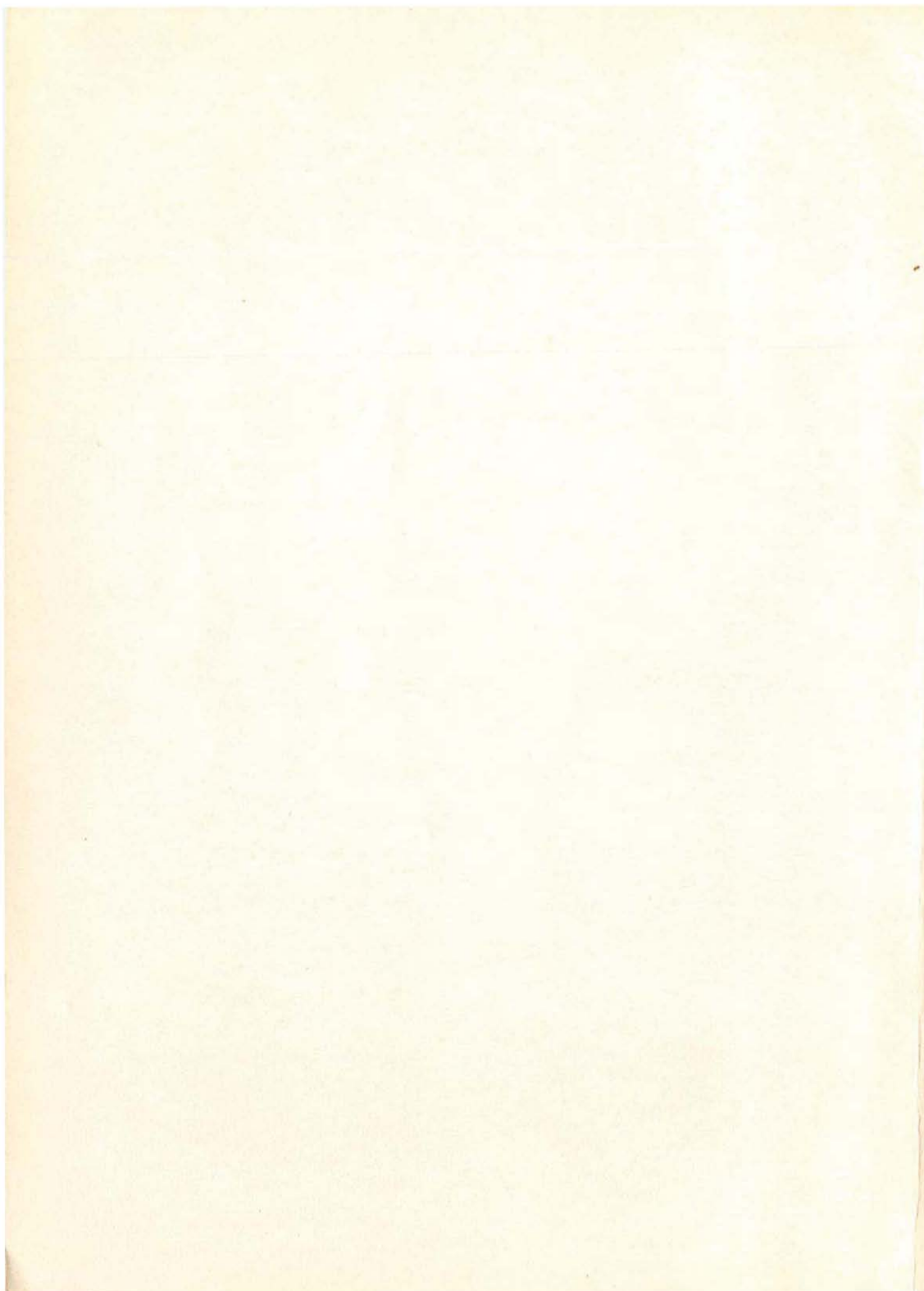




Knitking
the new modern handknitter

R I B B I N G A T T A C H M E N T
for KNITKING "AUTOMATIC"



INTRODUCTION

The Ribbing Attachment for the KNITKING "Automatic" will appeal to all those Knitkings fans who are particularly ardent knitters or who knit for professional purposes. Although the operation of the "Automatic" Ribbing Attachment is basically very simple, it requires a few manipulations which must be well mastered in order to be able to use it to its full advantage. It is essential to follow the instructions in this manual carefully and to be, in the first place, thoroughly familiar with the Knitking "Automatic" before attempting to use the Ribbing Attachment. This Instruction Manual is, therefore, planned and written bearing this fact in mind.

