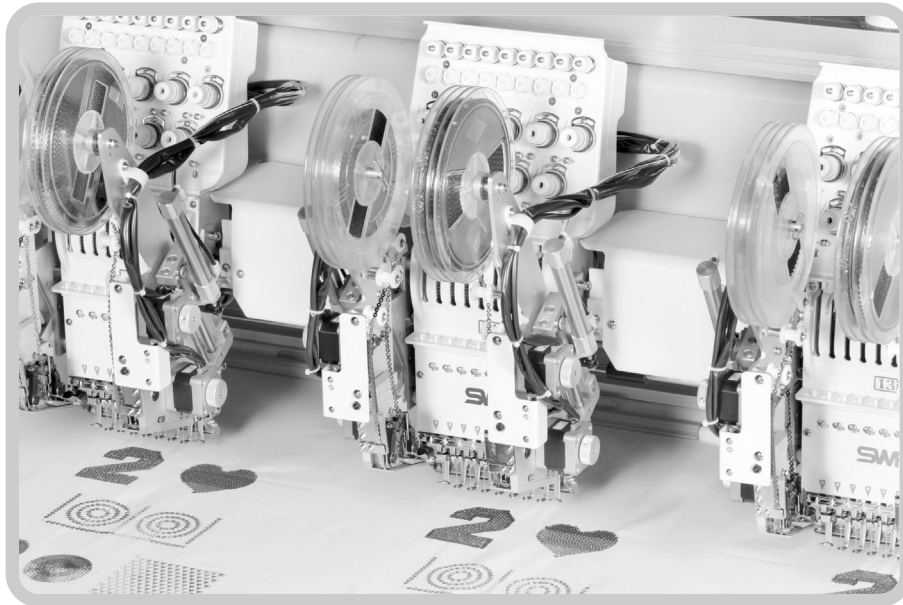




# Manual for Taping Utilization

- |                            |                       |
|----------------------------|-----------------------|
| • Tape attachment          | • Zigzag attachment   |
| • Coiling attachment       | • Blind attachment    |
| • Frill attachment         | • Cord attachment     |
| • Double Bobbin attachment | • Standing attachment |



MME-060728  
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- 2. CONTENTS IN THIS INSTRUCTION MAY CHANGE, WITHOUT PRIOR NOTICE, FOR IMPROVEMENT OF MACHINE QUALITY AND THUS MAY NOT CORRESPOND TO THE MACHINE YOU PURCHASED. CONTACT YOUR SALES AGENT FOR INQUIRIES.**
- 3. THIS IS DESIGNED AND MANUFACTURED AS AN INDUSTRIAL MACHINE. IT SHOULD NOT BE USED FOR OTHER THAN INDUSTRIAL PURPOSE.**

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# 01

## Types of Attachment of Taping Embroidery Machine

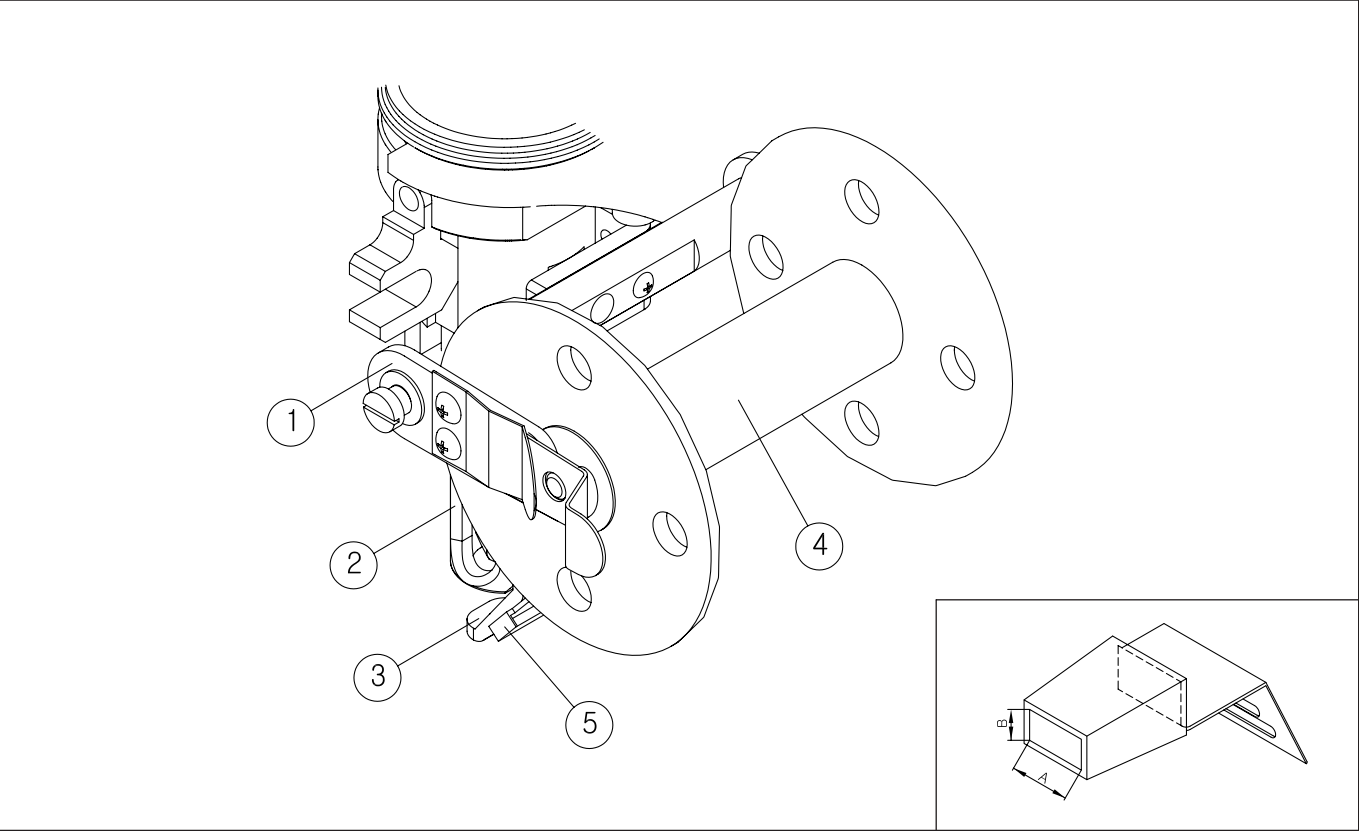
No.	Type of attachment		Specification	Remarks
1	Taping	Middle	Standard	
2	Zigzag	Middle	Standard	
3	Coiling	Small	Standard	
4	Double Bobbin		Standard	
5	Standing		Option	
6	Blind		Standard	
7	Frill		Standard	
8	Cord		Standard	

※ Standard quantity of bobbin : For every attachment type, middle bobbin head × 12  
small bobbin head × 12

※ Quantity of double bobbin device :  $1/H + 2$

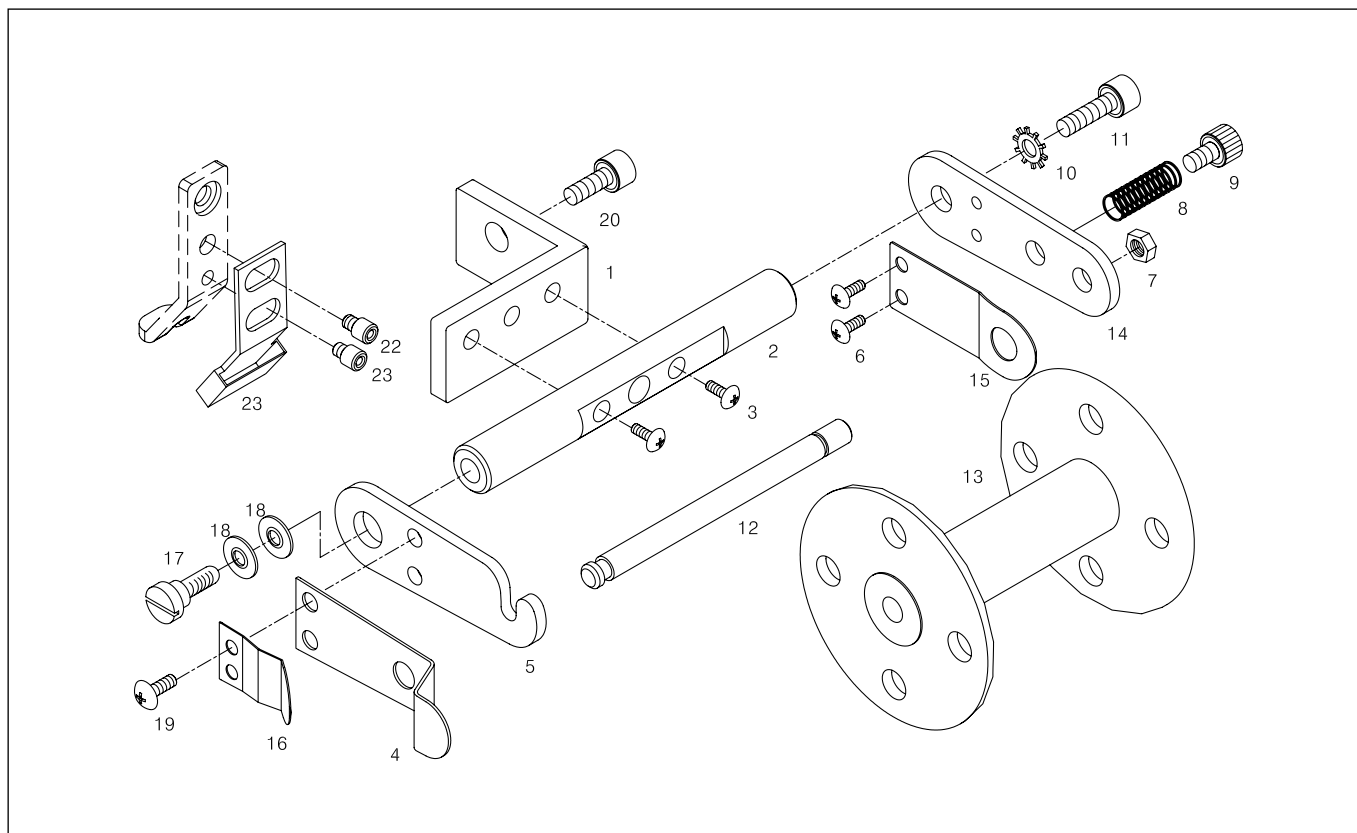
# 1) Tape attachment

## (1) Type of guide



No.	Name and Type		Part No.	Remarks
1	Taping Unit		AS-003093-02	
2	Guide Nipple		GP-009088-01	
3	Presser Foot		GP-009742-01	
4	Bobbin	Middle	GP-009754-00	
5	Tape Guide	A	B	
		2mm	1.7mm	AS-003853-01
		3mm		AS-003854-01
		4mm		AS-003855-01
		5mm		AS-003856-01
		6mm		AS-003857-01
		7mm		AS-003858-01
		8mm		AS-003859-01
		9mm		AS-003860-01
		10mm		AS-003861-01
		15mm		AS-003863-01
		20mm		AS-004470-00
		30mm		AS-004471-00
		40mm		AS-004472-00

## (2) Attachment Part

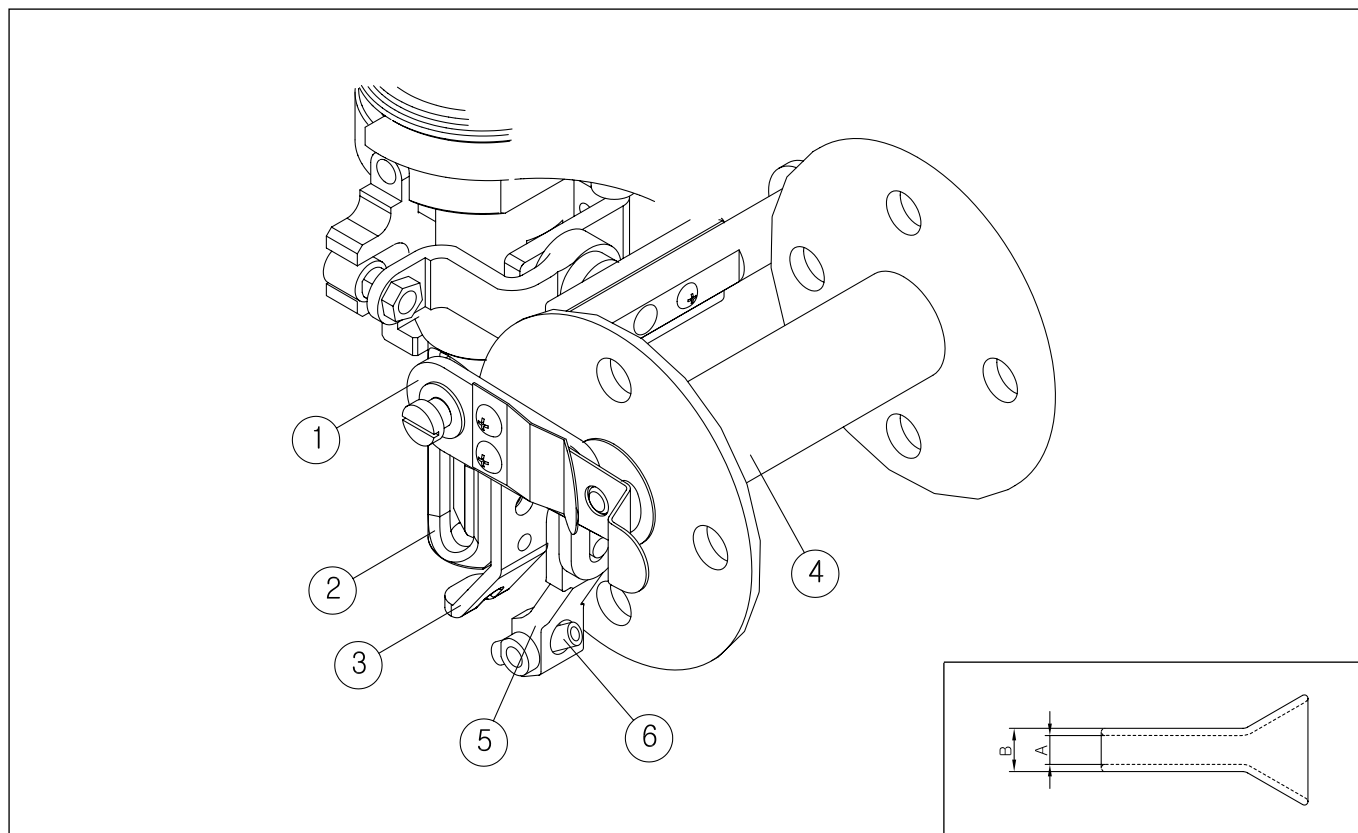


Ref. No	Part No.	Part Names	Q'ty
1	GP-009743-00	Bobbin Bracket	1/H
2	GP-009744-00	Bobbin Bracket Shaft	1/H
3	SC-000415-00	Plus Screw(M3 × L10)	2/H
4	GP-009746-00	Bobbin Bracket Spring(L)	1/H
5	GP-009745-00	Bobbin Bracket(L)	1/H
6	02003MC-8118	Plus Screw(M2 × L3)	2/H
7	15029SN-3211	Nut(M4)	1/H
8	GP-009752-00	Bobbin Tension Spring	1/H
9	SC-000378-01	Tension Regulator Screw	1/H
10	WS-000098-00	Untoothed Washer(@4)	1/H
11	02015SC-7113	Hex.Socket Bolt(M4 × L10)	1/H
12	GP-009753-00	Bobbin Shaft	1/H
13	GP-009754-00	Bobbin	1/H
14	GP-009750-00	Bobbin Bracket(R)	1/H
15	GP-009751-00	Bobbin Bracket Spring(R)	1/H
16	GP-009748-00	Plate for Spring for Bobbin Bracket	1/H
17	GP-009749-01	Bobbin Bracket Shaft Screw	1/H
18	WS-000099-00	Wave Washer(@4)	2/H
19	05060SC-8118	Plus Screw(M3 × L3)	2/H
20	02014SC-7113	Hex.Socket Bolt(M4 × L5)	1/H

Ref. No	Part No.	Part Names	Q'ty
21	GP-013055-00	Tape Guide(2mm)	1/H
	GP-010912-01	Tape Guide(3mm)	1/H
	GP-013056-00	Tape Guide(4mm)	1/H
	GP-013057-00	Tape Guide(5mm)	1/H
	GP-013058-00	Tape Guide(6mm)	1/H
	GP-010913-01	Tape Guide(7mm)	1/H
	GP-013059-00	Tape Guide(8mm)	1/H
	GP-013060-00	Tape Guide(9mm)	1/H
	GP-009755-01	Tape Guide(10mm)	1/H
	GP-013061-00	Tape Guide(15mm)	1/H
	GP-015805-00	Tape Guide(20mm)	1/H
	GP-015806-00	Tape Guide(30mm)	1/H
	GP-015807-00	Tape Guide(40mm)	1/H
22	SC-000396-02	Presser Foot Screw(B)	2/H
23	SC-000528-00	Screw	1/H

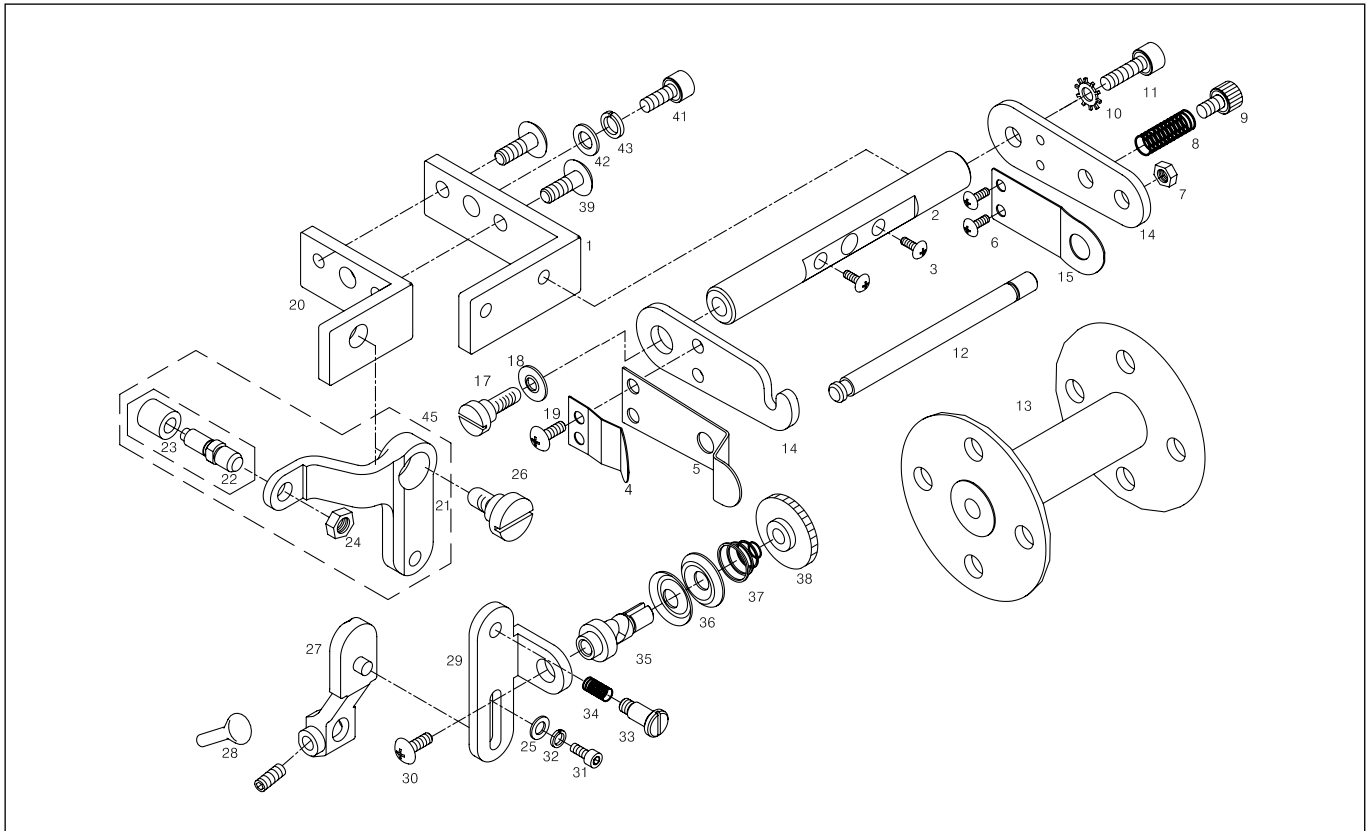
## 2) Zigzag Swing attachment

### (1) Type of guide



No.	Name and Type		Part No.	Remarks
1	Zigzag Swing Unit		AS-003101-02	
2	Guide Nipple		GP-009088-01	
3	Presser Foot		GP-009742-01	
4	Bobbin	Middle	GP-009754-00	
5	Guide Support	smaller than 3mm	GP-010250-00	Basically placed on the unit
		bigger than 3.5mm	GP-013054-01	
6	Cord Guide	A	B	
		1mm	4.5mm	GP-013062-00
		1.5mm		GP-010915-01
		2mm		GP-010914-01
		2.5mm		GP-010321-01
		3mm		GP-010320-01
		3.5mm	7mm	GP-013063-01
		4mm		GP-013064-01
		4.5mm		GP-013065-01
		5mm		GP-013066-01
		5.5mm		GP-013067-01

## (2) Attachment Part

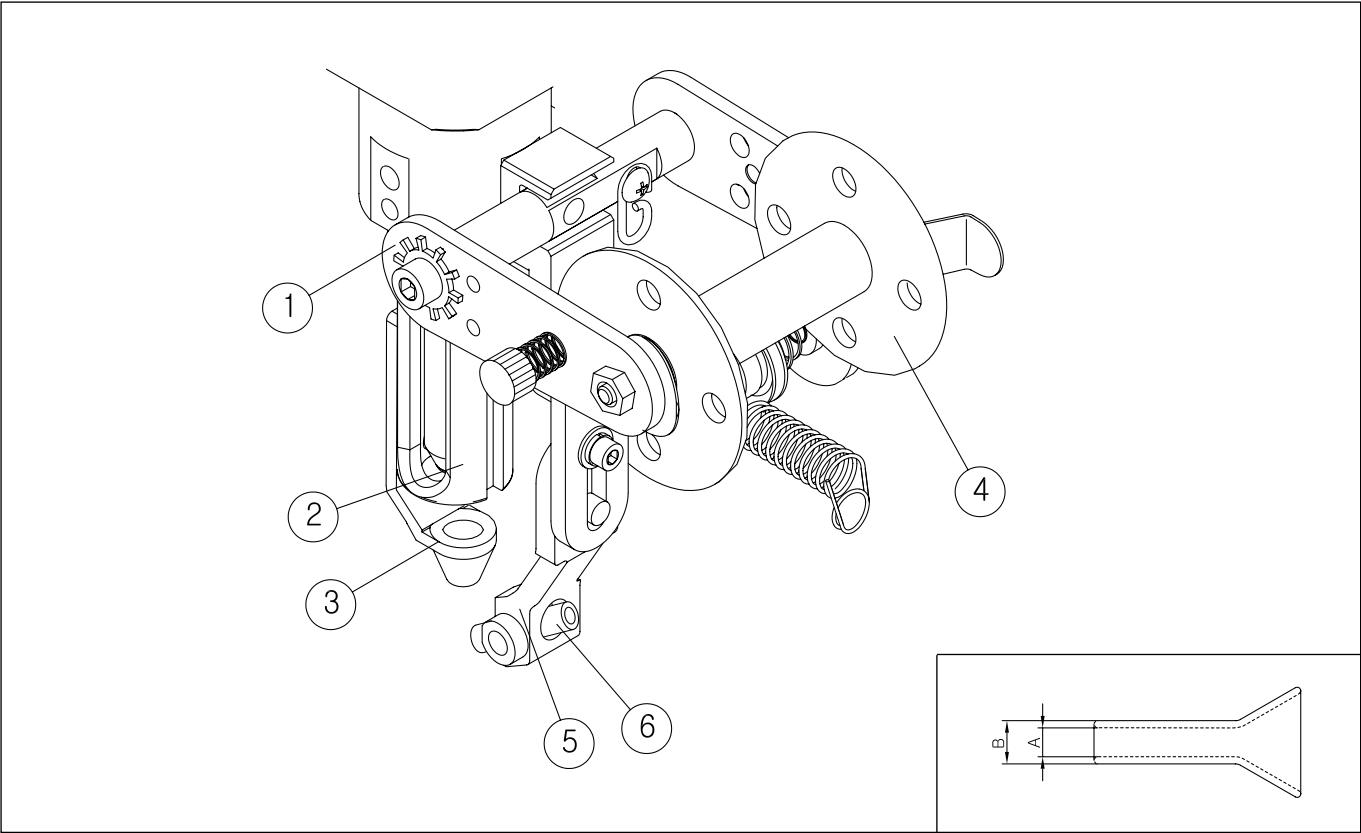


Ref. No	Part No.	Part Names	Q'ty
1	GP-010317-00	Bobbin Bracket Base	1/H
2	GP-009744-00	Bobbin Bracket Shaft	1/H
3	SC-000415-00	Plus Screw(M3 × L10)	2/H
4	GP-009746-00	Bobbin Bracket Spring(L)	1/H
5	GP-009745-00	Bobbin Bracket(L)	1/H
6	02003MC-8118	Plus Screw(M2 × L3)	2/H
7	15029SN-3211	Nut(M4)	1/H
8	GP-009752-00	Bobbin Tension Spring	1/H
9	SC-000378-01	Tension Regulator Screw	1/H
10	WS-000098-00	Untoothed Washer(@4)	1/H
11	02015SC-7113	Hex.Socket Bolt(M4 × L10)	1/H
12	GP-009753-00	Bobbin Shaft	1/H
13	GP-009754-00	Bobbin	1/H
14	GP-009750-00	Bobbin Bracket(R)	1/H
15	GP-009751-00	Bobbin Bracket Spring(R)	1/H
16	GP-009748-00	Plate for Spring for Bobbin Bracket	1/H
17	GP-009749-01	Bobbin Bracket Shaft Screw	1/H
18	WS-000099-00	Wave Washer(@4)	2/H
19	05060SC-8118	Plus Screw(M3 × L3)	2/H
20	GP-010318-00	Bobbin Bracket for Zigzag Unit	1/H
21	GP-010249-01	Zigzag Swing Base	1/H
22	PN-000176-00	Zigzag Base Roller Pin	1/H
23	GP-006995-00	Thread Release Driving Roller	1/H
24	05016SN-1211	Nut(M4)	1/H
25	06011SW-2111	Washer(@3)	1/H
26	PN-000177-01	Zigzag Swing Base Pin	1/H
27	GP-010250-00	Guide Support(smaller than 3mm)	1/H
	GP-013054-01	Guide Support(bigger than 3.5mm)	1/H

Ref. No	Part No.	Part Names	Q'ty
28	GP-010320-01	Cord Guide(@3.0)	1/H
	GP-010321-01	Cord Guide(@2.5)	1/H
	GP-010914-01	Cord Guide(@2.0)	1/H
	GP-010915-01	Cord Guide(@1.5)	1/H
	GP-013062-00	Cord Guide(@1.0)	1/H
	GP-013063-01	Cord Guide(@3.5)	1/H
	GP-013064-01	Cord Guide(@4.0)	1/H
	GP-013065-01	Cord Guide(@4.5)	1/H
	GP-013066-01	Cord Guide(@5.0)	1/H
	GP-013067-01	Cord Guide(@5.5)	1/H
29	GP-010316-01	Zigzag Swing Plate	1/H
30	09005SC-3123	Truss Screw(M3 × L6)	1/H
31	07035SC-7113	Hex.Socket Bolt(M3 × L6)	1/H
32	08011SW-1111	Spring Washer(@3)	1/H
33	PN-000178-01	Zigzag Swing Plate Fixing Pin	1/H
34	GP-010319-00	Zigzag Swing Plate Fixing Spring	1/H
35	GP-010322-00	Zigzag Swing Tension Shaft	1/H
36	40-102A-2700	Thread Guide Disc	2/H
37	40-103A-2700	Thread Guide Disc Spring	1/H
38	40-104A-2700	Sub-Thread Release Shaft Nut	1/H
39	03006MC-8118	Plus Screw(M3 × L6)	2/H
40	SC-000380-00	Nipple Ring Screw(M3 × L2.5)	1/H
41	02015SC-7113	Hex.Socket Bolt(M4 × L10)	1/H
42	18015SW-3111	Washer(@4)	1/H
43	18014SW-3115	Spring Washer(@4)	1/H
44	AS-003195-00	Zigzag Swing Base Roller(Set)	1/H
45	AS-003060-01	Zigzag Swing Base (Set)	1/H

### 3) Coiling Attachment

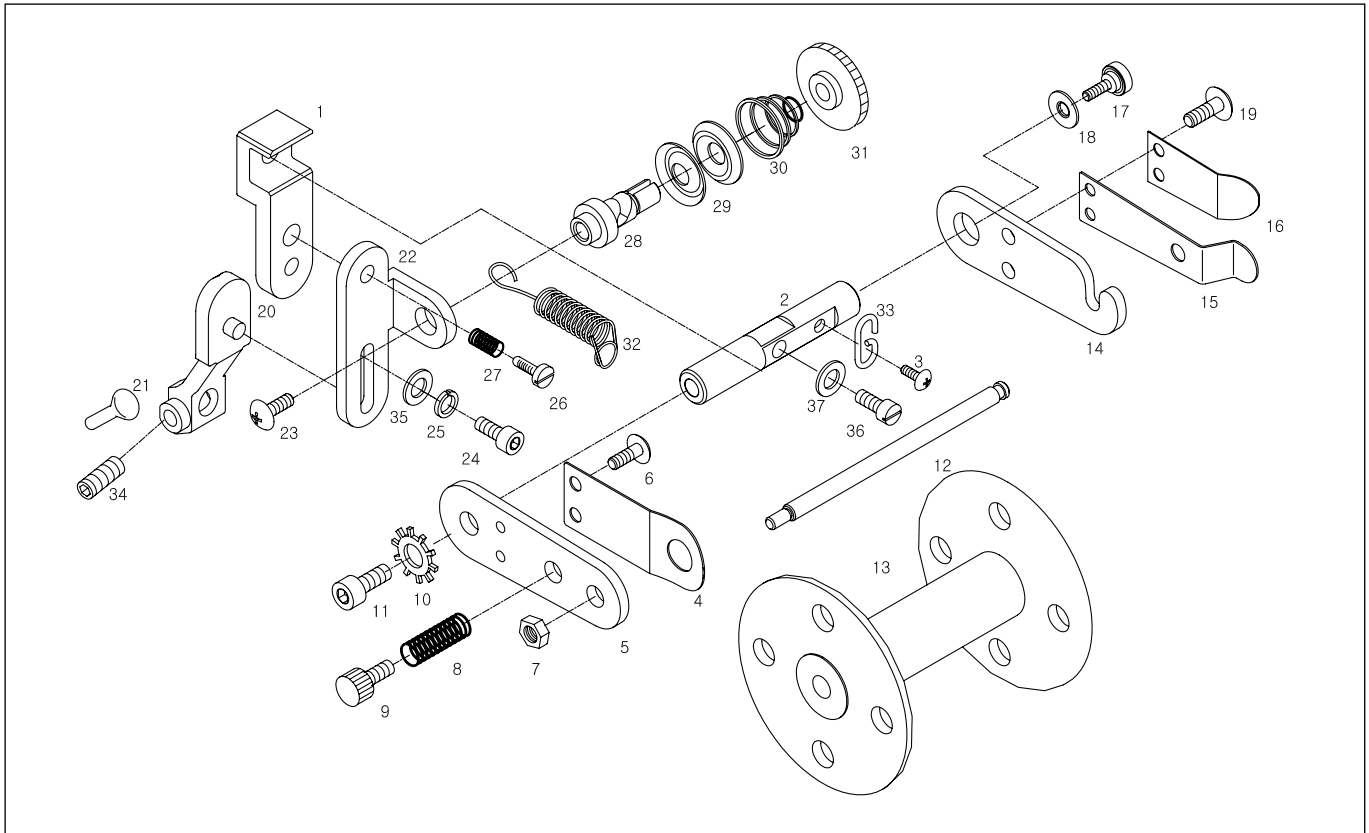
#### (1) Type of guide



No.	Name and Type		Part No.	Remarks
1	Zigzag Swing Unit		AS-003101-02	
2	Guide Nipple		GP-009088-01	
3	Presser Foot		GP-010470-00	
4	Bobbin	Small	GP-010445-00	
5	Guide Support	smaller than 3mm	GP-010250-00	
		bigger than 3.5mm	GP-013054-00	
6	Cord Guide	A	B	
		1mm	4.5mm	GP-013062-00
		1.5mm		GP-010915-01
		2mm		GP-010914-01
		2.5mm		GP-010321-01
		3mm		GP-010320-01
		3.5mm	7mm	GP-013063-01
		4mm		GP-013064-01
		4.5mm		GP-013065-01
		5mm		GP-013066-01
		5.5mm		GP-013067-01



## (2) Attachment Part

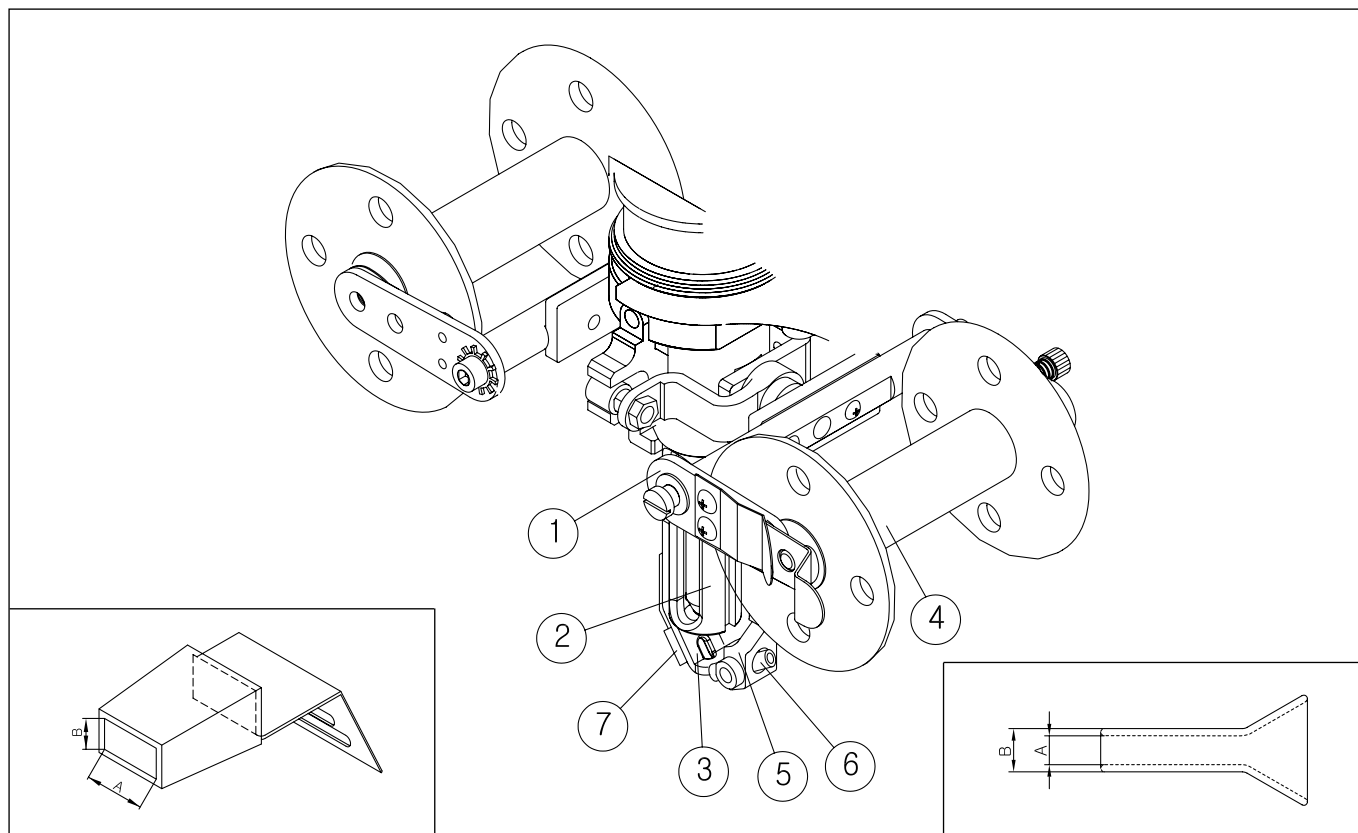


Ref. No	Part No.	Part Names	Q'ty
1	GP-010455-01	Coiling Guide Base	1/H
2	GP-010451-01	Small Bobbin Bracket Shaft	1/H
3	SC-000415-00	Plus Screw(M3 × L10)	1/H
4	GP-010450-00	Small Bobbin Bracket Spring(L)	1/H
5	GP-010449-00	Small Bobbin Bracket(L)	1/H
6	02003MC-8118	Plus Screw(M2 × L3)	2/H
7	15029SN-3211	Nut(M4)	1/H
8	GP-009752-00	Bobbin Tension Spring	1/H
9	SC-000378-01	Tension Regulator Screw	1/H
10	WS-000098-00	Untoothed Washer(@4)	1/H
11	02015SC-7113	Hex.Socket Bolt(M4 × L10)	1/H
12	GP-010452-00	Small Bobbin Shaft	1/H
13	GP-010445-00	Small Bobbin	1/H
14	GP-010446-00	Small Bobbin Bracket(R)	1/H
15	GP-010447-00	Small Bobbin Bracket Spring(R)	1/H
16	GP-010448-00	Plate for Spring for Small Bobbin Bracket	1/H
17	GP-009749-00	Bobbin Bracket Shaft Screw	1/H
18	WS-000099-00	Wave Washer(@4)	2/H
19	05060SC-8118	Plus Screw(M3 × L3)	2/H
20	GP-010250-00	Guide Support	1/H

Ref. No	Part No.	Part Names	Q'ty
21	GP-010320-00	Cord Guide(@3.0)	1/H
22	GP-010316-00	Swing Plate	1/H
23	09005SC-3123	Truss Screw(M3 × L6)	1/H
24	07035SC-7113	Hex.Socket Bolt(M3 × L6)	1/H
25	08011SW-1111	Spring Washer(@3)	1/H
26	PN-000178-01	Zigzag Swing Plate Fixing Pin	1/H
27	GP-010319-00	Zigzag Swing Plate Fixing Spring	1/H
28	GP-010322-00	Zigzag Swing Tension Shaft	1/H
29	40-102A-2700	Thread Guide Disc	1/H
30	40-103A-2700	Thread Guide Disc Spring	2/H
31	40-104A-2700	Sub-Thread Release Shaft Nut	1/H
32	GP-010463-00	Coiling Tension Spring	1/H
33	GP-010471-00	Coiling Guide	1/H
34	SC-000380-00	Nipple Ring Screw(M3 × L2.5)	1/H
35	06011SW-2111	Washer(@3)	1/H
36	SC-0215-1230	Screw(9/64", n=40, L=13)	1/H
37	18015SW-3111	Washer(@4)	1/H

