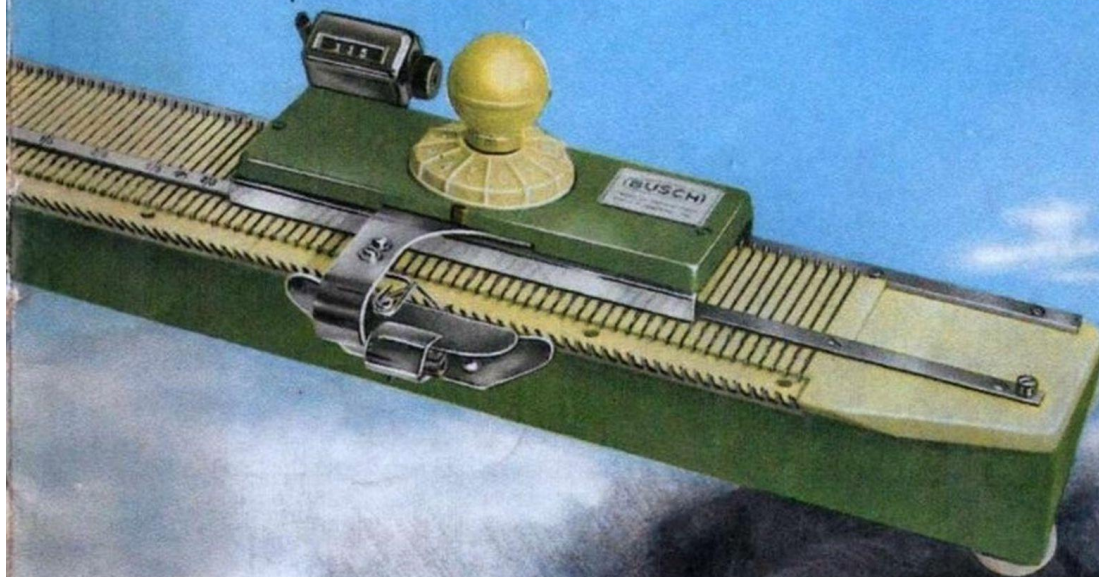
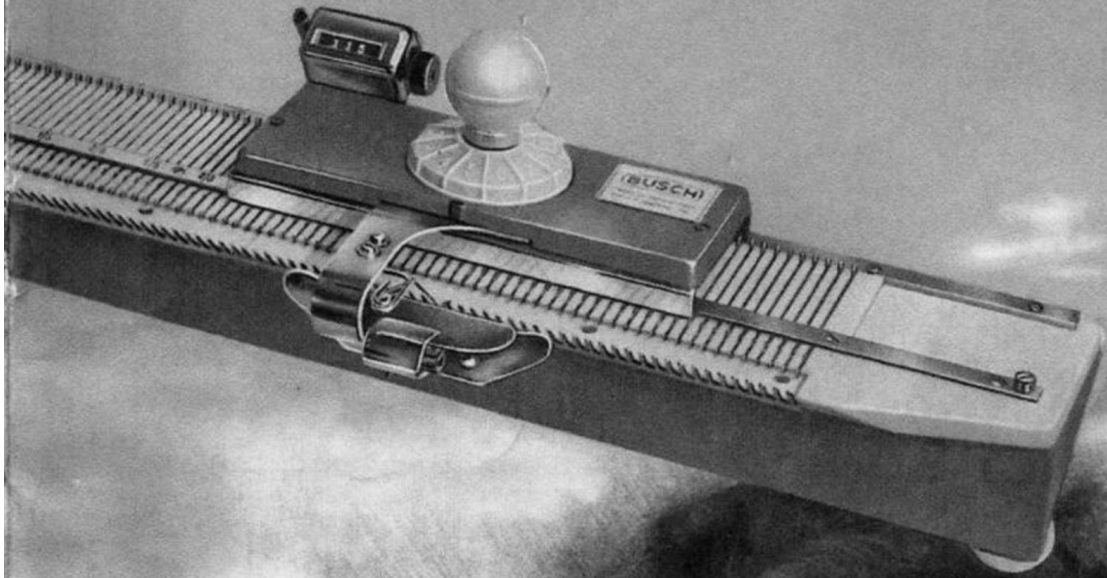


*Her dream
came true...*



BUSCH

*Her dream
came true...*



BUSCH



Instruction and Pattern Book

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FOREWORD

On unpacking the machine, you will find a piece of knitted fabric which is the full width of the 161 stitches. This is to assure you that the BUSCH has been tested and checked in every detail before despatch.

To remove the test knitting, run the Slide over the full length of the machine with the Knob pressed down. The knitting is cast off the needles. Push back the needles to their Resting Position against the Bottom Rail. Examine the test piece. Feel how soft and natural it is. Notice how evenly and accurately it is knitted.

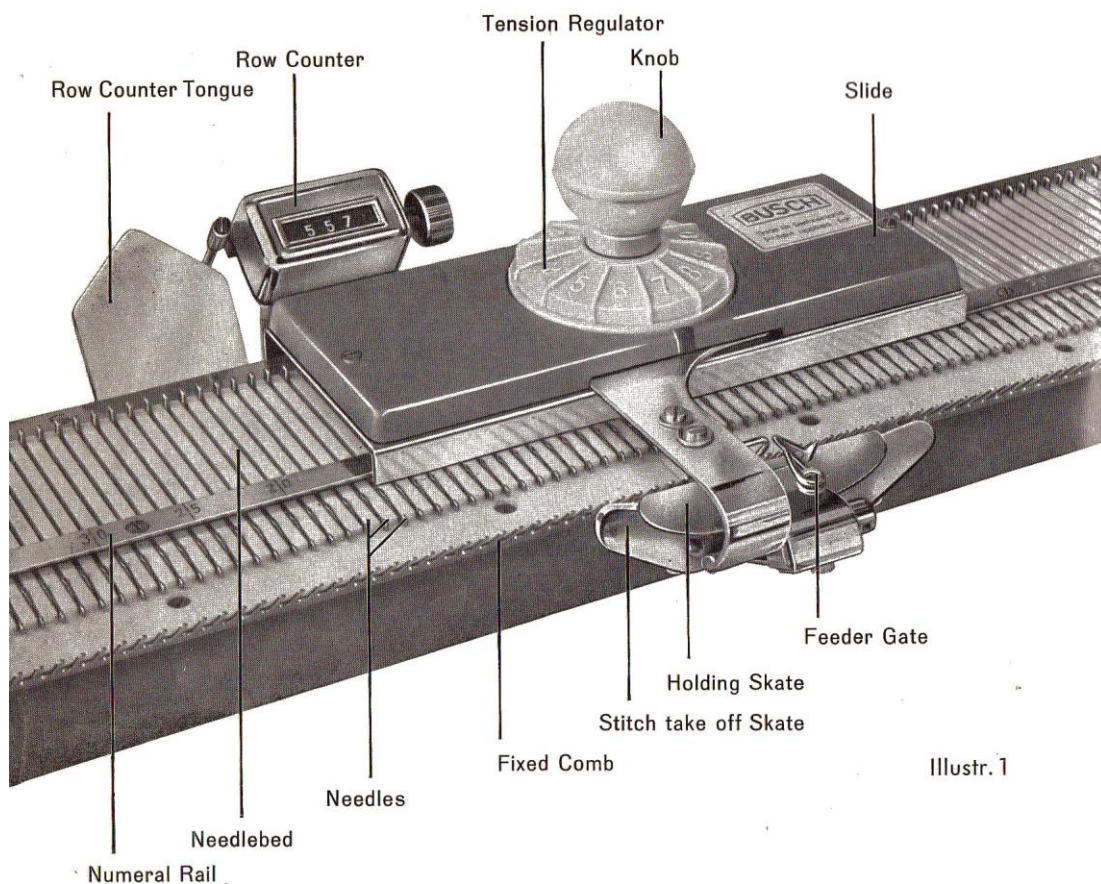
Every carton contains the following tools:

- 2 Spare Latch Needles
- 2 Twin Eyelet Tools (white)
- 1 Hook and Eyelet Tool (yellow)
- 1 Latch Needle and Eyelet Tool (red)

Place the machine on the edge of a firm table without a tablecloth. The rubber feet will not injure the most highly polished surface.

Get on friendly terms with this beautiful made precision BUSCH Knitter. Find the simple rhythm that will come to you with practice, after which you will be amazed at your ability to knit, at speed, intricate patterns, many of them of your own design. The BUSCH is a machine that will give you hours of enjoyment in knitting garments of such perfection that they will amaze yourself and your friends. The finished fabric is so natural in appearance that many refuse to believe it is not hand knitted.

Please do not first attempt to use the BUSCH to knit some difficult and intricate pattern. First read and digest the extremely simple instructions which we have spend considerable time compiling, so that any woman, however lacking in a knowledge of mechanics, can understand how to use her machine. Beyond passing the Slide rapidly to and fro, there is no manual operation necessary. One rapid movement knits one complete row and this «one stroke» action, knits 30 rows approximately 5000 stitches per minute.



Illustr. 1

Main parts of the BUSCH Handknitting Machine

The Chassis. Lies flat on the table on rubber feet which prevent the machine slipping or moving during knitting.

The Needlebed. Is fixed on the Chassis and is secured to it by two chromium plated Rails. The Needlebed has grooves in which the Needles rest.

Knitting Needles of industrial Latch type, rest in the Needlebed, and can be moved backwards and forwards. In the Resting Position the Needles are out of action. Only those Needles that are in «Forward and Lower» Knitting Position are in action. There are 161 Needles in all.

Numeral Rail is marked with Needle numbers. From the center «0» the Needles are numbered at each side in lots of 5. There are 80 Needles on each side. This makes it easy to put the required, number of Needles (stitches) in operation.

The Comb is permanently fixed to the Chassis and no manipulation of any kind is required.

The Slide moves to and fro on the Rails, along the full length of the machine. When moved from one side to the other, a row of stitches is formed automatically. The Slide has also three other functions:

- A. To guide the wool into the Latches of the Needles.
- B. To project and retract the Needles and to open and close the Latches at the same time.
- C. To keep the knitting to the desired tension.

The Slide consists of the following parts:

- 1. The Knob. 2. The Tension Regulator. 3. The Tension Indicator
- 4. The Wool Feeder. 5. The Skates. 6. The Row Counter.

The Knob can be raised or pressed down. Either operation should be done on either side of the machine, and never in the middle of a row. For Stocking Stitch the Knob should always be pushed down. For certain patterns like Fair Isle, fancy colours or shaping, the Knob should be raised.

The Tension Regulator is constructed for ten different Tensions. The desired Tension number is obtained by simply turning the Regulator to the desired number facing the red Tension Indicator. The lower the Tension number, the tighter the stitch, and of course, the higher the Tension number, the looser the stitch.

The Feeder consists of a metal Gate through which the wool is passed, and a metal Loop through which the wool is looped *clockwise*. The Feeder Gate guides the wool automatically into the Latches of the Needles.

The Skates. There are two Skates, one on top of the other. The top Skates prevent the knitting being pushed too high. The bottom one pushes down the knitting and thus eliminates the use of cumbersome weights.

The Row Counter is fixed to the Slide. Each time the Lever passes over the Row Counter Tongue, it operates the Row Counter. Before starting knitting, set the Row Counter at 000 by turning the wheel clockwise.

Care and Upkeep

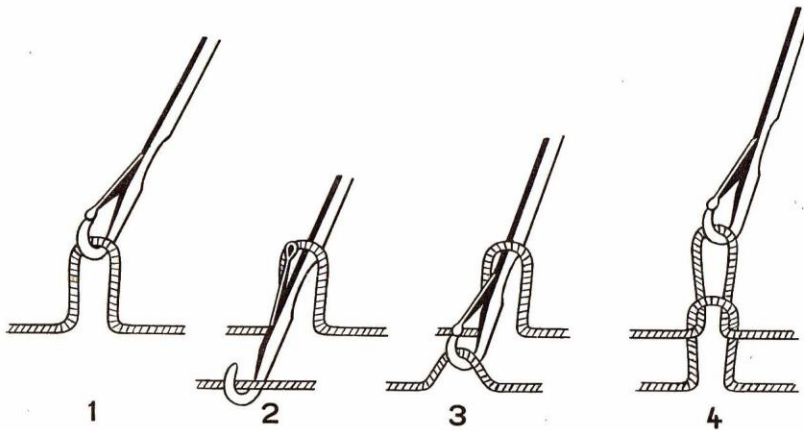
Protect the machine from dust; after knitting a garment we suggest you use a soft brush to remove the wool dust and fluff between the Needles, from the Needlebed, and from the Rails. It is recommended also to remove the fluff and dust from time to time, inside the Slide, and to grease very slightly the edges of the mechanism with petroleum jelly. To remove the Slide from the machine, unscrew one of the two Stop screws. It is also recommended to wipe clean the Needles with a soft cloth. When not in use, the machine should never be left uncovered. Now and again the Needlebed, between the two Rails, needs lubricating with best quality thin Sewing Machine oil.

