



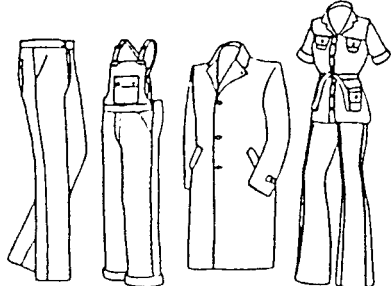
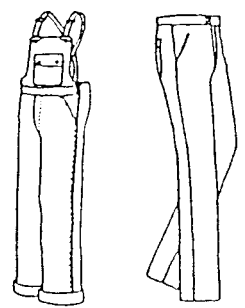
SINGER
299U-Srvc Manual
Part One

4-28-93

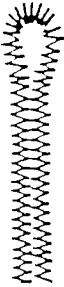

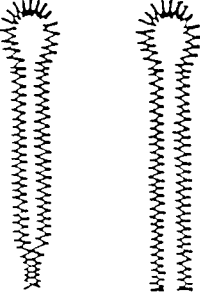









SINGER
299U MACHINE
SERVICE MANUAL
PART-I

SINGER NIKKO

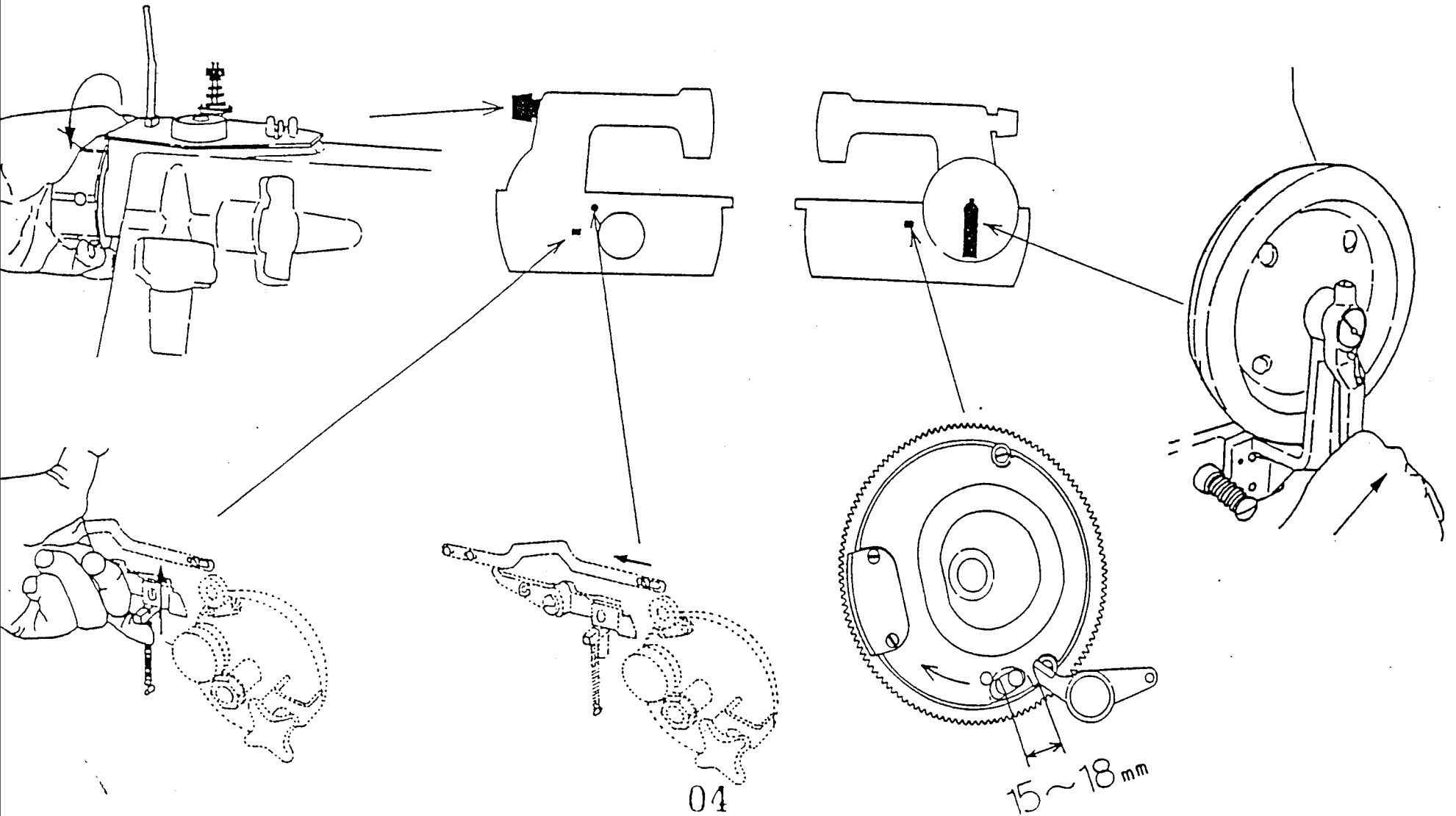
299U: MODEL & VARIETY

| MODEL NUMBER | |  MIN. MAX. MIN. MAX. TAPER BAR | | | APPLICATION | |
|---|-----------|--|---------------------|---|-------------|---|
| C U T B E F O R E | 299U231W | 16(3/8) - 35(1 3/8) | 13(1/2) - 32(1 1/4) | 9.5(3/8) - 35(1 3/8) 6.5(1/4) - 35(1 3/8) 3 (1/8) | (A) | (A)  |
| | 299U232W | 16(3/8) - 35(1 3/8) | 13(1/2) - 32(1 1/4) | 9.5(3/8) - 35(1 3/8) 6.5(1/4) - 35(1 3/8) 3 (1/8) | (A) | |
| | 299U233LW | 32(1 1/4) - 38(1 1/2) | 22(7/8) - 29(1 1/8) | 9.5(3/8) - 32(1 1/4) 6.5(1/4) - 35(1 3/8) 3 (1/8) | (A) | |
| | 299U233MW | 25(1) - 32(1 1/4) | 16(3/8) - 22(7/8) | 9.5(3/8) - 25(1) 6.5(1/4) - 29(1 1/8) 3 (1/8) | (A) | |
| | 299U233SW | 19(3/4) - 25(1) | 13(1/2) - 19(3/4) | 6.5(1/4) - 22(7/8) 3 (1/8) | (A) | |
| | 299U237MW | 25(1) - 32(1 1/4) | 16(3/8) - 22(7/8) | 9.5(3/8) - 25(1) 6.5(1/4) - 29(1 1/8) 3 (1/8) | (B)(C) | |
| C U T A F T E R | 299U211W | 16(3/8) - 35(1 3/8) | 13(1/2) - 32(1 1/4) | 9.5(3/8) - 35(1 3/8) 6.5(1/4) - 35(1 3/8) 3 (1/8) | (B) | (B)  |
| | 299U123W | | 13(1/2) - 19(3/4) | 6.5(1/4) - 22(7/8) 3 (1/8) | (C) | |
| | 299U127W | | 13(1/2) - 19(3/4) | 6.5(1/4) - 22(7/8) 3 (1/8) | (C) | |
| C / A & C / B | 299U251W | 16(3/8) - 35(1 3/8) | 13(1/2) - 32(1 1/4) | 9.5(3/8) - 35(1 3/8) 6.5(1/4) - 35(1 3/8) 3 (1/8) | (A)(B) | (C)  |
| | 299U253LW | 32(1 1/4) - 38(1 1/2) | 22(7/8) - 29(1 1/8) | 9.5(3/8) - 32(1 1/4) 6.5(1/4) - 35(1 3/8) 3 (1/8) | (A)(B) | |
| | 299U253MW | 25(1) - 32(1 1/4) | 16(3/8) - 22(7/8) | 9.5(3/8) - 25(1) 6.5(1/4) - 29(1 1/8) 3 (1/8) | (A)(B) | |
| | 299U253SW | 19(3/4) - 25(1) | 13(1/2) - 19(3/4) | 6.5(1/4) - 22(7/8) 3 (1/8) | (A)(B) | |

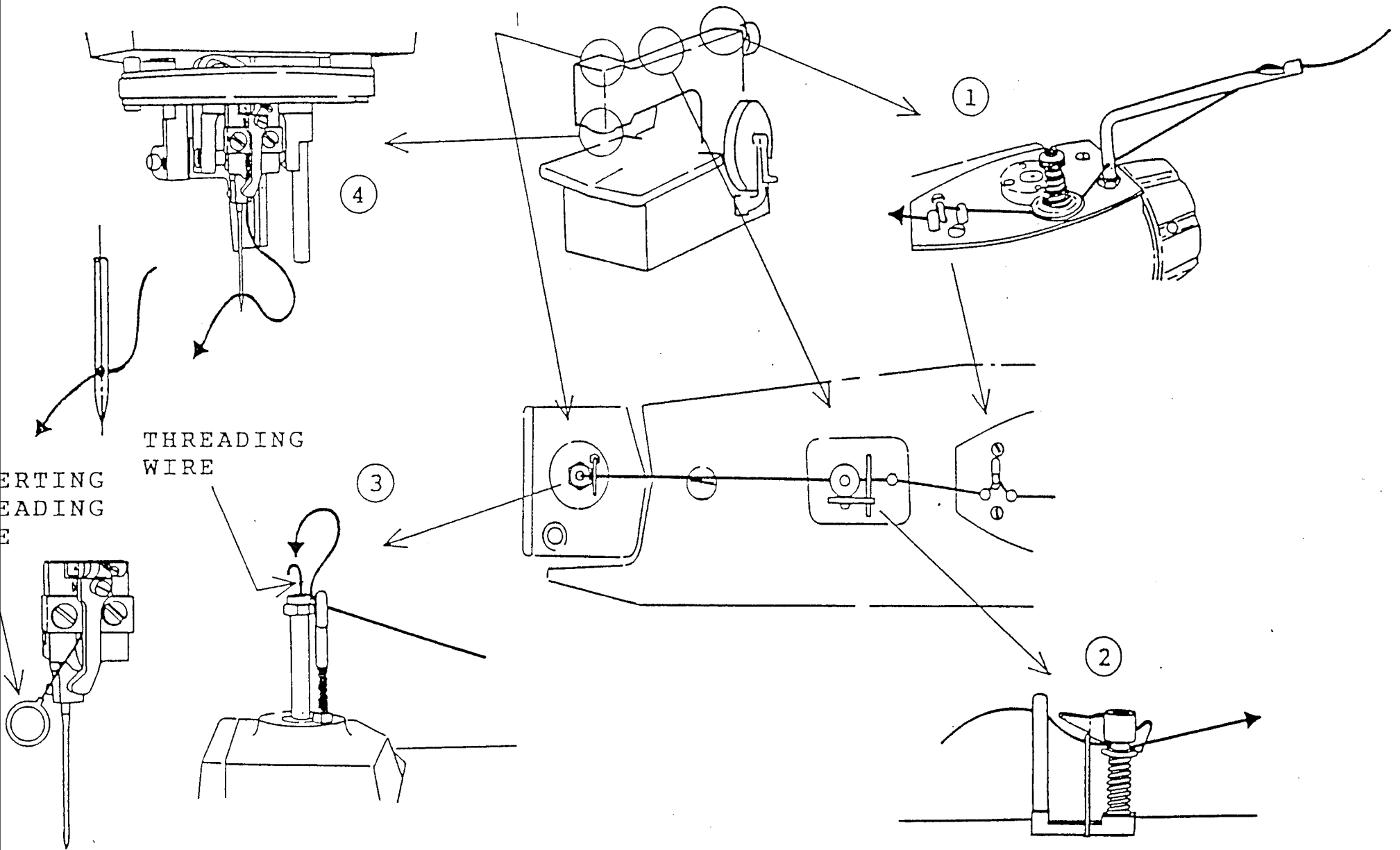
APPLICATION

| | | APPLICATION & VARIETY | | | | | | | | | |
|--|---|--|-------|---------|----------|--|---|---|---------------|----------|-----------|
| CUT BEFORE |  | <p>MEN'S OR LADY'S JACKET</p>  <p>299U230W/231W 299U233MW/233LW</p> | | | | | | | | | |
| CUT AFTER |  | <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 33%;">JEANS</td> <td style="text-align: center; width: 33%;">KNITTED</td> <td style="text-align: center; width: 33%;">TROUSERS</td> </tr> <tr> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> <td style="text-align: center;">  </td> </tr> <tr> <td style="text-align: center;">299U123W/127W</td> <td style="text-align: center;">299U210W</td> <td style="text-align: center;">299U213MW</td> </tr> </table> | JEANS | KNITTED | TROUSERS |  |  |  | 299U123W/127W | 299U210W | 299U213MW |
| JEANS | KNITTED | TROUSERS | | | | | | | | | |
|  |  |  | | | | | | | | | |
| 299U123W/127W | 299U210W | 299U213MW | | | | | | | | | |

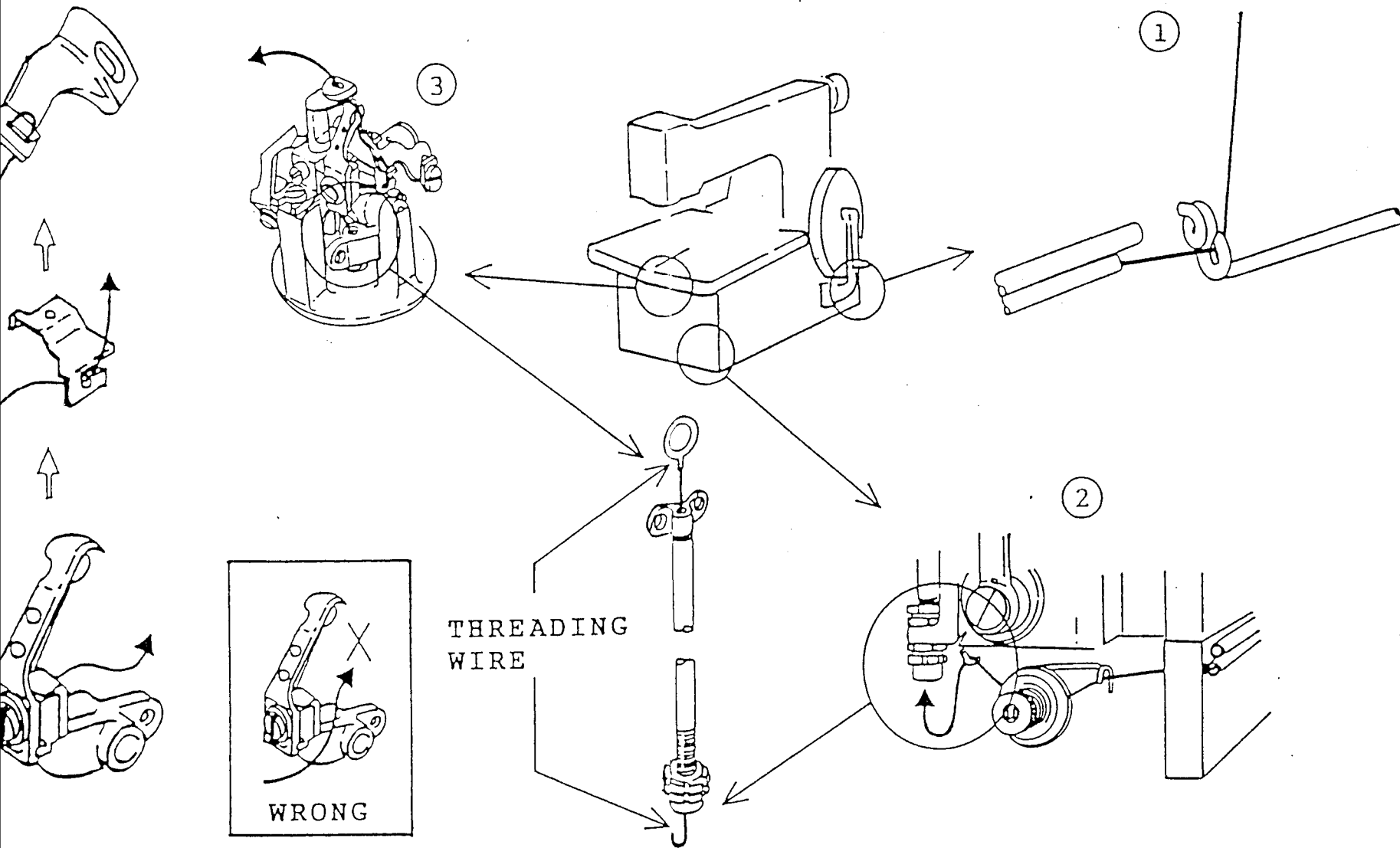
5-CHECK POINTS
BEFORE SEWING (BEFORE POWER ON)



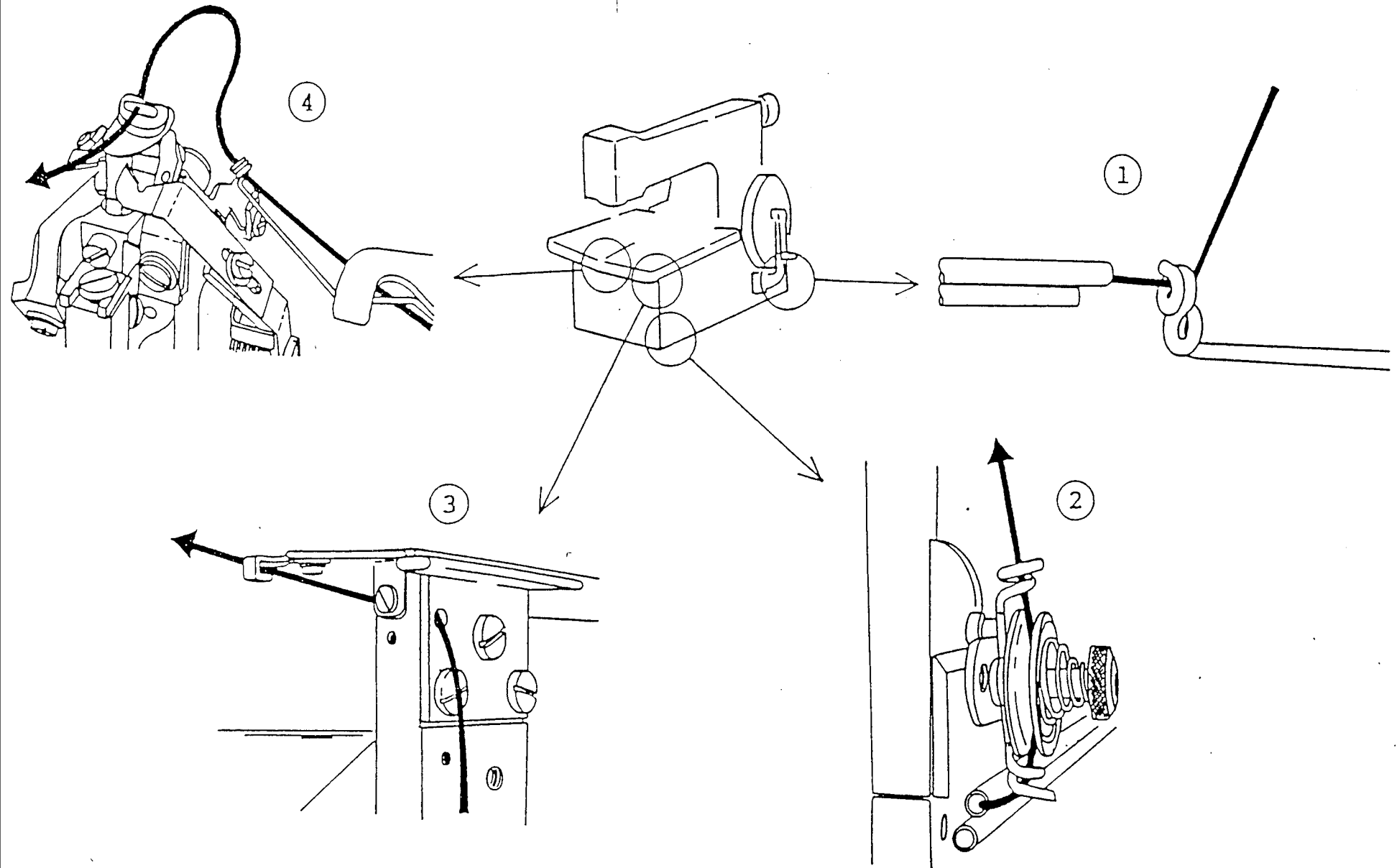
THREADING (NEEDLE THREAD)



