

***ENGLISH***

**MEB-3200C**  
**Needle thread clamp unit**  
**INSTRUCTION MANUAL**

# CONTENTS

<b>1. BEFORE INSTALLATION AND OPERATION OF THE NEEDLE THREAD CLAMP UNIT .....</b>	<b>1</b>
<b>(1) How to install the needle thread clamp unit (when the needle thread guide (32051708) is installed) .....</b>	<b>1</b>
<b>(2) How to install the needle thread clamp unit (when the needle thread guide (40023465) is installed) .....</b>	<b>2</b>
<b>2. Installing the needle thread clamp unit.....</b>	<b>3</b>
<b>3. Connecting the pneumatic components .....</b>	<b>4</b>
<b>4. Adjusting the pneumatic components .....</b>	<b>6</b>
<b>(1) Adjusting the thread clamp force (reducing valve) .....</b>	<b>6</b>
<b>(2) Adjusting the speed controller .....</b>	<b>6</b>
<b>5. Setting the memory switch.....</b>	<b>7</b>
<b>6. Adjusting the length of remaining needle thread.....</b>	<b>7</b>

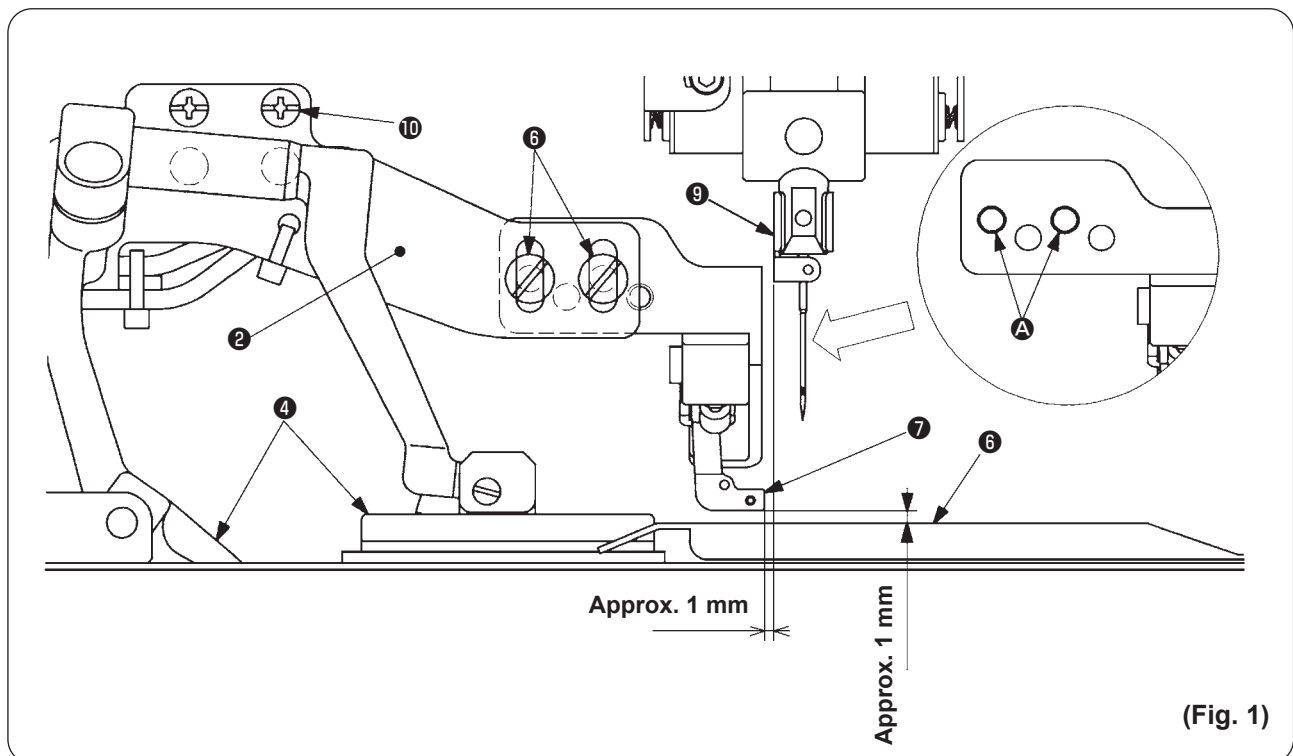
# 1. BEFORE INSTALLATION AND OPERATION OF THE NEEDLE THREAD CLAMP UNIT

## (1) How to install the needle thread clamp unit (when the needle thread guide (32051708) is installed)

Install needle thread clamp asm. ⑦ in the screw hole on the left side ① and close to the needle for use. In this case, the length of needle thread to clamp can be adjusted to a short one with the procedure of "6. Adjusting the length of remaining needle thread" P.7 . In addition, rolling of needle thread at the start of sewing can be facilitated. (There is no thread tension disk on the needle bar.)