The best way is to use a small soft brush and lightly coat the Needlebed by passing the brush, just once, over the Needles between the two Rails, from one end of the machine to the other. After a minute or two clean the Needlebed with a clean soft cloth. The machine is robust, and treated with proper care it will give you years of joyful and efficient knitting.

The Process of knitting

The Needles which have been brought up into the knitting position move backwards and forwards rapidly and in quick succession by the to and fro movement of the Slide. The stitches are formed as follows:

When the Needle is pushed forward by the Slide, the Latch opens and the wool is fed automatically onto the needle by the Feeder Gate. By the backward movement of the needle which follows, the thread is pulled through the stitch of the previous row. In this way a new loop has been formed, and the Latch Needle is closed. The four drawings below illustrate the way in which a stitch is formed:



- Phase 1. A stitch lies in the hook of the needle.
- Phase 2. The needle is brought forward and passes under the previous stitch. In so doing the Latch opens and the thread for the next stitch is automatically introduced onto the needle by the Feeder Gate.
- Phase 3. The needle is pushed back when it will pass underneath the previous stitch. The Latch opens and the new thread is pulled back to form a new stitch.
- Phase 4. The needle has reached the same position as in phase 1 and is ready for the formation of a new stitch. In this way the basic Stocking Stitch is produced. The Purl side is facing you and the Plain side being on the reverse side.

The different Positions of the Needles

A. Retaining Position. The needles are pushed forward against the Numeral Rail. In this position the various needles are put temporarily out of action, and is required for various knitting patterns. This is also the position for the Closed Edge Casting On.

B. Forward Knitting Position. In this position the open Latches are in front of the Comb.

C. Normal Knitting Position. In this instance the open Latches are behind the Comb.

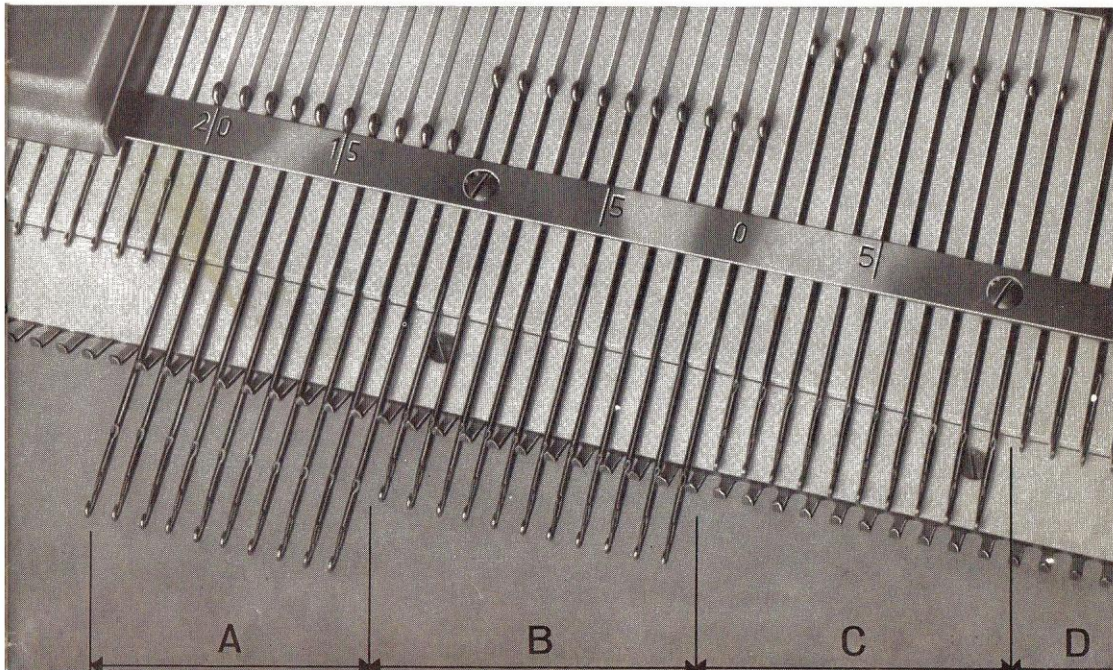
D. Resting Position. The needles rest against the Bottom Rail and remain out of action.

Tension and Measurements

This is the most important item, as it ensures that garments will be the correct size. There are 10 tensions on the Dial and these are changed by rotating the dial. The tension actually being used is the one immediately opposite the red Tension Indicator on the Slide. Tension No. 1 is the tightest, and No. 10 is the loosest. There is a tension for every type of wool; single-ply, two-ply, the generally used three-ply, four-ply, and double knitting wool. In addition, cashmere, angora, and almost any silk, wool or cotton and linen can be knitted on the BUSCH, but the correct tension is necessary for easy and swift knitting, and for a finished garment which is soft and lovely to handle.

In hand knitting, nearly every woman varies, even on the same needles. Some knit tightly, and others loosely. The wool, too, varies slightly according to the brand. All three-ply wool is not of the same thickness. One may knit

Illustr. 2



best on tension 6, another on tension 5, and yet another may require tension 7. For this reason it is not possible to make a hard and fast rule. The following indications are given as a general idea. We therefore recommend to knit a small trial piece before starting a garment in order to ensure the correct tension.

For fine wool, silk or cotton: set tension 2—5
 For medium wool, 2- or 3-ply: set tension 5—7
 For 4-ply, double knitting wool: set tension 8—10

When thick or double knitting wool is used, knit with every alternate needle, leaving every other needle in their Resting Position out of action. In this case set tension 5—8.

For very loose knitting with fine or medium wool, to produce loose articles such as Bedjackets, Shawls etc., knit with alternate needles on tension 3—6. The following figures give an approximate indication of the numbers of stitches per inch of 2ply and 3ply wool in relation to the different tensions:

Tension No.	Stitches per inch.	Rows per inch.
2	8	15
3	7—8	14
4	8	13
5	7	12—13
6	7	12
7	6—7	11
8	6—7	10
9	6	9
10	5—6	8—9

The above figures may vary slightly according to the brand of wool used. In following a hand knitting pattern, the wisest course is to knit a small trial piece on the machine, as all good hand knitters do, say 15 stitches (needles), and 24 rows. This will make two square inches of knitting on tension 6 in 3ply wool.

The pattern states the number of stitches to the inch. If 120 stitches are required on hand needles, and the pattern states there are 8 stitches to the inch, the finished fabric will be 15 inches wide. If the machine on tension 6, for 3ply wool gives 7 stitches to the inch, only 105 stitches (needles) are necessary on the BUSCH to give 15 inches of fabric in width.

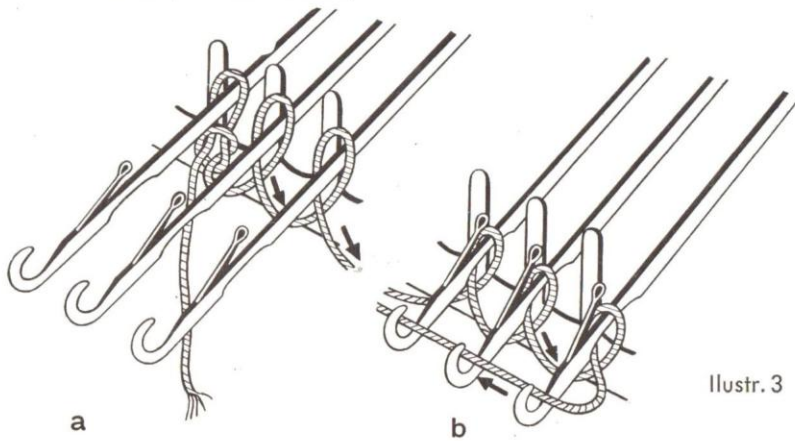
In other words: Knitting pattern says: 8 stitches to the inch X 15" wide —120 stitches (needles).

Trial sample shows: 7 stitches to the inch X 15" wide —105 stitches (needles). If the tension is much too tight (say tension 4 instead of tension 6), the Slide will be hard to operate, and the wool will probably break.

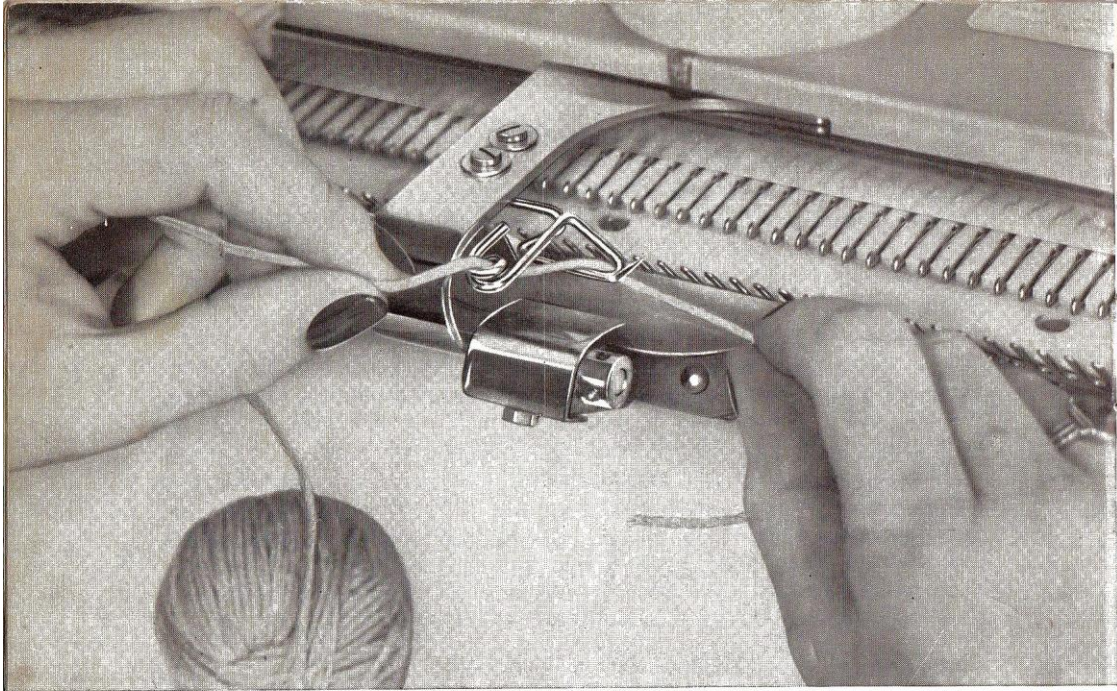
Many users of the BUSCH have mastered this question of Tension in a few minutes. Others take longer, and it is for this reason that we suggest simple things should be knitted first, to get used to the machine and the Tensions. Once the technique of Tension has been understood, all kinds of patterns can be knitted quickly and easily. We have already explained the method of ascertaining the number of needles to be cast on to obtain the correct width of the garment. The required length is obtained in much the same way. If the pattern quotes the number of rows per inch, then measure the small test piece to see how many rows per inch the machine will knit. If identical with the hand knitting instructions, then proceed according to pattern. If at variance, then knit more (or less) rows as required. Alternatively the fabric, having no weights to stretch it, comes off the BUSCH without contracting, so that length measurements can be used. If a pattern says knit 5 inches before altering for, say an armhole, then the tapemeasure can be used to check on length. When knitting, the wool should Always Run Freely through the fingers with just sufficient tension to prevent it from going slack. If the Slide is hard to work this is either because the wool is not running freely between the fingers, or else the tension chosen is not the right one.

Casting on. A) Closed Edge

- a) Set Tension Dial at No. 5—7 for 3ply wool.
- b) Place the Slide on the right hand side of the machine, and be sure that the Knob is raised.
- c) Push the required number of needles right up to the Numeral Rail to Retaining Position (see illustration No.2), and open all the Latches. The operation of opening the Latches can be made quicker by using an ordinary pencil.
- d) With a slipknot, tie the wool close to the comb on the first needle on the left. With your right hand, loop the wool Anti Clockwise (from right to left) around the other needles one by one, the loops to be formed close to the comb (see illustration a).