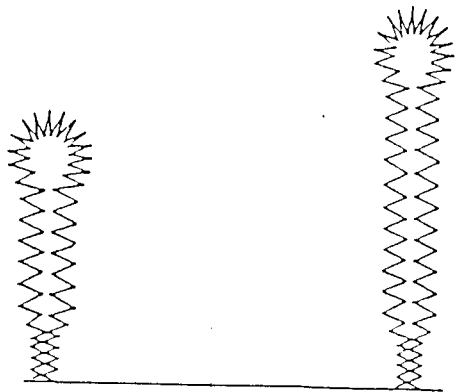
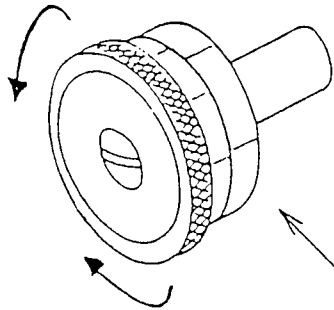
THREADING (LOOPER)



THREADING (GIMP)

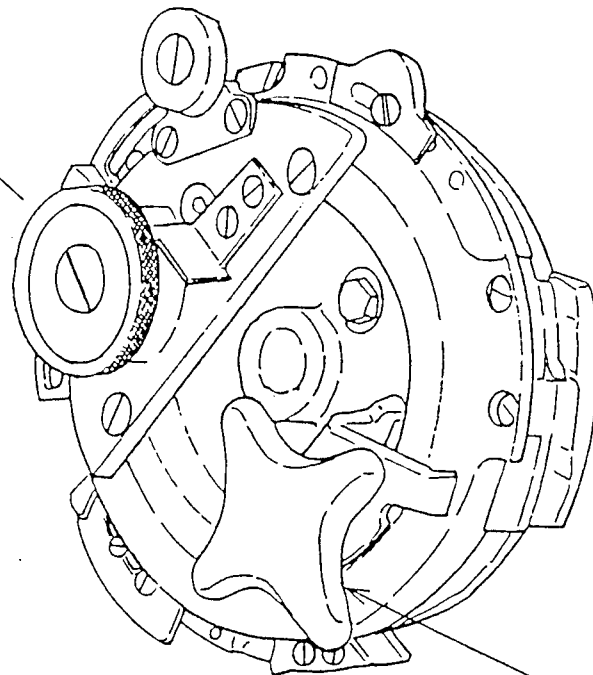


ADJUSTMENT OF BUTTONHOLE LENGTHS



SHORT LENGTH
TURN-CLOCKWISE

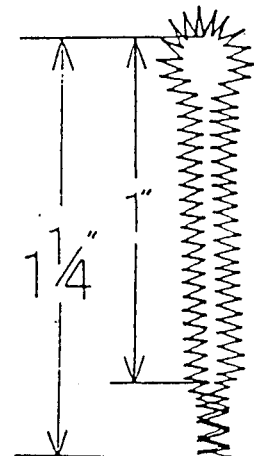
LONG LENGTH
TURN-
COUNTER-CLOCKWISE



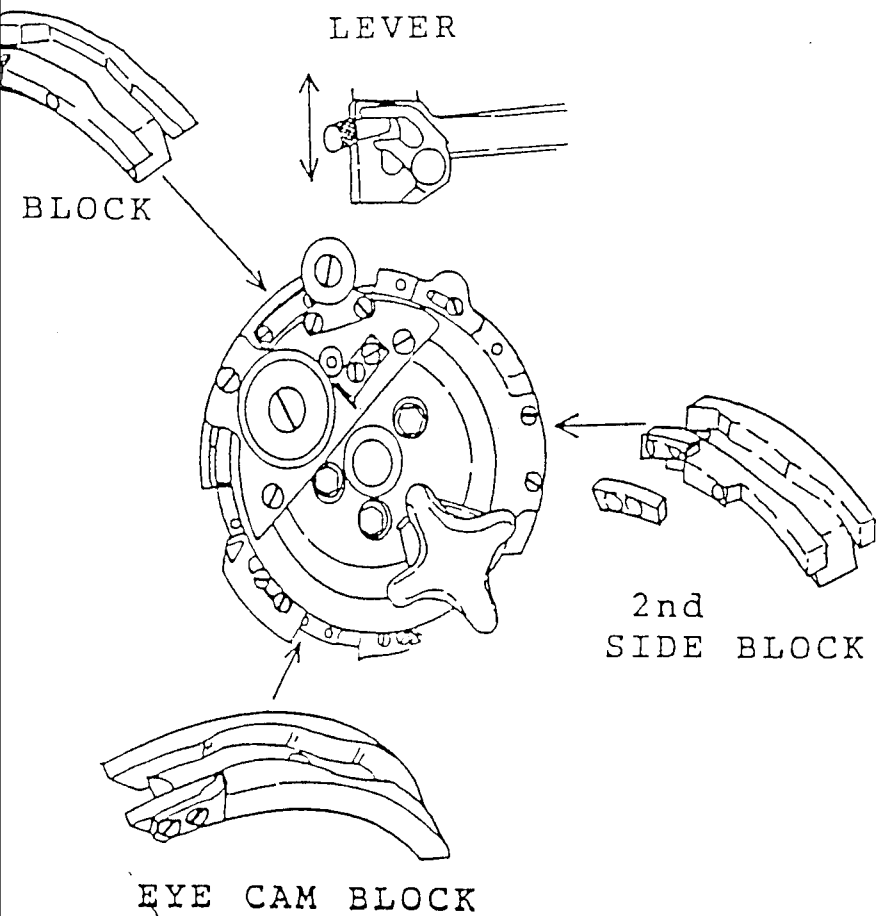
SET SCREW

FOR EXAMPLE

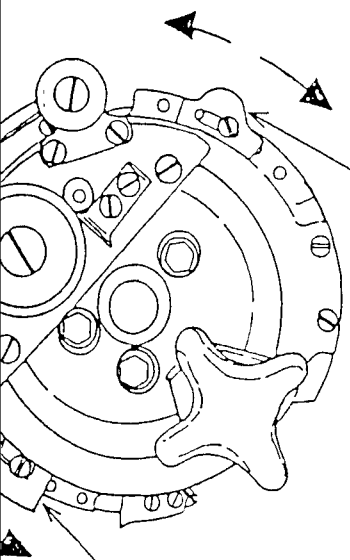
| | | |
|--|-------------------|---------------|
| | $1\frac{1}{8}$ | $\frac{7}{8}$ |
| | $1\frac{1}{4}$ | 1 |
| | EYE AND ST. | B A R |



SELECTION OF BUTTONHOLE PATTERN



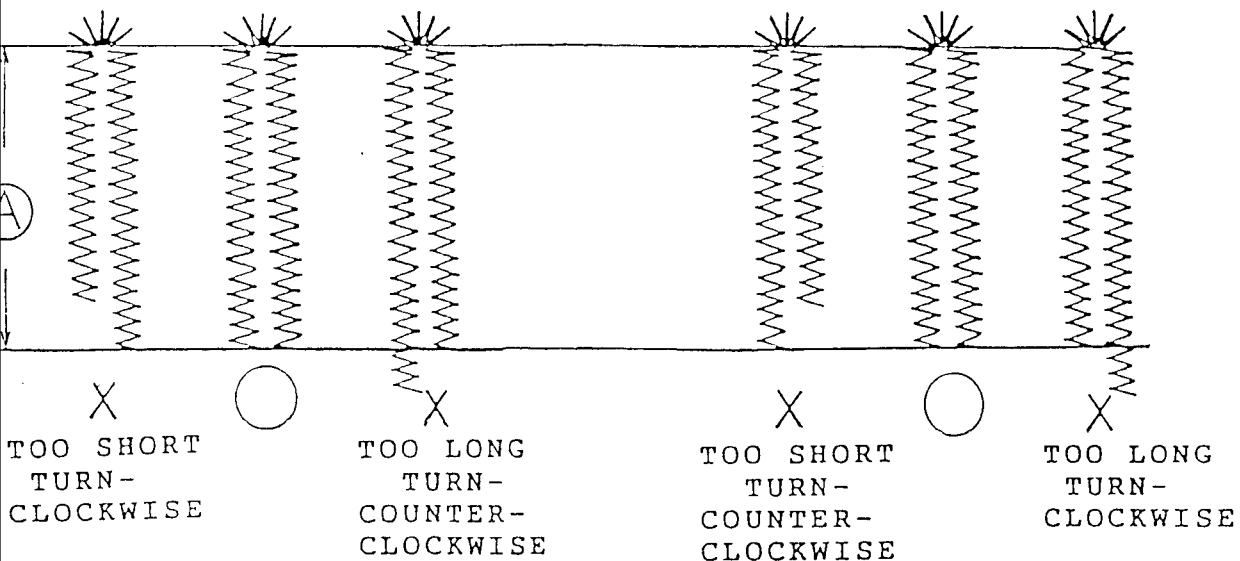
| | PATTERN WHEEL CAM BLOCK | | | LEVER |
|--|-------------------------|-----|-----|-------|
| | EYE | 1st | 2nd | |
| | ○ | ○ | ○ | DOWN |
| | ○ | ○ | ○ | UP |
| | ○ | — | — | DOWN |
| | — | ○ | ○ | DOWN |



ADJUSTMENT OF SEWING START & STOP

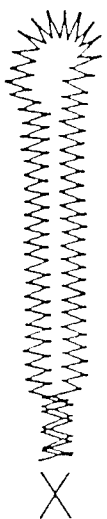
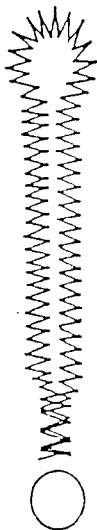
1st CAM

2nd CAM

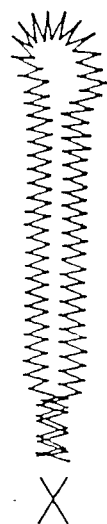


| MODEL | PATTERN WHEEL INDEX DISC (EYE AND ST.) A |
|---|--|
| 210W 211W 230W 231W 250W 251W | 1" 1/4 (31.8mm) |
| 123W 233SW 253SW | 1" (25.4mm) |
| 213MW 217MW 233MW 237MW 253MW 257MW | 1" 1/4 (31.8mm) |
| 213LW 233LW 253LW | 1" 1/2 (38.1mm) |

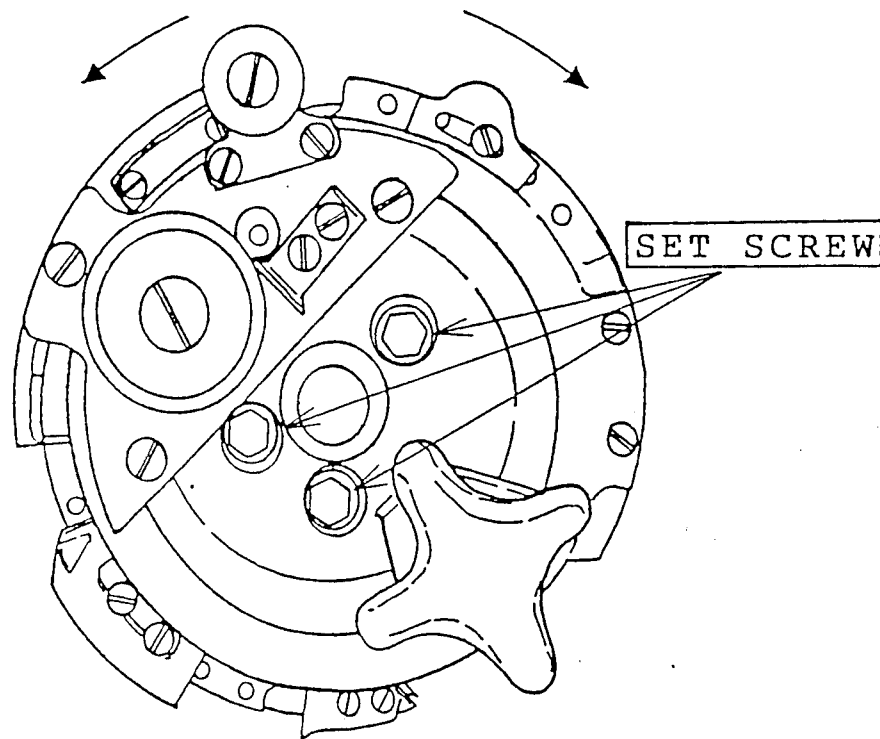
ADJUSTMENT OF PATTERN WHEEL CAM BLOCK (eye)



