

Your easy guide  
to modern  
**KNITTING**



*Empire-Knitmaster*  
MOD 305 AUTOMATIC

# KNITTING

## STEP **1**

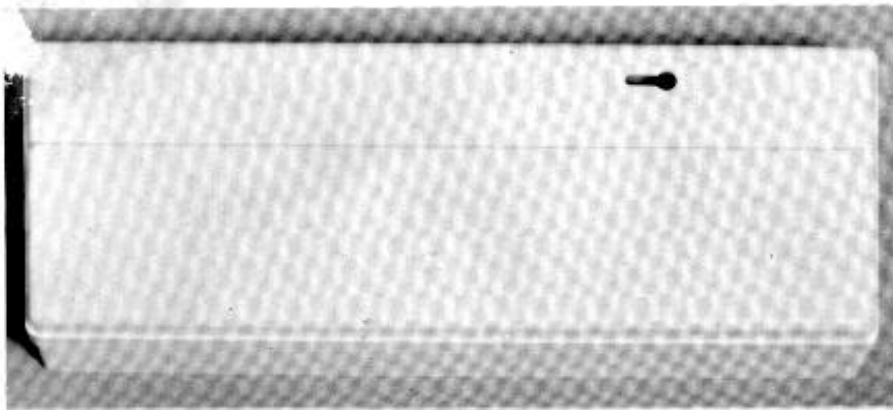


This booklet has been divided into 5 basic and easy to follow STEPS, with all you need to know about machine knitting - BUT KNITTING WITH 200 NEEDLES INSTEAD OF 2 AS FOR HAND KNITTING.

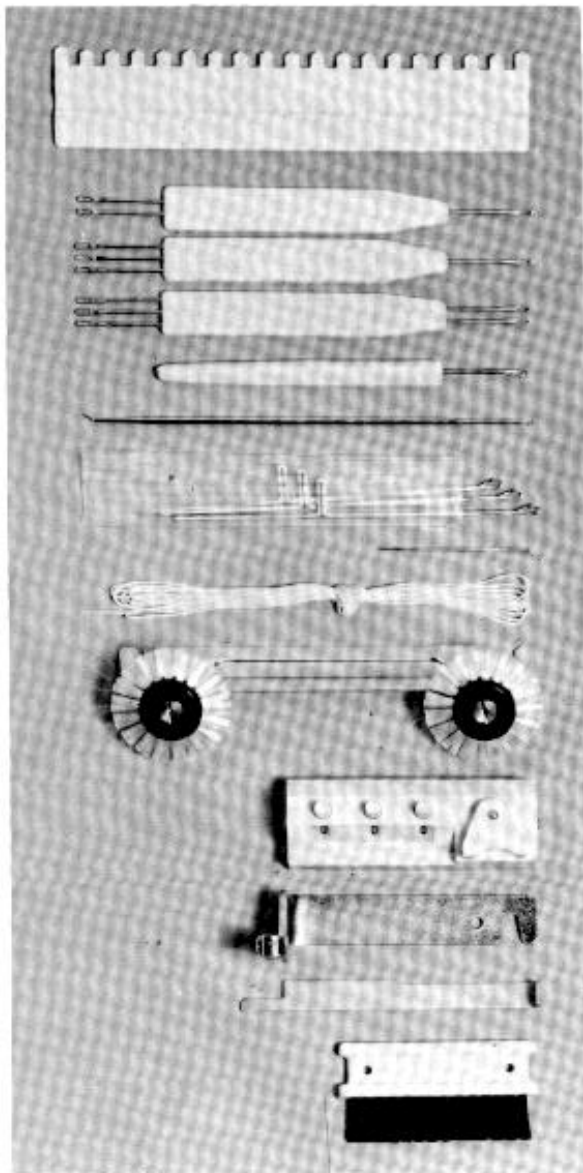
Follow the instructions and illustrations carefully and in no time at all you will be machine knitting - not only knitting, but also enjoying using your new knitting machine.

Interesting notes about wools and yarns	PAGE	4 - 5
Setting up the machine and knitting		8 - 27
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## ACCESSORIES



Accessory Case



Needle Pusher

Single and double Transfer Tool

Single and triple Transfer Tool

Double and Triple Transfer Tool

Latchet Tool

Crochet and work Hook

3 Spare needles and seaming needle

Nylon Thread

Weaving Brush

Row Counter

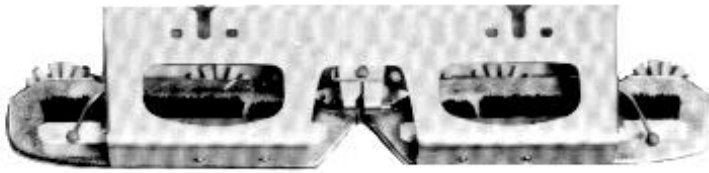
Carriage Lock Plate

Lock Plate for Pattern Panel

Brush

# ACCESSORIES

Sinker Arm Assembly



Oil Bottle



Table Clamps



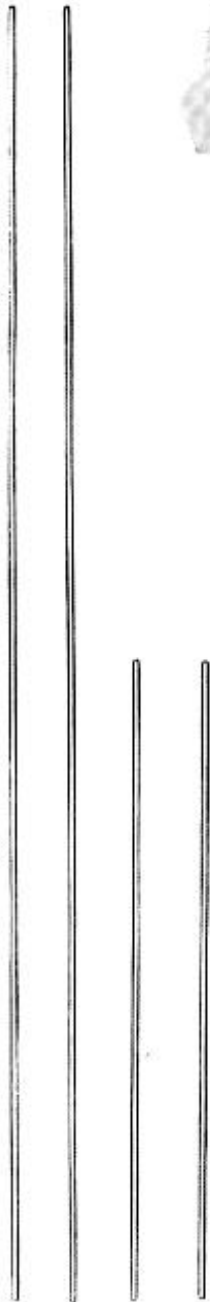
Card Holder



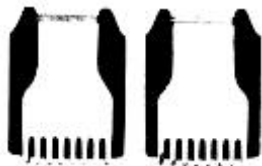
Wool Guide



Rib Frame



4 Balance Rods



4 Claws



Yarn Brake Rod

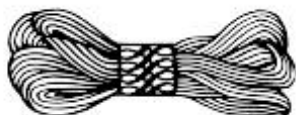


Yarn Brake

## PREPARATION OF YOUR YARNS

Your new knitting machine has been designed to give you perfect results using a wide range of yarns from cotton and 2 Ply wool right through to double knitting wool or even thicker. However, it is best to start with a standard 3 Ply wool. Always use the best quality wool or yarn available and remember - your garment can never be better than the yarn you choose.

Correct preparation of your yarns before you start knitting is important. This extra care will make knitting much more enjoyable, easier and the quality of your garment much better.



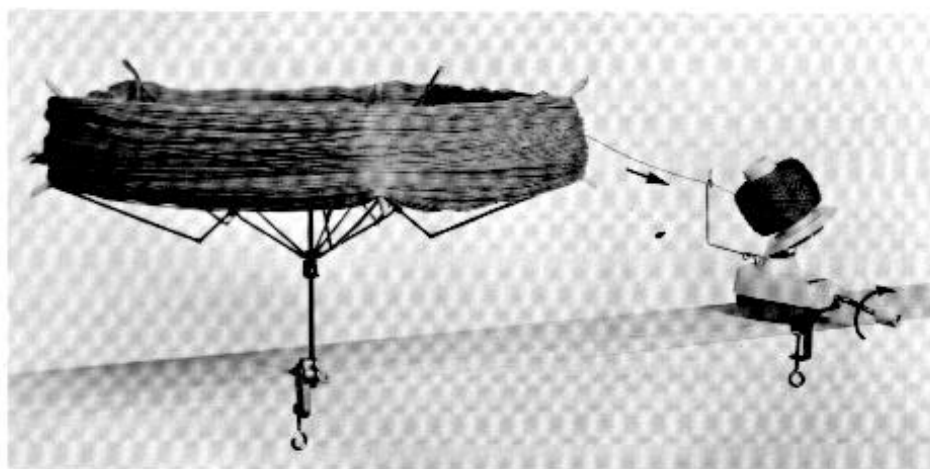
It is quite impossible to knit from a hank like this. You will have to open it and place it onto a skein holder to wind it into a ball suitable for machine knitting.



This hand wound ball of yarn looks good but is completely unsuitable for machine knitting. It will roll around and become tangled.



Although it is not recommended, it is possible to knit from this ball if you are able to draw the yarn smoothly from the centre. You cannot knit by drawing the yarn from the outside.



Place the hank onto the skein holder. Loosen the knot where the thread is joined and thread one end through the guide of the wool winder and then into the groove across the top of the bobbin.

While you wind the yarn from the skein holder onto the wool winder, let the yarn slide over wax. This will make the thread smooth and much easier to knit.

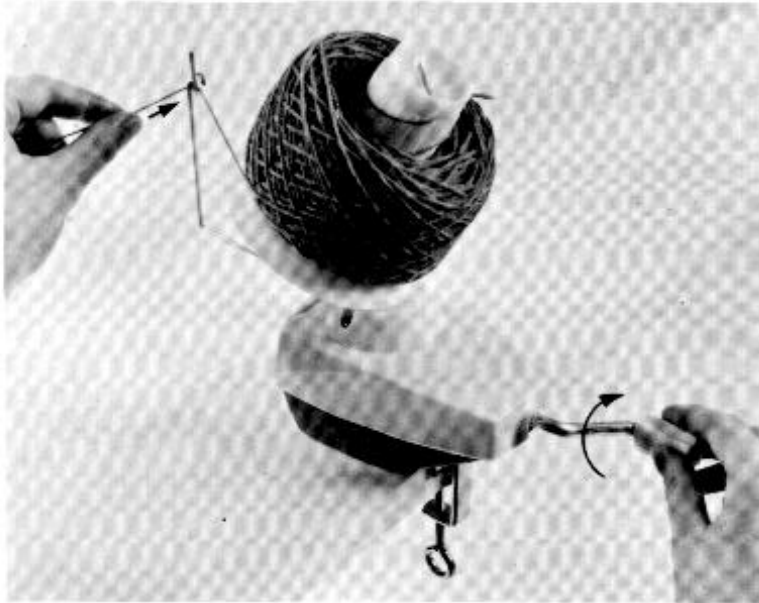
When you wax your yarn at the same time as you wind, the ball will be small and tight. You CANNOT knit from this small, tight ball. You MUST rewind it, allowing your yarn to run VERY LIGHTLY through your hand.

If a knot passes through your hand as you wind - STOP. Separate the yarn and start a new ball. Never leave knots inside your yarn ball as they cause faults or dropped stitches as you knit.

## PREPARATION OF YOUR YARNS

I am sure that you have a few odd balls of yarn lying around at home. PLEASE DO NOT use this yarn while learning. Use a thin 3 Ply yarn ONLY. As you become accustomed to machine knitting, you can use all types of yarn. Meanwhile, ONLY use the recommended yarn and wind it exactly as explained in the following instruction.

## THE AUTOMATIC BALL WINDER



Your machine will knit the yarn so quickly and effortlessly that you won't have time to catch knots and snags. It is important to the smooth running of your machine to have well wound wool and well worth the trouble.

The ball winder will wind your yarns speedily and perfectly, ready for machine knitting.

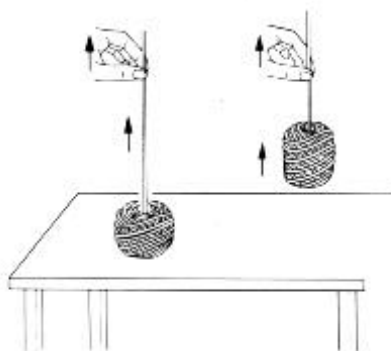
It saves a great deal of time by winding the yarn into a ball in a few seconds.

Also very useful while you are still practising as you are able to unravel and rewind the knitted yarn.

Always start unravelling from the last row knitted. When joining yarns make sure the joins come at the beginning or end of rows. When you see the ball is almost finished, pull down the yarn from the Yarn Brake and re-thread with the new ball of yarn.

While winding the yarn the first time - hold the wax in your hand and merely allow the yarn to run over the wax while winding. Waxing smoothes the tiny hairs on the yarn and makes it ready for very smooth running - very helpful for automatic patterning. All traces of wax will disappear when the garment is pressed.

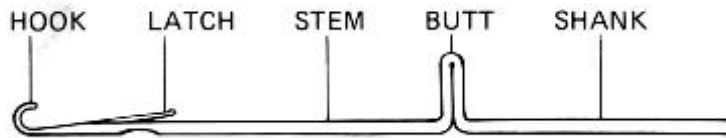
## AN IMPORTANT TEST



WHEN THE YARN IS PULLED FROM THE CENTRE OF THE BALL - THE THREAD MUST COME OUT FREELY WITHOUT LIFTING THE BALL FROM THE TABLE.



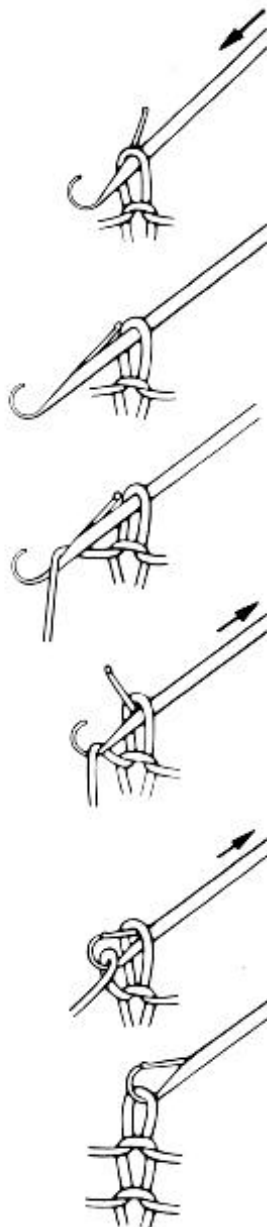
# WONDERFUL, YET SO SIMPLE LATCH NEEDLE



Over a century ago, the latch needle was invented in Europe. This invention was so wonderful that, to this day, the basic shape of latch needles has remained unchanged and machines fitted with these needles are used to produce most of the knitwear on sale today.

## HOW STITCHES ARE FORMED

The movement of the latch needle, in and out of the needle bed while knitting, is controlled by the carriage.

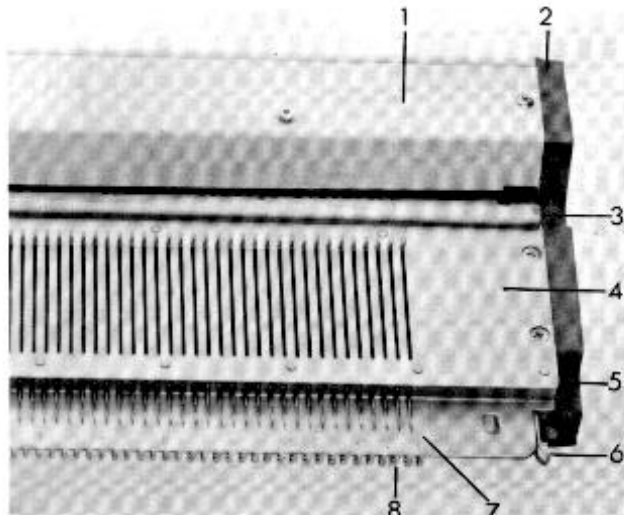


1. As the needle moves out, the stitch automatically opens the latch.
2. The needle moves out further and the stitch slides behind the latch.
3. The yarn is automatically fed onto the hook by the yarn feeder – preparing for a new stitch.
4. The needle moves back inside the needle bed and the old stitch slides forward causing the latch to close over the yarn inside the hook.  

The latch needle will ONLY drop a stitch if there is NO YARN in the needle hook when the needle returns into the needle bed.
5. The needle is pulled backwards, causing the old stitch to slide onto the needle latch.
6. When the needle is completely pulled back - the old stitch slides over the closed latch and the yarn forms a new stitch in the needle hook.

As this cycle of movements is repeated, stitches are formed and when the carriage moves across the needle bed 200 needles form as many stitches in the manner explained above.

# MAIN PARTS OF THE MACHINE



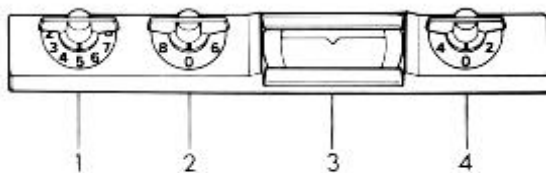
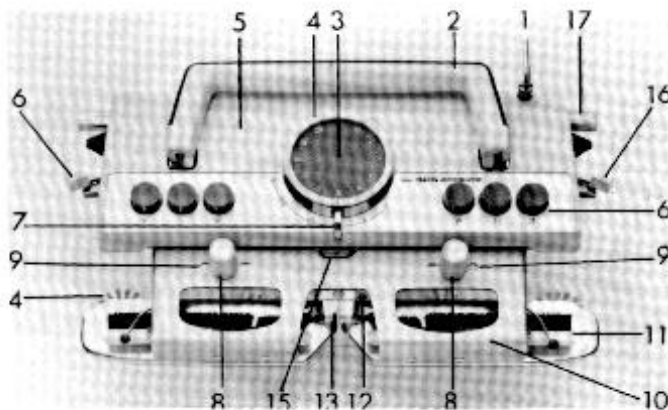
## NEEDLE BED

1. Rear Cover Plate
2. Side Covers
3. Carriage Guide Rail
4. Needle Bed
5. Needle Retaining Bar
6. Yarn Clip (left & right)
7. Needle Number Plate
8. Sinker Gate and Sinker Gate Pins



## CARRIAGE PARTS

1. Row Counter Tripper
2. Handle
3. Stitch Tension Dial
4. Tension Dial Ring
5. Carriage Plate
6. Push Buttons (left & right)
7. Cam Lever
8. Knurled nuts to fasten Sinker Arm Assembly onto carriage.
9. Studs to secure Sinker Arm Assembly onto the carriage
10. Sinker Arm Assembly
11. Latch Opening Brushes
12. Lock Spring for Yarn Feeder
13. Yarn Feeder
14. Roller Brush Wheels (left & right)
15. Lock Spring for Sinker Arm
16. Side Levers
17. Carriage Guide Rail



## PATTERN PANEL

1. Zig Zag Button
2. LEFT side Needle Selector Button
3. Pattern Needle Indicator
4. RIGHT side Needle Selector Button



## UNPACKING THE MACHINE



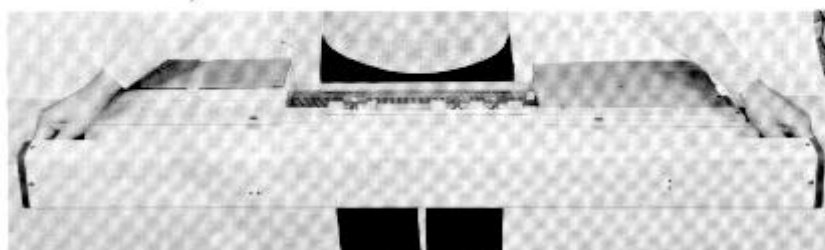
Set the machine onto the table.  
Handle of casing facing away.



Undo both latch locks which are  
situated at rear of the machine  
casing.

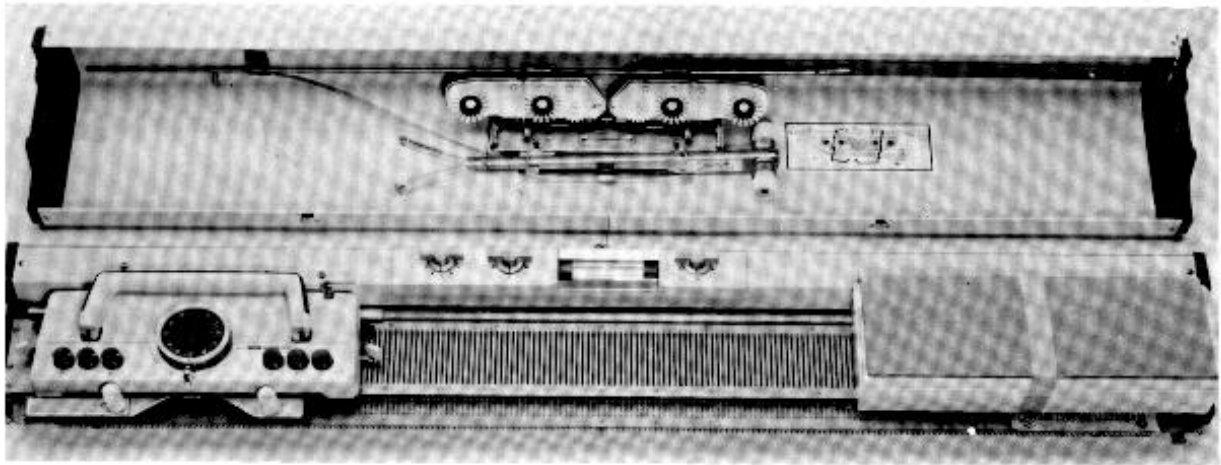


Lift up far side of cover and then  
pull cover towards you to free  
it.

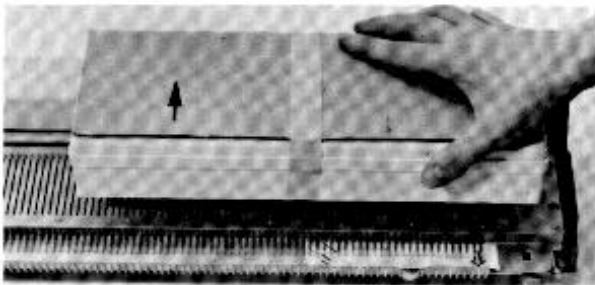


Place the cover to rear of  
machine, the lower side of the  
cover forward.

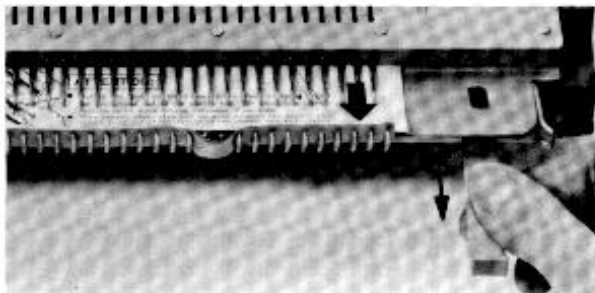
## UNPACKING THE MACHINE



On right side of your knitter is a case for the small accessories.

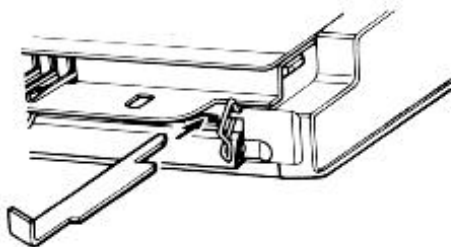


Raise the Accessory Case to remove it from your knitter. Place it inside the cover.



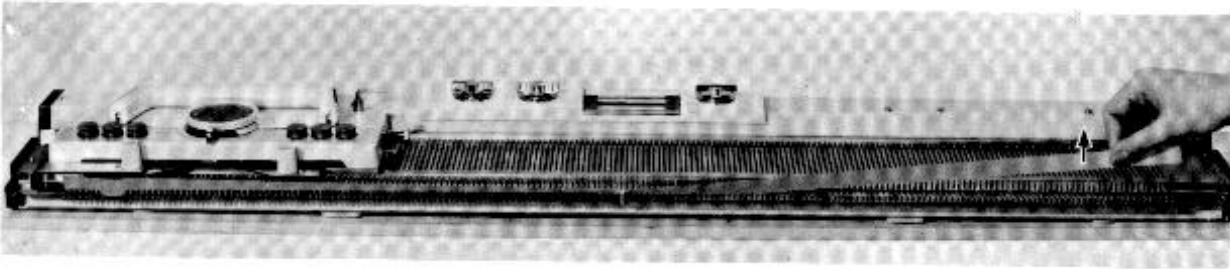
Below the RIGHT hand side of the needle bed a copper plate is inserted. Remove it by pulling it towards you.

Remove the little pink instruction slip from below the last needles.



When transporting the machine - ALWAYS re-insert the copper plate with the tongue at LEFT and the bent end upwards as shown.

## SETTING UP THE MACHINE

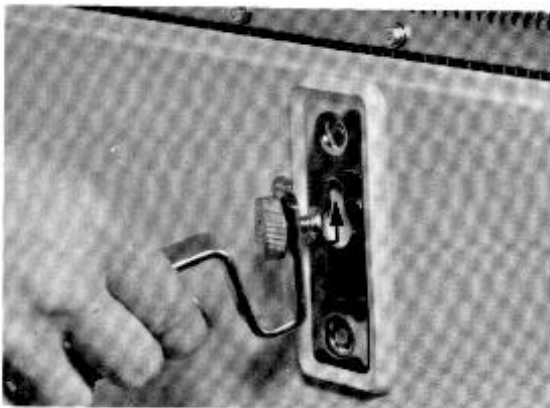


Remove the cardboard Needle Protector from the Sinker Gate of the knitter. If you wish, you can keep it.

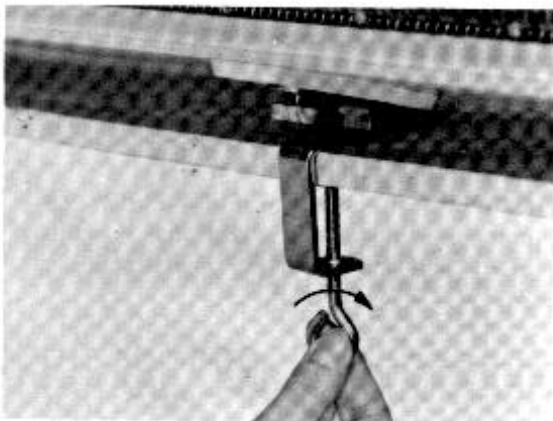


Take the two Table Clamps from inside the Accessory Case.

Turn screws A and B until they are wide open.

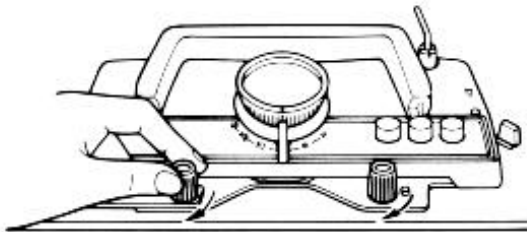
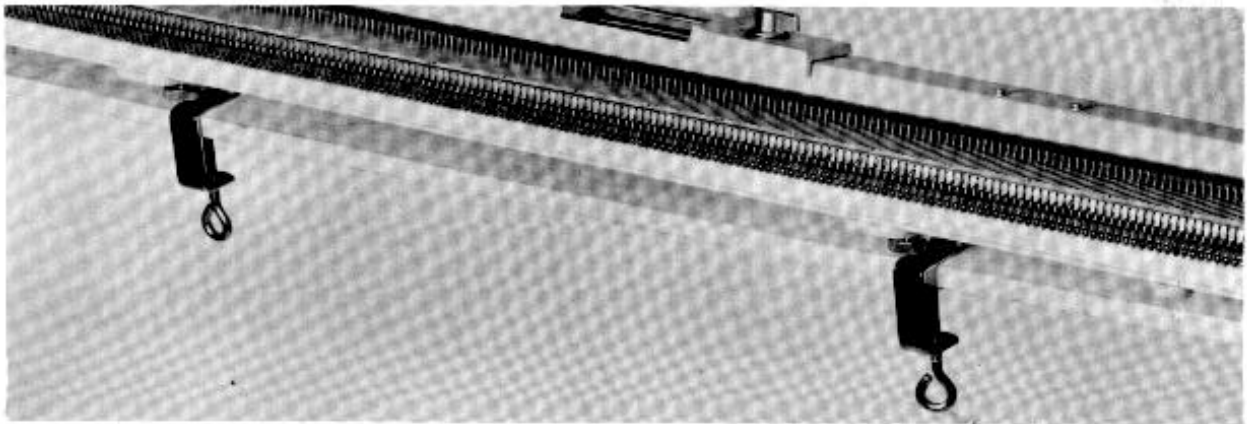


Tilt the machine and put the head of screw A into the keyhole on the underside of the machine. Pull the Clamp upwards into the narrow neck of the hole and turn the knurled nut in a clockwise direction - thus securing the Table Clamp firmly to the machine. Secure the second Table Clamp onto the machine.



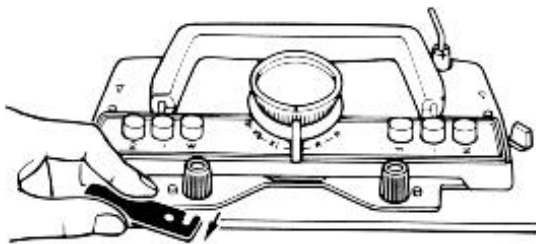
Now lower the machine, setting it flush with the table edge, and turn both screws B in a clockwise direction until they are fixed firmly onto the table.

## SETTING UP THE MACHINE



TO PROTECT THE MACHINE WHILE IN TRANSIT OR WHILE IT IS NOT BEING USED, THE CARRIAGE IS SECURED AT THE LEFT HAND SIDE OF THE NEEDLE BED BY MEANS OF A LOCK PLATE.

To free carriage - turn both white knurled nuts in an anti-clockwise direction until they are loose.



Remove the Lock Plate by pulling it towards you, away from the carriage and off the needle bed. Keep it in a safe place for future use.

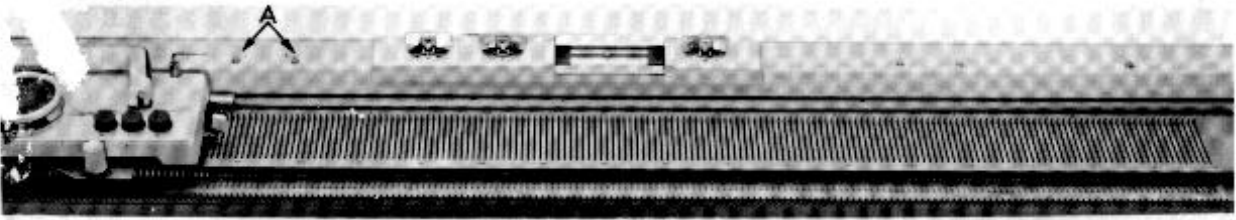
NOTE: Whenever the machine is not in use, be sure to replace the Lock Plate to fasten the carriage to the needle bed.



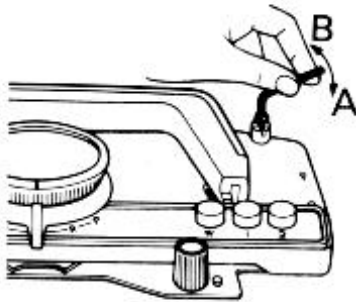
Raise the handle until it snaps into a locked vertical position.

When machine is not in use, return the handle onto carriage plate.

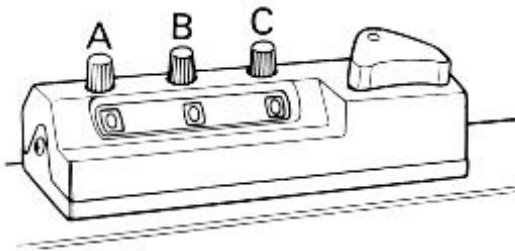
## THE AUTOMATIC ROW COUNTER



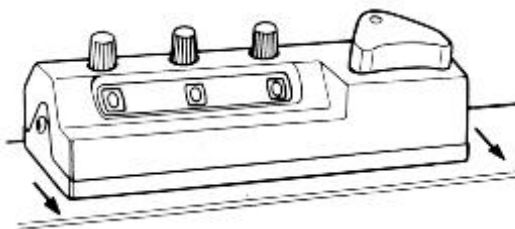
On the LEFT side of the Pattern Panel are TWO small studs (A). On these studs you can fix the Row Counter. Take the Row Counter out of the Accessory Case and place it, with the two keyholes on the underside, on top of the two studs. Push it down and back - this will lock the Row Counter in position. The Row Counter is automatically operated by the Row Counter Tripper at the RIGHT side rear corner of the carriage. Each time the carriage moves past the Row Counter it will register one more row of knitting.



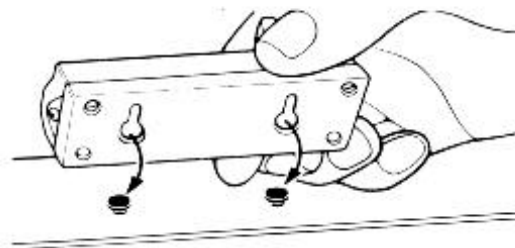
To put the Row Counter Tripper into operation pull it upwards and turn it backwards from A to B as shown by the arrow.



You can reset your Row Counter to zero by turning the knurled nuts A, B and C.

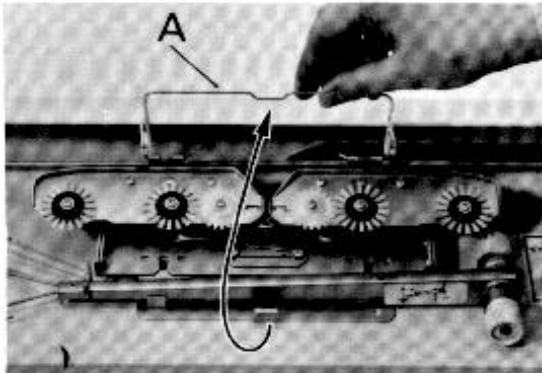


Should you wish to remove the Row Counter, just slide it firmly towards you until it lifts off easily.



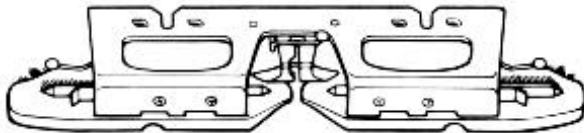
To replace the Row Counter, press it down firmly so that the slots engage the raised studs, then slide it backwards until it locks in the correct position.

## ATTACH THE SINKER ARM ASSEMBLY

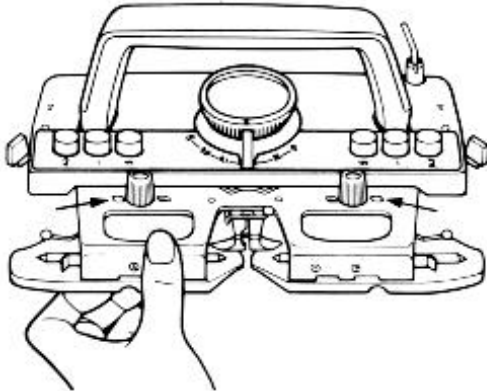


Release the Retaining Spring A by pushing it down on either side of the clip, then pull it forward and upwards.

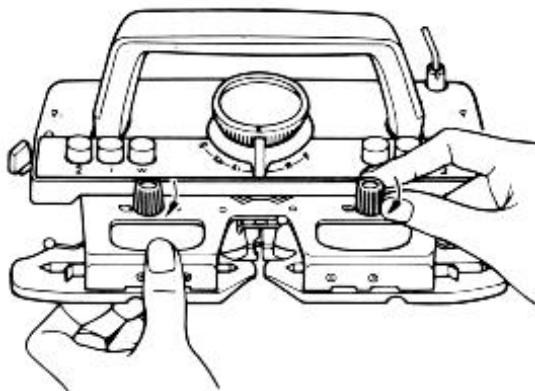
Remove the Sinker Arm Assembly from the cover.



Turn the Sinker Arm Assembly so that the Brush Wheels are on the underside.



Slide the Sinker Arm Assembly under the two knurled nuts and push it back as far as it will go - under the Retaining Spring at the front of the carriage and ensure that the studs on the top of the carriage plate FIT INTO THE HOLES IN THE SINKER ARM ASSEMBLY.

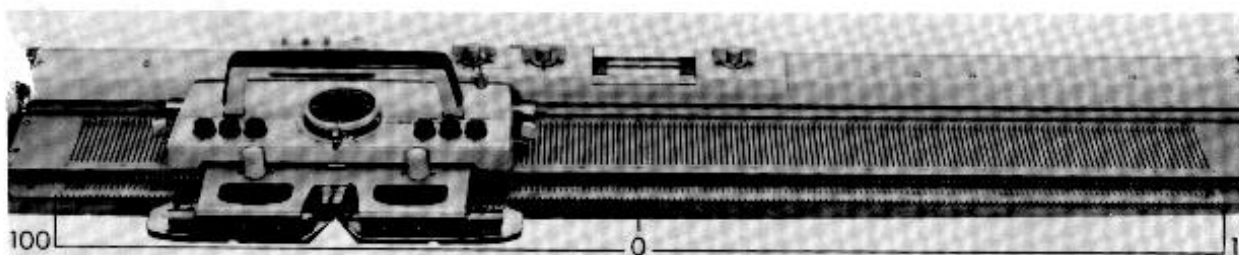


Check to be sure that the two STUDS ARE SHOWING THROUGH THE SINKER ARM.

Tighten the knurled nuts by turning them in a clockwise direction so that the Sinker Arm is firmly attached to the front of the carriage.

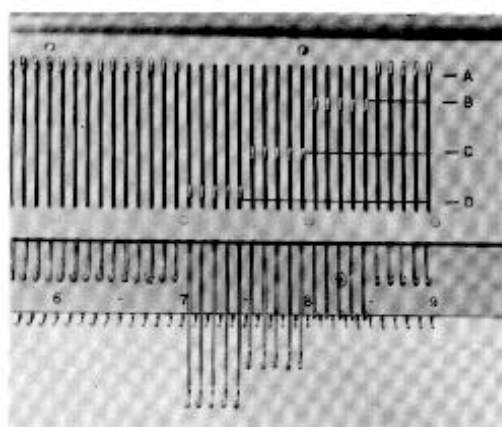
**ALWAYS SECURE THE SINKER ARM FIRMLY ONTO THE CARRIAGE PLATE.**

## THE DIFFERENT NEEDLE POSITIONS



Your machine has 200 needles, they are numbered from the centre 0 outwards in groups of 10, 100 needles on each side of the centre.

On both the LEFT and RIGHT side of the needle bed you will see markings A, B, C and D. These are the various positions used during knitting.

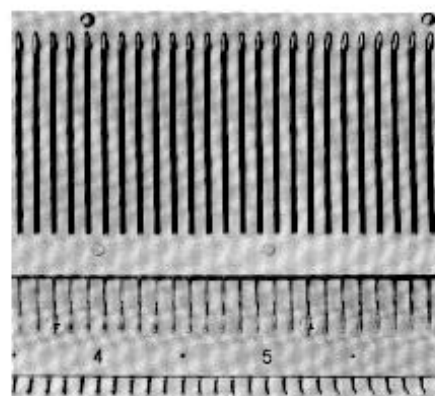
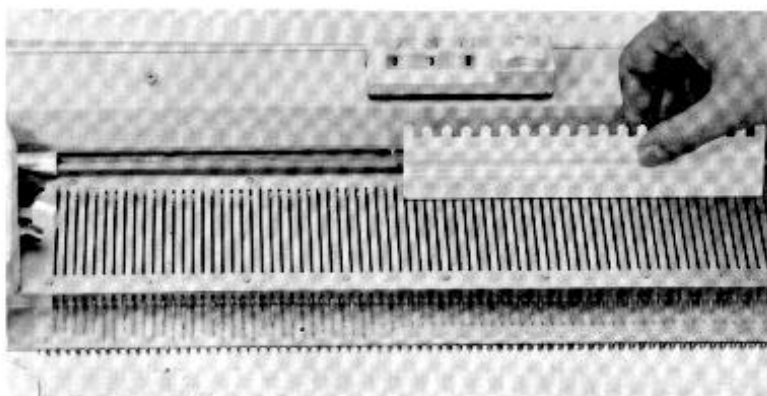


'A' is resting, or non-knitting position.

'B' if the needles are pushed up to 'B' position they are in normal position for plain knitting.

'C' position is used for different patterns.

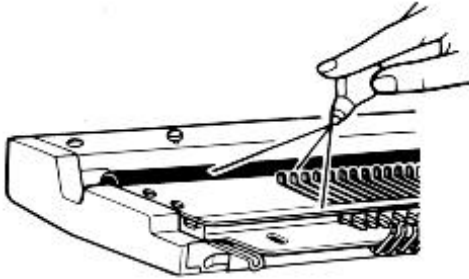
'D' is holding or carrying position, used for Tuck stitch patterning. It is also used for partial knitting which I shall show later in this book.



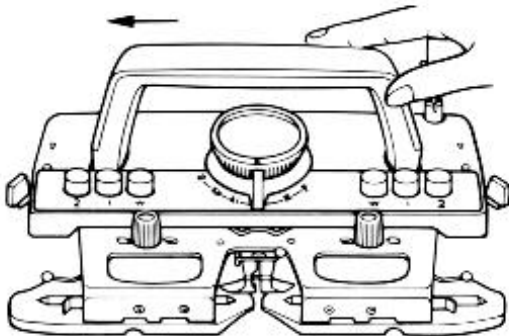
Move the carriage to the extreme LEFT of the machine, completely clear of ALL needles. From the Accessory Case take the straight edge Needle Pusher and push all needles back to 'A' position along the entire length of the needle bed.

**MAKE SURE ALL NEEDLES ARE IN 'A' POSITION.** Slide the carriage across the needle bed to the RIGHT to make sure that it moves across smoothly and easily.

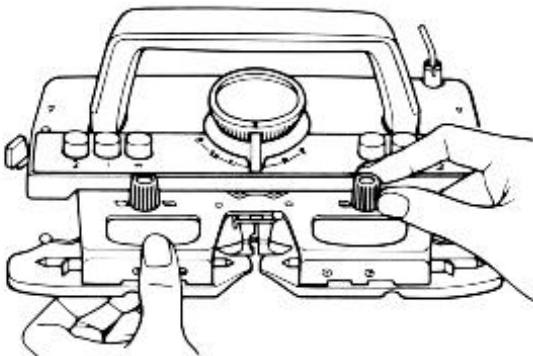
## OILING THE MACHINE



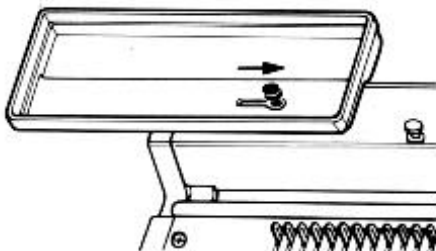
Wipe all the packing dust off the machine with a soft dry cloth. There is a small bottle of oil in your Accessory Case. Unscrew the cap, but **DO NOT** remove the brush which is in the neck of the bottle. Tilt the bottle and squeeze it lightly, rubbing the brush across the guide rail and the needle butts. Make sure you replace the cap firmly after use.



Move the carriage to the **LEFT**.



If the carriage does not move smoothly across the needle bed, check if both studs fit exactly into the holes in the Sinker Arm Assembly.