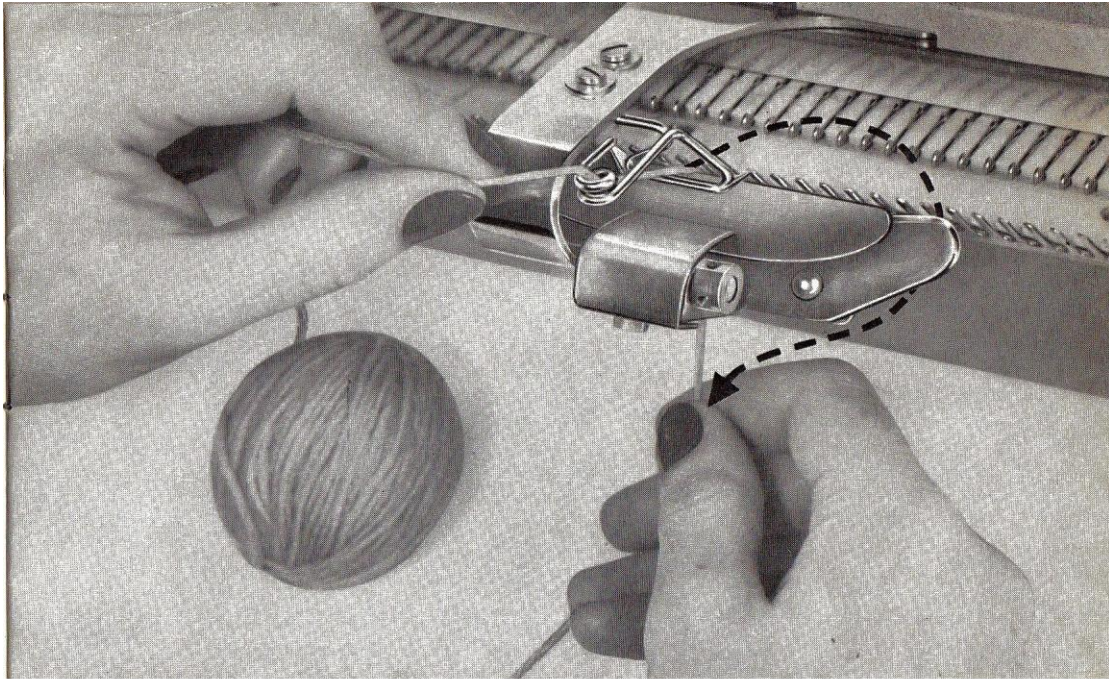
Illustr. 3



Illustr. 4

The operation is made easier by pressing that part of the loop which is under the needle against the Comb with your left thumb. Take care that the loops are not too tight.

- e) After having looped the wool round the last needle, hold the wool with your left hand, and with your right hand push the needles down into Forward knitting Position, taking care that the open Latches rest on the loops of wool.
- f) With the wool held with your left hand, lay it across the top of all the needles, and in front of the fixed Comb. See illustration No. 3 and b.
- g) Still holding the wool with your left hand, move the Slide gently and slowly from right to left over all the needles, including the last needle which has the slipknot, the Slide to pass well over the last needle.
- h) With the Slide now on your left side, press the Knob down.
- i) With the running end of the wool, pass it through the Gate of the Feeder, and loop it clockwise round the metal loop. See illustration No. 4.
- k) The Casting On operation being completed, you can now commence knitting the basic stocking stitch by moving the Slide from left to right over all the needles, thus forming a first row. For the next row, move the Slide back again from right to left; continue this to and fro movement along the length of the machine for as many times as rows are required.

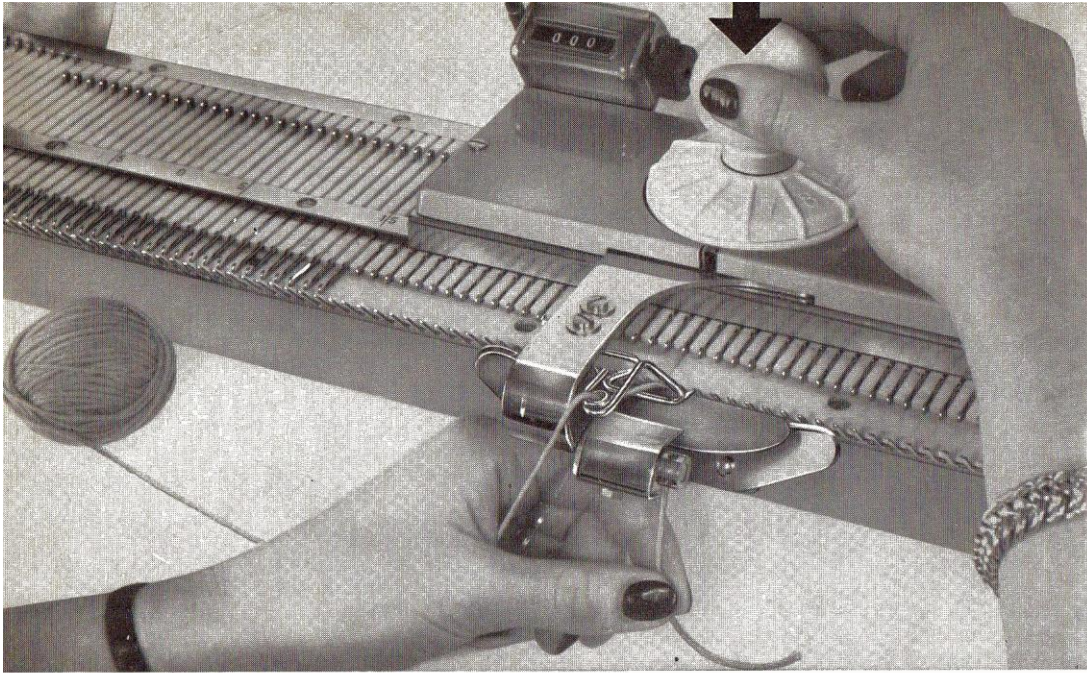


Illustr. 5

- l) It will be noted that the wool extends from the last needle to the Feeder Gate in a straight line. When knitting, care should be taken that the wool is allowed to run freely through your fingers. However at the beginning of each row hold the wool with just sufficient tension to prevent it going slack until the first needle has picked up the wool. After which let the wool run freely through the fingers. For the first 3 or 4 rows stretch downwards each end of the knitting after each row.

Casting on. B) Open Edge

- a) The Slide can be either on the right or left hand side. Press Knob down and set the required tension.
- b) Push the required number of needles evenly on both sides of center needle 0 in Normal Knitting Position, see illustration No. 2, so that the open Latches are behind the Comb.
- c) Bring the loose end of the wool down between the Skates and the fixed Comb until it is directly below the Feeder Gate. See illustration No. 5.
- d) Place the wool through the Feeder Gate and thread it clockwise through the Feeder Loop.



Illustr. 6

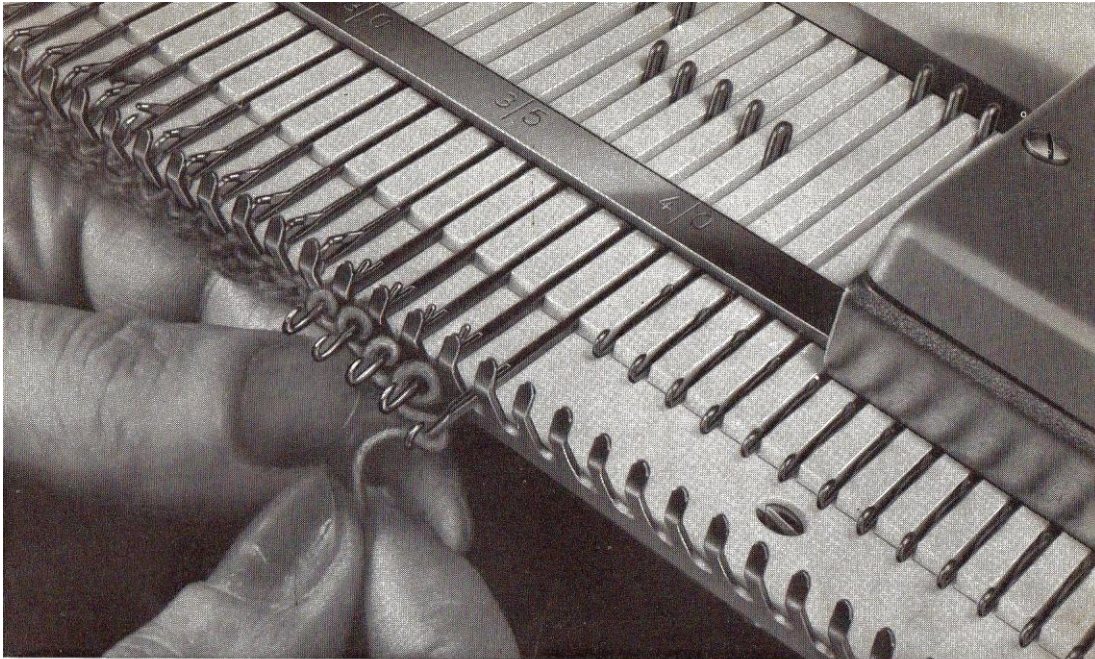
- e) Hold the running end of the wool loosely in your left hand, and the loose end firmly between the finger and the thumb. See illustration No. 6.
- f) Push the Slide across the needles. As soon as the wool has been taken up by the first needle, release the loose end which is between the thumb and the finger, and let the running end of the wool flow loosely through your hand. The Slide is to be brought well clear of the last needle. Continue knitting in the usual manner.

To Increase. A) One or two stitches

- a) Push up one or two additional needles to Normal Knitting Position, and open all the Latches.
- b) Knit one row, watching carefully so that the Feeder brings the wool over the additional needle or needles.
- c) Repeat the same operation at the other end if so required.

B) Three or more stitches

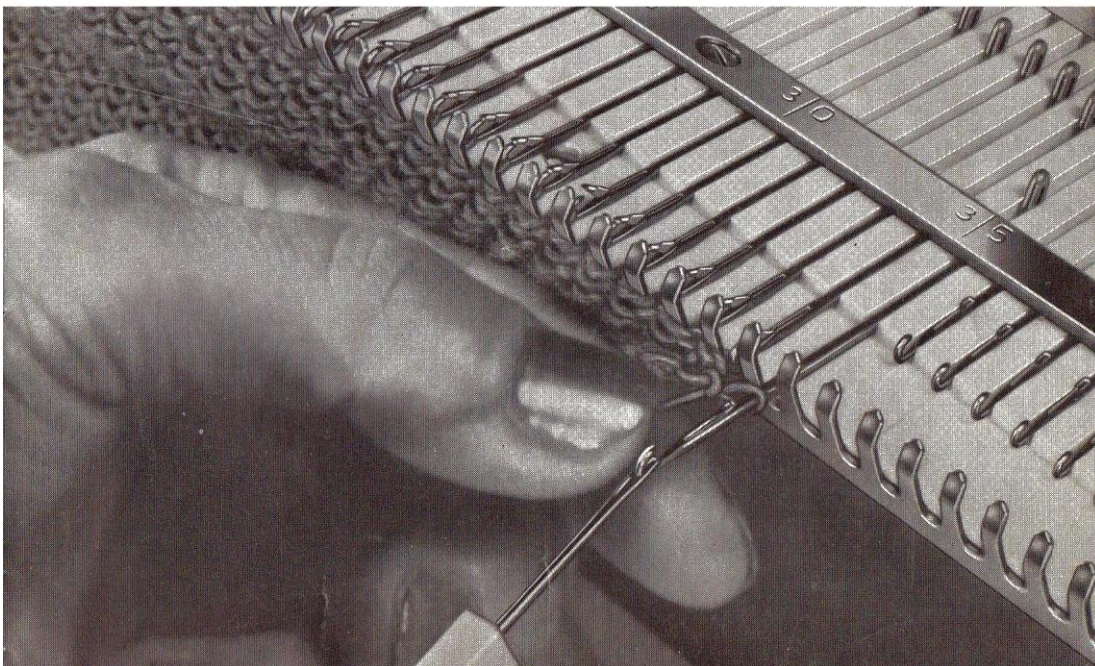
- a) If the Slide is on the right hand side, push three or more additional needles nearest to the Slide, to Forward Knitting Position and open all the Latches.

