

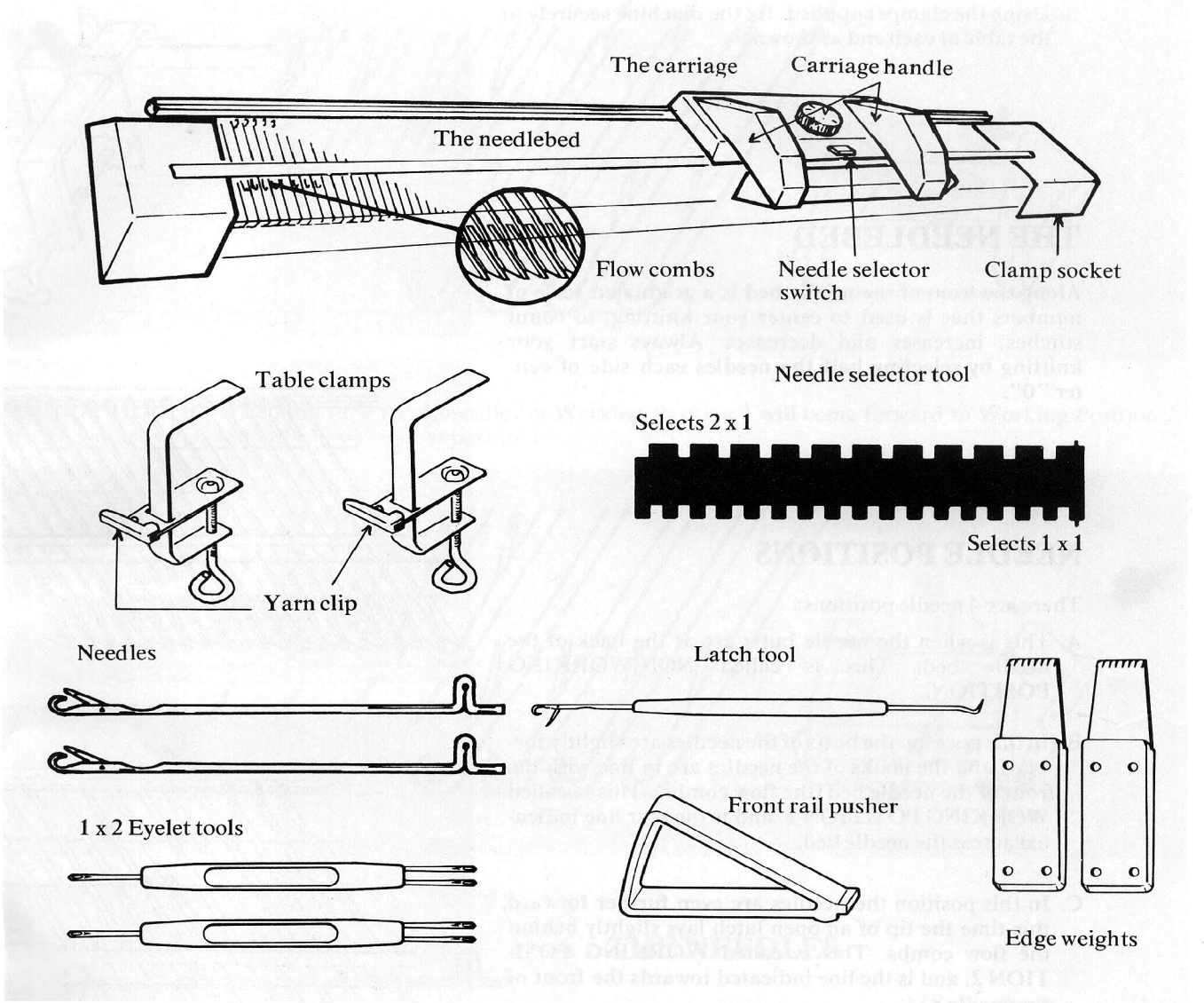
WHITE

EASY KNITTER

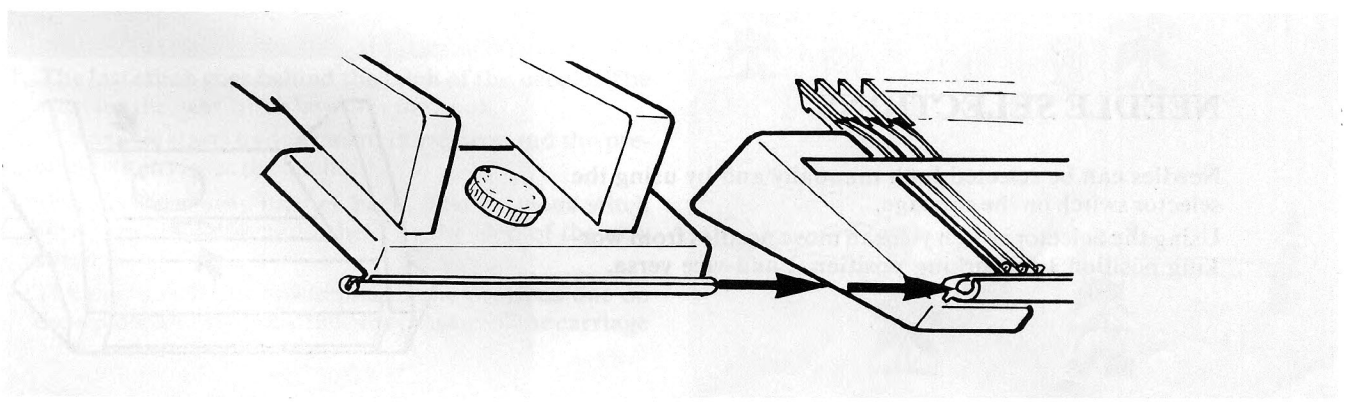
TYPE 07

Congratulations on your purchase of the White Easy Knitter. This product is manufactured to strict quality standards, and with reasonable care will provide you with many years of trouble-free performance. Take the time to go through the instruction book and perform the various exercises. With a little time and practice, you will soon be creating high fashion knitted garments for your entire family quickly and easily.

1. Firstly, familiarize yourself with the parts and accessories packed with your machine.
 Remove the machine and accessories from the box and lay them on a table.
 Keep the box and packaging as a storage carton to avoid the machine getting damaged or dirty when not being used.



2. Now remove the elastic bands from the carriage. These are used to avoid damage to the machine in transit. To remove or replace the carriage, simply slide it on or off the rear runner on the needle bed.



SETTING UP THE MACHINE

1. Place the machine on a table with the logo facing you.
2. Bring the clamp sockets at each end in line with the front edge of the table.
3. Using the clamps supplied, fix the machine securely to the table at each end as shown.

THE NEEDLEBED

Along the front of the needle bed is a graduated scale of numbers that is used to center your knitting, to count stitches, increases and decreases. Always start your knitting by selecting half the needles each side of center "0".

NEEDLE POSITIONS

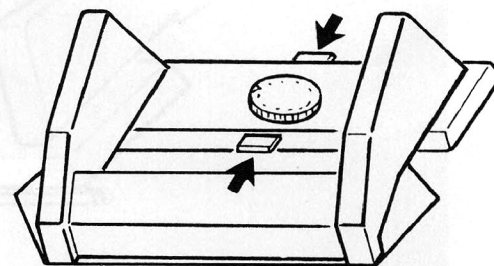
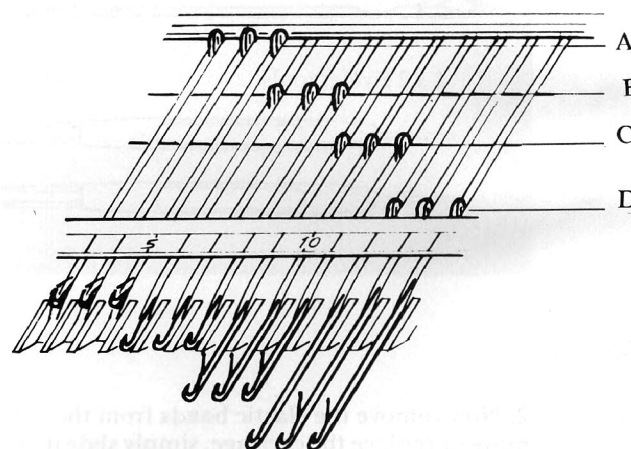
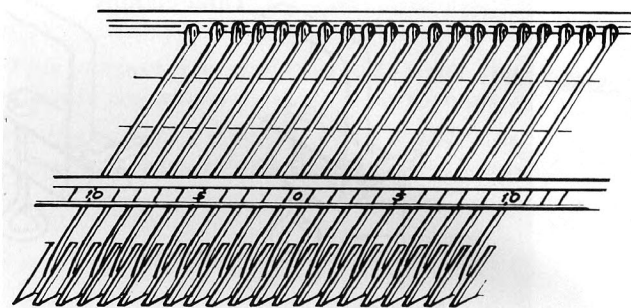
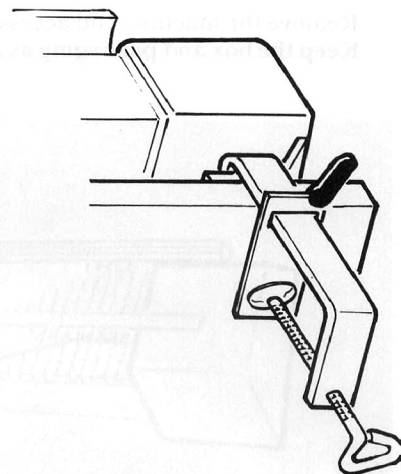
There are 4 needle positions:

- A. This is when the needle butts are at the back of the needle bed. This is called **NON-WORKING POSITION**.
- B. In this position the butts of the needles are slightly forward and the hooks of the needles are in line with the front of the needle bed (the flow combs). This is called **WORKING POSITION 1**, and is the rear line indicated across the needle bed.
- C. In this position the needles are even further forward, this time the tip of an open latch lays slightly behind the flow combs. This is called **WORKING POSITION 2**, and is the line indicated towards the front of the needle bed.
- D. Here the needles are all the way forward and the butts are up against the front slide rail. This is called **HOLDING POSITION**, and is used to hold stitches without knitting them when shaping necks, etc.

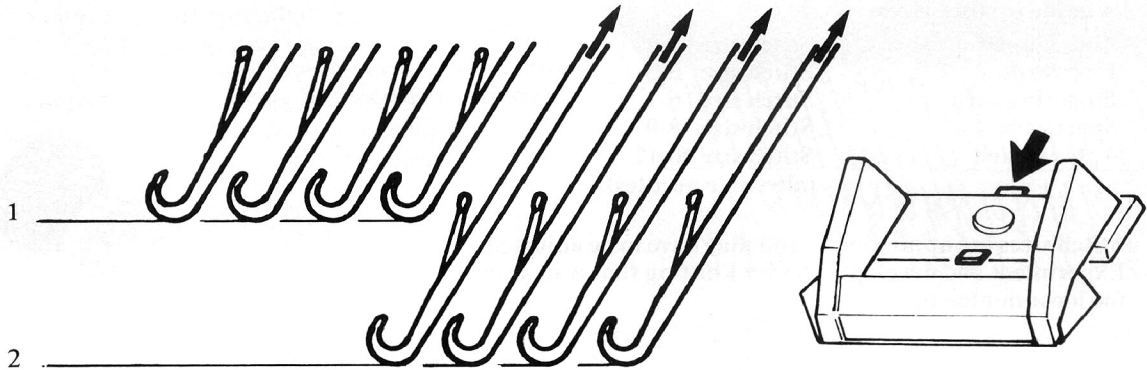
NEEDLE SELECTIONS

Needles can be selected both manually and by using the selector switch on the carriage.

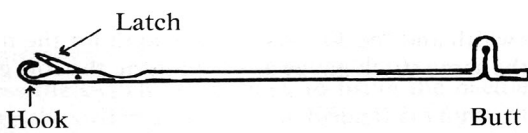
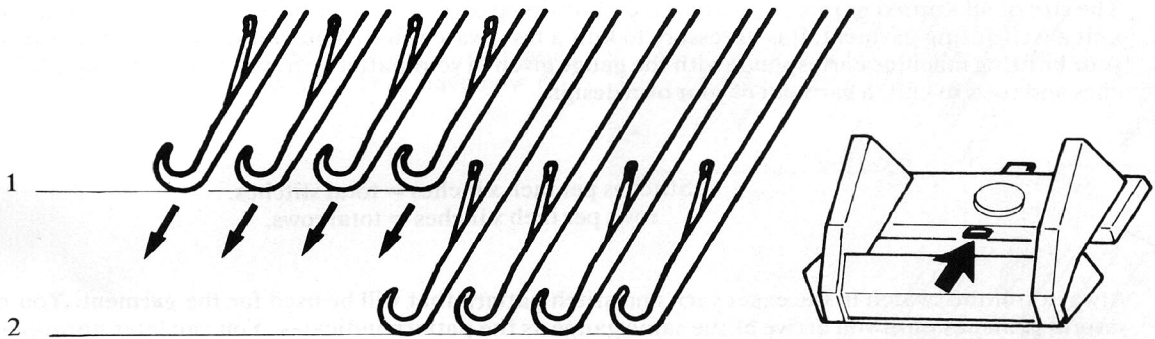
Using the Selector switch you can move needles from working position 1 to working position 2 and vice versa.



