

WEAVING ATTACHMENT

FOR

WEAVING & VERTICAL
PATTERN KNITTING



PREFACE

The scope of your Knitting Machine is considerably widened by the introduction of the WEAVING ATTACHMENT which, as its name implies, enables woven fabric to be produced on your machine.

In weaving, two yarns are employed. One is termed the 'Weft' and the other, the 'Warp'. The Weft is the yarn which runs horizontally across the fabric and the Warp runs vertically, up the fabric.

The Cam Box of your Knitting Machine controls the Weft and the Weaving Attachment controls the Warp.

The Cam Box, particularly those fitted with two feeders, will enable two colour horizontal stripe effects to be obtained in the fabric and, as the Warp is fed from various lengths of yarn, multiple coloured vertical stripes are obtainable, the number of different colours being dependent on the variety of shades used in setting up the Warp.

The Weaving Attachment can also be 'pitched' (or raked) which means that it can be moved over several needles to the right, or to the left, thus enabling vertical Zig Zag stripes to be introduced.

Many different stripe effects are obtainable by means of 'pitching' (or racking) the Weaving Attachment and there is a built in dial which tells you the number of times you have 'pitched' (or raked) the attachment in either direction.

To the frame of the Weaving Attachment are affixed several small plastic sections known as

'Vertical Pattern Knitter' units (Warp guides) which feed the threads of the Warp to the needles. If weaving over the full width of the machine all 'Vertical Pattern Knitter' units will be in use but, when weaving only narrow fabrics or if using the attachment for introducing a vertical straight, or Zig Zag stripe into a garment, the V. P. K units which are not in use, should be removed.

It is recommended that the usual Knitting Yarns are used for both Warp & Weft and, since there will always be two yarns passing through the needle hooks, thick wools should be avoided as these may be liable to cause damage to the needle latches. Yarns of 2 ply, 3 ply and 4 ply thickness are the most satisfactory.

When weaving fabrics of a 'Carpet Effect' type however, provided a fine yarn is used for the Weft, a thick or D. K. yarn may be used for the Warp.

Materials woven on your machine may be cut and sewn up as any ordinary material although it is always recommended that the raw edges should be bound to prevent fraying.

Careful study of the Instruction Book, coupled with your experience in the use of your knitter will quickly enable you to master the operation of the Weaving Attachment.

THE WEAVING ATTACHMENT
(For Weaving & Vertical Pattern Knitting)

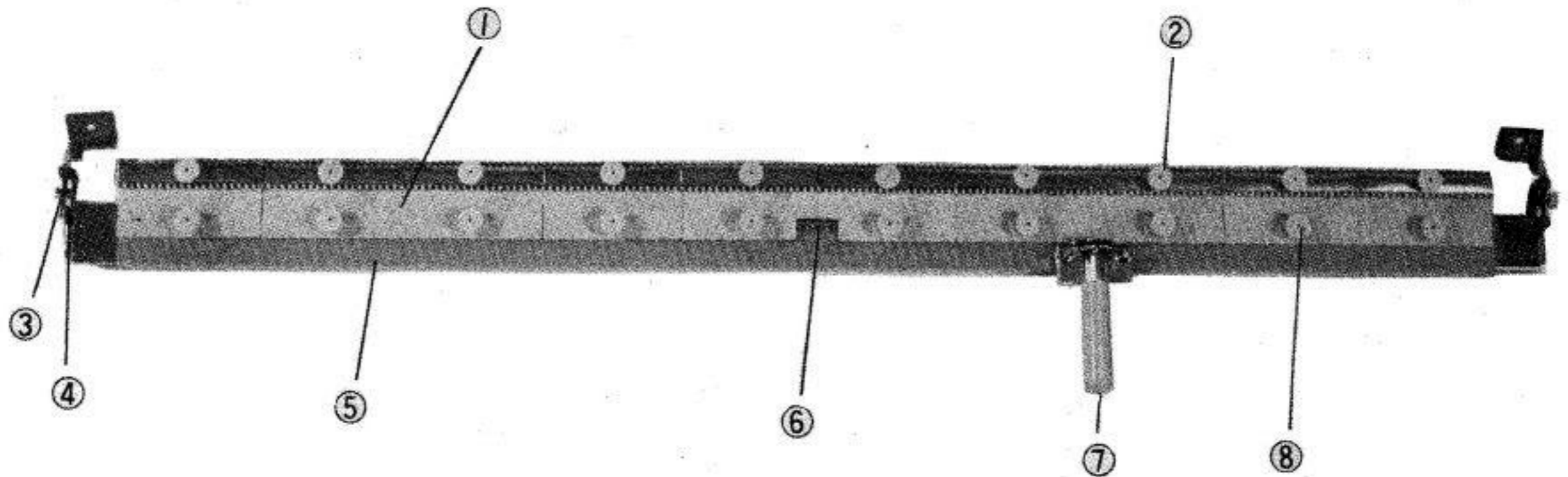


Fig. 1

- | | |
|---|-------------------------|
| 1. V. P. K. (Vertical Pattern Knitting) unit. | 5. Mounting Frame. |
| 2. V. P. K. Cover Securing Nut. | 6. Pitch Dial. |
| 3. Locking Screw. | 7. Pitch Handle. |
| 4. Mounting Joint. | 8. V. P. K. Fixing Nut. |

HOW TO ASSEMBLE AND FIT THE ATTACHMENT TO THE MACHINE

- (1) Place the Pitch Handle in position, ensure that the teeth engage in the rack and securely tighten the wing nuts. (See Fig. 2)
- (2) Place both the left and right hand Mounting Joints in position on the back of the Frame and tighten wing nuts firmly. (See Fig. 3)
- (3) Remove the two knurled nuts located at each end of the front of the Knitting Machine and place the Mounting Joints over the screws. Replace the knurled nuts and tighten them firmly with a screwdriver. (See Fig. 4)