Set the compensation of needle thread tension (U09) to "0" when using this unit. When the value is set to a higher one, the length of remaining needle thread will be unstable.

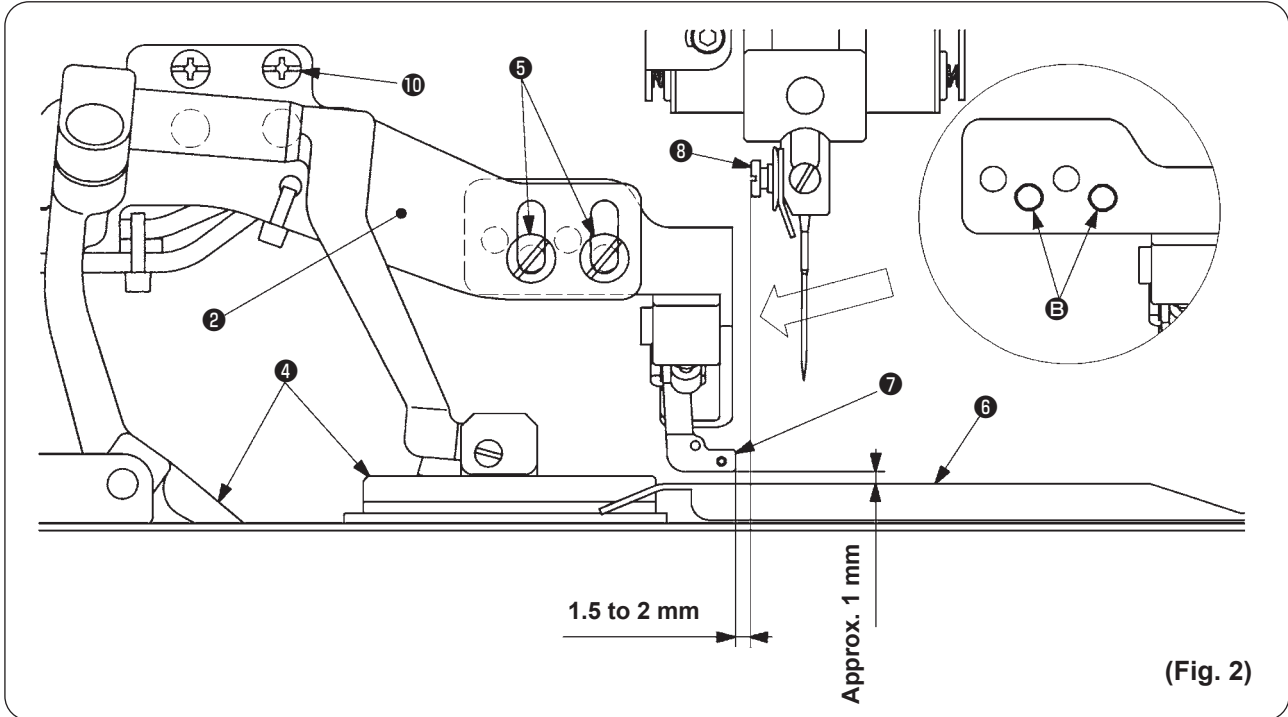


## (2) How to install the needle thread clamp unit (when the needle thread guide (40023465) is installed)

Change the installing position of needle thread clamp asm. ⑦ to the screw hole on the right side ③, (make it apart from the needle), and adjust the clearance between the thread tension disk setscrew and it to 1.5 to 2 mm for use.



Set the compensation of needle thread tension (U09) to "0" when using this unit. When the value is set to a higher one, the length of remaining needle thread will be unstable.



