

Maruyama

KNITTING
MACHINE

Deluxe

INSTRUCTION
BOOK

MARUYAMA
MANUFACTURING
CO., LTD.

Instruction Booklet for Deluxe, 30 type

Foreword

Since Maruyama Manufacturing Company was established in 1895, have been said widely to beyond the seas to Maruyama of spray, Maruyama of fire extinguisher, increase to be proud of the achievements for top-maker of the automatic spray sufficiently, be appoint the model factory, be given the Japanese Industry Standard Indication, and was awarded a prize the Principal of Agency of Industrial Science and Technology for the spray in 1959.

Type 30, Deluxe, Maruyama Knitting Machine which this Maruyama Manufactory make heartily present to all demander of knitting machine, put oneself in demander's place, concentrate the provision and the technique, be planed to manufactured by Maruyama Manufactory.

As the operation of the machine is very simple and the capability is great, even a beginner can knit with ease. It will handle all kinds of thread and yarn; fine, heavy or any novel thread as lace or vinye.

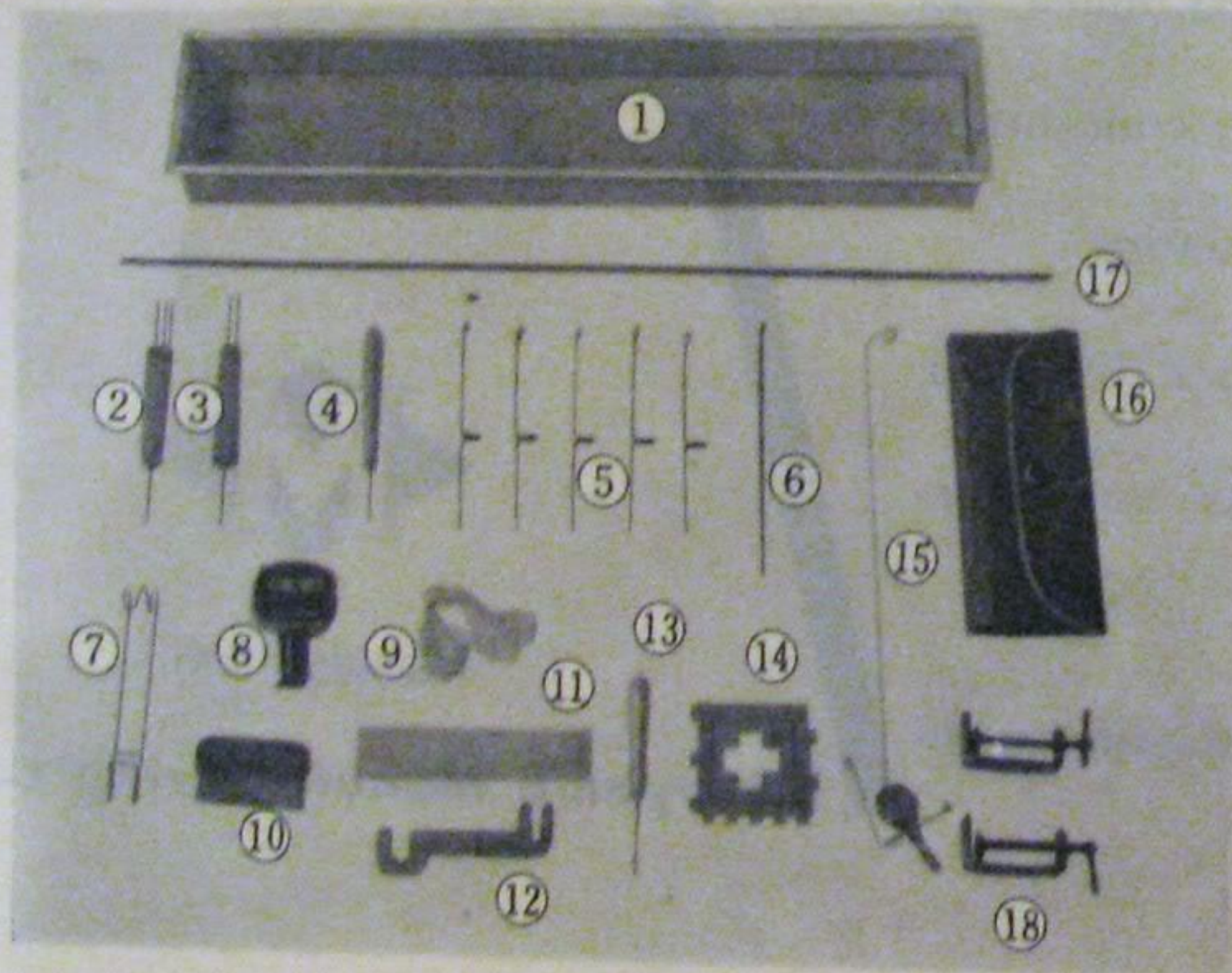
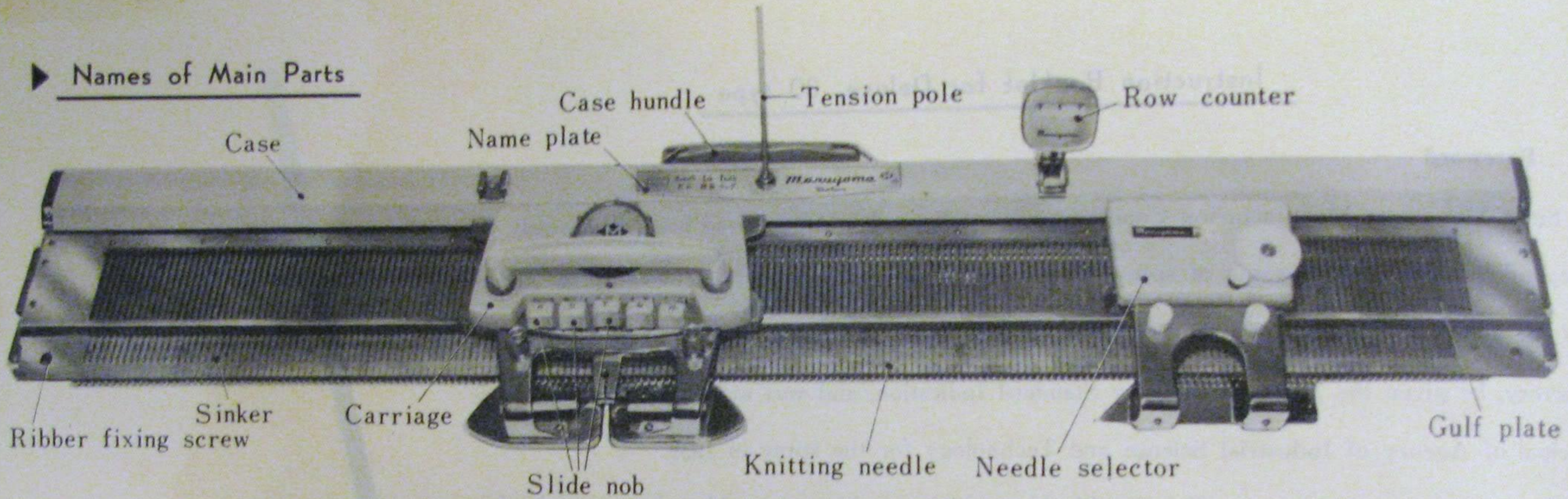
The durability of the machine will enable it to serve you long and to your satisfaction without trouble.



Manufacturer

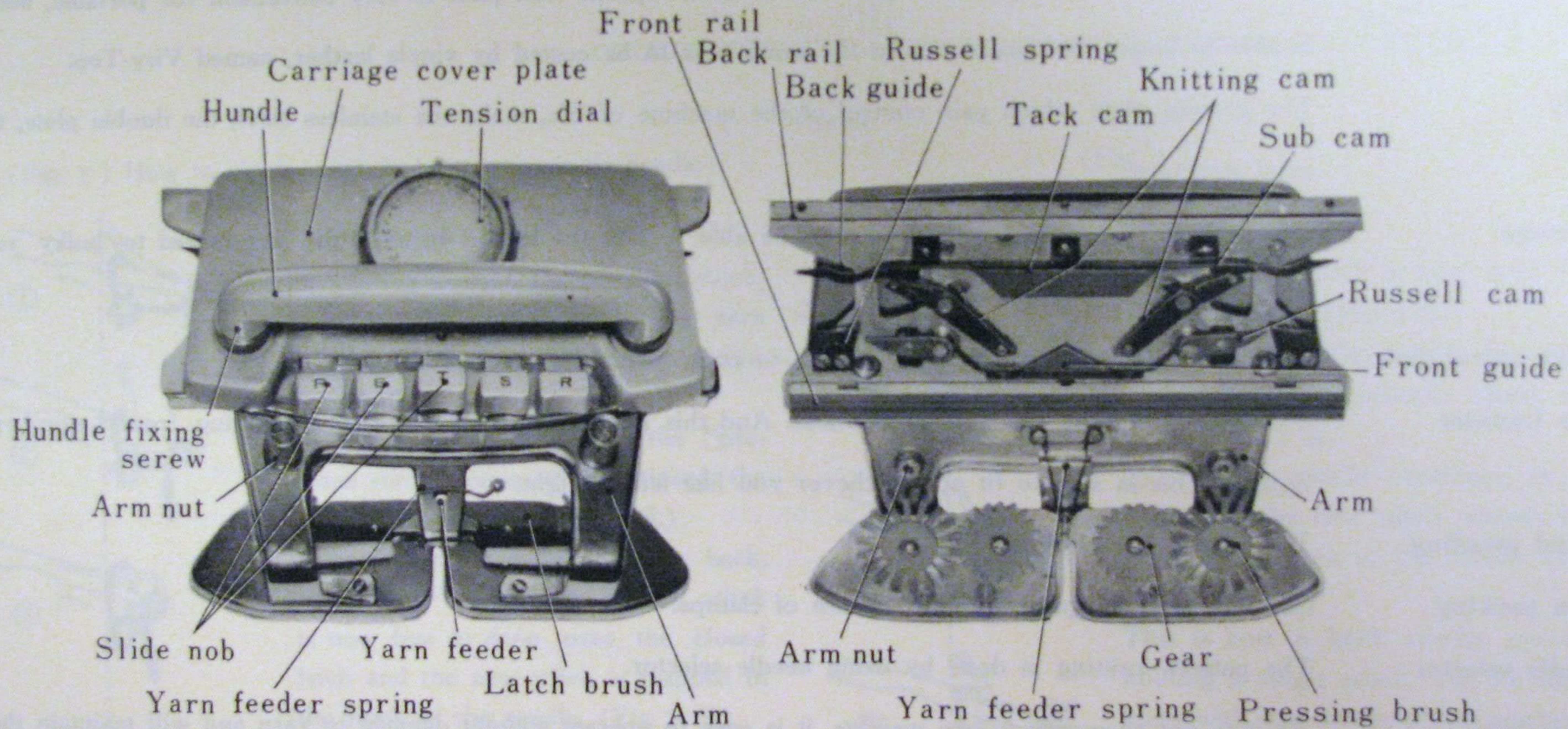
Maruyama Manufacturing Co., Ltd.

► Names of Main Parts



- | | |
|-------------------------|--|
| (1) Accessories case | (10) Cleaning brush |
| (2) Transfer tool (3x1) | (11) Knitting needle bag |
| (3) Transfer tool (2x1) | (12) Fitting metal for needle selector |
| (4) Tappet | (13) Screw driver |
| (5) Spare needle | (14) Pushing plate w/ stitch measure |
| (6) Crochet needle | (15) Autotension |
| (7) Yarn guide | (16) Parts bag |
| (8) Row counter | (17) Yarn holder pole |
| (9) Starting thread | (18) Clamps |

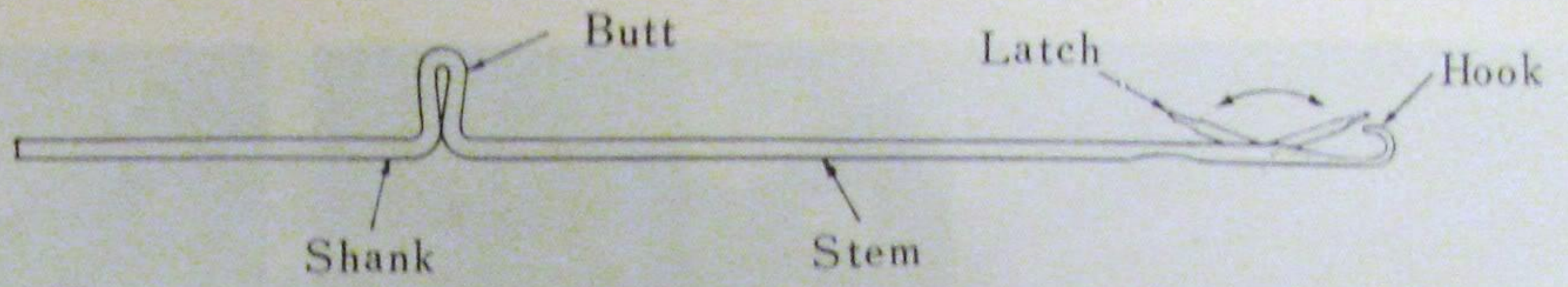
► Parts of Carriage



► Excellent points of this knitting machine

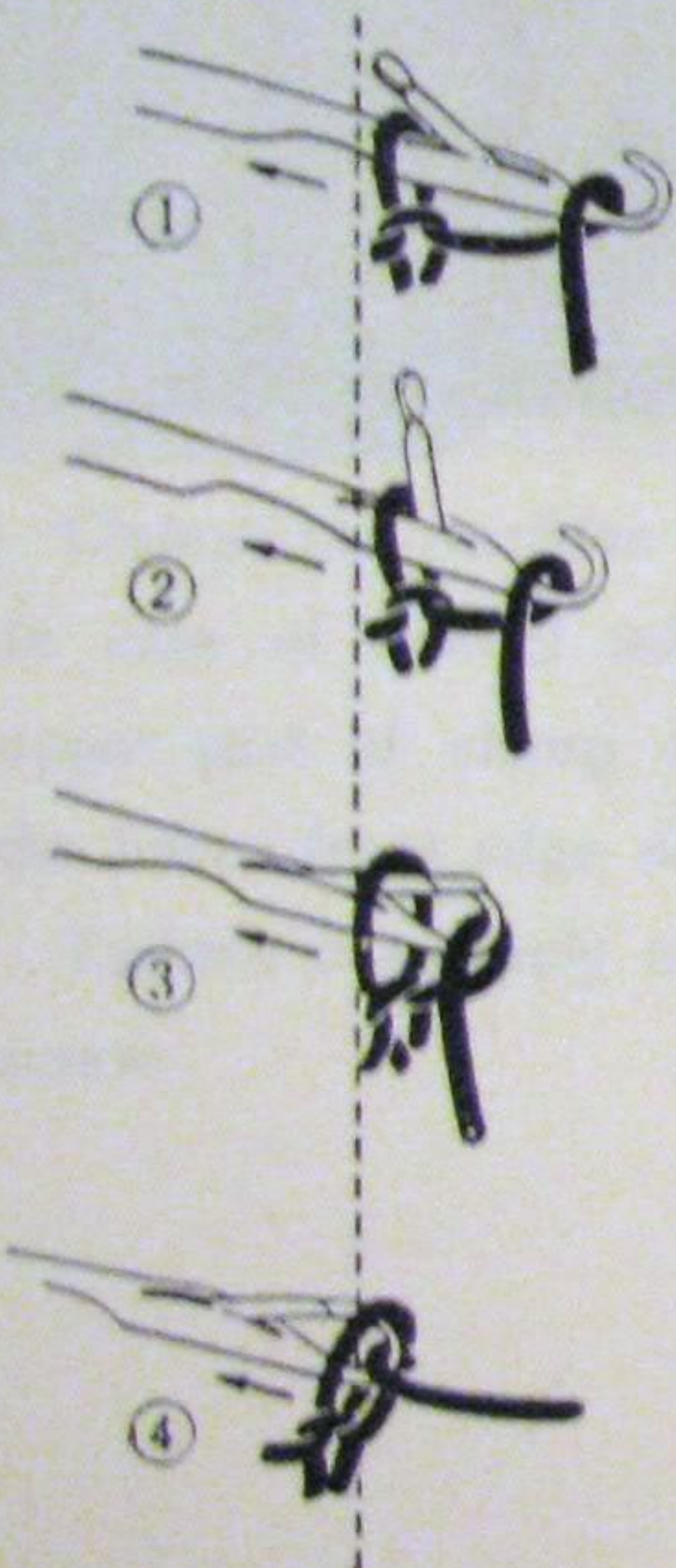
- Case** The smartly and strangly case which be used the special iron plate is very convenient for portable, because it is able to house the accessories at the same time to be coated by vinyle leather, named Viry-Top.
- Body** The groove plate which gain control of the machine of life, make the stainless steel, the double plate, the special structure.
- Carriage** As carriage is equipped with new gear, be able to knit the knit-in knitting, the lace thread to bulky yarn by the special cam gear reasonably,
- Stitch cotrol dial** The dial style stitch control gear is able to control the stitch correctly.
- Row Counter** This is in order by the high minuteness. And this is able to knit the any large knitting from a number of 3 figures. This is able to fit up whichever you like left or right.
- Sound proofing** The case is sound proofed.
- Gum packing** Can knit at high speed without the use of clamps.
- Needle selector** The pattern knitting in done by using needle selector.
- No weight** As it is not necessary to use weights, it is easy to operate without damage to yarn and will maintain the handknit look.