When the switch is pressed in at the back, needles in Working Position 1 stay in Position 1 and needles in Working Position 2 will return to Working Position 1.



When the switch is pressed in at the front, needles in Working Position 1 will come forward to Working Position 2. Needles already in Position 2 will stay in that position.



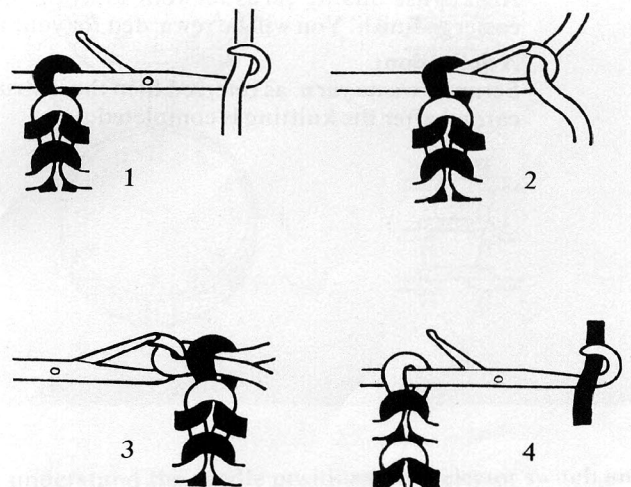
THE NEEDLES

There are 3 main parts to each needle. The Butt, the Hook and the Latch.

STITCH FORMATION

As you knit with the carriage, stitches are formed as follows:

1. The last stitch goes behind the latch of the needle. The yarn for the next stitch lays over the hook.
2. The needle starts its downward movement and the previous stitch closes the latch.
3. The needle moves further back. The previous stitch slips over the hook and is held by the loop of the new stitch.
4. The new stitch has now replaced the previous one on the needle and waits for the next passage of the carriage



SOME NOTES ON SUCCESSFUL KNITTING

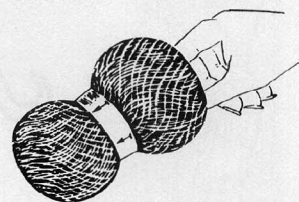
A guide to stitch sizes:

Fine Threadlike yarns	Stitch size 1-2
Fine yarns	Stitch size 3-5
Fingering yarn	Stitch size 6-7
Sport yarn	Stitch size 8-9
4 ply worsted	Stitch size 10-12 (alternate needles)

Stitch sizes are approximate and may have to be adjusted. Experiment and develop a feel for knitting that is neither too loose nor too tight.

A tip:

Pull the yarn from the center of a skein for a smooth flow.



*** The 3 ply yarn used in this book is fingering yarn ***

The importance of gauge:

The size of all knitted garments are based on knitting gauge, that is on the number of rows and stitches per inch. To knit a well-fitting garment, it is necessary to knit a test swatch first. You can then check that the gauge produced by your knitting machine corresponds with the gauge given in your pattern; or, you can use the gauge to calculate the stitches and rows to knit a garment of your own design.

$$\begin{aligned} \text{Stitches per inch} \times \text{inches} &= \text{total stitches.} \\ \text{rows per inch} \times \text{inches} &= \text{total rows.} \end{aligned}$$

Always knit the swatch in the exact yarn and stitch pattern that will be used for the garment. You may have to make several swatches until you arrive at the same gauge as the pattern indicates. You can later unravel and use the swatch for sewing or knitting the garment.

To proceed: Cast on 30 stitches in waste yarn of a contrast color, knit 10 rows.

Change to main yarn, knit 30 rows. Change again to scrap yarn, knit 10 rows and remove from needles. Pull into shape. Let the swatch rest overnight, or, if the finished garment is to be washed, wash the swatch, pin out evenly and dry. Press lightly unless otherwise specified by the manufacturer.

Now measure the swatch and divide the 30 stitches by the width and the 30 rows by the length for the number of stitches and rows per inch. Although your swatch may have the same stitch gauge as the pattern, the row gauge may not correspond. Add rows for the correct measurement.

The advantages of quality:

Always use quality yarns for your knitting. Quality yarns are easier to knit and garments made of quality yarns are easier to finish. You will be rewarded for your time with garments that look well and wear well.

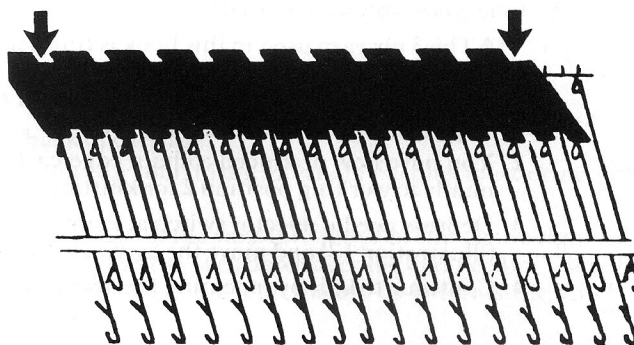
A definition:

Scrap or waste yarn, as referred to in the instructions, should be of a similar thickness as the main yarn and will be discarded after the knitting is completed.

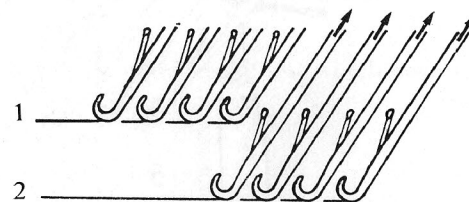
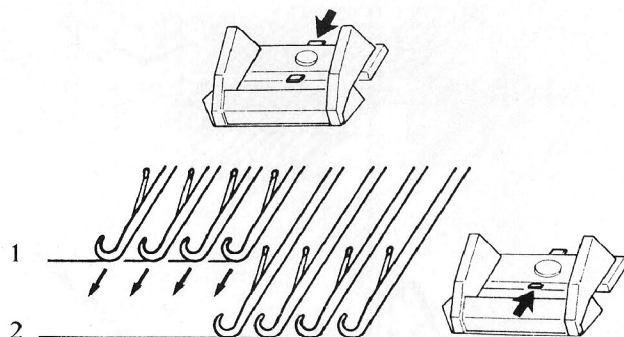
EXERCISE 1

(No yarn is used)

- Using the black plastic needle selector, bring alternate needles at the center of the needle bed forward into working position 1. Now bring the needles in between those you have already selected to position 1 as well. You have now selected 34 needles into working position 1, i.e. 17 each side of center "0".



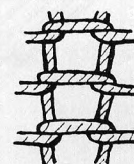
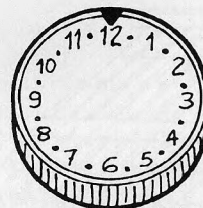
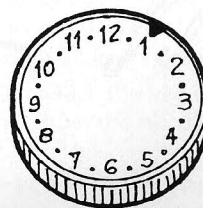
- Press in the needle selector switch at the back of the carriage and gently move the carriage across the needles. The needles remain in position 1. You will always press the switch at the back to put the needles back to position 1.
- Now press in the switch at the front of the carriage and move the carriage across the needles in position 1. They have now moved to position 2, your normal knitting position.
- Press the switch at the back of the carriage again and pass the carriage over the needles. They have now returned to position 1.



Remember

Press the switch at the back to bring the needles back.
Press the switch at the front to bring them forward.

- Set the stitch size dial to number 1.
Take carriage across needles. See how when the carriage has returned the needles to position 1, the hooks of the needles are in line with the front of the needle bed.
- Now set the stitch size to number 12 on the dial. Take the carriage across again. This time, using a larger stitch size, the hooks of the needles lay further back. This allows a larger stitch to be formed.



Well done, you have now completed the first exercise and now understand the needle positions, the selector switch and stitch size (tension) dial.

EXERCISE 2

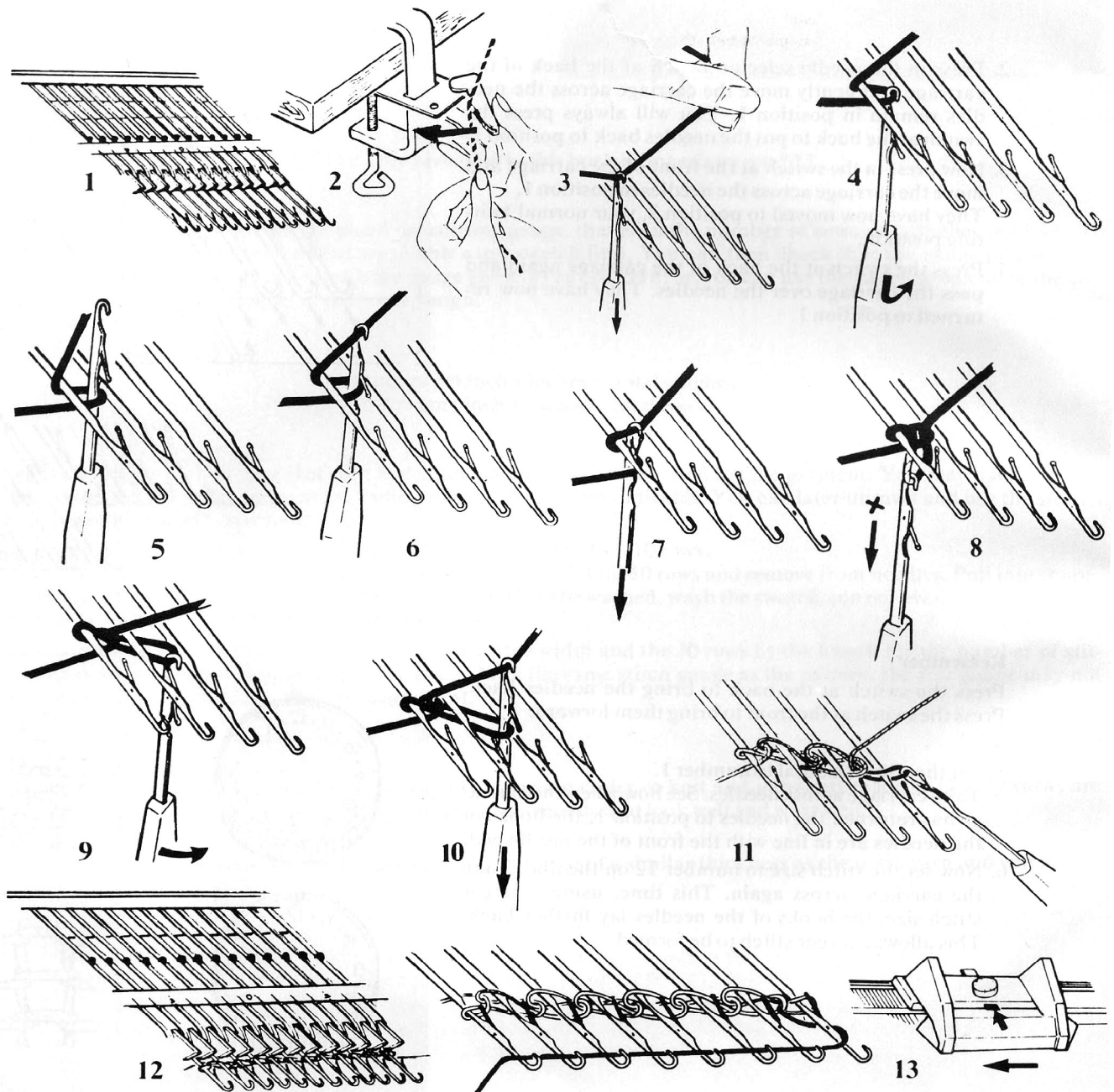
CHAIN CASTING-ON

METHOD 1

(one color 3 ply yarn is used)

*** The 3 ply yarn used in this book is fingering yarn ***

1. Bring 30 needles to holding position. (All the way forward.) Fix the end of the yarn clip on the left side. Follow steps 3 through 12 illustrated below.
2. You have now produced a chain edge cast on. Now push all yarn behind open latches and return the needles manually to working position 2 for knitting.
3. Depress needle selector switch at front of carriage. Set stitch size dial to number 6. * Lay the yarn across the needles (illustration 13) and move the carriage across to produce the first row.
4. Continue to knit by repeating the above operation.



