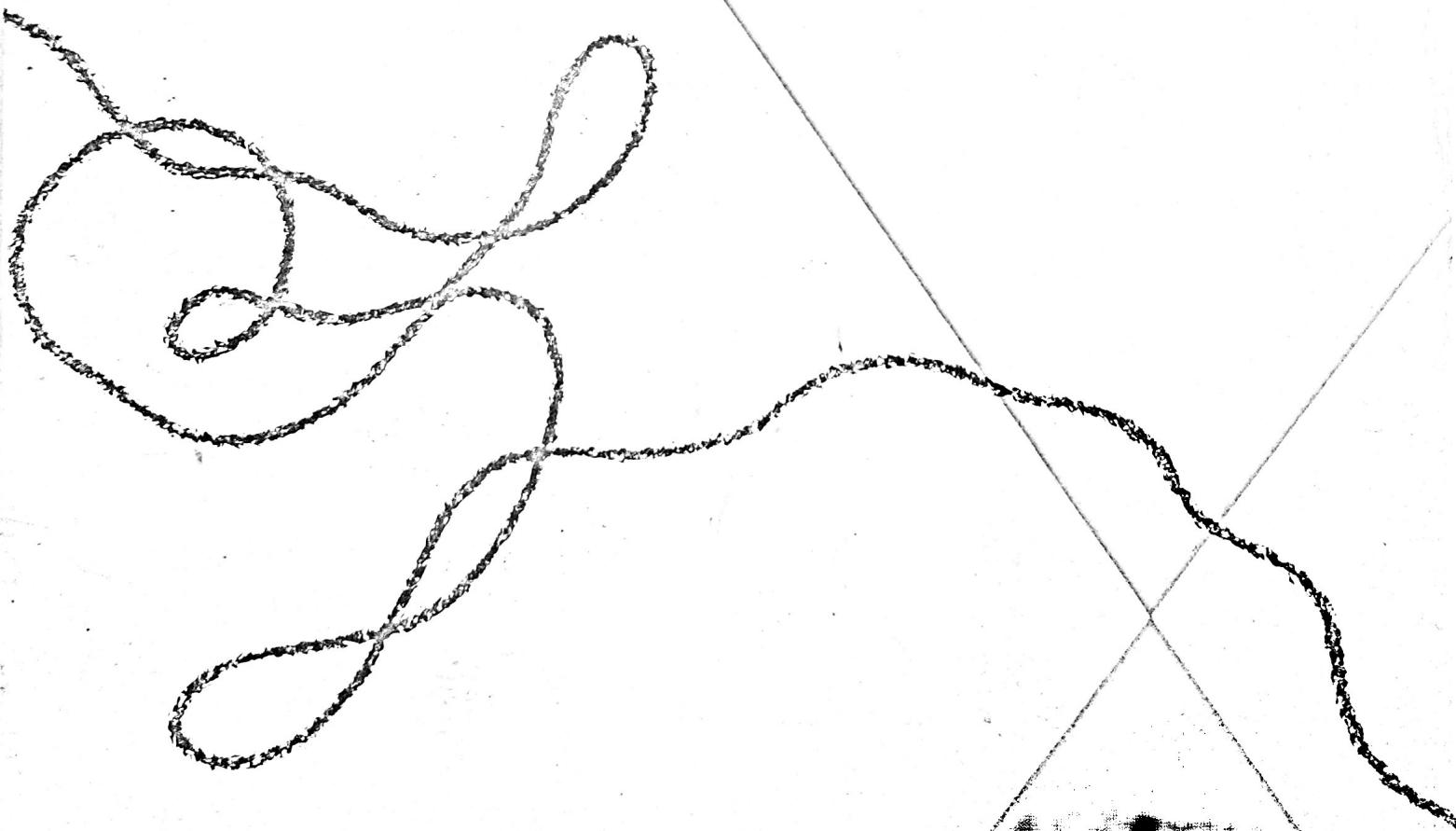


INSTRUCTION MANUAL

for SK-10 model

JIS No 6757

AUTOMATIC HOME KNITTER



①



One week romance possible.....

"Sometimes we like to recall our college days, when we carried the torch for a *divine* young man, for whom we decided to knit argyle socks. The romance lasted six months and five rows of knitting. Then we met another *divine* young man, and since it was a shame to throw away all that knitting, and since the colors would look just as well on him, we continued on with the same pair of socks. That romance lasted two months and three rows. Four years and one sock later, we had fallen in love a total of six times, had graduated, and were married. As nobody goes to the trouble of knitting argyle socks for HUSBANDS, we decided to keep at the socks for possible sons. Right now, it looks as though the socks will be ready for possible grandsons, given about 25 or 30 years, of course...", continued Frances Cawthon in The Atlanta Journal Monday, November 18, 1957, when invited to see one of our knitting machines in operation, "So... it was with these things in mind that we decided to take a look at a new knitting machine, which we were promised, would, if we were still single, enable us to provide each object of a one-week romance with the most gorgeous argyles ever...", she looked at it and went on "...we looked down to see where the knitting would be coming out, and to our amazement, there was a piece there that we couldn't have done in a month, all because she kept zipping the thing back and forth, with no effort...". That machine was our model SK-6 with 180 needles. We are now offering you our 200 needle model SK-10 which has been accomplished by your patronage and our incessant effort to improve SK-6 through 7, 8 and 9.

Today and everyday a conveyer belt in our modernized factory sends out one like yours in every 36 seconds wishing you a life-time pleasure of knitting.

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☆ Model SK-10 is simple to handle

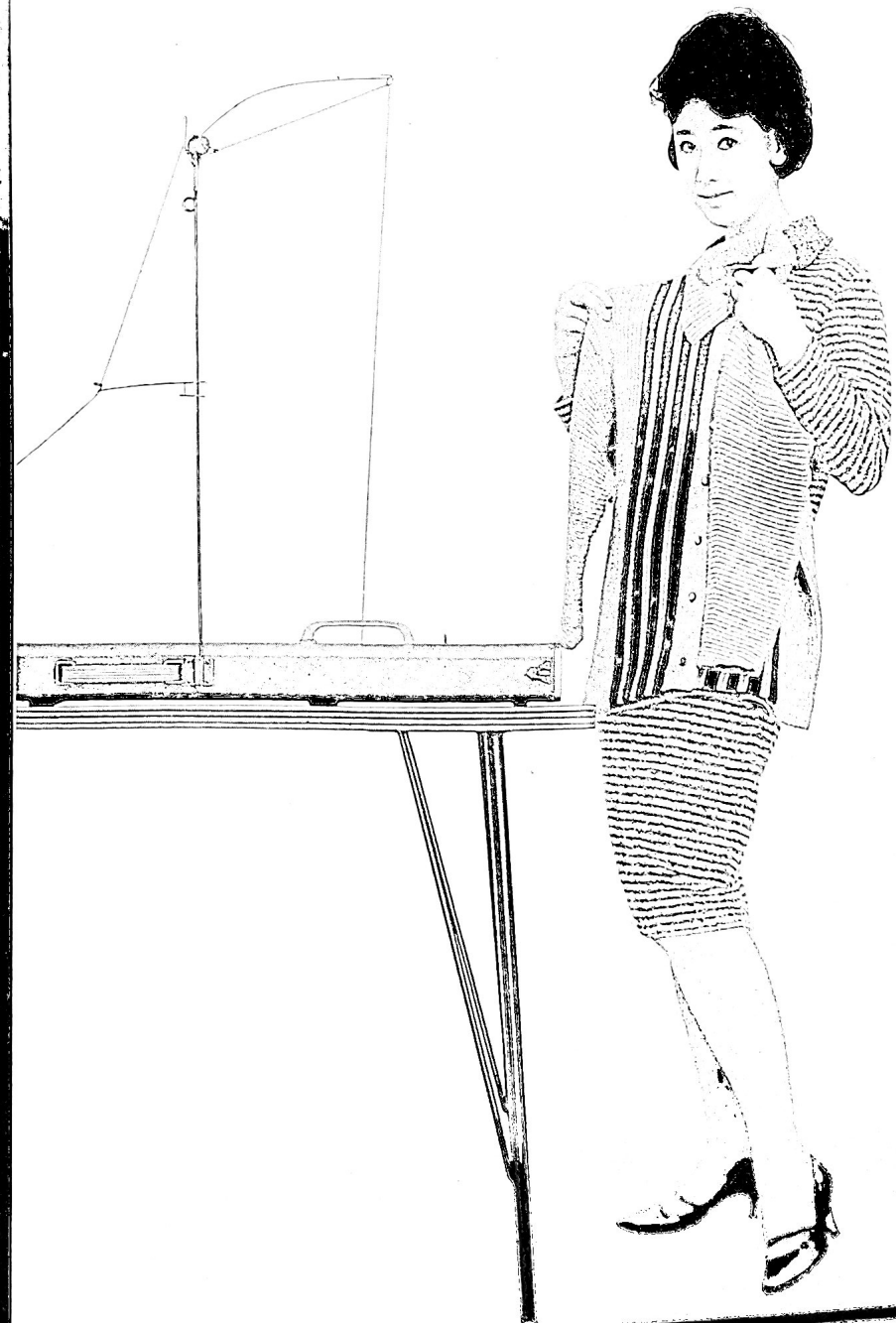
- Knitting is quickly started by using a cast-on wire.
Bulky yarns to crochet cotton may be used.
- Stitches are adjusted by turning a dial.
- Even beginners can knit with ease by using the auto-tension.

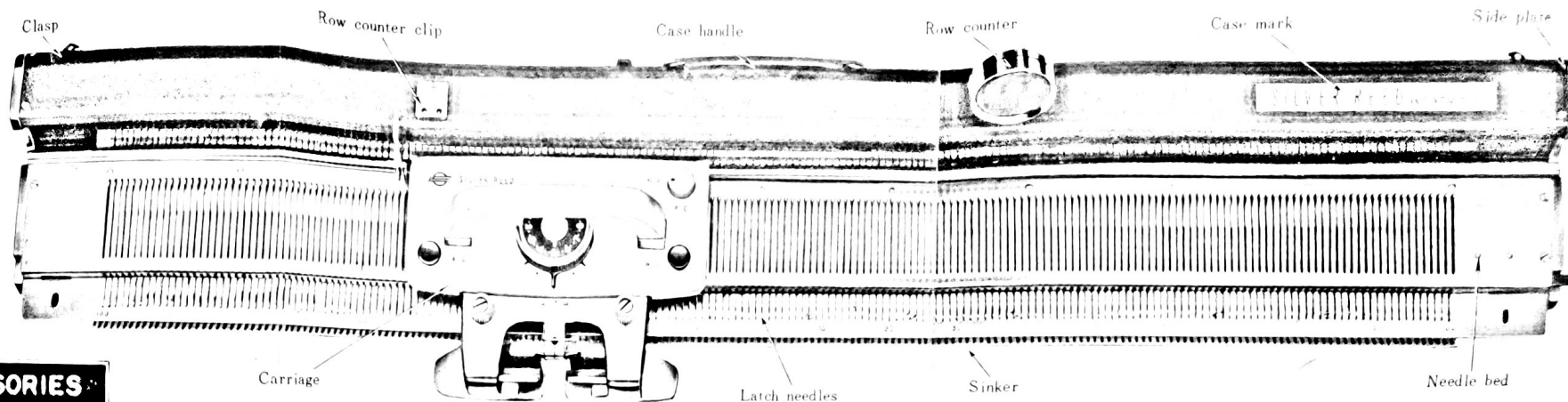
☆ is completely automatic

- The Row Counter may be attached to the right or left side of the machine.
- Damaged latch needles can be replaced without removing the needle bed.
- Intricate patterns can be knitted by using the Pick stitch dial, the cam lever and the Russel buttons.
- Errors can be easily corrected by lifting the carriage.

☆ is dependable in quality

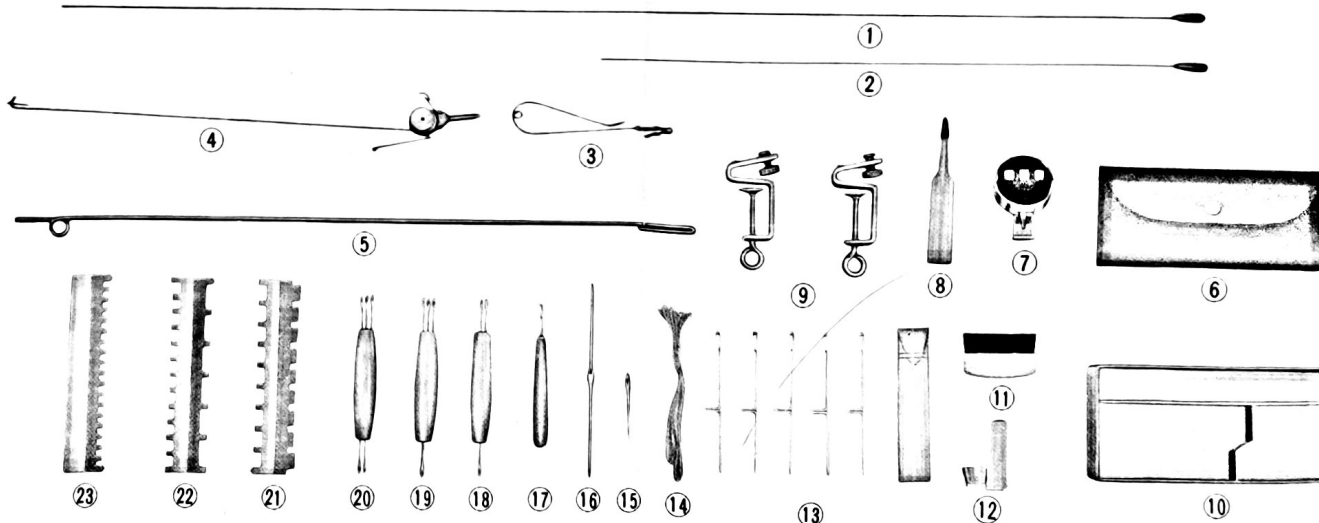
- The needle bed is made of specially treated stainless steel.
- The latch needles are protected from damage by Russel springs.
- Every part of the machine has withstood rigid tests before being assembled.

