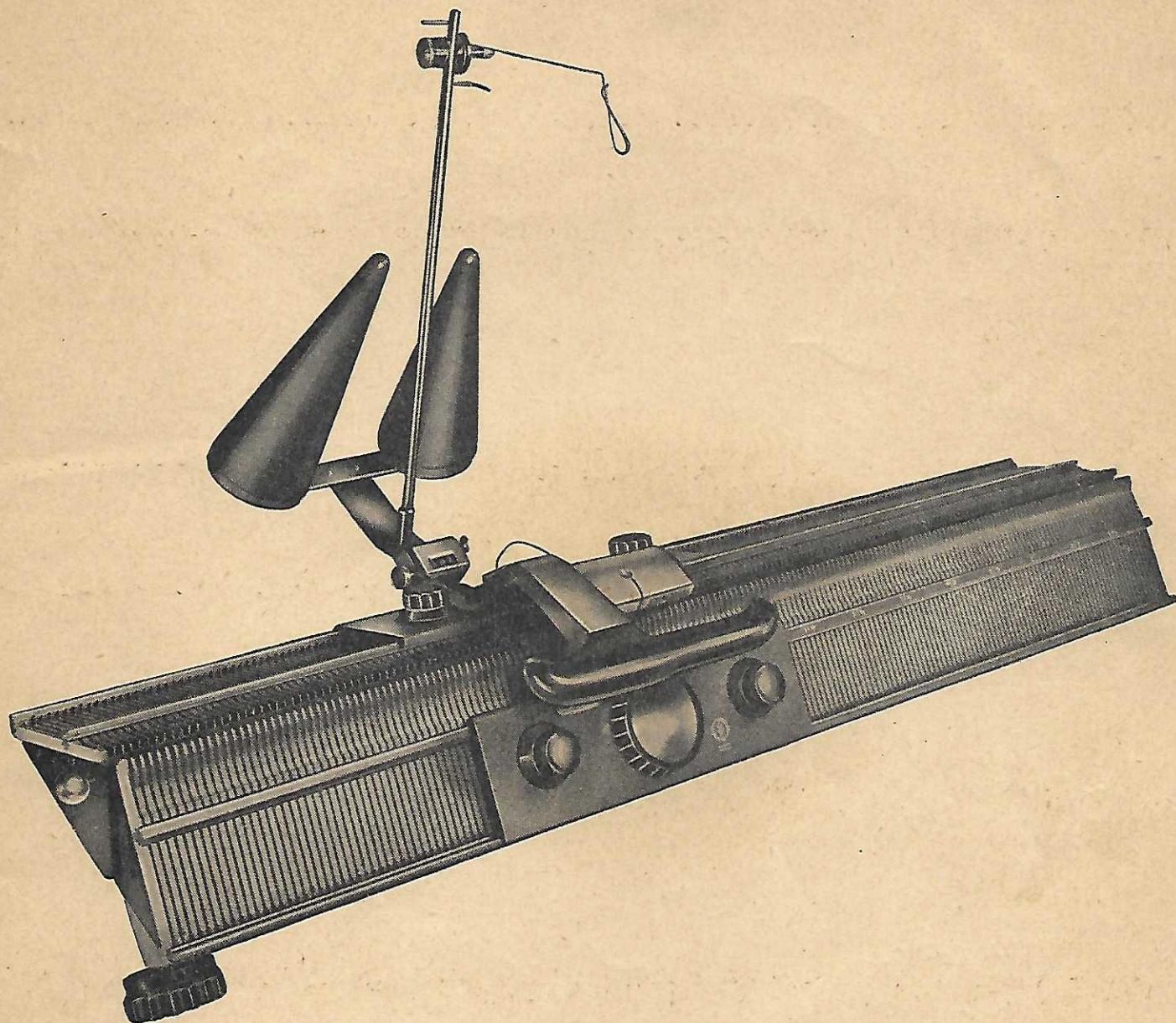


Swiftomatic



Approved by:
Swiss Good
Housekeeping Institute



Instruction manual

Dear Customer!

The Swiftomatic Home Knitting Machine is the product of many years of painstaking research and all the experience of Swiss manufacturing genius has gone into the assembly of this wonderful machine. Incorporated in its design are all the latest ideas in keeping with modern day trends and these have been simplified in construction to give ease of operation.

In itself the machine is most easy to use since the controls have been reduced to an absolute minimum, but it is nevertheless essential for the knitter to learn how to operate these correctly, if satisfactory results are to be obtained. Consequently, a most comprehensive yet simple Instruction Book has been devised to give the knitter every possible assistance and thus enable her to become familiar with the machine. This, combined with a certain amount of common sense, will ensure that in a very short space of time the knitting of actual garments can be accomplished. Before starting, however, please bear in mind that the machine is only as good as its master and that, as with a typewriter which cannot be blamed for poor spelling if the wrong keys are used, neither should the machine be blamed if it is handled incorrectly!

May we prevail upon you then, to begin slowly and carefully and to follow the Instruction Book closely, step by step. This will teach you to operate the machine efficiently and speed will follow through experience, – after all, everyone has to learn!

'Good luck' to you then with your knitting, and we thank you for your patronage. We have endeavoured by all the means at our disposal to supply a machine which will afford every satisfaction and give a lifetime of trouble-free service. With your co-operation we trust that success will reward our mutual efforts.

Yours sincerely,

GIROTEX QUICK KNITTERS

32, Chiltern Street, LONDON W. 1

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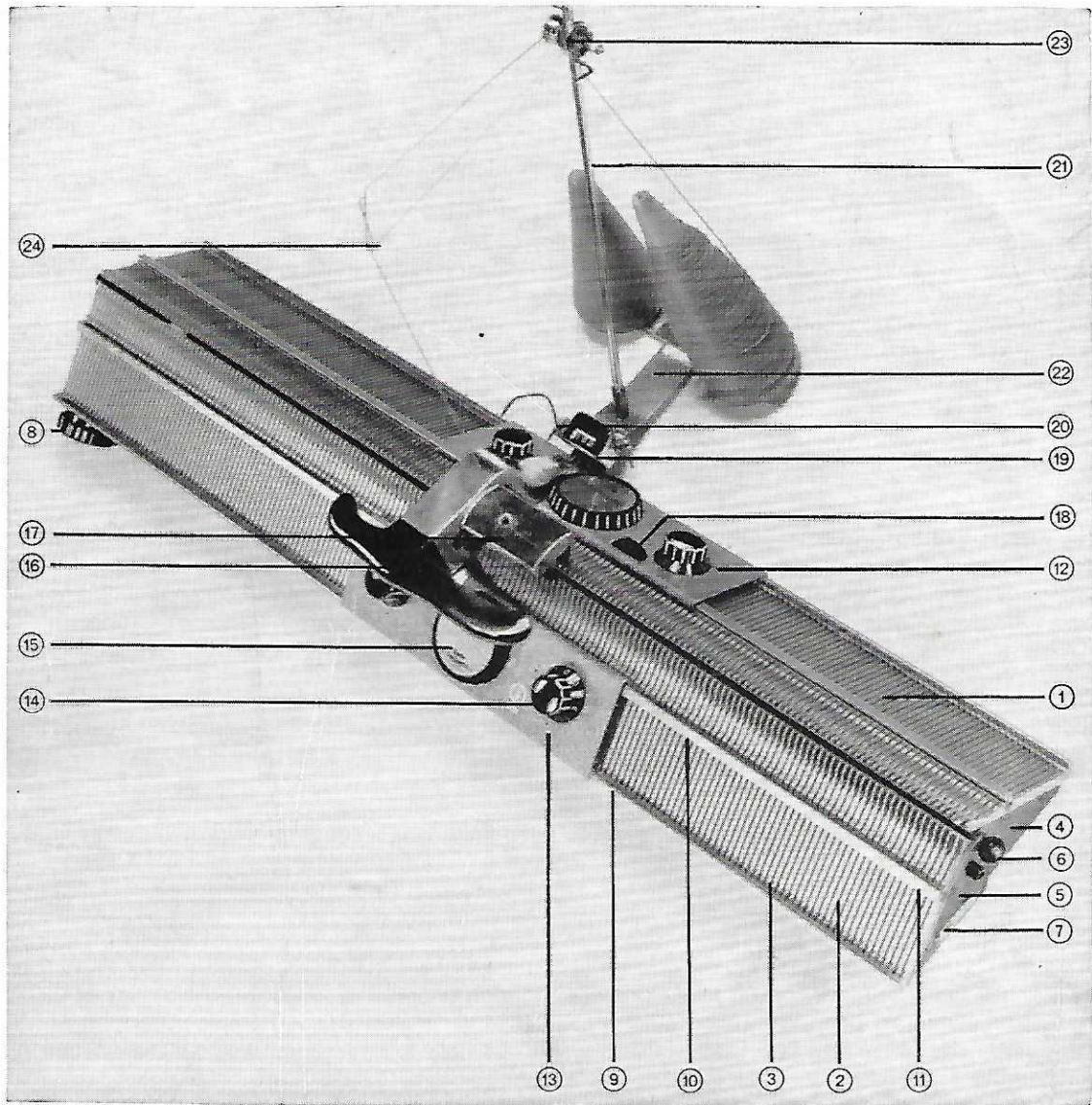


Fig. 1 Machine in the working position.

- 1 Back Needle Bed
- 2 Front Needle Bed
- 3 Needles
- 4 End Bracket Back Bed
- 5 End Bracket Front Bed
- 8 Racking Knob
- 9 Bottom Rail
- 10 Top Rail
- 11 Rail Securing Screw
- 12 Back Slide
- 13 Front Slide

- 14 Tension Regulators
- 15 Automatic Selector
- 16 Handle
- 17 Shuttle
- 18 Automatic Return Switch
- 19 Row Counter
- 20 Row Counter Trip
- 21 Wool Guide Stem
- 22 Cone Stand
- 23 Tension Discs
- 24 Tension Wire

Explanation of machine

Let us look at the machine now and examine its very simple working parts first.

The machine consists of two beds of 180 (200) needles each, which are coupled together when used for ribbing, circular knitting and automatic pattern work. When used for stocking stitch, however, only one bed is required and the front bed is removed to make handling of the work easier. The two beds can also be fitted together lengthwise, enabling the knitter to produce up to 361 (401) stitches with only one movement. Stitches are produced on the back bed with the **purl** side towards you and on the front bed with the **plain** side towards you. Therefore, when using the double bed for ribbed knitting, the front bed may be referred to as the «KNIT BED» and the back bed as the «PURL BED». Since the two beds and slides are identical, except that the slide on the back bed also carries the shuttle, wool carrier and row counter, we shall explain the details of the back bed only.

The needle bed has two slide rails running the whole length of the bed, on which is carried the slide. You will see that the butts of the needles rest on the lower rail, while the upper rail (which is numbered) passes over the needles just above the latches. Underneath the whole length of this upper rail lies a wire spring which acts as a brake, thus ensuring that the needles remain in position.

The slide which is the most important part of the machine, is pushed to and fro by the handle. On the slide itself are three knobs. The two outer knobs will be known as «**Tension Regulators**», and the centre knob as the «**Automatic Selector**».

N. B. It should be noted here that on the back slide only, there is a small push-button switch, known as the «**Automatic Return Switch**».