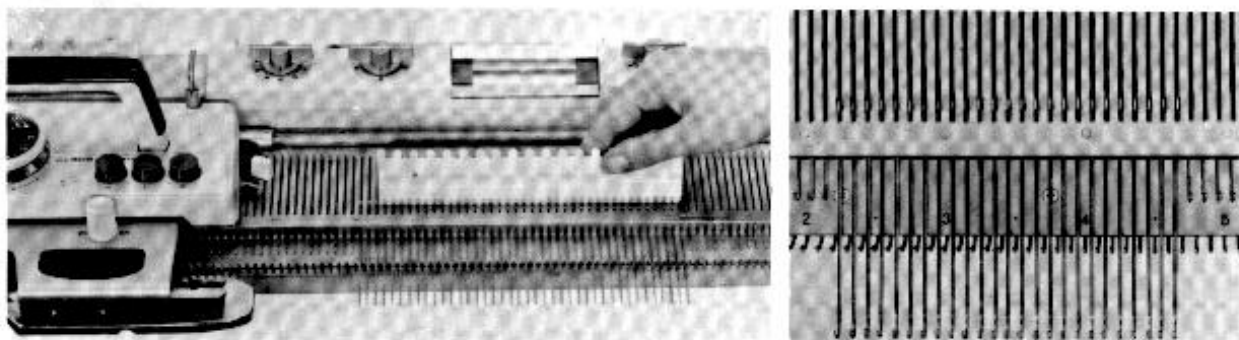


The top of the Accessory Case can be used as a tray for your accessories during knitting.

At the **LEFT** side of the Row Counter is another stud - allow the stud to pass through the keyhole slot in the tray, slide the tray to the **RIGHT** and it will be secure.

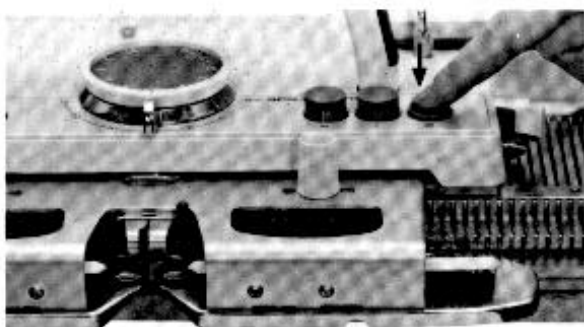


## SETTING UP THE MACHINE

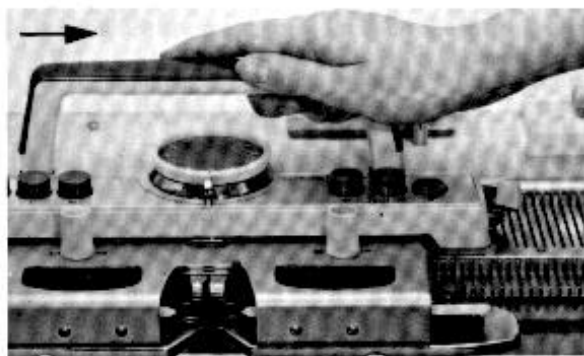


The carriage is at the LEFT. Using the straight edge of the Needle Pusher, bring 20 needles on either side of centre 0 from 'A' to 'D' position - this means completely towards the front of the needle bed.

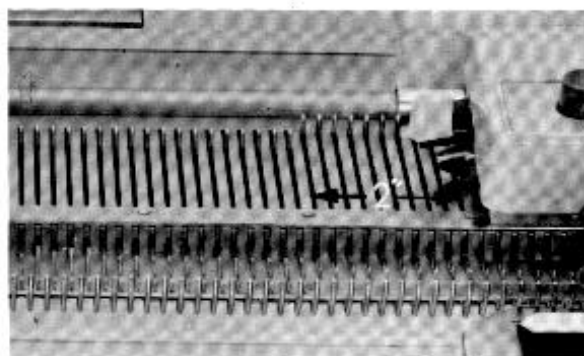
The more needles you push up to 'D' position, the wider your knitting will be. In the next STEP you will learn how easy it is to INCREASE and DECREASE while knitting.



Push DOWN button 2 on the RIGHT side of the carriage.

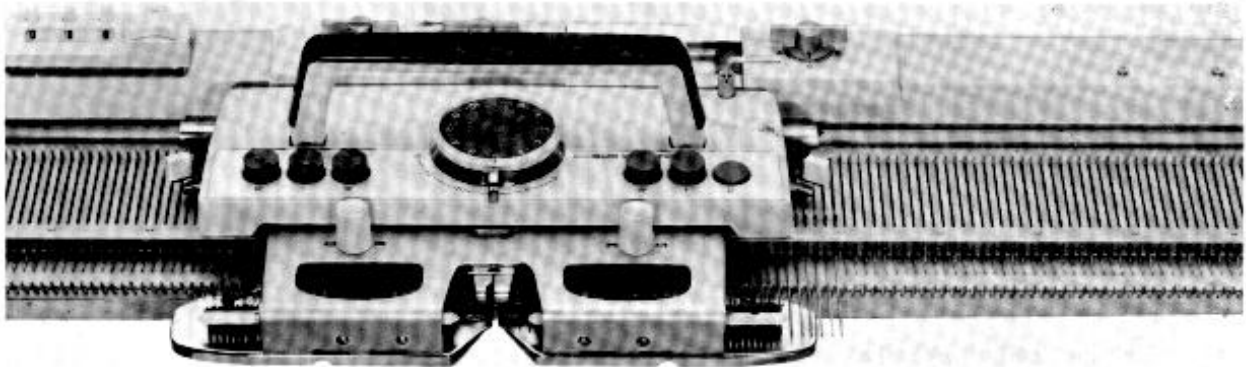


Move the carriage towards the RIGHT of the machine.

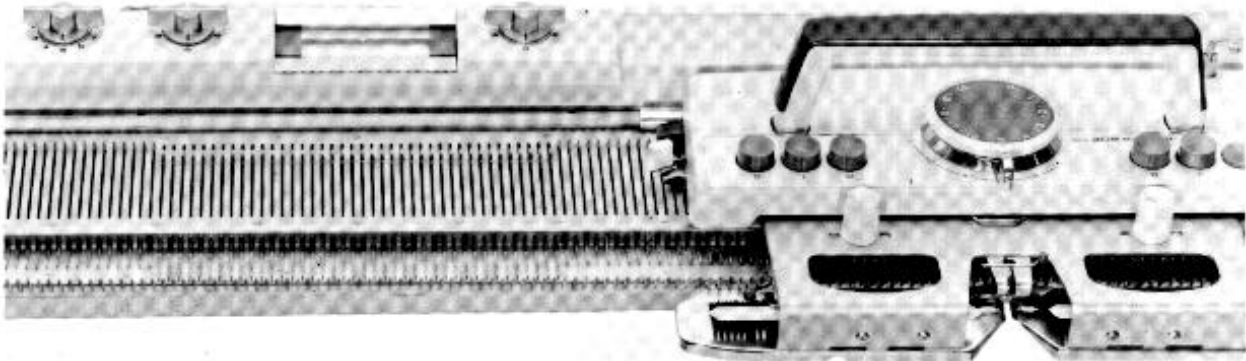


Leave the carriage about 2 inches away from the needles in 'B' position, as this is the position in which the needles come back because button 2 at the RIGHT of the carriage was pushed DOWN.

## SETTING UP THE MACHINE



1. NEVER STOP THE CARRIAGE IN THE MIDDLE OF A ROW - ALWAYS MOVE IT PAST ALL NEEDLES IN KNITTING POSITION, AND LET IT REST ABOUT 2 OR 3 INCHES PAST THE LAST NEEDLE IN 'B' POSITION.



2. Now move the carriage to the LEFT and back to the RIGHT side again until it is at least 2 inches past all needles in 'B' position.
3. IMPORTANT: NEVER REVERSE THE MOVEMENT OF THE CARRIAGE WHILE IT IS STILL IN CONTACT WITH ANY NEEDLES IN 'B' POSITION. THE CARRIAGE MUST BE CLEAR OF ALL NEEDLES BEFORE RETURNING.
4. Continue practising until you can slide the carriage smoothly back and forth across the needles. BE SURE, each time, that the carriage is at least 2 inches beyond the 40 needles BEFORE starting the return journey.

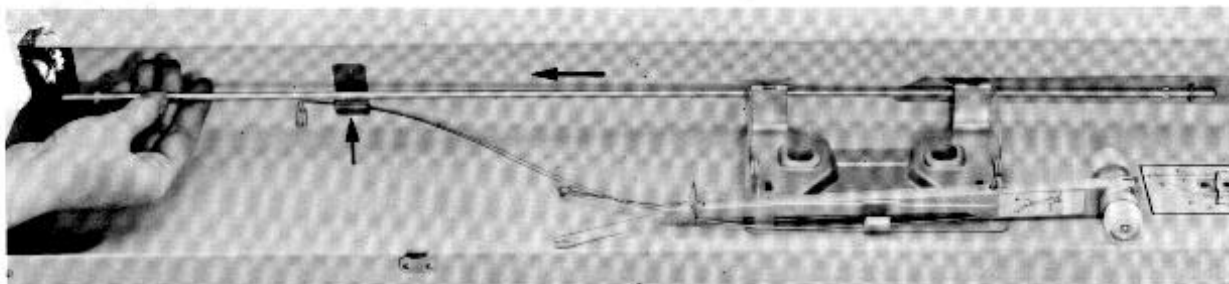


The next pages will show you how to set up the Yarn Brake and thread in the yarn.

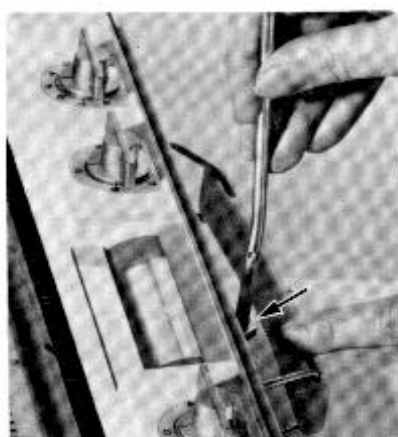
You will then be ready to start knitting.

Correct threading up is very IMPORTANT - so please follow the instructions carefully.

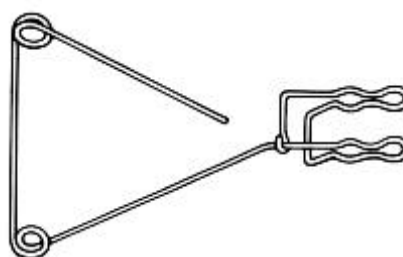
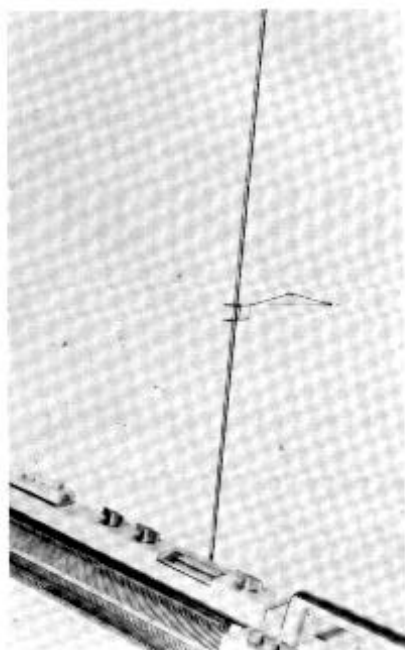
## SETTING UP THE YARN BRAKE



1. Lift the Yarn Brake Rod from the Retaining Clip.
2. Pull the Yarn Brake Rod to the LEFT until it is clear of the bracket and then remove it from the case.

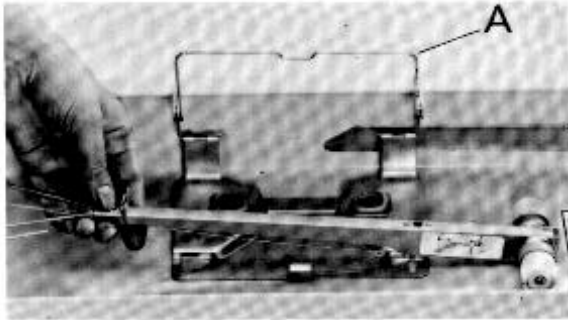


Slide the Yarn Brake Rod - with the slightly bent end at the bottom and pointing towards the back - into the socket inside the carrying handle on the rear cover of the machine.



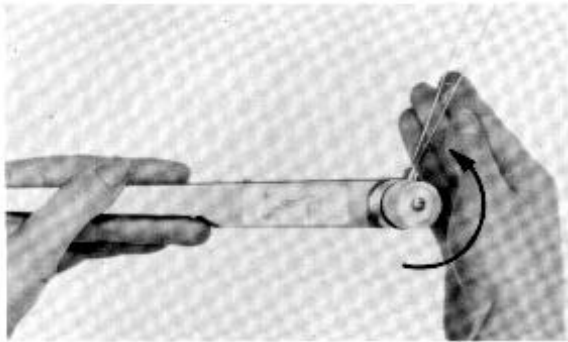
Take the Wool Guide from the Accessory Case and clip it halfway up the Yarn Brake Rod. The wire with the two guides must point towards the back.

## SETTING UP THE YARN BRAKE

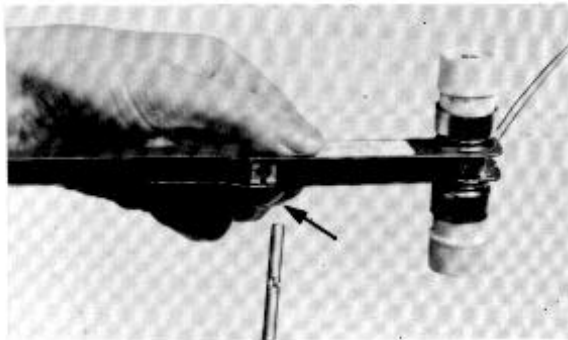


The Yarn Brake is retained by the same spring A through the Sinker Arm Assembly.

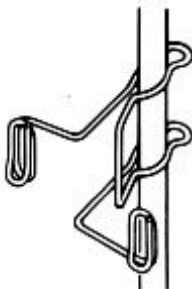
Remove it from the cover.



Turn the two Take-up Springs upwards as shown by the arrow until they snap into position.

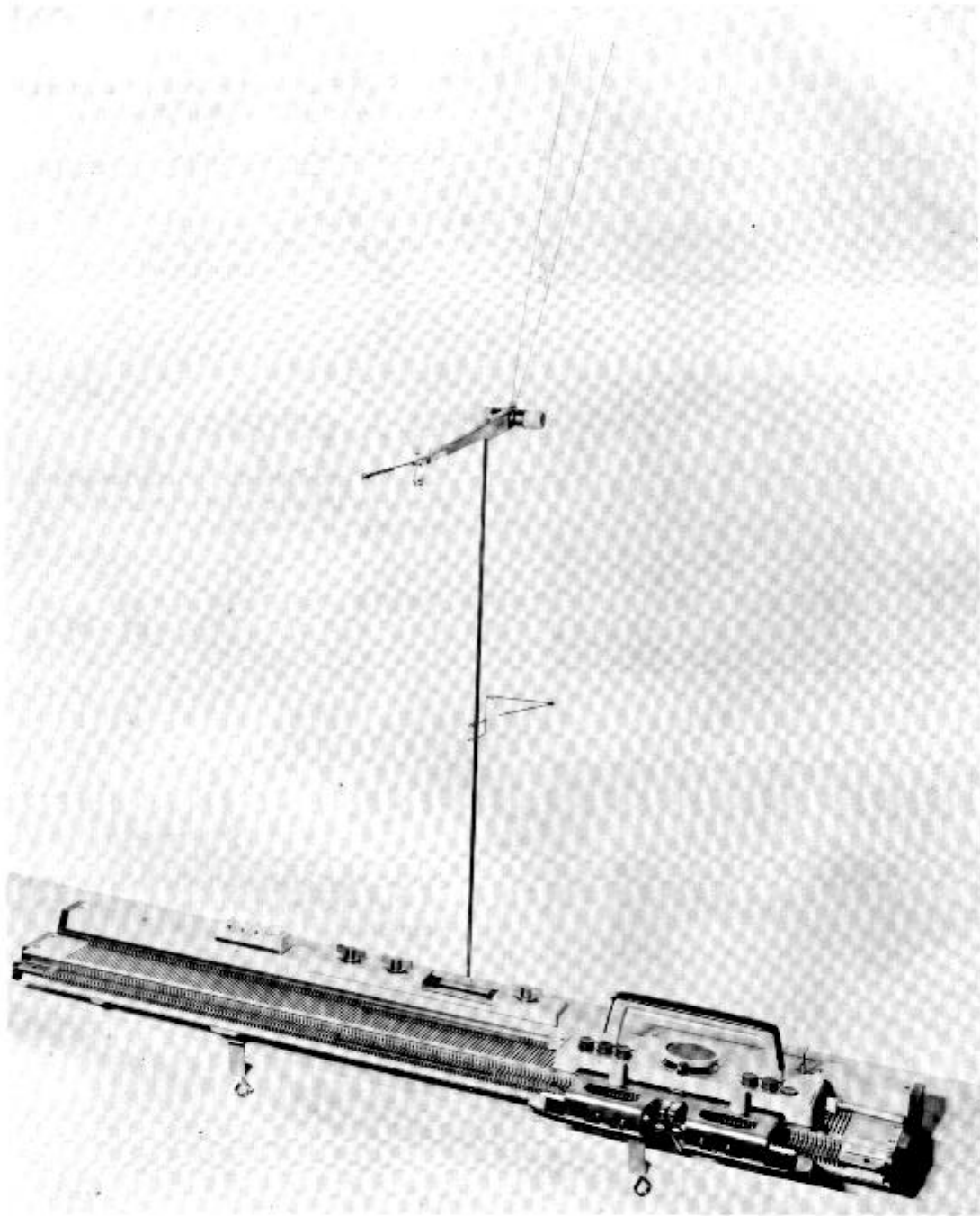


Set the Yarn Brake onto the Rod by inserting the Rod into the round opening beneath the Yarn Brake.



Remove the Card Holder from the Accessory Case and clip it around the Yarn Brake Rod - a few inches below the Yarn Guide - as shown in the diagram.

## THE MACHINE READY SET UP



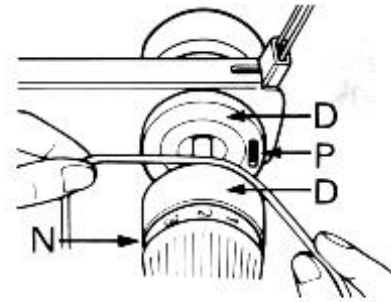
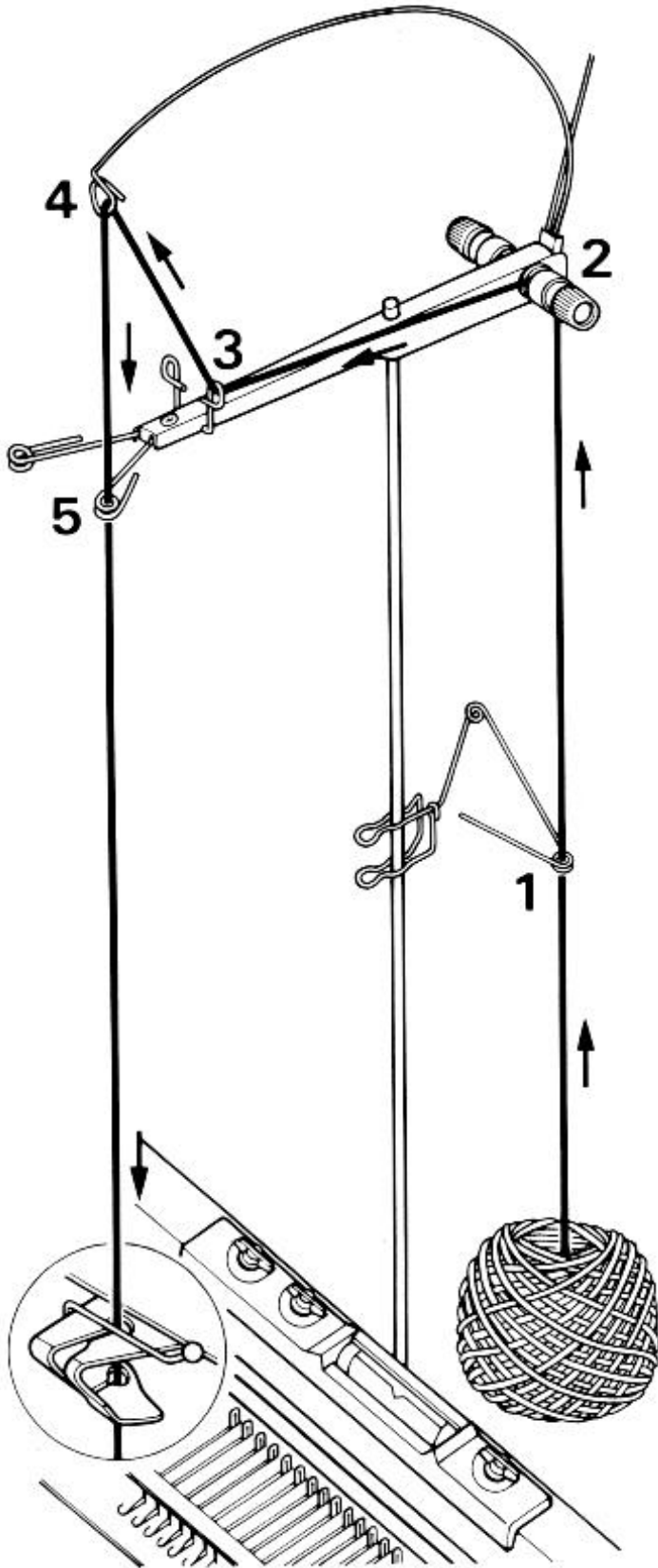
And this is your machine — ready for threading up the yarn and to start knitting.

I recommend you follow the next pages carefully as correct threading up is very important.

Take your ready wound ball of 3 ply wool and place it behind the machine.

## THREADING UP

Pull the yarn end out of the centre of the ball and thread it through point 1 as shown.  
**YOU C A N N O T** KNIT IF YOU DO NOT THREAD UP  
 EXACTLY AS SHOWN IN THE DIAGRAM.



### WARNING!

2. PULL THE YARN THROUGH THE YARN BRAKE (2) AS EXPLAINED BELOW.

On the Yarn Brake are TWO metal discs D. Separate them and you will see a small Lock Pin P. Pull the yarn **INSIDE** the Yarn Brake - **BETWEEN** the discs D, **UNDER** the Lock Pin P. Let the discs come together again.

**THE LOCK PIN ENSURES THE YARN ALWAYS REMAINS INSIDE THE DISCS DURING KNITTING.**

Turn the plastic knurled nut N until 3 faces the red arrow on the disc.

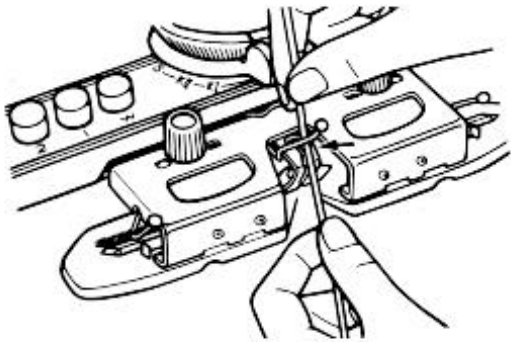
3. Thread the yarn through the Guide and Take-up Springs as shown at points 3, 4 and 5. Pull the yarn down from point 5 and hold it. If the Take-up Spring does NOT stay in a horizontal position - the yarn is NOT threaded correctly through the Yarn Brake, or the Tension is too loose for the thickness of yarn being used.

PLEASE CHECK.

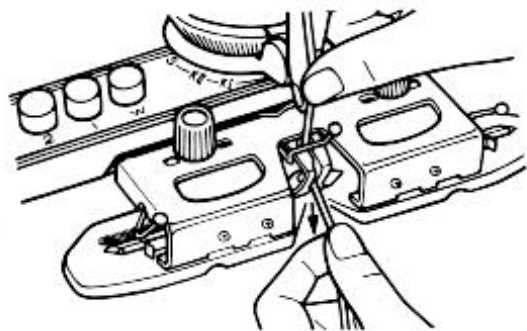
The Tension of the Yarn Brake adjusts the amount of pressure on the metal discs. If you knit heavy yarn - turn the knurled nut with 2 to the red arrow - the Tension is loose enough to let the yarn pass smoothly through the discs. If you knit thin yarn - turn the 4 or 5 to the red arrow - the pressure on the discs is stronger and your yarn will have more Tension.

## THE YARN FEEDER

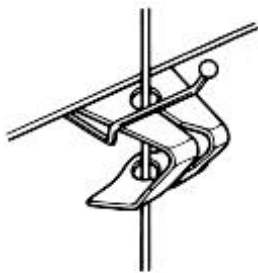
You are now ready to thread your yarn through the Yarn Feeder. Be sure to follow the steps exactly as illustrated.



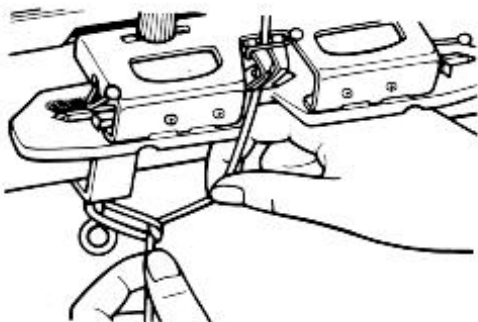
Slide the yarn **UNDERNEATH** the Guide Spring of the Yarn Feeder.



Now pull the yarn down into the Feeder slot and through the round eye under the Feeder.

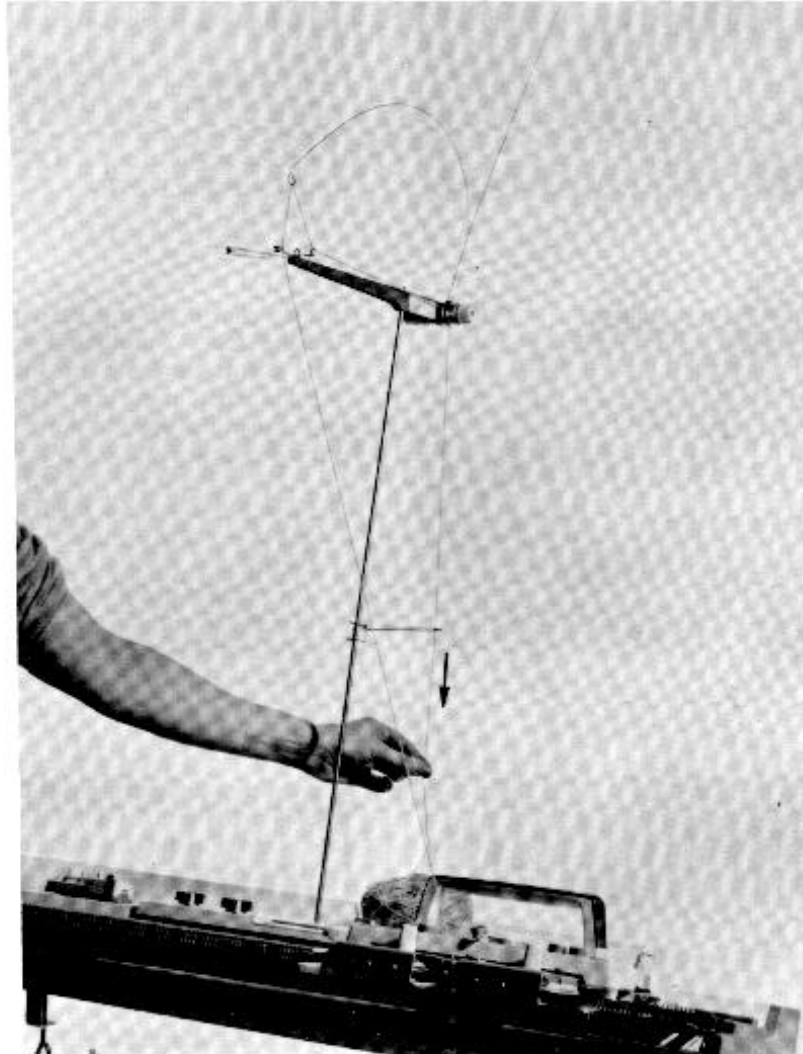


Here you can see the yarn correctly threaded in the Yarn Feeder.



Tie the end of the yarn around the **RIGHT** side Table Clamp.

## THE YARN TENSION



Pull the yarn down at the back of the Yarn Brake (as shown by the arrow), until all slack yarn has been taken up.

This will bring the Take-up Spring into a nearly horizontal position, and it will remain there. There should NEVER be SLACK yarn BETWEEN the Table Clamp and the Yarn Brake.

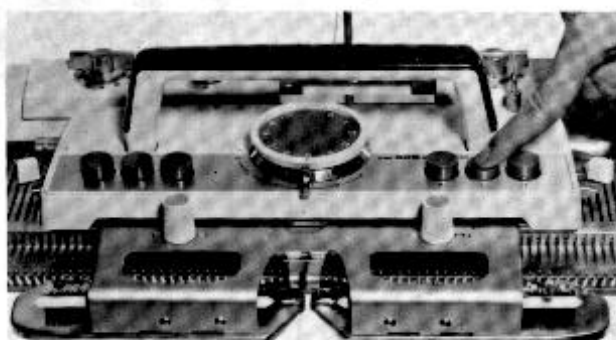
When casting on, and while knitting, there should NEVER be any slack yarn BETWEEN the KNITTING and the Yarn Feeder. Be careful and you will avoid difficulty.

NOTE: If you start knitting with slack yarn, it will result in big loops or dropped stitches at the sides of your knitting.

You are now ready to make the cast on and start knitting.



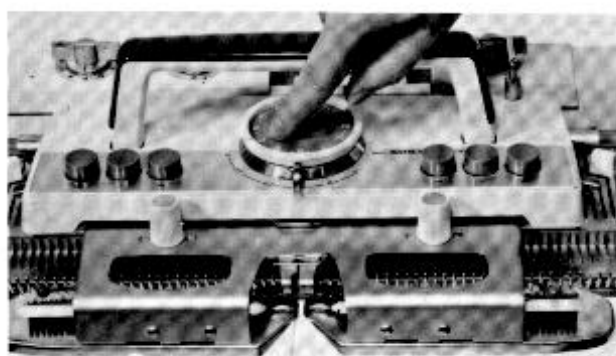
## START CAST ON



We will start knitting with an open edge cast on. An open edge cast on means an unfinished edge, therefore, if you pull on the knitting the stitches will 'run'. But don't worry - later in the book you will learn how to make a closed edge cast on.

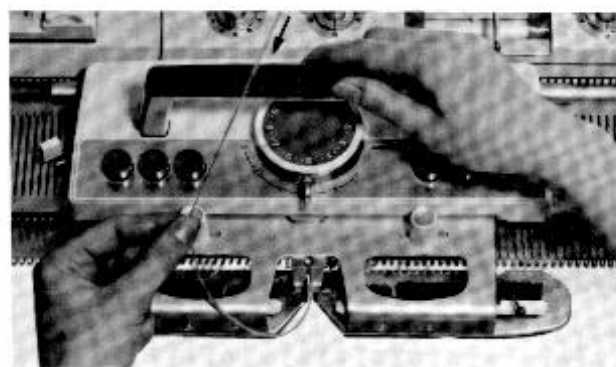
Push button 1 on the RIGHT side of the carriage HALF way DOWN, this will release button 2.

If you push button 1 TOO FAR DOWN, it will remain DOWN.



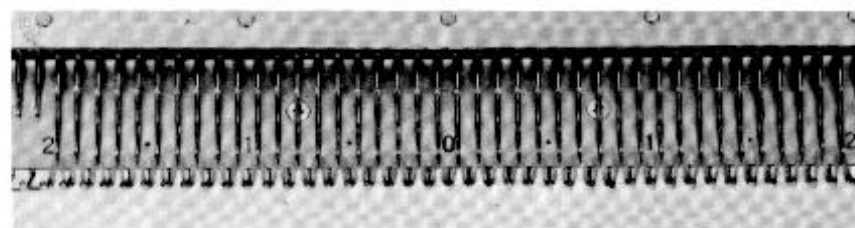
In the centre of the carriage is the Stitch Tension Dial - numbered from 0 to 10 with points between the numbers. The Tension Dial gives you 31 different stitch sizes enabling you to knit nearly every type of yarn.

1. Turn the Tension Dial with the RED mark on the Tension Dial ring towards the 7.
2. The Side Levers are set to the FRONT in ● position.
3. All buttons UP.
4. Cam Lever is set on centre 0.

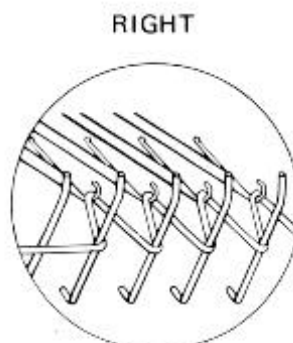


Now slide the carriage SLOWLY from the RIGHT to the LEFT until the centre (the yarn Feeder) is about 2 inches SHORT of the LAST of the 40 needles in knitting position.

Now, pull down a little yarn from the Take-up Spring (as shown in the diagram), so that you have some slack yarn between your hand and the carriage. Continue moving the carriage LEFT, allowing it to use up the slack yarn, until it is clear of all needles IN KNITTING position. Then you release the yarn.

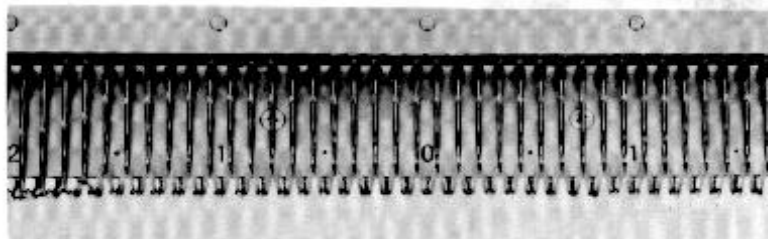
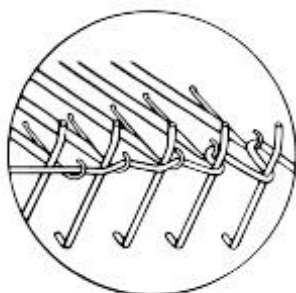


THIS IS HOW YOUR CAST ON SHOULD LOOK - ALL THE NEEDLES HAVE THE SAME SIZE LOOPS.



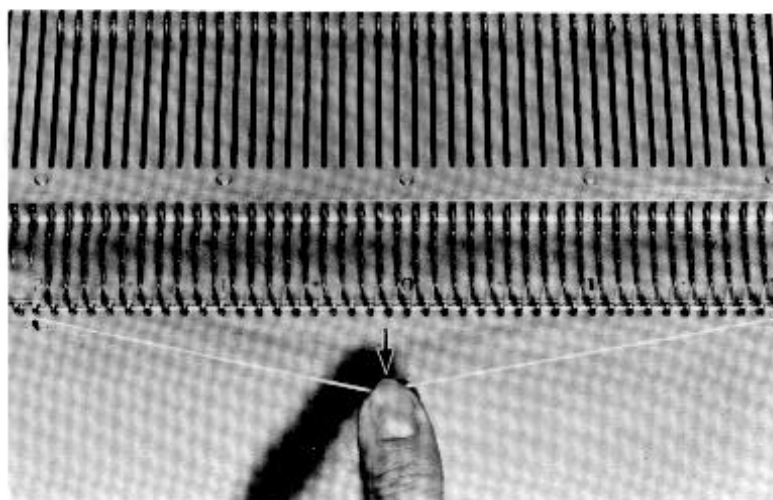
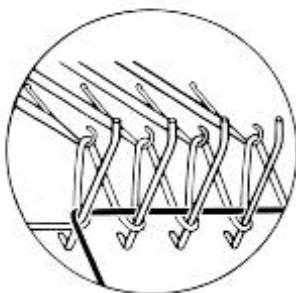
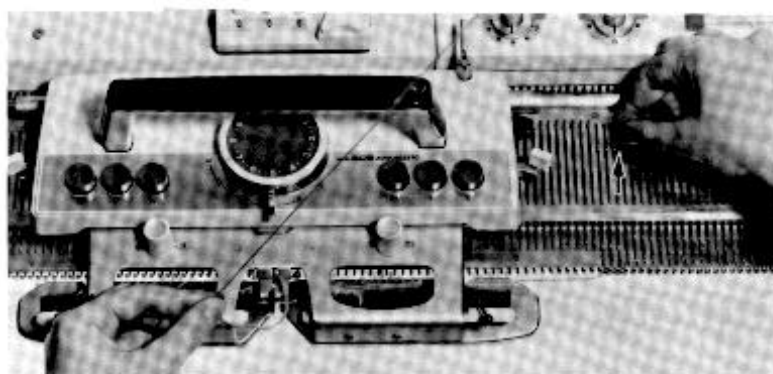
## THE OPEN EDGE CAST ON

WRONG



If there is NO slack yarn above your carriage while you move it across the last needles of the cast on row - this will be the result - the loops of the last needles at the LEFT will be very small, which is definitely WRONG.

REMEDY - pull down slack yarn from the Take-up Spring with your left hand and hold it down, while with your right thumb, starting with the first small loop INSIDE the row - push back, ONE by ONE the last few needles until ALL NEEDLES are in a line and have the SAME SIZE LOOPS. The carriage is at the LEFT.

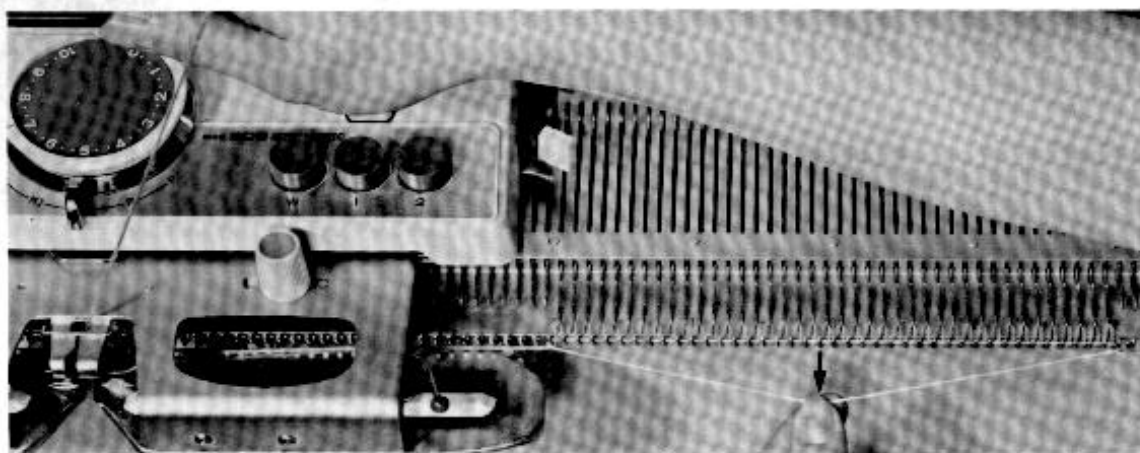


In your Accessory Case you will find a Nylon Thread. Open it and lay the centre of this Nylon Thread across the yarn loops BETWEEN the needle hooks and the Sinker Gate. Hold BOTH ends together and PULL DOWN FIRMLY so that the Nylon Thread comes BELOW the bottom level of the needle hooks.

As you can see in the diagram, the Nylon Thread must pass AROUND the LAST Sinker Gate pin on each side of the knitting.

PULL BOTH ENDS OF THE NYLON THREAD FIRMLY DOWN, if you do not, the Nylon Thread will catch inside the needle hooks when moving the carriage across and you will have to restart the cast on.

## YOU ARE NOW MACHINE KNITTING



Pull down any slack yarn from behind the Yarn Brake as shown on page 23. Still holding the Nylon Thread **FIRMLY DOWN** - move the carriage from **LEFT to RIGHT** until it is well past the last of the needles in 'B' position on the **RIGHT** hand side.

Move the carriage from **RIGHT to LEFT** and back again until you have knitted 4 rows and the carriage is on the **LEFT** side of the machine. Now leave the Nylon Thread.

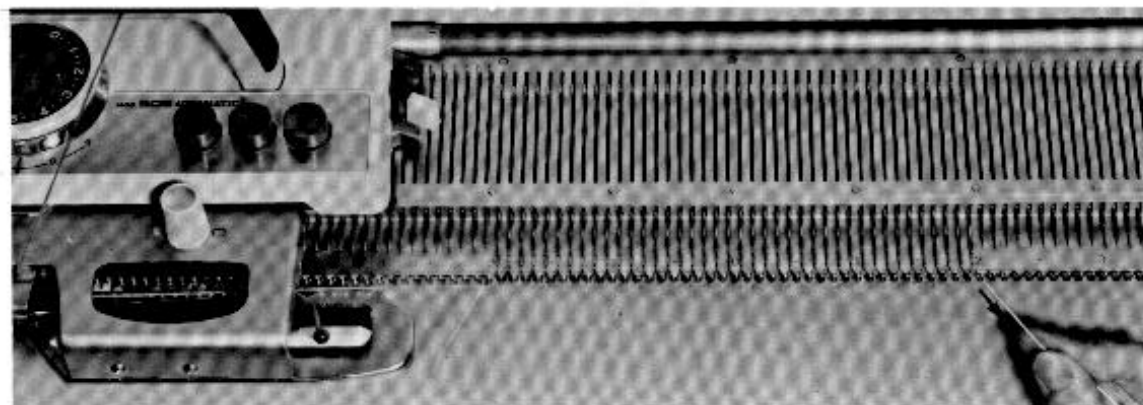
**MAKE SURE THE CARRIAGE ALWAYS PASSES CLEARLY THE NEEDLES IN 'B' POSITION BEFORE RETURNING TO KNIT THE NEXT ROW.**

IF . . . . 1. Your yarn has been properly wound into a ball suitable for machine knitting.

AND . . . 2. If your yarn is suitable for the Tension 7 to which your Tension Dial is set,

AND . . . 3. Your yarn has been correctly threaded up,

THEN . . . your carriage will move **SMOOTHLY AND LIGHTLY ACROSS THE NEEDLES**, knitting 40 stitches each time you move across.



Pull out the Nylon Thread from the cast on row - towards the **RIGHT**.

Take care you **NEVER** have knots in the Nylon Thread otherwise you will not be able to pull it out of the knitting.

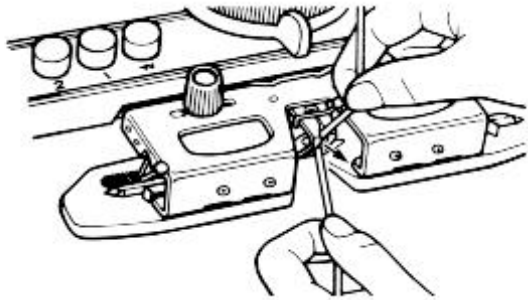
## NOW YOU ARE ALL SET FOR MACHINE KNITTING.

Knit 20 or 30 rows. **REMEMBER - ALWAYS MOVE THE CARRIAGE ABOUT 2 INCHES PAST THE LAST NEEDLE IN KNITTING POSITION BEFORE YOU CHANGE THE DIRECTION FOR THE NEXT ROW.**

**PROBLEMS !** If you do have any problems, the General Index at the back of this book will show you just where to look to find the correct answer.

