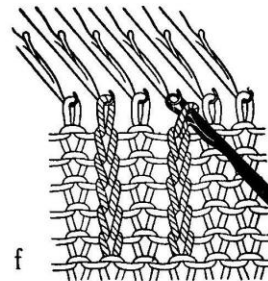


Fig. 3

3. Transfer the last loop onto the machine needle. (Fig. 3f)



## PART IV INCREASE SHAPING

### INCREASING

**Plain Increasing** —Always at the same end as the Carriage  
Bring forward the next empty needle from Position 'A' into Position 'B' and knit (Fig. 4)

**Fashioned Increasing**—This can be done at either or both ends simultaneously :

1. Bring the next empty needle from Position 'A' into Position 'B'.
2. Transfer the end stitch onto this empty needle. (Fig. 5a)
3. Pick up a loop from the previous row and place it onto the 2nd needle. (Fig. 5b)
4. Knit.

**Note :** Increasing 1 stitch may also be done 2 or 3 needles in from the end as shown in Fig. 6 - a. b. & c.

Fig. 4

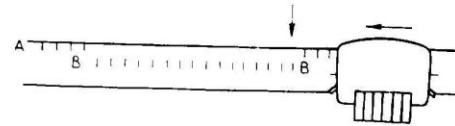


Fig. 5

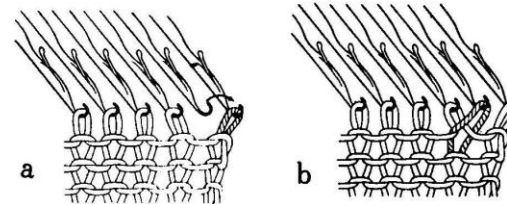
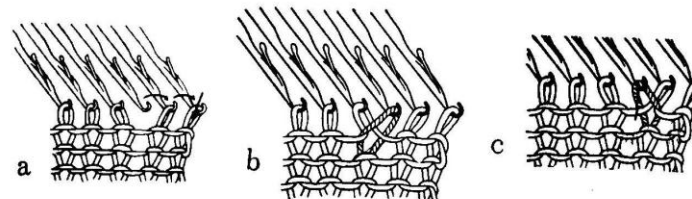


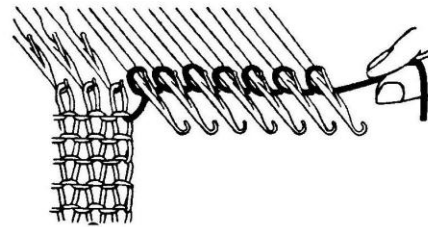
Fig. 6



## PART IV (INCREASE SHAPING CONTINUED)

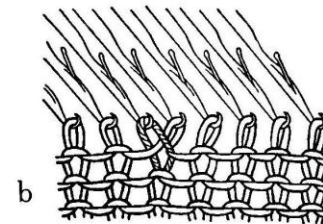
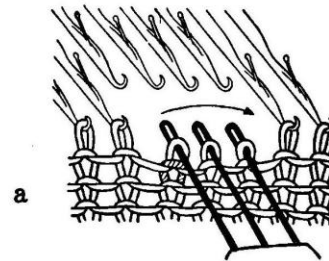
- Multiple Increasing** —
1. At the same end as the Carriage bring forward from Position 'A' into the Holding Position 'E' the required number of empty needles.
  2. Wind the wool from the Carriage Feeder once around the stems of each of these needles (Fig. 7). Ensure the newly-formed loops are behind the open latches.
  3. Pull forward the Return Cam Lever at the end nearest the working needles.
  4. Move the Carriage slowly across the working needles for the next 3 or 4 rows.

Fig. 7



- Centre Increasing** — To increase a stitch in the middle of the work—
1. Bring forward one empty needle from Position 'A' into Position 'B' at the end nearest to the point of increase.
  2. With the 3-point Transfer Tool move the 3 end stitches outwards thus leaving the fourth needle empty. Continue to move the stitches outwards in this manner until you have an empty needle at the point where you wish to make the increase. (Fig. 8a)
  3. Pick up a loop from the previous row and place it on the empty needle. (Fig. 8b)

Fig. 8



## PART IV (INCREASE SHAPING CONTINUED)

### PART KNITTING

**Increasing Slope**—Make certain Return Cam Levers are in the Back position. (Fig. 9)

- \* (1) At the opposite end to the Carriage, pull forward into Position 'E' (Holding Position) all the needles NOT required for the Increase. (Fig. 9)  
Knit one row.
- (2) Loop the yarn UNDER the end needle in Position 'E' farthest from the Carriage, leaving it over the other needles in Position 'E'. (Figs. 10 & 11)  
Knit one row \*

Repeat from \* to \* pushing back needles from Position 'E' into Position 'D' (Fig. 12) according to the degree of slope required.

When knitting the next row the needles pushed back to Position 'D' will knit and, will be automatically returned to Position 'B'.

When all the needles have been returned to Position 'B' in this manner the increasing slope will have been completed.

Fig. 9

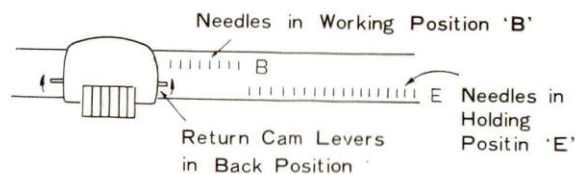


Fig. 10

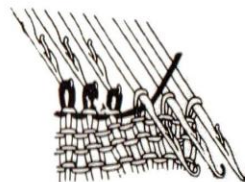
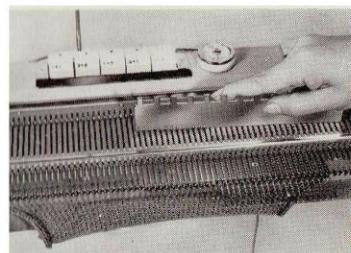
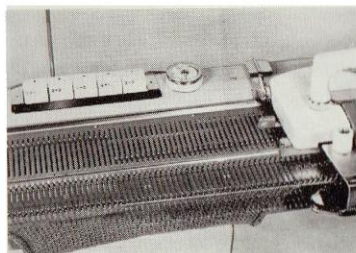


Fig. 11

Fig. 12



## PART IV DECREASE SHAPING

### DECREASING

To decrease ONE stitch at the edge:

**Plain Decreasing**—(a) With the single eye transfer tool, transfer the stitch from the end needle on to the 2nd needle (Fig. 13 a).  
(b) Push the empty needle back to Position 'A'.

or

- (a) Take the stitch off the 2nd needle Fig. 13b then off the end needle.  
(b) Place both loops onto the 2nd needle Fig. 13c.  
(c) Push the empty end needle back to Position 'A'.

### Fashioned Decreasing

- (a) Transfer the stitch from the 3rd to the 2nd needle Fig. 14a.  
(b) With the Double Eye Transfer Tool, transfer the stitches from the 1st and 2nd needles to the 2nd and 3rd needles Fig. 14b.  
(c) Push the empty end needle back to Position 'A'.

Fig. 13

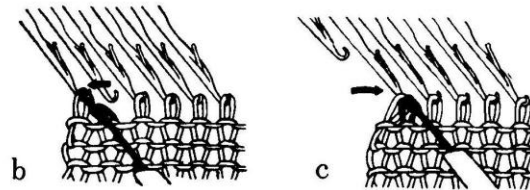
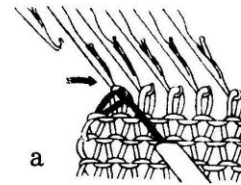
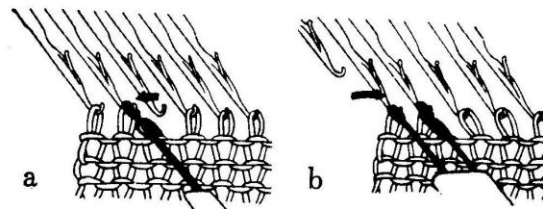


Fig. 14

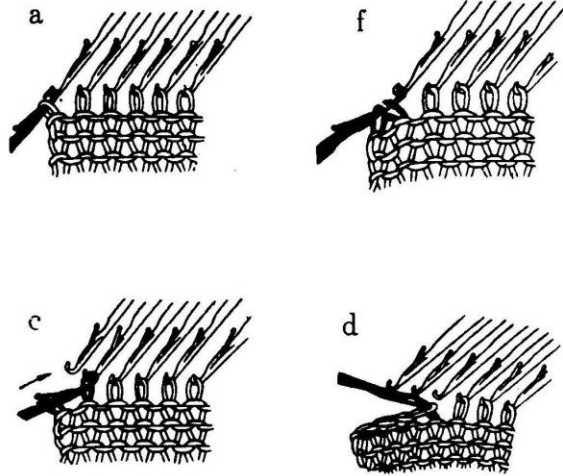




## PART IV (DECREASE SHAPING CONTINUED)

To decrease TWO or MORE stitches at the edge or  
CASTING-OFF using the Latch Needle Tool :  
For the following method the Carriage must be at the OPPOSITE  
END.