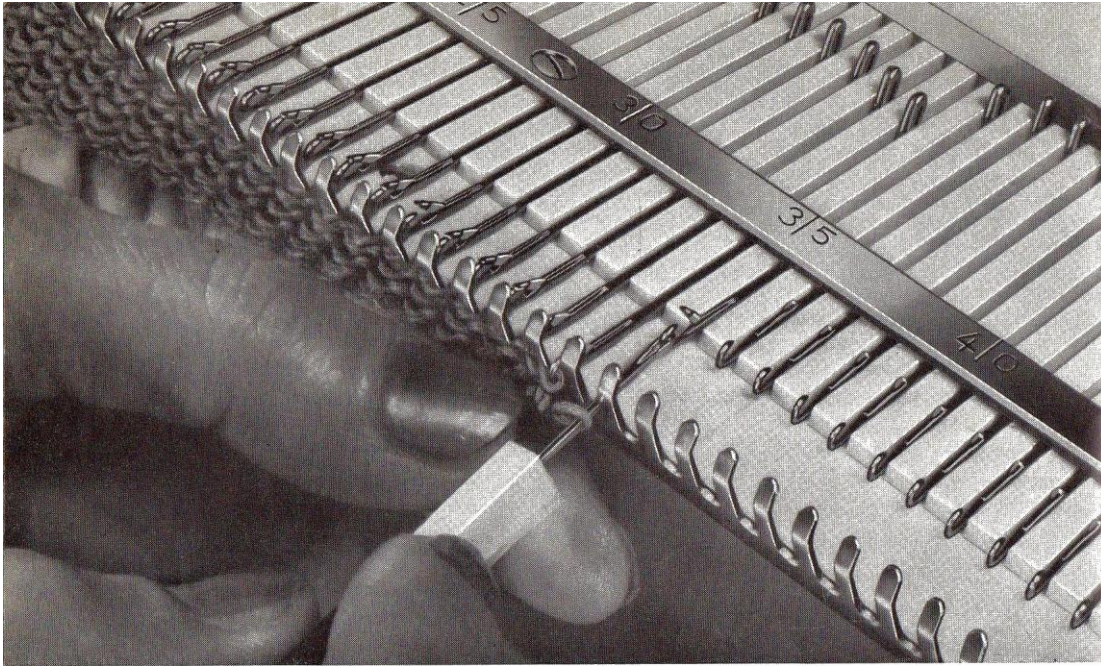


Illustr. 7

- b) Take the wool which runs from the Feeder Gate to the last stitch, and loop it Anti Clockwise (from right to left) around each additional needle, finishing with the needle nearest to the Slide. See illustration No. 7.
- c) Push needles back in line with all other needles. Knit one row by passing the Slide gently to the left of the machine and watching carefully that the Feeder brings the wool over the additional needles.

Illustr. 8





Illustr. 9

- d) When the Slide is now on the left side, repeat operation a and b, but this time loop the wool around each needle Clockwise (from left to right) by taking the wool which runs from the last stitch.
- e) Push needles back in line with all other needles and continue knitting in the usual way.

To Decrease. A) One Stitch

With Eyelet Tool, take the stitch off the last needle and hook it onto the next one. In this way, two stitches are laid on the needle at the end of the knitting. The operation is done as follows:

- a) Open the Latches of the two end needles. You will note that the stitches are Inside the Latches.
- b) Hook the Eyelet Tool onto the last needle and pull it towards you as far as it will go. By doing this, the stitch will slide automatically Behind the Latch. See illustration No. 8.
- c) Push the needle right down to the bottom rail to the Resting Position, when the Latch will close by itself, and the stitch is slipped from the needle onto the Tool. See illustration No. 9.

- d) With the stitch on your tool, lift the latter off the needle and transfer the stitch onto the next open needle by hooking the tool onto it. Continue knitting in the usual way. If decrease is required at both ends, repeat this operation on the other end of the knitting.

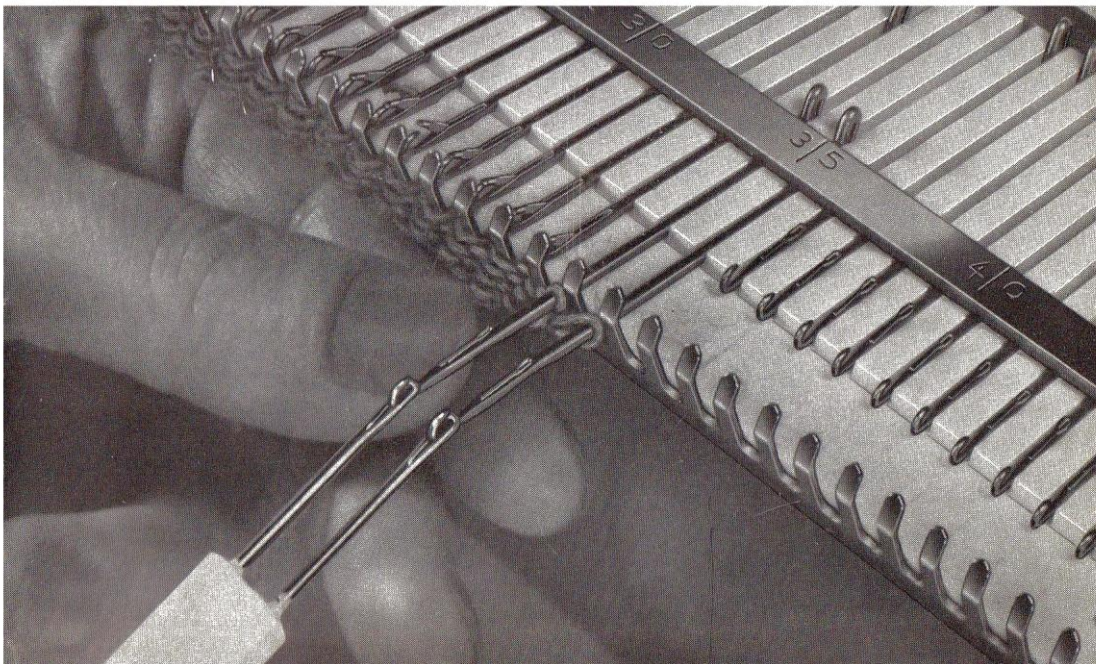
To decrease. B) Two stitches

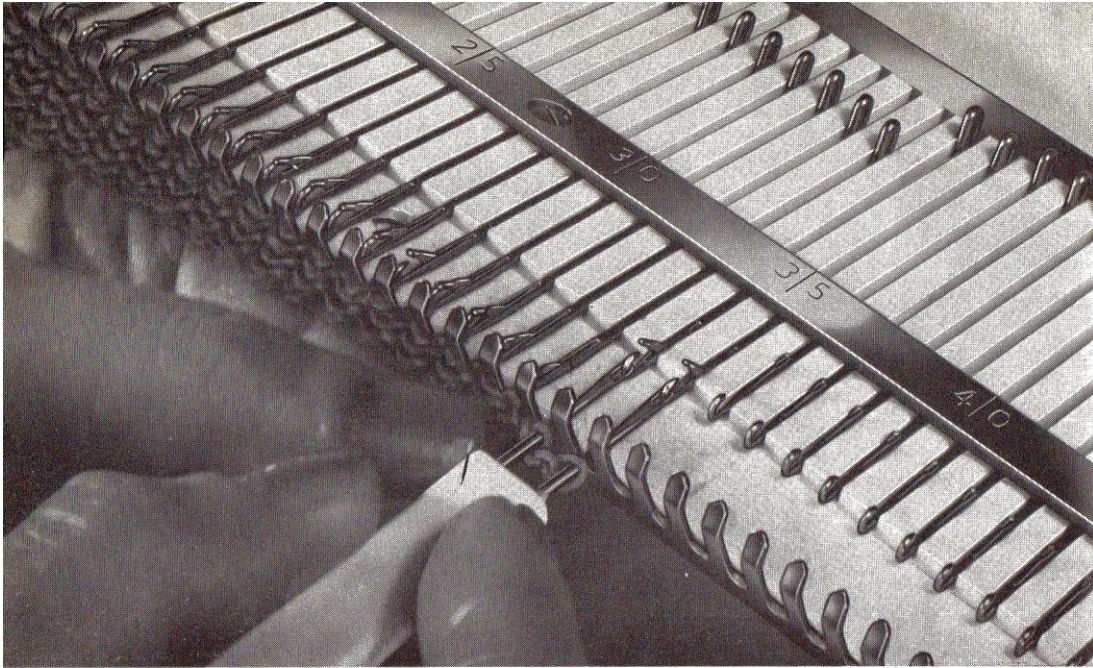
With the Double Eyelet Tool take the stitches off the last two needles, and hook them onto the next two needles. In this way two stitches are laid on each of the two needles. The operation is done as follows:

- a) Open the Latches of the four 1st needles. You will notice that the stitches are inside the Latches.
- b) Hook the Double Eyelet Tool onto the last two needles, and pull them towards you as far as they will go. By doing this, the two stitches will slide automatically behind each Latchet. See illustration No. 10.
- c) Push the needles right down to the bottom rail to the Resting Position, then the Latches will close by themselves, and the stitches are slipped from the needles onto the tool. See illustration 11.
- d) With the stitches on your tool, lift the latter off the needles and transfer the stitches onto the next two open needles by hooking the tool onto them. See illustration 12.

If decrease is required at both ends repeat this same operation at the other end of the knitting and continue knitting in the usual way.

Illustr. 10



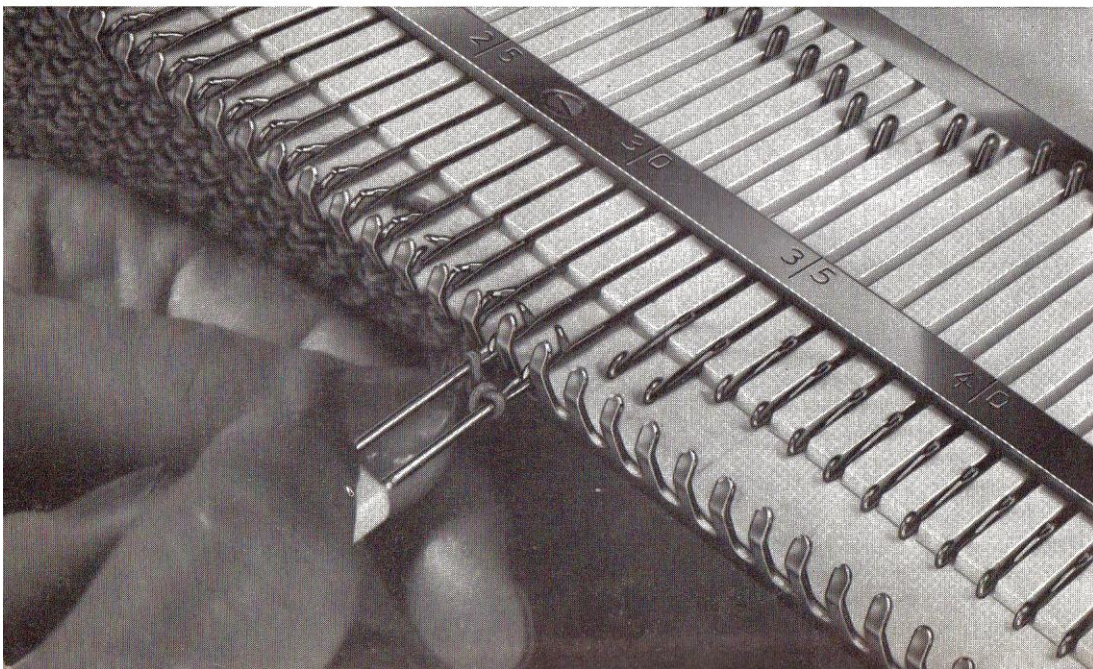


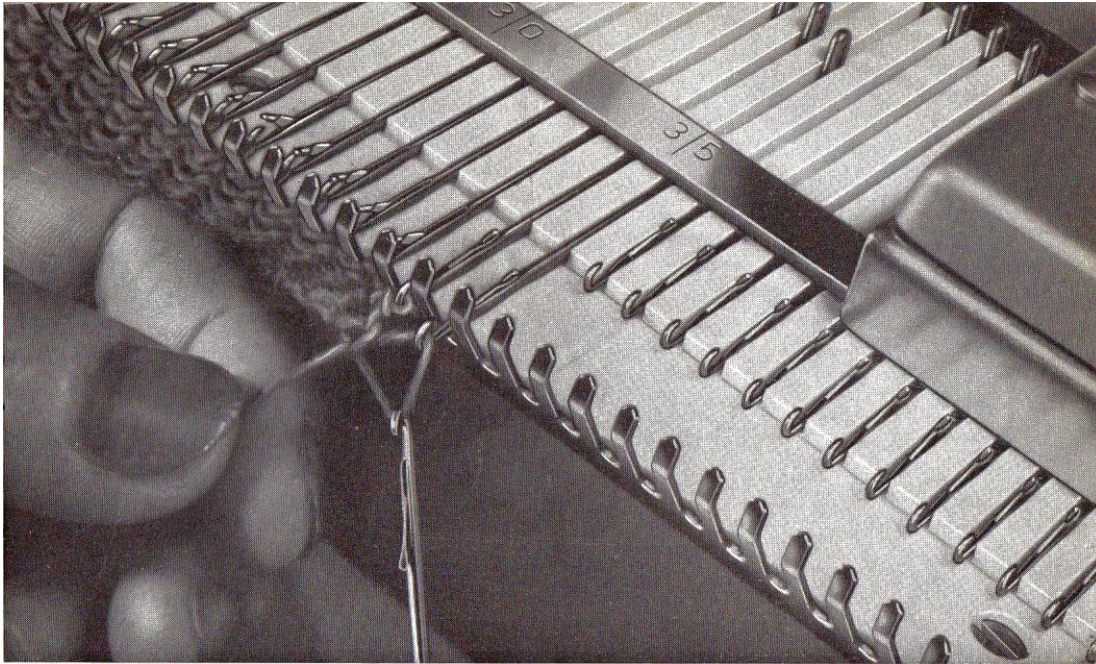
Illustr. 11 **To decrease.** C) Three or more Stitches

This operation must always be commenced at the same end as the Slide, because it is necessary to use the loose wool which runs from the needle to the Feeder.

a) Open all the Latches to the numbers of needles to be cast off. Take the wool off the Slide.