Adjust stitch size according to thickness of yarn (See page 4)

Note: If using a bulky yarn (4 ply worsted) cast on every alternate needle.

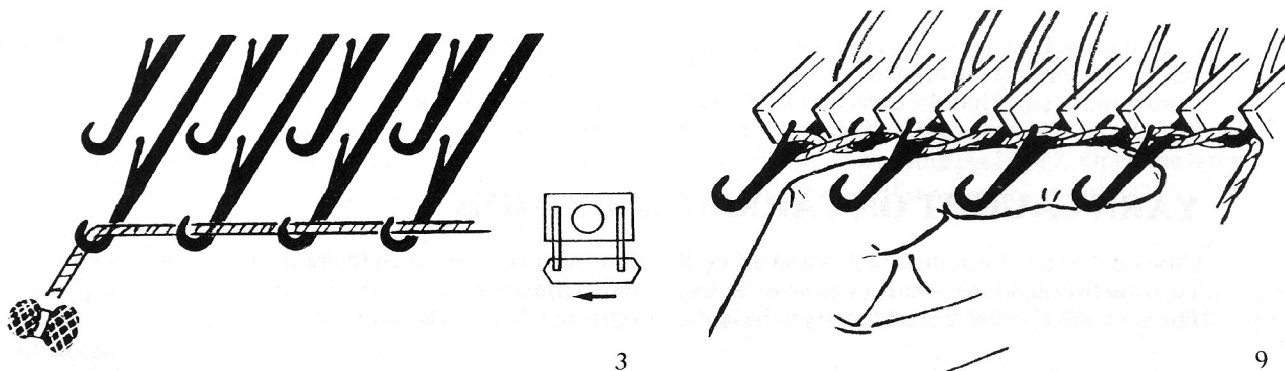
Remember: Latches must always be open with previous stitches behind them before knitting the row.

EXERCISE 2 CASTING-ON EVERY ALTERNATE NEEDLE METHOD 2

*** The 3 ply yarn used in this book is fingering yarn ***

Casting on:

1. Set stitch size dial to number 2 and push selector switch in at back of carriage.
2. At the center of the needle bed, using your black 1 x 1 needle selector tool, bring alternate needles to working position 2. Open all latches.
3. Place the cone or ball of yarn on the floor in front of you. Fasten the end of the yarn into the yarn clip on the right side of the machine. Lay the yarn across the selected needles and gently hold the yarn down over the end needle. Take the carriage gently across (from right to left) letting the yarn roll gently through your fingers as it forms the stitches across the row.



4. Set stitch size dial to number 3. Now, using the black selector tool, bring the needles in between those which have already knitted, into working position 2.
At this point be sure to loop your yarn around last needle.
5. Open the latches, lay yarn across again, this time in the opposite direction.
Take carriage across. (from left to right)
6. Set stitch size dial to number 4. Now bring the needles you first selected back again to position 2 using the needle selector tool. Check that the previous formed stitches on those needles are behind the latches and that the latches are open.
Lay yarn and take carriage across. (from right to left)
7. Set stitch size dial to number 5. Bring the other needles (selected in step 4) back again, check again as you did on the last row, lay the yarn and take the carriage across. (From left to right)
8. You have now produced a closed edge cast on and are ready to begin to knit in stocking stitch.
9. With your finger, push the knitting against the needle bed. Underneath the needles and bring the needles all the way forward manually. The stitches are now behind the open latches. Push the needles back into position 2 for knitting. Remove the end of the yarn from the clamp.
10. Set the stitch size dial to number 6*. Depress needle selector switch at front of carriage. Lay the yarn across the needles and move the carriage across to produce the first row of stocking stitch. Continue to knit by repeating this operation.

*NOTE: If using a different thickness of yarn, cast-on the first row with approximately three stitch sizes smaller than indicated on page 4. Then, gradually increase stitch size for the other cast-on rows in order to reach the final stitch size recommended on page 4. For bulky yarns (4 ply worsted) bring every fourth needle to working position two. Example: Needles 4, 8, 12, 16 ... for the first row. For the second row bring needles in between (2, 6, 10, 14 ...) to working position two. Row three same as row one and row four same as row two.

REMEMBER

Latches must always be open with previous stitches behind them, before knitting the row.

If this is the first time you have used a knitting machine, don't worry if you did not manage to cast on the first time. Below are some hints to help you, so read these through and if necessary, try a cast on again before moving on to Exercise 3. (To remove knitting, gently lift the stitches off the needle hooks.)

DROPPED STITCHES

These are caused when the previous stitches are not behind the open latches before knitting the next row, or if a latch was left closed before knitting the row.

LOOPS AT EDGE OF KNITTING

This is usually caused when laying the yarn across the needles. Make sure (after each row) that the yarn for the next row wraps neatly around the edge needle to avoid this.

CARRIAGE JAMS

Once the carriage has started the row you cannot reverse the direction. The carriage may jam if too tight a stitch size is being used for the type of yarn.

Always make sure that the carriage clears the end needle after each row.

IMPORTANT: Never force the carriage across if it jams.

YARN CAUGHT ON CARRIAGE BRUSHES

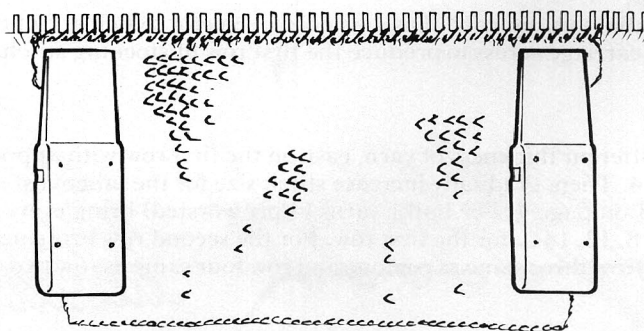
Unwind the yarn from the brushes and allow it to hang down at the edge of the knitting.

To avoid this, hold the yarn downwards slightly as the carriage passes the end needle.

The yarn will then be free and ready to be laid across the needles for the next row.

EXERCISE 3

1. If you removed the knitting from your machine at the end of the last exercise, cast on again following instructions in Exercise 2 using method 1 or 2.
2. Check that the selector switch is in at the front of the carriage.
3. All needles are now in working position 2. Check that the stitches are behind the open latches and that all latches are open.
4. Leave stitch size dial on number 5. Lay the yarn across the open latches from the carriage side. Don't pull on the yarn tightly or stitches will not form.
5. Take carriage across, letting the yarn pull gently through your fingers as it forms the stitches along the row.
6. Hang an edge weight on each side of knitting, to prevent material from piling up.



Note:

You will find that the more you knit, the faster you will become, but don't push the carriage across too quickly as at normal speed the latches usually stay open ready for the next row, but if you go too quickly, the latches will tend to close and you will need to open them again before laying the yarn across.

Now repeat Exercises 2 and 3 again, until you are fully familiar with the basic workings of your machine.

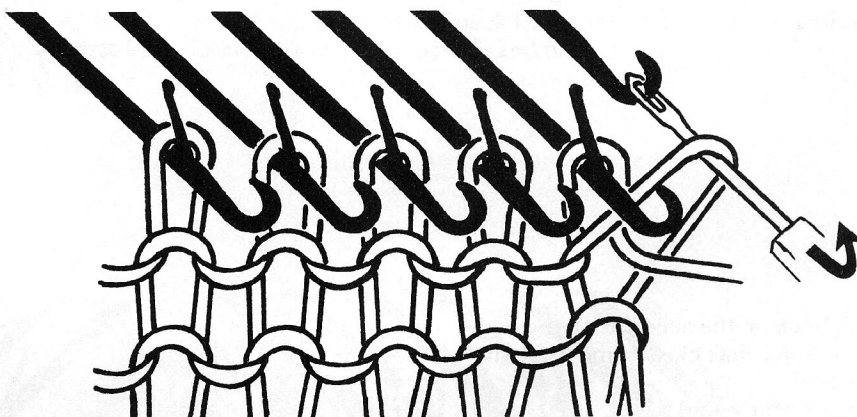
REMEMBER:

Stitches must lie behind the open latches and all latches must be open before knitting the row. If you remember this you will not get dropped or missed stitches.

EXERCISE 4

In this next exercise you will learn how to increase stitches for garment shaping.

1. Complete a cast-on edge.
2. Bring needles to working position 2 manually, and press the selector switch in on the front of the carriage.
3. Knit 20 rows in stocking stitch.
4. First you will learn a quick increase. This increase is done on the carriage side of the knitting.
5. Bring one needle from non-working position on carriage side of knitting to working position 2. Open the latch.
6. Lay yarn across needles, making sure that the yarn is placed over the new needle in working position 2.
7. Take carriage across and knit one row.
8. Now continue to increase a stitch at the carriage side of the knitting in every third row.
9. Increase 10 times altogether. Another method of increasing can be used when it is necessary to increase a stitch at both ends in the same row. We recommend you use a light colored yarn for this to make it easier to identify the loop until you become familiar with this method.
10. Bring a needle at both sides of the knitting from non working position to working position 1.
11. Pick up the lower loop of the first stitch using the single eyelet tool and lift it up on to the hook of the needle.
12. Bring the needle to working position 2 at each end. Check that the loops are placed behind the open needle latches and that the latches are open.



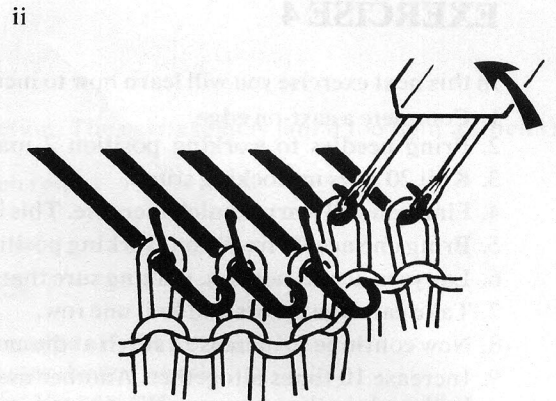
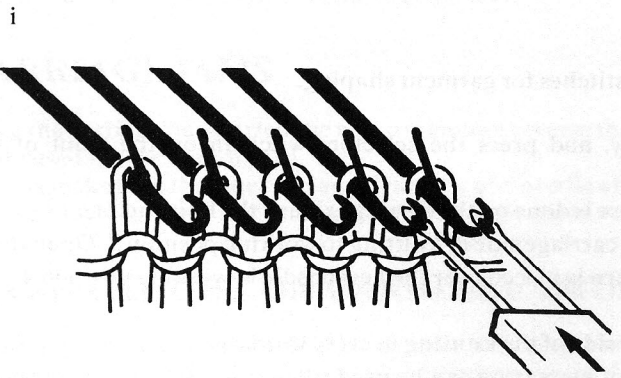
13. Lay yarn across needles and knit.

14. Repeat increasing one stitch at each end of every alternate row 10 times altogether.

EXERCISE 5

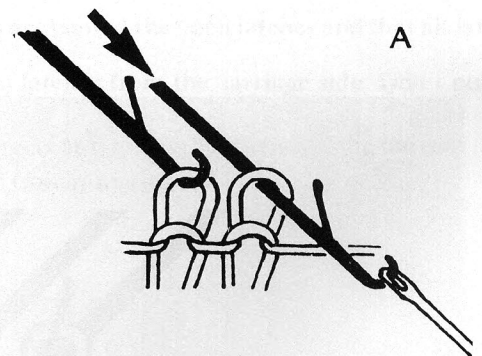
In this exercise you will learn the simple method of decreasing.

1. Using your eyelet tool, place the double end over the end of two needle hooks (See figure i). Hold the tool level with the needles and not at an angle to them.
2. Now push the tool, keeping it level, right back until the stitches slide onto the tool from the needles. Now with the 2 empty needles in working position 1, place the eyelets of the tool over the hooks of the needles, tilt the tool to allow the stitches to slip over back onto the needles (see figure ii).
The end needles are now in working position 1 and the stitches are in front of the open latches on these 2 needles.
3. You will now move the end stitch onto the needle next to it, thus ending with 2 stitches on one needle.

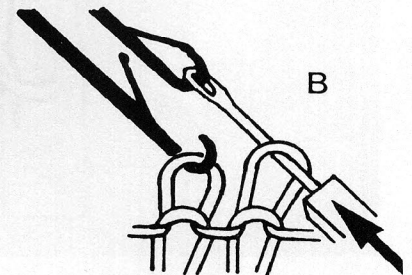


- A. Place the single eyelet over the end needle hook. Push the knitting back towards the needle bed with your other hand and bring the tool towards you until the needle is as far forward as it will go.

