

The *Penguin* **HOME KNITTER**

INSTRUCTIONS



Manufactured by NOBEL-PRICE LTD., 28-30 Tavistock Street, Adelaide, South Australia
Australian Patent No. 160,850.

IMPORTANT.

Prior to using your machine, you should observe the following points:

(1) Paraffin treatment of the needle beds.

In order to assure free sliding of the needles, it is essential to treat the beds with paraffin wax. Fix your machine to the table, then rub the surface carefully with a piece of paraffin and polish afterwards with a small brush—**before placing the needles in the bed.** Your beds should now shine like well-polished furniture. The bottom of the grooves must be as carefully treated as the top. Paraffin is the **only** suitable wax.

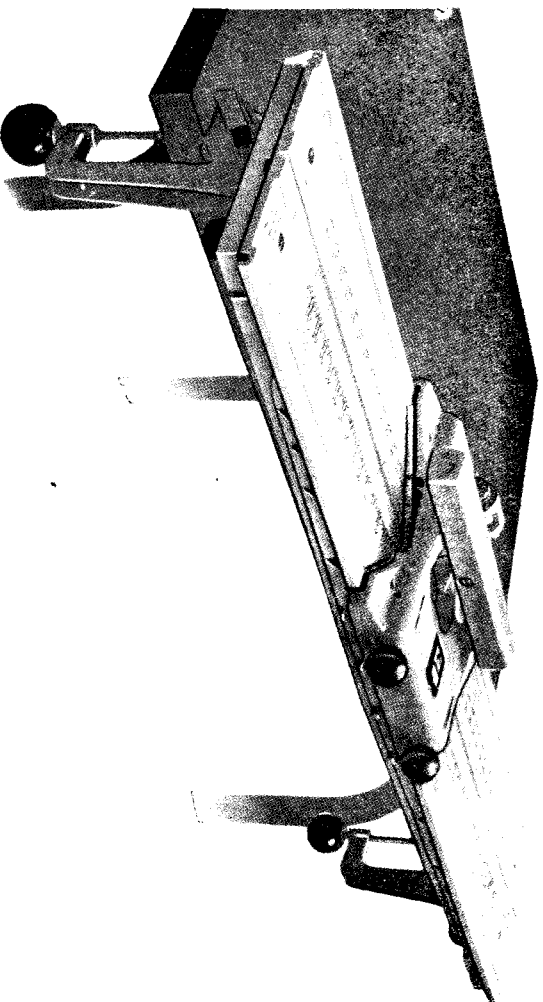
(2) Cleaning of the needles.

To protect the needles against rust during transport, we have covered them with grease which will prevent them from sliding freely and would stain the knitting. The needles have to be cleaned with a piece of linen, ~~or better still, dip the needles in a solution of caustic soda.~~

(3) Paraffin-wax the needle heads.

Having placed the needles in the bed, rub both front and back needle hooks with paraffin wax. It is not necessary to brush off the paraffin wax.

Paraffin wax treatment of the needle bed as well as the needle heads should be repeated from time to time. A machine cannot function without greasing. Paraffin wax is the grease of THE PENGUIN machine.



How to operate the machine.

Fasten the machine to a table by means of the two clamps.

The table should be straight. The clamps should be firmly screwed but not be too tight. You will note that once the machine is thus fixed, the needle beds can be tipped towards the back to enable you to inspect the knitting.

Paraffin wax the needle beds.

This is indispensable to ensure a gentle sliding of the needles, and a long life for the machine.

Set the needles.

In equal numbers to the number of stitches required. Distribute them evenly, right and left from "O" which is the centre of the needle bed (you will then be able to count the stitches more easily afterwards). Place them in the rear bed. They should not lie across the opening between the needle beds.

Thread an elastic thread through the comb.

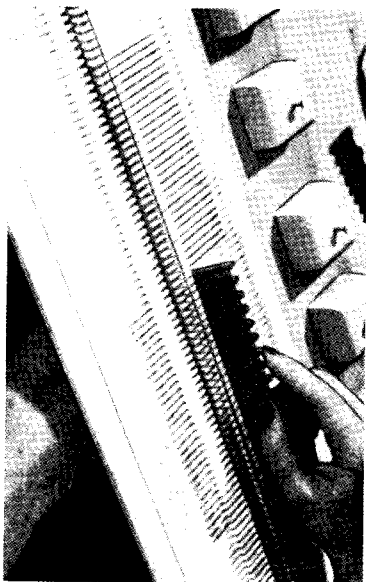
You have two combs at your disposal, one for up to 100 stitches and one for up to 160 stitches. Select the one best suited and thread it with an elastic thread. This thread should not be too taut; it should overlap each edge of the comb by about 4 inches.

Setting the comb in place.

Pass the comb between the needle beds, push needles under elastic and between teeth of the comb so that all needles rest on both beds—elastic above—the middle of the comb corresponding to "O." Slide the needles below the elastic and leave them projecting over the opening between the beds. Let the comb come down—the elastic then rests on the centre of the needle shafts.

Fasten the weights . . .

by fitting their heads into the notches of the comb frame. Arrange them evenly so that the comb rests perfectly level. Usually one weight is required for 20 needles, but additional weights on the comb may, at times, be advantageous. Attach the ends of elastic thread to each extreme weight.



No. 1

Line up the needles (No. 1).
on the back bed. To achieve this, push all the needles by means of the flat rule right up against the raised part of the front bed.

Open the needle latches.

Put back and front cams out of action by pulling the two knobs towards you. Slide the carriage very slowly over the needles; the rear latches are then open. Now push the needles right up against the raised part of the rear bed, so that they line up on the front bed. Again slide the carriage very slowly across. The front latches have thus been opened.

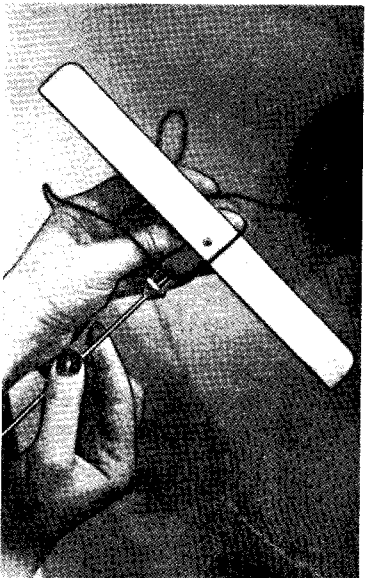
IT IS VERY IMPORTANT that the above instructions are closely followed. If the needles are not carefully pushed **RIGHT UP** to the raised part of the bed, the machine will jam and break needles.

Paraffin wax the needle heads.

Pass the piece of paraffin lightly over the needle heads. It is important to repeat this operation every 30 or 40 rows.

Thread your feeder (No. 2).

Detach the handle from the carriage. Pull the wool through from top to bottom using the comb wire. Replace the handle on the carriage. In operation, the screw head of the handle must be facing you, while the thread comes through the front of the feeder. Let the end of the thread down between the two beds and tie it to one of the weights.



No. 2

Push back the cam knobs.

The cams are now ready to operate the needles.

Adjust right and left tension.

This adjustment is made by the aid of the knobs—on the left for the back bed, on the right for the front bed. **ALWAYS PRESS THE KNOB right in.** By screwing to the right you will loosen your stitch. By unscrewing to the left you will tighten the stitch. The indicator facing the scale changes automatically. Following are some suitable tensions for certain quality wools. These should serve merely as an indication, to be modified according to personal taste and desired effect. It is up to you to choose the most suitable tension to obtain an attractive as well as a lasting garment.

TENSION ADJUSTMENT TABLE

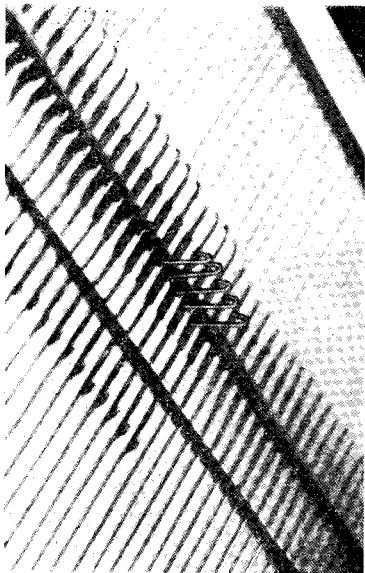
Ply	Brand	Plain	Rib
2	Paton's Silversheen (wool/rayon)	1 or 2	0
3	Paton's Crochet	2 or 3	1 $\frac{1}{2}$
3	Daphne Crochet	2 or 3	1 $\frac{1}{2}$
4	Paton's Fingering (Cairn)	5	3 or 4
4	Paton's Beehive Fingering	4 or 5	3 $\frac{1}{2}$ —4
5	Twinklufte	5 or 6	4 —4 $\frac{1}{2}$
5	Hughes Junior Kwicknitting	6 or 7	4 $\frac{1}{2}$ —5

IMPORTANT—Qualities, brands and ply in various wools differ all the time; therefore, we strongly suggest, before you commence any garment, knit a small piece (using 50 needles and knitting 50 rows) in the chosen pattern. Take it from the machine, leave for a few hours, and then measure carefully. Then decide the needles and rows required for your garment.