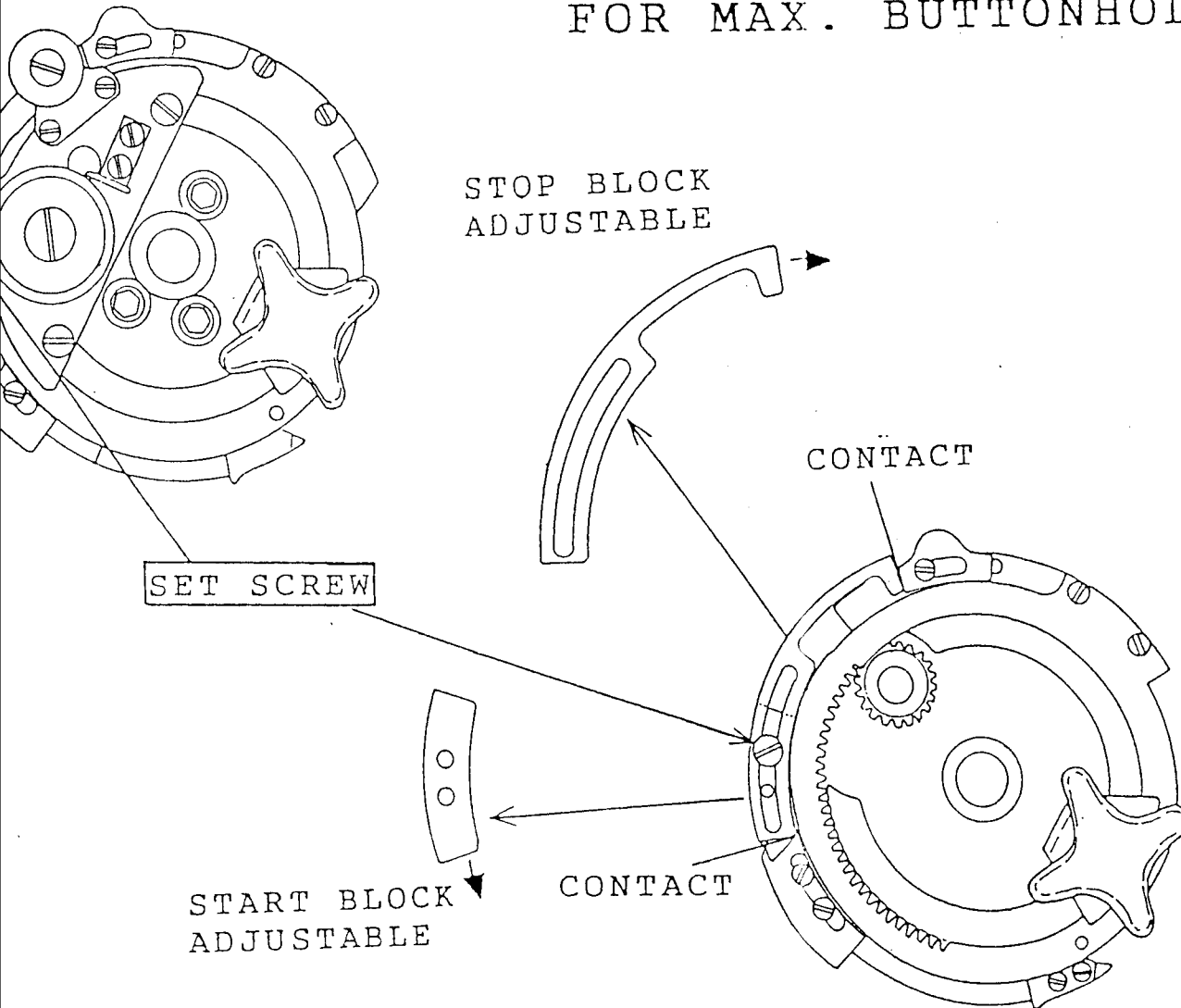
TURN
COUNTER-CLOCKWISE



TURN CLOCKWISE

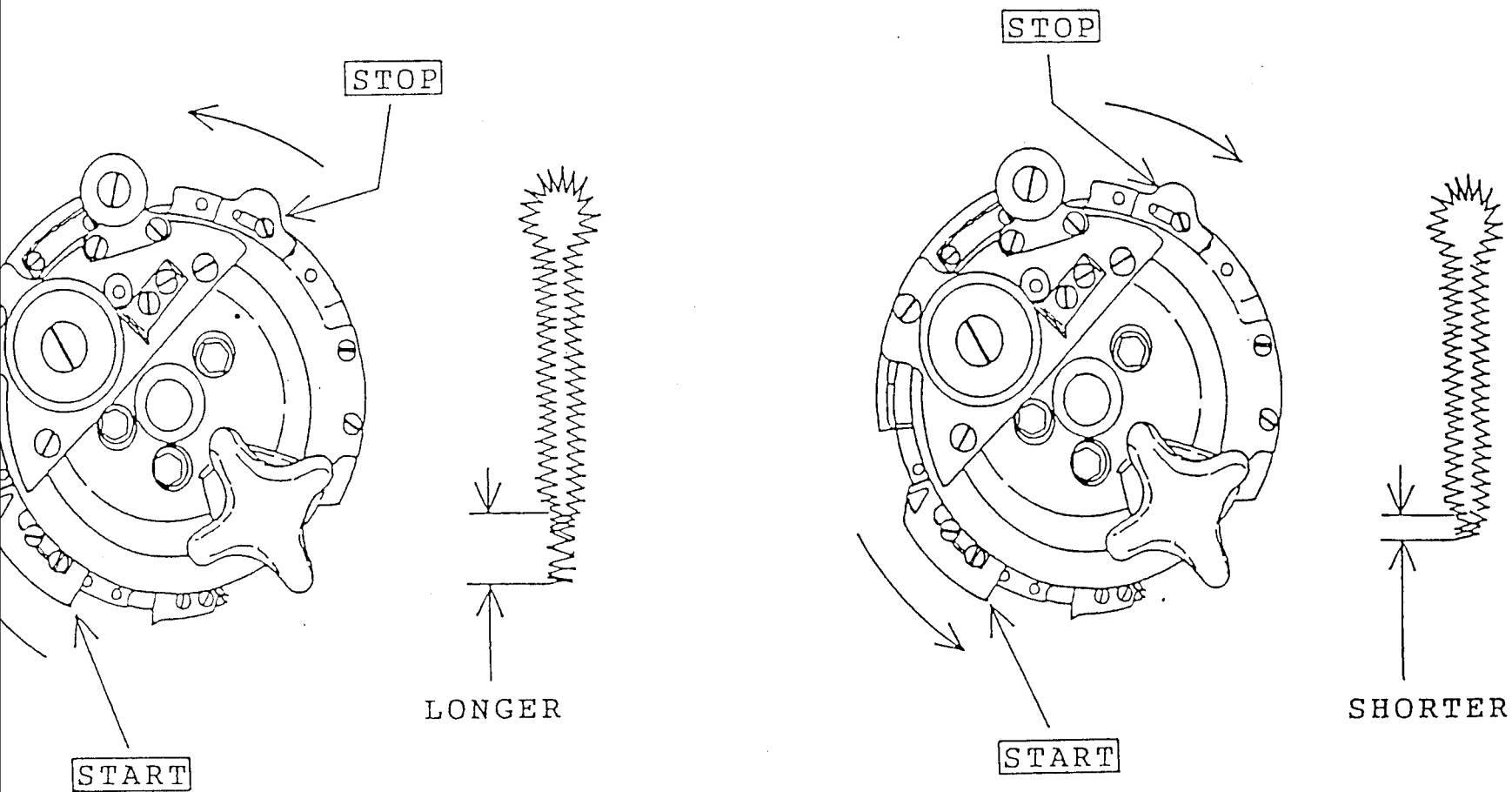


TO SET RESTRICTION PLATES
FOR MAX. BUTTONHOLE LENGTH

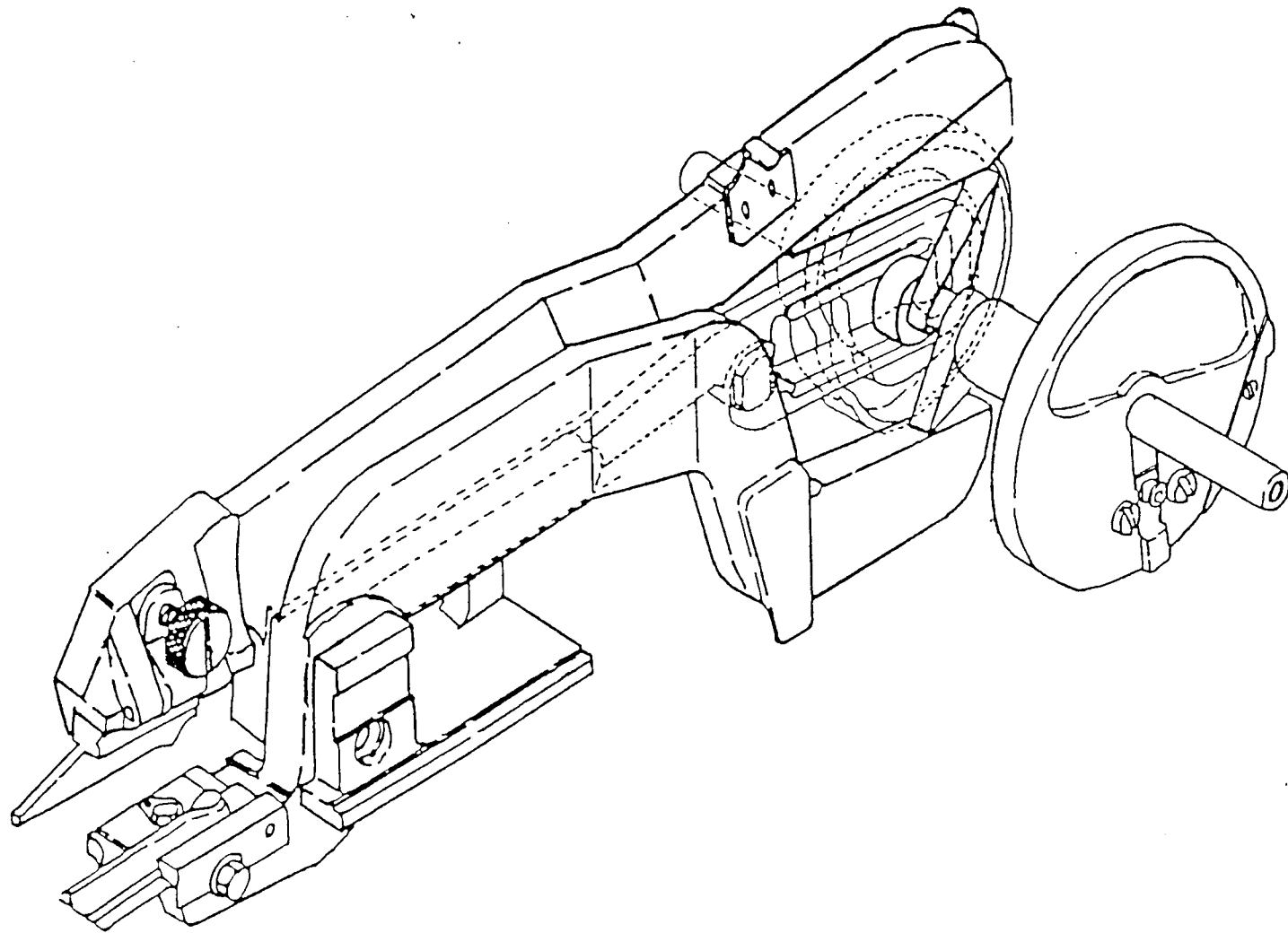


| MODEL | PATTERN WHEEL INDEX DISC (EYE AND ST.) |
|---|--|
| 210W 230W 250W | 1" 5/8 (41.3mm) |
| 211W 231W 251W | 1" 3/8 (35.0mm) |
| 123W 233SW 253SW | 1" (25.4mm) |
| 213MW 217MW 233MW 237MW 253MW 257MW | 1" 1/4 (31.8mm) |
| 213LW 233LW 253LW | 1" 1/2 (38.1mm) |

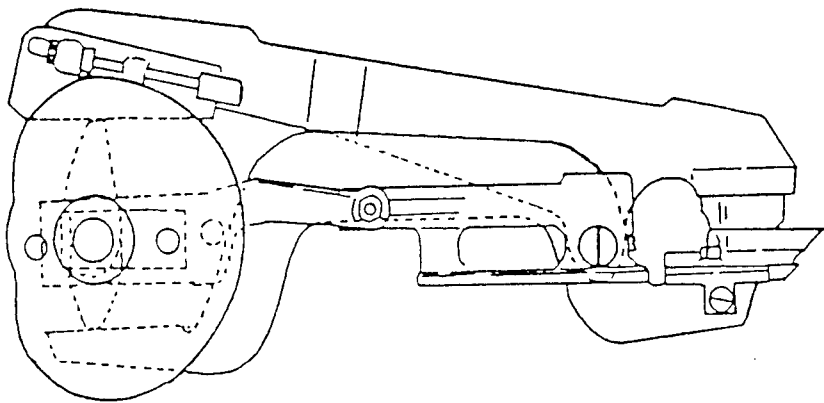
ADJUSTMENT OF TAPER BAR LENGTHS



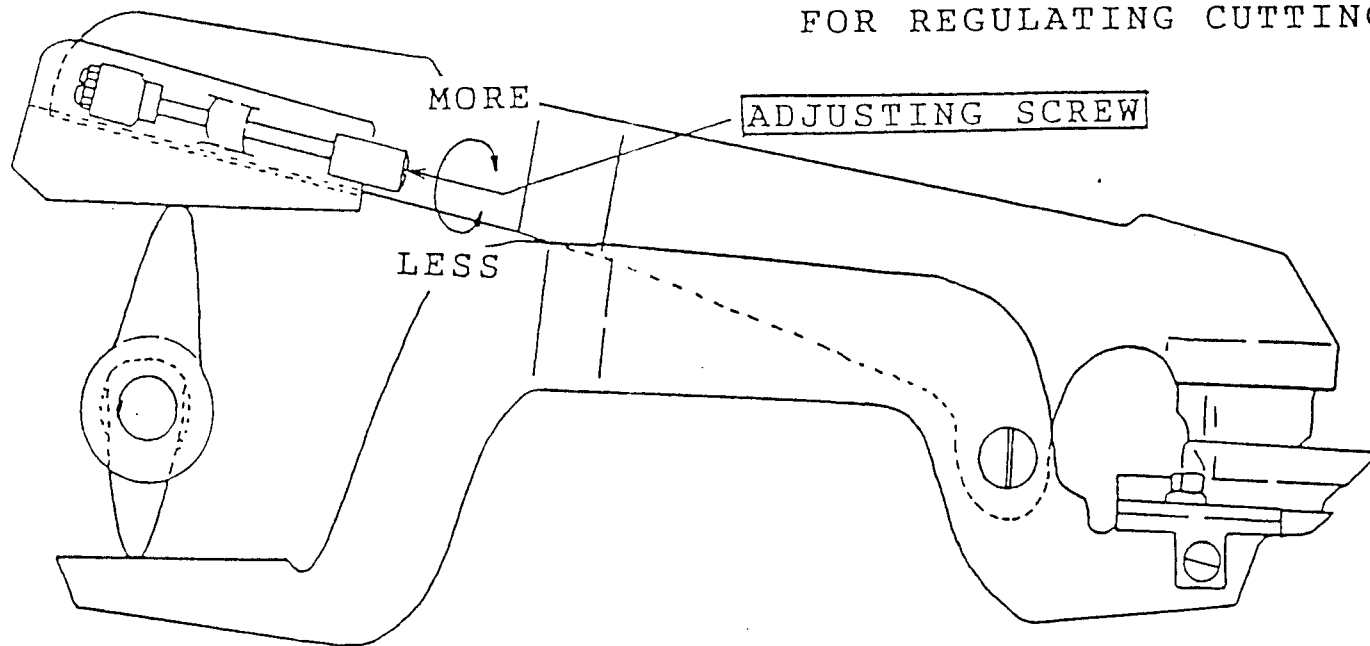
CUTTING MECHANISM



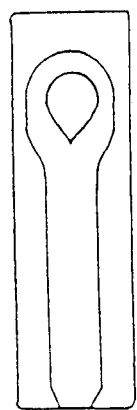
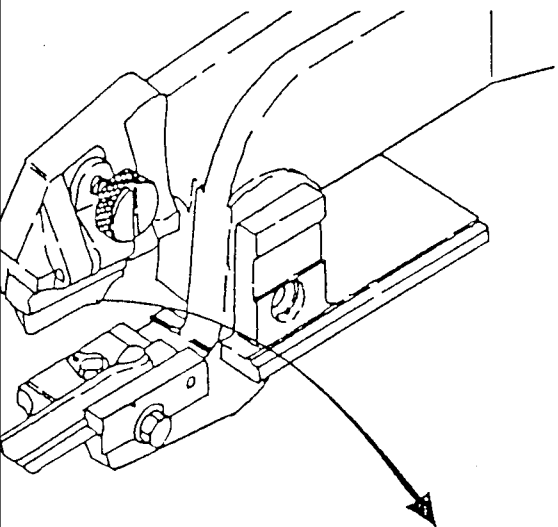
ADJUSTMENT OF CUTTING KNIFE PRESSURE



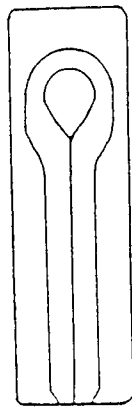
MAKE TRIAL CUTTING WITH A SHEET OF PAPER
FOR REGULATING CUTTING PRESSURE



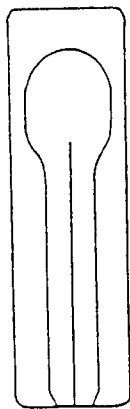
REFACING CUTTING BLOCK



X

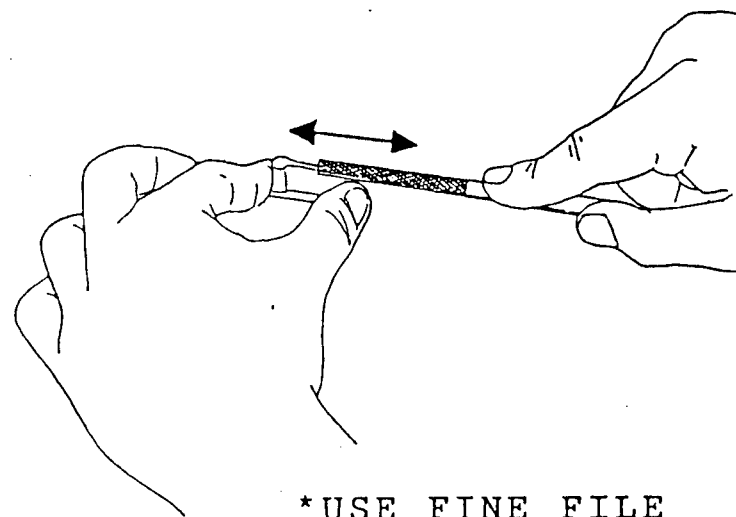


O



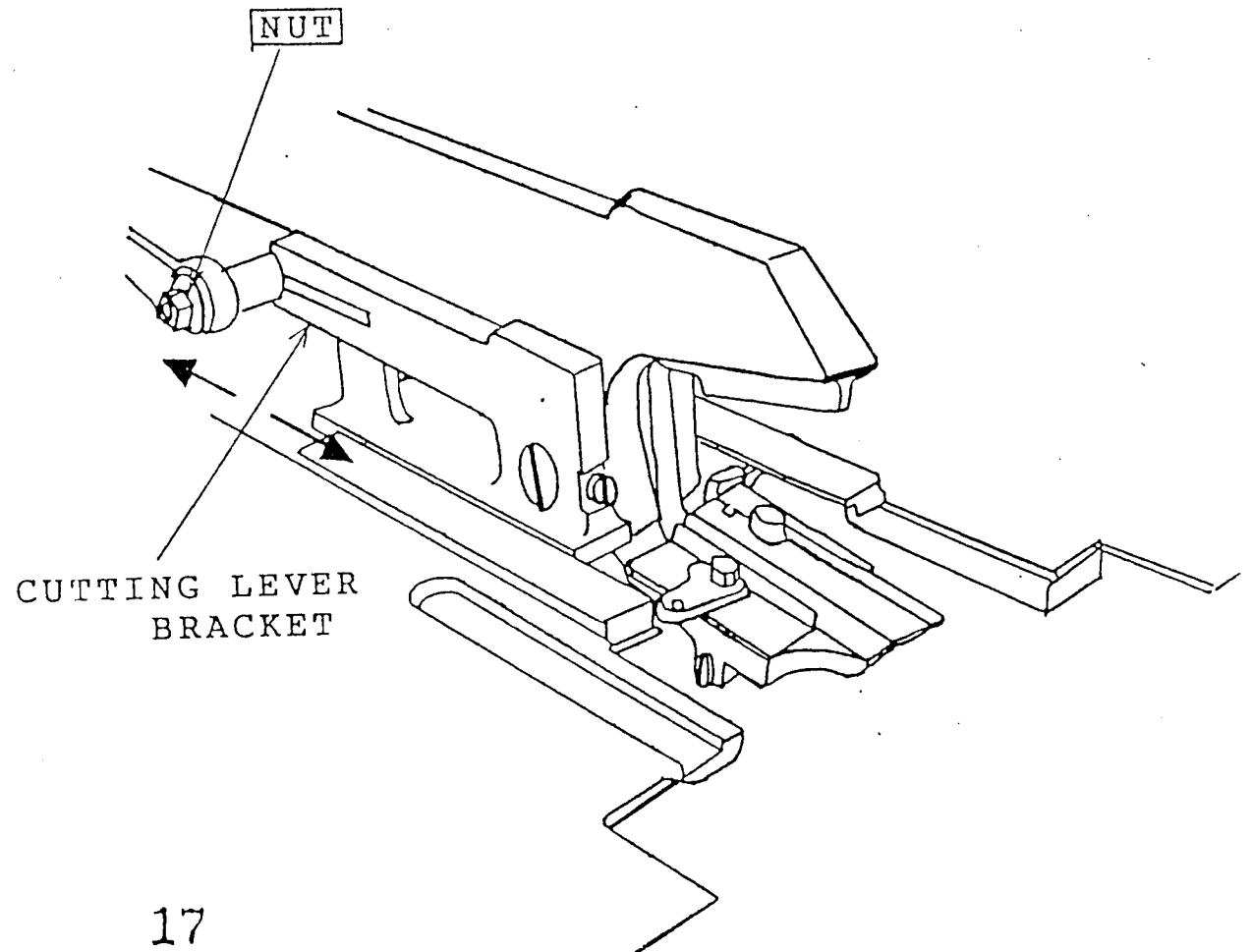
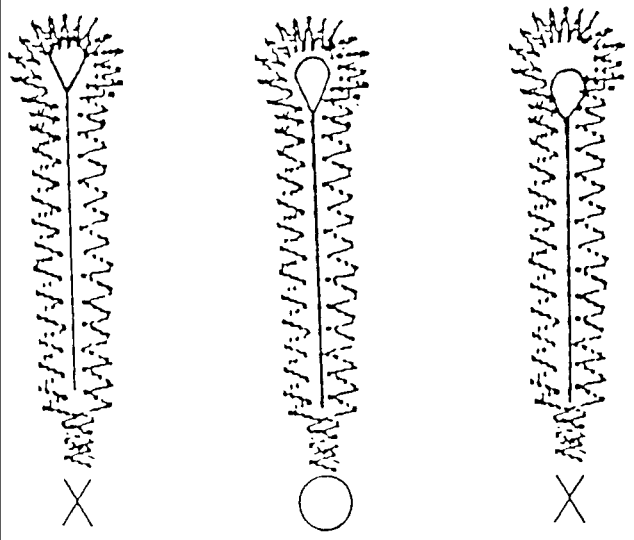
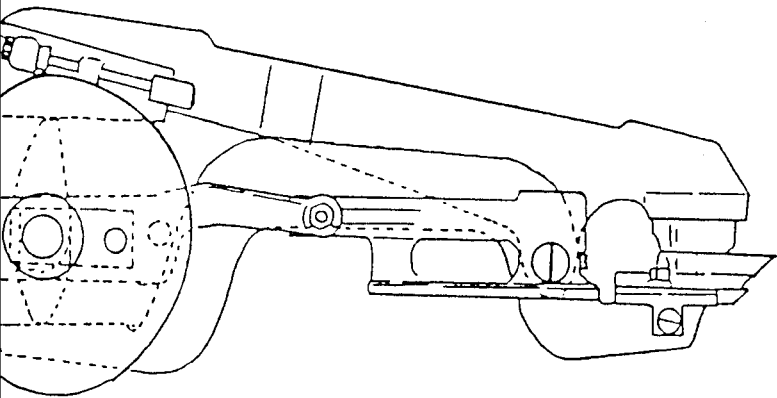
X

CUTTING BLOCK

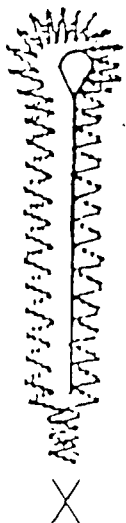
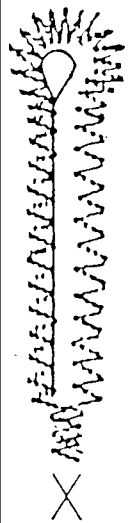
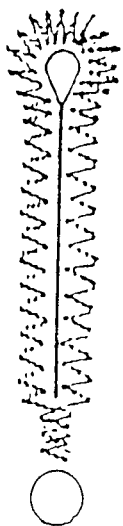


*USE FINE FILE

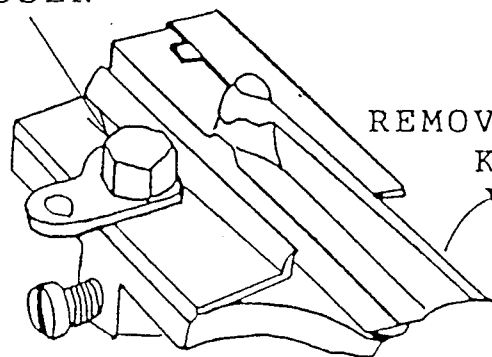
POSITION OF CUTTING KNIFE (1)



POSITION OF CUTTING KNIFE (2)



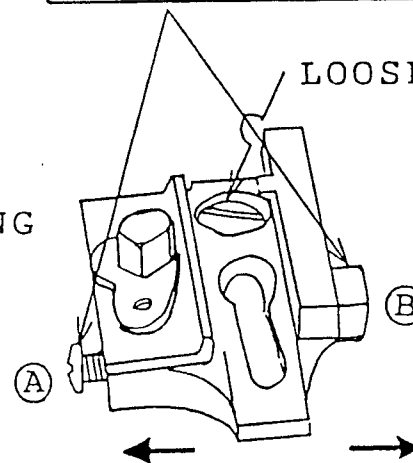
LOOSEN



REMOVE CUTTING KNIFE

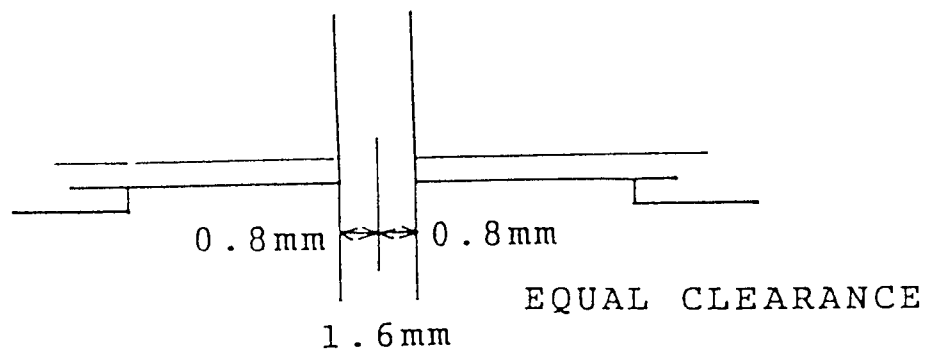
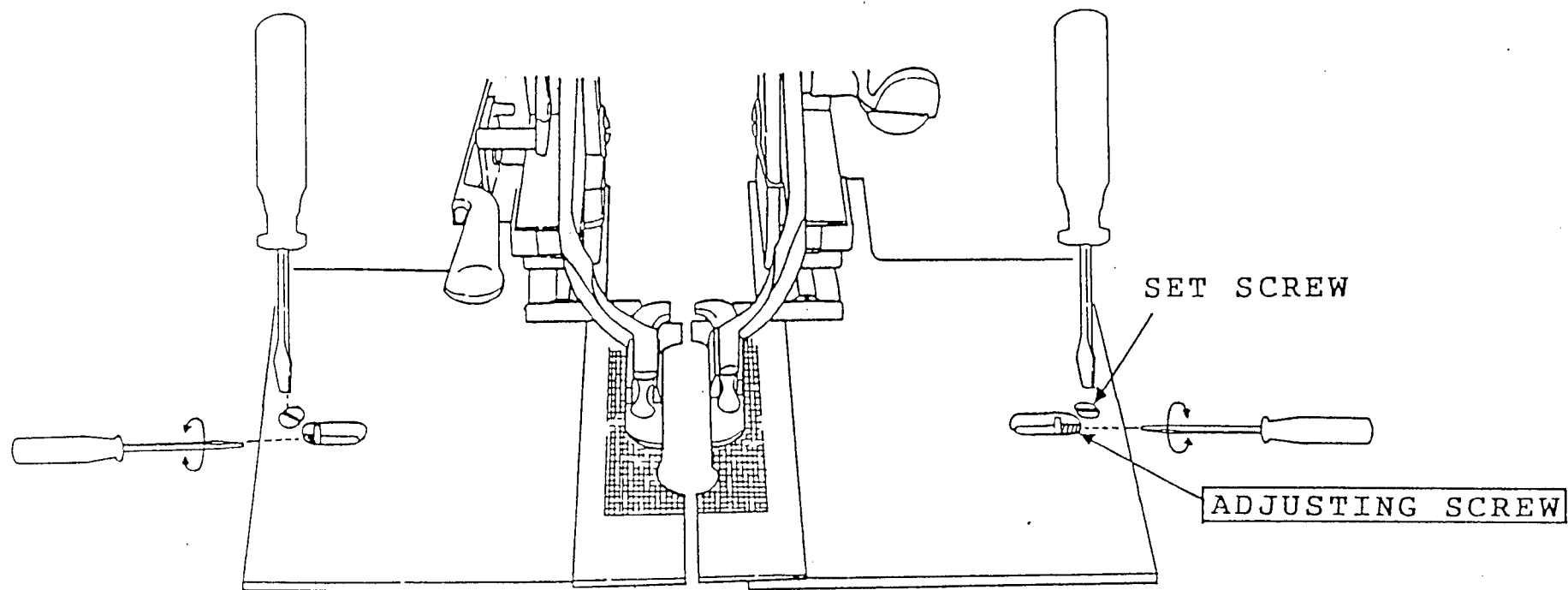
ADJUSTING SCREW