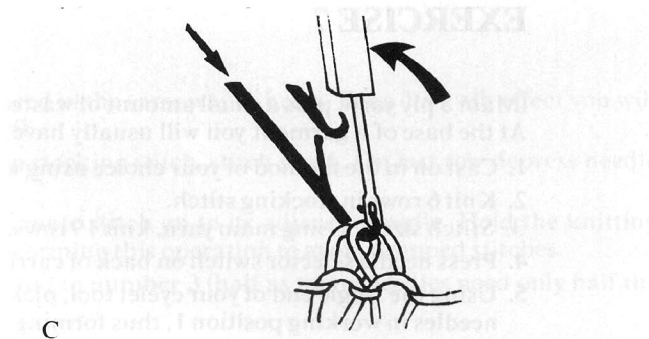
Remember to hold the tool level as if it were an extension of the needle.



- B. Now push back on the needle with the tool. The needle latch has closed and the stitch is now on the eyelet tool.
Don't drop it off the end!



- C. Take the eyelet tool with the stitch on it, carefully across to the next (inside) needle. Place it over the hook of the needle and slip the stitch over onto it.



Now check that the emptied needle is out of working position in position A (non working position). Lay the yarn and continue to knit.

Decreasing can be performed either at just one side or on both sides of each row. Repeat this exercise to get used to using your eyelet tool.

EXERCISE 6

The increasing and decreasing methods you have learned in exercises 4 and 5 are, of course, used when shaping garments, usually at armholes or on sleeves.

You will also decrease stitches at neck openings but first you will need to learn how to perform "Partial" knitting. "Partial" knitting is the term used when only knitting part of the garment. For example, at a "V" neck you will only knit one side at a time, decreasing at the center of the needle bed for the "V" shaping and at the armhole edge at the same time.

1. With carriage on right side of needle bed, bring needles on the left side of "0" into holding position, pushing the knitting back towards the needle bed. Remember holding position is when the needles are as far forward as they will go. You now have half of your needles in holding position. The half nearest the carriage are still in working position 2.
2. As you knit, lay the yarn over the needles in working position 2. As you pass the carriage across, take it over the needles in holding position if necessary, but don't worry, the needles in holding position will not knit.
3. Knit 2 rows. As you can see, only the needles in working position 2 are knitting. You have divided for the neck and are now working on half of the needles only.
4. Now decrease one stitch at each side of the knitting you are now working on.
5. Return each empty needle to non working position after each decrease.

Note: You may find it helpful to hang an edge weight onto the knitting at the center to avoid the bulking up which will occur as you knit up one side.

6. Continue decreasing on each side every other row until one stitch remains. Remove the last stitch from the needle, thread the end of yarn through the loop of the stitch and pull to close.
7. Return needles in holding position to working position 2. Check that all the latches are open and that stitches are behind the latches. Continue to knit, decreasing as per steps 4, 5, and 6.

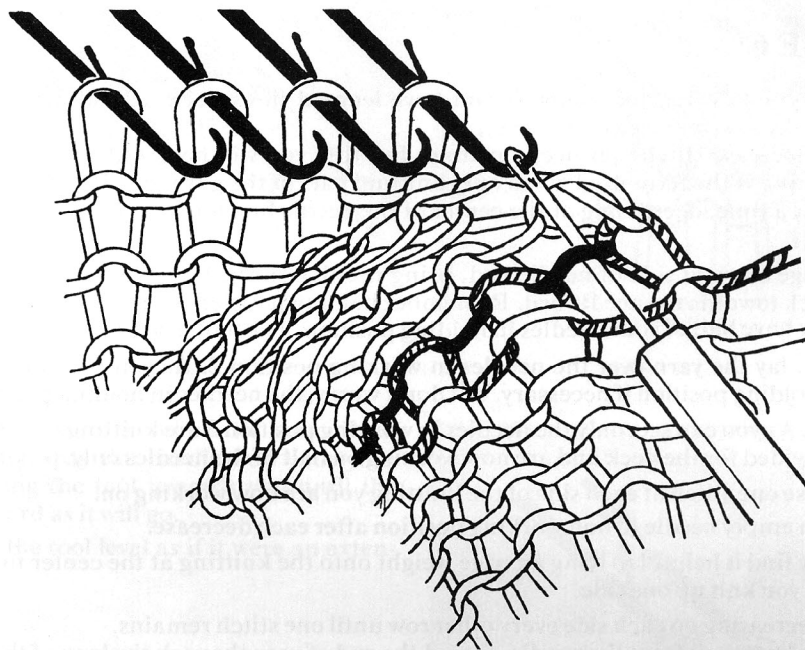


EXERCISE 7

(Main 3 ply yarn, plus a small amount of waste yarn)

At the base of a garment you will usually have a hem or rib (welt). This exercise shows you how to make a simple hem.

1. Cast on in the method of your choice using waste yarn, ending with needles in working position 2
2. Knit 6 rows in stocking stitch.
3. Stitch size 6. Using main yarn, knit 19 rows.
4. Press needle selector switch on back of carriage. Knit 1 row. The carriage is on the right side.
5. Using the single end of your eyelet tool, pick up the loops of main color, shown in black below, and place them on the needles in working position 1, thus forming a hem.



6. You have 2 stitches on each needle. Bring the needles to working position 2 either manually or by pressing the selector switch on the front of the carriage and without yarn take the carriage across the needles holding the knitting back towards the needle bed with your other hand.
7. Check that the knitting lies well behind the open latches of the needles. Break off yarn, then starting at left side of carriage, lay yarn across needles, and knit 6 rows.
8. Pull or clip the last row of waste knitting. Your first rows will drop off.

You have now completed a simple hem.

EXERCISE 8

Continental or "mock" ribs as they are often called are produced in the same way as hems. For a 1 x 1 rib effect you will use alternate needles only. First let's knit a Continental 1 x 1 rib.

1. Cast-on in waste yarn using Method 1 or 2. Knit 6 - 8 rows in stocking stitch, stitch size 6. On last row depress needle selector switch at back of carriage.
2. Using the single end of your eyelet tool, transfer every alternate stitch on to its adjacent needle. Hold the knitting back against the needle bed with your other hand while performing this operation to avoid dropped stitches.
3. Return empty needles to non working position. Stitch size dial to number 3 (half as many needles need only half the tension.) Bring needles to working position 2.
4. Depress needle selector switch at front of carriage.
5. Change to main color and knit 39 rows. Depress switch at back of carriage and knit 1 row, returning needles to working position 1.
6. Now, using the single end of your eyelet tool, pick up the loops of main color made in first row of the main color knitting and place them on the empty needles, bringing them forward to working position 1.
7. Bring the needles manually to working position 2. Press needle selector switch at front of carriage. Check that all stitches are well back behind the open latches and that all latches are open.
8. Change stitch size dial to number 6. Knit 10 rows.
9. Pull or clip the last row of waste knitting. Your first rows will drop off.

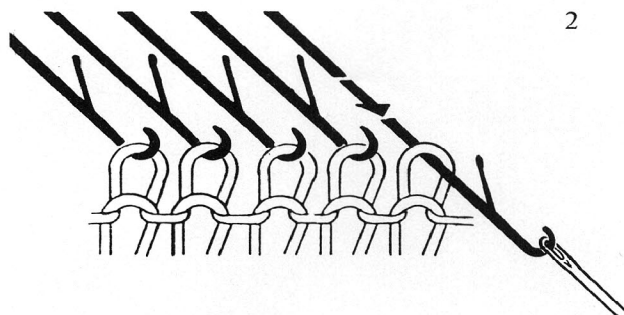
Well done. You have now completed your first rib. Later, when the knitting is removed from the machine, put a ruler or knitting needle through the hem of the rib and pull downwards slightly. This will ease the rib into shape.

10. Leave knitting on needles and continue with Exercise 9.

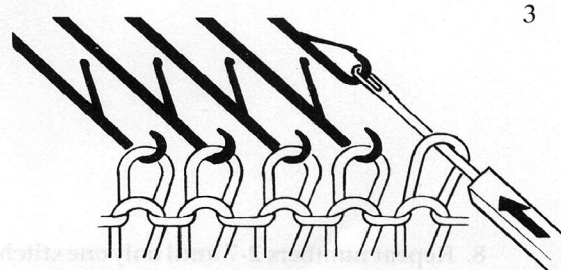
EXERCISE 9

For this exercise you will use your eyelet tool again, just as you did for decreasing in Exercise 5. This time, however, you will be using it to cast-off.

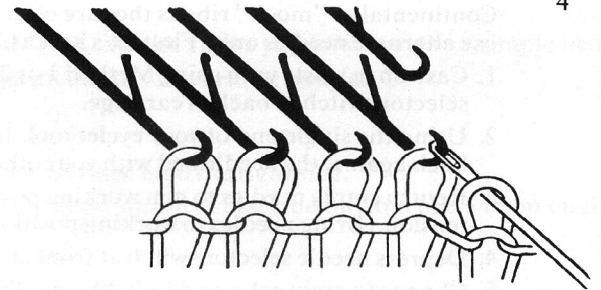
1. Bring all needles back to working position 1.
2. Place the single eyelet over the hook of the last needle in working position nearest the carriage. Bring the needle all the way forward with the eyelet tool.



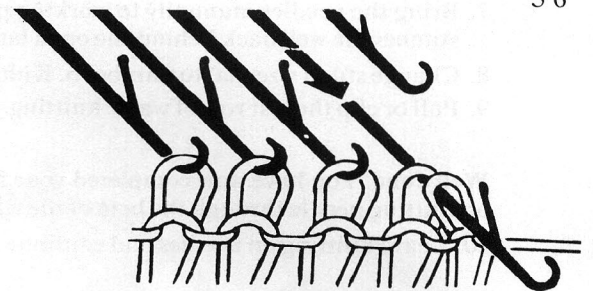
3. Now push it back into non-working position letting the stitch slide from the needle to the eyelet tool.



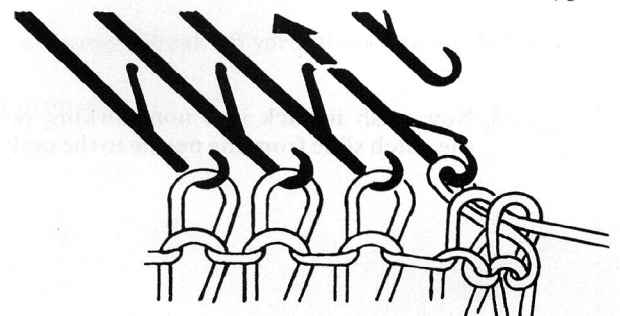
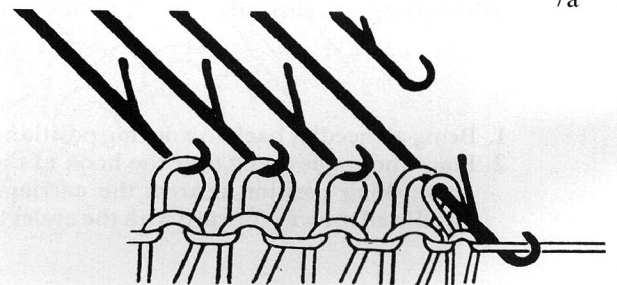
4. Take the eyelet tool off the needle hook and place it on the hook of the next needle.



5. Now slip the stitch on to the needle by tilting the tool, then bring the needle forward to working position 2. There are now 2 stitches on the needle in working position 2.
6. Check that the stitches are behind the open latch of the needle.



7. Now, lay the yarn over the hook of that needle and bring the needle back to working position 1, so that the two stitches knit together. You have now cast off one stitch. To avoid too tight a cast off, gently pull down the knitting beneath the stitch you have just bound off.



8. Repeat numbers 2-7 until only one stitch remains. Snip the yarn 3-4 inches away.
9. Pull the last stitch downwards slipping the end of the yarn through the loop. Unhook the last stitch from the machine.

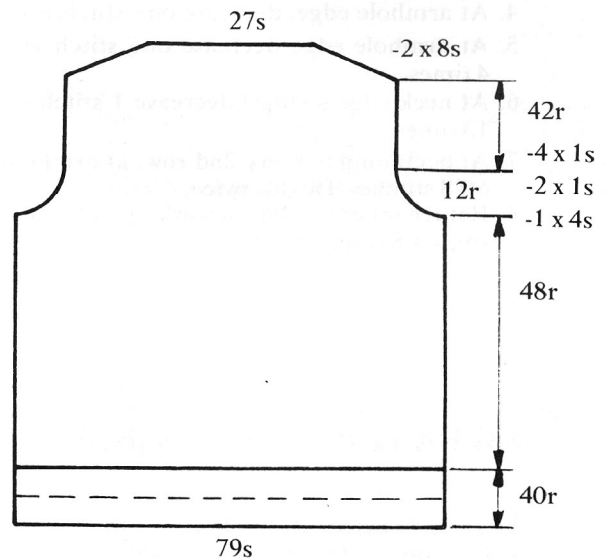
*** The 3 ply yarn used in this book is fingering yarn ***

EXERCISE 10

You have now completed exercise 9 and covered the basic workings of your new machine. We will now use all you have learned and help you to produce your first garment. For your first garment we have chosen a small child's 19" (48 cm) "V" neck sweater, knitted in stocking stitch. To knit this garment you will need approximately 250 grams fingering yarn in your main color, plus a small quantity of waste yarn.

