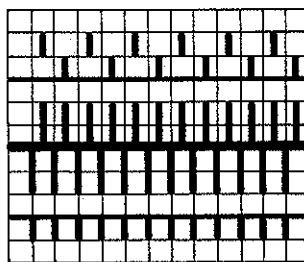english

Fairisle

A

Handle down, orange strippers
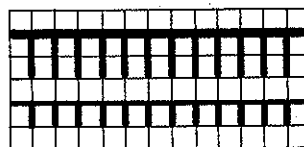
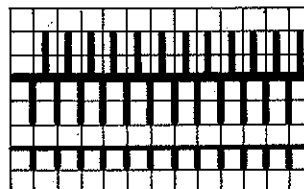BX ↔
BX ←
4

Tuck stitch

B1

Handle down, black strippers

GX
AX ←
2

B2

Handle down, orange strippers
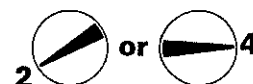
N
AX
2 or 4

Slip stitch

C

Handle down, black strippers

GX
BX ←
2 or 4

Pin tuck pattern

D

Handle down, black strippers

N
BX
4

Half fisherman's rib patterns

E

Handle down, black strippers

N
FX
4

Patterns with lace lock U70

F

Handle down, black strippers

N
BX
2 or 4

Fairisle in 3 or 4 colours

G

Handle down, orange strippers

BX ↔
BX
2

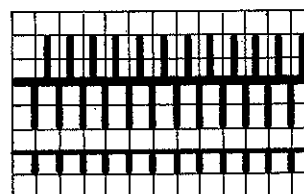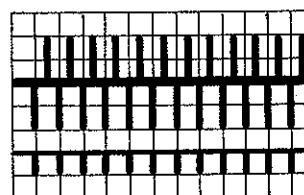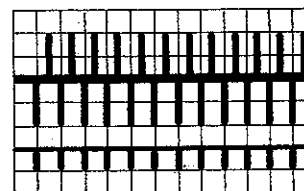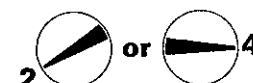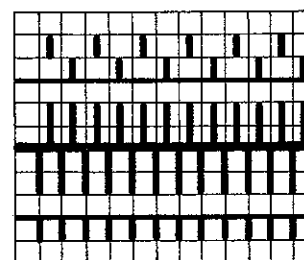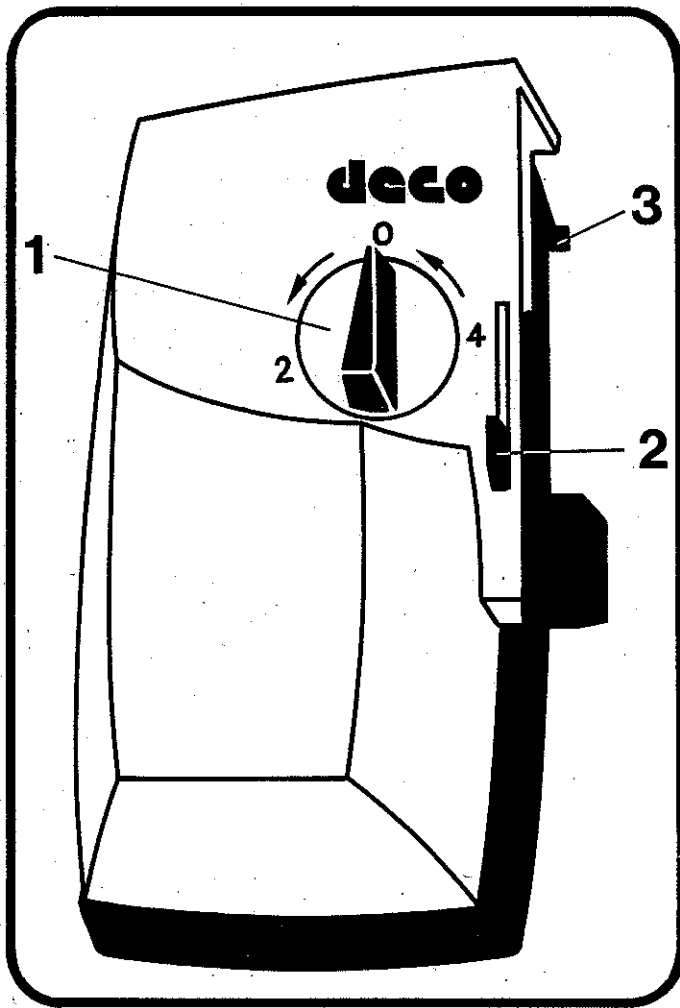# Instruction Book for

deco

Table of contents

The selector

1 The selector dial

Always turn the selector dial to the left, i.e. anti-clock-wise.

0 = Out of Working Position.

2 = The punchcard is moved on every alternate row.

4 = The punchcard is moved on every fourth row.

2 The engaging slide

It serves to fix the selector to the lock.

3 The upper guide

This is the guide that protrudes towards the back, on the upper edge of the selector, and fits into the machine guide rail.

Fitting the selector
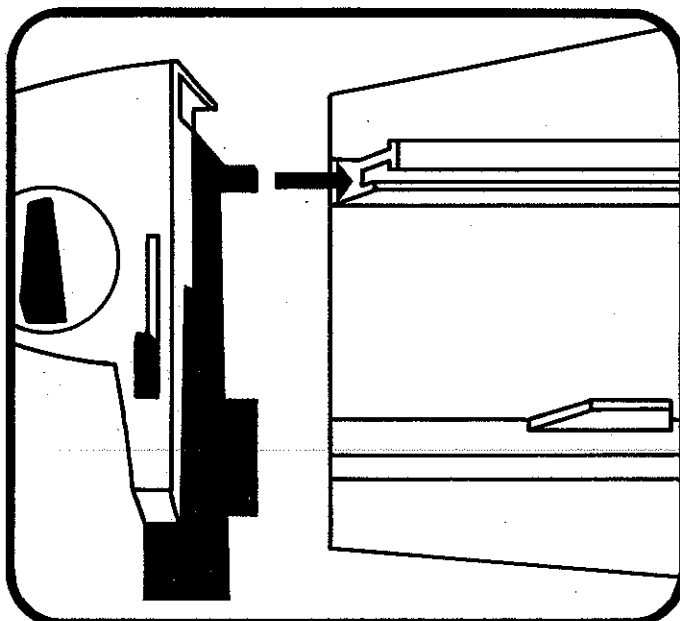
— **Turn selector dial to 0.**

— **Insert the selector guide into the upper guide rail of the bed extension.**

— **Push the selector to the right,** slightly raising the lower part, in order to guide it over the end-stop of the bed extension. Then, press it lightly against the bed to allow the lower guide to slide into the lower guide rail of the bed.

— **Coupling the selector to the bed:**
Push the engaging slide upwards, and move the selector against the lock. Push the engaging slide downwards again. It will click into place, and the selector and lock are now coupled.

The card reader
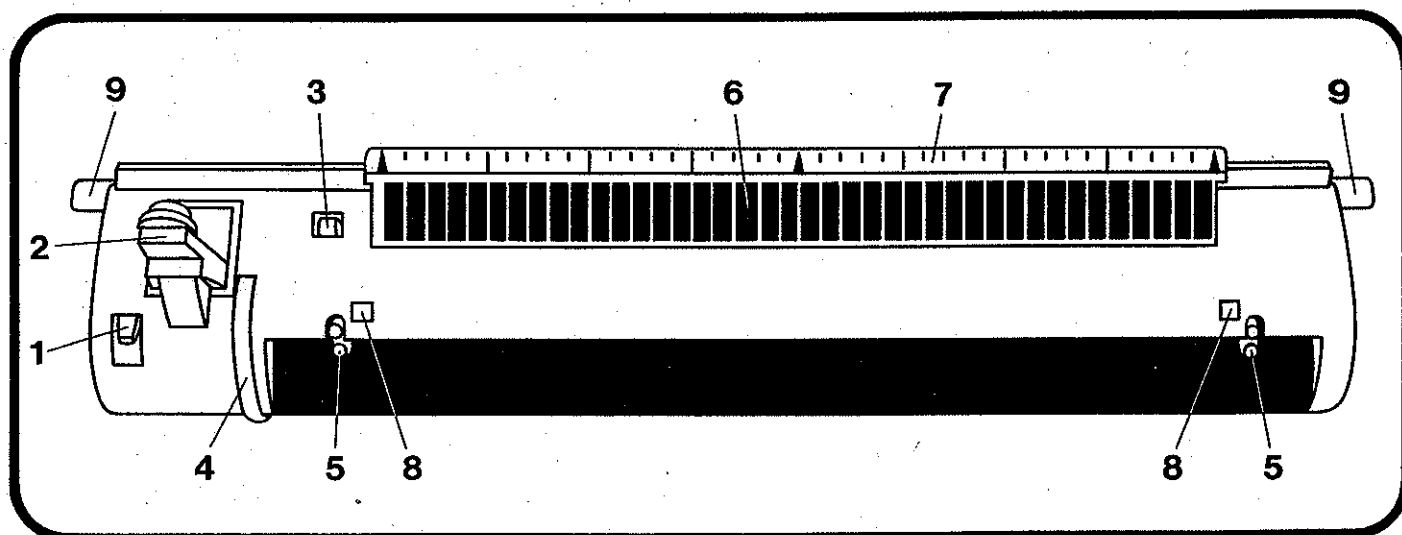
1 The release lever

With this lever, the locking mechanism for the punch-card may be released so that the card can be advanced by hand.

2 The automatic transport lever

This lever allows the card to be advanced automatically as selected by the selector dial (see Selector Dial).

3 The blocking lever

The blocking lever serves to reverse the effect of the release lever.

4 The transport wheel

With the locking mechanism released, the transport wheel allows you to advance the punchcard by hand.

5 The toothed wheels

The holes on the side of the card must be fitted onto the teeth of the wheels. This ensures the advancement of the punchcard.

6 The sensing feelers of the card reader
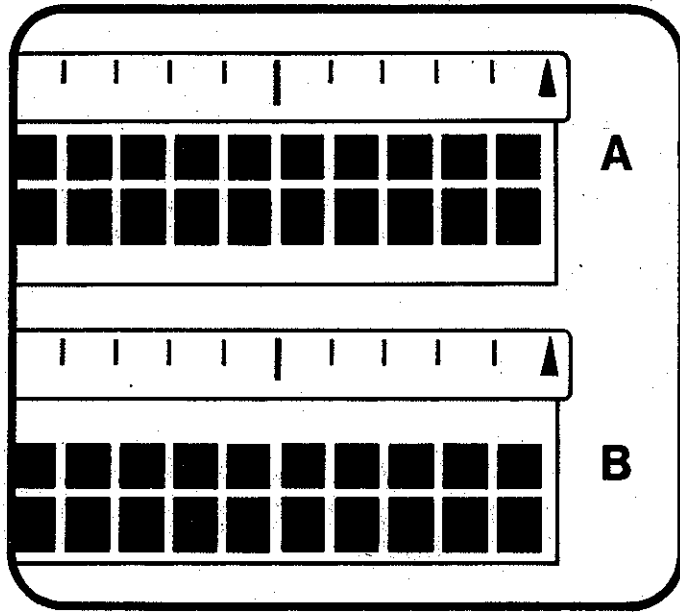
When the card reader is empty, these feelers have two positions:

Position A: All feelers touch the marking strip. The punchard is inserted in this position.

Position B: All feelers touch the front edge of the slit.

This is the position used for knitting without automatic patterning.

When knitting with the punchcard, the feelers are either in A or B position, depending on the perforation of the card.

(Position A = no perforation of the card)

(Position B = perforation of the card)

7 The marking strip

This strip is used for the accurate positioning of the card reader. The centre arrow indicates the centre of the pattern. This arrow is normally aligned with a bar-mark on the slotted rack.

8 The windows in the card reader

These windows show row numbers and other working instructions.

9 The latches

For attaching the card reader.

Attaching the card reader

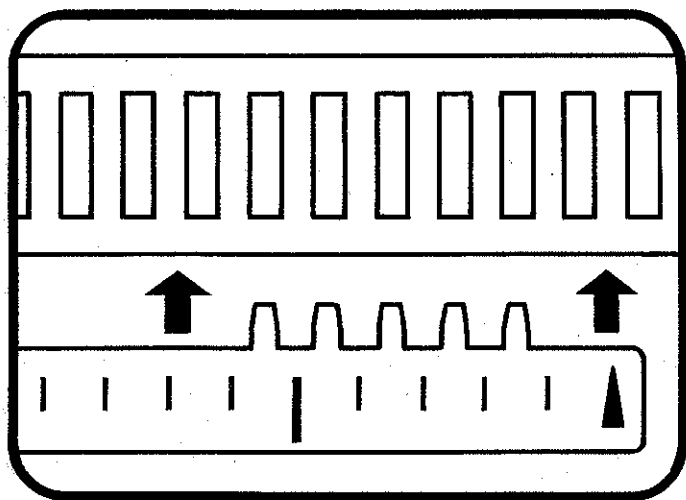—The teeth of the card reader are located at the back of the marking strip. Position these teeth **in a slot,** in such a way that the centre arrow corresponds with a bar-mark on the slotted rack.