How to knit.

Hold the handle in the middle and push the carriage slowly across, holding the strand of wool **LIGHTLY** with the other hand until it has been picked up by the first needle. Then you may let the wool hang freely. Afterwards allow the wool to be slack. On each row, the carriage must go past the last needle. If you go out too far the slack wool must be picked up again by holding the strand in your left hand until the first needle has hooked on. Always remember, slack wool at commencement must be picked up with left hand as described in previous paragraph.

NOTE—At the beginning of each row make sure that you push the handle as far towards your knitting side as it will go, prior to moving the carriage across. If the handle is not pushed hard against one side, the feeder is out of position and you will wonder why you drop stitches.



No. 3

Selvedge weights (No. 3)

When you have knitted about one dozen rows, the selvedge weights must be attached on both sides of the knitting.

- (a) Move up the selvedge weights every 10 to 15 rows.
- (b) The comb with the weights should be shifted up as soon as the tension on the needles appears to be insufficient:

—at that time, the needles becoming too free, have a tendency to rise, and do not keep their position. The length of the knitting which may be obtained without raising the weights shows up in the behaviour of the needles which have a tendency to rise whenever the tension is inadequate. How to move up the comb will be explained later.

ELEMENTARY STITCHES



No. 4

Plain Jersey (No. 4)

If plain jersey is required, it is sufficient to push the needles up to the raised edge of the rear bed with the set-up plate, so that they are knitting on the front bed.

1/1 Band (No. 6)

Commence with all needles on the front bed.

With the 1/1 set-up plate push every second needle on to the rear bed, up to the raised edge of the front bed.

Then move the carriage across as for jersey.

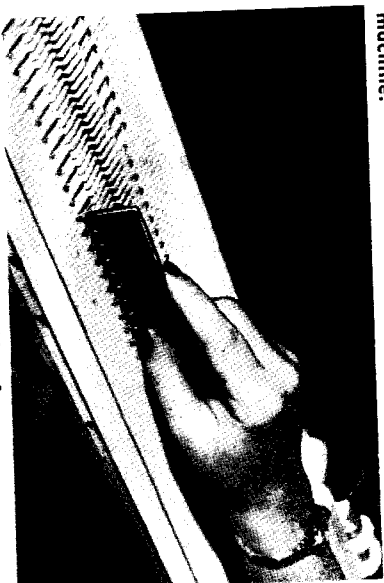
NOTE—Always knit the band $\frac{1}{2}$ to 1 point tighter than jersey.



No. 5

Purl Jersey (No. 5)

The needles are pushed on to the rear bed with the set-up plate. It is advisable to knit approximately 30 rows of this stitch in order to become familiar with the machine.



No. 6

2/2 Band (No. 7)

Have all the needles against the raised edge of either the rear or front bed and with the 2/2 set-up plate push up 2 in every 4 needles so that you have 2 needles on the front and 2 on the back bed. Then move the carriage across.

Jammed carriage (No. 8)

While operating the machine, the following difficulties may arise but can easily be overcome:

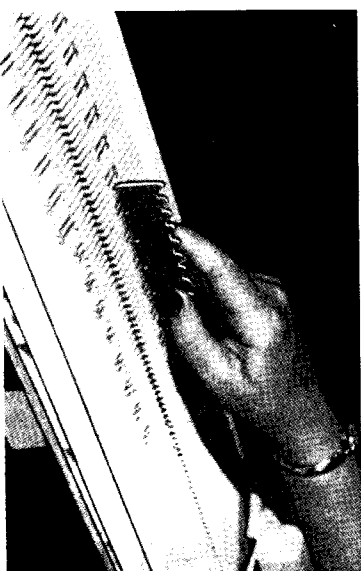
- (1) The carriage becomes jammed.
- (2) A stitch has not knitted.
- (3) A stitch has dropped.

Here is the way to remedy these mistakes.

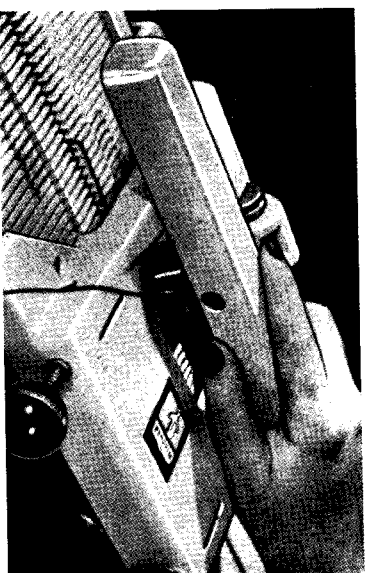
(1) Jammed carriage

A needle has shifted and is sitting between the 2 beds and the open latches jam in the cams.

DO NOT FORCE THE CARRIAGE. Without moving the handle, and leaving the feeder in its present position, take the carriage slightly back to free the needle and replace it with the crochet hook.



No. 7



No. 8

NOTE—Sometimes the end stitch may not knit properly. The needle hook catches the stitch and jams it between the grooves in the bed. This can be rectified by pushing the carriage back slowly, about $\frac{1}{4}$ inch until the offending stitch can be seen. Ease the stitch back underneath the needle and push the needle back into position. Return carriage to original position. See that each stitch forms properly underneath the feeder, and continue knitting.

If you have forced the carriage, take the weights out of the comb, unscrew slightly the 4 small thumb screws facing you underneath the carriage, and draw the carriage holding plate by the 2 little studs towards you. Loosen also the screws at the back to disengage the carriage, then lift it off, **AFTER HAVING TAKEN OFF THE HANDLE.**

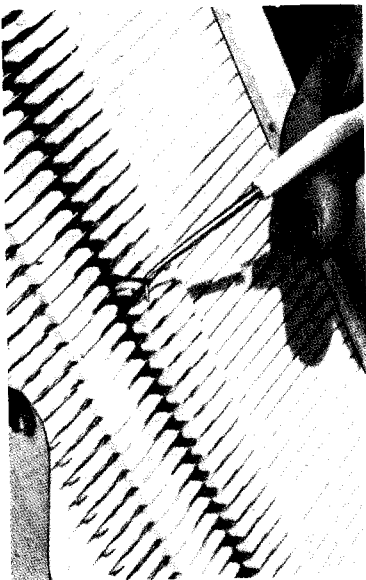
If you are knitting jersey on the front bed, push the needles that have been knitted before the carriage jammed on to the back bed, disengage the cams of the back bed, line up the balance of the needles which have not knitted in the front bed, put the weights back, replace the carriage on the beds, and after having tightened the thumb screws, take up the row where it was interrupted. Then push all the needles on to the front bed again and complete the row.

If you are knitting a pattern which uses needles on both beds, you either have to undo the first few stitches or complete the row by hand, depending whether the carriage got jammed at the beginning or the end of the row.

(2 & 3) A stitch has not knitted. (No. 9) dropped stitch.

This can occur if the slack wool has not been pulled back at the selvedge or if there is not enough weight on the comb. You can do the work of the machine by hand. The previous stitch and the strand of wool which has not knitted are both on the needle. Take the crochet hook, pass the unknitted wool over the open latch and bring back the wool over the stitch. Now replace the needle in its original position. Hang a selvedge weight on each side. Move them up from time to time.

Another instance of a needle not having knitted could be that the wool was too tight at the beginning of the row or the handle was not in its right position. Pick up the stitch with the crochet hook and knit it up as indicated above.



No. 9

How to obtain successful knitting

As we have suggested at the beginning of this book, it is absolutely essential to become familiar with your machine by knitting jersey and bands. The samples which you knit are not wasted because the wool can be used again.

While the loose selvage (which we have indicated at the beginning) is sufficient for the samples, it would not be good enough for a garment. Following are two methods of making a selvage.