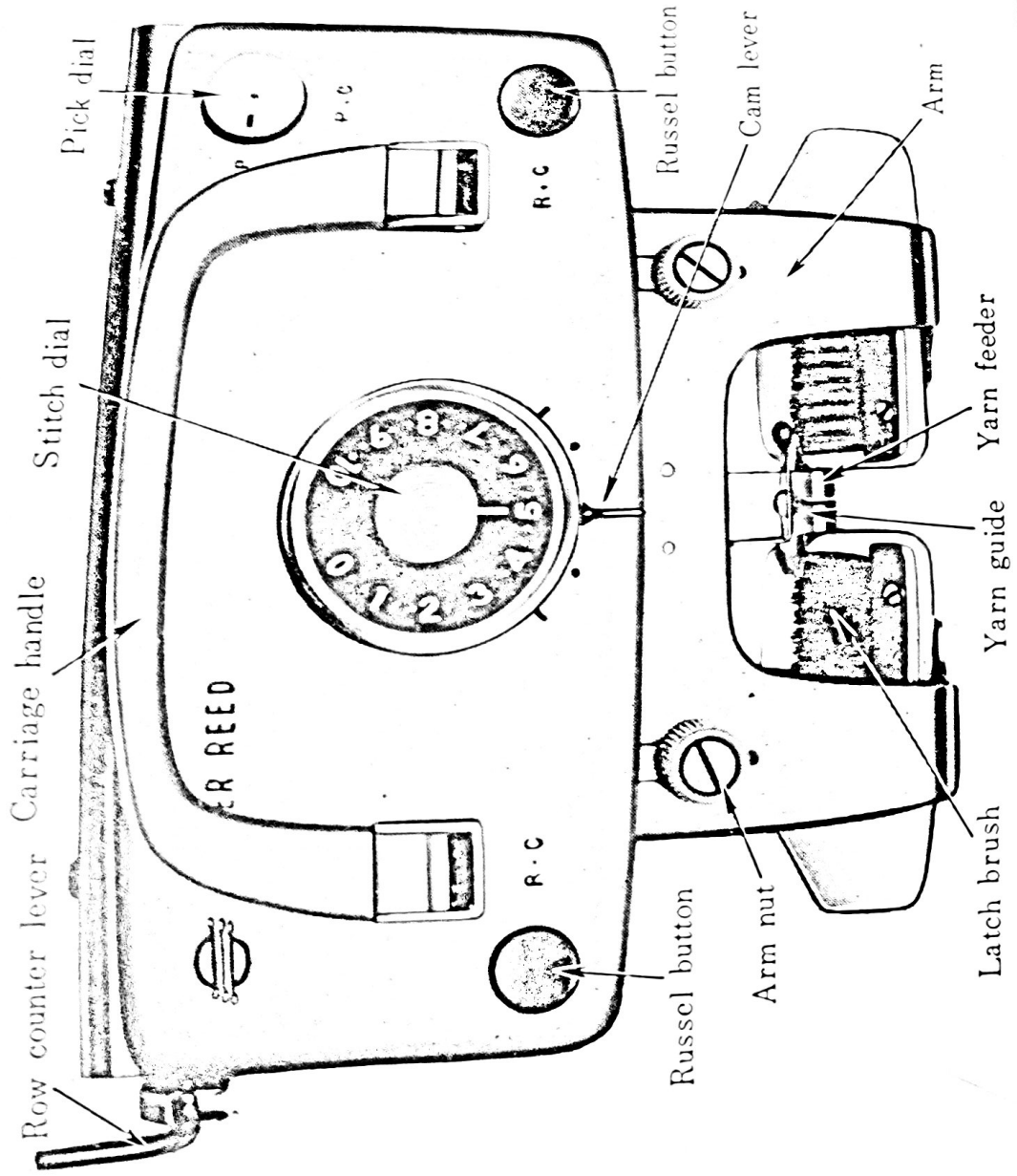




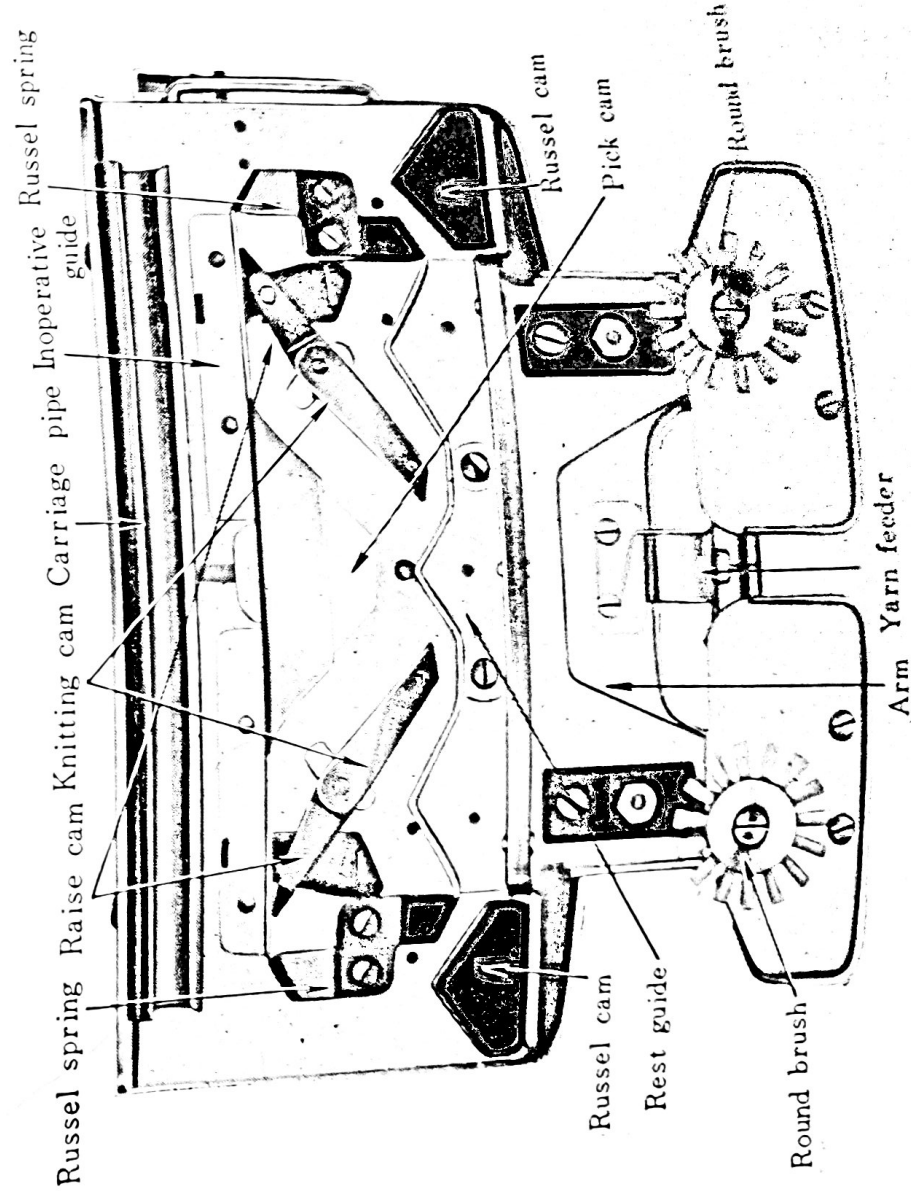
MACHINE AND ACCESSORIES

- 1) Cast on wire (long) For casting on approximately 90 to 200 stitches.
- 2) Cast on wire (short) For casting on less than 90 stitches.
- 3) Tension guide For guiding the yarn to the Auto-tension.
- 4) Auto tension Takes up excess slack of yarn.
- 5) Yarn rod Holds the auto-tension.
- 6) Accessory bag Contains the raveling cord, brush, needle pushers, transfer tools, tappet, crochet hook, spare needles, and a tapestry needle.
- 7) Row Counter Counts knitting rows.
- 8) Oil For machine use.
- 9) Clamps Clamp machine to table.
- 10) Accessory case Holds accessory bag, clamps, row counter, oil, tension guide, etc.
- 11) Brush Cleans machine of wool dust; also, opens latches.
- 12) Carriage fastener Keeps the carriage secure when the machine is in the case.
- 13) Spare needles. (5) For replacement.
- 14) Raveling cord. Used for yarn separating purposes.
- 15) Tapestry needle For stitching seams, etc.
- 16) Crochet hook For binding off stitches.
- 17) Tappet (Latch tool) For picking up dropped stitches or making ribbing stitches.
- 18) Transfer tool (1-2) For transferring stitches, increasing, decreasing or knitting various designs.
- 19) Transfer tool (1-3)
- 20) Transfer tool (2-3)
- 21) Needle pusher (1-3) Used to push needles.
- 22) Needle pusher (1-5)
- 23) Needle pusher (1-7)

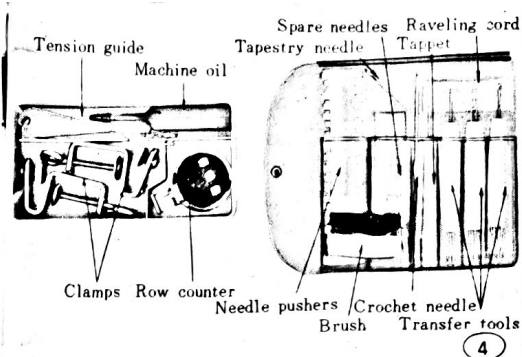
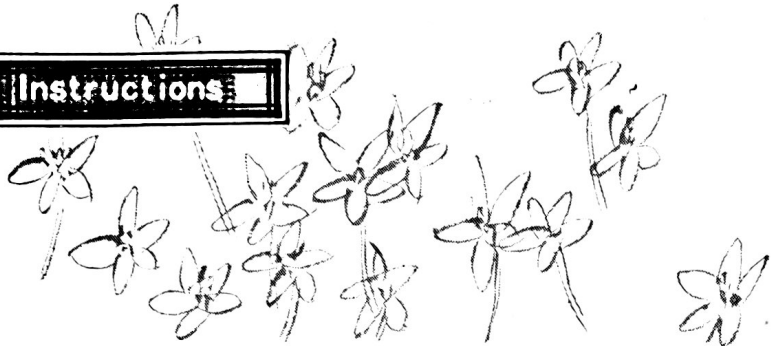




CARRIAGE

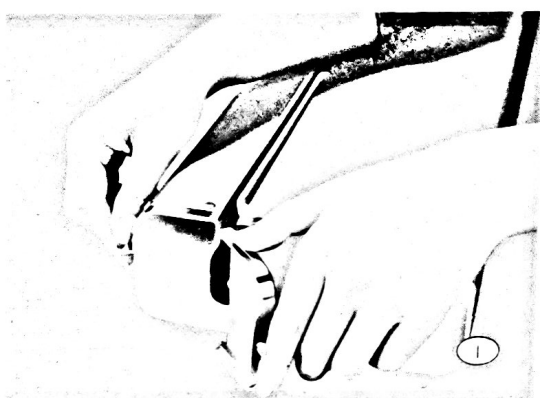


1. Assembling Instructions



Inside the case are clamps, tension guide, machine oil, row counter and accessory bag.

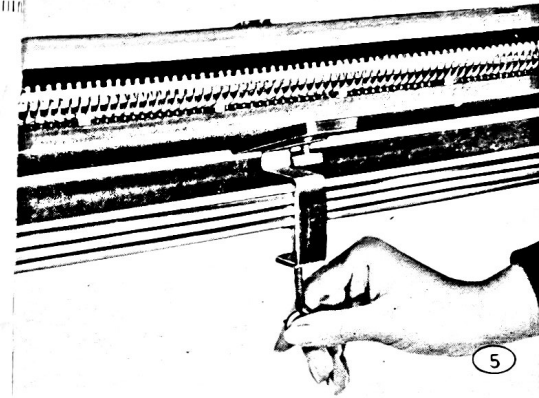
(Fig. 4)



1. Setting up the machine:

(A) Remove the cover.

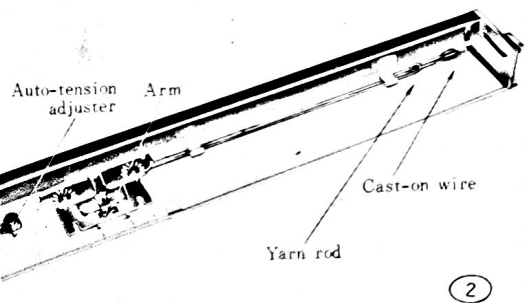
Open the clamps on both sides and draw the cover slightly towards you. (Fig. 1)



(C) Clamp the machine to a table.

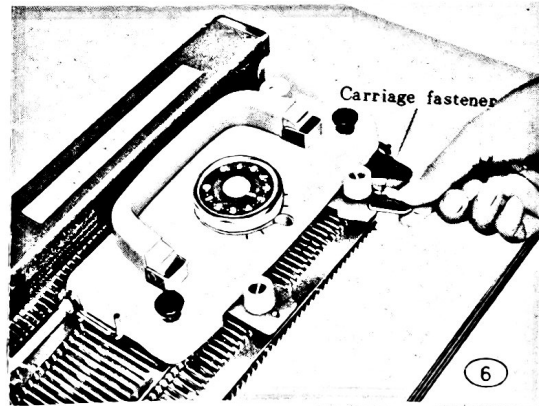
(Fig. 5)

Not necessary to clamp the machine to a table unless using patterns.