—**Tilt the card reader towards the back until it clicks into position.**

To release the card reader, push the two latches upwards and swing the card reader forward, lifting it out of the slotted rack with an upward movement.

Knitting without automatic patterning
= Rest Position

With the following settings it is possible to knit without patterning even if the card reader and selector are fixed to the machine:

—**Selector dial 0.**

—**Feelers of the card reader in position B.** If they are not in position B, press the blocking lever forward.

The card reader and selector should always be brought into this Rest Position when not in use.

The punchcard
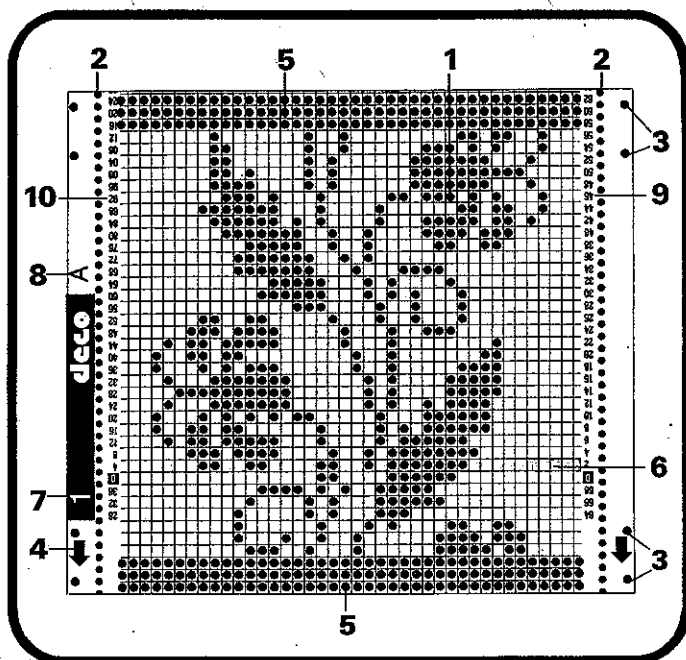
1 Perforation for pattern

2 Transport holes

3 Edge perforations for plastic studs

4 Arrow marking beginning of card

5 3 completely punched rows, for overlapping the card ends

6 Line showing the beginning of pattern knitting

7 Punchcard number

8 Instruction symbols

9 Knit row number with selector dial on 2

10 Knit row number with selector dial on 4

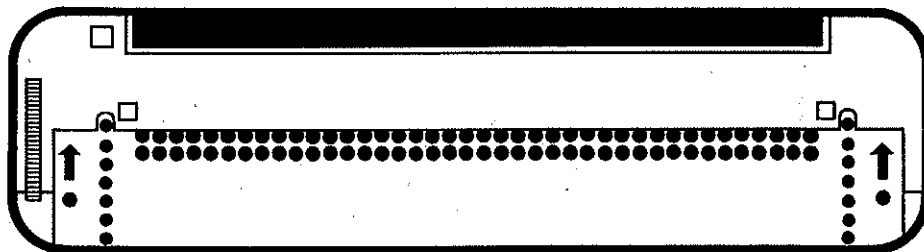# How to set your machine for automatic punchcard knitting

2 rows before patterning:

Insert punchcard:

— **Press the release lever down,** until the sensing feelers engage in position A.

— **Move the punchcard, with arrow pointing upwards,** over the toothed wheels until the first transport hole on each side has engaged with the toothed wheel.

Make sure the card hangs straight.

— **Continue turning transport wheel, until the manual transport becomes blocked.** The number 0 should now become visible in both windows. The pattern starting line will now be in line with the card reader cover.


## Joining the punchcard for continuous knitting

— **Press the release lever down and hold it there.** Advance the card with the transport wheel. When about 5 cm / 2 inches of the card remains visible,

— **place the beginning of the card on the end of the card** so that the 3 fully perforated rows overlap and the two edge holes are right on top of each other. The plastic studs lock together as shown in the illustration. Press stud underneath, not at the top.

If a pattern consists of more than one card, fix the second card to the first one as described. Finally join the cards to form a continuous loop.

— **Press the release lever down and continue turning the card in the same direction as before,** until number 0 reappears in the window, and the continuous line is in line with the card reader cover.
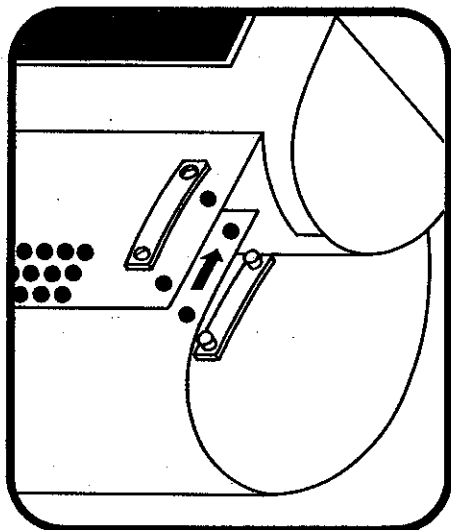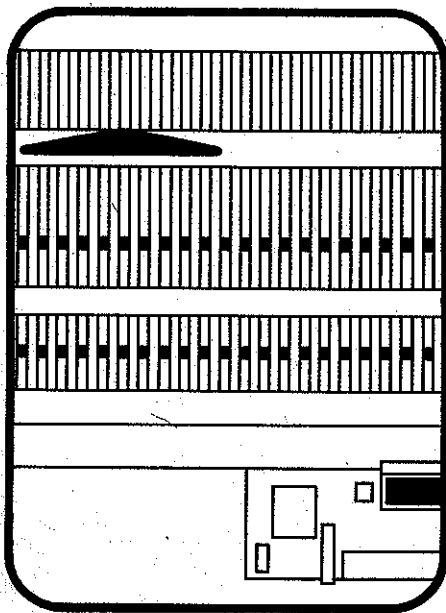
Push the trip cam to the left

The right-hand edge of the trip cam must be to the left of the knitting **and** left of the card reader.

— **Selector dial on 0.**

— **Knit 2 rows.**

If, at this point, you do not need to knit 2 more rows, use the following procedure instead:

— **Release selector from lock, and guide it to the left past the trip cam,** then back again, and fix it to the lock.
By doing this, the selector will have stored the programme for the first pattern row.

Automatic pattern knitting

— **Take the required number of pushers out of the blocking rail.**
The automatic patterning with DECO is **always worked with pushers.**
For each needle in Working Position, take one pusher out of the blocking rail of the front bed.
When you increase, always take the corresponding pusher out of the blocking rail for each new needle being brought into Working Position.
When you decrease, always return the corresponding pusher into the blocking rail for each needle taken out of Working Position.

— **Selector dial on 2 or 4**
depending on the instructions for the pattern.

Note: When you begin to knit, always make sure that the red dot on the selector dial is visible, otherwise the punchcard will lack the proper transport-rhythm. Should the red dot not be visible when you begin to knit, give the selector dial another turn, pressing it down at the same time.

Set the lock as required for the pattern

The punchcard number will be printed on every **punchcard** and every **illustration.** Example: **1   deco**

The black letter with a figure after the name inscription DECO indicates the lock-position with which to knit the pattern concerned.

The corresponding needle diagram shows whether the pattern is to be knitted on one or both beds and whether there are pushers in Working Position on the back bed or not.

On the following pages you will find these letters explained more fully.

When knitting fairisle, the colour is **always changed on every alternate row,** therefore no particular reference to colour changes is made in the illustrations.
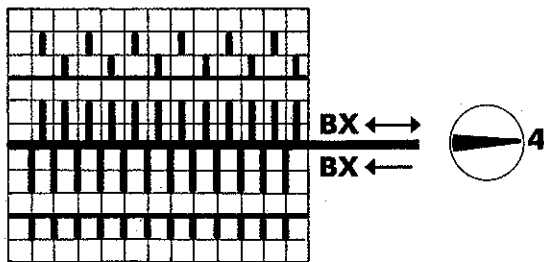
Note: always begin with the basic colour, i.e. 2 rows basic colour, 2 rows trimming colour.
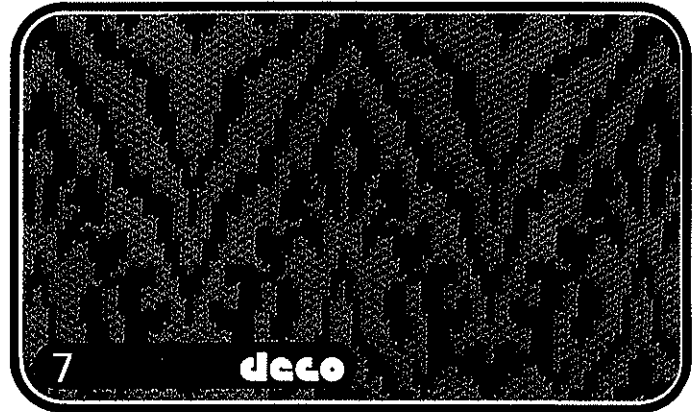(Basic colour: knits when the punchcard is not perforated.)
(Trimming colour: knits when the punchcard is perforated.)

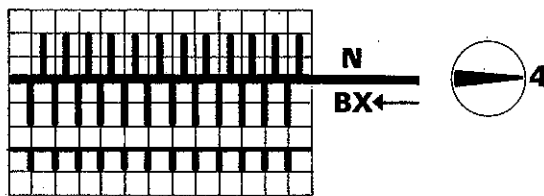**A**

Handle down, orange strippers

BX ⟷
BX ⟵

4

Double-bed fairisle with knitted-in threads on the reverse side.
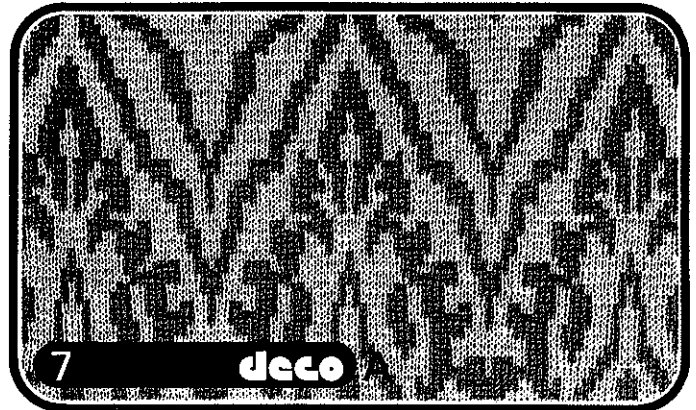
7 deco

Every punchcard marked A can be knitted with the following lock and pusher position:
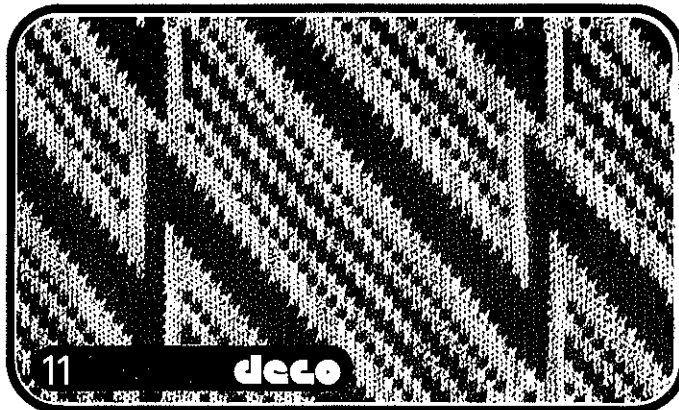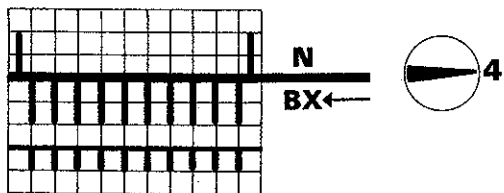
Handle down, orange strippers

N
BX ⟵

4

With this type of knitting, the picture will be higher than in normal fairisle.
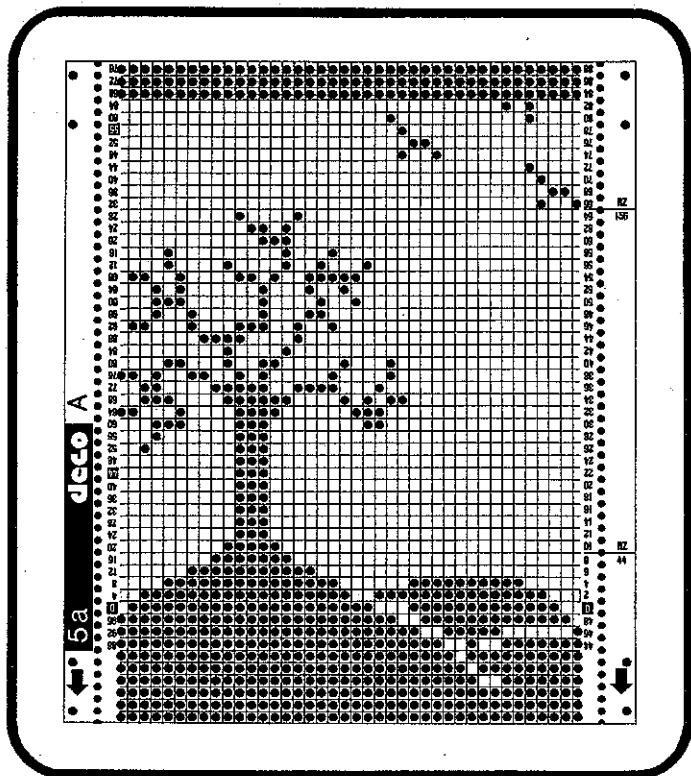
7 deco