Firm band for 1/1 ribs

Place the comb with the elastic thread between the beds. Set the needles in 1/1 rib position, add weights, and make a row of knitting by putting out of knitting action the cam of the needle bed on which the last needle extends—the opposite end to the carriage. In the following row set this cam at work and continue normally in 1/1 rib. When the knitting is finished, remove the elastic thread from the work.

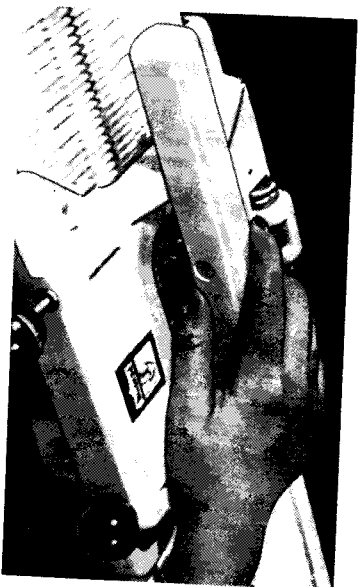
This band is easy to do; it is employed in hosiery machine knitting, and gives a very clean edge with good elasticity.

NOTE—If you wish to make use of this fast cast-on method, but do not require a band at the bottom of your garment, we suggest that you set up your needles as for a 1/1 band. Knit 2 rows, then push ALL the needles on to one bed and continue knitting in plain jersey.

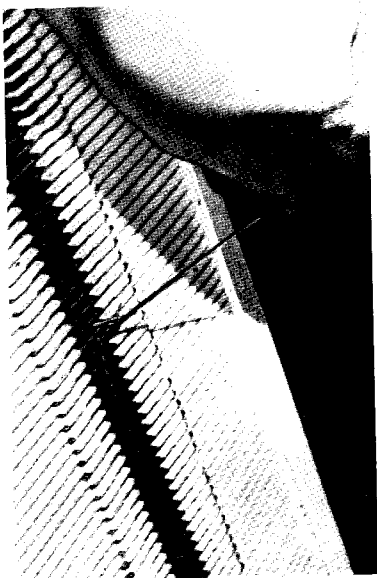
Chain stitch band (imitating a hand-knitted selvage)

Place the needles and the comb with the elastic thread in position. Lift off the carriage after having threaded the feeder and put it on the table. Loosen slightly the two knobs on both ends underneath the front bed. Move the two beds apart, watching that the needles still ride in the grooves of both beds.

With the aid of the latch tool you knit a chain over the needles as follows:



No. 10



No. 11

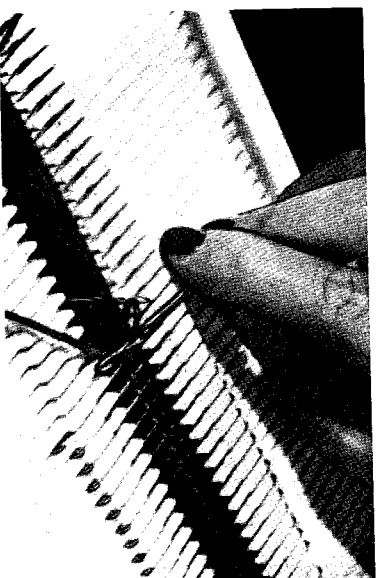
Take the strand of wool which comes out of the feeder tip from underneath the carriage, form a loop which you put on the latch tool, push the latch tool up from underneath the two beds, just before the first needle, making sure the strand of wool slides back behind the latch of the latch tool.

Form a chain by catching the wool coming from your left hand between each needle. (No. 11.)

Put the loop from the latch tool on to the last needle and let the strand of wool pass underneath this by lifting it slightly. (No. 12.)

Close the beds again, tighten the screws, and place the carriage on that side of the bed where you have finished the chain.

Place the needles into working position, open the latches, and knit the first row very slowly because the stitches are fairly tight. When the garment has been completed, remove the elastic thread. This selvedge is identical with a hand-knitted one.



No. 12

Increasing (No. 13)

If increasing on the side, place a new needle with both latches open next to the first needle of the row on the carriage side, letting the strand of wool pass underneath.

Push the head across, but do not stretch the wool much, otherwise the new needle will lift out of the bed.

In order to increase several stitches on the side, you have to cast on the new stitches by winding the wool loosely in an anti-clockwise direction around each needle before placing the needle in the groove. From underneath the bed put a selvage weight on to these new stitches with the last weight hook next to the first needle.

NOTE—This method can only be used to increase UP TO SIX STITCHES on each side.

To increase a larger number of stitches in one operation it is necessary to move up the comb. Place the number of additional stitches in the grooves (LATCHES OPEN). Then bring up your comb in between the needles, thread it with elastic, and attach the weights. Make a selvage on the new needles, as described before and continue knitting.

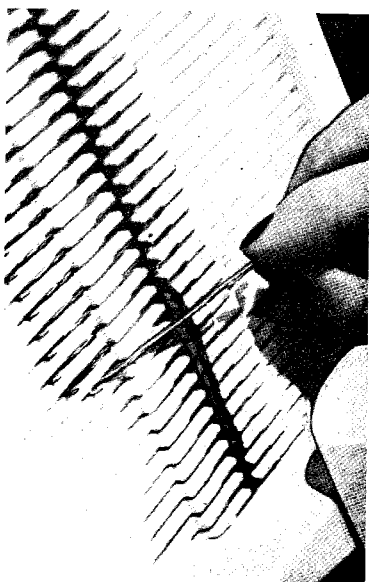
Decreasing (No. 14)

To decrease at the beginning of a row, free the first needle by placing the stitch on to the second needle and after having removed the empty needle, push the carriage across. There will be one stitch less.

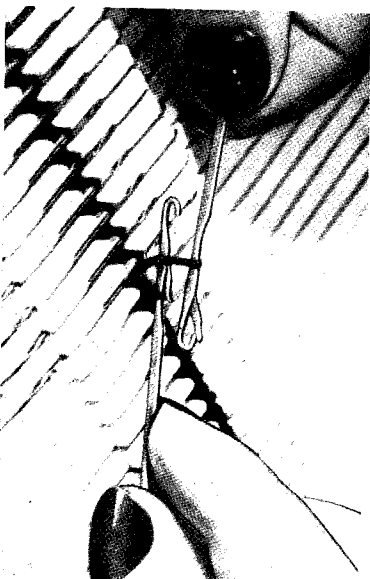
To decrease several stitches, pass the first needle through the loop of the second one, take the strand of wool which comes from the selvage and form a loop through the first two. Repeat this operation until you have reached the number of decreased stitches required. Take out the empty needles. Place the last loop on the following needle before continuing to knit.

Casting off

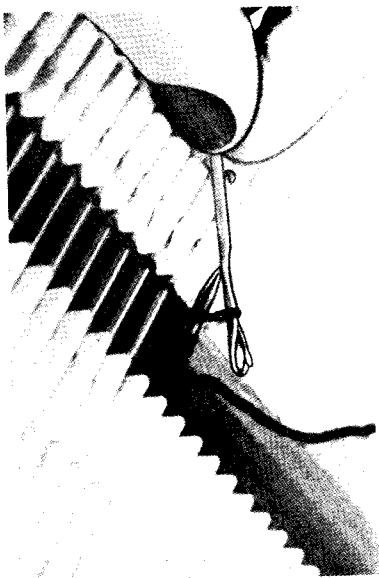
The same operation as for decreasing several stitches until you have cast off the complete row. Break the wool and pass it through the last loop as for ordinary knitting. Naturally, the weights have to be lifted off gradually during this operation.



No. 13



No. 14



No. 15

Holding position (No. 15)

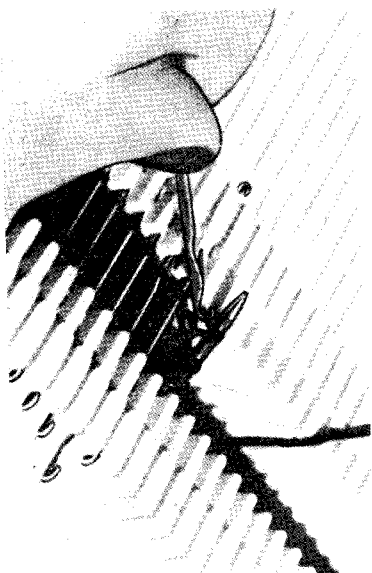
In the course of the knitting it happens that some stitches have to be put into holding position. For instance, when working the neck where one side is knitted after another.

To achieve this, lift off the carriage, push all the needles against the raised edge of the rear bed (if they are not already there), then part the two needle beds as for chain casting-on (described on page 8).