The Tension Regulators will produce any size of stitch you like, from 22 different tension settings. When using the machine as a double bed, the gap between the two beds can be increased so that these tensions will actually produce no less than 44 different tension settings. So if you will try to think of these tension regulators as being a pair of knitting needles, – but a most wonderful pair of needles which can alter in size at the turn of a knob, – then you will be able to understand their function better. A **comparative Tension Scale** is given further on, so we shall just say for the present the higher the number the tighter the stitch and the lower the number the looser the stitch, – just as with hand knitting needles. Since there are two independent Tension Regulators, this means you can, if you wish, set one high and one low, – this would produce a tight row and a loose row alternately, quite automatically, and would give the same effect as that obtained by using two different sizes of needles. For all normal knitting, of course, the two Tension Regulators are set to the same number. When knitting from left to right the **left hand** Tension Regulator makes the stitch and from right to left the **right hand** Tension Regulator makes the stitch.

The Automatic Selector enables the machine to knit circular fabrics automatically and to produce many more wonderful effects besides, such as half fisherman's rib, fisherman's rib, double fisherman's rib loop patterns etc. by setting this in accordance with the scale given further on.

The Automatic Return Switch brings the needles back into the working position from the holding position when required. If this is set to show «**H**» the needles will remain in the holding position: when it is set to show «**R**» however, the needles will be automatically returned to the working position.

N. B. Always ensure that latches are open when needles are being returned to working position.

The Shuttle is attached to the handle bar in a fixed position. Its function is firstly to brush open the latches of the needles and then to lay the wool across the open latches at the correct time. The brushes do not, and should not, touch the wool at any time. Should the brushes become ragged with use they may be trimmed with scissors.

The Wool Carrier enables the wool to be fed directly from the cone onto the needles, without any handling whatsoever. The flow of wool is controlled by tension discs at the top of the wool guide stem and these can be adjusted by means of the small thumb screw. Care should be taken to ensure that they are never too tight.

The Row Counter which is attached to the back of the slide, registers each row as it is knitted and this can be re-set to zero by turning the screw on the side. It should be noted that for circular knitting **two** rows registered on the counter equal only **one** circular row. – N. B. The row counter trip can be pulled out if it is required to knit any number of rows without counting these.

The Racking Knob which is numbered, is to be found on the left hand side of the front bed and is used to move the front bed in relation to the back bed. Its function is firstly to give the two main positions of the needle beds and secondly to produce automatic patterns.

N. B. Before any needles are set up, the position of the beds should always be checked.

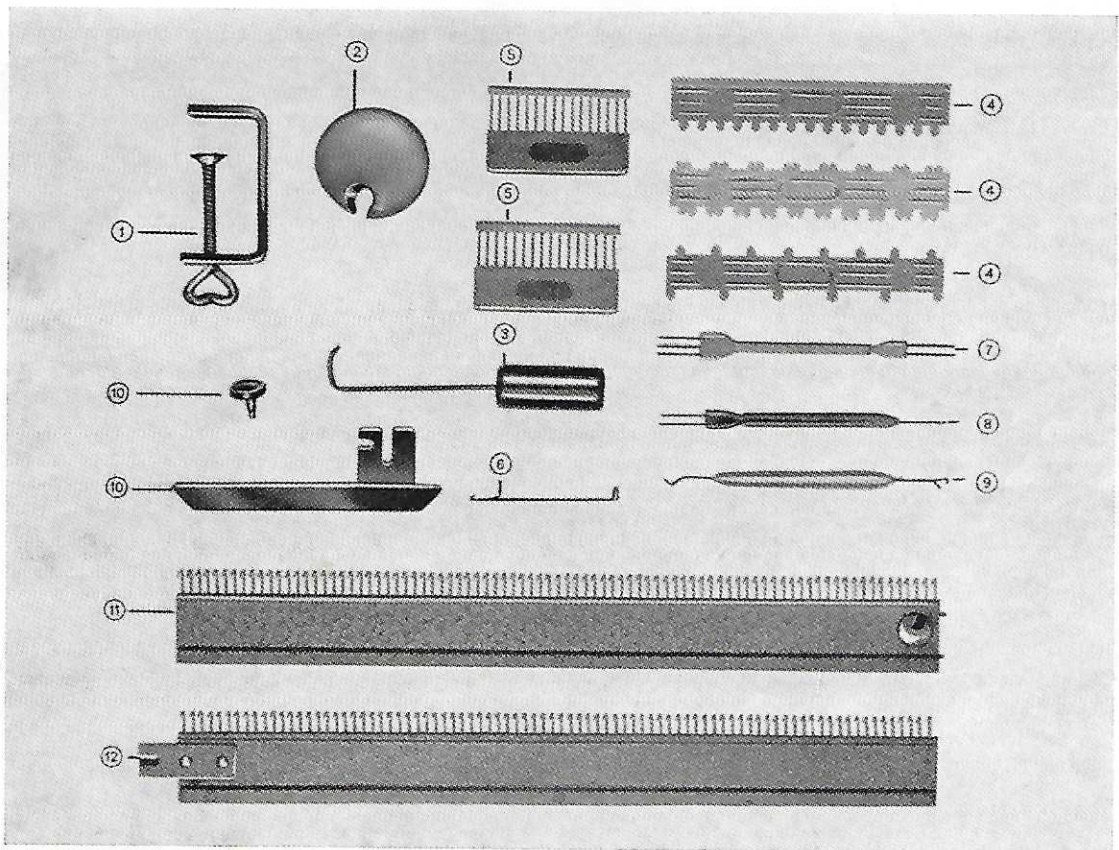


Fig. 2 Accessories

- | | | | |
|---|---------------------------------|----|--------------------------------------|
| 1 | Clamp | 8 | Single and Twin transfer Bodkin |
| 2 | Extra Weight for heavy work | 9 | Crochet Hook and Pointed Bodkin |
| 3 | Side Weight | 10 | Stocking Stitch Attachment and Screw |
| 4 | Needle Selecter | 11 | Weighted long Comb |
| 5 | Bodkin Comb | 12 | Weighted short Comb |
| 6 | Latch Needle | 13 | Distance Gauge |
| 7 | Triple and Twin transfer Bodkin | | |

The Needles are composed of four parts i. e. the head, latch, shaft and butt. Knitting is produced on the needles in exactly the same way as in hand knitting, following the same principle of «in, over, through and off». When the slide passes over the needles they are pushed up by the first tension regulator and the stitches pass behind the latches, (IN) the wool is laid over the open latches by the shuttle, (OVER) then the needles are pulled down by the following tension regulator, pulling the wool through the previous stitch (THROUGH) and finally the needles are left off according to the tension setting (OFF).

Weights and Combs. Long and short combs are supplied which are already weighted for all normal work. Also supplied are two round weights with slots in the top which enable these to be slipped onto the comb. These are used for D. knit wool and when knitting «Chunky» Designs. e. g. F. Rib. D. F. Rib. and loop patterns. The function of the weights is **not** to stretch the garment, but to stop the work from riding up. It should be remembered that **only** by using weights will correct hand knitting tensions be produced. Therefore, hand knitting patterns can be used.

Side Weights are used when knitting front bands for cardigans etc., small amounts of stitches, circular knitting, as heel weights for socks, or when increasing several stitches at the side of a garment. They are also used when extra weight is required at the selvedge.

Bodkin Tools. Five types of bodkins are supplied: The EYED or transfer bodkin is used to transfer stitches from one needle to another; the TWIN and TRIPLE transfer bodkins are for fully-fashioned shaping; the CROCHET HOOK is for picking up dropped stitches and for making various patterns; and the POINTED bodkin is for re-hooking stitches onto needles and for catching dropped stitches.

Bodkin Combs. These have sixteen teeth and a cover which slips over the top. They are used for transferring a number of stitches at one time as in fully-fashioned shaping, darts etc., and for turning stitches round when knitting circular socks. They can also be used as stitch holders.

Needle Selectors. These are used for selecting needles in K. 1. P. 1. or K. 2. P. 2. arrangements etc.

Distance Gauge. This is used for setting the gap between the beds in either of two alternative positions.

Stocking Stitch Stripper Attachment. This is **always** used when knitting on the single bed only, and is fixed underneath the handle by means of the serrated screw provided, after the front bed has been removed. Its purpose is to hold the work back towards the needle bed, so that the needle can push through the stitch.

Clamps. Two clamps are affixed to the back bed and these are used to fasten the machine to any firm table, or to a stand specially designed for this machine.

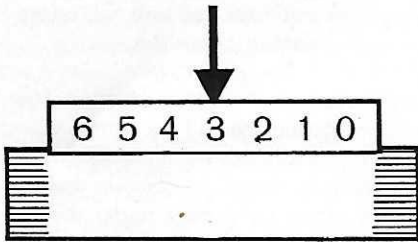
Cones. Two cones are supplied, and these should be wound firmly and evenly to ensure a correct flow of wool into the machine. A cone winder may be obtained from your dealer at a nominal cost. – N. B. It is most important to follow the shape of the cone – winding should start from the bottom, leaving, approx ½ "from the base of the cone and no less than 1" from the top.

Care and maintenance of the machine

A machine which is well looked after will always repay you with years of smooth and efficient service. Since the time involved is negligible, it is well worth the little effort required to keep it in good condition. For your guidance, the following procedure should be carried out, after each time a garment has been knitted.

First of all remove the slides, turn them upside down and carefully clean off all the wool fluff and old oil. After seeing that they are perfectly clean, put a thin smear of grease on the cams, – particularly on the working parts which push the needles up and down. Now push all the needles up to the top rail and with a nice stiff brush, clean out the spaces between the intersector of the needle beds. Having done so, return the needles to the bottom rail, taking care at all times to avoid touching the needle heads with any of the cleaning materials, since, quite obviously, should this happen, any knitting done afterwards would be soiled until eventually the needles were cleaned off again.

The Racking knob



Position 0: Ev. alt. ndl.

	.		.		.
	.		.		.

 K. 1. P. 1.

- As in hand-knitting.

Position 1-6: Ev. ndl.

 K. 1. P. 1.

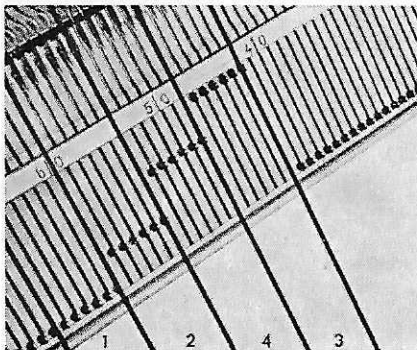
- Only possible on a Double bed machine.

The two main positions of the needle beds

Position 0 or zero, is the one you will use most of all, for this is the position **always** used when knitting any ribbed welt which is later followed by stocking stitch, or any pattern based on stocking stitch. In this position each needle is directly opposite another needle, so, for a K. 1. P. 1. rib, EVERY ALTERNATE NEEDLE is used on each bed, when they will come up BETWEEN each other. Ribbing produced in this position is of the type which can be knitted by hand, therefore hand knitting patterns will apply. N. B. IT IS NEVER USED FOR RACKING PATTERNS.

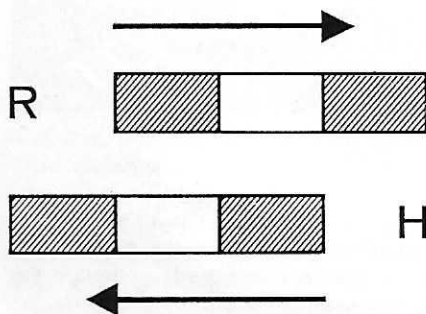
Position 1. Any type of ribbing knitted in this position can only be produced on a double bed machine and therefore this setting will only be used when knitting from double bed machine patterns, or from your own designs. In this position you will note that each needle is opposite an intersector, so every needle may be used on each bed. By setting the knob to ANY POSITION EXCEPT 0 the above applies, but, it is better, when learning, to adhere to one procedure, which you will absorb more easily and perform more automatically.

Racking Patterns. These are produced by moving the racking knob progressively (one position only at a time) from one position to another and knitting one or several rows between each movement. By setting up needles in different ways and combining this with different movements of the racking knob, an infinite variety of patterns can be produced. This should not, however, be attempted until the basic principles of the machine are clearly understood.