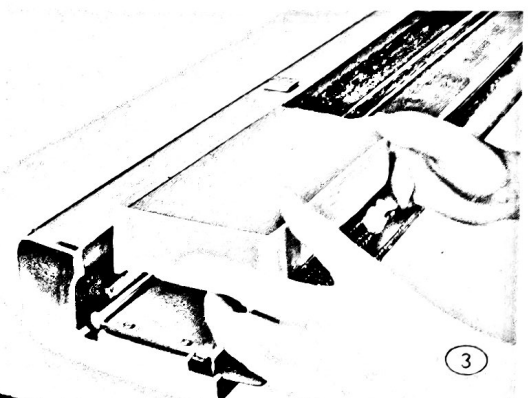
Contained inside the cover are two pieces of cast-on wire, (long and short), yarn rod, auto-tension and carriage arm.

(Fig. 2)



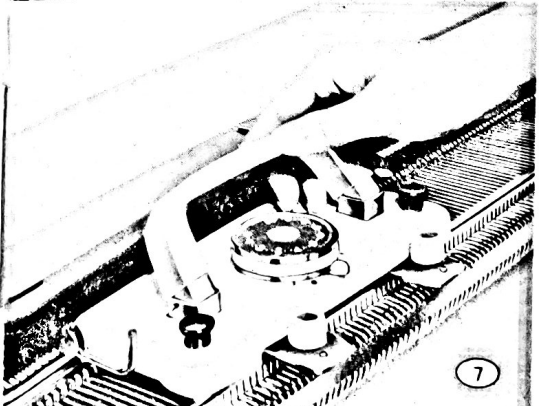
(D) Remove the carriage fastener to make the carriage freely movable on the needle bed.

(Fig. 6)



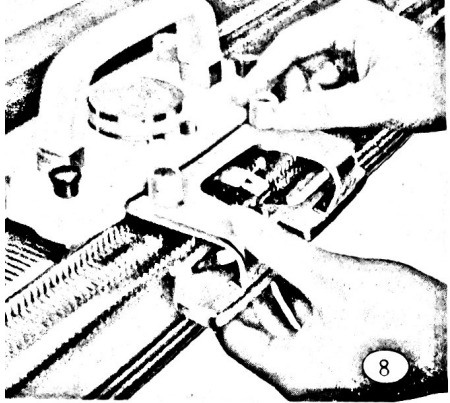
(B) To remove the accessory case.

Lift it straight up. (Fig. 3)



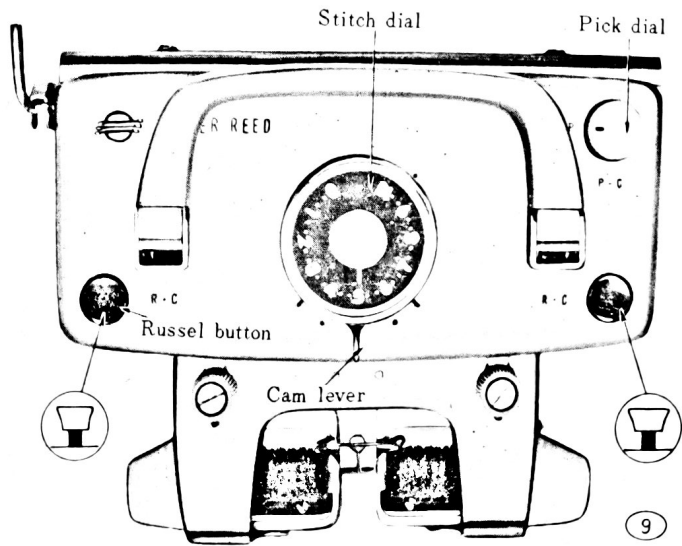
(E) Raise the handle toward you.

(Fig. 7)



(F) Attaching the arm plate to the carriage:

Loosen the two screws in the front of the carriage and slide the arm plate into place. Screw them down firmly. (Fig. 8)



(G) Pull up both Russel buttons. (Fig. 9)

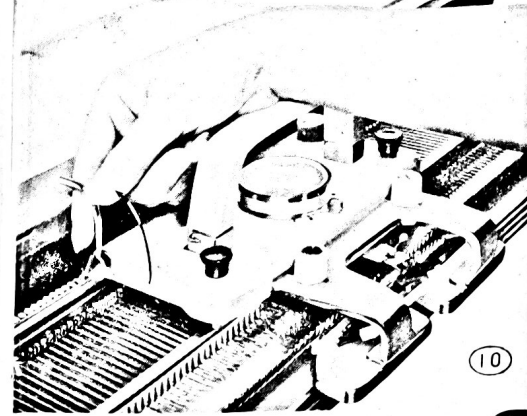
Note: Russel buttons are pushed down for pick knitting tuck knitting, making colored patterns or to finish partial knitting, etc.

(H) Set the cam lever at the center mark. (Fig. 9)

Note: To move the carriage without knitting stitches, or for color patterns, pick knitting or cord knitting, the lever should be set to ● or | on either side.

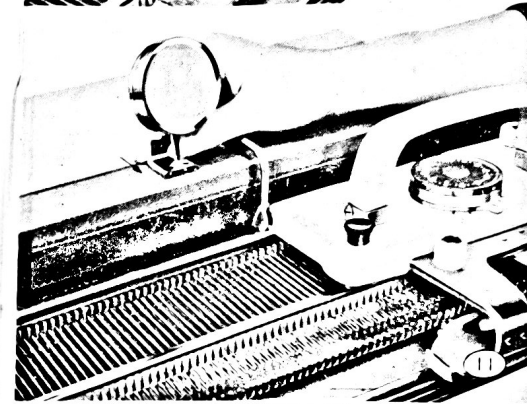
(I) Set the pick dial to the Neutral position. (N. P.) (Fig. 9)

Note: Set the pick dial to P. C. for knitting pick stitches.



(J) Raise the Row Counter lever until it snaps into place.

(Fig. 10)



(K) Place the row counter on the side where you will be knitting the most stitches.

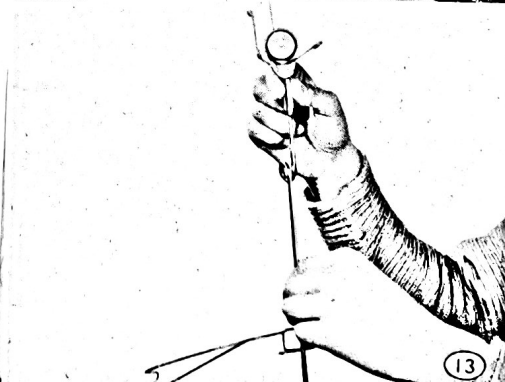
(Fig. 11)

Note: The row counter reads three figures. To reset the figures to a smaller number or 0, turn the respective knobs on the back of the counter.



(L) Setting the auto-tension.

Place the tension guide on the rod and insert it into the slit beside the handle. (Fig. 12)

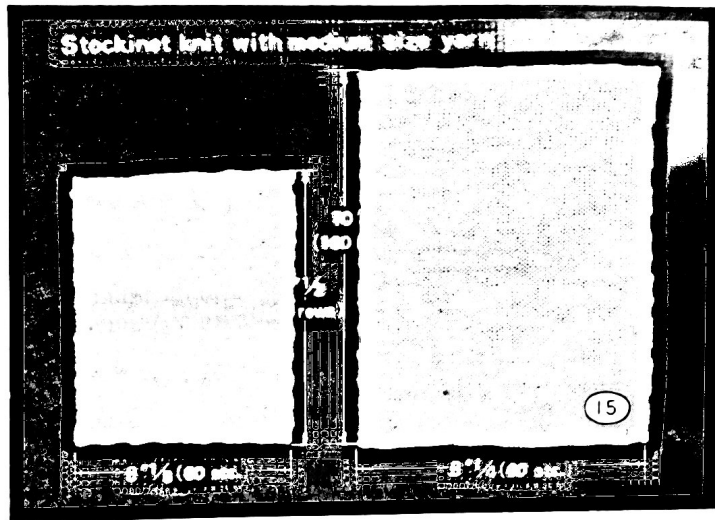


Place the auto-tension on the tip of the rod. (Fig. 13)

2. Adjusting stitches.

Just as you would choose hand knitting needles for the thickness of the yarn, the machine adjusts the stitch size by using the Stitch dial. With the same yarn, the knitting will be hard if the stitch dial is turned to a low number but it will feel soft if the number of the dial is high. The measurement of the knitting will vary, also.

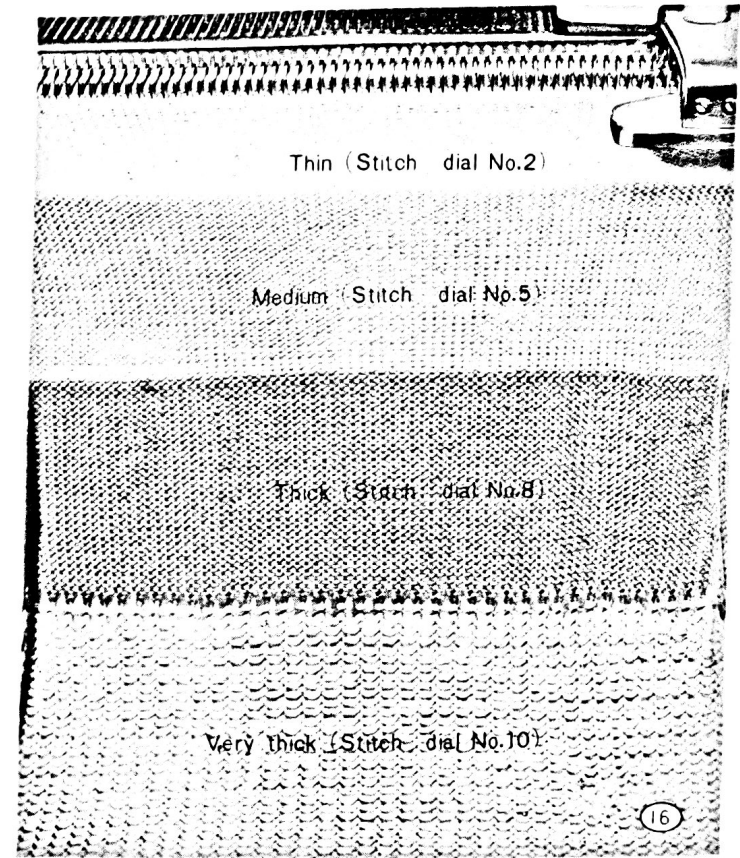
Example: Medium weight yarn knitted 60 stitches 100 rows by dial number 3 will measure $6\frac{1}{2}$ inches by $7\frac{1}{2}$ inches, but if the dial number is 7, the knitting will measure $8\frac{1}{2}$ inches by $10\frac{1}{2}$ inches. (Fig. 15)



How to measure the gauge or tension of stitches.

Before you start knitting a garment it is necessary to measure the gauge of your knitting. Yarn varies in size even though you buy the same ply; also, not everyone knits the same tension in stitches even with the same size yarn. Cast on 60 stitches, knit 60 rows in the chosen pattern, and remove it from the machine. Count the number of stitches and rows per inch in the center of the square. This will be the knitting gauge of your garment. It is best to make your sample the day before you count the stitches and rows per inch. To use the gauge immediately, squeeze the square in your hand before laying it flat on a table to measure your stitches.

Incorrect measuring of the gauge square will cause your garment to lose its correct size.

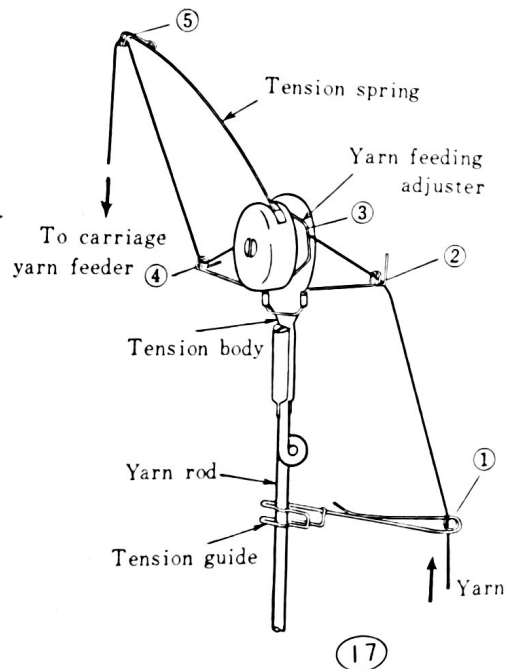
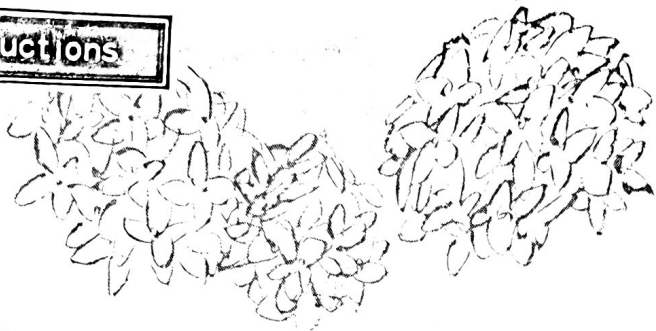


The standard number of the Stitch dial to the thickness of the yarn.

The yarn used here	Dial number
Thin (lace thread)	0 ~ 3
Medium	3 ~ 6
Thick	6 ~ 9
Very thick or loop yarn	9 ~ 10

Note: When bulky yarn is used, every other needle should be used.