The first part of this manual deals with the relevant technical details while the second part explains the principle of automatic ribbing.

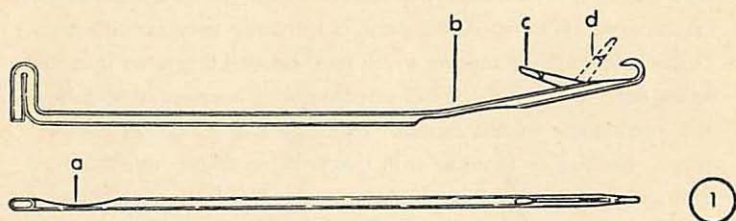
The Index will be found on the last page.

I. TECHNICAL SPECIFICATION

Description of the "Automatic" Ribbing Attachment

As on the Knitking "Automatic" (hereinafter called basic machine), the needlebed of the "Automatic" Ribbing Attachment (hereinafter called ARA) also consists of a number of highly resistant plates which are held in place on the metal base by two slider rails.

The reverse side of the ARA is provided with two suspension bolts to fix it on to the basic machine (fig. 2).



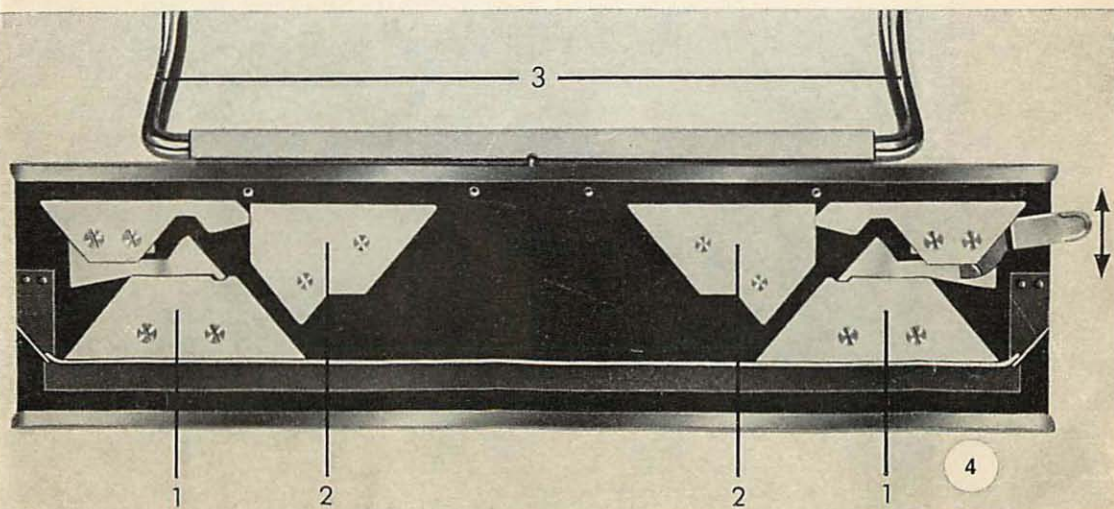
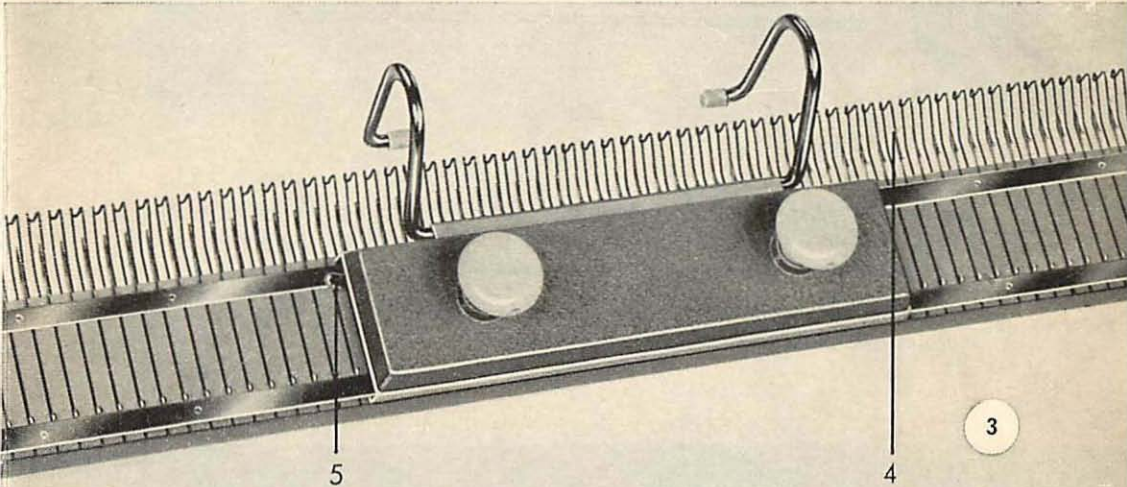
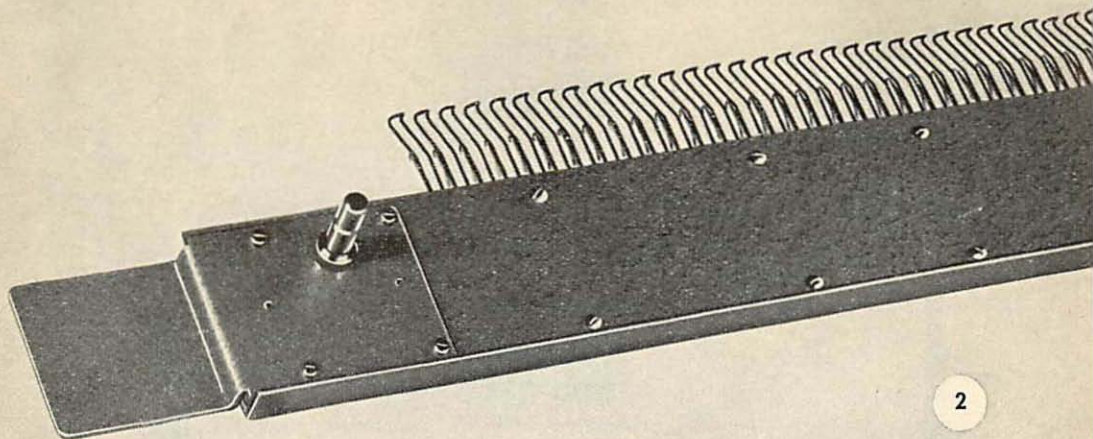
The needles of the ARA are somewhat different to those of the basic machine. The needle shaft is so constructed that the front and rear part each act as a spring. The rear spring (a) prevents the needle from slipping down in the needlebed and the front spring (b) helps to form the stitches (fig. 1).