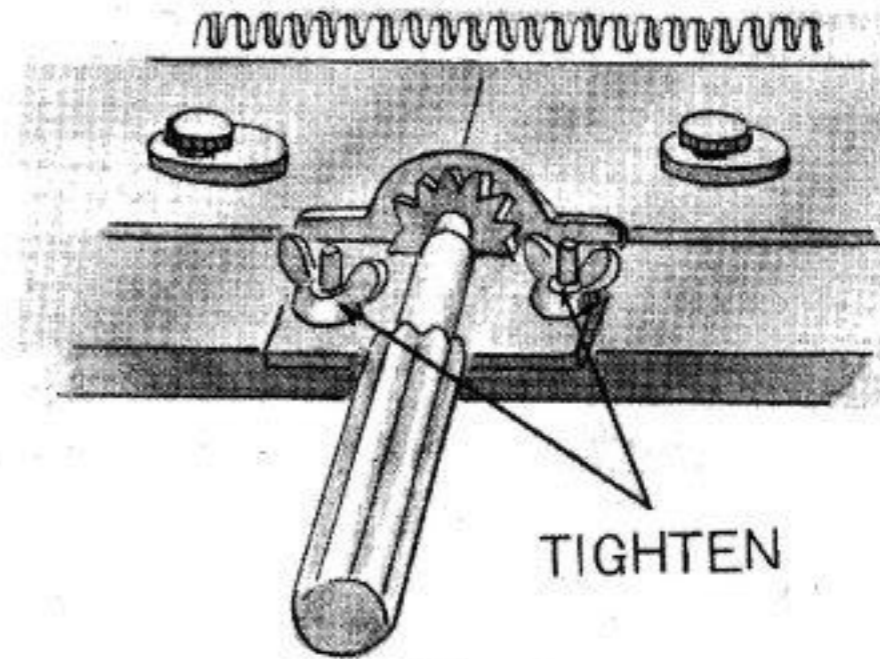


Fig. 2

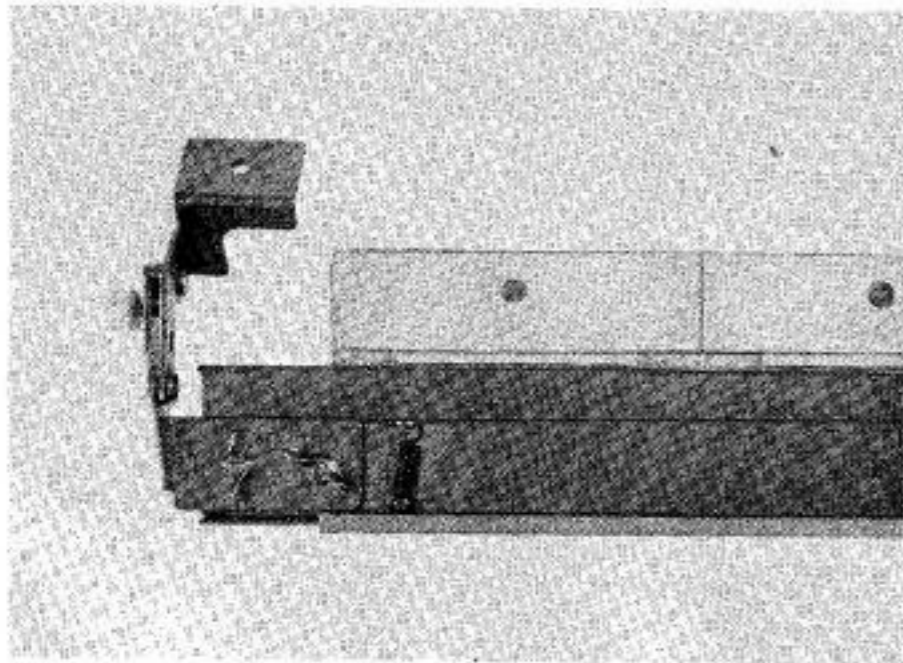


Fig. 3

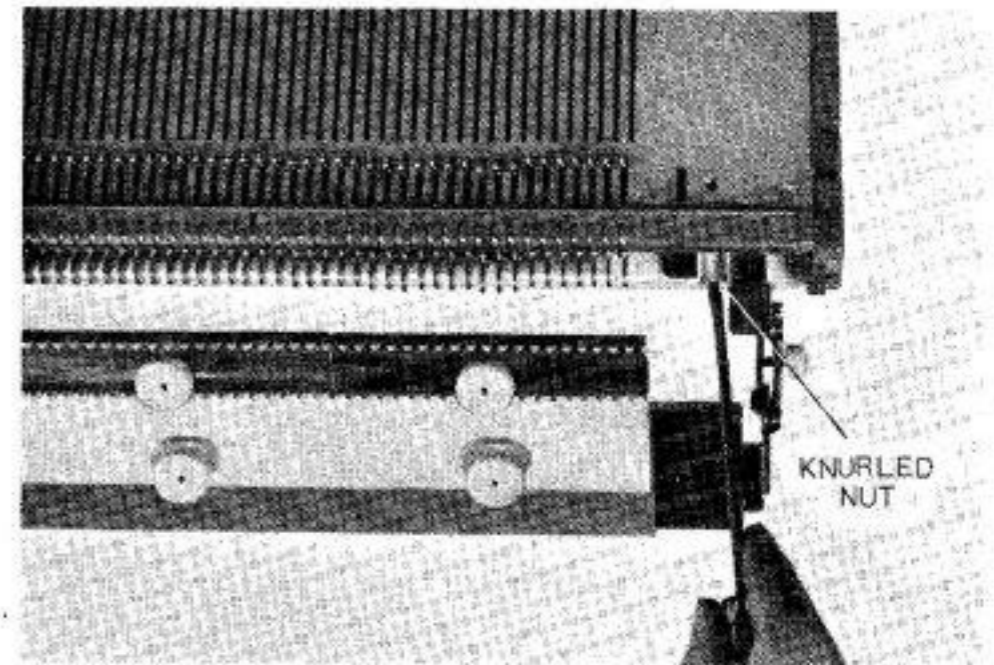


Fig. 4

(I) HOW TO ADJUST THE ATTACHMENT

Prior to using the attachment, it is essential to ensure that the needles line up correctly with the plastic teeth of the Vertical Pattern Knitting units.

To do this proceed as follows:

- (1) Lift the attachment slightly until the Locking Screws are in line with the holes in the inner arms of the Joints. (See Fig. 5) Lock in this position by tightening the Locking Screws until their ends pass through the holes in the inner arms of the Joints. (See Fig. 6)
- (2) In the centre of the machine, bring forward a few needles until their hooks just touch the plastic teeth of the V. P. K. units.

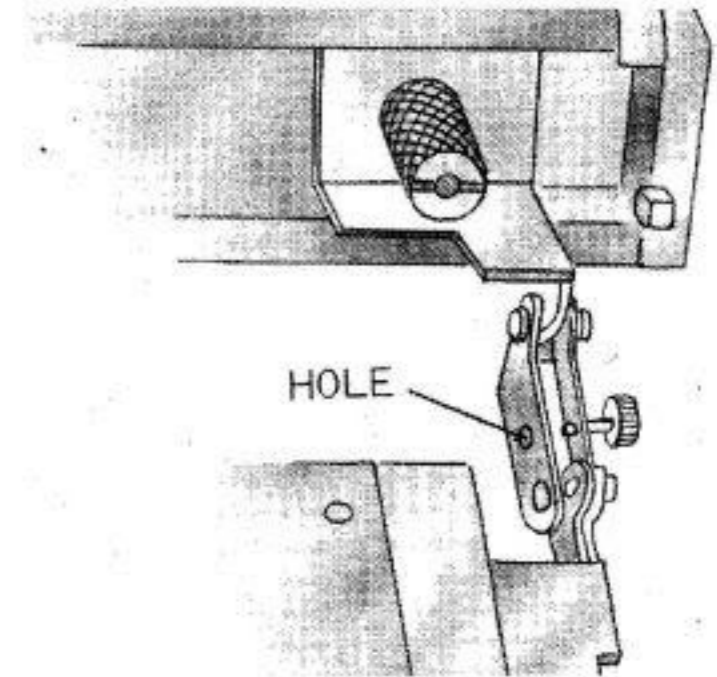


Fig. 5

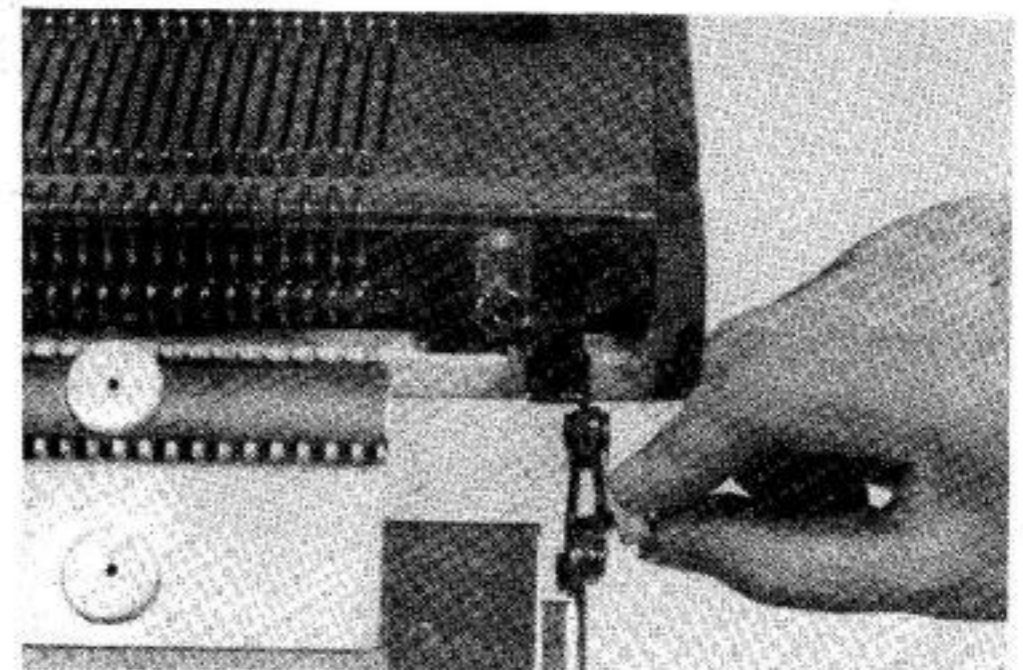


Fig. 6

- (3) Slacken all the V. P. K. unit Fixing Nuts (See Fig. 7) so that each unit can be moved sideways. Set one of the centre units to a position where the hooks of the needles which you have brought forward, are opposite the centre of the plastic teeth of the V. P. K. unit. (See Fig. 8) Now tighten the Fixing Nut of this unit.
- (4) After positioning the first unit, slide the adjacent units at each side firmly against this unit and tighten their Fixing Nuts. Continue to move the remaining units inwards until all the units are fastened in the correct position. Lower the Attachment by releasing the Locking Screws.

NOTE It is advisable, after positioning all the units, to check that the extreme end units are correctly lined up.