LOOSEN

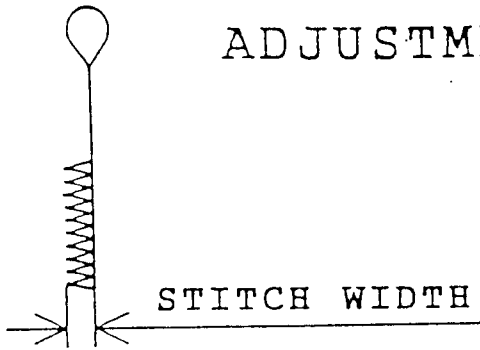


TO MOVE KNIFE TO RIGHT
 LOOSEN SCREW (A)
 TIGHTEN SCREW (B)
 TO MOVE KNIFE TO LEFT
 TIGHTEN SCREW (A)
 LOOSEN SCREW (B)

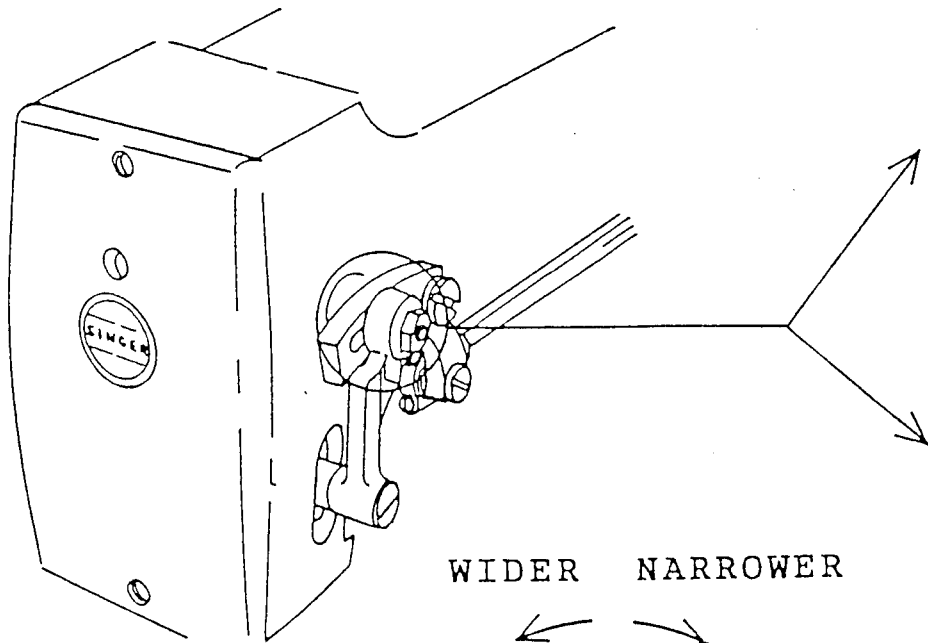
ADJUSTMENT OF WORK SPREAD AMOUNT



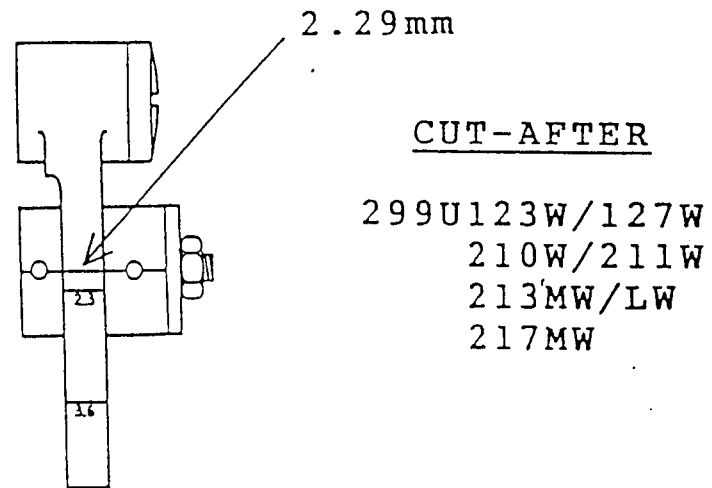
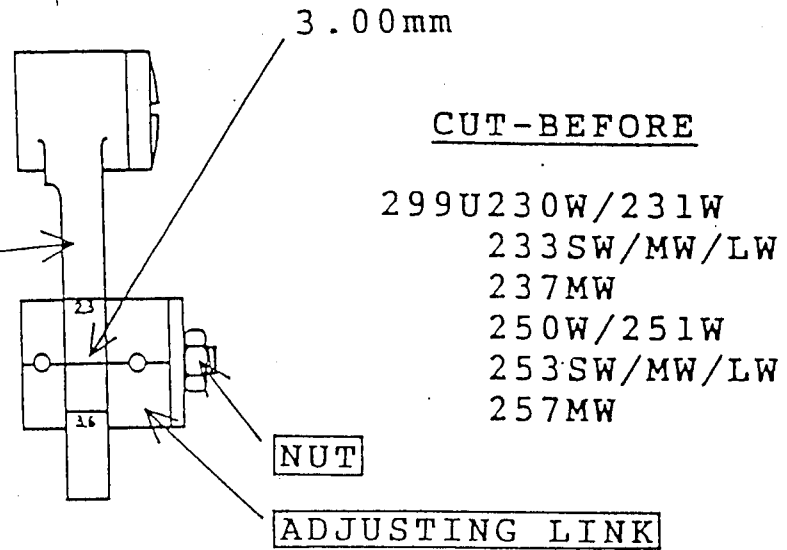
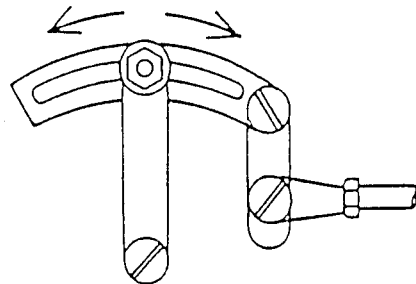
ADJUSTMENT OF STITCHING WIDTH



BELL CRANK

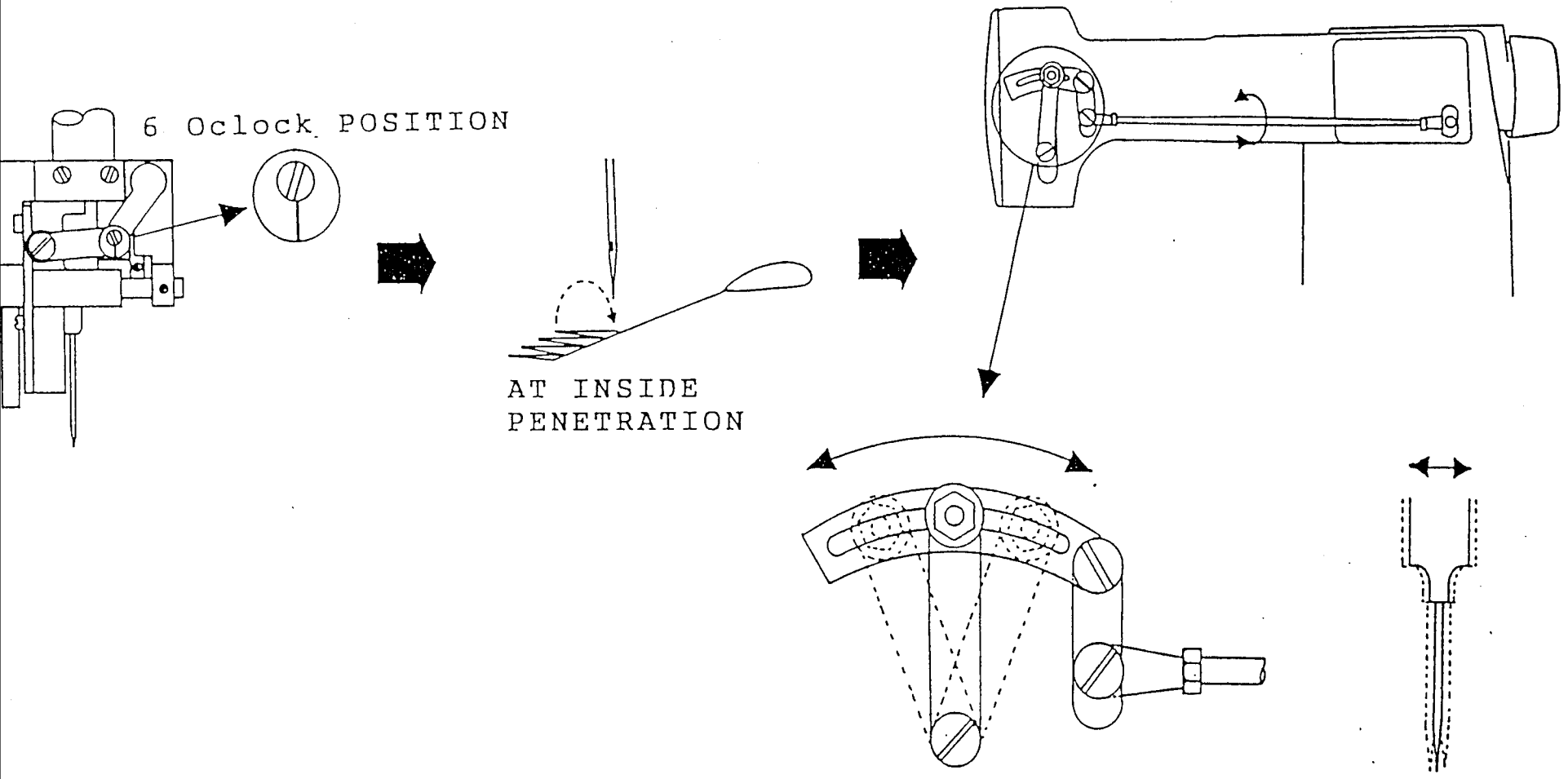


WIDER NARROWER



TO STOP NEEDLE VIBRATION WHILE PENETRATING (1)

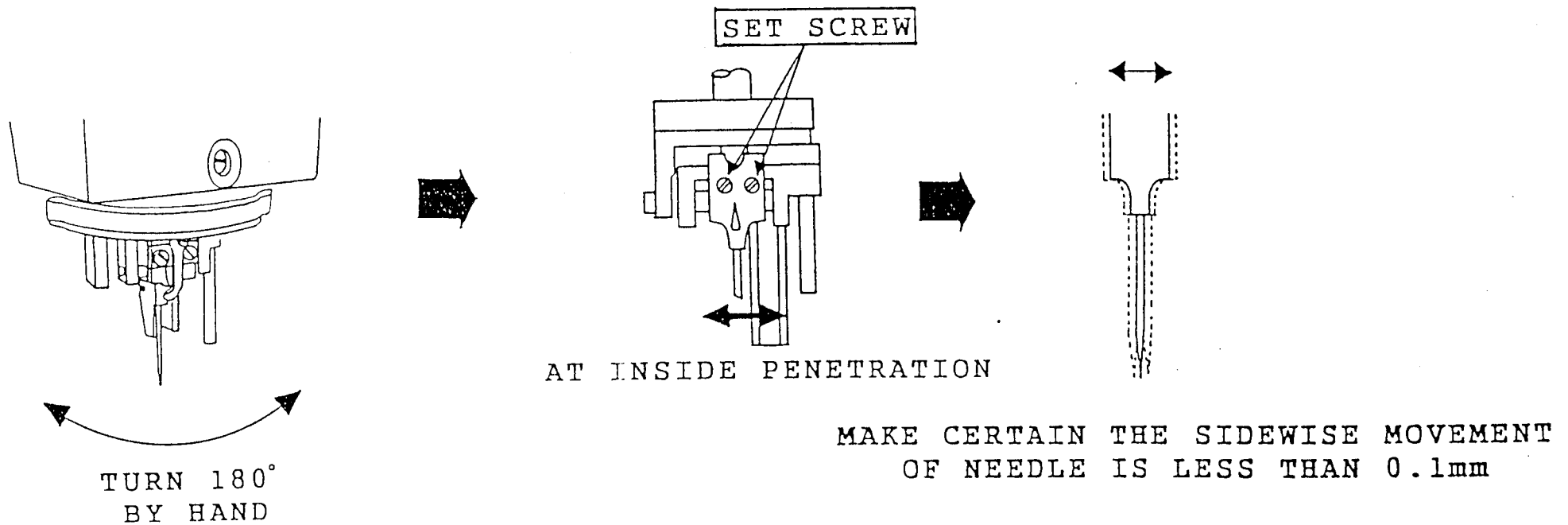
(ADJUSTING LENGHEH OF NEEDLE VIBRATING BELL CRANK CONNECTION ROD)



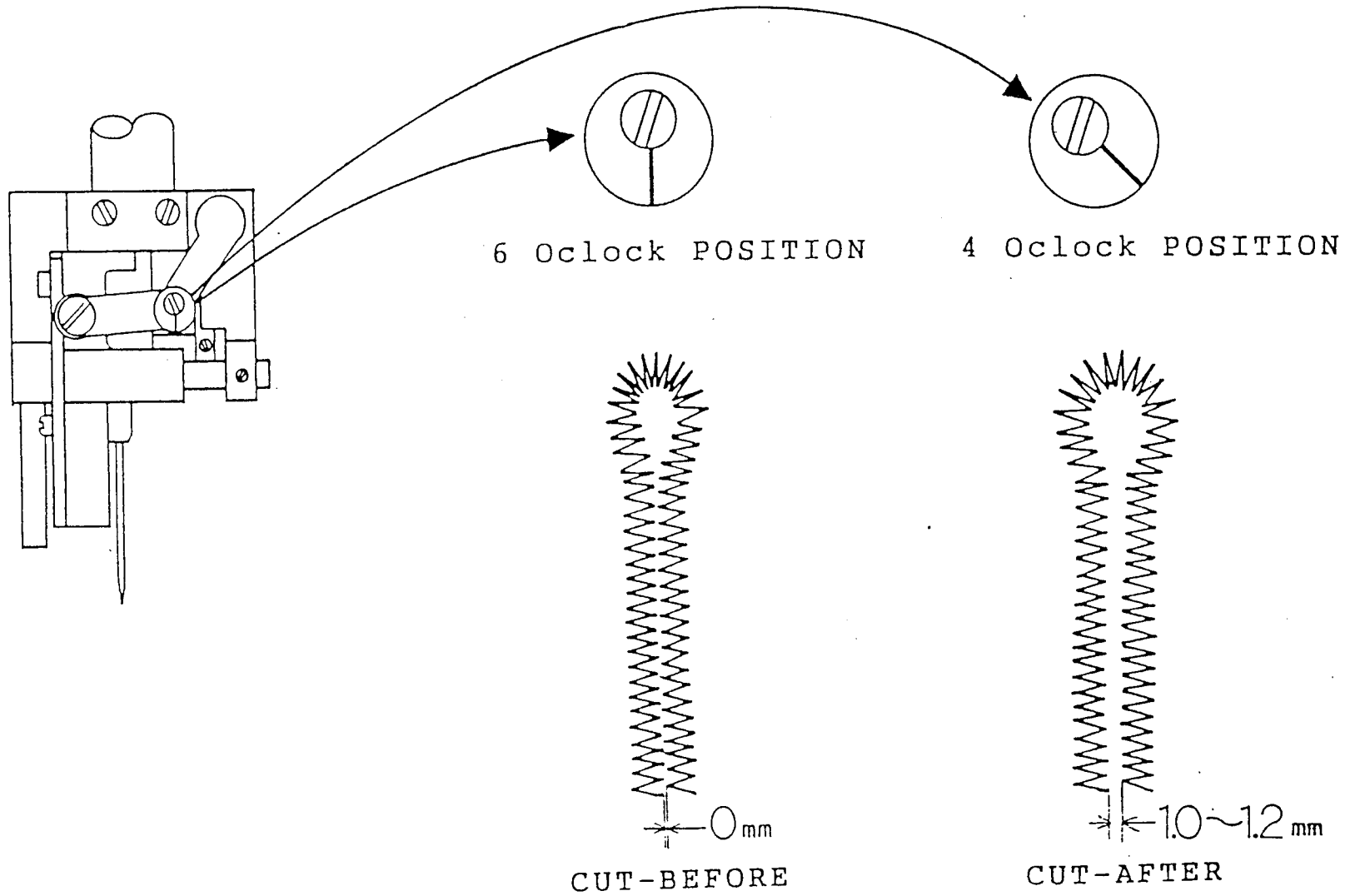
MAKE CERTAIN THE SIDEWISE MOVEMENT OF NEEDLE IS LESS THAN 0.1mm

TO STOP NEEDLE VIBRATION WHILE PENETRATING (2)