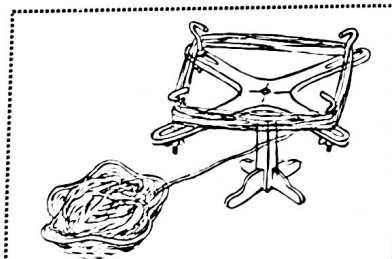
2 Knitting Instructions



17

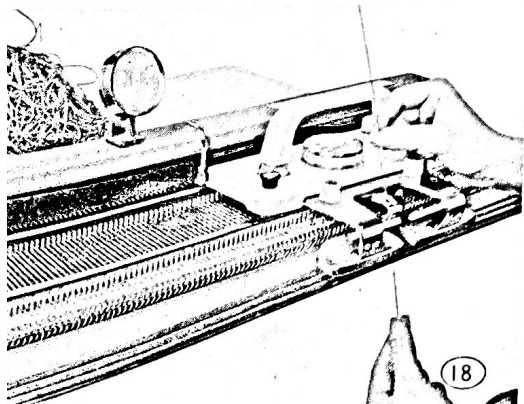
(1) Threading the yarn:

Pick up the loose end of yarn, pull it through the eyelets following the numbers indicated in Fig. 17 and pull it through the yarn guide from right to left into the yarn feeder. (Fig. 18)

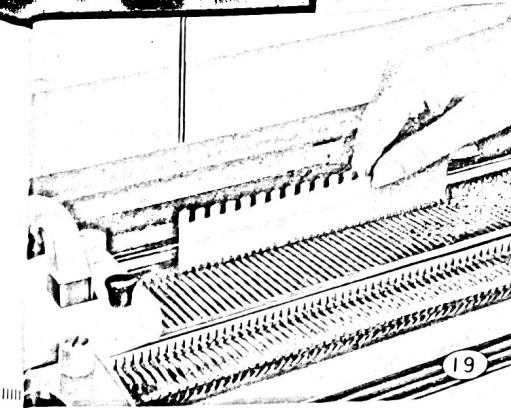


To Unravel the yarn:

Drop the yarn loosely into a box or basket since the yarn if rolled into a ball will cause your knitting to be uneven.



18

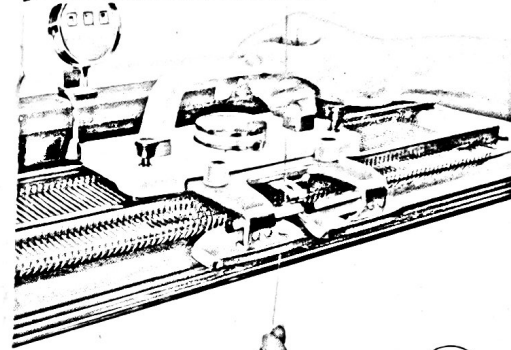


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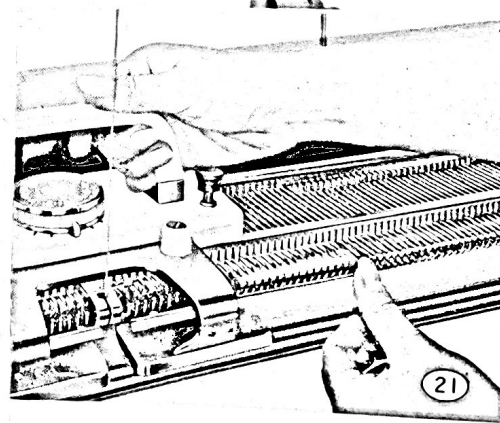
(2) How to start knitting:

- (A) Bring forward the required number of needles for the stitches into the working position, (about half an inch before the most rear position.)

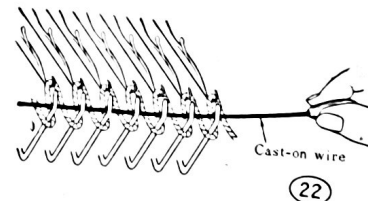
(Fig. 19)



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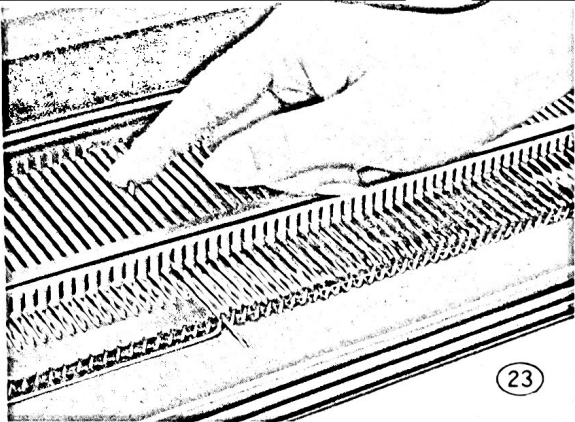
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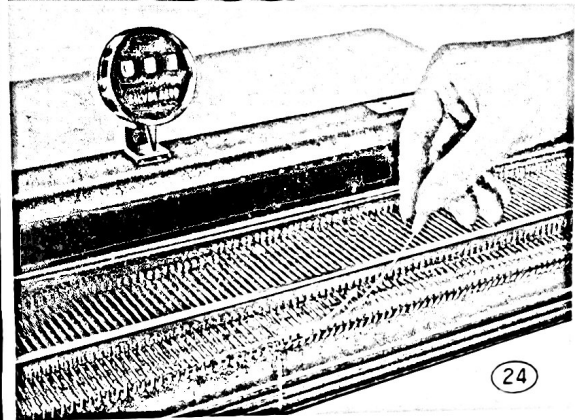
22

- (C) Place the cast-on wire over the yarn between the latch needles and the sinker needles

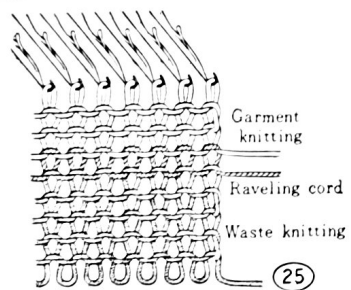
(Fig. 22)



(D) To hold the cast-on wire securely, draw out one latch needle at both ends and approximately every 20th stitches over. (Fig. 23)



(E) Move the knitting carriage back and forth over the needle bed knitting several rows before pulling the cast-on wire out of the knitting. (Fig. 24)

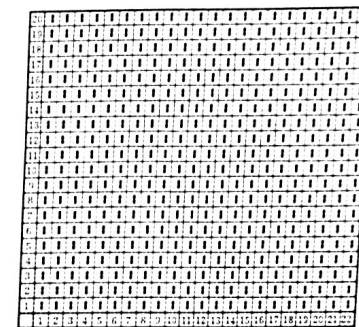
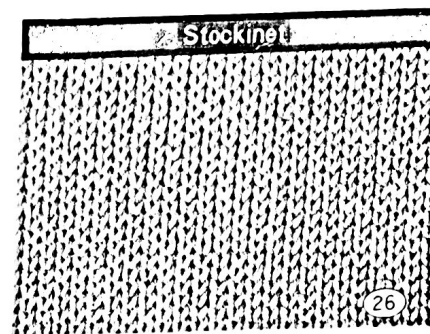


(F) Change to the raveling cord and knit one row.
 (G) Change again to the yarn for your garment and start knitting the garment.
Note: The Raveling cord serves to separate the casting on yarn from the main yarn.

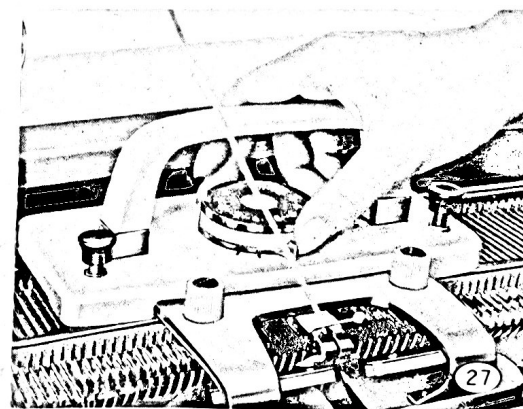
(Fig. 25)

The contrast yarn is used to safe-guard your knitting from raveling since you do not start with a bound off edge. It enables you to pick up stitches, count accurately how many rows you have knitted since none of the rows of your garment will unravel. The Raveling cord pulls out of the knitting very easily without sticking when you bind off your knitting.

3. Knitting stockinet. (Fig. 26)

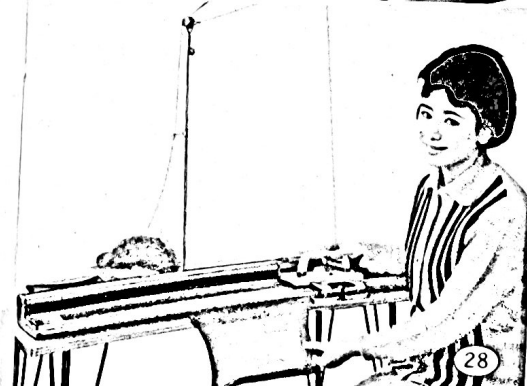


Stockinet is your basic knitting stitch. On your machine the wrong side of the stockinet stitch faces you. The ratio of stitches to rows per inch is approximately 3 to 4. Each stitch is shaped like this ∇ . Raveling is done from the last knitting row not the beginning row.



(A) Adjust the number shown on the Tension Dial or Stitch Dial according to the thickness of the yarn.

(B) Set the Row Counter to 0.



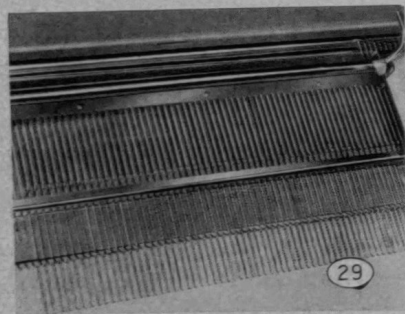
(C) Thread the yarn through the yarn feeder, move the carriage gently to and fro, and you will knit the stockinet stitches. (Fig. 28)

[How to cast on stitches by winding yarn around the needles.]

Casting on the stitches by winding the yarn around the needles will give you a bound off edge.

- (a) Place the carriage on the right side of the machine, pull forward into resting position the required number of needles.

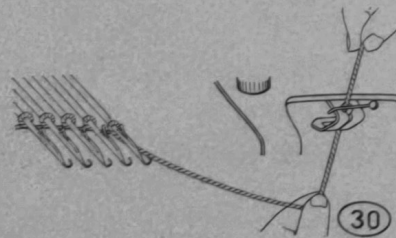
(Fig. 29)



29

- (d) Wind the yarn loosely around the needles behind the latches.

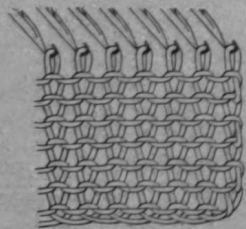
(Fig. 30)



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- (c) Insert the yarn into the yarn feeder, push down the Russel button in the direction the carriage is to advance and knit one row. Then continue knitting.

(Fig. 31)



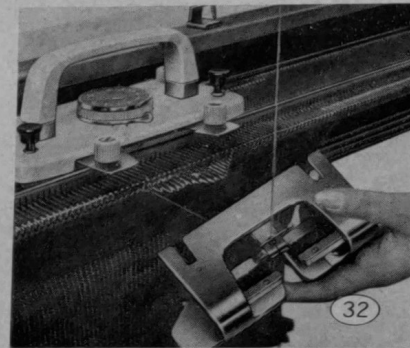
31

Note: Do not wind the yarn too tightly or the next row may be too difficult to knit.

[How to remove the carriage to correct your knitting.]

- (a) Loosen the screws holding the armplate and remove the plate.

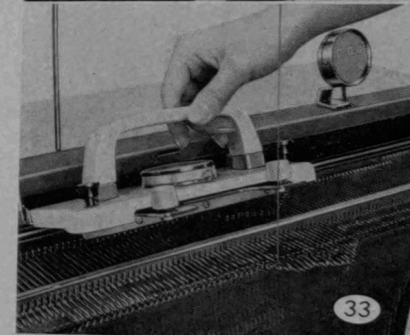
(Fig. 32)



32

- (d) Lift the carriage up at the front gently and return it to the starting position

(Fig. 33)



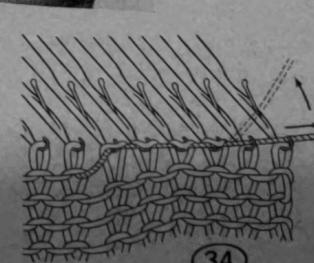
33

Note: Unravel the stitches at the end of the row where the carriage is replaced (34), fix the arm to the carriage, threading yarn through yarn feeder and continue knitting. Repeat the same procedure if you need to unravel rows for correction.

If the cam lever is set to | on the right or left you can move the carriage without knitting any more stitches.

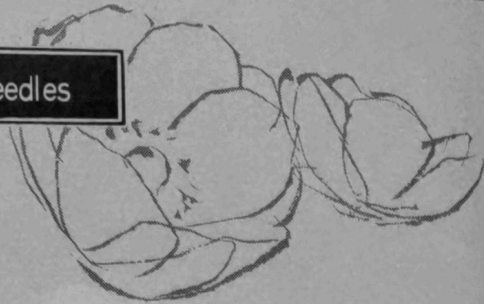


34



34

3. Four Basic Position of the Latch Needles

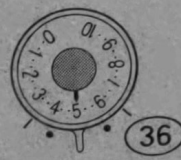


Knitting position and non-knitting position.



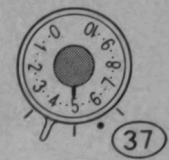
35

- A. **Non-Knitting position.** (Needles will not operate.)
Needles are completely moved back.
- B. **Normal knitting position.**
Needles are moved forward approximately one-half inch. It is not necessary to use the Russel buttons. When you start knitting bring the needles required into this position.