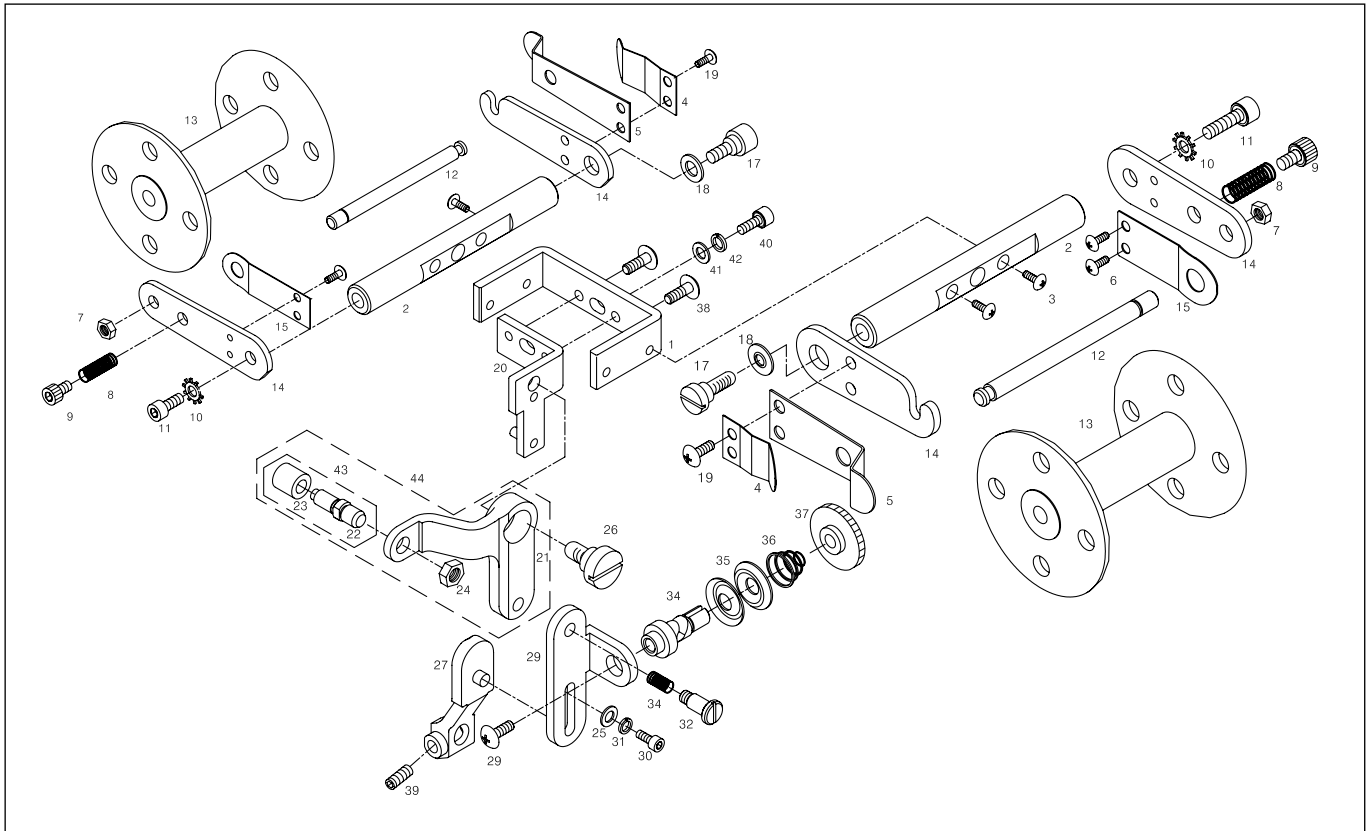
## 4) Double Bobbin attachment (option)

### (1) Type of guide



No.	Name and Type		Part No.	Remarks
1	Zigzag Swing Unit		AS-003195-00	
2	Guide Nipple		GP-009088-01	
3	Presser Foot		GP-009742-01	
4	Bobbin		GP-009754-00	
5	Guide Support	Middle	GP-010250-00	Basically placed on the unit
		smaller than 3mm	GP-013054-00	
		bigger than 3.5mm		
6	Tape Guide	A	B	
		2mm	1.7mm	AS-003853-01
		3mm		AS-003854-01
		4mm		AS-003855-01
		5mm		AS-003856-01
		6mm		AS-003857-01
		7mm		AS-003858-01
		8mm		AS-003859-01
		9mm		AS-003860-01
		10mm		AS-003861-01
		15mm		AS-003863-01
		20mm		AS-004470-00
		30mm		AS-004471-00
		40mm		AS-004472-00
7	Cord Guide	1mm	4.5mm	GP-013062-00
		1.5mm		GP-010915-01
		2mm		GP-010914-01
		2.5mm		GP-010321-01
		3mm		GP-010320-01
		3.5mm	7mm	GP-013063-01
		4mm		GP-013064-01
		4.5mm		GP-013065-01
		5mm		GP-013066-01
		5.5mm		GP-013067-01

## (2) Attachment Part

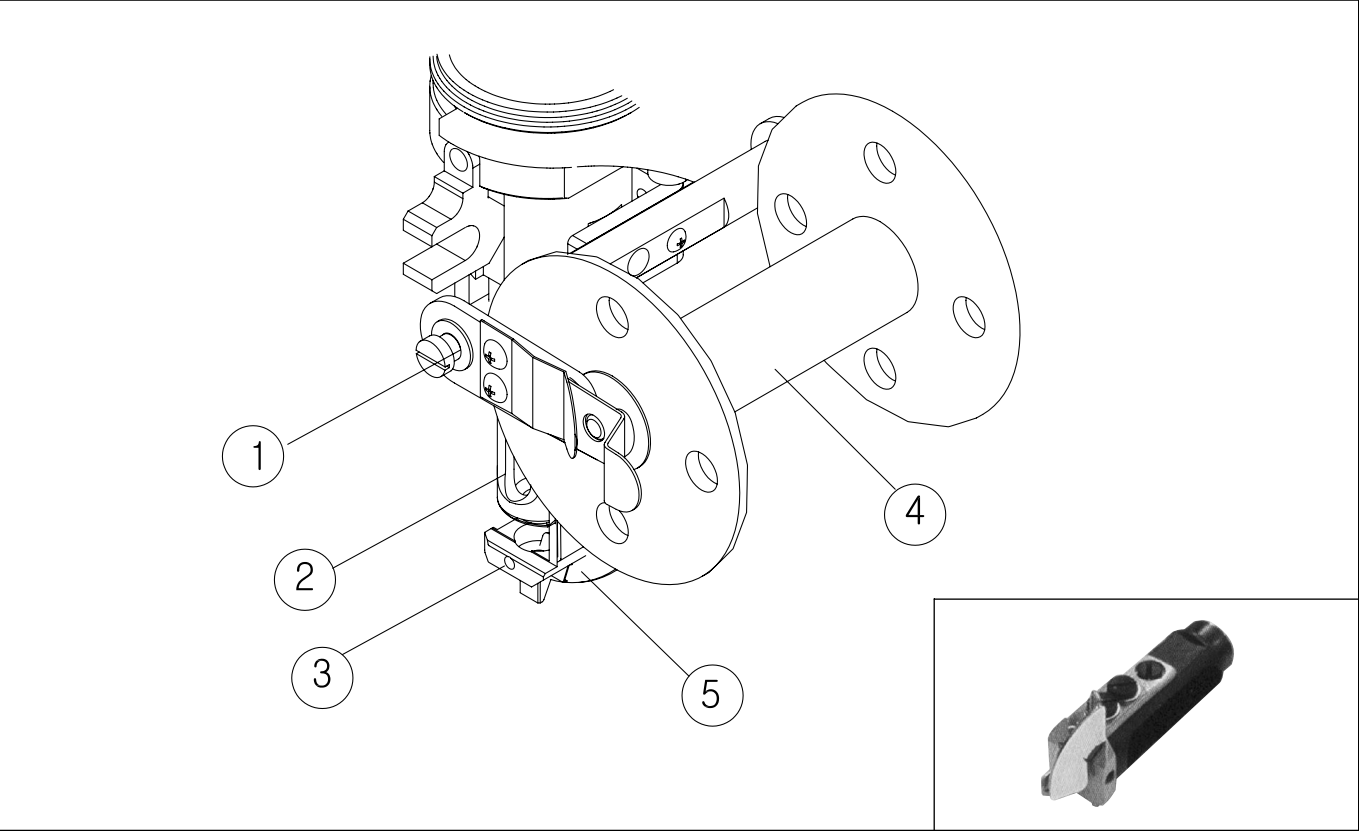


Ref. No	Part No.	Part Names	Q'ty
1	GP-012079-00	Double Bobbin Bracket Base	1/H
2	GP-009744-00	Bobbin Bracket Shaft	2/H
3	SC-000415-00	Plus Screw(M3 × L10)	4/H
4	GP-009746-00	Bobbin Bracket Spring(L)	1/H
5	GP-009745-00	Bobbin Bracket(L)	1/H
6	02003MC-8118	Plus Screw(M2 × L3)	4/H
7	15029SN-3211	Nut(M4)	2/H
8	GP-009752-00	Bobbin Tension Spring	2/H
9	SC-000378-01	Tension Regulator Screw	2/H
10	WS-000098-00	Untoothed Washer(@4)	2/H
11	02015SC-7113	Hex.Socket Bolt(M4 × L10)	2/H
12	GP-009753-00	Bobbin Shaft	2/H
13	GP-009754-00	Bobbin	2/H
14	GP-009750-00	Bobbin Bracket(R)	2/H
15	GP-009751-00	Bobbin Bracket Spring(R)	2/H
16	GP-009748-00	Plate for Spring for Bobbin Bracket	2/H
17	GP-009749-00	Bobbin Bracket Shaft Screw	2/H
18	WS-000099-00	Wave Washer(@4)	4/H
19	05060SC-8118	Plus Screw(M3)L3)	4/H
20	GP-012077-00	Double Bobbin Bracket for Zigzag Unit	1/H
21	GP-010249-00	Zigzag Swing Base	1/H
22	PN-000176-00	Zigzag Base Roller Pin	1/H
23	GP-006995-00	Thread Release Driving Roller	1/H

Ref. No	Part No.	Part Names	Q'ty
24	05016SN-1211	Nut(M4)	1/H
25	06011SW-2111	Washer(@3)	1/H
26	PN-000177-00	Zigzag Swing Base Pin	1/H
27	GP-010250-00	Guide Support(smaller than 3mm)	1/H
	GP-013054-00	Guide Support(bigger than 3.5mm)	1/H
28	GP-010316-00	Swing Plate	1/H
29	09005SC-3123	Truss Screw(M3)L6)	1/H
30	07035SC-7113	Hex.Socket Bolt(M3)L6)	1/H
31	08011SW-1111	Spring Washer(@3)	1/H
32	PN-000178-00	Zigzag Swing Plate Fixing Pin	1/H
33	GP-010319-00	Zigzag Swing Plate Fixing Spring	1/H
34	GP-010322-00	Zigzag Swing Tension Shaft	1/H
35	40-102A-2700	Thread Guide Disc	2/H
36	40-103A-2700	Thread Guide Disc Spring	1/H
37	40-104A-2700	Sub-Thread Release Shaft Nut	1/H
38	03006MC-8118	Plus Screw(M3)L6)	2/H
39	SC-000380-00	Nipple Ring Screw(M3)L2.5)	1/H
40	02015SC-7113	Hex.Socket Bolt(M4)L10)	1/H
41	18015SW-3111	Washer(@4)	1/H
42	18014SW-3115	Spring Washer(@4)	1/H
43	AS-003195-00	Zigzag Swing Base Roller(Set)	1/H
44	AS-003060-00	Zigzag Swing Base (Set)	1/H

5) Standing attachment (option)

(1) Type of guide

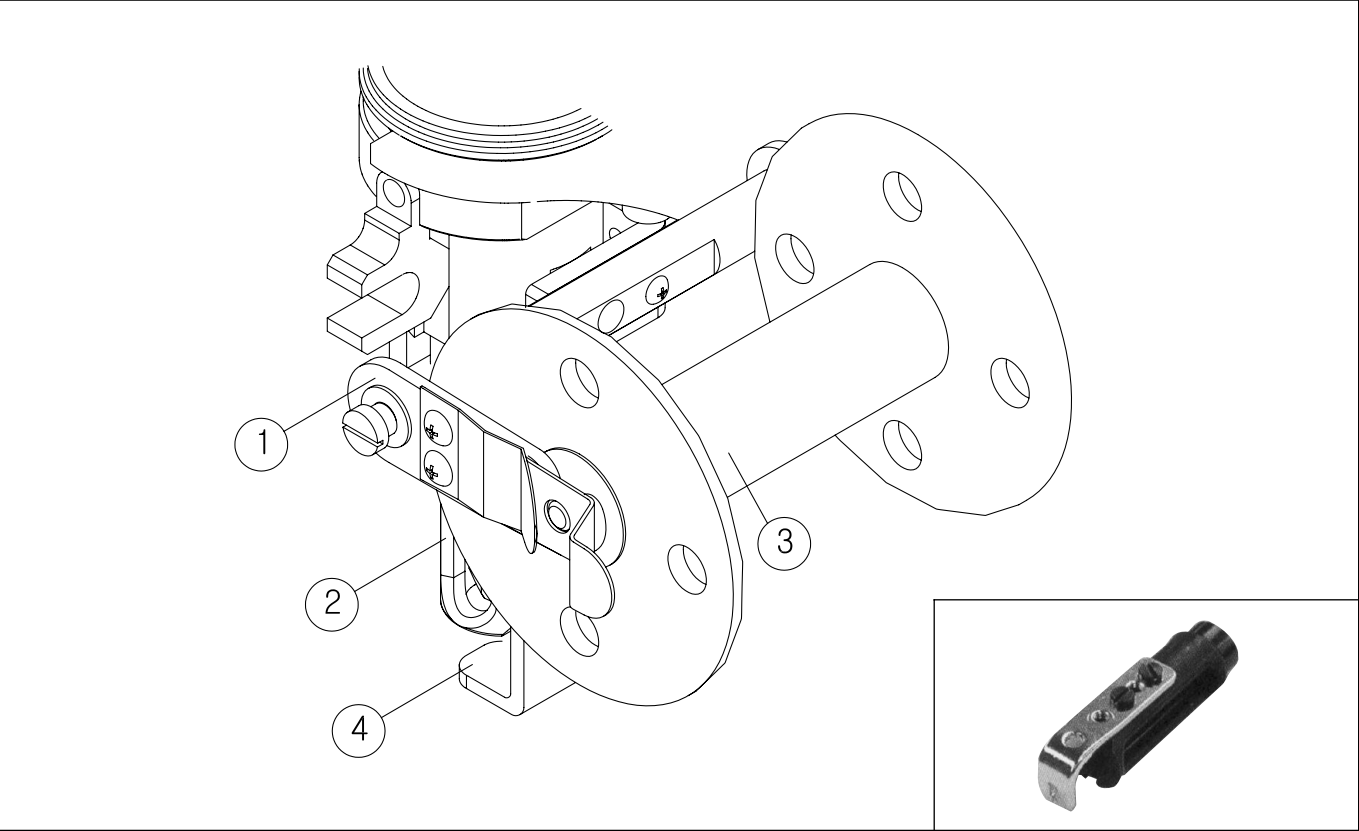


No.	Name and Type			Part No.	Remarks
1	Taping Unit			AS-003093-03	
2	Guide Nipple			GP-009088-01	
3	Standing Presser Foot			GP-011027-01	
4	Bobbin	Middle		GP-009754-00	
5	Standing Tape Guide	A	B		
		4mm	1.3mm	GP-011028-02	



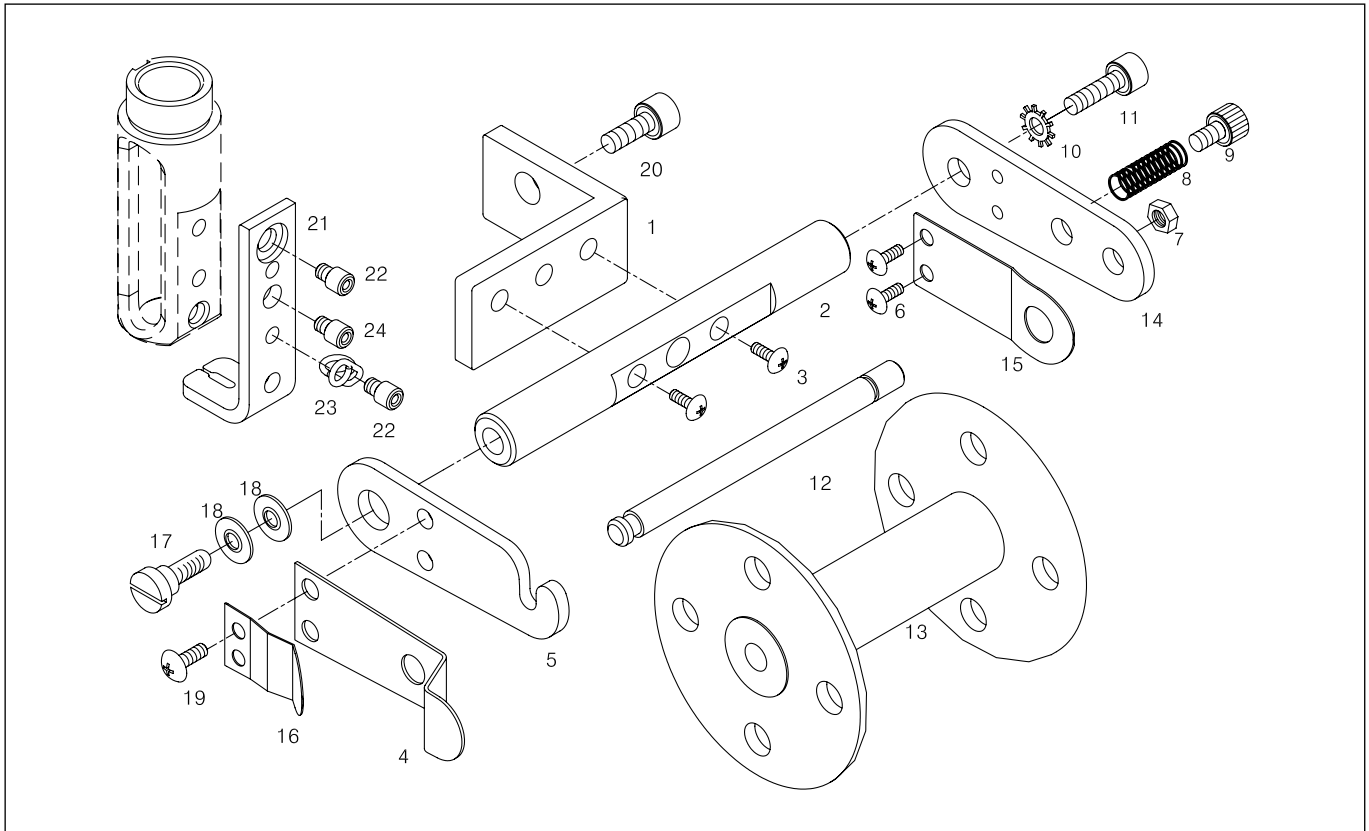
6) Blind attachment (option)

(1) Type of guide



No.	Name and Type		Part No.	Remarks
1	Taping Unit		AS-003093-02	
2	Guide Nipple		GP-009088-01	
3	Bobbin	Middle	GP-009754-00	
4	Blind Presser Foot	A		
		1.5mm	AS-003879-00	
		2mm	AS-003880-00	
		2.5mm	AS-003881-00	
		3mm	AS-003882-00	
		3.5mm	AS-003883-00	
		4mm	AS-003884-00	
		4.5mm	AS-003885-00	

## (2) Attachment Part

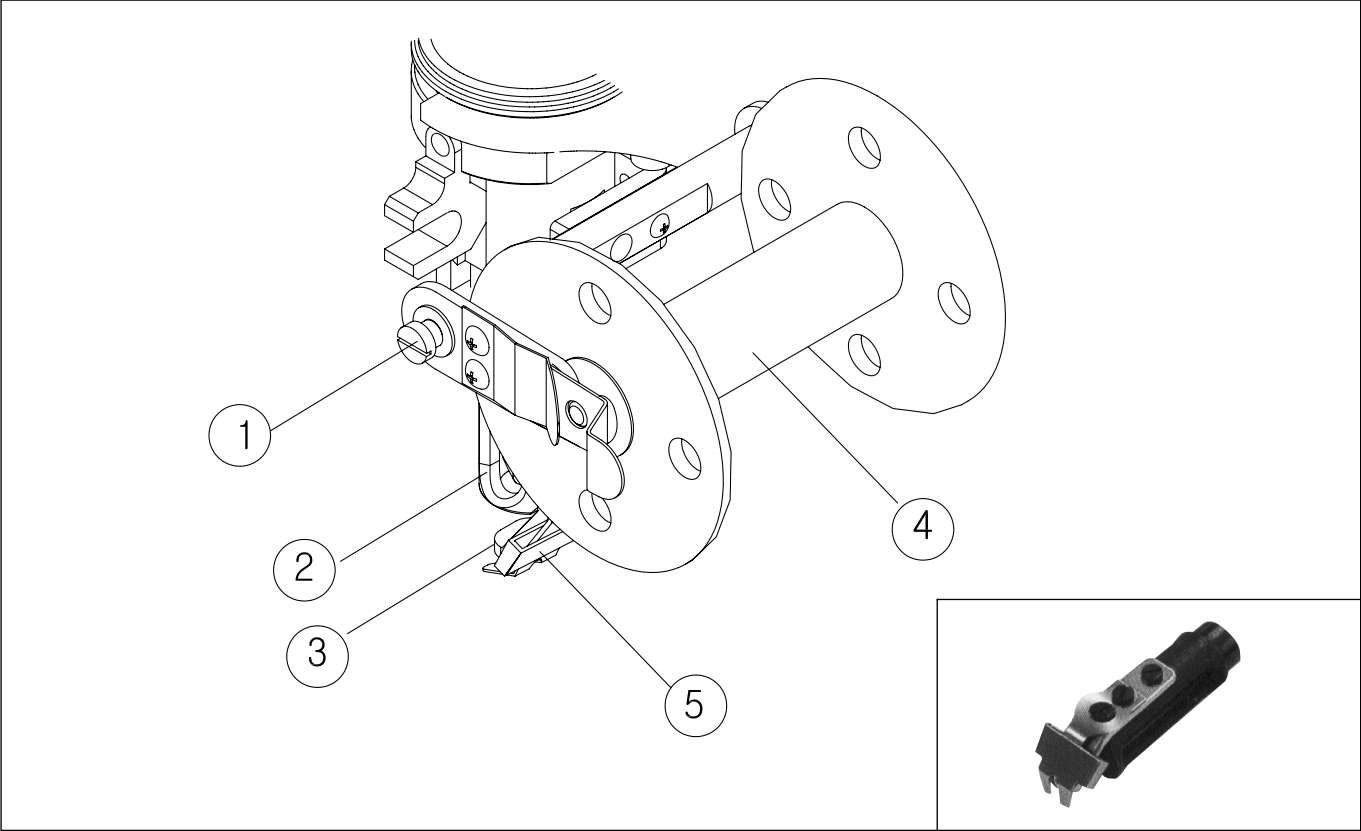


Ref. No	Part No.	Part Names	Q'ty
1	GP-009743-00	Bobbin Bracket	1/H
2	GP-009744-00	Bobbin Bracket Shaft	1/H
3	SC-000415-00	Plus Screw(M3 × L10)	2/H
4	GP-009746-00	Bobbin Bracket Spring(L)	1/H
5	GP-009745-00	Bobbin Bracket(L)	1/H
6	02003MC-8118	Plus Screw(M2 × L3)	2/H
7	15029SN-3211	Nut(M4)	1/H
8	GP-009752-00	Bobbin Tension Spring	1/H
9	SC-000378-01	Tension Regulator Screw	1/H
10	WS-000098-00	Untoothed Washer(@4)	1/H
11	02015SC-7113	Hex.Socket Bolt(M4 × L10)	1/H
12	GP-009753-00	Bobbin Shaft	1/H
13	GP-009754-00	Bobbin	1/H
14	GP-009750-00	Bobbin Bracket(R)	1/H
15	GP-009751-00	Bobbin Bracket Spring(R)	1/H
16	GP-009748-00	Plate for Spring for Bobbin Bracket	1/H
17	GP-009749-01	Bobbin Bracket Shaft Screw	1/H
18	WS-000099-00	Wave Washer(@4)	2/H
19	05060SC-8118	Plus Screw(M3 × L3)	1/H
20	02014SC-7113	Hex.Socket Bolt(M4 × L5)	1/H

Ref. No	Part No.	Part Names	Q'ty
21	GP-011021-01	Blind Presser Foot(1.5mm)	1/H
	GP-013472-00	Blind Presser Foot(2.0mm)	1/H
	GP-013473-00	Blind Presser Foot(2.5mm)	1/H
	GP-013474-00	Blind Presser Foot(3.0mm)	1/H
	Gp-013475-00	Blind Presser Foot(3.5mm)	1/H
	GP-013476-00	Blind Presser Foot(4.0mm)	1/H
	GP-013477-00	Blind Presser Foot(4.5mm)	1/H
22	SC-000396-02	Screw B for Coiling Presser Foot	1/H
23	GP-011023-00	Cord Holder	1/H
24	SC-0133-1230	Screw	1/H

7) Frill attachment

(1) Type of guide



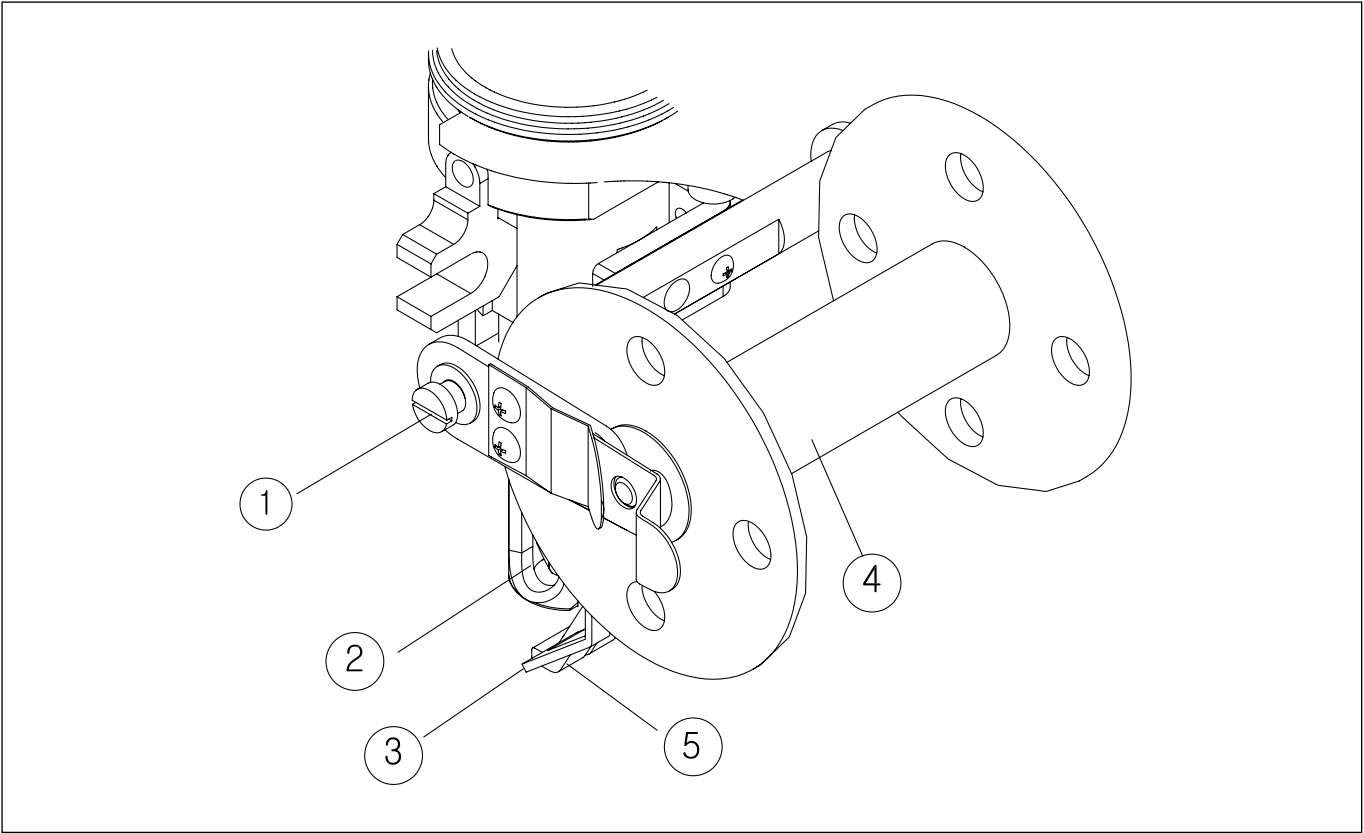
No.	Name and Type			Part No.	Remarks
1	Taping Unit			AS-003093-02	
2	Guide Nipple			GP-009088-01	
3	Presser Foot			GP-009742-01	
4	Bobbin	Middle		GP-009754-00	
5	Frill Guide	A	B		
		8 × 9	1.3mm	AS-003886-00	
		12 × 13		AS-003887-01	
		14 × 15		AS-003888-01	
		15 × 16		AS-003889-01	
		18 × 19		AS-003890-01	





## 8) Cord attachment

### (1) Type of guide



No.	Name and Type		Part No.	Remarks
1	Taping Unit		AS-003093-02	
2	Guide Nipple		GP-009088-01	
3	Cord Presser Foot Guide		GP-013487-00	
4	Bobbin	Middle	GP-009754-00	
5	Cord Presser Foot	A		
		1mm	AS-003892-00	
		1.5mm	AS-003893-00	
		2mm	AS-003894-00	
		2.5mm	AS-003895-00	
		3mm	AS-003896-00	





# 02

## How to Use Attachment and Guide

1. Tape attachment .....	26
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3. Coiling attachment .....	60
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# 1

## Tape attachment

### 1) Fixing the attachment to the machine

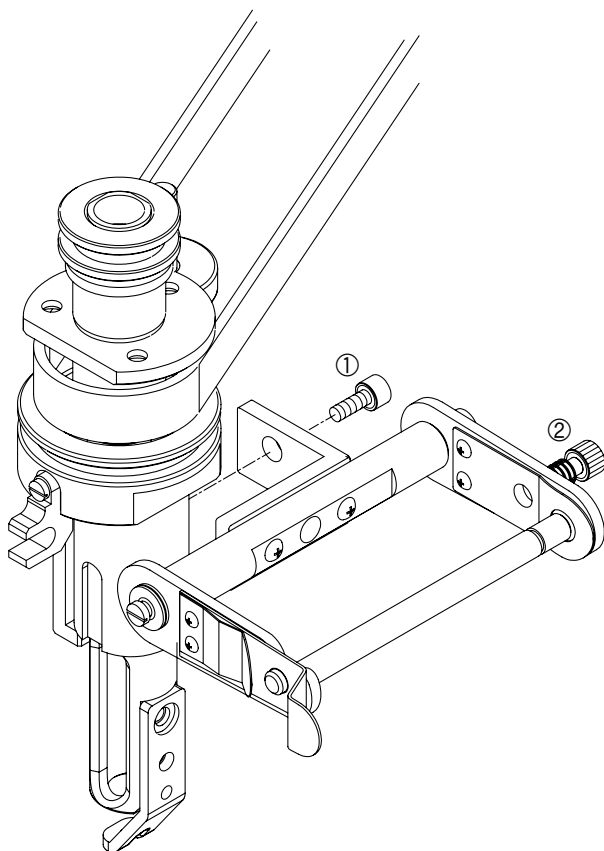


Fig. [1-1]

- ▶ For taping embroidery, fix a taping attachment or a double bobbin to the machine.
- ▶ The following is the explanation on the embroidery work with taping attachment placed on the machine.  
As shown in the Fig. [1-1], tighten the screw① to fix the taping attachment.
- ▶ Adjust the tension of thread when it is wound off the bobbin by using the bobbin tension adjusting bolt②.
- ▶ The embroidery work with double bobbin will be explained in the Double Bobbin attachment part .

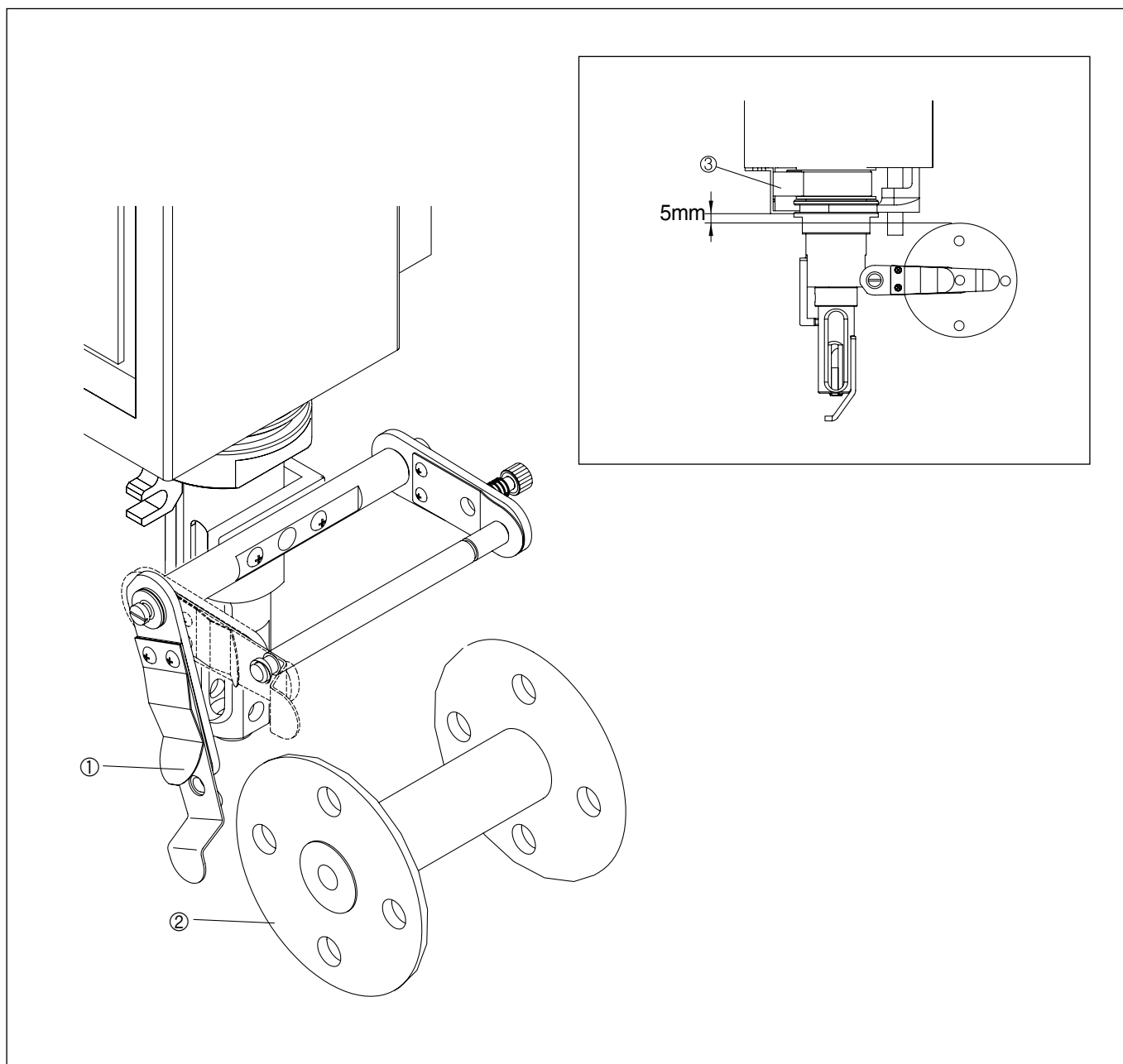


Fig. [1-2]

- After fixing the taping attachment, pull the bobbin bracket and the spring①to the side and pull them down to place the bobbin②as shown in Fig. [1-2].
- When placing the bobbin, carefully adjust it not to hit the lower surface of the pulley cover③of the M-axis. If it is too lowered, adjust it to an appropriate position not to hit the frame.
- The best position of the bobbin is 5mm away from the lower surface of the taping arm.

## 2) Fixing the tape guide to the machine

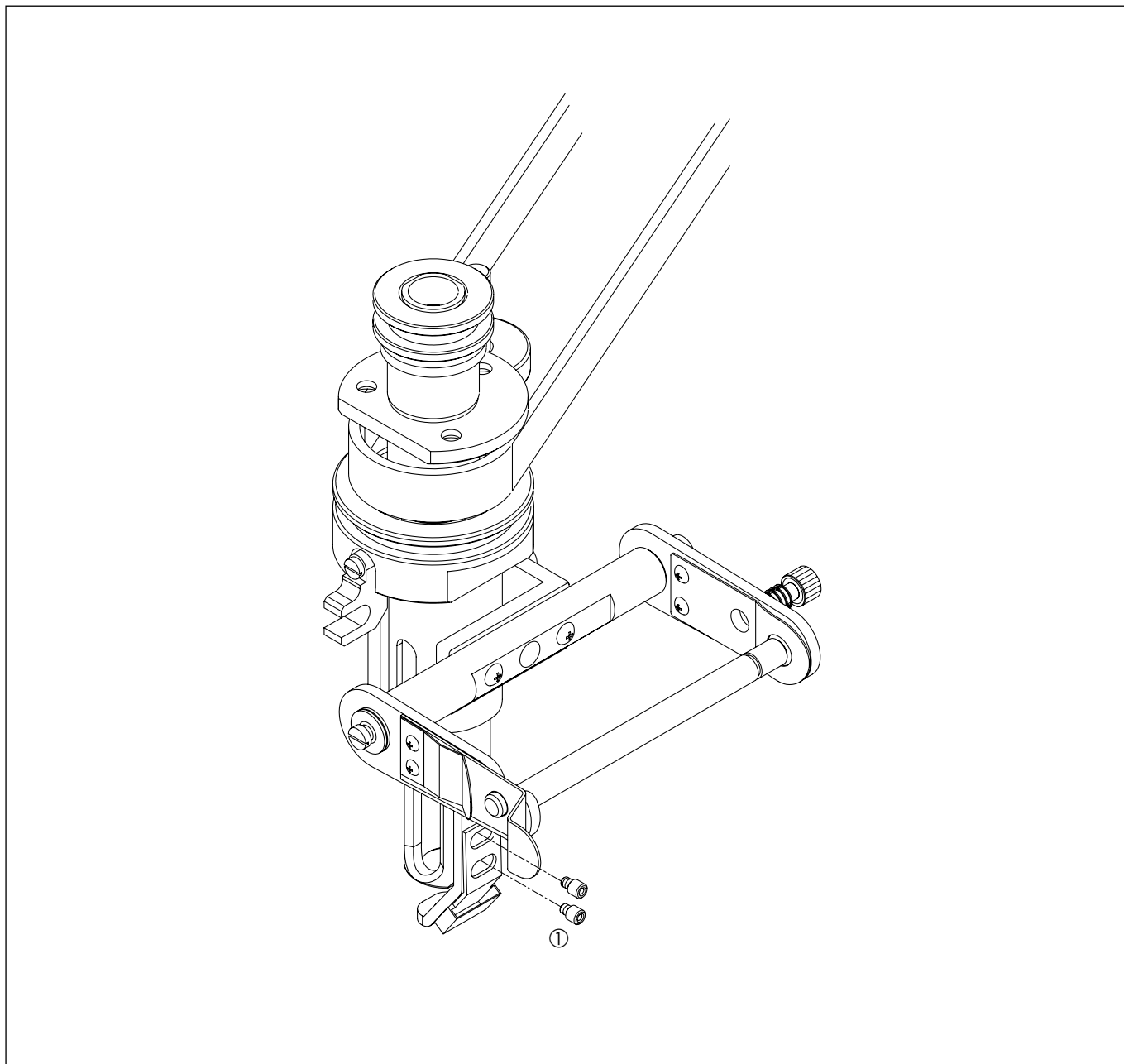


Fig. [1-3]

- ▶ As shown in the Fig. [1-3], set the guide to be placed at the center of the presser foot by tightening the screw①.
- ▶ If the tape guide is not placed at the center of the presser foot, the tape leans toward one side and the tape can be deformed during the embroidery.
- ▶ Make sure that the tape guide is not positioned lower than the bottom of the presser foot.
- ▶ Use a standard tape guide tightening screw(SC-000396-02).