The four needle positions

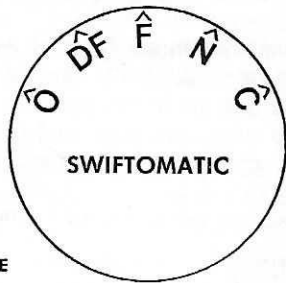
- 1 Non Working Position.
- 2 Knitting Position.
- 3 Holding Position.
- 4 Semi-Automatic Return Position.
(To be used for front bed.)



The Automatic Return Switch.

- H. When set to show H (hold) will allow needles placed in holding position to remain there.
- R. When set to show R (return) needles will be automatically returned to knitting position.

The Automatic Selector



- O Out of Action.
- DF Double Fisherman's Rib
- F Fisherman's Rib.
- N Normal.
- C Circular.

TENSION SCALE

EXPLANATION OF SYMBOLS

W = Use Wider Gap X = Add extra Ball Weight
 $\frac{N}{2N-2DF}$ = $\frac{N}{2 \text{ Rows } N}$ $\frac{N}{2DF \ 2N}$ = $\frac{DF}{2N \ 2DF}$ = $\frac{DF}{2 \text{ Rows } N} \ \frac{N}{2 \text{ Rows } DF}$

Stitch and type of Wool	1 x 1 Every 4th Needle					1 x 1 Every 3rd Needle					1 x 1 Every 2nd Needle					Every 2nd Needle	Every 2nd Needle	Stocking Stitch	Circular Knitting
	1 x 1 Every Alt. Needle	Half Fish. Rib	Full Fish. Rib	Half D. Fish. Rib	Full D. Fish. Rib	1 x 1 Every Needle	Half Fish. Rib	Full Fish. Rib	Half D. Fish. Rib	Full D. Fish. Rib	2 x 2 Down	Half Fish. Rib	Full Fish. Rib	Half D. Fish. Rib	Full D. Fish. Rib				
Indust. Yarn Loceply 1 Ply	11 N	9 1/2 F	10 F	10 N	9 N	10 N	10 1/2 F	10 1/2 F	10 1/2 N	10 N	10 N	9 F	9 1/2 F	9 1/2 N	9 N	9 N	8 N	11 C	
2 Ply fine 3 lay	10 N	8 1/2 N	9 F	9 F	8 N	10 1/2 N	9 F	9 1/2 F	9 1/2 N	9 N	9 N	8 1/2 F	8 1/2 F	8 1/2 N	8 N	8 N	7 N	11 C	
3 Ply	9 1/2 N	8 N	8 1/2 F	8 1/2 F	7 1/2 N	10 N	8 1/2 F	9 F	9 N	8 1/2 N	8 1/2 N	8 F	8 F	8 N	8 N	8 N	5 1/2 N	11 C	
Coarse 4 Ply	8 1/2 N	7 N	7 1/2 F	7 1/2 F	6 1/2 N	9 N	8 F	8 1/2 F	8 1/2 N	8 N	8 N	7 1/2 F	7 1/2 F	7 1/2 N	7 N	7 N	4 1/2 N	11 C	
Mohair Tweed Home-Spun Double Knit.	8 X	6 1/2 X	7 X	7 X	6 X	7 1/2 X	6 X	6 1/2 X	6 1/2 X	7 X	7 X	6 X	6 X	6 X	5 X	5 X	4 X	11 C	

20 20 15

Width of Gap. Normally, all knitting is carried out with the gap in the close or normal position. If very thick wool is to be used, or if looser tensions are required, then the gap may be increased to the wider position.

To obtain the normal gap, having loosened the two wing nuts underneath the front of the back bed, take the Distance Gauge and insert the thinner end between the two needle beds, approximately 6" in from the right-hand, and secure the wing nut at this end with the gap set in this position. Repeat this process 6" in from the left-hand side. Having done this, check both sides once more and re-set if necessary, for it is most important that the correct distance is obtained and that it is equal along the length of the beds.

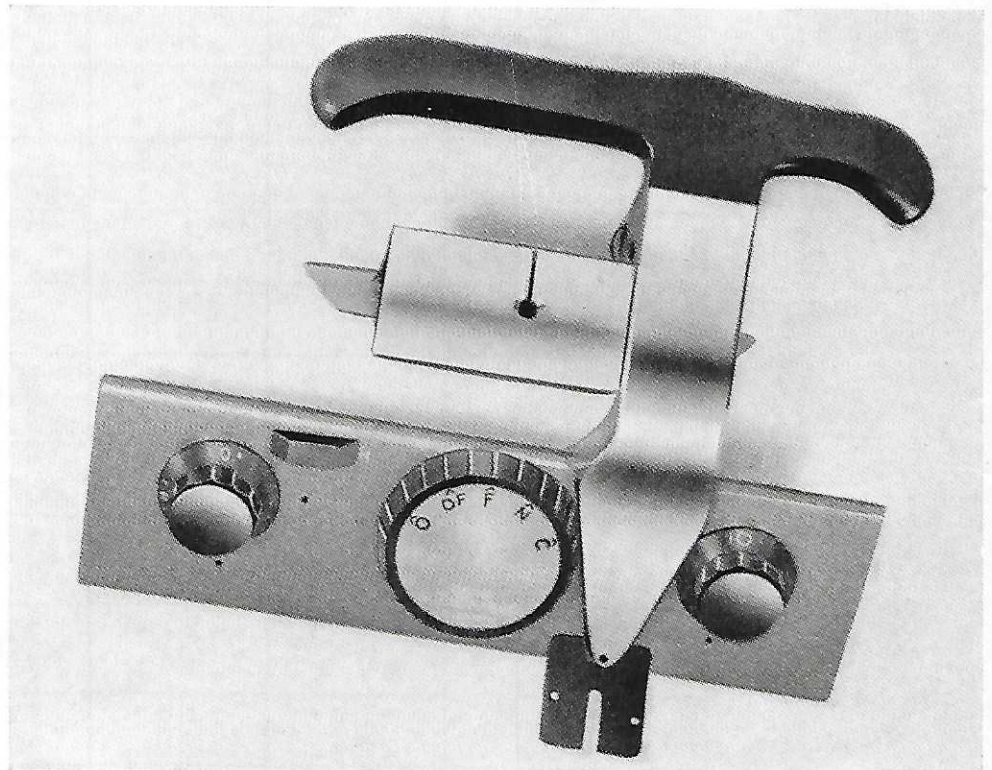
To obtain the wider gap, the whole of the above process is carried out, using instead the thicker end of the Distance Gauge.

The Tension Scale. Below is given an approximate guide, but there can be no hard and fast rules which apply, since wool, even in the same ply, varies extensively from one manufacturer to another. Therefore you must remember, at all times, the golden rule of knitting, – CHECK YOUR TENSION BEFORE YOU MAKE THE GARMENT. No one, not even an expert, can guess or judge how it will turn out, – all designs are calculated on a certain number of stitches and rows per inch. If you do not reproduce the given tension exactly, you will not make the garment as the designer intended. THERE IS NO SHORT CUT!

Setting up the machine

After clamping the machine onto the table, the triangular-shaped row counter trip should be affixed to the back bed. Having done so, bring the front edge of the back bed flush with the edge of the table and secure the machine by clamping it in this position. The front bed will thus overhang and allow the knitting to pass down between the two beds.

N. B. A card table or occasional table should not be used, as these are not sufficiently steady. The complete wool carrier should now be assembled, together with the row counter as illustrated, and attached to the back slide. Having wound the wool onto a cone and placing this on one of the cone stands, you are now ready to start knitting.



Casting on K. I. P. I. rib and transferring to stocking stitch

First push the slides to the RIGHT HAND SIDE of the machine. Now check that the racking knob is set on position 'O', and that the width of gap between the beds is normal (i. e. set in the close position.) Using the needle selector 1 x 1 bring up the required number of purl needles, – dividing these equally from the centre of the back bed, – until the heads protrude a little over the top. Now bring up the same amount of knit needles on the front bed, alternating these with the needles on the back and taking care to see that the first needle nearest to the slide is on the front and the last needle furthest from the slide is on the back i. e. start with a knit and end with a purl. Make sure that all non-working needles are in their correct position.

Having consulted the tension scale, set all four Tension Regulators to the same number and both Automatic Selectors to N. Take the slides over the needles and back again, – this will open the latches and leave the needles in the correct position for casting on. Next, thread the wool as follows, – from the cone, between the two discs at the top of the wool guide stem, through the loop of the tension wire, down between the two beds and into the shuttle, finally securing the end by winding it round the clamp at the right hand side of the machine. Bring the slides up to the needles and pull back any slack wool from the cone side of the tension discs.

Take the slides once across the machine and you will have cast on. Now, having removed the wire, push the comb up centrally between the two beds until the teeth have passed between the stitches. Insert the wire and lower it onto the cast on edge. Make sure that all stitches are held by the comb teeth in this way, and that you have not released any of the stitches from the needles during this process. Slide the appropriate weights (if used) onto the comb, and begin by knitting a circular hem as follows: –

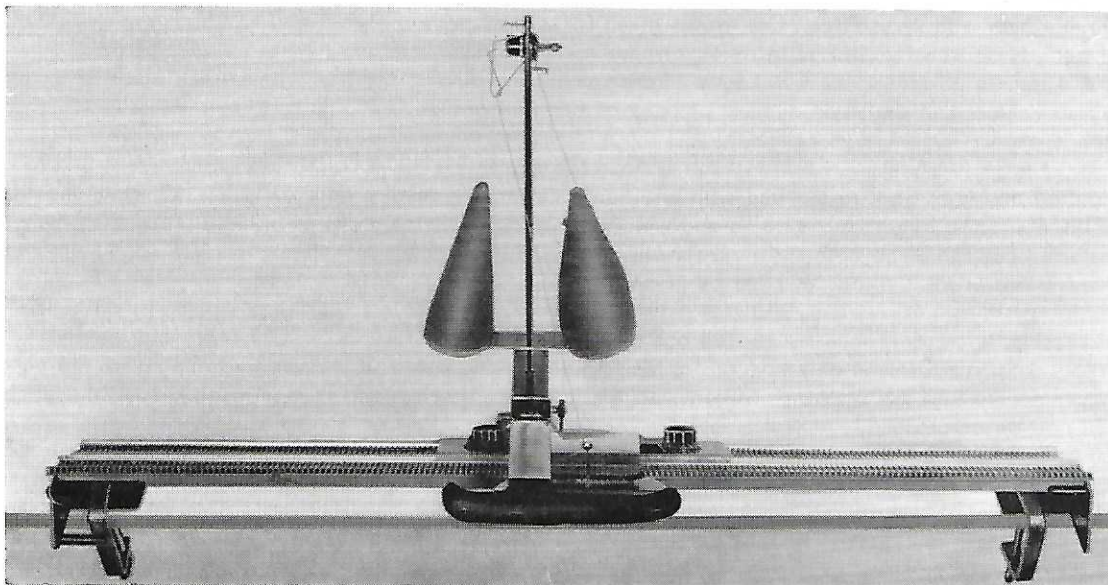
Set both Automatic Selectors to 'C' and knit across and back four times. This will give two circular rows. Now return both Automatic Selectors to 'N' and knit this row – joining the hem. Set the row counter to zero and continue to knit as many rows as required for the welt.

Transferring to stocking stitch. You are now going to transfer all the knit stitches from the front bed onto the empty purl needles on the back bed, and this is done as follows: – With a small brush, open all the latches of working needles on the front bed and also all those on the back bed in the non-working position.