► The Principle of knitting with The Movable Latch Needle



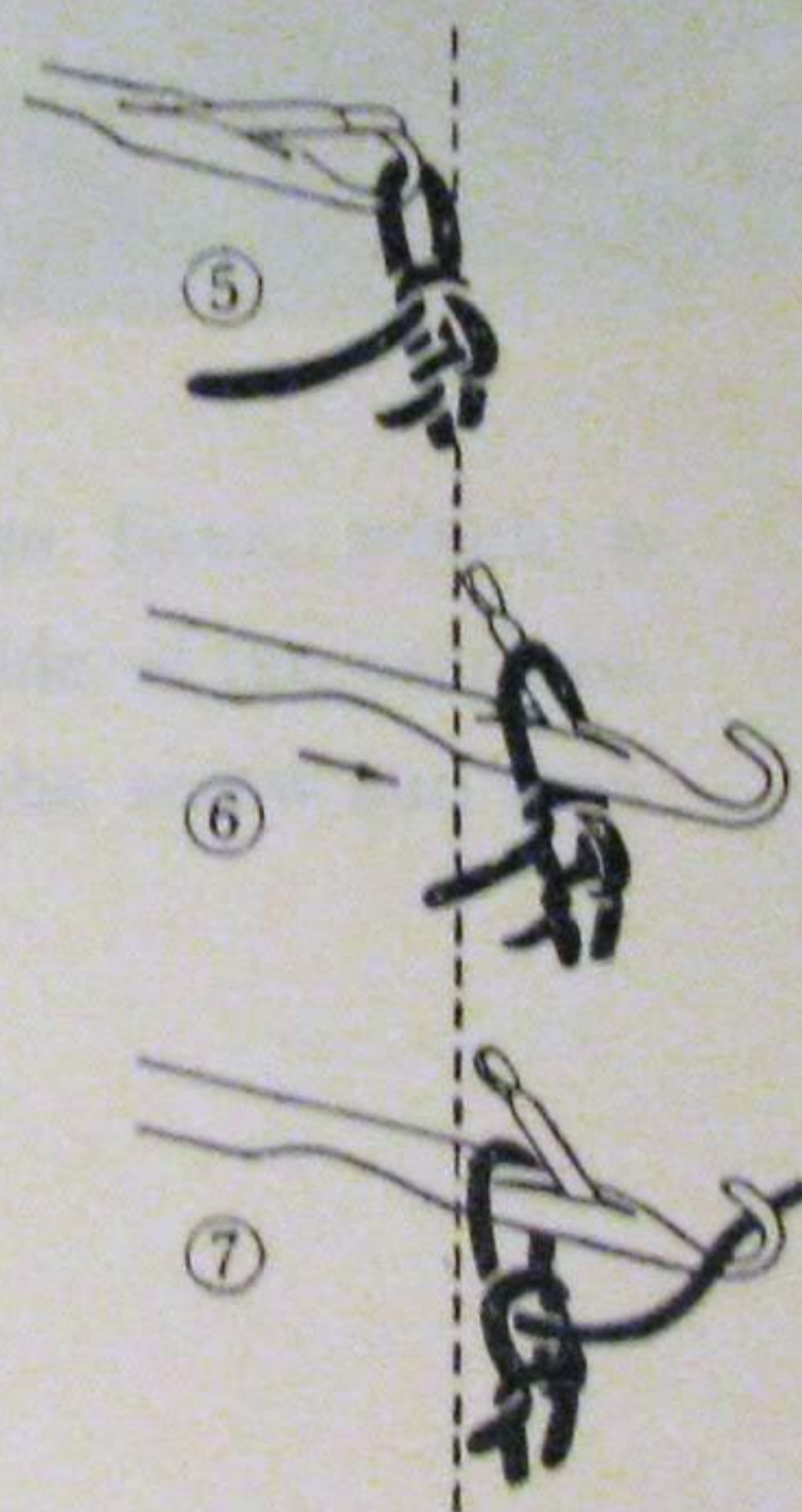
(Fig. 1)

(Fig. 2) How to single stitch is knit by a single needle :



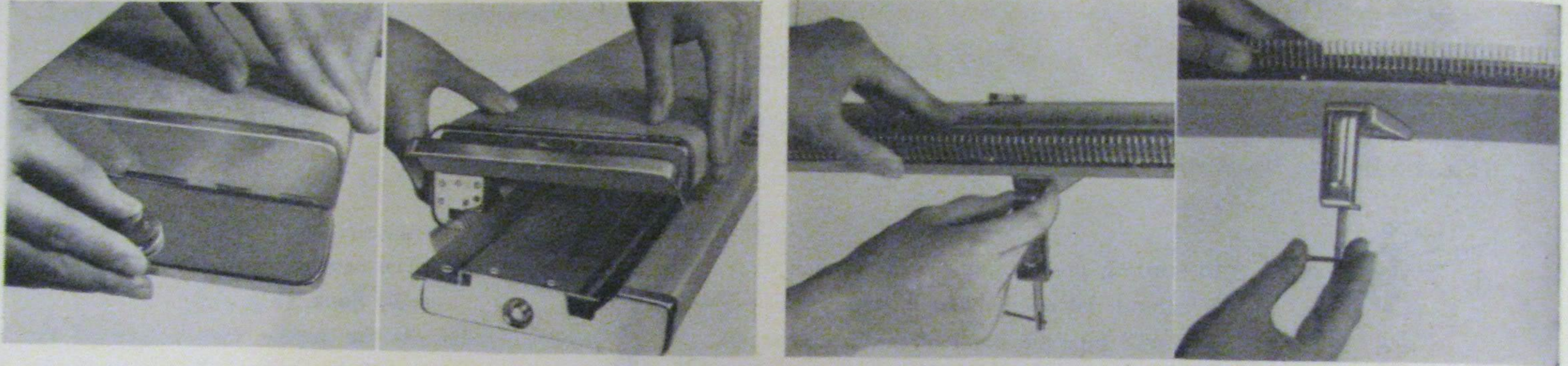
- ① In starting position the previous stitch is behind the opened latch, the yarn is placed into the hook of the needle. (Fig. 2 ①)
- ② As the needle move back the "previous stitch" automatically closed the latch of the needle. (Fig. 2 :②)
- ③ As the needle moves further back, the latch is closed, the former stitch is now free to drop over the closed latch and the new stitch is trapped in the hook of the needle. (Fig. 3 :③)
- ④ As the needle continued to move back the former stitch drops holds the trapped new stitch forward. (Fig. 2 :④)

(Fig. 2)



- ⑤ The new stitch is now held in the needle hook. (Fig. 2 :⑤)
 - ⑥ As the needle moves forward the new stitch automatically opens the latch. (Fig. 2 :⑥)
 - ⑦ As the needle continues to move forward the new stitch moves behind the open latch of the needle. (Fig. 2 :⑦)
- This is how a latch needle operate in knitting a single stitch. As the machine knits with one stroke of the carriage, 200 needles many stitches are knit in a twinkle.

► How to Operate a Machine



Setting up :

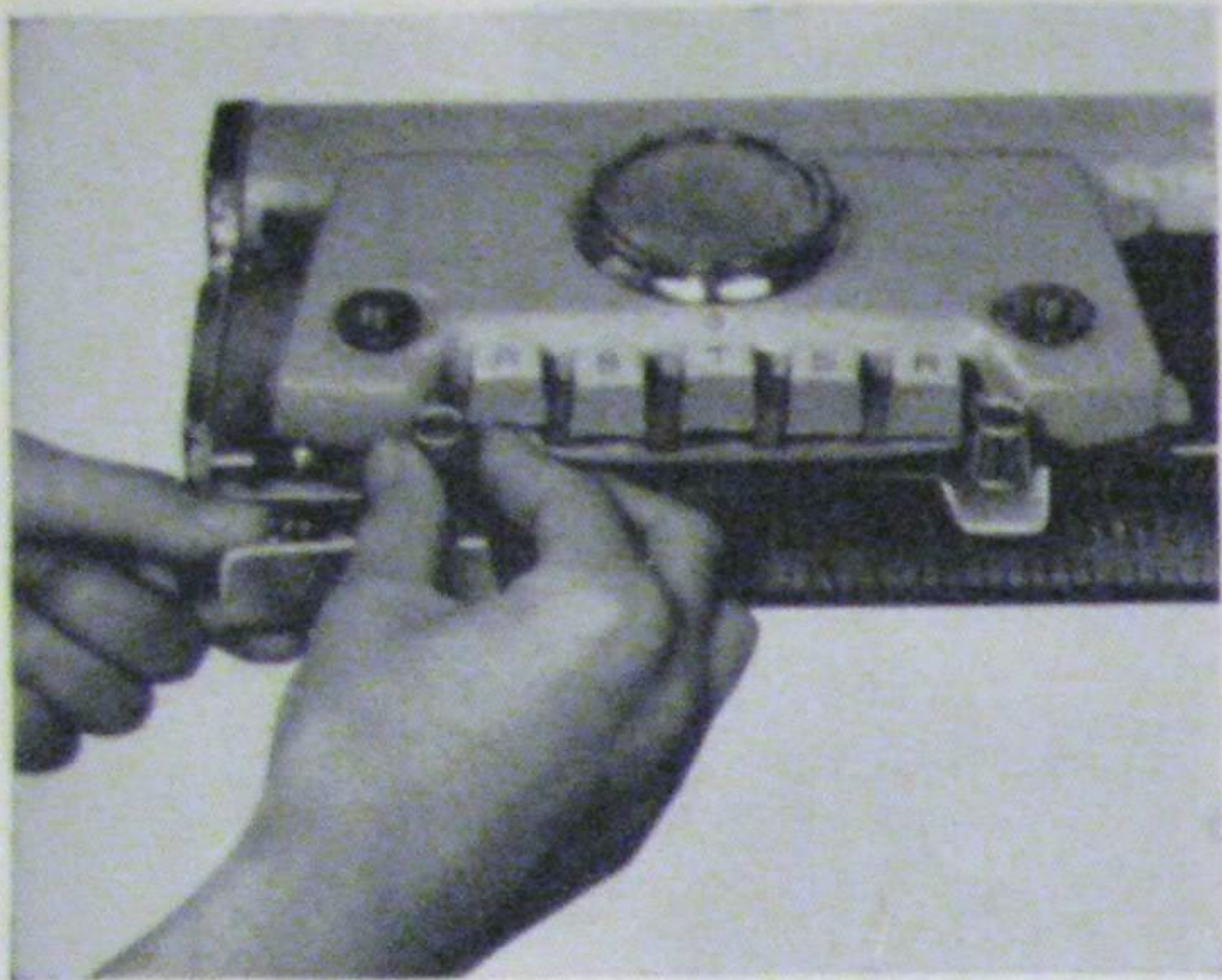
(A) Open the case :

Put out of the screw on
right side.

(B) Put out of cover :

Slide cover to left and draw
forward.

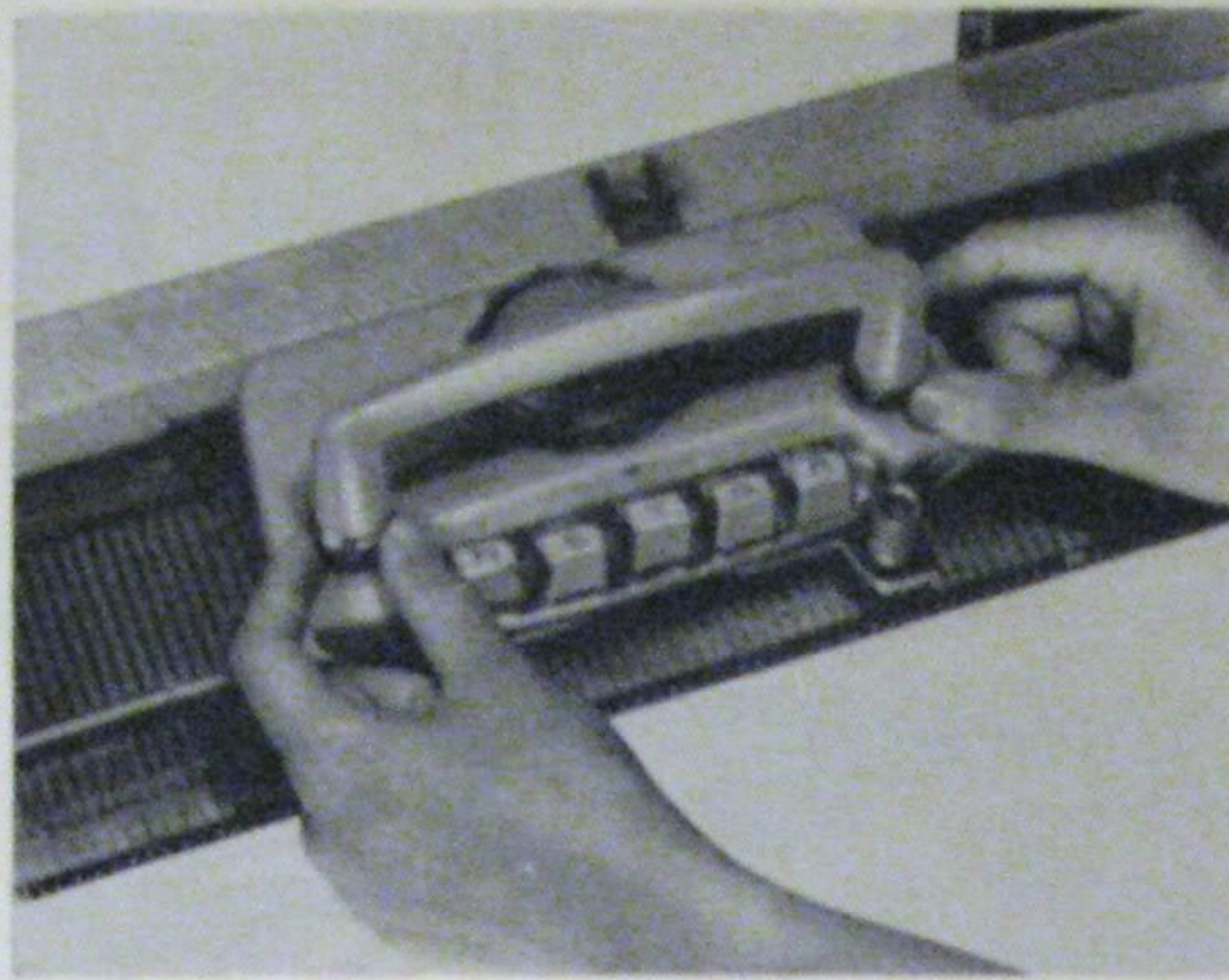
► How to Operate a Machine



(C) Clamps the machine to a table:

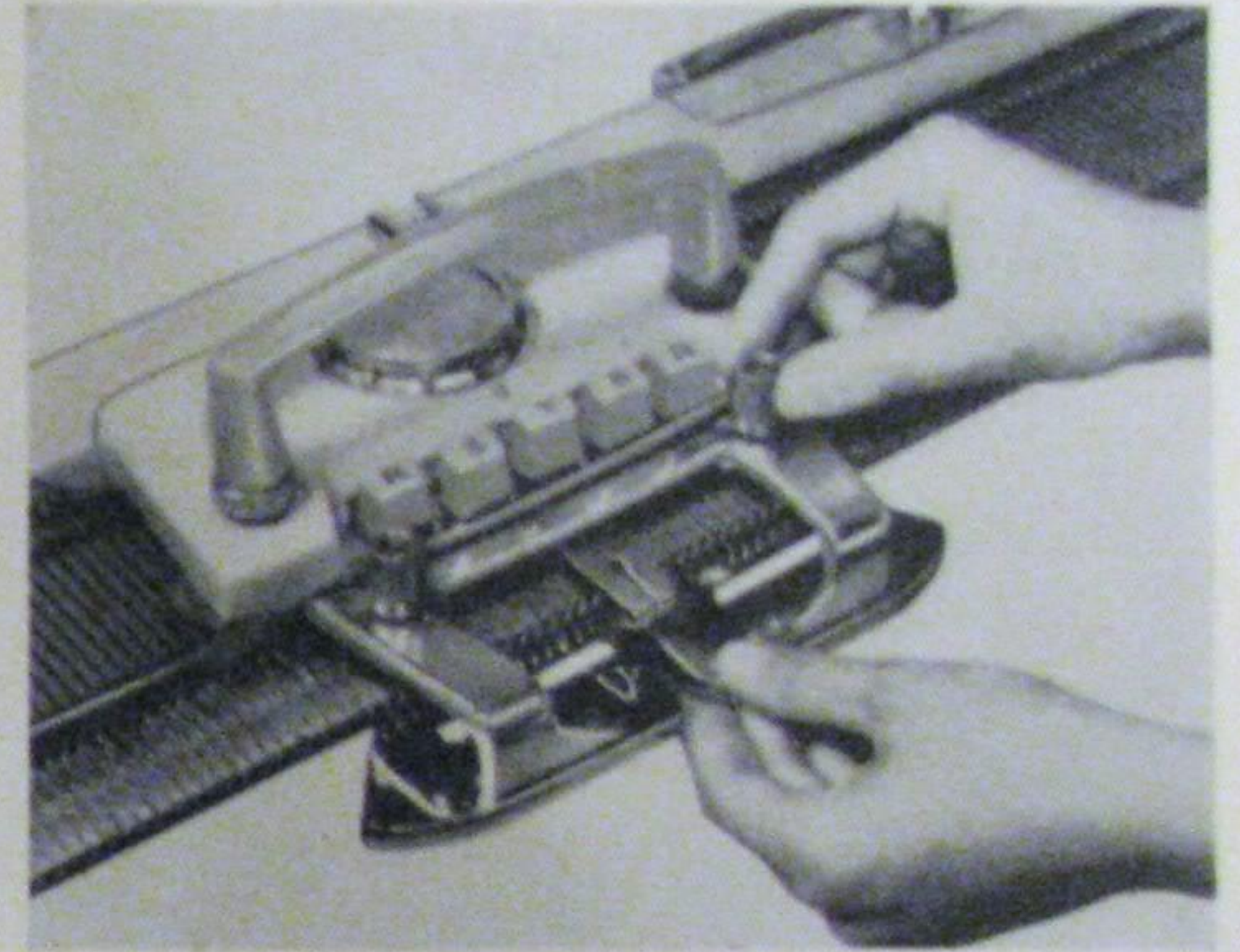
In case of a small table, insert the upper part of clamp into the slot at the lower front edge of the body.