Fig. 15



- (a) Take the stitch off the end needle onto the latch needle tool Fig. 15a.
- (b) Take the stitch off the second needle Fig. 15b.
- (c) Knit the 2nd stitch through the 1st and continue in this manner—Fig. 15c & d.
- (d) Push back the empty needles into Position 'A' Fig. 15c.

## PART IV (DECREASE SHAPING CONTINUED)

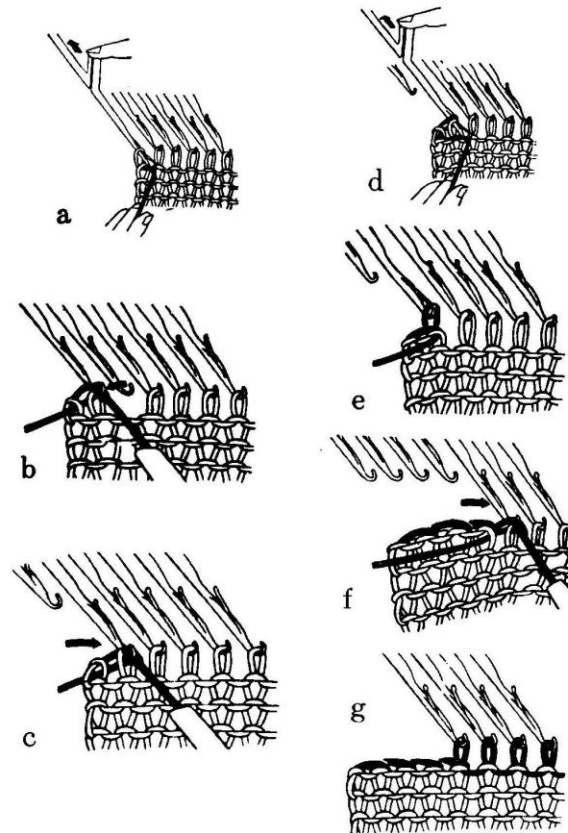
To decrease TWO or MORE Stitches at the edge or  
CASTING-OFF using the Transfer Tool :

For the following method the Carriage must be at the SAME END.

- (a) Push forward the end needle until the loop is behind the latch. Place the wool in the hook of this needle. Push the needle back to form a new stitch Fig. 16a.
- (b) Transfer the stitch from the 2nd needle onto the 1st needle carrying the new stitch Fig. 16b.
- (c) Now transfer the two stitches onto the empty 2nd needle Fig. 16c.
- (d) Push the empty end needle back to Position 'A' Fig. 16e.
- (e) Proceed as at paragraph (a) above so that the TWO loops on the end needle are behind the latch (Fig. 16 d)—continue as at paragraphs (b) (c) & (d) —Fig. 16e.

Continue as above until you have decreased the required number of stitches. Leave the two loops on the last needle at the end of the decreasing and knit. Fig. 16 f & g.

Fig. 16



## PART IV (DECREASE SHAPING CONTINUED)

To decrease a stitch in the MIDDLE OF A ROW

- (a) At the point of decrease transfer a stitch to the next needle towards the centre of the work. (Fig. 17a)
- (b) Transfer remaining stitches inwards. (Fig. 17b).
- (c) Push back into Position 'A' the empty end needle and continue to knit.

Fig. 17

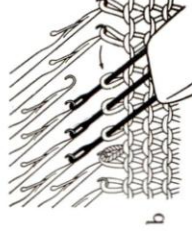
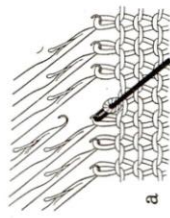


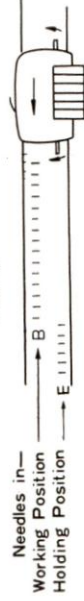
Fig. 19

### PART KNITTING — Decreasing Slope

Make certain Return Cam Levers are in the Back position. (Fig. 18)

- \* (1) At the opposite end to the Carriage, pull forward into Position 'E' (holding Position) the required number of needles. (Figs. 18 & 19)  
Knit one row.

Fig. 18



Return Cam Levers  
in Back Position



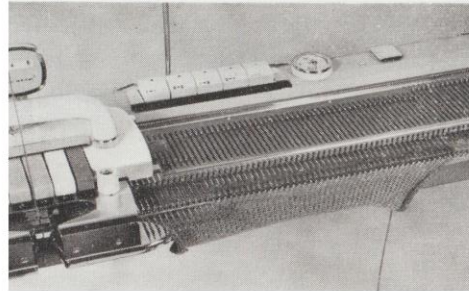
## PART IV (DECREASE SHAPING CONTINUED)

- (2) Loop the yarn UNDER the end needle in Position 'E' farthest from the Carriage, leaving it over the other needles in Position 'E' (Fig. 20). (Failure to do this will cause a hole in the fabric).  
Knit one row. \*

Repeat from \* to \* bringing further needles forward from Position 'B' and at the opposite end to the Carriage, into Position 'E' as required.

After completing the slope and, with the Carriage at the opposite end to the needles in Position 'E', bring forward the leading Return Cam Lever and knit one row to form a neat edge.

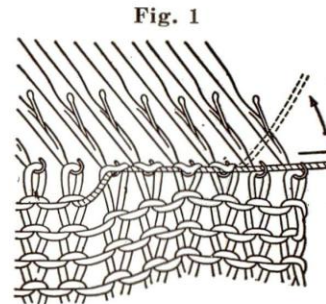
Fig. 20



## PART V GENERAL INFORMATION

### 1. HOW TO PULL BACK A ROW OF KNITTING

- (1) Hold the fabric down gently with one hand.
- (2) With the other hand, pull the wool in line with the needle bed until it forms a straight line across the needle hooks. (Fig. 1)
- (3) Still holding the fabric, continue to pull the wool in a sideways and upwards direction as shewn by the dotted lines in Fig. 1. The wool will lift out of the needle hooks bringing the loops of the previous row into the hooks.



### 2. CARRIAGE JAMMING— HOW TO RELEASE

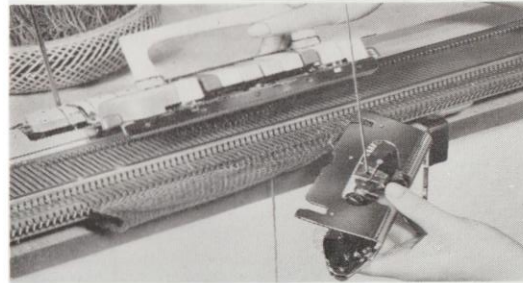
Never use force to operate the Carriage. If the movement is excessively stiff check the following:

- (1) Whether the wool has twisted around the Wool Guide Wire—the Overhead Feed-Control or, the Carriage Feeder.
- (2) The Tension Setting. You may be knitting at a Tension too tight for the thickness of wool being used—see under heading “Tension Settings”—Part II Page. 8.