Illustr. 12

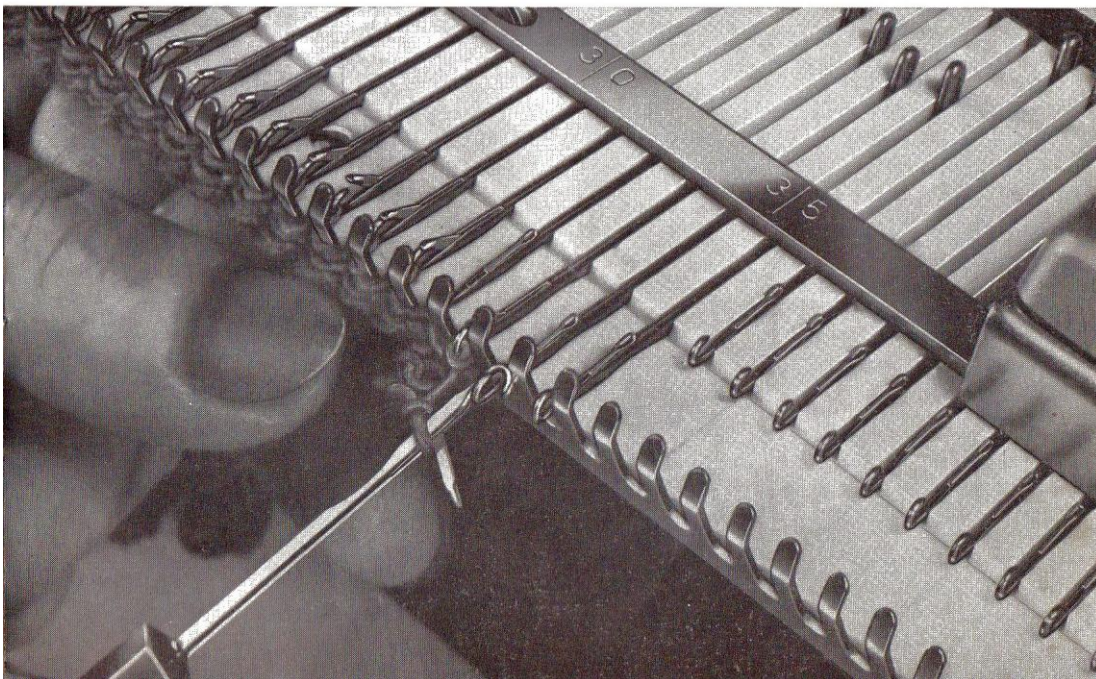


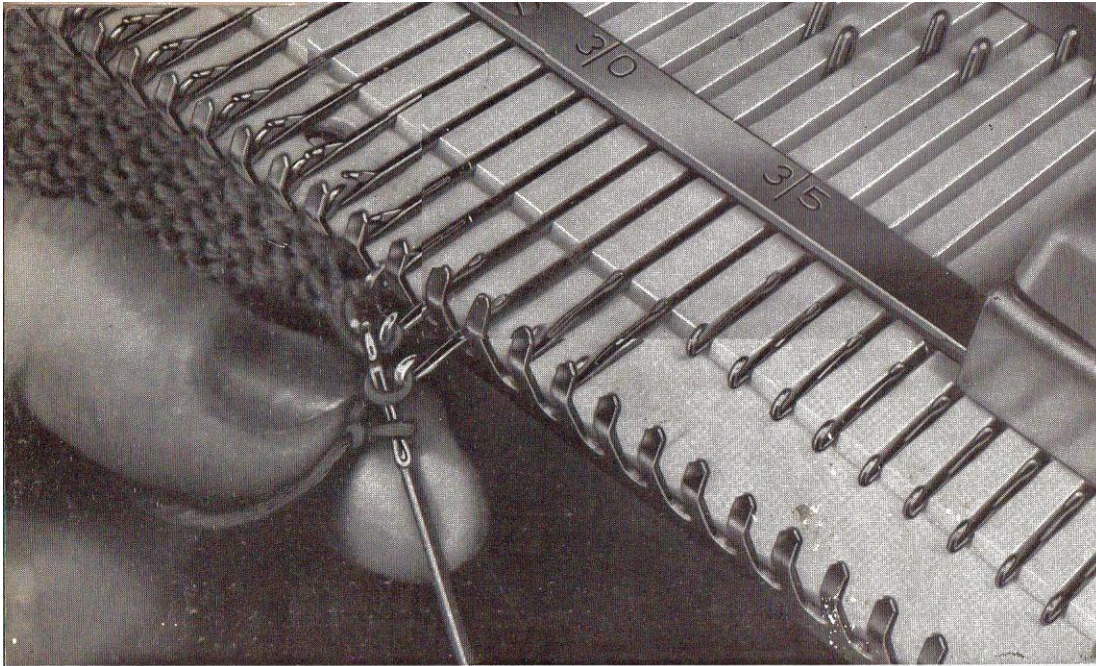


Illustr. 13

- b) Hold the wool with the left hand. Take the red Latch tool in the right hand, and place the hook into the stitch of the last needle. See illustration No.13.
- c) Lift the stitch off the needle and lower it behind the tool's open Latch. See illustration No. 14.

Illustr. 14

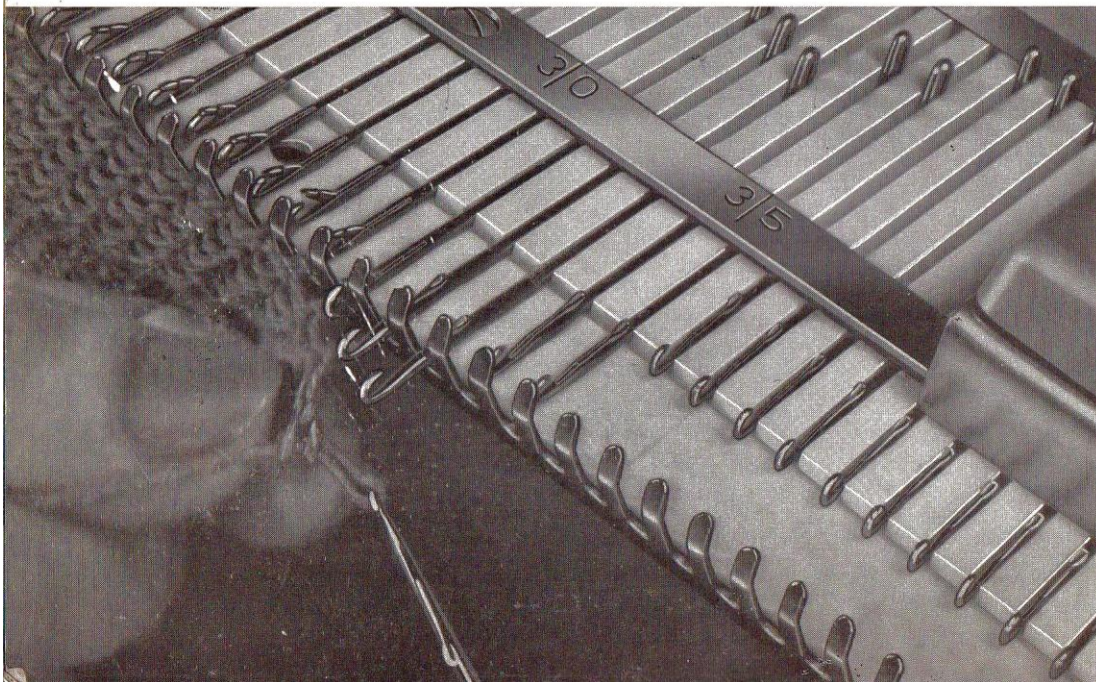


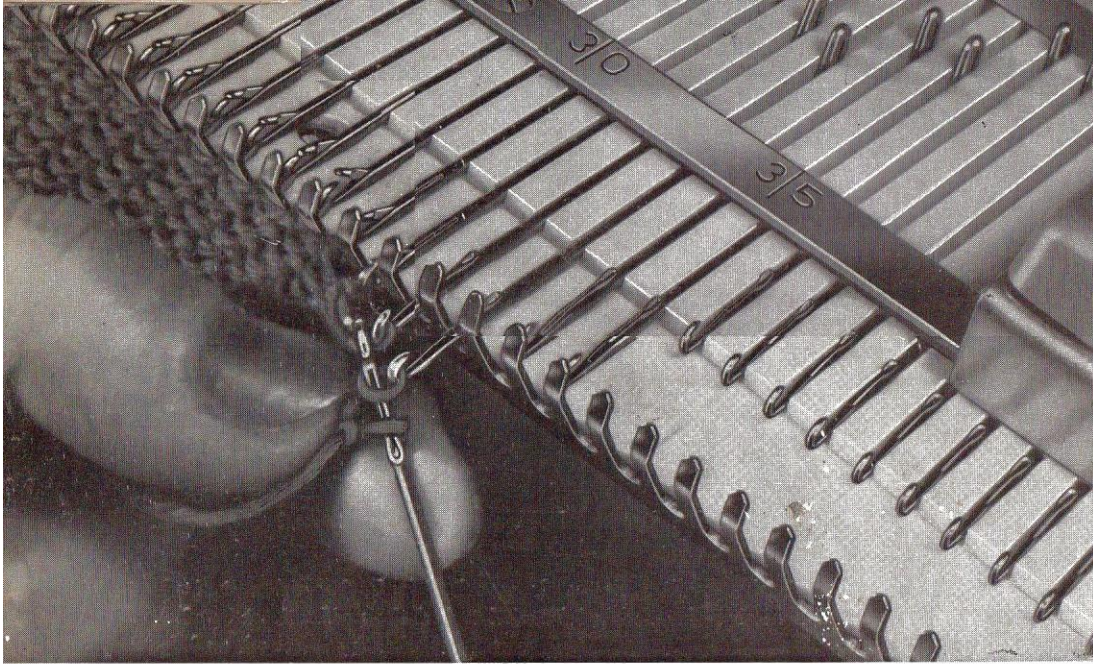


Illustr. 15

- d) Make a loop by hand with the running end of the wool around the hook of the Latch tool. See illustration No. 15.
- e) Pull the tool so that the stitch which is behind the open Latch, slips over the closed Latch, and so off the tool. See illustration No. 16.