Tighten it securely on the table by screw.



(D) Carriage fixer:

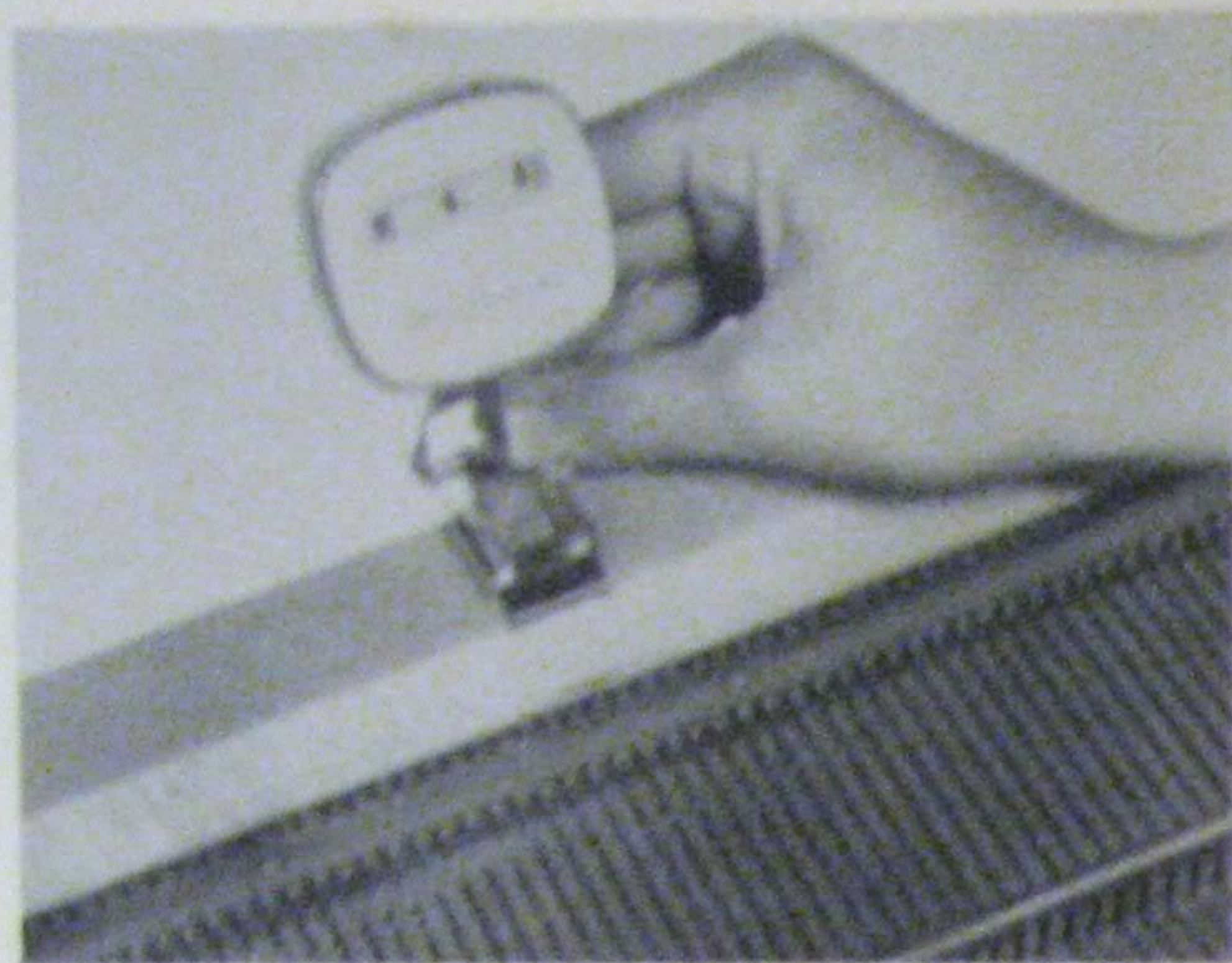
Unfasten the carriage fixer, which is located on the left side of the carriage. To do this remove the screw and then the fixer.



(E) Handle:

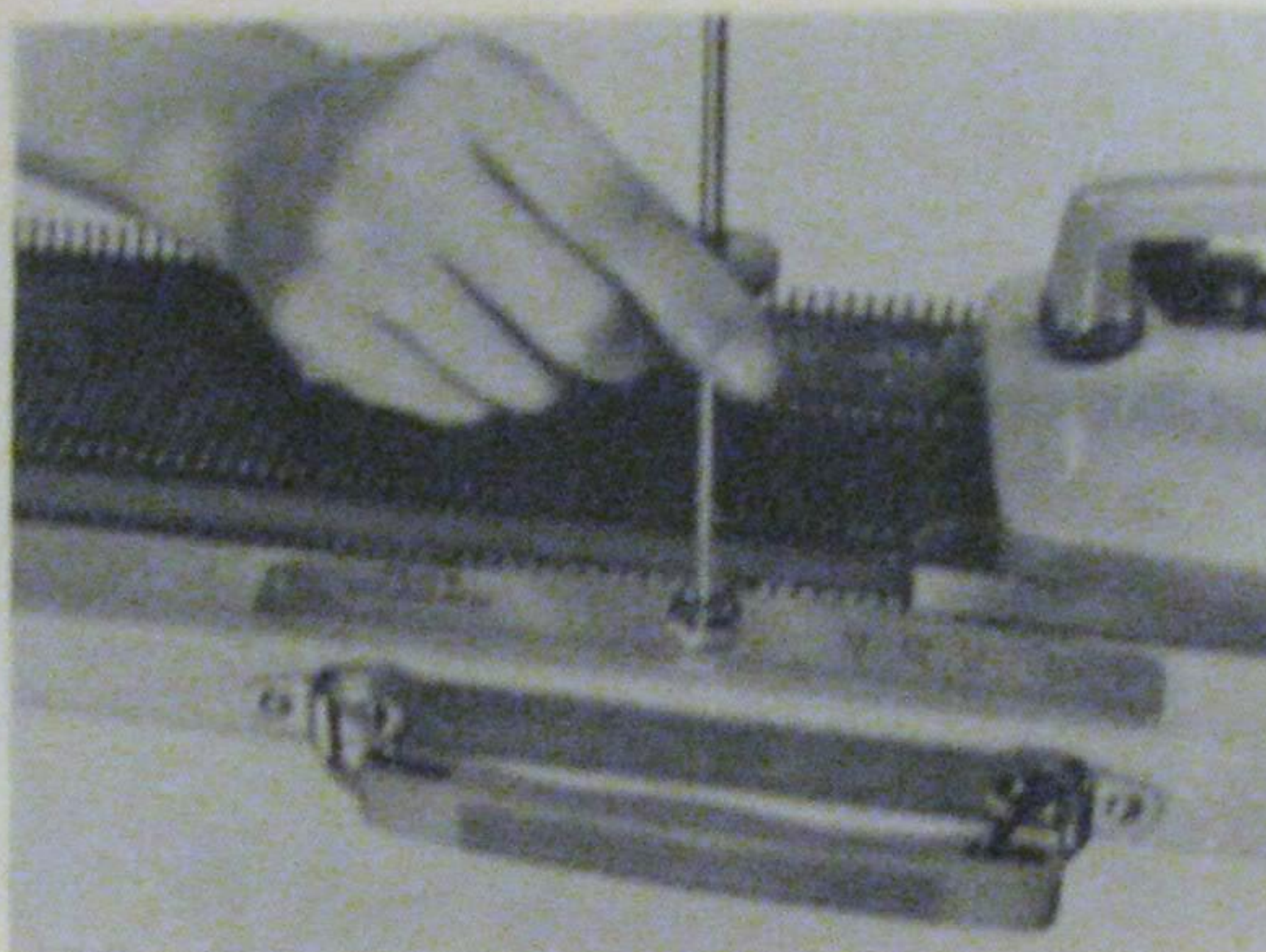
Put handle ends into the holes on the carriage and screw them firmly turning both knobs at the same time

► How to Operate a Machine



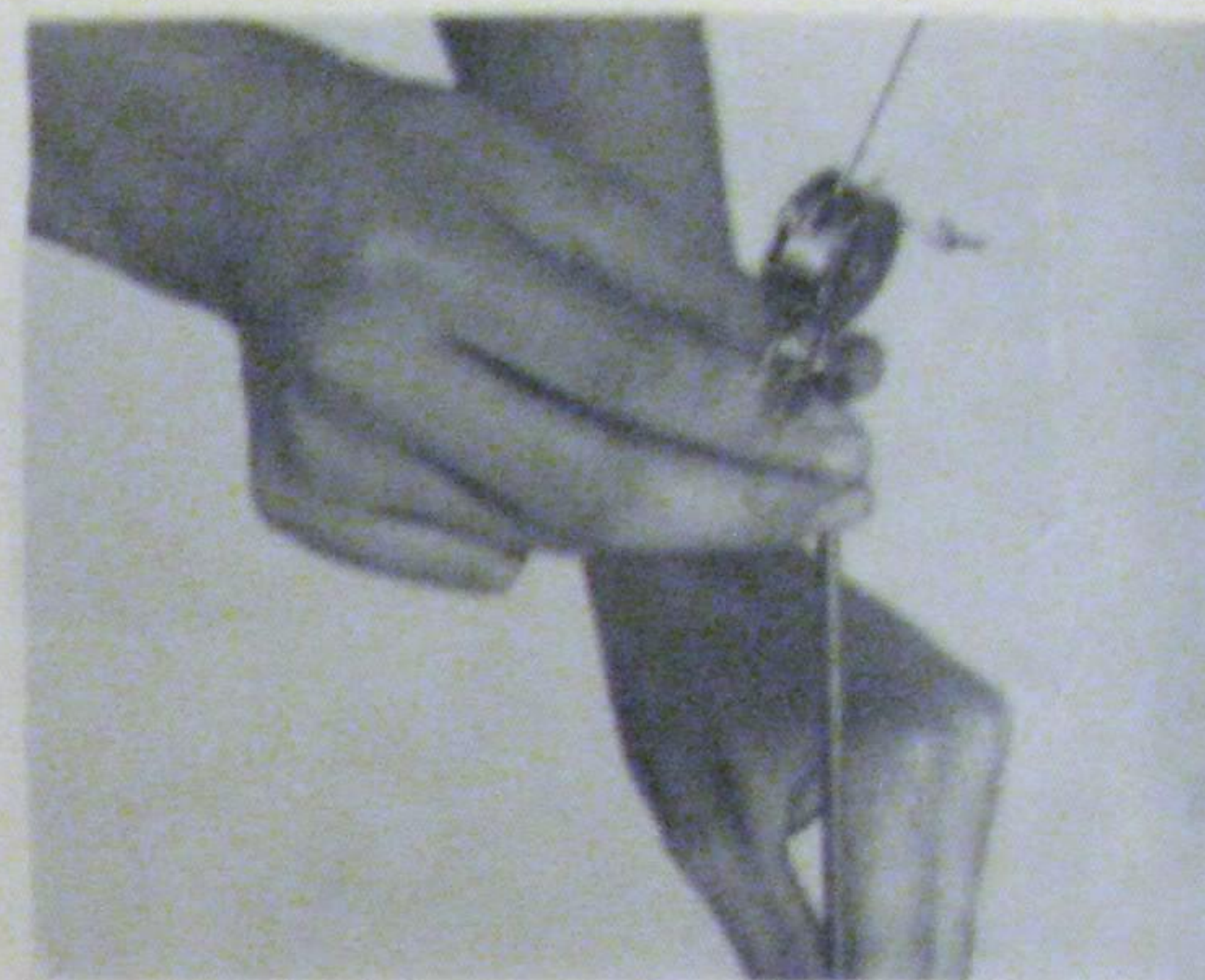
(f) Fabric presser arm:

Loosen the arm nuts of the carriage, push in the arm fully and tighten firmly.



(g) Row counter

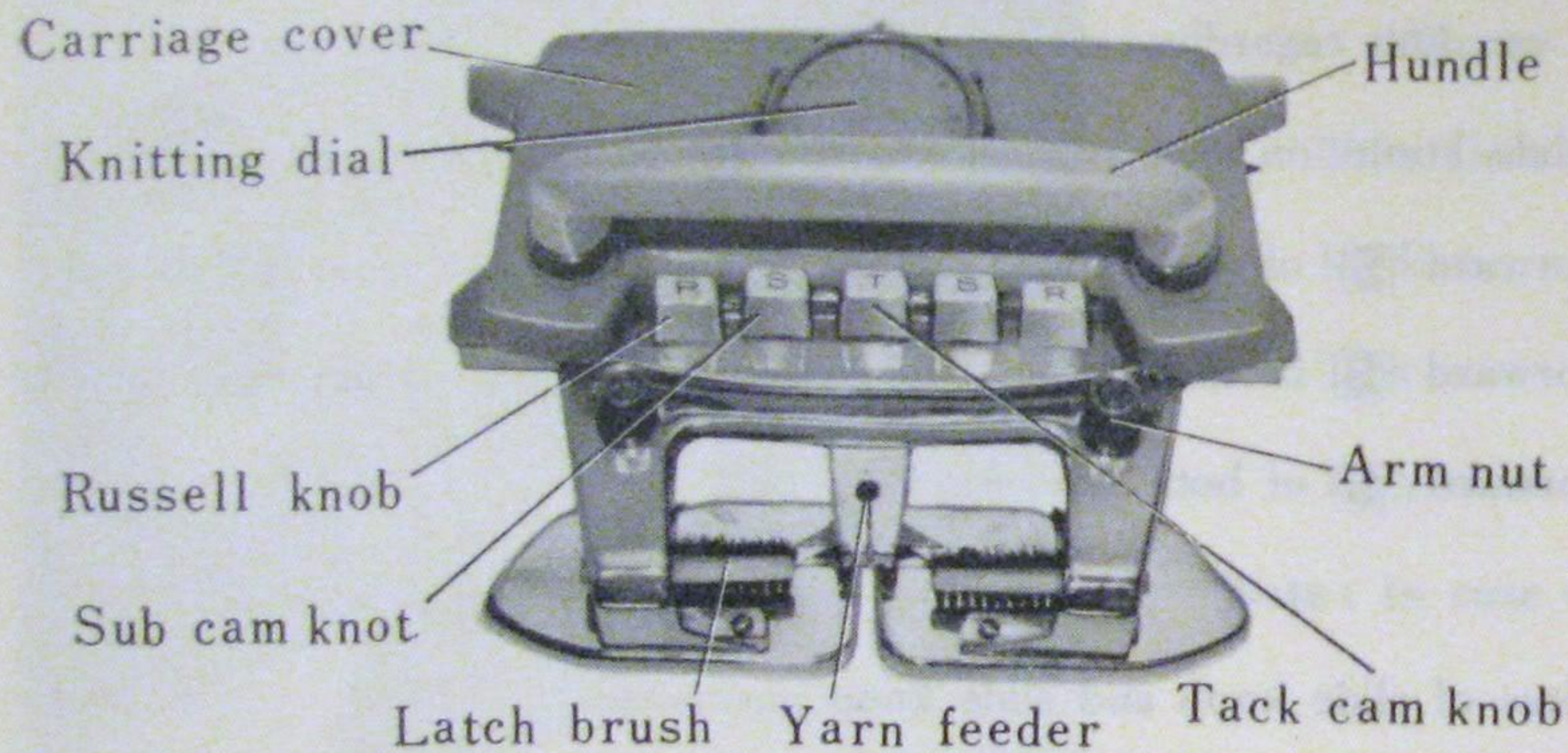
Put up knitting row counter on its stand, right or left whichever you like.



(h) Auto tension

- 1) Put up yarn pole.
- 2) Fix to auto tension on the top of yarn pole.

► State of Carriage



Knitting stitch

Slide knob, **R**, **S**, **T**, **S**, & **R** are regular position.

knit in pattern

Draw up Forward **R**, **S** of right and left.

Cord stitch

Draw up forward which **S** of right or **S** of left.

Trn back stitch & draw up stitch

Draw to forward **R** of progressing direction and return to regular position, and repeat this motion.