If the Carriage jams do not use force to free it but proceed as follows:

- (1) Unscrew the two plastic nuts holding the Carriage Feeder Unit in position.
- (2) Pull out Carriage Feeder Unit. (Fig. 2)

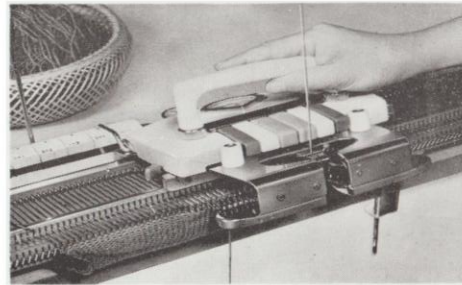
Fig. 2



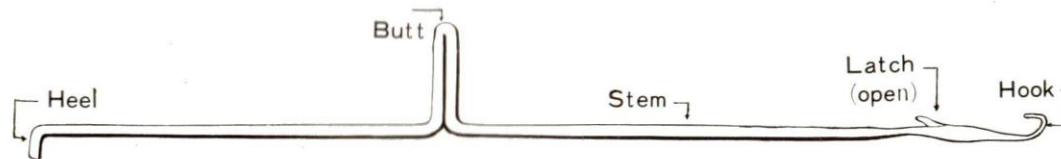
## PART V (GENERAL INFORMATION CONTINUED)

- (3) Lift front of Carriage clear of front runner rail and needles (Fig. 2). Slide carriage back clear of working needles.
- (4) Replace Carriage Feeder Unit and secure.
- (5) Locate and remedy cause of carriage jamming.
- (6) Pull back part row knitted.
- (7) Continue to knit. (Fig. 3)

Fig. 3



### 3. THE LATCH NEEDLE



### 4. HOW A STITCH IS FORMED

As the Carriage passes over the needles, the Cams operate the needles by making contact with the Needle Butts.

## PART V (GENERAL INFORMATION CONTINUED)

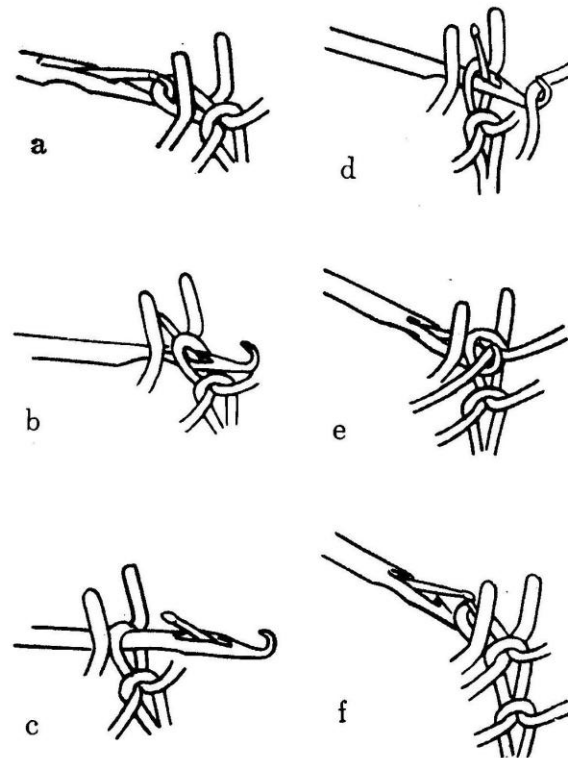
Fig. 4

1. The Cam pushes the needle forward. (Fig. 4 a. & b.)
2. The Rotary Brush and Pinion Wheel prevent the fabric from coming forward with the needles. The needle is therefore pushed through the loop, which action opens the LATCH. (Fig. 4b. & c.)

3. As the Carriage movement continues the wool is fed into the needle HOOK as the needle is being driven back and the latch closed by the loop. (Fig. 4 d)

4. The loop is checked by the stitch Divider Posts and is forced over the closed hook of the Needle (Fig. 4 e) to form a new stitch by closing around the strand of wool in the needle hook. (Fig. 4f)

The action as outlined in paragraphs 1 to 4 is repeated at each traverse of the Carriage.

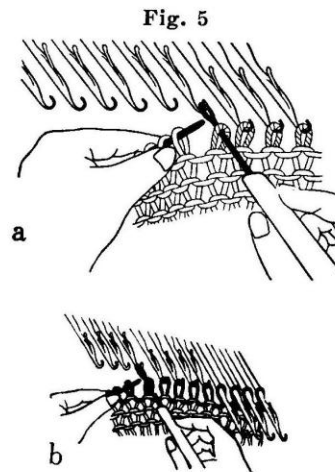


## PART V (GENERAL INFORMATION CONTINUED)

- Slip Stitch :** This is a stitch held in the hook of a needle while adjoining needles knit.
- Tucking Stitch :** This is a Double stitch where the needle is not pushed forward far enough for the loop to pass behind the open latch. The loop therefore returns into the hook with the strand of wool picked up from the passing Carriage Feeder.
- Pull-up Stitch :** This is a series of "gathered" stitches obtained when selected needles are left in the forward Holding Position 'E'. The strands of wool at every Carriage movement accumulate on the stems of these needles until knitted in a "bunch".

### 5. HOW TO TRANSFER WORK FROM A HAND KNITTING NEEDLE TO THE MACHINE

1. Bring forward into Position 'C' as many needles as there are stitches to be transferred.
2. With the Purl side of the knitting to the front, transfer the stitches one at a time from the Hand Knitting Needle to the Machine Needles. Use the single eye transfer tool. (Fig. 5 a)
3. As each stitch is transferred draw the needle forward into Position 'D'. (Fig. 5 b)
4. When all stitches have been transferred bring the needles forward into Position 'E' at the same time holding back the fabric so that the loops are behind the open latches.—see needles at extreme right of Fig. 5 b.
5. Thread up the Overhead Feed-Control Unit and Carriage Feeder, pull forward the Return Cam Levers and knit.





## **PART V (GENERAL INFORMATION CONTINUED)**

### **6. KNITTING A GARMENT (Casting-on using the Divider Thread)**

Always Cast-on by the Automatic Method (see Part III) but using old wool of 3 or 4 ply thickness. Knit some 10 or 12 rows This will ensure that the cast-on edge of the garment does not become soiled through handling.

- (a) After knitting 10 rows break the old wool and insert the Divider Thread (Part I Fig. V Item 11) in the Carriage Feeder. Knit ONE ROW ONLY with the Divider Thread then take it out of the Feeder. (You will find it easier for the next stage if the Carriage is on the Right after knitting the one row with the Divider Thread)
- (b) Change the Tension to suit the thickness of wool which you intend to use for the garment.
- (c) Thread-up the Overhead Feed-Control Unit and Carriage Feeder with the new wool.
- (d) Bring Forward into the Holding Position 'E' all the needles carrying stitches, at the same time holding the knitting back against the Stitch Divider Posts.
- (e) Make a slip-knot at the end of the new wool and place this onto the left-hand end needle in Position 'E' and wind the wool around each needle from left to right as for Multiple Increasing (Part IV Fig. 7).
- (f) Ensure that all the newly made loops are behind the open latches of the needles.
- (g) Pull forward the Left-Hand Return Cam Lever and knit the first row slowly.
- (h) Push back the Left-Hand Return Cam Lever and continue to knit.

NOTE: Casting-on with the new wool over the Divider Thread may also, as an alternative, be done by the Automatic Method.

## **PART V (GENERAL INFORMATION CONTINUED)**

### **7. HOW TO FORM A HEM**

Proceed as given in the preceeding paragraph 6 from (a) to (h) and then continue as follows:

- (a) Knit until the piece is twice as long as the depth of the hem.
- (b) Turn the knitting up towards you and, with the Crochet Needle, hook the cast-on loops of the new wool onto the respective needles.
- (c) When all the loops have been hooked onto the needles, pull the needles forward into the Holding Position 'E', at the same time keeping the knitting back against the Needle Divider Posts so that all loops are behind the open latches.
- (d) Pull out the Divider Thread. This will separate the piece of fabric knitted with the old wool from the new.
- (e) Pull forward the Return Cam Levers and knit the first row slowly, to complete the Double Hem.
- (f) Continue to knit.