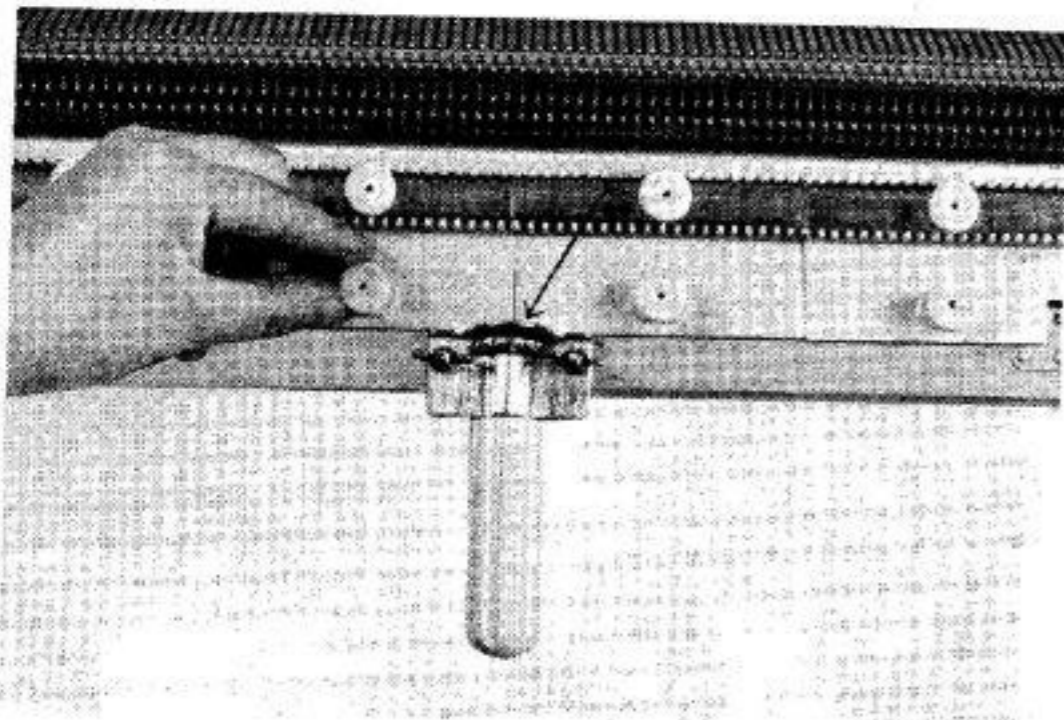


Fig. 7

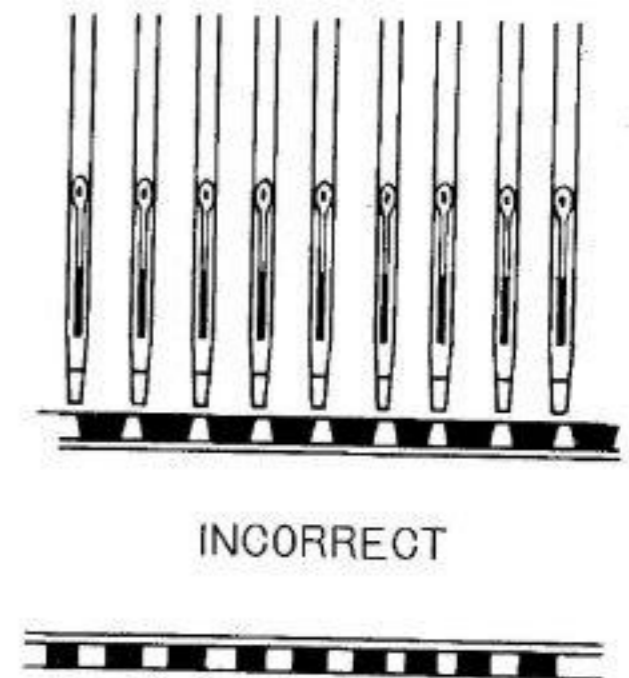
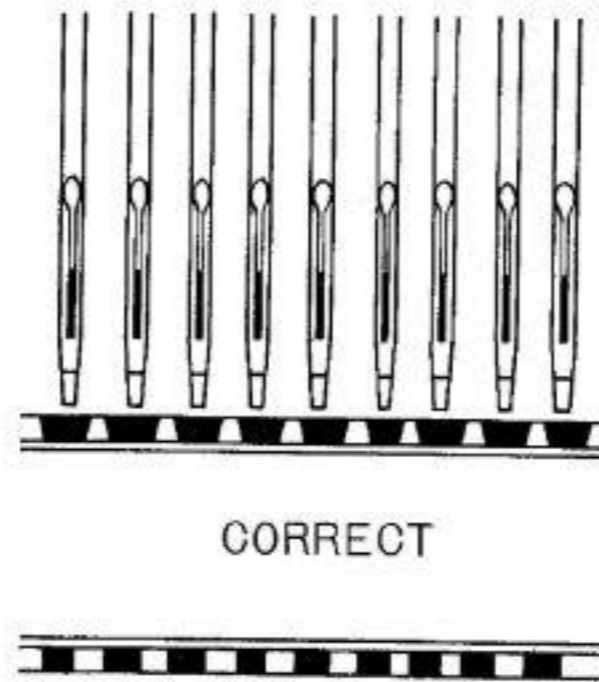


Fig. 8

(II) HOW TO USE THE ATTACHMENT

- (1) On the Knitting Machine, cast on over the required number of needles and knit a few rows.
(See Fig. 9)
- (2) Bring forward both Return Cam Levers and set both Pattern Control Knobs to "M"
- (3) Raise the Attachment and lock in the upper position.
(See Fig. 10)
- (4) Push back into position "B" alternate needles.
Those needles remaining in position "C" will now be used for hooking on, the contrasting colour yarn forming the Warp. (See Fig. 11)

NOTE At least 2 adjacent needles at each end must always be pushed back into position "B". When producing a Zig Zag pattern pitched say over 4 needles in each direction, then at least 5

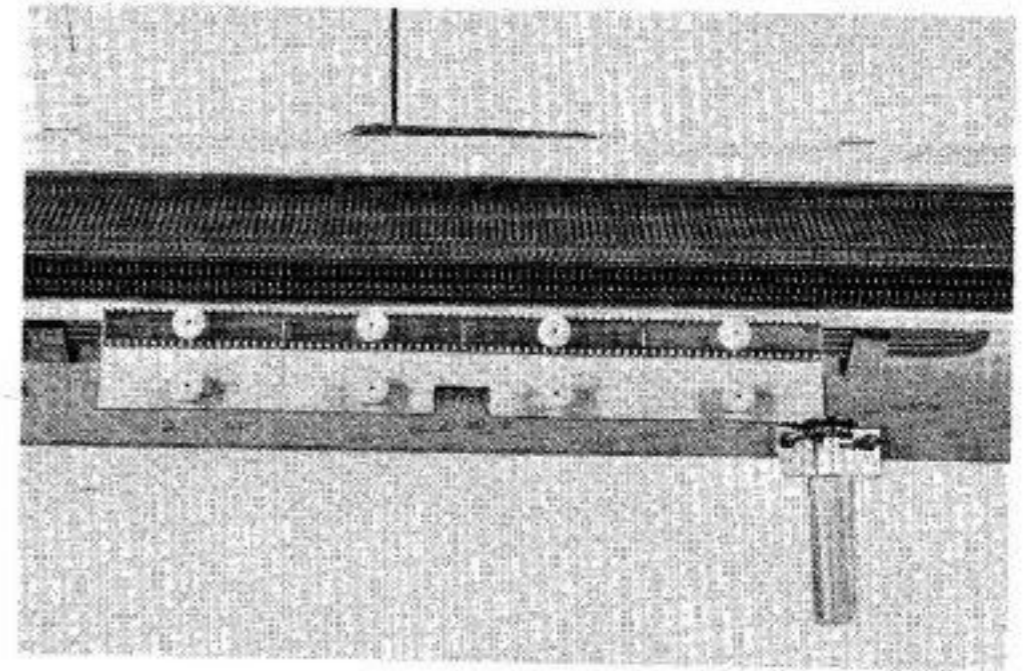


Fig. 9

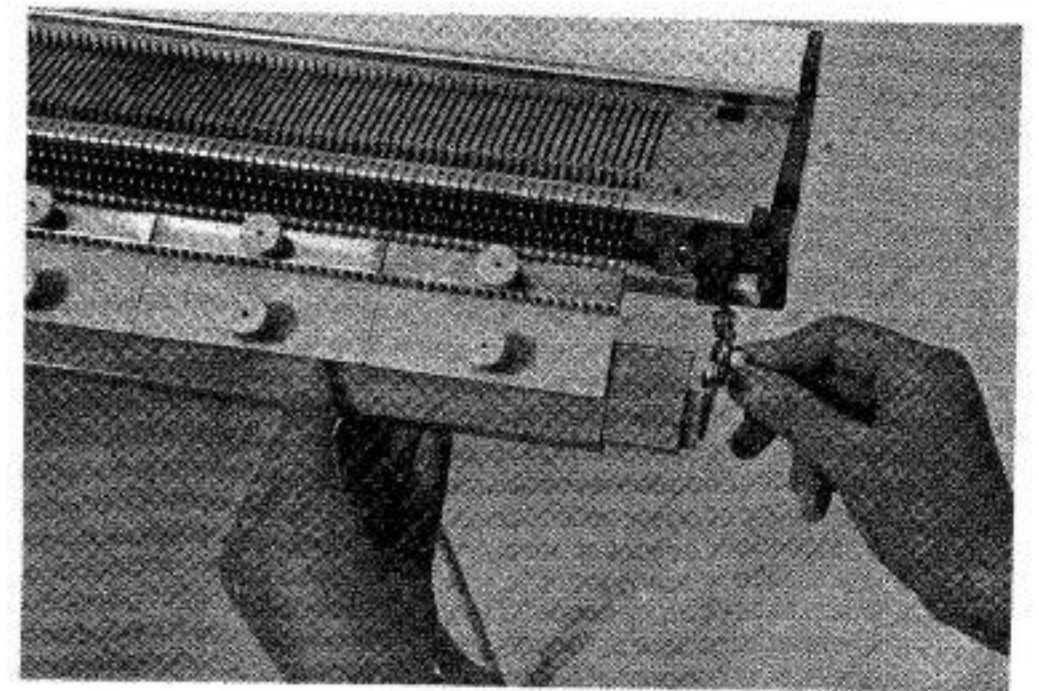


Fig. 10

adjacent needles at each end must be pushed back into position "B". If pitching over 7 needles in each direction then at least 8 adjacent needles should be pushed back into position "B" and so on.