## YOU ARE NOW MACHINE KNITTING

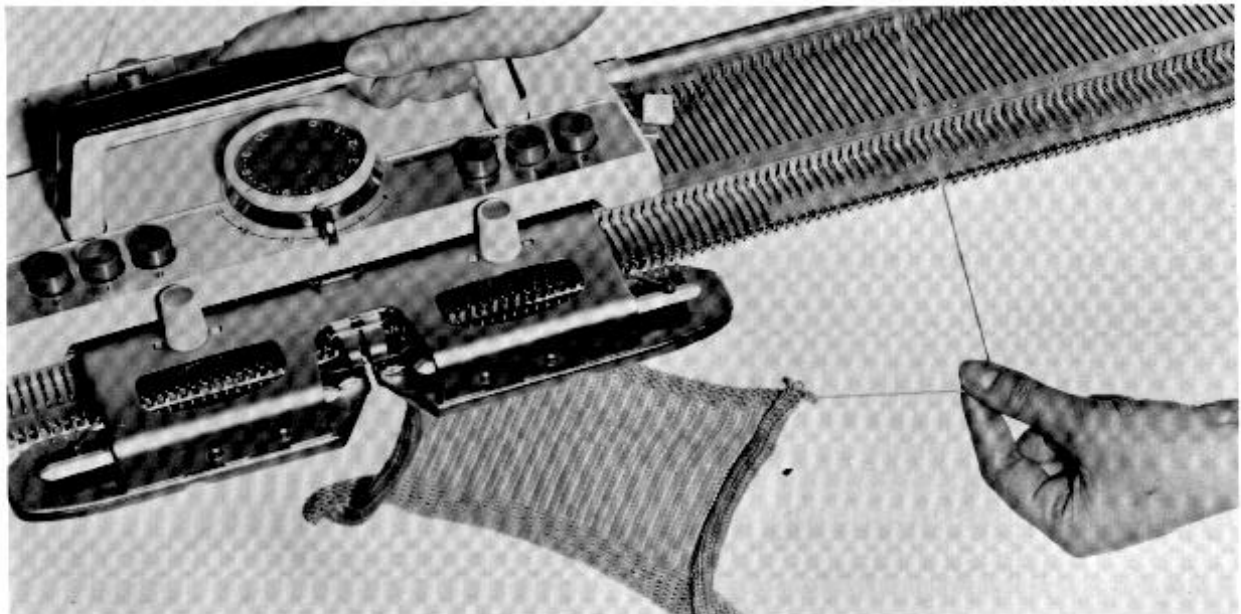
Continue knitting until your first ball of yarn has been knitted. This is the best way to get the right rhythm for knitting on your new machine and to gain confidence. DO NOT move the carriage too far beyond the knitting after each row. If you do - the yarn tension becomes too loose and the yarn will tangle around the brush wheels below the Sinker Arm Assembly, thus causing the carriage to jam.



**HOW TO REMOVE THE KNITTING FROM THE MACHINE WITHOUT CASTING OFF OR BINDING OFF.**

You can now remove the knitting from the machine.

It is easy and quick to do - just remove the yarn from the Yarn Feeder.



Hold the yarn away and below the carriage with your left hand and with the right hand move the carriage across the needles in knitting position. The knitting automatically comes away from the needles because there was NO yarn in the Feeder and the knitting will have an open edge. Later you will learn how to cast or bind off.

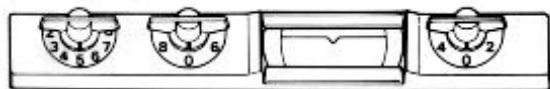
**YOU HAVE NOW COMPLETED THE MOST IMPORTANT PART OF THE FIRST STEP IN KNITTING.**

If you are not sure of all points, it is well worthwhile to go back to the beginning and start again.

So, DO NOT hurry into the next STEP. Rather go through the FIRST section two or three more times and if you encounter any problems just look in the General Index for the correct answer.

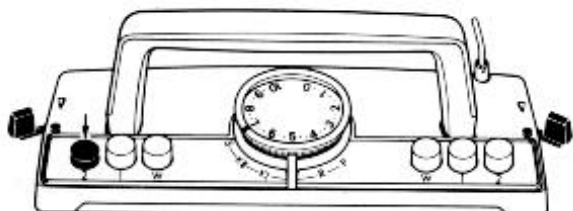


## THE AUTOMATIC CLOSED EDGE CAST ON



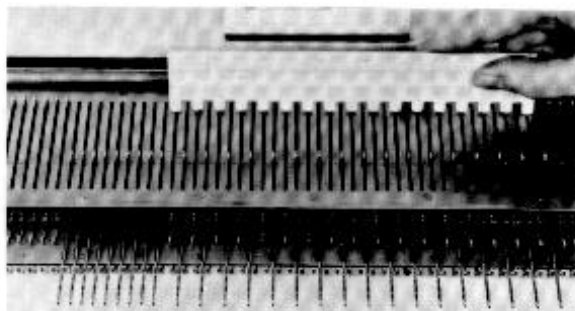
There are TWO different methods to make a closed edge cast on — one is automatic and one is made by hand.

Pattern Panel Setting is: 5 - 0 - 0.



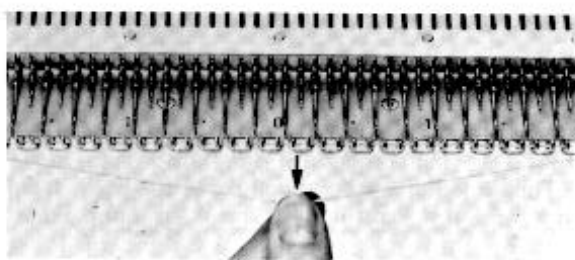
The carriage setting is:

1. Tension Dial to 7.
2. Both Side Levers are in FRONT.
3. Push DOWN button 2 at the LEFT side of the carriage.
4. Cam Lever to centre 0.



Using the straight edge of the Needle Pusher bring 22 needles at the LEFT and 21 needles at the RIGHT of centre from 'A' to 'D' position. You have 43 needles in 'D' position altogether.

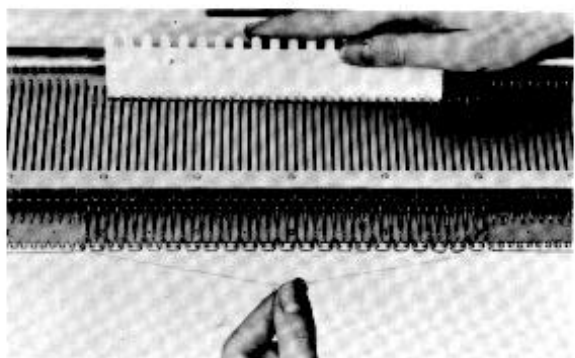
Start with the SECOND needle from the RIGHT and push every SECOND needle back from 'D' to 'A' position, using the 1/1 side of the Needle Pusher.



Thread up the yarn.

Knit 1 row to the LEFT.

Now every SECOND needle has a loop of yarn. Lay the Nylon Thread across these loops and pull it FIRMLY DOWN.



Still pulling the Nylon Thread down - with the straight edge of the Needle Pusher bring the rest of the 43 needles up from 'A' to 'B' position. This means in the same line as the needles with the loops.

Knit 4 rows. Pull the Nylon Thread out of the knitting.

Knit another 11 rows. Leave the carriage on the RIGHT side of the knitting.

With your first row you have knitted the AUTOMATIC closed edge cast on.

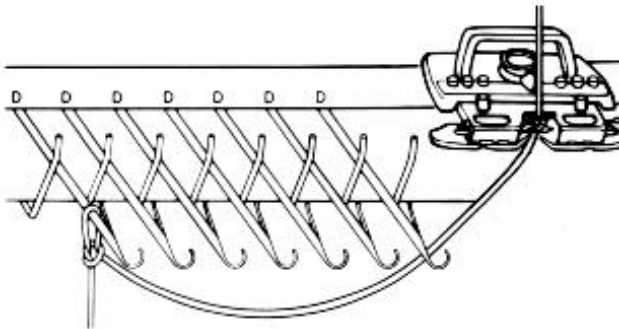
## THE CLOSED EDGE CAST ON BY HAND

It is slower than the AUTOMATIC cast on but gives a firmer edge. As it is often used, it is well worth learning.

The pattern panel is set on 5 - 0 - 0.

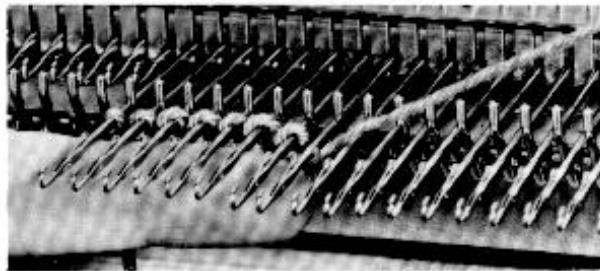
The carriage is at the RIGHT.

1. Tension is set to 7.
2. Side Levers are FRONT.
3. Button 2 at LEFT is DOWN.
4. Cam Lever on 0.

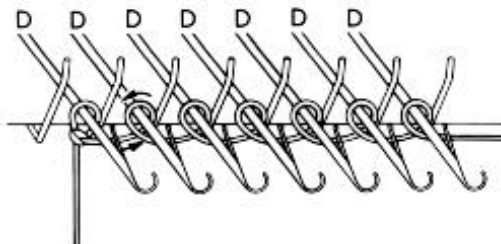


Thread the yarn through the Yarn Brake and the Yarn Feeder and pull sufficient yarn from below the Yarn Feeder to tie a loose knot around the LAST needle on the LEFT side in 'D' position.

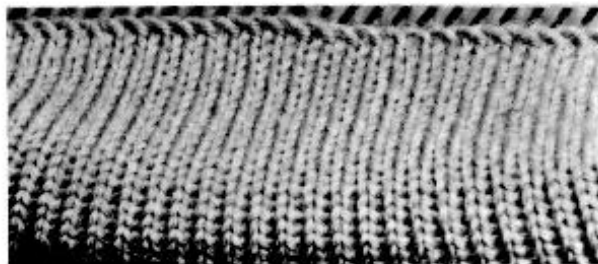
**IMPORTANT:** ALWAYS start by winding the yarn around the needles from THE OPPOSITE side to the carriage.



Wind the yarn LOOSELY in anti-clockwise direction UNDER and OVER the SECOND needle in 'D' position and continue winding the yarn around the needles towards the RIGHT. As you wind a loop around a needle push it BACK against the Sinker Gate BEHIND the needle latch.



When all needles have a loop, pull down any slack yarn from behind the Yarn Brake until there is NO slack yarn between the carriage and the needles in 'D' position.



Knit 1 row towards the LEFT. All needles have been knitted back to 'B' position. Continue knitting a few rows. You have made a very attractive closed edge cast on.

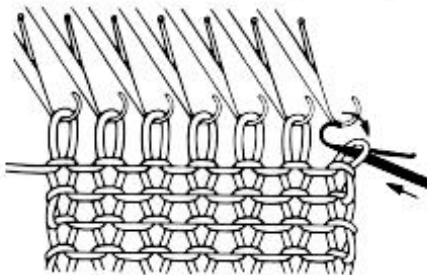
**WHEN STARTING AT THE LEFT, WIND THE YARN ANTI-CLOCKWISE (as shown). WHEN STARTING FROM THE RIGHT (then the carriage is at the LEFT) WIND CLOCKWISE – ALWAYS LOOSELY UNDER AND OVER THE NEEDLES.**

## CASTING OFF OR BINDING OFF WITH BIG LOOPS

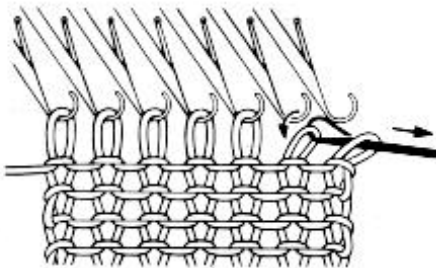
This method of binding or casting off is **ONLY** suitable when using a thin to medium yarn, as the last row is knitted at a much looser Tension than the rest of the knitting. Only bind or cast off this way when your main Tension is 7 or less. Also, you can only cast off or bind off this way when you cast off a complete row at a time. Another method will be shown later in the book.



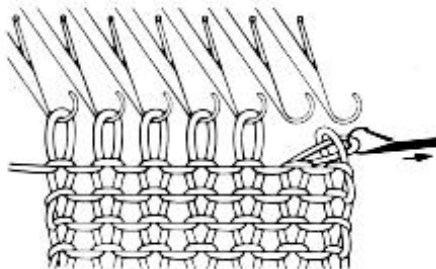
Make an open edge cast on over 40 needles and knit a few rows with Tension 7. Finish with the carriage at the **RIGHT**. Set the Tension to 10, knit 1 row. Break the yarn at the top of the carriage. Pull the yarn down - out of the Yarn Feeder. **ALWAYS** start casting or binding off on the opposite side of the carriage.



Insert the Latchet Hook in the **FIRST** stitch from the **RIGHT**. Lift the stitch from its needle. Push the Latchet Hook forwards until the loop slides **BEHIND THE LATCH**.

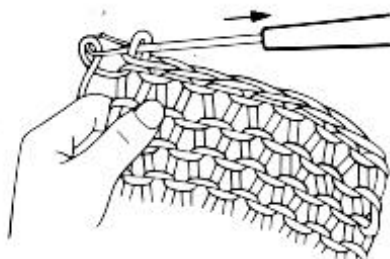


Remove the **SECOND** stitch from its needle but keep it **IN** the Latchet Hook. **DO NOT** let it slide behind the latch. Pull the Latchet Hook backwards.



When pulling the Latchet Hook backwards, you pull the stitch from the hook through the loop which is behind the latch.

Move the Latchet Hook forwards until the remaining loop slides behind the latch again. Now remove the third stitch from its needle and pull it through the loop which is behind the latch.



Continue this way until the binding or casting off of the whole row is completed.

When you have the last loop in the Latchet Hook, pull the rest of the yarn through the loop to bind off the knitting completely.

You can start casting or binding off from the **LEFT** but then you knit the last row with the Tension 10 from **LEFT** to **RIGHT** and start the binding off with the first stitch from the **LEFT**.

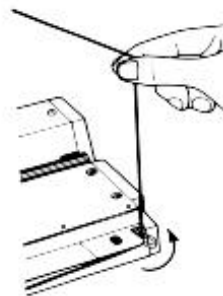
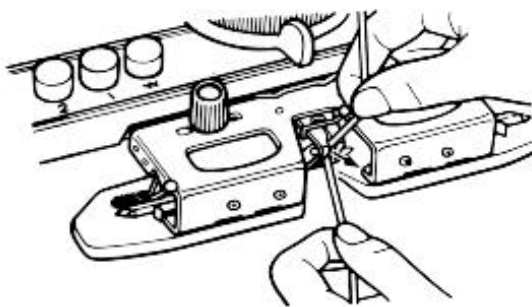
## HOW TO JOIN YARN DURING KNITTING

To start a new ball of yarn is a very simple matter. When one ball of yarn is almost finished, pull the rest of the yarn out of the Feeder and the Yarn Brake from below the Yarn Feeder and leave this end hanging down from the side of the knitting. Thread the end of the new ball through the Yarn Brake and the Yarn Feeder, tie the end around the Table Clamp.



## CHANGING THE YARN WITHOUT BREAKING IT

If you wish to knit stripes - it is very easy to change the colour in the Yarn Feeder.



Remove colour 1 from the Yarn Feeder and hang it around the RIGHT side Yarn Clip. Thread up colour 2, but through the LEFT hand parts of the Yarn Brake. Pull the thread inside the Yarn Feeder and fasten the end onto the RIGHT side Table Clamp. Continue knitting.

When you wish to knit colour 1 and the carriage is on the opposite side of the machine - remove the carriage from the needle bed and set it back onto the needle bed on the other side. Take care both Guide Rails fit properly.

## STEAMING A FABRIC



**IMPORTANT** - Please follow very carefully.

Lay the knitting on the pressing table - wrong side facing and without stretching, pin it out to the correct size using 1 pin per half inch.

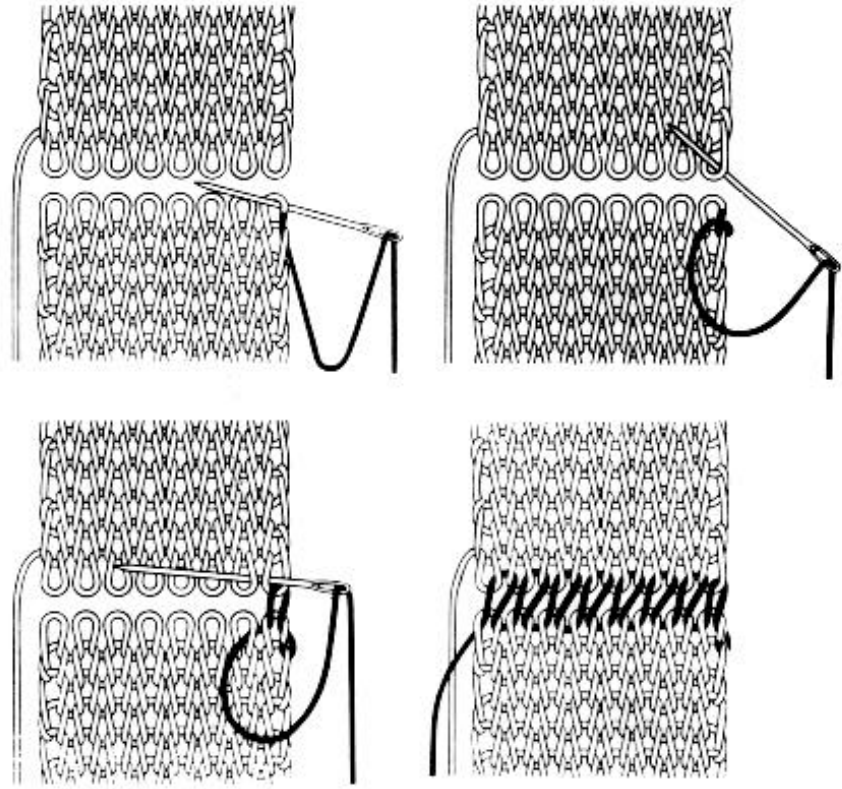
Lay a wet cloth on top of the knitting and move the hot iron across the wet cloth. **DO NOT PRESS** the iron onto the cloth, just slide it across and let the steam penetrate into the knitting.

Remove the cloth and let the knitting dry. Remove the pins. Careful steaming helps to give your garment that look of perfection.



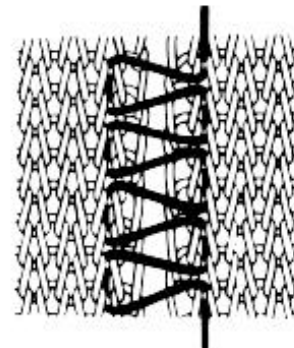
## GRAFTING

Quick and easy to do and it is used for sewing together almost any type of open edge knitting. After a little practice you will graft stitches together so well that you cannot afterwards see where your knitwear has been joined.



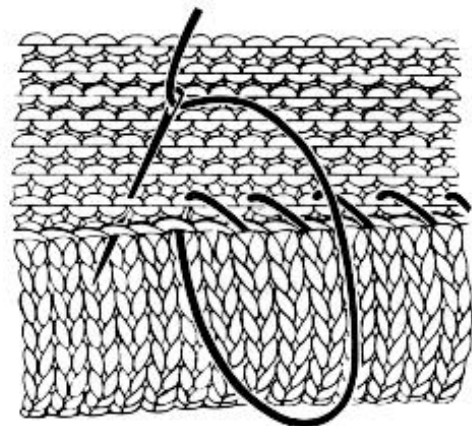
## THE MATTRESS STITCH

For hand sewing your side edges together. This mattress stitch is also very useful for sewing together skirts or dress panels or any other panels, such as trouser-legs for children's trouser suits.



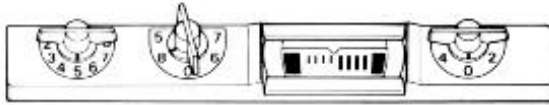
## SEWING UP A HEM

Fold up the required length of hem. Take care to join the hem to the same row of knitting, otherwise your hem will not be straight.



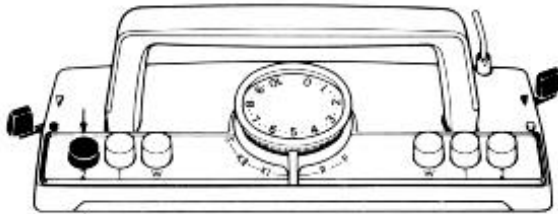
# CIRCULAR CORD KNITTING

THIS IS A VERY USEFUL TRIMMING FOR ALL NECKLINES.  
IT HAS MANY OTHER USES AND IS VERY EASY TO KNIT.



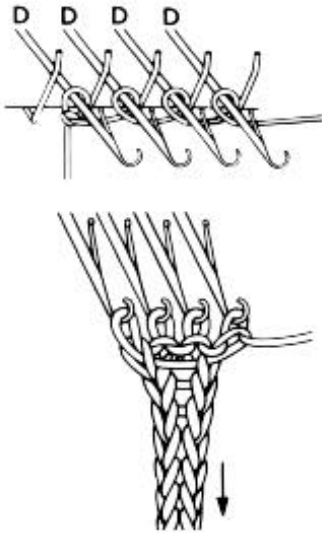
Carriage is at the RIGHT.

Pattern Panel setting: 5 - 8 - 0.



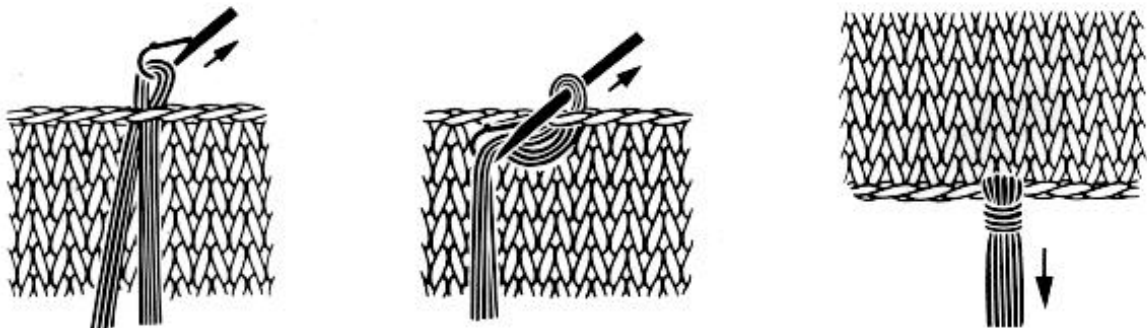
Carriage Setting:

1. Tension Dial to 7.
2. Side Lever at RIGHT back to ▼ position, leave Side Lever at LEFT in ● position.
3. Push DOWN button 2 at LEFT - all other buttons are UP.
4. Set Cam Lever on S.



Bring 4 needles RIGHT of centre 0 from 'A' to 'D' position. Thread up the yarn and make a knot around the last needle at the LEFT. Wind yarn around other needles. Pull down any slack yarn from behind the Yarn Brake. Knit 1 row towards the LEFT. The needles have been knitted back to 'B' position. Move the carriage to the RIGHT past the 4 needles and the thread is in front of the Sinker Gate. This is correct. Continue knitting - always pulling lightly on the cord at the same time.

## HOW TO MAKE FRINGES



Take 4 or more threads, depending on the thickness of fringe you prefer, and cut them about 10 inches or longer according to taste.

Make your fringe as shown in the diagram 1 to 3, placing the threads as close together as you wish. Trim the edges.

## STITCH SIZES AND TENSION TESTING

When doing hand knitting it is important to use the right size needles for each yarn. This is different with the knitting machine. You do not need to have different sized needles. You **ONLY** have to change the **TENSION DIAL NUMBER**. The higher the number on the Tension Dial, the bigger the stitch will be, the smaller the number on the Tension Dial, the smaller the stitch will be.

### GENERAL TENSION GUIDE

Thick soft yarn	Tension Number 9 upwards
Medium 3 Ply to 4 Ply yarn	Tension Number 6 to 9
2 Ply or thin 3 Ply yarn	Tension Number 3 to 6
Fine cotton or crochet yarn	Tension Number up to 4

A very thin yarn on tension 2-3 will knit 8 to 9 stitches (needles) to the inch, or a total **WIDTH** of 23 inches over 200 needles.

A thick soft yarn knitted on tension 10 will give about 5 stitches (needles) to the inch, or a total **WIDTH** of 49 inches over 200 needles. Very thick yarn should be knitted over every second needle.

Cast on over 40 needles and start at the tension number recommended above for your yarn. Knit a few rows or enough to see if the tension is too big or too small. If it is too loose then try a tension smaller and knit a few rows. If it is too tight try a larger tension number.

Continue in this way until you find the tension number that is most suitable for the yarn and also for the type of garment you wish to make.

A sweater is usually knitted at a tension one or even two points looser than you would use for a skirt. The reason is that a sweater is comfortable when it has more stretch, but a skirt will stretch out of shape unless the tension is a little tighter. Anyway, tension setting is usually a matter of yarn thickness.



When yarns are dyed in the factories, the natural oils are washed out by the chemicals.

This may make the yarns (especially the thicker yarns) hard and heavier to knit.

Waxing helps to replace the natural oils and makes the yarn much easier and quicker to knit.

## HOW TO MEASURE A TENSION SWATCH

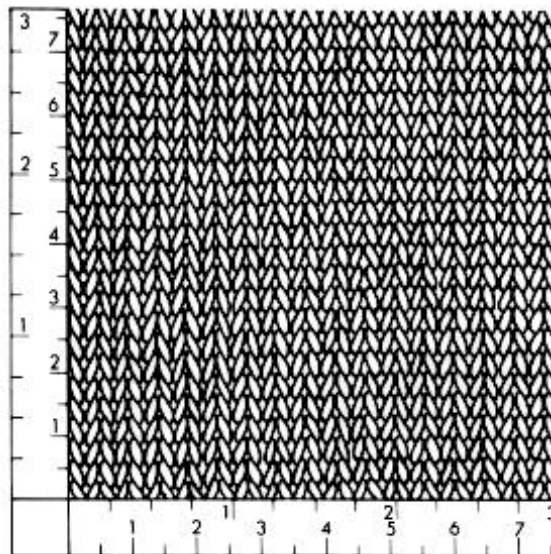
It is easy to make your knitwear fit perfectly, quick too, and very simple.

Every type of yarn is different and sometimes even the dye can make a difference to the thickness of the same type of yarn.

So, to make sure your garment will always fit perfectly, it is essential to make a tension swatch before starting it.

First test to see which tension number is most suitable for the yarn.

With the correct stitch size, knit 40 rows over 60 needles and remove the knitting from the machine.



Pull the swatch a little to enable the stitches to close up slightly.

Leave the swatch for a few hours, then pin the edges of the swatch – without stretching them – onto the pressing table.

Take a metal ruler and count how many stitches and rows you have over a 2 inch square.



On this picture we have

2 inches give 11 stitches  
2 inches give 15 rows

It is very easy to calculate how many rows and stitches you need to knit for your own pattern instructions.

If the half of the bust width is 18 inches – then you need to cast on 99 stitches, as 2 inches occur 9 times in 18 inches and  $11 \times 9$  is 99 stitches. Always try to start the garment with an even number of stitches, in this case 98 or 100 stitches.

If the length of the garment should be 20 inches – you need to knit 150 rows, as there are 15 rows to 2 inches and  $10 \times 15$  is 150 rows.

# Here they are!

Some special  
starter designs  
that need no  
shaping

**SO EASY - just  
knit'n'stitch up**

NOW IT'S TIME TO  
PRACTICE ALL  
YOU'VE LEARN'T.

So — GET KNITTING —  
show off your new  
skill to your family  
and friends because  
you're all ready to  
knit some simple  
but exciting garments  
and novelties on your  
wonderful  
NEW MACHINE.

Just look at the  
super selection we've  
designed for you.  
Choose and knit the  
ones which take  
your fancy . . . .  
It's good practice  
before you progress  
to the interesting  
instructions on the  
pages which follow.



U-8

U-9



U-7



U-6

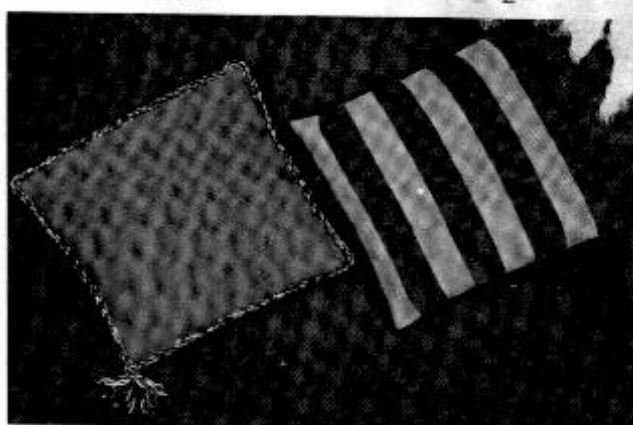


U-1

U-5



U-3



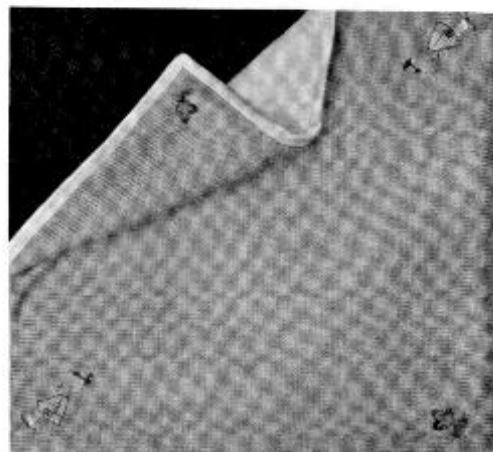
U-10,11 & 12



U-13 & 14



U-15



U-4

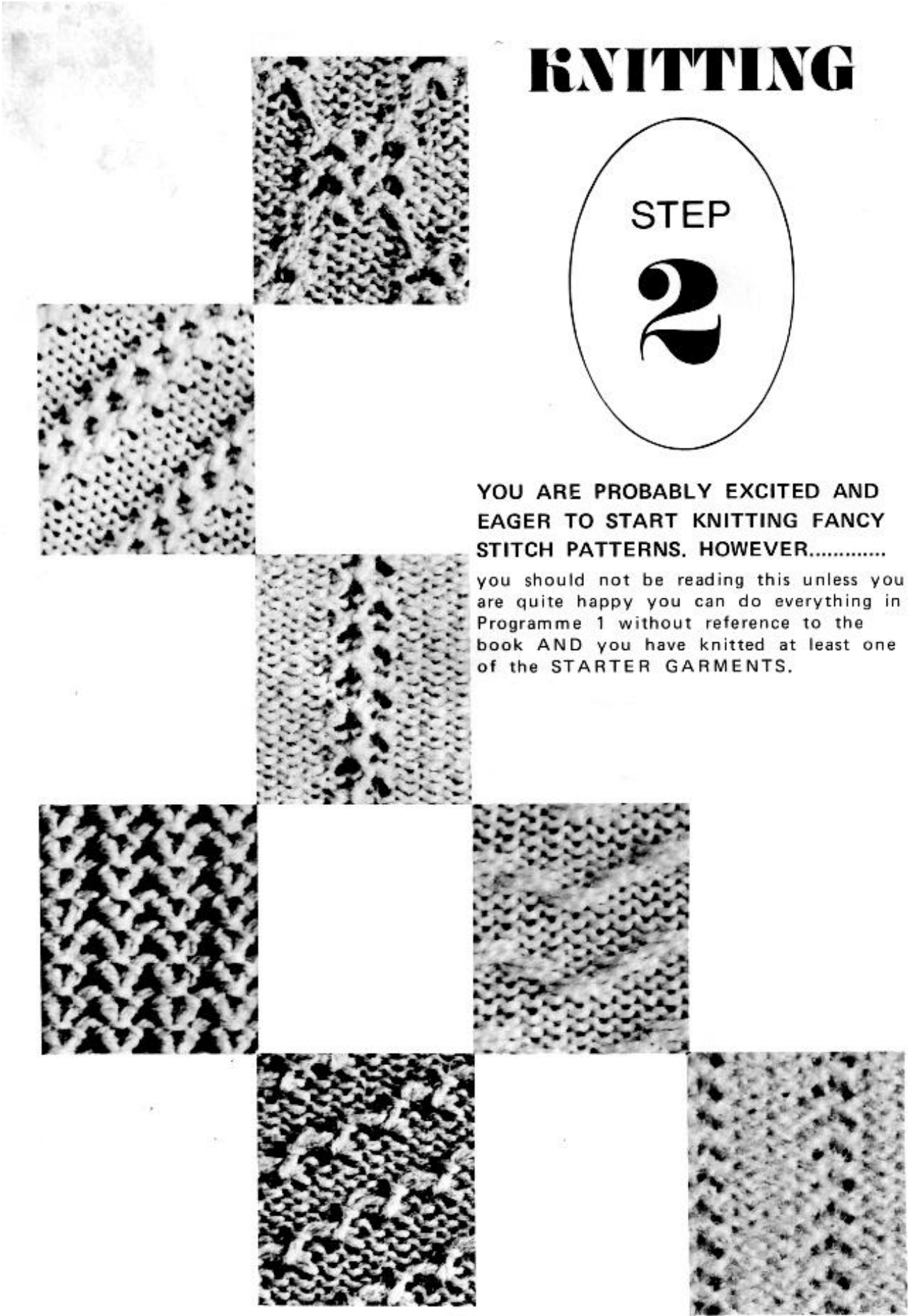
# KNITTING

STEP

2

**YOU ARE PROBABLY EXCITED AND EAGER TO START KNITTING FANCY STITCH PATTERNS. HOWEVER.....**

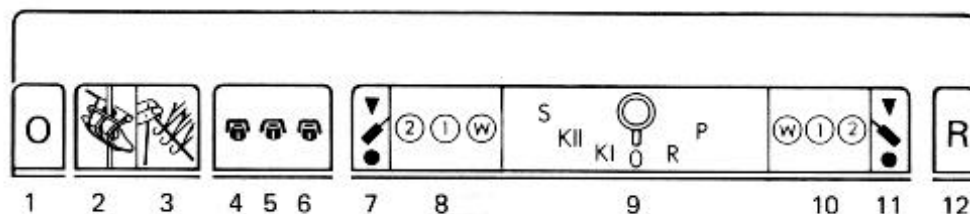
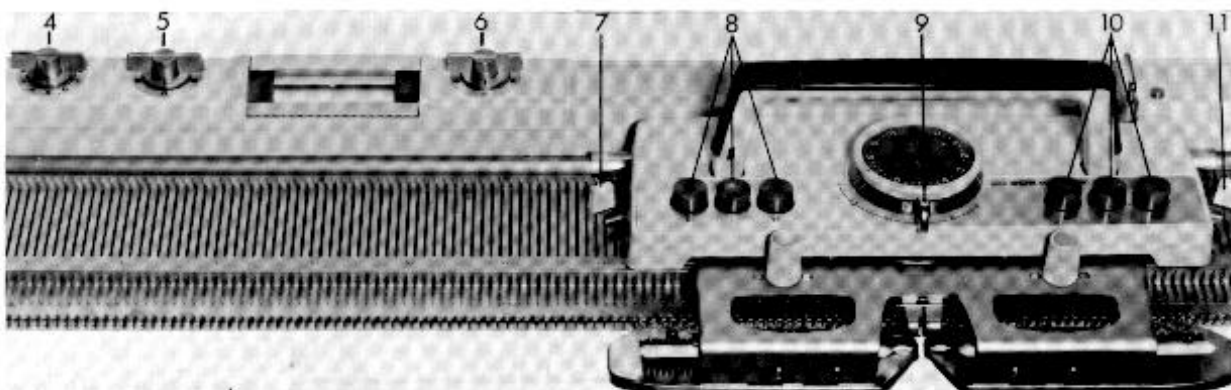
you should not be reading this unless you are quite happy you can do everything in Programme 1 without reference to the book AND you have knitted at least one of the STARTER GARMENTS.



## READING THE PATTERN CARDS

The instructions of the pattern cards are always read from LEFT to RIGHT and also set this way on the machine.


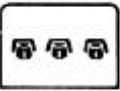



The NEW pattern diagrams are easy to follow. They are set out in simple and easy to follow columns. In order to explain how to ready them, I have divided the diagram below into 12 main groups.

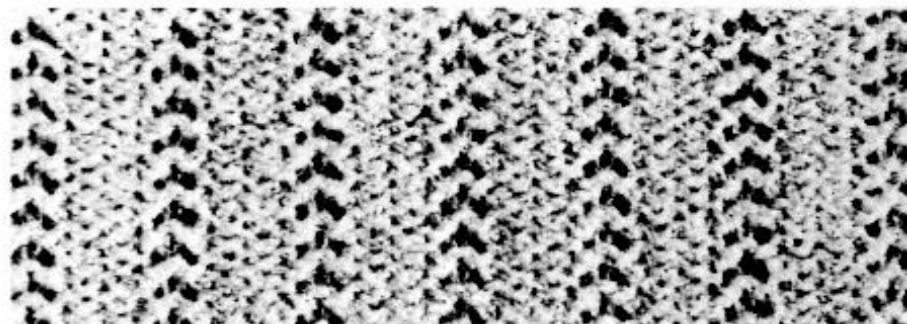


- 1, 0 - shows you the number of steps needed to achieve one pattern.
2. This diagram is for the yarn knitted through the Yarn Feeder. As long as you knit with one colour only, the number 1 will be shown in this column. When you have to change to a second colour in the Yarn Feeder, then you have a 2 in place of the 1.
3. This column will only be used for Fair Isle patterns and for Weaving In patterns, which I shall explain later.
4. This column shows you to which position the Zig Zag button should be set before you knit the next pattern setting.
5. This column shows you to which needle setting you must set the LEFT side Needle Selector button before you start knitting the next row.
6. This shows you to which needle setting you must set the RIGHT side Needle Selector button before you start knitting the next row.
7. Shows you where the LEFT Side Lever should be set.
8. Shows you which of the 3 buttons on the LEFT side of the carriage must be pushed DOWN before continuing knitting.
9. Shows you to which of the 6 different positions the Cam Lever must be set.
10. Shows you which of the 3 buttons on the RIGHT side of the carriage must be pushed DOWN before you continue knitting.
11. Shows you where the RIGHT Side Lever should be set.
12. Shows the number of rows to knit of the actual pattern setting.


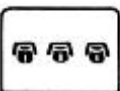





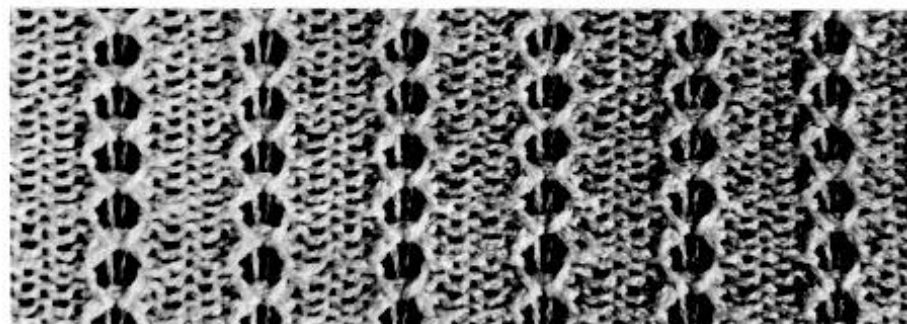
## KNITTING YOUR FIRST STITCH PATTERNS

5018													
O									S KII KI O R P 			(W) (1) (2) 	R
1	1		5	0	4	▼	1	0		2	▼	2	


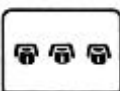





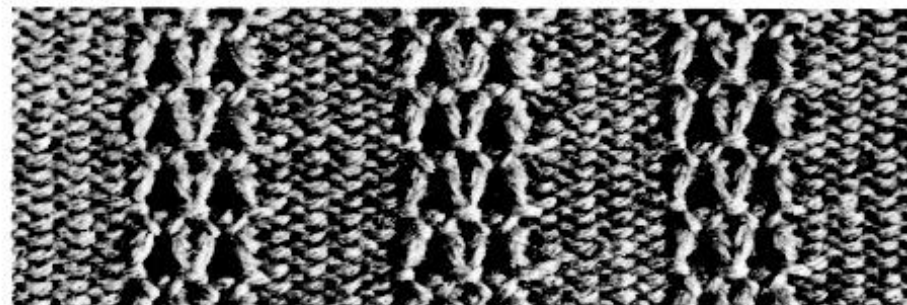
Knit about 32 rows of pattern. Push button 2 on the LEFT side of the carriage HALF way DOWN to release button 1. Knit 4 more rows. Because you released button 1, the last rows will be knitted in plain stocking stitch.

48													
O									S KII KI O R P 			(W) (1) (2) 	R
1	1		5	0	4	▼	1	0		1	▼	3	
2	"		"	"	"	"	"	"		2	"	1	



Knit about 40 rows of this pattern. Leave button 2 at the RIGHT side of the carriage DOWN and push DOWN button 2 on the LEFT side of the carriage. This way you will knit the next 4 rows in plain stocking stitch.



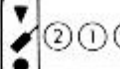
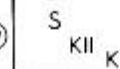




5020													
O									S KII KI O R P 			(W) (1) (2) 	R
1	1		5	8	1	▼		P		▼	3		
2	"		"	"	"	"	"	0		"	1		

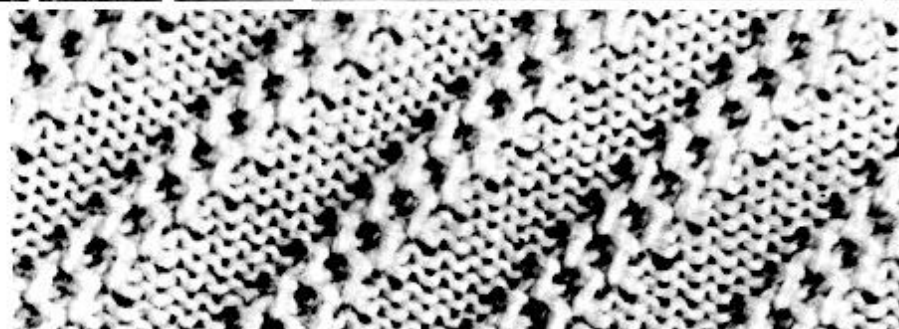


This card has no settings for the buttons on the carriage. This means ALL buttons on the LEFT and RIGHT side of the carriage are UP.

Knit about 40 rows of the pattern. Leave the Cam Lever on 0 and knit 4 rows. With the Cam Lever on 0, the needles will NOT pick up the stitches but knit them.