### **8. HOW TO FORM A HEM WITH PICOT EDGE**

Proceed as in paragraph 6 from (a) to (h) and then continue as follows:

- (a) Knit HALF the number of rows intended for the Hem, i.e. if 30 rows knit 15.
- (b) Transfer the stitch from the 2nd needle to the 3rd needle, the 4th to the 5th, the 6th to the 7th and so on to the end. Align the empty needles in Position 'B'.
- (c) Continue to knit the remaining number of rows for the Hem, i.e. 15 rows if the total is 30.
- (d) Now proceed as from sub-paragraph (b) to (f) of paragraph 7 above.

## **PART V (GENERAL INFORMATION CONTINUED)**

### **9. MOCK RIB 2×1**

- (a) Cast-on by the Automatic Method with old wool and knit 7 or 8 rows.
- (b) Transfer the stitch from the 3rd to the 4th needle, 6th to 7th, 9th to 10th and so on to the end of the row. Push the empty needles back into Position 'A' (Rest Position). Arrange number of needles so that there are two working needles at the extreme ends.
- (c) Knit 3 or 4 rows—still using the old wool.
- (d) Introduce the Divider Thread as explained in sub-paragraph (a) Paragraph 6.
- (e) Change the Tension Dial 1 or 2 full settings TIGHTER than you intend to use for the rest of the garment.
- (f) Proceed as in sub-paragraphs (d) (e) (f) and (g) of Paragraph 6.
- (g) Knit to twice the depth of welt required.
- (h) Bring forward into line with the working needles the empty needles from which stitches had been transferred earlier.
- (i) Turn the fabric up towards you and hook the loops, cast-on with the new wool, on to the corresponding needles. In the case of the empty needles, hook on to these the THIRD strand from the Cast-on edge of the "ladders" to be found between the pairs of "knit" stitches.
- (j) Pull out the Divider Thread and continue as at sub-paragraphs (d) (e) & (f) Paragraph 6.

## **PART V (GENERAL INFORMATION CONTINUED)**

### **10. HOW TO KNIT A 2 × 1 RIB WELT**

Proceed as at Paragraph 6 — sub-paragraphs (a) to (h) and knit, at 1 or 2 Tension Settings TIGHTER than for the remainder of the garment, to depth of welt required.

- (a) Drop the stitch off the 3rd needle.
- (b) Insert the hook of the Latch Needle Tool into the loop immediately above the Divider Thread, and “run” the stitch down. Knit up with the Latch Needle Tool — see Fig. 3. (a) to (f) Part IV.
- (c) Continue as at (a) and (b) above with the stitch from every THIRD needle.
- (d) Pull out the Divider Thread to detach the piece knitted with old wool.
- (e) Change the Tension Setting to that required for the remainder of the garment and knit.

### **11. BUTTONHOLES**

**Vertical Buttonhole :** With Return Cam Levers BACK

- (a) Bring forward into Position 'E' (Holding Position) all needles at the opposite end to the Carriage and up to the point where the buttonhole is required.
- (b) Knit an odd number of rows over the needles remaining in Position 'B' to the required length of the buttonhole, finishing with the Carriage at the opposite end to the needles in Position 'B'.
- (c) Break the wool and pull the loose end clear of the needles in Position 'E'.
- (d) Bring forward into Position 'E' all the needles from Position 'B' and push back into Position 'D' all the needles that were formerly in Position 'E'.
- (e) Re-thread the Carriage Feeder and knit the same number of rows as for the first half of the buttonhole. The Carriage should then be at the opposite end to the needles in Position 'E'.

## **PART V (GENERAL INFORMATION CONTINUED)**

- (f) Break the wool and pull the loose end clear of the needles in Position 'E'.
- (g) Re-thread the feeder and bring forward the Return Cam Levers.
- (h) Continue to knit.

**NOTE :** To finish off the buttonhole, knot together the two loose ends of wool and bind the edges of the buttonhole.

**Small Buttonhole** — Transfer the stitch from the needle where the buttonhole is required onto the next needle and leave the empty needle in Position 'B'. This type of buttonhole is only suitable for small buttons.

**Horizontal Buttonhole** — With Return Cam Levers FORWARD —

- (a) Bring forward into Position 'E' the number of needles for the width of buttonhole required.
- (b) Place a strand of contrasting colour wool into the hooks of these needles.
- (c) Pull the needles back by hand until this strand has been knitted in.
- (d) Now bring them forward into Position 'E'.
- (e) Continue to knit.

**NOTE :** When the garment is completed pull out the strand of contrast colour wool. Using the Seaming Needle and matching wool, pick up the loops and finish off by buttonholing around the edges.

## **PART V (GENERAL INFORMATION CONTINUED)**

### **12. NECK OPENINGS**

#### **'V' NECK :**

- (a) Bring forward into Position 'E' (Holding Position) all the needles from the centre of the work to the end away from the Carriage.
- (b) Knit over the remaining needles, decreasing at the centre edge as desired until this first half of the 'V' opening has been completed. Cast-off the remaining stitches and return the empty needles to Position 'A'.
- (c) Pull forward the Return Cam Levers and knit over the needles returned from Position 'E', decreasing to match the first half of the 'V' opening.

#### **SQUARE NECK :**

- (a) At the opposite end to the Carriage, pull forward into Position 'E' the number of needles required for the Shoulder. With Return Cam Levers back, knit one row.
- (b) With the wool from the Carriage Feeder cast-off the number of stitches required to make the neck-opening.
- (c) Push back into Position 'A' the empty needles.
- (d) Knit over the needles remaining in Position 'B' to complete the piece at one half of the neck-opening—Cast-off.
- (e) Pull forward the Return Cam Levers and complete the second half of the neck-opening. Cast-off.

### **13. TURNING—SOCK HEEL or POUCH**

- (a) With Return Cam Levers back, bring the needle, at the end near the Carriage, into Position 'E'. Knit one row—and again bring the end needle near the Carriage into Position 'E'.
- (b) Repeat by pulling forward into Position 'E' one needle, at the same end as the Carriage, after knitting each row until sufficient needles to form the "turn" or pouch have been brought forward.

## **PART V (GENERAL INFORMATION CONTINUED)**

- (c) Now, push back into Position 'D' the inside holding needle of the group near the Carriage. Knit one row and repeat at the opposite group of holding needles. Continue to knit and return one inside needle after every row until all the needles are back in the working position.

### **14. KNITTING A MEASUREMENT SAMPLER**

When knitting the pieces for a garment to be made to a given size it is essential to know how many stitches and rows will have to be knitted to produce the required measurements.

As the Tension Setting determines the number of stitches and rows per square inch of fabric, it is advisable to knit a Sampler before attempting to knit the pieces for a garment.

The measurement Sampler should be knitted with the wool intended for the garment and not any other comparable wool. A similar quality and thickness of wool may be used with which to knit samplers for the purpose of finding the most suitable size of stitch

The measurement Sampler should be knitted over a convenient number of needles, say 60, and to a length of 70 or 80 rows for accuracy, starting and finishing with a wool of contrasting colour. The contrast colour will provide distinct measuring points.

The Sampler should not be measured immediately, but be allowed to settle for some hours after it has been removed from the machine. This will give the stitches the opportunity to relax into their permanent shape.

Measure the Sampler for length and width but avoid stretching. Check the measurements two or three times.

If the Sampler measures 8" in width and 8" in length when knitted over 60 needles and contains 80 rows, then 60 divided by 8 equals  $7\frac{1}{2}$  stitches to the inch and 80 divided by 8 equals 10 rows to the inch.

In order to knit a piece 20" wide by 22" long the number of needles required would therefore, be  $7\frac{1}{2} \times 20 = 150$ , and the number of rows  $10 \times 22 = 220$ .

## PART V (GENERAL INFORMATION CONTINUED)

### 15. PATTERN UNIT

#### Keys :

The pattern Unit consists of 5 keys. Reading from left to right they are marked as follows:

BLACK 1-1; 2-2; 1-3; 3-1. RED 3-3.