- (5) Remove V. P. K. unit Cover securing nuts and take off the covers. (See Fig. 12.)
- (6) Cut the contrasting colour yarns, to be used for the Warp, into lengths and each length should be approximately 5 times the length of the fabric to be produced, (but 10 times for Carpet Effect Knitting as per Section IV). Fold the lengths in half and place the centre fold (or loop) over the first needle in position "C" and pass the ends down through the slots in the V. P. K. unit at each side of the needle. Continue in this way until all needles in position "C" have a loop of contrasting colour in the hook. (See Fig.13.)

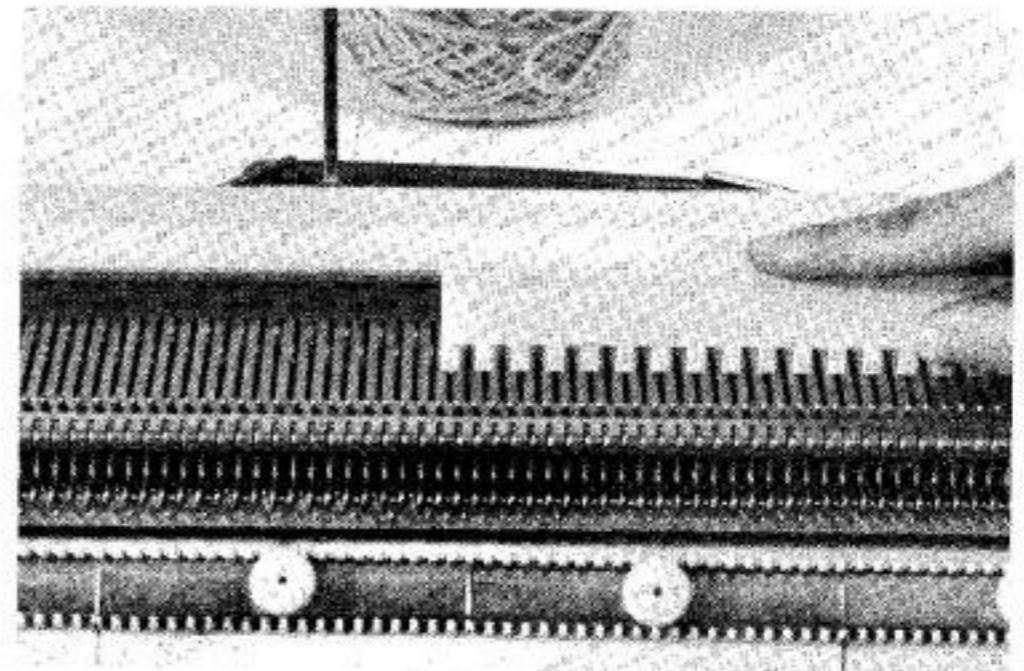


Fig. 11

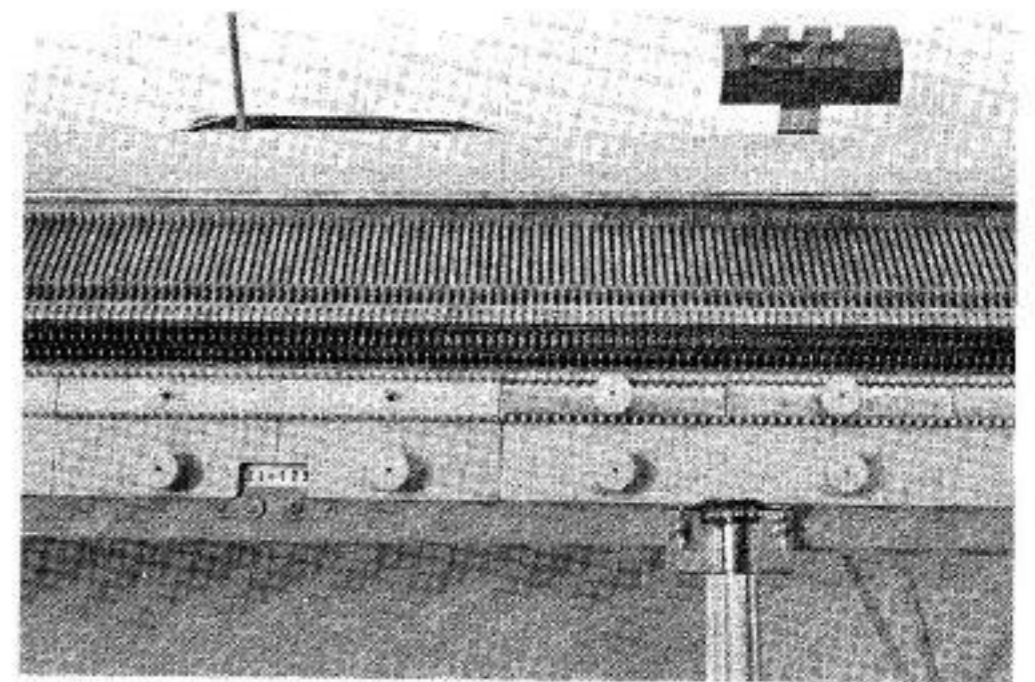


Fig. 12

(7) Replace V. P. K. unit Covers and secure with the nuts. (See Fig. 14.)

NOTE: As the pressure of the covers on the yarn control the tension, do not over tighten as the yarn should be able to feed freely.

(8) Remove all V.P.K. units not in use. (See Fig. 15.)

(9) Release the Locking Screws and lower the Attachment.