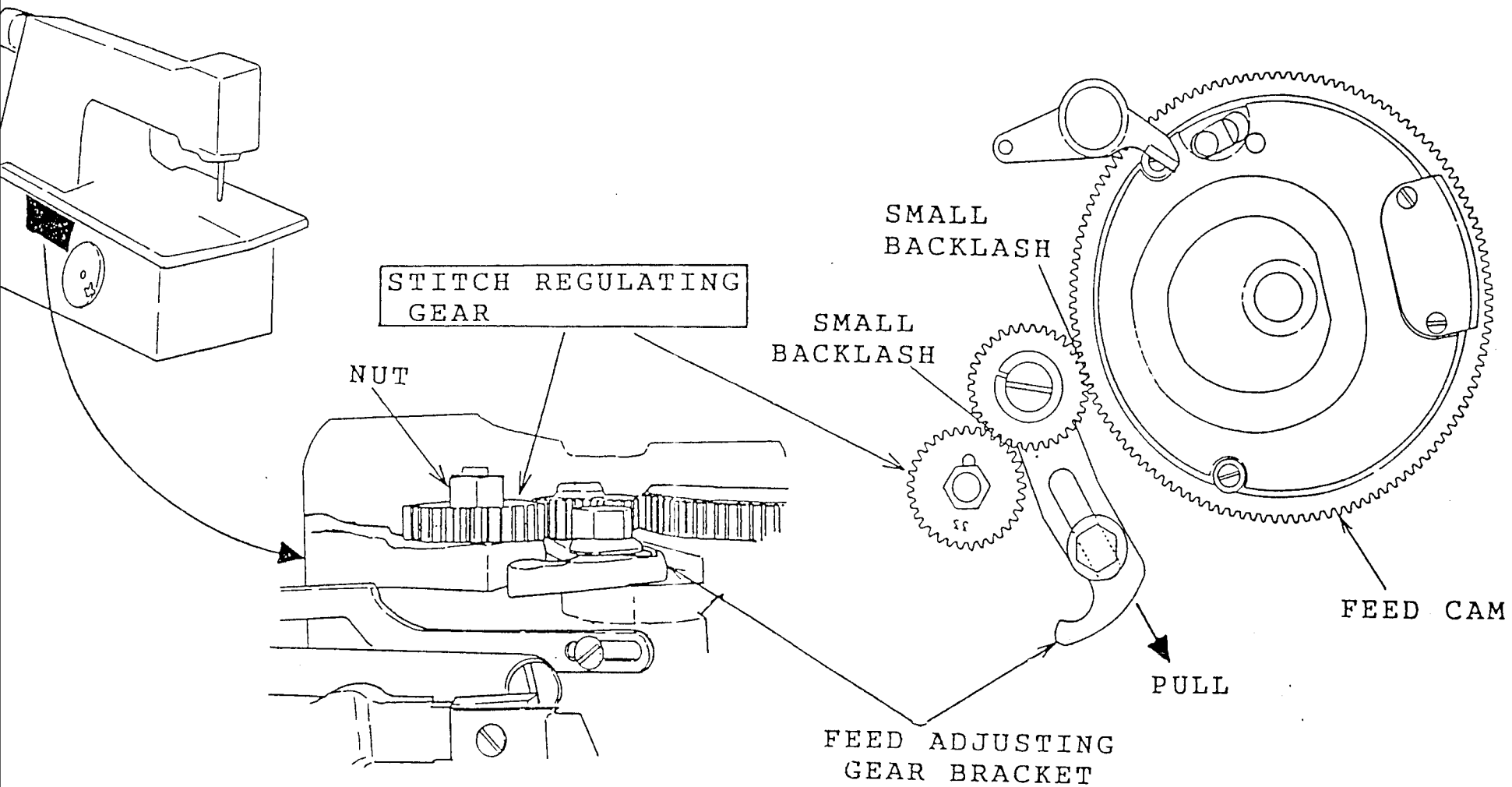
(ADJUSTMENT OF NEEDLE HOLDER)



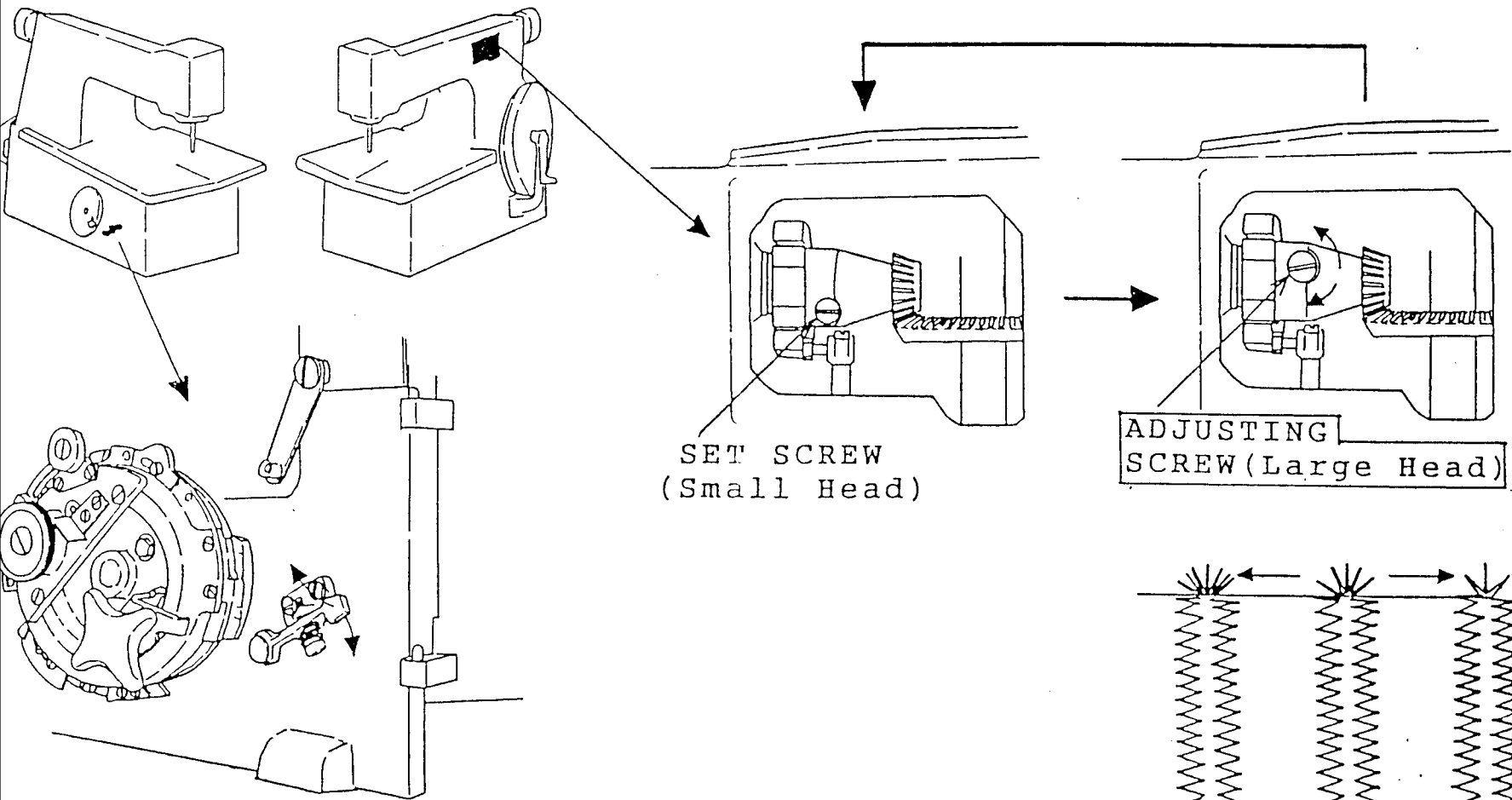
ADJUSTMENT OF CUTTING SPACE (ECCENTRIC SCREW)



TO CHANGE STITCH REGULATING GEAR



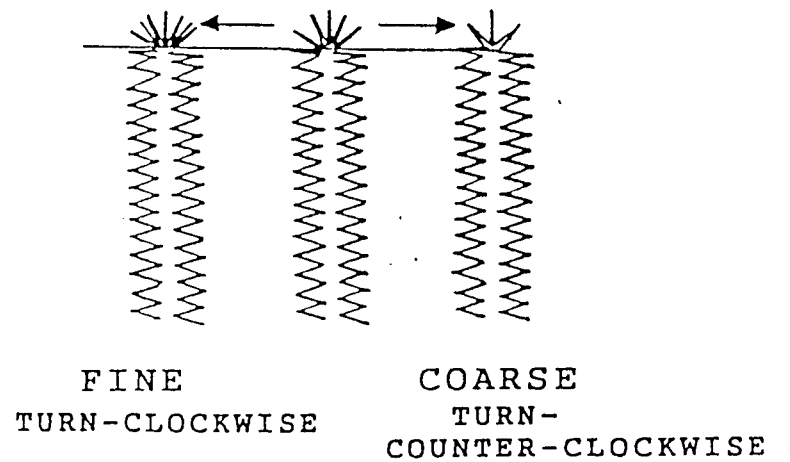
ADJUSTMENT OF AUXILIARY FEED



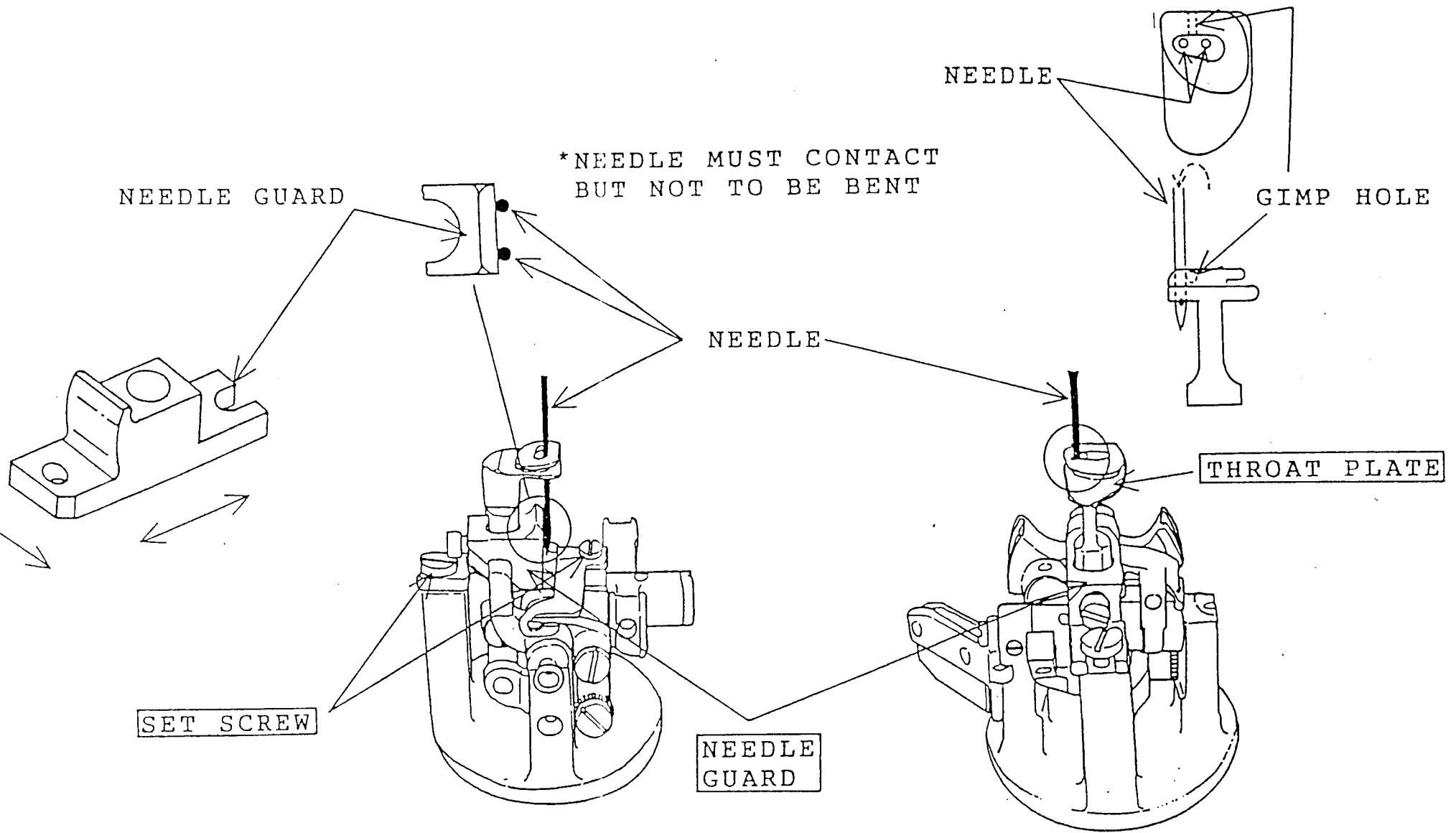
PULL: WITH AUXILIARY FEED
 PUSH: W/OUT AUXILIARY FEED

SET SCREW
 (Small Head)

ADJUSTING
 SCREW (Large Head)



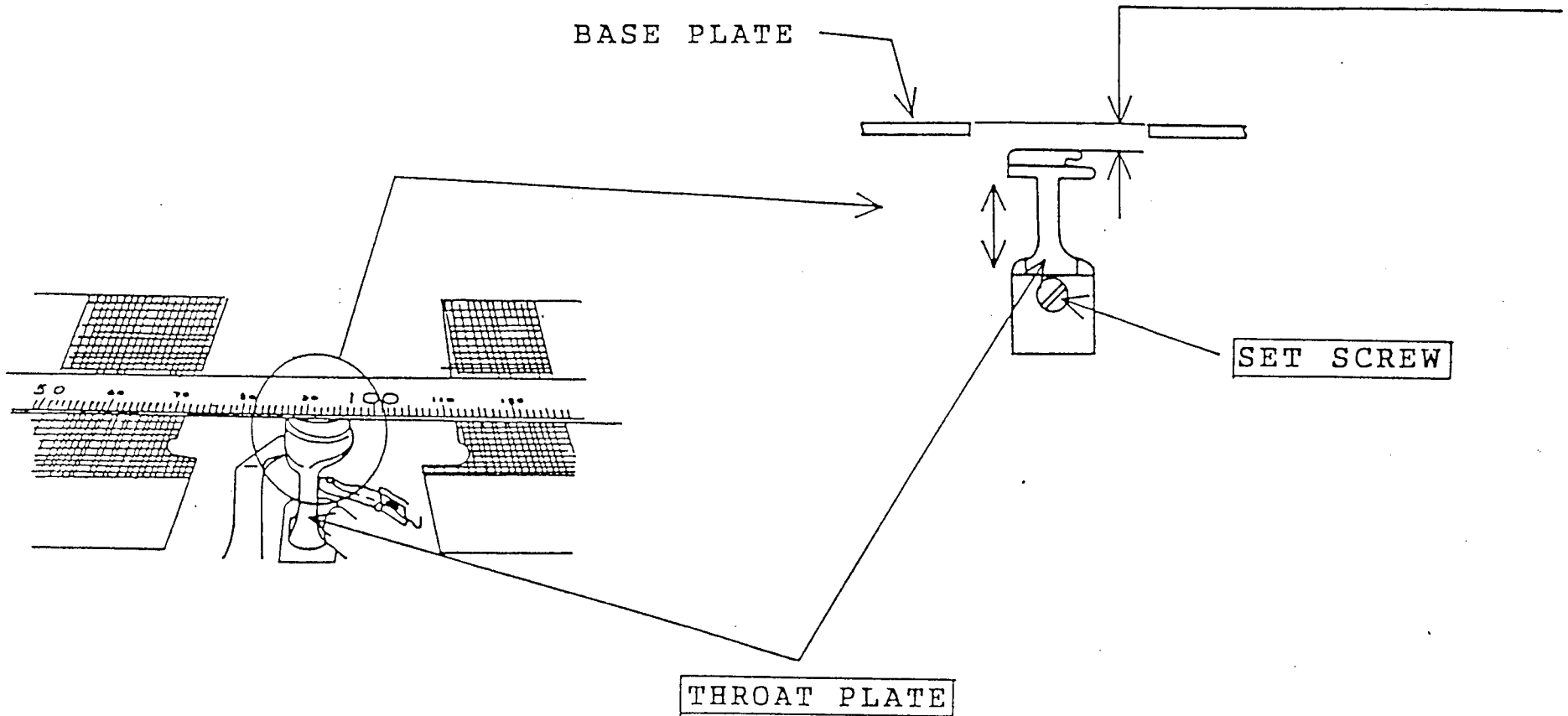
POSITION OF NEEDLE GUARD & THROAT PLATE



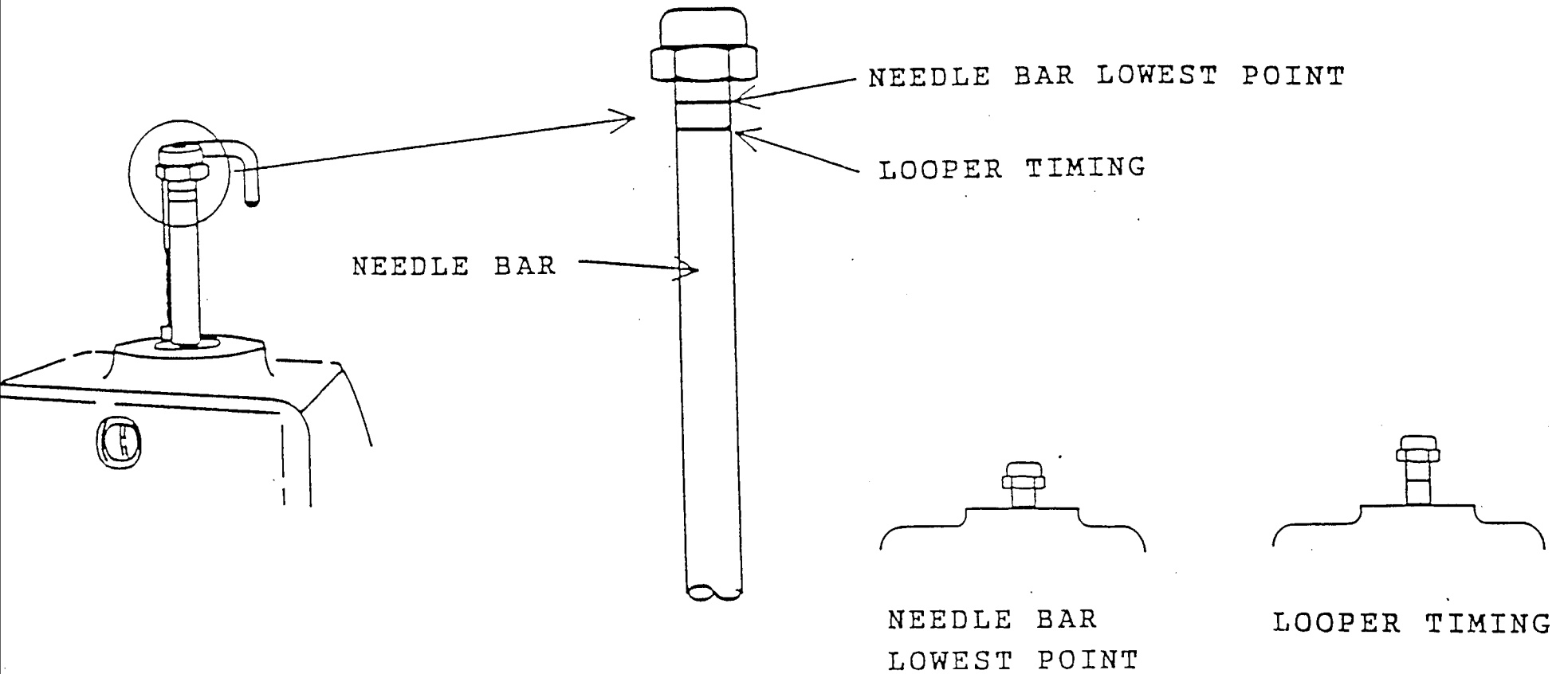
HEIGHT OF THROAT PLATE

0.2mm 299U 123W/127W/213W
233W/253W/257W

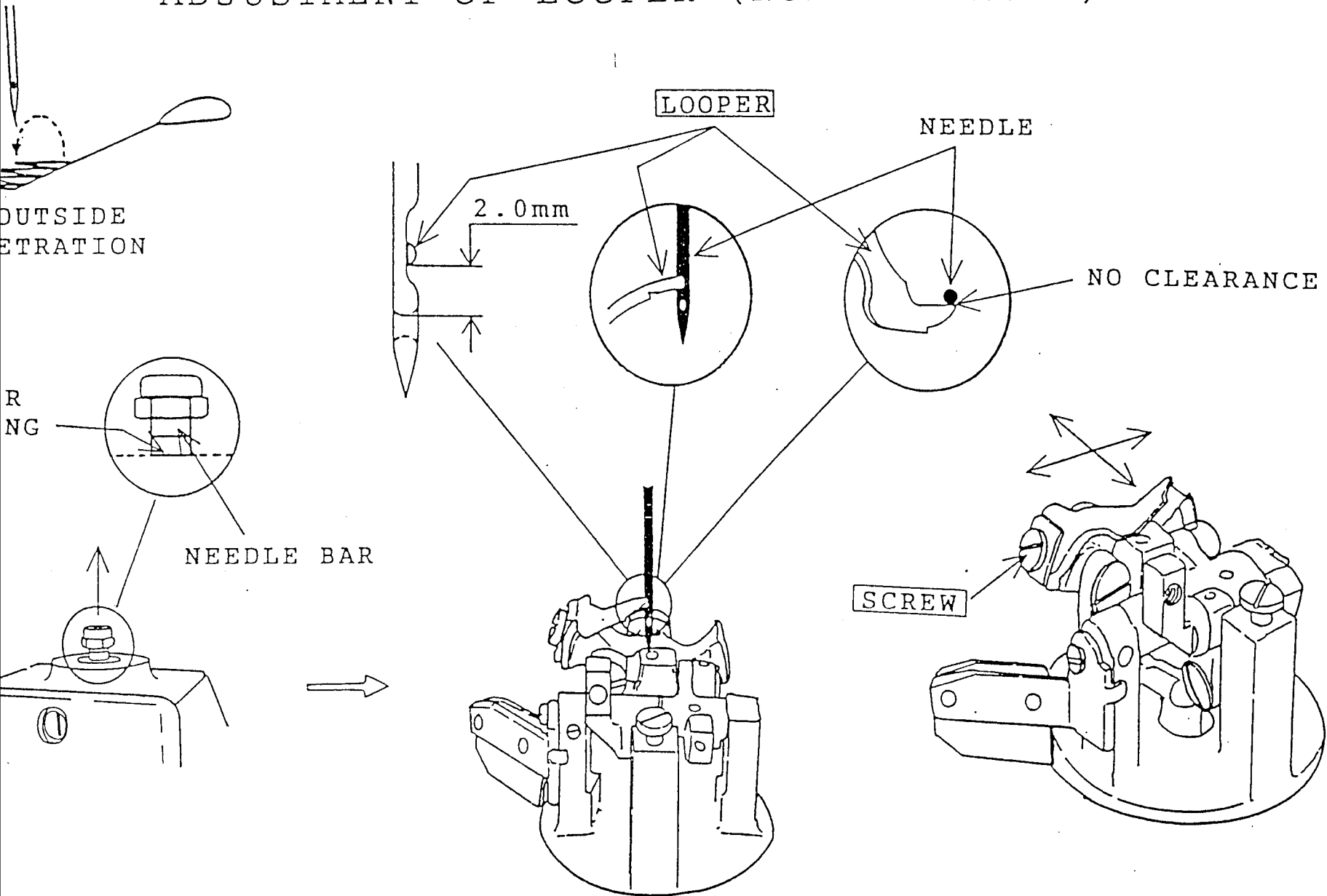
0.8mm 299U 210W/211W/230W
231W/250W/251W



TIMING MARKS ON NEEDLE BAR



ADJUSTMENT OF LOOPER (NON THREADED) 1.