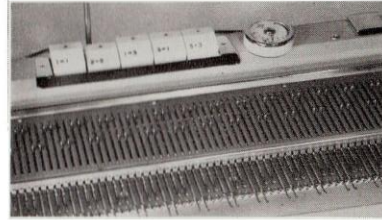
The Keys indicate the formation of the needles to be selected, i.e. 1-1, 2-2, 1-3, 3-1 and 3-3. By depressing a Key and moving the Needle Selector Lever inwards until the bell rings, all needles previously aligned in Position 'B' will be selected in the formation printed on the Key.

e. g. Depress Key 2-2. Operate Lever and pairs of needles will be pushed forward into Position 'D', whilst alternate pairs will remain in Position 'B'. (Fig. 6)

The left-hand number on the Keys indicates the number of needles brought into Position 'D'.

**IMPORTANT NOTE** All Keys MUST be released before attempting to Increase, Decrease or bring needles to or from Position 'A'.

Fig. 6



#### Needle Pitch Dial :

This Dial has on its face the figures 1-5. The numerals 1, 2, & 3 are in BLACK and 4 and 5 in RED.

The Dial must not be turned to or from the RED numbers 4 and 5 when any Key numbered in BLACK is depressed.

The RED number Dial Settings are intended for use ONLY with the Key numbered in RED.

The purpose of the Dial is to "pitch" the selection of needles to LEFT or RIGHT. By turning the Dial from lower to higher numbers the "pitching" is to the RIGHT, and to the LEFT when turned from higher to lower numbers.



## **PART V (GENERAL INFORMATION CONTINUED)**

### **16. CARRIAGE KEYS**

#### **Red :**

Either Red Key can only be operated when the Return Cam Lever at the same end of the Carriage is in the Forward position. To release this Key the Return Cam Lever must be pushed into the Back Position— it is however, released automatically during knitting. With the Key in action the needles selected will be brought forward from Position 'D' into Position 'E' and will not knit but will hold stitches.

Used for Drawn or Gathered Pattern work.

#### **Ivory :**

To operate these press inwards, and to release tap the top of the Key lightly.

When the Keys are pressed in, needles in Position 'D' will knit while those in Position 'B' will pick up a strand of wool without knitting.

This action is known as "Tucking" and is used to produce "Fisherknit" and similar patterns.

#### **Brown :**

To operate these press inwards, and to release tap the top of the Key lightly. With the Keys in operation, needles in Position 'B' will not knit.

When used in conjunction with the Pattern Unit, the selected needles in Position 'D' will knit but those in Position 'B' will merely hold the stitches.

Used for Colour Pattern work, etc..

**NOTE:** ALL Keys should be RELEASED after use and before continuing to knit in Stocking Stitch.

## PART V (GENERAL INFORMATION CONTINUED)

### 17. HOW TO CHANGE A NEEDLE

- (1) Pull out the Needle Holder Rod (Fig. 7) until the opposite end is clear of the needle you wish to change.
- (2) Bring the needle forward into Position 'E'. Lift up by the butt and press down gently on the needle hook so that the heel of the needle comes up through the slot.
- (3) Push the needle back until the heel passes over the back runner rail and the hook-end comes out through the slot. (Fig. 8)

To Insert a New Needle—

- (4) Push the hook-end of the needle into the slot and forward through the opening at the front of the forward runner rail and continue to push the needle forward until the butt comes up to Position 'E'. Allow the heel of the needle to drop into the slot.
- (5) Push needle back to position 'A'.
- (6) Push the rod back into position and at the same time gently press down at the hook-end of the needles to allow the rod to pass freely over them.

Fig. 7

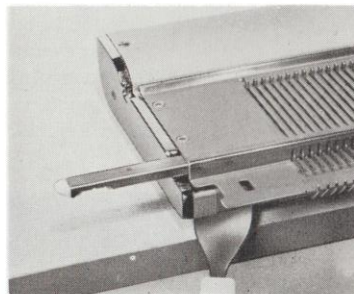
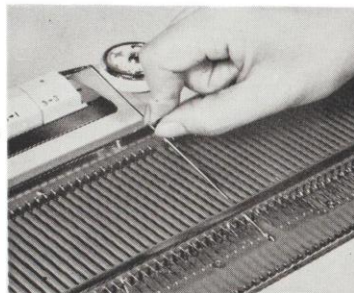


Fig. 8



## PART V (GENERAL INFORMATION CONTINUED)

### 18. USE OF MACHINE CLAMPS

When knitting a heavy fabric, and particularly over the full width of the machine or, when using the machine on a table where the surface allows the machine to slide, it is advisable to clamp the machine to the edge of the table. Two Clamps will be found inside the Accessory Case and these should be placed in position to the base of the machine, as shown at Fig. 9.

The machine, with clamps in position, should be fastened to the edge of a table, as in Fig. 10.

Fig. 9

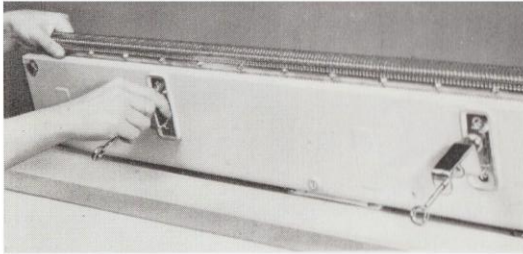
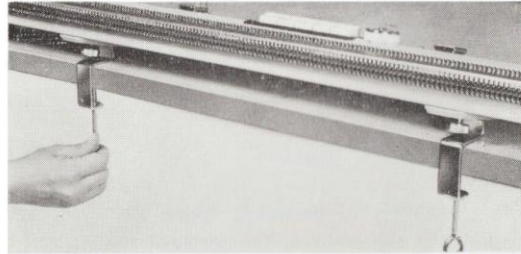


Fig. 10



### 19. CARE AND MAINTENANCE

In order to obtain the best results from the "Pine Star", the machine should always be kept perfectly clean, free from dust and grit. You should therefore, dust after use and wipe over with a soft cloth moistened with a few drops of the oil provided.

#### Needle Bed:

Do not over-oil as this will only collect dust and possibly soil the wool. Oil should only be applied lightly to the needle butts and runner rails.

#### Carriage:

Remove the Carriage, dust and clean the underside. Apply a little oil to the cams.

## **PART VI FANCY PATTERNS**

### **IMPORTANT NOTES**

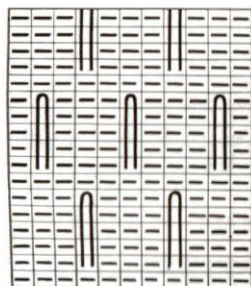
- (1) Always release ALL Carriage Keys before continuing to knit in Stocking Stitch.
- (2) Never attempt to Increase, Decrease or bring needles to or from Position 'A' without first releasing ALL Pattern Keys.
- (3) Never attempt to turn Needle Pitch Dial onto the RED figures when a Pattern Key with BLACK figures is depressed.

### **ABBREVIATIONS**

P. K.	Pattern Key
N. P. D.	Needle Pitch Dial
C. K.	Carriage key
R. C. L.	Return Cam Lever
N. S. L.	Needle Selector Lever
C. C.	Contrasting Colour
M. C.	Main Colour

## PART VI (FANCY PATTERNS CONTINUED)

### PATTERN A



Purl Side

Fig. 1

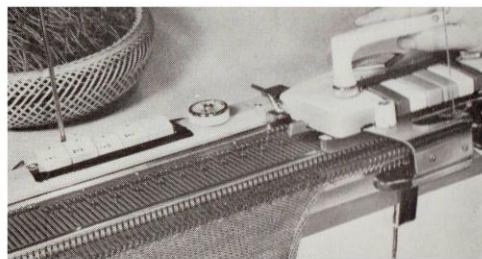


Fig. 2

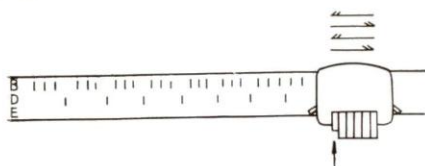


Fig. 3

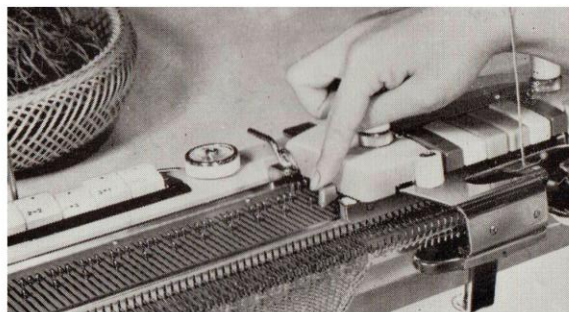
### 1. PULL-UP KNITTING IN ONE COLOUR—PATTERN A

Depress 1-3 P. K. (Fig. 1)

- \* (a) Turn N. P. D. to '0'
- (b) Bring forward leading R. C. L. and press in leading Red C. K. (Fig. 2)
- (c) Operate N. S. L. Note: The extreme end needles must be in Position 'B'
- (d) Knit 4 rows
- (e) Bring forward leading R. C. L. (Fig. 3) Knit 2 rows.
- (f) Turn N. P. D. to '2' \*
- (g) Repeat from (b) to (e).