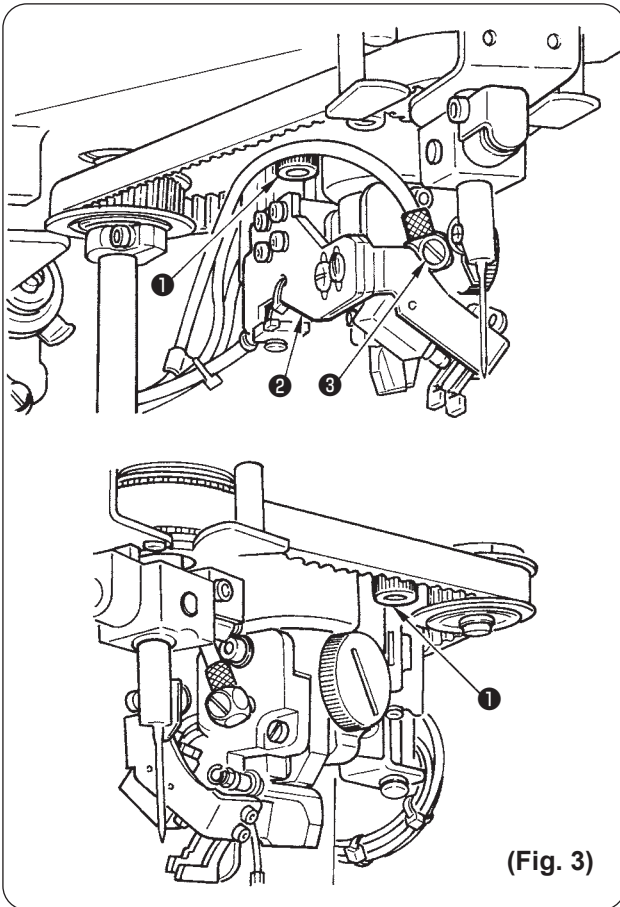
(Fig. 2)

## 2. INSTALLING THE NEEDLE THREAD CLAMP UNIT



### WARNING :

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



- 1) Turn OFF the power and the air.
- 2) Remove the presser units, left and right.
- 3) Change the installing position of joint ③ in the direction of approximately 60° so that the needle thread clamp unit does not interfere with the air tube.
- 4) Remove two direct drive metal setscrews ① located in the rear and fix needle thread clamp unit ② with two direct drive metal setscrews ①.

1. When installing the needle thread clamp unit, use the hexagonal wrench key (32025603) supplied with the unit as accessories.



2. Install needle thread clamp unit ② so that it is almost parallel to the sewing direction.

Refer to Figs. 2/3 given below. (After you have carried out the procedure up to "4. Adjusting the pneumatic components")

- 5) Attach right and left presser units ④.
- 6) Loosen needle thread clamp asm. fixing screws ⑤ (2 pieces).
- 7) Turn ON the power and air.

8) Press  button.

9) Press  button.

- 10) Turn the needle bar to the right and left by hand to adjust the direction of needle thread guides ⑨ / ⑧ as shown in Figs. 2/3.
- 11) Turn the pulley to move the needle bar up and down, and stop it at the position where the needle is closest to the needle thread clamp.
- 12) Press the (01) "Presser button" to lower the presser foot.
- 13) Press the (09) "Needle thread clamp" to lower the needle thread clamp.
- 14) Adjust the clearance provided between looper thread trimmer cover ⑥ and needle thread clamp ⑦, and the clearance provided between needle thread guides ⑨ / ⑧ respectively. Then, tighten needle thread clamp asm. fixing screws ⑤ (two pieces). The aforementioned clearances can also be adjusted with four setscrews ⑩.
- 15) After the adjustment, operate the sewing machine under the test mode to make sure that the needle bar does not come in contact with the needle thread clamp.

1. Install needle thread clamp unit asm. ⑦ so that the bottom surface of needle thread clamp asm. ⑦ is almost parallel to the presser unit or the looper thread trimming knife cover.

2. Adjust the clearance between looper thread trimming knife cover ⑥ and needle thread clamp asm. ⑦ to the actual sewing product so that the sewing product does not come in contact with needle thread clamp asm. ⑦.