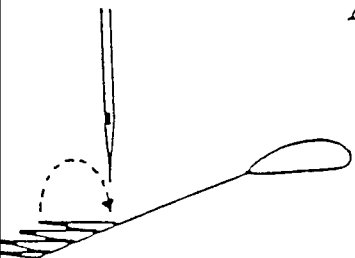
ADJUSTMENT OF LOOPER (THREADED) 2

(Ref)

C/A 9.10mm

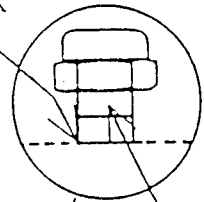
C/B 7.14mm

C/A.C/B · 7.14mm



AT INSIDE
PENETRATION

G MARK

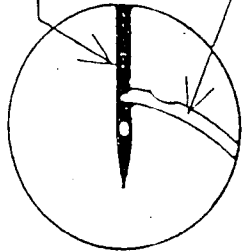


NEEDLE BAR

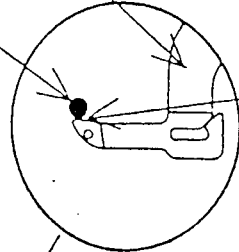
2.0mm

NEEDLE

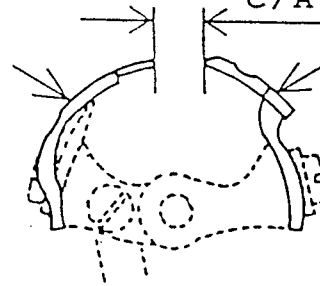
LOOPER



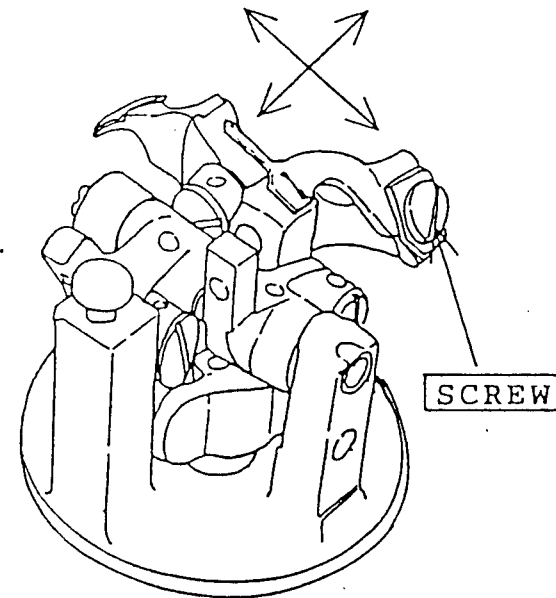
NO CLEARANCE



LOOPER
(NON THREADED)

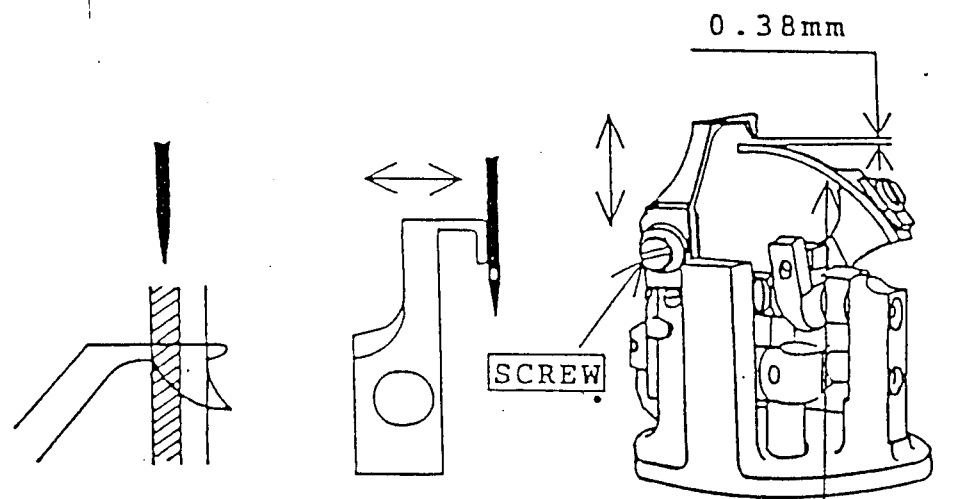
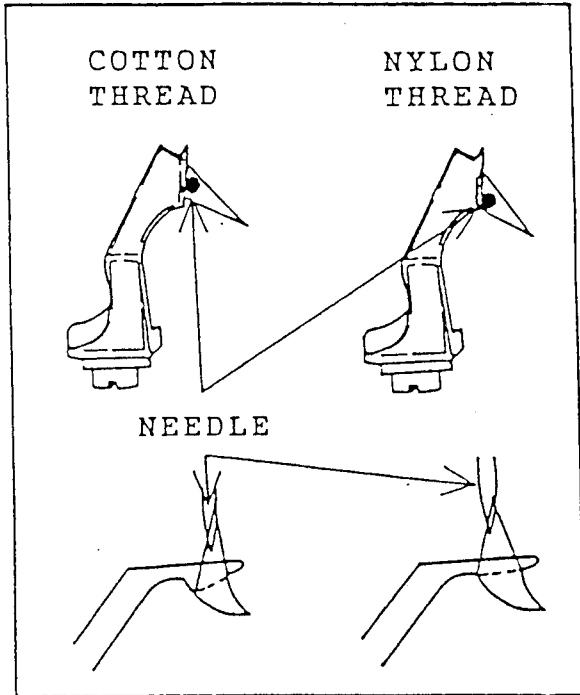


LOOPER
(THREADED)



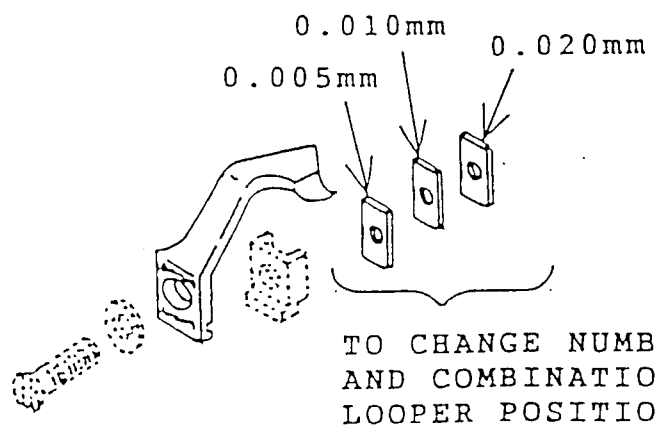
SCREW

ADJUSTMENT OF LOOP RETAINER (LEFT) 1



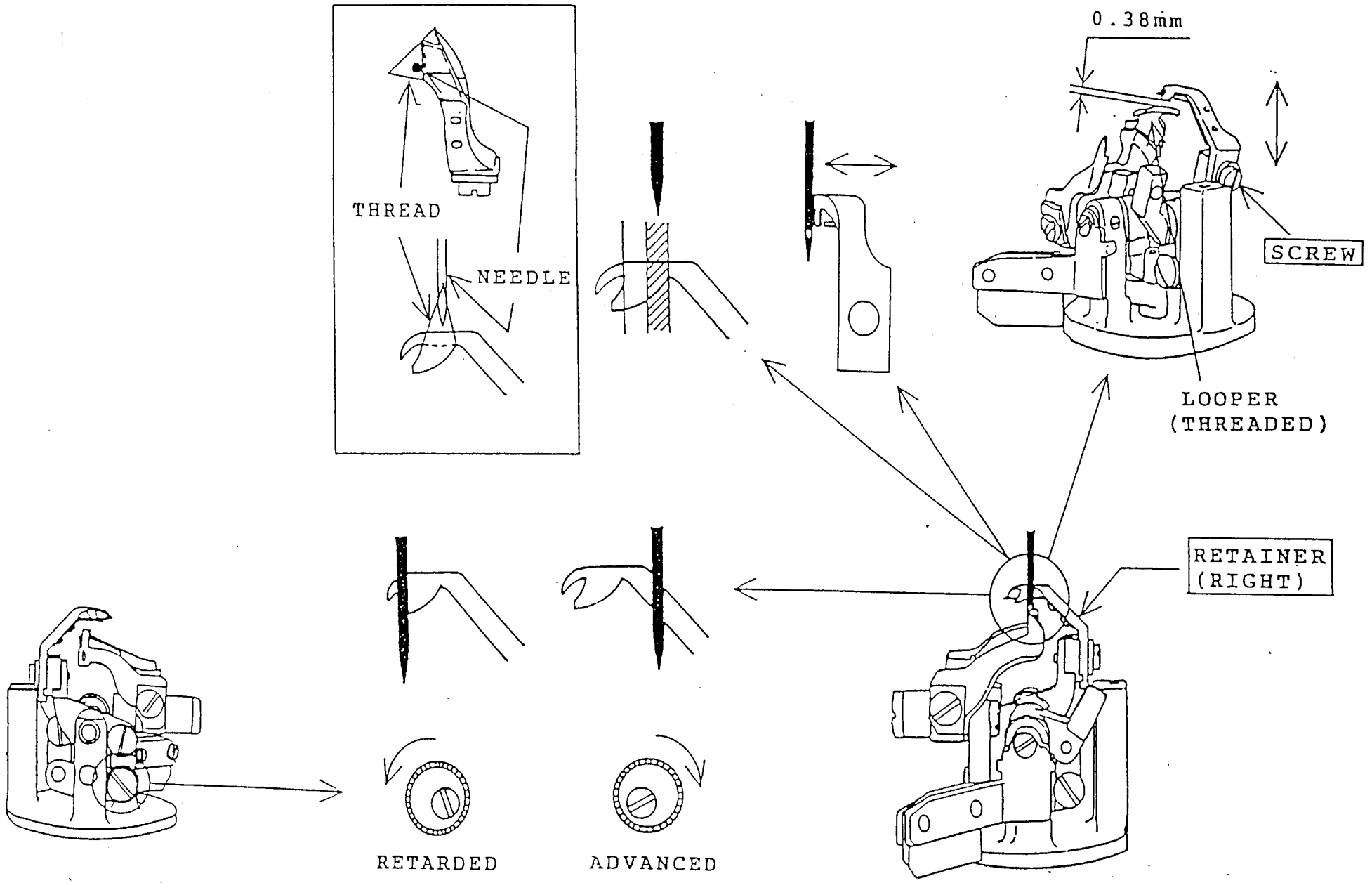
LOOPER (THREADED)

RETAINER (LEFT)

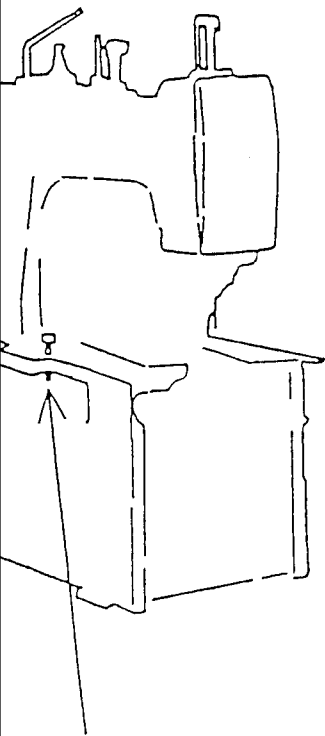


TO CHANGE NUMBER OF SHIM AND COMBINATION FOR CORRECT LOOPER POSITION

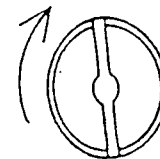
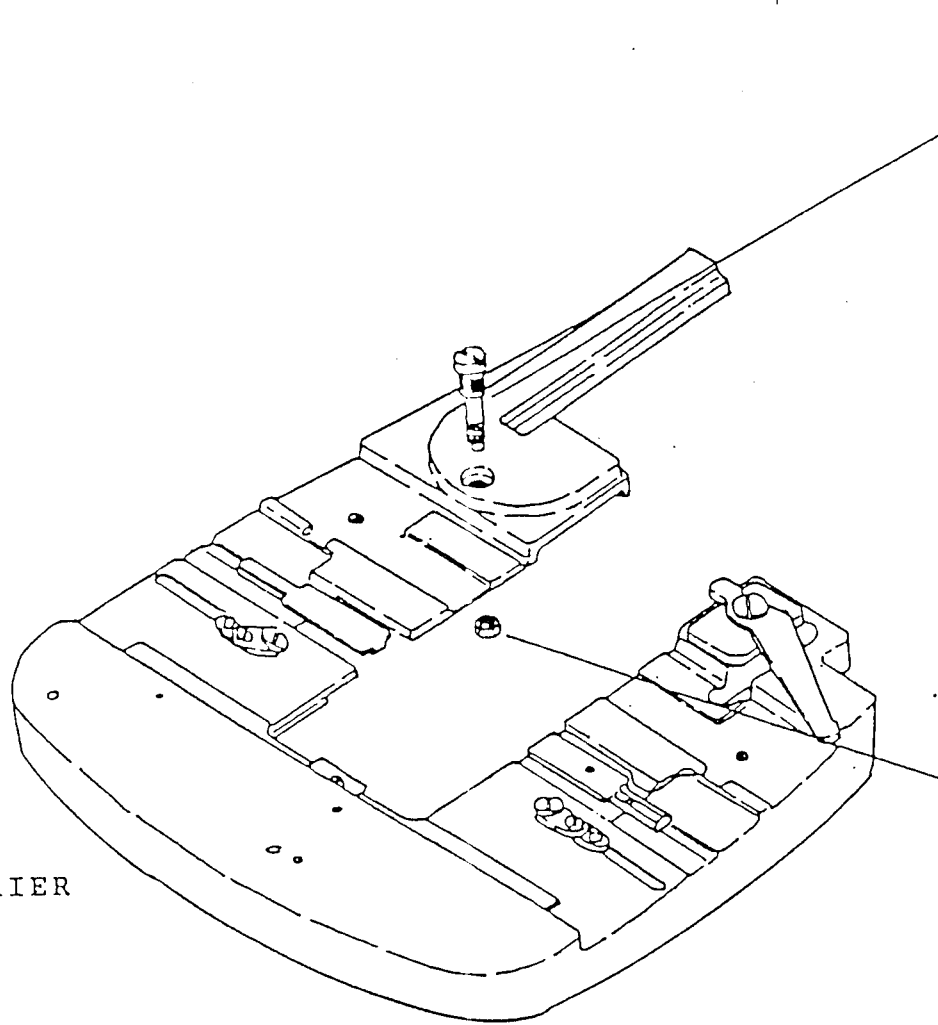
ADJUSTMENT OF LOOP RETAINER (RIGHT) 2