### 3) Tape placement and setting

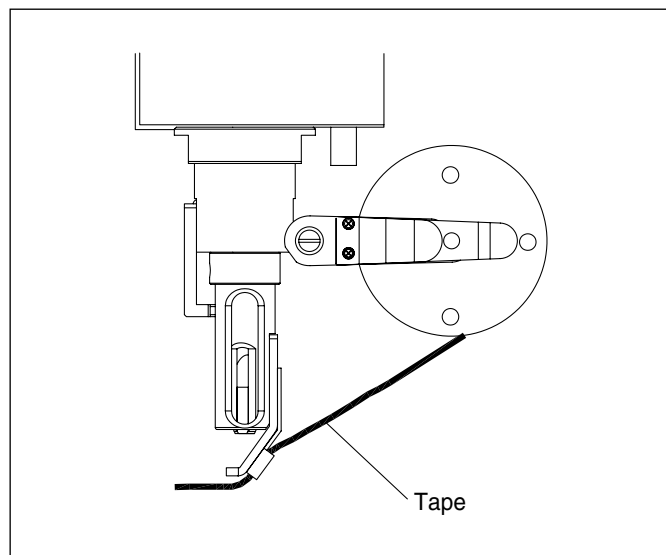


Fig. [1-4]

- Carefully wind a tape on the bobbin and fix the bobbin to the tape attachment. And then put the tape through the tape guide.

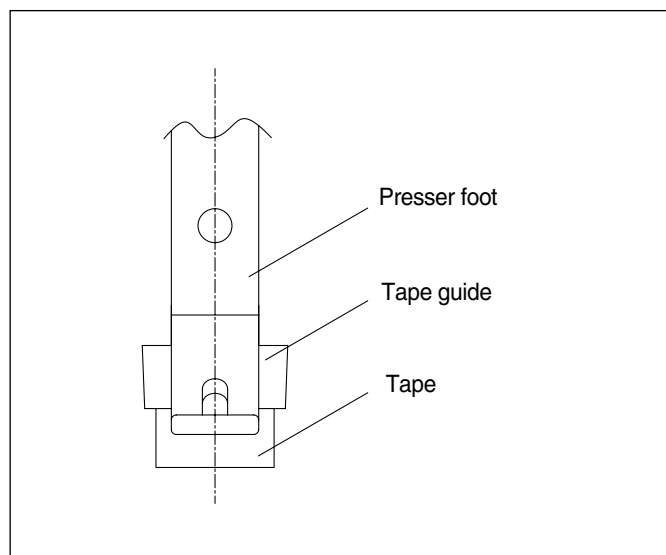


Fig. [1-5]

- Check whether the tape center is placed at the center of the presser foot after the placement. If the tape leans toward one side, adjust the position of the tape guide.

## 4) Operation

### (1) Needle bar setting

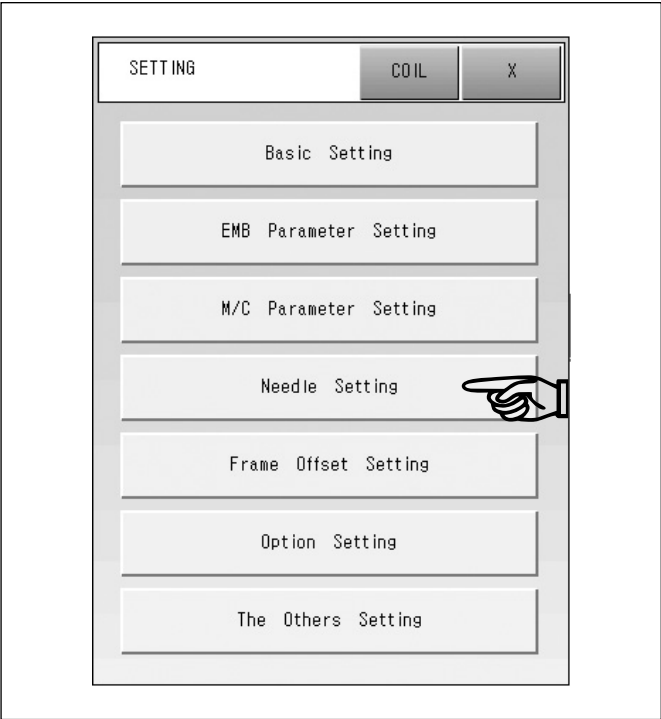


Fig. [1-6]

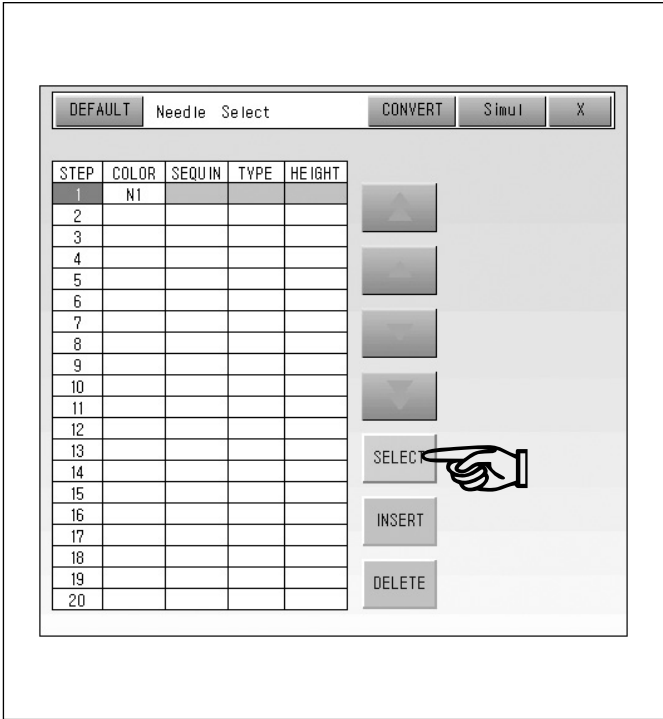


Fig. [1-7]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [1-6].
- ▶ Press Needle Bar Parameter Setting.
- ▶ If a screen like Fig. [1-7] appears, press SELECT in the step corresponding to taping embroidery by using an arrow key.

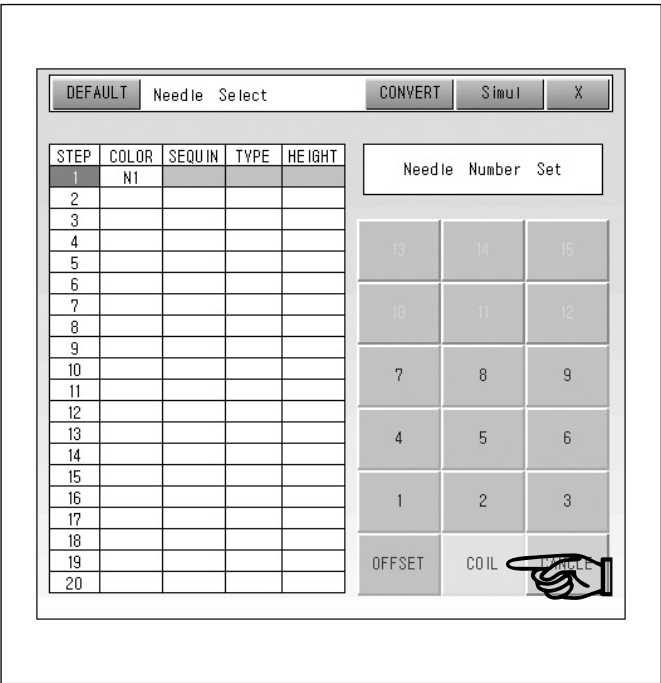


Fig. [1-8]

- ▶ If you press SELECT, you will see a needle bar setting screen as shown in Fig. [1-8].
- ▶ Use the number keypad when setting a standard head needle.  
If you choose COIL, a taping head will be assigned.
- ▶ For taping embroidery, select COIL.

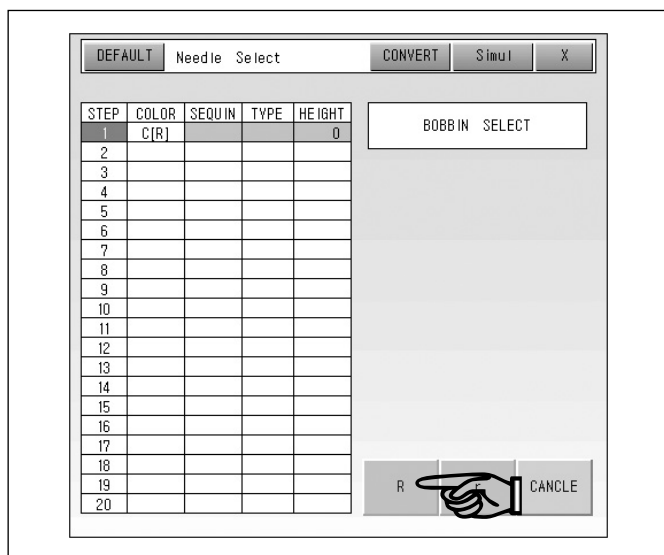


Fig. [1-9]

- ▶ If you select COIL, a bobbin select screen will appear.
- ▶ For the tape attachment, choose 'R' between 'R' and 'r'.
- ▶ If you select 'r', you cannot proceed the taping embroidery because a tape movement direction becomes reversed.

※ When using double bobbin → select 'r'.

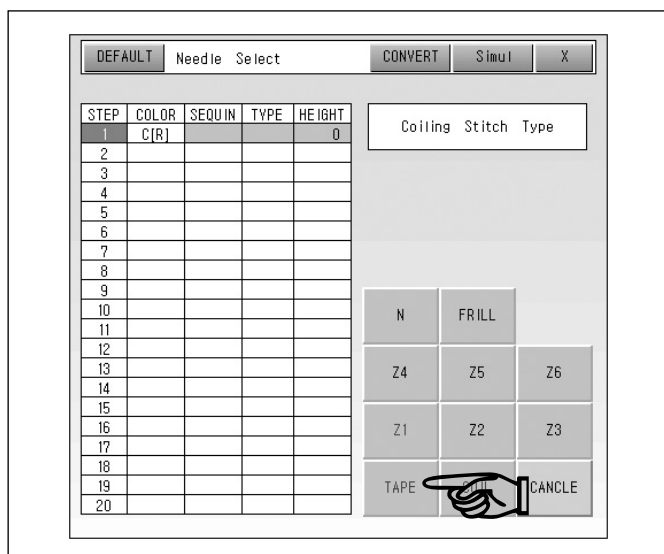


Fig. [1-10]

- ▶ Choose TAPE in Fig. [1-10] since it is taping embroidery.

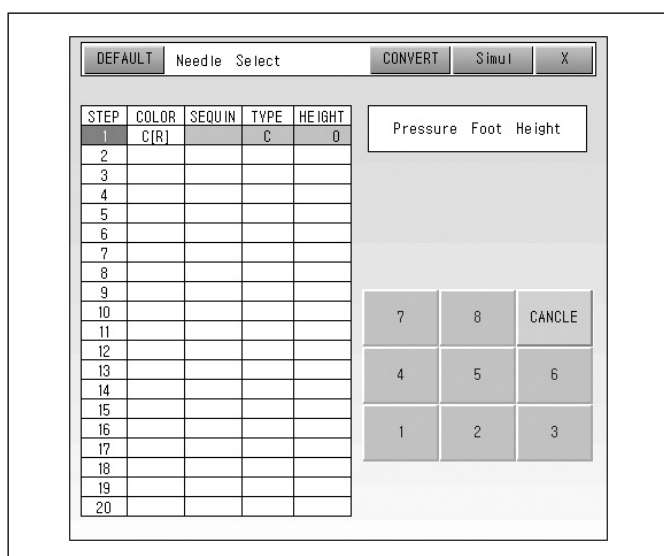


Fig. [1-11]

- ▶ The next phase is nipple height setting. You can set the height from step 1 to step 8. For taping embroidery, select a step with low nipple height and small swing amount.

※ Nipple height and swing amount are adjustable at each step.

## (2) Nipple height setting

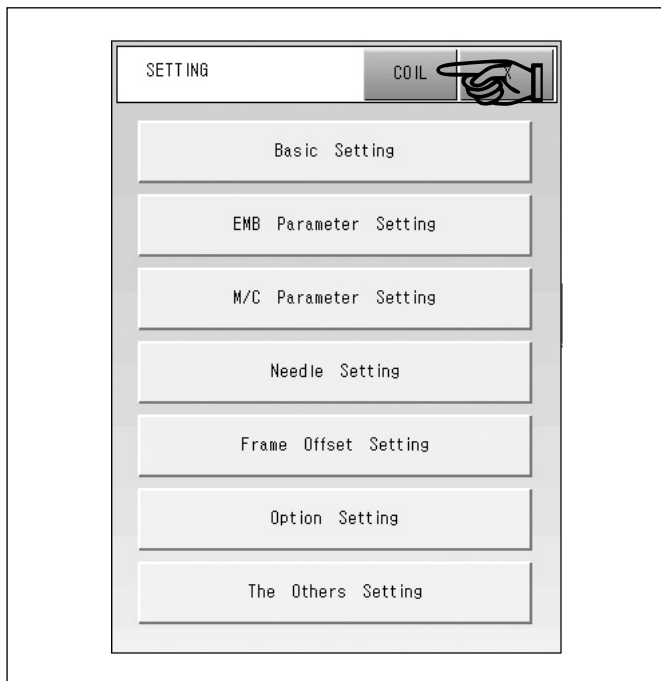


Fig. [1-12]

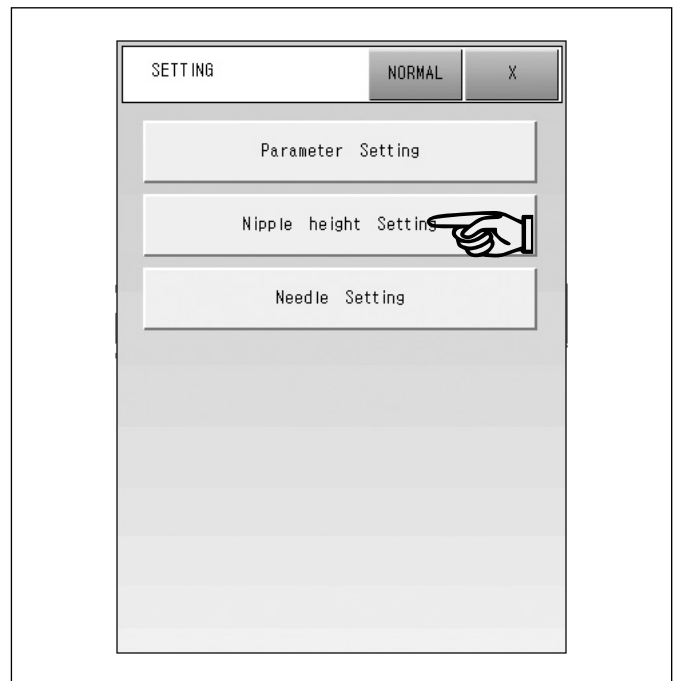


Fig. [1-13]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [1-12].
- ▶ If you press COIL at the top of the screen, a nipple height setting screen will appear as shown in Fig. [1-13].
- ▶ Press the Nipple Height Setting button, and you will see a screen like Fig. [1-14].

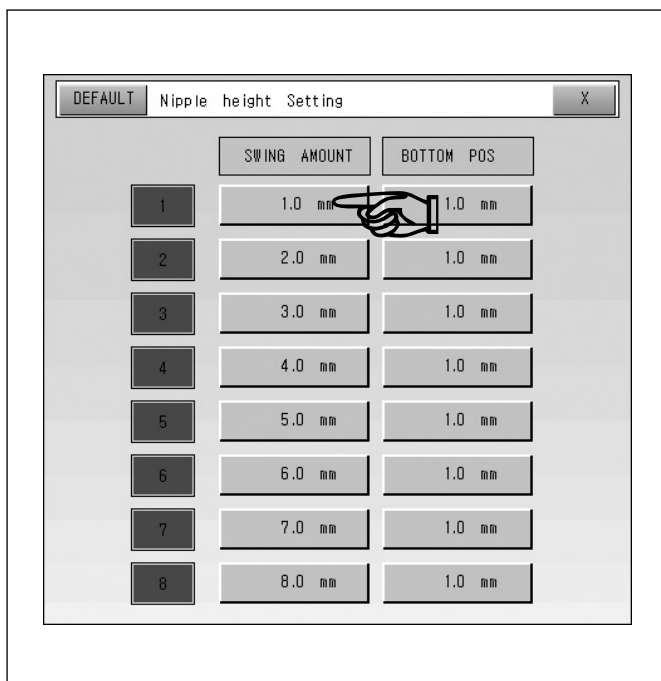


Fig. [1-14]

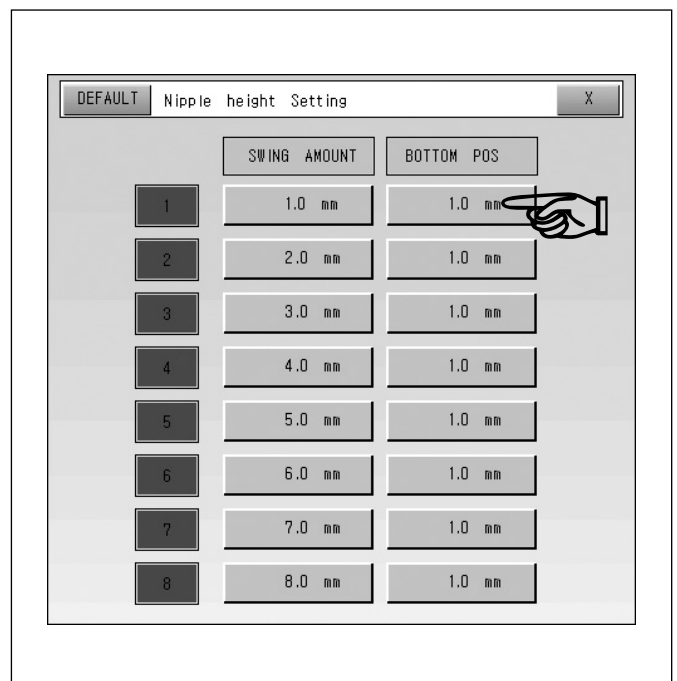


Fig. [1-15]

- ▶ You can save as many as 8 nipple heights as shown in Fig. [1-14].
- ▶ Nipple height can be set by selecting values of swing amount and bottom position.

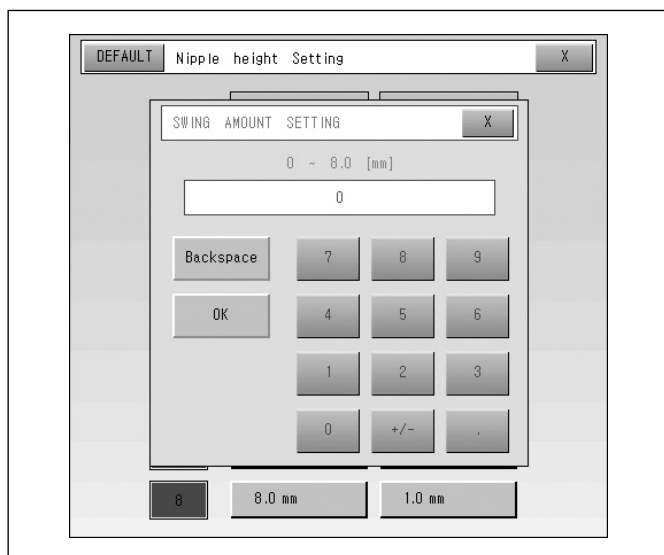


Fig. [1-16]

- ▶ If you choose the first button as shown in Fig. [1-14], a swing amount setting screen like Fig. [1-16] will appear.
- ▶ Swing amount setting is to set a vertical feed distance of the presser foot.
- ▶ You can set the value in the range of 0~8.0mm in the unit of 0.1mm.
- ▶ 1~2mm of swing amount is appropriate for taping embroidery.

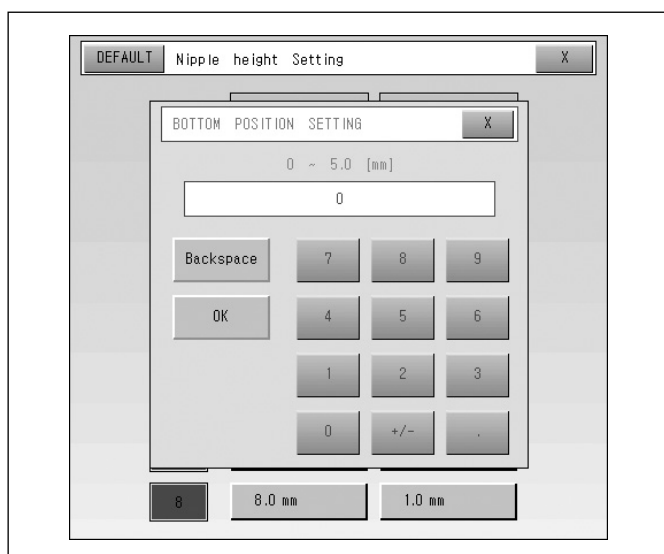


Fig. [1-17]

- ▶ If you choose the second button as shown in Fig. [1-15], a bottom position setting screen like Fig. [1-17] will appear.
- ▶ Bottom position setting is to set a height from the lowest point of presser foot to the needle plate. You can set the value in the range of 0~5.0mm in the unit of 0.1mm according to the type of materials.
- ▶ Bottom position is set according to the thickness of cloth and tape. For taping embroidery, it is recommended to set the bottom position as close to the upper side of the work table as possible.

---

## 5) Punching and matters to be noted

### (1) Punching

- Conduct a standard running operation.
- The stitch length should be 2.0mm~3.0mm.
- The stitch length should be shorter around the corners.
- When standard embroidery and other options are conducted, taping embroidery is better to be the last process.

### (2) Matters to be noted

- Stop signals should be given both at the beginning and the end (for trimming). (The signals are not necessary in the case of embroidery using double bobbin.)
- If cord threads or beads are placed on a tape, the tape will become flat.
- When beading and taping are conducted simultaneously, select their colors separately.  
Conduct taping first and then beading operation at the end.
- For designs with many sharp curves, stitches should be close together. Otherwise the tape can be deviated. It is recommended to avoid designs with sharp curves.

## 6) Matters to be noted

NO.	Matters to be noted
1	If the bottom of tape guide is lower than the presser foot, the tape guide can hit the needle plate. Make sure that the tape guide is not positioned lower than the presser foot.
2	In the case of a large size tape guide, tape is not supplied properly without sub-support. Make sure to use a sub-support for stable supply of tape.
3	If tape guide and guide nipple are not properly located, taping can lean toward one side or even the needle misses the target around a sharp curve area. Make sure that tape guide and guide nipple are properly fixed to the machine.
4	If tape is not properly wound on the bobbin, taping can lean toward one side. Make sure that tape is appropriately wound around the bobbin.
5	If the bobbin rotates too smoothly, materials get loose. Make sure that the bobbin tension is not too weak.
6	If the bobbin rotation is not smooth, materials are not twirled off the bobbin, which leads to no stitches made. Make sure that the bobbin tension is not too strong.
7	If the bobbin bracket is not located at an appropriate position, it can cause an M-axis error due to interference with other neighboring parts.
8	Before starting a work, check whether a thread is wound on or displaced from the needle.

## 2

## Zigzag Swing attachment

### 1) Fixing the attachment to the machine

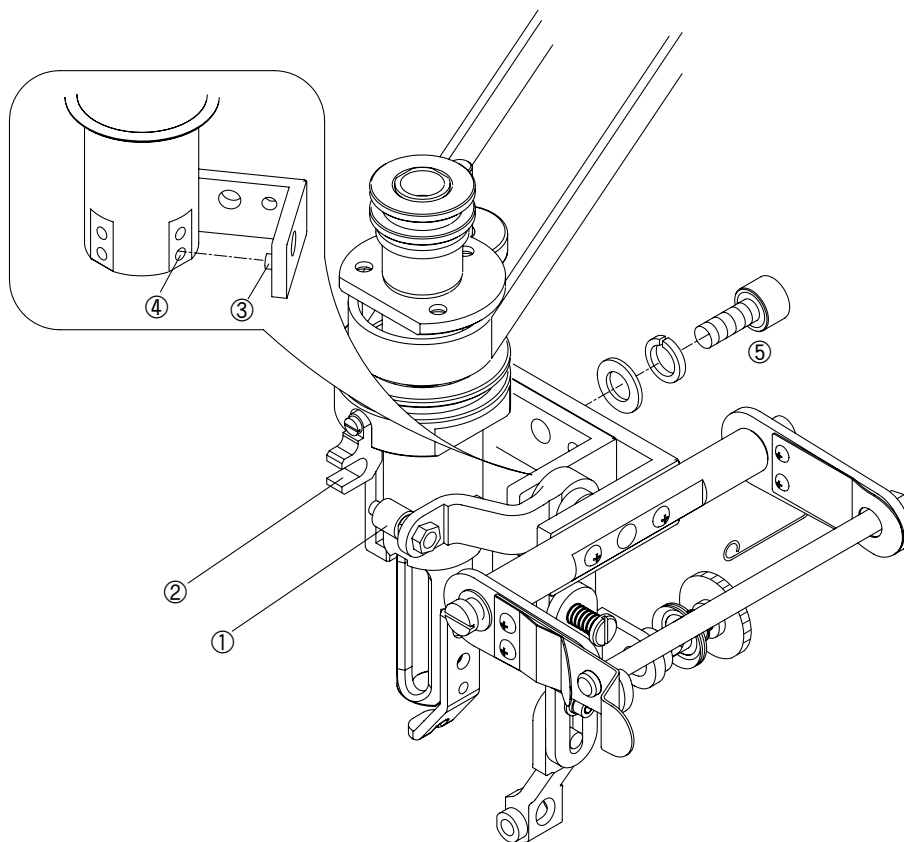


Fig. [2-1]

- ▶ For zigzag embroidery, fix a zigzag swing attachment or a double bobbin to the machine.
- ▶ The following is the explanation on the embroidery work with zigzag swing attachment placed on the machine.  
The embroidery work with double bobbin will be explained in the Double Bobbin attachment part.
- ▶ As shown in the Fig. [2-1], place the roller① of zigzag swing attachment into the rotary ring②, and put the pin③ into the hole④ and then tighten the screw⑤ to fix the zigzag swing attachment.



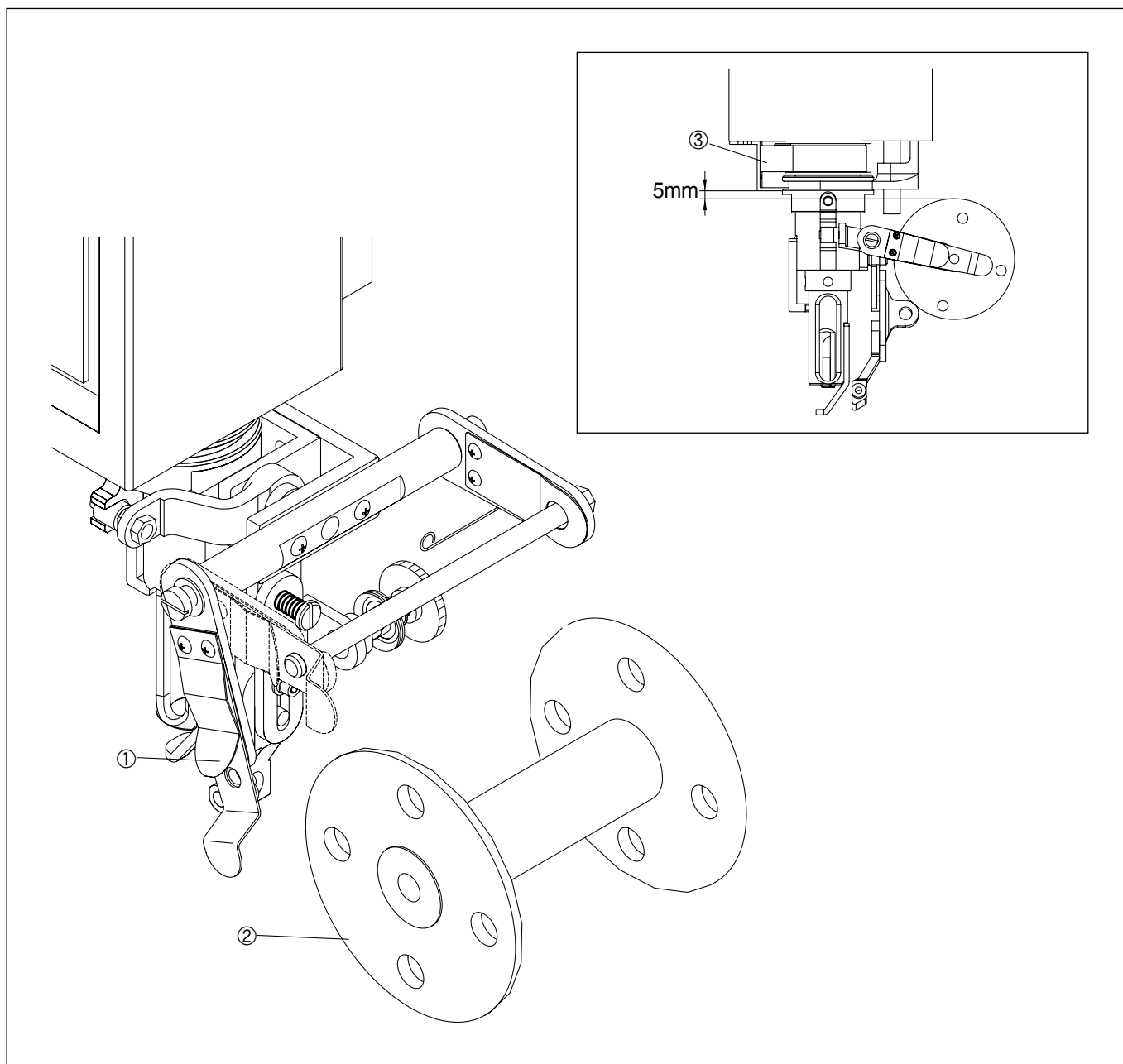


Fig. [2-2]

- ▶ After fixing the zigzag swing attachment, pull the bobbin bracket and the spring①to the side and pull them down to place the bobbin②as shown in Fig. [2-2].
- ▶ When placing the bobbin, carefully adjust it not to hit the pulley cover of the M-axis. If it is too lowered, adjust it to an appropriate position not to hit the frame.
- ▶ The best position for the bobbin is 5mm away from the lower surface of the tapping arm.
- ▶ Adjust the tension of thread when it is wound off the bobbin by using the bobbin tension adjusting bolt④.

## 2) Fixing the cord guide for zigzag embroidery to the machine

### (1) Cord guide setting

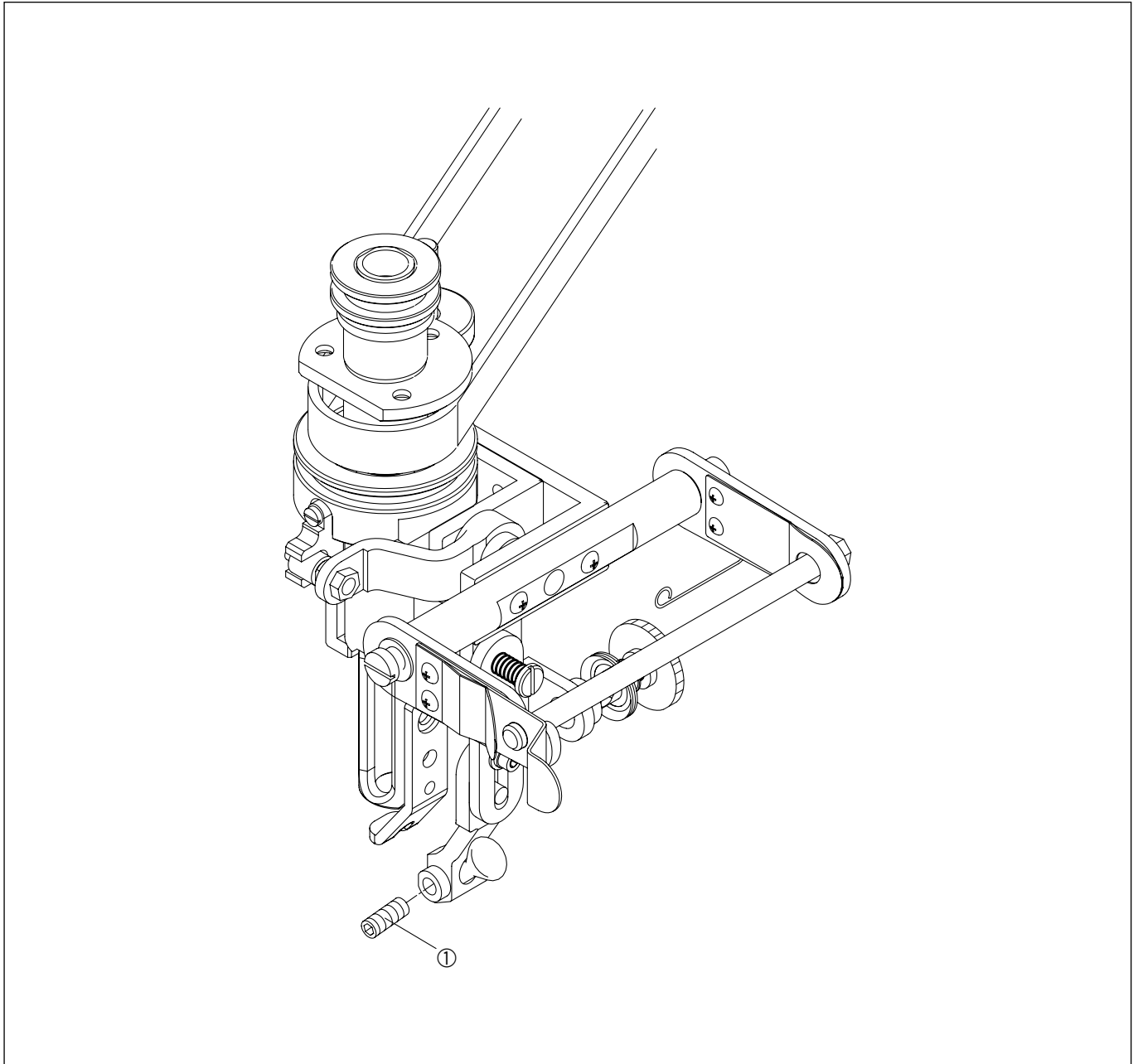


Fig. [2-3]

- ▶ As shown in the Fig. [2-3], set the guide by tightening the screw ①.
- ▶ Select an appropriate type of cord guide according to the type of thread.

► Cord guide height setting:

The height of cord guide should be set a little higher (0.5~1mm) than the thickness of the thread to use.

Loosen the screw ① and adjust the guide support up and down.

If its height is too low, the cord guide can get caught on the work material.

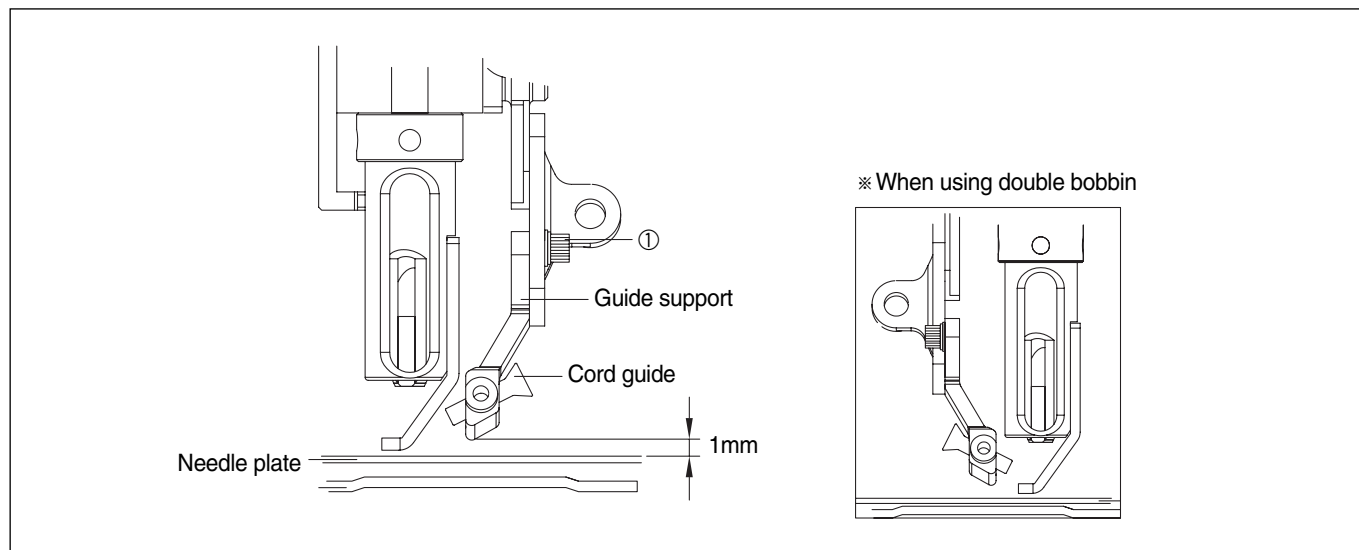


Fig. [2-4]

(2) Zigzag swing position setting

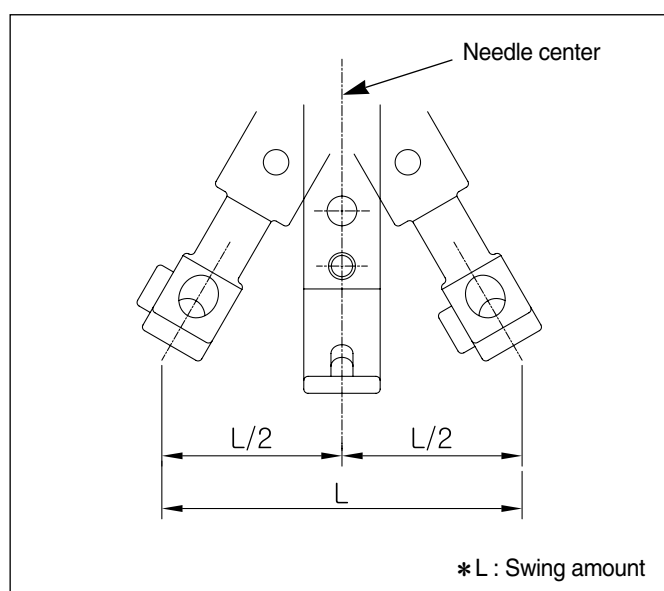


Fig. [2-5]

- When the cord guide moves from the center of the presser foot to the side (zigzag swing), check whether it consists with the half value of the swing amount. If it leans toward one side, adjust its setting as shown in Fig. [2-5].
- The cord guide is placed behind the presser foot from the user direction.