With the thumb and forefinger of the left hand holding the butt of the first needle to be transferred, hook the eyed transfer bodkin onto this needle with the right hand, holding the tool in a direct line with the needle. Push the needle up with the left hand and the stitch will pass behind the latch. Now pull the needle down again until the stitch passes onto the bodkin, – but no further. Lift the bodkin off the needle, tilting it slightly backwards and a little to the side. Continue to push the empty needle into the non-working position with the left hand. With the same hand bring up the first empty needle on the back bed and push this through the stitch held on the bodkin, from behind. Do **not** try to put the stitch onto the needle or you will only drop it, **always** push the needle through the stitch, – and do not push the needle so far through that the stitch goes behind the latch. Continue thus all along the row.

Converting to the single bed.

The front bed is now removed to facilitate handling of the work, when knitting stocking stitch on the single bed. To do this, first separate the two slides by pressing the trigger release under the handle and push the back slide to the end of bed, so that the handle/shuttle assembly is clear of the front bed. Now loosen the two wing nuts underneath the front of the back bed and simply pull the front bed towards you like a drawer and detach completely. Put this carefully aside, making sure that the slide does not slip off the end of the bed.



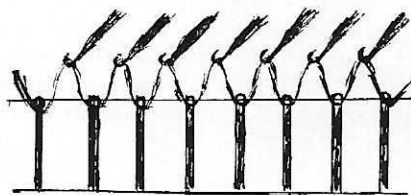
When replacing the front bed, the whole procedure is reversed, but before tightening the wing nuts, set the width of gap with the Distance Gauge, as described on Page 9.

Fitting the stocking stitch attachment. After the front bed has been removed, the stocking stitch attachment must now be fitted into the socket under the handle and fastened with the screw provided. In this position the edge of the attachment or stripper will lie parallel with the edge of the needle bed.

The tension must now be lowered for stocking stitch for, as in hand knitting, the main part of any garment is knitted on a looser tension than the welt. Consult the tension scale as before and set both Tension Regulators to the desired number. The Automatic Selector will remain on 'N' for all normal knitting. Stocking stitch is now knitted by simply pushing the slide to and fro as before. According to the wool used, it may be necessary to hang on side weights to prevent unformed stitches appearing at the selvages. These should be hooked into the knitting, as near to the top as possible and should be moved up at intervals when necessary.

Casting on for stocking stitch. Should a double hem be required, it is no longer necessary to do this on the single bed, – instead, twice the number of stitches are cast on the double bed, exactly as given for Machine K. 1. P. 1. rib (see last paragraph on page 16) then the dials are set for circular knitting (see page 17). If a 1" hem of approximately 12 rows is required, 12 circular rows are knitted, – this will show 24 on the row counter. Now the stitches are transferred from the front bed onto the opposite needles on the back bed, so that there are two stitches on each needle. The front bed is removed, and the dials now set for stocking stitch. (Consult Tension Scale for settings.)

If, however, a small sample piece is being knitted, after bringing up the required number of needles, set the dials for Stocking Stitch, i. e. Automatic Selector to 'N', and Tension Regulators to desired number. Now take the slide across and back to open the latches, leaving this on the right hand side, and thread up machine, winding the end of wool round the clamp. Holding the comb, with wire already inserted, in front of the needle bed in such a way that the needles will pass between the teeth of the comb and under the wire, take the slide slowly across and you will have cast on automatically. Now lower the comb, guiding this from the top with the right hand, forward, until the wire rests on the cast on edge. (See illustration below.) Knit approximately 6 rows, (or until teeth of comb hang below front of needle bed) and fit the Stocking Stitch Attachment.



Double hem with picot Edge. Cast on as given for second method above, and knit half required depth of hem. Now transfer stitches to adjacent needles, so that there are two stitches on one needle and one empty needle all along the row. Leave empty needles in working position with latches open, and knit this row. Now knit the same number of rows as first part of hem, – e. g. knit 10 rows, make picot edge, knit 10 rows.

Holding the work back to the bed with one hand, extend the needles approximately $\frac{1}{4}$ " above the top of the needle bed and remove comb and weights (if used). With the transfer bodkin, place the stitches from the cast on edge onto the appropriate needles all along the row, being careful not to unravel them in the process. Now reweight as given in paragraph on page 14.

Increasing. Increasing may be carried out in three ways.

- (a) Automatically: this is only possible at the beginning of a row and is done by bringing up the next empty needle into the working position with the latch open. When the slide is taken across, the stitch will cast on automatically.
- (b) At each end: Bring up one empty needle at each end of the work, lift the loop which lies below the last stitch and place it on the empty needle.
- (c) Increasing of several stitches, or casting on as in armhole or sleeve shaping: This is carried out in the following manner, AT THE BEGINNING OF THE ROW. First push up all new needles until the heads are extended approximately $\frac{1}{4}$ " above the top of the needle bed.

If increase is to be made at right hand side, the wool is wound loosely round the needles in an anti-clockwise direction, until required number of stitches are cast on. Now reweight the whole of the work as described on page 14. (See illustration (a) below.) Remove Stripper Attachment and knit this row. If increase is to be made now at left hand side, the stitches are cast on in a clockwise direction, and the work reweighted once more. Replace Stripper Attachment after approximately 6 rows have been knitted.

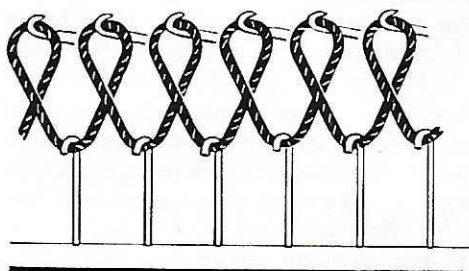


Illustration 'A'

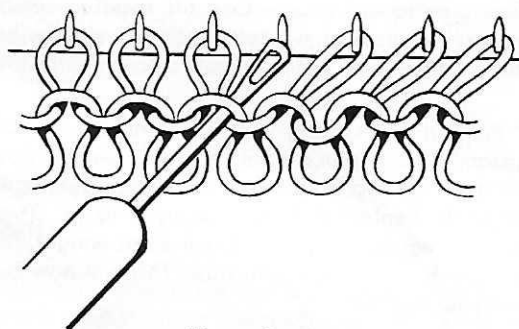


Illustration 'B'

Fully fashioned increasing is carried out using the double transfer tool and may also be done at each end. Bring up one empty needle at each end and transfer the two end stitches, replacing these so that they are on the first and second needle with the third one left empty. Now with the bodkin lift up the loop which lies below the stitch on the fourth needle (see illustration (b) above) and place this on the empty needle. Repeat at other end. This shaping may be carried out anywhere within the row, moving stitches along as required.

Fully fashioned decreasing is carried out at each end of the work as follows. With the double transfer tool, transfer the first and second stitches onto the third and second needles, replacing the empty one to the non-working position. Repeat at other end. This may also be carried out anywhere within the row, moving the stitches along as required.

Decreasing and casting off. Decreasing singly, or at each end (as given in most patterns) is done by placing the last knitted stitch onto the next needle with the bodkin tool. Repeat at other end. Decreasing of several stitches or casting off (as for armhole or neck shaping). Using the bodkin, place the last knitted stitch (at the wool end) onto the next needle and push up this needle until both stitches are behind the latch. With the other hand lay the wool across the open latch (in the direction in which the slide is travelling) and pull down the needle, thus making a new stitch. Repeat whole procedure until required number of stitches have been cast off. Care should be taken to avoid casting off too tightly.

Buttonholes. These can be done in three different ways: -

(a) Small buttonholes are made by placing one stitch onto the next one and leaving this empty needle in working position with latch open.

(b) Large buttonholes are made in the same way, but this time two stitches next to each other are placed onto adjacent needles left and right. Knit two rows then cross the two loops so that each needle has a separate stitch.

(c) Larger buttonholes or any slit opening (as for pockets etc.) Select required number of needles and push these up until stitches lie behind the latches. Now take an odd piece of contrast colour wool, and laying this across the open latches, knit these stitches by hand, pulling down the needles one by one to the same level as the others. Leave the ends hanging down the front. When the garment is ready for making up, first press this portion lightly, then remove coloured wool. The stitches are then finished off with self-coloured wool, or, if for a pocket, the lower stitches can be replaced to knit a pocket lining. As an alternative, and in the manner usually described in patterns, the following method, set out in the next paragraph is used.

Knitting of pockets. First make pocket lining e. g. approximately 30 stitches and 40 rows. Take these off machine and hold on bodkin combs or spare wool. Knit main part of garment till row for pocket insertion is reached. Cast off 30 stitches at point where pocket is to be inserted, then replace the 30 stitches already held for pocket lining. Reweight whole of work as directed and continue to knit.

Dividing for Neck Shaping

“V” Neck. – First put centre stitch(es) onto adjacent needle(s) as directed in pattern, and push empty needle(s) to non-working position. Now follow from * to end of instructions.

Round or square neck. – Cast off required number of stitches in centre of work, as directed in pattern, with spare piece of self-coloured wool, and push empty needles to non-working position. Now follow from * to end of instructions.

* Pull out row counter trip, noting number of rows knitted. Take wool out of shuttle and wool guide assembly, and place cone on floor. Setting Automatic Return Switch to show 'H', push up all needles at this end into holding position. Set Automatic Selector to 'O', and take slide across to other end of work. Replace Automatic Selector to 'N'. Thread up machine with contrast colour wool, and knit approximately 6 rows. Remove extra weight, (if used) break off wool and run off this side, taking slide right over to the opposite side. This will now be at the wool end. Push all empty needles to non-working position.

Set Automatic Return Switch to show 'R', ensuring that all the latches are open. Replace row counter trip, replace cone from floor onto stand, rethread machine as before, and knit this row. Now remove Stocking Stitch Stripper Attachment, and reweight this half of work, centrally, with the short comb, – removing long comb from cast on edge.

Set Automatic Return Switch to show 'H', ** and knit approximately 6 rows, (or until teeth of comb hang below front of needle bed) shaping as directed in pattern. Replace Stripper Attachment and continue to knit until this side is completed. **

To knit second side, first push slide to **armhole** edge, bring up required number of needles with latches open, and extend them approximately ¼" beyond top of needle bed. Replace stitches held with contrast colour wool onto these needles, and pull back spare wool. Reweight centrally with short comb as before. Set row counter to number noted before starting to shape first side. (In this case, there will be no need to reverse shapings, as these will be knitted on the same row numbers as first side). Rethread machine with wool used, and holding the end in one hand, knit this row. Now follow instructions given from ** to **.

Reweighting stocking stitch. * Remove Stripper Attachment and extra weight (if used). Now push up all needles until heads extend approximately ¼" beyond top of needle bed. (Ensure that stitches **do not** pass behind latches.) * If reweighting only half of work, as for neck shaping etc., this is done with the short comb as follows. – ** Remove wire, and holding the work centrally with the left hand, firmly, in a downward, slightly forward direction, take the comb in the right hand, passing this up centrally behind the work, until the teeth appear above and between the needles. Release work gently from left hand, and insert the wire. Now lower the comb, guiding this from the top with the left hand, forward, until the wire rests on the stitches. **It must not** rest on any needle. ** Remove all other weights and comb from cast on edge, and slide on extra weight, if used. Ensure that wool is free at the beginning and knit approximately 6 rows (or until teeth of comb hang below front of needle bed). Replace Stripper Attachment and continue to knit as required.

If reweighting whole of work, use long comb, – removing this from cast on edge after completing instructions from * to *. Now follow instructions from ** to **. Slide on extra weight, if used, and complete instructions to end of paragraph above.