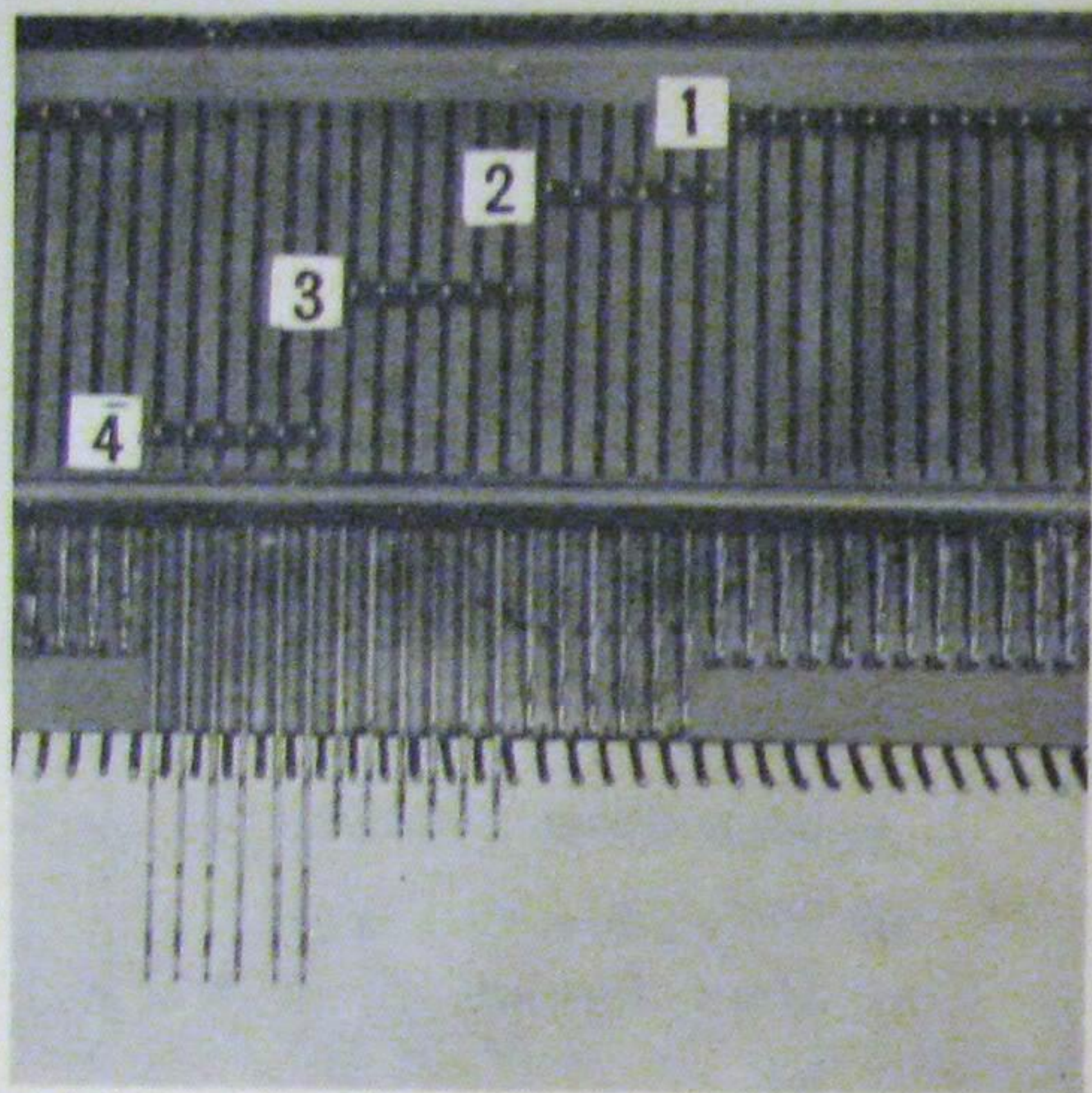
Empty stitch

Draw forward **S** of right and left.

Tack sttch

Draw forward, **T**, **S** & **R** of progressing. direction

► Slide knobs and knitting needle position :



(A) **Course 1 :**

Where slide knobs are situated, this course will not knit.

(B) **Course 2 :**

This course can knit regardless of slide knob positions.

(a) Set to slide knobs on regular position, knit by moving carriage.

(b) Draw forward **S** of slide knob, knit by moving carriage from left to right.

(c) Draw forward **S** of slide knob, knit by moving carriage from right to left.

(d) Draw forward **S** of both side, for "no-knit".

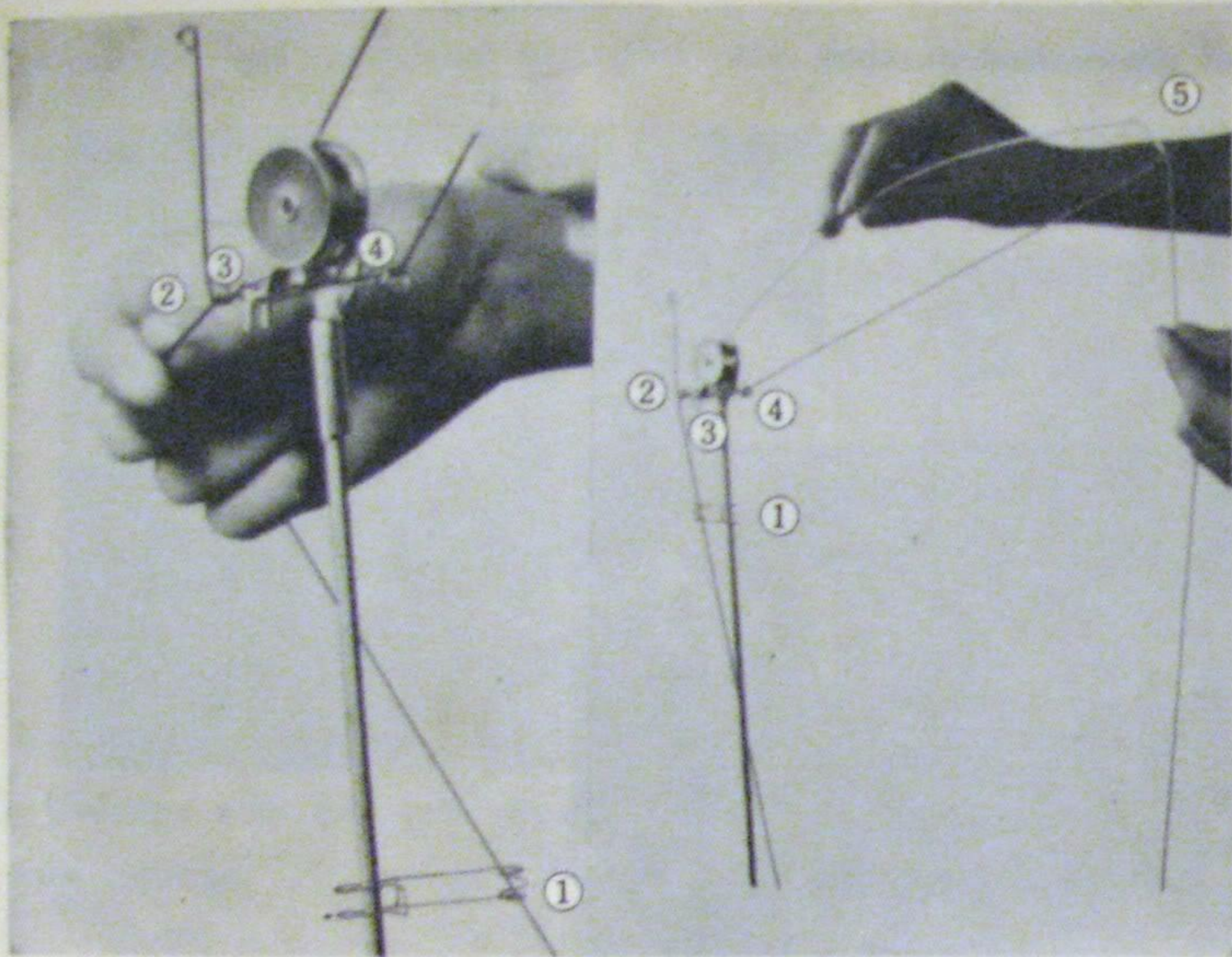
(C) **Course 3 :**

Knit regardless of slide knob and slide knob positions.

(D) **Course 4 :**

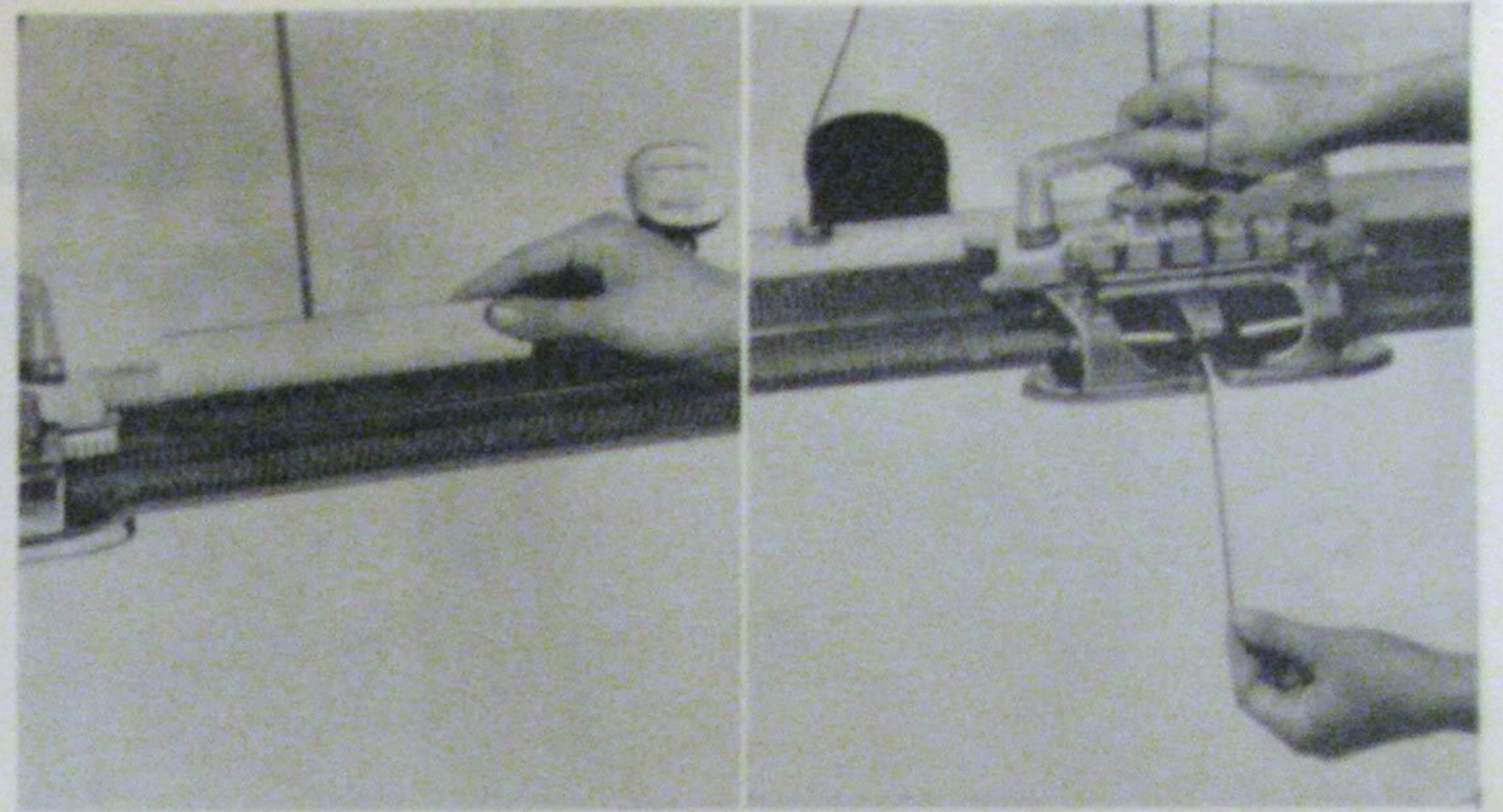
No-knit when both **R** of slide knobs are situated on regular position, and can knit when both **R** of slide knobs are draw forward.

► How to Knit



(A) How to run a tread :

Run a tread from auto tension to yarn guide of carriage and to yarn feeder.



(B) How to commence knitting:

(1) With the pushing plate (1 x 1), bring out the number of needles for knitting to **Course 2** (every Other needle)

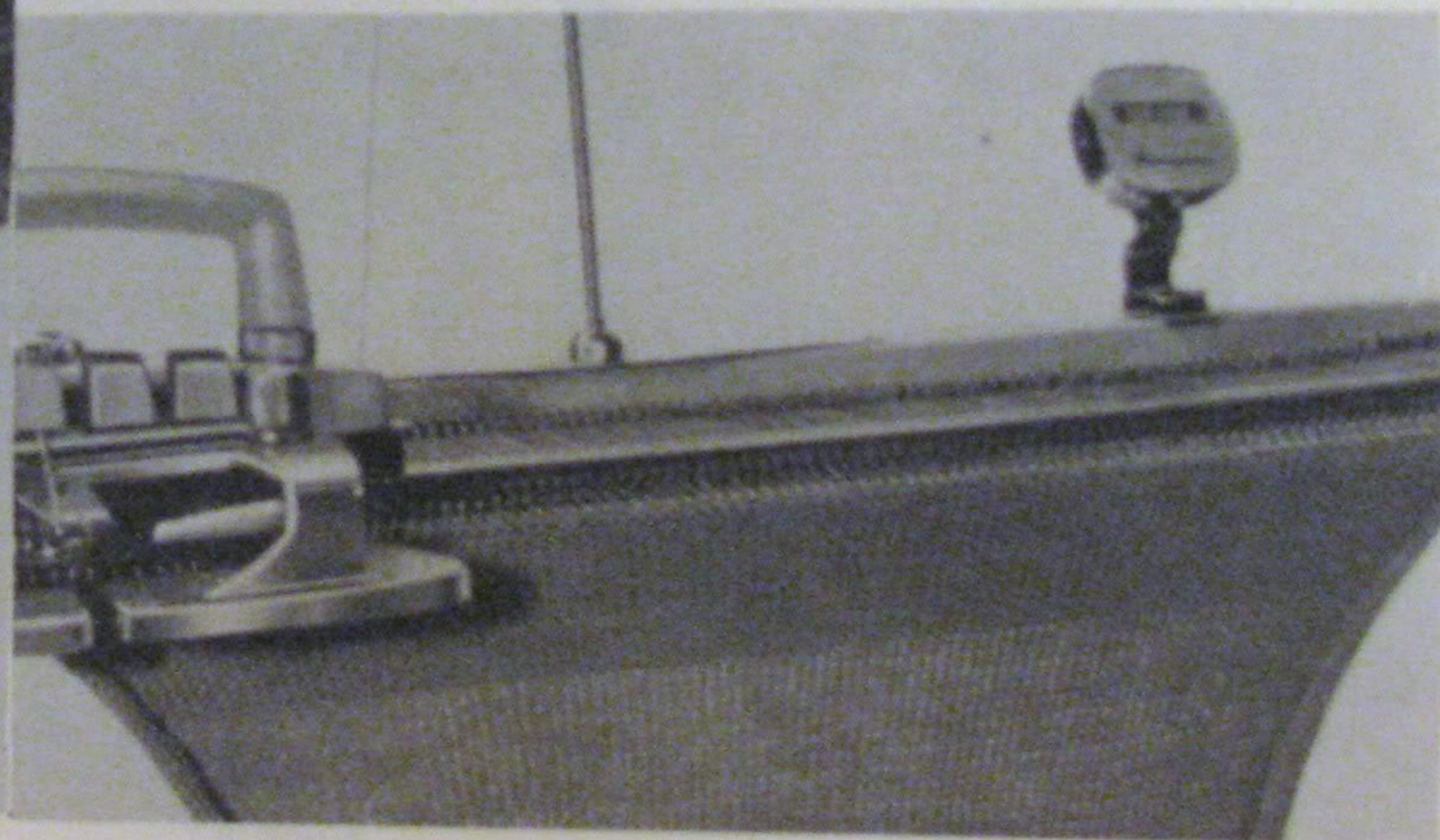
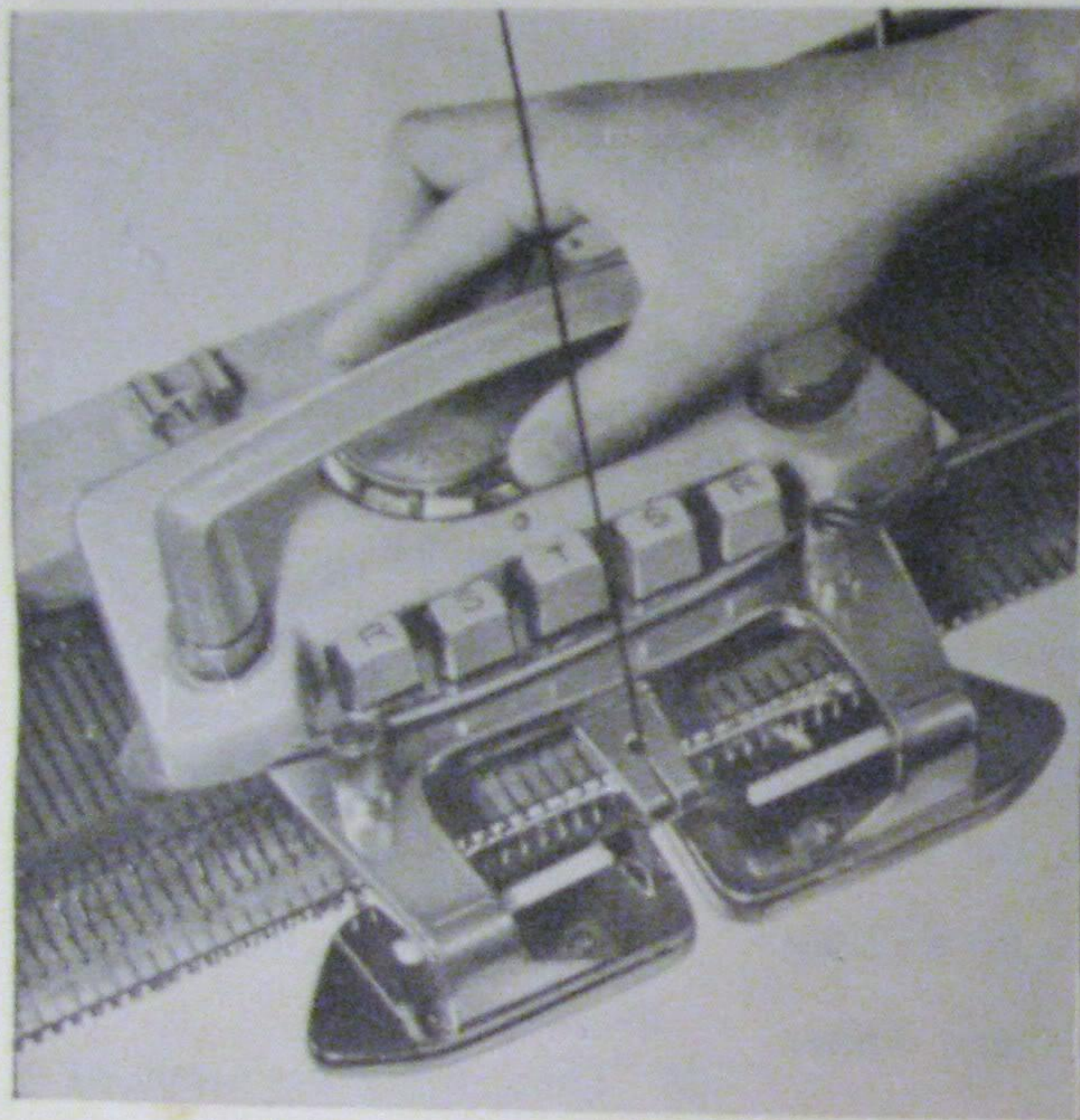
(2) Hold end of yarn (about 20cm) and move the machine very slowly until the carriage has passed through the last needle in knitting position.