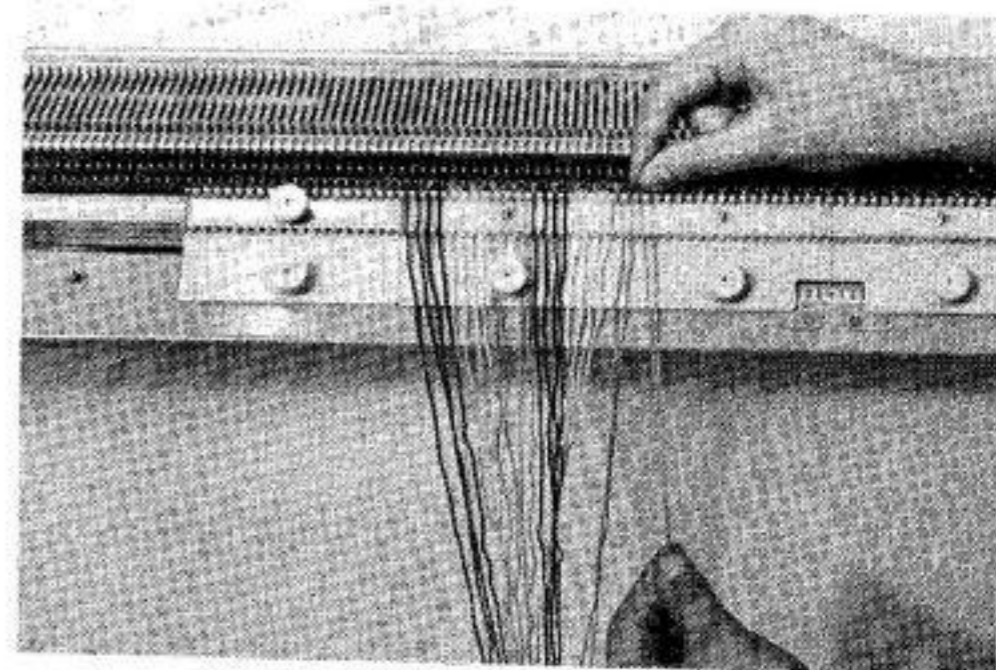


Fig. 13

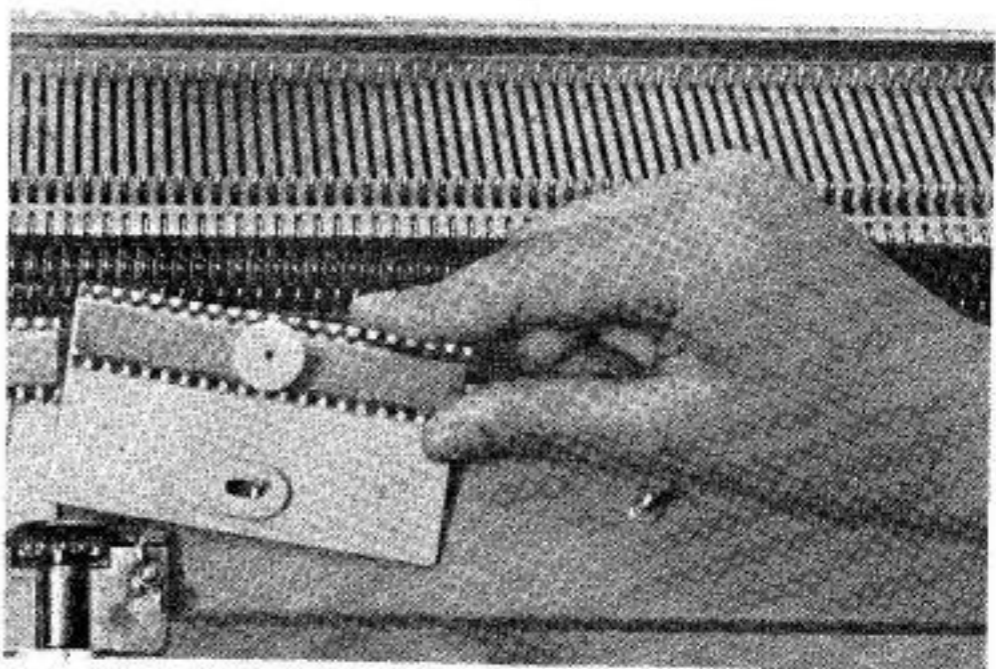


Fig. 15

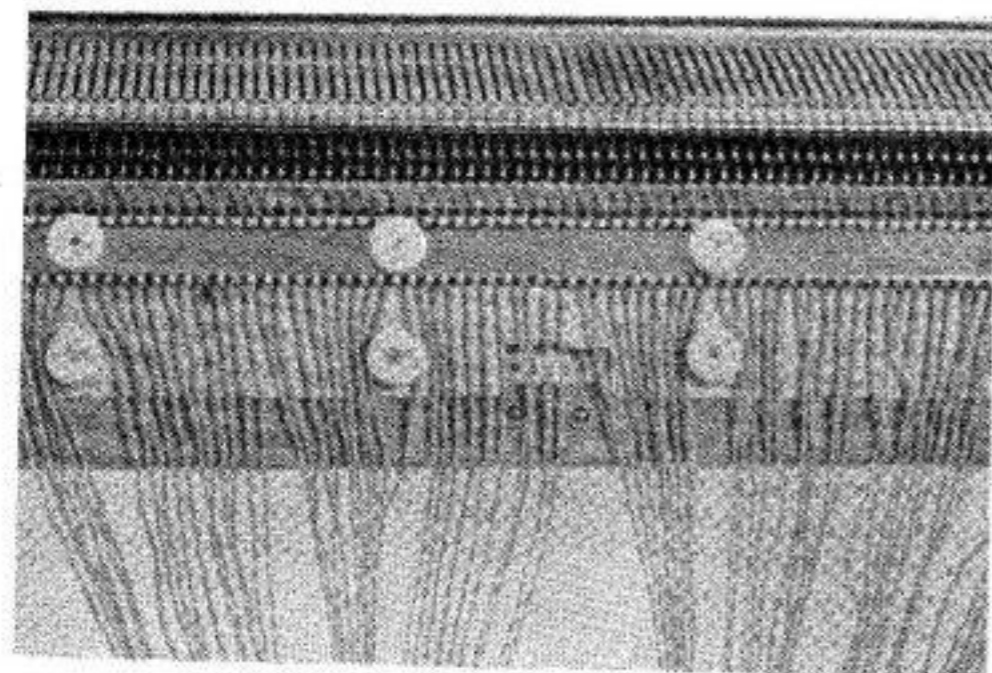


Fig. 14

(III) HOW TO WEAVE A VERTICAL ZIG-ZAG PATTERN.

(See Fig. 16)

- (1) Set up as given in Section (II). Commencing at the right hand end, push back into position "B" the following needles: — 1st. to 6th. then the * 8th. 10th. 12th. 14th. 16th. 18th. 19th. & 20th. Repeat from * across full width of the fabric. The needles will now be in the following order:—

Pos. "B" | | | . | . | . | . | . | . | | | | | | | |

Pos. "C" . . . | . | . | . | . | . | . . . | . | . | . | . | . |

- (2) With the Pitch Scale set at "●", place the loops of contrasting colour yarns into the hooks of all the needles in position "C".
- (3) Bring forward into position "E" all the working needles from positions "B" & "C" so that all the stitches, including the loops of contrasting colour yarns, are behind the open latches of the needles.
- (4) Making sure that both Return Cam Levers are in the forward position, knit one row. The end of the Carriage MUST be taken beyond the last V. P. K. unit. (See Fig. 17.)

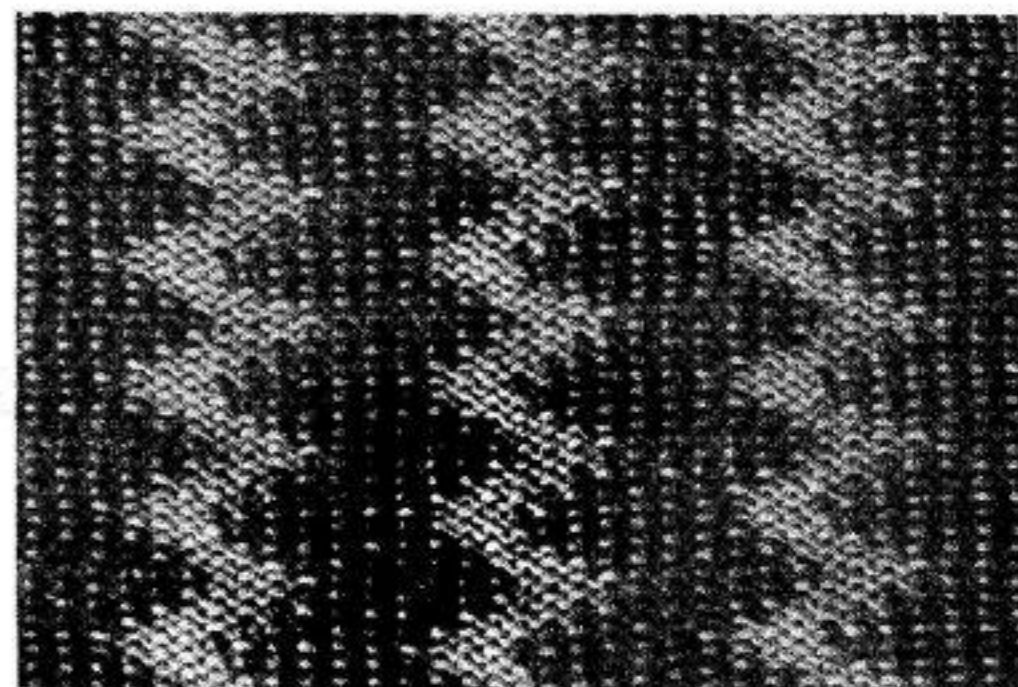


Fig. 16

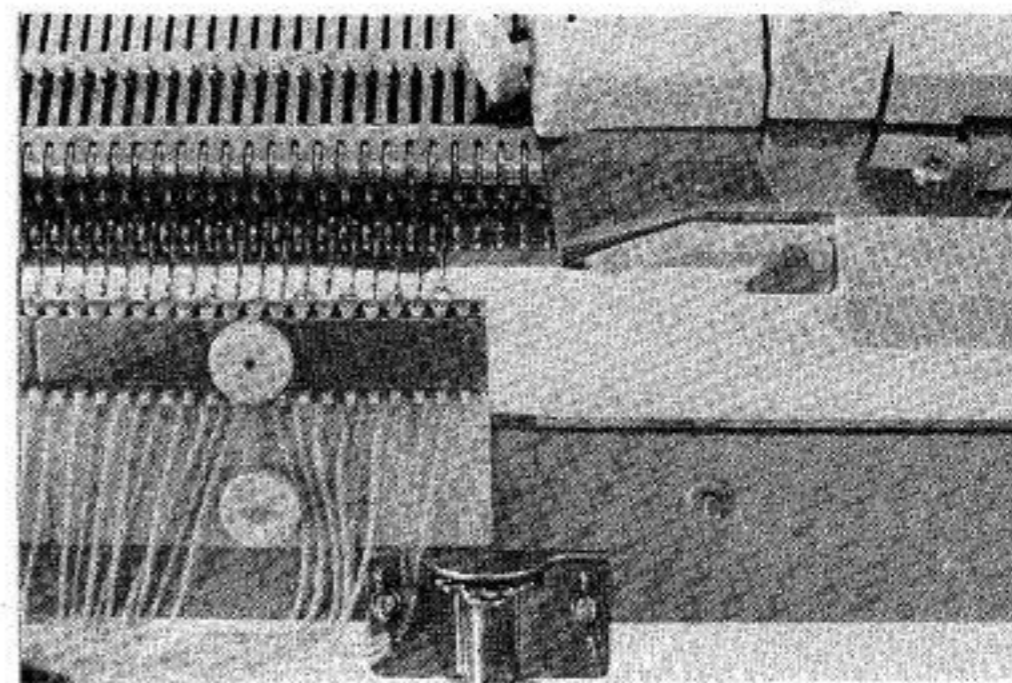


Fig. 17

- (5) Holding the Pitch Handle with your right hand, and the Attachment with your left hand. (See Fig. 18.) pull the Attachment slightly towards you and raise it until all the machine needles are beneath the V. P. K. units. (See Fig. 18.)
- (6) Still holding the Attachment in this position, turn the Pitch Handle clockwise (to the right) until it clicks once. The Scale will now read "1".
- (7) Pulling the Attachment slightly towards you, gently lower it and let go.