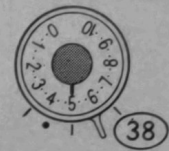
36

- When the cam lever is set at the center, the needles operate as the carriage moves from right to left or vice-versa on the needle bed. (Fig. 36)



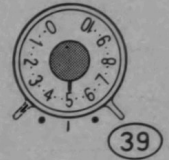
37

- When the cam lever is set to ● on the left the needles work only when the carriage goes from left to right. (Fig. 37)



38

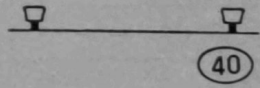
- When cam lever is set to ● on the right, the needles work only when the carriage goes from right to left. (Fig. 38)



39

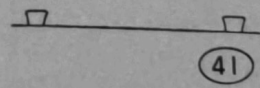
- When the cam lever is set to the right or left | the needles will not operate. (Fig. 39)

- C. **Always knitting position.** (Needles are pulled forward approximately one inch from B position.)
Needles will be in operating position whether or not the cams or Russel buttons are in use.
- D. **Resting position.** Needles are pulled forward as far as possible. They will remain in resting position unless the Russel buttons are pushed down. This position is used for partial knitting, pull-up (tuck) knitting, colored patterns, etc.



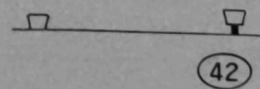
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- When the Russel buttons are up on both sides, the needles will not operate. (Fig. 40)



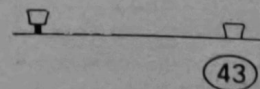
41

- When the Russel buttons on both sides are pushed down, the needles go into working position. (Fig. 41)



42

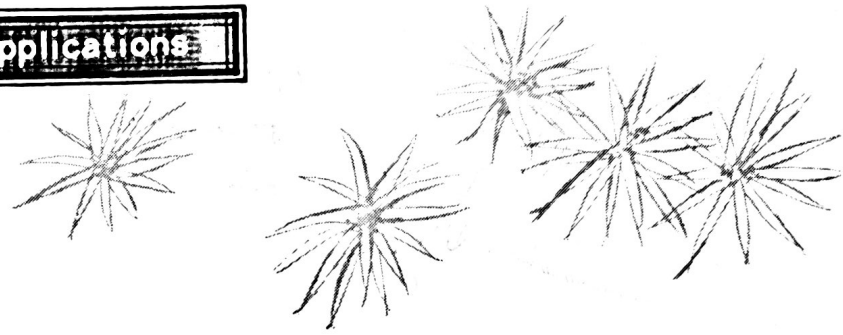
- When the left Russel button is pushed down, the needles operate only when the carriage moves from right to left. When the carriage moves from left to right the needles are drawn back into C position without knitting. (Fig. 42)



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- When the right Russel button is pushed down, the needles operate only when the carriage moves from the left to right. (Fig. 43)

4. Knitting Applications



Knitting symbols

The following set of symbols has been adopted to help you understand your patterns at a glance and to save countless lines of description for each stitch.

	Knit stitch	Face loop of plain stitch.
-	Purl stitch	Back loop of plain stitch.
O	Empty stitch	Hole made by transferring the stitch to the next needle.
>	Two stitches together	Transfer left stitch to the adjacent right needle.
<	Two stitches together	Transfer right stitch to the adjacent left needle.
/	Lean stitch to the right	Transfer the stitch to the right
\	Lean stitch to the left	Transfer the stitch to the left
>>	Three stitches together	Right stitch on top
<<	Three stitches together	Left stitch on top
><	Three stitches together	The center stitch on top of the left and right stitches
Y	Increased stitch to the right	Increase one stitch to the right
Y	Increased stitch to the left	Increase one stitch to the left
X	Crossing, left over right	Cross the stitches with the left stitch over the right
X	Crossing, right over left	Cross the stitches with the right stitch over the Left
U	Tucking stitch	Several unknitted stitches with the loops on one needle
□	Skipped stitch	A skipped stitch has its needle in inoperative position
V	Float stitch	Several unknitted stitches the first one of which is over the needle, the others under the needle and with the loops protruding out the knit side
∞	Twisted stitch	Stitch formed by removing the stitch from the needle, twisting the loop, and then replacing it.
∞	Twisted tucking stitch	Drop a stitch, twist its loop, and replace on the needle.
⊙	Rolled stitch	Wind the yarn around the needle in a roll similar to the illustration.
⊙	Three stitch increase	Increase three stitches out of one stitch.

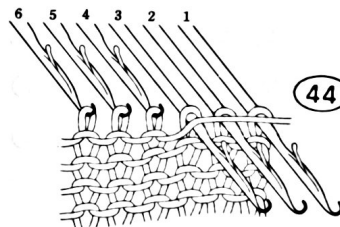
(1) Partial knitting. (Every two rows)

Partial knitting is used for shaping a curve or a gentle slope. Partial knitting can be easily knit by proper manipulation of the Russel buttons and arrangement of the needles.

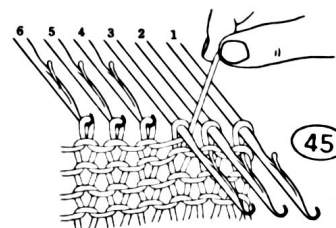
Russel buttons should be pulled up and the cam lever should be set at the center.

[Partial knitting decreasing.]

(A) The illustration shows how to do partial knitting on 9 stitches doing 3 stitches at a time starting on the right side of the knitting. Place the carriage on the left side, push into resting position 3 needles at the extreme right and knit a row. (Fig. 44)

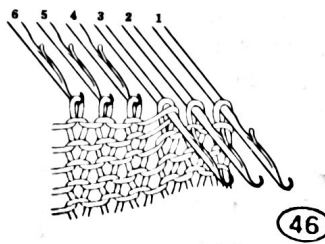


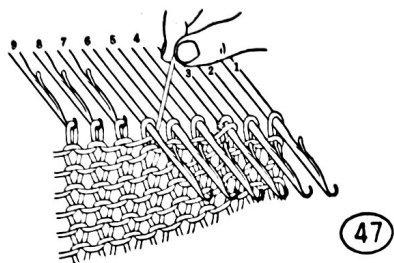
(B) Place the yarn around the stem of the first resting needle on the left (45) and return the carriage to the left, thus completing one partial knitting. (Fig. 46)



Note: Step (B) prevents a hole from forming between the partial knitting.

(C) Push three more successive needles into the resting position and once again move the carriage to the right for the third row.





47

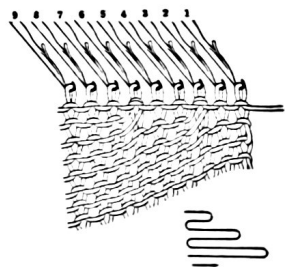
(D) Repeat step (B) following the illustration (47) to complete the second partial knitting.



48

(E) When you have completed the partial knitting, push down the Russel button in the direction the carriage is to advance (Fig. 48) and knit one row. (This places every needle in resting position into operating position.)

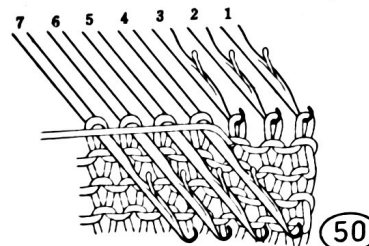
(Fig. 49)



49

Helpful hints

- (1) For a Knit-on sleeve, knit across an extra row after stitches are picked up from armhole; then do the partial knitting. When completed, hold the sleeve cap and shoulder knit side in and pull the starting end of yarn tightening up the extra row. Pulled out extra yarn can be used to join sides. This will give better look, but see that the yarn is smooth enough to pull through.
- (2) When doing 1-k 1-p ribbing, cast on stitches in odd numbers and start purling third stitch from edges. You have two knit stitches on both edges. When you join the sides, join them loosely so that the seam will look like another line of purl stitches.

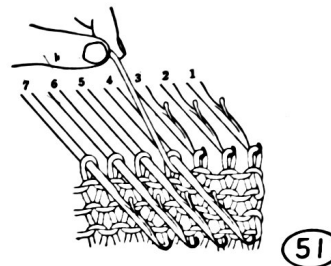


50

Partial knitting increasing.

This is usually done for making a sleeve cap.

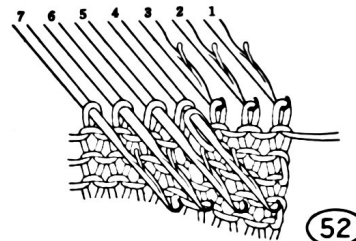
(A) All the needles to be used are pushed into resting position except the first group to be knitted. In illustration (50) have the carriage on the right side. Knit one row.



51

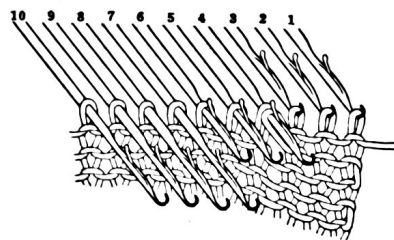
(B) Wind the yarn around the first needle in resting position to prevent a hole from forming. (51) Return the carriage to the right, thus completing the first partial knitting.

(Fig. 52)



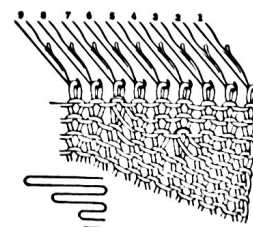
52

(C) To knit a third row, push back three needles into knitting position (53) and move the carriage to the left.



53

(D) Repeat step (B) and return the carriage to the right. Repeat this procedure until all the needles are in working position. (Fig. 54)

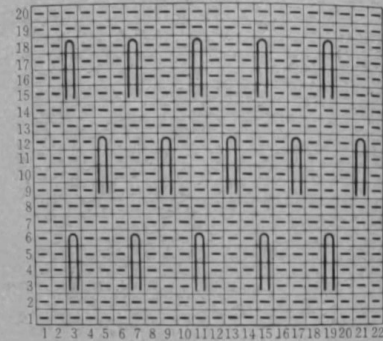
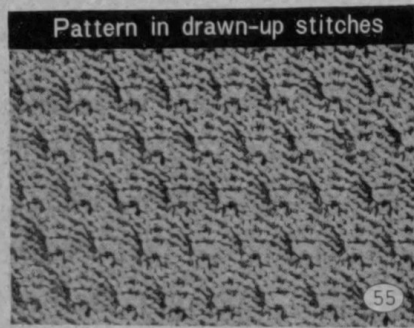


54

(2) How to knit tuck stitches (pull up stitches)

With a single color or many contrasting colors you can knit various tucking stitch patterns such as loop stitch, slip stitch and pick stitch.

These patterns can be arranged in various ways along the rows and lines.



[Tucked, Solid Pattern] (Fig. 55)

(A) Set cam lever to the center. Pull up both Russel buttons. Knit three rows with the main yarn.

(B) With the needle pusher push out the needles required for tuck stitch to D position. (Fig. 56)

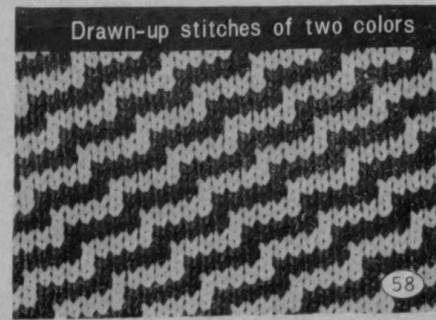
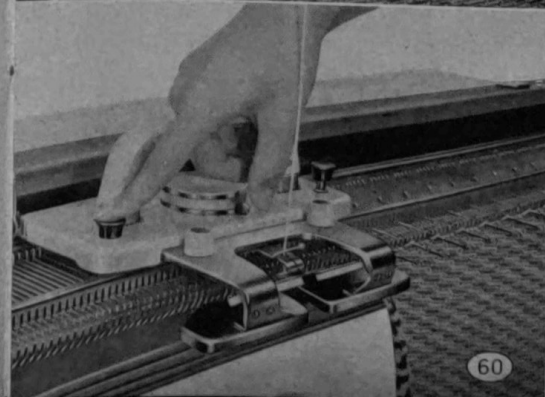
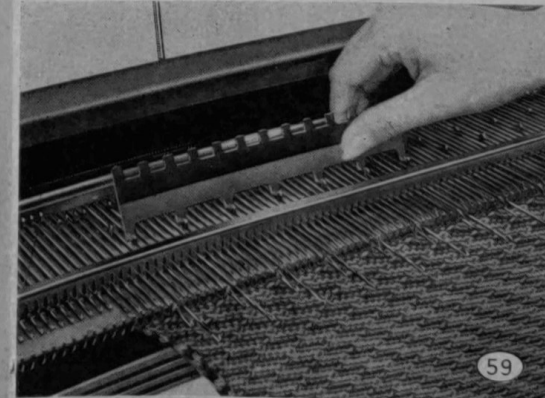
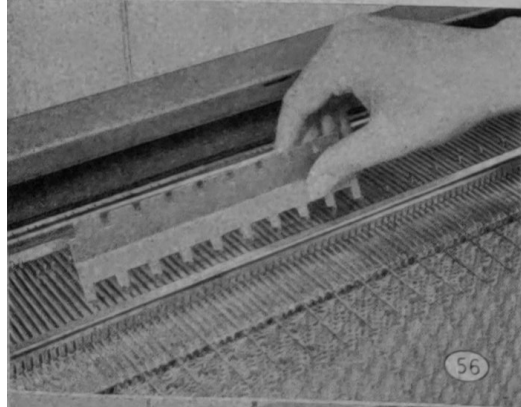
(C) Knit three rows. The needles in D position do not knit but have three loops across them.

(D) Push down the Russel buttons (57) and knit three rows. All of the needles will operate.

(E) Repeat pulling up the Russel buttons and pushing out the needles required for the tucking stitches. Once again knit 3 rows making a loop over the needles.

(F) Repeat step (D)

(G) By alternating the needles pushed into resting position various tucking patterns can be made.



[Tuck knitting with color] (Fig. 58)

(A) Set cam lever to the center. Push up both Russel buttons and knit 2 rows with the main yarn.