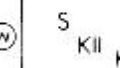




## USING THE ZIG-ZAG BUTTON

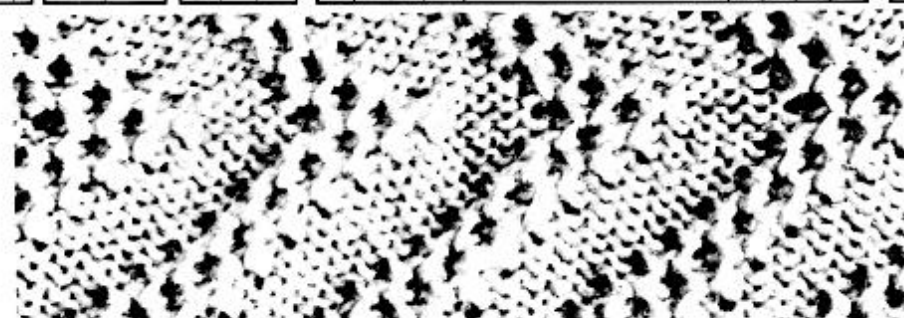
5019										
O									R	
1	1	1 8 1	▼					P	▼	2
2	"	2 " "	"					"	"	"
3	"	3 " "	"					"	"	"
4	"	4 " "	"					"	"	"
5	"	5 " "	"					"	"	"
6	"	6 " "	"					"	"	"
7	"	7 " "	"					"	"	"
8	"	8 " "	"					"	"	"



Until here you have been knitting with the same pattern needles all the time. From this card on, we will start moving the pattern needles by using the Zig Zag button on the Pattern Panel.

You can only turn the Zig Zag button from LEFT to RIGHT and back, not around. Knit the pattern card twice and set the Cam Lever back to 0. Knit another 4 rows plain stocking stitch.

5022										
O									R	
1	1	1 8 1	▼					P	▼	2
2	"	2 " "	"					"	"	"
3	"	3 " "	"					"	"	"
4	"	4 " "	"					"	"	"
5	"	5 " "	"					"	"	"
6	"	6 " "	"					"	"	"
7	"	7 " "	"					"	"	"
8	"	8 " "	"					"	"	"
9	"	7 " "	"					"	"	"
10	"	6 " "	"					"	"	"
11	"	5 " "	"					"	"	"
12	"	4 " "	"					"	"	"
13	"	3 " "	"					"	"	"
14	"	2 " "	"					"	"	"


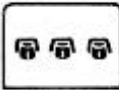
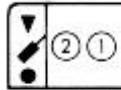
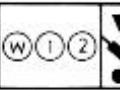


In this pattern card you will find the FIRST Zig Zag pattern instruction.

Knit the pattern card twice and set the Cam Lever back on 0. Knit 4 rows.

## TRANSFERRING A STITCH PATTERN

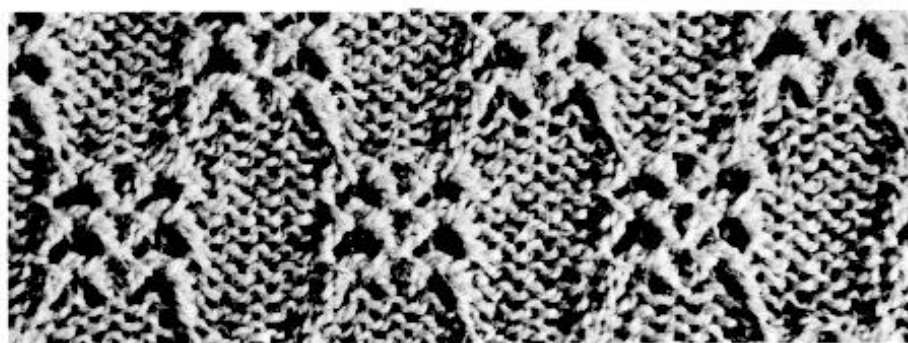
5021

O				S KII KI O R P		R	
1	1	5 8 1	▼		P	▼	3
2	"	" " "	"		0	"	1
3	"	" " "	"		P	"	3
4	"	" " "	"		0	"	1
5	"	" " "	"		P	"	3
6	"	" " "	"		0	"	1
7	"	1 " "	"		P	"	3
8	"	" " "	"		0	"	1
9	"	" " "	"		P	"	3
10	"	" " "	"		0	"	1
11	"	" " "	"		P	"	3
12	"	" " "	"		0	"	1



On this pattern card you see that the Cam Lever is moved after every 3rd row to 0 position. This will knit off the gathered stitches, and after 3 times pattern knitting you transfer the pattern onto different needles.



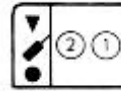

Knit this card twice and leave the Cam Lever in 0 position. Knit 4 rows of plain stocking stitch.

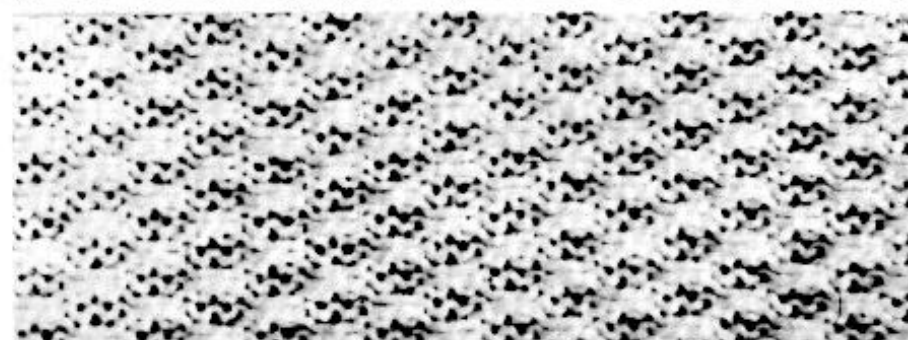


This instruction shows you the Cam Lever set to S position which is for the pattern we call slip stitch. The thread remains in front of the knitting and these needles will not knit.

Knit this card 40 rows and then set the Cam Lever to 0 position. Knit 4 rows plain stocking stitch.

85

O				S KII KI O R P		R	
1	1	5 0 3	▼	S		▼	2
2	"	7 " "	"	"		"	"



I am sure you enjoyed pattern knitting and the easy way it could be achieved. There are many more possibilities for knitting patterns, like knitting with many colours - Tuck Stitch patterns, Fair Isle patterns, Weaving patterns and Lace patterns. But all this I shall explain later.

The patterns 5021, 5022, 5019, 5020, 48, 5018 are Tuck stitch patterns. Tuck stitch means that many stitches are gathered together in one needle hook and therefore thick yarns are not so suitable for this kind of pattern.

# KNITTING

STEP

**3**



KNITTING STRAIGHT  
PANELS FOR THE  
GARMENTS OF THE  
FIRST STEP.

IN STEP 3 YOU WILL  
LEARN HOW TO GIVE  
SHAPE TO YOUR  
KNITTING AND HOW TO  
KNIT HEMS AND WELTS.  
DON'T BE WORRIED –  
IT IS EASY TO DO AND  
AT THE END OF THIS  
STEP YOU WILL FIND  
MORE EXCITING NEW  
GARMENTS TO KNIT  
USING ALL YOU LEARN  
IN STEP 3

Making a Hem

Simple Increasing and Decreasing

How to make Ribbings

Helpful Hints

PAGE 44 · 46

47 · 49

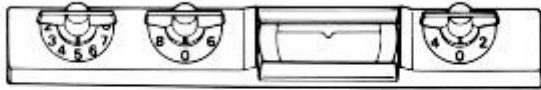
50 · 59

92

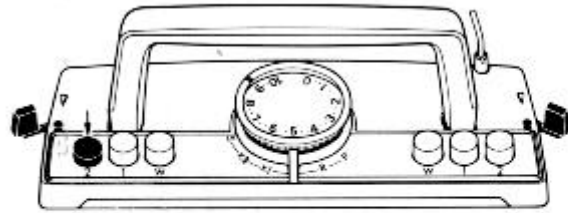
## KNITTING A HEM

When knitting a hem or any other garment, always start by knitting the first rows using odd or waste yarn. By waste yarn I mean left overs from previously knitted garments, but they should be a thin quality yarn. It will make the start of the garment much easier and it is also very useful when steaming your garment, as it will be much simpler to pin onto your pressing table. After pressing you can remove the waste yarn. When knitting welts and hems, you remove the rows of waste yarn immediately after folding the welt or hem.

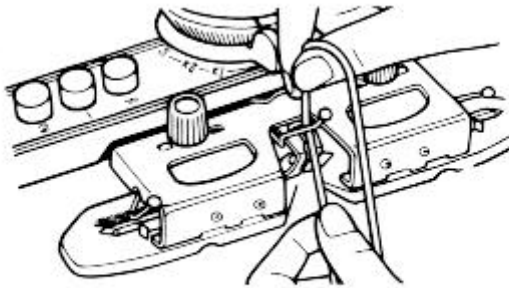
Thread up the waste yarn and make an open edge cast on over 40 needles. Knit a few rows, finishing with the carriage at the LEFT. Break the thread of the waste yarn above the carriage and pull the end downwards out of the Yarn Feeder. Remove the waste yarn from the Yarn Brake.



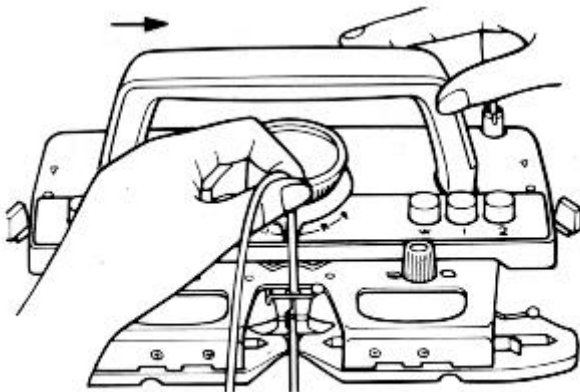
The Pattern Panel is set to: 5 - 0 - 0.



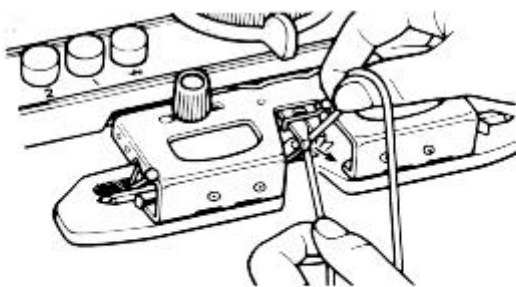
Carriage setting: Turn Tension Dial to 9.  
Both Side Levers are set to ● position.  
ALL buttons are UP.  
The Cam Lever is set to front on 0.



Take the Nylon Thread and feed it DIRECTLY into the Yarn Feeder, allowing 2 or 3 inches to hang down below the carriage.



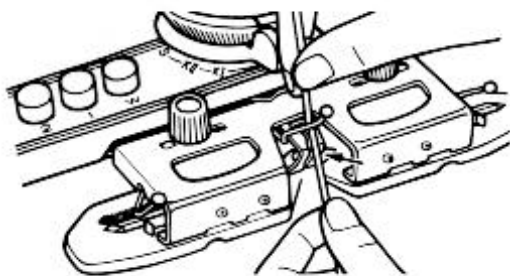
Allow the Nylon Thread to hang over your thumb as shown, and hold it lightly between thumb and forefinger. Knit 1 row towards the RIGHT. While moving the carriage - let the Nylon Thread slide smoothly through your fingers as the carriage needs it to make the stitches.



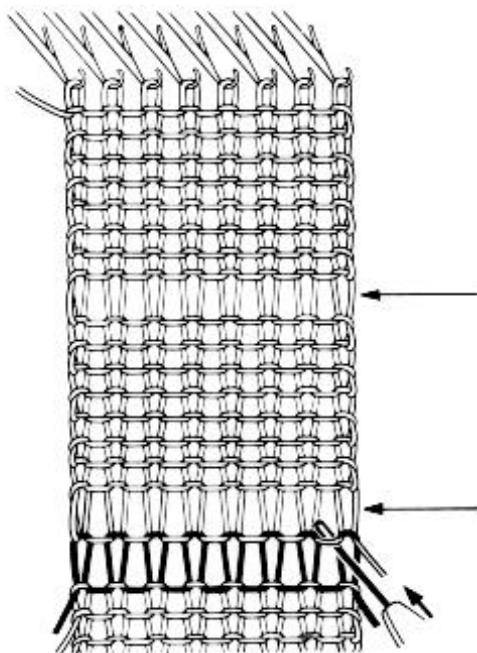
Pull the remaining length of Nylon Thread out of the Yarn Feeder, downwards, and let it hang down. You have knitted IN the Nylon Thread to separate the following hem from the cast on with the waste yarn.

## KNITTING A HEM

The hem is usually knitted with a smaller Tension size than the rest of the garment. This gives more elasticity so it cannot stretch out of shape.



The carriage is at the RIGHT. Thread the main yarn through the Yarn Brake and Yarn Feeder and fasten the end onto the RIGHT hand Table Clamp. Pull down any slack yarn from behind the Yarn Brake.

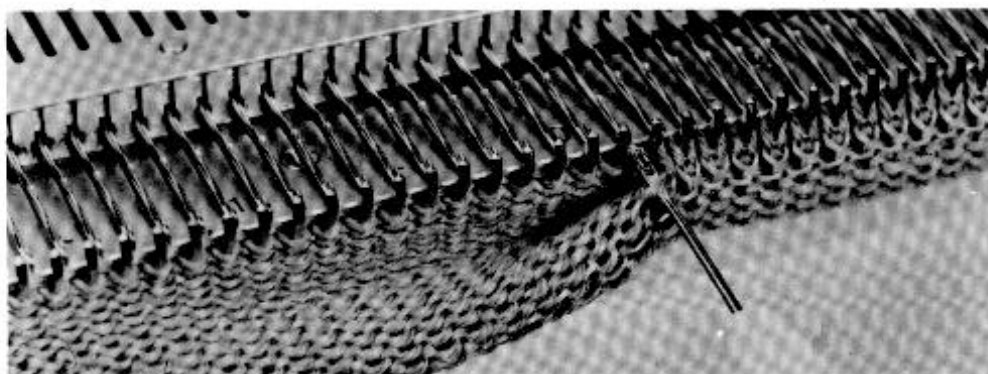


Set the Row Counter to 000.  
Knit 1 row with Tension 7.  
Knit 7 rows with Tension 5.  
Knit 1 row with Tension 7.  
Knit 8 rows with Tension 5.  
Set the Tension back to 7.  
The Row Counter shows 17.

These large stitches help to make a neat, flat edge when the hem is folded.

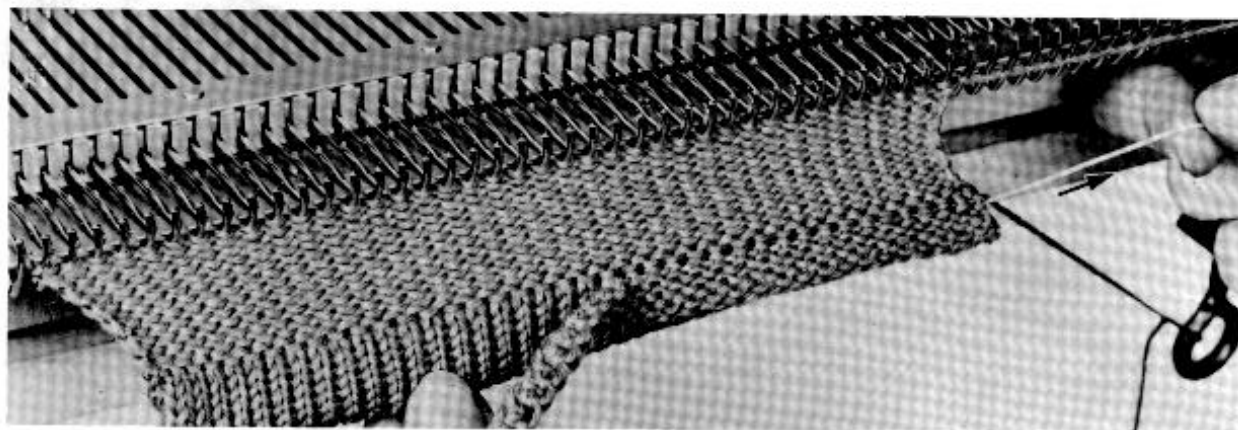
These large stitches will make it easy to lift the first row of knitting after the Nylon Thread, onto the needles, to close the hem.

With the little brush, open all needle latches. Slip the Transfer Tool under the FIRST STITCH FROM THE RIGHT, of the FIRST ROW KNITTED AFTER the Nylon Thread.



Fold the knitting. Hold the row knitted with the Nylon Thread and the first row of knitting between thumb and forefinger of your LEFT hand. Hook the Transfer Tool into the first needle from the RIGHT. Raise the Transfer Tool and let the loop slide DOWN INTO the needle hook. This needle now has TWO loops.  
Lift, into the needle hooks, all the loops of the first row knitted after the Nylon Thread. When this is completed, each needle in 'B' position will have TWO loops.  
After a little practice you will find it much quicker to lift 3 stitches at a time with your Triple Transfer Tool.

## KNITTING A HEM

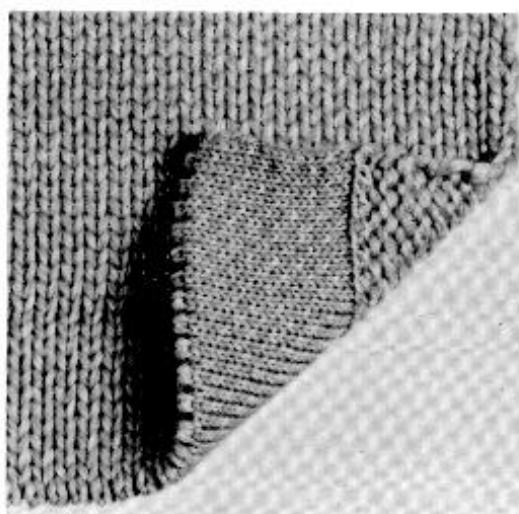


Each needle has TWO loops. Bring all needles clearly in 'B' position and knit 2 rows. Hold the knitting with your LEFT hand and pull the Nylon Thread towards the RIGHT. The first rows knitted with waste yarn automatically fall away from the knitting, leaving a perfect hem. In future, when starting a garment, always start by knitting the first rows with waste yarn.

## KNITTING A HEM WITH BULKY YARNS

When you are knitting with thicker yarns, and your hem has been lifted, you have two big stitches in each needle hook - this could cause a little trouble when knitting the next row. The best and safest method is to hold the knitting against the machine and with the straight edge of the Needle Pusher bring the needles from 'B' to 'D' position. When the carriage is at the RIGHT, push DOWN the LEFT side button 2. When the carriage is at the LEFT, push DOWN the RIGHT side button 2. Knit 1 row, pull out the Nylon Thread and continue knitting.

A very easy way to make a hem for bulky yarn is to knit the inside part of the hem with a thin to medium yarn and only the outside of the hem with the thick yarn. This makes a flat hem even with bulky yarns.



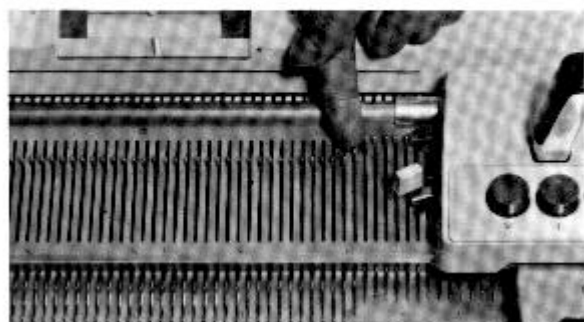
Supposing the yarn can only be knitted with every second needle and the hem should be 2 inches long, start the knitting with waste yarn and ALL needles. Knit IN the Nylon Thread - and then knit the first and inside half of the hem with thin yarn.

Transfer every second stitch onto its adjacent needle. Bring the empty needles back to 'A' position. Thread the thick yarn into the Yarn Brake and Yarn Feeder and knit the second half of the hem.

When lifting up, every second needle in 'B' position must have TWO loops of the thin yarn. The two qualities should be matching colours.

## INCREASING ONE STITCH AT A TIME

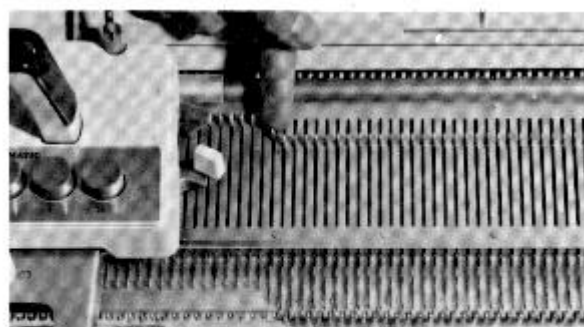
HERE I SHOW YOU HOW TO INCREASE 1 STITCH ON EITHER SIDE IN A VERY SIMPLE WAY



If you wish to increase ONE stitch on the RIGHT SIDE - your carriage must be at the RIGHT.

Push the next empty needle on the RIGHT side of the knitting from 'A' to 'B' position. Continue knitting.

The stitch will automatically be picked up and knitted by the carriage.



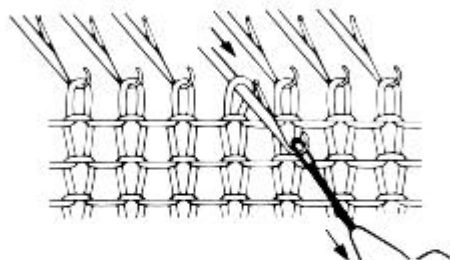
If you wish to increase ONE stitch on the LEFT side - your carriage must be at the LEFT.

Push the next empty needle on the LEFT side of the knitting from 'A' to 'B' position. Continue knitting.

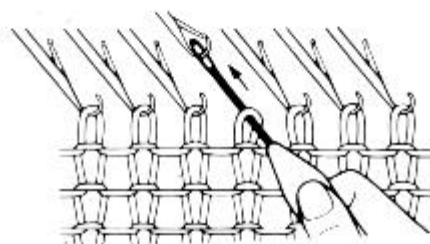
The stitch will automatically be picked up and knitted by the carriage.

## TRANSFERRING STITCHES WITH THE TRANSFER TOOL

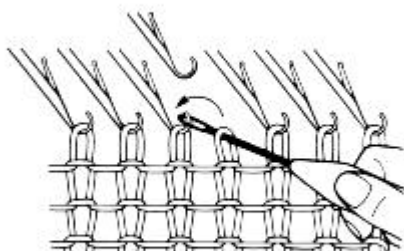
The Transfer Tool has many uses but is mainly used for transferring stitches, increasing and decreasing and for fancy pattern making.



Place the eye of the Transfer Tool onto the needle hook. Pull the needle towards you from 'B' to 'D' position.



Push the needle back to 'A' position, causing the stitch to slide over the needle latch onto the Transfer Tool. Lift the Transfer Tool out of the needle hook.



Place the Transfer Tool in the hook of the adjacent needle. Hold the knitting down and lift the handle of the Transfer Tool until the stitch slides down into the needle hook.

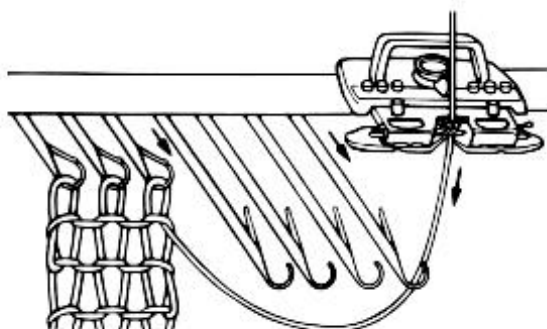


## INCREASE MORE THAN ONE STITCH AT A TIME



### TO INCREASE SEVERAL STITCHES ON THE RIGHT SIDE — THE CARRIAGE MUST BE AT THE RIGHT.

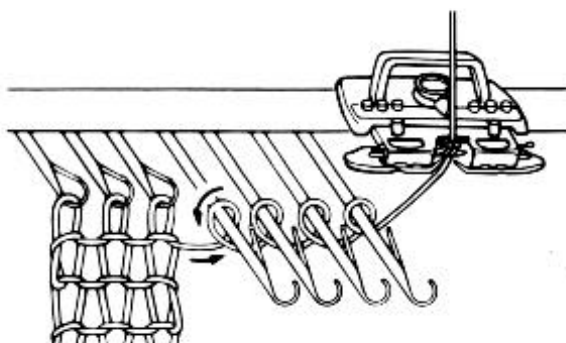
This method is suitable when knitting plain stocking stitch.



Push DOWN button 2 at the LEFT side of the carriage.

To increase 4 stitches at the RIGHT - push 4 extra needles from 'A' to 'D' position on the RIGHT side.

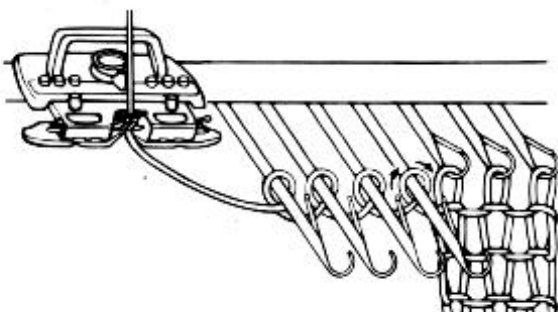
Pull some yarn downwards through the Yarn Feeder.



Wind the yarn L O O S E L Y under and around every needle in anti-clockwise direction. As you wind, push each loop BEHIND the needle latch.

Pull down any slack yarn from the Yarn Brake. Knit 1 row. You will notice that you have increased 4 stitches on the RIGHT side of the knitting.

### TO INCREASE SEVERAL STITCHES ON THE LEFT SIDE — THE CARRIAGE MUST BE AT THE LEFT.

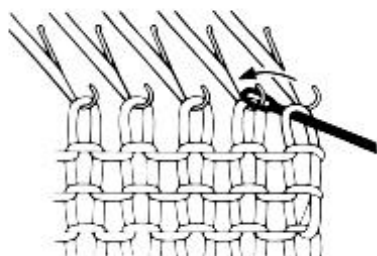


To increase 4 stitches at the LEFT - push 4 extra needles from 'A' to 'D' position on the LEFT side.

Wind the yarn L O O S E L Y around the 4 needles in clockwise direction as shown by the arrows. Push DOWN button 2 at the RIGHT side of the carriage.

Pull down any slack yarn from behind the Yarn Brake and knit 1 row. You have now increased 4 stitches on the LEFT side of the knitting.

## DECREASING ONE STITCH AT A TIME



You can decrease 1 stitch on both sides of the SAME ROW.

Transfer the last stitch on each side onto its adjacent needle.

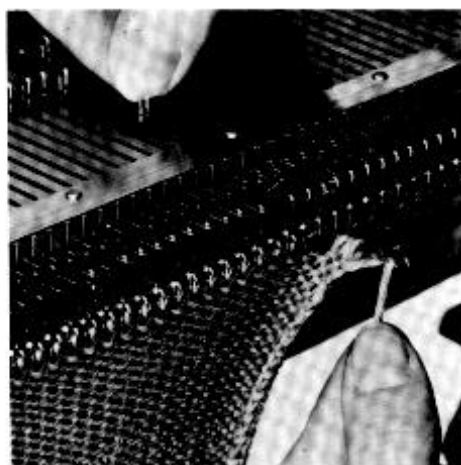
Push the EMPTY needle BACK to 'A' position.



## DECREASING MORE THAN ONE STITCH AT A TIME

THE CARRIAGE IS AT THE RIGHT.

1. Transfer the stitch from the LAST needle on the RIGHT onto the adjacent needle on the LEFT. Push the needle with the 2 stitches up to 'D' position.
2. Leave the empty needle in 'B' position.
3. With your left thumb, push the needle with the TWO stitches carefully from 'D' to 'C' position. The latch MUST remain OPEN.



4. Pull a little yarn from the Feeder and lay it from RIGHT to LEFT across the open hook as shown.
5. Holding the needle by the butt, pull it BACK to 'B' position.
6. Repeat 1 to 5 until the required number of stitches have been decreased.

When this is completed, you may bring BACK to 'A' position all the empty needles. We leave the empty needles in 'B' position while decreasing because it makes the counting of the empty needles easier.

## CASTING OFF OR BINDING OFF THIS WAY

In this manner, you can DECREASE AS MANY STITCHES AS NEEDED. To BIND OFF OR CAST OFF COMPLETELY, you just continue this process until there are no stitches left in the needles. Then you break the yarn and pull the end through the last loop to lock your stitches.

## A NEW WAY TO KNIT RIBBED WELTS



**THE OLD:** For many years now the traditional method has been to knit plain and purl rib combinations. They look fine when they are new but 'fan' out of shape after a while - and, especially on childrens' knitwear, the first row of cast on breaks too easily and then the welt must be re-knitted or the whole sweater must be thrown away.

**THE NEW:** The special **DOUBLE ELASTIC** welts. The welts, ribbings and borders on knitwear are so important. They are snug fitting, but still soft and elastic. They will not wash out of shape and will never sag and spoil the whole garment. I recommend the new welts because they look better, are far more elastic and last much longer.

Of course, it is important to use the correct Tension - but even this is no problem at all. Just try a few different Tensions and soon you will find the perfect Tension for whichever yarn you are using - and you will also enjoy the perfect results illustrated here.



Boy's sweater knitted with the **NEW** special **DOUBLE 1 by 1** welt. Very easy and great fun to knit. On the next pages you will find the instructions on how to knit them.

## THE NEW WAY TO MAKE RIBBED WELTS

THE NEW SYSTEM TO KNIT PERFECT DOUBLE WELTS FOR ALL KNITWEAR.

Double to give a perfect, snug fit, and more elastic than ever before.

Double hems last much longer too, and - they are SO easy to knit.



These hems will give your knitwear that professional finish found in couture garments.

Particularly suitable for children's clothes and sportswear as they are tough and can withstand the roughest handling.

1 by 1 ribbing effects are most suitable when you are knitting with medium to thick yarns using Tension 6 and higher.



2 by 1 ribbing effects - very suitable and useful for every type of yarn and all Tensions from 2 upwards.

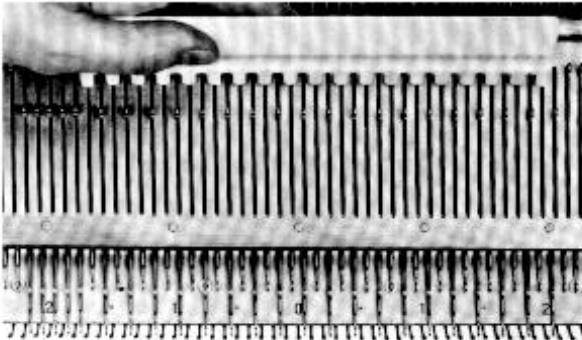


3 by 1 - Can also be used for all yarns using Tensions from 2 upwards, but it is most attractive and elastic when knitted in a fine soft yarn using Tensions between 2 - 4.

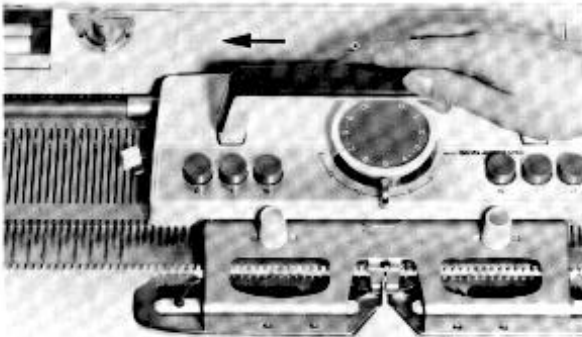
## THE 1 BY 1 DOUBLE WELT

In order to make perfect welts - elastic, neat and durable - it is most important to knit them with the correct Tension. Every yarn is different but in principle the Tension used for the 1 by 1 welt is set about 3 to 4 numbers lower than the yarn would usually be knitted

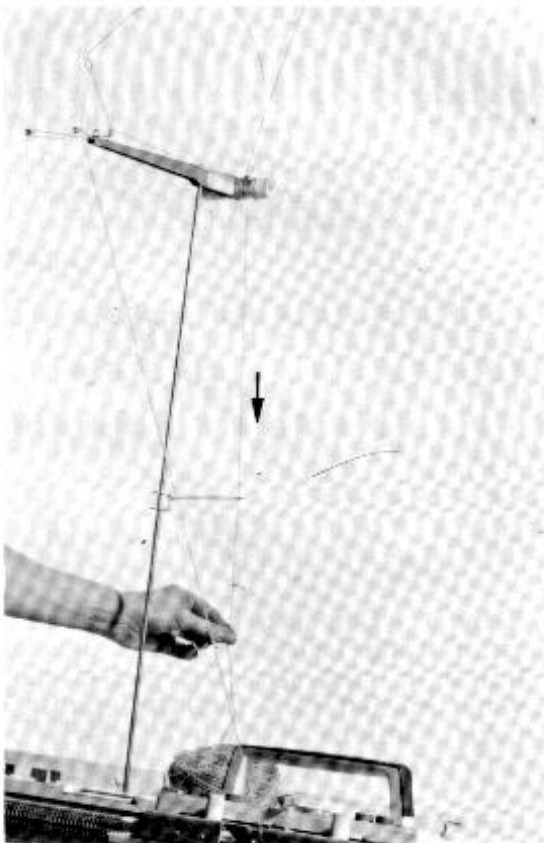
The carriage is at the RIGHT. Bring 22 needles at the LEFT and 21 needles at the RIGHT of centre 0 from 'A' to 'B' position.



Starting with the SECOND needle from the RIGHT - bring every SECOND needle BACK to 'A' position using the 1 / 1 side of the Needle Pusher.



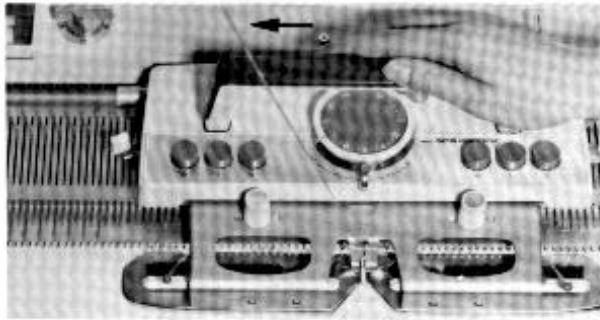
Slide the carriage to the LEFT and back to the RIGHT across the needles to ensure that they are clear and ready for the cast on.



Thread up the waste yarn through the Yarn Brake and the Yarn Feeder, pull down any slack yarn from behind the Yarn Brake.

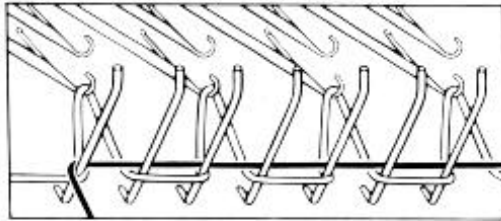
Remember there must NOT be any slack yarn between the Yarn Feeder and the Table Clamp.

## KNITTING THE 1 BY 1 DOUBLE WELT

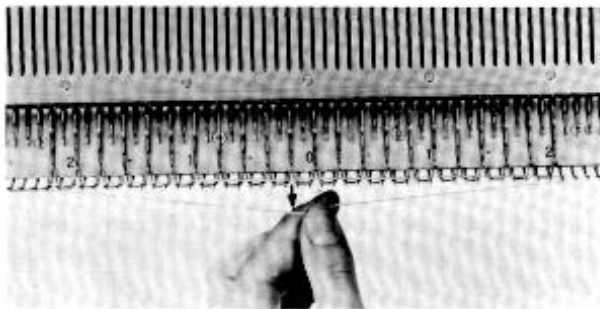


The carriage is at the RIGHT  
Turn the Tension Dial to 7.  
Both levers are at FRONT.  
All buttons are UP.  
Cam Lever set to 0.

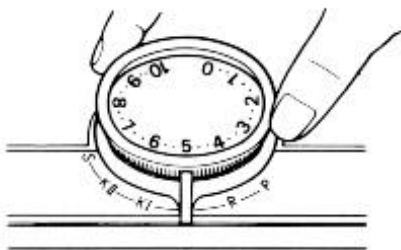
Knit 1 row towards the LEFT.



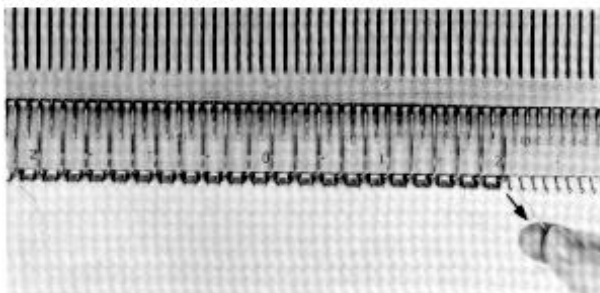
Lay the Nylon Thread across  
the loops between the needle  
hooks and the Sinker Gate.



Pull the Nylon Thread FIRMLY  
DOWN.

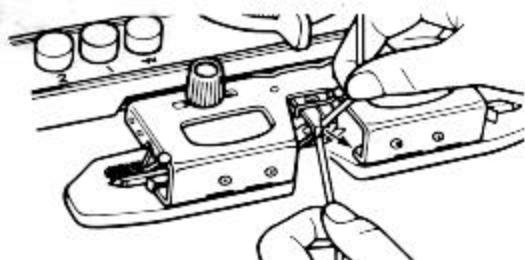


Turn the Tension Dial to 5 and  
knit a few more rows finishing  
with the carriage at the LEFT.

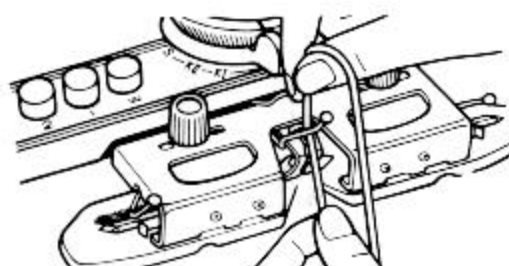


Pull out the Nylon Thread from  
the knitting.

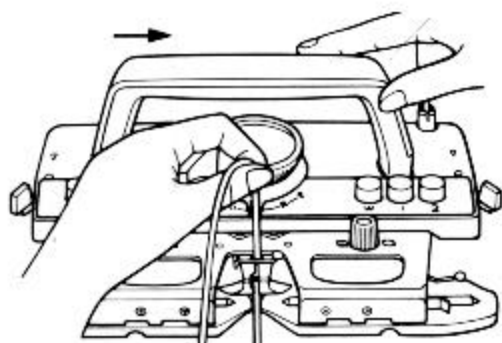
## KNITTING THE 1 BY 1 DOUBLE WELT



Remove the waste yarn from the Yarn Feeder and the Yarn Brake and break it.

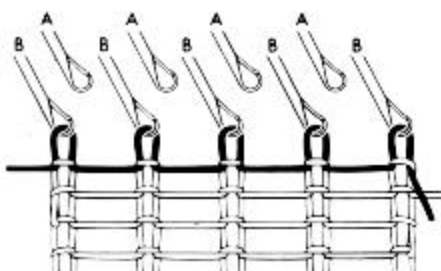


Thread the Nylon Thread into the Yarn Feeder allowing a few inches to hang down below the carriage.

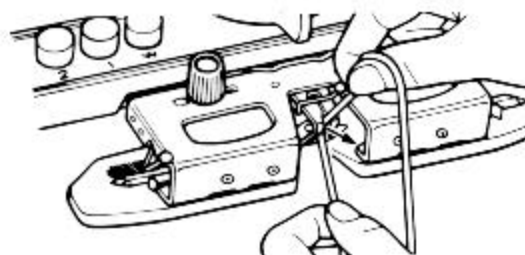


Hold it over your thumb and lightly between your thumb and forefinger, as shown.

Knit 1 row towards the RIGHT allowing the Nylon Thread to slide through your fingers as you knit across.

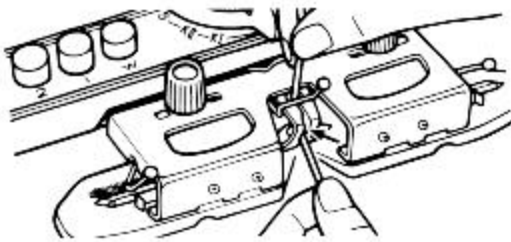


Now you have knitted IN the Nylon Thread to separate the waste yarn from the welt.

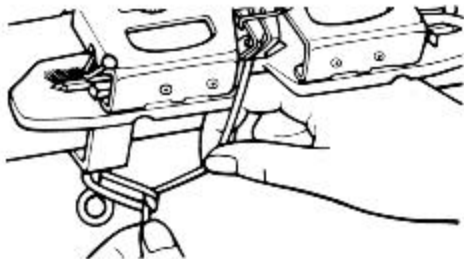


Remove the Nylon Thread from the Yarn Feeder and let it hang down on the side of the knitting.

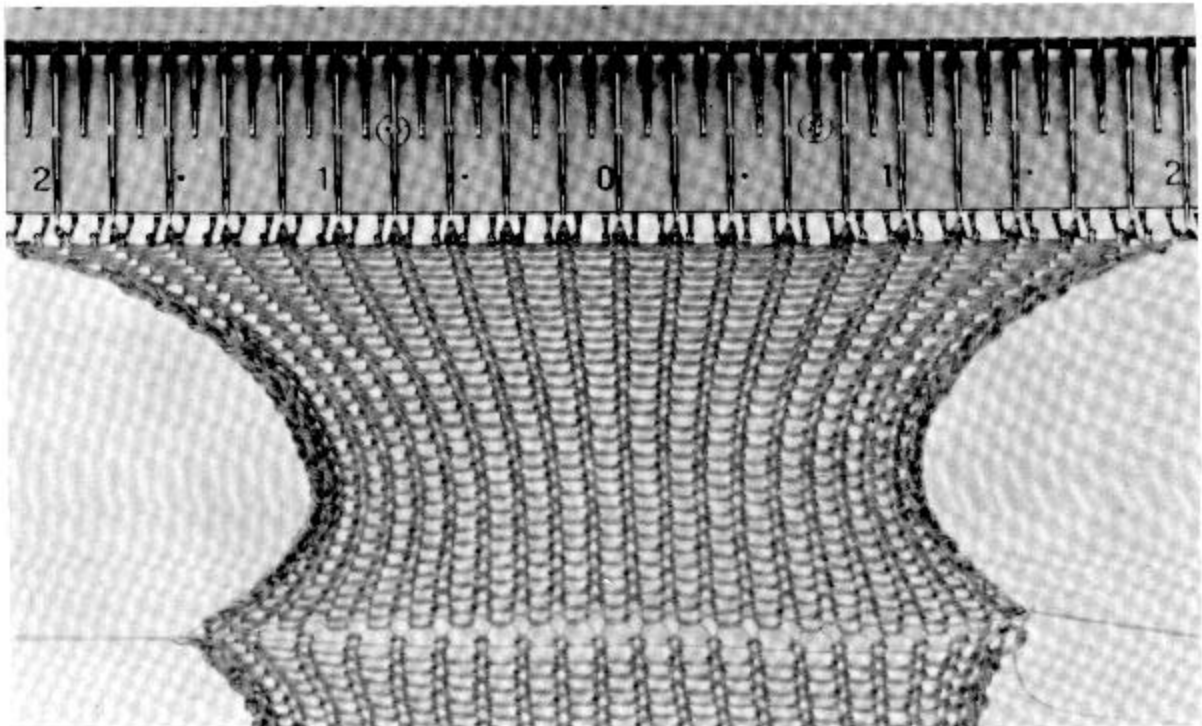
## KNITTING THE 1 BY 1 DOUBLE WELT



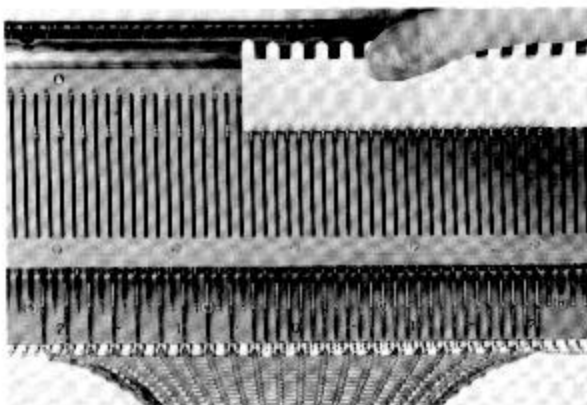
Thread the main yarn through Brake and the Yarn Feeder.