(3) Then, bring out needle of **course 1** to **course 2**, equally (1) and move the carriage to left and right as per trial knitting.

► Knitting Stitch

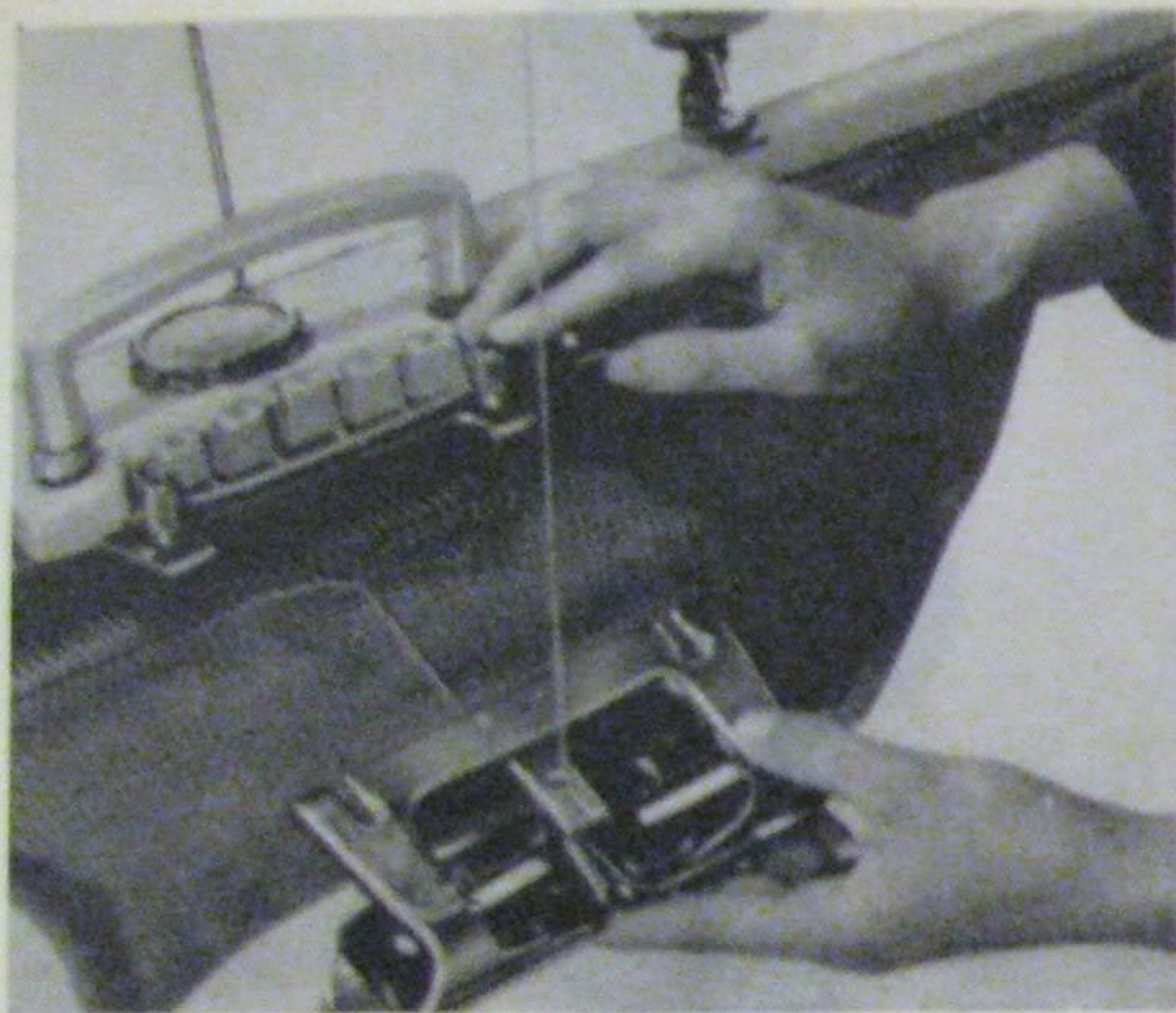
Set the tension dial at the desired number.

Move the carriage from side to side alternately.

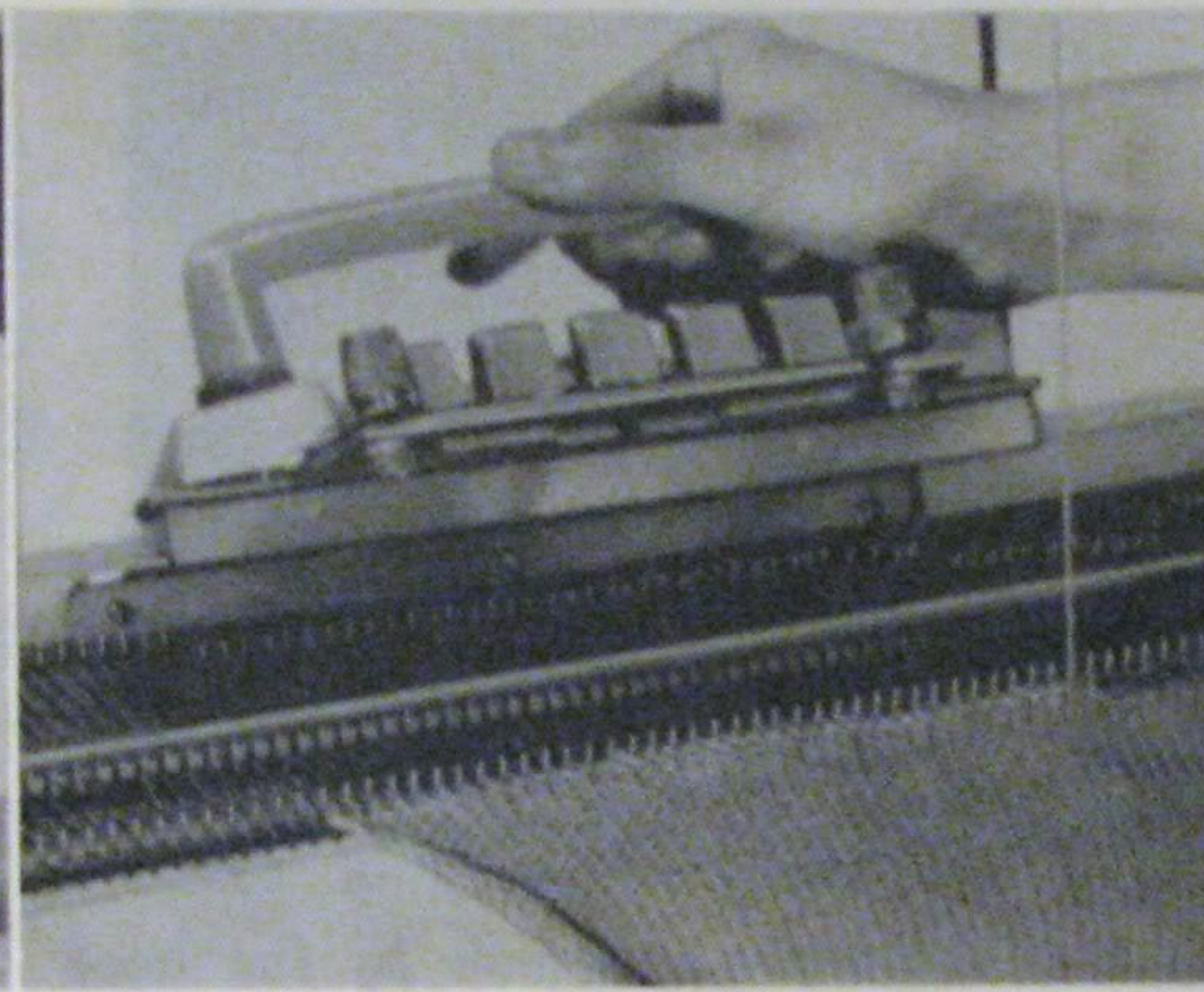


► How to reverse direction of carriage

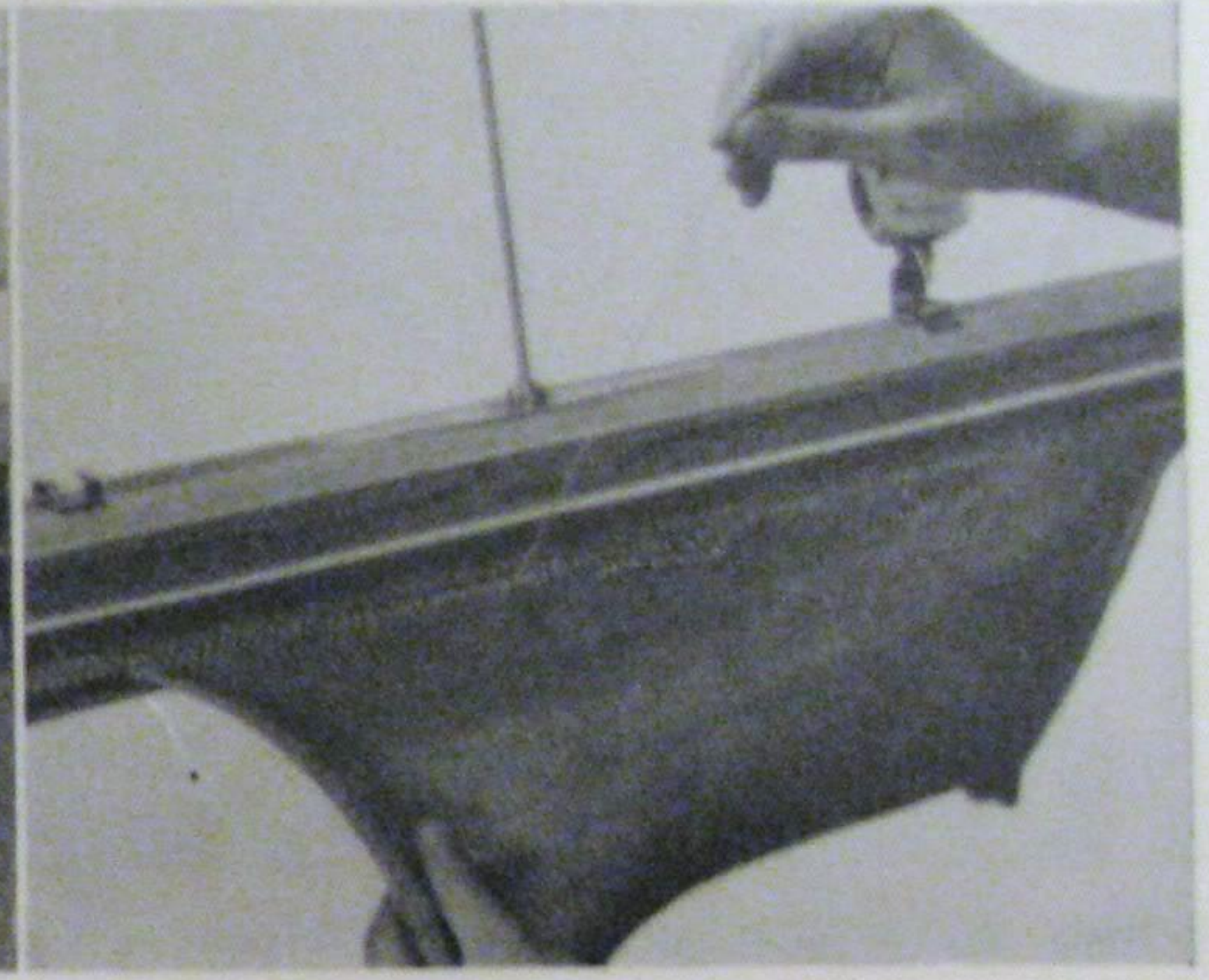
In case carriage jams from entangled yarn, do not try to move by force.



(A) Unfasten arm nut and remove arm from carriage.

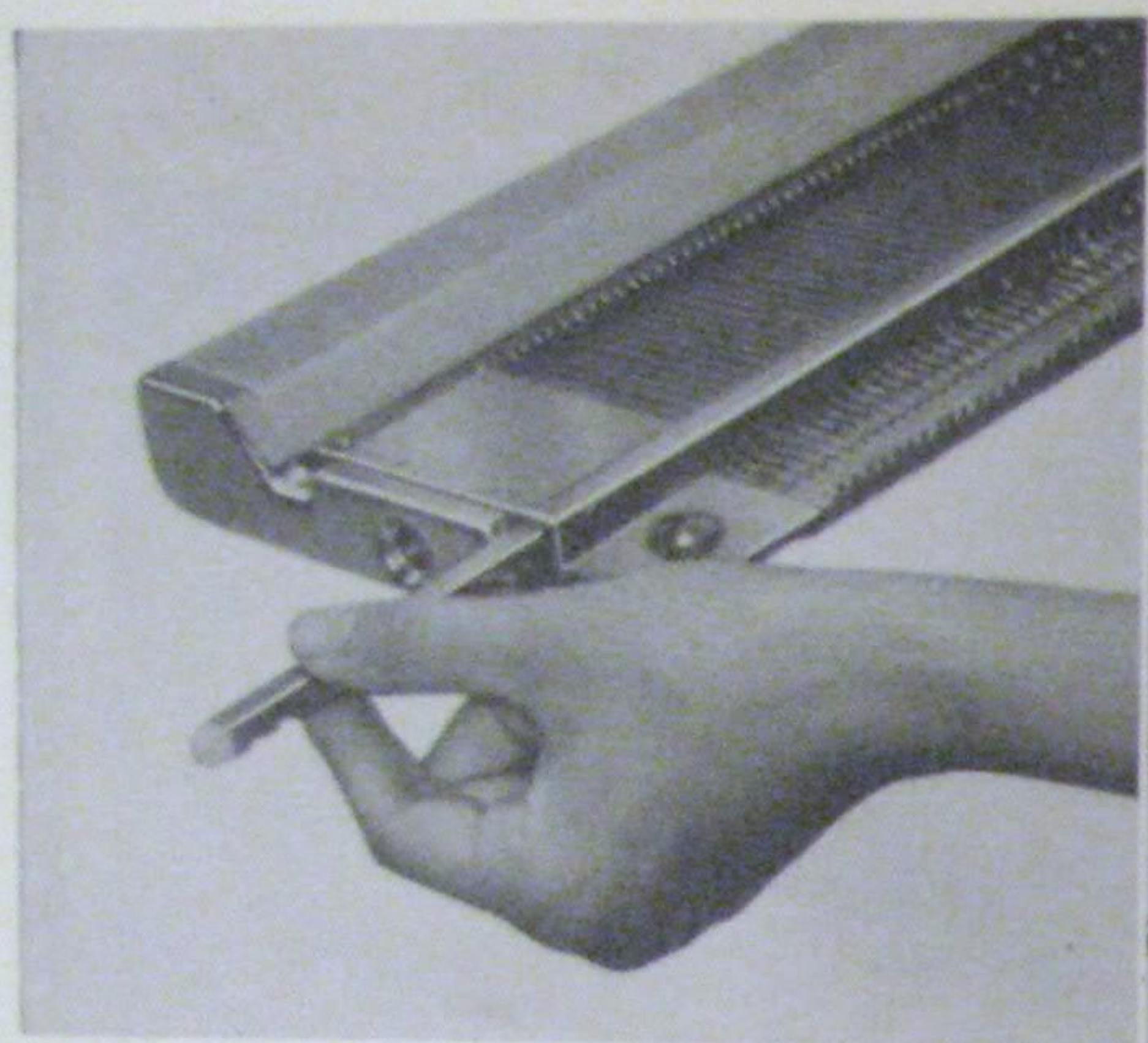


(B) Lift up front edge of carriage. Now you are free to turn back carriage.