A Fairisle

Every punchcard with an A can also be knitted as single-bed fairisle.
Patterns with short floating threads are particularly suitable.
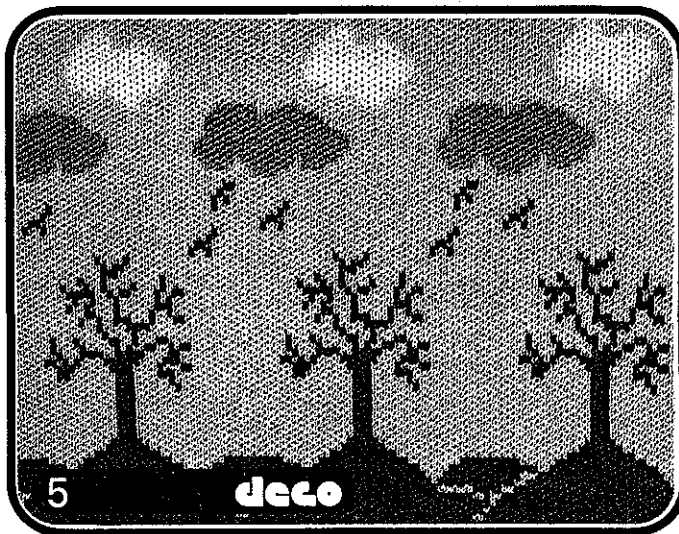
Handle down, black strippers

To ensure a neat edge in single-bed fairisle knitting, we recommend bringing in an additional needle at both ends on the back bed.
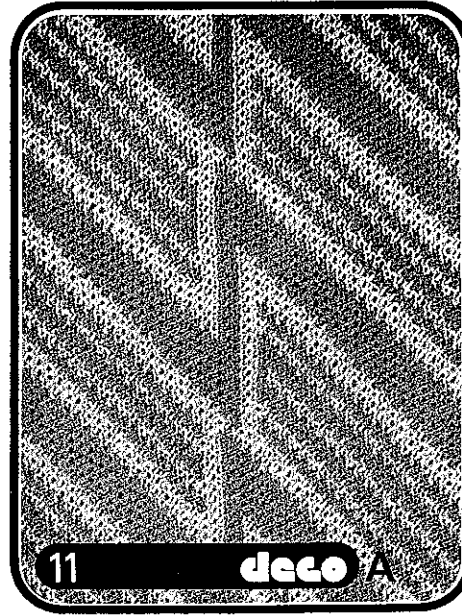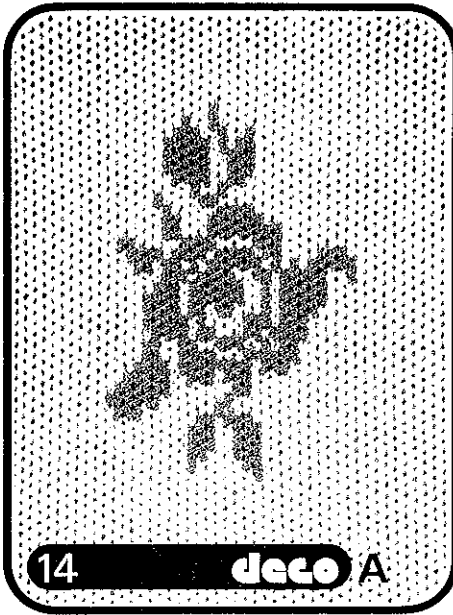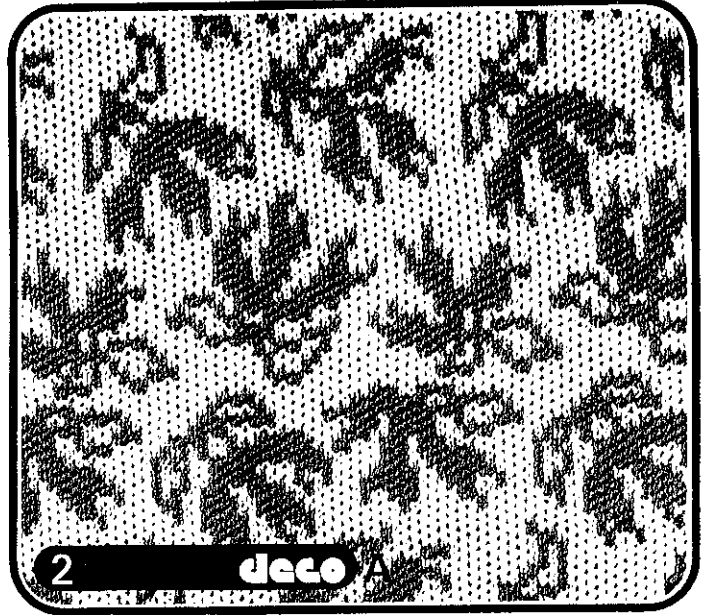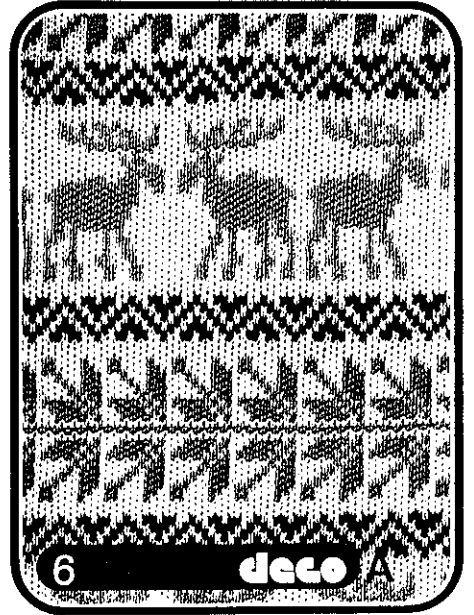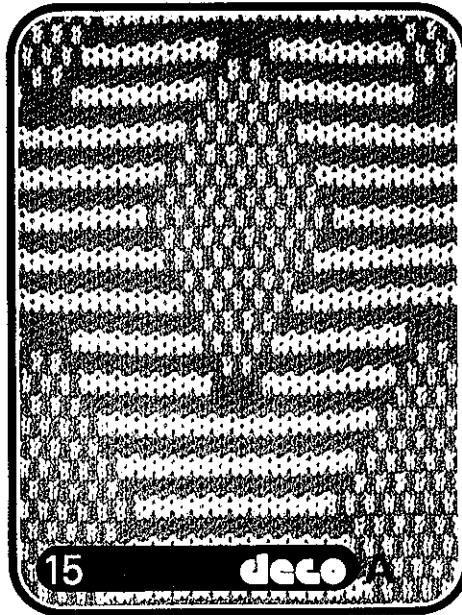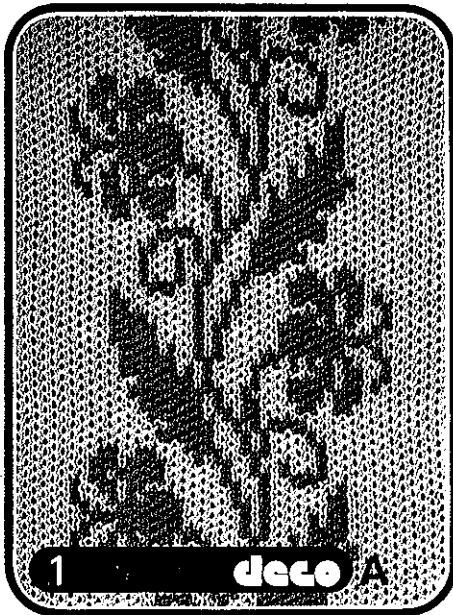
Special hints

On a number of fairisle cards some horizontal lines have been drawn past the squares right to the edge of the card. They are marked with RZ and a figure.

This concerns punchcards that have been knitted with two or more trimming colours, as seen from our illustrations. The marking on the card indicates the exact position on the row-counter where the colour has to be changed.

To further simplify the colour change, the row number appears white on black in the window of the card reader, at the point where the colour must be changed.

Of course, all these cards may also be knitted in two colours only.

1 deco A

15 deco A

6 deco A

4 deco A

2 deco A

14 deco A

11 deco A

8 deco A

9 deco A

10 deco

13 deco A

3 deco A

19 deco A

12 deco A

5 deco
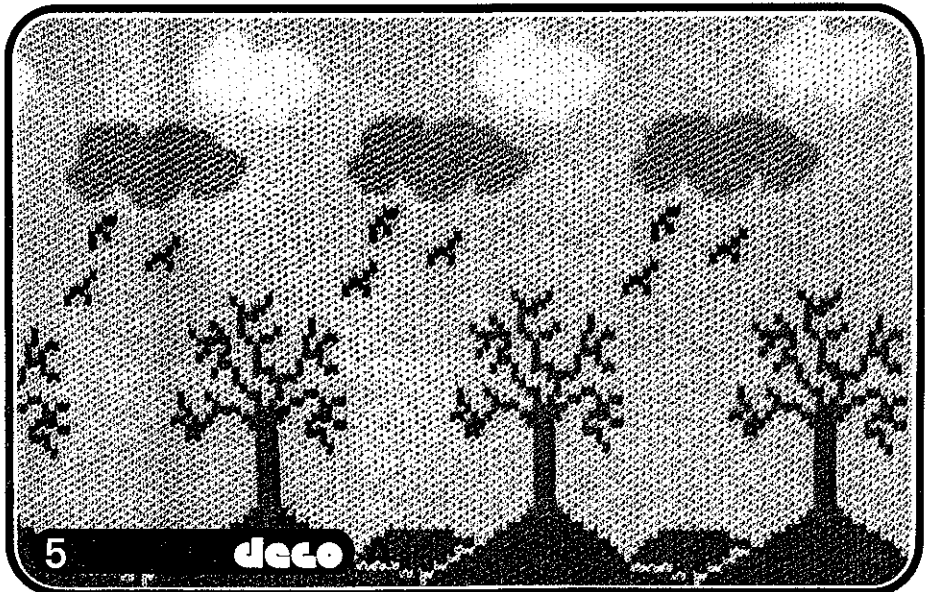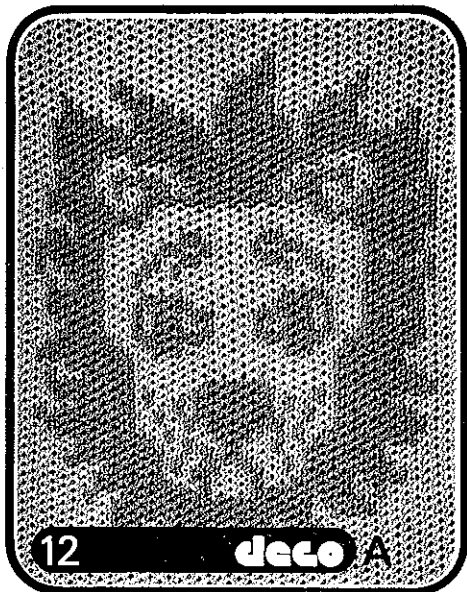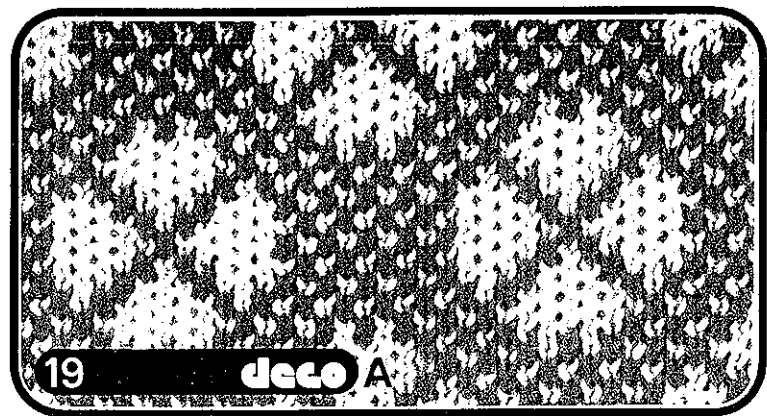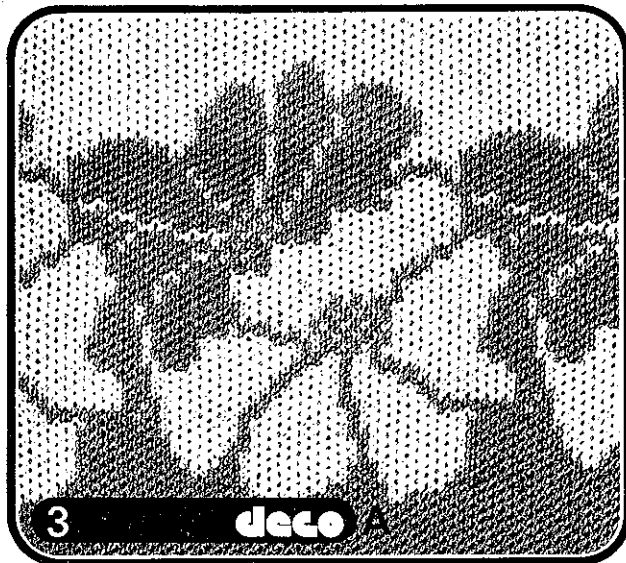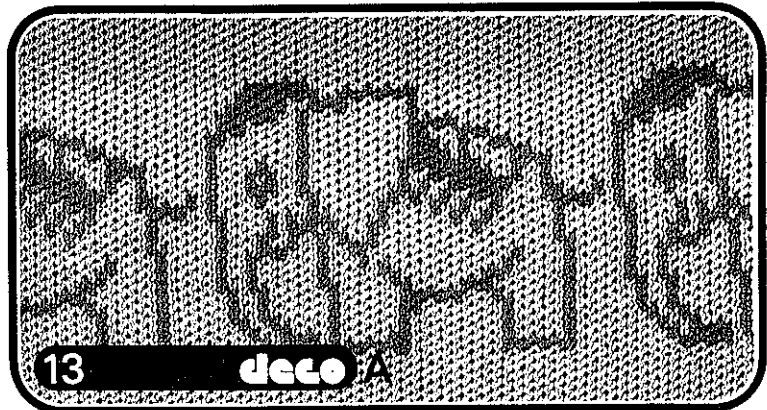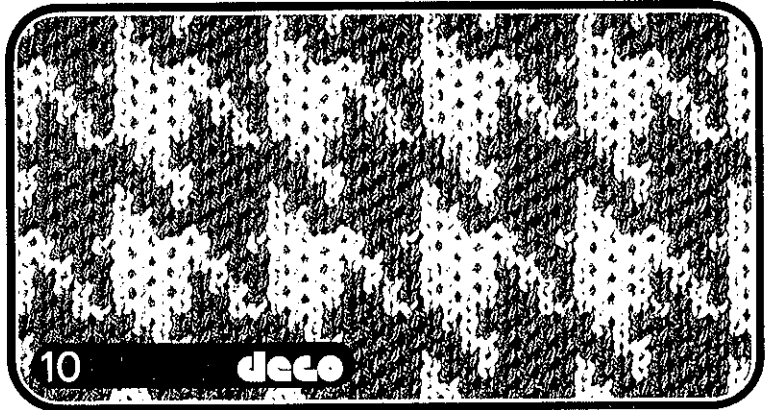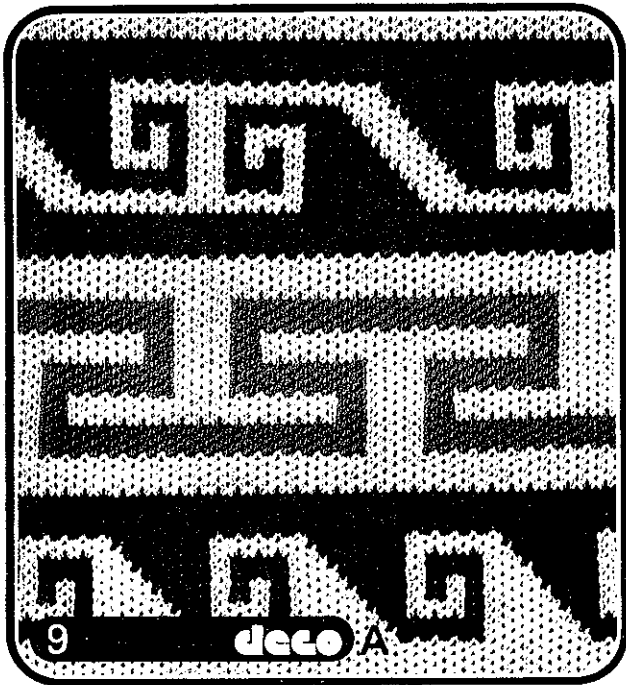
There are double and single-bed, as well as single or multi-coloured, tuck stitches.