Illustr. 16

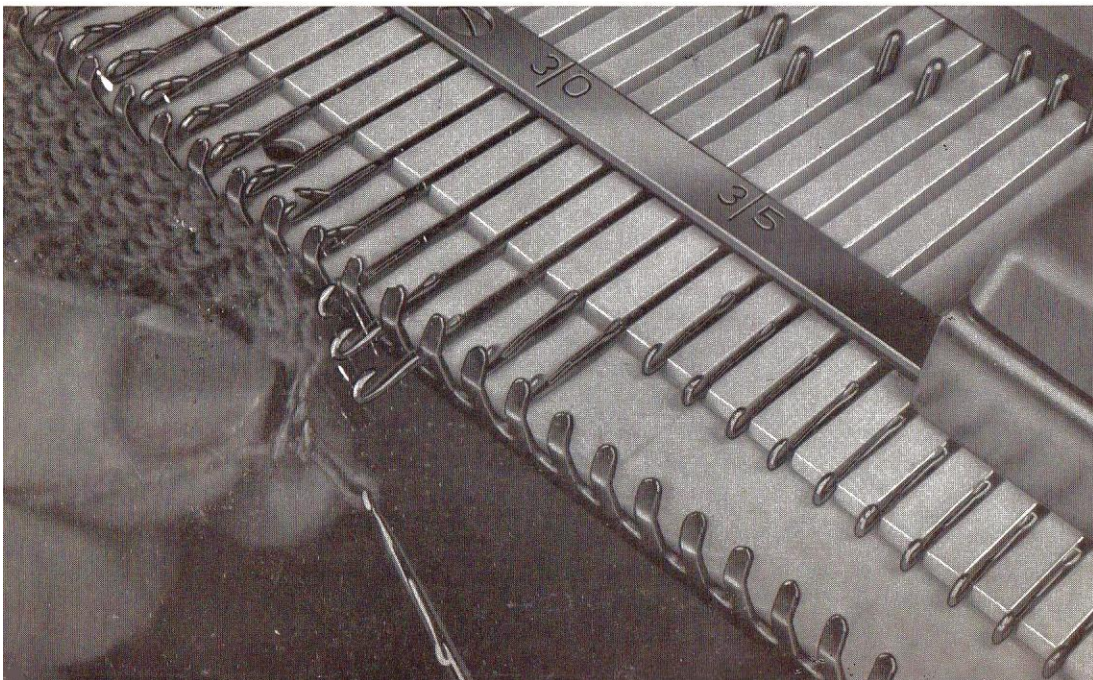


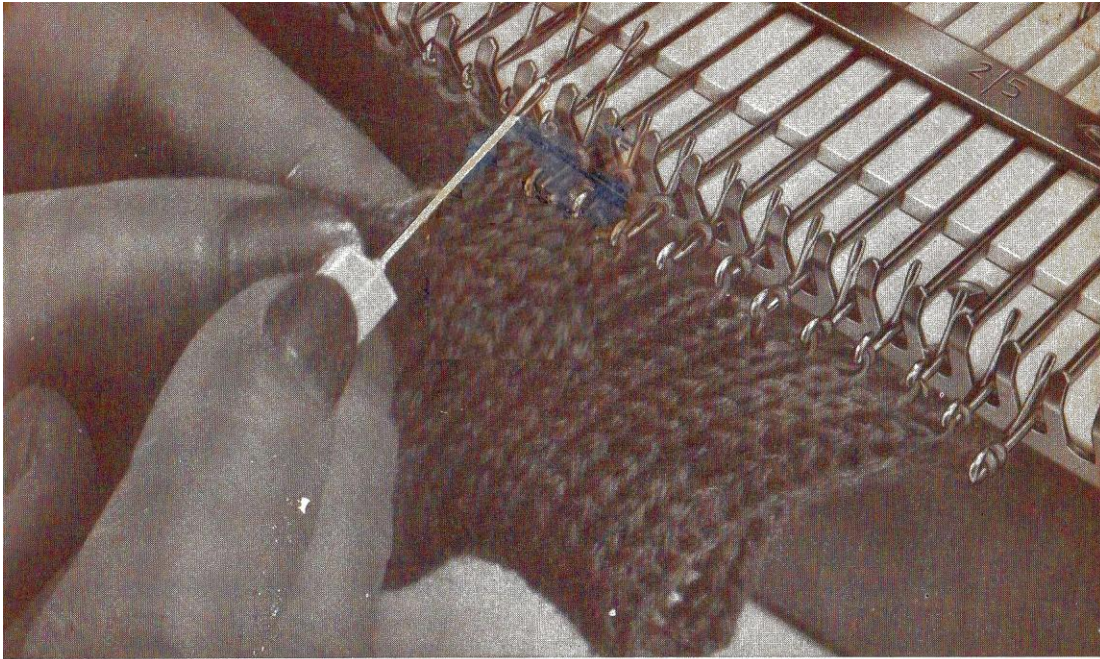


Illustr. 15

- d) Make a loop by hand with the running end of the wool around the hook of the Latch tool. See illustration No. 15.
- e) Pull the tool so that the stitch which is behind the open Latch, slips over the closed Latch, and so off the tool. See illustration No. 16.

Illustr. 16





Illustr. 17

- f) Push the empty needle to the bottom rail, out of action. Slide the loop (which is now in the hook) behind the open Latch, and repeat operation described above.
- g) When the desired number of stitches have been decreased, transfer the loop remaining on the tool to the nearest working needle, thus having two loops on this needle. Replace running end of wool into the Feeder Gate and continue knitting.

To cast off

Proceed as for decreasing 3 or more stitches, but continue until all stitches have been removed from the needles. When the last stitch is on the Latchet. Tool break the wool, and darn the loose end of the wool into the fabric.

To make a double Hem

- a) Cast on the number of needles required, knit double the amount of rows as required for depth of hem, and open the Latches of all the needles.
- b) To fold the fabric so as to form a double hem proceed as follows: Put the eyelet tool through the single cast on loop and hook each loop on to its original needle, each needle having now two stitches. See illustration No. 17.

- c) Raise all the needles into Retaining position, and pull the knitting firmly down against the Comb. Push needles to Forward knitting position B so that open Latches rest on the stitches.
- d) Take the wool off the Slide and lay it across all the needles, see illustration b. Pull the Knob up and knit one row by moving the Slide gently to the other side.
- e) Press Knob down, put wool back through the Feeder Gate and metal Loop (clockwise) and continue knitting in the usual way.

Ribbing

To produce Ribbing, every alternate needle must be pushed back into Resting Position, out of action. Stitches are dropped and picked up on the purlside facing you to form plain stitches. It is essential that you pick up the first dropped vertical line of Stitches before dropping the next vertical line.

- a) Cast on (closed edge) in the usual way. Knit the required number of rows in plain Stocking stitch, but it is advisable to do this in a tighter tension than the knitting of the garment.
- b) Drop the stitch off the second needle from the edge and push back needle into Resting Position. Hold the knitting taut with your left hand, and by a slight pull downwards, the stitches will ladder down to the cast on edge. Before dropping the stitch hook the Latch tool into the second last stitch of the line.
- c) To pick up, let the stitch slip behind the Latch of the tool. Pull the tool towards you, drawing at the same time the thread above into the hook of the tool. By pulling the tool towards you, the Latch will close and pull the thread through the previous stitch, thus forming a new one. This process to be continued all the way up to the last dropped stitch, which will have to be hooked back on its empty needle. The 1 x 1 Ribbing is continued by dropping the stitch of every alternate needle. This is equivalent to a K. 1., P. 1. For a 2 x 1 Rib, only every third line of stitches is reversed which in handknitting is K. 2., P. 1., Rib.

The above process seems a little slow although much faster than handknitting, but after some practice, you will be able to do it much faster, and the rhythmic movement will come naturally to you.

You can obtain attractive ribbing patterns by picking up every alternate thread or by picking up two threads at a time.

Automatic mock ribbing

Set Tension two numbers tighter than the garment.

- a) Cast on every alternate needle, the needles in between to be left in the Resting Position, out of action.

- b) Knit as many rows as required. The Ribbing is thus made automatically.
- c) Raise the alternate needles which were in the Resting Position back into knitting position and open all the Latches of these needles.
- d) With the aid of the eyelet tool, pick up the stitch which is below the one already in the needle, and transfer it onto the adjacent empty needle. Continue knitting in the usual way.

Ribbing with elastic shirring thread

Welts, Cuffs, etc., are quickly and successfully made by knitting the above described ribbing and by introducing shirring elastic thread.

This is done in the same way as the above described ribbing, except that instead of working with wool only, all the casting on and ribbing process are worked with wool and elastic shirring together as one. When the required depth of ribbing is reached, cut the elastic shirring thread, and secure it. Continue knitting with wool only.

Another satisfactory way is to use the elastic thread only at every second or third row. The elastic is laid over every second or third working needles and under the intervening needles, then stretched and looped round the outer needle. Always lay the elastic over the same needles. Before knitting the row with wool in the usual way, the elastic thread must be placed behind the open Latches wherever it lies on the Needles. When knitting is completed, the elastic thread must be fastened firmly at the beginning and the end.

To make a V Neck

Before starting turn Row Counter to Zero.

- a) Begin with Slide on the left hand side of the knitting, and transfer the center stitch, where the slit begins, onto the adjacent left needle, thus dividing the needles into two equal sections. Push the empty center needle down to the Resting Position, out of action.
- b) Raise the needles of right hand section into Retaining position.
- c) Continue knitting left hand section, decreasing at the neck edge as required. Cast off in the usual way, according to pattern.
- d) Push needles of right hand section into Forward Position so that the open Latches rest on the wool. Lay the wool across the needles, with the end of the wool on the left hand side. Raise the Knob and knit across.
- e) Press Knob down, place wool in Feeder, and continue knitting as for left section, decreasing at neck edge. Cast off in the usual way according to pattern.

To make Buttonholes

To give buttonholes a neater and stronger appearance it is recommended to finish them off by hand. Have needle and thread handy so that the open stitch can be fastened with a buttonhole stitch.

A) A Small Buttonhole.

- a) Raise the required one or two needles according to the size and position of the intended buttonhole.
- b) Take the stitch(es) off the needle(s) with the Eyelet tool and transfer the stitch(es) to the next needle(s). (Same operation as in decreasing.)
- c) Raise the empty needle(s) up, with the Latches open, to the same level as the other needles, and continue knitting in the usual way.

Note. If the buttonhole is two stitches wide, it will be necessary to take the loop and secure it to the loose stitch which is above the buttonhole.

B) A Large Buttonhole, (3 or more stitches)

- a) Raise the required number of needles according to the size and position of the intended buttonhole.
- b) Make sure that the Latches are open and lay small piece of a different coloured wool across these needles.
- c) Push these needles down to be in line with the others. Continue knitting in the usual way. When the Garment is finished, carefully pull out the coloured wool and secure the stitches of the buttonhole.

How to join a second ball of wool

When you are approaching the end of a ball of wool, we would suggest that, for really neat knitting, care should be taken to avoid running out of wool in the middle of a row.

If you do find the wool is not going to knit a full row, stop the slide at one end of the machine, and knot the end of the wool in the feeder to the new ball. The machine will knit in the knot, and throw it to the back of your knitting.

Better still, if you are in doubt as to whether the small quantity left will knit a row, take the yarn out of the feeder, and feed in the new ball as described in Open Edge Casting on, and knit a row. Now tie the two ends in neat knot, and cut off the surplus wool from the knot. The neat join will now be in the seam and will not show.

Patterns using several colours

When knitting patterns using several colours, the change of wool should be made at the beginning of the row. If it is intended to make a striped pattern using alternatively 3 rows of red and 3 rows of blue proceed as follows:

- a) Knit 3 rows red.
- b) Take the wool off the feeder and replace it with the blue wool and knit 3 rows. (See Casting on Open edge c. d. e. and f.)
- c) The slide is now on the opposite side of the red wool. To bring the Slide to the side of the red wool, you must first take off the Feeder the blue wool, then raise the Knob, and move the Slide across to the side of the red wool.
- d) Feed the red wool into the Feeder, press Knob down and knit 3 rows. Continue this alternative change for as many times as required.

The above instructions are to be used only for uneven numbers of coloured rows i. e. 3, 5, 7, 9, etc.

To re-knit or lengthen finished Garments

It is possible on the BUSCH to lengthen socks, garments or to re-knit the instep of socks by following the instructions as under:

- a) The stitches of garments or socks to be picked up onto an ordinary Hand-knitting needle, or stitchholder.
- b) Raise the required number of needles into Forward Position, and open all the Latches.
- c) Hook the stitches from the handknitting needle onto the needles of the machine, one at a time and push needles to the Normal knitting position. The Slide may be on either side of the machine.
- d) Thread the wool onto the Feeder and knit the same way as described in Casting on-open edge.

Shaping of Heels and Babies Bonnets

- a) Cast on the number of stitches required according to the size of the heel or bonnet (for bonnets use Closed Edge Casting on), and knit as many rows as required.
- b) Raise one needle (with the stitch on) nearest the Slide, to the Retaining position, and knit one row. Raise one needle (with the stitch on) from the other end and nearest to the Slide to the Retaining position and knit one row.

- c) Continue knitting raising needles at each side of the knitting until 2/3 rd of the total number of the needles have been raised into Retaining position, leaving the remaining 1/3 rd of the total numbers of needles in the center, in the Ordinary knitting position. Watch carefully when knitting that the wool is always laid on top of the needles.
- d) Make a loop by hand on the first center needle nearest the slide and knit a row. Continue looping the wool by hand around each center needle alternately until all the needles are pushed down into the Ordinary knitting position.

Shaping of Ladies and Childrens Knickers

The garment is knitted in two separate parts. You knit first one part of the garment where the shaping is to be done on the right hand side. When that part of the garment is completed, take the knitting off the machine, and then knit the second part of the garment as the first part, but this time the shaping is to be done on the left hand side.

To start cast on Closed Edge, for as many stitches as required. Then knit a double hem.