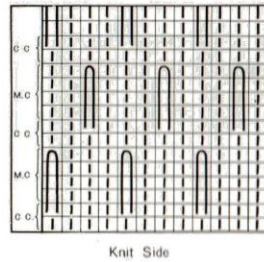
This completes one pattern

Repeat from \* to \*



## PART VI (FANCY PATTERNS CONTINUED)

### PATTERN B



### PATTERN C

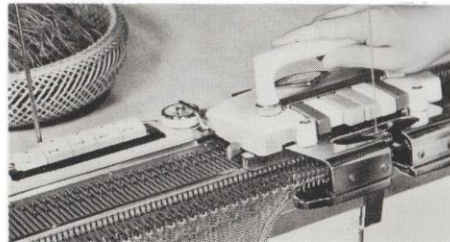
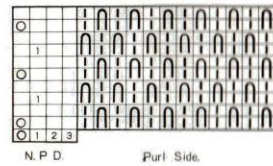


Fig. 4

### 2. PULL-UP KNITTING IN TWO COLOURS—PATTERN B

Proceed as given in Para. 1. Pattern A.  
 \* Changing to C. C. at (d) — Knit 4 rows  
 Change back to M. C. at (e) — Knit 2 rows  
 Repeat from \* to \*

### 3. TUCKING STITCHES IN ONE COLOURS—PATTERN C

(Mock Moss Stitch on Knit side)

Depress 1-1 P. K. (Fig. 4)  
 Press in leading Ivory C. K. (Fig. 4)  
 \* (a) Turn N. P. D. to '0'  
 (b) Operate N. S. L.  
 (c) Knit 2 rows  
 (d) Turn N. P. D. to '1' (Fig. 5)  
 (e) Operate N. S. L.  
 (f) Knit 2 rows \*  
 Repeat from \* to \*

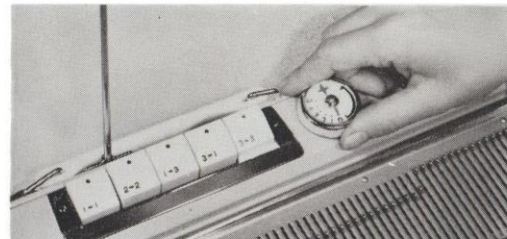


Fig. 5

## PART VI (FANCY PATTERNS CONTINUED)

### PATTERN D

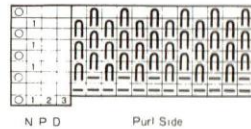
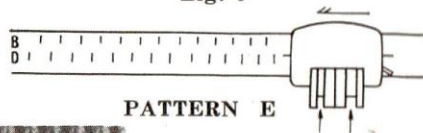


Fig. 6



### PATTERN E



Fig. 7

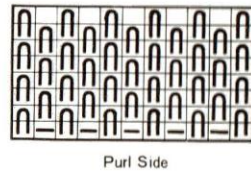
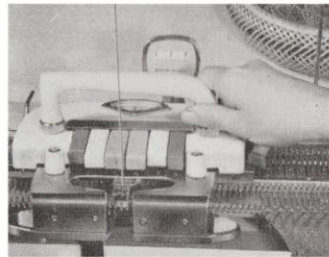
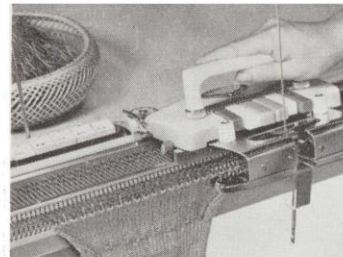


Fig. 8



### 4. TUCKING STITCHES ON SUCCESSIVE ROWS—PATTERN D

(Fisherknit Stitch on Knit side)

- Depress 1-1 P. K. (Fig. 4)  
 Press in both Ivory C. K. (Fig. 6)
- \* (a) Turn N. P. D. to '0'
  - (b) Operate N. S. L. (NOTE: Both end needles should be pulled forward into Position 'D')
  - (c) Knit 1 row
  - (d) Turn N. P. D. to 'I'
  - (e) Operate N. S. L.
  - (f) Knit 1 row \*
- Repeat from \* to \*

NOTE: Many variations of Tucking Stitch Patterns may be made by changing colours and varying the number of rows between needle selections

### 5. FANCY RIBBING STITCHES—PATTERN E

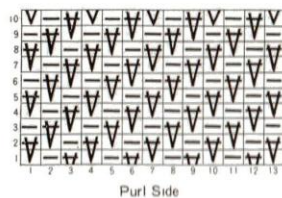
Depress 1-1 P. K.

Bring forward leading R. C. L. — Press in leading Red C. K. and trailing Ivory C. K. (Fig. 7)

- \* (a) Operate N. S. L.
  - (b) Knit 1 row
  - (c) Bring forward leading R. C. L. (Fig. 8)
  - (d) Knit 1 row \*
- Repeat from \* to \*

## PART VI (FANCY PATTERNS CONTINUED)

PATTERN F

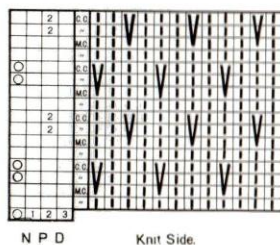


### 6. ZIG-ZAG PATTERN—PATTERN F

Depress 2-2 P. K.  
Press in both Brown C. K. (Fig. 9)

- \* (a) Turn N. P. D. to '0'—Operate N. S. L.
- (b) Knit 1 row

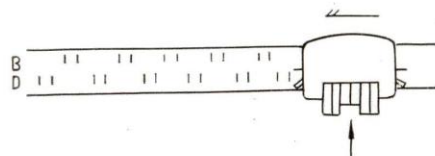
PATTERN G



### 7. SLIP STITCH PATTERN IN TWO COLOURS—PATTERN G

Knit 2 rows in Stocking Stitch in M. C.  
Depress 3-1 P. K.

Fig. 9



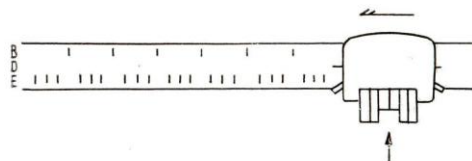
- (c) Turn N. P. D. to '1'—Operate N. S. L.
- (d) Knit 1 row
- (e) Turn N. P. D. to '2'—Operate N. S. L.
- (f) Knit 1 row
- (g) Turn N. P. D. to '3'—Operate N. S. L.
- (h) Knit 1 row \*

Repeat from \* to \* twice (12 rows)

Repeat above turning N. P. D. in following order :

2; 1; 0; 3; 2; 1; 0; 3; 2; 1; 0; 3; Then repeat from (a)

Fig. 10



- (a) Turn N. P. D. to '0'
  - \* (b) Press in both Brown C. K. (Fig. 10)
  - (c) Operate N. S. L.
  - (d) Change to C. C.—Knit 1 row.
  - (e) Operate N. S. L.—Knit 1 row.
  - (f) Release both Brown C. K.
  - (g) Change to M. C.—Knit '2' rows \*
  - (h) Turn N. P. D. to '2' Repeat from \* to \*
- Then repeat from (a).