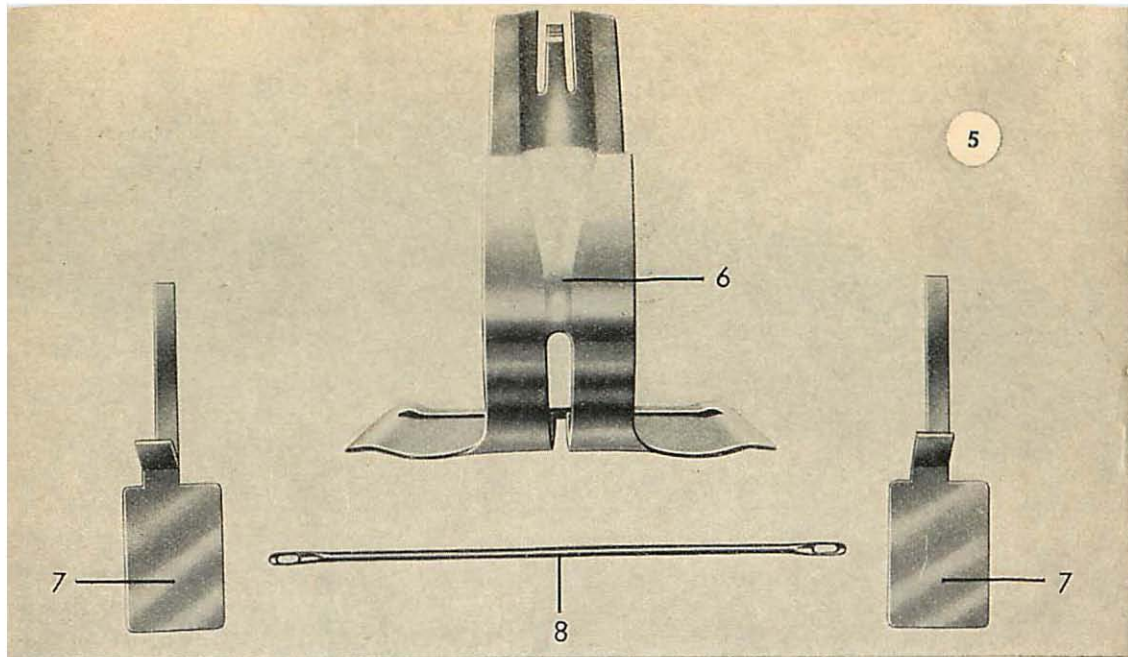
The slide is similar to that of the basic machine. The needle heels of the ARA operate in the same manner as those of the basic machine. However, the control cams (1) are fixed and cannot be moved. Moreover, the needle sinkers (2) are not adjustable (fig. 3 & 4). The slide is equipped with a slewable yoke (3) to connect it with the slide of the basic machine. The wire hooks (4) on the needlebed serve to drop off the stitches (see fig. 2 & 3).

The gate cam release lever (5) on the left side of the slide enables the spring gate to be released so that, when moving the slide from left to right, the needle heels do not travel **over**, but slide **under** the spring gate. This results in the stitches remaining **on top** of the open latches, not **behind** them.

Accessory

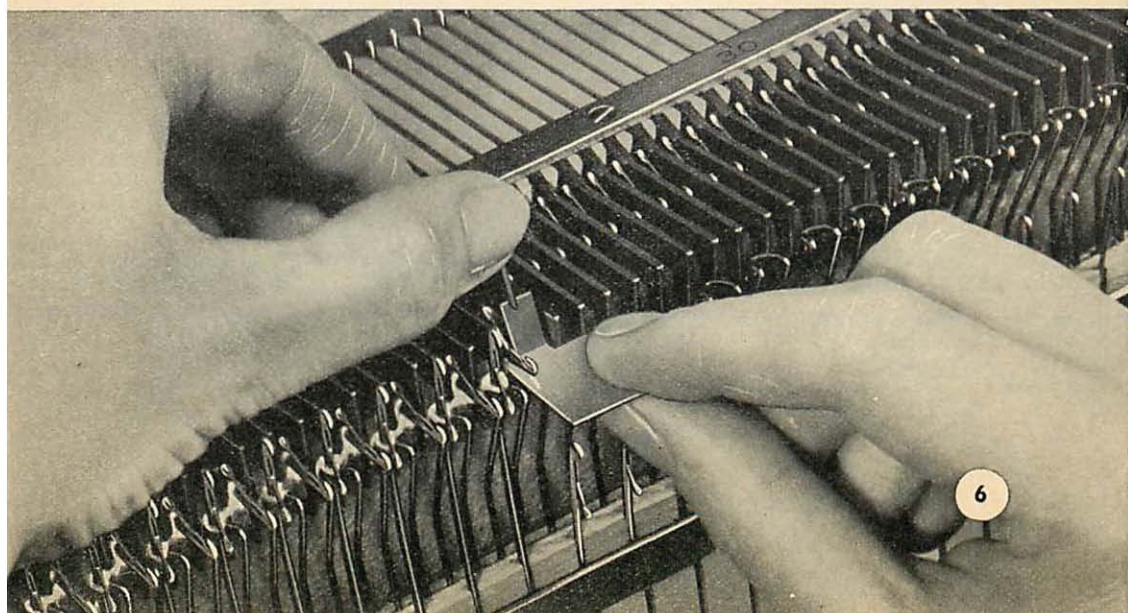
The yarn feeder (6) will **only** be used when knitting with the ARA (see fig. 5). Before starting to knit, the strippers (7) will be placed next to the extreme right and left