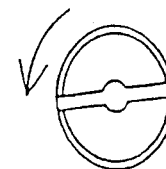
TO SET THE WORK CLAMP CARRIER



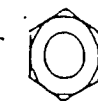
RIGHT SCREW STUD
FEED LEVER LINK
ON WORK CLAMP CARRIER
DISMOUNTED



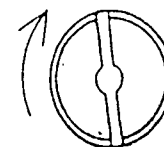
1, TIGHTEN THE SCREW
ALL THE WAY



2, LOOSEN
THE SCREW 90°

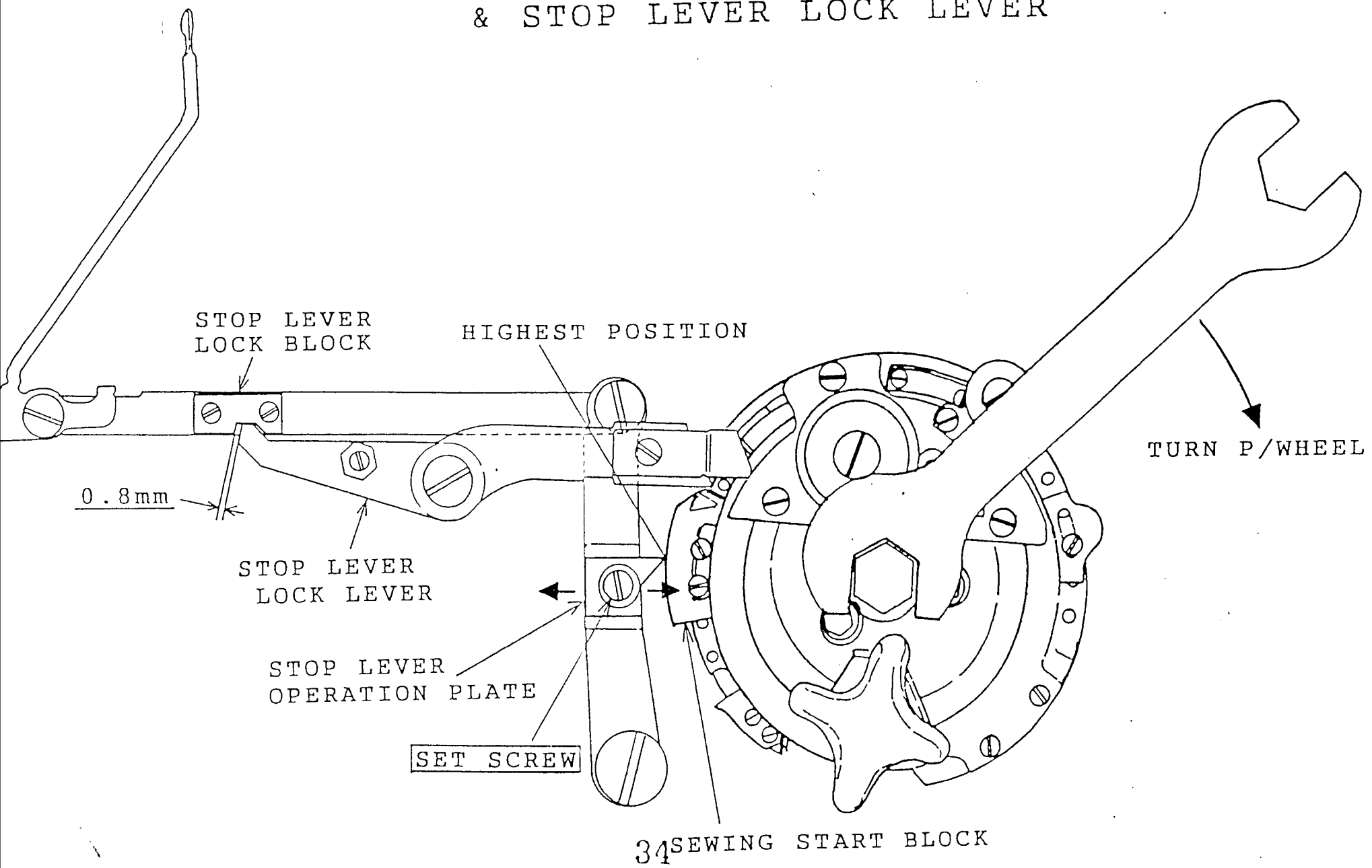


3, TIGHTEN THE NUT
SECURELY

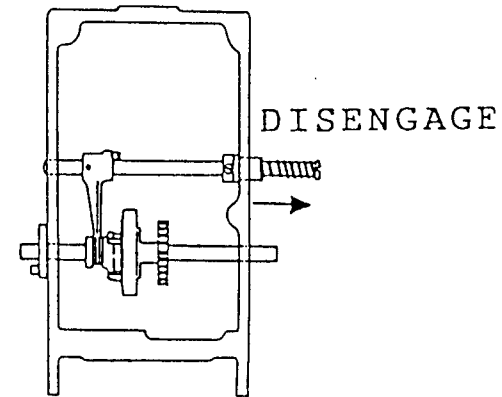
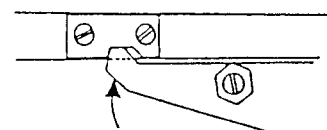
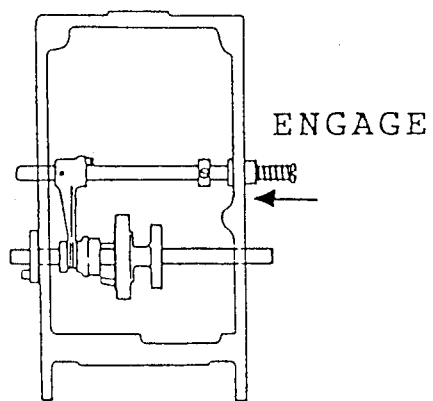
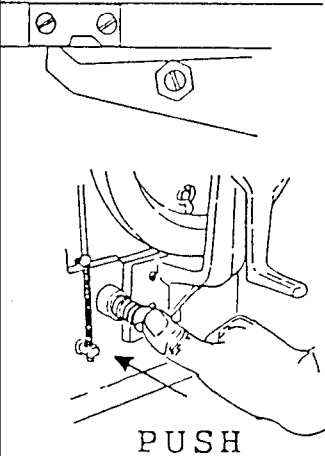
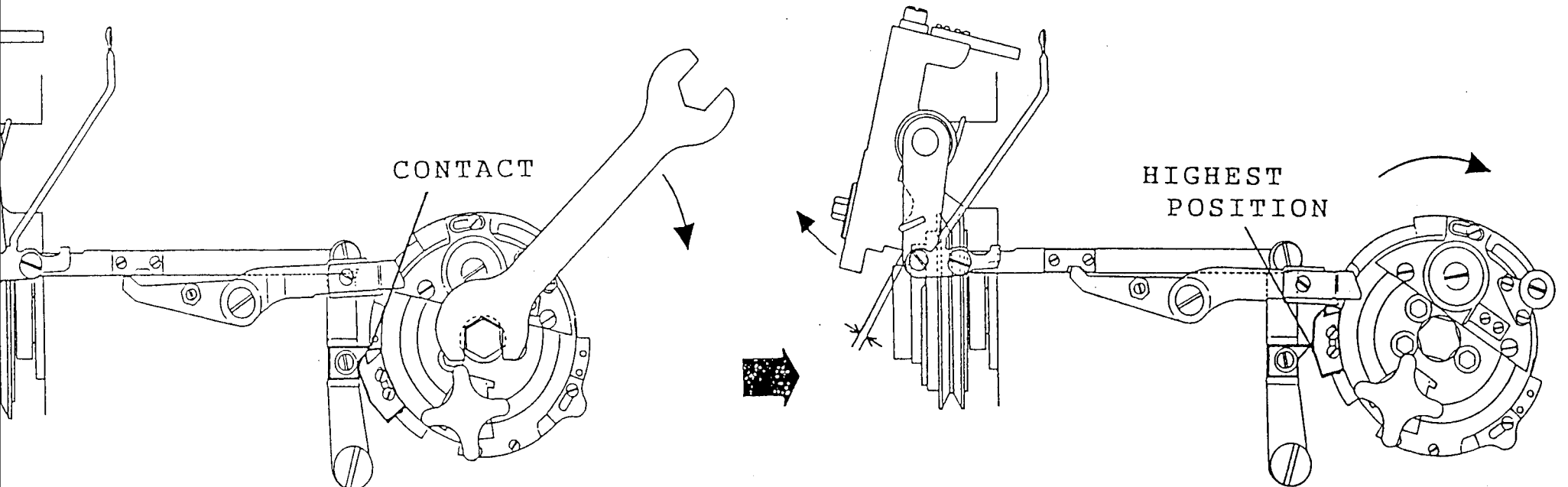


4, TIGHTEN THE SCREW
SECURELY

ADJUSTMENT OF CLEARANCE BETWEEN STOP LEVER LOCK BLOCK & STOP LEVER LOCK LEVER



DISENGAGE TIMING OF RAPID FEED (1) (RAPID FEED TO SEWING)

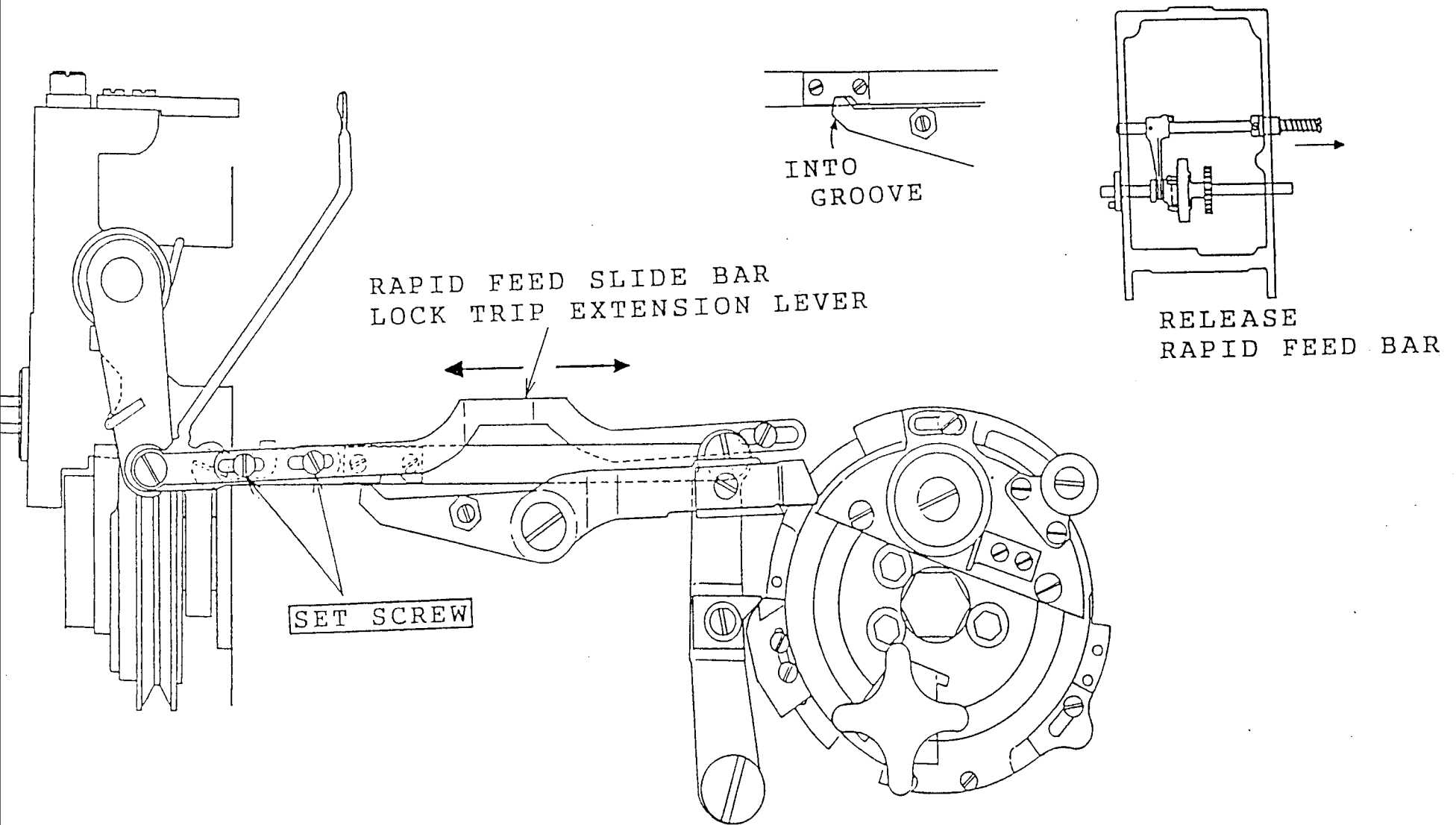


ENGAGING RAPID FEED

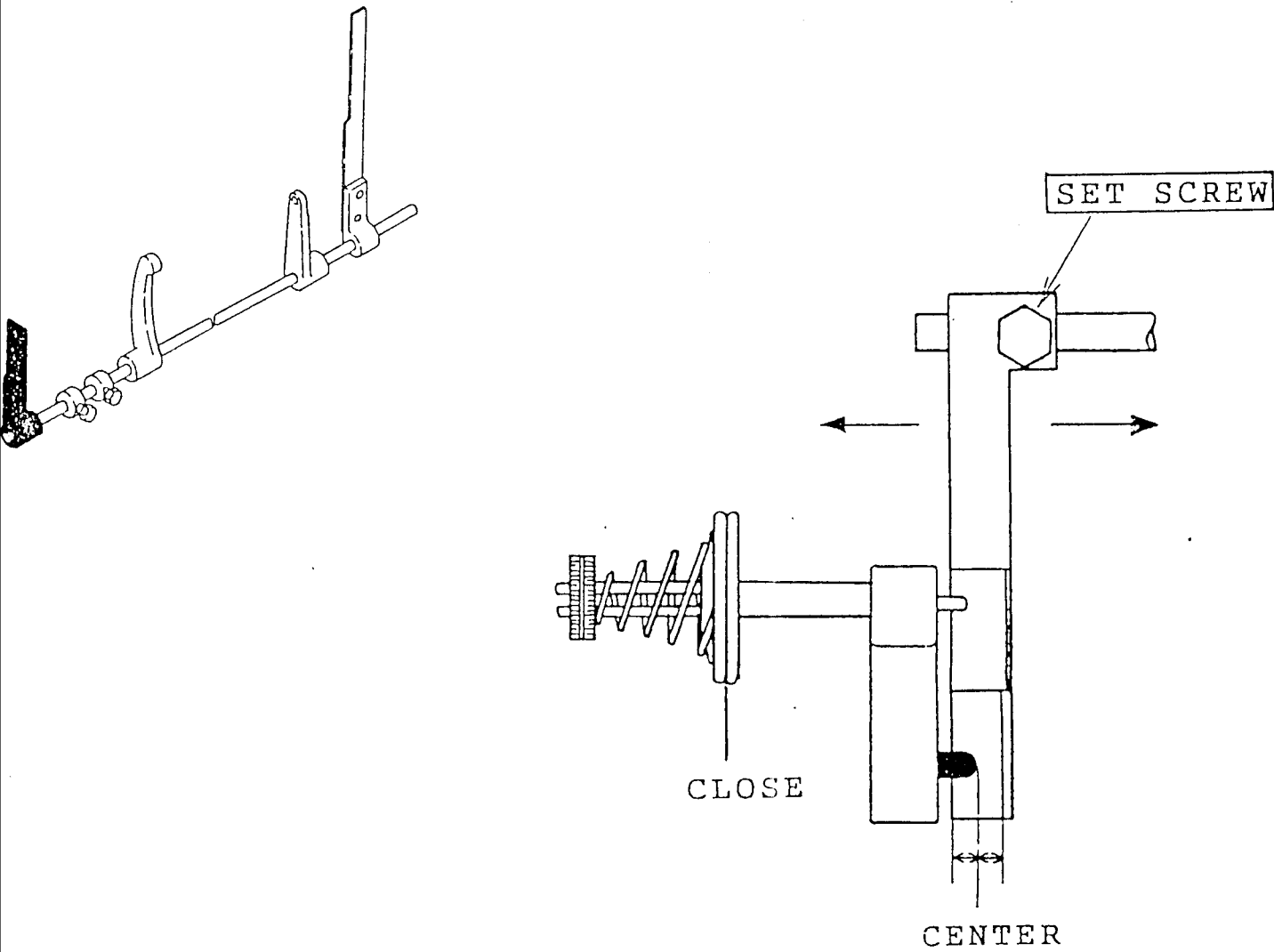
DISENGAGING RAPID FEED

DISENGAGE TIMING OF RAPID FEED (2)

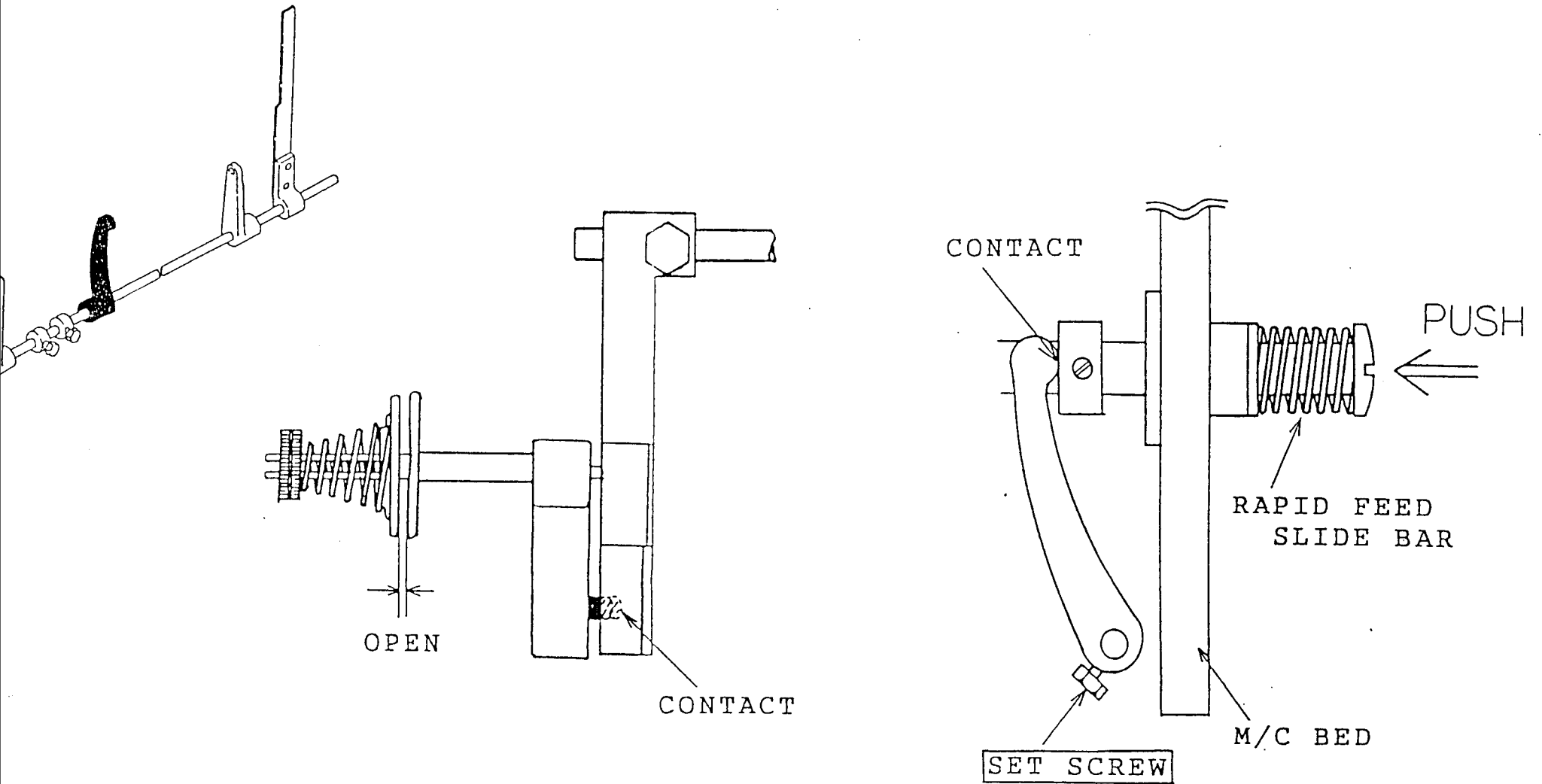
(RAPID FEED TO SEWING)



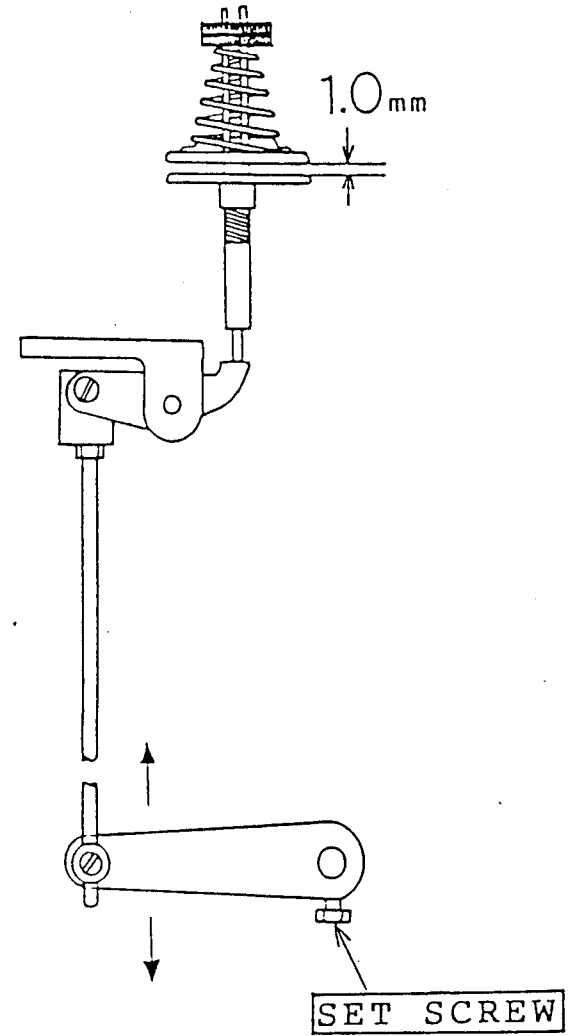
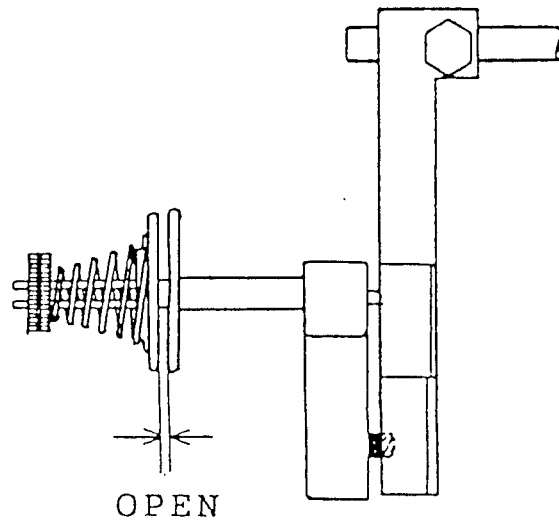
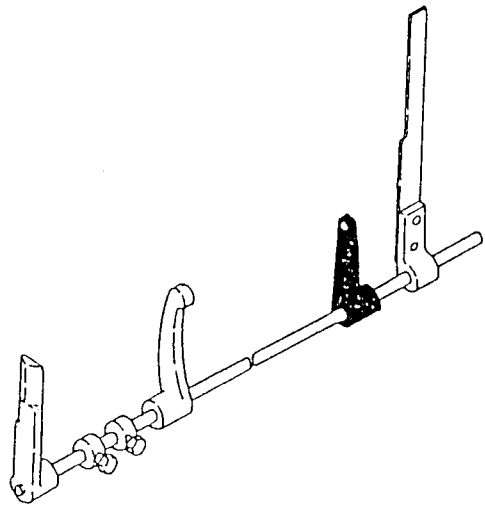
ADJUSTMENT OF TENSION RELEASE MECHANISM(1)