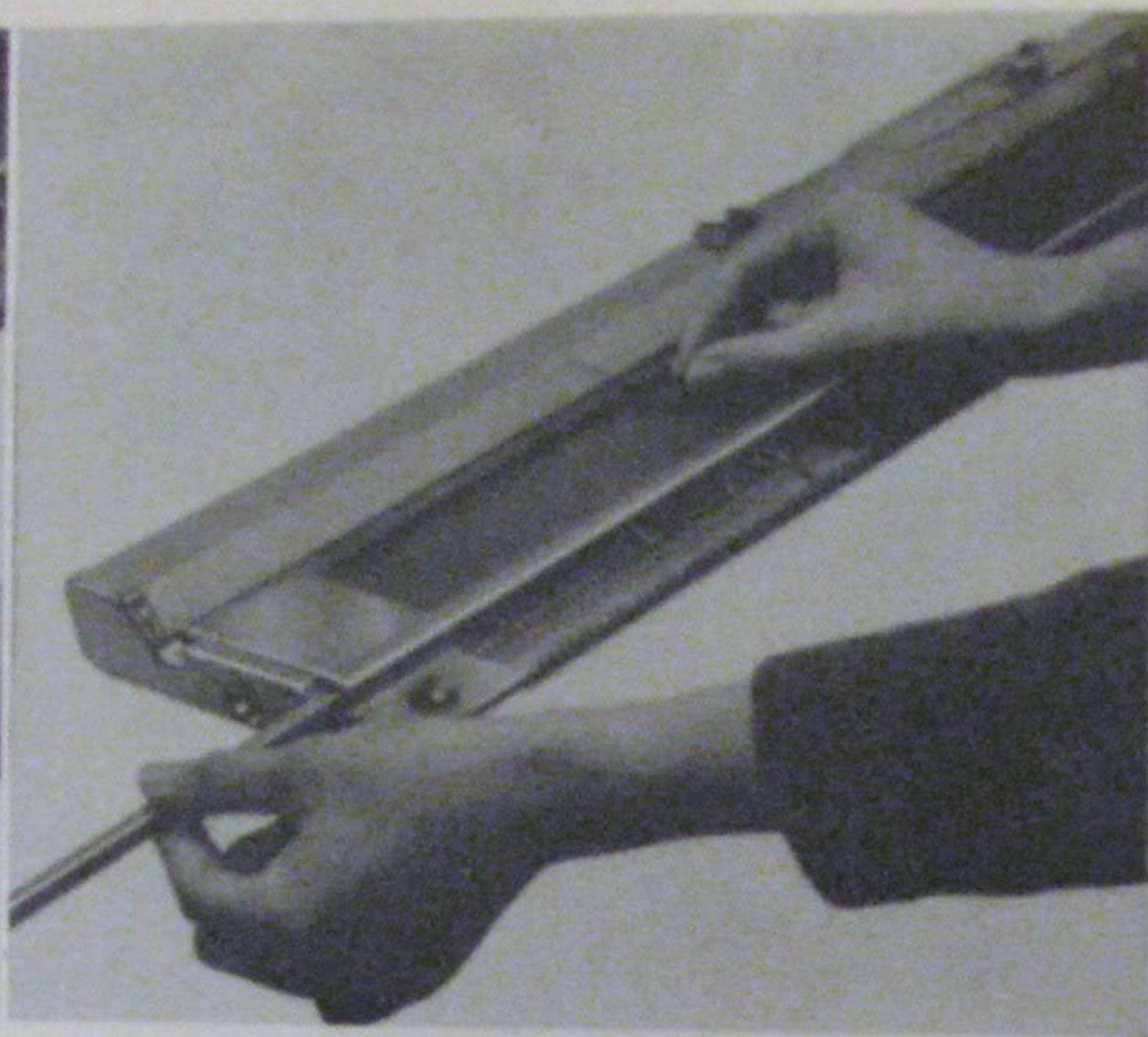


(C) Unlace the stitch from the place which stopped the carriage to the end of knitting.

► How to replace latch needles



(A) Pushing up needle holder, pull it out as far as necessary to release damaged needle.



(B) Pull out damaged needle by the hook so the needle comes off easily.

Change the needle and replace needle bed.

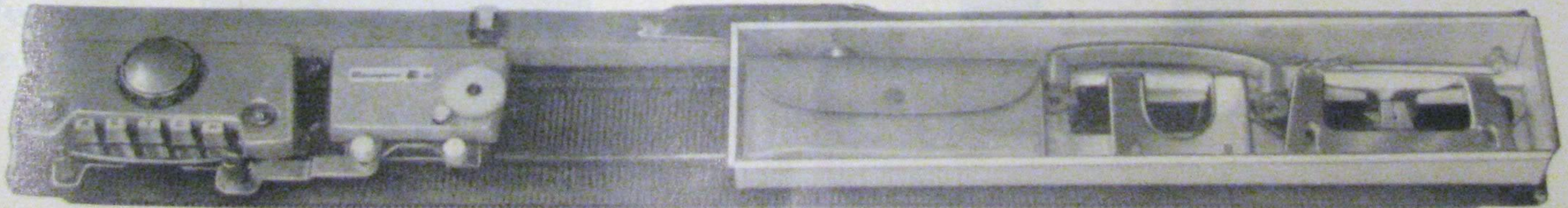


► How to Take Care of Machine

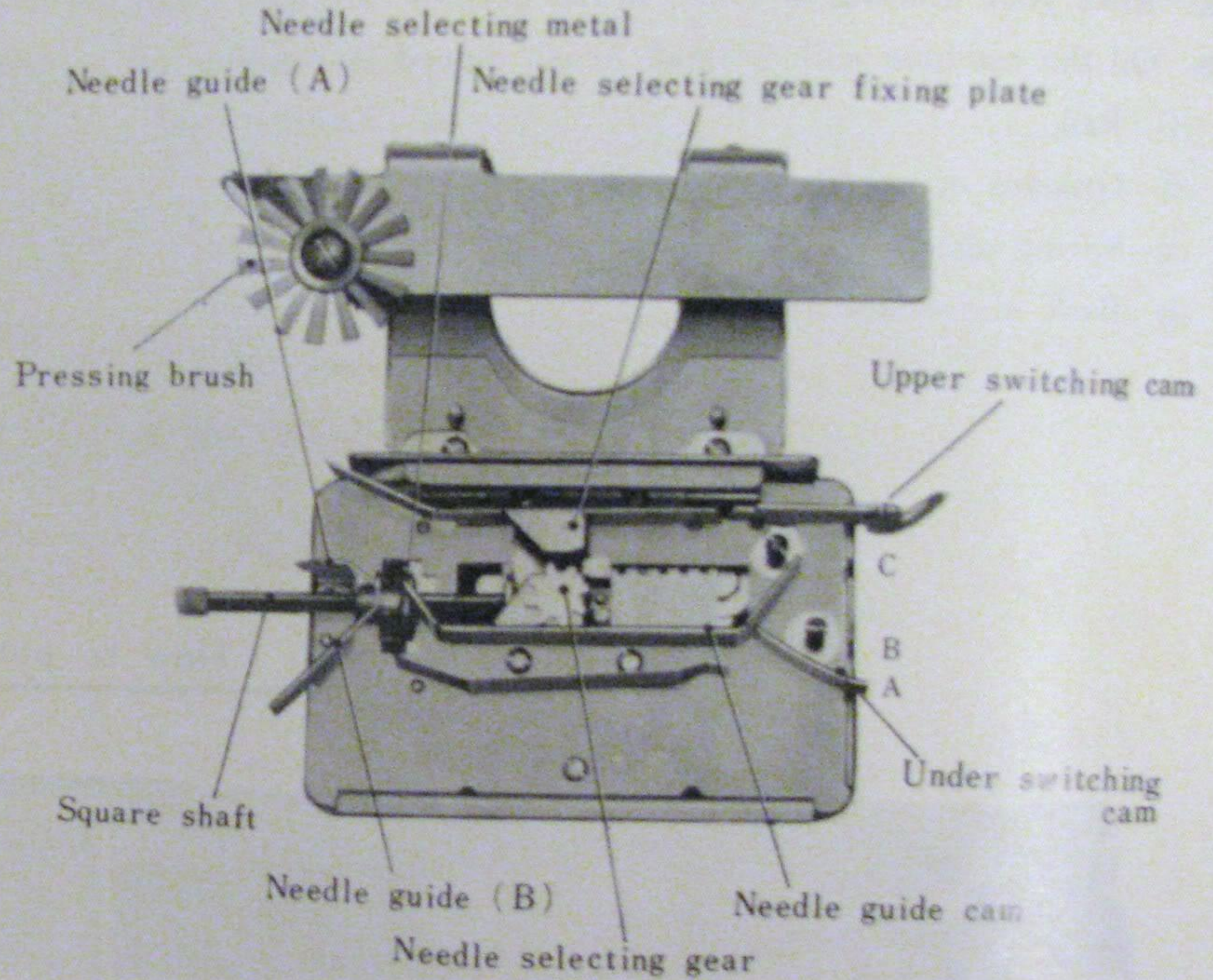
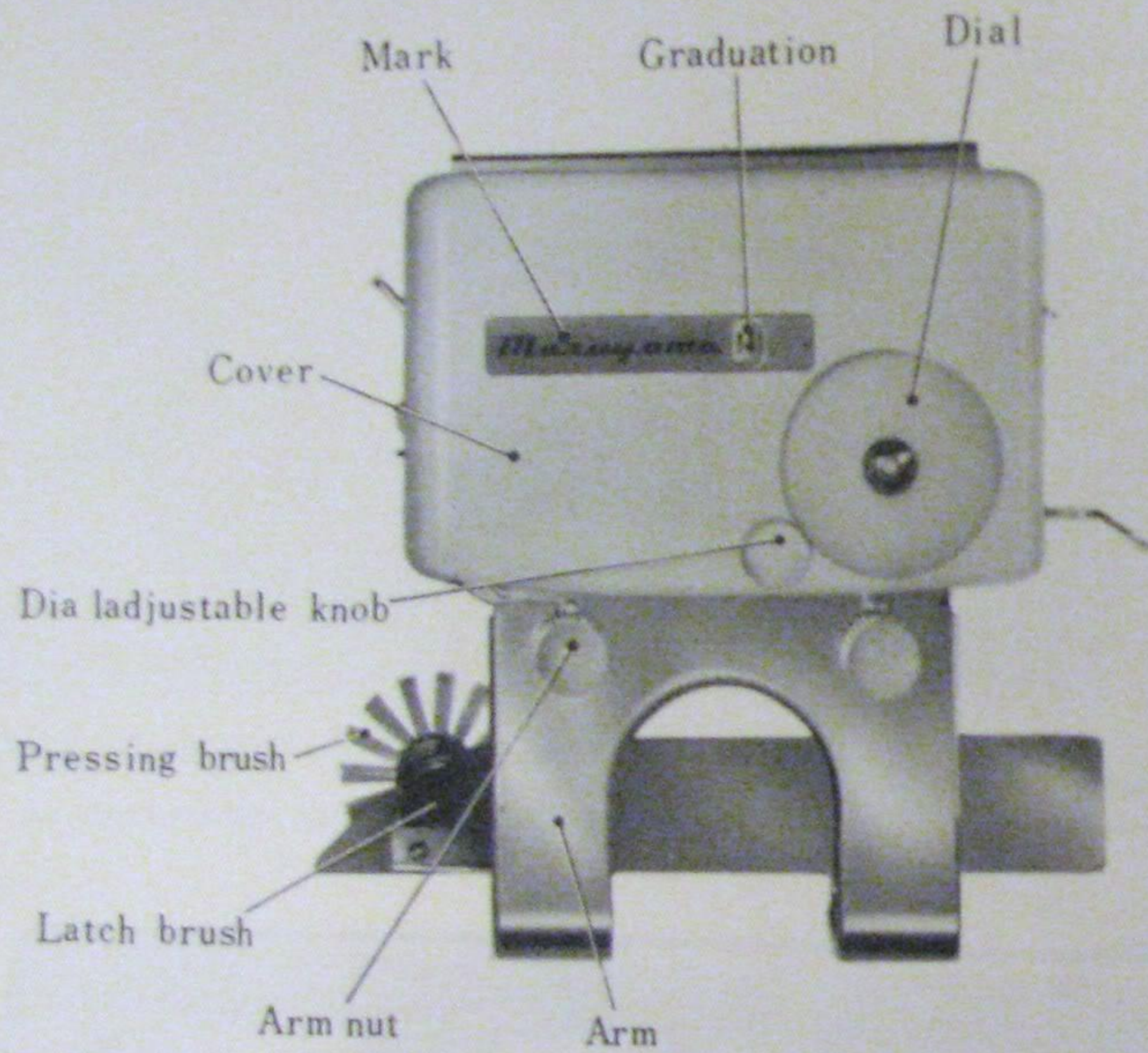
Without oiling, any good machine can not work well. Please take good care of your knitting machine and oil it well.

- (A) After your knitting is done, brush needles carefully, clean the whole machine with oiled cloth and store it in a dry place.
- (B) Oil the machine with a small brush dipped in machine oil or rustproof oil.
 - (1) Rail
 - (2) Grooves of needle bed
 - (3) Spring plate
 - (4) Back of carriage
 - (a) Knitting cam
 - (b) Tack cam
 - (c) Russell cam
 - (d) Front rail
 - (e) back rail
 - (f) Russell spring

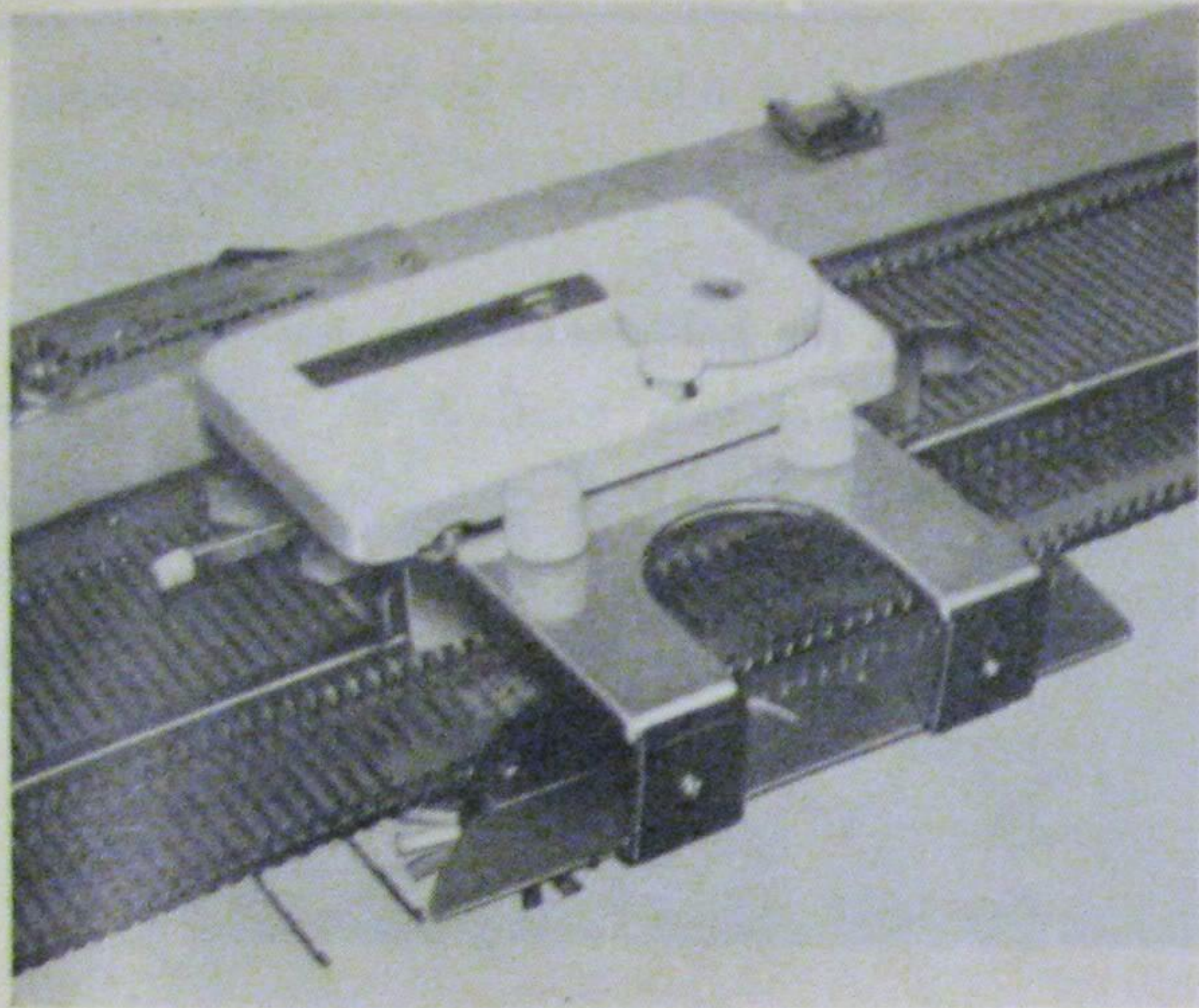
How to put away



► Parts of carriage for needle selector



► Excellence points of this needle selector for knitting machine



- (1) For the adjusting of dial, needles are selected, automatically, the desired pattern.
- (2) For cooperation with this needle selector and garter plate at same time, can knit up various kinds of pattern very easy and fine.
- (3) To make easy draw up stitch, too, moreover, as it can select 14 needles, it can make about 800 kinds of pattern.