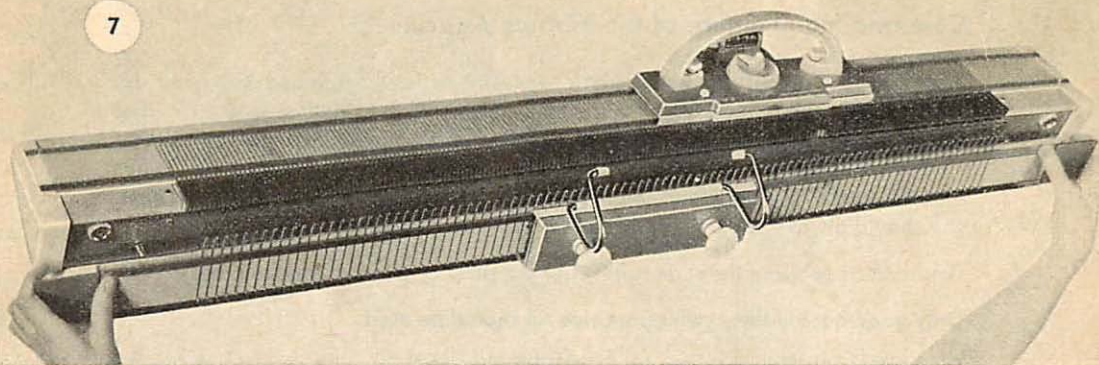




needle of the basic machine, underneath the adjoining needle out of working position. When doing so, the corresponding sinkers will be slightly lifted and laid on the upward bent steps of the strippers (fig. 6).

The transfer needle (8) will be used to transfer stitches from the ARA to the basic machine and vice versa.





Joining and Taking off the Ribbing Attachment

If you wish to knit with the ARA, the basic machine is placed so that the front plate is flush with the edge of the table. Now hold the ARA approximately vertically in front of the basic machine and insert the suspension bolts into the sockets provided in the front plate (fig. 7).

When removing the ARA, simply pull it towards you.

How the Ribbing Attachment works

The basic principle of how stitches are formed on the Knitking Handknitting Machine is fully explained in the instruction book supplied with the Knitking "Automatic". Before even attempting to use the ARA, you should be fully conversant with the Knitking "Automatic" Instruction Book and the working of the machine, as this manual is a supplement of the main book, but dealing specifically with automatic ribbing.

Assuming that the stitches formed on the basic machine are plain stitches and those formed on the ARA are purl stitches, you should place as many needles of the basic machine into knitting position as plain stitches are required. The purl stitches are formed on the needles of the Ribbing Attachment.

The connecting yoke of the ARA will be turned toward the slide of the basic machine so that the two buffers of the yoke will come to lie to the right and left of the sinker moving mechanism of the basic machine. The slides thus connected will not be moved by way of the handle on the basic machine, but by holding the two knobs of the ARA with both hands.

Care and Maintenance of the Ribbing Attachment

Broadly, the same instructions apply for the ARA as for the Knitking AM. After use, you should always clean off all particles of dust and wool-fluff with the aid of a soft brush. When not in use, the Ribbing Attachment should be carefully covered up and safely stored away so that nothing damages the protruding needles and their latches. If you have had the Ribbing Attachment stored away for some time, you should always inspect it before use and give it a clean if necessary.