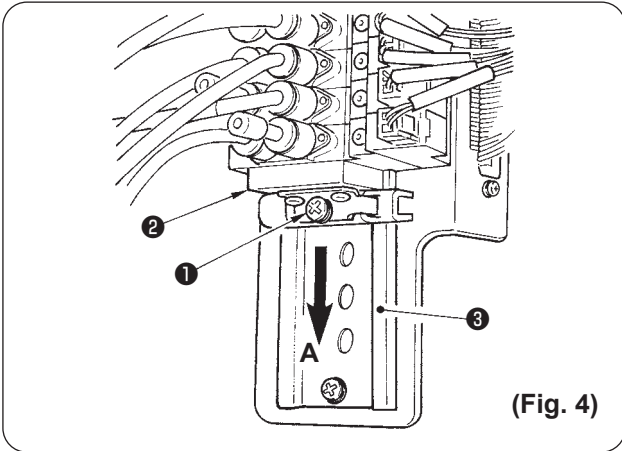


### 3. CONNECTING THE PNEUMATIC COMPONENTS



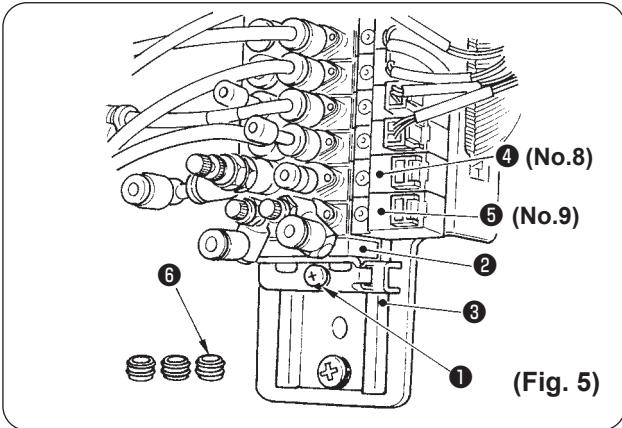
**WARNING :**

Turn OFF the power before starting the work so as to prevent accidents caused by abrupt start of the sewing machine.



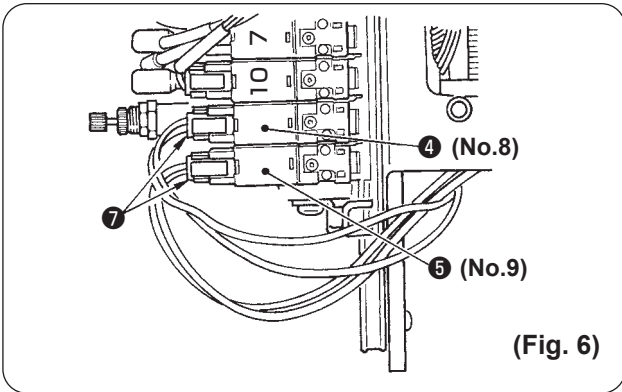
(Fig. 4)

- 1) Loosen setscrew ① in the end block, draw end block ② in the direction A to draw out from rail ③.
- 2) Insert solenoid valves ④ and ⑤ in the order into the positions as shown in the illustration. (Valve with reducing valve ④ is above.)
- 3) Insert end block ② into rail ③ and tighten setscrew ① while making the end block come in close contact with the solenoid valve.



(Fig. 5)

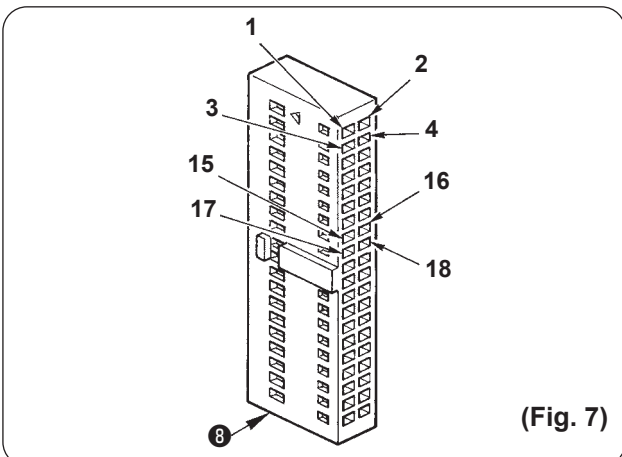
- Caution**
1. When tightening setscrew ①, if the respective solenoid valves do not come in close contact with the end block, air leakage will be caused. Be careful that there is no clearance between them.
  2. Be sure to attach bushes ⑥ (3 pcs.) supplied with the unit as accessories to the respective solenoid valves.