## PART VI (FANCY PATTERNS CONTINUED)

### PATTERN H

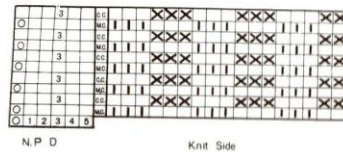
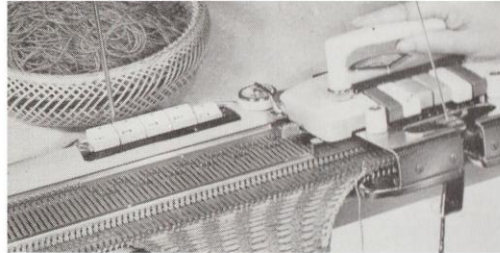
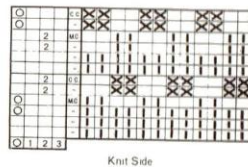


Fig. 11



### PATTERN I



### 9, TWO COLOUR STOTTED PATTERN— PATTERN I

Knit 2 rows with M. C. in Stocking Stitch  
Depress 2-2 P. K.

### 8. VERITICAL STRIPES—PATTERN H

Depress 3-3 P. K. (Fig. 11)

Press in both Brown C. K. (Fig. 11)

- \* (a) Turn N. P. D. to '0'
- (b) Operate N. S. L.—Knit 1 row with M. C.
- (c) Turn N. P. D. to '3'
- (d) Operate N. S. L.—Change to C. C.—Knit 1 row
- (e) Remove yarn from feeder—Return Carriage to opposite end \*
- (f) Rethread feeder with M. C.—Repeat from \* to \*

- 
- (a) Turn N. P. D. to '0'
  - \* (b) Press in both Brown C. K.
  - (c) Operate N. S. L.—Knit 1 row in M. C.
  - (d) Operate N. S. L.—Knit 1 row in M. C.
  - (e) Turn N. P. D. to "2"
  - (f) Operate N. S. L.—Knit 1 row in C. C.
  - (g) Operate N. S. L.—Knit 1 row in C. C.
  - (h) Release both Brown C. K.
  - (i) Knit 2 rows in M. C.
  - (j) Press in both Brown C. K.
  - (k) Operate N. S. L.—Knit 1 row in M. C.
  - (l) Operate N. S. L.—Knit 1 row in C. C.
  - (m) Turn N. P. D. to '0'
  - (n) Operate N. S. L.—Knit 1 row in C. C.
  - (o) Operate N. S. L.—Knit 1 row in C. C.
  - (p) Release both Brown C. K.
  - (q) Knit 2 rows in M. C. \*

Repeat from \* to \*

## PART VI (FANCY PATTERNS CONTINUED)

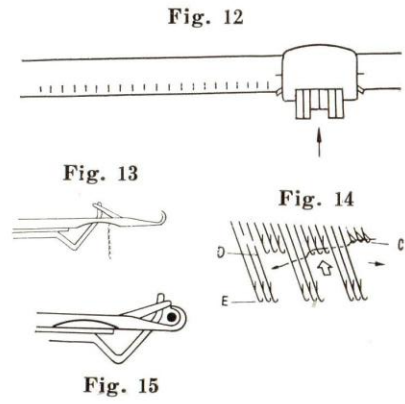
### 10. KNITTING IN TWO OR MORE COLOURS AT THE SAME TIME

Press in both Brown C. K.— bring forward both R. C. L. (Fig. 12)

- \* (a) Holding knitting back against machine, pull forward all working needles into Position 'E' (Holding Position) (Fig. 12)
- (b) Push back into Position 'D' all the needles required for C. C. (Fig. 13) leaving needles required for M. C. in Position 'E'.
- (c) Commencing at the same end as Carriage, lay C. C. yarns into these needle hooks, passing them under the needles in position 'E' (Fig. 14)
- (d) Push the needles in Position 'D' back into Position 'C' (Fig. 15)
- (e) Knit 1 row \*

Repeat from \* to \*

NOTE: M. C. remains in Carriage Feeder.

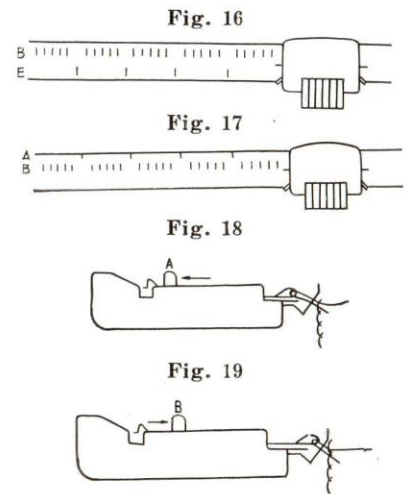
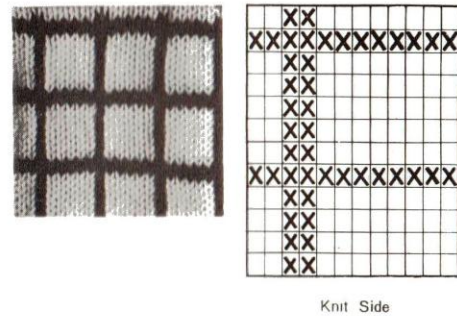


### 11. LARGE CHECK PATTERN—PATTERN J

Bring forward both R. C. L. (Fig. 16)

- \* (a) Bring forward into Position 'E' the needles required for the vertical stripe (Fig. 16)
- (b) Place C. C. yarn into these needle hooks and push them back into Position 'A' (Figs. 17 & 18)
- (c) Knit 1 row with M. C.
- (d) Bring forward the needles with C. C. from Position 'A' to Position 'B' (Fig. 19)
- (e) Pull C. C. yarn until all the stitches are the same size (Fig. 19) \*

Repeat from \* to \*  
Where horizontal contrasting line required— Knit 2 rows with C. C. in Stocking Stitch.



## PART VI (FANCY PATTERNS CONTINUED)

### 12. TO KNIT A CORD

- (a) With Carriage on right—bring forward into Position 'E' the number of needles (2 to 5) required for thickness of cord.
- (b) Bring forward both R. C. L.—Press in trailing Ivory C. K. (Fig. 20)
- (c) Wind the yarn anti-clockwise around stems of needles in Position 'E' (Fig. 21)
- (d) Thread up Carriage Feeder—Knit.

NOTE: To obtain a neat cord use a tighter Tension. Always pull downwards on the cord during knitting.

Fig. 20

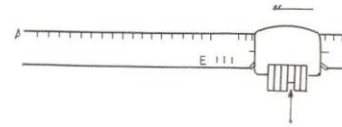
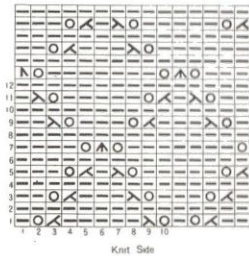


Fig. 21



### PATTERN K



### 13. LACE PATTERNS—PATTERN K

Where a hole is required, transfer the stitch on to the next needle and leave the empty needle in Position 'B'. Knit 2 or more rows as required for the pattern.

Various types of lace Patterns can be obtained according to the distribution of the holes made in the manner described above. (Fig. 22)



Fig. 22

## PART VI (FANCY PATTERNS CONTINUED)

### PATTERN L

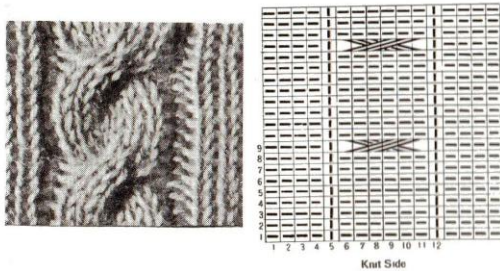


Fig. 23

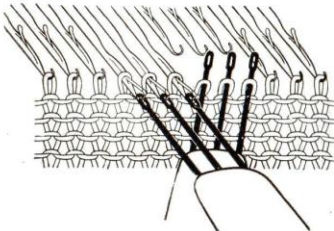
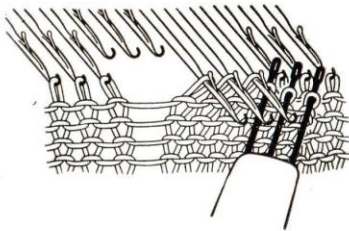


Fig. 24



### 14. CABLE PATTERN—PATTERN L

Using the two treble-eye transfer tools:

- (a) Take the stitches from 3 needles onto one of the tools.
- (b) Take the next 3 stitches onto the second tool.
- (c) Place the stitches from the first tool onto the second 3 empty needles and pull these needles forward into Position 'D' (Figs. 23 & 24)
- (d) Place the 3 stitches from the second tool onto the first 3 empty needles and pull these needles forward into Position 'D' (Figs. 25 & 26)
- (e) Knit the number of rows required between twists of cable and repeat.