The needle heels and the slide rails require a drop of oil from time to time.

Only good quality thin sewing-machine oil should be used.

The best results are obtained by using either a small camel-hair brush or the tip of your finger dipped in oil. **Never** oil to such an extent that the oil drips all over the Ribbing Attachment. If too much oil is applied, the device will not function properly, the knitting will be spoiled and dust and fluff will tend to stick to the Ribbing Attachment more easily.

For the purpose of a thorough cleaning, the Ribbing Attachment can be dismantled. To that effect, the upper slide rail must be removed — but not the lower slide rail — and the needles are carefully taken out of their grooves in the needle bed. After taking the needles out, carefully clean them with a good quality lighter fuel and also clean each needle bed groove by brushing out the dust and fluff. Before putting the slide back, this should also be cleaned carefully from wool particles and dust. Give it a light oiling and make sure that it moves freely along the two rails.

This periodical overhauling should not be necessary for at least 12 months or more. If you are not mechanically minded, we suggest that you have it done by an experienced mechanic or our nearest agency.

II. HOW TO KNIT WITH THE "AUTOMATIC" RIBBING ATTACHMENT

Setting the gate cam release levers

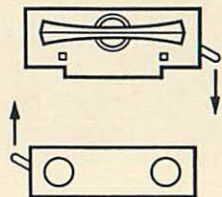
On the slide of the basic machine the gate cam release lever is on the right hand side and on the ARA slide it is on the left hand side. When the levers are pointing toward the needle heads, the respective spring gate cams are in operation. If the one or the other gate cam is to be put out of action, the respective lever must be pushed toward the needle heels.

The following drawings will show you the position of the levers for the various patterns:

1 + 1, 3 + 1, 5 + 1 and similar ribs

(see figs. 10 and 14)

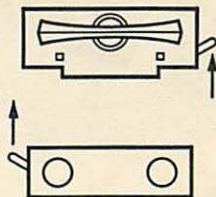
=
1 plain — 1 purl
3 plain — 1 purl
5 plain — 1 purl



1 + 1 Fisherman's rib on purl side

(see fig. 11)

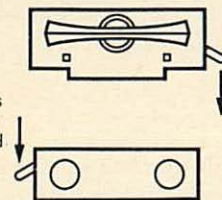
The retaining position is used on the basic machine only, forming the ribbed pattern on the side facing the knitter.



1 + 1 Fisherman's rib on plain side

(see fig. 12)

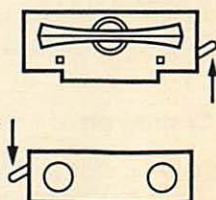
The retaining position is used on the ARA slide only, forming the ribbed pattern on the side turned away from the knitter.