SWEATER BACK

1. Bring 79 needles to working position 2 and cast on using Method 1 or 2.
2. Set stitch size to 6. Knit 6-8 rows in stocking stitch. On last row depress needle selector switch on back.
3. To return needles to working position 1 transfer every alternate stitch to its adjacent needle. Bring empty needles back to non working position.
4. Bring needles to working position 2.
5. Using main yarn and stitch size 3, knit 39 rows in rib. Depress switch at back of carriage and knit 1 row, returning needles to working position 1.



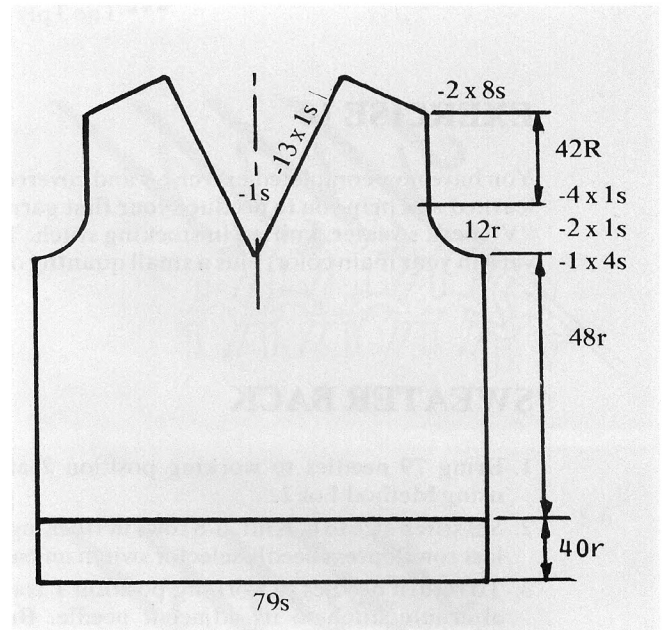
6. Lift loops of main color from those of the first row knitted in main color, and place them on empty needles - bringing them forward to working position 1.
7. Stitch size dial 6. Bring needles to working position 2.
8. Knit straight for 48 rows, using edge weights if necessary to avoid curling at the edges. Place them a little way from the top at each end and move up every 10 rows.
9. Cast off 4 stitches at the beginning of each of the next 2 rows.
10. Decrease one stitch each side every row 2 times.
11. Decrease one stitch each side every 2nd row 4 times.
12. Knit 42 rows straight.
13. Cast-off 8 stitches at beginning of each of the next 4 rows.
14. Cast-off the remaining 27 stitches.

SWEATER FRONT

1. Knit as back from 1-9 inclusive.
2. Decrease one stitch at each side and transfer center stitch to its adjacent needle. Return the center needle now empty to non-working position.
3. Work on half the stitches on the right side placing the other 34 needles into holding position.

Note: Steps: 4-6 are knitted simultaneously.

4. At armhole edge, decrease one stitch every row once.
5. At armhole edge decrease one stitch every 2nd row 4 times.
6. At neck edge (center) decrease 1 stitch every 4th row 13 times.
7. At beginning of every 2nd row, at armhole edge, cast-off 8 stitches. Do this twice.
8. Return other needles to working position 2 and repeat steps 4-8 reversing shapings.



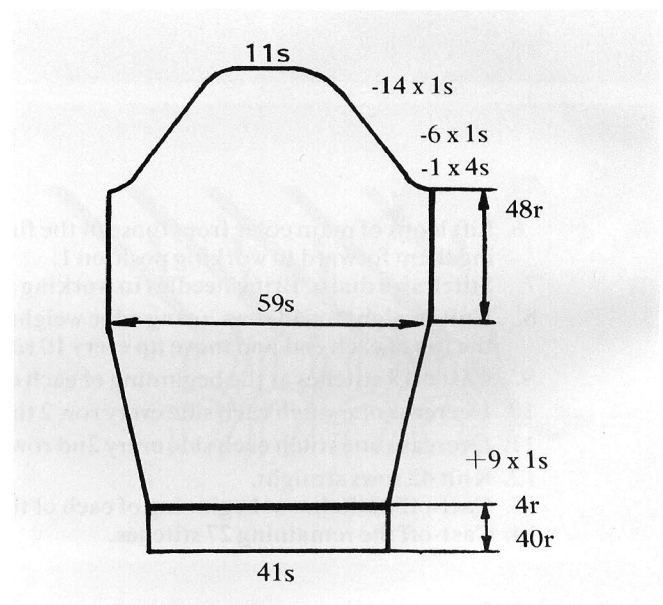
SWEATER SLEEVES (Knit 2 the same)

1. Bring 41 needles to working position 2.
2. Cast-on and knit as sweater back, steps 1-7.
3. Stitch size 6. Knit 4 rows.
4. Increase one stitch at each end of this and every following 5 rows. Increase 9 times altogether.

Remember:

To increase at both ends at once use single end of eyelet tool and pick up first loop under each end stitch and place it on the next outside needle bringing it from non working position to working position 2.

5. There are now 59 stitches. Knit 48 rows straight.
6. Cast-off 4 stitches at the beginning of next 2 rows.
7. Decrease one stitch at each side every 2nd row 6 times.
8. Decrease one stitch each side every row 14 times.
9. Cast-off the remaining 11 stitches.



NECKBAND

1. Bring 163 needles (full bed width) to working position 1.
2. Cast on in Method 1 or 2 in waste yarn.
3. Stitch size 6, Knit 6 rows. On last row depress needle selector switch on back to return needles to working position 1.
4. Transfer alternate stitches to adjacent needles and take empty needles back to non working position.
5. Stitch size 3. Bring needles to working position 2.
6. Using main color knit 24 rows.
7. Using waste yarn knit 6 rows.
8. Remove from machine.

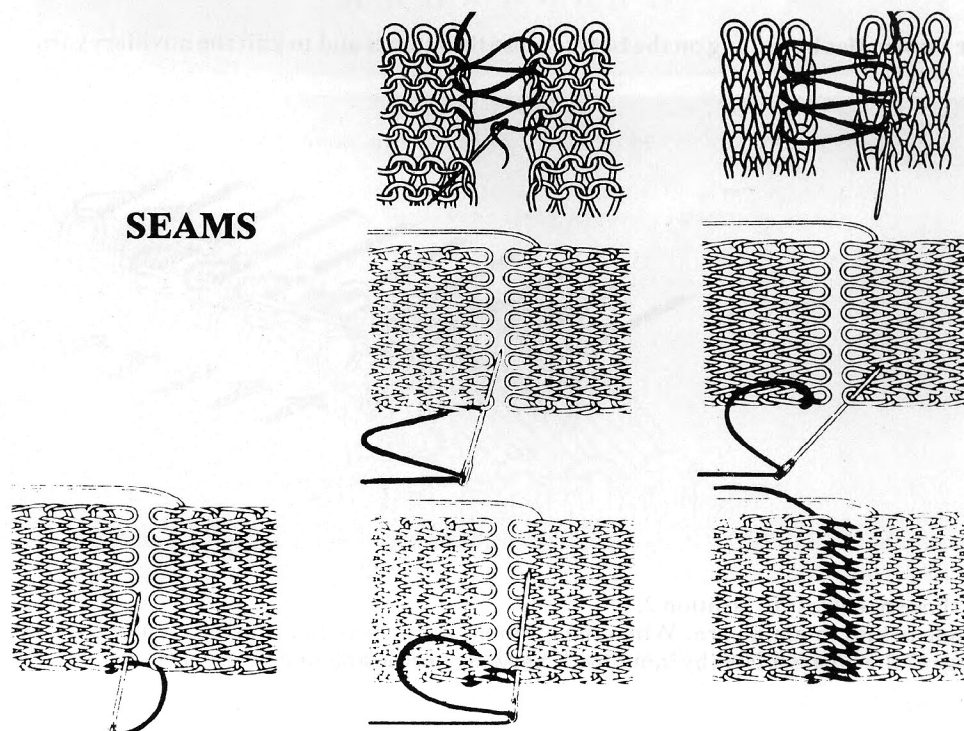
Note: When attached neckband is folded in half and slip stitched into place, the waste yarn can then be removed.

TO MAKE UP

1. Remove waste yarn from sweater back, front and sleeves. Stretch and pull each piece into shape.
2. Pull ribs downwards to shape using a ruler or knitting needle inserted into the hem.
3. Press lightly with a warm iron over a damp cloth, unless otherwise specified by yarn manufacturer.
4. Sew up shoulder and side seams, then sleeve seams.
5. Sew in sleeves, matching the shoulder seam to center of sleeve cap and matching side and sleeve seams.

Note: The sleeve is eased to fit the garment.

6. Pull neckband vertically to ease into shape. Sew band around neck, commencing with ends at the "V". Fold band in half and slip stitch in place unraveling waste yarn as you go. Make a miter at center of the "V". You have now completed your first garment, and the more you practice the more proficient and confident you will become.



MORE ADVANCED TECHNIQUES

We will now move on to show you a few of the more advanced techniques. Practice these now and refer back should you wish to use them at any time.

Knit a small piece for the practice below.

BUTTONHOLES

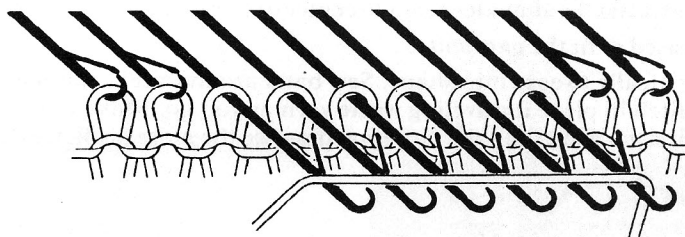
a) Round

These are used for small buttons in stocking stitch or cardigan bands. Use the single end of your eyelet tool and transfer one stitch in the center to the needle next to it. Leave the empty needle in working position 2 with latch open. It will knit in the next row.

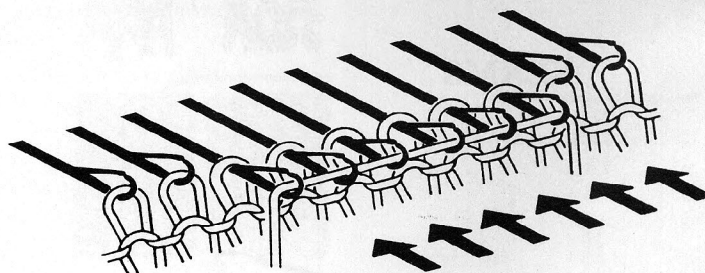
Note: To make the transfer easier bring the stitch for the buttonhole and the next stitch to working position 1. Reset those two needles to working position 2.

b) Horizontal

Lay a 2nd color yarn over the hooks of the needles corresponding to the required width of the buttonhole.



Lower the needles by pulling on the butt to close the latches and to knit the auxiliary yarn.



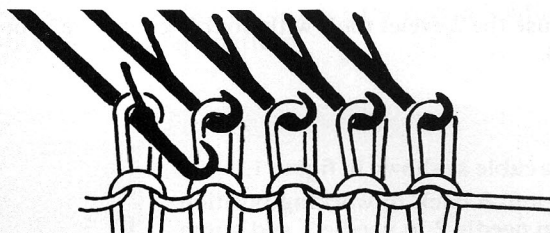
Reset those needles into position 2.

Continue to knit in main yarn. When the garment is finished and pressed, gently remove the 2nd color yarn loosely finishing off the open stitches by hand, with a sewing needle and matching yarn.

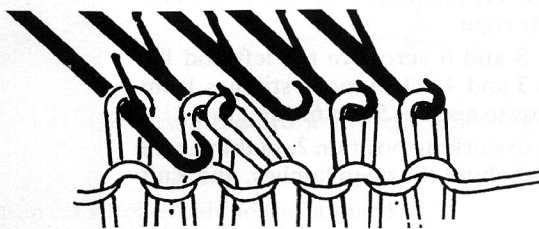
ITALIAN DECREASE

To produce a fancy decrease on raglan sleeve shaping you will perform the decrease not at the edge but inside the edge of the knitting as follows:

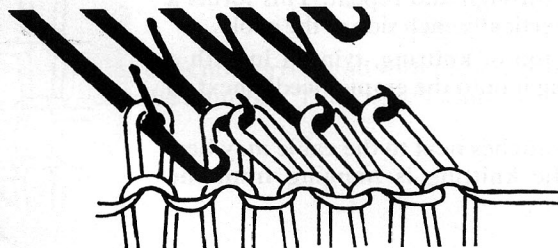
1. Bring 4 end needles from position 2 to position 1, using the eyelet tool as you did with 2 needles in the simple decrease.