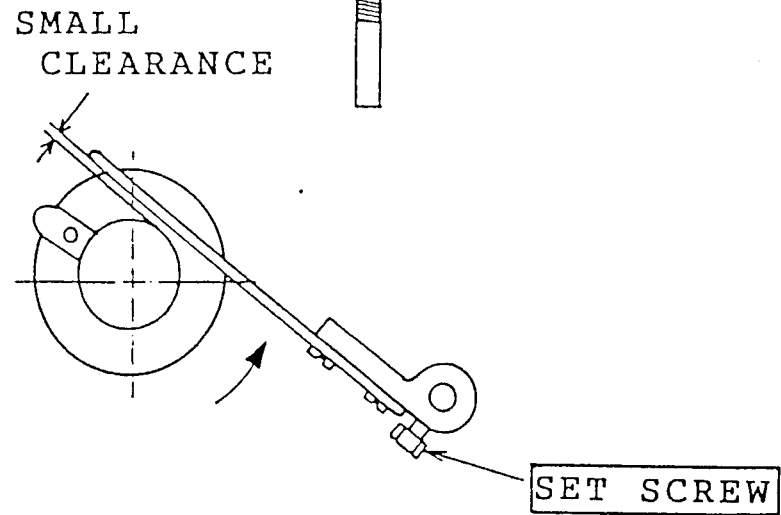
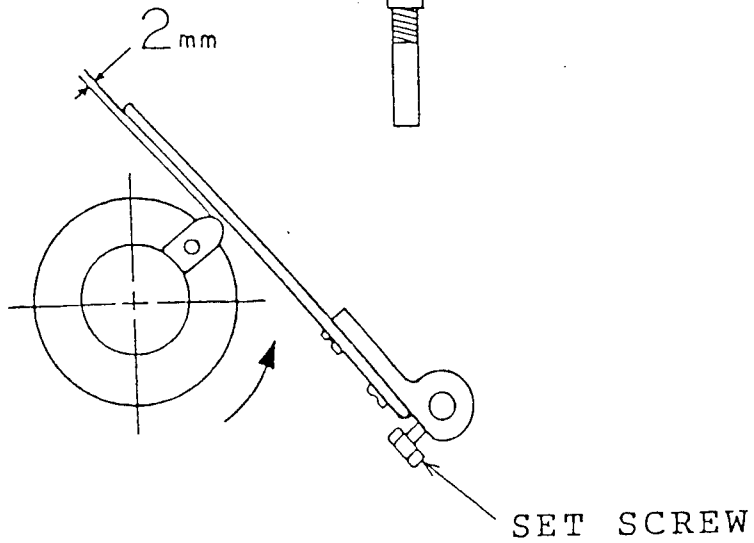
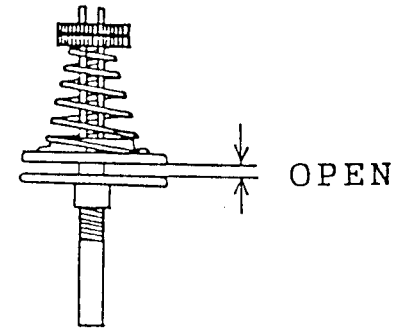
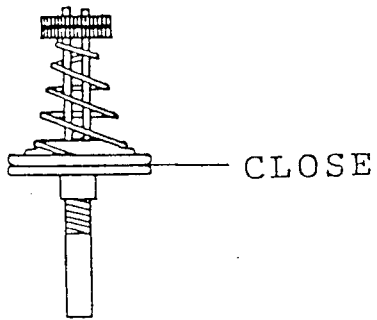
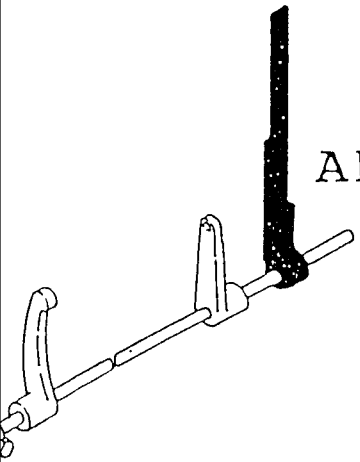
ADJUSTMENT OF TENSION RELEASE MECHANISM (2)



ADJUSTMENT OF TENSION RELEASE MECHANISM (3)



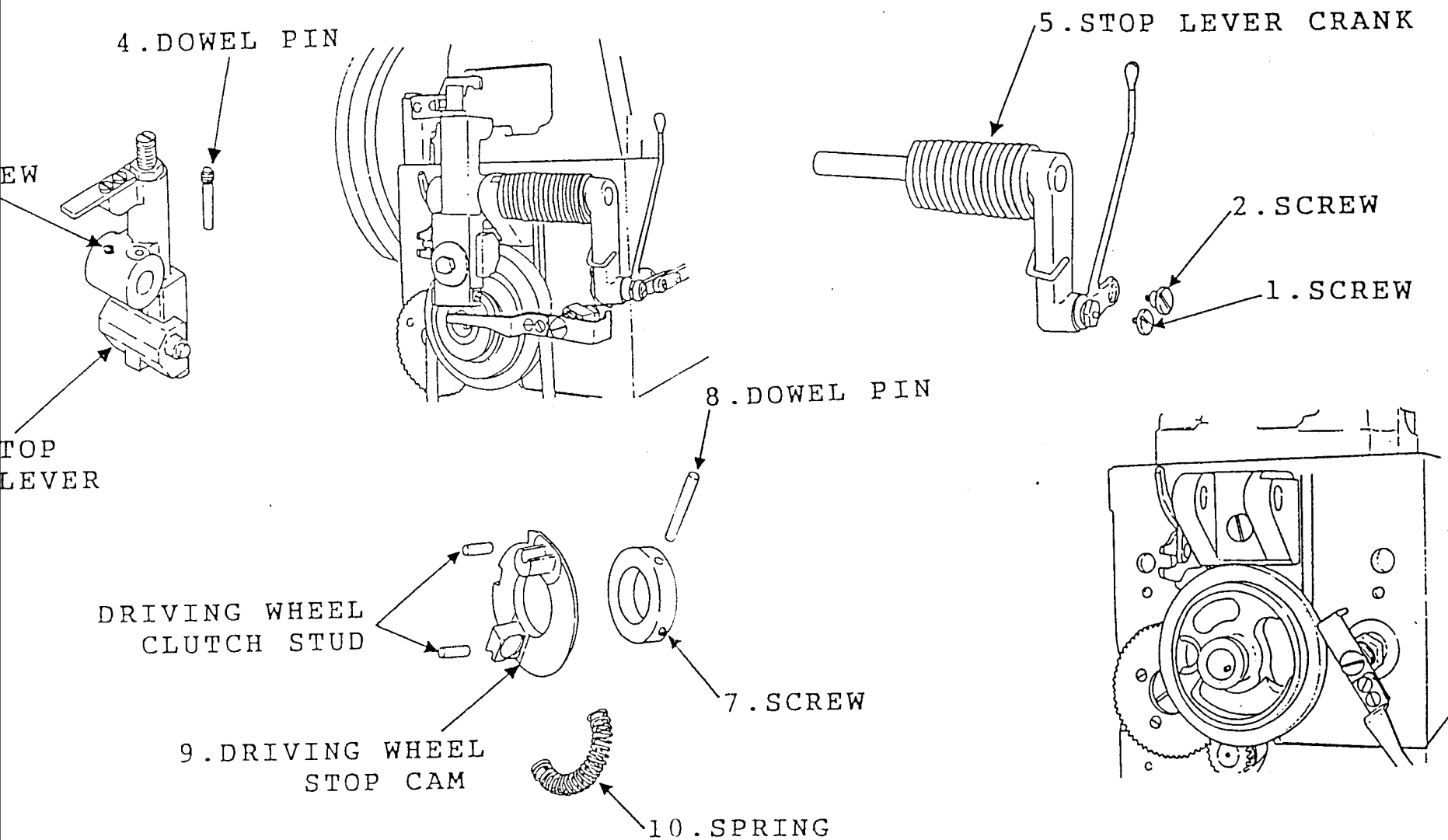
ADJUSTMENT OF TENSION RELEASE MECHANISM (4)



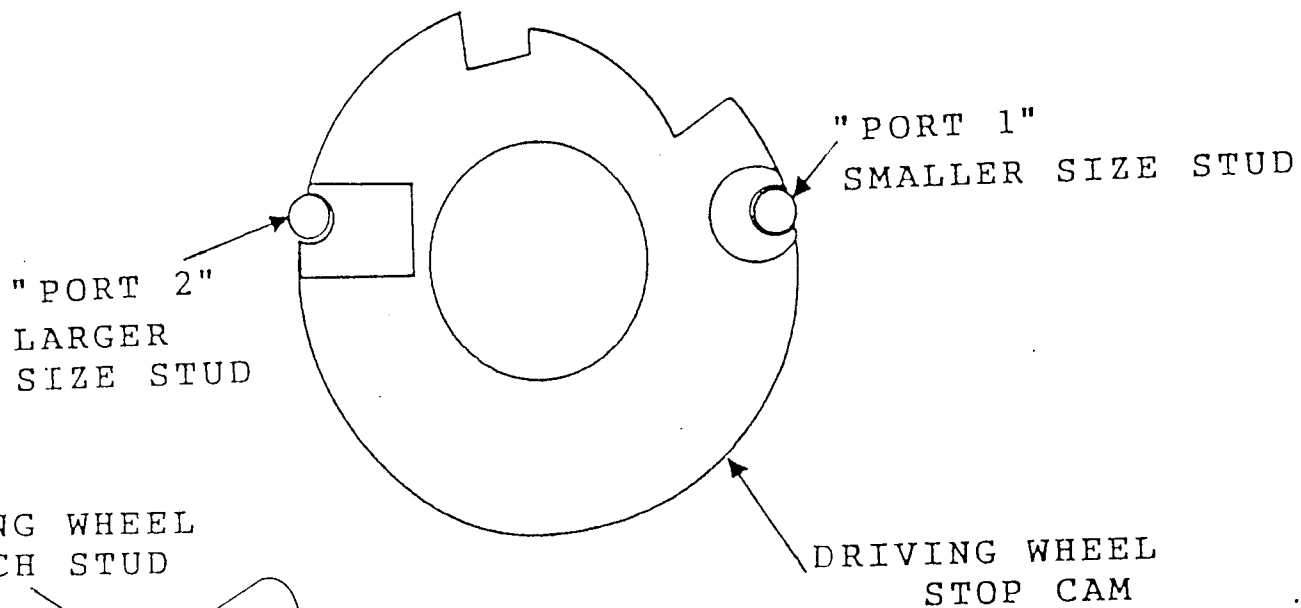
M/C ON SEWING

M/C AT STOP POSITION
OR M/C ON RAPID FEED

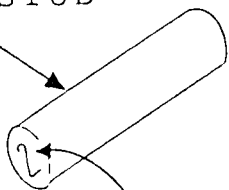
ADJUSTMENT OF DRIVING WHEEL CLUTCH (DISASSEMBLING)



ADJUSTMENT OF DRIVING WHEEL CLUTCH (ASSEMBLING)



ING WHEEL
TCH STUD

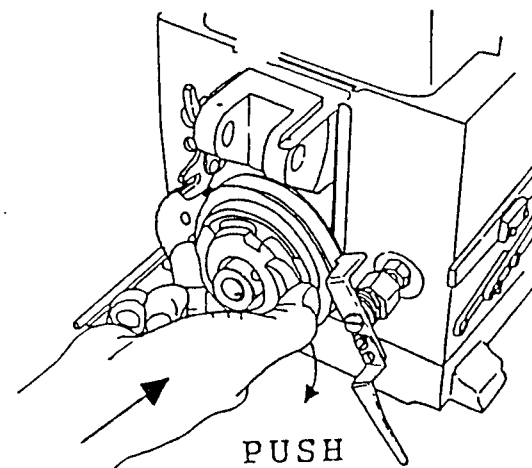


PIECE MARK

| | |
|---|------------------|
| 0 | SMALLER DIAMETER |
| 1 | ↑ |
| 2 | ↕ |
| 3 | ↓ |
| 4 | LARGER DIAMETER |

CONBINATION

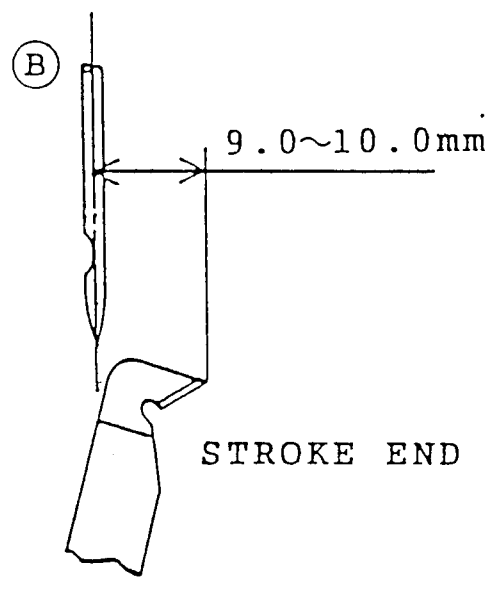
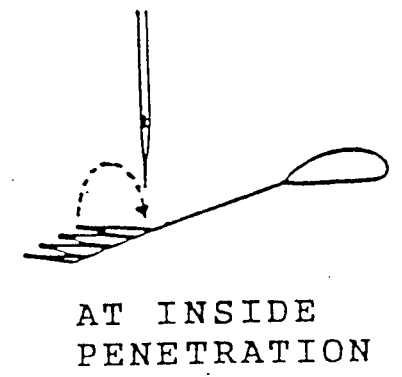
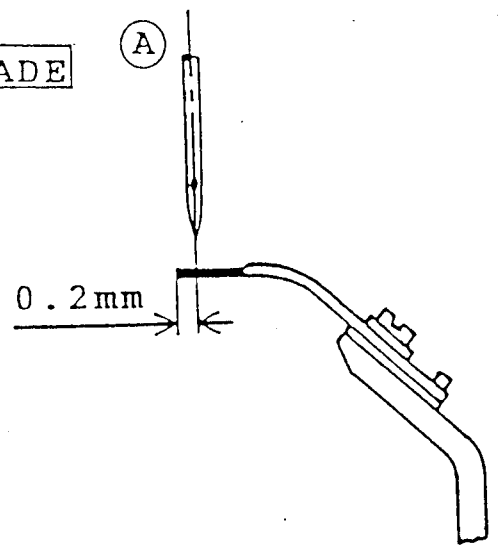
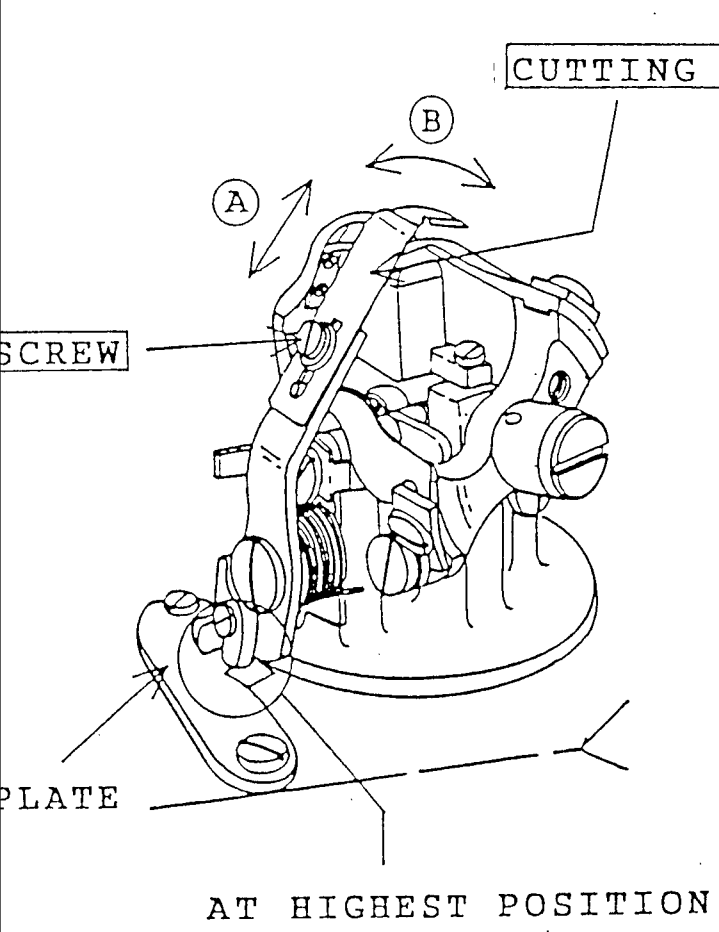
| | PORT 1 | PORT 2 |
|--|--------|--------|
| | 0 | 3 |
| | 0 | 4 |
| | 1 | 3 |
| | 1 | 4 |
| | 2 | 3 |
| | 2 | 4 |



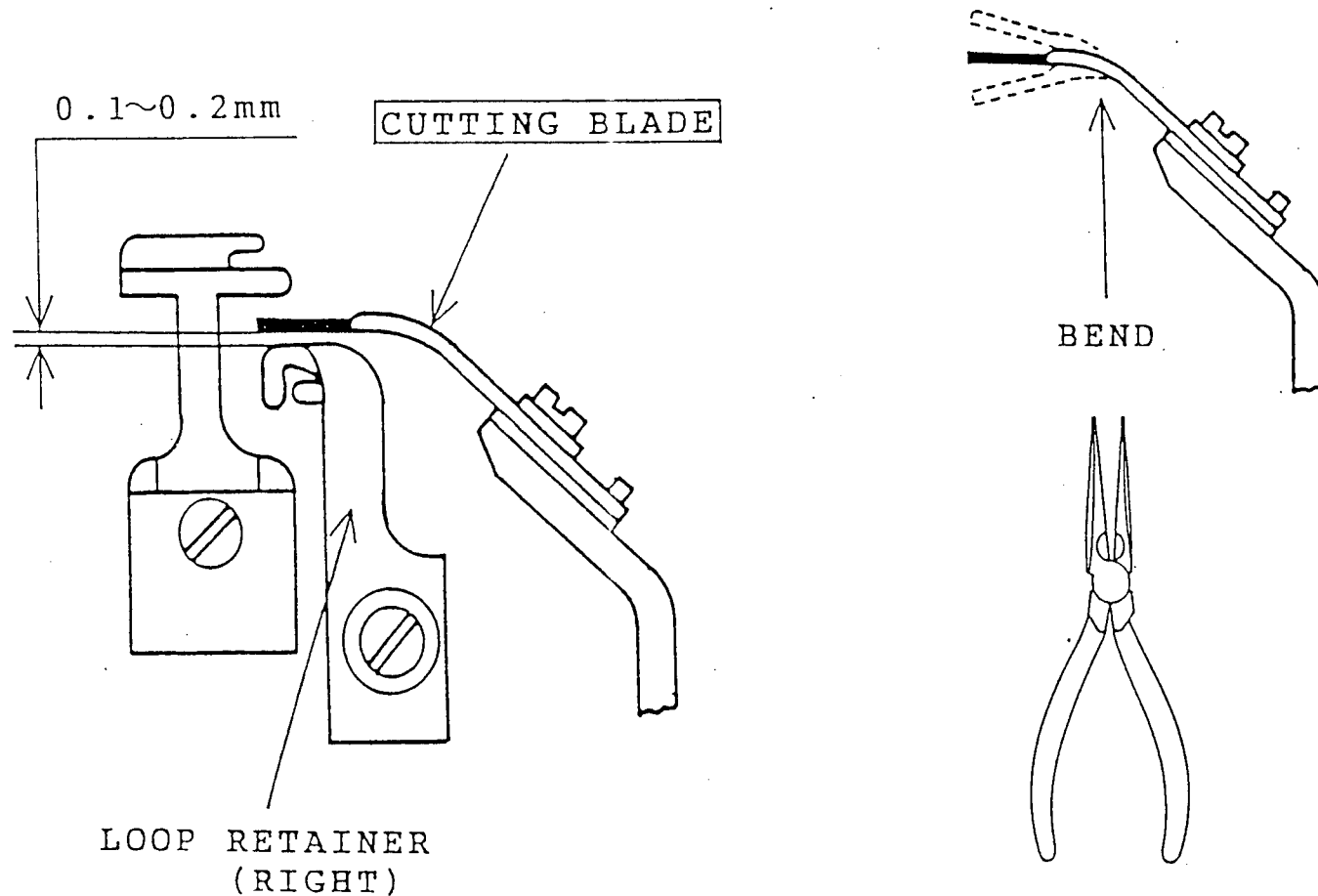
PHENOMENON RESULTS FROM
MISCOMBINATION OF STUDS

| | LOOSE | TIGHT |
|---------------------|-------|-------|
| CLUTCH | SLIP | NOIZE |
| MOTION OF NEEDLE | SLOW | - |

ADJUSTMENT OF CUTTING BLADE (1)



ADJUSTMENT OF CUTTING BLADE (2)



ADJUSTMENT OF CUTTING BLADE (3)