(B) With the needle pusher pull out the needles required for tucking to D position. (Fig. 59)

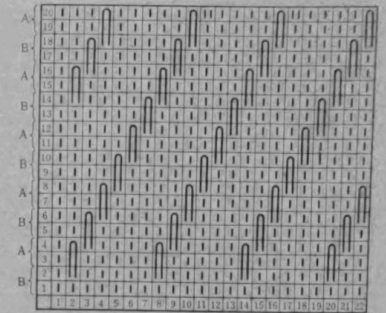
(C) Knit one row with contrasting yarn. Carriage is on the left side.

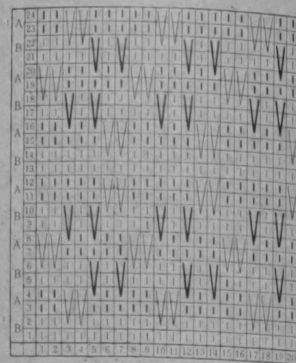
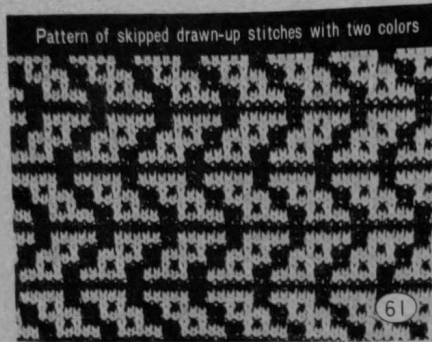
(D) Push down the left Russel button. (60) Move the carriage to the right side of the machine. Needles in D position will automatically go to C position.

(E) Pull up left Russel button.

(F) Push into resting position every needle on the right side of the needles now in position C. Knit one row with the main yarn.

(G) Push left Russel button down. Knit one row. Pull up the left Russel button. By repeating this procedure you can knit tuck stitches two rows with color and two rows with the main color without breaking the pattern all over your knitting.



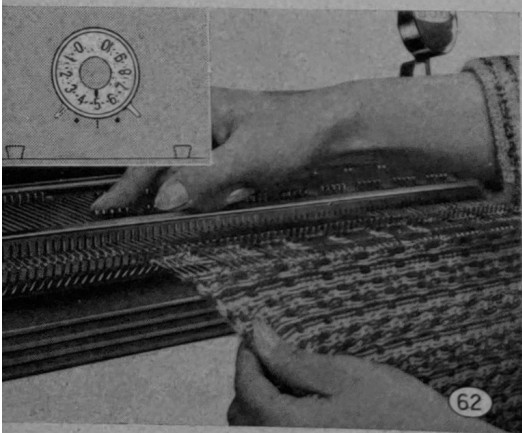


[Slip stitches with two colors] (Fig. 61)

- (A) With the main color knit 2 rows. Set cam lever to | on either side. Push down both Russel buttons.
- (B) All the needles except those you propose to knit in slip stitch should be brought forward to D position. (62) Knit a row with the contrasting color. This brings the needles in D position back to B position.
- (C) Again bring forward the same needles just drawn back to D position and knit a row with contrasting color.

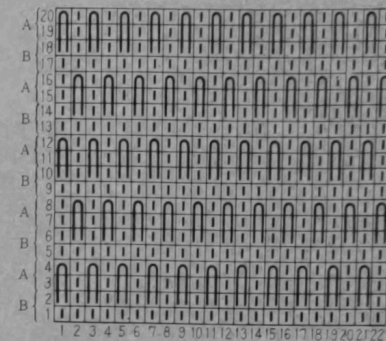
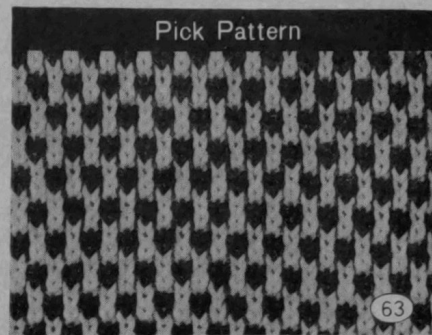
- (D) Repeat step (B) only using main color. (needles are staggered)
- (E) Repeat step (C) only using main color.

Note: By repeating the same procedure you can knit various patterns using slip stitches. Rows with no markings should always be knit with the main yarn in plain stitches.



Ways of making the pick stitches.

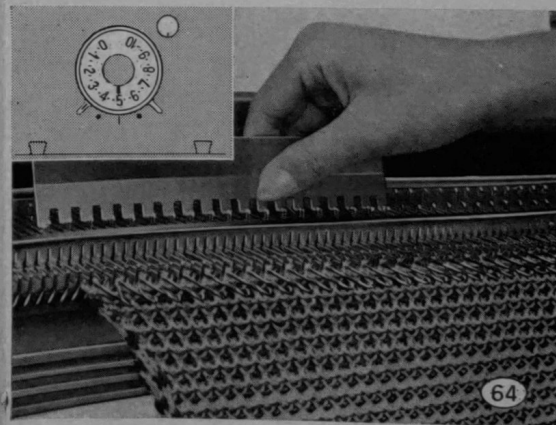
There are two ways to make the tucking stitches on this machine but the symbols used are the same. First way: The needles required for tucking stitches should be brought forward to D position so that the needles do not knit but have yarn over them which is to be pulled up or tucked in another stage of knitting. Second way: Use the Pick cam. All the needles except those required for tucking should be pushed to D position. The yarn is placed fairly loosely over the needles and when pulled up the stitches have a softer look.



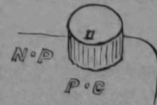
[Pick pattern] (Fig. 63)

- (A) Knit two rows with the main colored yarn. Set cam lever to | on either the right or left. Push down the Russel buttons. Set the Pick dial to P. C.
- (B) All the needles except those required for tucking should be brought to D position with the needle pusher (one by one). (64) Knit a row with the contrasting color so that the yarn is looped over the picking needles.
- (C) Again bring the needles just drawn out to the foremost limit, D position and knit a row with the contrasting color.
- (D) Set cam lever to the center. Knit two rows with the main color.

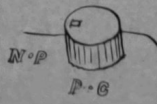
- (E) Set cam lever to | on either side. Bring the alternate needles except those required for picking to D position with the needle pusher (1x1). Knit one row with contrasting color.
- (F) Push forward the needles just drawn forward into D position. Knit another row with the contrasting color.
- (G) Set cam lever to the center. knit 2 rows with the main color. Following this procedure you can knit a pretty moss pattern with pick stitches.



[How to use the Pick dial]



The pick dial is set to N. P. when not in use.



When you knit pick stitches the dial is to be set to P. C.

5. How to Use Accessories

(4) Double knitting:

This is used to make a hem at the bottom of the garment.

- (A) First you have to knit double the length of the hem (Fig. 76). Open the latches of the needles.
- (B) With a transfer needle pick up the loops from the first row of the main knitting (the next one to the starting cord) and place them on the needles. (Fig. 77).

(Fig. 77).

- (C) Set the Stitch dial a third higher than the number you are now using. Knit one row.
- (D) Reset the number of the Stitch dial and knit on so as to form a hem.

Note: Unravel a stitch on both edges. Pull out the starting cord sideways so the waste knitting will fall off. (Fig. 78)

(5) Cord knitting:

A cord is usually required for a cape or a hood.

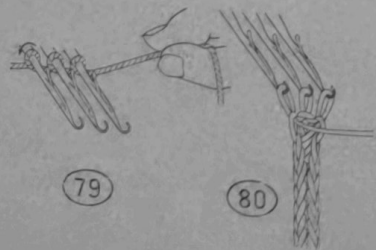
- (A) Bring forth some needles from two to five required to knit the cord to D position. Cast on the stitches by winding the yarn around the needles. (Fig. 79)

(Fig. 79)

- (D) Set the cam lever to ● on the right. Push down both Russel buttons. Move the carriage from right to left and back again to knit one row.

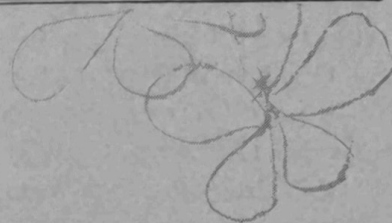
- (C) Again move the carriage both ways to knit row two.

- (D) By repeating this procedure you can make a tube cord. The carriage effects the needles only when it moves from the right to the left and not on its way back. (Fig. 80)

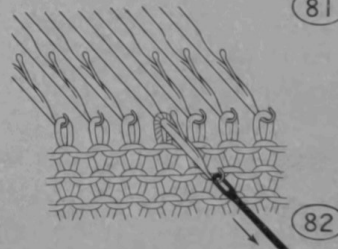


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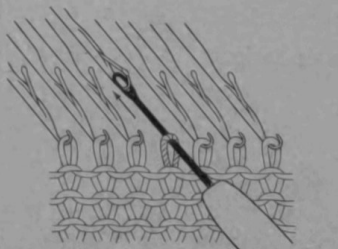
80



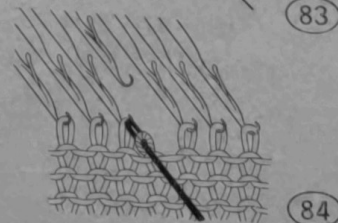
81



82



83



84

(1) Transfer tools:

The transfer tools consist of one eye needle, two eye needles and three eye needles. They are used for transferring stitches from needle to needle.

[How to use the transfer needles.]

☆ Transferring stitches onto other needles.

- (A) Place the eye of a tool onto the hook of a machine needle. (Fig. 81)

(Fig. 81)

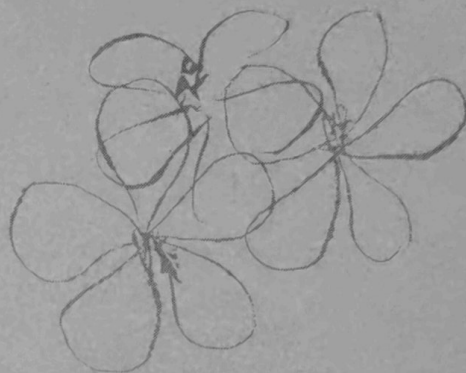
- (B) Draw out the needle so that a stitch slides back over the latch. (Fig. 82)

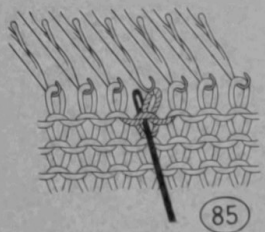
(Fig. 82)

- (C) Push backward the machine needle. The latch will automatically close dropping the stitch onto the transfer tool. (Fig. 83)

(Fig. 83)

- (D) Place the eye of the transfer tool holding the stitch on the latch needle where the stitch is to be transferred and slip the stitch onto it (Fig. 84)

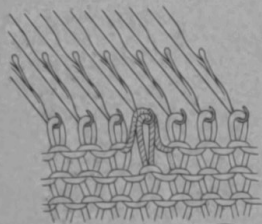




85

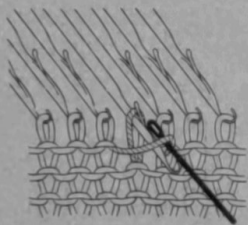
☆ Picking up dropped stitches:

(A) Insert the one eye transfer tool into a stitch just under the dropped one (Fig. 85) and raise that stitch together with the dropped stitch onto the vacant needle. (Fig. 86)



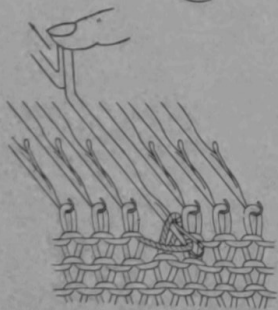
86

(B) Pull out the needle so that the stitch slides over the latch, leaving the loop of the dropped stitch on the hook. (Fig. 87)

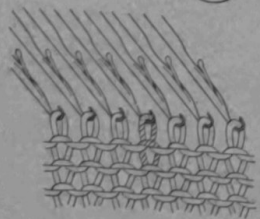


87

(C) With your finger push back the needle (Fig. 88) so that the stitch behind the latch automatically comes over the hook to knit a stitch. (Fig. 89)

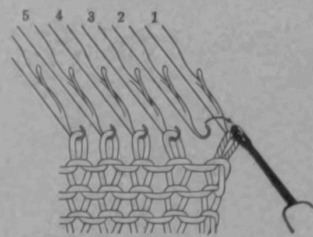


88



89

Note: When a stitch has dropped two or three rows down pick it up in the same manner.



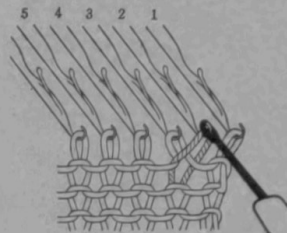
90

[Increasing stitches]

☆ Increasing one edge stitch:

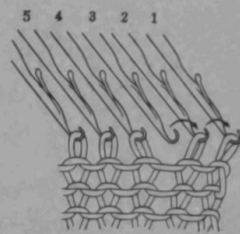
The first way

(A) With the one eye transfer tool place an edge stitch onto the hook of the next vacant latch needle leaving the second needle empty. (Fig. 90)



91

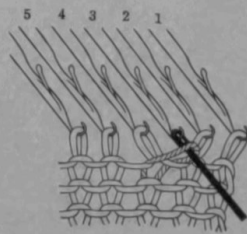
(B) Take the top loop of the purl stitch on the 3rd needle and place it on the just vacated needle to form a new stitch. (Fig. 91)



92

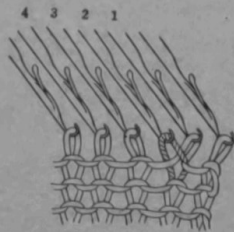
The second way

(A) With a two eye transfer tool transfer the last two stitches over one space so that the third needle is vacant. (Fig. 92)



93

(B) Take the top loop of the purl stitch under the stitch on the fourth needle and place it on the just vacated needle to form a new stitch. (Fig. 93)



94

Note: The illustration (Fig. 94) shows another way of forming a new stitch.