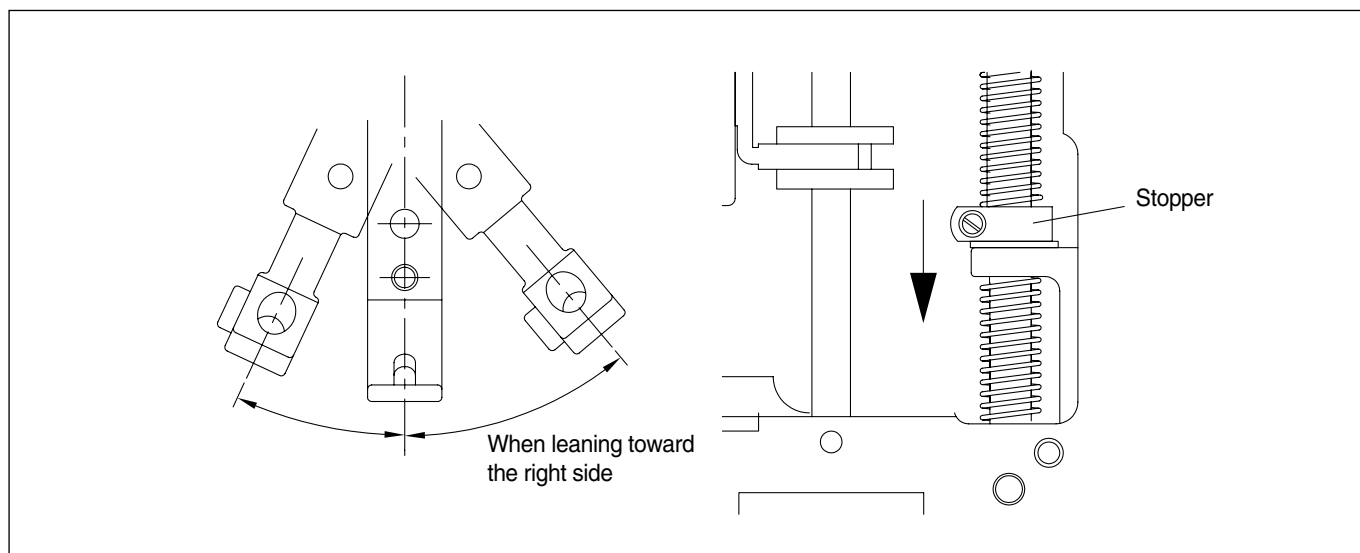


Fig. [2-6]

- If the swing leans toward the right side from the user direction, adjust the stopper downward to place the swing position at the center.

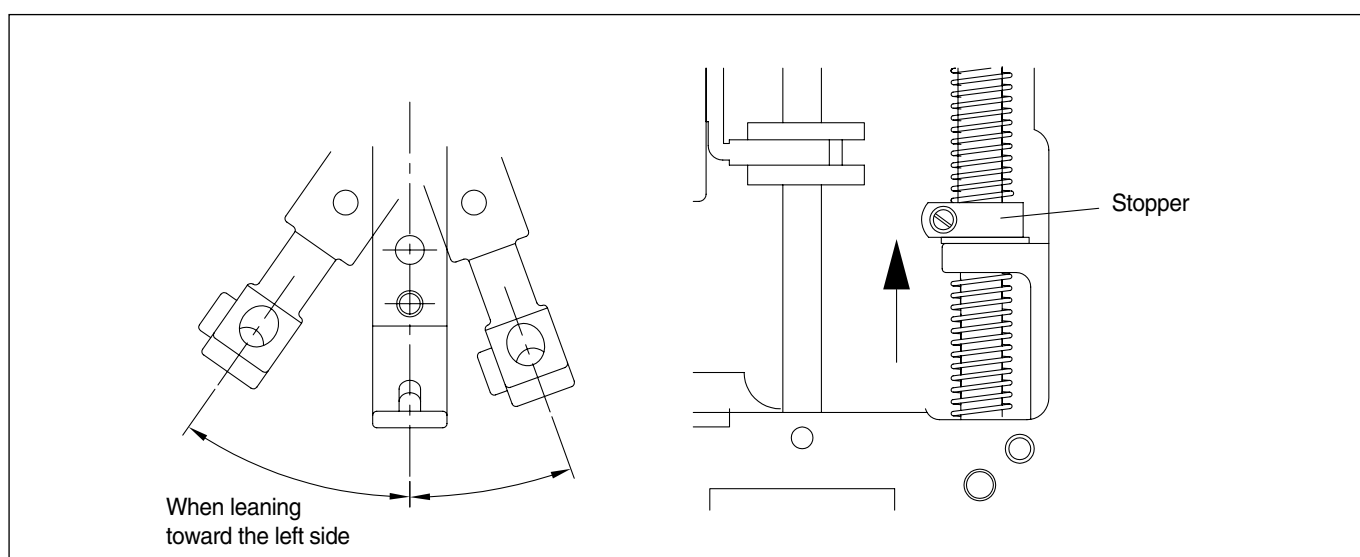



Fig. [2-7]

- If the swing leans toward the left side from the user direction, adjust the stopper upward to place the swing position at the center.

 <p>Adjustment</p>	<p><b>Stopper appears when the front cover of the arm is removed.</b></p>
---	---

### 3) Thread placement and setting

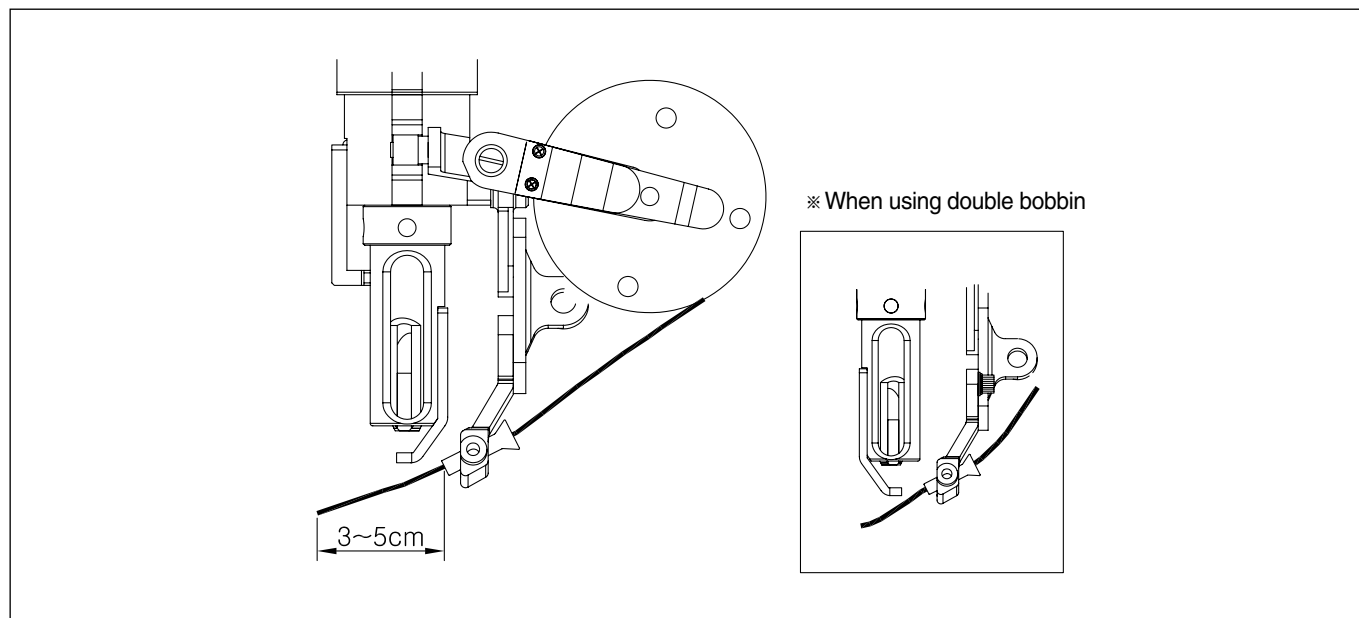


Fig. [2-8]

- ▶ Put a thread through the cord guide after fixing the bobbin to the zigzag attachment.  
Set the thread leaving the length at 3~5cm from the end of cord guide.  
Adjust the thread tension to make it not to strong.
- ▶ In the case of hard material thread such as beads, wind only an appropriate amount on the bobbin. Otherwise it is twirled off the bobbin, impeding the operation.
- ▶ At first, make several stitches by using inching and stop the machine to cut the remaining thread. And then proceed the operation.

## 4) Operation

### (1) Needle bar setting

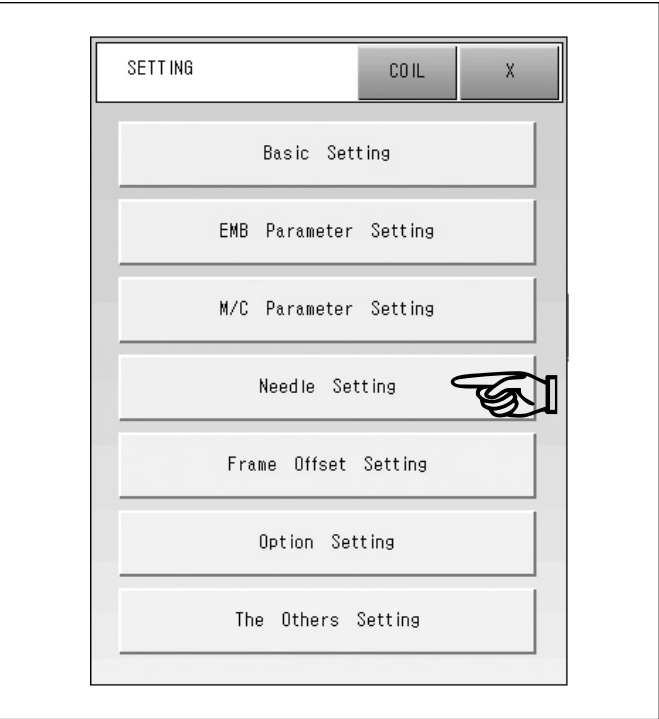


Fig. [2-9]

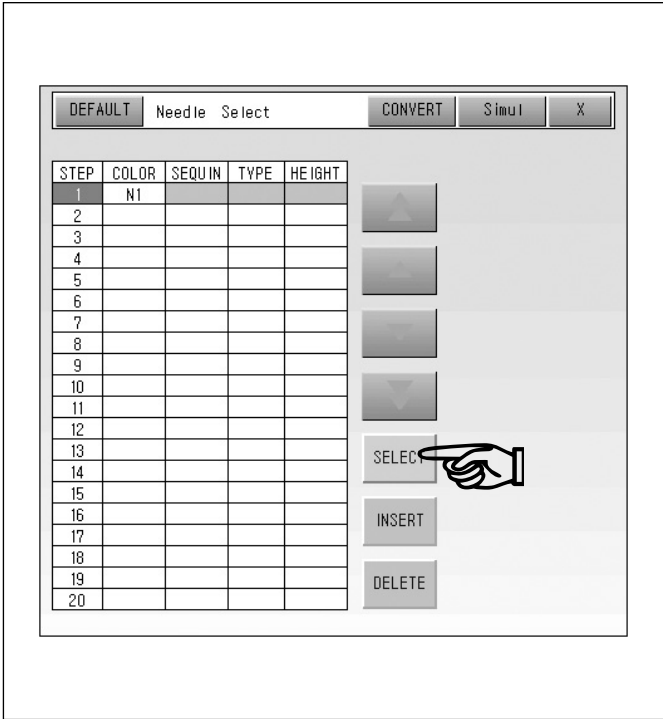


Fig. [2-10]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [2-9].
- ▶ Press Needle Bar Parameter Setting.
- ▶ If a screen like Fig. [2-10] appears, press SELECT in the step corresponding to zigzag embroidery by using an arrow key.

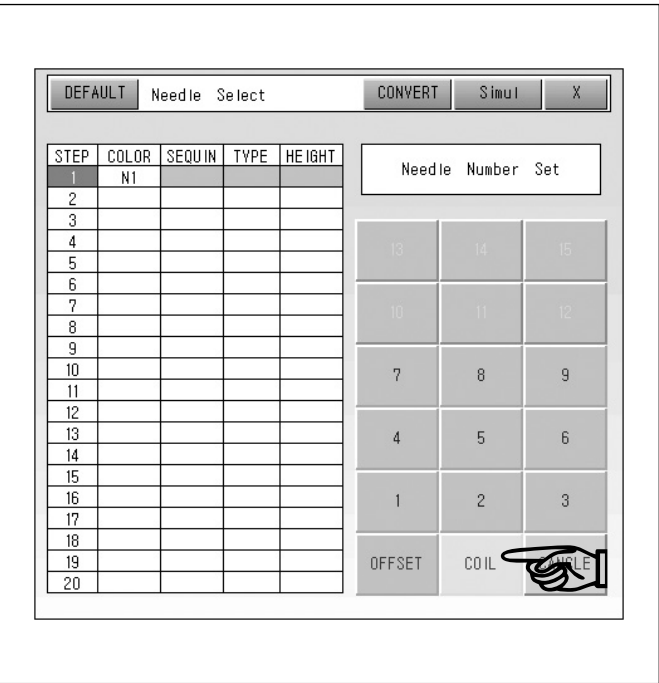


Fig. [2-11]

- ▶ If you press SELECT, you will see a needle bar setting screen as shown in Fig. [2-11].
- ▶ Use the number keypad when setting a standard head needle.  
If you choose COIL, a taping head will be assigned.
- ▶ For zigzag embroidery, select COIL.

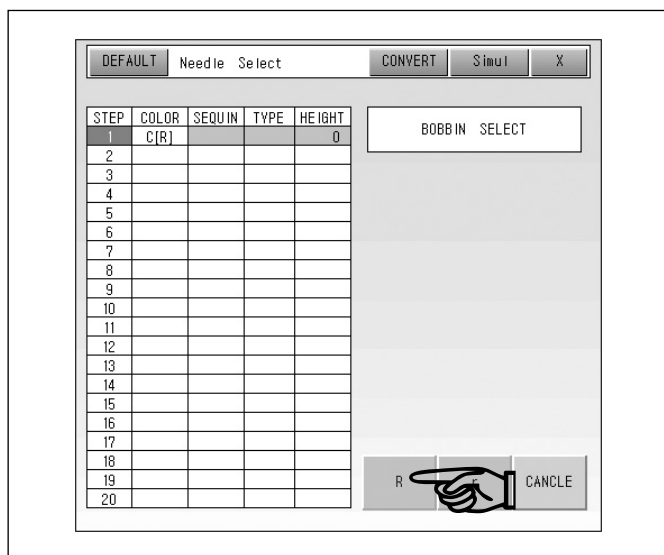


Fig. [2-12]

- ▶ If you select COIL, a bobbin select screen will appear.
- ▶ Choose 'R' for zigzag swing attachment.
- ▶ If you select 'r', you cannot proceed the zigzag embroidery because a zigzag movement direction becomes reversed.

- ※ When using double bobbin → select 'R'.
- ※ For the zigzag embroidery, select only 'R'.

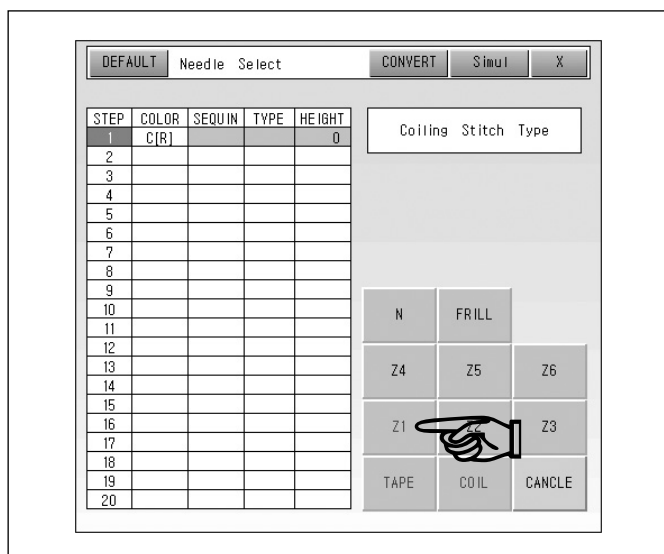


Fig. [2-13]

- ▶ This is a screen for zigzag mode setting (Fig. [2-13]). Choose from Z1 ~Z6 modes according to the conditions of zigzag embroidery.

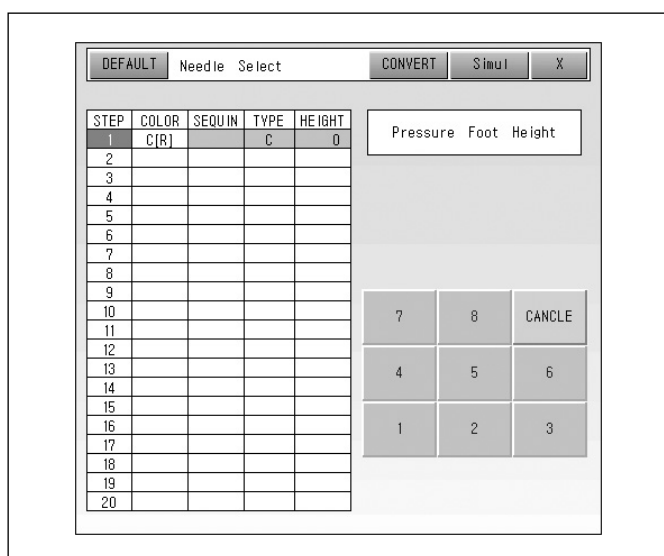


Fig. [2-14]

- ▶ The next phase is nipple height setting. You can set the height from step 1 to step 8. You should set the nipple height according to the types of zigzag embroidery.

## (2) Nipple height setting

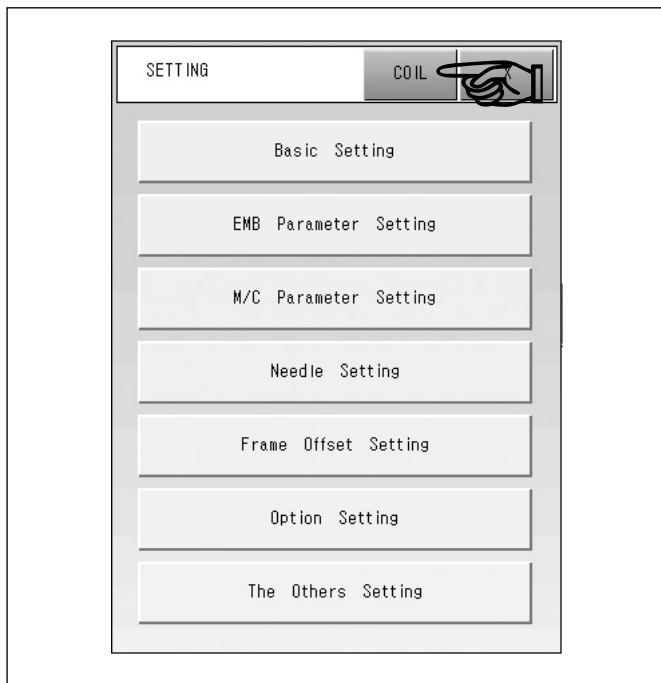


Fig. [2-15]

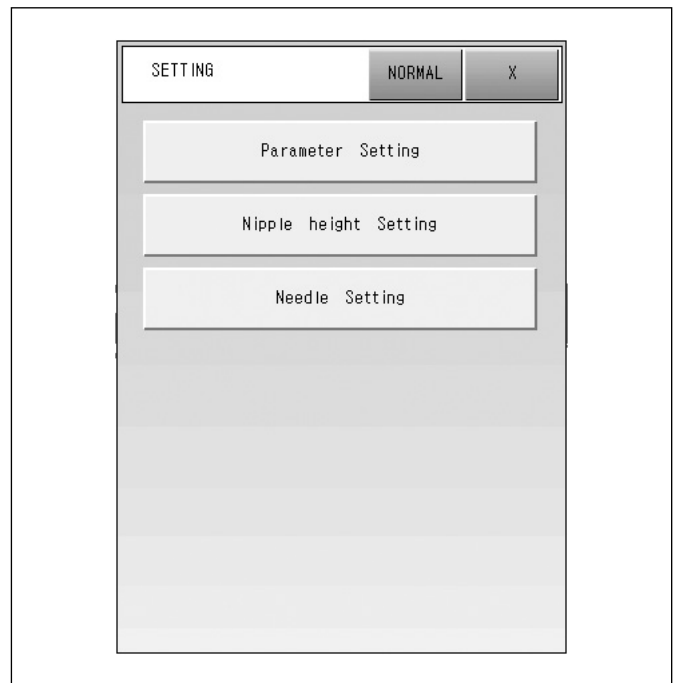


Fig. [2-16]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [2-15].
- ▶ If you press COIL at the top of the screen, a nipple height setting screen will appear as shown in Fig. [2-16].
- ▶ Press the Nipple Height Setting button, and you will see a screen like Fig. [2-17].

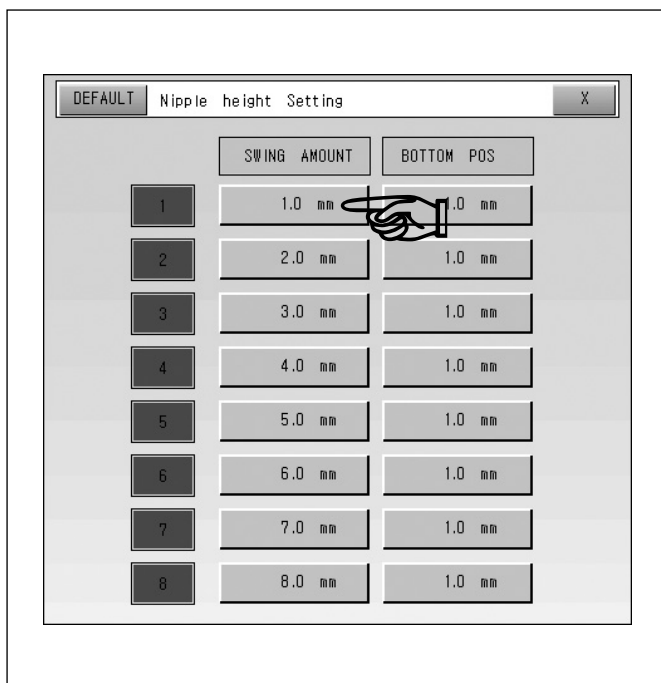


Fig. [2-17]

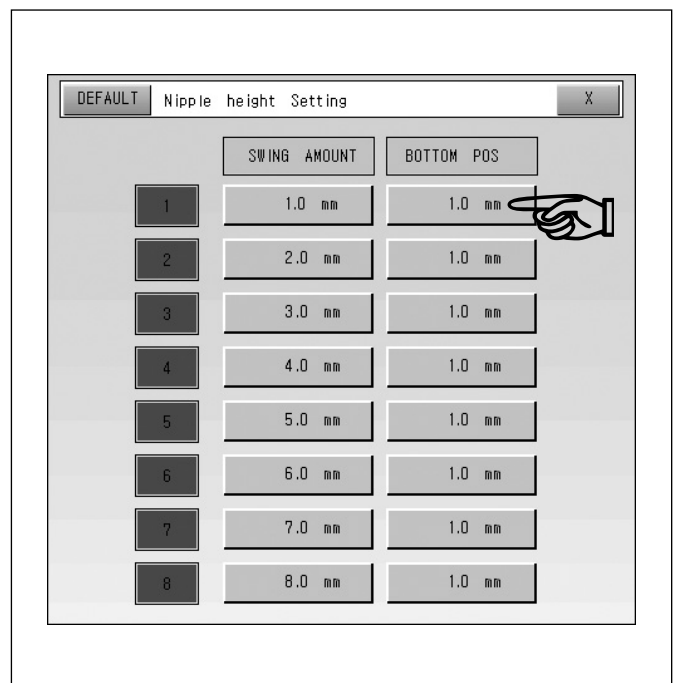


Fig. [2-18]

- ▶ You can save as many as 8 nipple heights as shown in Fig. [2-17].
- ▶ Nipple height can be set by selecting values of swing amount and bottom position.



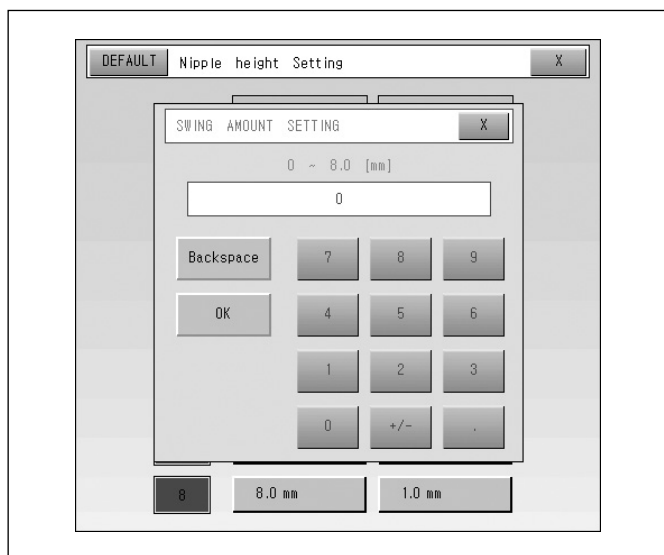


Fig. [2-19]

- ▶ If you choose the first button as shown in Fig. [2-17], a swing amount setting screen like Fig. [2-19] will appear.
- ▶ Swing amount setting is to set a vertical feed distance of the presser foot.
- ▶ You can set the value in the range of 0~8.0mm in the unit of 0.1mm.
- ▶ Set an appropriate swing amount according to the types of zigzag embroidery. The recommended swing amount is 5mm.

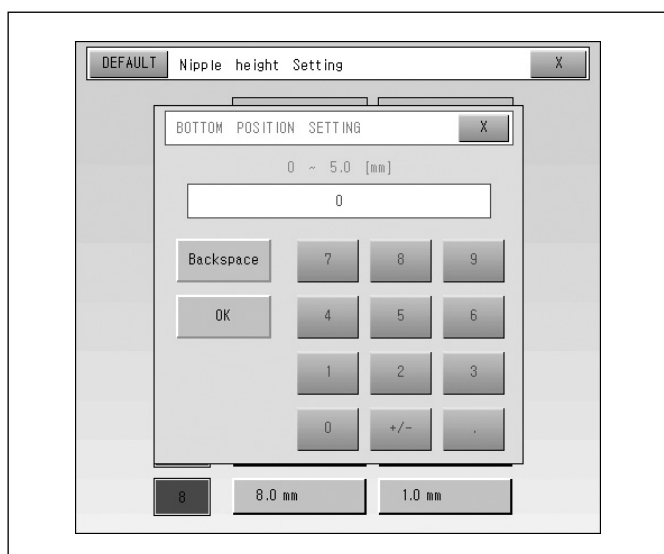


Fig. [2-20]

- ▶ If you choose the second button as shown in Fig. [2-18], a bottom position setting screen like Fig. [2-20] will appear.
- ▶ Bottom position setting is to set a height from the lowest point of presser foot to the needle plate.
- ▶ You can set the value in the range of 0~5.0mm in the unit of 0.1mm according to the type of zigzag embroidery.
- ▶ Bottom position is set according to the types of cloth and thread. For zigzag embroidery it is recommended to set the bottom position as higher than the upper part of thread as possible.

### (3) Zigzag swing amount setting

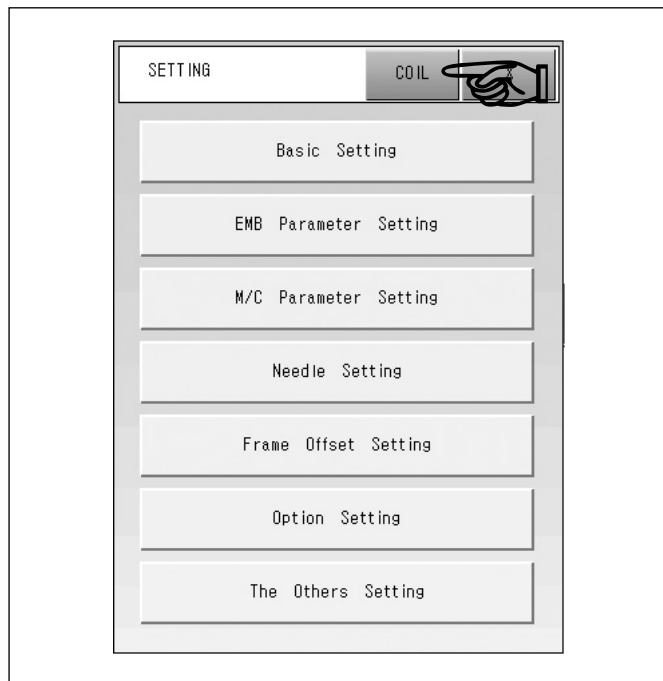


Fig. [2-21]

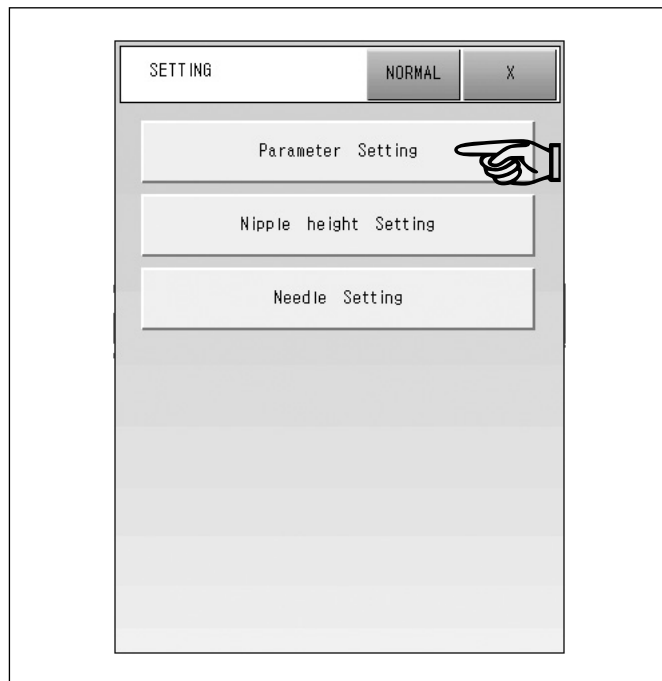


Fig. [2-22]

- If you press **SETTING** at the bottom of the main screen, the setting menu will appear as shown in Fig. [2-21]. If you press **COIL** at the top of the screen, a coiling parameter setting screen will appear as shown in Fig. [2-22].

Press the Coiling Parameter Setting button, and you will see a screen like Fig. [2-23].

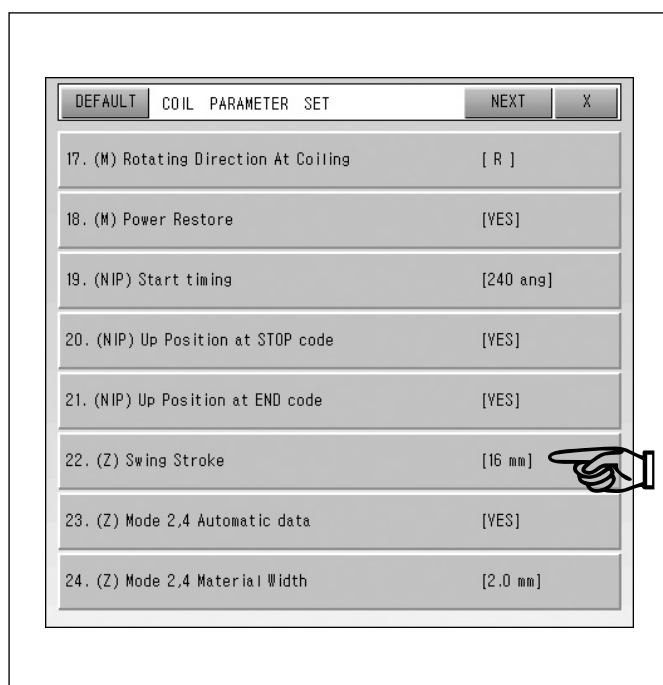


Fig. [2-23]

- If you select **(Z) Swing Amount Setting** in the coiling parameter setting screen, you can set a zigzag swing value.

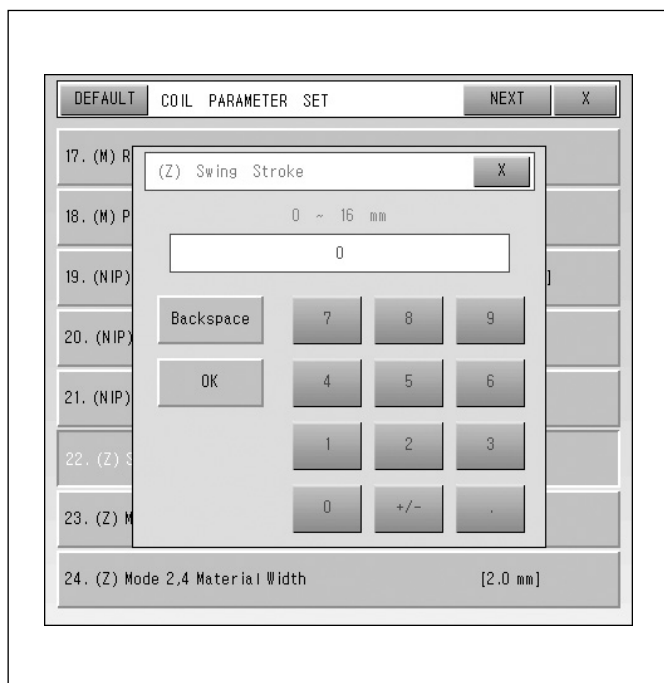


Fig. [2-24]

- Zigzag swing value refers to the width of swing. The default value is 8mm and you can set the value in the range of 0~16mm. Select the value according to the width of materials.

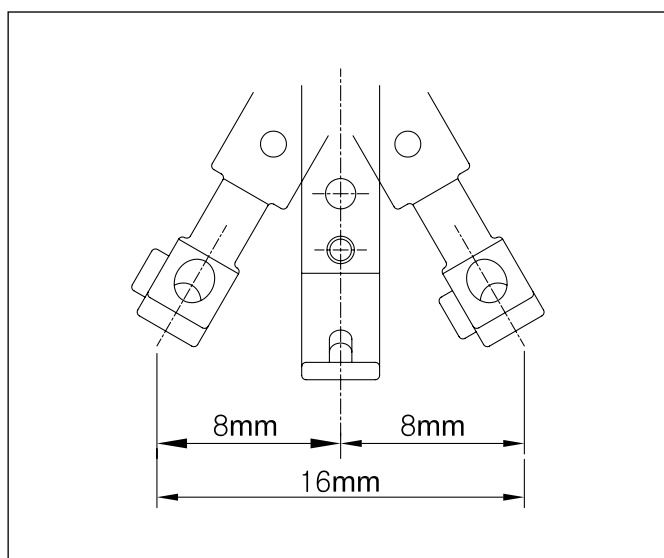


Fig. [2-25]

- In the case of 16mm setting

## 5) Characteristics by zigzag mode

### (1) Z1 mode

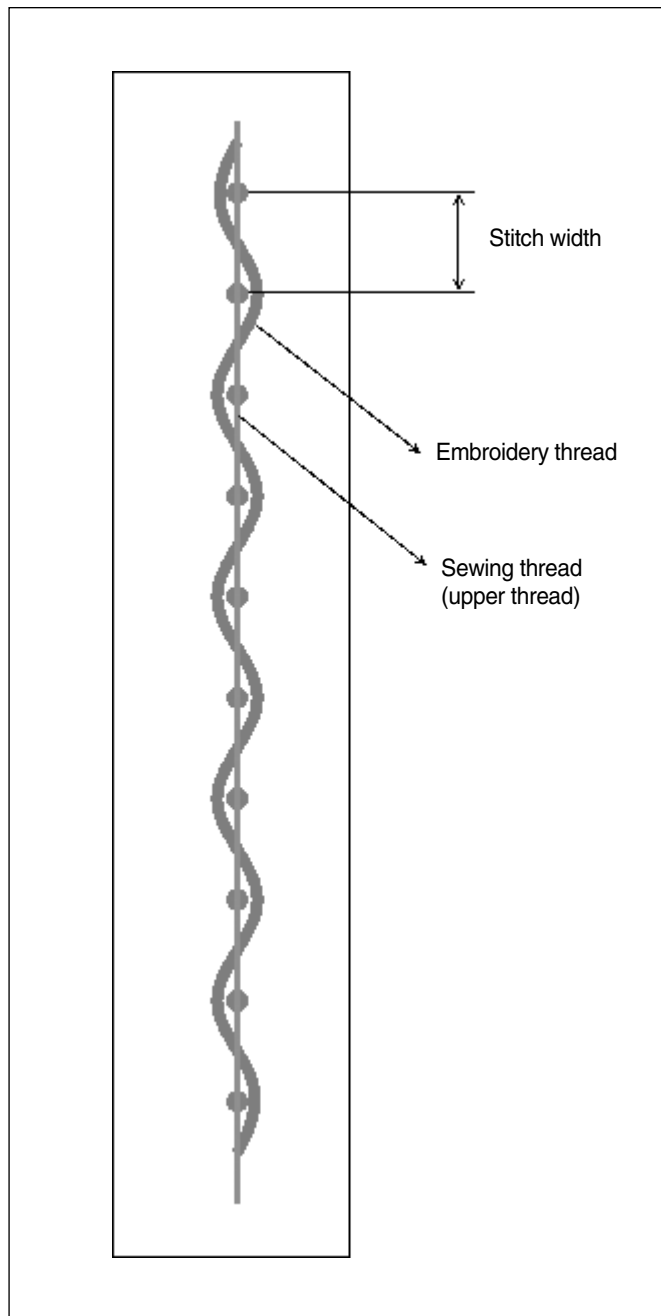


Fig. [2-26]

► Z1 mode is a widely used method.

The swing plate is swinging from side to side one time per every stitch.

The final outcome looks like 'S' shape.

There are no setting values other than the zigzag swing amount.

## (2) Z2 mode

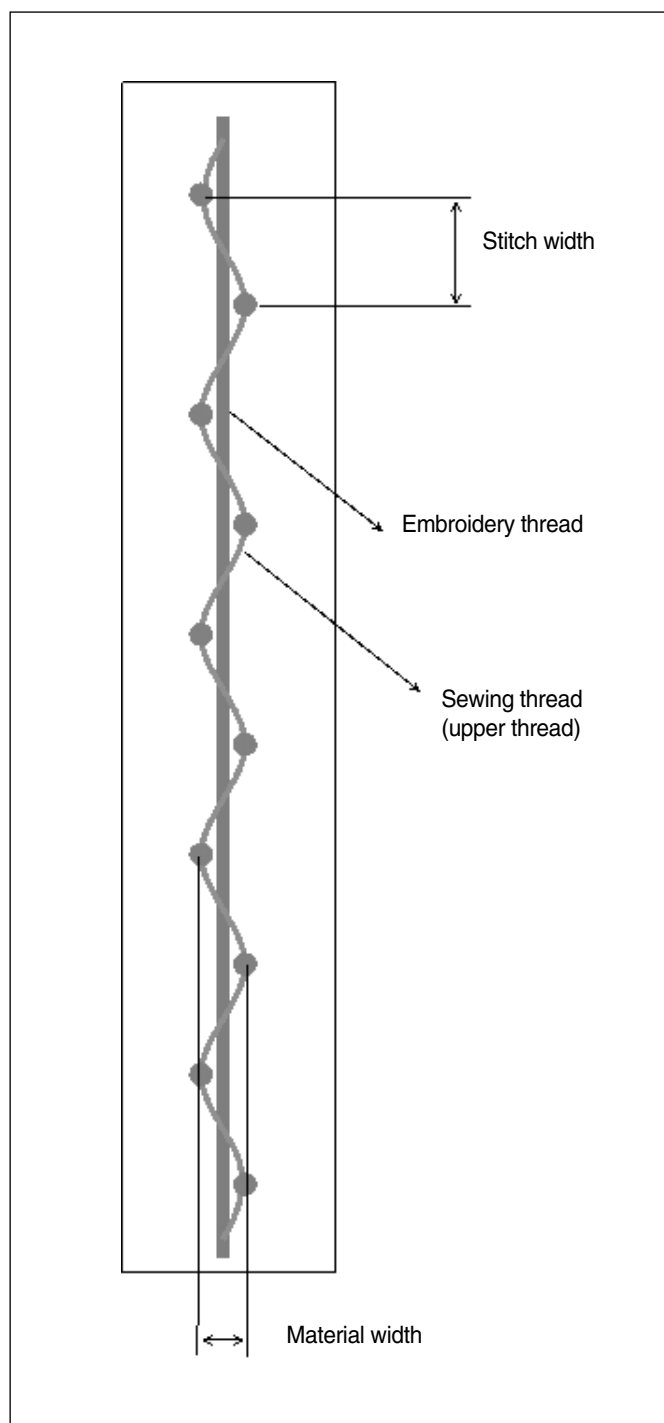


Fig. [2-27]

► Z2 mode is a widely used method.