NOTE Make sure that each strand of contrasting colour is now in the hook of the adjacent needle to the right.

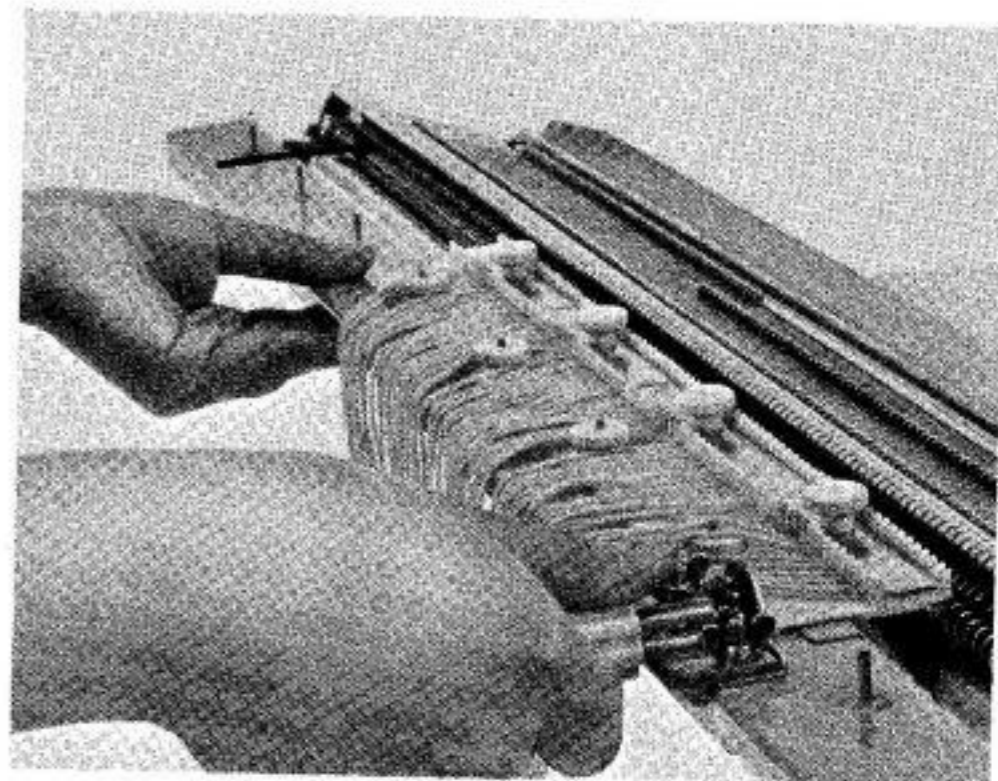


Fig. 18

- (8) Knit 1 row. Repeat from (5) above until six rows have been knitted. (Pitch Dial will now read "6".)
- (9) 7th. row. Before knitting this row, raise the Attachment and turn the Pitch Handle anti-clockwise (to the left) until it clicks once. The contrasting colour yarn will now be in the hooks of the adjacent needles to the left.
- (10) Knit the 7th. row. Repeat from (9) above, turning the Pitch Handle anti-clockwise each row until the 12th. row has been knitted. (Pitch Dial will now read '●') Repeat from (5) above.

(IV) CARPET EFFECT WEAVING. (See Fig.19)

- (1) Set up as given in Section (II). Push back into position "B" every alternate needle but arranging the needles so that at least 2 adjacent needles at each end are in position "B".

NOTE: We recommend the use of a fine yarn for the Weft and a thicker yarn for the contrasting colour(Warp).

- (2) Knit 1 row.
- (3) Pull attachment firmly towards you so that some extra yarn is pulled through the V. P. K. units.

NOTE: When the Attachment is released, the strands of contrasting colour will slacken. (See Fig.20.)

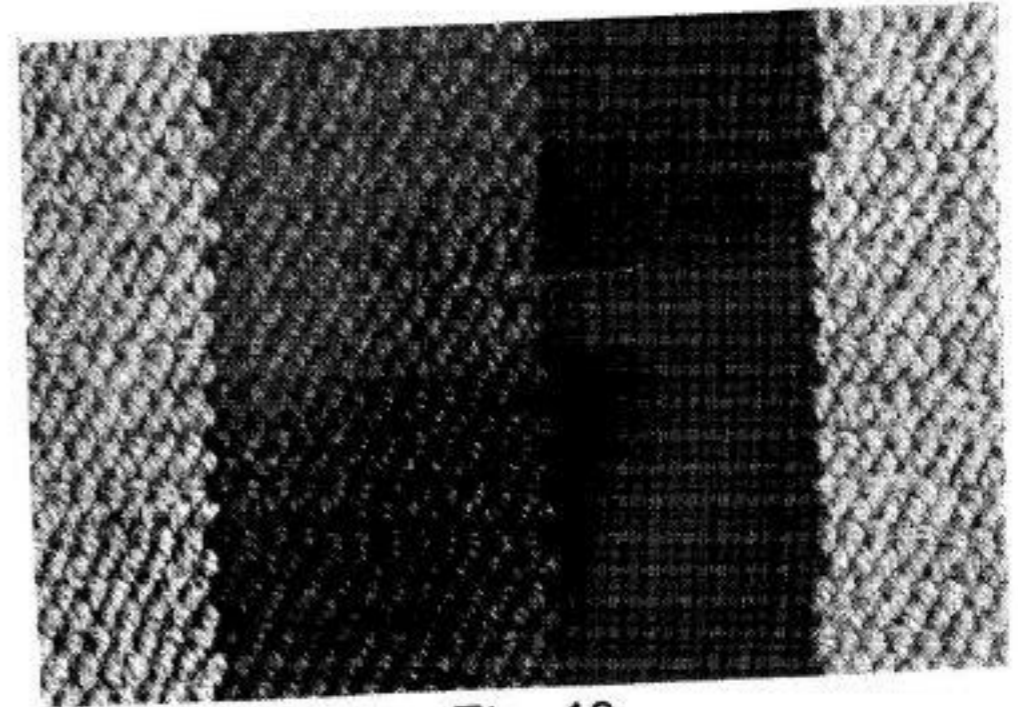


Fig. 19

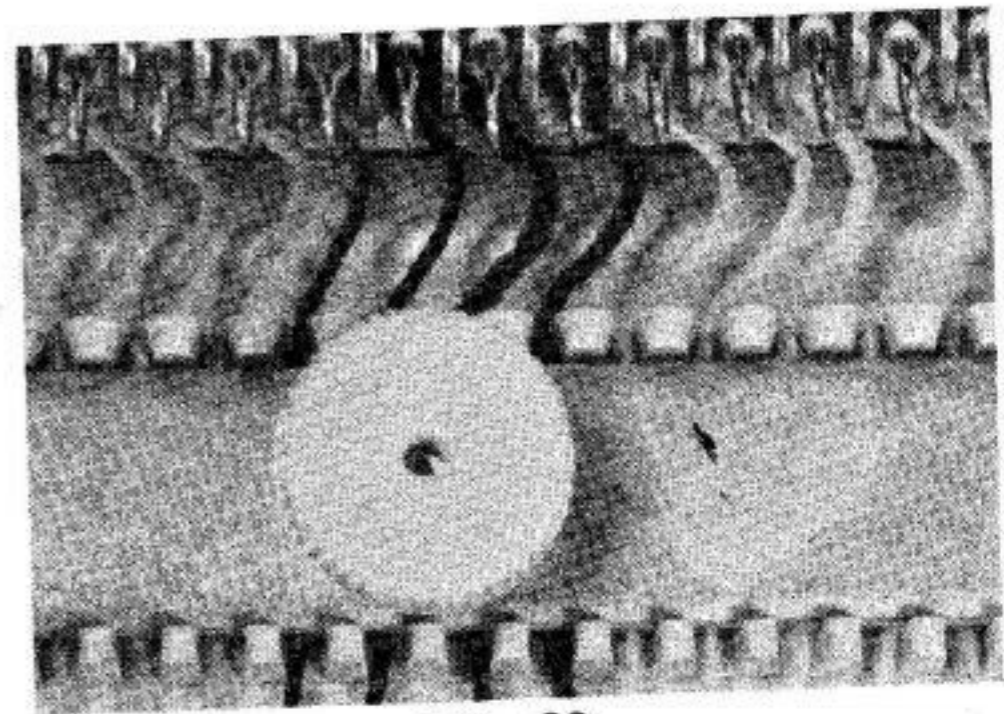


Fig. 20

- (4) While still holding the Attachment down, according to the size of pile required, insert one, or more, Needle Selection Guide Strips (or other straight rod of suitable thickness) along the contrasting colour just below the Sinker Hooks. (See Fig. 21.)
- (5) With the Needle Selection Guide Strip still held in this position, raise the Attachment and turn the Pitch Handle once to the right. Lower Attachment.