As the **colour change,** when doing multi-coloured tuck stitches, is often irregular, this colour change is always shown in the illustrations after the letter for the lock setting.

Col. 8/8 = change colour every 8th row
Col. 2/6 = begin with 2 rows first colour, then 6 rows second colour, repeat.

Handle down, black strippers

B1

GX
AX ← 2
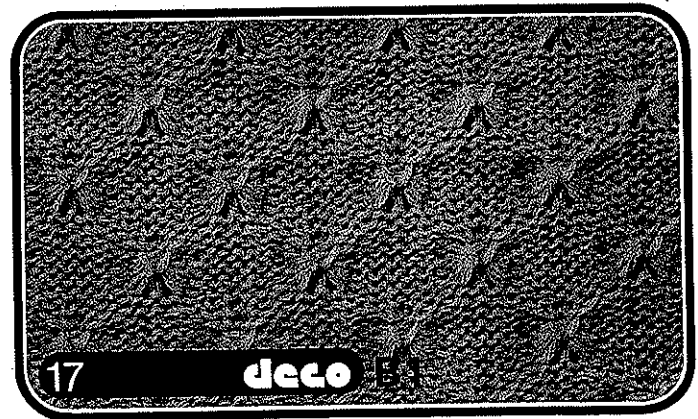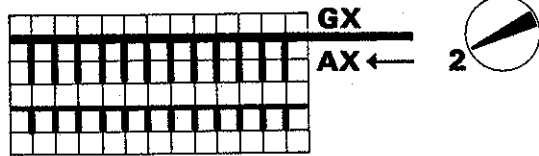
Single-bed tuck stitches.
They are always knitted with the left arrow key.

Note: When knitting with arrow key, the selector dial must always be set at 2.

Every punchcard that has the letter B 1 on it, can also be used for **double-bed** knitting.

Handle down, orange strippers

N
AX ← 2

Handle down, orange strippers

B2

N
AX 2

15　deco B 2
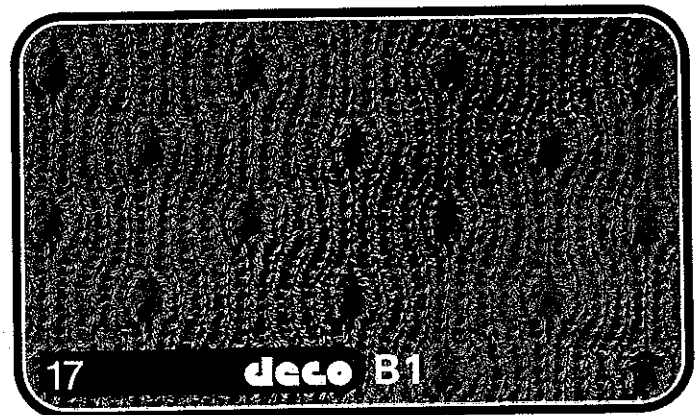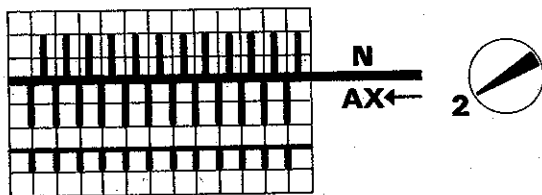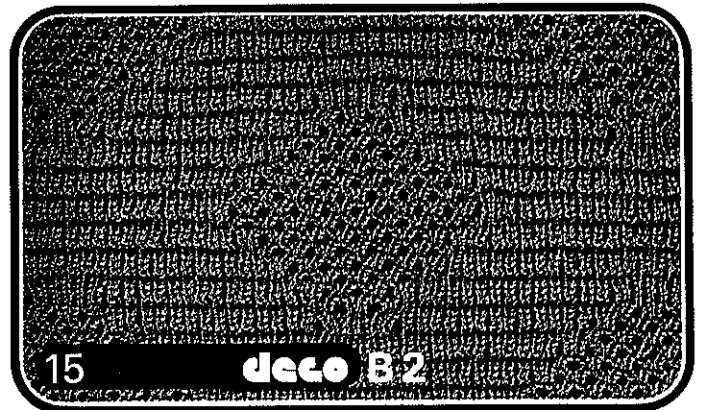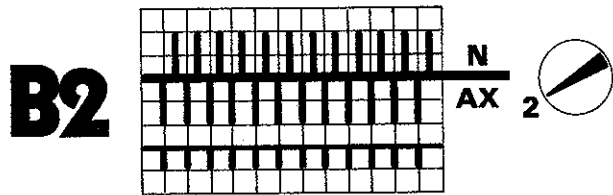
All double-bed tuck stitches, where no arrow key is used, can be knitted with selector dial on either 2 or 4.

Handle down, orange strippers

N
AX 4

15　deco B 2
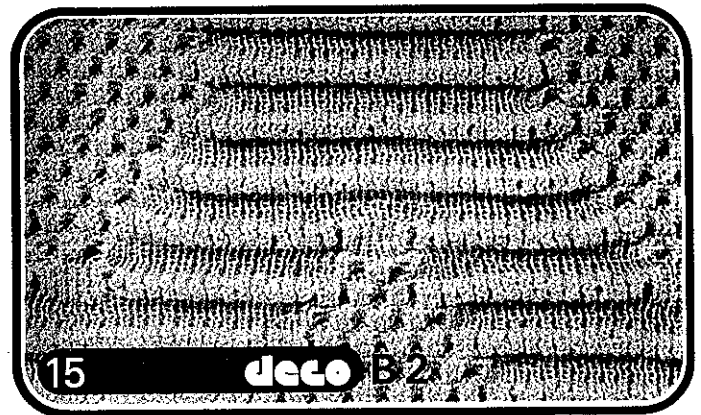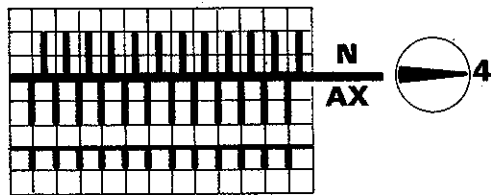
The pattern will have a more raised effect than when it is knitted with selector dial on 2. This lock setting is only advisable for thin yarns.

Handle up, orange strippers

N
AX 2
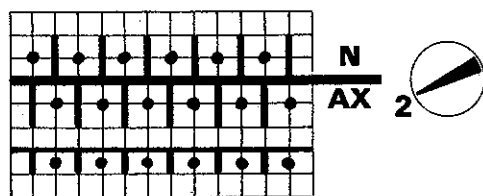
If the handle is in the "up" position, it should be removed before knitting across large widths.

15　deco B 2
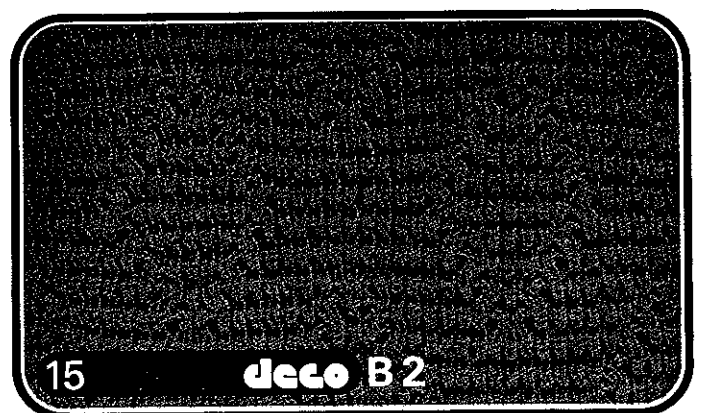
There are double-bed tuck stitches that may be knitted with every alternate needle in accordance with the diagram. This is particularly recommended for somewhat thicker yarns.