N. B. Illustration (a) on Page 13. indicates how wire should rest on stitches.

How to pull back or unravel knitting. Remove weight (if used) and holding the end of the wool firmly and as close to the work as possible, pull the wool upwards and away from you, 'emptying' the stitches onto the needles. Be careful to hold out the edges of the work, otherwise the end stitches will not go onto their respective needles. As many rows as required can be pulled back, but should the last row finish at the opposite end to the slide, set the Automatic Selector on 'O' and the slide can now be pushed over the machine without knitting.

Fair Isle or Jacquard Knitting

Example given is for squares of 2 red, 2 green, all along the row with pattern repeated on 2nd row and alternated on 3rd and 4th rows.

Thread machine with red wool and push up every 2nd pair of needles into holding position. Knit 2 rows. Remove red wool from shuttle and re thread with green wool *. Push all needles now in holding position into semi-automatic return position and push up all all other needles into holding position *. Knit 2 rows with green wool. Push all needles in holding position into semi-automatic return position and push all other needles into holding position. Knit 2 rows with green wool. Repeat from * to *, alternating colours as required.

Casting on machine K. 2. P. 2. rib welt-proceeding to machine K. 1. P. 1. for body of garment

First push the slides to the RIGHT HAND SIDE of the machine. Now check that the racking knob is set on position 1 and that the width of gap between the beds is normal. Using the needle selector 2x1 bring up the required number of purl needles, – dividing these equally from the centre of the back bed, – until the heads protrude a little over the top. Now bring up the same amount of knit needles, alternating these with the needles on the back; (two working needles set opposite one non-working needle) taking care to see that the first needle nearest to the slide is on the front and the last needle furthest from the slide is on the back i. e. start with K. 1. and end with P. 1.

Having consulted the Tension Scale, set all four Tension Regulators to the same number and both Automatic Selectors to N. Take the slides over the needles and back again, – this will open the latches and leave the needles in the correct position for casting on. Next, thread the wool as follows, – from the cone, between the two discs at the top of the wool guide stem, through the loop of the tension wire, down between the two beds and into the shuttle, finally securing the end by winding it round the clamp at the right hand side of the machine. Bring the slides up to the needles and pull back any slack wool from the cone side of the tension discs.

Before casting on, turn the racking knob to position 2. Take the slides once across the machine and you will have cast on. Now having removed the wire, push the comb up centrally between the two beds until the teeth have passed between the stitches. Insert the wire and lower it on to the cast on edge. Make sure that all stitches are held by the comb teeth in this way and that you have not released any of the stitches from the needles during this process. Slide the appropriate weights onto the comb, – RETURN RACKING KNOB TO POSITION 1 and begin by knitting a circular hem as follows: –

Set both Automatic Selectors to 'C' and knit across and back four times. This will give **two** circular rows. Now return both Automatic Selectors to 'N' and knit this row – joining the hem. Set row counter to zero and continue to knit as many rows as required for the welt.

Proceeding to machine K. 1. P. 1. Bring up all those needles in the non-working position which lie between the pairs of needles on each bed. Consult Tension Scale and set all four Tension Regulators to desired number. Now take the slides across and you will have cast on the extra stitches. Continue to knit as before.

Increasing. Increasing may be carried out in 3 ways:

(a) Automatically: this is only possible at the beginning of a row and is done by bringing up the next empty needle on the opposite bed into the working position with the latch open. When the slide is taken across, the stitch will cast on automatically. – N. B. When knitting a machine K. 1. P. 1. rib as above, increasing is carried out by bringing up the next **two** needles.

(b) At each end, as directed in most patterns. This is done by lifting the loop which lies below the last knitted stitch with the transfer bodkin and placing it onto the next empty needle on the opposite bed.

(c) Increasing or casting on several stitches is done by bringing up the required number of empty needles at the **end** of the row with the latches open. When the slide is taken across, the new stitches will cast on automatically. The small side weights should now be hung across the new stitches. If this is to be carried out at the other end also, it is recommended that the whole of the garment should be re-weighted after the second increase has been made, after one or two inches have been knitted.

Fully fashioned increasing is also done at each end and for this the double transfer tool is used. Bring up one empty needle on the front bed with the latch open and transfer two stitches, replacing them so that the last stitch is moved onto the new needle and the 3rd needle in is left empty. Now lift the loop, which lies below the stitch on the 4th needle, and place it onto the 3rd needle. Repeat the same procedure on the back bed and this will complete the shaping at one end. Repeat at other end. This form of increasing may be carried out anywhere within the row, moving as many stitches outwards as required.

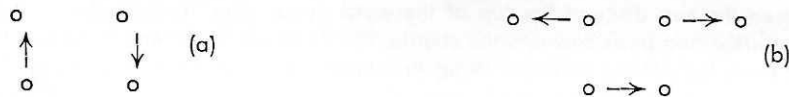
Fully fashioned decreasing is carried out using the double transfer bodkin. With the bodkin transfer the two end stitches inwards onto the 2nd and 3rd needles. There will now be two stitches on number 3 and one on number 2. Repeat on opposite bed. Return empty needles to non-working position, and repeat at other end.

Decreasing and casting off. Decreasing singly, or at each end, is done by transferring the last knitted stitch onto the next needle on the opposite bed, pushing the empty needle to the non-working position. N. B. For machine K. 1. P. 1. Rib, two stitches are decreased at each end.

Casting off, or decreasing by several stitches as in armholes, neck shapings etc.: - Transfer the first stitch onto the next needle (on the opposite bed). Now push up the needle until both stitches are behind the latch, lay the wool across the open latch (in the same direction as the slides travel) and pull down the needle thus making a new stitch. Repeat as required, always taking care to pull the needle down far enough to avoid a too tight cast off edge.

Buttonholes. These can be done in 3 different ways:

(a) Small buttonholes are made by opening the latches of two needles on the front bed and two needles on the back bed facing each other. Transfer the left hand stitch from the front bed onto the next needle on the left on the back bed. Now transfer the right hand stitch from the back bed onto the next needle to the right on the front bed. Leave the two empty needles in the working position, with latches open. See diagram.



(b) Large buttonholes are made in the same way but this time open the latches of four needles on the back bed and two needles (facing these four) on the front bed. Working on the back only, transfer the second stitch onto the first and the third stitch onto the fourth. On the front bed transfer the first stitch onto the second. Leave all empty needles in working position with latches open. See diagram.

(c) Larger buttonholes or any slit openings as for pockets etc. Select the required number of needles and push these up until the stitches lie behind the latches. Now take an odd piece of contrast colour wool, and laying this across the open latches knit these stitches by hand, pulling down the needles one by one to the same level as the others. Leave the ends hanging down the front. When the garment is ready for making up, first press this portion lightly, then remove coloured wool. The stitches are then finished off with self-coloured wool, or if for a pocket, the lower stitches can be replaced to knit a pocket lining. As an alternative, and in the manner usually described in patterns, the following method, set out in the next paragraph is used.

Knitting of pockets. First make pocket lining e. g. approximately 30 stitches and 40 rows. Take these off machine and hold on bodkin combs or spare wool. Knit main part of garment till row for pocket insertion is reached. Cast off 30 stitches at point where pocket is to be inserted, then replace the 30 stitches held for pocket lining. Reweight whole of work as directed and continue to knit.

Dividing for neck shaping. Instructions are exactly the same as those given for stocking stitch. See page 15.

Reweighting. This is carried out in exactly the same manner as given for reweighting stocking stitch. See page 14.

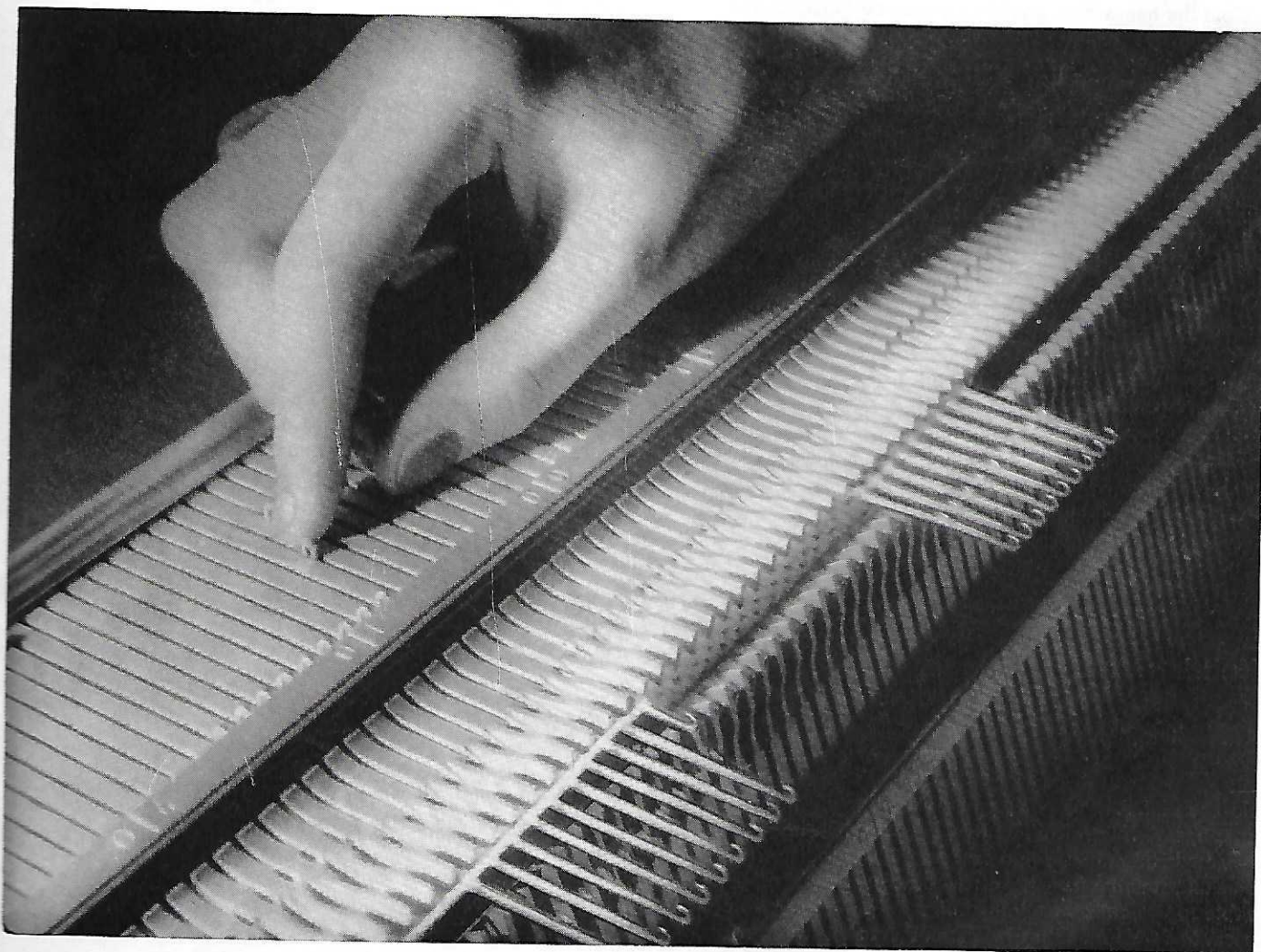
How to pull back or unravel knitting. Remove weight and holding the end of the wool firmly and as close to the work as possible, pull the wool backwards and forwards, «emptying» the stitches onto the needles. Be careful to hold out the edges of the work, otherwise the end stitches will not go onto their respective needles. As many rows as required can be pulled back, but should the last row finish at the opposite end to the slide set the Automatic Selector on '0' and the slide can now be pushed over the machine without knitting.