[Decreasing stitches]

☆ Decreasing one edge stitch

The first way:

With a one eye transfer tool place the last stitch over the next to last stitch. (Fig. 95)

Note: Push the vacant needle back into the inoperative position. (Fig. 95)

The second way:

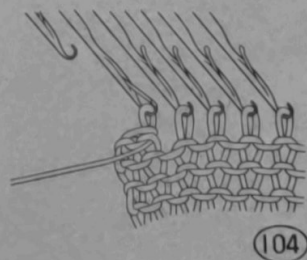
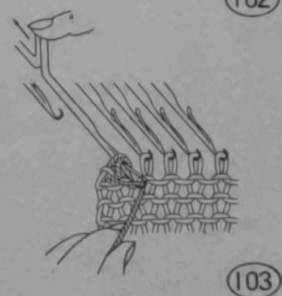
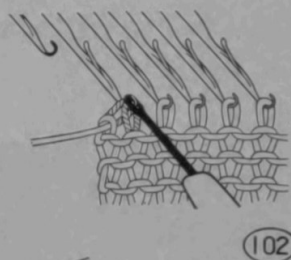
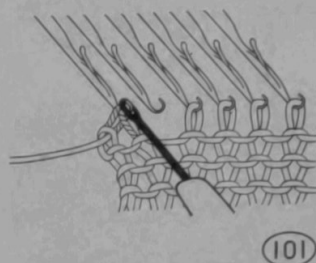
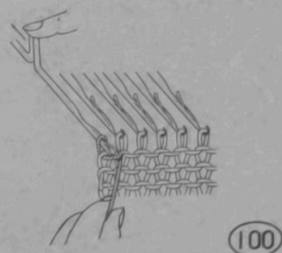
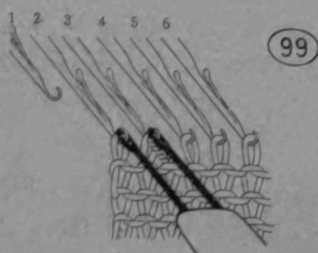
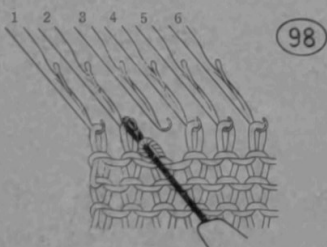
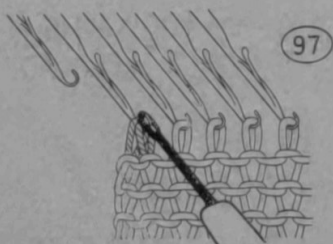
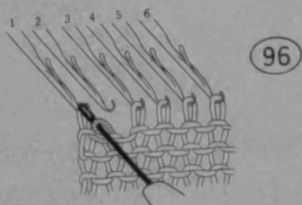
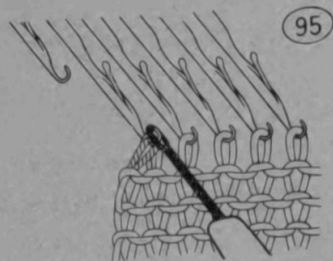
With a one eye transfer tool place the second stitch from the edge onto the edge stitch. (Fig. 96)
Place both stitches on the vacant second needle. (Fig. 97)

Note: Push the vacant edge needle back into the inoperative position.

The third way:

With the one eye transfer tool place the third stitch from the edge onto the second stitch. (Fig. 98). With a two eye transfer tool take the two stitches on the second needle and the stitch on the first needle and transfer them to the vacant needle. (Fig. 99)

Note: Push the vacant edge needle back into the Inoperative position.

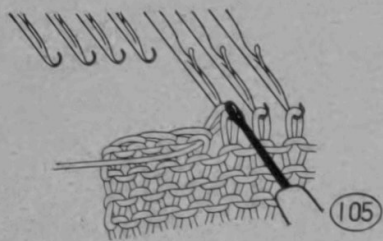


☆ Decreasing two or more edge stitches on the side where the carriage is placed.

(A) On the edge needle, move the stitch behind the latch and place the loose end of the yarn over the needle hook. Push back the needle and knit on another stitch. (Fig. 100)

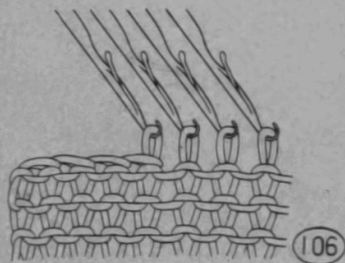
(B) With the one eye transfer tool place the second stitch onto the edge stitch (Fig. 101) and transfer them to the second needle. (Fig. 102)

(C) By drawing the second needle toward you the stitches will automatically go behind the latch. Place the loose end of the yarn over the needle hook. Push back the needle and you have a new stitch. (Fig. 104)

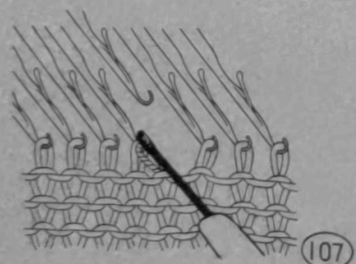


(D) Repeat this procedure until you reach the last two stitches to be decreased. Place the last loop you have just knitted onto the next needle (Fig. 105), and knit a row by using carriage.

(Fig. 106)



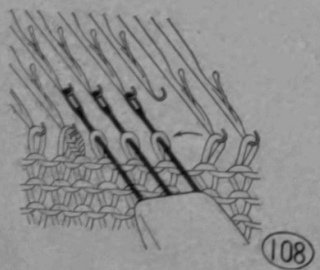
Note; When you want to bind off more than two stitches (for instance at the arm curve) you can do it in the same way without taking your knitting from the machine.



☆ **Decreasing a stitch in the middle of your knitting:**

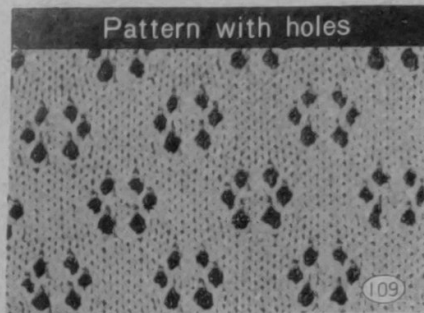
(A) With the one eye transfer tool take the stitch to be decreased from the needle and place it onto the next needle.

(Fig. 107)



(B) With the three eye transfer tool move three stitches at a time over to fill the vacant spot until all the empty needles are filled.

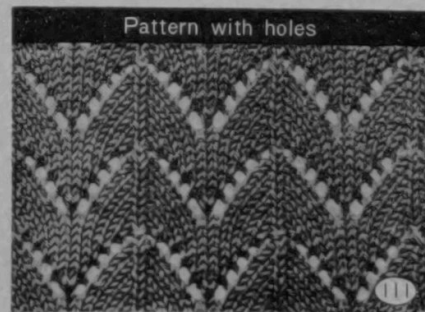
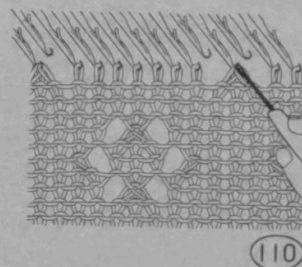
(Fig. 108)



20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Open stitch pattern (Fig. 109)
Using the transfer tools.

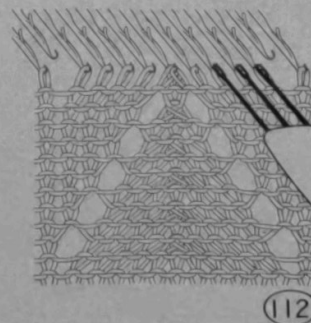
Using the one eye transfer tool transfer a stitch onto the next needle. Then knit a row. (Fig. 110)



20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

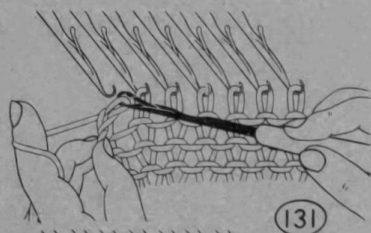
Open stitch pattern (Fig. 111)

You can also use the double eye or three eye transfer tool for lace patterns as shown in Figures. (Fig. 111) (Fig. 112)

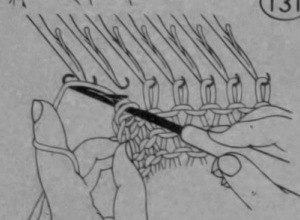


Decreasing more than two stitches at a time.

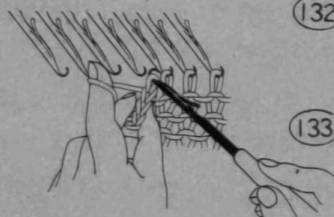
(On the side of your knitting where the carriage is)



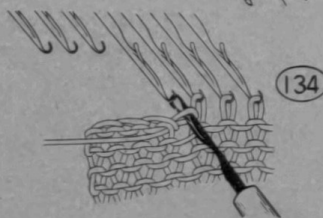
131



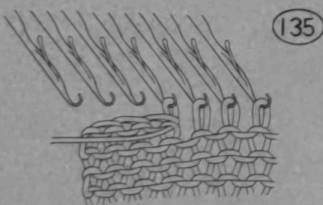
132



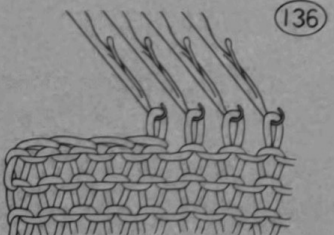
133



134



135



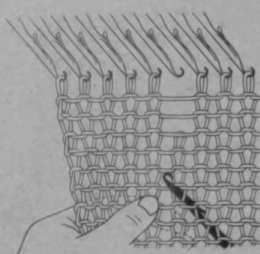
136

(A) Place the edge stitch behind the latch on the tappet. Lay the yarn over the hook of the tappet and knit a stitch. (Fig. 131) Place the second stitch on the tappet.

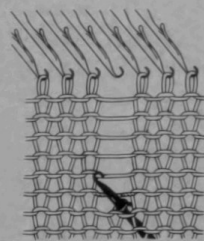
(B) Move the two loops behind the latch and draw the yarn over the hook of the tappet to knit another stitch. (Fig. 132)

(C) Repeat this procedure until the last two stitches are left. (Fig. 133) Place the last loop you have just knitted onto the next needle and knit a row by using the carriage.

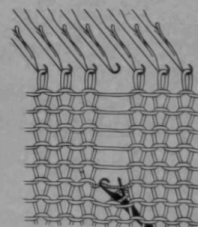
Correcting dropped stitches while knitting.



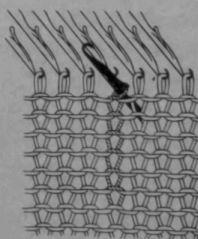
137



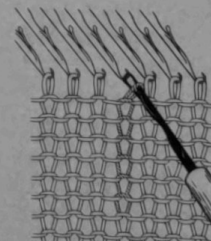
138



139



140



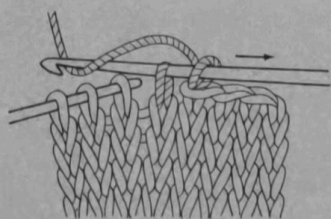
141

(A) Insert the tappet from the opposite side of your knitting through a stitch a few rows below where the dropped stitch is. (Fig. 137)

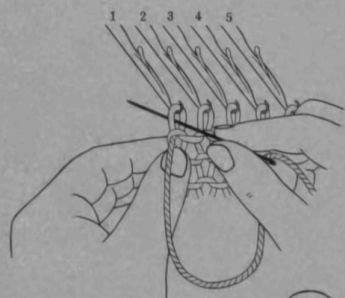
(B) Push the tappet towards you and catch the last dropped stitch. Place it behind the latch and catch the loop in the next row over the hook. (Fig. 138)

(C) Pull the tappet out of the knitting automatically closing the latch over the loop and forming a new stitch. Repeat this procedure to the top row. (Fig. 140)

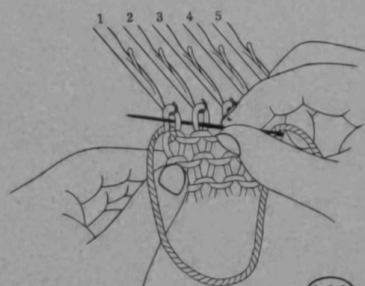
(D) Pull the last loop a little tighter. Carefully ease the stitch from the tappet. Then pick up the stitch from the outside with the tappet and place it onto the latch needle. (Fig. 141)



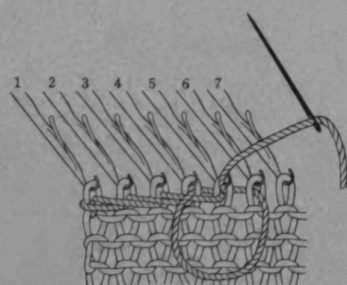
142



143



144



145

(3) Crochet hook.

The crochet hook is used to bind off your knitting when it is on a hand knitting needle.

(Fig. 142)

(4) Tapestry needle:

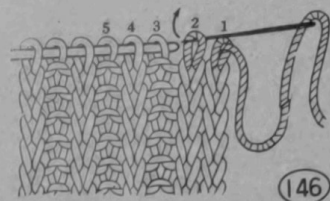
This needle is used for binding off the last stitches, seaming up two pieces of knitting or embroidering.

(A) Thread the needle with yarn three times the length of the garment to be bound off. Insert the needle into the edge stitch as shown in Fig. 143.

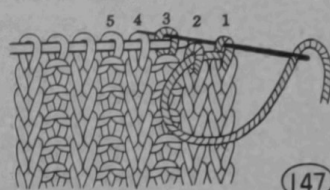
(B) Insert the needle into the second stitch and back through the first stitch. (Fig. 144) Then insert the needle into the third stitch back through the second stitch pulling the yarn snug. Repeat this procedure (Fig. 145) to the end. Remove the garment from the machine.