18   deco B 2

19   deco B 1

17   deco B 1 Col 8/8

18   deco B 2 Col 4/4

17   deco B 1 Col 8/8

18   deco B 2

16   deco B 2

16   deco B 2
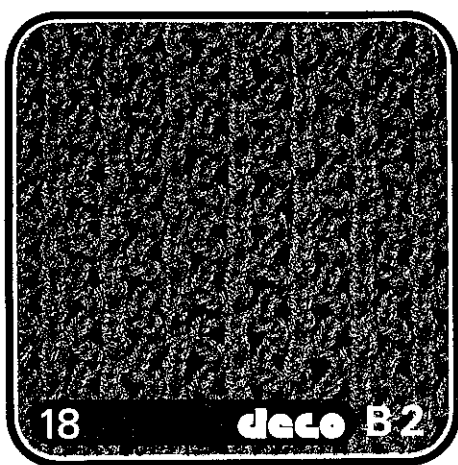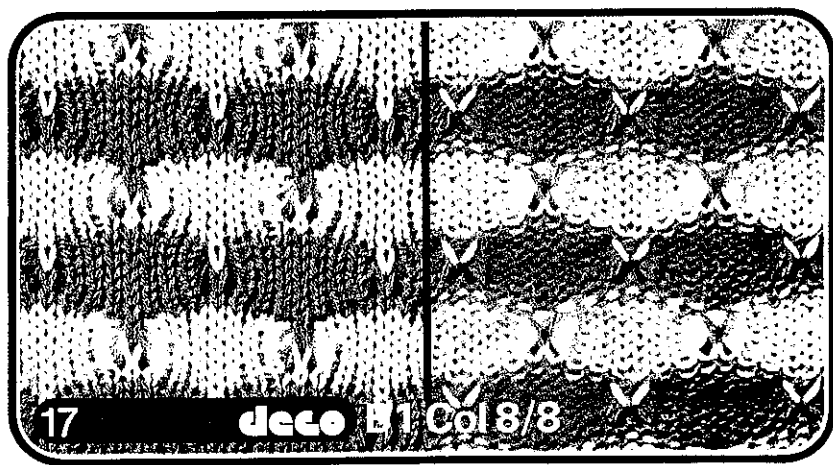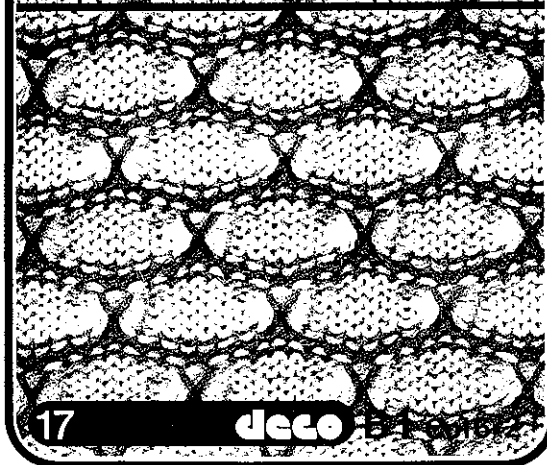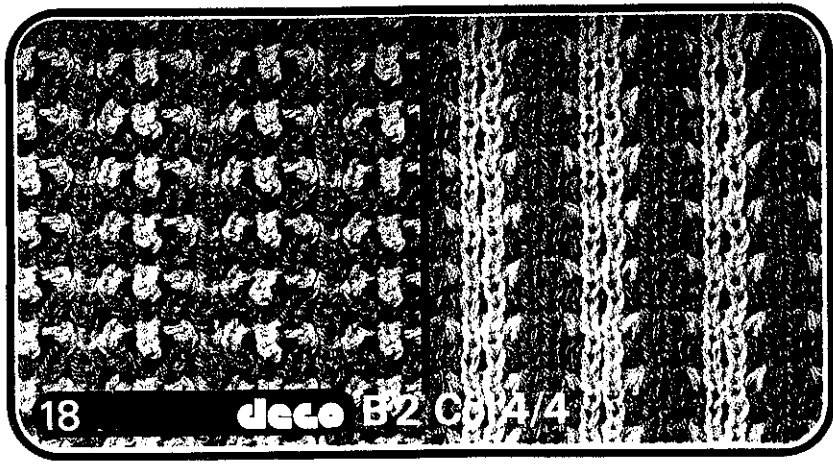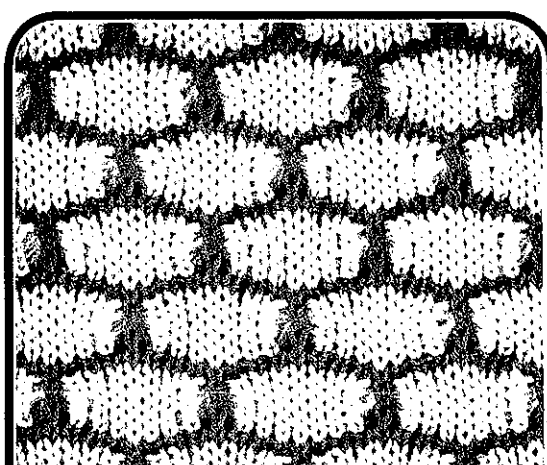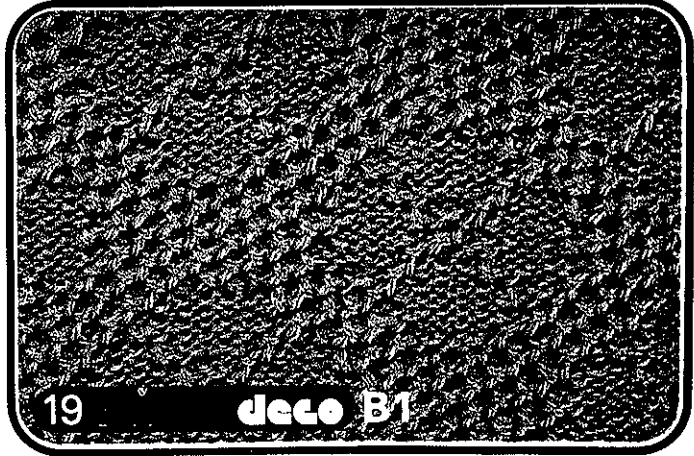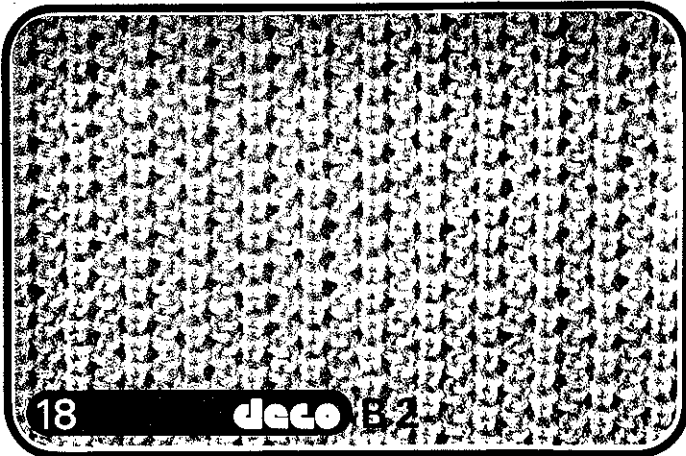
These patterns are normally knitted in one colour, always on one bed.
All punchcards marked with a C can be knitted with the selector dial on
either 2 or 4.

C

Handle down, black strippers
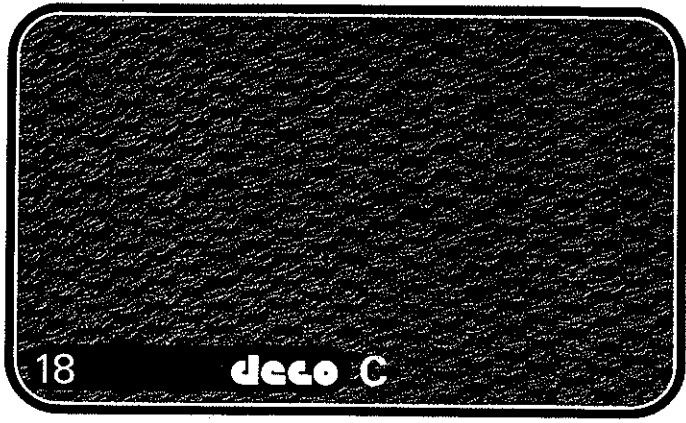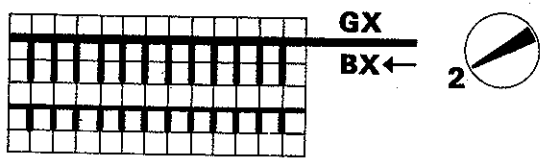
GX

BX ← 2

Slip stitch with selector dial on 2.

Handle down, black strippers

GX

BX ← 4
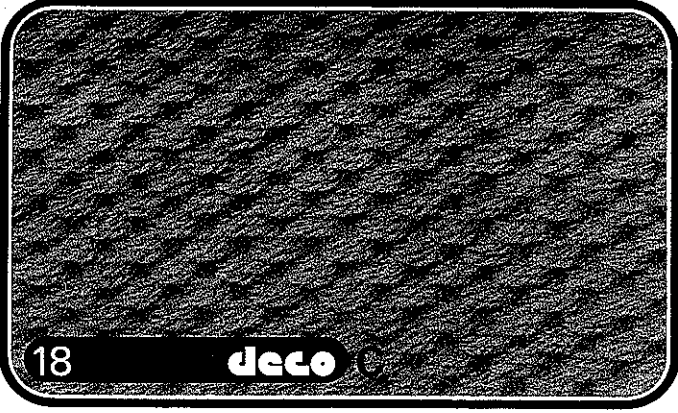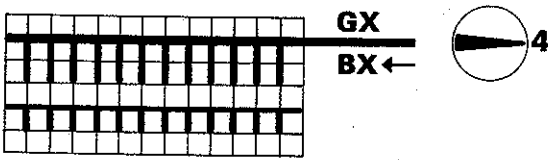
Slip stitch with selector dial on 4. This is not
possible with all punchcards marked with a C.

Pin tuck patterns can be knitted only with two beds.

Handle down, black strippers

D

N
BX

4

16 deco D
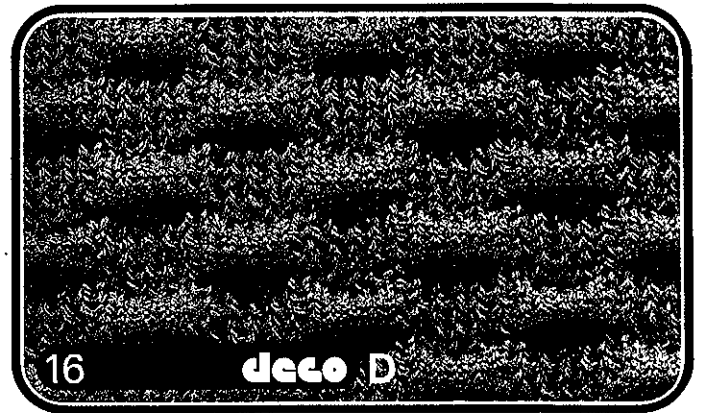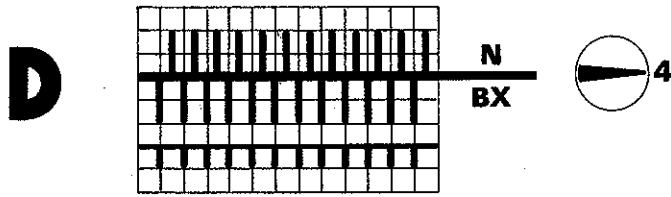
E Half fisherman's rib patterns

When knitting these patterns, you alternate between Knit/Knit and half fisherman's rib. They can only be done with two beds.

Handle down, black strippers.

E

N
FX

4

16 deco E

18 deco E
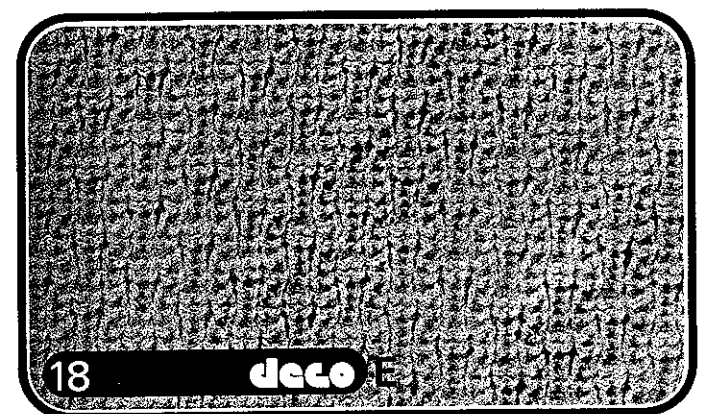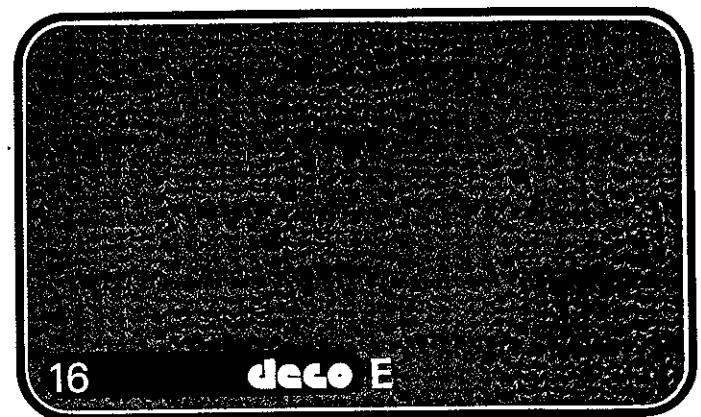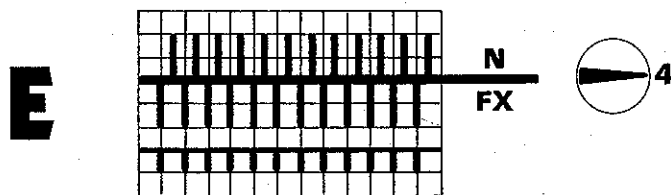
Here we mainly have lace patterns, but raised patterns are also possible.

There are special cards intended for use in conjunction with the lace lock U 70. These cards bear the inscription DECO F.

As you do not always transfer every alternate row, **there is an abbreviated indication when to transfer on the illustrations.**

2/2 = transfer every alternate row
4/4 = transfer every fourth row

When knitting with DECO, always transfer from front to back bed. The handle is brought into the same position as for transferring from back to front bed (see instructions). The lace lock U 70 is, however, placed to the right of the knitting, and brought into work by moving it across the needles to the left.