The swing plate is swinging from side to side one time and the frame is also moving from side to side per every stitch.

Z2 mode is mainly used when thick embroidery threads are used.

The final outcome looks like ' - ' shape.

The zigzag swing amount value is same as the existing value and the frame material width can be set in the range of - 1~ - 12.7mm or +1~ +12.7mm.

## ※ Frame material width setting

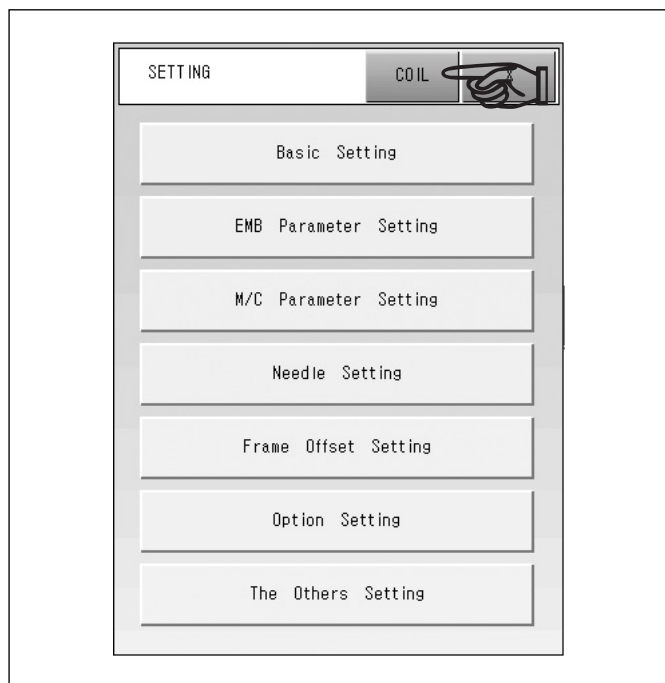


Fig. [2-28]

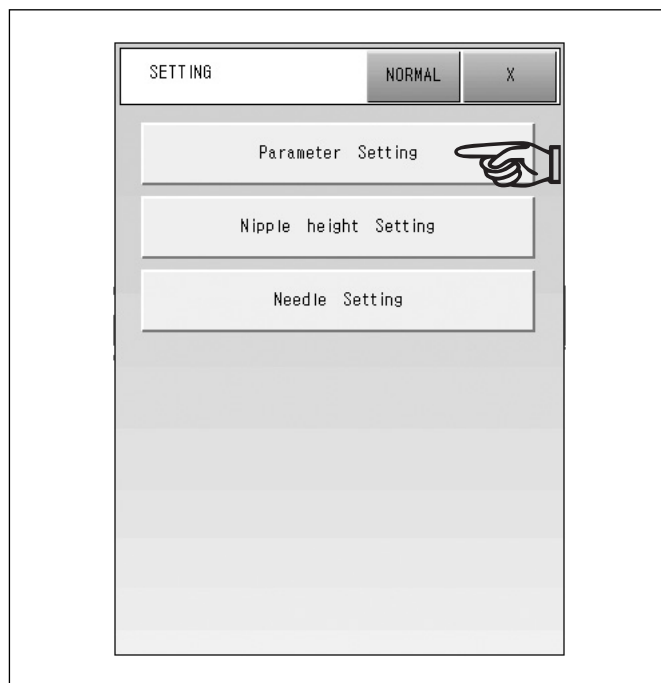


Fig. [2-29]

- If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [2-28]. If you press COIL at the top of the screen, a coiling parameter setting will appear as shown in Fig. [2-29]. Press the Coiling Parameter Setting button, and you will see a screen like Fig. [2-30].

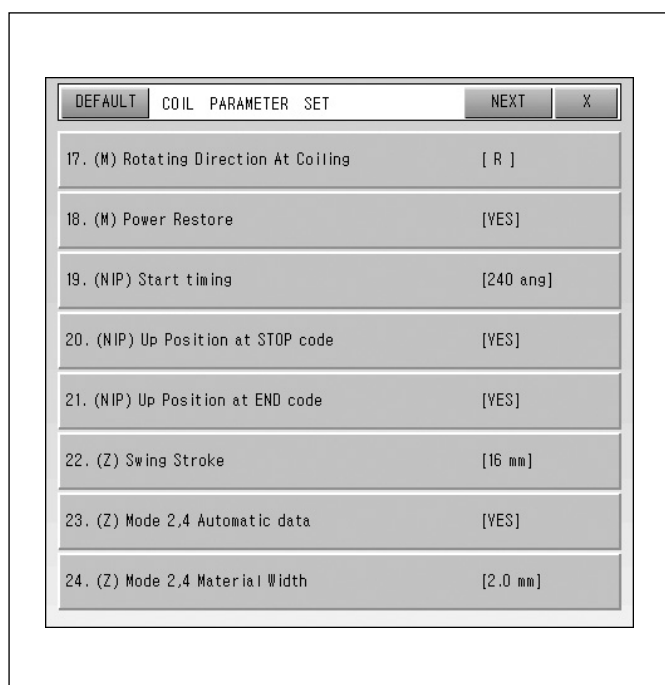


Fig. [2-30]

- You can set a value of frame material width when using (Z) mode 2 and 4 in the coiling parameter setting screen.

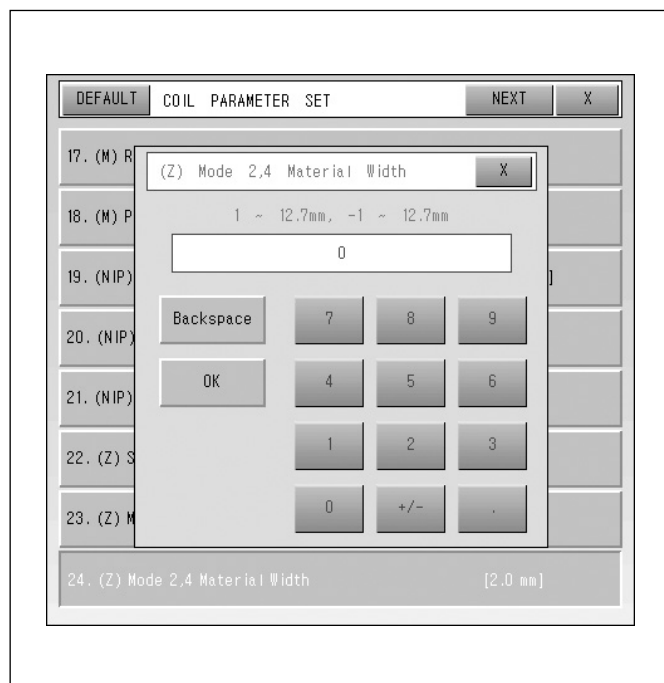


Fig. [2-31]

- The value of frame material width means the length of frame's movement from side to side.

You can set a value of frame material width in the range of - 1 ~ - 12.7mm or +1 ~ +12.7mm.

' - ' and ' + ' refer to left and right, respectively.

Set the value according to the width of material.

### (3) Z3 mode

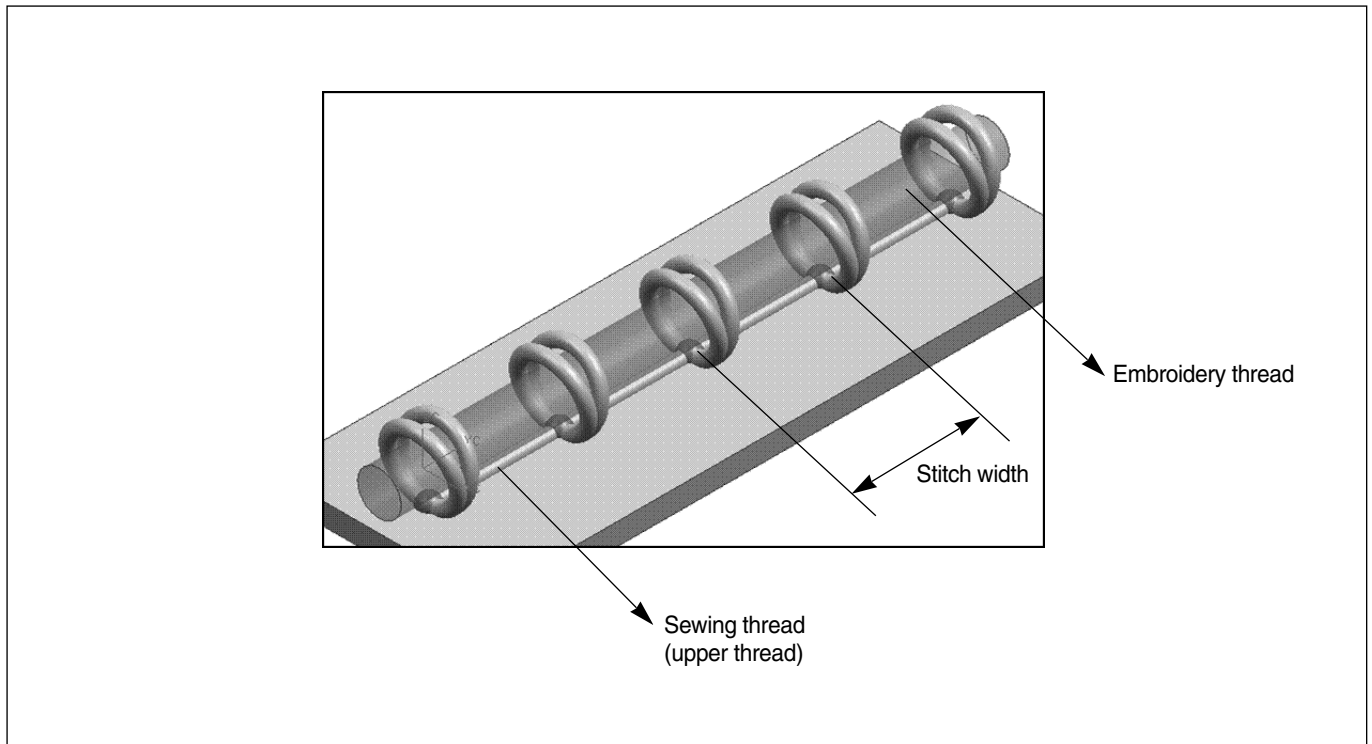


Fig. [2-32]

- In the Z3 mode, the needle stitches the same spot three times; first of all, after moving to the embroidery position, the needle bar goes down to stitch the fabric. Then after the swing plate swings to the right side and comes back to where it was, the needle bar goes down again to stitch the fabric on the same spot. Lastly, the swing plate swings to the left side and then the needle bar goes down again. After this process of three needle strokes on the same spot, the needle moves to the next embroidery position.

The final outcome looks like ‘ - ’ shape.

There are no setting values other than the zigzag swing amount.

However, the thread can break and the work speed is slow.



#### (4) Z4 mode

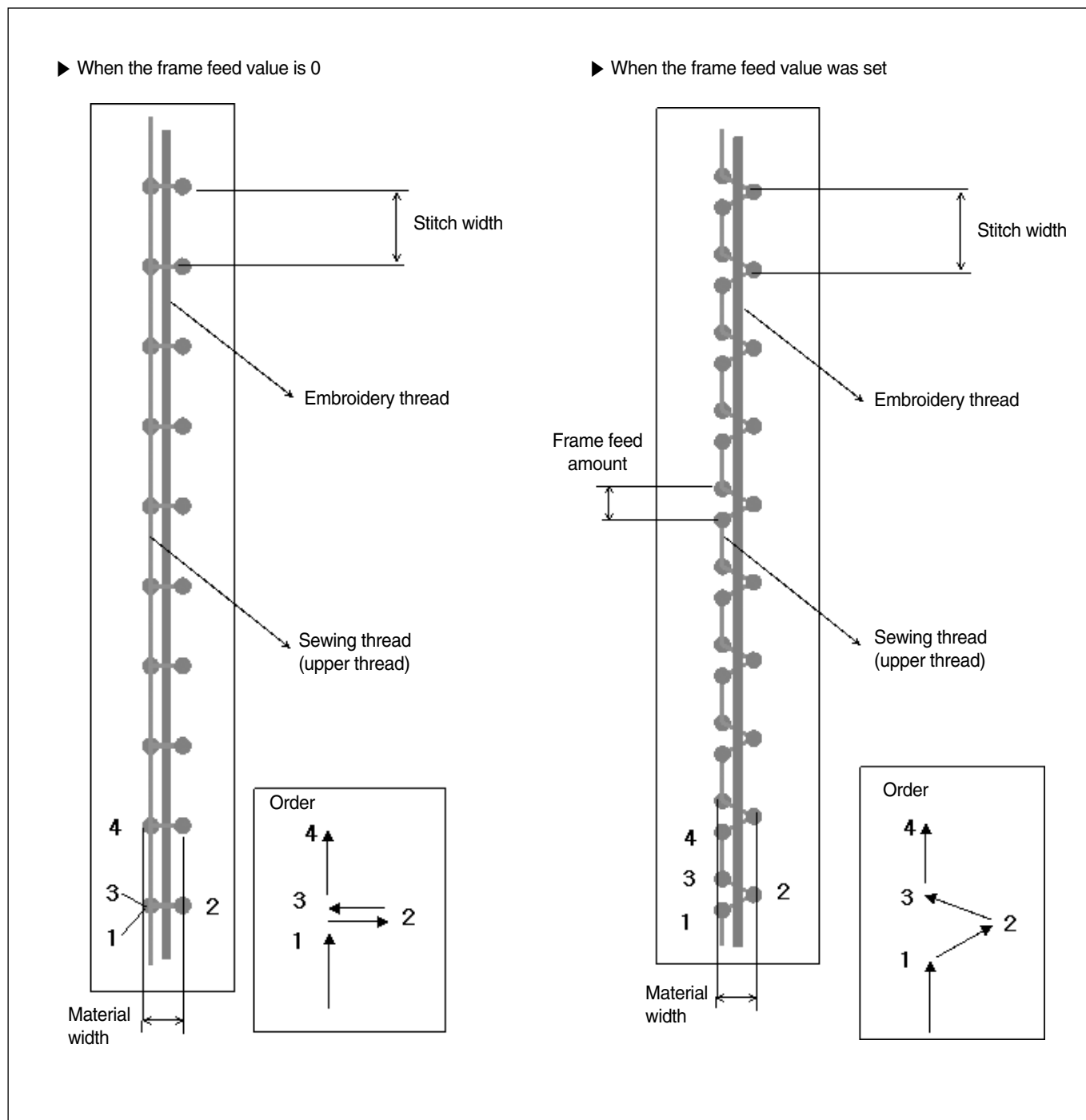


Fig. [2-33]

- The swing plate is swinging from side to side one time and the frame is also moving from side to side per every stitch.

The final outcome looks like ' - ' shape.

The zigzag swing amount value is same as the existing value and the frame material width and frame feed amount should be set.

The frame material width can be set in the range of - 1~ - 12.7mm or + 1~ + 12.7mm and the embroidery position changes according to whether the value is - or +.

The frame feed amount can be set in the range of 0~12.7mm.

## ※ Frame feed amount setting

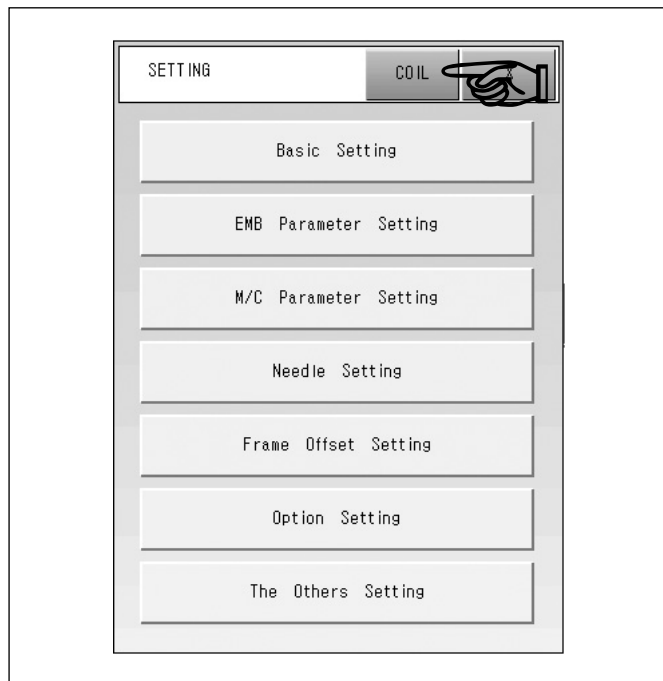


Fig. [2-34]

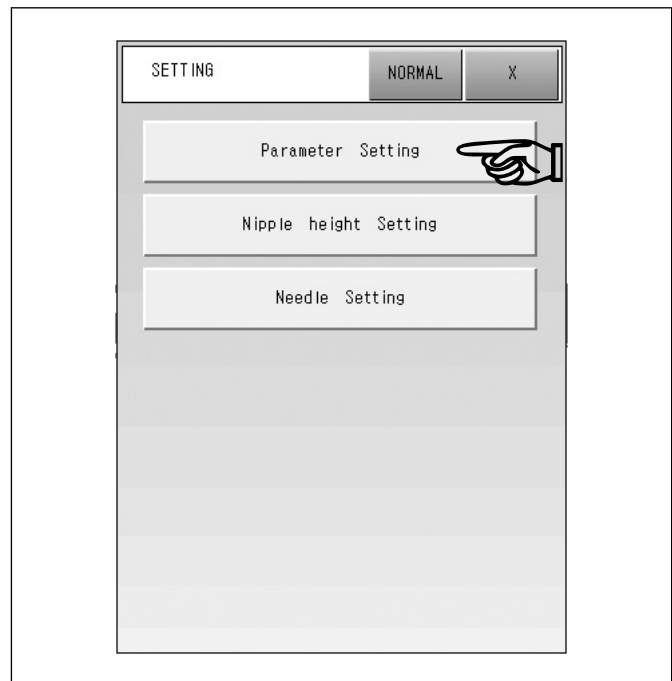


Fig. [2-35]

- If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [2-34]. If you press COIL at the top of the screen, a coiling parameter setting screen will appear as shown in Fig. [2-35].

Press the Coiling Parameter Setting button, and you will see a screen like Fig. [2-36].

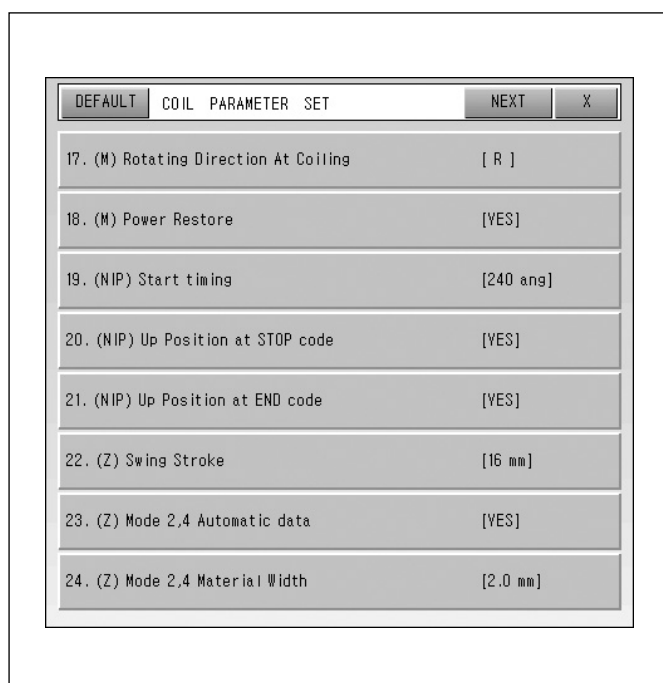


Fig. [2-36]

- You can set a frame feed amount value when using (Z) mode 2 and 4 in the coiling parameter setting screen.

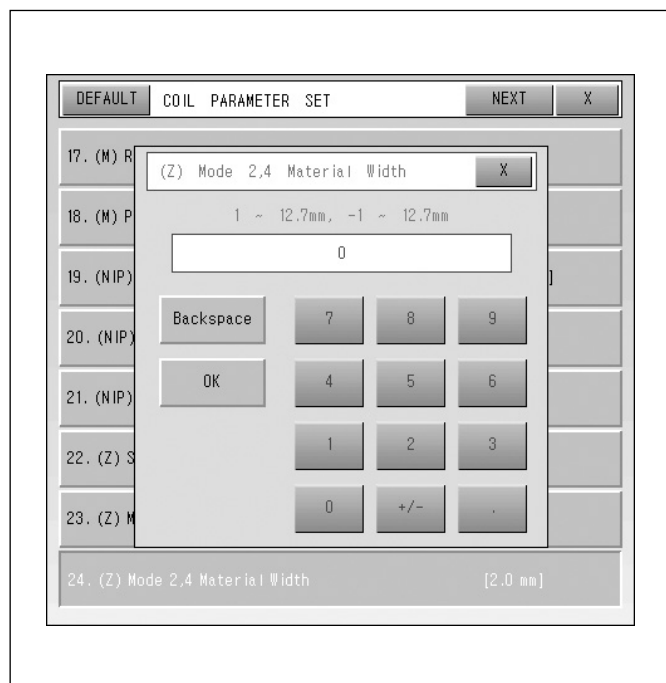


Fig. [2-37]

- The frame feed amount value refers to the amount of frame movement to the front.

The frame feed amount can be set in the range of 0~12.7mm.

### (5) Z5 mode

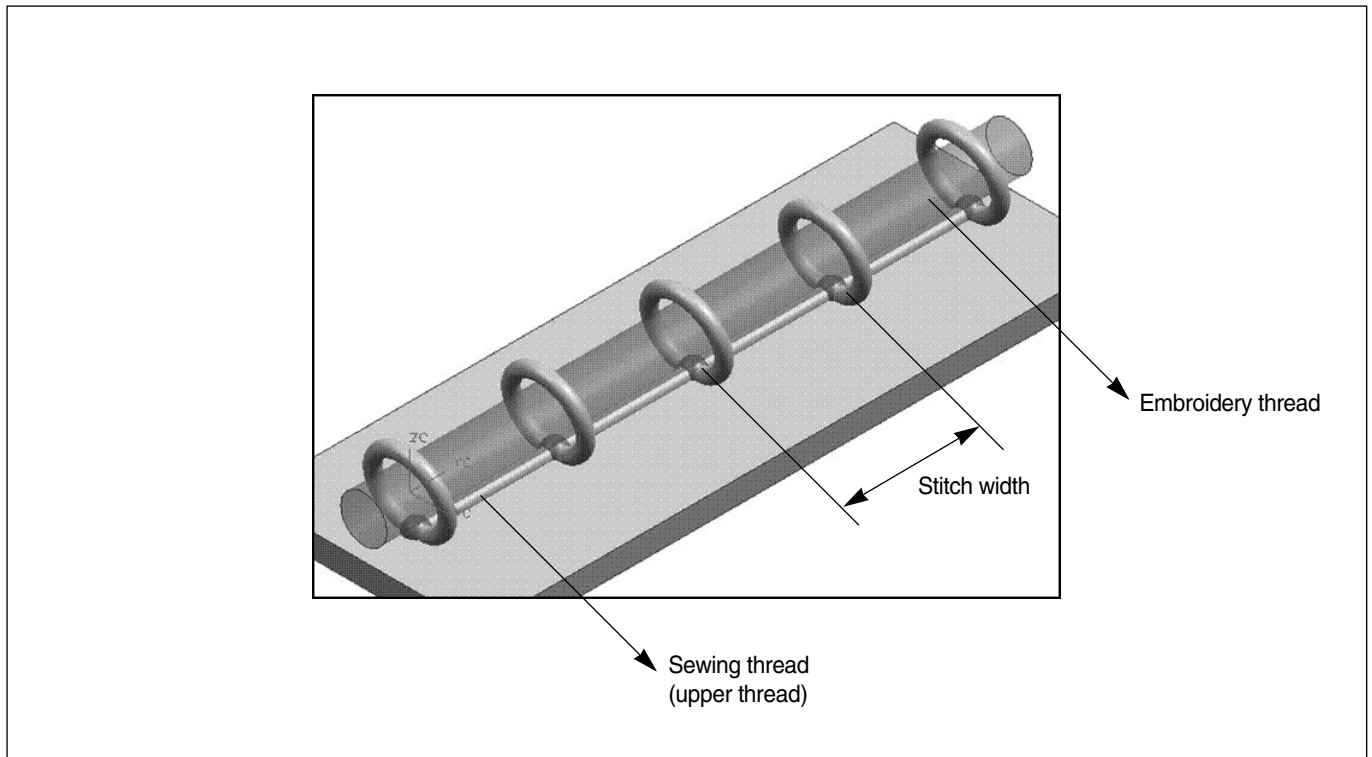


Fig. [2-38]

- In the Z5 mode, the needle stitches the same spot two times; first of all, after moving to the embroidery position, the needle bar goes down to stitch the fabric. Then the swing plate swings to the right side and the needle bar goes down again. While the swing plate stays at the right, the needle bar moves to the next embroidery position and goes down to stitch the fabric. And the swing plate swings to the left side and the needle bar goes down again. While the swing plate stay at the left, the needle bar moves to the next embroidery position. The final outcome looks like ‘-’ shape. There are no setting values other than the zigzag swing amount. However, the thread can break and the work speed is slow.

## (6) Z6 mode

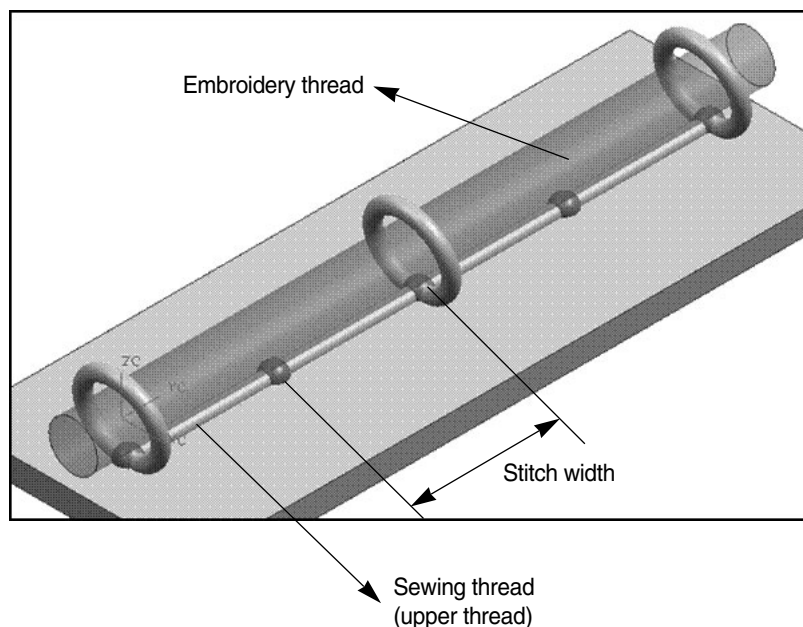


Fig. [2-39]

- Z6 mode is almost same as Z5 mode except that it skips one stitch during the process; after moving to the embroidery position, the needle bar goes down to stitch the fabric. Then the swing plate swings to the right side and the needle bar goes down again. While the swing plate stays at the right, the needle bar moves to the next embroidery position and goes down to stitch the fabric. And then the needle bar moves one stitch further and do embroidery on the fabric and after the swing plate swings to the left the needle bar goes down again. While the swing plate stays at the left, the needle bar moves to the next embroidery position. The final outcome looks like '—' shape. There are no setting values other than the zigzag swing amount. However, the thread can break and the work speed is slow.

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## 6) Punching and matters to be noted

### (1) Punching

- Conduct a standard running operation.
- The appropriate stitch length is 2.0mm~3.0mm, but it can be adjusted according to the type of materials.
- The stitch length should be shorter around the corners.
- If there are standard embroidery and other options, zigzag embroidery is better to be the last process.

### (2) Matters to be noted

- Stop signals should be given both at the beginning and the end. -for trimming  
(The signals are not necessary in the case of embroidery by using double bobbin.)
- If cord threads or beads are placed on a tape, the tape will become flat.
- It is recommended not to repeat the work on the same area.  
→ A needle can be broken on the overlapped area in the case of beading.
- Make notes with 7~8 stitches of standard embroidery both at the beginning and the end.
- When beading and taping are conducted simultaneously, select their colors separately.
- Be careful when conducting the beading work around the corner area  
→ For an angular corner, conduct the beading work to make it gentle curve.
- Be careful of the line parallel to the beading line  
→ Gap between lines should be adjusted according to the size of beads.
- Sharp curves make the work difficult. It is recommended to avoid designs with sharp curves.

## 7) Matters to be noted during the work

NO.	Matters to be noted
1	When a cord guide inappropriate for the thickness of material is used, supply of materials cannot be made smoothly. Make sure to use an appropriate cord guide according to the thickness of material.
2	Guide support can interfere with the cloth depending on the thickness of materials. Make sure to adjust the guide support not to interfere with the cloth. Also, adjust the nipple height on O/P (refer to the text).
3	If the bobbin does not wind off easily, it makes the round of cord thread smaller at the corner area and makes stitches more visible. On the contrary, if the bobbin winds off too easily, it makes the cord thread not straight. (Therefore it is important to set appropriate tensions for upper thread and bobbin.)
4	As embroidery materials can be deviated (when no stitch are made) in the sharp curve area, it is recommended to punch stitches closely when conducting design punching and to avoid designs with sharp curves.
5	When setting the nipple height, if a bottom position value is set too low it can cause interference with the embroidery materials. Make sure to set an appropriate bottom position value according to the thickness of cloth and material.
6	When setting the nipple height, if a swing amount of presser foot is small, it can cause interference between material and presser foot during the zigzag embroidery. Make sure to set an appropriate swing amount value according to the thickness of cloth and material.
7	Keep in mind the followings when replacing the cord guide; if the distance between presser foot and cord guide is too far, it makes the swing width smaller, resulting in displacement of cord thread during the embroidery work. If the distance is too close, it makes the tension of cord thread too strong.
8	Select an appropriate mode from Z1 to Z6 according to the type of materials.

### 3

## Coiling attachment

### 1) Fixing the attachment to the machine

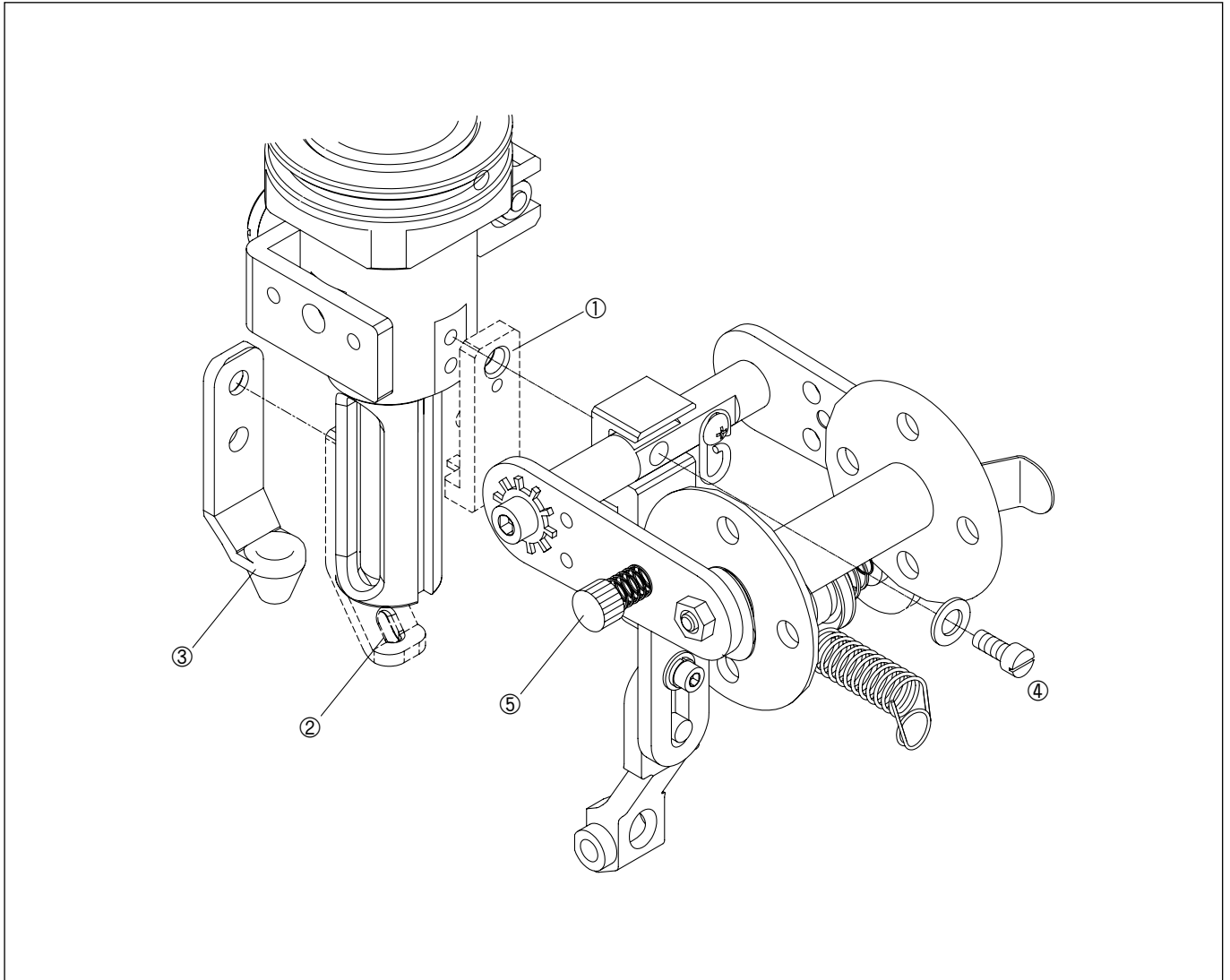


Fig. [3-1]

- ▶ For coiling work, a coiling attachment and a coiling presser foot should be set on the machine.
- ▶ First of all, remove the nipple rotating block① and put the coiling attachment instead.
- ▶ Replace the standard presser foot② with the coiling presser foot③.
- ▶ Fix the coiling attachment by tightening the screw④ as shown in Fig [3-1].
- ▶ Adjust the tension of thread when it is wound off the bobbin by using the bobbin tension adjusting bolt⑤.  
During the coiling work, the coiling presser foot does not rotate.



## 2) Fixing the coiling cord guide to the machine

### (1) Cord guide setting

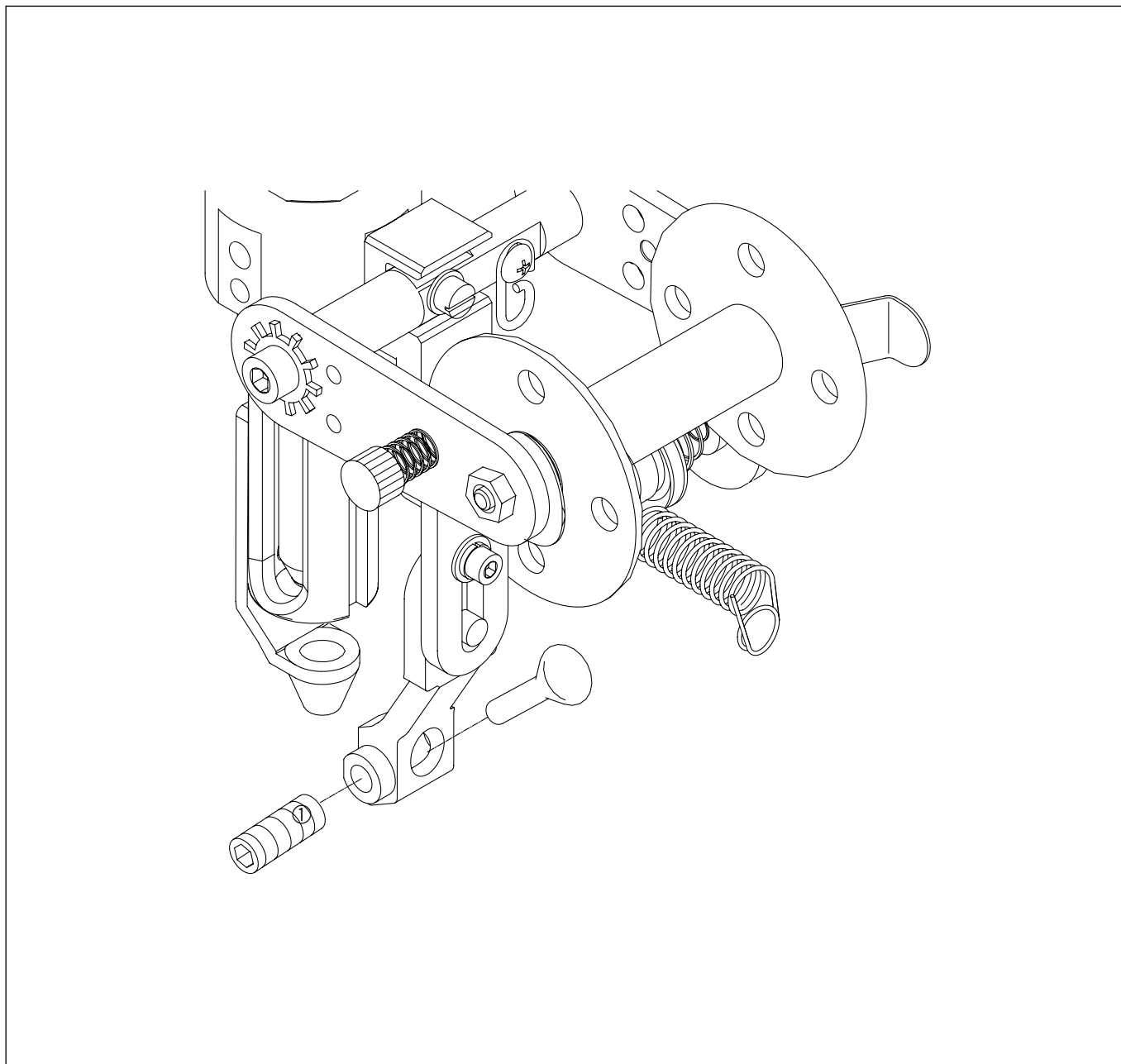


Fig. [3-2]

- ▶ Place the cord guide by using the cord guide screw ① as shown in Fig. [3-2].
- ▶ Select an appropriate cord guide according to the type of thread used.