With a stitch holder (or a long thin wire) take all the stitches you require to be held from the needles one by one, releasing the needles progressively. The ideal stitch holder is a very large safety pin. Whenever the number of stitches to be held have been removed from the needles, close the stitch holder to prevent dropped stitches, and lower it under the needle beds. Tighten the beds and remove the weights from under the stitches being held, so that the comb may rest in a horizontal position, and thus ensure even knitting on the remaining stitches. Continue to knit on these stitches.

To return the stitches from the stitch-holder to the needles, release and draw apart the two beds. Take each stitch from the stitch holder with the needles to be replaced, one by one, and put back individually in the grooves of the needle beds. Hold the stitch holder almost vertically between the two beds to avoid losing stitches. (No. 16.)

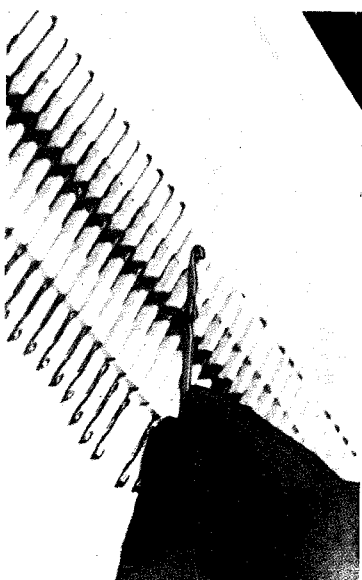
If the work is in jersey, it is not necessary to remove the stitches on to a stitch holder if only a few rows have to be made on the other needles. In this case, you need only push back the needles you require out of action by towards the other bed, and to put the cam of this bed out of action by pulling the knob so as to bring the indicator on the letter "A." Place a selvage weight on the last stitches being made on the side of separation.



No. 16

Round buttonhole as used in babies' garments (No. 17)

To make this small round buttonhole, transfer a stitch from a needle to the one on the right, as for lace patterns, then the stitch from the following needle to the one on the left. Place the two empty needles back into their grooves, one extending over the rear bed and one over the front bed. The front bed needle must be placed on the side nearest to the carriage. Knit two rows, then put the needles back into their normal place. The effect will be as in normal hand knitting, you had cast off two alternate stitches, one purl and one plain.



No. 17

An alternative way is to replace the needles into their original position, knit one row, then turn one of the needles in the other direction. This twists the yarn so that, in the following row, the same effect is obtained.

Vertical buttonhole

As in hand knitting, knit a few rows on the end needles, leaving the remainder at rest. Then draw the yarn down into a long loop between the last inside working needle and the first non-working one; knit the same number of rows on the other stitches and, thereafter, resume working on every needle. Cut the loop and secure the ends.

Horizontal buttonhole

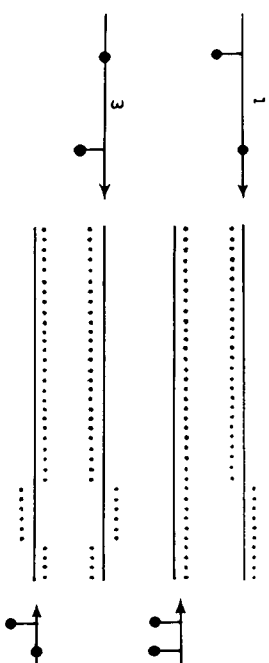
Cast off four or five stitches where the buttonhole has to appear (see decreasing). Replace the needles in the grooves and push the carriage across.

The strand of wool passes over the needles. Turn every other needle in the opposite direction to twist the wool so that the stitches are formed in the following row. Put a selvedge weight on these stitches.

Re-enforced buttonhole

The following diagram is that of operations required to produce a six-stitch buttonhole commencing four stitches from the right selvedge. This buttonhole is made on plain fabric as follows: Transfer the needles to the back-bed, knit one row of purl for the folding of the hem, and then return the needles to the front bed.

Proceed according to the diagram in which the selvedge is to the right. The large dot in the arrow represents the knob of the cam working, and the dot set aside represents the knob of the cam out of action.



Place a selvedge weight on the six plain stitches, knit six rows of jersey and fold back. Break the wool.

Put back the six needles into the grooves, cast on a chain with the latch tool and hang on a selvedge weight.

Knit six rows of jersey on the six stitches by leaving the cams in the preceding position. Then for the folding of the hem, knit one row purl:



Break the wool and place all the needles on the front bed and continue to knit, after having, of course, pushed back the front cam.

Pocket

This is made like the above buttonhole only with a greater number of stitches. After having made the first hem, replace the needles, cast on a chain and knit the number of rows required for the depth of the pocket.

Do not knit the row of purl but simply bring the other needles on to the front bed and continue to knit.

Selvedge

After you have knitted about 8 inches, the needles on both sides of the garment have a tendency to lift up, because the knitting is less stretched on the edges than in the middle, and the first few stitches may not knit. It is therefore necessary to put a selvedge weight on both sides. Push it up from underneath the bed and hang it on the first five stitches. Move them up from time to time.

Moving up the comb

Having knitted a certain length you will find that the weights do no longer have their full effect on all the stitches. It is then essential to move up the comb.

Remove the weights and take out the elastic thread to free the comb. Bring the comb up between the needles and thread it with elastic (each needle has now a loop of wool and elastic over it). Attach the weights and tie the elastic to each end weight. To disengage the comb, remove the elastic.

Changing of the wool

Knots will not pass through unless they are very tight and the ends cut off short. However, a knot on the face of the garment gives a bad impression, and we would advise you to note the following instructions:

When you come to the end of a ball of wool and you have a strand left about twice the length of a row, knit one more row then knot the beginning of the new ball to end of the strand and pull this knot through the feeder. With the crochet hook you pull the strand down between the 2 beds and make a loop that the knot cannot get into the needles. Hold loop down with one hand so that you do not come in with the loose thread to commence a new row. When the garment has been completed, cut the loop and take the ends into the side selvedge.

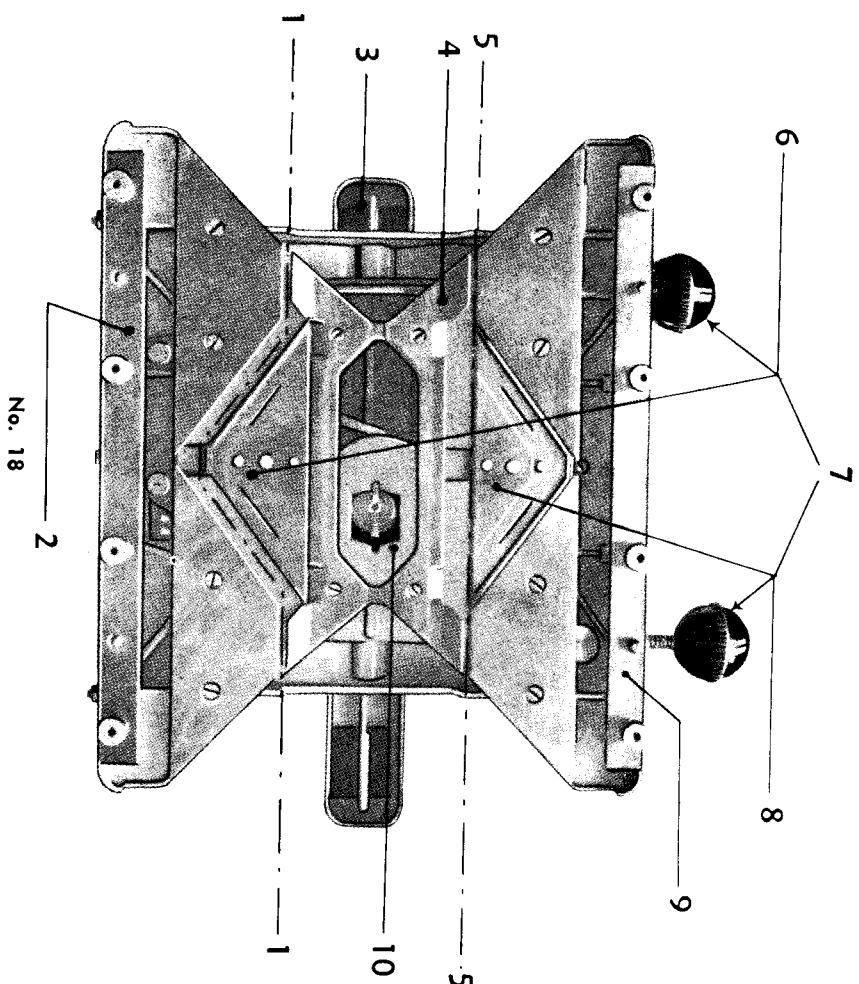
Stripes

Follow the same operations as for changing the wool, only threading a different colour in the feeder each time.