NOTE: The needle Guide Strip (or Rod) will now be between the strands of contrasting colour.
(See Fig. 22.)

- (6) Knit 2 rows.
- (7) Pull out the Guide Strip (or Rod)
- (8) Repeat from (3) above, turning Pitch Handle one pitch to the left. Then repeat turning Pitch Handle first to the right and then to the left until the fabric is completed.

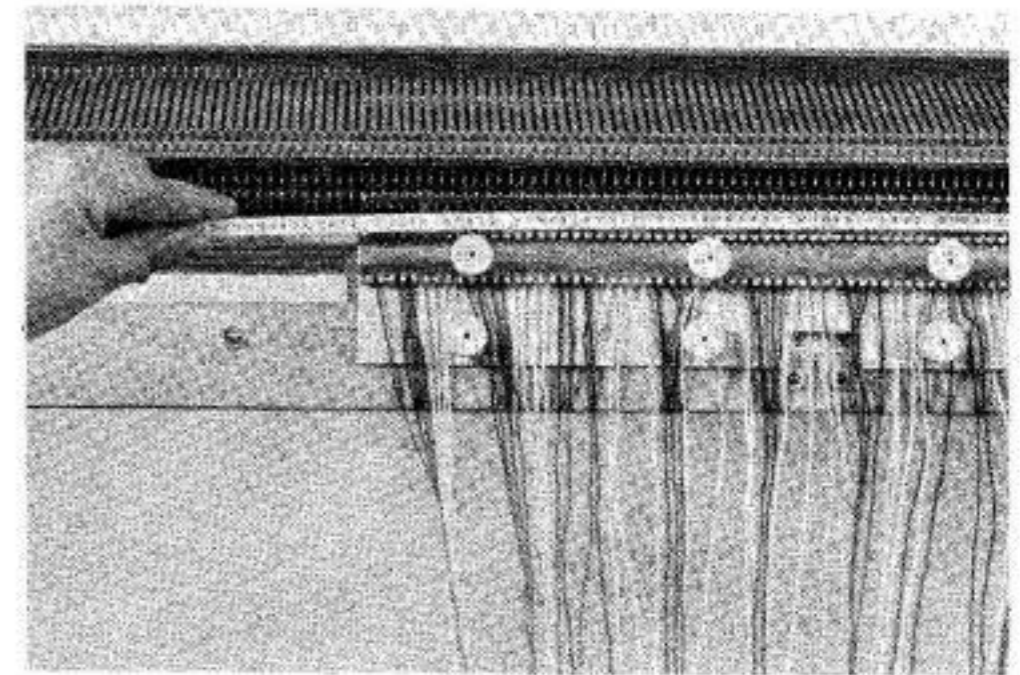


Fig. 21

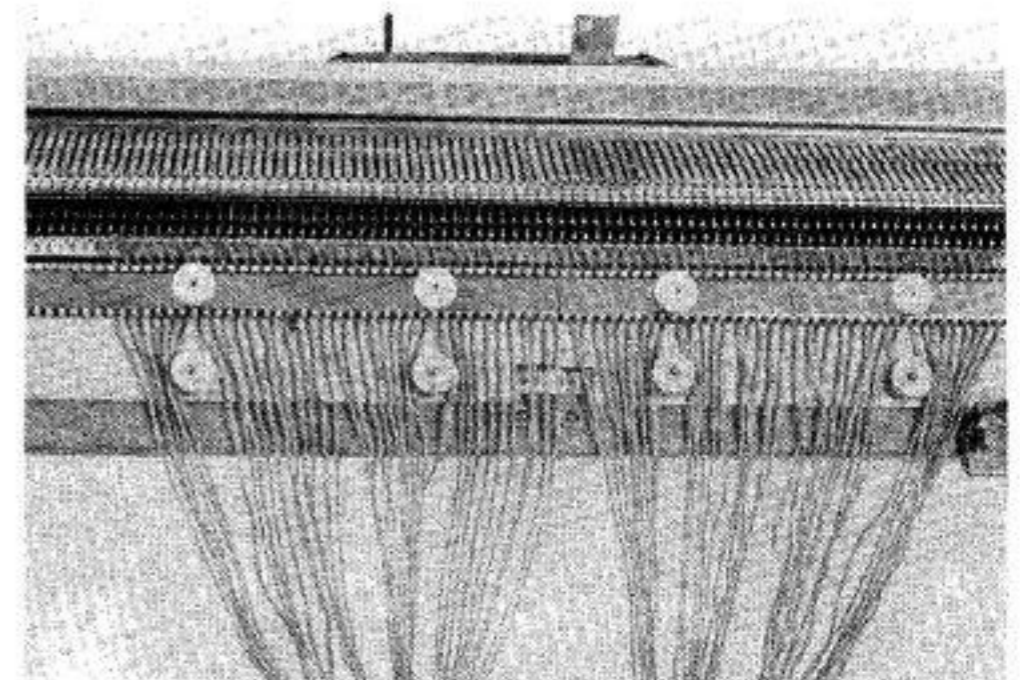


Fig. 22

(V) CHECK PATTERN. —Using Twin Yarn Feeders— (Fig .23)

Use two fine yarns, say 2 ply or 3 ply and thread first colour through left hand machine feeder and second colour through the right hand machine feeder.

- (1) Using the yarn in the left hand feeder, set up and cast on as given in Section (II) and arrange alternate needles as given for 'Carpet Effect' knitting in Section (IV)
- (2) Using the same two colours for the Warp as for the Weft, divide the colours between the needles in position "C"—say 5 needles in the 1st. colour then 5 needles in the 2nd. colour and so on across all needles in position "C".
- (3) With the left hand machine feeder still in use, weave a suitable number of rows which you consider will form a nice square. Pitch one to the right for the 1st. row, one to the left for the 2nd. row, one to the right for the 3rd. row and so on until the required number of rows have been knitted. (See Fig .23)
- (4) Change over to the right hand machine feeder and continuing in the same sequence, repeat (3) above.

Continue to repeat (3) & (4) above until the desired length of fabric is completed.

NOTE: Many variations may be woven in this way by using a variety of colours and different needle formations.

Fabric woven in this way can, after pressing, be cut out and the pieces machined together. The edges should be bound to avoid fraying.

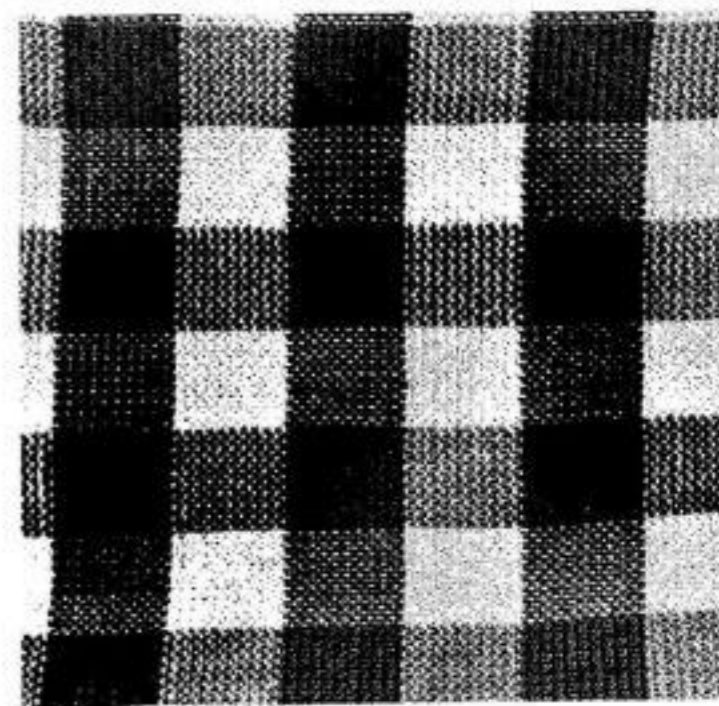


Fig. 23

(VI) OTHER TYPES OF VERTICAL KNITTING PATTERNS.