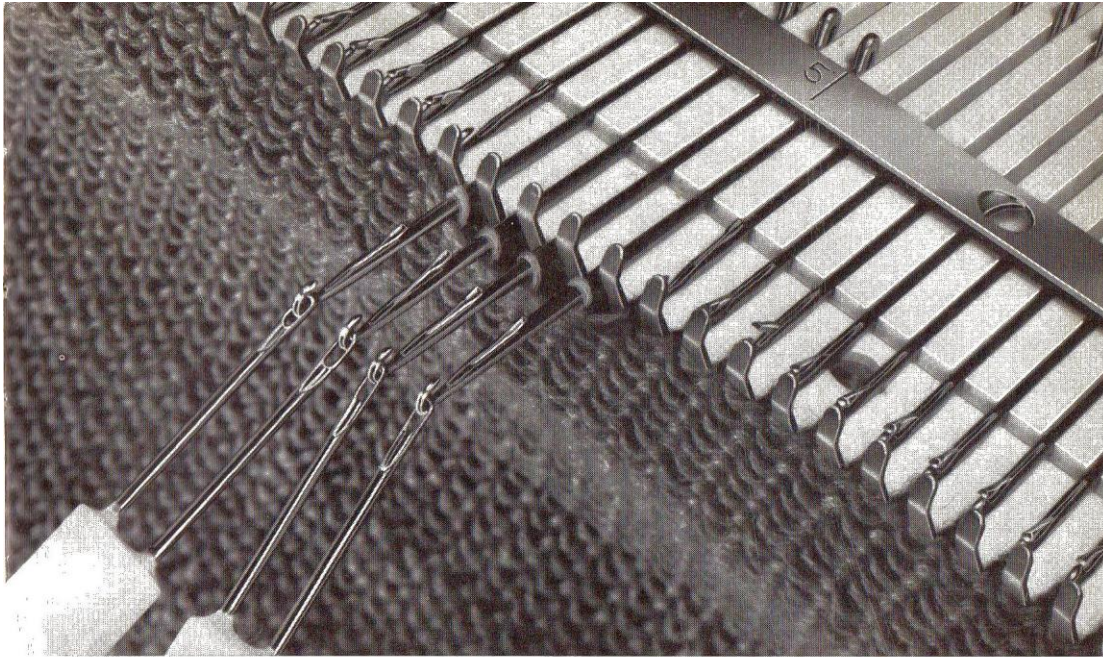
- a) With the Slide on your right hand side, raise all the needles to the Retaining position except the first 8 needles nearest to the Slide.
- b) Knit one row, the Slide being now on your left hand side.
- c) Loop the wool by hand on the next 8 needles and knit two rows.
- d) You carry on looping the wool by hand on each successive 8 needles, knitting 2 rows in between.
- e) The remaining needles, which should consist of 1/3 rd of the total number of needles in work, to be looped by hand one after each other. Continue knitting in the usual way according to pattern.

The same operation is worked for the second part of the garment, but this time the shaping is to be made on the left hand side.

Making stitches by hand

Push needles right up to Retaining position. Always work with the wool running from the Slide end. When the Slide is on your left hand side, the loop to be made round the needle, clockwise. (From left to right.)

When the Slide is on your right hand side loop the wool anti-clockwise around the needle. (From right to left.) To loop the wool correctly, place the wool into the open hook of the needle. Then push the needles each time by hand to the Normal knitting position.



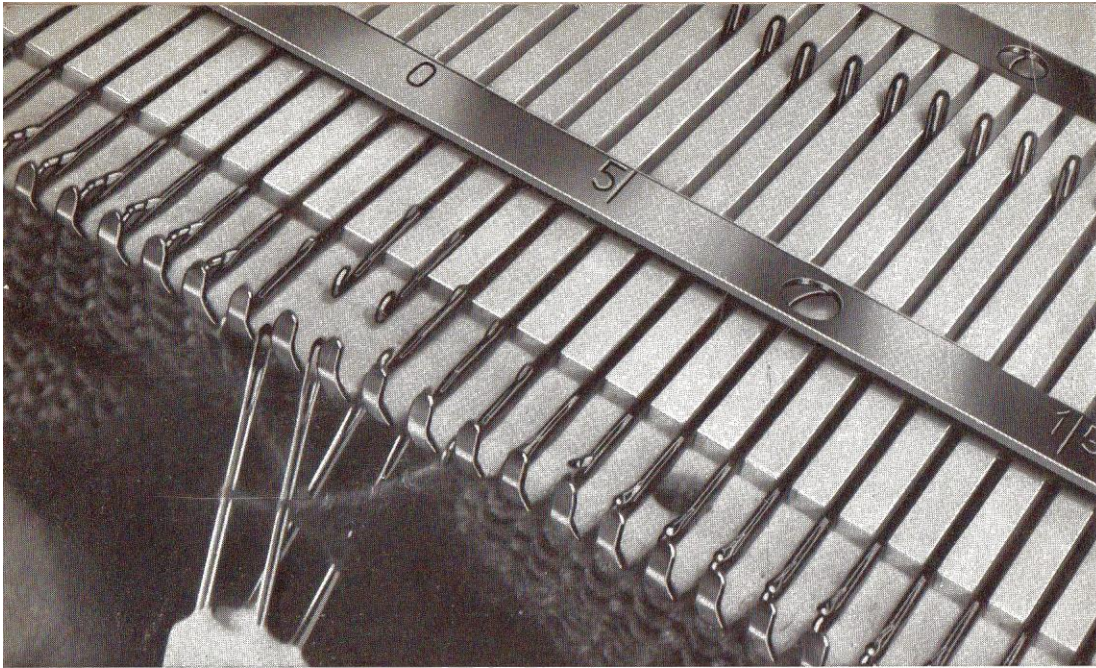
Cable Stitch. This is worked with the two Twin Eyelet tool.

Illustr. 18

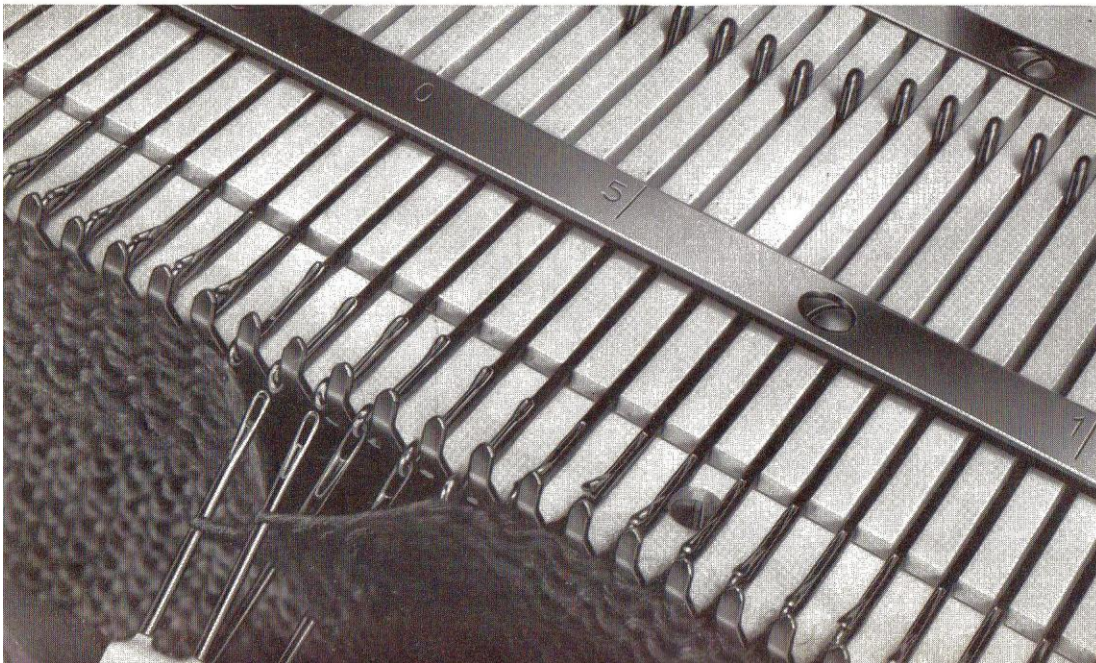
- a) Close the Latches of the first four needles, open the Latches of the second four, and so on throughout the working needles.
- b) Take both Twin Eyelet tools and hook them onto the first four open needles.
- c) Pull the needles towards you until the stitches slip behind the open Latches. See illustration No. 18.

Illustr. 19





- Illustr. 20
- d) Then push the needles back to the bottom rail until the stitches slip onto the tool. Lift the tool off the needles with eyelets pointing upwards. See illustration No. 19.
 - e) Transfer the two left hand stitches onto the two right hand needles. See illustration No. 20 and the two right hand stitches onto the two left hand needles. See illustration No. 21 and push the four needles well down, so as to tighten the cross stitch.
- Illustr. 21



- f) Repeat the operation for as many cables as are required in the row. Knit 6 rows of stocking stitch between each row of cables.

Socks

Materials: 2 oz. 3 ply wool.

Size: Length of foot 9" .Length of leg 7" .

Tension: 4 for welts. 5 for main parts.

Tension 4:

Cast on 64 stitches.

Knit 25 rows (26 rows on the counter).

Drop every third stitch and latchet to form K 2 P 1 rib.

Turn to Tension 5.

Knit 50 rows (or more as required) (76 rows on the counter). Slide at the right hand side.

Place 16 stitches at left hand side on to stitch holder. Knit row.

Place 16 stitches at right hand side on to stitch holder. Knit 80 rows.

On remaining 32 stitches (or more as required) (157 rows on the counter).

Shape the toe.

Raise one needle into stitch retaining position at the beginning of every row until 8 stitches remain in the centre (181 rows on counter).

Beginning at the centre, knit one stitch by hand at the beginning of every row until all needles are in the normal knitting position. (205 rows on the counter).

Instep.

Knit 69 rows (or more as required) (274 rows on the counter).

Shape the heel.

Raise the needles into stitch retaining position as for toe until 12 stitches remain in the centre (294 rows on the counter).

Knit one stitch by hand at the beginning of every row until all stitches are in the normal knitting position. Knit 10 rows (324 rows on the counter). Place stitches on needle.

Making up:

Sew up leg seam.

Graft 32 stitches from heel to 32 stitches on leg stitch holders.

Sew side foot seams.

Introduction to Pattern knitting

In the following pages we reproduce examples of main basic patterns which can be worked on the BUSCH. These are:

1. By Multi Tension Variations.
2. By putting certain needles out of action.
3. By dropping and lifting certain stitches.
4. By using our exclusive Retaining Position.
5. By transferring stitches.
6. By combining two or more of the above basic processes.

Through practice and by becoming more accustomed to your machine, and after trying some of the above stitches, you will be able to work out new ideas and create new patterns of your own design. The possibilities are endless.

Multi Tension Variations

A Stripe effect is obtained by knitting numbers of rows in a tight and loose stitch alternately.



No. 1

Knit one row each on the following tensions: 4, 5, 6, 7, 8, 9 and 10 and repeat.



No. 2

- a) Knit 2 rows on Tension 5.
- b) Push needles to Forward knitting position so that the open Latches rest on the loops of wool.
- c) Lay wool across the needles, raise the Knob, change to Tension No. 10 and knit one row.
- d) Press Knob down and knit one row.
- e) Change to Tension No. 5 and knit 2 rows. Repeat.

No. 3

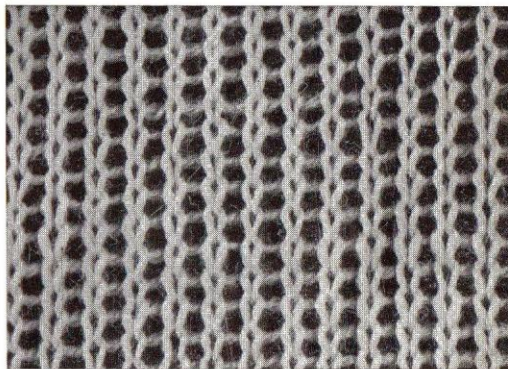
- a) Knit 10 rows on tension 9 and 10 rows on tension 5.
- b) Push needles to Forward knitting position so that the open Latches rest on the loops of wool.
- c) Lay wool across the needles, raise the Knob, change to tension No. 9, and knit one row.
- d) Press Knob down and knit 9 rows on tension 9.
- e) Change tension to No. 5 and knit 10 rows.



Putting certain needles out of action

No. 4

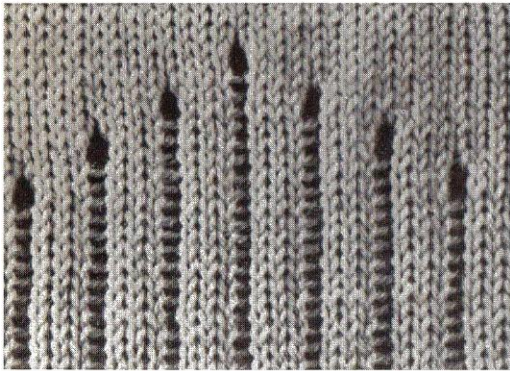
Push every second needle to the Resting position out of action and knit in the usual way.
On tension 8 or 9 particularly suitable for Matinee Coats or Double Knitting wool. For welts with elastic shirring thread use tension 5 or 6.



No. 5

Push every 4th needle to the Resting position out of action.

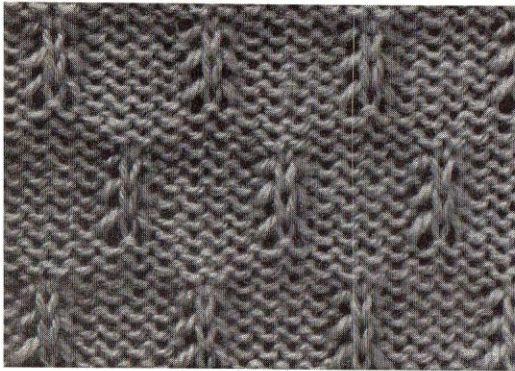




No. 6

Work pattern from centre needle 0.