(Fig. 6)

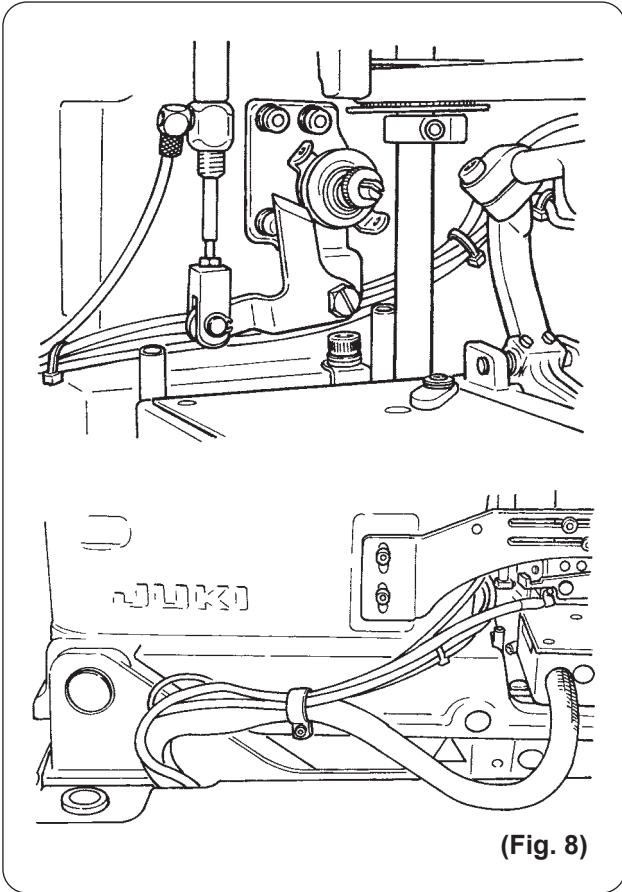
- 4) Connect solenoid valve cables ⑦ to the respective solenoid valves ④ and ⑤.
- 5) Insert pins of solenoid valve cable ⑦ into the designated positions of connector ⑧.

	Solenoid valve No.	Cable color	Connector No.
④	No.8	Red	15
④	No.8	Black	16
⑤	No.9	Red	17
⑤	No.9	Black	18



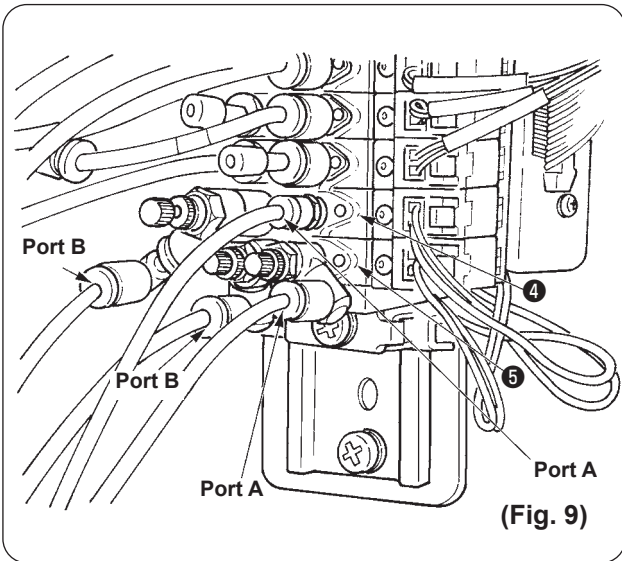
(Fig. 7)

- Caution**
- There are no marks "8" and "9" on solenoid valves ④ and ⑤ supplied with this unit as accessories.



(Fig. 8)

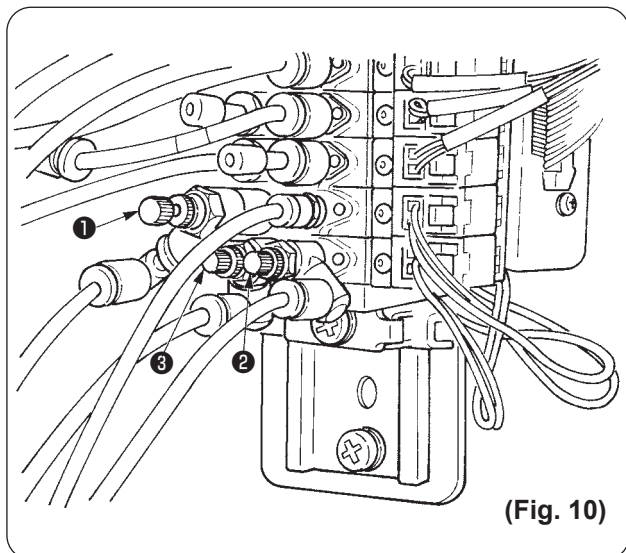
- 6) Draw the cables up to the bottom of the table as shown in the illustration on the left, and fix them with the clip bands supplied with the unit as accessories.