Casting on machine K. 1. P. 1. rib. This type of rib is used for front bands, scarves, etc., but is NEVER used for a welt. First push the slides to the right hand side of the machine. Check that the racking knob is set on position 1 and that width of gap is normal. Counting equally from the centre of the back bed, bring up the required number of needles (every needle) into the working position. Bring up the same number of needles on the front bed, – start with K. 1. and end with P. 1. Now follow directions as given for K. 1. P. 1. every alternate needle.

Casting on fisherman's rib. Cast on as directed for K. 1. P. 1. rib every alternate needle. Complete the circular hem, but before 'joining' this, set all Tension Regulators according to the Tension Scale and both Automatic Selectors to 'F'. Take the slides the machine and continue to knit as required.

Should a welt of ordinary rib be required first, knit this in the usual way, finishing with the slides on the right hand side of the machine. Then continue with the above procedure. For Fisherman's rib it is usually necessary to apply more weight than for ordinary rib and as the garment progresses, the small side weights may also have to be employed for holding down the end stitches, – unless this is done by hand between the needle beds underneath. At all times remember, it is important to keep the original needle setting throughout the garment. It therefore follows that to increase or decrease as the case may be, this must be done two stitches at a time (at the same end) to keep the needle position correct.

Circular knitting is done only in stocking stitch and to cast on, a K. 1. P. 1. every needle setting is used. Follow exactly the directions given for this on page 16 except to see that, after casting on, the Tension Regulators are re-set for stocking stitch. It will be seen that circular knitting is a continuation of the circular hem and therefore the Automatic Selectors will remain on 'C' throughout. Continue to knit, remembering that the row counter will register twice for one circular row. It may also be necessary to add the small side weights as the work progresses, to avoid unformed stitches appearing at the edges. These if used, should be moved up as required.



Basic Sock Pattern

Using 4ply wool.

Cast on 64 stitches K. 1. P. 1. every alternate needle, racking knob set on 0 and all Tension Regulators set according to Tension Scale. Knit circular hem and join. Knit 60 rows, which completes the ribbed welt. Leave slides on right hand side. Now pull back 16 stitches and transfer all the purl stitches onto the empty needles on the front bed. Push the empty purl needles into the non-working position and alter the racking knob to position 1.

Counting from the stitch to where the wool has been pulled back, push up 32 needles on the purl bed (every needle) and open latches. Remove weight from comb if used and open the latches of 16 needles at each end of the front bed (32 in all). Transfer first one set of 16 stitches with a bodkin comb as follows. Remove cover and hook bodkin comb onto needles. Pull up needles so that the stitches pass behind the latches and push down so that all stitches are now transferred onto the bodkin comb. Replace cover on bodkin comb and lower it down between the needle beds with the cover uppermost. Let it turn inwards and bring it up again, pushing it up from below, so that the outside stitch appears now in the centre of the back bed. Again remove the cover and transfer these stitches onto the 16 empty purl needles. Repeat this procedure at the other end of the work, and replace weight. Now knit circular by setting both Automatic Selectors to 'C' and all Tension Regulators to the correct setting for stocking stitch, according to the scale. Knit 100 circular rows (200 on row counter) or as many as required for length of leg.

To turn the heel, set Automatic Selector on back bed to 'N' and disengage the front slide. The front bed is thus taken out of action meanwhile and the heel is knitted on the back bed only. Both Tension Regulators should now be set on same number. Hang side weight into centre back of sock, — this serves to weight the heel which would otherwise be loose. Starting from the opposite end to where the slides are standing, push up the last needle into the holding position and set Automatic Return Switch to show 'H'. Knit across the row and by hand, take the end of the wool underneath the needle now in the holding position. Push up another needle at the opposite end and knit across, again taking the wool underneath the needle in the holding position. Repeat this operation (always taking the wool underneath the last needle held) until 10 stitches are held at each end. Move up the side weight to the centre of this row. Now starting from the last stitch held opposite the slides, push this needle into the **semi-automatic** return position and knit across. Push the last needle held at the other end into the **semi-automatic** return position and knit across. Repeat this operation, returning one needle at a time, at alternate ends, until all needles have been returned to the working position. The heel is now completed and the front slide should be re-engaged to knit circular as before for the foot. Set both Automatic Selectors to 'C' and back left hand Tension Regulator to 0. Knit approximately 70 circular rows (140 on row counter) or as many as required for length of foot.

Shaping the toe, — working on both beds and at each end of the work, decrease as follows; using the twin transfer bodkin, transfer 2nd stitch onto 3rd needle and 1st stitch onto 2nd. Repeat on opposite bed and at both sides of other end (4 stitches decreased in all). Push empty needles to non-working position. Knit two circular rows and repeat this whole procedure 5 more times in all (40 stitches). Continue decreasing in the same way, with only 1 circular row in between. Repeat this 8 times in all, until 8 stitches remain. Cast off or graft as desired.

Knitting and Weaving

This method of knitting is used for rugs, blankets, string or cane mats etc., and any thick fabric you may wish to produce.

Cast on K.1.P.1. every alternate needle as given on page 10, but increase the width of gap as explained on page 9. This will allow thick rug wool to be laid over the knitted row, into the gap between the two beds. Make sure that first and last needles are on the back bed. Holding rug wool firmly down, knit one row. Repeat this after each row is knitted. When making rugs, to give harder wear it is advisable to use cotton as the knitting yarn. By using different needle arrangements, and laying in rug wool every 2nd, 3rd or 4th row etc., many interesting variations can be produced.

Points to remember

By this time you will realise that the basic procedure for casting on is always the same, no matter what type of knitting is to be carried out. For your guidance, and quick reference, we have listed the following step by step instructions in the order of operation: -

1. Check Racking Knob.
2. Check width of gap.
3. Set up needles.
4. Set Tension Regulators and Automatic Selectors.
5. Take slides over and back to open latches.
6. Thread up wool tension guide.
7. Take slide across to cast on.
8. Put up combs and weights, if used.
9. Knit circular hem.
10. Join hem.
11. Set row counter to zero.
12. Continue to knit as required.

Faults and their causes

Dropped stitches at selvedge.

- (a) Slide is being taken too far past end of work.
- (b) Tension discs on wool guide stem are too loose.
- (c) Comb or weight is hanging unevenly.
- (d) Wool is still attached to clamp at side.

Wool is laying in at selvedge.

- (a) Side weights are not being used.
- (b) Side weights are not being moved up often enough.
- (c) Wool is not properly inserted in shuttle.
- (d) Tension is wrong for wool being used.

Dropped sts. in middle of work.

- (a) Needle is broken or has broken latch.
- (b) Comb is resting on something and weight is no longer able to pull work down.
- (c) Wool is not properly inserted in shuttle.

Uneven rows of knitting.

- (a) Tension regulators have not been set correctly at same number.
- (b) Wool has been caught on something before coming through the tension discs, making that particular row too tight.
- (c) Wool is not properly inserted in shuttle.

Uneven knitting within a row.

- (a) Bent latches are causing faulty stitches.
- (b) Comb or weight is hanging unevenly.
- (c) Badly wound cone.

Wool is fraying or breaking.

- (a) Tension Regulators are set too high.
- (b) Tension discs are much too tight.
- (c) Too many weights are being used.
- (d) Old or poor quality wool being used.
- (e) Machine requires lubrication.
- (f) Tension is wrong for wool being used.

After transferring to single bed wool is laying in all along the row.

- (a) Tension Regulators have not been altered to correct setting for stocking stitch.
- (b) Wool is not properly inserted in shuttle.

Slides jam in middle of row.

- (a) Needles have been set up wrongly.
- (b) Racking knob in wrong position.
- (c) Position of beds has been altered during knitting of this row.
- (d) Automatic selector(s) have not been properly set to desired position.
- (e) Machine requires lubrication.
- (f) Tension is wrong for wool being used.

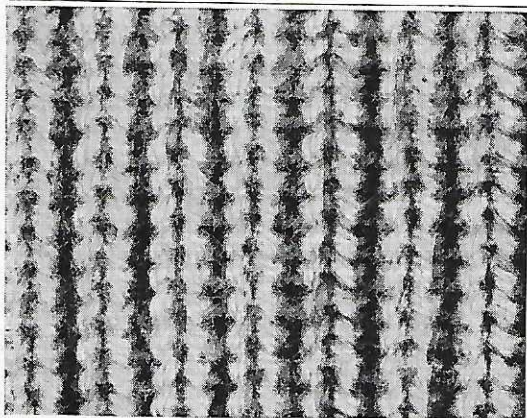
A few examples of stitch patterns

This selection of stitch patterns is intended to give you an idea of the possibilities of your machine. They are normally used for the main part of the garment, and would be preceded by a 1 x 1 welt, the stitches being transferred as required by the pattern, and the Racking Knob position changed if necessary. Where a pattern continues with a 1 x 1 setting, it is of course only necessary to re-set the dials and or Racking Knob as required. If it is desired to start the pattern without a welt, as for jackets etc., the method of casting on is given in brackets in each case. All patterns are started from the right hand side of the machine, unless otherwise stated.

Tensions given are for 3-ply wool, - consult Tension Scale for other settings.

List of abbreviations

Sts. - stitches. Trans. - transfer. Bet. - between. Prog. - progressively. Thro. - throughout. Pos. - position. R. K. - Racking Knob. Circ. row. - circular row. B. B. - back bed. F. B. - front bed. T. - tension. K. Str. - knit straight. Ev. Ndl. - every needle. Ev. Alt. Ndl. - every alternate needle. Rep. - repeat. Re-ar. Sts. Bef. Join. - re-arrange stitches before joining circular hem.



1.

B. B. | . | . | . | . | . | . | . | . | . | . | . | . | . | .
F. B. . | . | . | . | . | . | . | . | . | . | . | . | . | . | .

R. K. Pos. O. Thro.

8 8

N

F

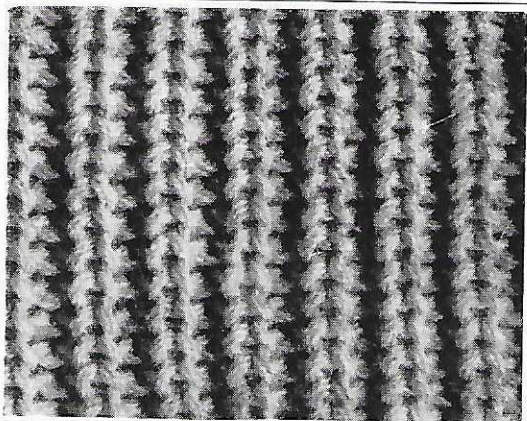
8 8

← Back

(Cast on at T. 10. K. 1. Circ. Row and Join.)

Knit as normal.

Half Fisherman's Rib.



2.

B. B. | . | . | . | . | . | . | . | . | . | . | . | . | . | .
F. B. . | . | . | . | . | . | . | . | . | . | . | . | . | . | .

R. K. Pos. O. Thro.

8½ 8½

F

F

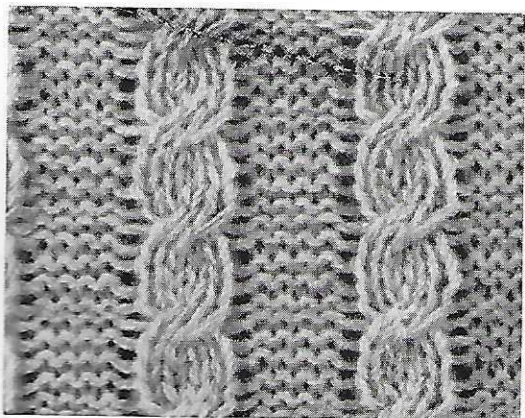
8½ 8½

← Either
Side

(Cast on at T. 10. K. 1. Circ. Row. and Join.)

Knit as normal.

Full Fisherman's Rib.



3.