2. Transfer the 3rd stitch in, onto the next inside needle.



3. Now using the double end of your eyelet hook, move the last 2 stitches in, to close the edge.



4. Bring the needles back out to working position 2. Check that the empty end needle is back in non working position. Knit 3 rows and repeat.

PICOT HEM

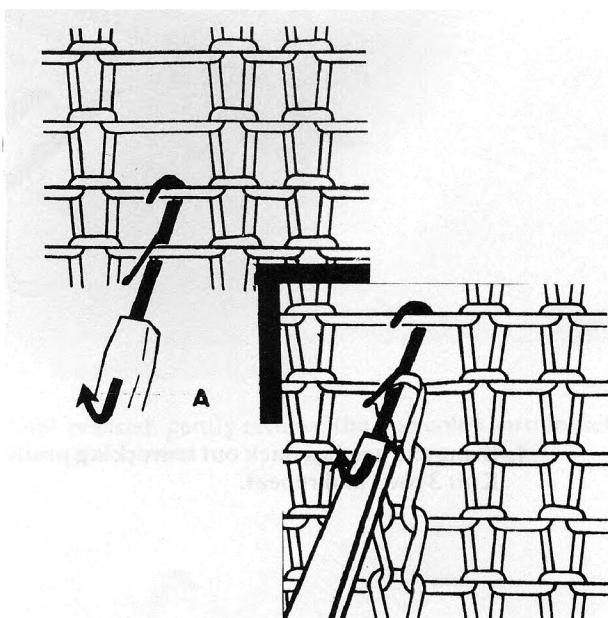
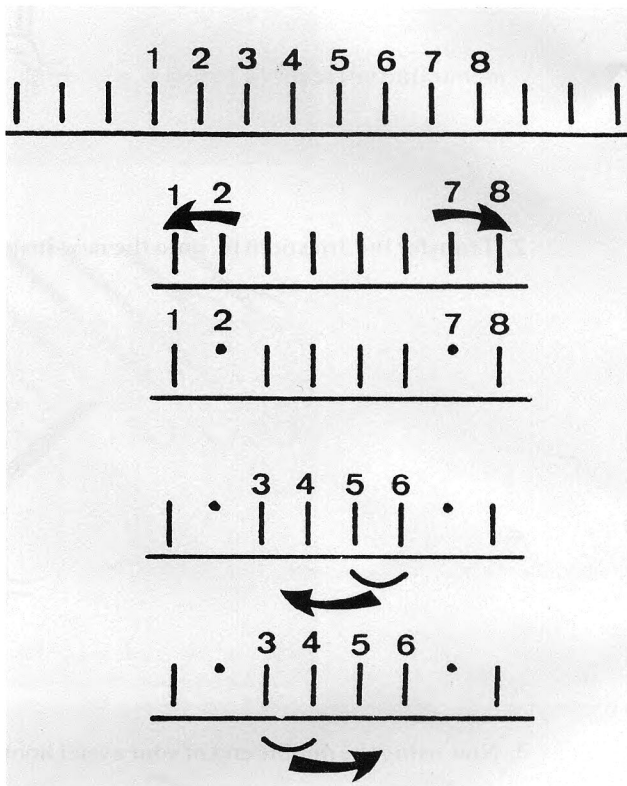
In exercise 7 you made a simple full needle hem. In order to produce a hem with a picot edge, knit half the number of required rows in main yarn. Bring needles to working position 1. Transfer every alternate stitch on to its adjacent needle, but leave the empty needles in working position 1. Bring needles to working position 2 and knit the remainder of the hem rows plus one extra row. A picot edge forms when the hem is turned up following the instructions given for making a simple hem.

CABLES

To make cables you will use the 2 eyelet tools with double ends. Use a looser stitch size to avoid tightness from twists (suggested stitch size 7-8).

1. Select 8 needles for the cable as shown in figure 1.
2. Bring needles 1, 2, 7, and 8 back to working position one. Transfer stitch on needle 2 to needle 1 and stitch on needle 7 to needle 8.
Bring needles 1 and 8 back to working position 2 with stitches behind the open latches.
3. Return empty needles 2 and 7 to non working position.
Note: Steps 4-5 require a bit of practice but the results are very attractive.
4. Using both double ended eyelet tools transfer the stitches on needles 3 and 4 to the tool on the left and 5 and 6 on to the tool on the right.
5. Now bring stitches 5 and 6 across to the left and lift them on to needles 3 and 4. Then move stitches from needles 3 and 4 across to needles 5 and 6.
6. Bring cable needles to working position 2, making sure that the stitches slip behind the open latches, and knit 6 rows.
7. Repeat from 4-6. A longer or a shorter cable may be produced, just change the number of rows knitted in between each twist.
8. (Optional) After garment piece is completed, pick up the loops formed at each side of the cable on the wrong side of the knitting as follows:
9. Insert latch tool hook and slide through as shown in Figure a. Pull through and move up the tool. Pick up the next loop and with one loop in front of and one behind the latch, pull through and repeat. This forms a purl stitch running vertically each side of the cable.
10. Fasten last loop at top of knitting, tying it in with a piece of yarn, or hang it onto the empty needle next to each cable.

Note: Latching up the stitches next to the cable may best be performed while the knitting is hanging from the machine needles.



PATTERN KNITTING

Tuck Stitch

For Tuck Stitch pattern knitting, we recommend that you use 2/3 ply yarn. Stitch size 4-6.

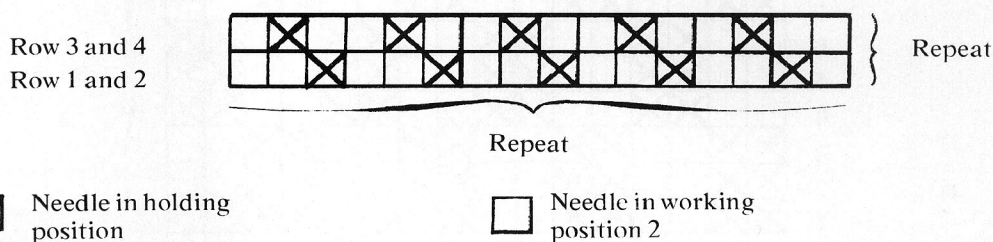
Note: Purl side is the right side.

1. Cast on and knit 10 rows.
2. All needles are in working position 2.

METHOD:

A Tuck Stitch is formed by knitting on some needles but leaving the rest in holding position. The needle positions are then changed every few rows, thereby, creating a pattern.

EXAMPLE:



3. On the first row, working from the left side, bring the 3rd and every following 3rd needle into holding position following the Chart above.
Knit 2 rows.
4. Return all needles to working position 2. (Stitches behind the latches).
5. Now bring the 2nd and every following 3rd needle into holding position and knit 2 rows.
6. Repeat from N° 3 to 5.

You can create your own Tuck Stitch designs by selecting pattern needles into holding position that have one or more working needles between them.

According to the thickness of the yarn, you can knit one, two, three or four rows with the same needles in holding position in order to get different effect.

At least one needle at each side of the knitting should be in working position 2 on every row in order to obtain a neat edge for sewing up.

Note: Because the gauge of tuck stitch knitting does not correspond with the gauge of stocking stitch knitting, garment instructions given in stocking stitch will need to be adjusted. Tuck Stitch knitting will measure shorter and wider than Stocking Stitch knitting.

SLIP STITCH

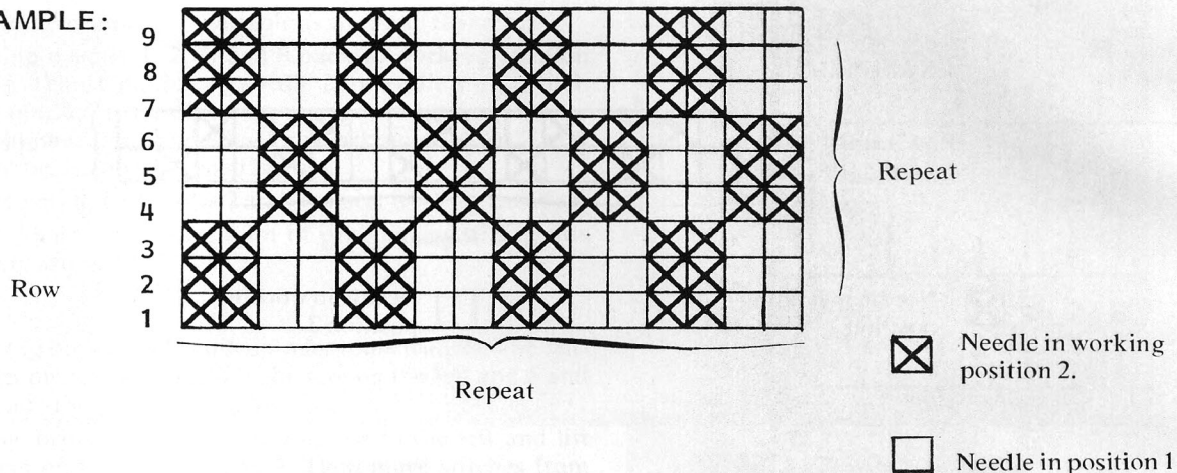
For Slip Stitch pattern knitting 2/3 ply yarn can be used for different effect. Refer to stitch size section.
 Note: Purl side is the right side.

1. Cast on and knit 10 rows.
2. Bring all needles to working position 1.
3. Needle selector switch IN at the back of the carriage.

METHOD:

The needles to knit are brought forward to working position 2. The remainder stay in position 1 to form the Slip Stitch.

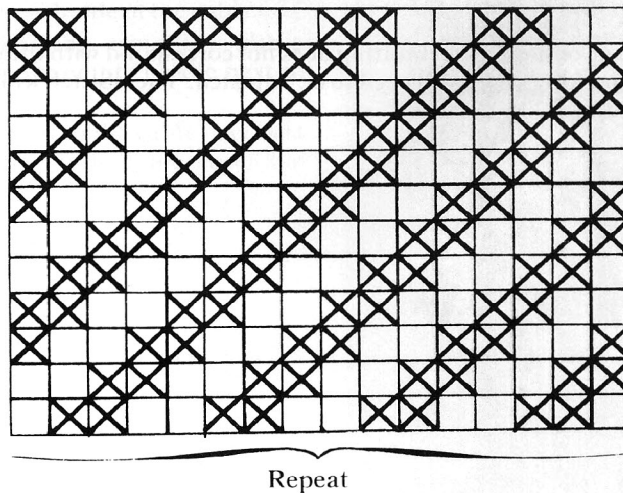
EXAMPLE:



4. Bring needles X into working position 2. Repeat for 3 rows as shown on rows 1-3 above.
5. Bring needles X into working position 2. Repeat for 3 rows as shown on rows 4-6 above.
6. Repeat from row 1. (Nos. 4-5)

You can design your own Slip Stitch design, but we recommend that you always have at least one needle at each side of your knitting in working position 2 to obtain a neat edge for sewing up.

Why not try this diagonal design:



FAIRISLE

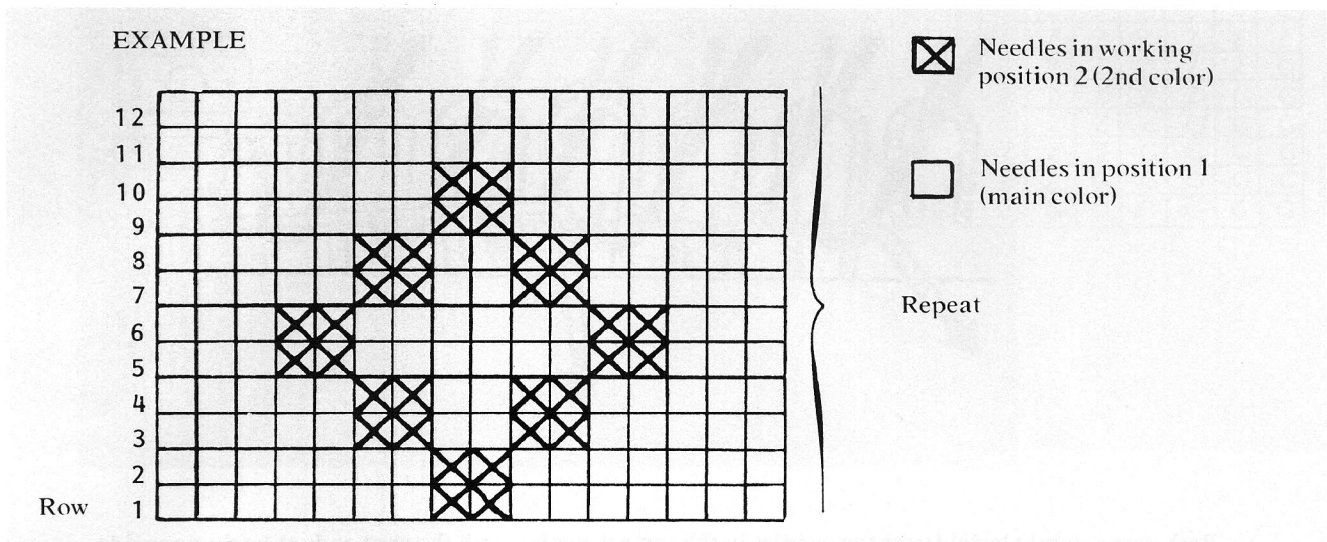
Use two different colors of 3 ply or sport yarn. Use one stitch size larger than used for Stocking Stitch.