Fisherman's rib

Put the needles into the grooves in even numbers and place them in a 1/1 position. The Fisherman's Rib is obtained by working the needles of one bed in one direction and those of the other bed in the opposite direction.

For this you only need to disengage every other cam, altering it each row. The last needle in a row must always be working. For instance, if the carriage is on the right side and the last needle on the left overlaps on the rear bed, one has to leave the back cam in operation and pull out the front cam knob to knit the row from right to left. Coming back, push this button in again and pull out the back cam. To obtain a good Fisherman's Rib, the tension must be loosened as much as possible, that is, put the tension indicator on "loose."



Maintenance (No. 18)

Occasionally, turn the carriage upside down in order to wipe the cams with a clean cloth to remove the paraffin wax which may have accumulated.

The beds should be paraffin treated regularly to assure smooth running of the needles.

To clean the machine, brush the beds with a small hard brush to remove clots of paraffin wax from the grooves and polish them with a cloth lightly dipped in paraffin oil. Clean carefully and paraffin wax treat again. Now and then the mobile plate underneath the carriage should be lubricated.

- (1) Needle Passage.
- (2) Back carriage holding plate.
- (3) Handle.
- (4) Needle latch opener.
- (5) Needle passage (not knitting).
- (6) Rear Cam (operating).
- (7) Tension adjusting knobs.
- (8) Front cam (non-operating).
- (9) Front carriage holding plate.
- (10) Sliding guard plate.

Fancy Stitches.

Now that you have learned how to knit jersey and bands, we shall show you some fancy stitches, which usually contain plain and purl stitches in the same row. The patterns we describe are made with the carriage in its usual position as for jersey work, without having to manipulate the various adjusting knobs.

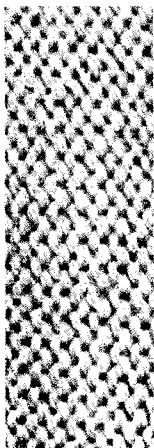
To simplify the method we shall give you the instructions in diagrams. When you knit plain jersey all your needles overlap in the front bed and the carriage is pushed alternatively from right to left and left to right. These 2 movements of the carriage are indicated by 2 arrows which are shown on either side of a line representing the centre of the 2 needle beds, and the dots stand for the overlapping needles. We have then:



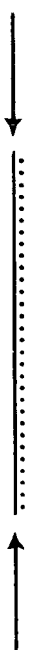
Plain Jersey:



To make a purl jersey, push all the needles over on to the rear bed. See following diagram.

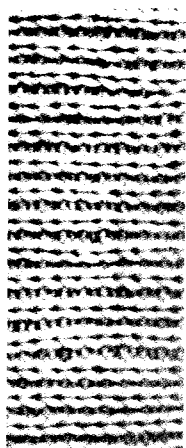


Purl Jersey:



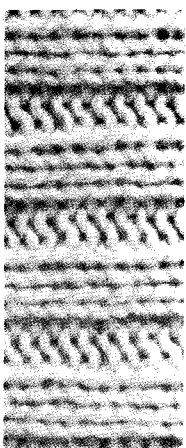
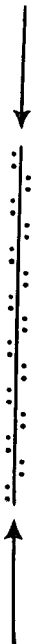
For a 1/1 band you simply push in every other needle on the front bed, with your 1/1 set-up plate. The movements of the carriage are the same as for jersey, except that the stitch must be tightened.

1/1 Band:
Tight Tension.



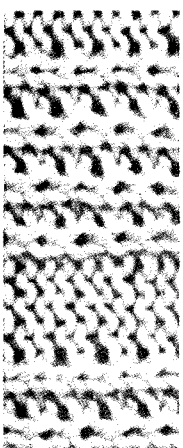
In the same way, we note:

2/2 Band:
Tight Tension.

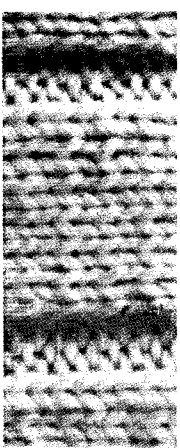


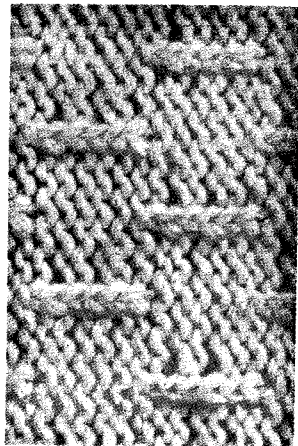
Here are some stitches for bands for which the position of the needles need not be modified for the 2 movements of the carriage. You can thus create an indefinite number of variations.

Hunting stitch:
Tight Tension.

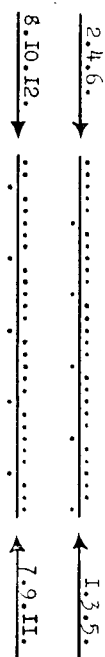


Flat band.

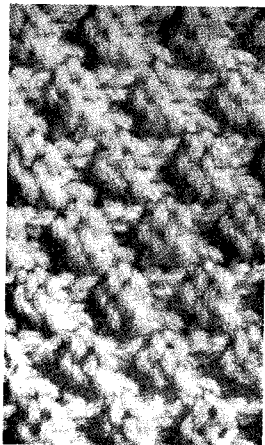




Caterpillar Stitch:

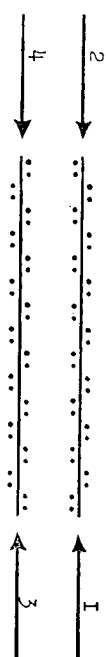


For other stitches the position of the needles must be changed after one or more rows. For instance, for the "caterpillar stitch" one has to do 6 rows in a certain position and 6 rows in another position. Note the number of the row to be knitted in one direction is indicated on the arrow. (e.g., 2,4,6. in one direction and 1,3,5. in the other direction.)



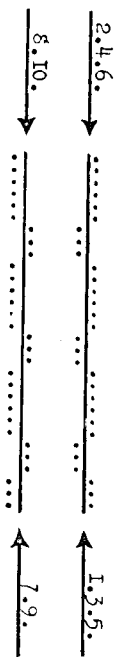
Fine Basket Weave:

Tight tension.



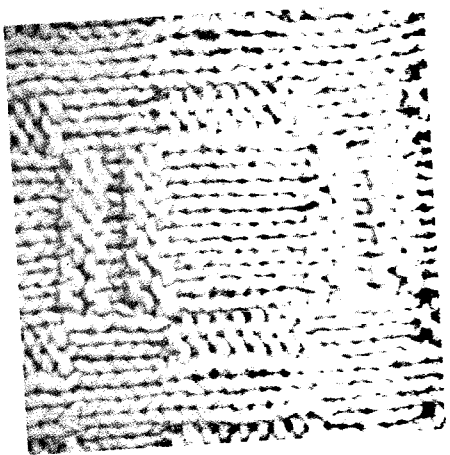
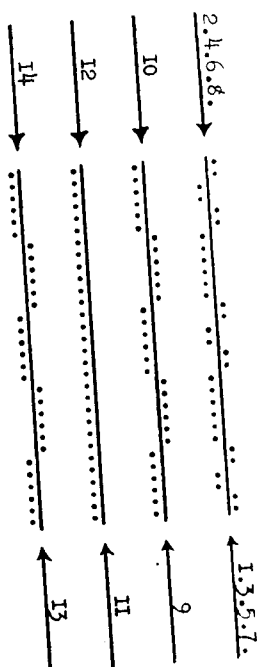
For the following stitch 6 rows are knitted with the needles in one position and 4 rows in the opposite position.

Fancy Basket Weave.