Seaming on machine needles.

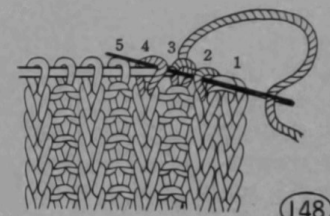
Seams will be more firm if you use the machine needles. It is an excellent way to seam shoulders. Place the two pieces of knitting to be seamed on the machine needles right side in. Knit one row with carriage. Unthread and break yarn leaving three times the length of the seam. Thread it into tapestry needle and bind off following Fig. 143 to 145.



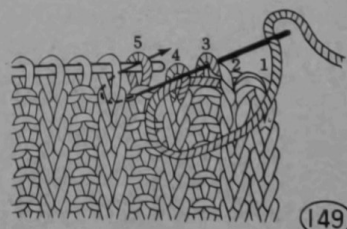
146



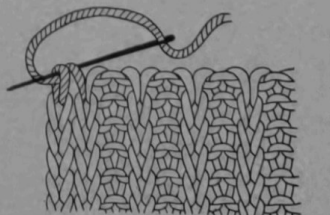
147



148



149



150

[Rib binding]

☆ 1. How to bind off knit one and purl one ribbing.

On the machine, end your work on the left side. Place all the stitches required for binding onto a hand knitting needle. Thread your tapestry needle three times the length of the seam. Two stitches on both ends are usually plain knitting.

(A) (Fig. 146) Insert your needle from the purl side of your first two rib stitches and pull your yarn through.

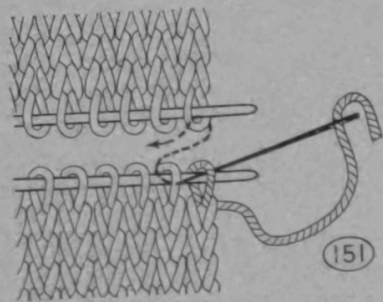
(B) Insert your needle from the rib side of the first stitch (Fig. 147) and back through the purl side of the third stitch.

(C) Following the figure 148 insert the needle into the second stitch on the rib side and pass it through the fourth stitch on the purl side.

(D) (Fig. 149) Rib side the third stitch and purl side the fifth stitch.

(E) Repeat the same procedure to the end of the row and insert the needle once more into the last two plain stitches. The yarn goes through each stitch twice all the way. (Fig. 150)

Note: Do not slide the second stitch off the hand knitting needle until the yarn has passed through it twice.



Weaving stitches.

☆ How to weave in stockinet stitches.

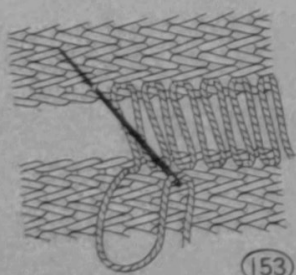
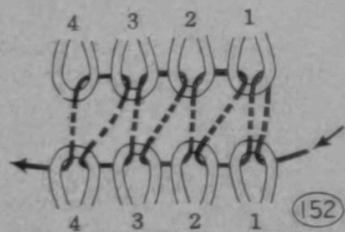
(A) Lay two pieces of stockinet knitting closely together with the stitches on the hand knitting needles. Yarn on the tapestry needle is three times as long as the seam.

(B) Insert the needle into the first stitch from the wrong side of the lower piece.

Next insert the needle into the first stitch on the upper piece of knitting from the wrong side.

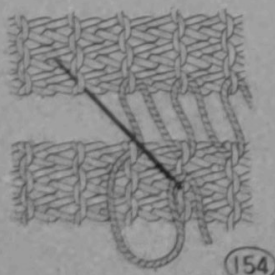
(C) Again draw the yarn from the right side of the first stitch on the lower piece back through the wrong side of the second lower stitch.

(D) Insert the needle into the first stitch on the upper side back through the wrong side of the second upper stitch. (Fig. 152) Repeat this procedure until you finish the seam.



Seaming side stitches.

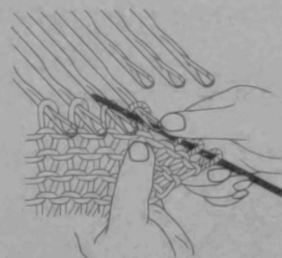
Thread the tapestry needle with yarn double the length of the garment. Bring the two pieces to be joined closely together. Weave each edge stitch on both pieces by passing the needle through the inside loop of every row. Join the edges neatly. (Fig. 153)



(Fig. 154) Another way of seaming.

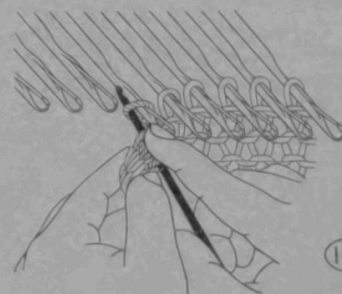
[To remove your knitting from the machine.]

One way is to use a hand knitting needle. Another way is to knit an extra piece of knitting.

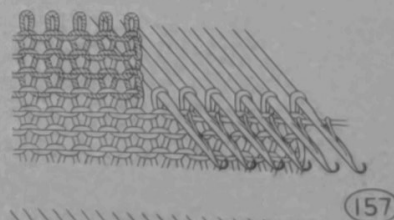


[To remove the knitting onto a hand knitting needle.]

(A) Push the needles in use to D position so as to place the stitches behind the latches.
(B) Hold the knitting in your left hand and insert the knitting needle into the right edge stitch from wrong side. Draw the stitch forward while you push back the needle so the stitch will slide onto the knitting needle.



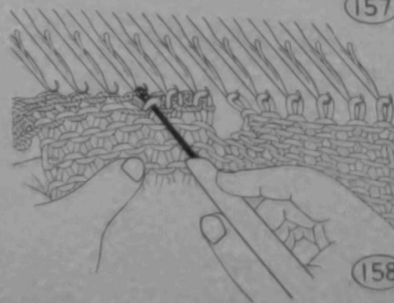
Note: Another way is shown in figure 156. Insert the knitting needle into the stitches from right side drawing the stitch toward you while you push back the needle so as to get the stitch onto the knitting needle. (Fig. 156)



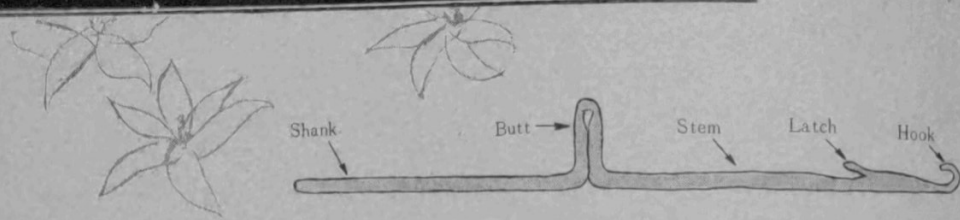
How to take stitches off the machine without using a pin.

Push the needles you'll be using into D position. Pull up the Russel buttons and knit 4 or 5 rows with contrasting yarn to hold stitches. Remove these from the machine and return to regular knitting. (Fig. 157)

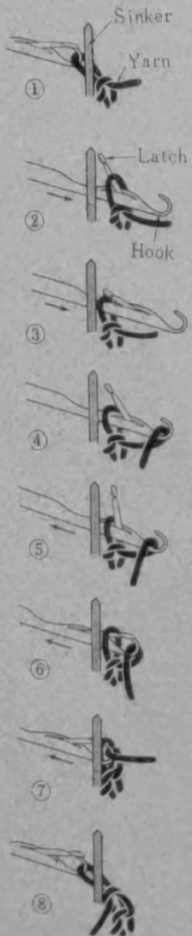
To cast on the stitches that were being held in place by the contrasting yarn, tuck the contrasting yarn down between the machine and the needles and pick up the main yarn stitches. (Fig. 158)



6. How The Latch Needle Forms a Stitch



A stitch is formed in the following way.



1. "An old stitch" is in the hook of a latch needle.
2. The needle moves forward and the old stitch automatically opens the latch.
3. The needle moves forward to C position and the old stitch slides behind the open latch.
4. The yarn is automatically fed into the hook preparing for a new stitch.
5. The needle moves to the back and the old stitch automatically closes the latch.
6. The needle moves farther back and the old stitch closes the latch completely. The yarn on the hook is caught inside the closed latch.
7. The needle now moves back into B position and the old stitch slides over the closed needle head. (The sinker needle helps a stitch slide over the needle head at certain intervals.) Now a new stitch is inside the hook.

This same cycle of the movements of a needle from 1 to 7 is repeated and stitches are formed.

With one movement of the carriage on the needle bed 200 latch needles from 200 stitches in the same manner just explained.

7. How to Take Care of the Machine



The best quality machine cannot work well without being oiled properly.

Make sure to oil your machine in order to knit well. After using your machine, clear the machine from wool dust with a dusting brush and polish each part with an oiled soft cloth. Keep your machine in a dry place.

1. Oiling:

The machine oil found in your accessory box is best for this machine but you may use sewing machine oil or a rust proof oil.

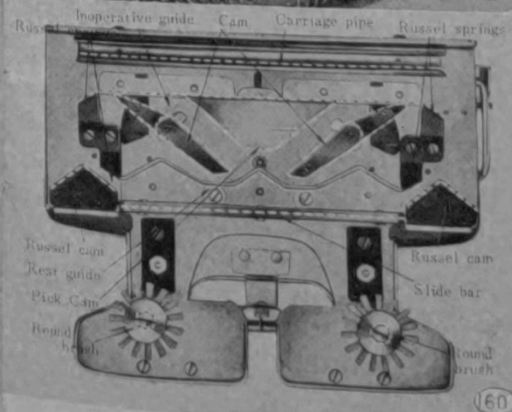
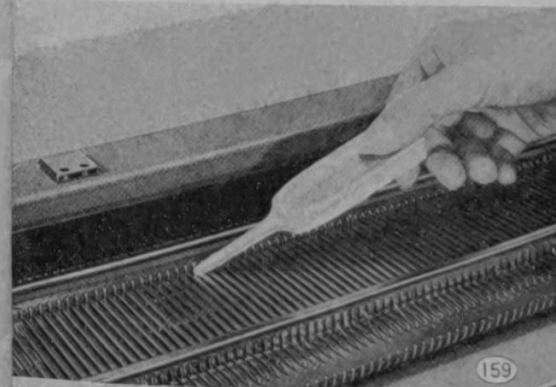
(A) The rail over which the carriage glides should be oiled every time you use the machine. (Fig. 159)

(B) The slots of the needle bed in which the needles move should be oiled.

(C) Oil the cams carefully following the dotted line. The needle butts hit the cams all the time.

(Fig. 160)

(D) Wipe off excess oil.



How to replace latch needles.

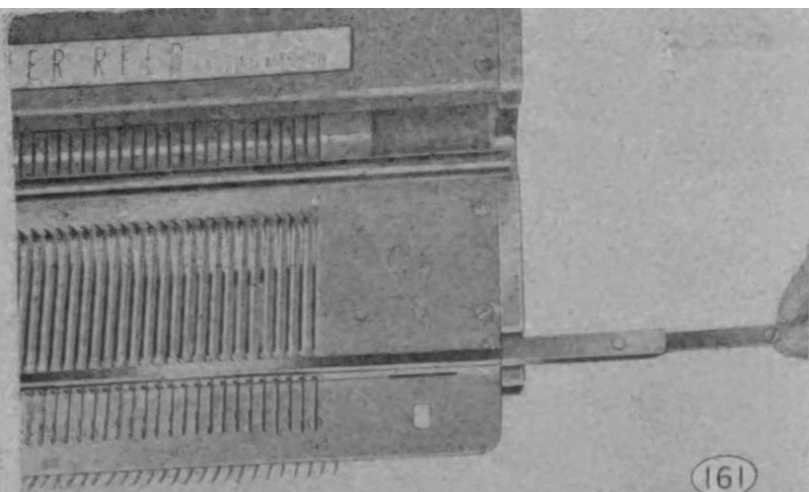
If a needle should be damaged you can replace it with one of the five spare needles.

There is a needle retaining band in front of the machine inside the needle bed. Push it down slightly on both sides and pull it out. (Fig. 161)

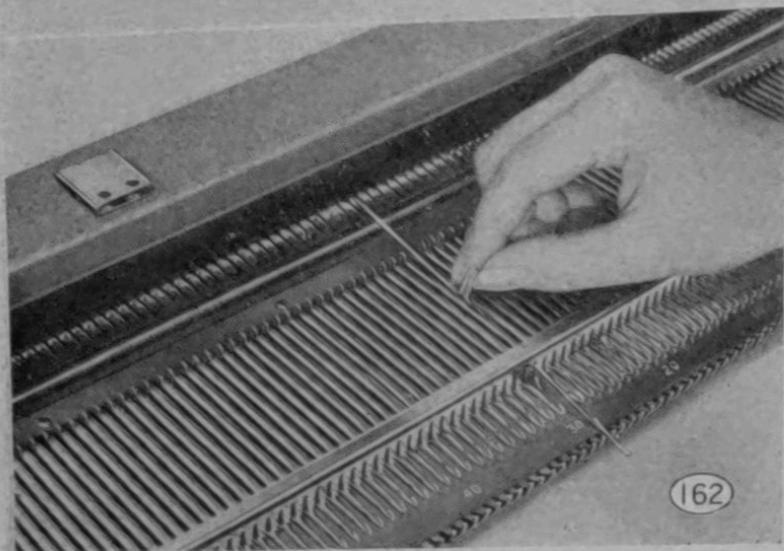
Bring the damaged needle to the foremost position and pick it up by the butt of the needle. (Fig. 162)

Replace the new needle.

Replace the needle retaining band in front of the needle bed.



(161)



(162)