## (2) Cord guide height setting

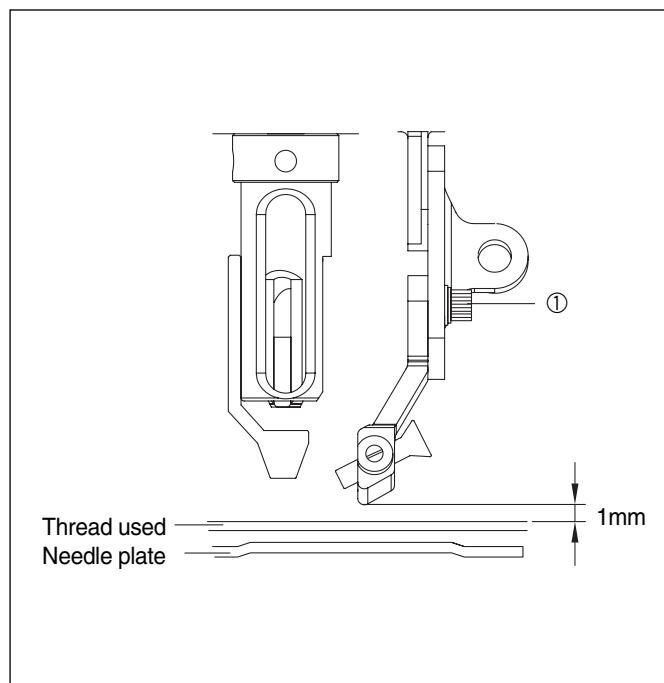
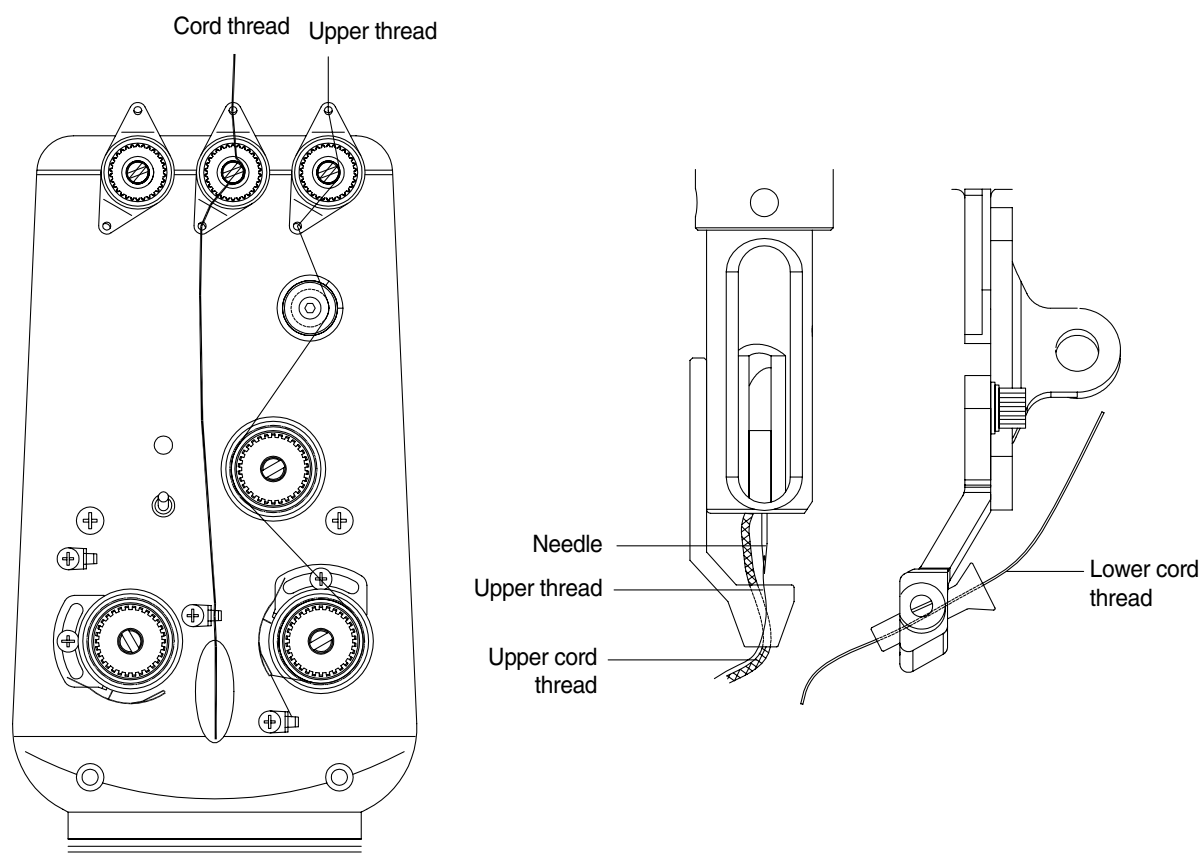


Fig. [3-3]

- The next phase is the cord guide height setting.  
Set the cord guide height a little higher (0.1~1mm) than the thickness of thread used.  
Loosen the screw① to adjust the guide support up and down.  
If the height is too low, the cord guide can get caught on the work material.

### 3) Thread placement and setting

#### (1) When using a thick cord thread as inner thread



※ Image of threads after the work

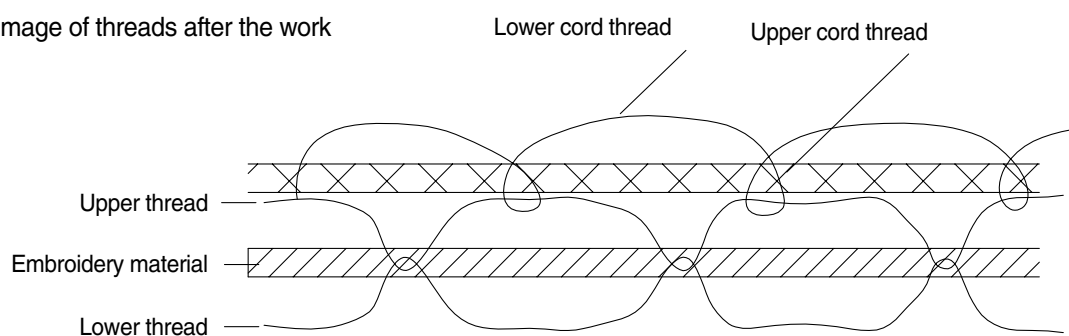
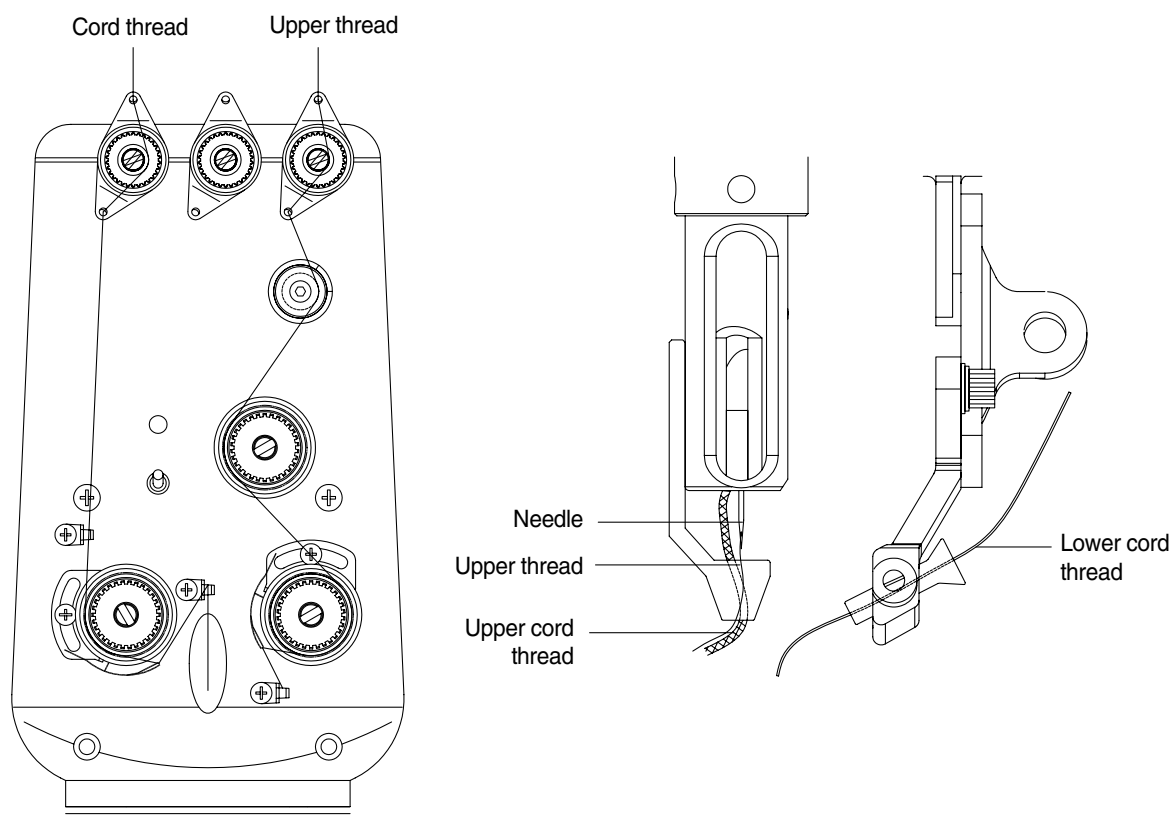


Fig. [3-4]

## (2) When using a thin cord thread as inner thread



※ Image of threads after the work

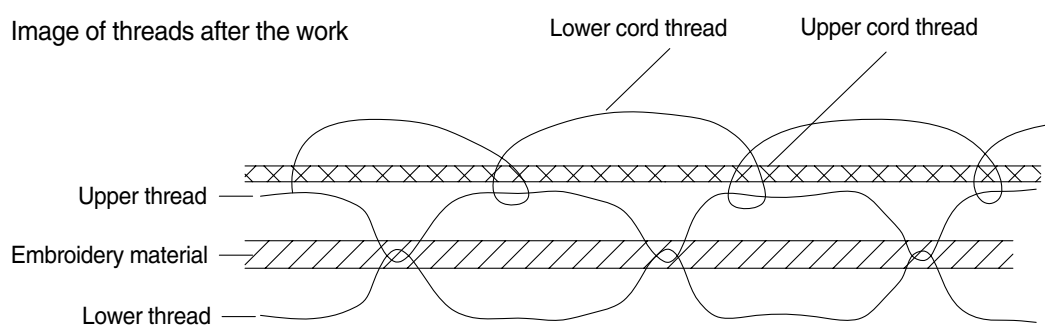
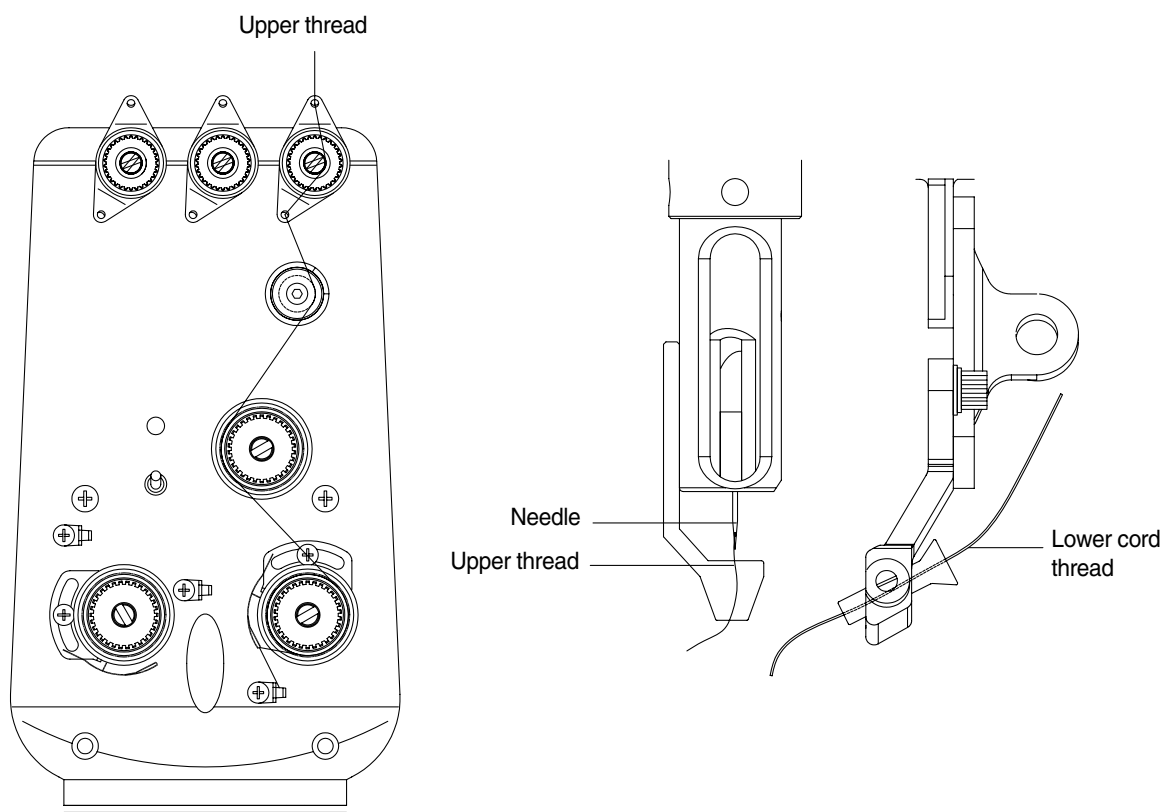


Fig. [3-5]

### (3) When conducting the coiling work without inner thread



※ Image of threads after the work

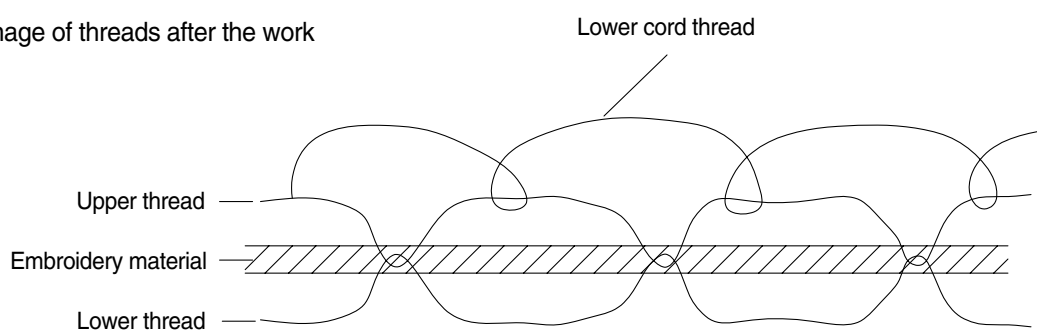


Fig. [3-6]

# 4) Operation

## (1) Needle bar setting

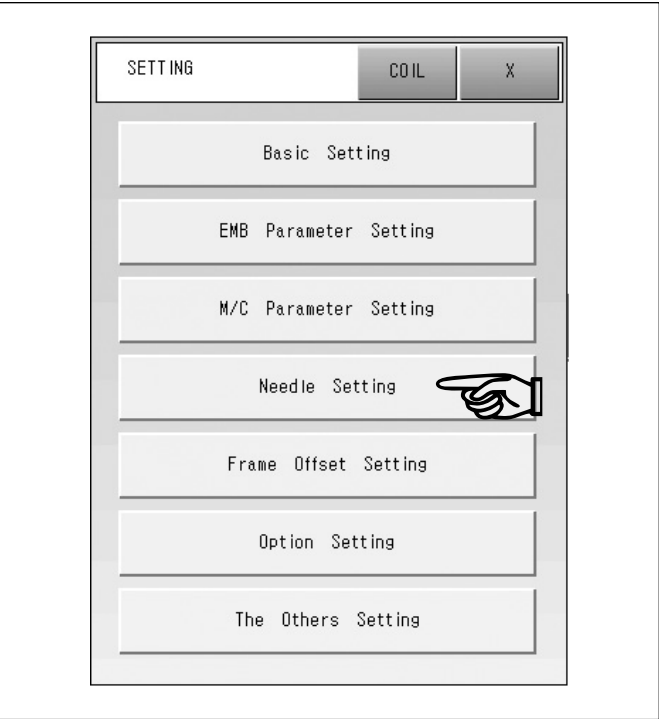


Fig. [3-7]

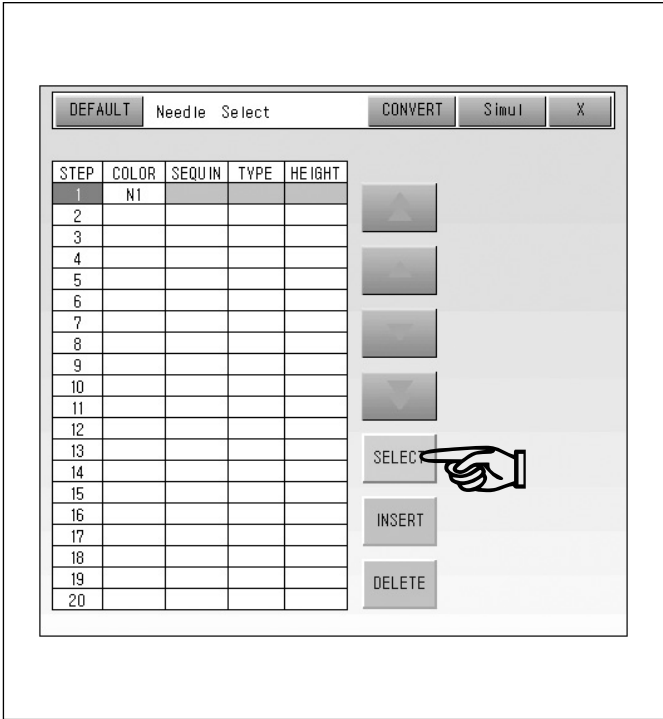


Fig. [3-8]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [3-7].
- ▶ Press Needle Bar Parameter Setting.
- ▶ If a screen like Fig. [3-8] appears, press SELECT in the step corresponding to coiling by using an arrow key.

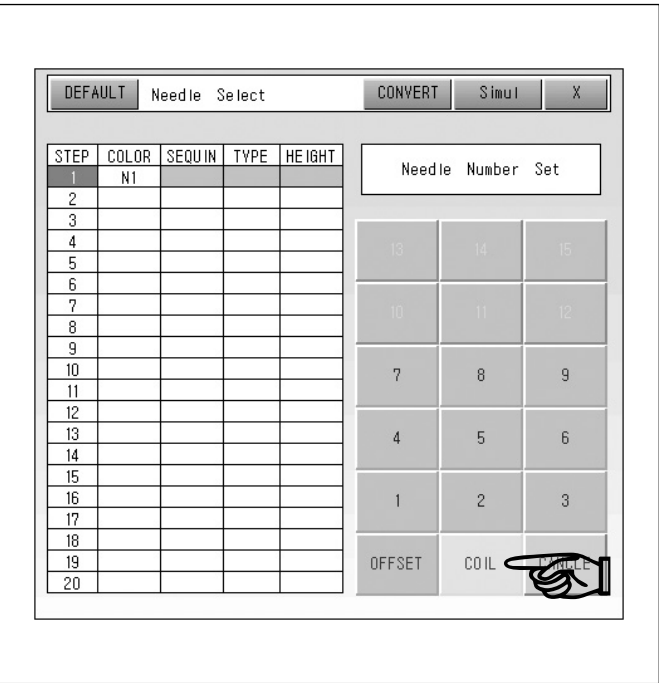


Fig. [3-9]

- ▶ If you press SELECT, you will see a needle bar setting screen as shown in Fig. [3-9].
- ▶ Use the number keypad when setting a standard head needle.  
If you choose COIL, a taping head will be assigned.
- ▶ For coiling work, select COIL.

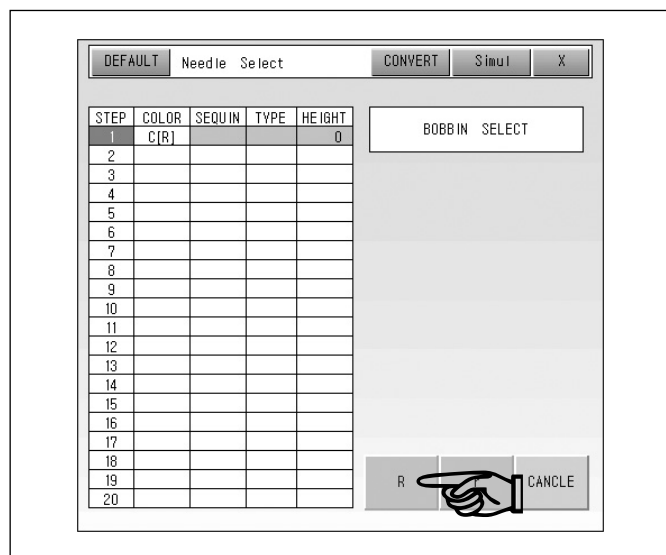


Fig. [3-10]

- If you select COIL, a bobbin select screen will appear.
- In the case of coiling work, you can choose between 'R' and 'r'.

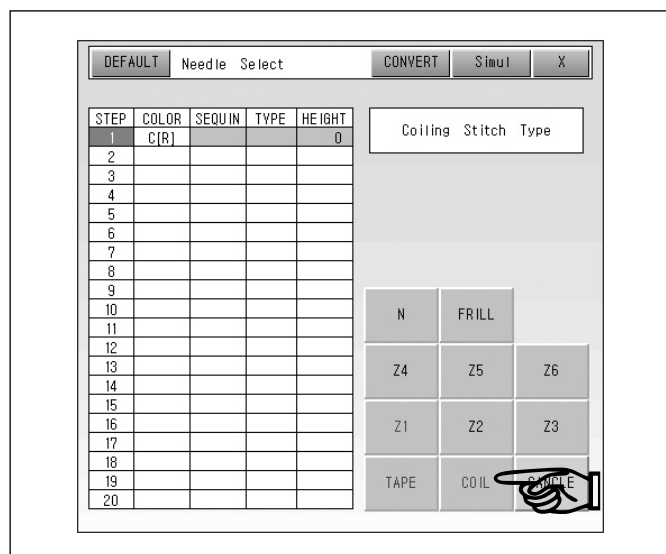


Fig. [3-11]

- Select COIL for coiling work as shown in Fig. [3-11].

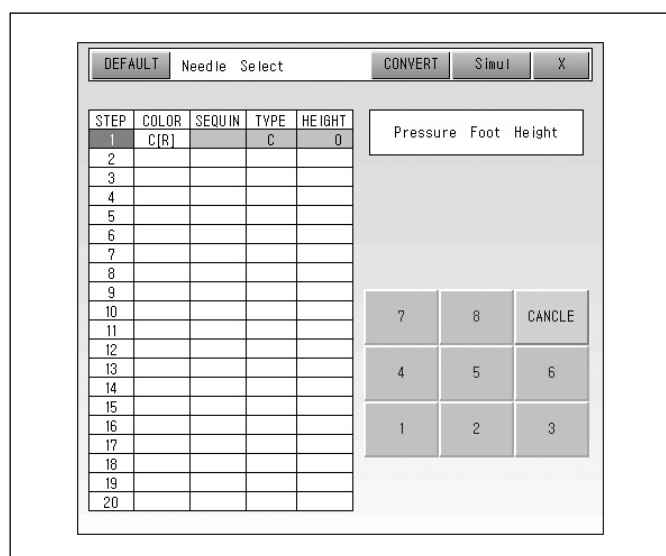


Fig. [3-12]

- The next phase is nipple height setting.  
You can set the height from step 1 to step 8.

## (2) Nipple height setting

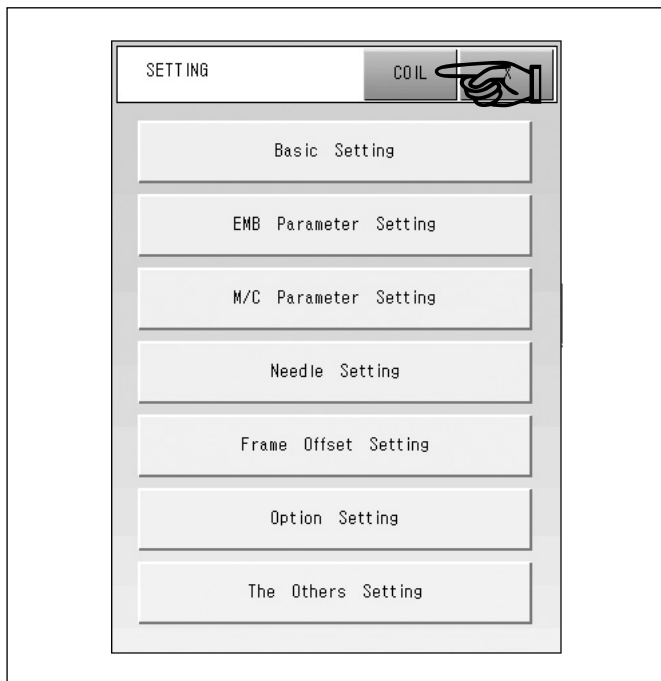


Fig. [3-13]

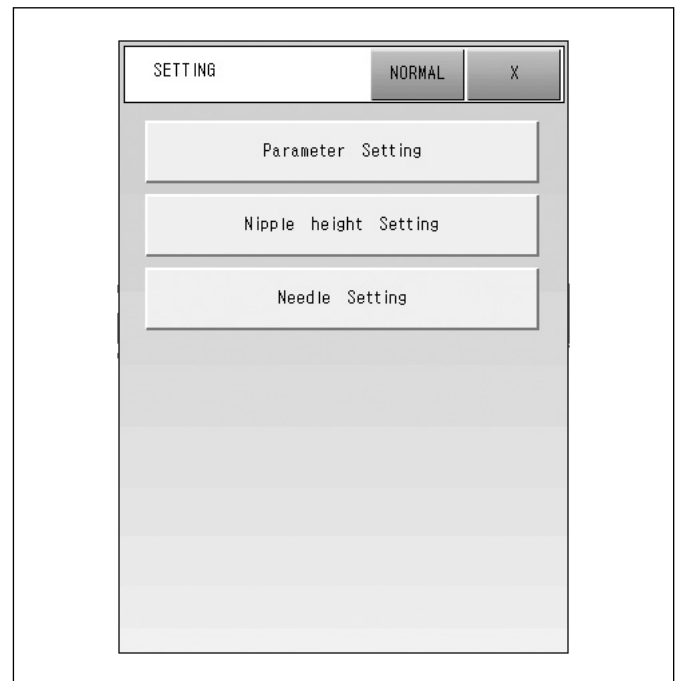


Fig. [3-14]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [3-13].
- ▶ If you press COIL at the top of the screen, a nipple height setting screen will appear as shown in Fig. [3-14].
- ▶ Press the Nipple Height Setting button, and you will see a screen like Fig. [3-15].

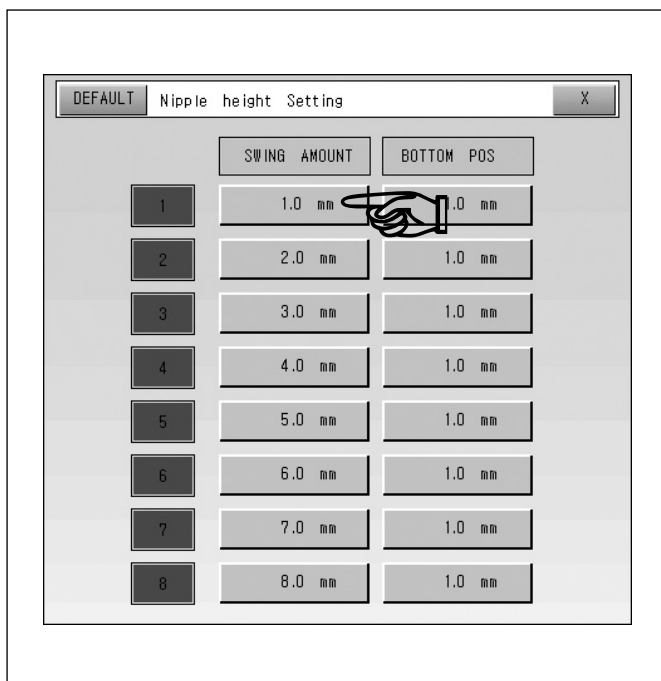


Fig. [3-15]

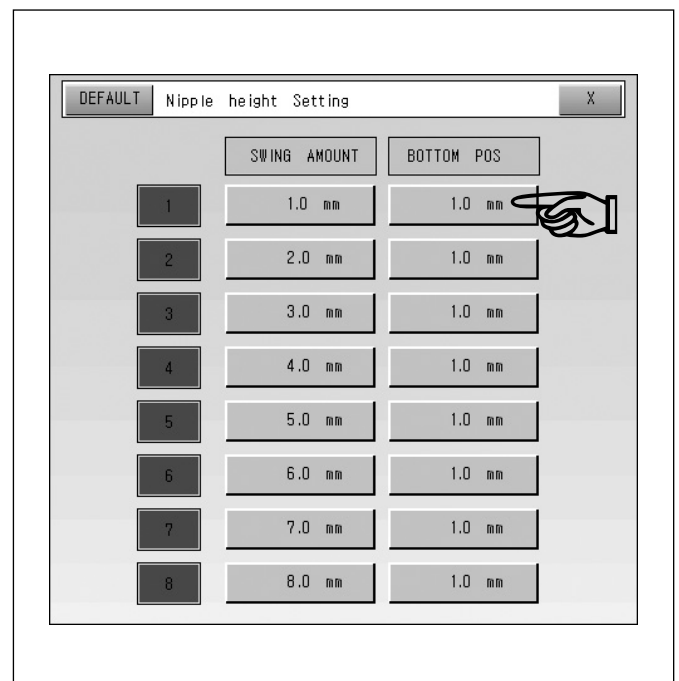


Fig. [3-16]

- ▶ You can save as many as 8 nipple heights as shown in Fig. [3-15].
- ▶ Nipple height can be set by selecting values of swing amount and bottom position.



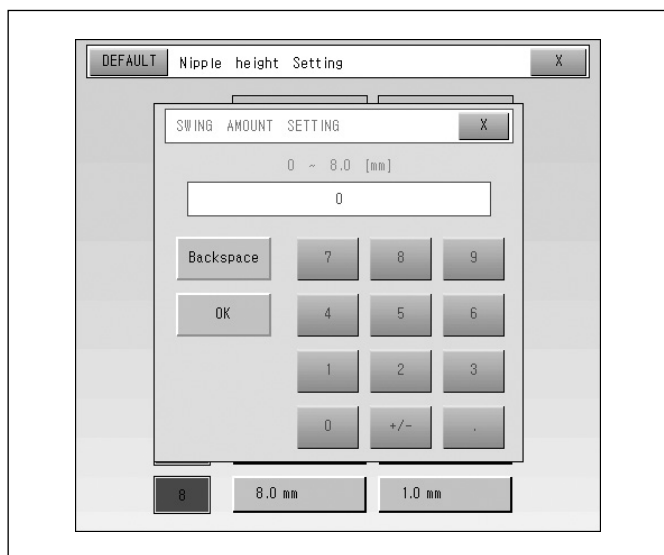


Fig. [3-17]

- ▶ If you choose the first button as shown in Fig. [3-15], a swing amount setting screen like Fig. [3-17] will appear.
- ▶ Swing amount setting is to set a vertical feed distance of the presser foot.
- ▶ You can set the value in the range of 0~8.0mm in the unit of 0.1mm.
- ▶ Set an appropriate swing amount according to the type of embroidery materials for coiling work. The recommended swing amount is 0~1mm.

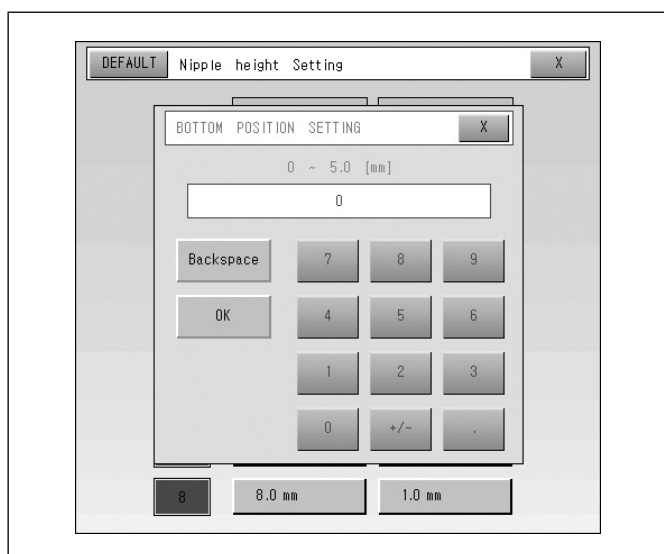


Fig. [3-18]

- ▶ If you choose the second button as shown in Fig. [3-16], a bottom position setting screen like Fig. [3-18] will appear.
- ▶ Bottom position setting is to set a height from the lowest point of presser foot to the needle plate.
- ▶ You can set the value in the range of 0~5.0mm in the unit of 0.1mm according to the type of embroidery material.
- ▶ Bottom position is set according to the types of cloth and thread used. It is recommended to set the bottom position higher than the upper part of thread used as much as possible.

### (3) Coiling rotation amount

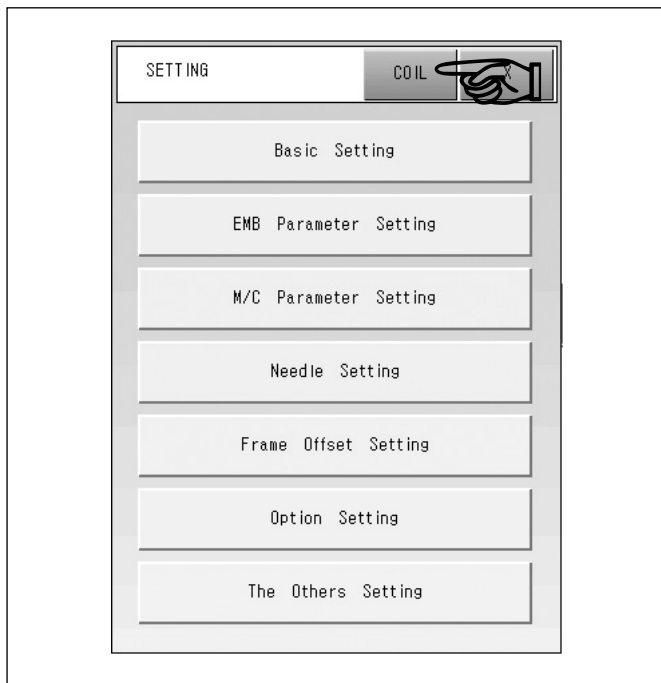


Fig. [3-19]

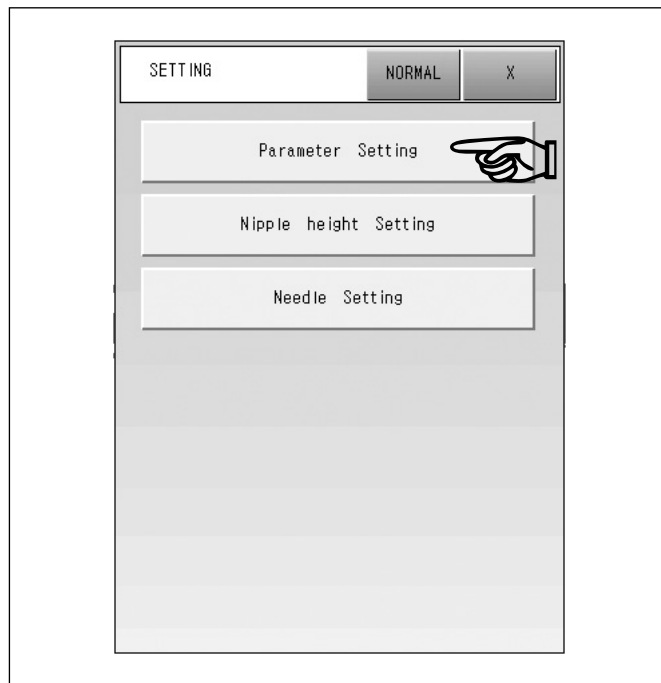


Fig. [3-20]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [3-19].
- ▶ If you press COIL at the top of the screen, a coiling parameter setting screen will appear as shown in Fig. [3-20].
- ▶ Press the Coiling Parameter Setting button, and you will see a screen like Fig. [3-21].

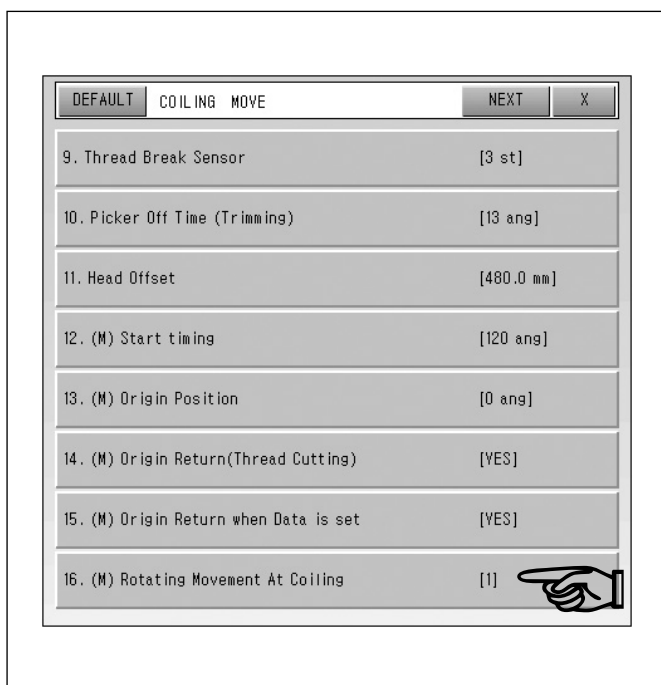


Fig. [3-21]

- ▶ If you select the Coiling Rotation Amount button, you can set a rotation value of M-axis per stitch.

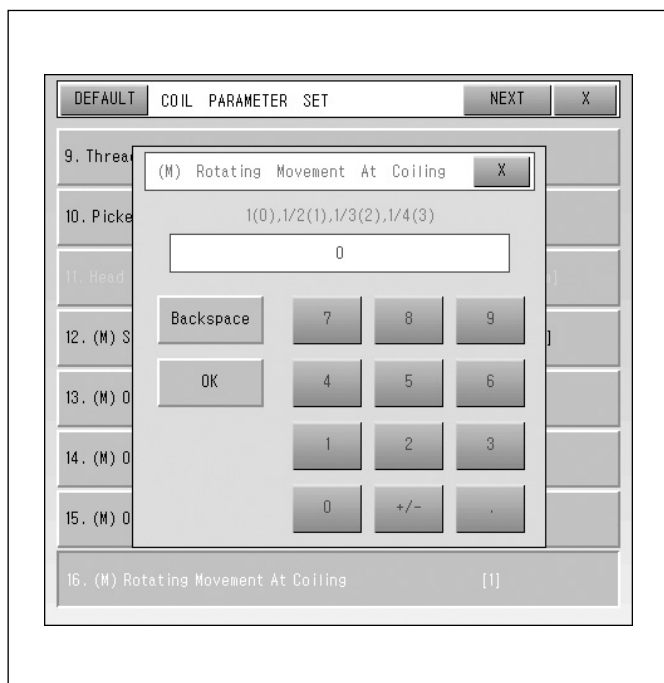


Fig. [3-22]

- ▶ The coiling rotation amount is to set a rotation value of M-axis per stitch when conducting the coiling embroidery.
- ▶ The default value is 1 and you can choose from one of 4 values (1, 1/2, 1/3, 1/4).
- ▶ The value 1 means one M-axis rotation per stitch. The value 1/2 refers to a half M-axis rotation per stitch. The value 1/3 means one third of an M-axis rotation per stitch, and the value 1/4 one fourth of an M-axis rotation per stitch.
- ▶ Set the value as you want.