Fasten the end onto the RIGHT side Table Clamp. Check to make sure your yarn is properly threaded up.



The carriage is at the RIGHT. Turn the Tension Dial to 3. Knit 32 rows.

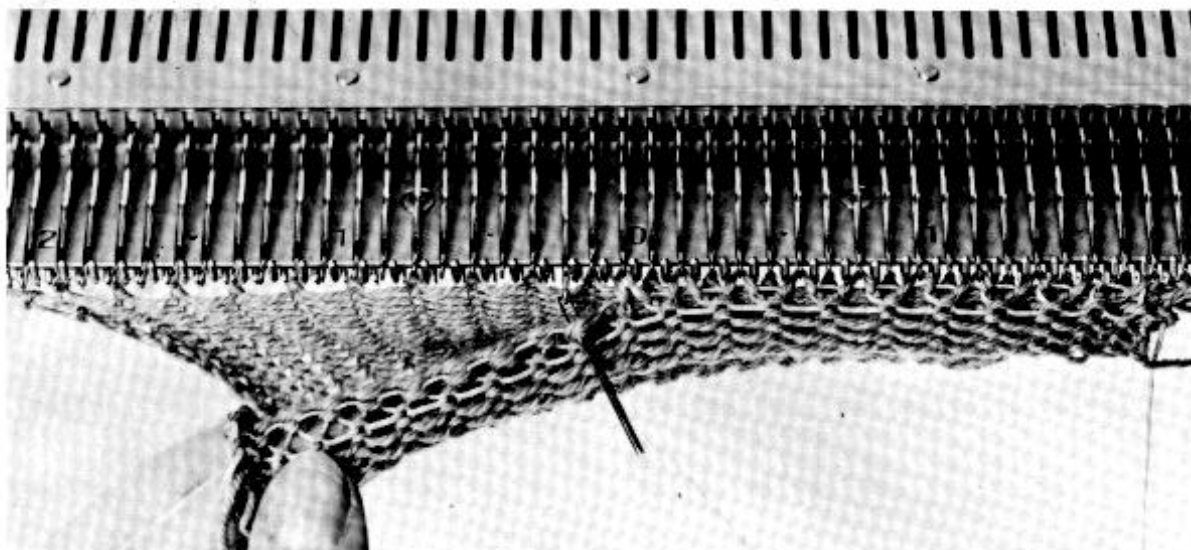


The carriage is at the RIGHT. Using the straight edge of the Needle Pusher, raise from 'A' to 'B' position the remaining 21 needles of the welt (the ones you pushed back to 'A' position earlier).

There are now 43 needles in 'B' position and EVERY SECOND needle has a stitch.



## KNITTING THE 1 BY 1 DOUBLE WELT



Fold the welt as shown. Starting at the RIGHT, slip the Transfer Tool inside the FIRST LOOP at the RIGHT of the FIRST row knitted AFTER the Nylon Thread.

Lift this loop into the hook of the FIRST EMPTY NEEDLE IN 'B' position at the RIGHT.

Now lift the SECOND loop into the SECOND EMPTY needle in 'B' position.

Continue lifting each loop and placing it IN the EMPTY needles until the complete welt has been lifted.

**YOUR DOUBLE RIBBED WELT IS NOW KNITTED.**

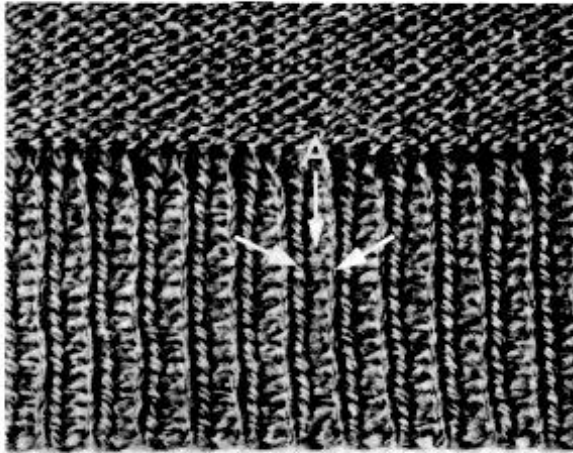
With your LEFT hand hold the knitting against the machine. Use the straight edge of the Needle Pusher to push the needles from 'B' to 'D' position, Push DOWN button 2 on the LEFT side of the carriage.

Check the yarn Tension. Turn the Tension Dial to 7, knit 1 row. Pull the Nylon Thread out of the knitting.

Knit another 40 rows - and if you wish, remove the knitting from the machine.

Your first DOUBLE RIBBED WELT is now completed, it only needs to be steamed. For this, follow the instruction on the next pages carefully.

## STEAMING THE DOUBLE WELT



### BEFORE STEAMING

Your 1 by 1 double welt will now look like this. After steaming and blocking which is explained on the next page, you will notice that the linking bars A have been absorbed into the ribs.

You may steam and block your rib with the Rib Frame, which is a new, useful accessory.

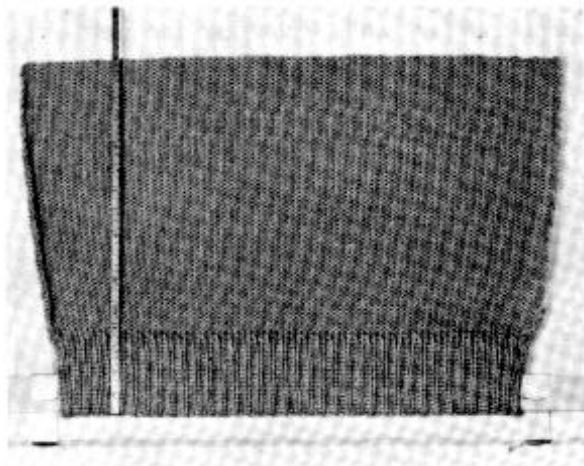
You only start steaming the welts when the rest of the garment has been steamed. **REMEMBER** - first the garment, then the welts.



### AFTER STEAMING

This is how the welt should look when you have steamed according to the instructions given in the book.

If you are knitting with synthetic yarns exercise the greatest care when steaming your garment, as synthetic yarns do **NOT RESPOND** to heat in the same manner as natural wools. Always work lightly and quickly.

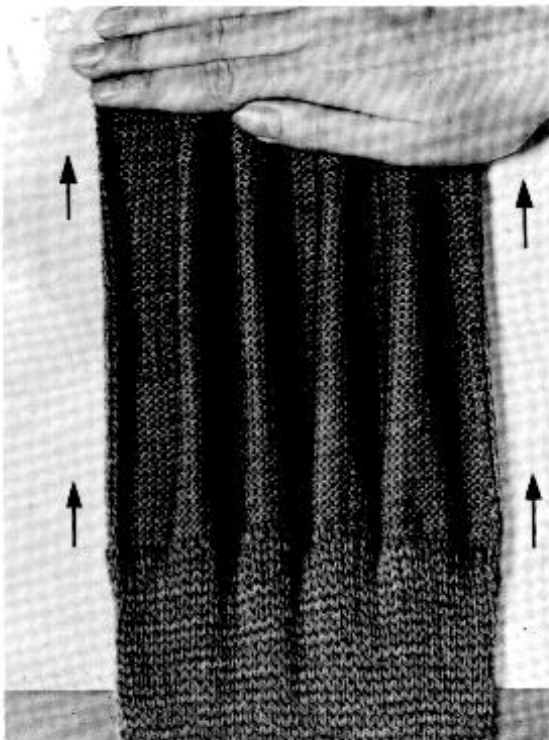


Place both clamps of the Rib Frame onto the front of your pressing table. Insert the metal bar through the welt and slide the ends of the bar under the clamps.

The picture shows you how the welt will look when it comes off the machine.

Please note that the welt is 2 inches wide.

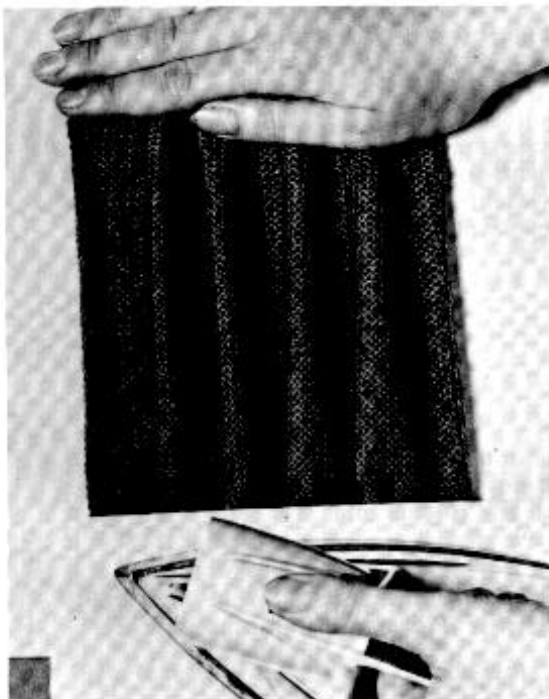
## STEAMING THE DOUBLE WELT



With one hand stretch out your knitted piece as much as possible. At the same time, with the other hand, gather the welt together as closely as possible.

The welt is now 3 inches deep

The welt is now 3 inches deep, so always knit your welt 1/3 shorter than you wish the final depth to be. This applies to all 1 by 1 rib combinations.



Lay a wet cloth on top of the welt, still stretching it as much as possible, lower the hot iron onto the wet cloth and let the hot steam penetrate into the knitting. Do NOT PRESS, just slide the iron over the wet cloth until the entire welt has been steamed.

When steaming 4 ply or double knitting yarn you may let the iron rest on the welt for 1 or 2 seconds on each spot.

Remove the cloth and, while the knitting is still hot and damp, continue to stretch it with one hand and then let the knitting cool and dry, while 'gathering' the welt closely with the other hand. If necessary this procedure may be repeated for added elasticity. When the welt is completely dry, remove it from the rib frame.

**NOTE:** Do NOT stretch 2 by 1 and 3 by 1 rib welts as much as the 1 by 1. The linking bars between the stitches must contract and should look like a fine rib after being steamed.

## KNITTING A 2 BY 1 WELT



Knitting a 2 by 1 welt means - knit 2 and leave 1 needle in 'A' position.

Here are the instructions for knitting this welt it is really easy to do.

It can be knitted with almost any type of yarn.

Bring 33 needles at the RIGHT and 33 needles at the LEFT of centre from 'A' to 'B' position.

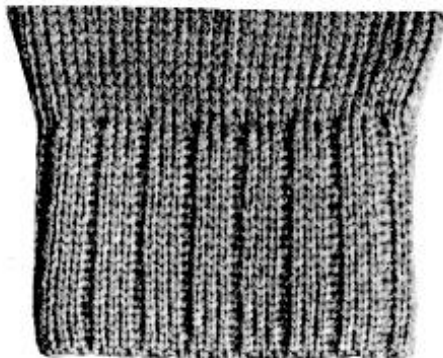
Starting with the THIRD needle from the RIGHT, push every THIRD needle back to 'A' position.

Make an open edge cast on with waste yarn and knit a few rows finishing with the carriage at the LEFT.

Knit in the Nylon Thread from LEFT to RIGHT. Set the Row Counter to 000. Thread the main yarn through the Yarn Brake and Yarn Feeder. Set the Tension Dial to 3. Knit 50 rows. The carriage is at the RIGHT. Set Tension Dial to 6. Bring the needles which you pushed to 'A' position back to 'B' position.

Lift the loops of the first row knitted after the Nylon Thread. Hang the FIRST loop from the RIGHT onto the SECOND needle from the RIGHT which has a stitch. Hang the SECOND loop onto the FIRST EMPTY needle from the RIGHT. Hang the THIRD loop onto the next SECOND needle with a stitch. Hang the FOURTH loop onto the next empty needle. Repeat until all loops have been lifted. Bring all needles into a straight line - pull out the Nylon Thread and continue knitting the sleeve.

## KNITTING A 3 BY 1 WELT



The 3 by 1 welt is knitted leaving every 4th needle back to 'A' position.

It is really simple to do as you know how to knit the others.

And it is most attractive when knitted with thin to medium yarns.

Bring 33 needles at the RIGHT and 33 needles at the LEFT of centre from 'A' to 'B' position.

Starting with the 4th needle from the RIGHT - bring every 4th needle back to 'A' position.

Make an open edge cast on with waste yarn and knit a few rows - finishing with the carriage at the LEFT.

Knit in the Nylon Thread from LEFT to RIGHT. Set the Row Counter to 000. Thread the main yarn through the Yarn Brake and the Yarn Feeder. Set the Tension Dial to 3. Knit 50 rows. The carriage is at the RIGHT. Set the Tension Dial to 6. Bring the needles which you pushed to 'A' position to 'B' position again.

Lift the loops of the first row knitted after the Nylon Thread. The FIRST loop goes onto the SECOND needle WITH a stitch. The SECOND loop goes onto the THIRD needle with a stitch. The THIRD loop goes onto the FIRST EMPTY needle. Repeat until all loops are lifted. Bring the needles in a straight line - pull out the Nylon Thread and continue knitting the sleeve.

## KNITTING A 2 BY 1 WELT



Knitting a 2 by 1 welt means - knit 2 and leave 1 needle in 'A' position.

Here are the instructions for knitting this welt it is really easy to do.

It can be knitted with almost any type of yarn.

Bring 33 needles at the RIGHT and 33 needles at the LEFT of centre from 'A' to 'B' position.

Starting with the THIRD needle from the RIGHT, push every THIRD needle back to 'A' position.

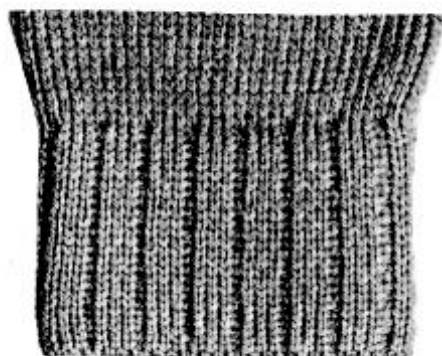
Make an open edge cast on with waste yarn and knit a few rows finishing with the carriage at the LEFT.

Knit in the Nylon Thread from LEFT to RIGHT. Set the Row Counter to 000. Thread the main yarn through the Yarn Brake and Yarn Feeder. Set the Tension Dial to 3. Knit 50 rows. The carriage is at the RIGHT. Set Tension Dial to 6. Bring the needles which you pushed to 'A' position back to 'B' position.

Lift the loops of the first row knitted after the Nylon Thread. Hang the FIRST loop from the RIGHT onto the SECOND needle from the RIGHT which has a stitch. Hang the SECOND loop onto the FIRST EMPTY needle from the RIGHT. Hang the THIRD loop onto the next SECOND needle with a stitch. Hang the FOURTH loop onto the next empty needle. Repeat until all loops have been lifted.

Bring all needles into a straight line - pull out the Nylon Thread and continue knitting the sleeve.

## KNITTING A 3 BY 1 WELT



The 3 by 1 welt is knitted leaving every 4th needle back to 'A' position.

It is really simple to do as you know how to knit the others.

And it is most attractive when knitted with thin to medium yarns.

Bring 33 needles at the RIGHT and 33 needles at the LEFT of centre from 'A' to 'B' position.

Starting with the 4th needle from the RIGHT - bring every 4th needle back to 'A' position.

Make an open edge cast on with waste yarn and knit a few rows - finishing with the carriage at the LEFT.

Knit in the Nylon Thread from LEFT to RIGHT. Set the Row Counter to 000. Thread the main yarn through the Yarn Brake and the Yarn Feeder. Set the Tension Dial to 3. Knit 50 rows. The carriage is at the RIGHT. Set the Tension Dial to 6. Bring the needles which you pushed to 'A' position to 'B' position again.

Lift the loops of the first row knitted after the Nylon Thread. The FIRST loop goes onto the SECOND needle WITH a stitch. The SECOND loop goes onto the THIRD needle with a stitch. The THIRD loop goes onto the FIRST EMPTY needle.

Repeat until all loops are lifted. Bring the needles in a straight line - pull out the Nylon Thread and continue knitting the sleeve.

# HERE ARE SOME MORE EASY TO MAKE GARMENTS.

BEFORE PROCEEDING ANY FURTHER ON YOUR  
INSTRUCTIONS – TAKE YOUR CHOICE AND  
MAKE SOMETHING FROM THE RANGE ON THIS  
OR THE FOLLOWING PAGE.





# KNITTING



STEP

4

**This STEP will give you the last little hints and instructions you need in order to really use your new knitting machine to its best advantage.**

4 different methods of Increasing and Decreasing for fully fashioned shaped knitwear.	PAGE 63 - 65
Shaping a 'V' Neck	66 - 68
Shaping a round neck	69 - 71
Buttonholes	72 - 76
Partial knitting - Darts - Pockets	77 - 80
Picot Edge Hem	81
'V' neck with pattern	82 - 83
Slit for Zip Fastener	84
Pockets with pattern	84 - 85
1 PLAIN - 1 PURL Rib	86 - 89
'V' neckband	90 - 91
Helpful Hints	92



## INCREASING ONE STITCH FULLY FASHIONED

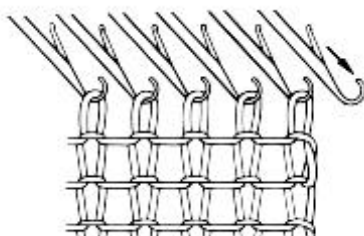
Previously I showed you the simple way to increase 1 stitch at a time. Now try this fully fashioned increasing which you will find on expensive knitwear. It is not difficult to do – it does require a little more time but the improvement in appearance is well worth the extra time.

Another important advantage of fully fashioned shaping is that the garment is very much easier to sew up - and you will be absolutely thrilled with the professional results you achieve.

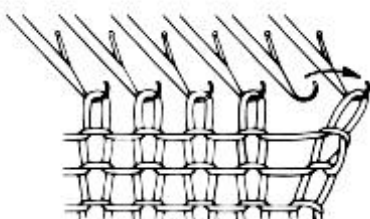


### FULLY FASHIONED INCREASING 1 STITCH AT A TIME WITH THE SINGLE TRANSFER TOOL.

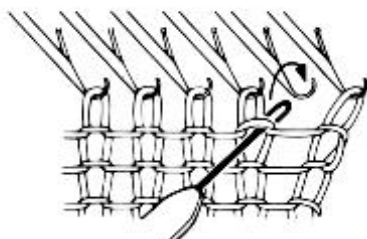
YOU MAY USE THIS METHOD TO INCREASE AT BOTH EDGES OF THE SAME ROW BUT – ONLY 1 STITCH AT A TIME.



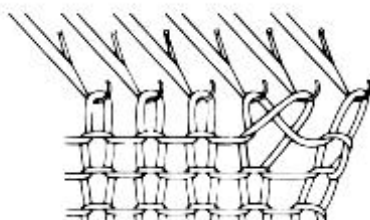
Bring 1 extra needle from 'A' to 'B' position on the side on which you wish to increase.



Transfer the end stitch outwards onto this new empty needle.



Pick up the bar of the row below the second stitch and place it onto the empty second needle.

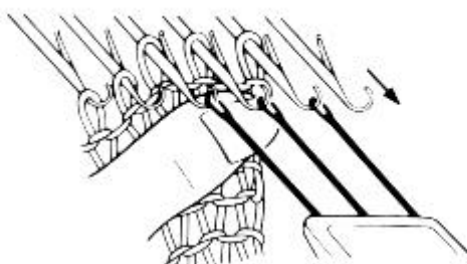


You have now increased one stitch fully fashioned.

## INCREASING 1 STITCH FULLY FASHIONED WITH THE TRIPLE TRANSFER TOOL



This type of increasing is usually used to make perfect Raglan shaping.

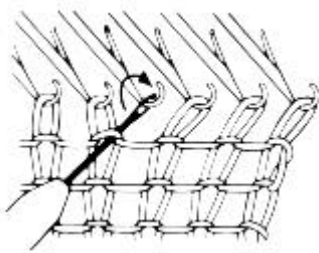


To increase 1 stitch on the RIGHT side, bring 1 more needle at the RIGHT from 'A' to 'B' position. Open the latches of the last 4 needles at the RIGHT.

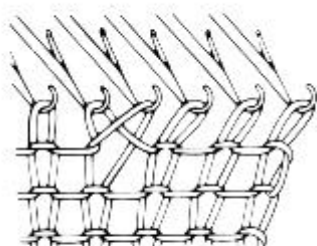
Hang the Transfer Tool into the hooks of the last 3 needles with stitches. Pull these needles to 'D' position, push them back to 'A' position and then pull them up to 'B' position again.



Lift the Transfer Tool with the 3 stitches and transfer the stitches one needle outwards. The 4th needle INSIDE the knitting is EMPTY.



Lift the bar of the 4th stitch of the previous row onto the empty needle. You have now increased 1 stitch, fully fashioned.

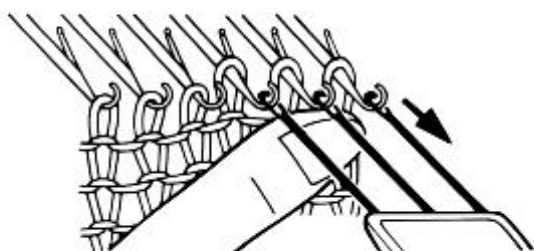


**YOU CAN INCREASE THIS WAY ON BOTH SIDES OF THE SAME ROW – BUT ONLY 1 STITCH AT A TIME.**

## DECREASING 1 STITCH FULLY FASHIONED WITH THE TRIPLE TRANSFER TOOL

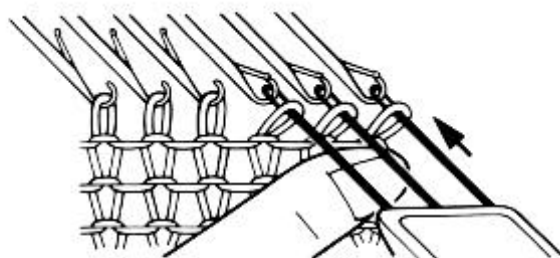


**YOU MAY DECREASE ON BOTH SIDES OF THE SAME ROW.**



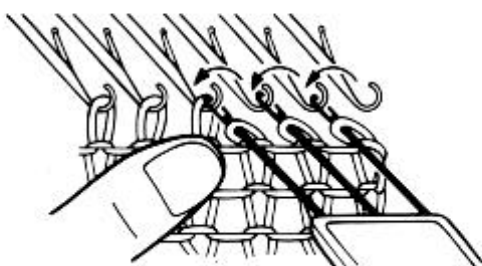
Knit a few rows. Open the latches of the last 4 needles at the RIGHT.

Hang the Transfer Tool into the last 3 needles from the RIGHT. Pull the needles out to 'D' position.

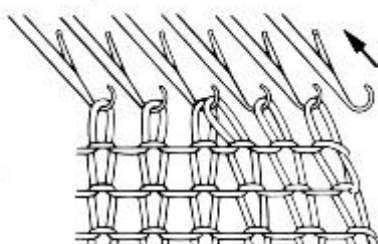


Push them BACK to 'A' position and then pull them slowly up to 'B' position.

Lift the Transfer Tool out of the needles with the stitches on it.



Move the Transfer Tool 1 more needle towards the LEFT. Let the 3 stitches slide into the needle hooks.



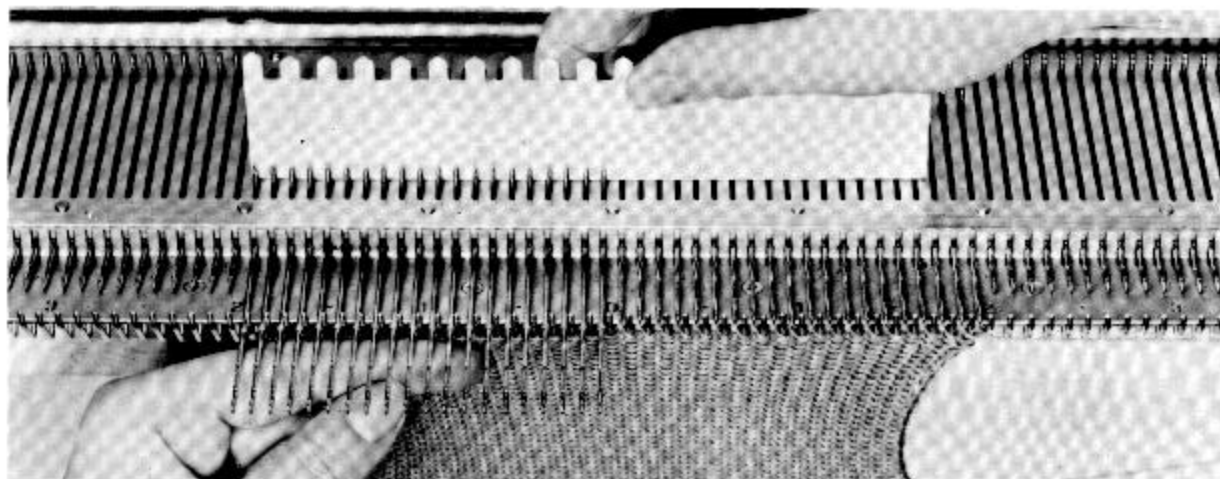
The 4th needle inside the knitting has 2 stitches and the first needle from the RIGHT is empty. Push the empty needle back to 'A' position.

When decreasing for a 'V' neck or Raglan shaping, this method of decreasing is very useful and most attractive.

## HOW TO SHAPE A 'V' NECK

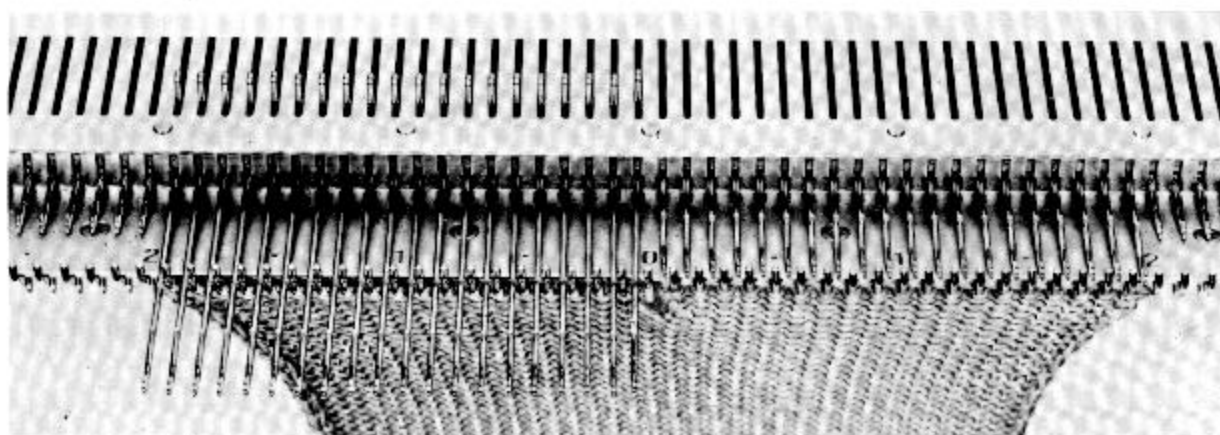


This method is suitable when doing plain knitting (stocking stitch). The 'V' neck for patterned fronts will be shown later in this book. Turn the Row Counter to 000. The carriage is at the RIGHT. Cast on open edge 40 stitches, 20 stitches on each side of centre. Knit 11 rows with Tension 7 finishing with the carriage at the RIGHT.



With the straight edge of the Needle Pusher raise the 20 needles LEFT of centre from 'B' to 'D' position. ALL buttons are UP and the Cam Lever is on centre 0.

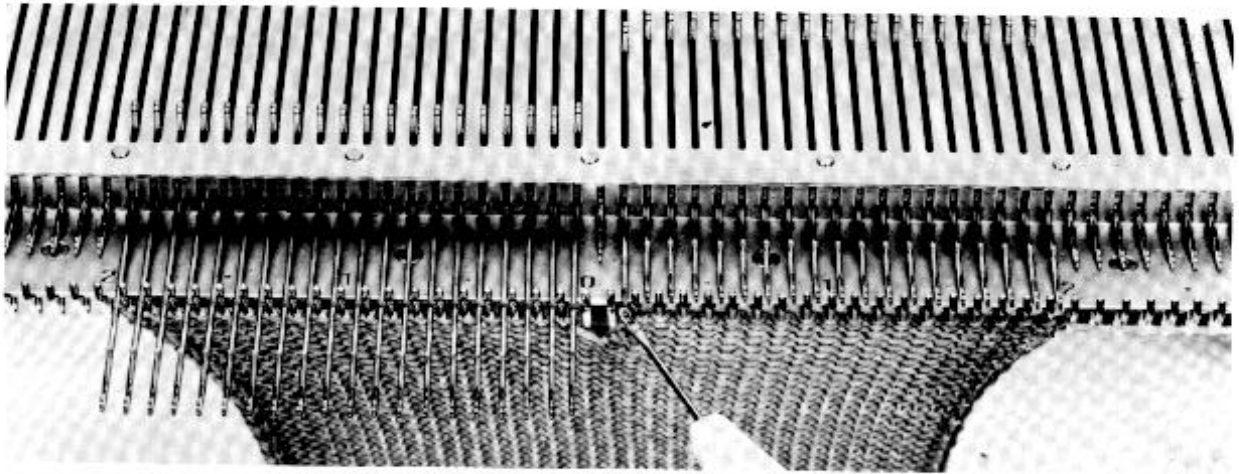
While pushing the needles to 'D' position - always hold the knitting against the machine with your left hand (as shown in the photo) to ensure that all stitches slide well BEHIND the needle latches.



The needles in 'D' position will NOT knit. Just move the carriage past the needles in knitting position - DO NOT move it past the needles in 'D' position at the LEFT as the yarn tension will become too loose and this could cause dropped stitches or LOOSE loops at the 'V' neck edge.

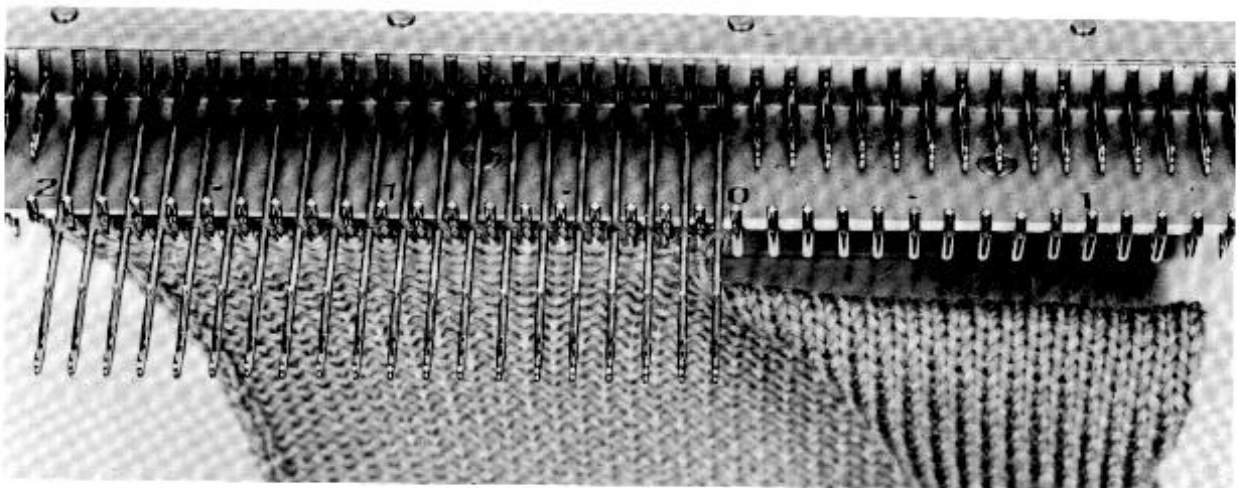
Knit 4 rows - you will notice that the carriage has knitted ONLY the stitches on the RIGHT side of centre which you left in 'B' position. The needles on the LEFT side have NOT been knitted, and in the centre of the knitting is the opening for the 'V' neck.

## SHAPING A 'V' NECK

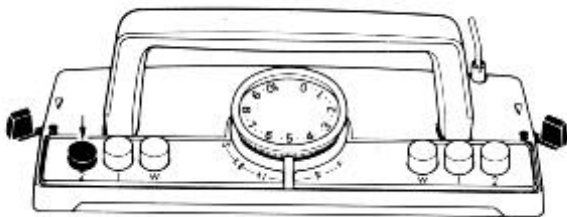


We now start decreasing for the 'V' neck at the neck edge of the RIGHT side section.

Take the Transfer Tool and transfer the last stitch on the LEFT edge of the needles in 'B' position onto its adjacent needle to the RIGHT. You will then have 1 empty needle on the RIGHT of centre - push the empty needle back to 'A' position.



Knit 4 rows. Again transfer 1 stitch in the centre of the knitting towards the right. Continue knitting 4 rows and transferring 1 stitch towards the RIGHT until you have 10 needles left with stitches at the RIGHT side of centre. Knit 4 more rows and bind off the remaining stitches. The Row Counter shows 56 - set it back to 12.



Now we are ready to knit the LEFT section of the 'V' neck.

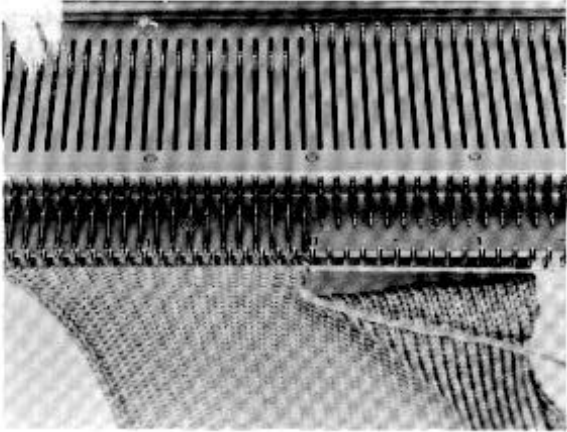
Push all empty needles back to 'A' position.

The carriage is at the RIGHT.

Check that the Row Counter shows 12.

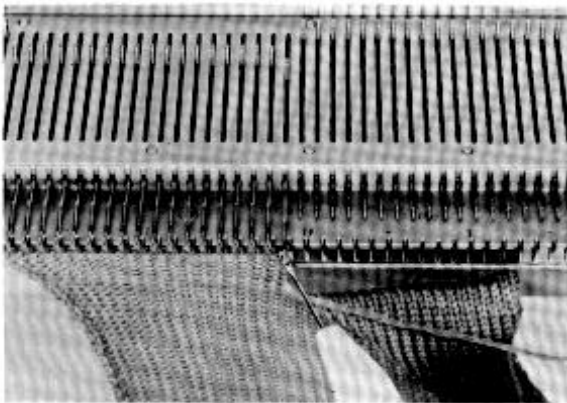
Push DOWN button 2 on the LEFT.

## SHAPING A 'V' NECK



Re-thread the yarn through the Yarn Feeder and fasten the end onto the RIGHT side Table Clamp.

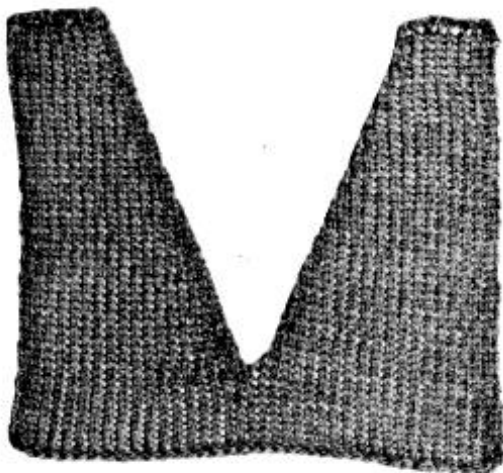
Make sure button 2 at LEFT is DOWN.  
Check the yarn tension.  
Knit 4 rows.



Transfer 1 stitch at the RIGHT edge onto its adjacent needle to the LEFT. Bring the empty needle back to 'A' position.

Knit 4 rows, again transfer 1 stitch at the RIGHT edge onto its adjacent needle to the LEFT.

Repeat knitting 4 rows and transferring 1 stitch at the RIGHT until you have 10 needles remaining in 'B' position. Knit 4 rows and bind off the last 10 stitches. The Row Counter shows 56.



This is your 'V' neck if it has been knitted according to the above instructions. If NOT please try it again until you have the right result.

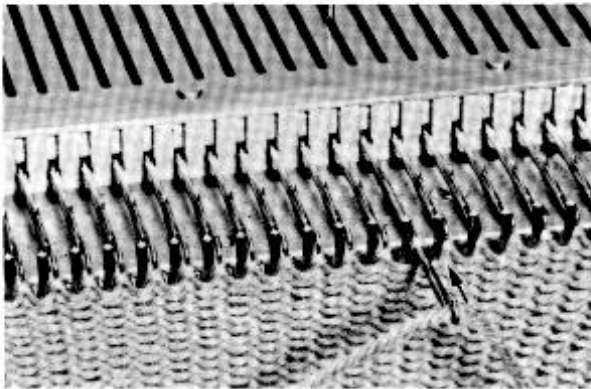
Of course this 'V' neck is knitted in a very small size - but when knitting according to pattern instructions, you always get the required size. Each pattern tells you how many rows to knit and how many times to decrease for the 'V' neck.

Here you have learned the simple way of decreasing for the 'V' neck - later you can try the decreasing with the Triple head Transfer Tool - this method gives the fully fashioned shaping effect to your neckline.

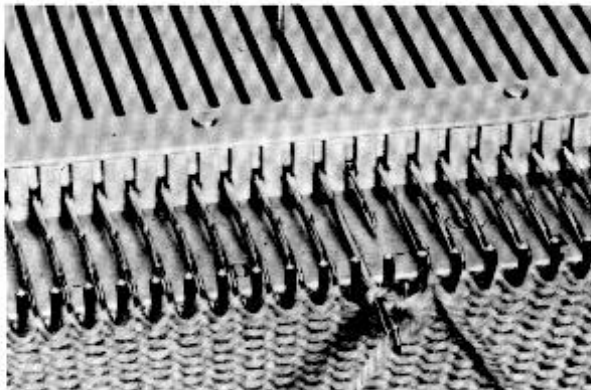
## KNITTING A ROUND NECKLINE

We will now knit a round neckline - which is also very easy to do. Set the Row Counter to 000. Make an open edge cast on over 40 needles and knit 29 rows with a suitable Tension.

The carriage is at the RIGHT and the Row Counter shows 30. Take a thread of the same quality yarn as you are knitting with, about 20 inches long, and we will start the round neckline by binding (or casting) off the centre 10 stitches.

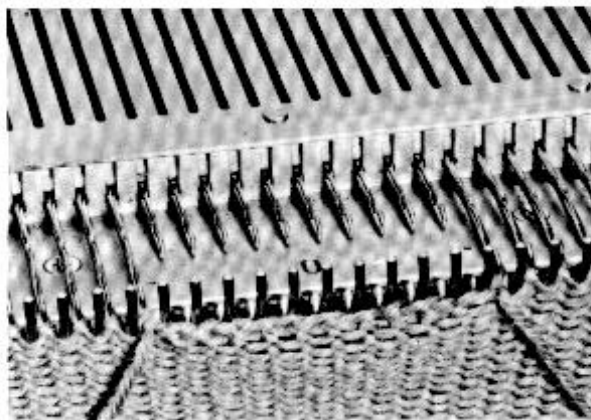


Push the 6th needle RIGHT of centre from 'B' to 'D' position. The stitch is BEHIND the latch. Lay the centre of the thread across the EMPTY and OPEN needle hook of the 6th needle. Pull this needle back to 'B' position causing the thread to be knitted through the stitch.



Push the 5th needle RIGHT of centre to 'D' position and lay the thread across the hook to be knitted in the same way as on needle 6.

Transfer the stitch from needle 5 onto needle 4 on the RIGHT of centre. Push needle 4 to 'D' position, causing both stitches to slide behind the latch. Lay the thread across the hook of needle 4 and pull the needle back to 'B' position. The thread will be knitted through both stitches.

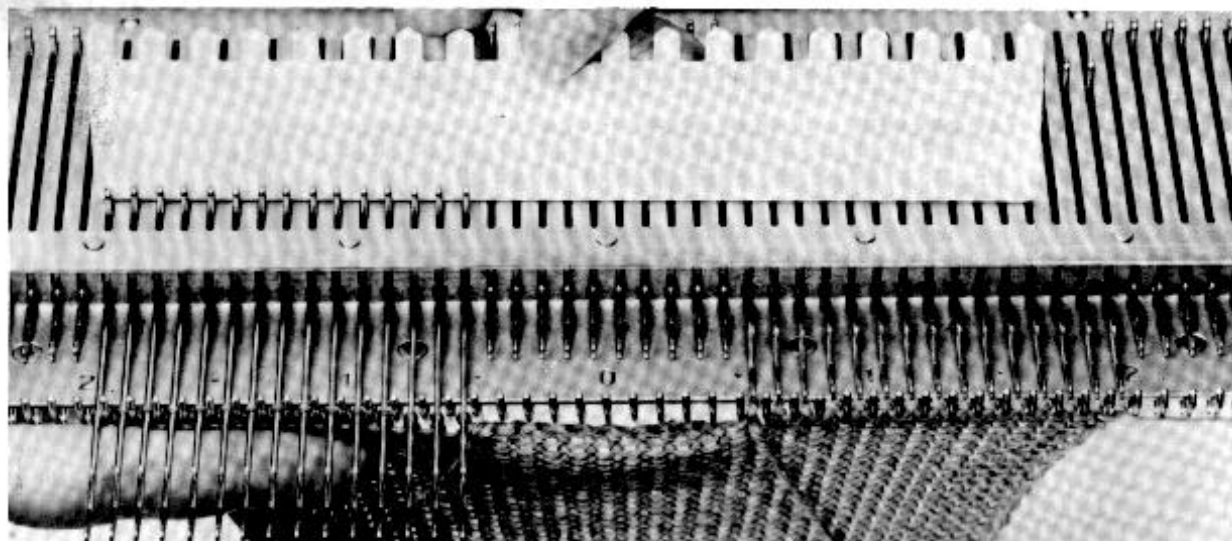


This way, cast or bind off the 10 centre stitches until you have 2 stitches on needle 6 on the LEFT of centre. Knit the thread through these 2 stitches but leave the new stitch IN the needle hook. Leave the rest of the thread hanging down from the knitting.

THE CENTRE OPENING FOR THE ROUND NECKLINE IS COMPLETED.