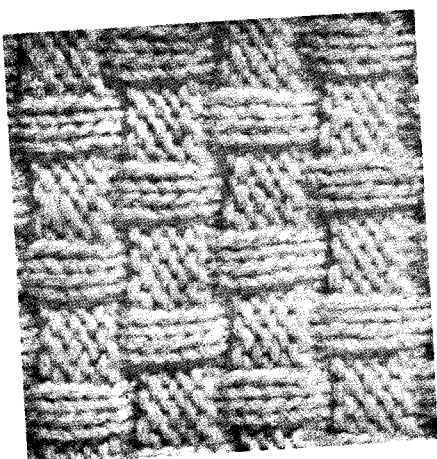
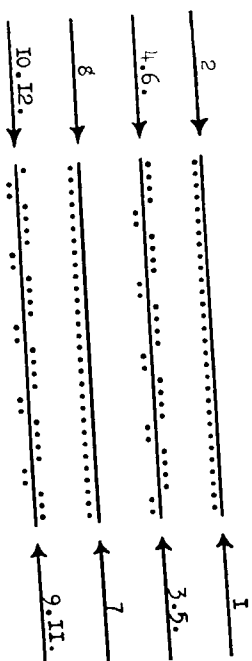


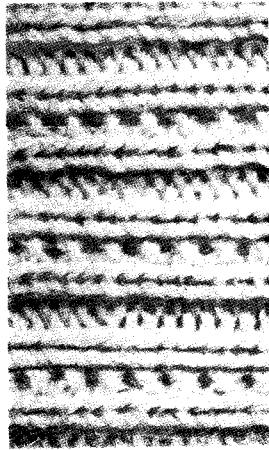
Some variations on these stitches:

Window stitch

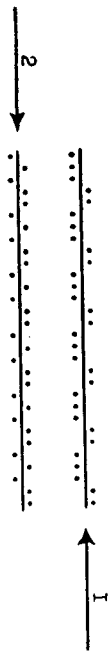


Large basket weave.

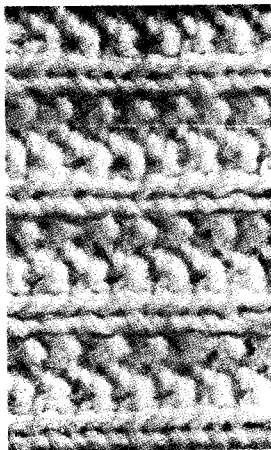




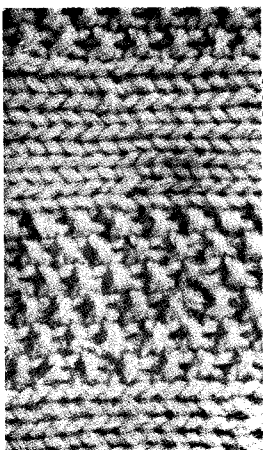
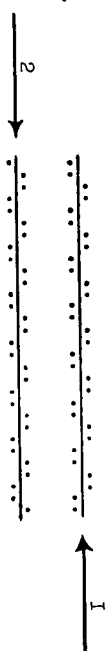
Purled band.
Tight tension.



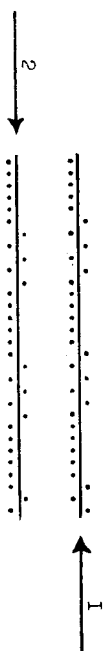
Here are a few stitches where you have to change the position of some of the needles for each row.



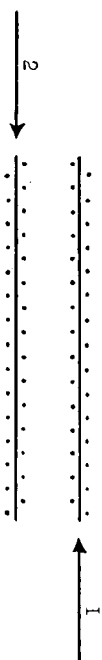
Imitation Fisherman's Rib.
Tight tension.



Spotted stripes.

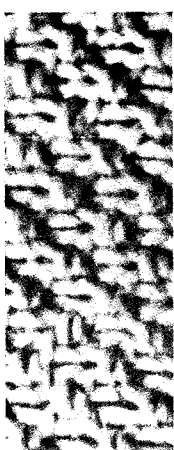
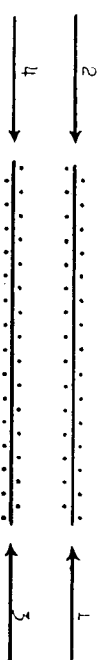


Moss Stitch.
Tight tension.



You will notice that for moss stitch, the back needles come forward in the second row while the other needles are moved in the opposite direction. To make these two operations we advise you to use the 1 / 1 set-up plate, placing it against the overlapping needles on either side, to line them up against the raised edge of the bed. For the double moss stitch, you do the same operation every two rows.

Double Moss Stitch.
tight tension.



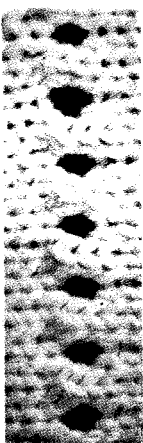
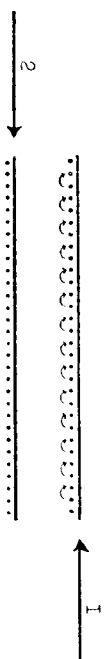
Lace patterns.

To make a hole, it is sufficient, prior to pushing the carriage across, to shift a stitch from one needle to the next and place the empty needle in its groove again. When the row has been completed, you will have a strand of wool over the empty needle and two stitches on the next needle. You can now make any amount of combinations of lace patterns. Following are some instructions for some lace patterns, always on the basis of jersey and plain and purl. The small curved arrows indicate the shifting of stitches before pushing the carriage across.

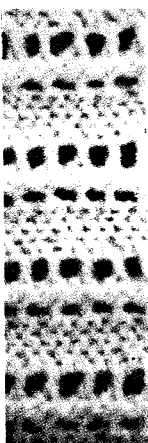
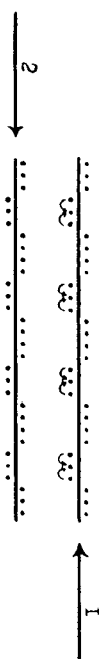
If you make the holes on a plain and purl base, do not tighten the tension as much as for a band, as it would be too difficult to transfer the stitches from one needle to another.

When you have completed the transfer of the stitches, push the carriage gently across, because your stitches are a little tight and your needles have to go through two or three loops according to the pattern.

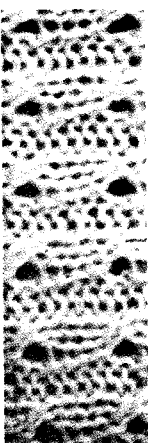
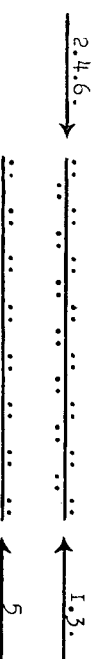
Single hole.



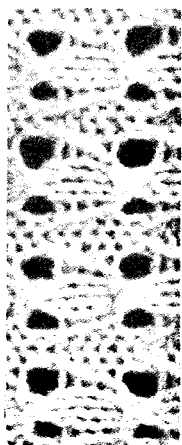
Ladder stitch.



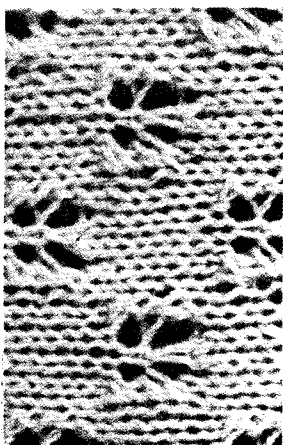
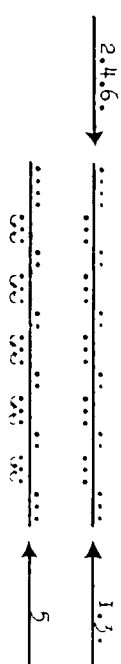
Purl chain.



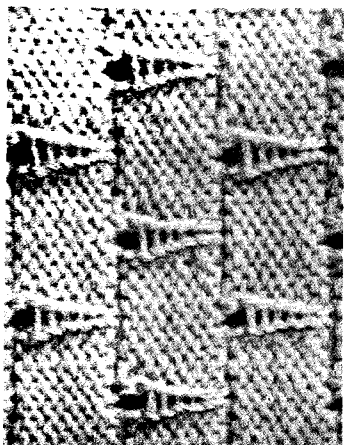
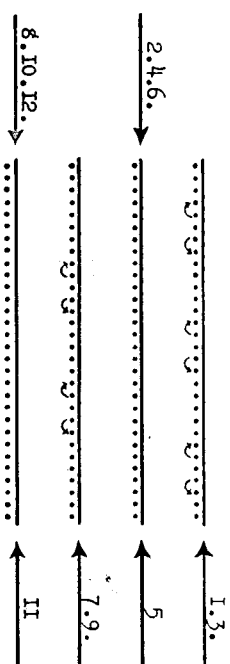
Fairly loose tension.