#### (4) Coiling rotation direction setting

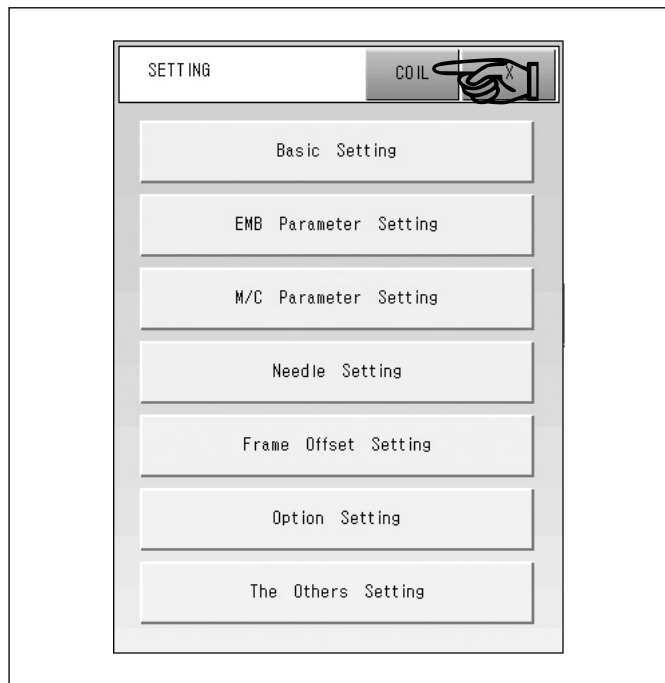


Fig. [3-23]

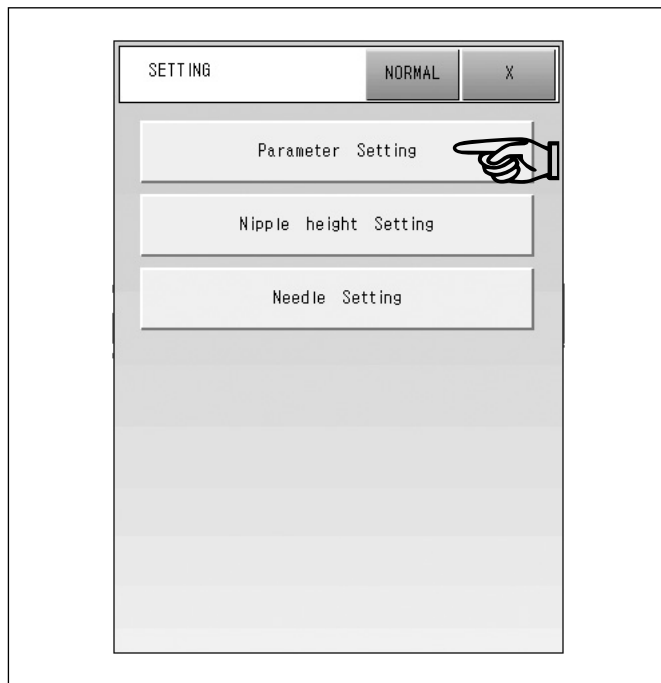


Fig. [3-24]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [3-23].
- ▶ If you press COIL at the top of the screen, a coiling parameter setting screen will appear as shown in Fig. [3-24].
- ▶ Press the Coiling Parameter Setting button, and you will see a screen like Fig. [3-25].

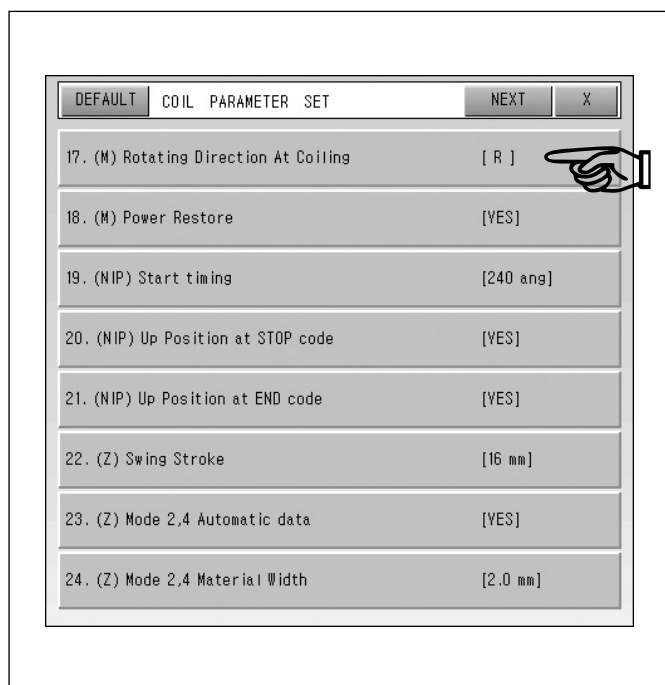


Fig. [3-25]

- ▶ If you select the Coiling Rotation Direction button, you can set a rotation direction of M-axis.

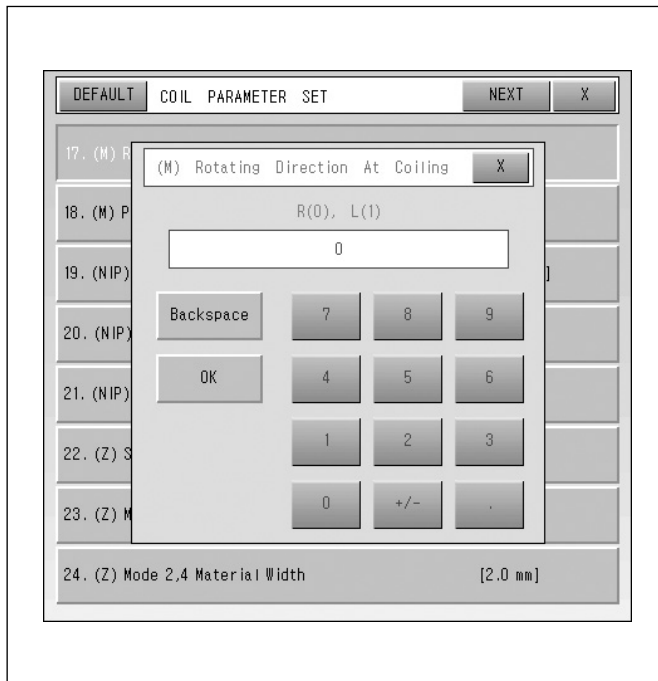


Fig. [3-26]

- ▶ The coiling rotation direction is to set a rotation direction of M-axis when conducting the coiling embroidery.
- ▶ The default value is 'R' and you can choose between 'R' and 'L'.
- ▶ 'R' means the right direction and 'L' the left direction.
- ▶ Set the value as you want.

---

## **5) Punching and matters to be noted**

### **(1) Punching**

- Conduct a standard running operation.
- The appropriate stitch length is 2.0mm~3.0mm.
- If there are standard embroidery and other options, coiling embroidery is better to be the last process.

### **(2) Matters to be noted**

- Stop signals should be given both at the beginning and the end. - for trimming  
(The signals are not necessary in the case of embroidery by using double bobbin.)
- It is recommended not to repeat the work on the same area.
- It is recommended to make notes in the way of standard embroidery both at the beginning and the end.

## 6) Matters to be noted during the work

NO.	Matters to be noted
1	When a cord guide inappropriate for the thickness of material is used, supply of materials cannot be made smoothly. Make sure to use an appropriate cord guide according to the thickness of material.
2	As embroidery materials can be deviated (when no stitch are made) in the sharp curve area, it is recommended to punch stitches closely when conducting design punching and to avoid designs with sharp curves.
3	If the bobbin does not wind off easily, there can be no stitches made because the materials are not wound off the bobbin. Make sure to set the tension of bobbin not too strong.
4	When inching is used for embroidery, coiled thread can swell. It is advisable not to use inching.
5	If the bobbin bracket is placed on an inappropriate position, it can interfere with the neighboring parts, causing M-axis error.

## 4

## Blind attachment

### 1) Fixing the attachment to the machine

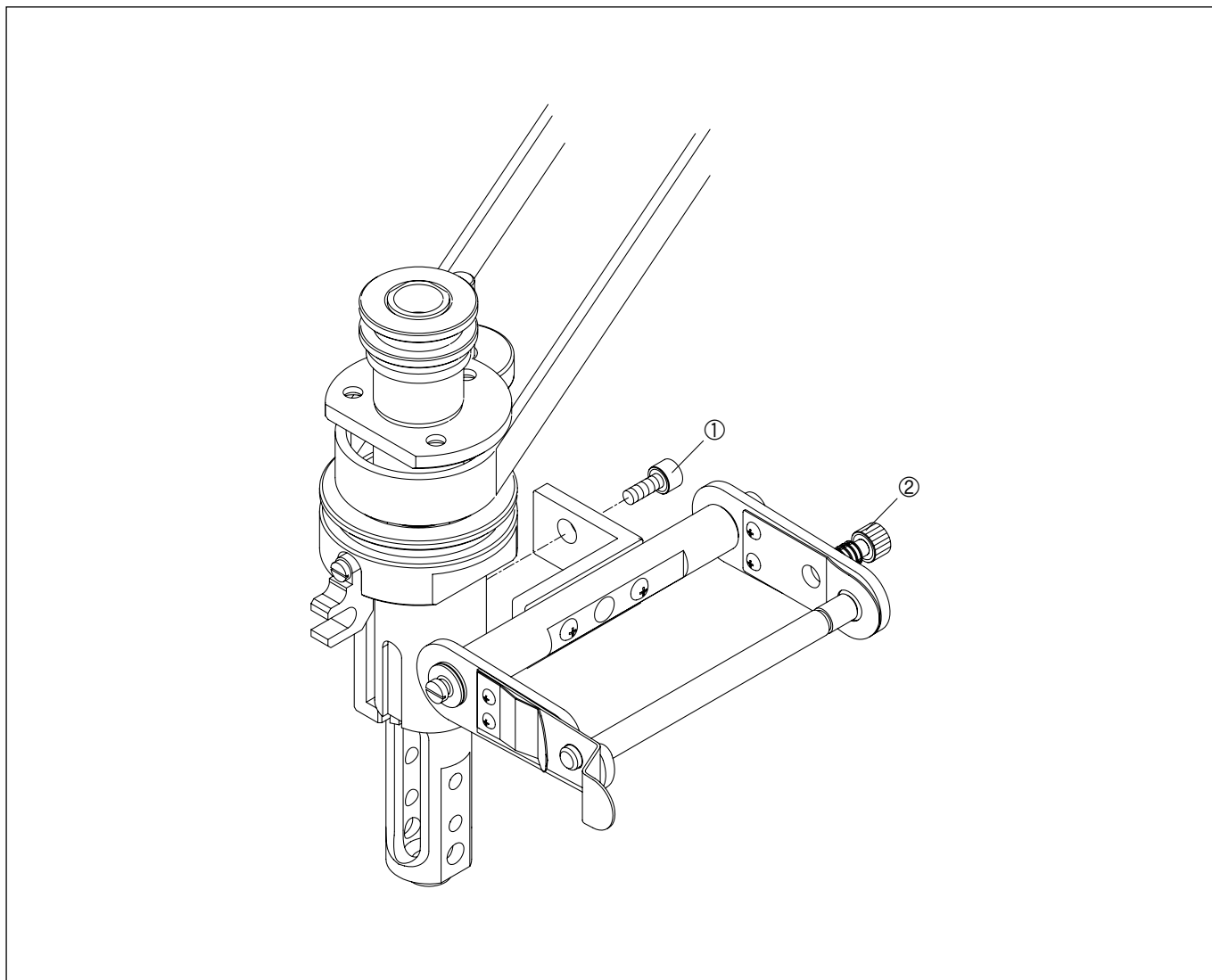


Fig. [4-1]

- ▶ For blind embroidery, fix a taping attachment or a double bobbin to the machine.
- ▶ The following is the explanation on the embroidery work with taping attachment placed on the machine.  
The embroidery work with double bobbin will be explained in the Double Bobbin attachment part
- ▶ As shown in the Fig. [4-1], tighten the screw① to fix the taping attachment.  
Adjust the tension of thread when it is wound off the bobbin by using the bobbin tension adjusting bolt②.



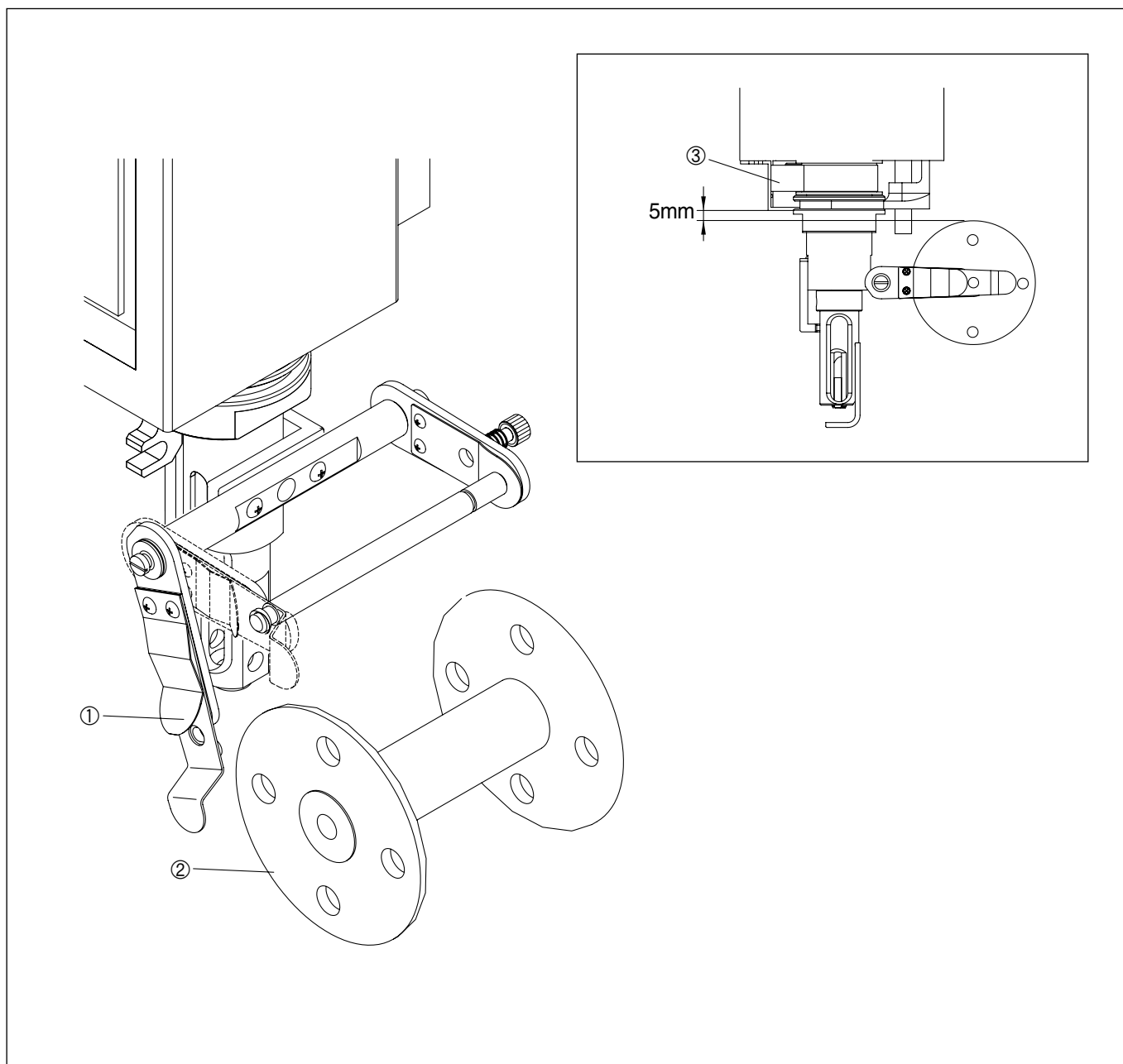


Fig. [4-2]

- ▶ After fixing the attachment, pull the bobbin bracket and the spring① to the side and pull them down to place the bobbin② as shown in Fig. [4-2].
- ▶ When placing the bobbin, carefully adjust it not to hit the lower surface of the pulley cover③ of the M-axis.
- ▶ If it is too lowered, adjust it to an appropriate position not to hit the frame.  
The best position of the bobbin is 5mm away from the pulley cover③ of the M-axis.

## 2) Fixing the blind presser foot to the machine

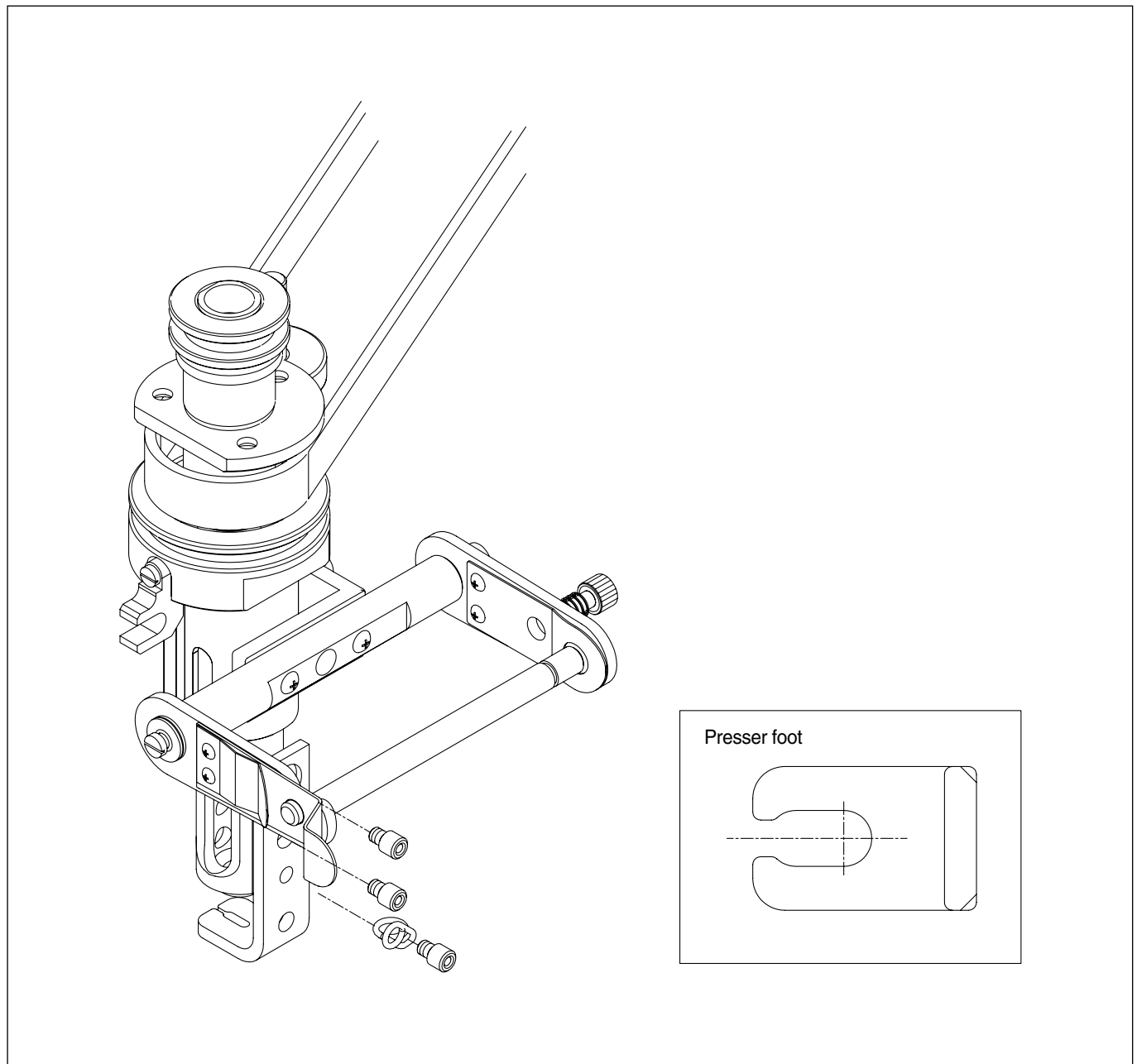


Fig. [4-3]

- As shown in the Fig. [4-3], remove the standard presser foot① and place the blind presser foot (2).
- After fixing the blind presser foot, check if the needle is accurately aligned with the hole at the center of the presser foot. If it is not, the work is not conducted and the needle can be broken. In this case, set the presser foot again.

### 3) Thread placement and setting

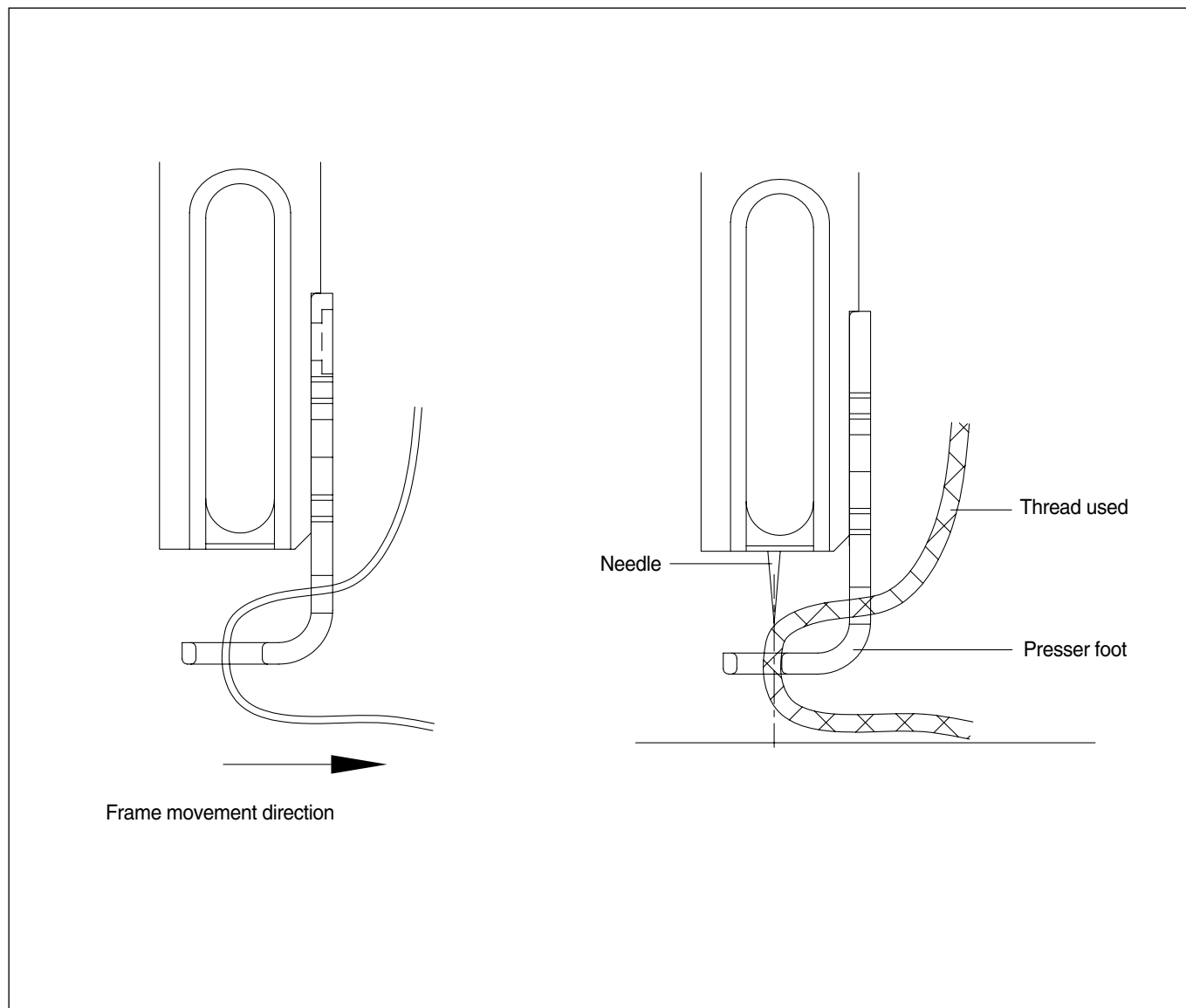


Fig. [4-4]

- After placing the thread, check if the needle is positioned accurately at the center of the thread.  
If it is not, set the presser foot again.  
This is an embroidery method to stitch inner part of the thread to hide the fixing thread from the top.

## 4) Operation

### (1) Needle bar setting

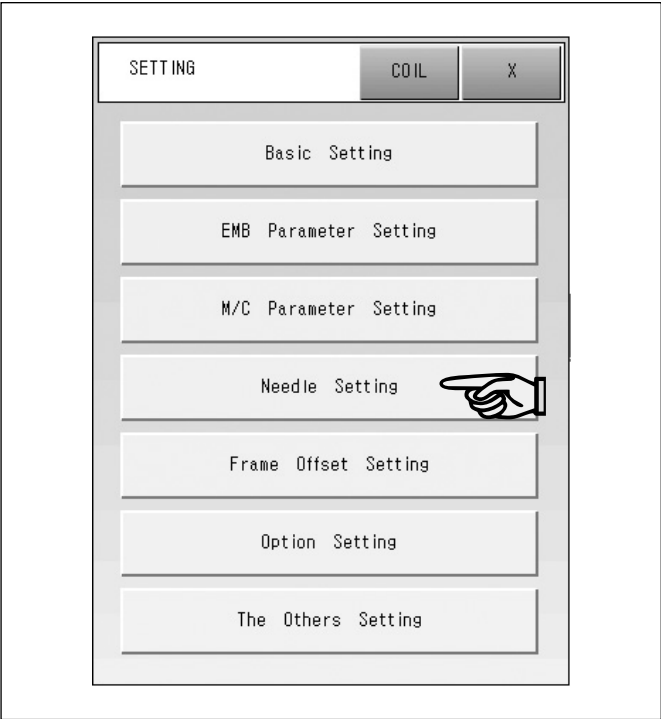


Fig. [4-5]

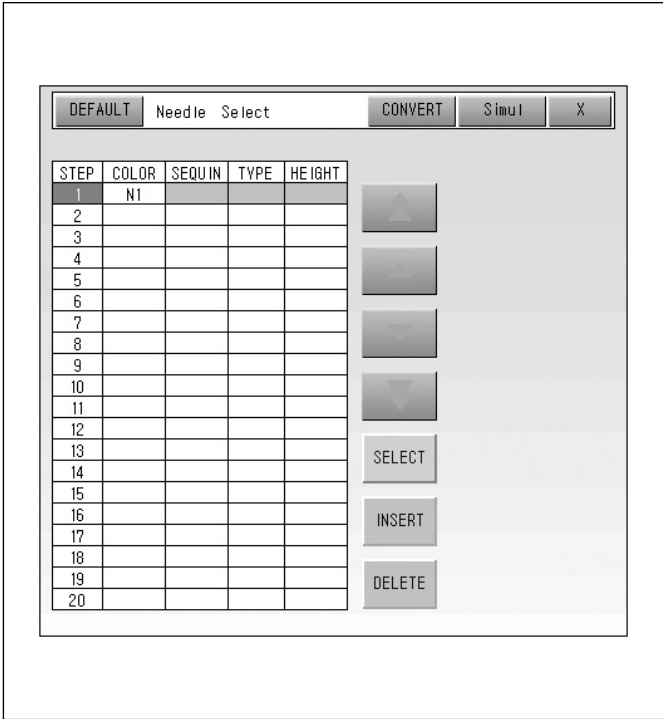


Fig. [4-6]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [4-5].
- ▶ Press Needle Bar Parameter Setting.
- ▶ If a screen like Fig. [4-6] appears, press SELECT in the step corresponding to blind embroidery by using an arrow key.

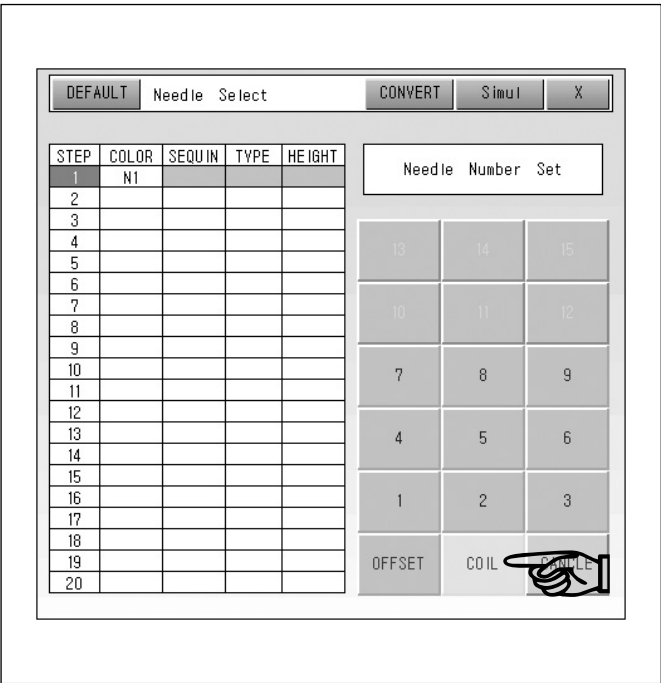


Fig. [4-7]

- ▶ If you press SELECT, you will see a needle bar setting screen as shown in Fig. [4-7].
- ▶ Use the number keypad when setting a standard head needle.  
If you choose COIL, a taping head will be assigned.
- ▶ For blind embroidery, select COIL.

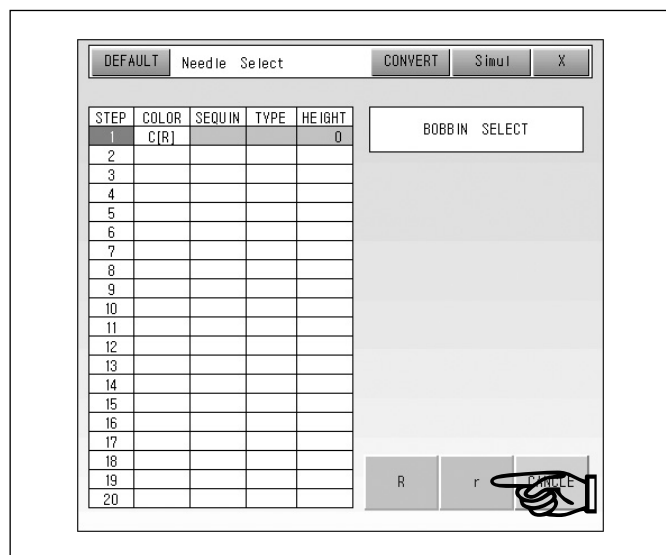


Fig. [4-8]

- ▶ If you select COIL, a bobbin select screen will appear.
  - ▶ For the blind attachment, choose 'r' between 'R' and 'r' (when the taping attachment is placed).
  - ▶ If you choose 'R', the coil movement direction becomes reversed, which turns blind embroidery into normal cording embroidery.
- ※ When using double bobbin → select 'R'  
When conducting the cording with double bobbin → select 'r'

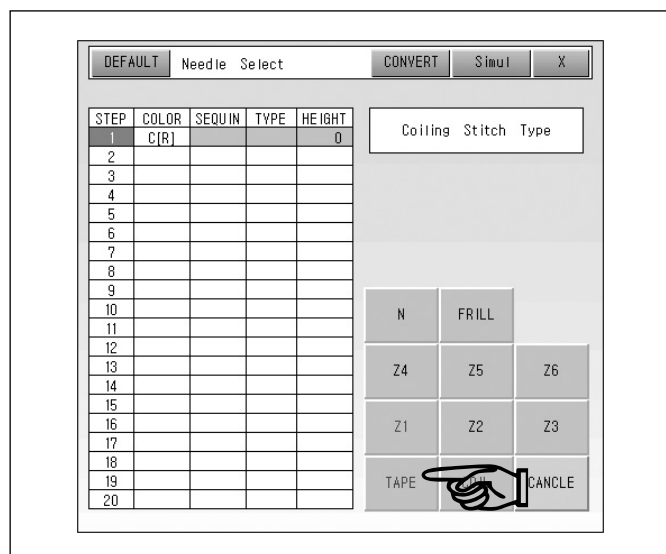


Fig. [4-9]

- ▶ As shown in Fig. [4-9], a coiling stitch type selecting screen appears.
- ▶ For blind embroidery, select TAPE.

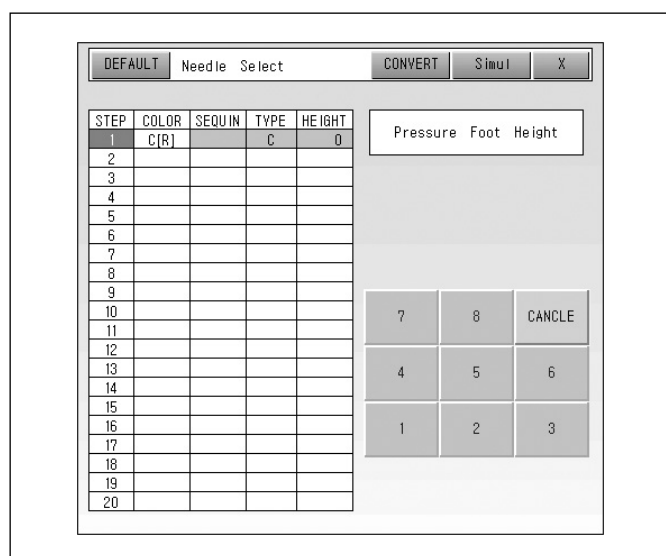


Fig. [4-10]

- ▶ The next phase is nipple height setting.  
You can set the height from step 1 to step 8.

## (2) Nipple height setting

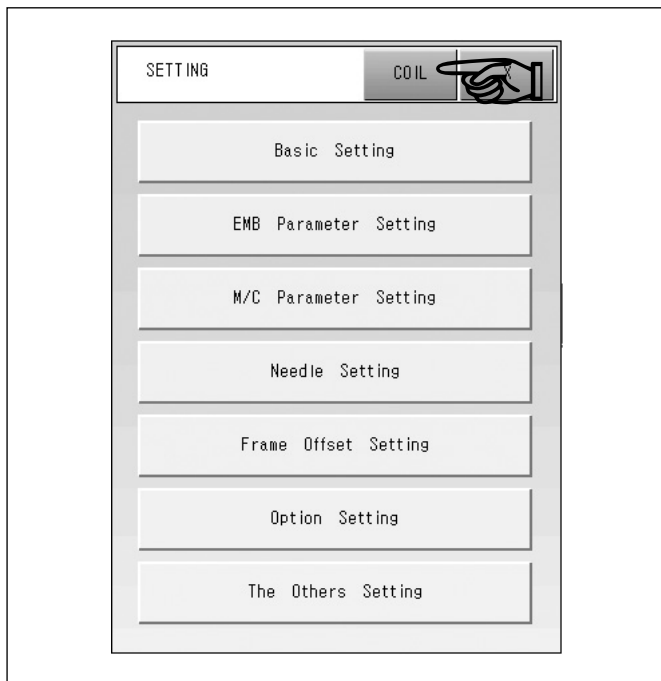


Fig. [4-11]

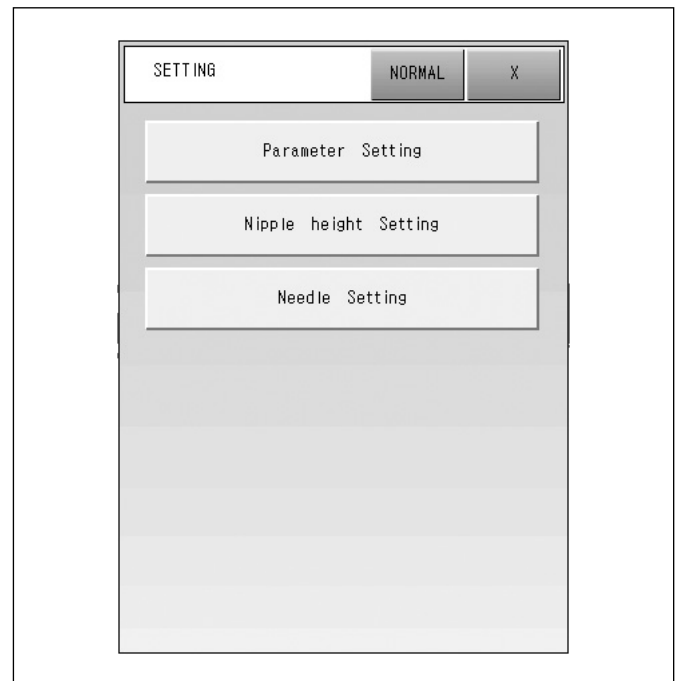


Fig. [4-12]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [4-11].
- ▶ If you press COIL at the top of the screen, Nipple Height Setting will appear as shown in Fig. [4-12].
- ▶ Press the Nipple Height Setting button, and you will see a screen like Fig. [4-13].

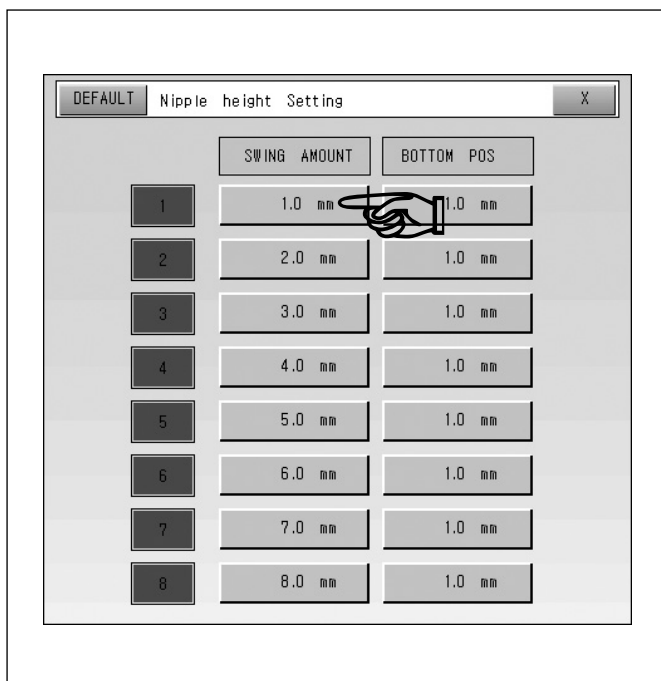


Fig. [4-13]

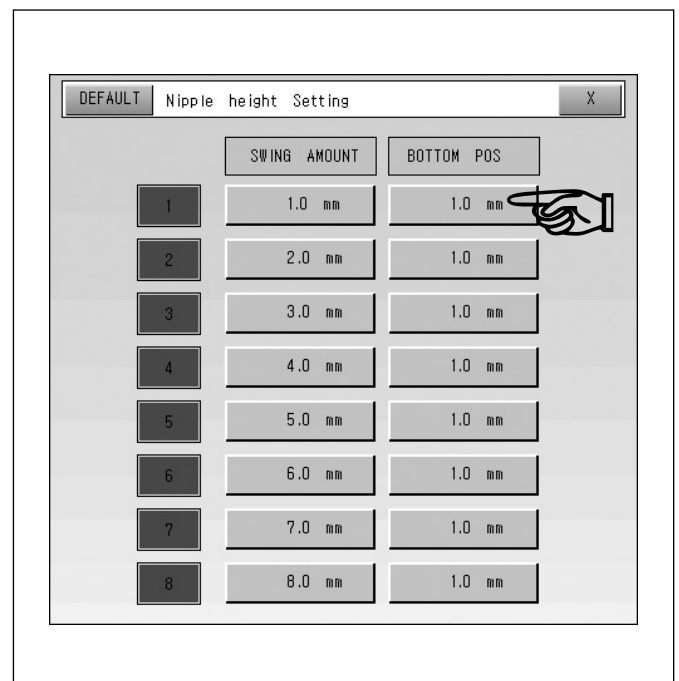


Fig. [4-14]

- ▶ You can save as many as 8 nipple heights as shown in Fig. [4-13].
- ▶ The nipple height is set by selecting values of swing amount and bottom position.