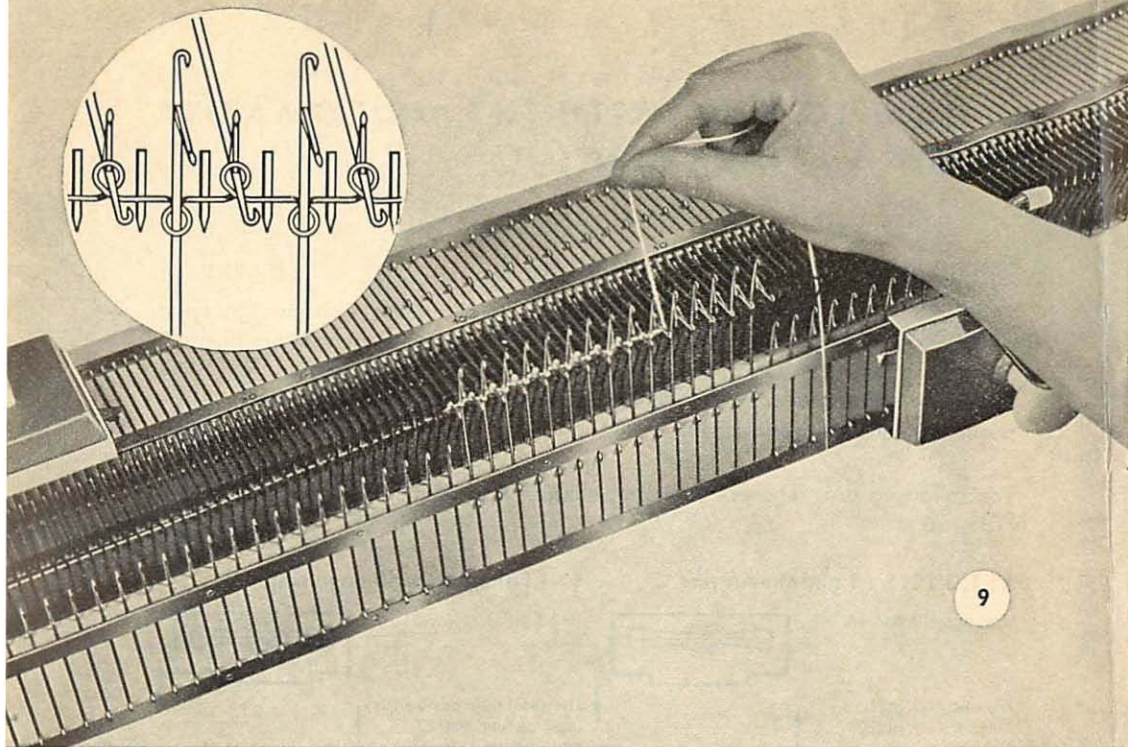


1 + 1 Double-sided fancy rib or Brioche

(see fig. 13)

For this type of stitch, the retaining position is used on both the basic machine and the ARA slides.





9

Positions of Needles

Contrary to the basic machine, the ARA has no Holding Position. There are, therefore, on the ARA only the following two positions:

Non-working Position and Knitting Position.

In the non-working position the needle heels rest on the lower slider rail and are not operated by the slide mechanism. To bring the needles into knitting position, the needle heels must be pushed up to the top slider rail where the ARA slide automatically brings them into the correct knitting position.

Casting on

To begin with, push the required ARA needles up into knitting position. Then bring also the corresponding needles of the basic machine into knitting position. You should see to it that the outer needles are always needles of the basic machine. The latches of the needles must be open. The slide of the basic machine is on the left and the ARA slide on the right hand side. The gate cam release levers are pointing toward the needle heads.

After fastening one end of the yarn to the left casting-on disc, you lay the wool under the hook of the sinker next to the needles in working position, then from

underneath around the first needle of the basic machine in **counter-clockwise** direction, then around the following ARA needle in **clockwise** direction, etc. (fig. 9).

You should see to it that the loops are not formed too tightly! When the yarn has been wound around all the needles in working position, it will be in front of the latches on the needles of the basic machine and behind the latches, on the needle shafts of the ARA. Now the slide of the basic machine will be moved to the right without wool. This will bring the loops of the yarn behind the latches of the basic machine and under the sinker hooks. Next the yarn will be inserted into the wool feeder and yarn tension device. Pull it back until the antenna of the yarn tension device is bent forward vertically. Now you may connect the two slides, adjust the required tension on the dial and turn the gate cam release levers into the direction required for your pattern. After having inserted the strippers as well, you may start to knit. When inserting the right stripper, you should see to it that the yarn is laying above the stripper.

Transferring the Stitches

To that effect you will use the transfer needle (8). When transferring stitches from the ARA to the basic machine, the needle of the ARA will be pushed back with one eye of the transfer needle so that the stitch will slide on to the transfer needle. Thereupon the opposite eye of the transfer needle will be inserted into the corresponding needle of the basic machine, which is pulled forward. By a slight upward turn of the transfer needle, the stitch will slide on the needle of the basic machine. When transferring stitches from the basic machine to the ARA, the process is reversed.

Decreasing and Increasing

In general, increasing and decreasing is done in the same way as on the basic machine. However, the following points should be carefully noted when using the Ribbing Attachment.