Fig. 25

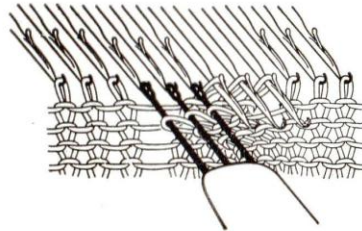
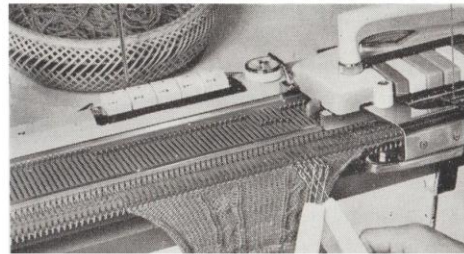


Fig. 26



## PART VI (FANCY PATTERNS CONTINUED)

### PATTERN M

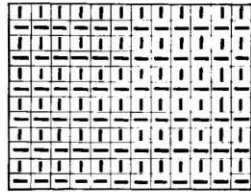
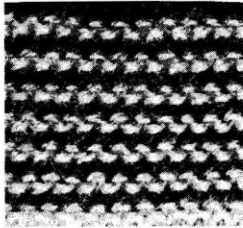
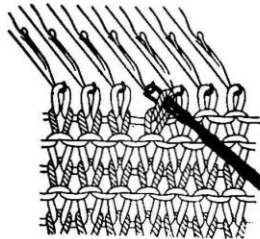
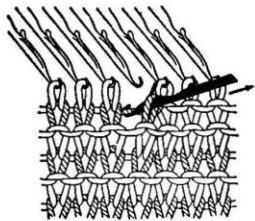


Fig. 27

Fig. 28



### 15. GARTER STITCH—PATTERN M

- \* (a) Knit 2 rows in Stocking Stitch.
- (b) Push the Latch Needle Tool through the first loop below the one on the machine needle.
- (c) Drop the loop off the machine needle onto the tool. (Fig. 27)
- (d) Knit up with the tool thus reversing the stitch and replace it on the empty machine needle. (Fig. 28)
- (e) Repeat until all the stitches have been turned in this manner \*

Repeat from \* to \*

Fig. 29



Fig. 30

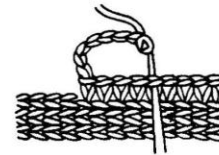
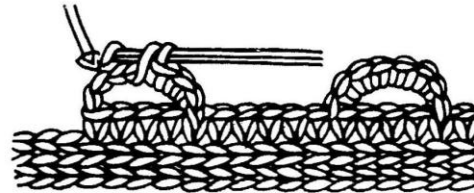


Fig. 31



### 16. HOW TO USE THE CROCHET HOOK

The Crochet Hook is used either to bind off the stitches when the fabric is completed by taking the stitches onto a knitting needle and crocheting through the loops. (Fig. 29)

or

to make a fancy edge to the fabric and chain-stitch loops for buttonholes. (Figs. 30 & 31)

## PART VI (FANCY PATTERNS CONTINUED)

### 17. HOW TO USE THE SEAMING NEEDLE

The Seaming Needle is used to cast off stitches, graft edges together, join seams, etc.

- (a) Casting-off by binding. (Fig. 32)
- (b) Grafting raw edges of Stocking Stitch together (Figs. 33, 34, 35 & 36)
- (c) Joining plain stitches. (Figs. 37 & 38)
- (d) Joining Rib stitches. (Figs. 39, 40, 41 & 42)

Fig. 32

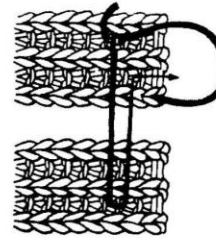


Fig. 33

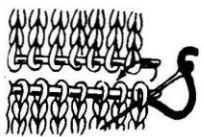


Fig. 34

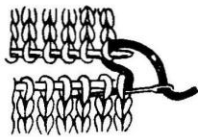


Fig. 35

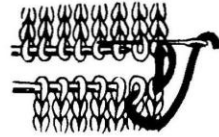


Fig. 36



Fig. 37



Fig. 38

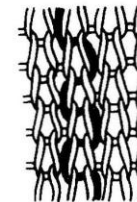


Fig. 39

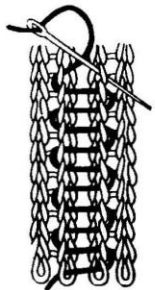


Fig. 40

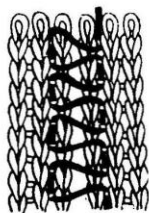


Fig. 41

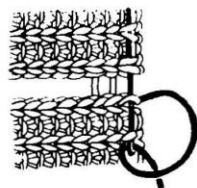
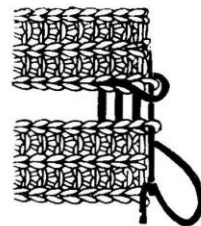


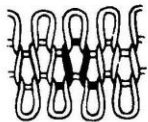
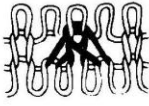
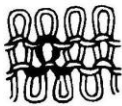
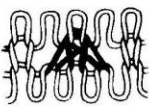
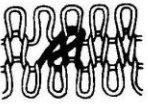
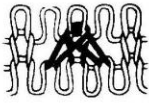
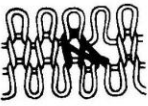
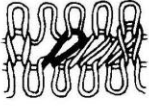
Fig. 42



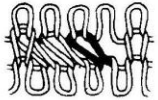
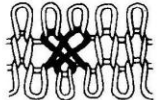
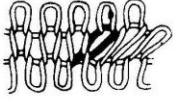
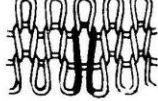

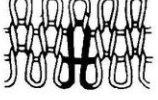
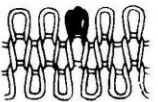
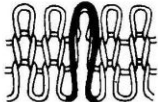
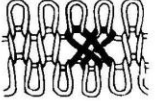

## PART VI (FANCY PATTERNS CONTINUED)

### KNITTING SYMBOLS

NOTE: All illustrations except "Purl Stitch" are as seen from the Knit Side (front) of the fabric.




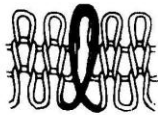



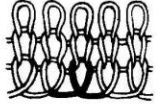


Symbol	Illustration	Description	Symbol	Illustration	Description
		Knit Stitch (Front loop of Stocking Stitch)	↑		Three Stitches together Centre Stitch on top
—		Purl Stitch (Back loop of Stocking Stitch)	↘		Three Stitches together Right-hand Stitch on top
↘		Two Stitches together Right-hand stitch on top	↙		Three Stitches together Left-hand Stitch on top
↙		Two Stitches together Left-hand stitch on top	/		Stitch sloping to right

**PART VI (FANCY PATTERNS CONTINUED)**

Symbol	Illustration	Description	Symbol	Illustration	Description
\		Stitch sloping to the left	X		Crossed Stitches Left over right
┌		Increased Stitch on right	V		Slip Stitch on Knit side
└		Increased Stitch on left	∇		Slip Stitch on Purl side
3 V		Three Stitch Increase	∩		Drawn Stitch
X		Crossed Stitches Right over left	∩		Drawn Stitch inclined to right



**PART VI (FANCY PATTERNS CONTINUED)**

Symbol	Illustration	Description
		<p>Drawn Stitch inclined to left</p>
		<p>Twisted Drawn Stitch</p>
		<p>Twisted Stitch</p>
		<p>Rolled Stitch</p>
		<p>Empty Stitch</p>



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