The carriage is at the RIGHT and the Row Counter shows 30. Bring the 10 empty needles back to 'A' position. ALL buttons are UP.

## SHAPING A ROUND NECKLINE

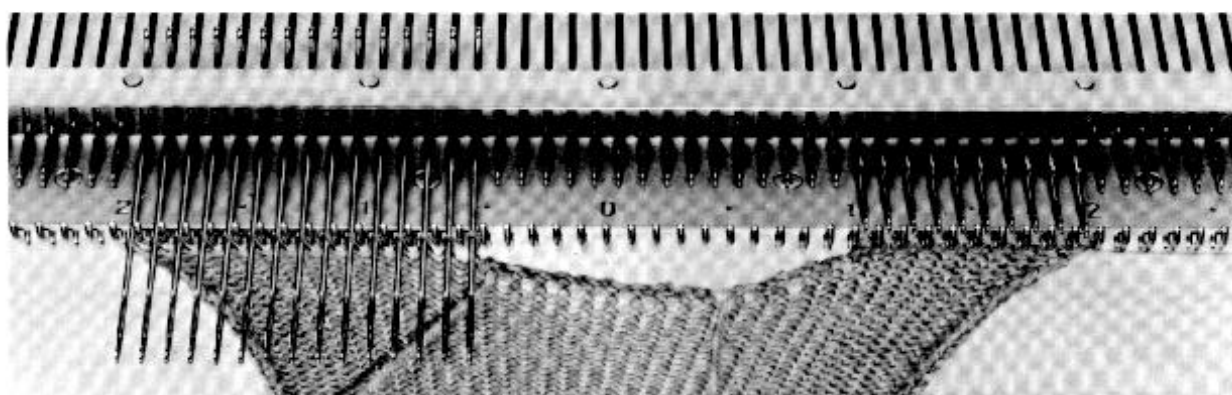


Using the straight edge of the Needle Pusher bring the 15 needles LEFT of centre from 'B' to 'D' position.

Again we will first knit the RIGHT section and then the LEFT section of the neckline and only move the carriage across the needles in knitting position.

Knit 1 row to the LEFT. The Row Counter shows 31 and only the needles on the RIGHT of centre have been knitted.

To shape the neckline - bind or cast off 2 stitches on the LEFT edge of the RIGHT section. Bring both empty needles back to 'A' position.



Knit 2 rows, the Row Counter shows 33.

Knit 2 rows, the Row Counter shows 35.

Knit 2 rows, the Row Counter shows 37.

Knit 2 rows, the Row Counter shows 39.

Knit 2 rows, the Row Counter shows 41.

Knit 4 rows, the Row Counter shows 45.

Knit 4 rows, the Row Counter shows 49.

Bind off 2 stitches for the neckline.

Decrease 1 stitch for the neckline.

Decrease 1 stitch for the neckline.

Decrease 1 stitch for the neckline.

Decrease 1 stitch for the neckline.

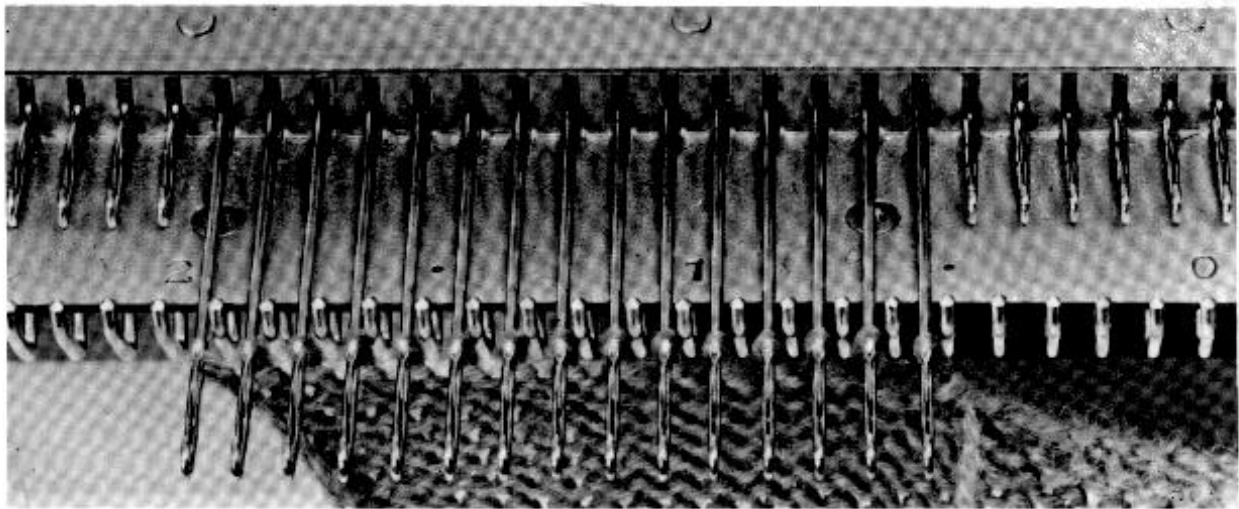
Decrease 1 stitch for the neckline.

Decrease 1 stitch for the neckline.

Knit 15 rows. Bind or cast off the remaining 5 stitches of the RIGHT side section at one time. With the straight edge of the Needle Pusher bring the empty needles clearly back to 'A' position.



## SHAPING A ROUND NECKLINE



Move the carriage towards the LEFT - well past ALL needles in 'D' position of the LEFT section. Re-thread the yarn through the Yarn Feeder and fasten the end to the LEFT side Table Clamp.

Set the Row Counter back to 30. Push DOWN button 2 on the RIGHT side of carriage. Check the yarn tension.

Knit 1 row, the Row Counter shows 31.

Knit 2 rows, the Row Counter shows 33.

Knit 2 rows, the Row Counter shows 35.

Knit 2 rows, the Row Counter shows 37.

Knit 2 rows, the Row Counter shows 39.

Knit 2 rows, the Row Counter shows 41.

Knit 4 rows, the Row Counter shows 45.

Knit 4 rows, the Row Counter shows 49.

Knit 15 rows - bind off all the remaining 15 stitches.

Bind off 2 stitches at the RIGHT side edge of the LEFT section.

Bind off 2 stitches for the neckline.

Decrease 1 stitch for the neckline.

Decrease 1 stitch for the neckline.

Decrease 1 stitch for the neckline.

Decrease 1 stitch for the neckline.

Decrease 1 stitch for the neckline.

Decrease 1 stitch for the neckline.

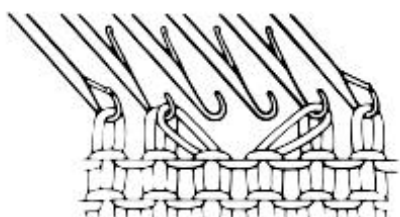


Your first round neckline is now completed.

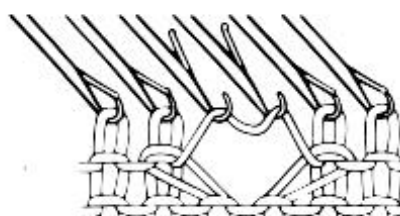


## BUTTONHOLES FOR SMALL BUTTONS

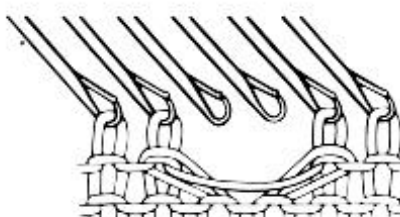
If you are using a thin yarn, the buttonhole over 2 needles will be quite small. A thin yarn knitted on Tension 5 will give about 1/4 inch buttonhole. Thick yarn knitted on Tension 10 will give a buttonhole about 1/3 inch. Decide the position of the buttonhole.



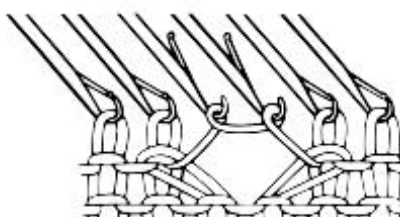
Where a button hole is required - transfer 1 stitch to the adjacent needle on each LEFT and RIGHT side.



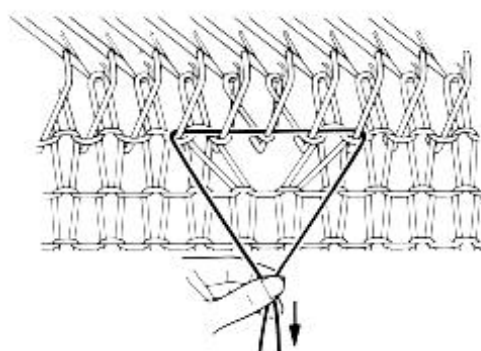
Knit 1 row - the yarn lies loosely over the 2 empty needle hooks.



Bring these empty needles to 'D' position and then back to 'B' position - leaving the loose thread in front of the Sinker Gate.



Bring the LEFT needle a little to the front, just out of the Sinker Gate, open the latch so that you are able to wind the thread in an anti-clockwise direction around it. Pull the needle back to 'B' position. Repeat the same with the second needle.



Lay the Nylon Thread across the new loops and the stitches of the adjacent needles on each LEFT and RIGHT side - between the needle hooks and the Sinker Gate.

Pull both ends of the Nylon Thread down and knit 2 or 3 rows.

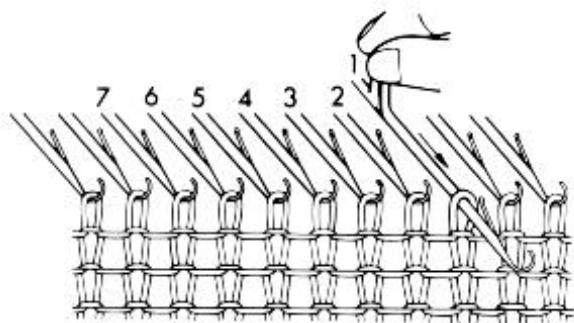
Pull the Nylon Thread out of the knitting. Continue knitting and repeat the buttonhole where required.

## LARGE SINGLE BUTTONHOLE

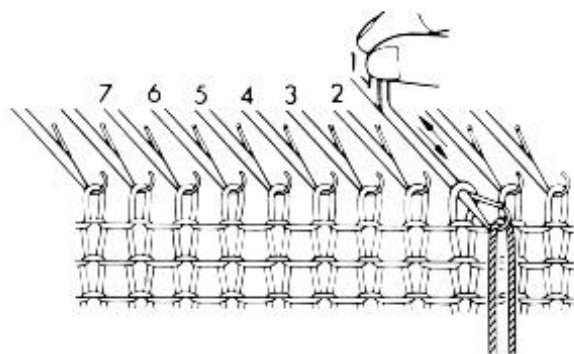


To make this buttonhole you will need a thread about 10 inches long of the same yarn you are knitting with.

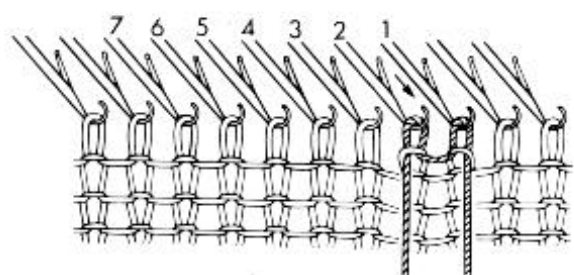
Decide the position of the buttonhole - you will knit it over 7 needles. In the diagram they are numbered from 1 to 7.



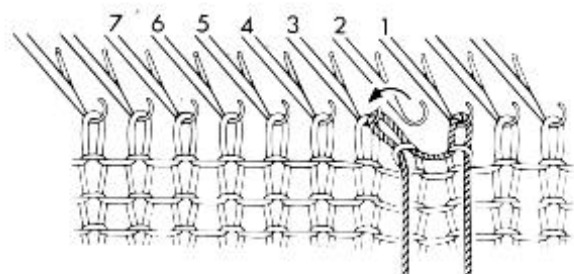
Push needle 1 from 'B' to 'D' position. The stitch will slide behind the latch and the hook is empty.



Hang the loose thread of yarn across the empty hook and pull the needle back to 'B' position. You have now knitted 1 stitch by hand with needle 1.

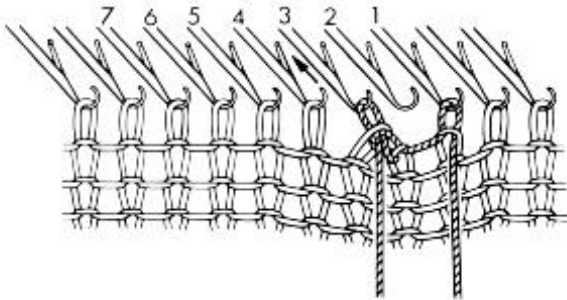


Push needle 2 to 'D' position and knit-in the thread in the same way.

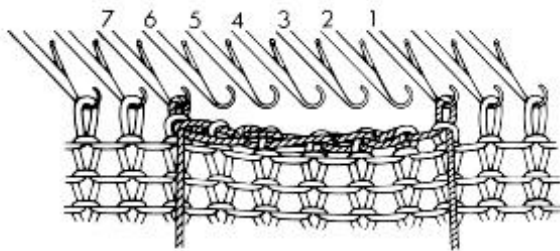


Now transfer the stitch from needle 2 onto needle 3. Push needle 3 (which has 2 stitches) up to 'D' position.

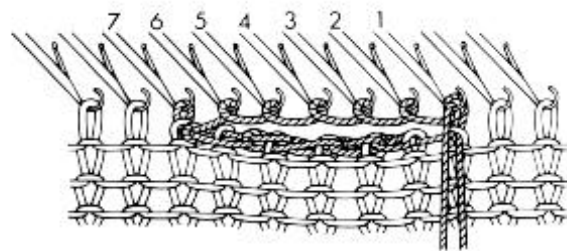
## LARGE SINGLE BUTTONHOLE



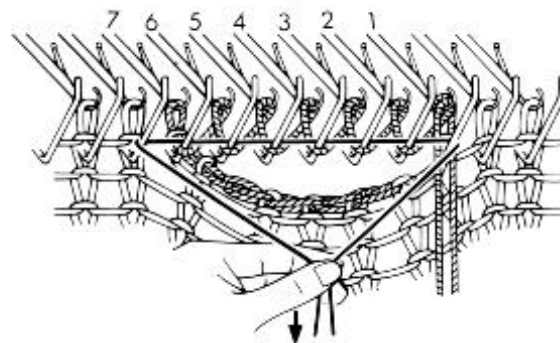
Lay the yarn across the empty hook and pull needle 3 back to 'B' position. You have pulled the yarn through both stitches.



Transfer the stitch of needle 3 onto needle 4, bring needle 4 up to 'D' position and continue binding off stitches until 5 needles are empty and a new stitch is on needle 7.



The 5 empty needles are in 'B' position. Open the latches of these needles. Bring needle 6 a little to the front, just out of the Sinker Gate and wind the yarn in anti-clockwise direction L O O S E L Y around it. Pull the needle back to 'B' position. Repeat with needle 5, 4, 3, 2 and 1. The needles with the new loops must be in line with all other needles.

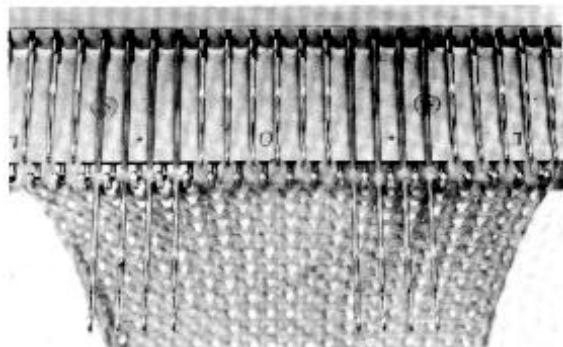


Take the Nylon Thread and lay it across the loops of the 7 needles, between the needle hooks and the Sinker Gate. Pull the Nylon Thread down at both ends and knit 2 rows. Pull out the Nylon Thread. The buttonhole is now completed.

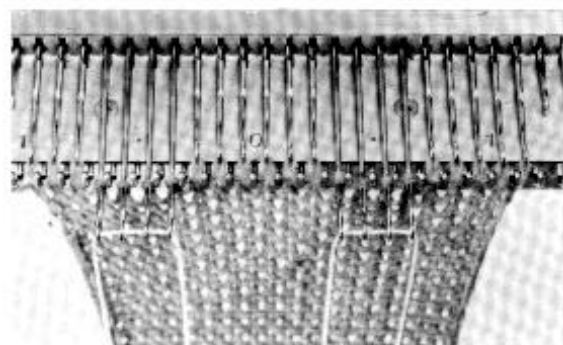
## THE DOUBLE BUTTONHOLE BAND

This buttonhole can be knitted as wide as you wish - and it can be used for a separately knitted cardigan band.

For a jacket or cardigan band, cast on 22 needles closed or open edge and knit 20 rows.

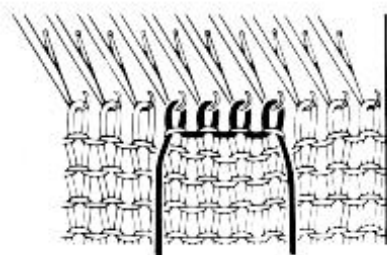


Starting from the RIGHT - bring needles 6, 7, 8, 9, 16, 17, 18 and 19 from 'B' to 'D' position.

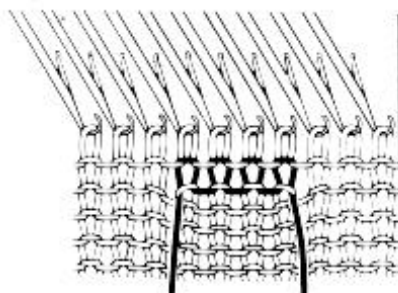


In the picture you see the Nylon Thread lying across the needles - but you should use a contrast colour or waste yarn.

Lay the contrasting thread over each block of 4 needles in 'D' position. Hold both threads down while carefully pushing the 2 groups of needles back to 'C' position until the latches close over the thread.



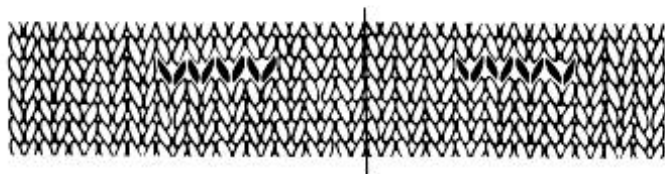
Now let the threads hang down and starting with the first needle from the RIGHT in 'C' position, push the needles back - one by one - until BOTH groups of 4 needles have hand knitted stitches and are in 'B' position.



Knit 1 complete row. The contrasting thread should now be knitted in as shown in this illustration.

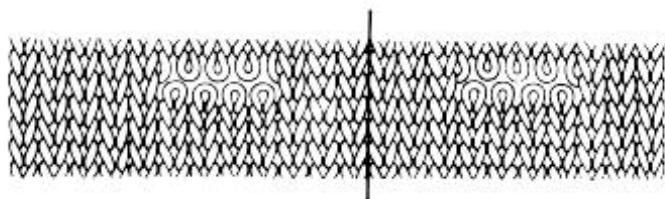
Knit the required number of rows and repeat the buttonhole.

## FINISHING THE DOUBLE BUTTONHOLE BAND

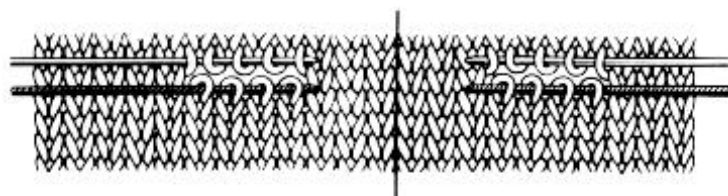


The line shows where the cardigan band will be folded back.

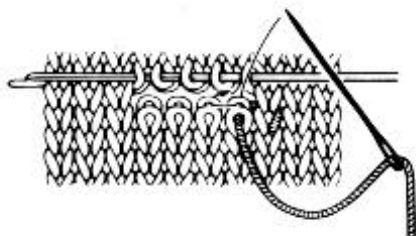
The stitches shown in black are those which you knitted in by hand as shown on the previous page.



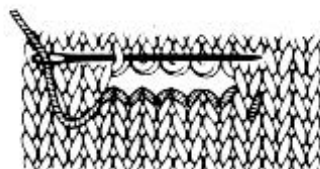
Steam the band lightly as this makes it much easier to sew up the buttonhole and the stitches do not unravel so easily. Pull out the contrasting yarn from the band.



Insert needles to hold the stitches.



Fold the buttonhole band in the centre. With a thread of matching yarn, sew up the buttonhole as shown in the diagram, starting at the lower edge.

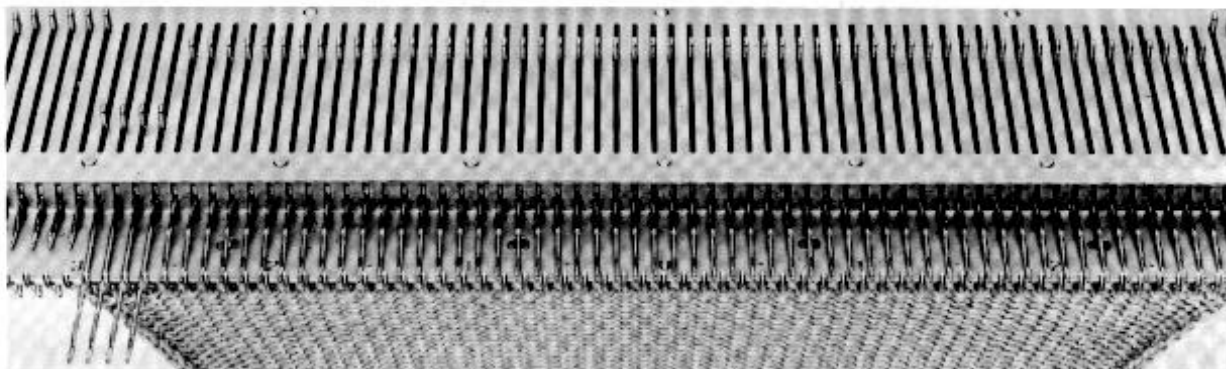


When you have practised your buttonhole a few times, the result should look like the buttonhole in the diagram above. Steam the band and lay it onto the edge of the jacket. Backstitch 2 stitches from the edge - row by row - the buttonhole band onto the jacket. Catch down on inside. The above instruction is for a lady's jacket. For a man's jacket you must have the 5 stitches at the LEFT and 3 stitches at the RIGHT side edge while knitting.

## PARTIAL KNITTING – DARTS

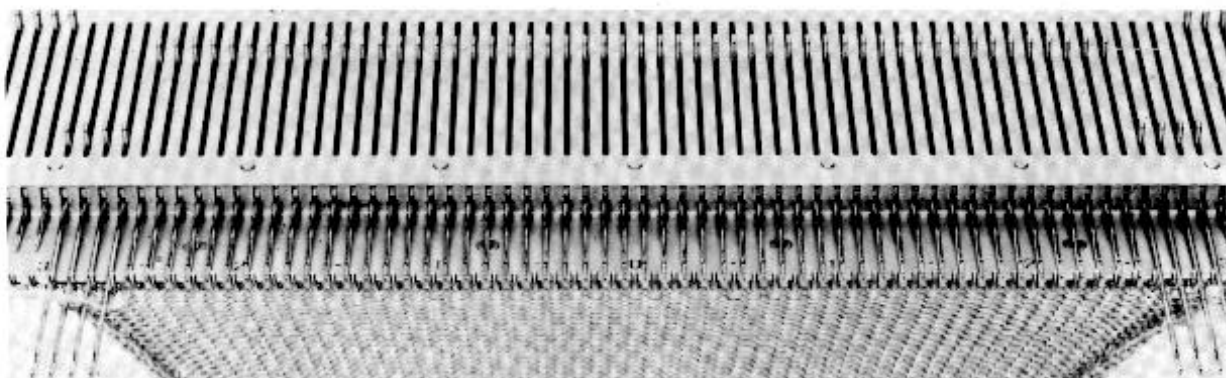
Partial knitting means knitting selected groups of needles while the remaining needles DO NOT knit. Partial knitting has a wide variety of practical uses - such as knitting darts, pockets, circular table mats, circular flared skirts, bonnets and many other things.

### DARTS – IN PLAIN STOCKING STITCH GARMENTS

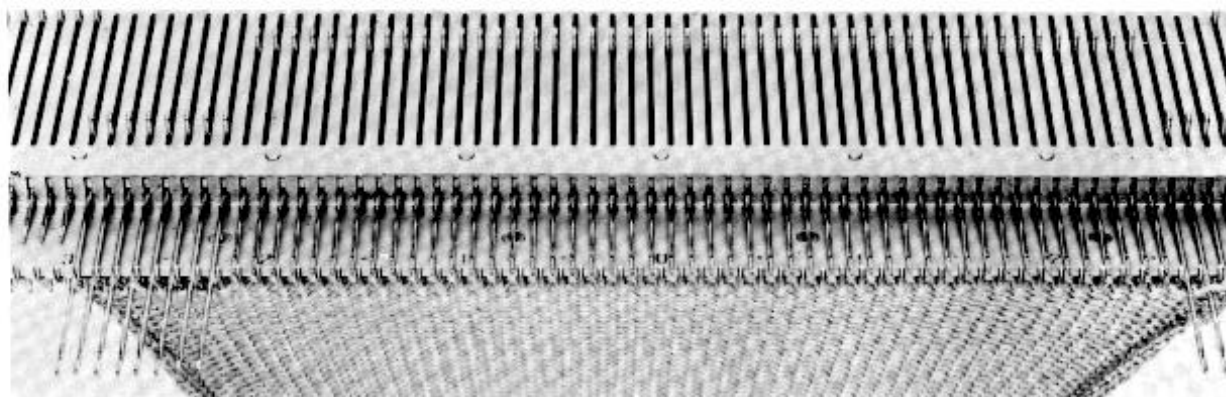


Make an open edge cast on over 60 needles and knit a few rows, finishing with the carriage at the RIGHT. ALL buttons are UP.

Push 4 needles at LEFT edge of knitting from 'B' to 'D' position. Knit 1 row to the LEFT.



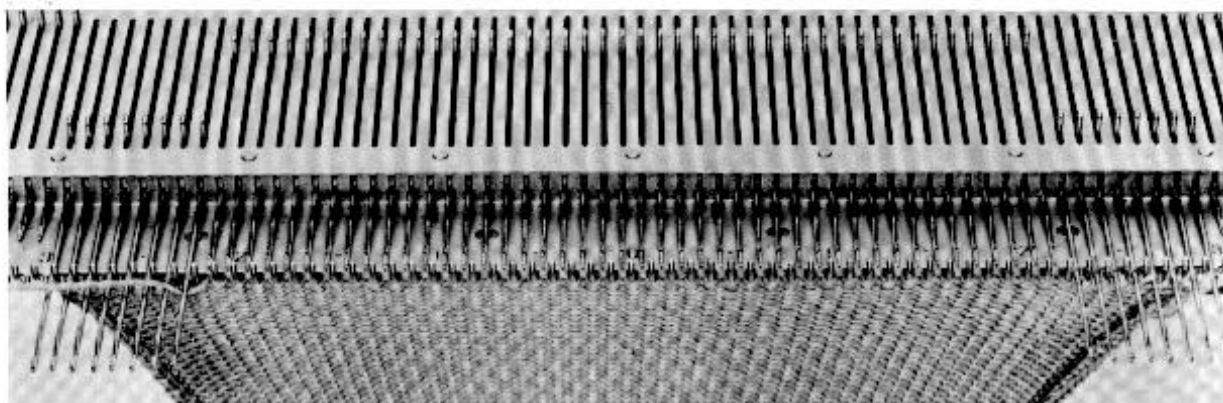
The 4 needles in 'D' position at the LEFT have NOT been knitted and the yarn lies on top of these needles. Take the yarn under the 4th needle INSIDE the knitting and lay it over the other 3 needles in 'D' position. Now push 4 needles at the RIGHT to 'D' position. Knit 1 row to the RIGHT.



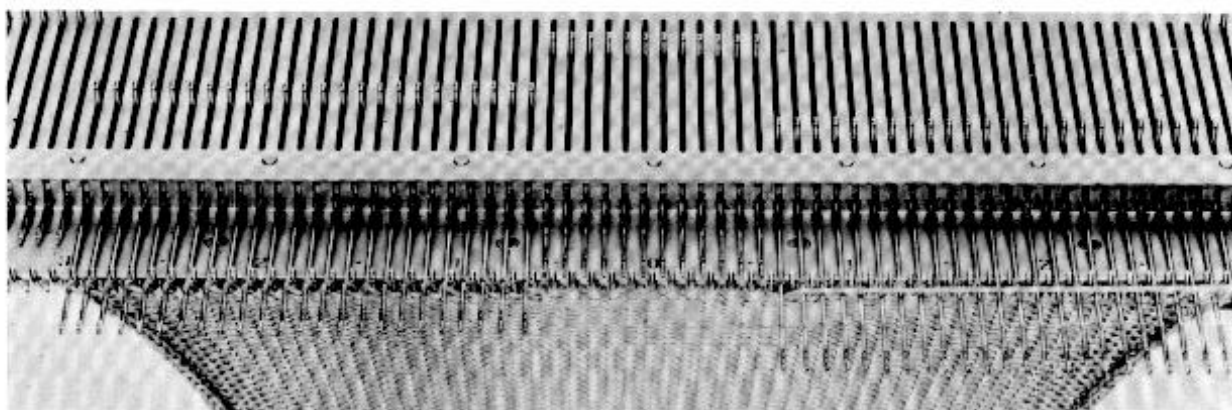
Take the yarn under the 4th needle INSIDE the knitting at the RIGHT and on top of the other 3 needles in 'D' position. At the LEFT bring 4 more needles from 'B' to 'D' position.

## PARTIAL KNITTING – DARTS

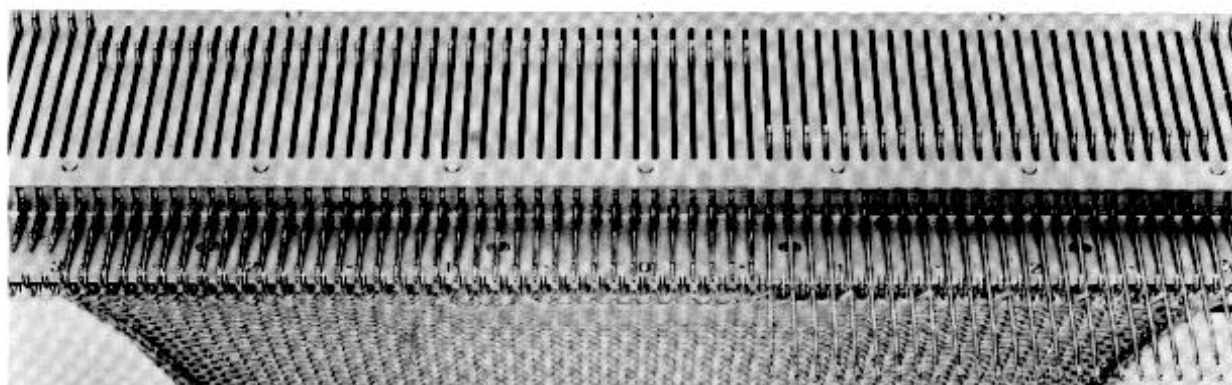
When doing Partial knitting, you do not need to move the carriage past all the knitting after each row - just past the needles knitting in 'B' position - otherwise the yarn tension becomes too loose and this could cause dropped stitches inside the knitting.



Knit 1 row towards the LEFT. Take the yarn UNDER the 8th needle inside the knitting in 'D' position and let it lie on top of the other 7 needles. Bring 4 more needles at the RIGHT into 'D' position. Knit 1 row. Take the yarn UNDER the 8th needle inside the knitting at the RIGHT.



Proceed as above until you have 12 needles in the centre of the knitting in 'B' position. The carriage is at the RIGHT and every 4th needle in 'D' position has two loops. Using the straight edge of the Needle Pusher, bring the needles at the LEFT from 'D' back to 'C' position. Knit 1 row towards the LEFT.



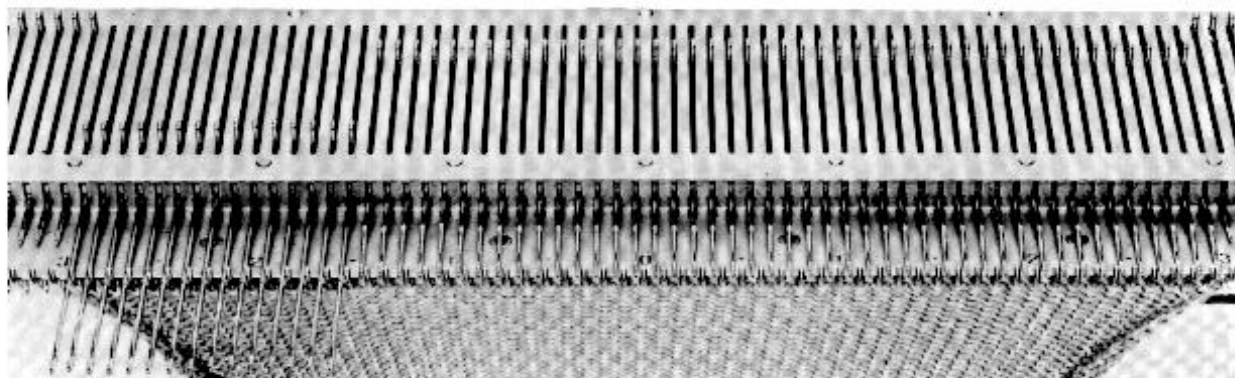
The needles from 'C' position are knitted back to 'B' position. Push the needles at the RIGHT from 'D' to 'C' position. Knit 1 row. These needles are also knitted back to 'B' position. Knit another 8 or 10 rows. You can see quite clearly where the darts have been knitted.

NOTE: When knitting darts in pattern knitting, the stitches will be held in 'A' position by the Nylon Thread. Each needle must then be brought back to 'A' position one by one. You learn this later.

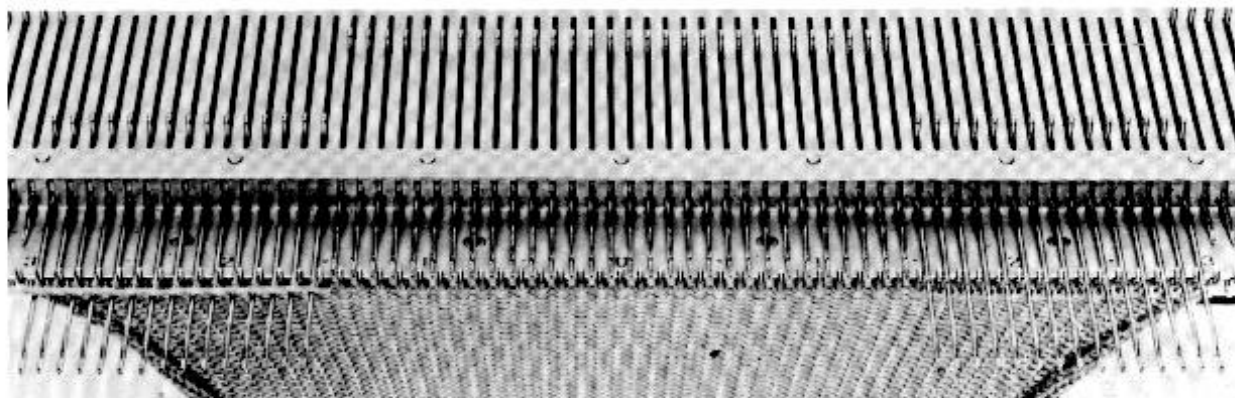


## PARTIAL KNITTING – POCKETS

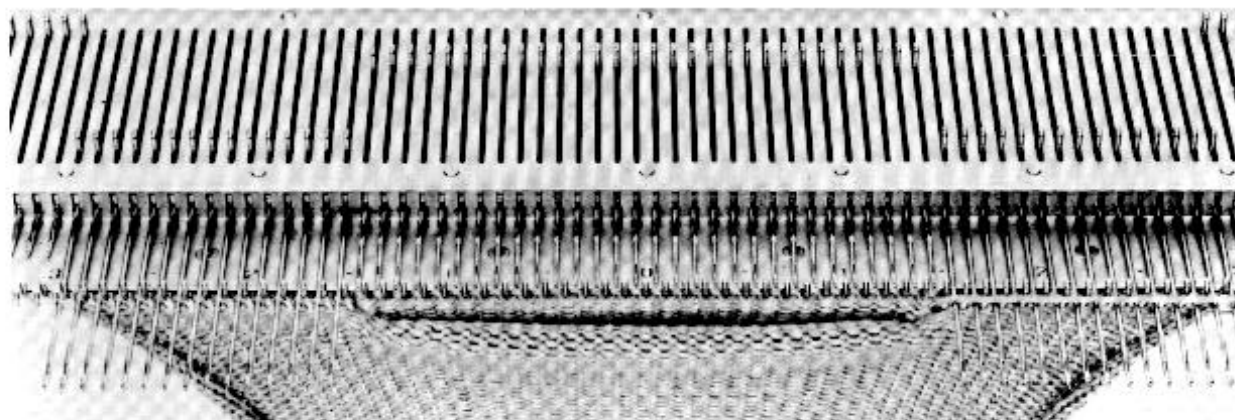
Cast on 60 needles open edge. Knit 21 rows finishing with the carriage at the RIGHT. Both Levers are in front and ALL buttons are UP. Cam Lever set to centre 0.



With the straight edge of the Needle Pusher, bring 15 needles at the LEFT from 'B' to 'D' position. Set the Row Counter Tripper out of action by lifting it up and turning it sideways. Knit 1 row to the LEFT. The 15 needles on the LEFT side in 'D' position have not been knitted.

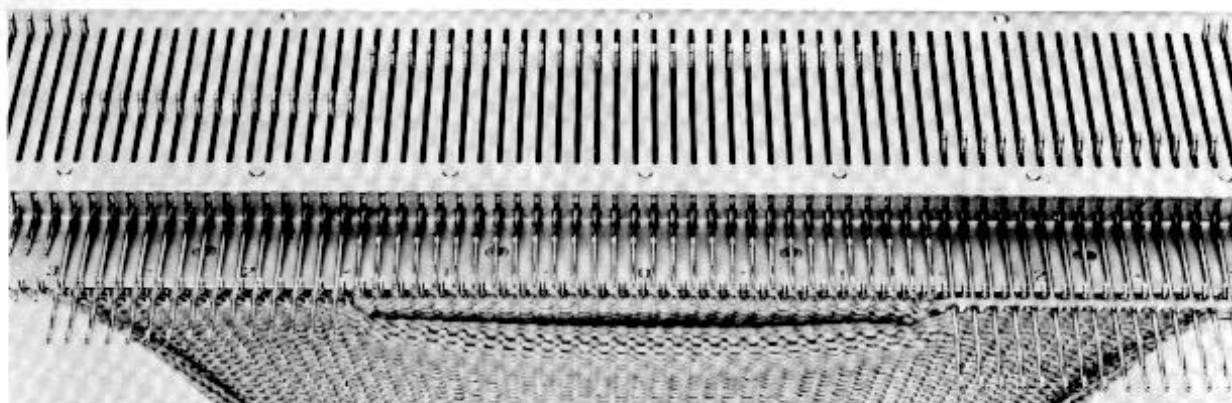


The yarn lies on top of the 15 needles in 'D' position. Bring 15 needles at the RIGHT edge from 'B' to 'D' position. This will leave 30 needles in the centre of the knitting in 'B' position. These 30 needles will be the width of the pocket. If you wish the pocket to be narrower or wider, leave less needles or more needles in the centre in 'B' position.

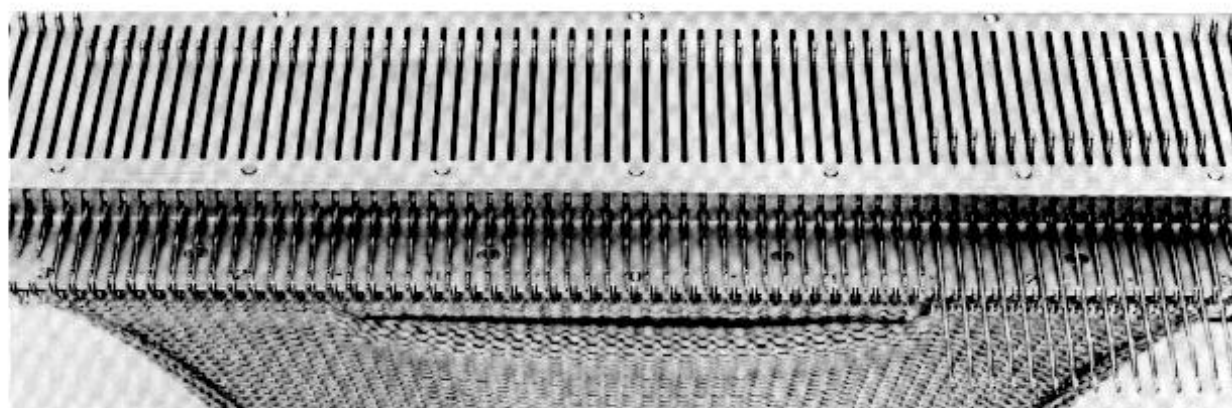


Knit 80 rows or more, depending on how deep you wish the pocket to be. You must finish with the carriage at the RIGHT. You will have to count the rows as the Row Counter is out of action. If you wish to count the rows using the Row Counter, then leave the Row Counter Tripper in action and turn back the Row Counter when the pocket is finished. But note and return to the row at which you started the pocket.

## PARTIAL KNITTING – POCKETS



The carriage is at the RIGHT. Using the straight edge of the Needle Pusher, push the 15 needles on the LEFT edge carefully back to 'C' position. Knit 1 row towards the LEFT.



The carriage is at the LEFT and the 15 needles on the LEFT side have been knitted back to 'B' position. Now push the 15 needles on the RIGHT edge back to 'C' position. Knit 1 row towards the RIGHT. All needles are now knitted back to 'B' position.

Set the Row Counter Tripper back into action if necessary, and knit a few more rows finishing with the carriage at the RIGHT.



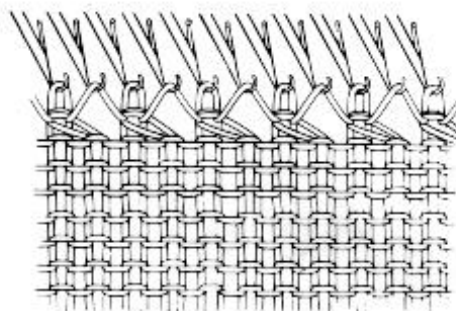
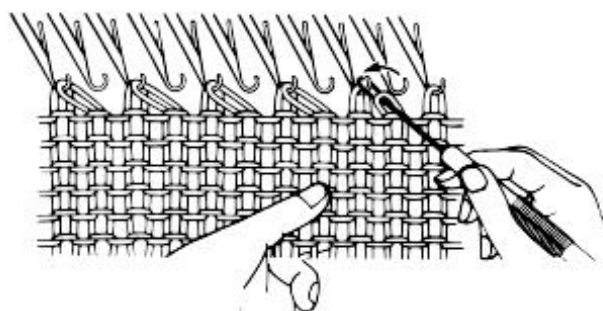
If you now look at your pocket, you will see that only the side edges will need to be sewn up to close the pocket completely.