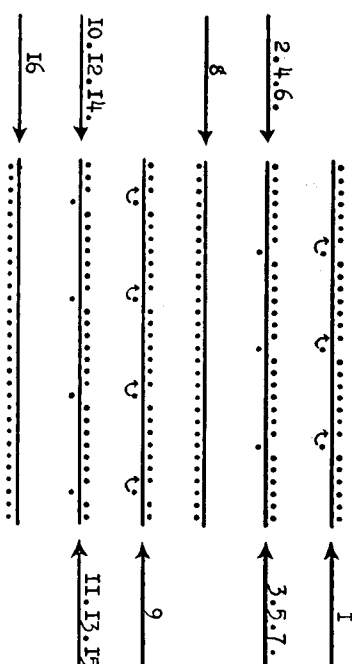
Bell stitch.



Butterfly stitch.

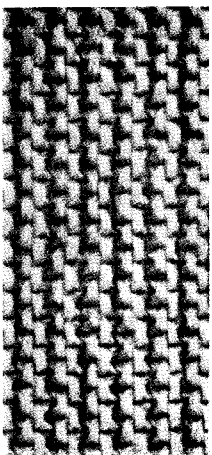


Eiffel Tower.

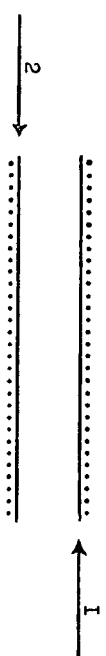


The garter stitch and its derivations.

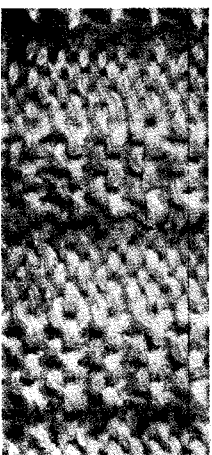
The garter stitch is made up of alternate rows of plain and purl jersey. It is therefore sufficient, after each row, to push the needles from one bed on to the other, with the flat set-up plate.



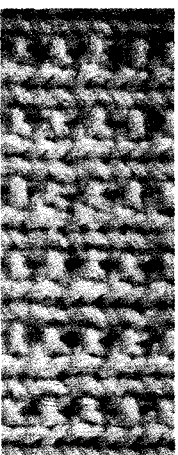
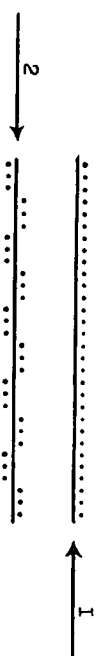
Garter Stitch.



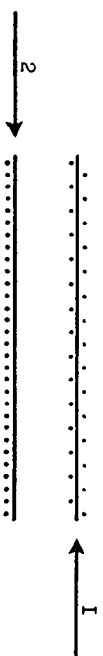
To make a ribbed garter stitch, you proceed as follows: After one row of purl jersey from right to left, you move forward three needles in every six on the front bed to knit the second row; after this has been completed, you push all the needles on to the rear bed again to repeat the first row.



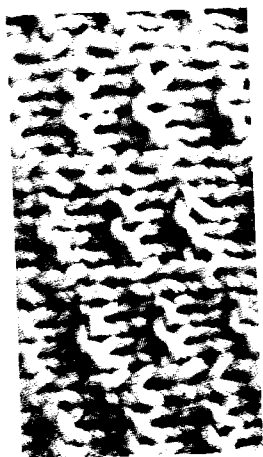
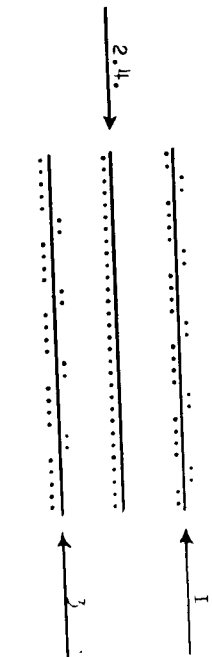
Large Moss Rib.



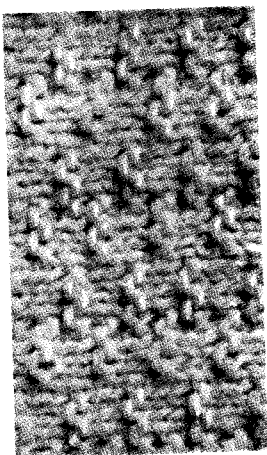
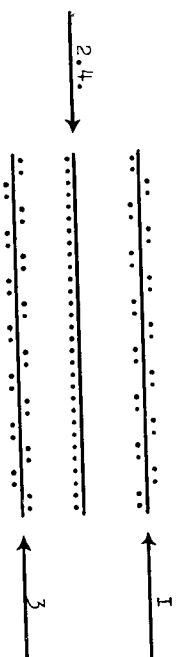
Fine Moss Rib.



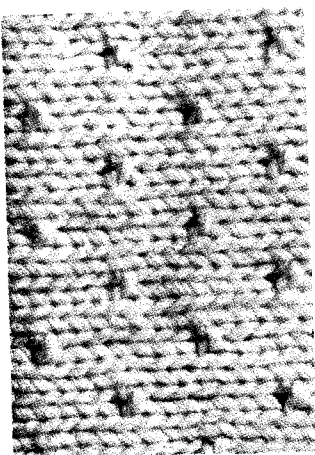
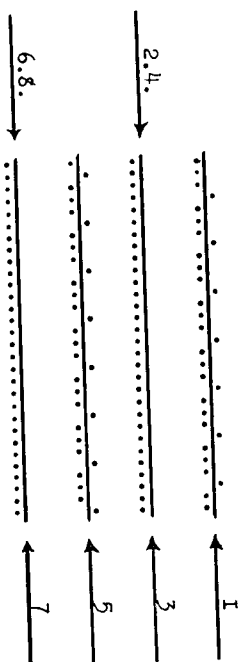
Ocean Wave stitch.

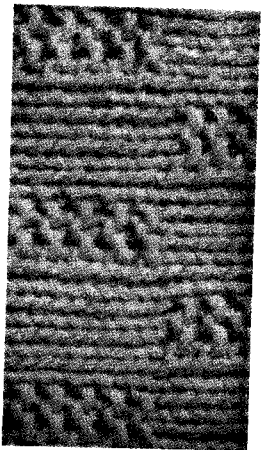


Double Dots.



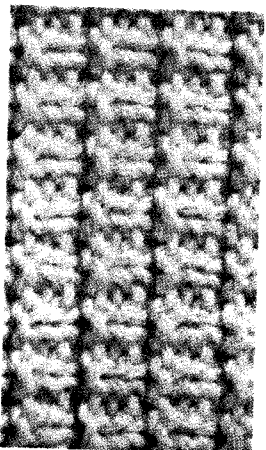
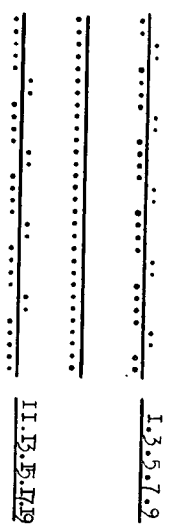
Single Spots.



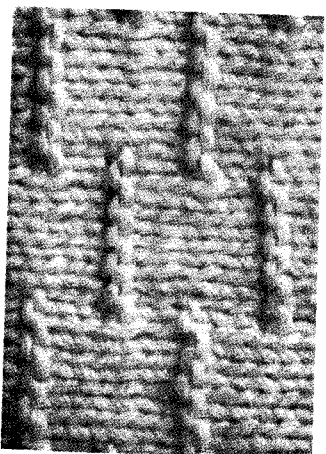
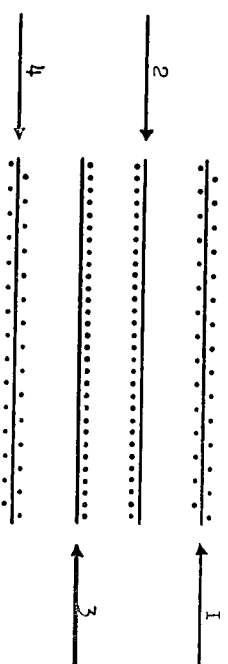


Panel stitch.

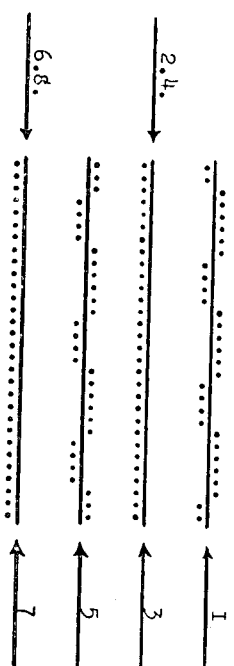
Even No-
Rows



Border stitch.