(Fig. 9)

- 7) Connect the air tube on the side where the needle thread clamp closes to port B (reducing valve of solenoid valve ④) of solenoid valve ④.
- 8) Connect the air tube on the side where the needle thread clamp opens to port A (joint on the connector side of solenoid valve ④) of solenoid valve ④.
- 9) Connect the air tube on the side where the needle thread clamp goes up to port B (side where connector of solenoid valve ⑤ does not exist) of solenoid valve ⑤.
- 10) Connect the air tube on the side where the needle thread clamp comes down to port A (side where connector of solenoid valve ⑤ exists) of solenoid valve ⑤.

## 4. ADJUSTING THE PNEUMATIC COMPONENTS



(Fig. 10)

### (1) Adjusting the thread clamp force (reducing valve)

Adjust adjusting screw ① of the reducing valve and adjust the thread clamp force in accordance with the thread used so that the thread smoothly comes off the needle thread clamp during sewing.

(Standard : Adjust the force by turning adjusting screw ① approximately 10 times from the fully closed state to the open.

- When the clamp force is strong :
1. Needle breakage may occur.
  2. The stitches on the right side of sewing may rise.
- When the clamp force is weak :
3. Needle thread may not be clamped.
  4. Thread may come off during clamping.



### (2) Adjusting the speed controller

Adjust speed controllers ② and ③ respectively to such an extent that there is no shock when moving the needle thread clamp unit up or down.

1. If up/down operation of the unit is excessively retarded, the operation timing cannot be adjusted and needle thread clamp failure may occur, or the unit may interfere with other components.
2. If up/down operation of the unit is excessively advanced, breakage of the components of the needle thread clamp unit may be caused.





## 5. SETTING THE MEMORY SWITCH

Set the memory switch U59 (needle thread clamp setting) to "1" (enable).

### ■ Memory switch

No.	Function	Description	Standard value	Setting range	Unit
U59	Needle thread clamp setting	0: Without 1: With	0	0 to 1	—
U60	Number of stitches of releasing needle thread clamp	Number of stitches from the start of swing to releasing needle thread clamp	5	0 to 99	Number of stitches
K23	Moving amount of closing needle thread clamp	Moving amount from the end of sewing to closing needle thread clamp	23	0 to 50	mm

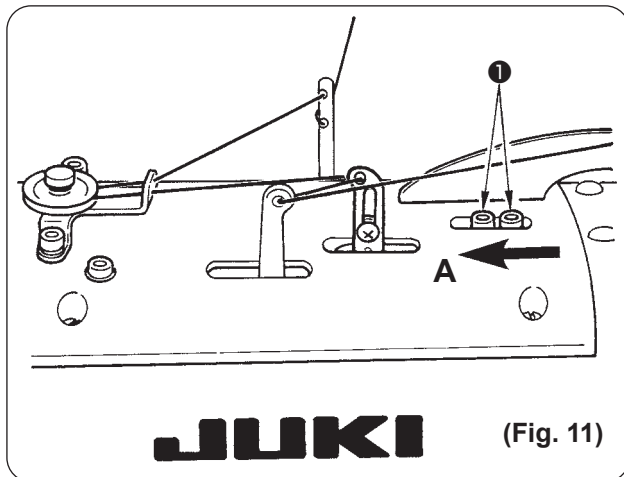


Change the set value of memory switch U60 so that needle thread can be neatly sewn in accordance with the sewing conditions. In case of increasing the set value, be careful of the interference with the longitudinal guide.

## 6. ADJUSTING THE LENGTH OF REMAINING NEEDLE THREAD

It is the standard to adjust the length of remaining needle thread to a short one so that the clamped thread can be neatly rolled. Adjust the length of needle thread to clamp to a short one in the following procedure and rolling of the needle thread at the start of sewing can be facilitated. It is possible to roll the thread up to sewing length of approximately 20 mm.

(There is a case where rolling may not be stabilized even in case of 20 mm or more in accordance with the sewing conditions.)



When the amount of remaining thread is desired to be further shorter, loosen screws ❶, and slide screws ❶ in the direction of arrow mark A.



**When the drawing amount of needle thread is excessively small :**

1. Thread may slip off needle.
2. Thread knotting failure at the start of sewing may occur.
3. Needle breakage may occur.