## THE PICOT EDGE HEM

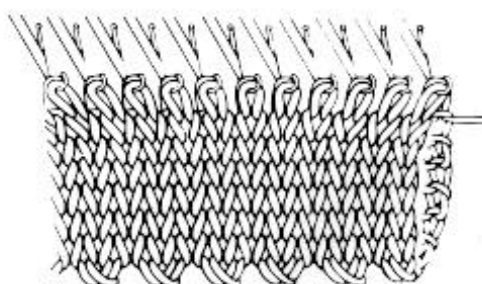
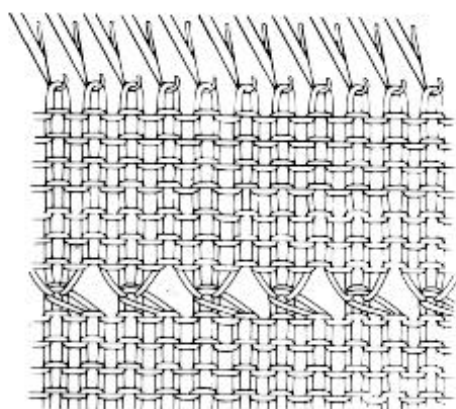


The Picot edge hem is similar to the circular hem. The difference is that you do NOT knit the row with the larger stitch size, instead you transfer every second stitch onto its adjacent needle. Knit the same number of rows as for the first half of the hem and add one more row.

The transferring of the stitches gives you the attractive scalloped edge when you fold the hem.



With waste yarn make an open edge cast on over 40 needles and knit a few rows finishing with the carriage at the LEFT. Knit in the Nylon Thread towards the RIGHT. Knit 7 rows with the main yarn. Open all needle latches and now transfer every second stitch onto its adjacent needle towards the LEFT. The EMPTY needles MUST REMAIN IN 'B' POSITION. Knit 1 row towards the RIGHT. The needles which had NO stitches now have a loose loop.



Knit another 7 rows. Lift the stitches of the row knitted after the Nylon Thread to close the hem - as explained on page 45. Now pull the Nylon Thread out of the knitting. The last diagram shows how the completed Picot edge hem should look.

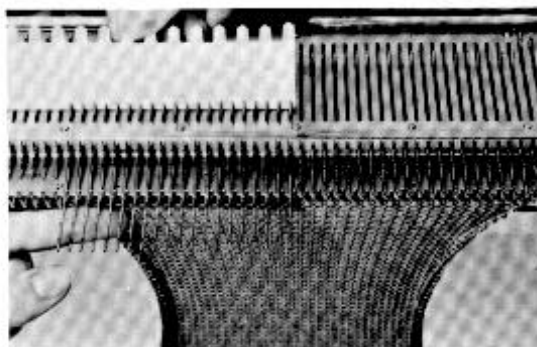
## KNITTING A 'V' NECK IN A PATTERNED GARMENT

This method of knitting a 'V' neck is used when knitting garments using fancy stitch patterns. For the ROUND neckline use the same method to bring the needles out of action as used for the 'V' neck.

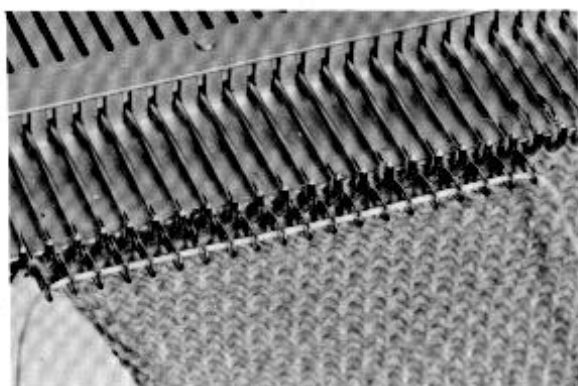
Make a closed edge cast on over 40 needles and knit a few rows finishing with the carriage at the RIGHT.

Now when you are knitting stitch patterns, you must note with which pattern setting you start to knit the neckline so that you can start the second half with the same pattern setting.

Also, you MUST note the number of rows so that the Row Counter can be set back to count the same number of rows for the second half.



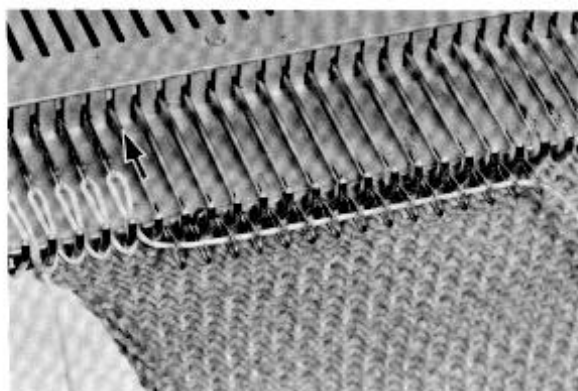
Hold the knitting against the machine with your LEFT hand. With the straight edge of the Needle Pusher, bring the 20 needles LEFT of centre from 'B' to 'D' position. Open the latches of ALL needles in 'D' position.



Lay the Nylon Thread across the OPEN latches of the needles in 'D' position.

Use the straight edge of the Needle Pusher and move all needles carefully from 'D' to 'C' position JUST until ALL latches close over the Nylon Thread.

Pull the Nylon Thread towards the RIGHT until 3 or 4 inches are hanging down on the LEFT side of the needles in 'C' position.

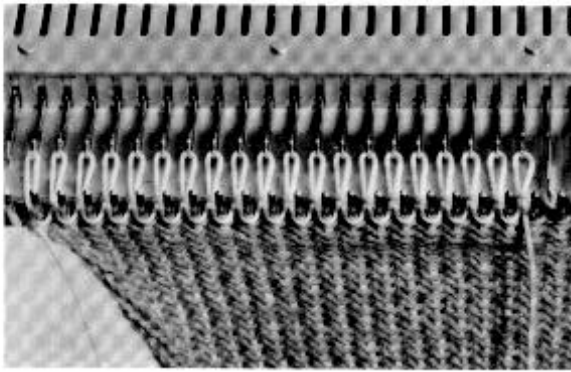


Holding the needle by the butt and starting with the FIRST needle from the LEFT - pull the 20 needles ONE by ONE from 'C' position BACK to 'A' position.

This will cause a BIG LOOP of Nylon Thread in each needle.

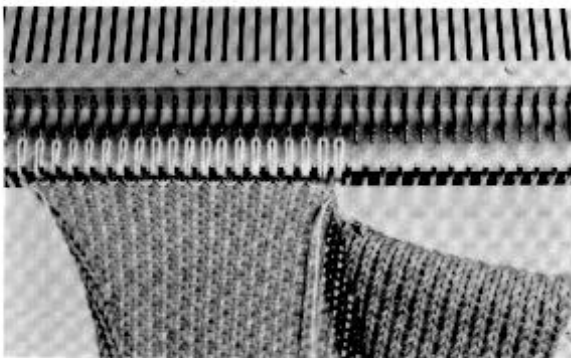
The needles which you bring back to 'A' position this way are ALL out of action and in holding position.

## KNITTING A 'V' NECK IN A PATTERNED GARMEN

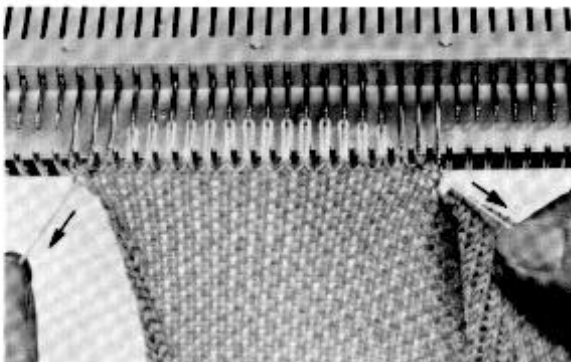


Continue until all 20 needles LEFT of centre are in 'A' position. In this position they will NOT knit and you can therefore knit the stitch pattern on the other needles.

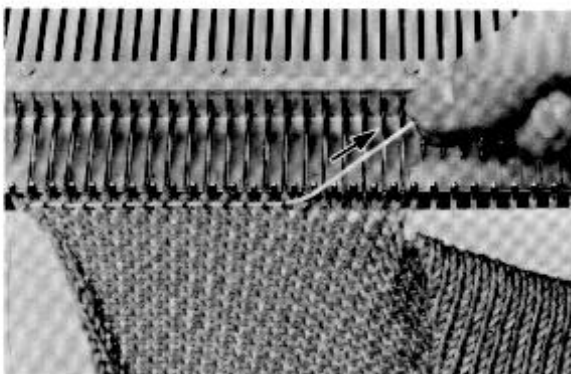
The carriage is at the RIGHT. Pull down any slack yarn from behind the Yarn Brake.



Knit 4 rows. Decrease 1 stitch from the centre towards the RIGHT for the 'V' neck. Bring the empty needle back to 'A' position. Knit 4 rows. Repeat the decreasing for the 'V' neck after every 4th row until 10 stitches remain on the RIGHT side. Bind off or cast off these 10 stitches. Bring ALL empty needles back to 'A' position.



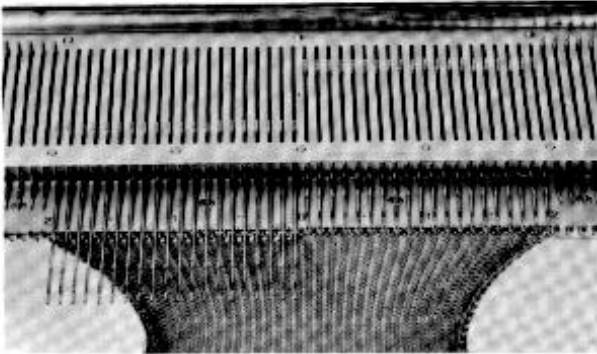
Re-thread the yarn through the Yarn Feeder and fasten the end onto the RIGHT side Table Clamp. Now you must bring the needles with the big loops from 'A' to 'B' position. Therefore pull the Nylon Thread outwards on both sides of the needles - they will automatically move from 'A' to 'B' position.



When all needles are in 'B' position, hold the Nylon Thread on the LEFT side and from the RIGHT side pull the Nylon Thread up and out of the needles, thus leaving the stitches of yarn in the needle hooks. Set the machine for the pattern, reset the Row Counter to the number noted before, and knit the second half of the 'V' neck.

When knitting a pocket or a dart in patterns - use the Nylon Thread to bring the needles back to 'A' position as shown above.

## SLIT FOR A ZIP FASTENER



In case you wish to make a slit for a zip fastener, use the same method to separate the knitting in the centre as used for the 'V' neck.

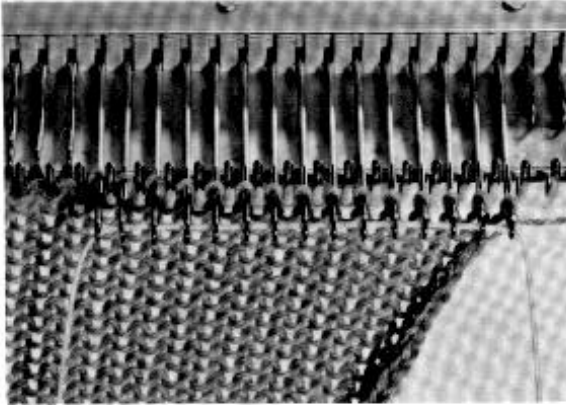
Bring the needles of the LEFT side section to 'D' position when knitting stocking stitch and to 'A' position when knitting patterns.

The LEFT and RIGHT section are knitted without decreasing - only straight - until you reach the neckline.

## KNITTING A POCKET IN A PATTERNED GARMENT

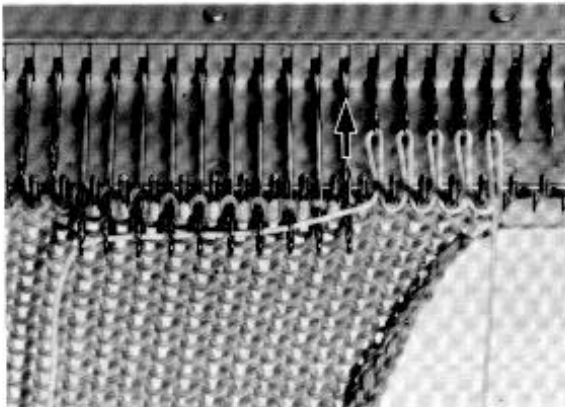
Cast on 60 stitches open edge, knit 21 rows, finishing with the carriage at the RIGHT.

Of course you will knit this pocket in plain stocking stitch as all the other things - just try it out before you knit it into a garment.



Bring the first 15 needles on the RIGHT side from 'B' to 'D' position.

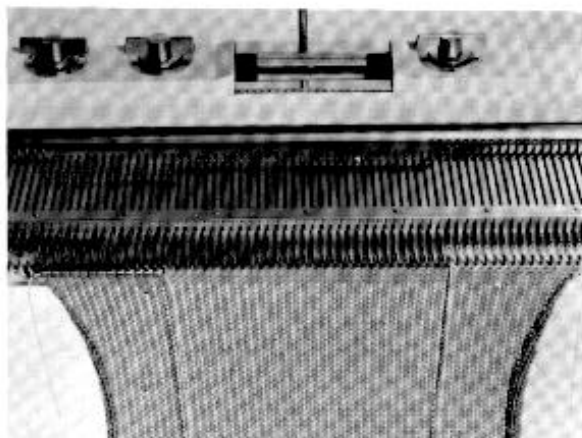
Open the latches of these needles. - Lay the Nylon Thread across the needle hooks and with the straight edge of the Needle Pusher bring these 15 needles from 'D' to 'C' position, until the latches close over the Nylon Thread.



Pull the Nylon Thread towards the LEFT - leaving about 3 inches hanging down from the RIGHT side of the knitting.

Starting with the first needle from the RIGHT - push all 15 needles ONE by ONE from 'C' position back to 'A' position making a big loop with the Nylon Thread in each needle.

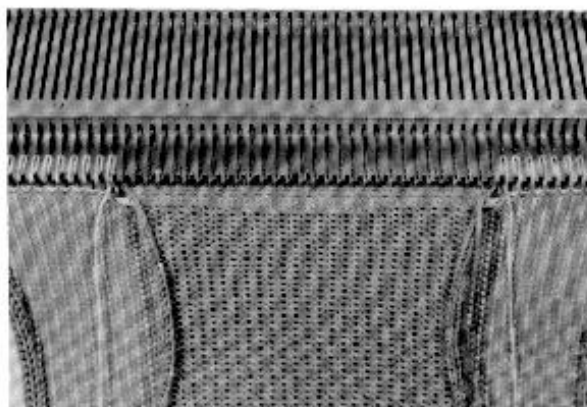
## KNITTING A POCKET IN A PATTERNED GARMENT



Once the needles at the RIGHT are in 'A' position, bring the 15 needles at the LEFT side from 'B' to 'D' position and open the latches. Lay the Nylon Thread across the open hooks of the 15 needles in 'D' position.

With the straight edge of the Needle Pusher bring these 15 needles from 'D' to 'C' position until the latches close over the Nylon Thread. Pull the Nylon Thread towards the RIGHT side leaving 3 inches hanging down on the LEFT side of the knitting.

Starting with the first needle from the LEFT, push the needles ONE by ONE back to 'A' position. ALWAYS start pushing them back to 'A' position at the side of the knitting. Do not let more than 3 inches of Nylon Thread hang down at the sides of the knitting - this will leave enough Nylon Thread in front of the pocket. The Nylon Thread should NEVER be tight in front of the pocket - otherwise the needles which are in 'A' position, just at the edges of the pocket, could be pulled towards the front while knitting and there they could cause you trouble.

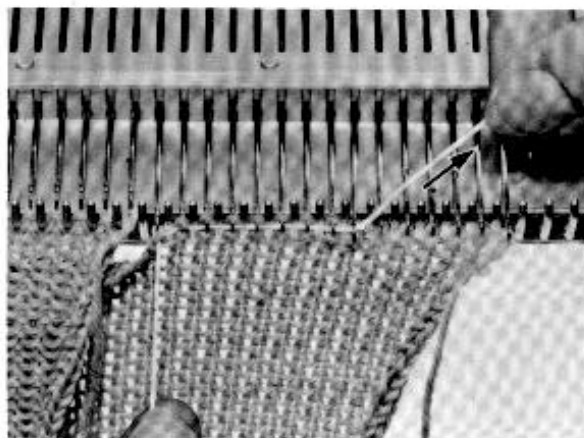


Set the Row Counter Tripper out of action and note the pattern setting of the next row. Break the yarn below the carriage and fasten the new end onto the RIGHT hand Table Clamp.

Knit about 80 rows finishing with the carriage at the RIGHT - past ALL 30 needles on the RIGHT of centre.

If you did not set the Row Counter Tripper out of action, set it back to the number you noted before starting the rows of the pocket.

While knitting the pocket - only move the carriage just past the needles in 'B' position otherwise your yarn tension is too loose and could cause loose loops or dropped stitches at the edges of the pocket. The pocket can always be knitted in plain stocking stitch as it does not show.



Again break the yarn and leave 10 inches hanging down from the pocket. Now bring the 15 needles at the RIGHT from 'A' to 'B' position. To do this, pull the Nylon Thread to the LEFT and RIGHT until all 15 needles are in 'B' position - then upwards and slightly backwards and the stitches will slide back inside the needle hooks.

In the same way bring the stitches of the 15 needles at the LEFT of the pocket back to 'B' position.

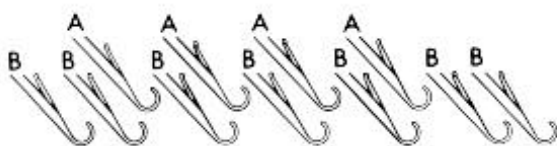
## THE 1 PLAIN – 1 PURL RIBBED WELT



This method of knitting Rib Welts is now very seldom used. It is not nearly as elastic as the new type of Double Welts shown previously and it is also inclined to 'fan' out of shape and breaks too easily at the edges.

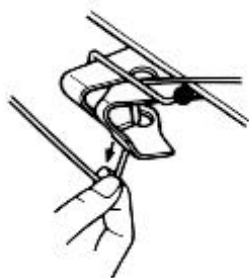
It is suitable for Bulky yarns and with a little practice it is fun and quick to do.

With the straight edge of the Needle Pusher bring 21 needles on the LEFT and 21 needles on the RIGHT of centre from 'A' to 'B' position.

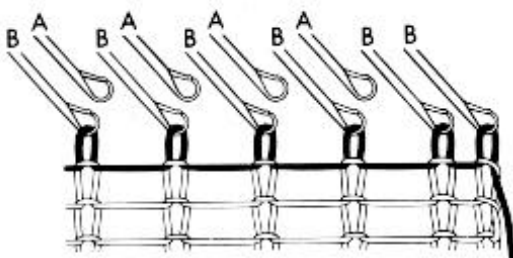


Starting at the THIRD needle from the RIGHT, and using the 1 / 1 edge of the Needle Pusher, bring every SECOND needle back to 'A' position.

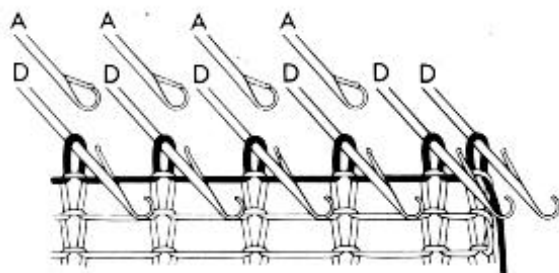
Push one EXTRA needle on the LEFT side from 'A' to 'B' position so that there are 2 needles in 'B' position on each side.



With waste yarn make an open edge cast on and knit 10 rows finishing with the carriage at the LEFT. Break the yarn above the carriage and pull the rest downwards out of the Yarn Feeder. Remove the waste yarn from the Yarn Brake.



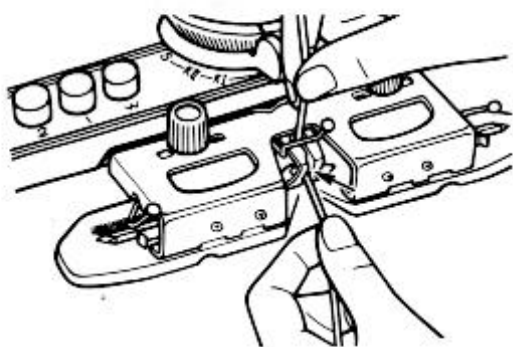
Thread the Nylon Thread through the Yarn Feeder and knit 1 row towards the RIGHT. Remove the Nylon Thread from the Yarn Feeder.



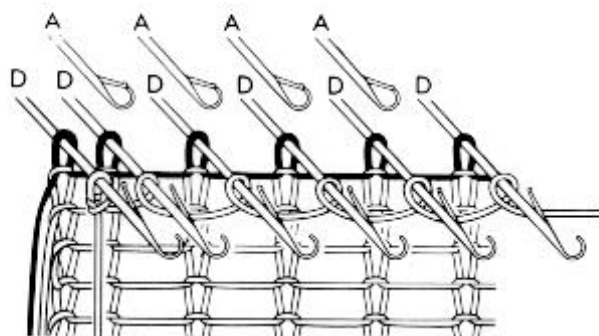
While holding the knitting against the machine with your left hand, bring the needles from 'B' to 'D' position, using the straight edge of the Needle Pusher.



## THE 1 PLAIN – 1 PURL RIBBED WELT

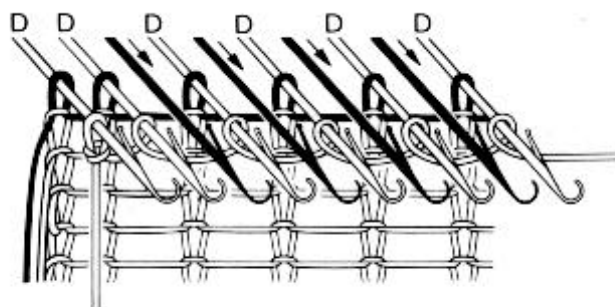


The carriage is at the RIGHT.  
Thread the main yarn through the Yarn Brake  
and the Yarn Feeder.

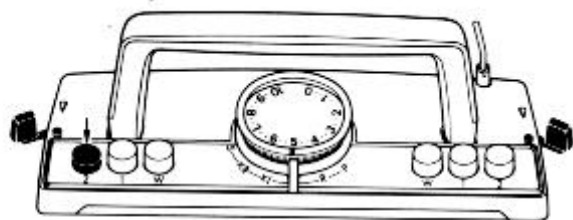


Pull a little yarn from below the Yarn Feeder  
and tie a loose knot around the LAST needle  
at the LEFT in 'D' position.

Wind the yarn LOOSELY in anti-clockwise  
direction around the needles in 'D' position.  
As you wind the loops, push them behind  
the latches at the same time.



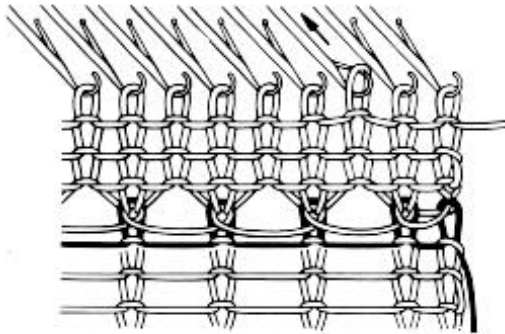
When all needles in 'D' position have a loop,  
pull the yarn down behind the Yarn Brake  
to avoid slack yarn. With the straight edge of  
the Needle Pusher bring the rest of the  
needles of the welt from 'A' to 'D'  
position. (The needles which you pushed back  
to 'A' position before.)



Turn the Tension Dial to 5.  
Both levers should be in FRONT.  
Push DOWN button 2 on the LEFT of the  
carriage. Knit 1 row to the LEFT.

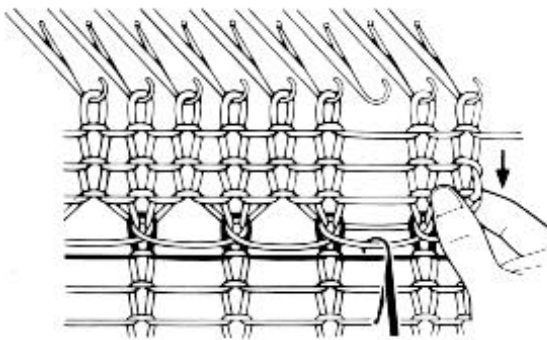
All needles are knitted back to 'B' position.  
Knit another 17 rows finishing with the  
carriage at the RIGHT side of the knitting.

## THE 1 PLAIN – 1 PURL RIBBED WELT



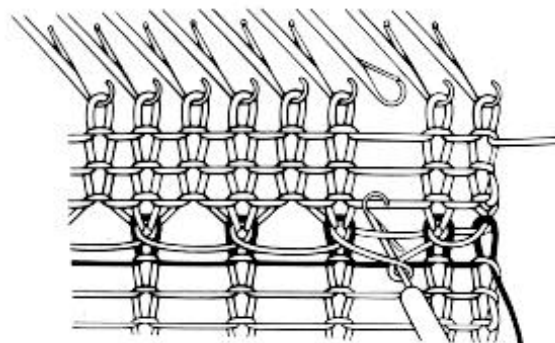
You are now ready to purl up the RIB. For this you will need the Latchet Hook.

Push the THIRD needle from the RIGHT up to 'D' position, back to 'A' position and up to 'B' position again, thus removing the stitch from its needle.



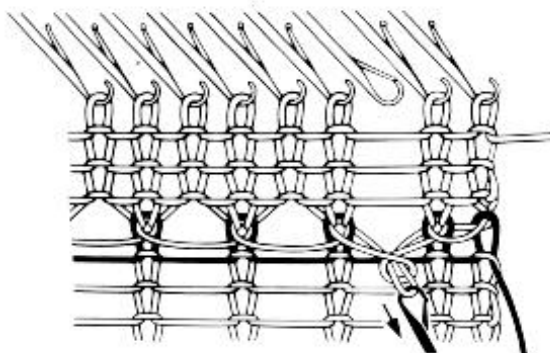
On the RIGHT side hang the Latchet Hook on the FIRST bar of yarn after the Nylon Thread.

Hold the knitting by the waste yarn below the third stitch from the RIGHT and pull down – this enables the third stitch to run down until it reaches the Latchet Hook.



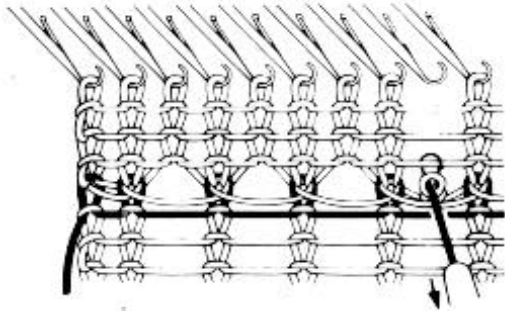
Twist the Latchet Hook until a loop is formed around the stem of the Hook.

Push the Latchet Hook upwards until the loop is behind the latch and the second bar of yarn lies INSIDE the hook.

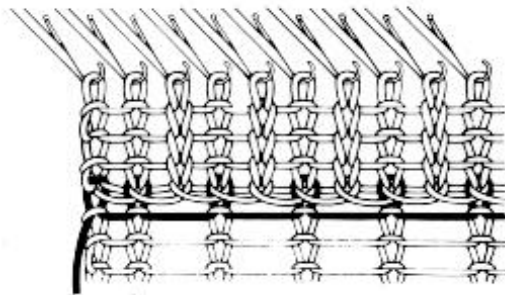


Pull the Latchet Hook down until the second bar is pulled through the loop which is behind the latch.

## THE 1 PLAIN – 1 PURL RIBBED WELT



Again push the Latchet Hook forward until the stitch is **BEHIND** the latch.  
Catch the next bar of yarn and pull it through the loop.  
Repeat this process until all bars of yarn have been knitted up and hang the last loop back onto the empty needle.  
Your first **PURL Rib** is now completed.



Miss 1 needle and lift the next stitch off its needle hook.  
Repeat working up the stitches until every second stitch has been purlled up.  
**DO NOT** purl up the last stitch on the **LEFT** or **RIGHT** side edge as these stitches are sewn up to make the seam.

## THE PLAIN AND PURL RIB

### WHEN KNITTING BULKY YARNS

With waste yarn make an open edge cast on over every second needle.  
Knit a few rows, finishing with the carriage at the **LEFT**.  
Knit **IN** the Nylon Thread from **LEFT** to **RIGHT**.

Hold the knitting against the machine, bring up the needles from 'B' to 'D' position. Thread in the main yarn. Make a loose knot around the last needle on the **LEFT** in 'D' position and wind the yarn around the other needles in 'D' position.

**DO NOT BRING THE REST OF THE NEEDLES FROM 'A' TO 'D' POSITION.**

Both Side Levers can be in ● position. Push **DOWN** button 2 at the **LEFT** of the carriage and knit 20 rows or more in a suitable Tension for the yarn.

Take the stitch **OFF** the **SECOND** needle from the **RIGHT** in 'B' position. Pull a little on the knitting to enable the stitch to run down until it reaches the Nylon Thread. Hang the Latchet Hook in the first bar after the Nylon Thread. Purl up the stitch and hang it back onto the empty needle in 'B' position. Repeat with every **SECOND** needle in 'B' position.



## HOW TO KNIT A DOUBLE 'V' NECKBAND

It is very easy to knit a DOUBLE 'V' NECKBAND. Of course, the first time you try one, the result may not be quite like the illustration, but it will not be long before you achieve a perfect result.

There are a few different methods of knitting 'V' neckbands and this illustration shows you how to make the one which is most often used and the easiest to do. At the same time it gives the neatest finish to the front of your garment.

Using waste yarn, make an open edge cast-on over 70 needles and knit a few rows finishing with the carriage at the RIGHT. Remove the waste yarn.

Thread up the main yarn. Bring the 70 needles from 'B' to 'D' position. Starting with the first needle from the LEFT, make a closed edge cast-on by hand.

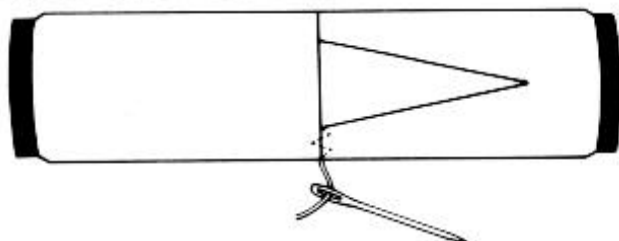
Set Tension to 7, the Cam Lever to centre 0 and push DOWN button 2 at the LEFT. Set Row Counter to 000. Knit 30 rows. The carriage is at RIGHT. Release button 2 at the LEFT.

Bring 35 needles LEFT of centre to 'D' position. Knit 4 rows.

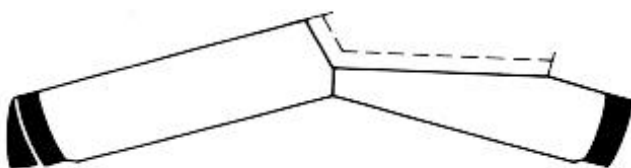
Now you start shaping your fully fashioned neckline. For this take the triple Transfer Tool and transfer the 3 stitches at the neck edge 1 more needle towards the RIGHT. Bring the empty needle back to 'A' position. Repeat knitting 4 rows and transferring the 3 stitches at the neck edge until the Row Counter shows 130 and 10 stitches remain in the needles. Knit 4 rows and cast-off the remaining stitches. Release all buttons. Set Row Counter back to 29.

Set Cam Lever to S, Side Levers are to FRONT and move the carriage to the LEFT across the needles in 'D' position. Set Cam Lever back to centre 0. Re-thread the yarn, push DOWN button 2 at the RIGHT. Knit 4 rows and transfer the last 3 stitches at the RIGHT 1 more needle towards the LEFT. Bring the empty needle back to 'A' position. Repeat knitting 4 rows and transferring the 3 stitches for shaping the neckline until the Row Counter shows 130. Knit 4 more rows and cast off the remaining stitches. Release all buttons.

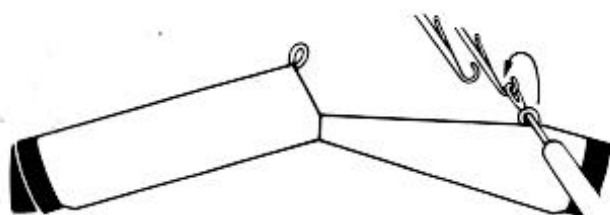
For the BACK - cast-on open edge 70 stitches using waste yarn and knit several rows finishing with the carriage at RIGHT. Thread up main yarn and make a closed edge cast-on starting with the first needle on the LEFT. Push DOWN button 2 at the LEFT and knit 129 rows on Tension 7. Knit 1 row on Tension 10 and cast-off all stitches.



When FRONT and BACK are knitted and steamed, sew up the shoulder seam and steam lightly.



Fold knitting in half as shown, wrong side facing. Measure the length of the neck as shown by the dotted line. Let's say it is 16 inches long. To make out the length of the neck, we use the following Tension chart - 2 inches give 11 stitches and 15 rows.



For 16 inches you will need to cast-on 88 stitches. Bring 88 centre needles to 'B' position. Move the carriage to LEFT. Hang first stitch of 'V' neck point onto last needle at RIGHT and centre stitch of back onto last needle at LEFT in 'B' position.

Now hang all loops of the first half of the 'V' neck band onto the remaining 86 needles, dividing them evenly, so that the knitting is not stretched in one place and bunched up in another.

## HOW TO KNIT A DOUBLE 'V' NECKBAND

Bring 1 extra needle on either side from 'A' to 'B' position. These TWO stitches will be used to sew up seams.

Thread up the main yarn. Set Tension Dial to 6, Row Counter to 000, Cam Lever to centre 0 and ALL buttons are UP.

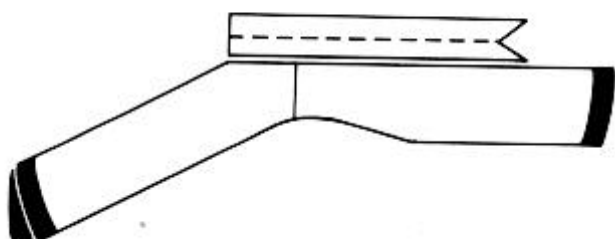
Knit 1 row towards the RIGHT. Turn the yarn around the extra needle at LEFT and RIGHT. Take the Double Transfer Tool and hang it in the hooks of the last 2 needles at the RIGHT. Transfer the 2 stitches 1 more needle towards the LEFT.

Hang the Nylon Thread across the loops of the last 2 needles at the RIGHT - if you do not, the loop of the last needle will not be knitted properly when doing the next row. Knit 1 row. Pull the Nylon Thread out of the knitting. Again transfer the 2 last stitches at the RIGHT 1 more needle towards the LEFT. Repeat knitting 1 row and transferring the 2 stitches until the Row Counter shows 12 and 12 stitches have been decreased. The carriage is at the LEFT. Knit 1 row towards the RIGHT.

You now start knitting the second half of the neckband. This will be folded in afterwards.

1. At the RIGHT - bring 1 extra needle from 'A' to 'B' position. Knit 1 row.
2. At the RIGHT - bring 1 extra needle from 'A' to 'B' position and transfer the LAST loop onto this new needle. Leave the empty second needle in 'B' position. Knit 1 row.

Repeat 1 and 2 until the Row Counter shows 25 and 12 stitches have been increased. Knit 1 row on Tension 10 and cast off all stitches.

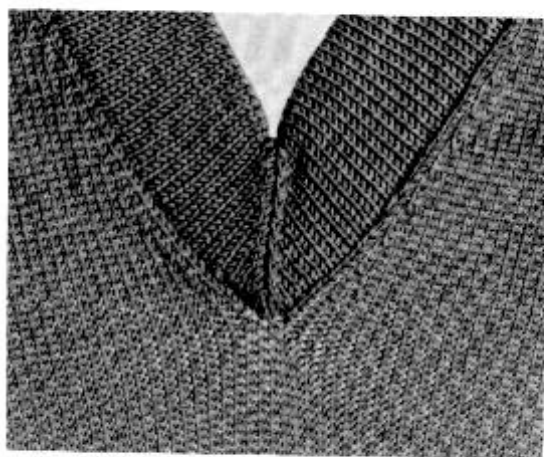


Your knitting will now have this shape. At the RIGHT edge you have the point for the 'V' neck shaping.

Move the carriage to the RIGHT, turn Tension Dial to 6, set Row Counter to 000. Hang the second half of the neckband into needles - but this time the 'V' neck point is at the LEFT. You start knitting from the RIGHT.

Knit the second half the same way as the first half but reverse the instructions for the shaping of neck point - RIGHT is LEFT and LEFT is RIGHT now.

When both parts are knitted, steam them lightly. Start sewing up the neckband by closing the centre back. Sew the stitches at the edges together by using the mattress stitch. In the same way sew together the 'V' neck point by starting with the 2 bottom stitches. Turn the neckband to the inside and backstitch the cast off edge onto the cast on edge of the neckband.



There are many different types of neckbands and also many different ways to shape a 'V' neck. The more you practice them, the quicker you will be able to give extra excitement to your garment.

# KNITTING



All beginners make mistakes. It is part of the process of learning, and not at all serious

## BECAUSE

in the following STEP I show you how these mistakes could have happened- and I also tell you how you can easily overcome and repair them.



Helpful Hints	PAGE 93 - 100
Stitch Sizes (Tension)	101
Knitting to measure	102 - 104
How to change a needle	105
Technical details of the carriage	106 - 108
Repacking	109
Maintenance of the machine	110
General Index	111 - 112

## USEFUL HINTS



### CASTING ON PROBLEMS

When you cast on it is always better to cast on with a very loose Tension, i.e. 7 upwards.

This gives you a large loop between the Sinker Gate and the needle hook and when you lay the Nylon Thread across these loops, it is easy for you to pull the Thread well down below the needle hooks thus enabling the hooks to pass OVER the Nylon Thread when knitting the next row.

If the stitches of the first row are too tight or if you do not pull the Nylon Thread well DOWN, then when you knit the next row the needles will incorrectly pass UNDER the Nylon Thread causing it to be 'knitted in' thereby either jamming the carriage or spoiling the cast on. In this case you will have to restart the cast on.

### STITCHES NOT KNITTED AT THE EDGES

If you return the carriage BEFORE IT HAS PASSED THE LAST NEEDLES IN 'B' POSITION BY 2 INCHES, it is possible that the first stitches in the row may NOT knit and sometimes the complete row remains unknitted. If stitches are NOT knitted, unravel this row and start again - also set the Row Counter back. If a complete row is not knitted - slide the carriage completely OFF the needle bed in the direction that you were moving it and start from the other side - also set the Row Counter back.

### DROPPED STITCHES AT THE EDGES

Dropped stitches will occur at the sides of the knitting if your Yarn Brake is not properly threaded and your Take-up Spring is NOT automatically taking up all slack yarn between the Feeder mouth and the needles. Loose loops may also form on the sides.

Dropped stitches or loose loops may occur at the sides of the knitting if you move the carriage TOO far past the knitting after knitting a row 0 then TOO MUCH yarn is pulled from the Yarn Brake and you have slack yarn between the carriage and the knitting.

This can be easily avoided if you just pull down any slack yarn from the Yarn Brake or by NOT moving the carriage TOO far away from the knitting.

### DROPPED STITCHES IN THE KNITTING

Can be caused by:  
Too loose or too tight a Tension.  
A Tension unsuitable for the pattern.  
Yarn not suitable for the pattern.

## USEFUL HINTS

Inside the Sinker Arm Assembly are two rectangular black brushes. As you move the carriage, these brushes open and hold open the needle latches so that your Yarn Feeder can lay yarn into the hooks as the carriage passes the needles.

If these brushes are badly worn, or if the Sinker Arm has not been placed onto the carriage properly, then the brushes cannot serve their function and dropped stitches will result. Dropped stitches are easy to repair (see next page).

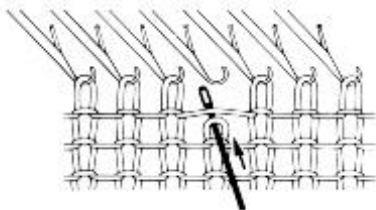
### DROPPED STITCHES

These can be caused by a knot in the yarn, or by yarn which has been badly or too tightly wound, thus preventing the smooth flow of yarn from the ball to the knitting.

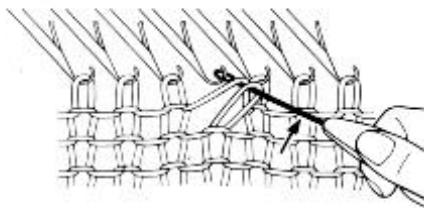
## REPAIRING A DROPPED STITCH

Once you are accustomed to machine knitting, you will very seldom drop a stitch.

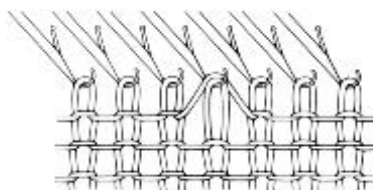
But as soon as you notice a dropped stitch, you should repair it at once. So let's try.



Insert the Transfer Tool inside the dropped stitch.



Hook the Transfer Tool into the empty needle. Lift the loose bar of yarn and the stitch onto the empty needle.

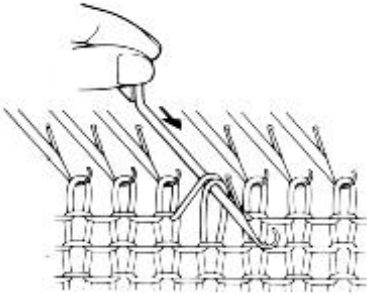


There is now 1 stitch and 1 bar on the empty needle.

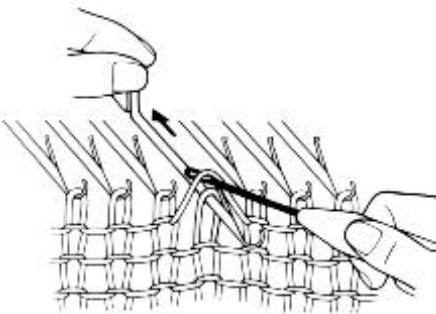


## USEFUL HINTS

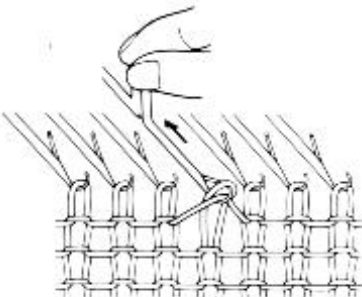
### REPAIRING A DROPPED STITCH



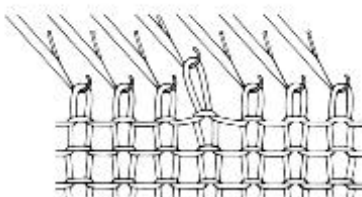
First, push the needle up to 'D' position, then pull the needle slightly back - just until the bar and the stitch are behind the latch - then STOP.