Handle down, black strippers
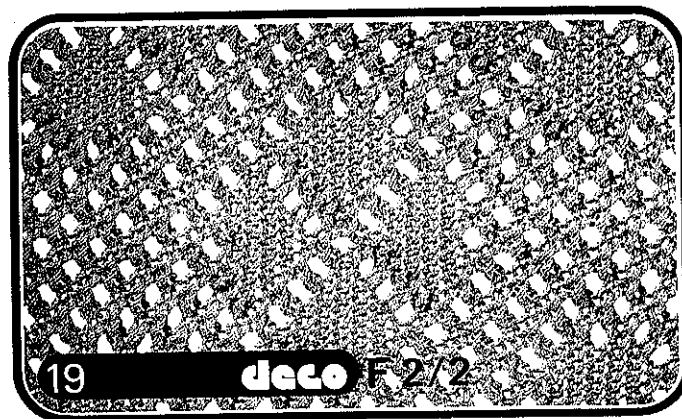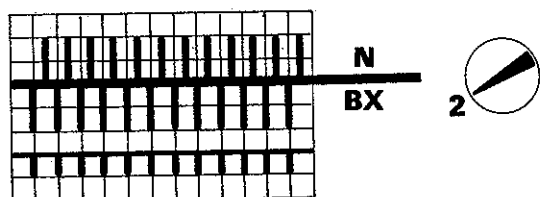
Lace or raised patterns with selector dial on 2.

Handle down, black strippers
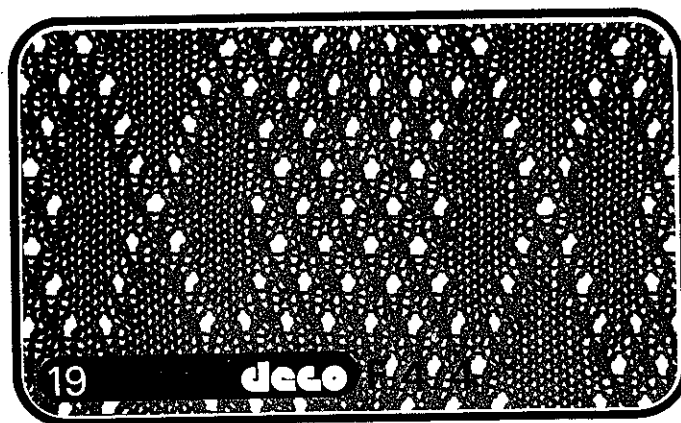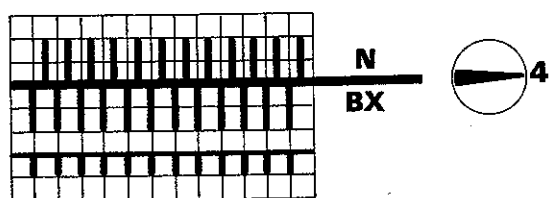
Generally speaking, each of these cards may be knitted with the selector dial on 2 or 4. Many cards, however, may also be knitted without the U 70, e.g. as a fairisle pattern.

Selector dial on 4.
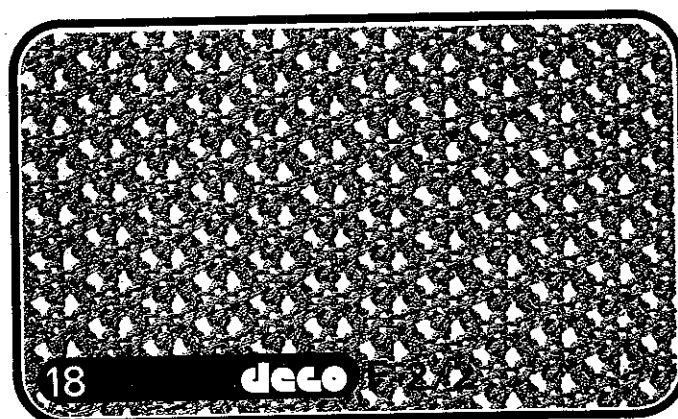
There are special cards intended for use with COLOR, **where three or four different colours can be knitted on the same row.** These cards are marked ▊▊▊▊ **deco** ▊▊

The colour change takes place every alternate row. The sequence is specially indicated for each card.

Handle down, orange strippers

G

BX ←→
BX

2

20   **deco** ▊▊ G
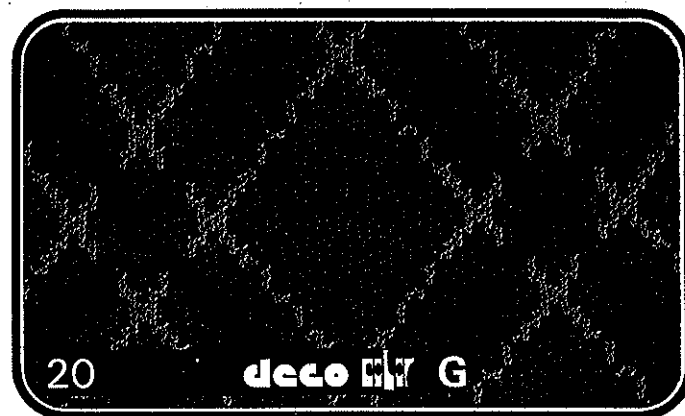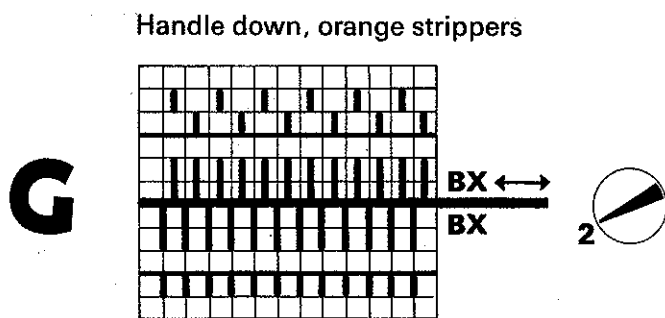
Sequence of colour change:
Rows 1+2 green
Rows 3+4 red
Rows 5+6 yellow

Be sure that the colours are always changed in the same sequence, as otherwise mistakes will result.

Note: Amongst these cards there are some that can be used for placing single motifs, and some that can't. That is, **only the cards with an arrow after the letter F can be used for knitting single motifs.** When using these cards, always press the left arrow key on the front lock when knitting with the basic colour; the two or three other colours, however, are knitted without arrow key. To tell you when to knit the two rows with arrow key, an arrow will appear in the right-hand window of the card reader.

Continuing to knit after the single motif
If the plain background should look the same before and after the motif, as it does on either side of it, continue in the same colour rhythm.

That is:
On front bed all pushers in Rest Position, lock at front BX ←—, knit 2 rows basic colour, 2 rows first trimming colour; lock BX 0, 2 rows second trimming colour, for 4-coloured patterns knit 2 rows third trimming colour. Repeat.

Single motifs and interrupted patterns in fairisle knitting

Interrupting the pattern:
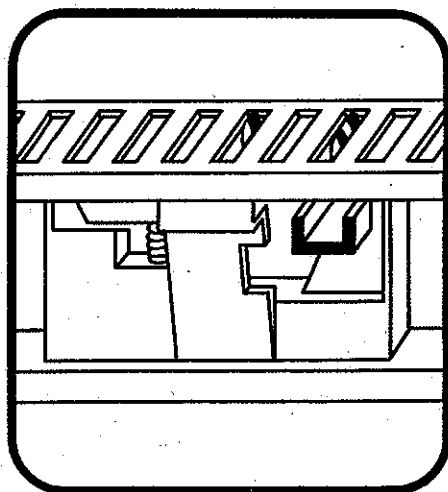
Positioning-socket:
There are five positioning-sockets in the slotted rack, which can be moved by pushing the U-shaped handle downwards.
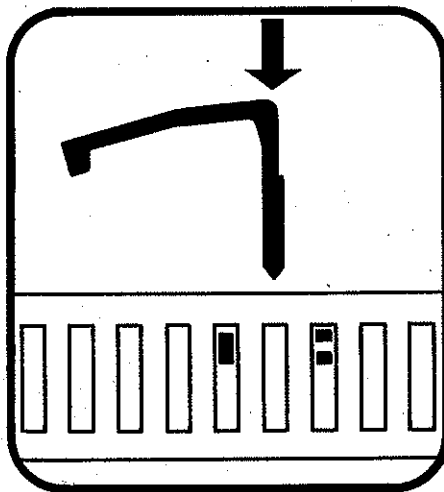
Positioning-pin:
Insert the straight part into the slot of the slotted rack, which is located between the larger and the two smaller pegs of the socket. Press down well, until the pin clicks into place, as there is a spring in the socket.
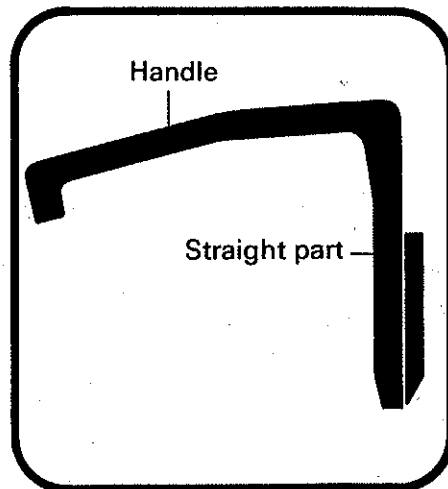
The handle of the positioning-pin must always face to the left.
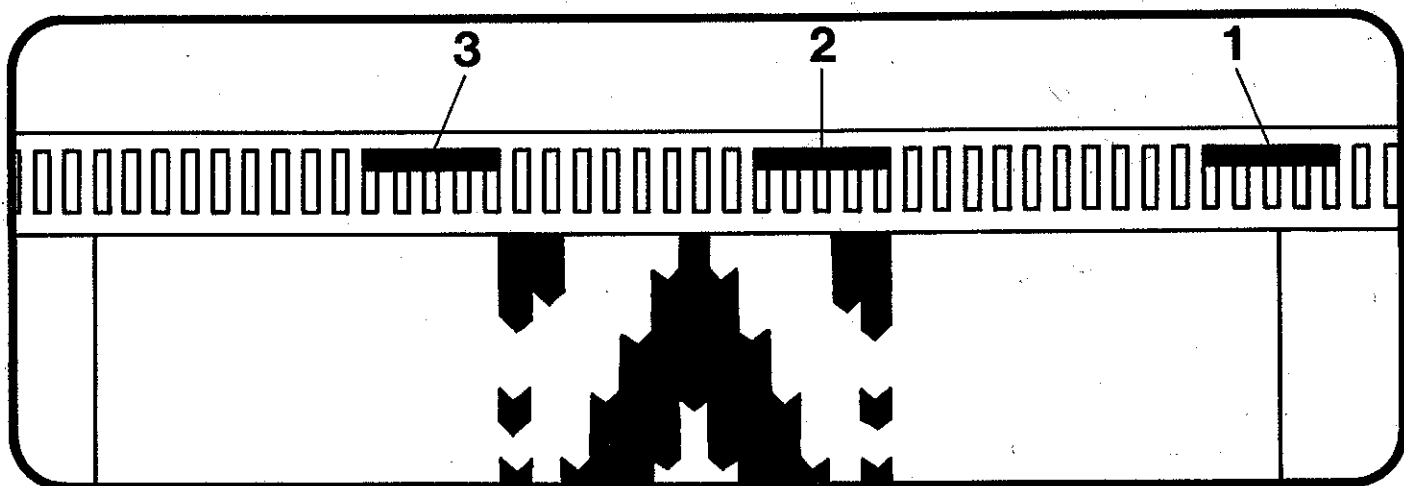
This is how it works: Beginning from the right, the first positioning-pin interrupts the patterning, the second one restores it, the third one interrupts it again, and so on.
Each positioning-pin changes the type of knitting (patterned or plain). Starting from the right, the change of pattern begins with the needle directly above the slot holding the positioning-pin.

An example:
If you want to place a single motif, using the needles 12–52, to the right of the centre:

1. Place positioning-pin **2 to 3 needles out from the edge** of the knitting, thereby interrupting the pattern to knit the plain background.