(A) **How to operate this needle selector :**

To put up the graduation of a pattern and to adjust the switch cam according to a sort of pattern.

a) First of all, draw forward the knitting needle at situation of **course 4** as per pattern mark to be mentioned at last page.

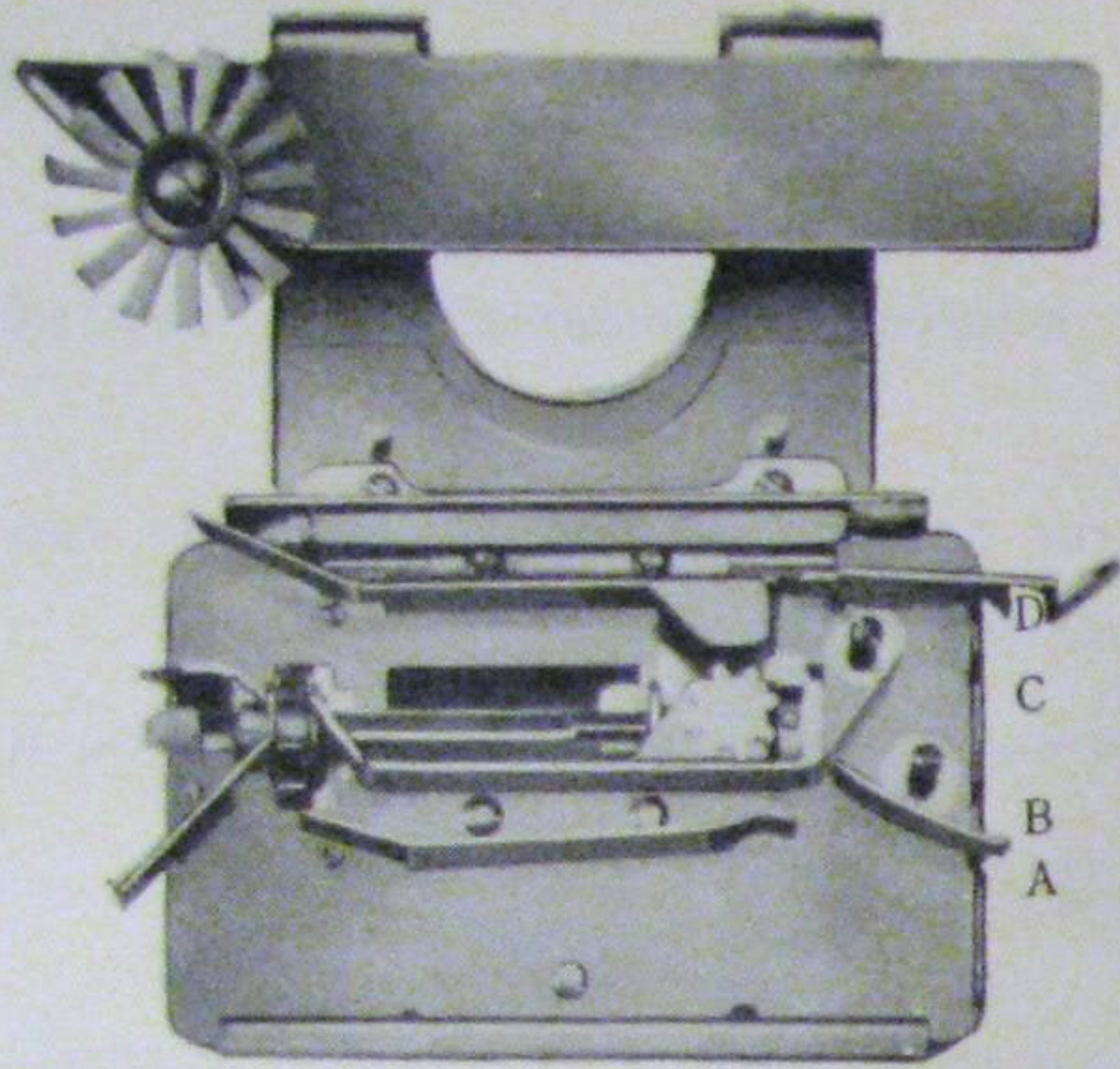
Example, in case of a pattern for 10 stitches, put up the graduation, (10) of dial.

b) put on the right hand of main knitting machine this needle selector, and remove to left hand on main machine, and put off this needle selector when knitting needle appear to **course 4** all together.

(Note: the needle selector is always operated from right hand to left hand)

(B) **Needle's selection for knit in pattern :**

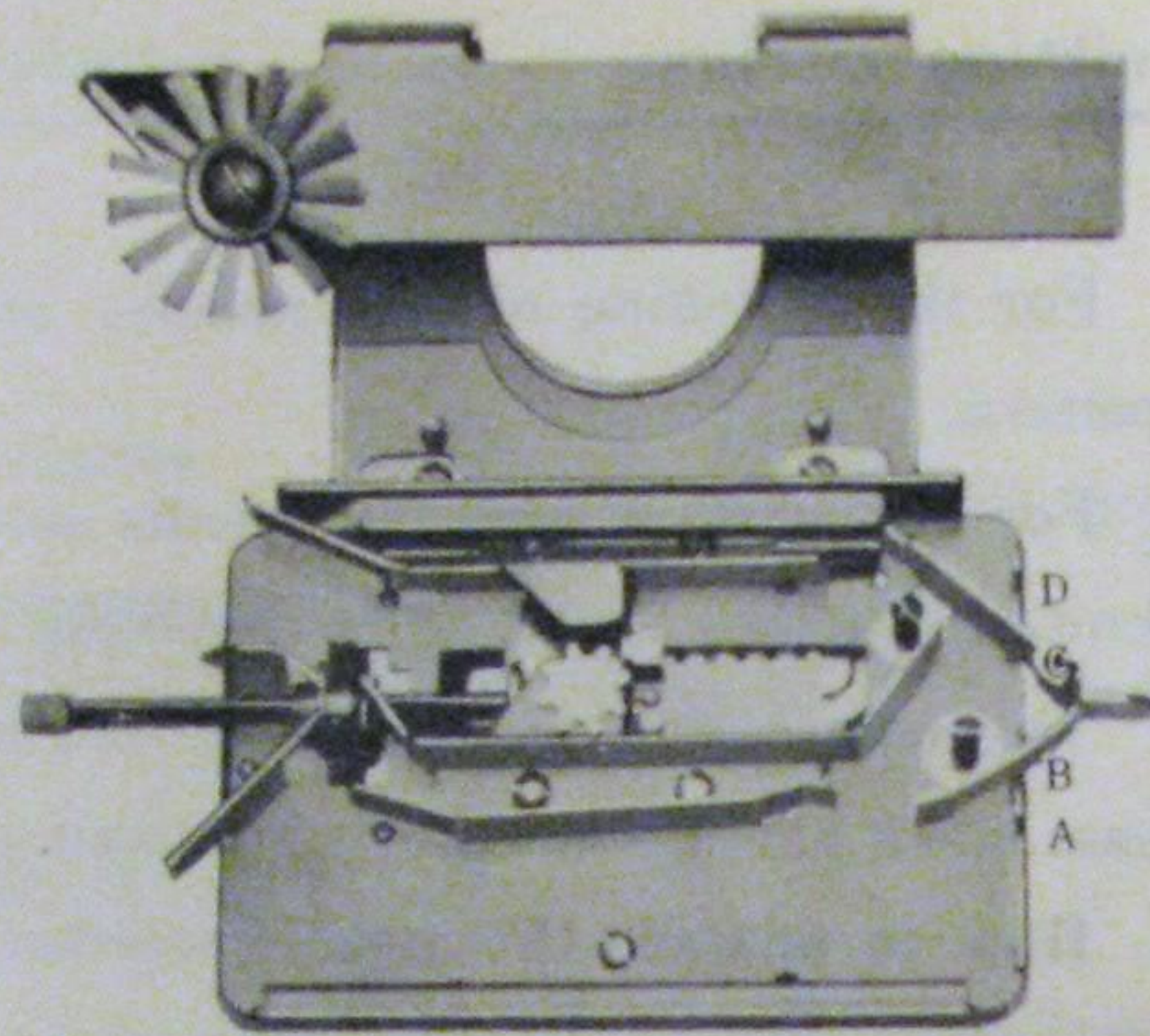
(It is to be shown at page of knitting pattern.)



(C) **Needle's selection for knitting stitch :**

(Draw up stitch and tack stitch is to be shown at page draw up knitting and tack knitting)

Set the switch cam to A. & D.



(D) **Continued draw upstitch :**

(See the page of draw up knitting)

- a) Set switch cam to B & D.
- b) Knit the stitch of a pattern by main carriage and set switch cam to C., and operate once, according to return the knitting needle at **course 4**.

- c) Set switch cam to D and for continuing this operation, make the continued draw up pattern.

(E) **Pattern for hole making on knitted yarn :**

- a) Set switch cam to C. & B., and the selected needle pushes out latch to the knitted yarn, and the needle to be not selected leaves the knitted yarn in latch according to remove the selected needle only by transfer tool.

(Note: In case of above, cooperate with the garter plate.)

Note; Can easily knit the garter knitting for the cooperation with the garter plate and the switch cam of needle selector.)

► How to knit the draw up stitch :

According to combine the stitch and stroke in color, can knit a colorful pattern knitting.

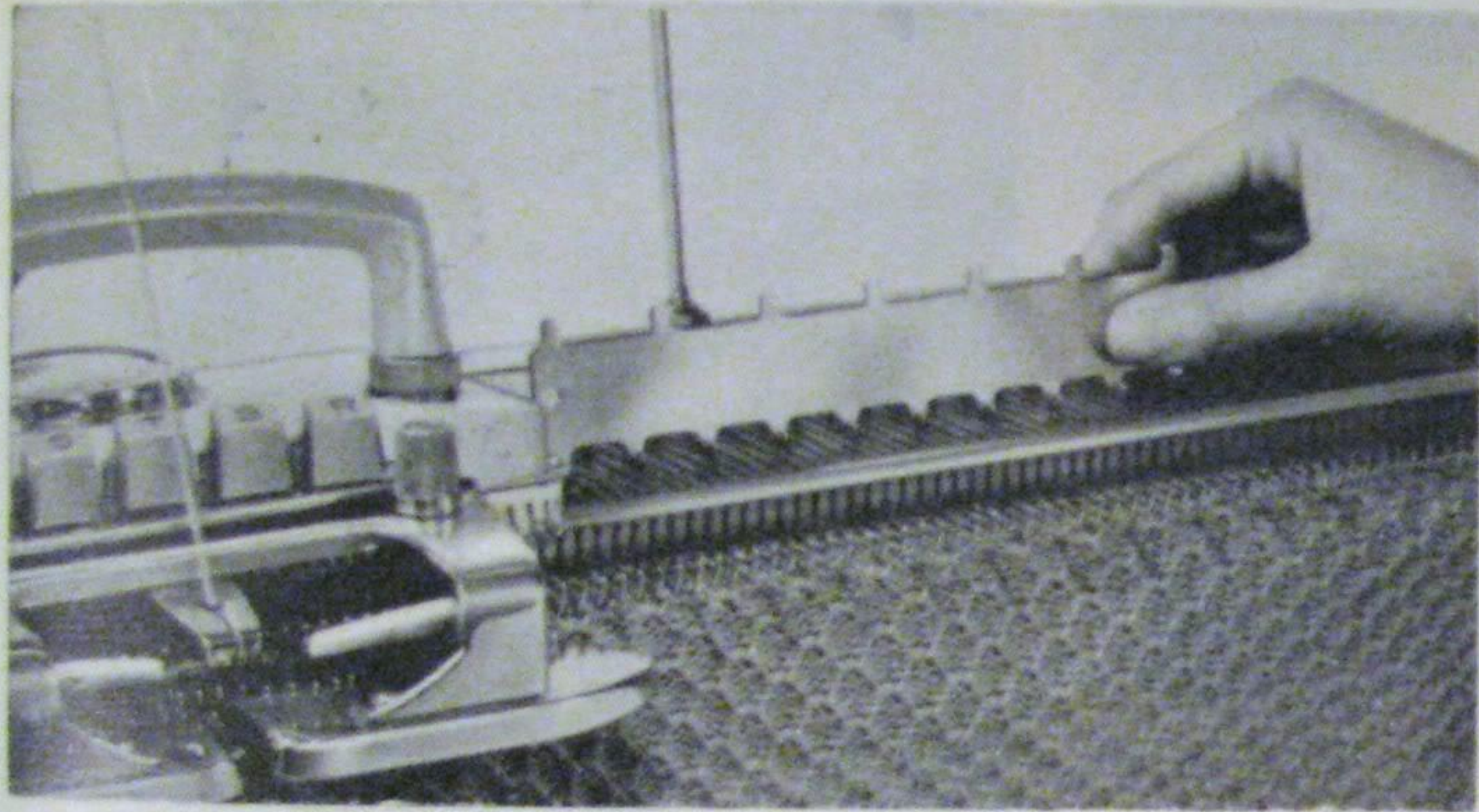


Fig. 1.

- a) Draw forward the knitting needle until situation of **course 4** by using needle selector or needle selecting plate, and knit desired strokes in regular position of russell knob.
- b) Draw forward russell knob of progressing direction and move the carriage.

according to repeat this motion, can make the draw up pattern.