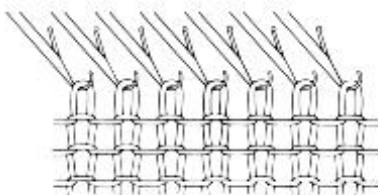
Lift the loose bar of yarn over the latch INTO the hook, and leave the stitch BEHIND the latch.



Pull the needle back down to 'B' position thus pulling the bar of yarn through the stitch.



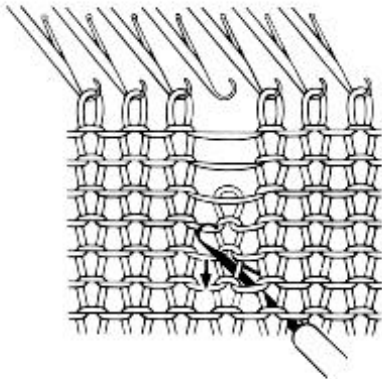
Push the needle further back to 'A' position to enable it to form a bigger stitch.



Pull your knitting down and sideways until gradually the newly repaired stitch assumes the same shape as all other stitches.

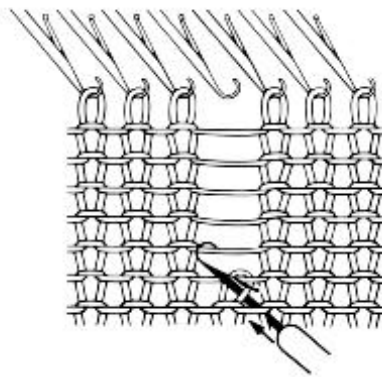
## USEFUL HINTS

### REPAIRING A DROPPED STITCH

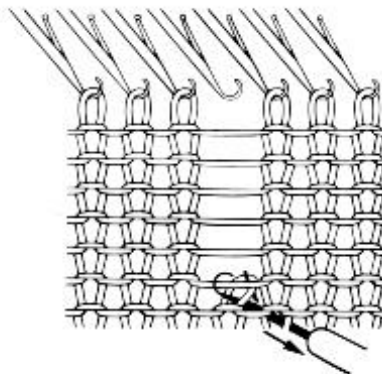


Insert the Latchet Hook from behind your knitting through a stitch a few rows below the dropped stitch.

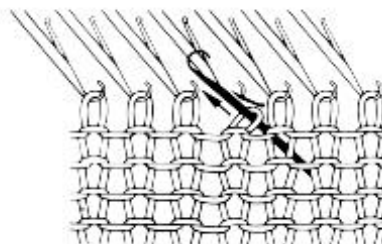
Undo stitches down to the Latchet Hook by pulling down on the Latchet Hook.



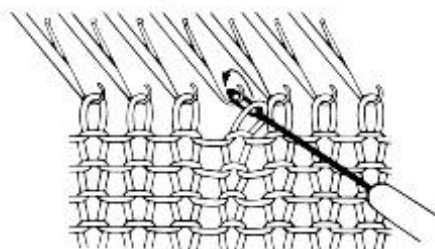
Push the Latchet Hook towards you so that the stitch comes behind the latch, and the hook catches the cross thread.



Draw back the Latchet Hook. The cross thread is trapped in the closed latch. Pull the cross thread through the loop thus forming a knitted stitch.



Push the Latchet Hook towards you until the stitch is behind the latch. Catch the next cross thread in the hook and pull it through the stitch. Repeat until you reach the top.



Pull the last stitch rather tight to make a bigger loop. Insert the Transfer Tool into this loop from the front. Carefully remove this stitch from the Latchet Hook and place it on the needle with your Transfer Tool.

## USEFUL HINTS

Unravelling is quick and very simple to do and may save quite a considerable amount of time.

IT MAY BE NECESSARY TO UNRAVEL –

If you have knitted too many rows.

If you have made a mistake in the knitting.

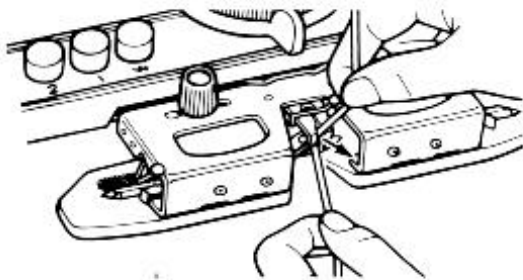
If your carriage jams and it is necessary to release the carriage and restart the row where the fault occurred.

If you have one or more dropped stitches in the middle of a row, it is much easier to unravel 2 or 3 rows and then just lift the dropped stitches back onto their respective needles.

**TO PRACTICE UNRAVELLING** – Cast on 40 stitches in the normal way. Knit 20 rows finishing with the carriage at the RIGHT.

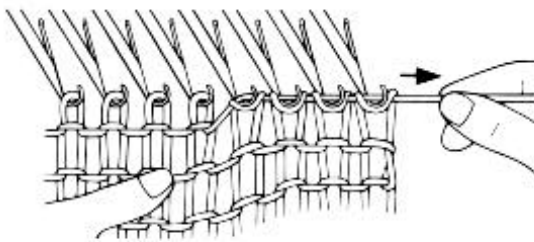


## UNRAVELLING

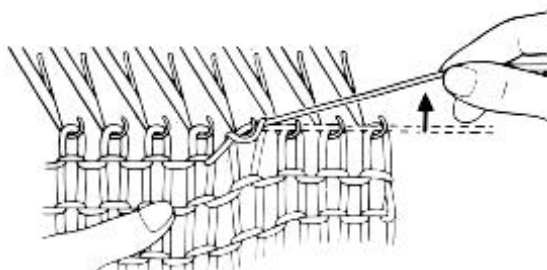


**TO UNRAVEL 4 ROWS PROCEED AS FOLLOWS:**

Remove the yarn from the Yarn Feeder.



Hold the knitting down with your left hand and with your right hand pull the yarn sideways, as illustrated.



Lift the yarn upwards and very slightly backwards and you will notice that the stitches of the previous row automatically slide back into the needle hooks. Repeat pulling the yarn and lifting the stitches of the previous row into the needle hooks until you have unravelled 4 rows. When unravelling from the LEFT, you must pull the thread towards the LEFT.

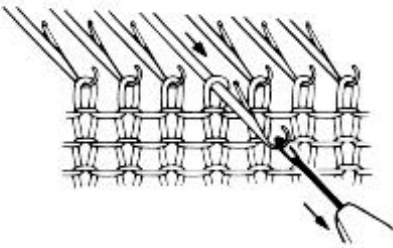
After unravelling rows - bring all needles in a straight line in 'B' position and when knitting patterns you need to bring your needles into the correct pattern setting again.

## UNRAVELLING

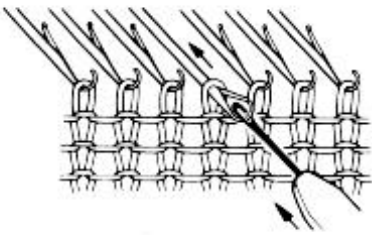
When you have unravelled a few rows, this will leave quite a considerable length of loose yarn. Thread the yarn back into the Yarn Feeder. Pull back all loose yarn down from the Yarn Brake onto the ball of yarn as shown on page 23. Move the carriage nearer the needles in 'B' position. Again pull down the slack yarn behind the Yarn Brake and proceed to knit.

**DO NOT FORGET TO SET BACK THE ROW COUNTER FOR THE NUMBER OF ROWS UNRAVELLED.**

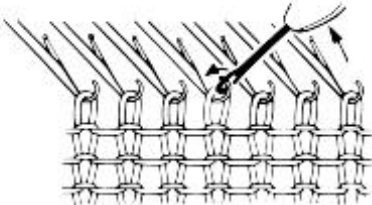
**YOU CAN ONLY UNRAVEL WHEN ALL YOUR STITCHES ARE INSIDE THE NEEDLE HOOKS.**



If, for any reason, one or more of the stitches are not in the needle hooks and are behind the latches, hang the Transfer Tool in the needle hook. Pull the needle into 'D' position.



Push it back to 'A' position, the stitch is on the Transfer Tool. Pull the needle into 'B' position.



Raise the Transfer Tool and let the stitch slide into the needle hook. When you have brought all needles to 'B' position this way, then you may start unravelling.

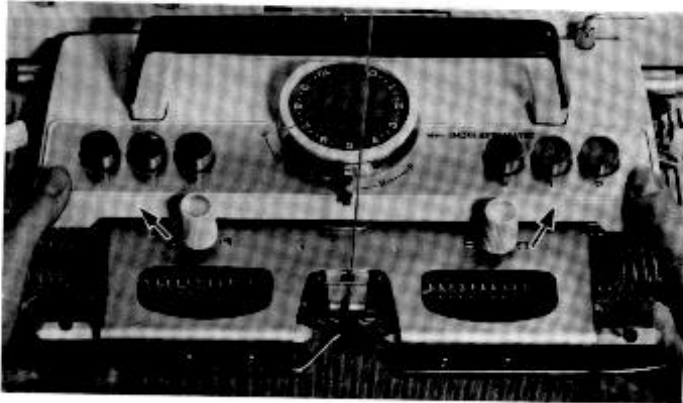
### THE CARRIAGE IS HARD TO MOVE IF —

1. The yarn is wound too tightly and does not flow easily into the needles.  
The yarn you are using is too hard or too heavy.  
The yarn is unsuitable for use on your machine.  
The yarn is not suitable for the pattern which you are knitting.
2. The Tension (stitch size) is either too loose or too tight.
3. Your machine is dirty or needs oiling.
4. The Yarn Brake has been incorrectly threaded.
5. The yarn was tangled in the Yarn Brake during knitting.

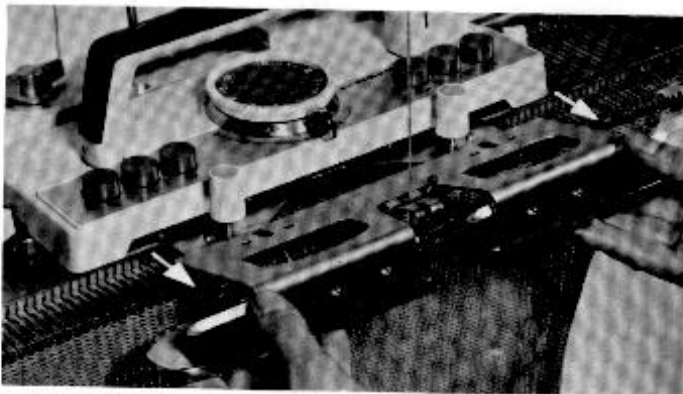


## USEFUL HINTS – IF THE CARRIAGE JAMS

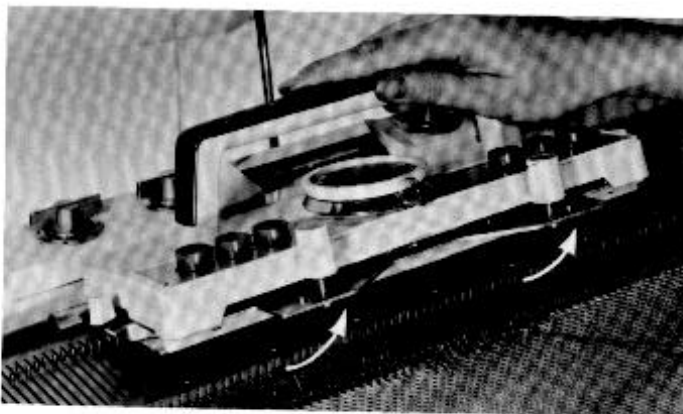
SOMETIMES THE CARRIAGE MAY JAM IN THE MIDDLE OF A ROW. IF THIS HAPPENS – IT IS NOT SERIOUS AND NO CAUSE FOR WORRY. DO NOT FORCE OR HIT THE CARRIAGE TO GET IT LOOSE - PROCEED AS FOLLOWS:



Set the Row Counter out of action. Loosen both knurled nuts which secure Sinker Arm onto carriage. With a thumb on each front corner of the carriage and the fingers below the Sinker Arm - push the Sinker Arm UPWARDS OUT OFF THE STUDS.



Pull the Sinker Arm towards you OFF the carriage. If necessary cut the yarn to separate the Sinker Arm from the carriage. Take care that there are NO needle hooks caught IN the Yarn Feeder.



You can now easily lift up the carriage from the needle bed and it will be held by the Guide Rail at the back of the needle bed.

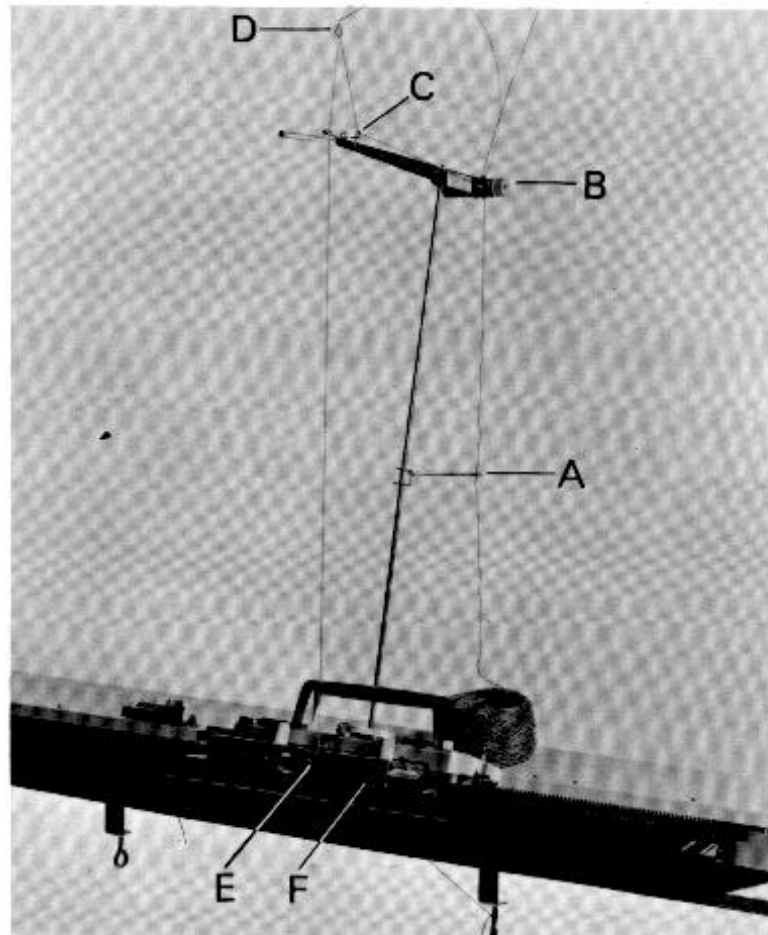
Hold the carriage UP in its raised position and move it across the needle bed away from the knitting in the direction from which it came. Replace the carriage onto the needle bed.

Remove the yarn from the Yarn Feeder. Check that there is no yarn twisted around the brushes below the Sinker Arm Assembly. If there is, clear it and replace the Sinker Arm Assembly back onto the carriage.

Set the Row Counter back into action. Unravel the last row. If the last row has been counted, set the Row Counter back. Re-thread the yarn.

## REASONS WHY THE CARRIAGE MAY JAM

THE YARN MUST ALWAYS FLOW SMOOTHLY AND EASILY INTO THE NEEDLES AS THE CARRIAGE IS MOVED ACROSS THE NEEDLE BED.



1. IF FOR ANY REASON THE YARN CANNOT FLOW INTO THE NEEDLES, THE CARRIAGE WILL JAM IMMEDIATELY.
2. It may be blocked at A.B.C.D or E, if it is not correctly threaded or if there is a large knot in the yarn or the yarn is twisted around the points just mentioned.
3. Underneath the Sinker Arm Assembly are 4 brushes F. The yarn may become caught in the brush wheels F if there is any slack yarn between the Yarn Feeder E and the needles.

It is easy to find out why your carriage jammed. Pull the yarn below the carriage down. If it does not flow smoothly then check all points mentioned above.

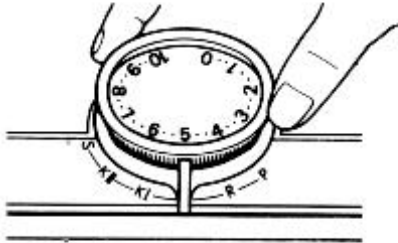
If the yarn does flow smoothly - the reason for the jamming is not above the carriage.

Check the brushes below the Sinker Arm Assembly  $\emptyset$  if there is yarn twisted around the brushes - move the carriage away from the knitting and replace the Sinker Arm Assembly back onto the carriage ensuring that both knurled nuts are properly tightened.

Unravel the last row - check the yarn tension and continue knitting.

## TENSIONS AND STITCH SIZES

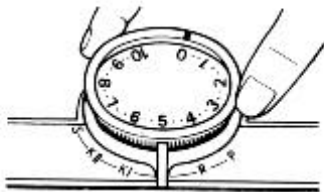
Just as in hand knitting, it is **IMPORTANT** to have the **RIGHT STITCH SIZE** for the **YARN** that you use. Because of the **31 STITCH SIZES** you will find that you are able to use **ALMOST ALL OF THE POPULAR HAND KNITTING YARNS**.



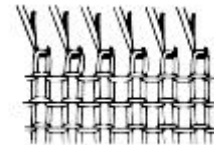
In the centre of the carriage is the stitch Tension Dial. With the Tension Dial you can choose the size of stitch suitable for your yarn. Between the numbers you can see two little dots - these are also Tensions - this means you can select from 31 different Tension sizes to find the most suitable for nearly any type of yarn you wish to knit.

You will see that most stitch patterns look far better when knitted with the correct stitch size. It is quite impossible for me to tell you here which is the best Tension for your yarns there are too many different types and qualities.

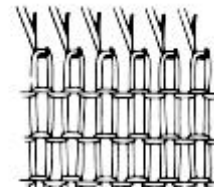
It is very easy to find out yourself which of the 31 Tensions is the best one for you to use. Let's make a little test. Cast on open edge 60 stitches and knit a few rows on Tension 10. If using a thin to medium yarn, you will find the stitches are much too loose. Set the Tension to 9 and knit a few rows. Repeat setting the Tension to a smaller size and knitting a few rows until you find the right Tension for the yarn you are using.



When the Tension Dial is set to 0 - the tightest Tension is obtained (smallest stitch).



When the Tension Dial is set to 10 - the loosest Tension is obtained (largest stitch).



**IF YOUR TENSION IS TOO TIGHT** — it will be difficult, or even impossible to knit and you will use more yarn, thus wasting money and your knitwear will be hard and uncomfortable to wear.

**IF YOUR TENSION IS TOO LOOSE** — your knitted garment will either have no shape or will very soon lose its shape.

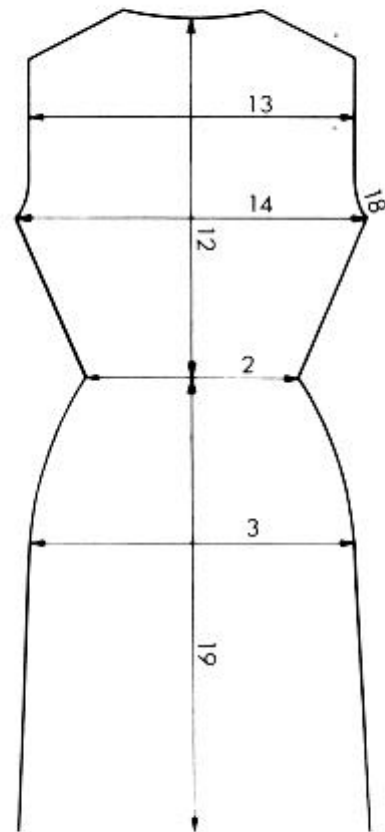
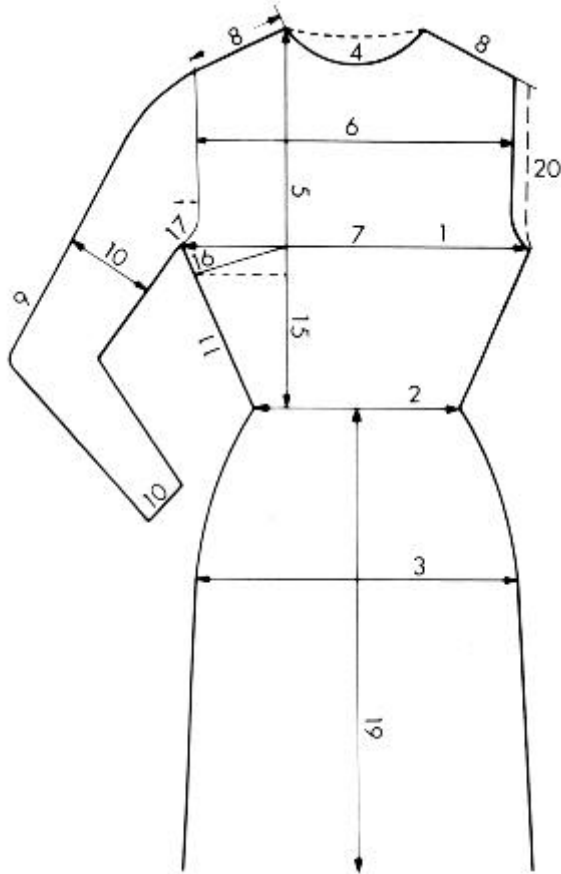
### INCORRECT TENSION SETTING CAUSES

1. JAMMING OF THE CARRIAGE
2. VERY HARD KNITTING
3. WASTAGE OF YARN IF THE TENSION IS TOO TIGHT
4. FAULTY PATTERNS
5. DROPPED STITCHES
6. SHAPELESS GARMENT IF THE TENSION IS TOO LOOSE

## KNITTING TO MEASURE

You do not need to be a dressmaker, nor have any special knowledge, to take the simple measurements you will need to make your knitwear fit loosely and comfortably, yet fashionably.

A good hint is to give extra width to the measurements you take, as knitwear should not be skin tight.

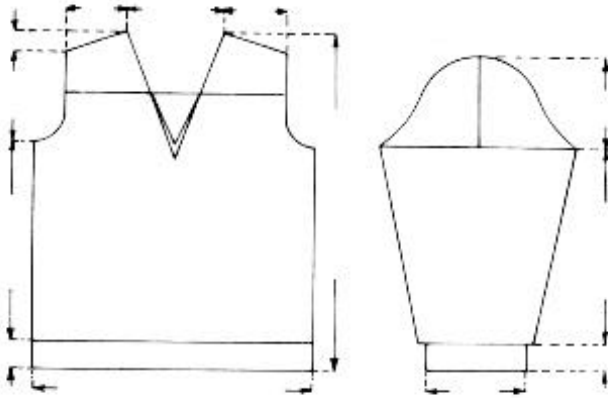




## KNITTING TO MEASURE

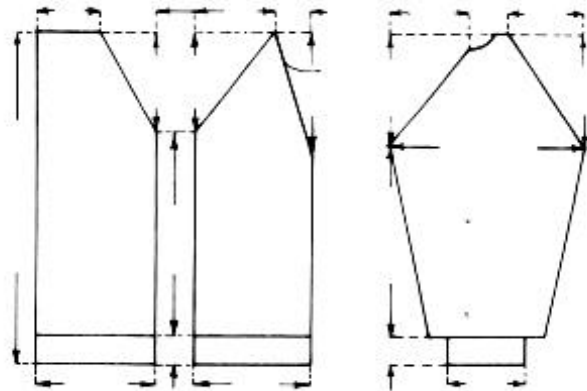
- |     |                                  |  |
|-----|----------------------------------|--|
| 1.  | Bust measurement . . . . .       | It is taken around the fullest part of the bust and shoulder blades.   |
| 2.  | Waist measurement . . . . .      | To fit snugly around the waist   |
| 3.  | Hip measurement . . . . .        | Over the widest part of the hip.   |
| 4.  | Neck measurement . . . . .       | Round base of neck.  |
| 5.  | Front length . . . . .           | From highest point of shoulder over the bust to the waistline.   |
| 6.  | Front shoulder width . . . . .   | Above the bust from armhole to armhole.  |
| 7.  | Front bust width . . . . .       | Over the bust from side seam to side seam under the arm.   |
| 8.  | Width of shoulder . . . . .      | From neckline to armhole.  |
| 9.  | Sleeve length . . . . .          | From shoulder to the required point of the arm.  |
| 10. | Sleeve width . . . . .           | Width on top around the upper arm, width at bottom around the wrist.   |
| 11. | Side length . . . . .            | From the waist, about 1 inch below the armpit.   |
| 12. | Back length . . . . .            | From nape of neck to waistline.  |
| 13. | Back shoulder width . . . . .    | Across the back from armhole to armhole.   |
| 14. | Back width . . . . .             | Across the back from side seam to side seam.   |
| 15. | Length of dart . . . . .         | The front length minus back length (12) gives the required number of inches your dart needs to be knitted in rows.   |
| 16. | Width of dart . . . . .          | From the side seam (2 inches before starting the shaping of the armhole) to the required point of the bust.  |
| 17. | Width of armhole Front . . . . . | Front bust width (7) minus front shoulder width (6). The difference between measurement 7 and 6 must be divided by 2 so you have one half for the left and one half for the right armhole. |
| 18. | Width of armhole Back . . . . .  | Back width (14) minus back shoulder width (13) divided by 2 as you need one half for each armhole.   |
| 19. | Skirt length . . . . .           | From the waist to the point of the hem.  |

## KNITTING TO MEASURE



FOR SET-IN SLEEVES

FOR RAGLAN SHAPING



**TO OBTAIN A WELL FITTING GARMENT** It is just as important to knit a Tension square as it is to take the right measurements. Always knit a Tension square before starting a new garment. This little extra trouble will be well worth your while.

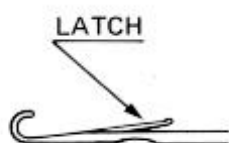
**WHETHER YOU HAVE A KNITTING PATTERN OR NOT**, you will be able to copy any model you fancy if you make a Tension square of the stitch pattern and draw a diagram on which you enter the precise measurements you have taken. Always start by knitting your Tension square.

**TAKE YOUR MEASUREMENTS** — draw a sketch on a reduced scale, calculate the number of stitches you will need to cast on for the width you need, and how many rows are needed for the length required.

For shaping you also need to calculate the increasing and decreasing and divide the number of stitches you need to increase into the number of rows you must knit.

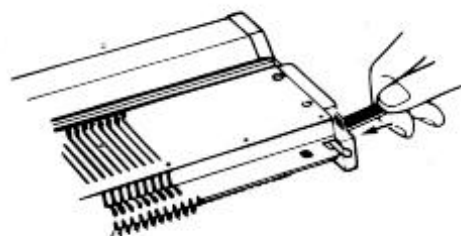
**THE MORE CARE YOU TAKE PLANNING YOUR GARMENT, THE SOONER YOU WILL FINISH YOUR KNITTING AND THE BETTER THE GARMENT WILL FIT.**

## CHANGING A DAMAGED NEEDLE



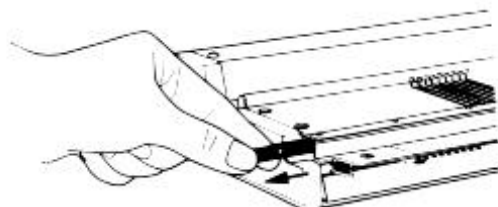
Needles with damaged latches will cause faulty knitting or dropped stitches and therefore must be changed.

The needle latch must move easily and lie flat over the needle hook.

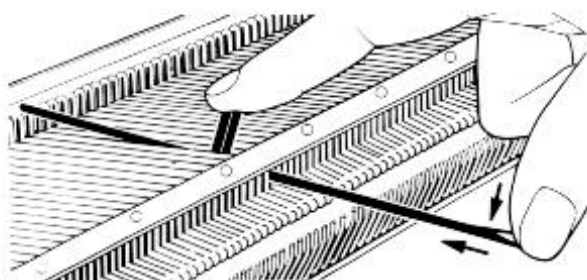


At each side of the needle bed you can see the needle retaining bar - it can be pulled out of the needle bed either to the RIGHT or to the LEFT side.

If the damaged needle is at the RIGHT half of the centre - push the raised end of the copper plate into the needle bed at the RIGHT.



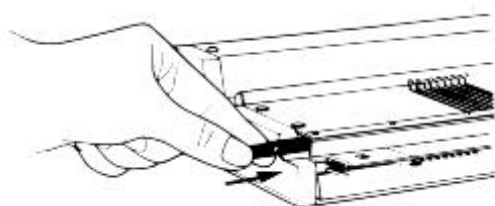
The needle retaining bar is now pushed out of the needle bed at the LEFT and you can pull it out of the needle bed until the damaged needle lies free.



Push the damaged needle by the butt up to 'D' position. With your thumb, push the needle hook down as shown, unless the needle is badly worn the heel will lift out of the needle bed. If NOT, use the work hook. Slide it inside the needle bed from the top and bring the shank of the needle below the opening of the needle bed to let it come out. Hold the heel of the damaged needle and pull it backwards out of the needle bed.



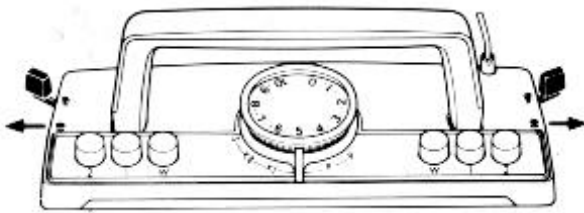
Open the latch of the new needle and slide it into the groove of the needle bed as shown by the arrow. The needle must come to 'D' position. Then you let the shank slide into the needle bed, move the needle backwards to 'A' position.



Check that the needle slides smoothly in the needle bed from 'A' to 'D' position.

Now insert the needle retaining bar inside the needle bed as shown.

# THE FUNCTION OF THE PUSH BUTTONS



## SIDE LEVERS

For plain stocking stitch knitting they should be set in FRONT in ● position.

But for stitch pattern knitting - they must be set back to ▼ position, only then the carriage has contact with the automatic needle selector.

Push Buttons	Directions of carriage	Needles in 'B' position	Needles in 'D' position
	→	Knit	Remain in 'D' position
	→	Needles shown in indicator as long lines move to 'D' position.	Remain in 'D' position
	→	All needles knit to 'B' position	Knit back to 'B' position
	←	Knit	Move to 'C' position without knitting
	←	Move to 'D' then to 'C' position without knitting	Move to 'C' position without knitting
	→	Knit	Move to 'D' then to 'C' position without knitting
	→ ←	Knit	Do not knit
	→ ←	Knit	Knit

For plain stocking stitch knitting.

For Tuck stitch patterns push DOWN button 1 and the needles which show in the indicator as long lines come to 'D' position to knit the pattern.

To knit back needles from 'D' position to 'B' position - push DOWN button 2 on the side of the carriage in the direction you move. If the needles should move to 'C' position - only push button 2 on the OPPOSITE side of the carriage. Also used to knit Fair Isle patterns.

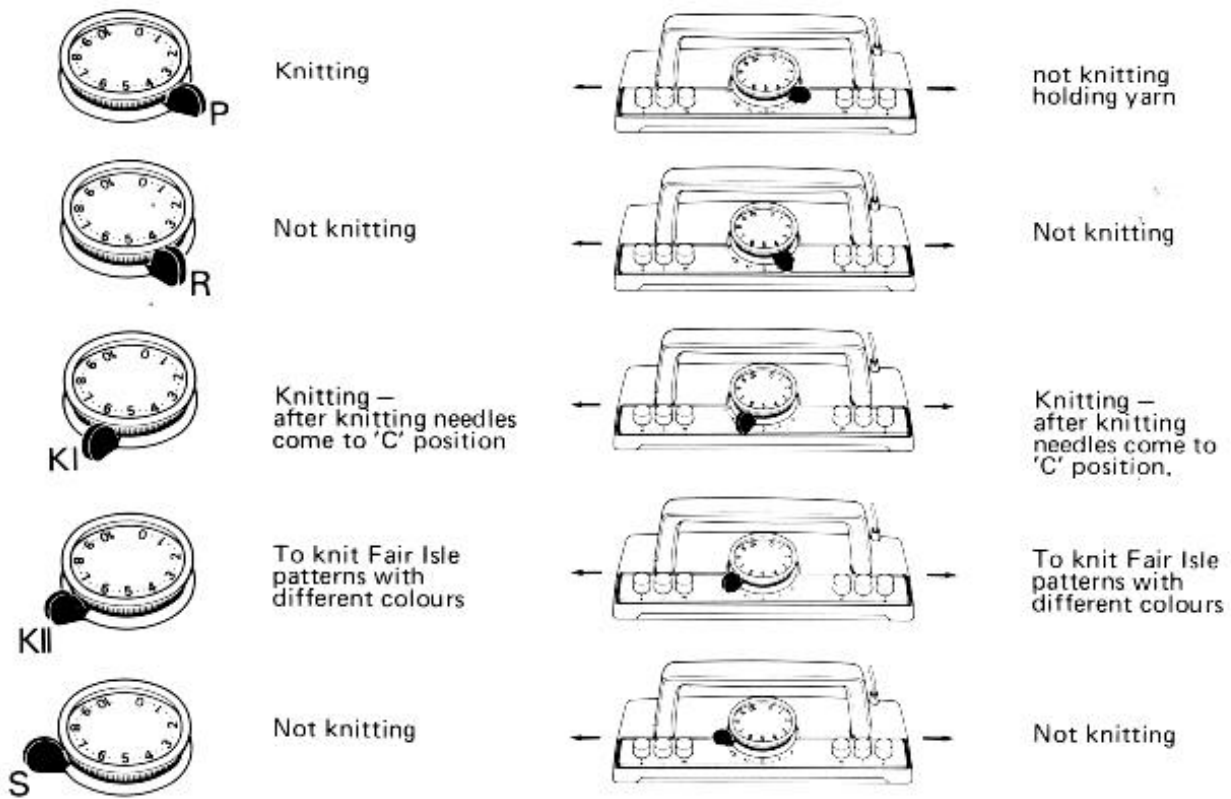
For consecutive Tuck stitching - push button 1 and 2 DOWN at the same time.

For weaving patterns - push buttons W - but follow instructions on pattern cards for 'B' patterns.

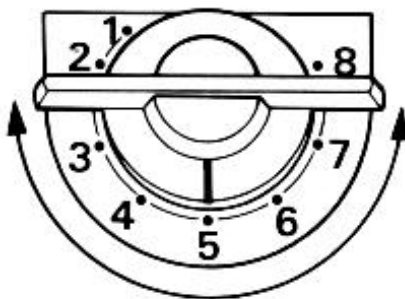
To release any button - push another one down HALF WAY ONLY.

## THE CAM LEVER

The following instruction applies for the needles that show as SHORT lines in the indicator. When you knit Tuck Stitch Patterns using P on the Cam Lever these short line needles will knit the pattern.



## THE ZIG-ZAG BUTTON

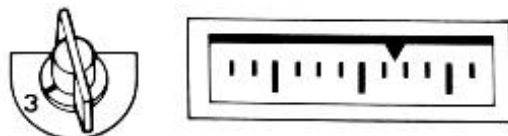
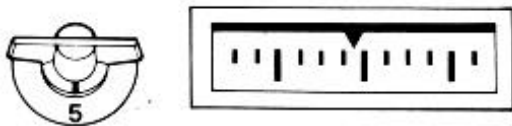


With the ZIG-ZAG button you are able to move the stitch pattern onto any other needle or knit completely diagonal.

In this case you usually start the pattern from 1 to 8. When you have knitted the pattern on 8, you will start on 1 again.

When you knit back from 8 to 1 - you will then knit a ZIG-ZAG pattern.

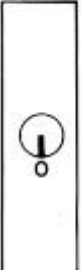
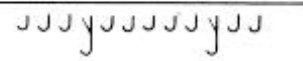

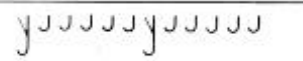

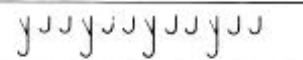

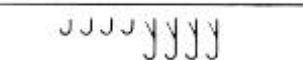

You **MUST ALWAYS** turn the ZIG-ZAG button **BACK** from 8 to 1 - **DO NOT TRY** to turn it round completely - you will damage the pattern mechanism. When repacking the machine - set the ZIG-ZAG button to 5 and insert the copper Lock Plate into the **RIGHT** side of the Needle Bed. This way you protect the Pattern Panel from moving during transport.




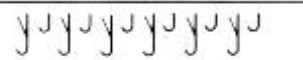

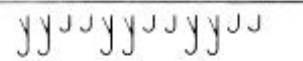

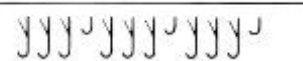

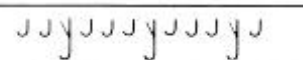

By the little white triangle showing towards the needles, inside the Pattern Needle Indicator, you can control if you did move the pattern or not. Try this check by moving the ZIG-ZAG button as shown in the diagram at the **LEFT**.

Later, when you are more accustomed to pattern knitting, you will just count the pattern on the knitting.

## THE NEEDLE SELECTOR BUTTONS

	5		
	6		
	7		
	8		

These are the 5 different positions of the LEFT side needle selector button.

	1		
	2		
	3		
	4		

These are the 5 different positions of the RIGHT side needle selector button.

Of course you can combine the settings of both Needle Selector buttons. You just cannot imagine the wide range of pattern possibilities they give you.

### CAM LEVER AT CENTRE 0

When doing normal Tuck Stitch patterns using the Push Buttons on the carriage - then the needles that show as long lines will come to 'D' or 'C' position and gather the threads to knit the pattern.

### CAM LEVER AT P

When knitting Tuck Stitch patterns using the Cam Lever on position P - then the needles that show as short lines will pick up the threads, go back to 'B' position with the thread in the hook and make the pattern.

### CAM LEVER AT KII

When knitting Fair Isle patterns - the needles that show as short lines in the indicator will knit the contrasting colour which lies on top of the needles in 'C' position. So, remember - the short lines knit the second colour.

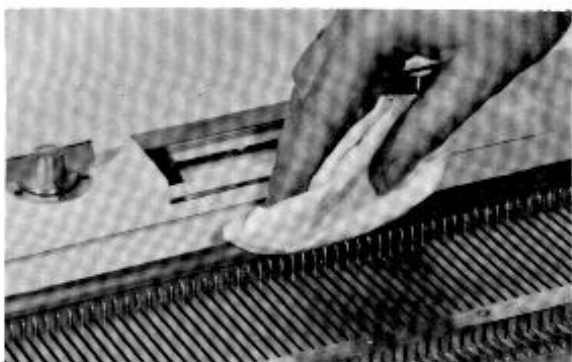
### CAM LEVER AT CENTRE 0

When knitting Weaving patterns - the needles which show as long lines in the indicator will weave-in the weaving thread. The weaving thread is never knitted - the stitch is made around it.

## MAINTENANCE OF THE MACHINE

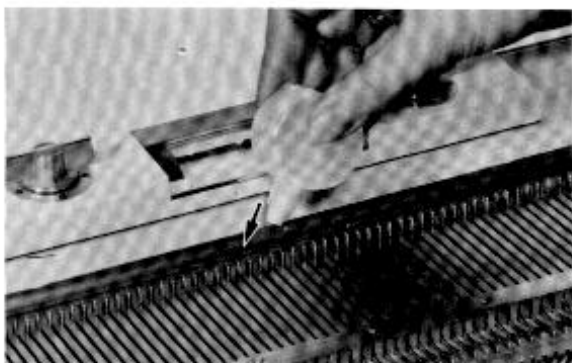


To clean the machine - remove the carriage from the needle bed completely. Bring all needles up to 'D' position and with the little brush remove all wool dust from the needle number plate.

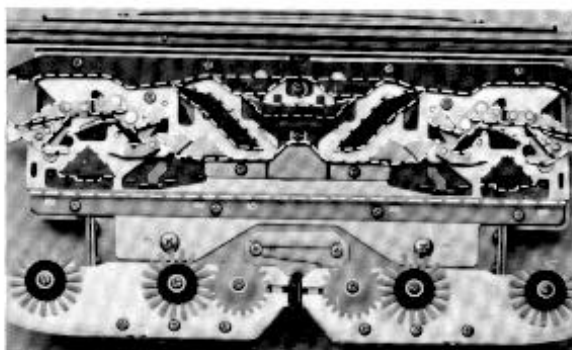


Remove any little wool hairs that may be around the brushes below the Sinker Arm Assembly.

With a paper tissue or a soft dry cloth remove oil from Guide Rail of machine and from below the carriage.

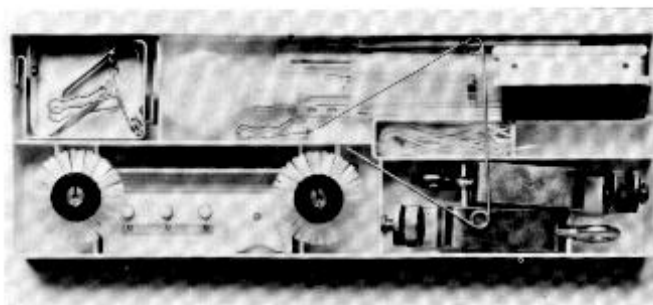


When starting to knit - slide the oil bottle along the Guide Rail of the machine, the needle butts and the front guide of the needle bed.



The dotted line shows you where the parts below the carriage need oiling before knitting. Oil lightly.

## REPACKING THE MACHINE

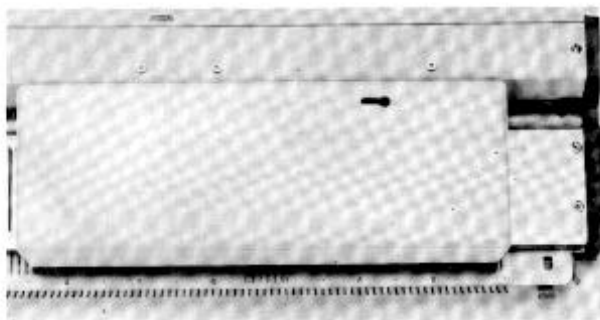


Remove the Yarn Brake and turn DOWN the Take-up Spring. Place it under Spring A in cover.

Remove Sinker Arm Assembly and place it below Spring A. Close Spring A.

If necessary, replace Rib Frame into cover. Insert Yarn Brake Rod from LEFT into holder then down into clip.

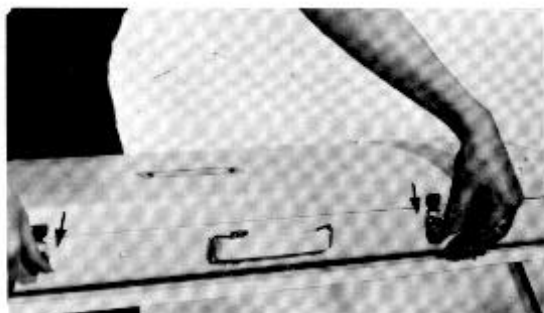
Remove both Table Clamps from machine, close them and place in Accessory Case. Place all other little accessories into case.



Close the Accessory Case and place it onto needle bed as shown.



Place cover over machine, short side towards the back of machine. Lower the longer end below the machine and close in direction of the arrow.



Close both catch locks on rear cover of machine.



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