Horizontal caterpillar
stitch.

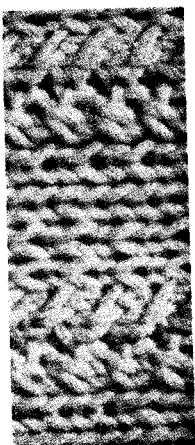
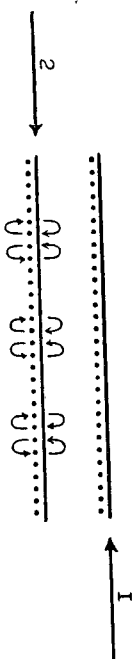


Cable Stitches.

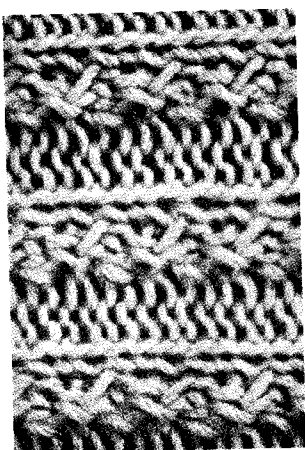
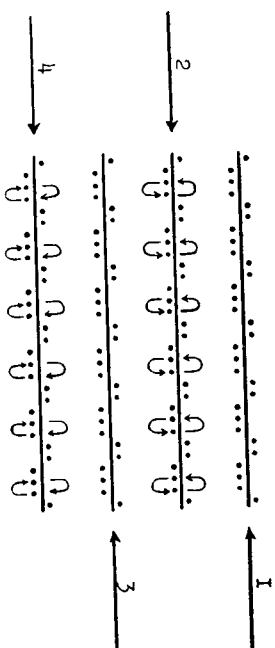
In order to cross two stitches, one has to take the two respective needles on each side of the bed and cross them. Replace the two needles in their original order and make sure the latches are open. Push the carriage gently across, because the crossed stitches exercise a greater tension on the needles.

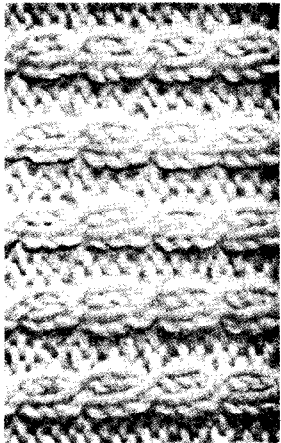
Following are some cable stitches and the crossing of the needles is indicated with small arrows:

Flat cable.

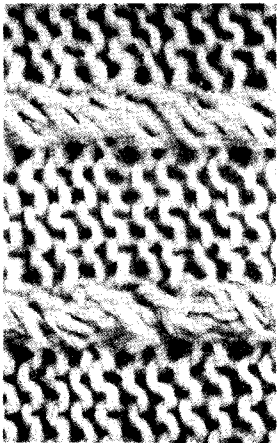
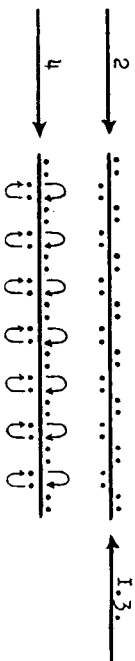


Cable rib, tension not tight.

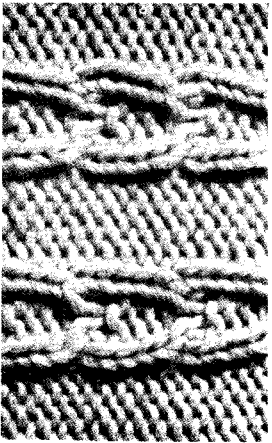
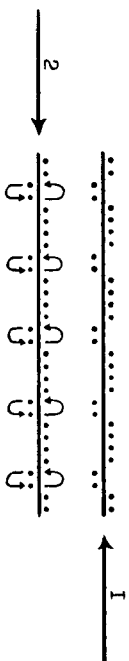




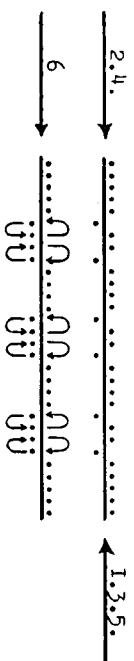
Single cable, tension not tight.



String cable.

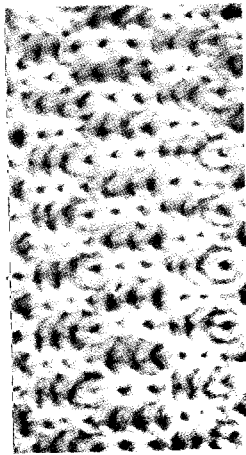


Chain cable.

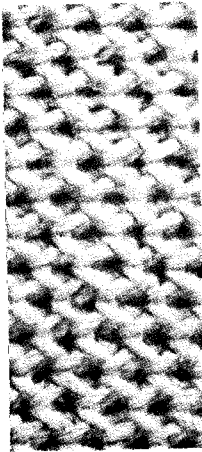
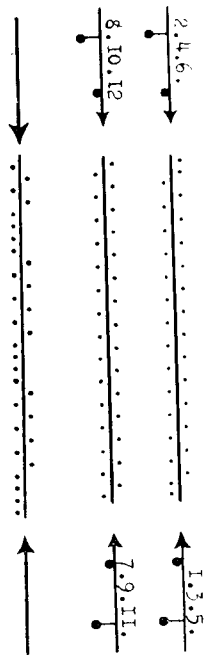


The Fisherman's Rib and its Derivations

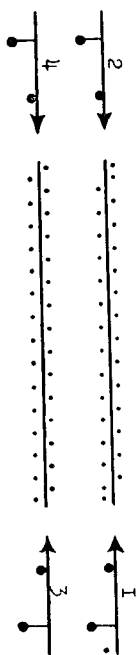
You will remember the description of the fisherman's rib on page 14. We now give you some derivations. They are carried out with one of the cams not operating. The black dot on the arrow represents the knob of the operating cam, the diverted point represents the non-operating cam.



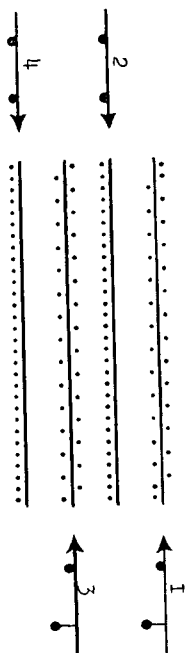
Fancy cardigan stitch,
loose tension.



Pigeon-hole stitch,
loose tension.



Honey-comb stitch,
loose tension.



How to adapt hand-knitting patterns to the "Penguin" machine.

If you wish to knit yourself a garment on the Penguin machine, for which you have found a pattern and instructions in a magazine, it is necessary to convert the inches into rows of knitting, because it is rather difficult to measure the garment while it is being knitted. Having chosen the wool and the stitch, you knit up a sample of 30 needles by 30 rows. Then count the number of rows and the number of stitches in a square inch.

After this, it is sufficient to make a pattern of the garment, with your measurements, and enter on to this pattern all the instructions which will serve you during the course of your knitting.

As an example, we shall take a lady's pullover, which will be described in detail in the attached pattern pamphlet.

Knit a sample in jersey stitch, Paton's Cairn Fingering 4 ply. It will give you 8 stitches and 13 rows per inch on tension 3. The front pattern around the waist is 16 inches. Therefore, one has to cast on $8 \times 16 \text{ stitches} = 128 \text{ stitches}$.

Bust measurements are $19\frac{1}{4}$ inches, i.e., $8 \times 19\frac{1}{4} = 154 \text{ stitches}$. Consequently we have to increase on each side 13 times to obtain the extra 26 stitches.

There are $9\frac{3}{4}$ inches from waist to armhole, that is $13 \times 9\frac{3}{4} = 126 \text{ rows}$. Thus, the increase has to be made every 9th row. To facilitate the work, we shall increase 13 times every 8th row, which will be 104 rows, then 22 rows straight.

In the attached pattern pamphlet you will find some classical designs with detailed instructions.

We would advise you to make a paper pattern of the actual size and to rewrite the instructions on there, with the exception of the large figures which represent the dimensions.

You could then leave your work at any time, just making a sign on your pattern where you left off.

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