- a) Push every 3rd needle to the Resting position out of action.
- b) Knit as many rows as required.
- c) * Bring left and right hand needles, which have been out of action, back into Normal Knitting position and open all the Latches. Knit 3 rows. *
- d) Repeat in this way until all the needles are back in working position.

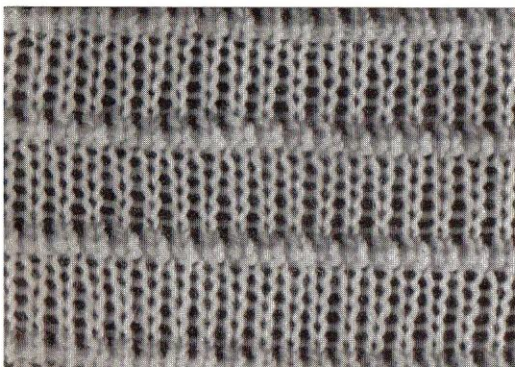


Dropping and lifting certain stitches

No. 7

Pattern on reverse side of knitting.

- a) Knit 8 rows on tension 7.
- b) Drop every 6th stitch down 8 rows.
- c) Pick up every 2nd running thread with latchet tool.
- d) Repeat 8 rows plain but pick up stitch between 2 patterns of previous rows.



No. 8

- a) Knit 9 rows on tension 6 or 7 and open all the latches.
- b) Insert eyelet tool into running stitch 3 rows below the stitch already on the needle. Lift it onto the needle and continue all along the row. Repeat.

A variety of patterns can be made by lifting the stitches on any desired number of needles.

Transferring certain stitches

No. 9

Work pattern from centre needle 0.

- a) Knit 3 rows.
- b) Transfer the first stitch on the right of centre needle 0 on to the adjacent needle to the right. Continue in this manner transferring every 8th stitch on to the next adjacent needle to the right all along the full row.
- c) Knit 3 rows.
- d) Transfer the first stitch of the left from centre needle 0 on to the adjacent needle to the left and continue in this manner transferring every 8th stitch to the next adjacent needle on to the left all along the full row. Repeat.



No. 10

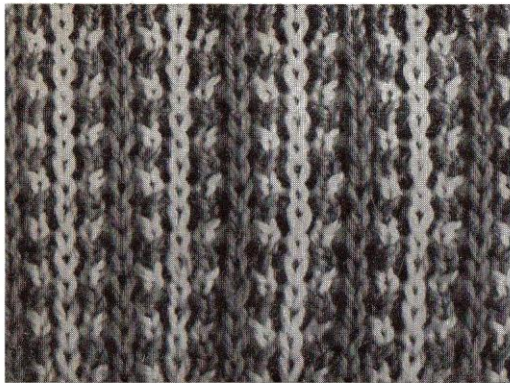
- a) Transfer 0 needle on to the adjacent right needle and every 10th stitch all along the full row.
- b) Knit 2 rows.
- c) Transfer first left needle from centre needle 0 on to the adjacent left needle.
- d) And the first stitch on the right of centre needle 0 to the adjacent right needle.
- e) * Transfer all along the full row the left stitch of your pattern stitch on to the adjacent left needle, and the right stitch of your pattern stitch on to the adjacent right needle. Knit 2 rows *. Repeat.
- f) When the diamond patterns meet, work the holes in the centre of the diamond, which are 10 stitches apart, by transferring the stitches on to the right and to the left of the adjacent needle. The holes are transferred after every 2 rows on knitting.



No. 11

- a) Knit 6 rows on tension No. 7
- b) Cross over stitches 7 and 8, 13 and 14, 19 and 20, and so on.
- c) Knit 6 rows.
- d) Repeat pattern but cross stitches 5 and 6, 11 and 12, 17 and 18, and so on. Repeat.

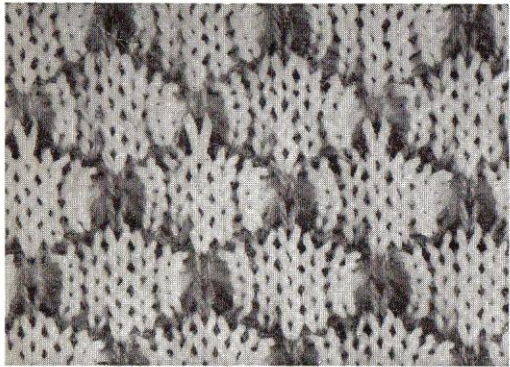




Patterns based on Retaining position

No. 12

- a) Bring every 4th needle (4th, 8th, 12th) into Retaining position.
- b) Knit 2 rows blue.
- c) * Bring up all needles so that the loops slip behind the open latches, leaving every 4th needle (starting with the 2nd) in the Retaining position, lower rest to Forward Knitting position with open latches resting on the stitches.
- d) Lay white wool across the needles and knit row with knob up.
- e) Knit 1 row white.
- f) Bring up all needles in Forward Knitting position, so that the loops slip over the open latches, leaving every 4th needle (4th, 8th, 12th, etc.) in Retaining position, lower rest to Normal knitting position with open latches resting on the stitches.
- g) Lay white wool across needles and knit row with knob up.
- h) Knit 1 row white. *
- i) Repeat from * reversing colours after every 2 rows.



No. 13

- a) Knit 1 row red.
- b) Raise every 6th needle into Retaining position (6th, 12th, etc.).
- c) * Knit 5 rows white.
- d) Raise all needles to Forward Knitting position so that the loops slip behind the open latches, push needles back into Forward position, with the open latches resting on the stitches.
- e) Lay red wool across needles and knit row with knob up. *
- f) Repeat, raising every 6th needle (3rd, 9th, etc.) to reverse pattern.
- g) Repeat whole operation.



No. 14

- a) Knit 1 row white.
- b) * Raise every 5th needle into Retaining position.
- c) Knit 3 rows red.
- d) Raise all needles so that the loops slip over the open latches, push needles back Forward position with the open latches resting on the stitches.
- e) Lay white wool across needles and knit row with knob up. *
- f) Repeat.

Patterns based on Retaining position
Continued

No. 15

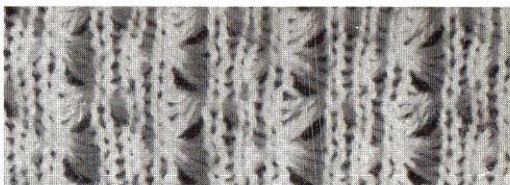
- a) * Raise every 4th needle (4th, 8th, 12th, etc.) into Retaining position.
- b) Knit 5 rows.
- c) Raise all needles so that the loops slip over the open latches, push all needles back into Forward knitting position.
- d) Lay wool across needles and knit row with knob up.
- e) Raise every 4th needle (2nd, 6th, 10th, etc.) into Retaining position.
- f) Knit 5 rows.
- g) Raise all needles so that the loops slip over the open latches push needles down into Forward knitting position.
- h) Lay wool across needles and knit row with knob up. *
- i) Repeat from beginning.



No. 16

This pattern can be used on both sides. Leave every 4th needle out of action in resting position for the whole pattern.

- a) ** Raise the right hand needle of every remaining set of three into the Retaining position.
- b) * Knit 4 rows.
- c) Raise all working needles so that the stitches slip behind the open latches, push the needles back into Forward knitting position, with the open latches resting on the stitches.
- d) Lay wool across needles and knit row with knob up. *
- e) Raise the Left hand needle of every set of three into the Retaining position, leaving the right hand needles in the normal working position. **
- f) Repeat from * to *.
- g) Then repeat from **.



No. 17

- a) * Raise every 10th needle into Retaining position.
- b) Knit 5 rows.
- c) Raise all needles so that the loops slip behind the open latches, push needles back into Forward knitting position, so that the open latches rest on the stitches.
- d) Lay wool across needles and knit row with knob up. *
- e) Repeat.





Fais isle patterns

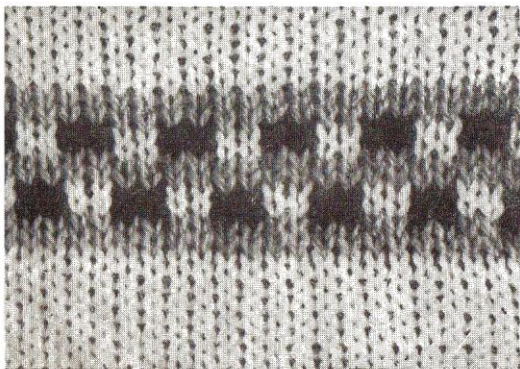
No. 18

- a) * Knit 1 row black.
- b) Raise every 7th needle into Retaining position. For every one of these needles a separate strand of wool is needed.
- c) To make the vertical lines knit 15 rows yellow. But after each yellow row knit a black stitch by hand on the raised needles, and raise them again into the Retaining position before knitting the next row.
- d) After 15 rows of yellow have been completed in this manner knit one row black. *
- e) Repeat.



No. 19

- a) ** Knit 8 rows white.
- b) Knit 2 rows red.
- c) * Raise every alternate needle to Retaining position (1st, 3rd, 5th, etc.) so that the loops slip behind the open latches, push needles back, into Forward position with the open latches resting on the stitches.
- d) Lay black wool across needles and knit row with knob up.
- e) Knit 1 row red. *
- f) Repeat from * to * raising alternate needles (2nd, 4th, 6th, etc.) to reverse patterns.
- g) Knit 2 rows red. **
- h) Repeat whole pattern reversing colours.



No. 20

- a) Knit 8 rows with yellow wool, 2 rows with blue wool.
- b) * Raise every 3rd and 4th needle (3rd and 4th, 7th and 8th, etc.), to the Retaining position so that the loops slip over the open Latches, push needles back into Forward position.
- c) Lay red wool across all the needles. Raise Knob and knit 2 rows.
- d) Raise every 1st and 2nd needle (1st and 2nd, 5th and 6th, etc.) to the Retaining position so that the loops slip over the open Latches, push needles back into Forward position.
- e) Lay yellow wool across all the needles, and with the Knob still raised, knit 2 rows.
- f) Press Knob down and knit 2 rows with blue wool. Repeat * to * and knit again 8 rows with yellow wool.

Important points to remember for perfect knitting

The Slide should be moved across the needles in one gentle movement and not jerkily. If the Slide is hard to work this is either because the wool is not running freely between the fingers, or because the Tension No. chosen is not the right one.

In order to let the wool run freely through the fingers, it is advisable to have some unravelled wool on your lap, or to have the ball of wool in a container.

Before beginning to knit make sure that the latches of the working needles are open.

Never move back the Slide in the middle of a row, but always finish the row well over the last needle.

When beginning to knit, push both ends of the knitting well down after each row for the first 3 or 4 rows.

Care should be taken to avoid running out of wool in the middle of a row. A new ball of wool should be always started at the beginning of a row.

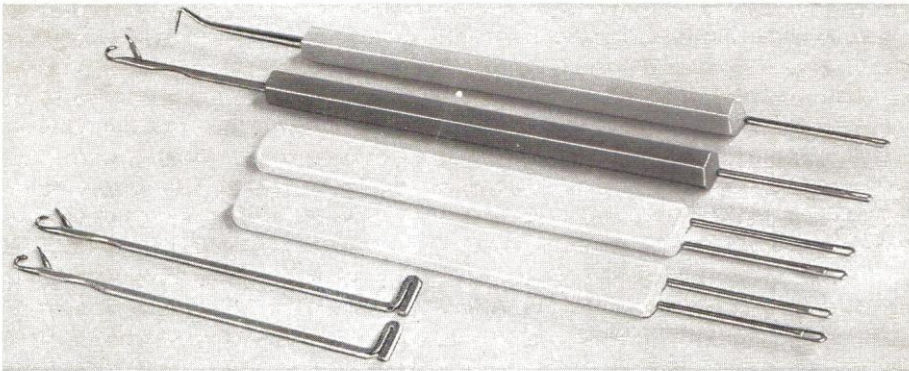
Remember that the knitting will come off the machine if the Slide is moved across the needles with the Knob pressed down and with NO wool in the feeder.

When the Knob has to be raised or pressed down, this should never be done in the middle but always at the beginning of a row.

When changing from a tight to a loose tension, always knit the first row with the Knob raised and the wool laid across the needles by hand. This is not necessary when changing from a loose to a tight tension.

Accessories

- 1 Eyelet and Hooktool combined (Yellow)
- 1 Eyelet and Latchtool combined (Red)
- 2 Twin Eyelet tool (White)
- 2 Latchneedles



The machine should never be cleaned with paraffin, benzene, spirit, ether, petrol etc.

BUSCH-WERKE Ltd. CHUR/Switzerland