B. B. | | | . . . | | | . . . | | | . . . | | | . . . | | |
F. B. . . . x x O O . . . | | | . . . | | | . . . | | | . . . | | | . . . | | |

R. K. Pos. O. Thro.

6 6

N

N

6 6

← Front

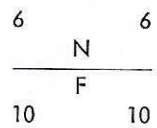
(Cast on 1 x 1. T. 10. K. 1. Circ. Row and Re-ar Sts. Bef. Join.)

K. 5 Rows, using twin Bodkin trans. Sts. marked x onto B. B. now trans. Sts. marked o onto Ndl. thus vacated. Finally trans. 1st. pair back to vacant Ndl. on F. B. Thereby crossing these to form a cable Pattern. Rep. from beg.

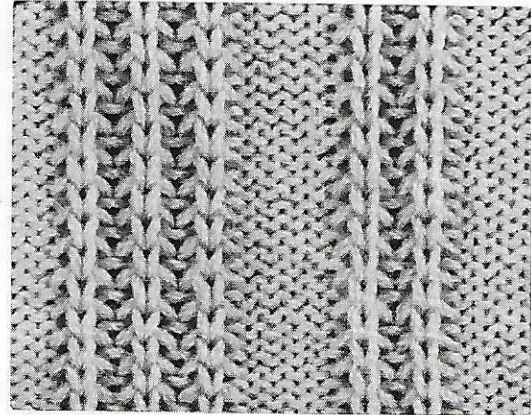
4.

B. B. | | | | | | | | | | | | | | | | | |
 F. B. .

R. K. Pos. O. Thro.



Front →



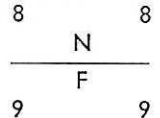
Cast on 1 x 1 T. 10. K. 1. Circ. Row and Re-ar
 Sts. Bef. Join.)

Knit as normal.

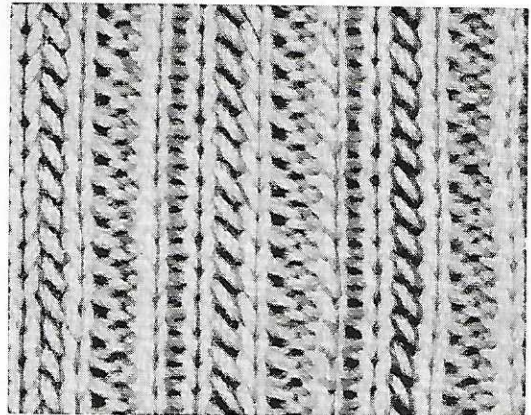
5.

B. B. | . | | | . . . | | | . . . | | | . . . |
 F. B. . | . | . | . | . | . | . | . | . | . | . | . |

R. K. Pos. 1. to begin



Front →



(Cast on 1 x 1 Ev. Ndl. T. 10 K. 1. Circ. row
 and Re-ar. STS. Bef. Join.)

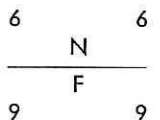
Turn R. K. to Pos. 2 K. 1 row

Turn R. K. to Pos. 1 K. 1 row

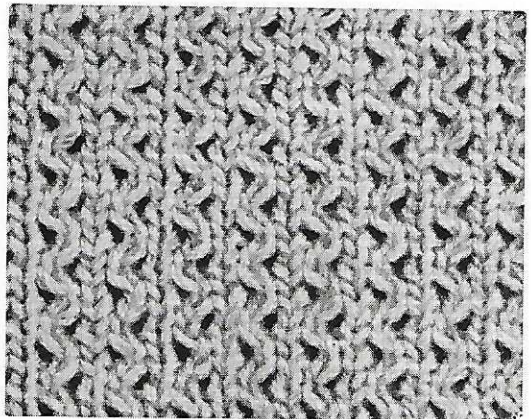
Rep. from beg.

6.

B. B. | | | | | | | | | | | | | | | | | | | | | |
 F. B. | . | . | . | . | . | . | . | . | . | . | . | . | . |



Back →



(Cast on 1 x 1 Ev. Ndl. T. 10 K. 1. Circ. row
 and Re-ar. Sts. Bef. Join.)

Turn R. K. to Pos. 2. K. 2 Rows.

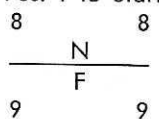
Turn R. K. to Pos. 1 K. 2 Rows.

Rep. from beg.

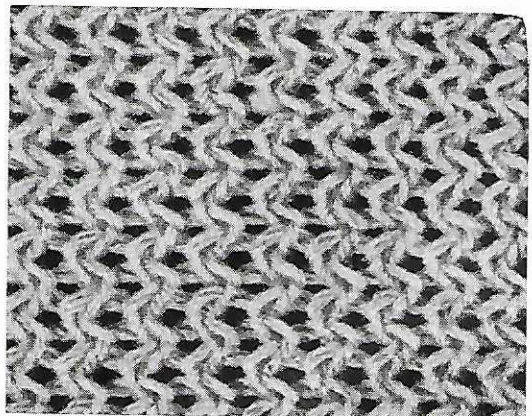
7.

B. B. | . | . | . | . | . | . | . | . | . | . | . | . | . | .
 F. B. | . | . | . | . | . | . | . | . | . | . | . | . | . | .

R. K. Pos. 0 to Cast. on
 R. K. Pos. 1 to Start Patt.



Front →



(Cast on 1 x 1 T. 10. R. K. Pos. 0. K. 1. Circ.
 row and turn R. K. to Pos. 1 Bef. Join.)

Turn R. K. to Pos. 2 K. 2 Rows.

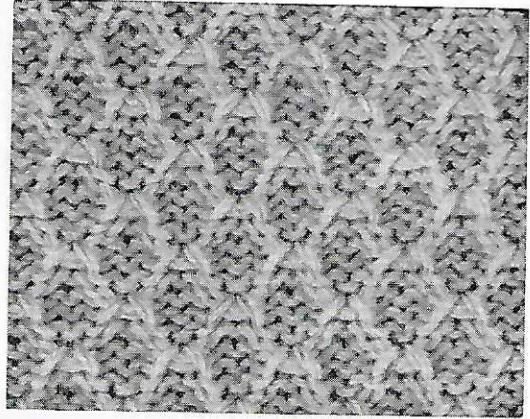
Turn R. K. to Pos. 1 K. 2 Rows.

Rep. from beg.

12.
 B. B. |||||
 R. K. Pos. 0 to Cast on.
 Pattern on single bed only.
 6 6

N

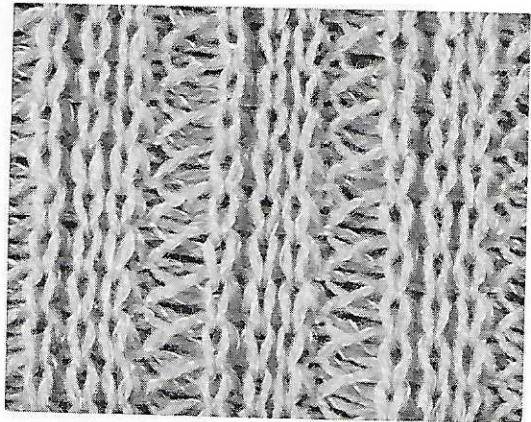
(Cast on 1 x 1. T. 10. K. 1 Circ. row then Trans. all Sts. to B. B. Remove F. B. and fit stripper.) Front →
 K 3 rows.
 Push Ev. 4th Ndl. into H. P. Set A. R. S. to show 'H'. K. 3 rows.
 * Set A. R. S. to show 'R'. K. 1 row.
 Push Ev. 4th Ndl. into H. P. alternating pattern. Set A. R. S. to show 'H'. K. 3 rows.
 Rep. from *



13.
 B. B. |||...|||...|||...|||...|||
 F. B. |||...|||...|||...|||...|||
 R. K. Pos. 1 Thro.
 8 8
 N Thro.
 2 F. 2 O.
 9 9

(Cast on 1 x 1 Ev. Ndl. T. 10. K. 1 Circ. row and Re-ar. Sts. Bef. Join.)
 Pattern using automatic Selector only.

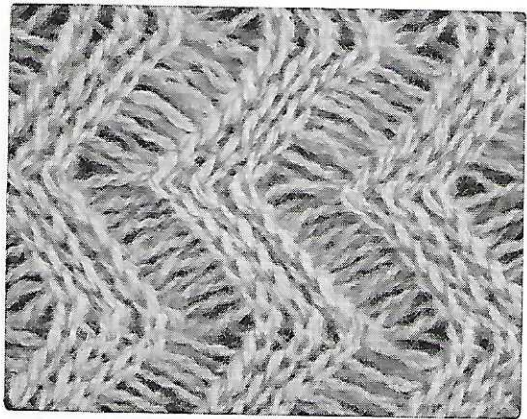
Front →



14.
 B. B. |||...|||...|||...|||...|||
 F. B. |||...|||...|||...|||...|||
 R. K. Pos. 1
 to begin.
 8 8
 F
 F
 8 8

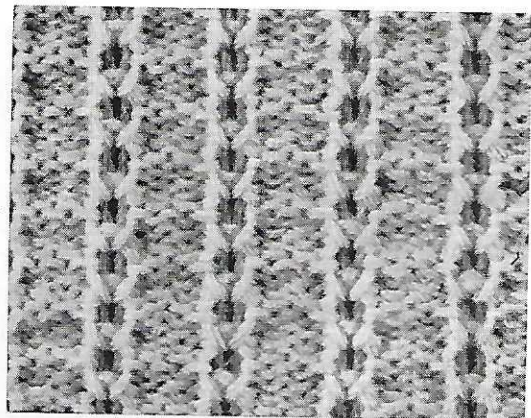
(Cast on 1 x 1 Ev. Ndl. T. 10. K. 1. Circ. row and Re-ar. Sts. Bef. Join.)
 Turn R. K. to Pos. 2. K. 1 row
 Turn R. K. to Pos. 1 K. 1 row 6 times
 K. 1 row straight. Rep. from beg.

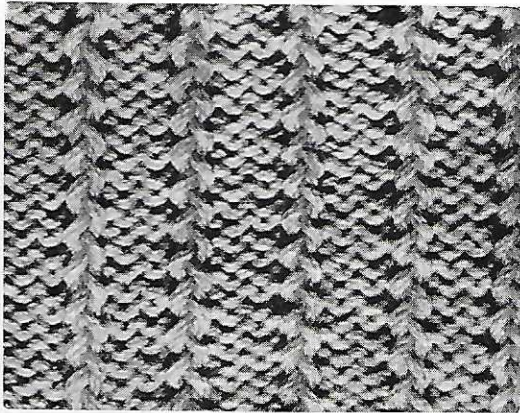
Either Side →



15.
 B. B. |||||
 R. K. Pos. 0. To Cast on.
 Pattern on single bed only.
 6 6
 N

(Cast on 1 x 1. T. 10. K. 1. Circ. row then Trans. all Sts. to B. B. Remove F. B. and fit stripper.) Front →
 K. 3. Rows.
 * Push Ev. 4th Ndl. into H. P. Set. A. R. S. to show 'H'. K. 3. Rows.
 Set A. R. S. to show 'R'. K. 1 row.
 Rep. from *





← Front

16.

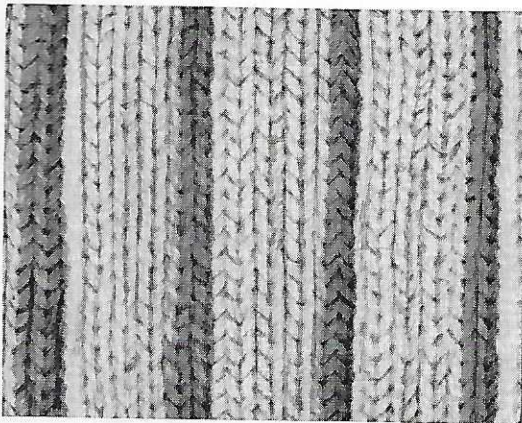
B. B. $\overline{|||||}$
 F. B. $\overline{|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|}$
 R. K. Pos. 1. to begin.