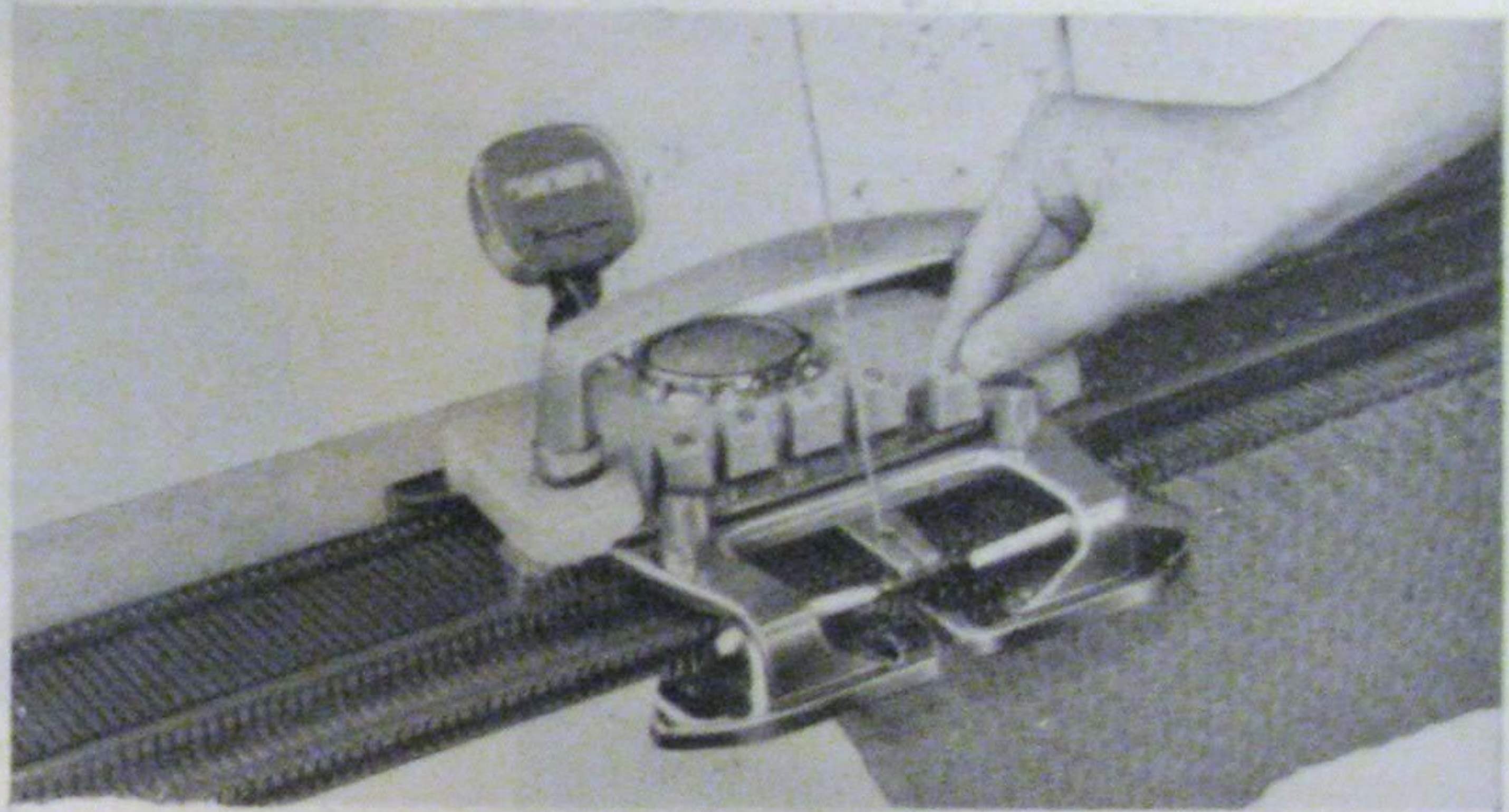
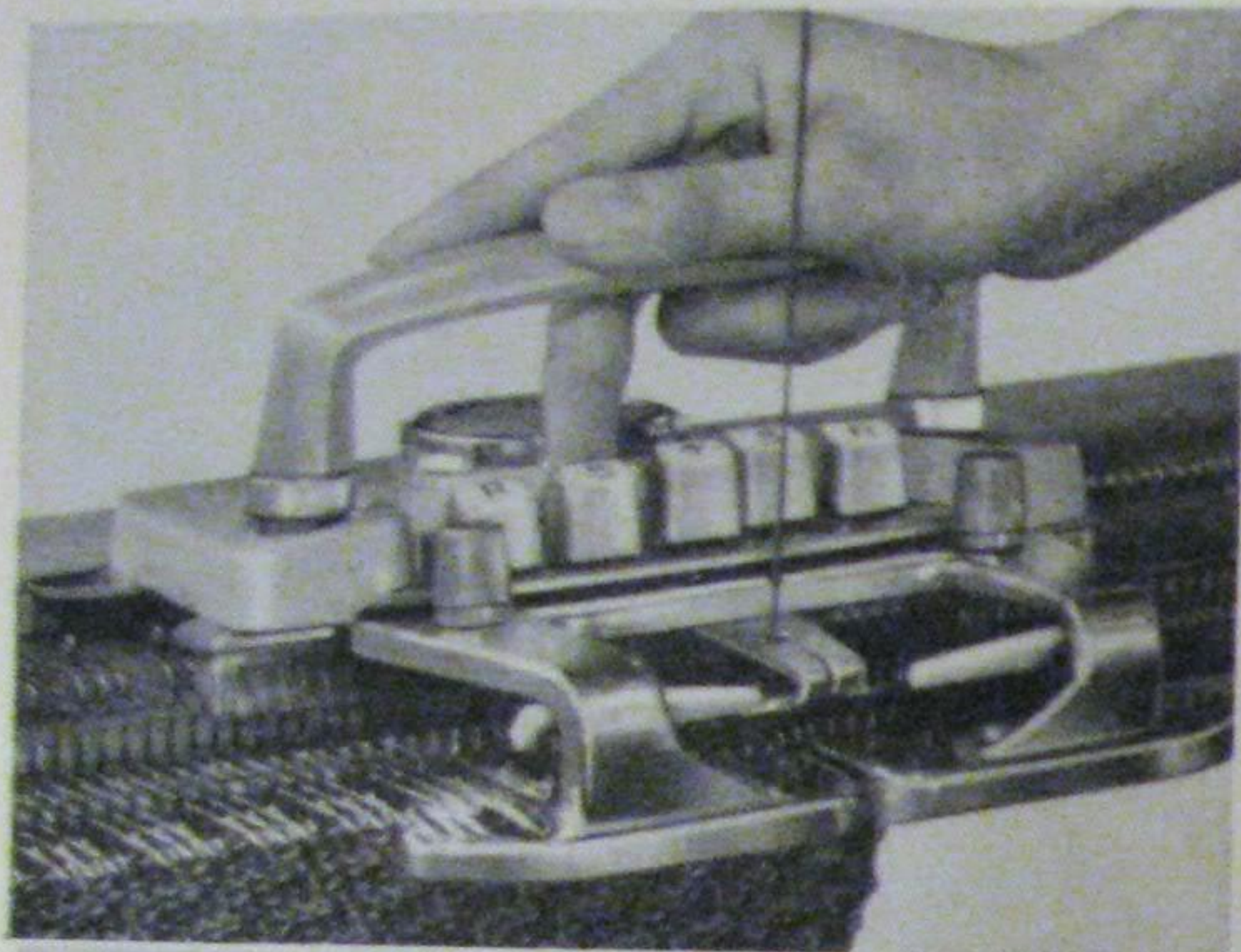


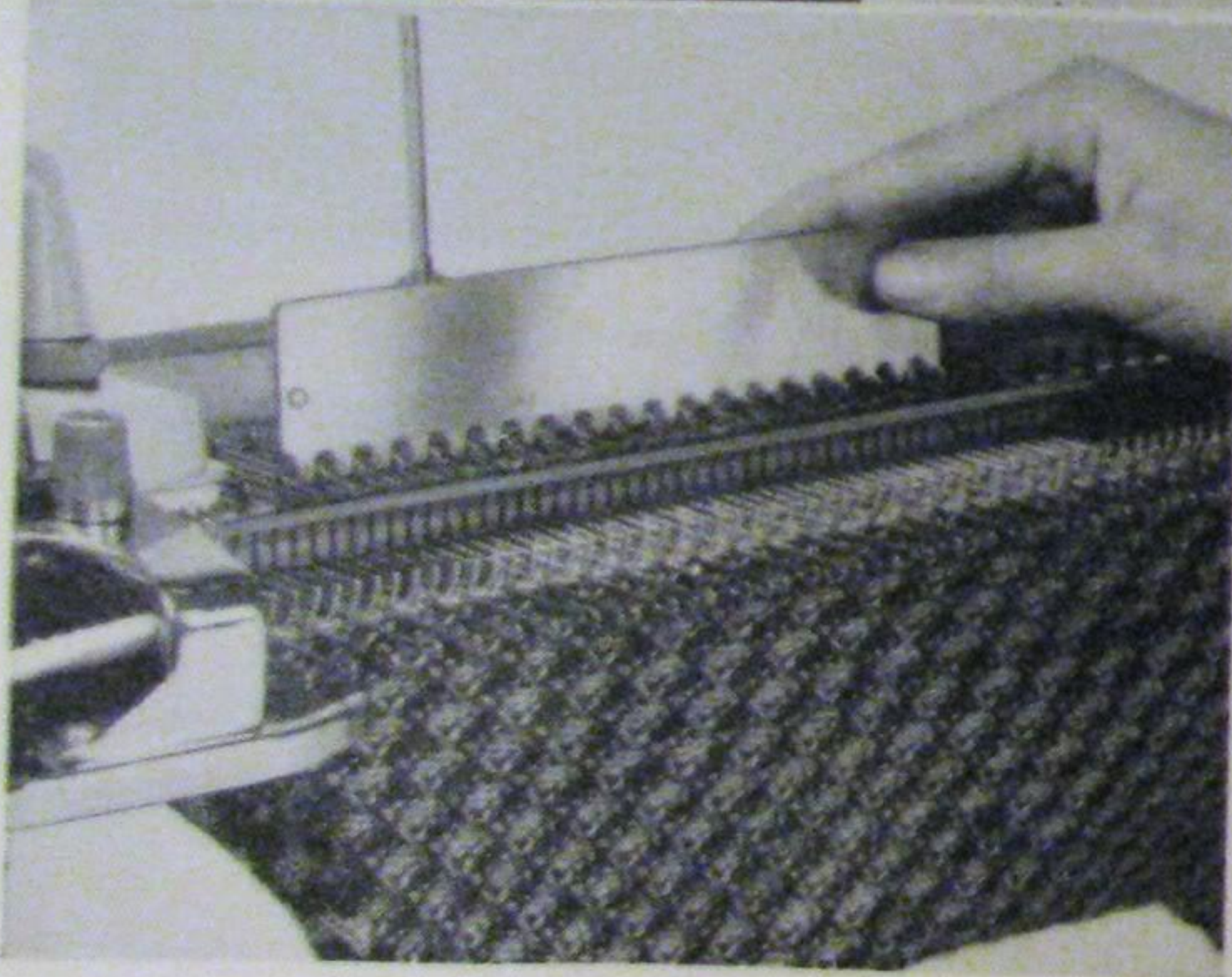
Fig. 2.

- a) Draw forward the knitting needle until situation of **course 4**, and knit until the desired step to be draw up.
- b) Return to **course 3** the needle to be draw up and repeating (a) & (b),

► How to knit the taek stitch



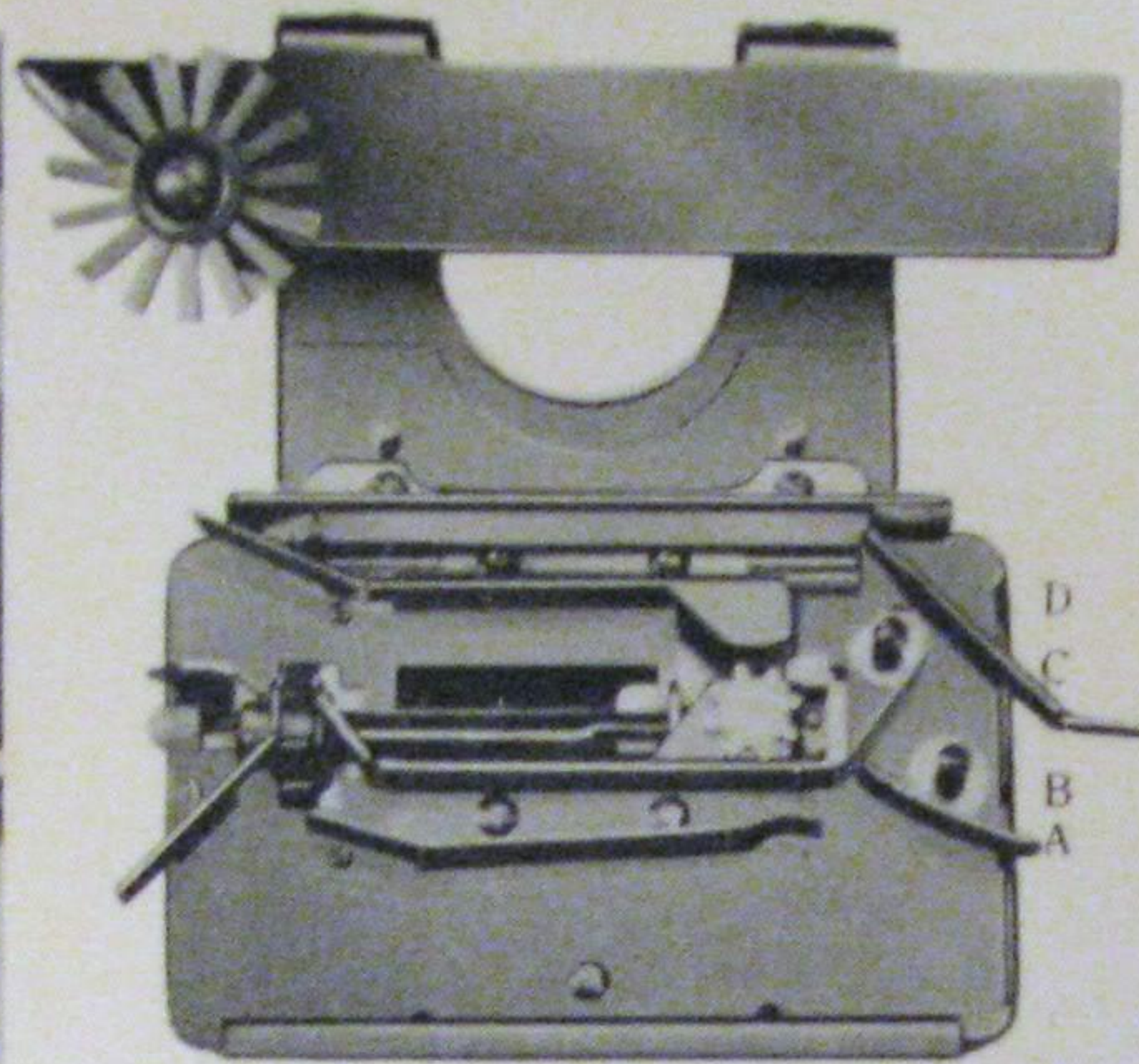
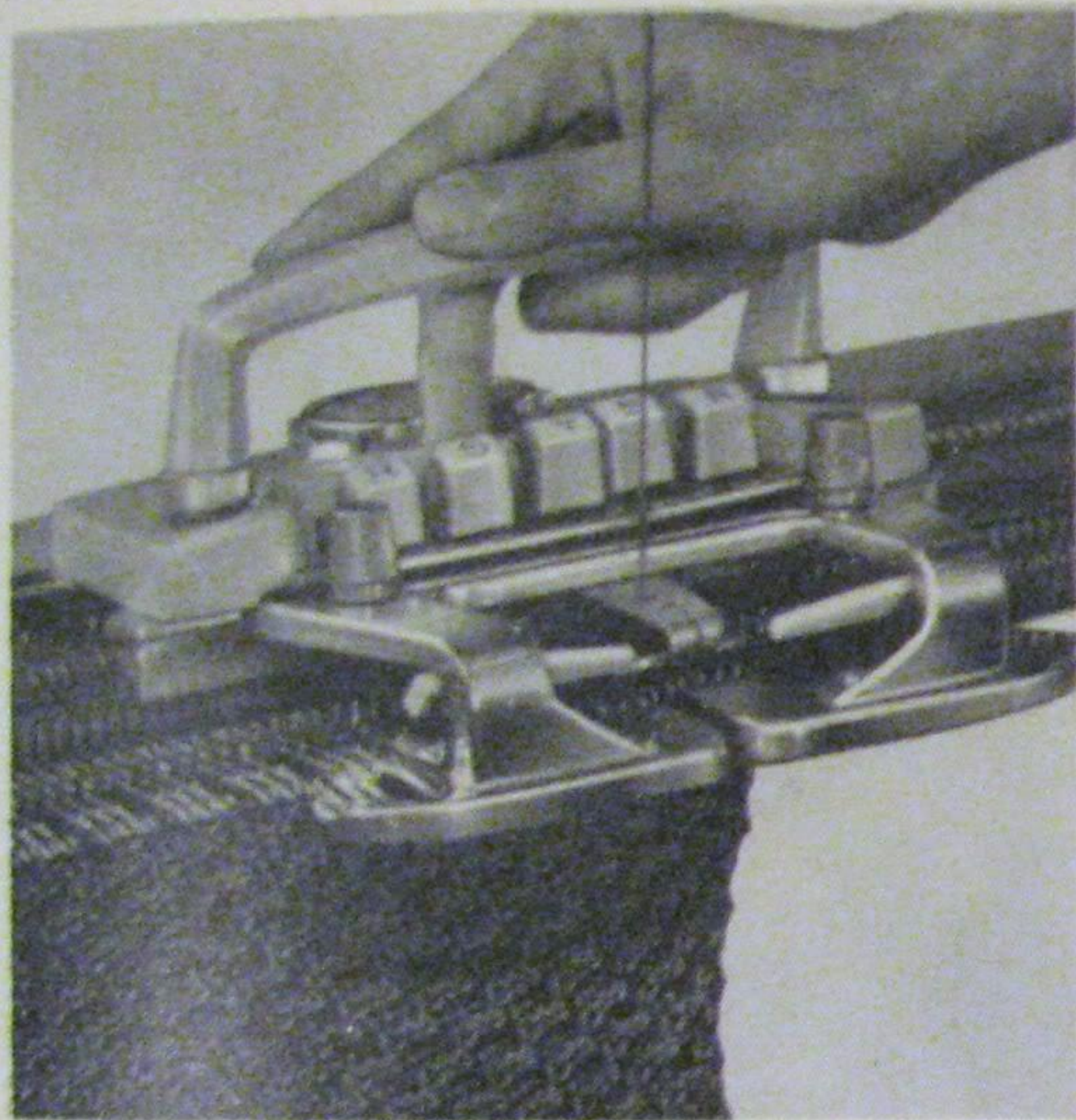
(A) Draw forward **R** **S** & **T** of the slide knob on left to right hand.



(B) and draw up the course 4 to the needles out side of draw up stitch by the needle selector or needle Selecting plate and move the carriage accordingly the needles of course 2 posting are not knitted and can only knit the needles posting of course 4.



► Knit in pattern



- (A) Fix to the mark. A, C, of needle selector and draw up the needle to the course 3.
- (B) First of all, knit the needles of the course 3. (draw forward the slide knob, S. on both hands, and move the carriage, and then, can knit only the needles of the course 3 posting.
- (C) The second, draw up the needle of course 2 to be not knitted to the course 3 by the needle selector and the knitting of A. B., it can fine knitting pattern.



Manufacturers **Managers Manufacturing Company Ltd.**
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