1. Cast-on and knit 10 rows.
2. Return all needles to working position 1. Needle selector switch IN at back of carriage.

METHOD:

Needles to knit on each row (either background color or 2nd color) are brought forward into working position 2.

Only one color at a time is knitted on each pass of the carriage



3. Bring needles as indicated above (X) into working position 2. Lay 2nd color yarn across the needles. Knit 1 row.
4. Bring needles as indicated in row 2 (X) into working position 2. Using 2nd color again, knit 1 row.
5. Now return to row one of the Chart above. This time, bring needles that were previously left in position 1 (□) to working position 2. Using main color, knit 1 row.
6. Go to row 2 again and bring needles (☒) to working position 2 again as in N° 5. Knit 1 row.
7. Change to 2nd color and follow rows 3 and 4 of Chart.
8. Change to main color and knit the background of rows 3 and 4.
9. Continue reversing selection and yarn every 2 rows.

This design can be knitted as a single motif or continued right across your knitting.

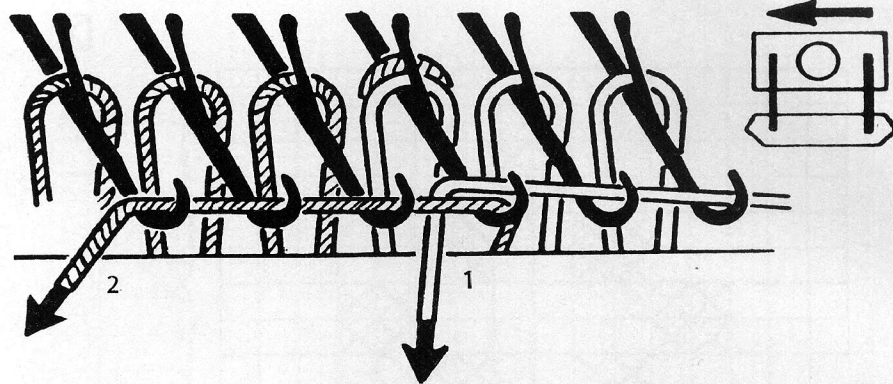
It is not necessary to always knit two rows of each color, but if you change your color every row, you will need to break the yarn as it will not be on the carriage side.

INTARSIA KNITTING

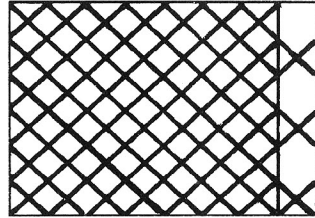
Intarsia is the term used for color pattern knitting without loops of yarns on the reverse side of the fabric.

USING 2 DIFFERENT COLORS

1. Cast-on and knit 10 rows.
2. All needles are in working position 2.
3. In this method, the two yarns are overlapped at the joining needle.

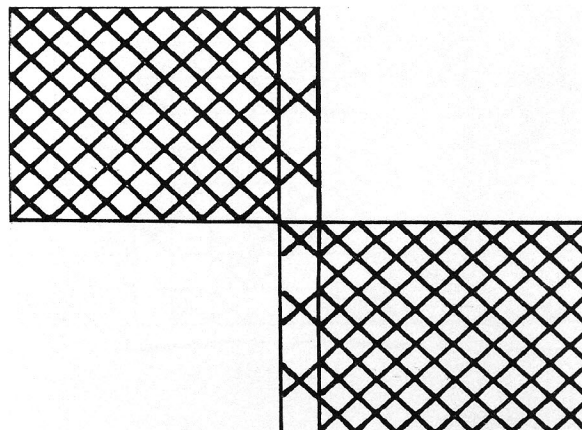


Both yarns should be laid over the needles in the same direction with the yarn ends at the carriage side.



EXAMPLE:

4. Lay first color over half the needles on the carriage side.
5. Lay 2nd color over the needles on the other side overlapping yarns at the center needle.
6. Knit 1 row. Repeat each row remembering to lay the yarns from the carriage side, and to alternate overlapping the yarns from the right center needle to the left center needle. You can reverse the colors to get a patchwork effect.

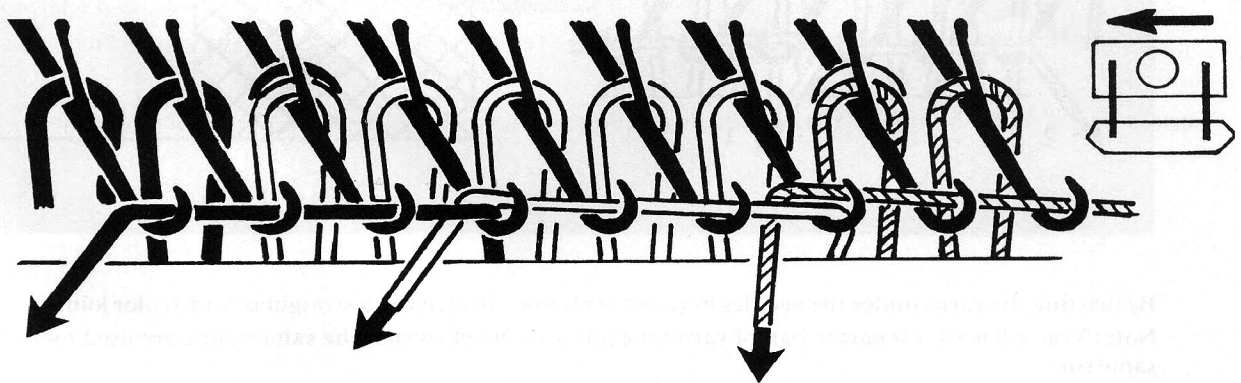


INTARSIA USING SEVERAL COLORS

13	G	G	G	G	X	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Z	O	O	O	O	O	O								
12	G	G	G	G	X	X	X	Y	Y	Y	Y	Y	Y	Y	Y	Y	Z	Z	Z	Z	O	O	O	O								
11	G	G	G	X	X	X	X	Y	Y	Y	Y	Y	Y	Y	Y	Z	Z	Z	Z	Z	O	O	O	O								
10	G	G	X	X	X	X	X	X	X	Y	Y	Y	Y	Y	Z	Z	Z	Z	Z	Z	Z	Z	O	O								
9	G	X	X	X	X	X	X	X	X	X	Y	Y	Y	Y	Z	Z	Z	Z	Z	Z	Z	Z	Z	O	O							
8	X	X	X	X	X	X	X	X	X	X	Y	Y	Y	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	O							
7	X	X	X	X	X	X	X	X	X	X	X	Y	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z							
6	X	X	X	X	X	X	X	X	X	X	X	B	B	B	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	G							
5	Y	X	X	X	X	X	X	X	X	X	B	B	B	B	B	Z	Z	Z	Z	Z	Z	Z	Z	Z	G	G						
4	Y	Y	X	X	X	X	X	X	X	B	B	B	B	B	B	Z	Z	Z	Z	Z	Z	Z	Z	Z	G	G	G					
3	Y	Y	Y	X	X	X	X	X	B	B	B	B	B	B	B	Z	Z	Z	Z	Z	Z	Z	Z	Z	G	G	G					
2	Y	Y	Y	Y	X	X	X	B	B	B	B	B	B	B	B	Z	Z	Z	Z	Z	Z	Z	Z	Z	G	G	G					
1	Y	Y	Y	Y	Y	X	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	Z	G	G	G	C	G	G

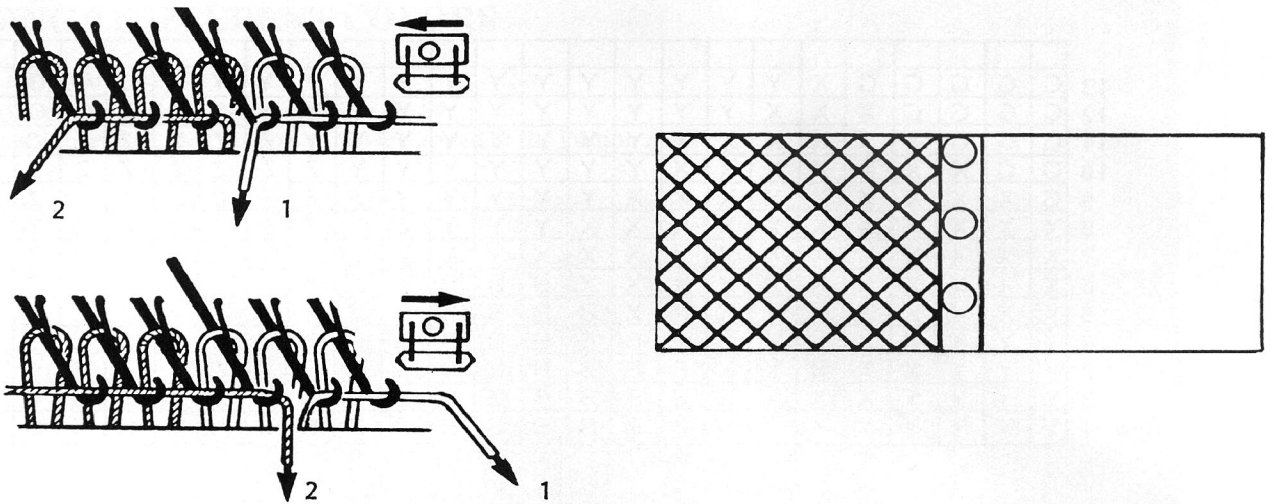
G = Green
 Y = Yellow
 O = Orange
 B = Blue
 X = Black
 Z = White

Lay yarns over needles from direction of carriage as shown above, overlapping yarns on joining needles as follows:



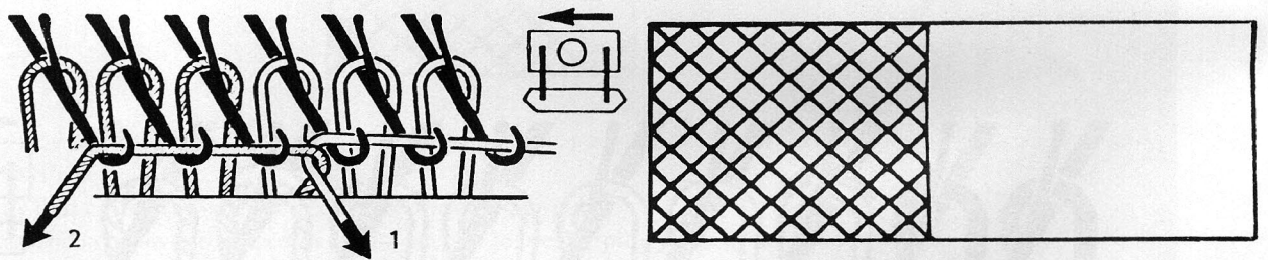
The Intarsia method shown so far, overlaps the colors at the joins. This gives a "stitched together" look on the right side of the knitting.

METHOD 2



By not overlapping the yarns you can get a laced join effect.