Single Stitches

It is imperative that the last stitch at each end of the row should always be on a needle of the basic machine. By decreasing one stitch at the end of the row in the 1+1 rib, the last stitch would be on an ARA needle and this must be avoided. It is therefore necessary to first transfer this stitch from the ARA needle on to the corresponding needle of the basic machine (see above, "Transferring the Stitches"). Only now you may decrease in the usual way by transferring the end stitch on the basic machine one needle inward. There will then be two needles of the basic machine at the end of the row. Only after one more decrease, the original arrangement will again be obtained, i. e. one needle of the basic machine at the end of the row.

A similar method as above is used for increasing single stitches. For the first increase, a needle of the basic machine is brought into knitting position on the

side of the yarn. There will now be two basic machine needles at the end of the row.

Before you make the next increase, the stitch on the outer needle of the basic machine is transferred to the corresponding ARA needle, so that after completing the increase, the original arrangement will be obtained of one basic machine needle at the end of the row. **Depending on increases and decreases, the strippers will have to be moved.**

Several Stitches

When increasing several stitches at a time, additional needles of the basic machine and of the ARA have to be brought into knitting position and the stitches are cast-on as described under "Casting on". However, care should be taken that all the loops are lying **behind** the latches. Furthermore, by means of the work hook, the loops must be put underneath the sinker hooks.

When increasing on the left hand side, the wool must be wound in the opposite direction, i. e. **clockwise** around the needles of the basic machine and **anti-clockwise** around the ARA needles.

When decreasing by more than one stitch at a time, all the ARA stitches to be decreased must first be transferred to the corresponding basic machine needles. Then you may decrease in the usual way as you have been doing it on the basic machine. When the decreasing has been completed, at least one basic machine needle must remain at the end of the row. Please see to it that here, too, the strippers be moved correspondingly after each increase and decrease.

Knitting with shortened rows

As the ARA needles have no holding position, the ARA stitches must be transferred to the corresponding needles of the basic machine before you can knit shortened rows.

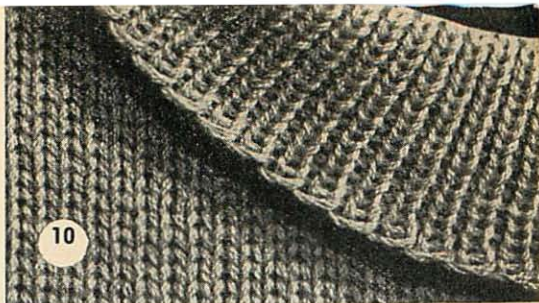
Casting off

All ribbed patterns knitted on the ARA are more or less elastic. Thus, for casting off we can only adopt a method which also produces a very elastic edge. It is advisable to knit the last row before casting off at the loosest possible tension. If a loose tension is already being used, this row can be knitted by hand after having removed the wool feeder. This is done by operating each needle individually and pulling them down as far as they will go. You will already have noticed that for all shapings, etc., the needles of the basic machine are used rather than the ARA needles. This also applies for casting off. All ARA stitches are transferred to the corresponding needles of the basic machine and the ARA is then taken off the front of the machine.

A very loose edge is obtained when the stitches are taken off the needles of the basic machine by using the latch needle tool, i. e. one stitch is drawn through the other all along the row.

1 + 1
(fig. 10)

Both gate cam release levers are pointing to the needle heads.



1 + 1 Fisherman's rib on purl side
(fig. 11)

The gate cam release lever of the basic machine is set to point toward the needle feet, and that of the ARA is pointing toward the needle heads.



1 + 1 Fisherman's rib on plain side
(fig. 12)

The gate cam release lever of the ARA is pointing towards the needle feet, that of the basic machine toward the needle heads.



1 + 1 Double-sided rib or brioche
(fig. 13)

Both gate cam release levers must point toward the needle feet.



3 + 1, 5 + 1, etc.
(fig. 14)

Both gate cam release levers are pointing toward the needle heads.



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