6	N	6

N		

9		9

(Cast on 1 x 1 Ev. Ndl. T. 10. K. 1 Circ. row and Re-ar. Sts. Bef. Join.)
 Turn R. K. to Pos. 2. K. 1 row.
 Turn R. K. to Pos. 1. K. 1 row.
 Rep. from beg.



← Front

17.

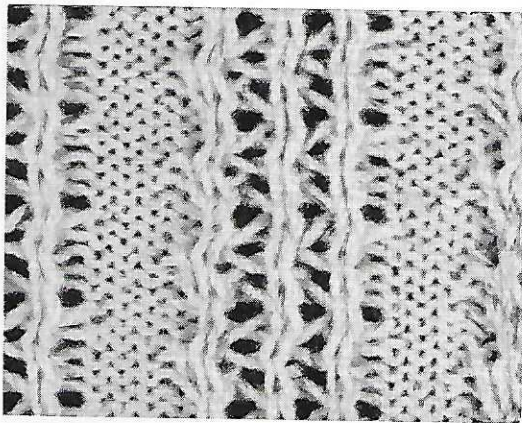
B. B. $\overline{|||||}$
 F. B. $\overline{\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|}$
 R. K. Pos. 1 Thro.

9	N	9

N		

9		9
X		

(Cast on 1 x 1 Ev. Ndl. T. 10. K. 1 Circ. row and Re-ar. Sts. Bef. Join.)
 Knit as normal.
 Permanent pleating.



18.

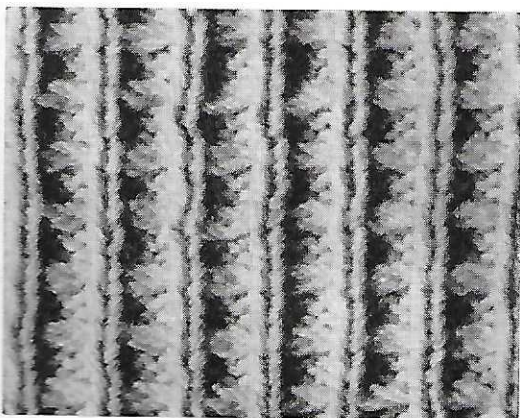
B. B. $\overline{|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|}$
 F. B. $\overline{\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|\cdot\cdot|}$
 R. K. Pos. 0 to Cast on.
 R. K. Pos. 1 to start patt.

6	F	6

N		

9		9

(Cast on 1 x 1 T. 10. R. K. Pos. 0. K. 1. Circ. row and Re-ar. Sts. Turn R. K. to Pos. 1. Bef. Join.)
 Turn R. K. to Pos. 2. K. 1. Row.
 Turn R. K. to Pos. 3. K. 1. Row.
 Turn R. K. to Pos. 2. K. 1. Row.
 Turn R. K. to Pos. 1. K. 1. Row.
 Rep. from beg.



← Front

19.

B. B. $\overline{|||||}$
 F. B. $\overline{|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|\cdot|}$
 R. K. Pos. 1. Thro.

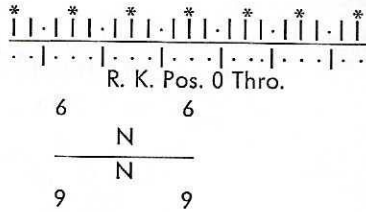
6	4 N 3 O	6

N Thro.		

8		8

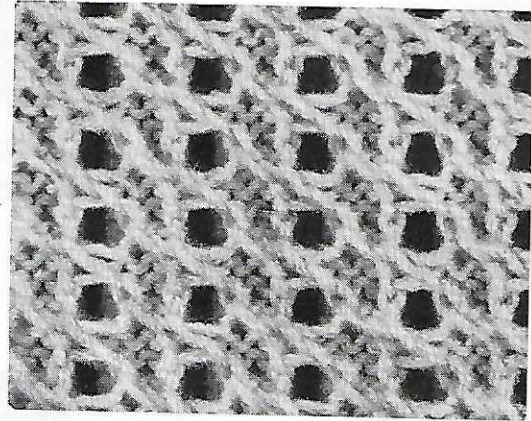
(Cast on 1 x 1 Ev. Ndl. T. 10. K. 1 Circ. row and Re-ar. Sts. Bef. Join.)
 Pattern using automatic Selector only.

20.
B. B.
F. B.

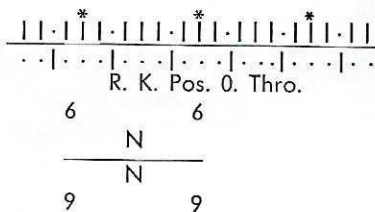


(Cast on 1 x 1 T. 10. K. 1 Circ. row and Re-ar. Sts. Bef. Join.)
K. 4 Rows.
Trans. Sts. from F. B. to the left onto Ndl.
Marked x leaving Ndl. in working Pos. with latches open.

Rep. from beg.

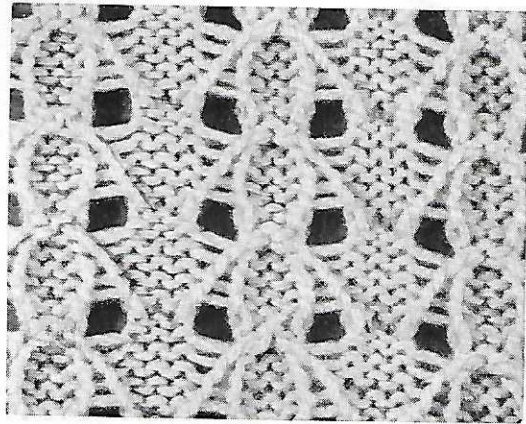


21.
B. B.
F. B.

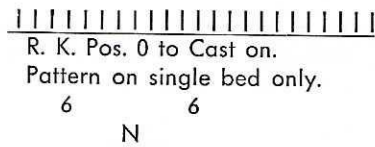


(Cast on 1 x 1 T. 10. K. 1 Circ. row and Re-ar. Sts. Bef. Join.)
K. 6 Rows.
Trans. Sts. from left and right on F. B. onto Ndl. marked x, leaving Ndl. in working Pos. with latches open.

Rep. from beg.

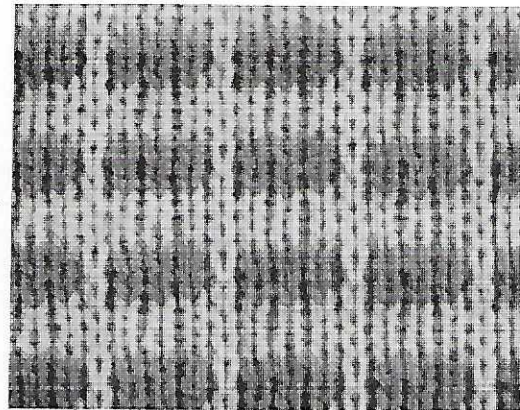


22.
B. B.

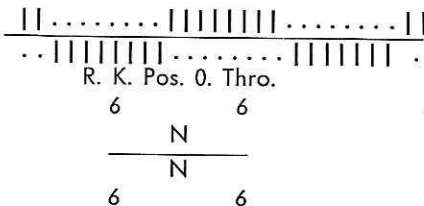


(Cast on 1 x 1 T. 10. K. 1 Circ. row then Trans. all Sts. to B. B. Remove F. B. and fit stripper.)
K. 4 rows with basic colour.
Push Ev. 4th Ndl. into H. P. set A. R. S. to show 'H'.
K. 4 rows with contrast colour.
Set A. R. S. to show 'R'.

Rep. from beg.



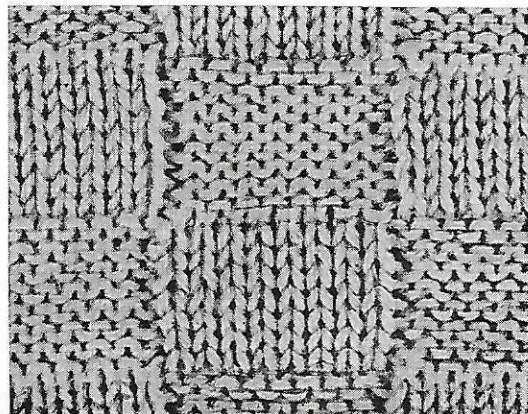
23.
B. B.
F. B.

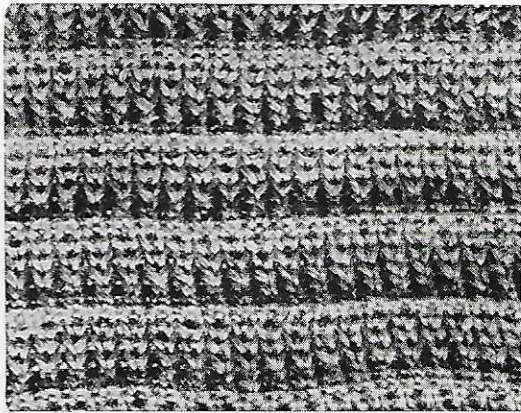


(Cast on 1 x 1 T. 10. K. 1 Circ. row and Re-ar. Sts. Bef. Join.)
Knit 8 rows.
Trans. F. B. Sts. to B. B. and vice versa.

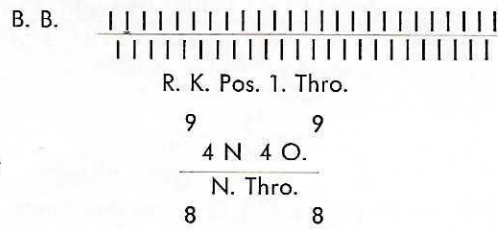
Rep. from beg.

Either Side →





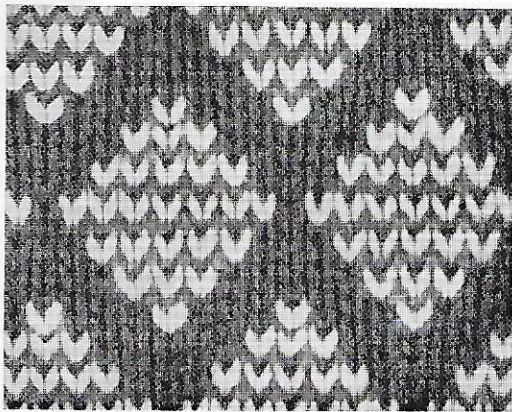
24.



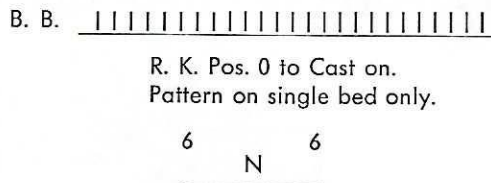
← Front

(Cast on 1 x 1 Ev. Ndl. T. 10. K. 1 Circ. row and Join.)

Pattern using automatic Selector only.



25.



← Back

(Cast on 1 x 1 T. 10. K. 1 Circ. row. then Trans. all Sts. to B. B. Remove F. B. and fit stripper.)

Knit 2 rows with basic colour.

* Push up Ev. 8th Ndl. until St. is behind latch. Lay across latches contrast colour Set automatic selector to 'O'. Take slide across and back again.

Set A. S. to 'N'. K. 1 row with basic colour. Push up 3 needles to form Patt. as illus. and follow as from *.

Rep. until only 1 Ndl. is left in bas. col. Then reverse procedure to form triangle.