1 Row—1 Pitch.

After setting up and knitting the 1st. row:

- (1) Prior to raising the Attachment, turn the Pitch Handle 2 pitches to the left. (Anti-clockwise)
 - (2) Raise the Attachment and turn Pitch Handle one more Pitch to the left. (See Fig. 24.)
 - (3) Lower Attachment and knit 1 row.
 - (4) Turn Pitch Handle 2 pitches to the right.
 - (5) Raise Attachment and turn Pitch Handle one more pitch to the right.
 - (6) Lower Attachment and knit one row.
- Repeat from (1) above.

2 Rows—2 Pitches.

- (1) Prior to raising the Attachment, turn Pitch Handle 3 pitches to the left.
- (2) Raise the Attachment and turn Pitch Handle one more pitch to the left. (See Fig. 25.)
- (3) Lower Attachment and knit Two Rows.
- (4) Turn Pitch Handle 3 pitches to the right.
- (5) Raise Attachment and turn Pitch Handle 1 more pitch to the right.

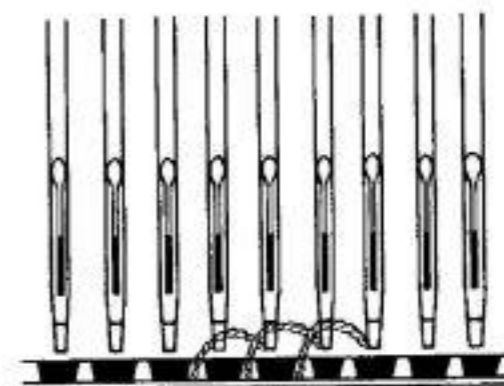


Fig. 24

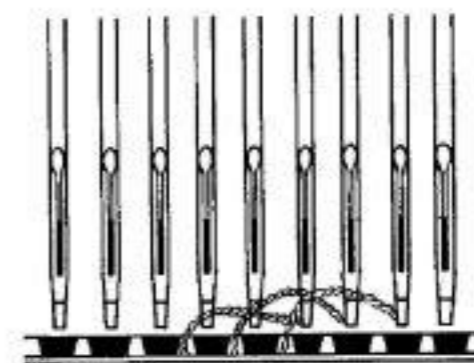


Fig. 25

(6) Lower Attachment and knit TWO rows. Repeat from (1) above.

OILING THE ATTACHMENT.

Apply a little fine machine oil, from time to time, to the following parts:—

- (1) Mounting Joint (See Fig. 26.)
- (2) Rack Gear (See Fig. 27.)
- (3) Pinion Wheel Shaft (See Fig. 28.)

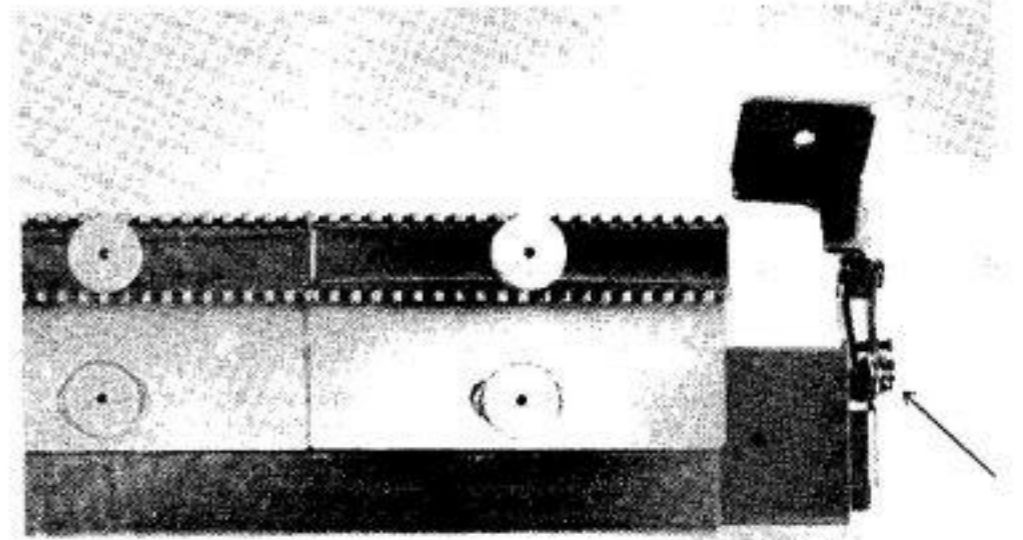


Fig. 26

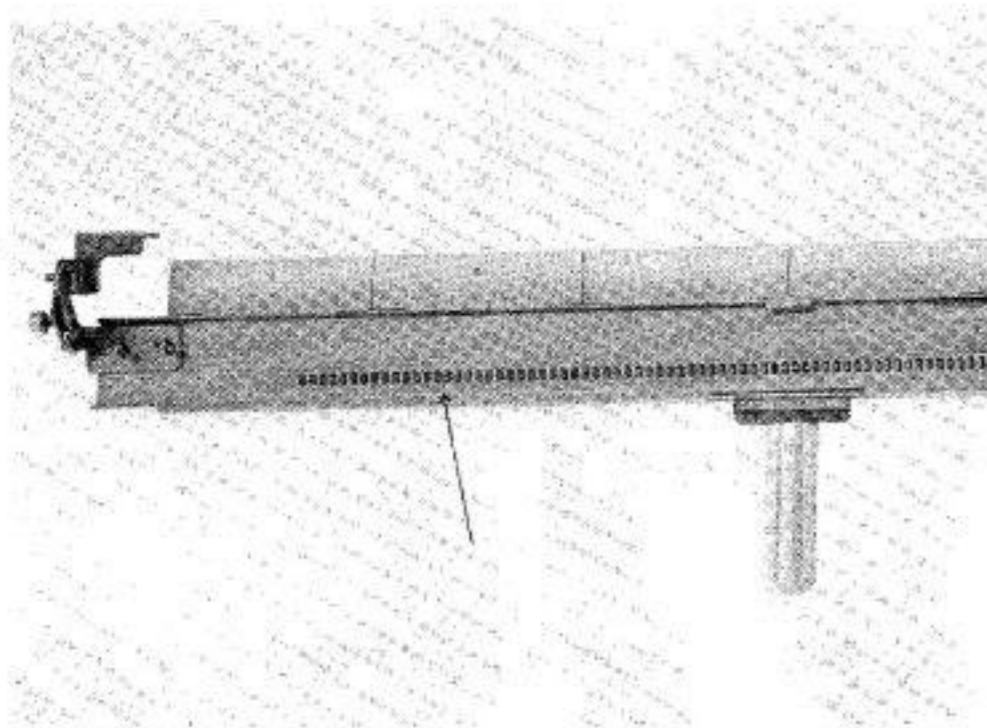


Fig. 27

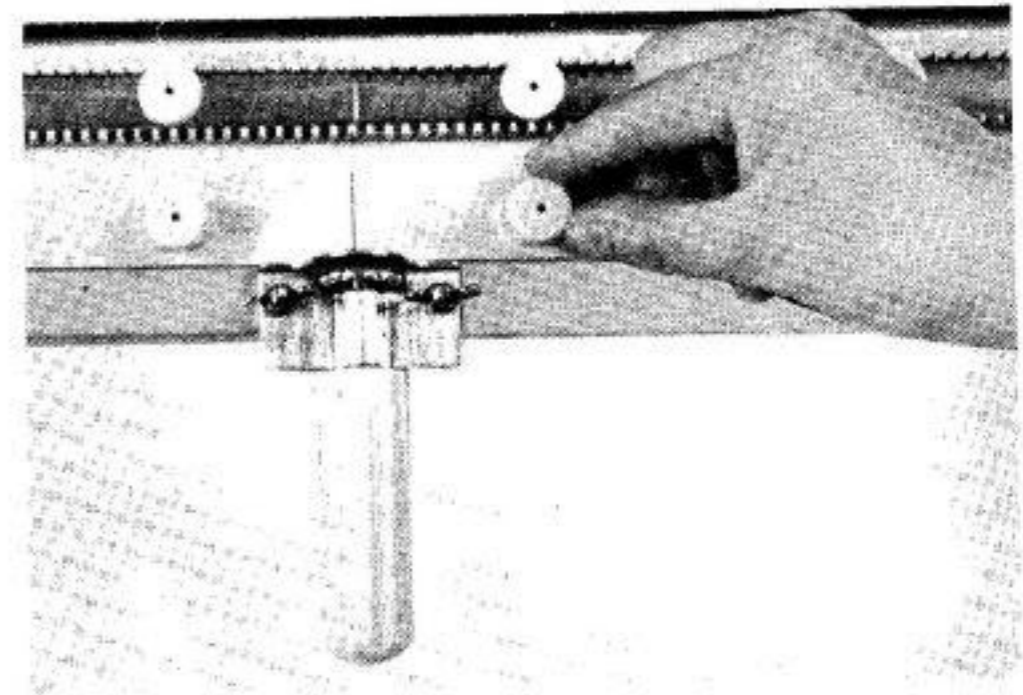


Fig. 28