2. Insert positioning-pin into the slot right underneath **needle 52.**

3. Insert positioning-pin into the slot right underneath **needle 11.**

How to position the card reader
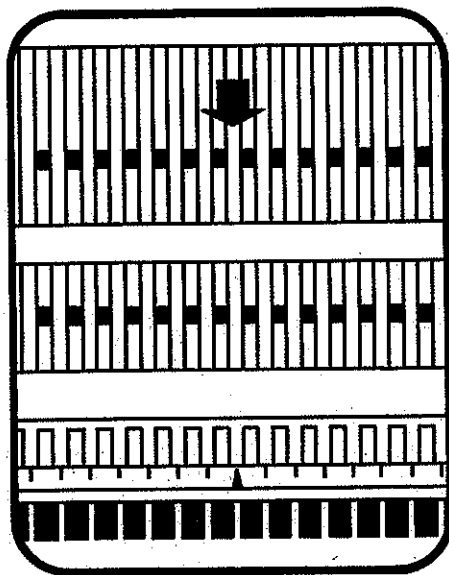
Normally, the centre of the pattern appears at the centre of the bed, i.e. from needle 20 at right of centre to needle 20 at left of centre. When knitting single motifs, however, it is usually preferable to have the centre of the pattern in the middle between the two positioning-pins. Proceed as follows:

— **Look for the two needles on the needle bed which will be knitting the centre of the motif.**

— **Align the centre arrow of the card reader with the bar on the slotted rack positioned vertically underneath the two centre needles.**
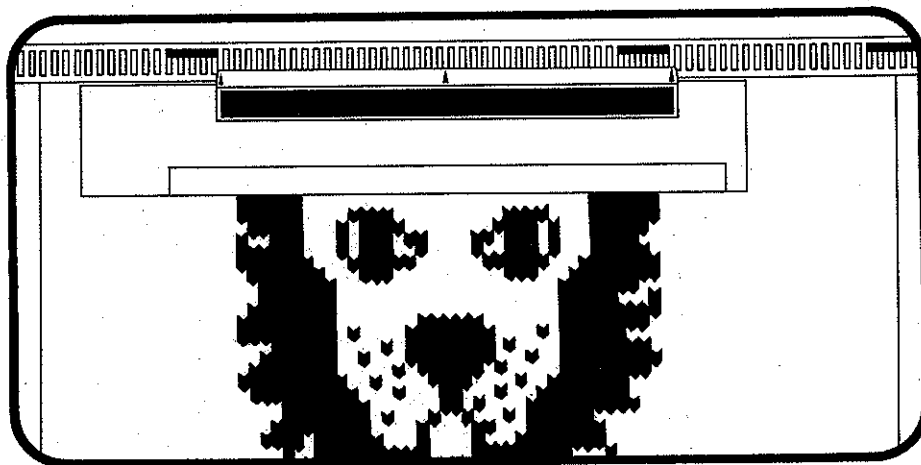
The pattern will be knitted vertically above the card reader.

Should the card reader now be in an awkward place, it may be moved to the left or right by exactly 40 or 80 bars.

What to do at the end of a single motif
On most cards suitable for single-motif knitting, the end of the motif is followed on the punchcard by a row without any punched holes. Thus, the pushers will be in the correct position, and the selector dial only needs to be turned to 0 when the row has been knitted.

If you wish to change from a fairisle pattern to a plain fairisle stitch at a point where there is no row without any punched holes in the card, proceed as follows:
— **Selector dial on 0.**
— **All pushers on front bed into Rest Position,** leaving pushers on back bed in their position.
— **Continue knitting with the same lock setting, following the same colour change rhythm.**

Procedure for single-bed fairisle
If you wish to achieve a neat transition to the background in basic colour, wind the trimming colour at both ends round the first needle knitting in basic colour.

Interrupted patterns in non-fairisle patterning
The procedure here is exactly the same as for fairisle patterns.
Lace patterns, raised patterns, and single-bed tuck stitch are all suitable for this; double-bed tuck stitch, however, less so.

21

Varying the pattern in length

— **Prepare for fairisle knitting,** as decribed on page 7 a. s. o.

— **Knit at least RC 4**

— **Selector dial on 0**

— **Knit RC 4, 8, 12**
  The more rows you knit, the higher the pattern will be.

— **Selector dial on 4, when you wish to knit with the pushers in a new position.**

Basic rule: If you knit with selector dial set to 4, only alter the setting of the selector dial after 4 rows, or a multiple of it. If you knit with selector dial set to 2, only alter the setting of the selector dial after 2 rows, or a multiple of it.

For example:
Punchcard 11 DECO
RC 4 with selector dial on 4
RC 8 with selector dial on 0
Repeat
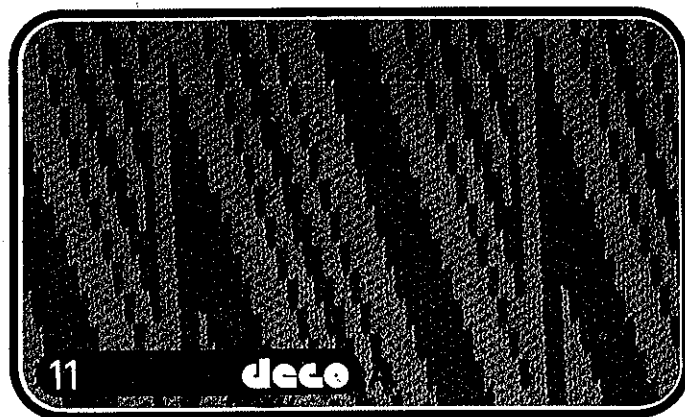
As a comparison:
The same pattern knitted without variation.
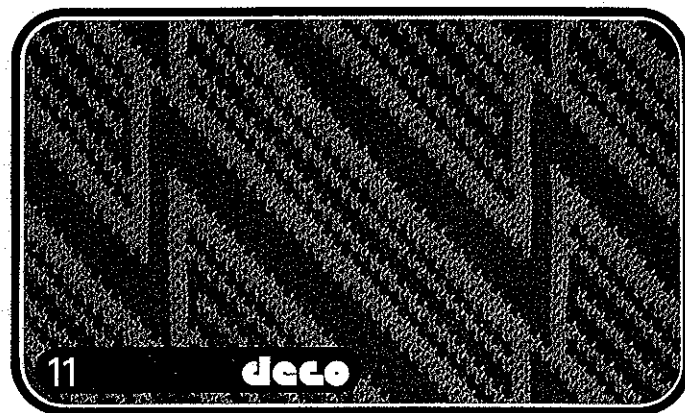
Practical hints

How to divide the work during automatic patterning

The actual division of the work is carried out in exactly the same way as described in the DUOMATIC 80 instruction book, pages 60 and 61.

If you want to leave the stitches of the second half of your work on the needles of the machine while you knit the first half, it is necessary to put all the pushers of the second half into the blocking rail on the back and the front bed. **Make a note of the position of the pushers on the back bed.**

In order to match the pattern correctly when you knit the second half, proceed as follows:

— **When you divide the work, make a note of the row number in the window of the card reader.**

— **To knit the second half, set the punchcard to the noted down row number** by pushing the release lever down, thereby advancing the punchcard.

— **Selector dial on 0.**

— **Disengage the selector from the lock, guide it over the trip cam to the left, then back again and attach it to the lock.**

— **Selector dial on 2 or 4, depending on the pattern.**
Check whether the red dot is visible on the selector dial; if not, give the selector dial another turn.

Continue knitting according to the pattern.

Free move when knitting with PASSAP DECO

If you set the lock to GX-position (free move) in order to move it out of the knitting, disengage PASSAP deco if necessary, and guide it out of the knitting in the direction you have been knitting in.

When knitting with PASSAP deco, never change direction if PASSAP deco has not yet been moved past all the needles in Working Position.

Unravelling knitted rows during automatic patterning

If rows have to be undone during automatic patterning, proceed as follows:

If you are knitting with selector dial on 2:

If the last row was knitted **from left to right,** unravel 2 rows.

If the last row was knitted **from right to left,** unravel 1 row.

Turn the punchcard back one row.

If necessary, continue in this way, i.e. every time 2 rows have been undone, turn back the card one row.

If you are knitting with selector dial on 4:

Fairisle knitting

If the last row was knitted with **trimming colour from left to right,** unravel 2 rows trimming colour and 2 rows basic colour; then, turn back the punchcard 1 row.

If the last row was knitted with **trimming colour from right to left,** unravel 1 row trimming colour and 2 rows basic colour; if you have already gone over the trip cam on the left, turn the punchcard back 1 row.

If the last row was knitted with **basic colour from left to right,** unravel 2 rows basic colour, but do not turn back the punchcard.

If the last row was knitted with **basic colour from right to left,** unravel 1 row basic colour, but do not turn back the punchcard.

If necessary, continue by turning back the card 1 row every time 4 rows have been unravelled.

One-coloured patterns knitted with selector dial on 4

— Unravel the rows which have been knitted with the same pusher position (maximum 4).

— If 4 rows have already been knitted, or if, while knitting the 3rd row, you have already gone over the trip cam at the left, turn the punchcard back 1 row.

— If you have knitted only 1 or 2 rows, do not turn back the punchcard.

If necessary, continue by turning back the punchcard 1 row, each time you have unravelled 4 rows.

Note: Before continuing to knit:

— **Selector dial on 0.**

— **Disengage selector from lock, guide it over the trip cam to the left, then back again, and attach it to the lock.**

— **Continue knitting.**

Unpacking and fitting the DECO to DUOMATIC 80 only

First check that the carton and accessory are not damaged. If however your accessory has been damaged during transport, please inform the Carrier immediately of the damage. Keep the special packing so that you can repack your DECO safely at any time.
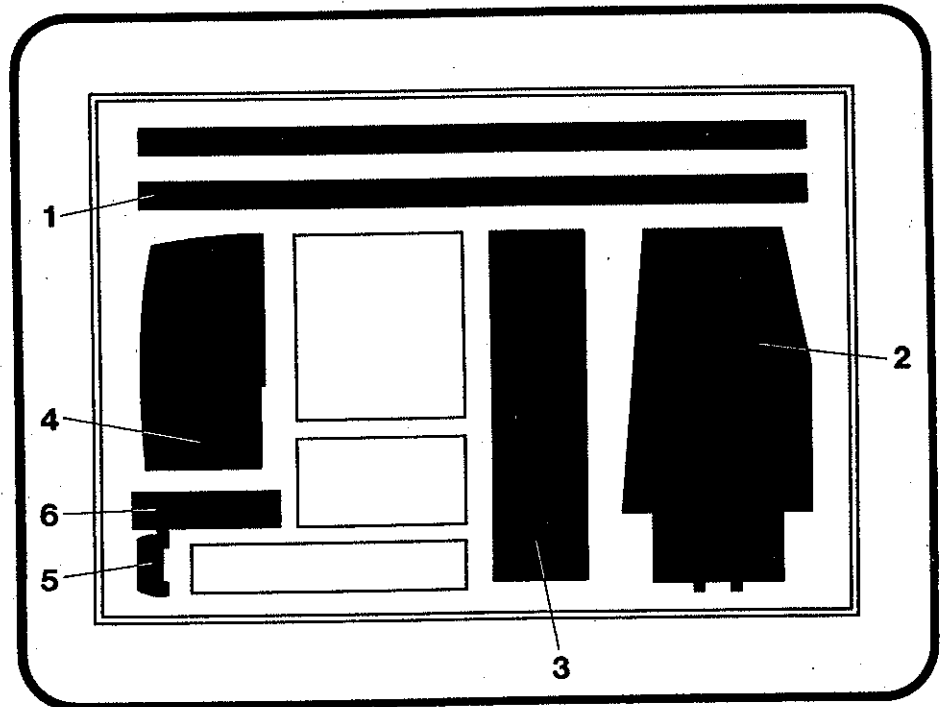
The instruction book and the envelope with 20 punchcards are on the right on top of the bed extension and the card reader.

1 **Slotted rack, in two parts**

2 **Bed extension, left**

3 **Card reader**

4 **Selector**

5 **Holder for the selector**

6 **Plastic bag containing:**
3 dark grey screws (for fitting to the DUOMATIC 80).
3 silver grey screws (for fitting to the DUOMATIC).
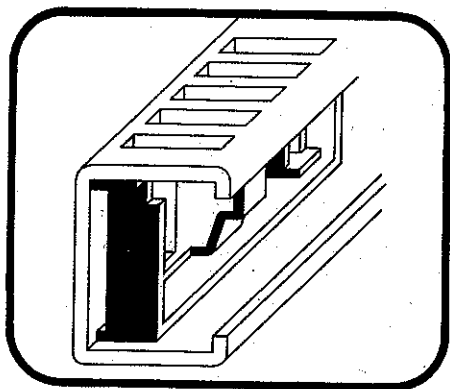Extension part for the knob of the blocking rail.
2 hexagonal adapting pieces for fitting the left bed extension.
8 positioning-pins.
8 plastic studs for punchcards.
Special hexagon spanner for fitting the left bed extension.