METHOD 3



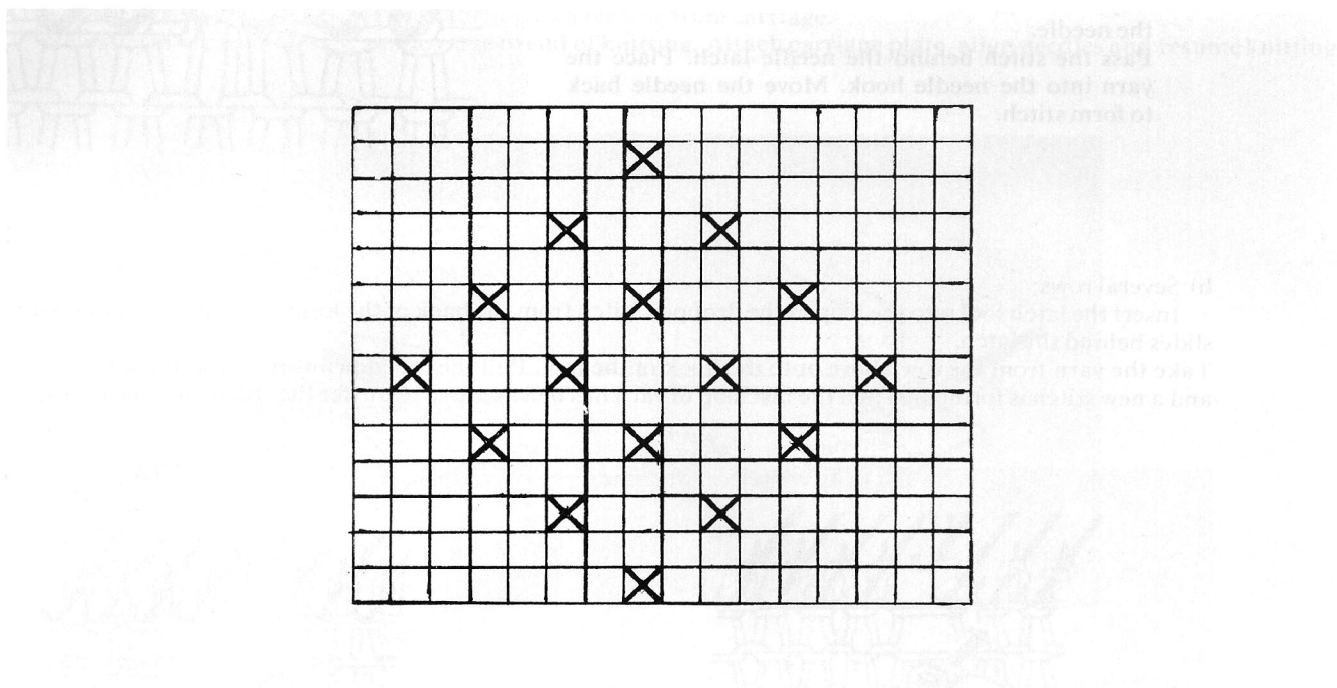
By twisting the yarns under the needles between each row will give you a straight color to color join.

Note: You will need a separate ball of yarn for each color block even if the same colors are used more than once in the same row.

OPEN LACE PATTERNS

Just as holes were formed when you made a Picot edged hem, lace patterns are created by transferring stitches in the same way.

Here we show an example of how to create a lace motif. You can also repeat the design all over your garment.



1. Cast-on and knit 10 rows.
2. Transfer stitch as shown in Chart above (X) onto its adjacent needle. Knit 2 rows

Note: To make the transfer easier, bring the pattern stitch and the next stitch to working position 1 and reset those needles to working position 2.

3. Row 3, transfer stitches as shown in Chart above (X) onto their adjacent needles.
Knit 2 rows.

4. Continue following Chart until pattern is completed.

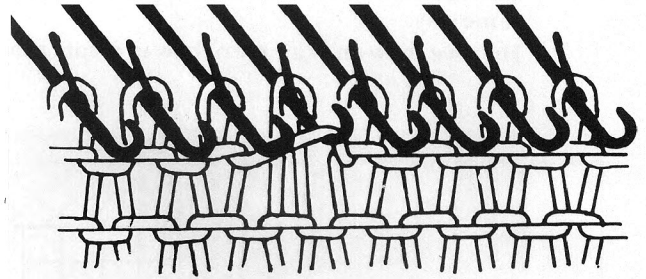
Try your own lace designs: You can transfer stitches in either direction (left or right) for different effects.

PLEASE NOTE: DO NOT transfer 2 stitches next to or above each other as the holes produced will be too large.

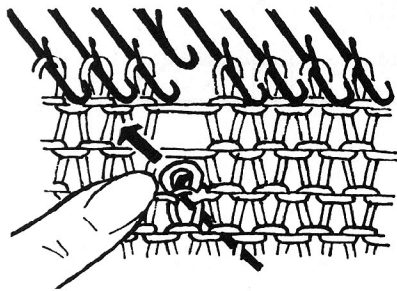
WHAT TO DO IF ...

1. A needle jams and breaks:
Turn to Section "Care and Maintenance".
2. You drop a stitch:

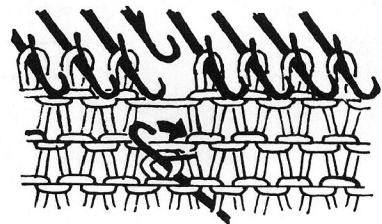
- a) On one row:
Replace dropped stitch and the unknitted yarn onto the needle.
Pass the stitch behind the needle latch. Place the yarn into the needle hook. Move the needle back to form stitch.



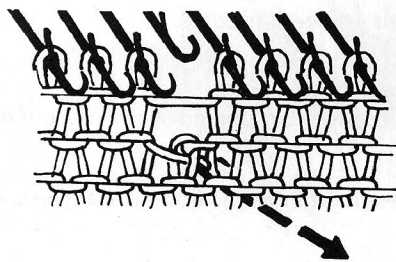
- b) Several rows:
Insert the latch tool into the loop of the dropped stitch from the back of the knitting. Push the tool up until the stitch slides behind the latch.
Take the yarn from the row above onto the hook of the tool. Pull the tool downwards until the latch of the tool closes and a new stitch is formed. When the last loop of yarn has been knitted, transfer the stitch onto the needle.



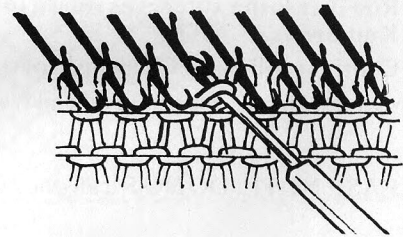
1



2



3

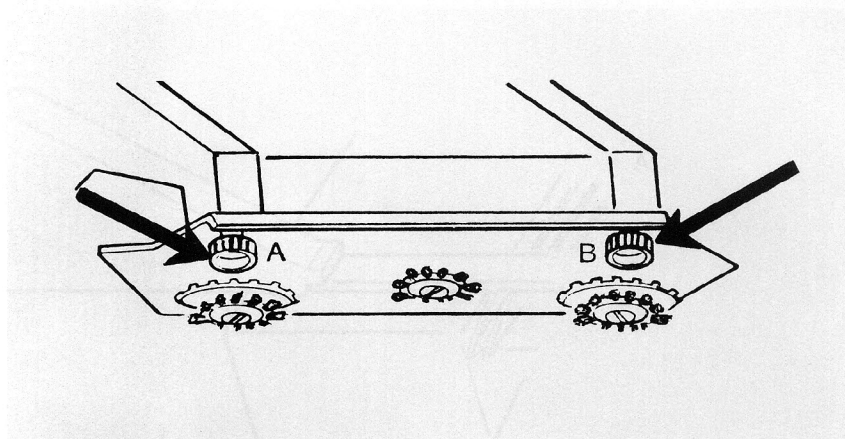


4

3. You are dropping edge stitches.

This is caused by the latch of the first needle closing before the yarn has been laid over, or the stitch is in front of the latch. Check that the latch is open before knitting and that the stitch is behind the latch. Also, be sure to move up the edge weights every 10 rows.

4. You drop other stitches:
Check that you have no broken needles or needles with bent latches. If you do, turn to Section 'Care and Maintenance'.
If not, the dropped stitch (es) will have been caused by the needle latches being closed or the previous stitches remaining in front of and not behind the open latches.
5. Carriage hits needle butts:
Needles are not in alignment with the correct holding or working position.
6. Carriage jams:
Loosen front carriage plate, A and B below, and remove from carriage.
Release jammed needles. Move carriage to end of knitting. Attach carriage plate, align needles and resume knitting.



CARE + MAINTENANCE

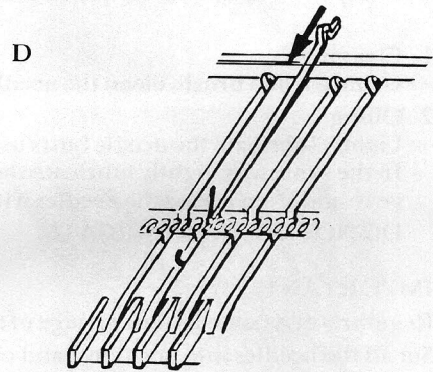
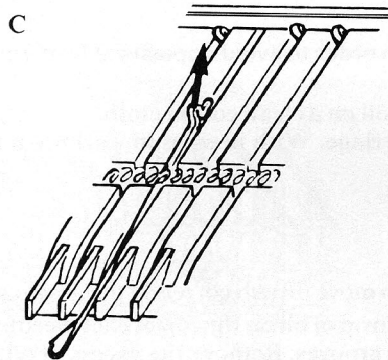
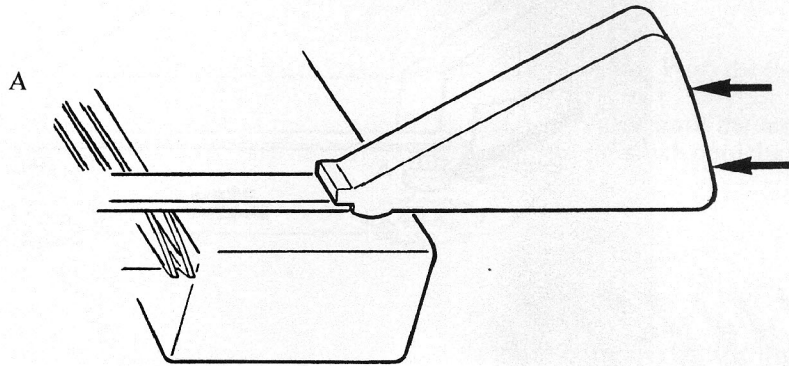
1. Cleaning
Using a nylon brush, clean the needle grooves regularly in order to avoid deposits of fluff and dust.
2. Oiling
Lightly lubricate the needle butts using Sewing Machine oil on a clean cotton cloth.
In the same way, lightly lubricate the underside of the carriage. With needles in working position 2, take the carriage to and from across the needles without using yarn.
DO NOT OVER-LUBRICATE.

IMPORTANT:

Regularly or as soon as the carriage of the machine is hard to move, brush correctly the grooves of the needle bed. Set all the needles into position 2 and oil each groove with a drop of oil on the top of each needle butt. Move the carriage across several times to allow the oil to penetrate well into the grooves. Remove the excess of oil by means of a soft cloth.

3. Changing a needle

- (a) The front rail on the needle bed must be moved. Place the special tool provided at the end of the needle bed in line with the rail and push.
Pull the rail out only as far as the damaged needle.
- (b) The needle must be removed with the latch closed unless it is too damaged and then we recommend that you cut the end of the needle off using a pair of pliers.
- (c) Lift the needle by the butt and pull it carefully out backwards, taking care not to damage the needle retaining spring.
- (d) Open the latch of the new needle and place it in the needle groove.
- (e) Slide it forward **carefully** and into position **under** the spring.
- (f) Push the rail back in place.



NOTE

Take special care so as to not damage the retaining spring.

GLOSSARY

1	ACCESORIES	3	NEEDLE
3	BUTT	2	NEEDLE BED
18	BUTTONHOLES	1-3	NEEDLE BUTT
20	CABLES	1-3	NEEDLE HOOK
29	CARE AND MAINTENANCE	1-3	NEEDLE LATCH
2-3	CARRIAGE	2	NEEDLE POSITIONS
14	CASTING OFF	2	NEEDLE SELECTION
6-7	CASTING ON	2-3	NEEDLE SELECTOR SWITCH
30	CHANGING A NEEDLE	1-4	NEEDLE SELECTOR TOOL
2	CLAMP	27	OPEN LACE
2	CLAMP SOCKET	11	PARTIAL KNITTING
10	DECREASING	21	PATTERN
1	EDGE WEIGHTS	20	PICOT HEM
1	EYELET TOOL	30	RETAINING SPRINGS
23	FAIRISLE	13	RIBS
1	FLOW COMBS	17	SEAMS
15	GARMENT SHAPPING	2	SETTING UP
12	HEM	22	SLIP STITCH
9	INCREASING	3	STITCH FORMATION
24-25-26	INTARSIA	5	STITCH SIZE DIAL
19	ITALIAN DECREASING	4	STITCH SIZES
15	SWEATER PATTERN	8	STOCKING STITCH
27	LACE	21	TUCK STITCH
3	LATCH	12	WELT
1	LATCH TOOL	28	WHAT TO DO IF ...
13	MOCK RIB	1	YARN CLIP
21-27	MOTIFS		