Fitting the slotted rack

Fit the positioning sockets in the right half of the slotted rack (see picture), by pressing the small U-shaped handle downwards. Check that the two small red pegs of the socket are to the right of the larger red peg (see picture on page 20).
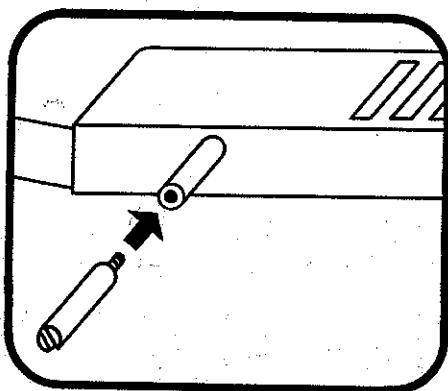
– Screw in the extension piece for the knob of the blocking rail.

left half of slotted rack

right half of slotted rack
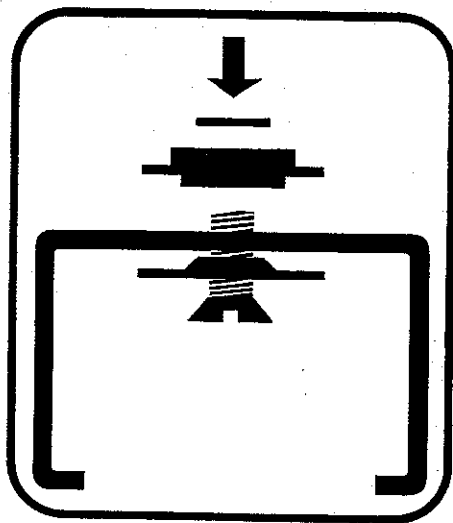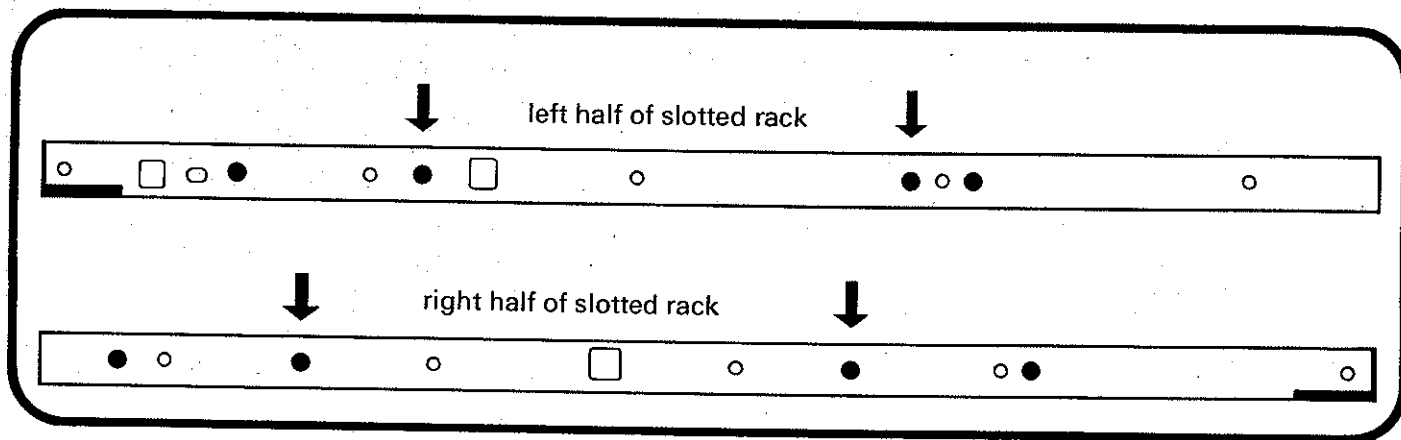
In both halves of the slotted rack there are already two screws with which to fix it.

Should the screws have come loose from the slotted rack, re-insert them into the holes marked with an arrow.

Insert the screw with the spring washer from below into the slotted rack, then fit the metal socket and the cardboard disc on top.
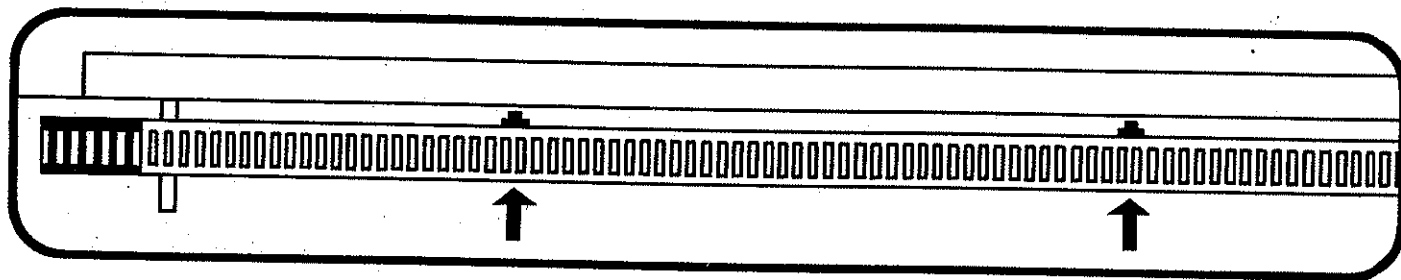
— **Screw left half of slotted rack to the edge of the needle bed,** with the bars of the slotted rack facing upwards and the black end piece facing to the left. At the same time guide the lengthened knob of the blocking rail through the large left hole of the slotted rack.

— **Screw on the right half of the slotted rack in the same way.**

Fitting the left bed extension
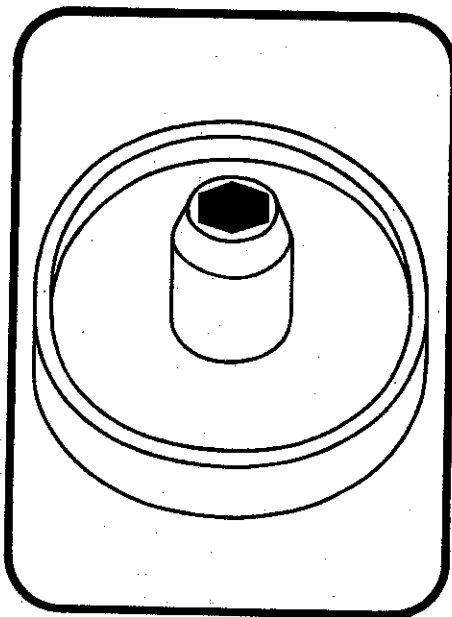
— **Using the special hexagon spanner supplied, loosen the two hexagonal nuts under the left front side plate.** Keep the nuts and discs (spring washers).
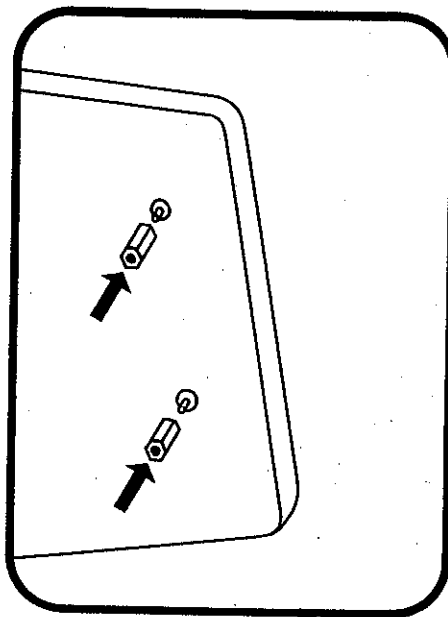
— **Insert the hexagonal adapting piece into the special spanner and screw it from below over the screws** from which the nuts have just been removed. Press the screw located in the lower guide rail from above against the bed, and tighten the adapting piece as much as possible.
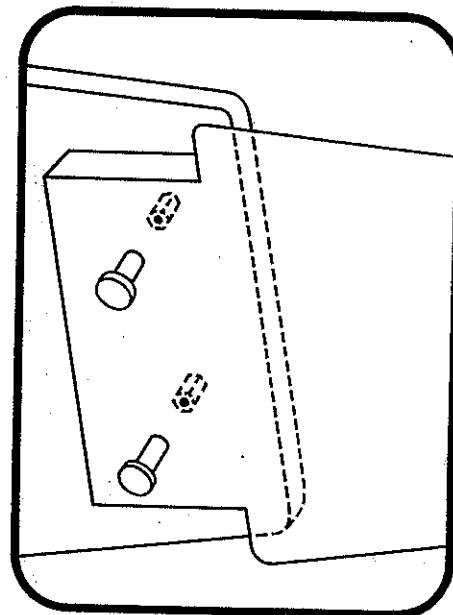
— **Slide the bed extension with the two holes over the adapting piece, and tighten the two knurled screws already on the bed extension.**

Fitting the holder for the DECO

Note: The holder for ALINEA cannot be used for DECO.
(Dark grey screws for DUOMATIC 80.)

— **Remove the front lock from needle bed,** with arrow keys disengaged. If the bed extension has already been fitted, pull the lock slightly upwards at the stop, and at the same time push down the lower left corner of the bed extension.

— **Turn lock round** (lock connection at right).
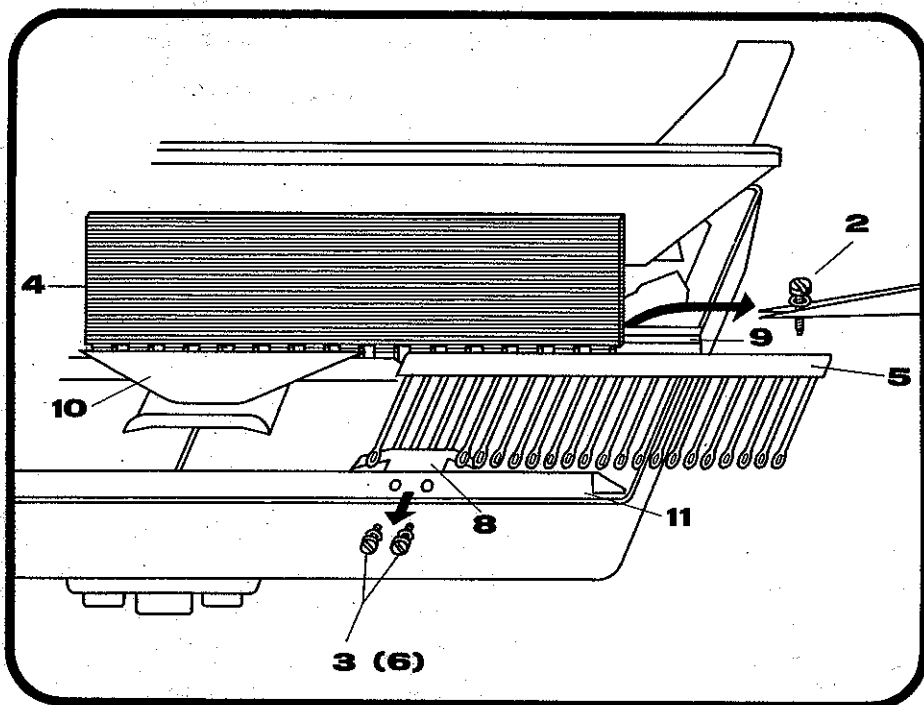
Preparation

— **Remove screw (2)** with washer and keep it.

— **Introduce pattern ruler (4)** between cam box guide (9) and auxiliary pusher cam (10).

— **Introduce deckercomb (5)** between pattern ruler (4) and strap (8) so that four decker needles rest underneath strap (8) holding it tight.

— **Only now remove screws (3)** with washers and throw them away. They will be replaced later on with new screws (6) with new spring washers.
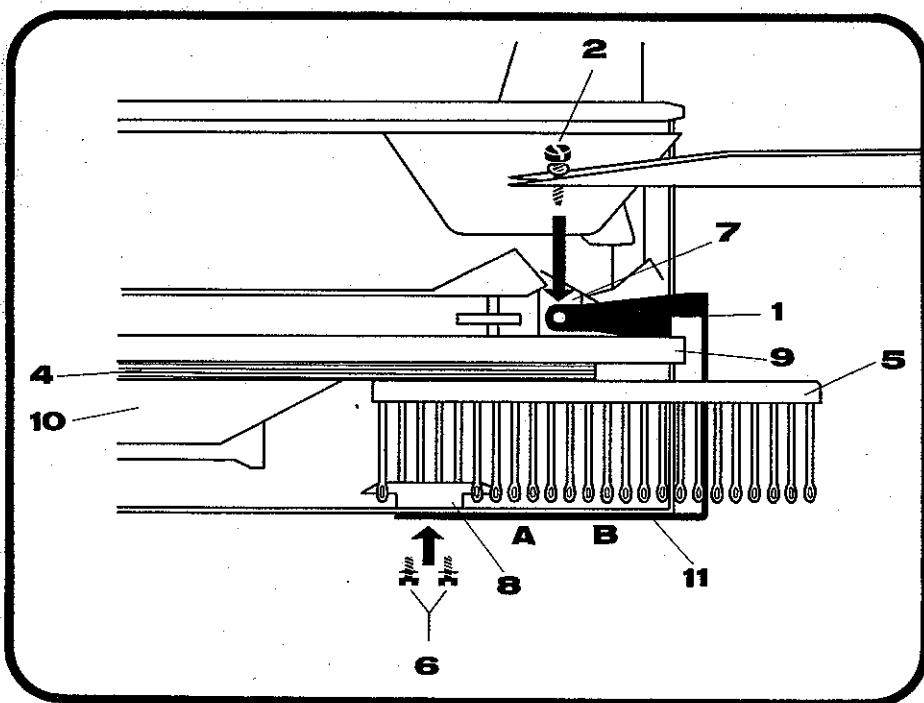
Mounting the holder

— **Insert holder (1) from the right,** fitting pegs A and B into rim of ground plate (11).

— **Fasten short end of holder with screw (2) and spring washer over auxiliary rejector (7).**

— **With new screws (6)** (dark grey screws for DUOMATIC 80) and spring washers fix long end of holder behind strap (8). The new longer screws (6) may only be used with the holder.

— **Remove deckercomb (5) and pattern ruler (4),** turn lock round and put back on front bed.

Now the holder is ready for use at left of lock.