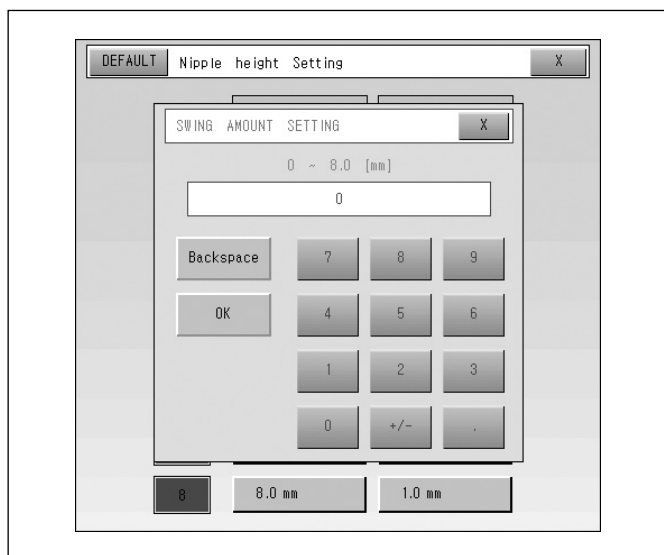


Fig. [4-15]

- ▶ If you choose the first button as shown in Fig. [4-13], a swing amount setting screen like Fig. [4-15] will appear.
- ▶ Swing amount setting is to set a vertical feed distance of the presser foot.  
You can set the value in the range of 0~8.0mm in the unit of 0.1mm.
- ▶ Set an appropriate swing amount according to the type of embroidery material for blind embroidery.  
The recommended swing amount is 0~2mm.

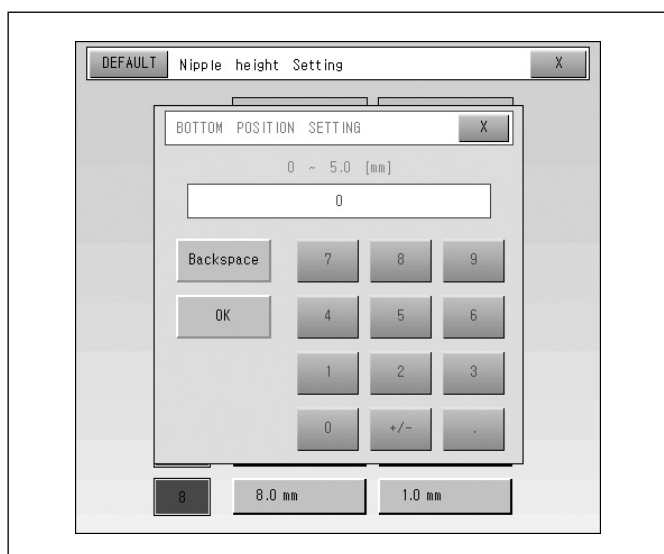


Fig. [4-16]

- ▶ If you choose the second button as shown in Fig. [4-14], a bottom position setting screen like Fig. [4-16] will appear.
- ▶ Bottom position setting is to set a height from the lowest point of presser foot to the needle plate.
- ▶ You can set the value in the range of 0~5.0mm in the unit of 0.1mm according to the type of embroidery material.
- ▶ Bottom position is set according to the types of cloth and thread used. It is recommended to set the bottom position a little higher than the upper part of thread used.

---

## **5) Punching and matters to be noted**

### **(1) Punching**

- Conduct a standard running operation.
- The appropriate stitch length is 2.0mm~3.0mm.
- The stitch length should be shorter around the corners.
- If there are standard embroidery and other options, blind embroidery is better to be the last process.

### **(2) Matters to be noted**

- Stop signals should be given both at the beginning and the end. - for trimming  
(The signals are not necessary in the case of embroidery by using double bobbin.)
- It is recommended not to repeat the work on the same area.
- Make notes with 7~8 stitches both at the beginning and the end.



## 6) Matters to be noted during the work

NO.	Matters to be noted
1	As embroidery materials can be deviated (when no stitches are made) or lean toward one side in a sharp curve area, it is recommended to punch stitches closely for curve areas when conducting design punching.
2	If the bobbin does not wind off easily, there can be no stitches made because the materials are not wound off the bobbin. Make sure to set the tension of bobbin not too strong.
3	As the frame feeds in the opposite direction in blind embroidery, materials should be always placed on the tape bobbin not on the zigzag bobbin.
4	As the size of blind presser foot ranges from 1.5mm to 4.5mm, choose an appropriate presser foot according to the size of materials.
5	If the needle is not positioned at the center of blind presser foot hole, no stitches are made or stitches are made only on the upper surface of the materials. Make sure that the needle is positioned at the center of blind presser foot hole.
6	If the bobbin bracket is placed at an inappropriate position, it can cause an M-axis error due to interference with the neighboring parts.

## 5

## Frill attachment

### 1) Fixing the attachment to the machine

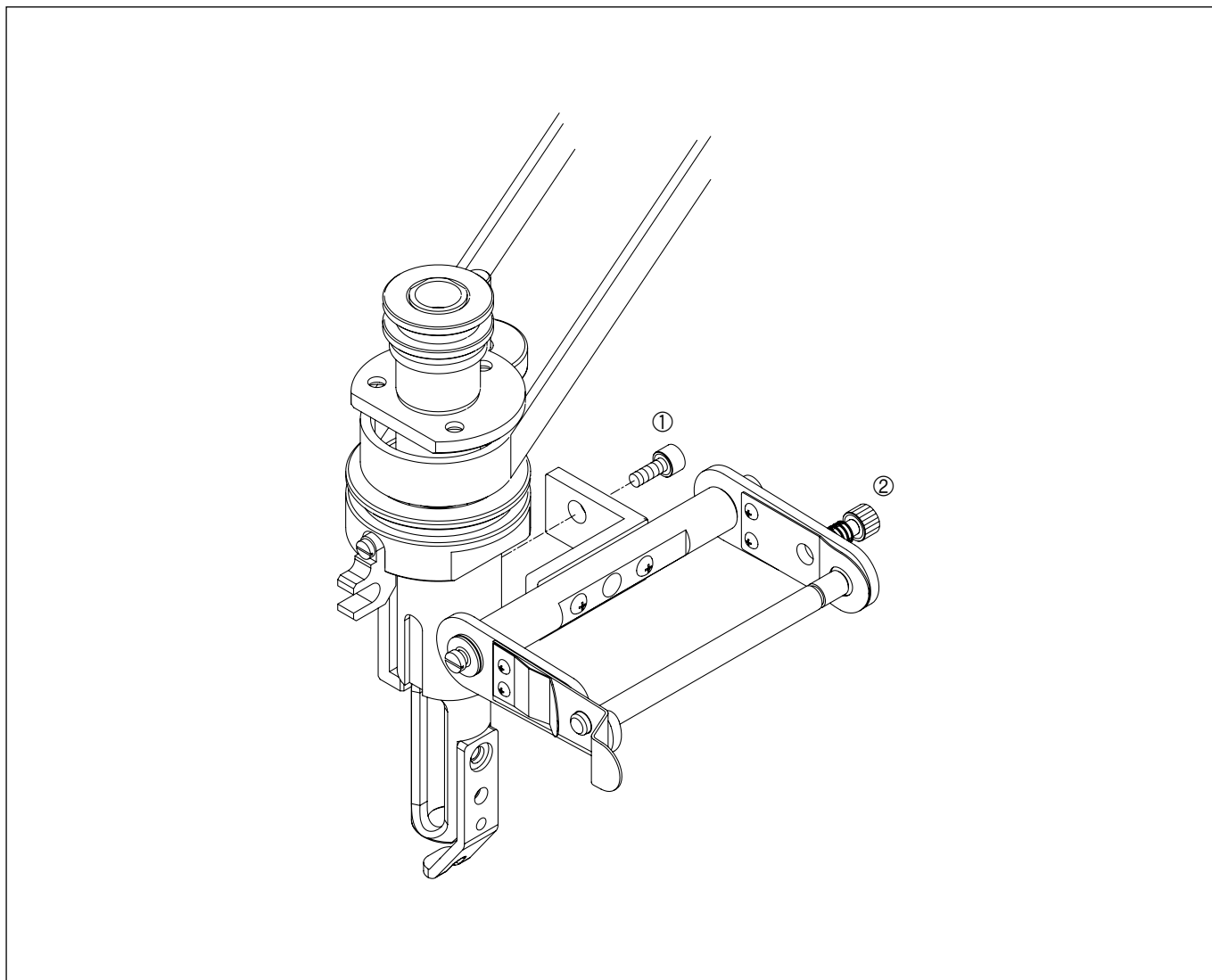


Fig. [5-1]

- ▶ For frill embroidery, fix a taping attachment or a double bobbin to the machine.
- ▶ The following is the explanation on the embroidery work with taping attachment fixed on the machine.  
The embroidery work with double bobbin will be explained in the Double Bobbin attachment part
- ▶ As shown in the Fig. [5-1], tighten the screw① to fix the taping attachment.
- ▶ Adjust the tension of thread when it is wound off the bobbin by using the bobbin tension adjusting bolt②.

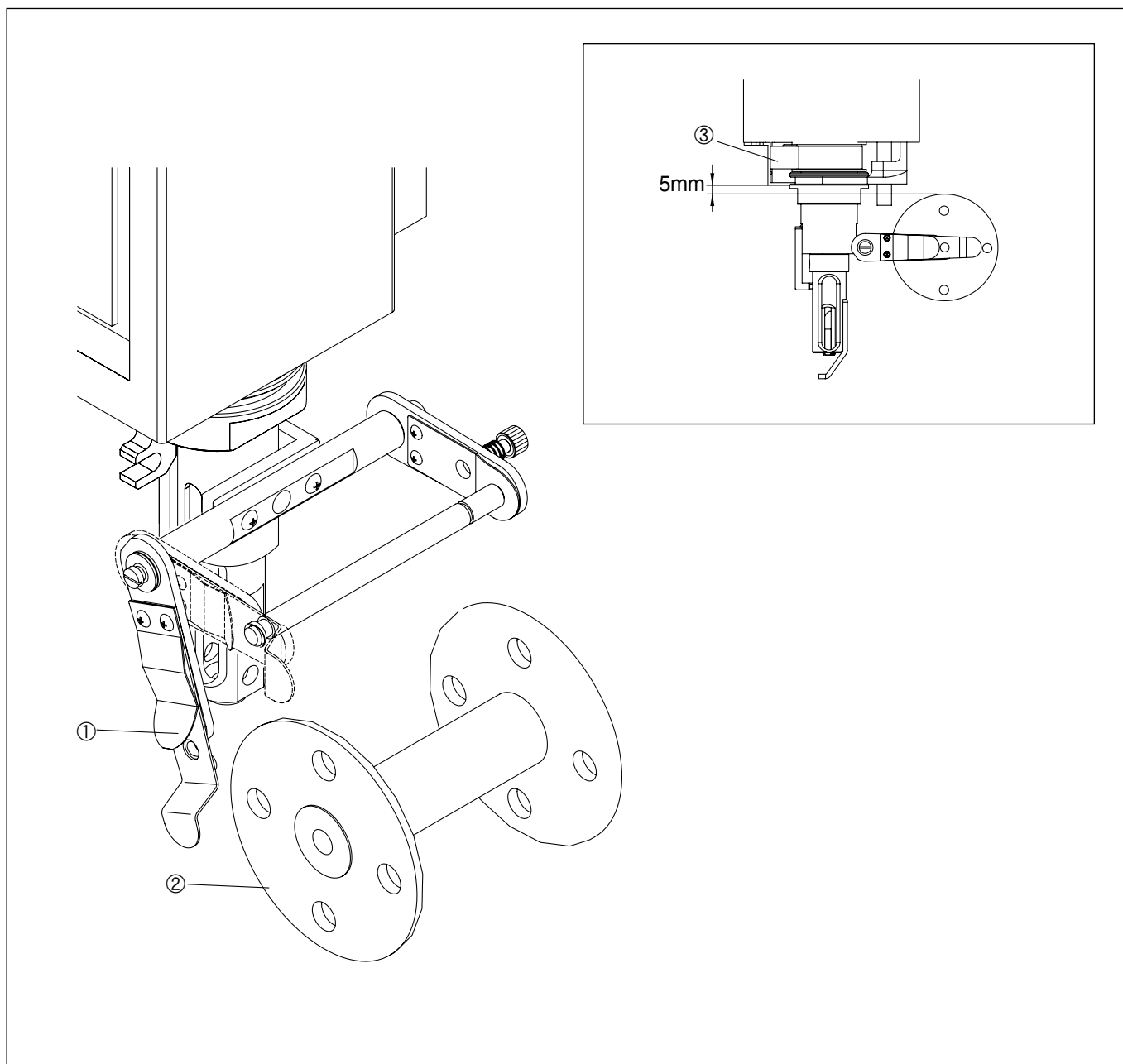


Fig. [5-2]

- ▶ After fixing the taping attachment, pull the bobbin bracket and the spring①to the side and pull them down to place the bobbin②as shown in Fig. [5-2].
- ▶ When placing the bobbin, carefully adjust it not to hit the lower surface of the pulley cover③of the M-axis. If it is too lowered, adjust it to an appropriate position not to hit the frame.
- ▶ The best position of the bobbin is 5mm away from the pulley cover③of the M-axis.

## 2) Fixing the frill tape guide to the machine

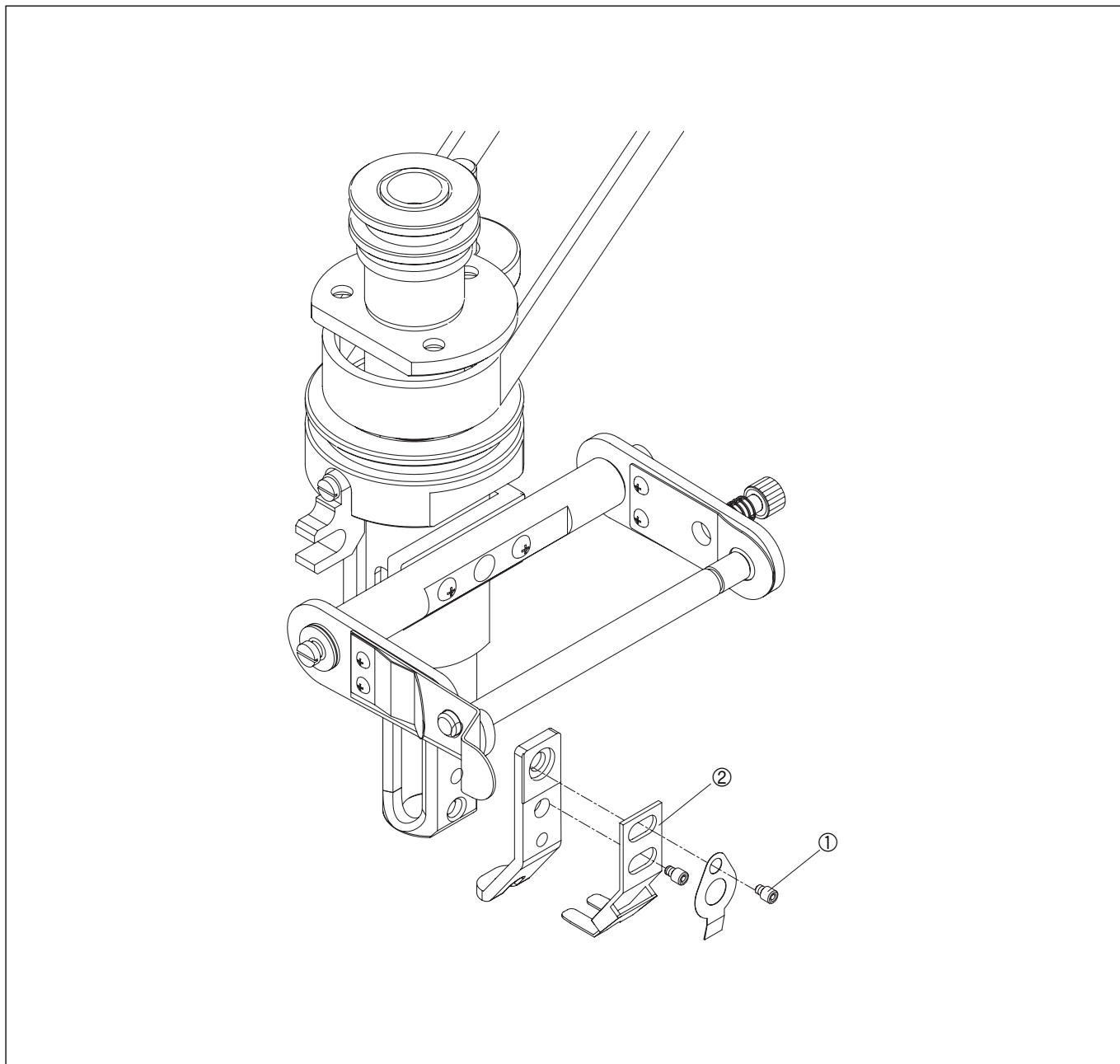


Fig. [5-3]

- ▶ As shown in the Fig. [5-3], set the frill guide② to be placed at the center of the presser foot by tightening the screw①
- ▶ If the frill guide② is not placed at the center of the presser foot, the tape leans toward one side and can be deformed during the embroidery

### 3) Tape placement and setting

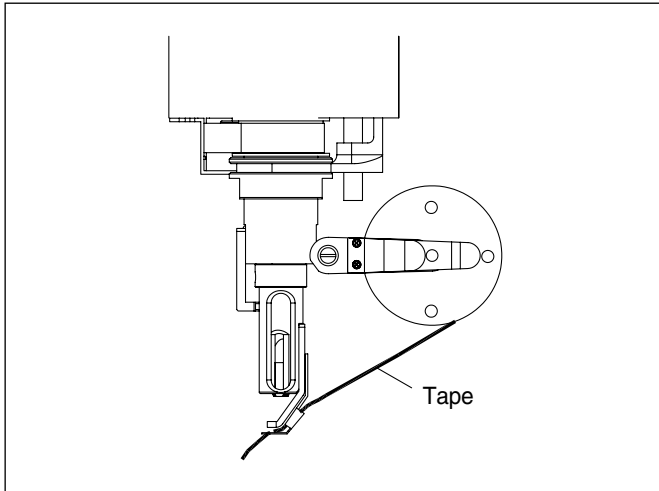


Fig. [5-4]

- ▶ Carefully wind a tape on the bobbin and place the bobbin on the tape attachment. And then put the tape through the frill tape guide.
- ▶ Set the bobbin tension as weak as possible. If the tension is strong, it impedes the tape supply, resulting in failure of the work.

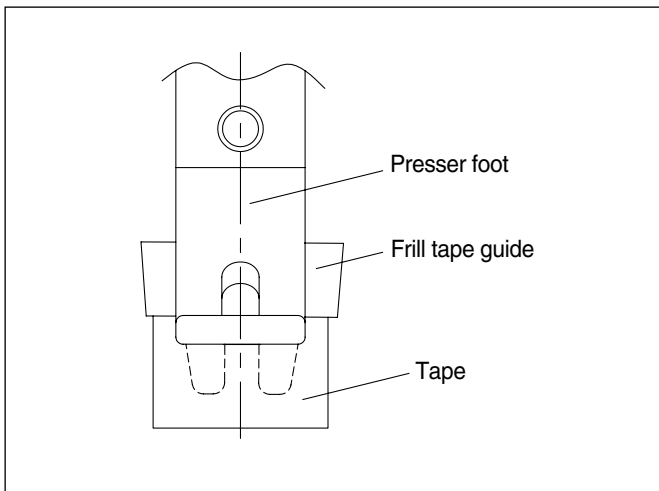


Fig. [5-5]

- ▶ Check whether the tape center is placed at the center of the presser foot after the placement. If the tape leans toward one side, adjust the position of the frill tape guide.

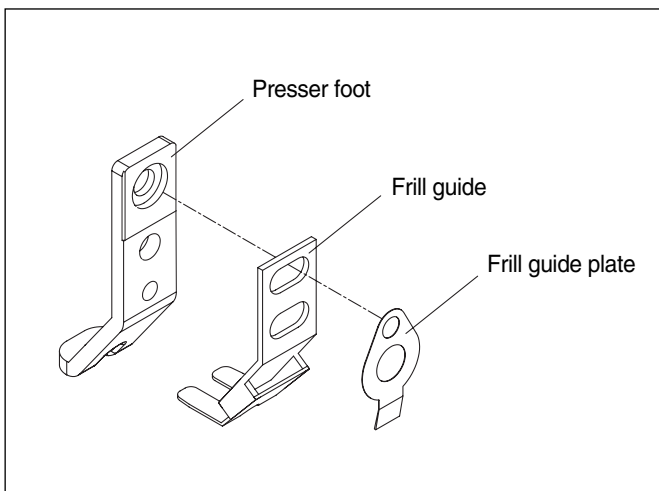


Fig. [5-6]

- ▶ The frill guide plate maintains the tape wound off the bobbin.
- ▶ When a flexible and soft material tape is used, do not use the frill guide plate. If the frill guide plate is used, the frill embroidery cannot be conducted because the tape becomes twisted and leans toward one side.
- ▶ When a hard material tape is used, use the frill guide plate. The frill plate maintains the tape amount when the tape is released after it is pulled.

## 4) Operation

### (1) Needle bar setting

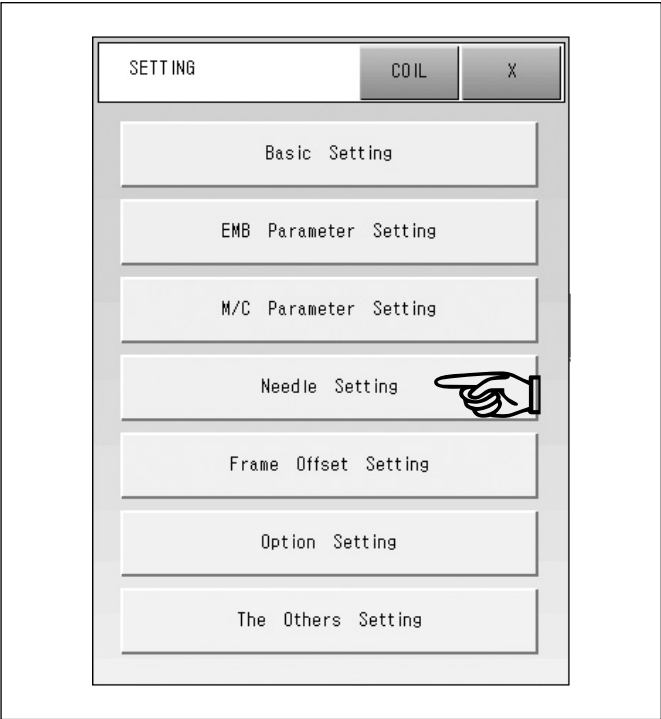


Fig. [5-7]

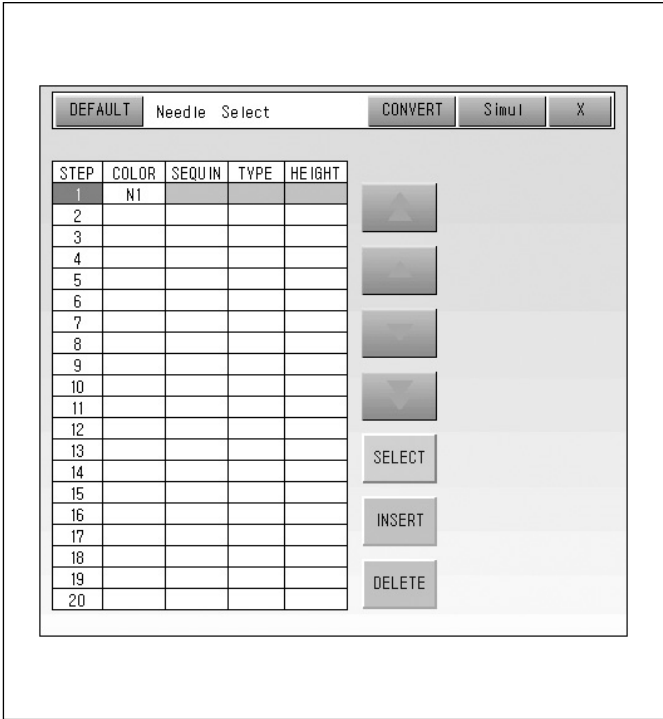


Fig. [5-8]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [5-7].
- ▶ Press Needle Bar Parameter Setting.
- ▶ If a screen like Fig. [5-8] appears, press SELECT in the step corresponding to frill embroidery by using an arrow key.

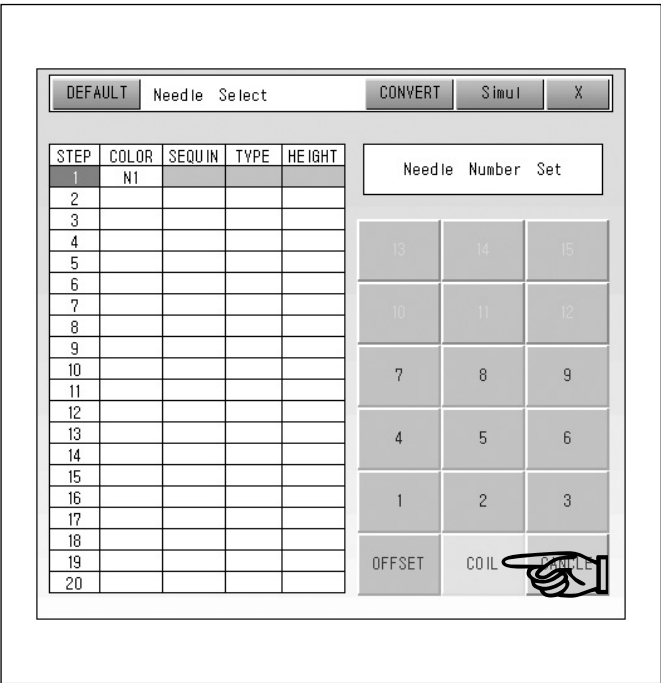


Fig. [5-9]

- ▶ If you press SELECT, you will see a needle bar setting screen as shown in Fig. [5-9].
- ▶ Use the number keypad when setting a standard head needle.  
If you choose COIL, a taping head will be assigned.
- ▶ For frill embroidery, select COIL.

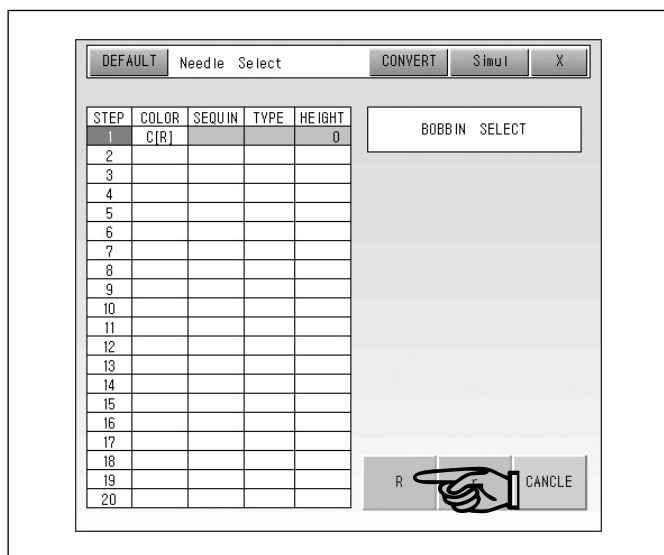


Fig. [5-10]

- ▶ If you select COIL, a bobbin select screen will appear.
- ▶ Choose 'R' for frill attachment.
- ▶ If you select 'r', you cannot proceed the frill embroidery because a frill movement direction becomes reversed.

※ When using double bobbin → select 'r'.

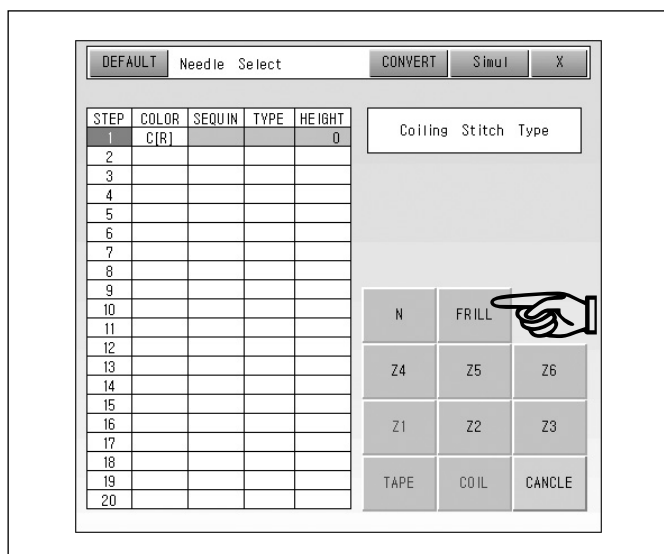


Fig. [5-11]

- ▶ Choose Frill in Fig. [5-11] since it is frill embroidery.

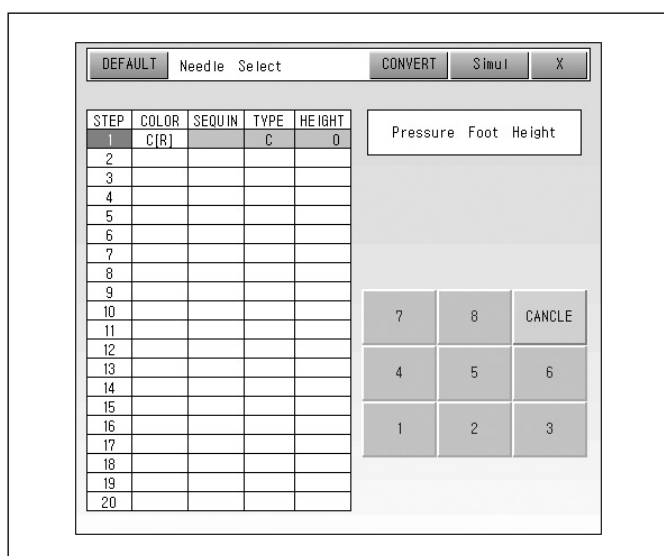


Fig. [5-12]

- ▶ The next phase is nipple height setting.  
You can set the height from step 1 to step 8.

## (2) Nipple height setting

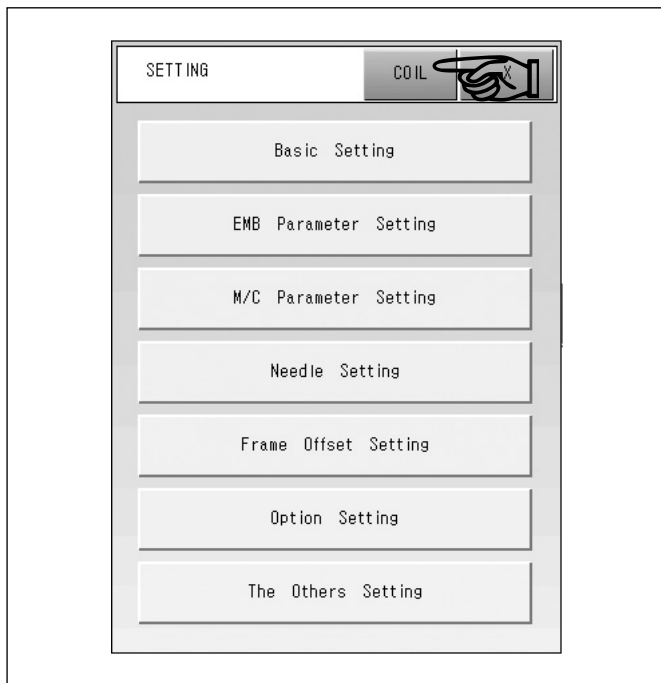


Fig. [5-13]

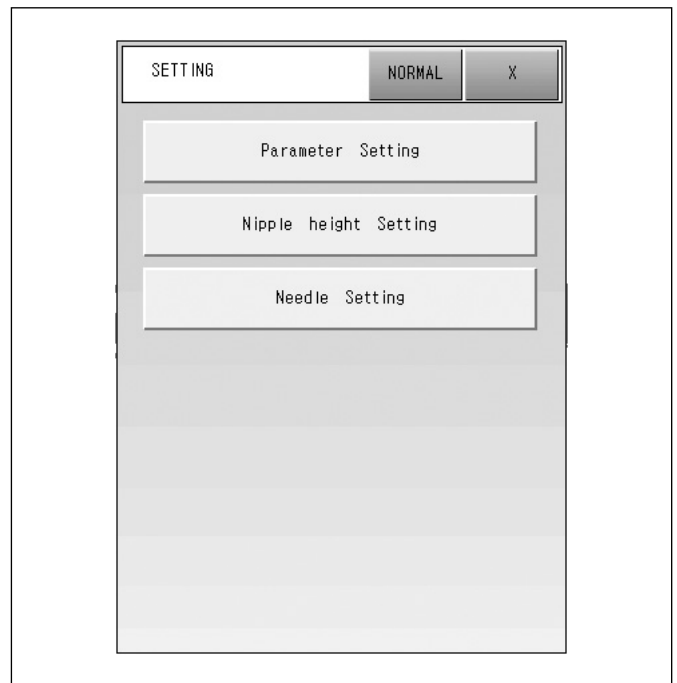


Fig. [5-14]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [5-13].
- ▶ If you press COIL at the top of the screen, Nipple Height Setting will appear as shown in Fig. [5-14].
- ▶ Press the Nipple Height Setting button, and you will see a screen like Fig. [5-15].

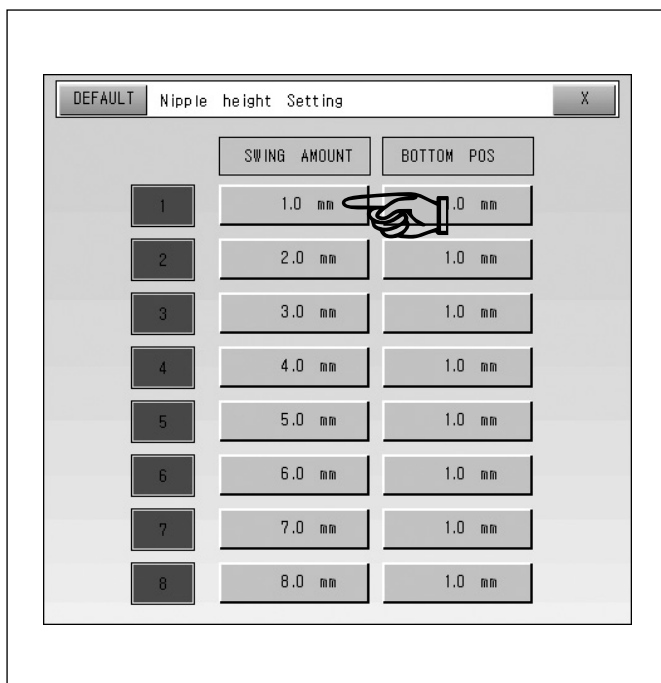


Fig. [5-15]

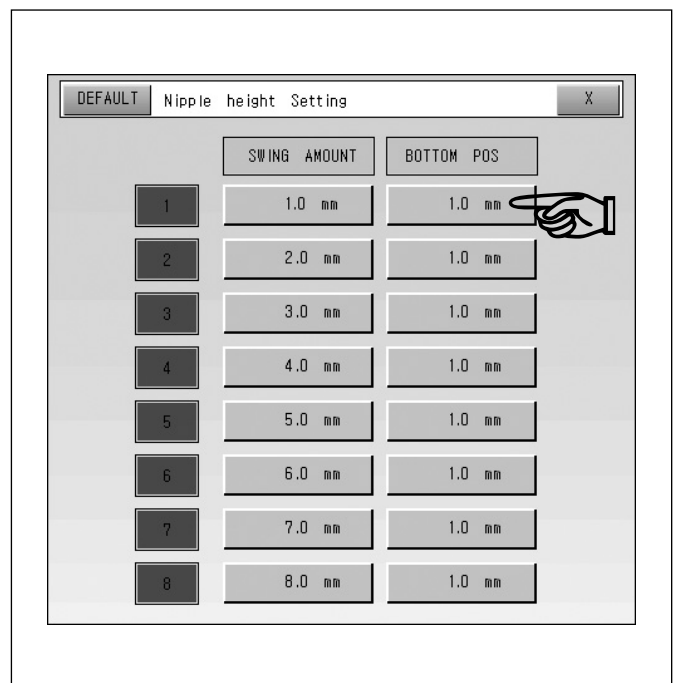


Fig. [5-16]

- ▶ You can save as many as 8 nipple heights as shown in Fig. [5-15].
- ▶ The nipple height is set by selecting values of swing amount and bottom position.



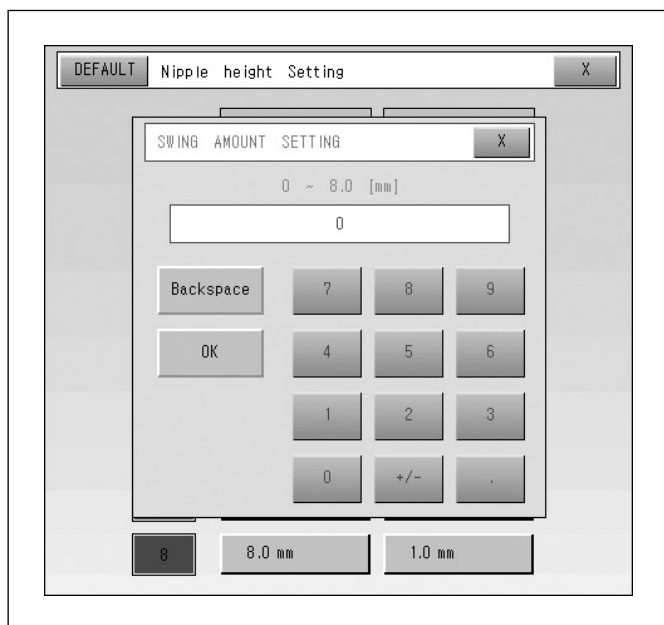


Fig. [5-17]

- ▶ If you choose the first button as shown in Fig. [5-15], a swing amount setting screen like Fig. [5-17] will appear.
- ▶ Swing amount setting is to set a vertical feed distance of the presser foot.  
You can set the value in the range of 0~8.0mm in the unit of 0.1mm.
- ▶ For frill embroidery, set an appropriate swing amount according to the type of materials.  
7~8mm of swing amount is appropriate for frill embroidery.

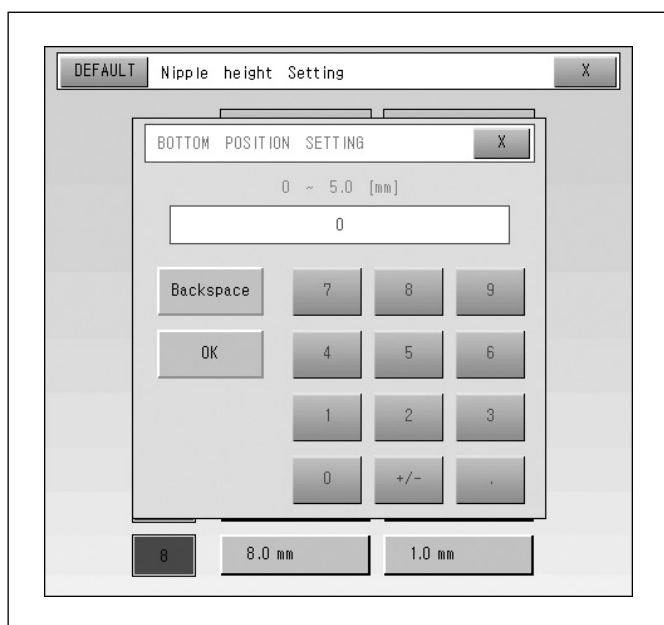


Fig. [5-18]

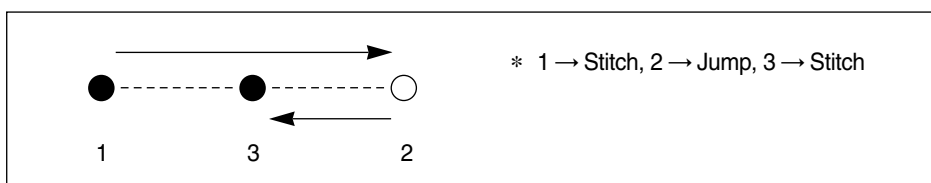
- ▶ If you choose the second button as shown in Fig. [5-16], a bottom position setting screen like Fig. [5-18] will appear.
- ▶ Bottom position setting is to set a height from the lowest point of presser foot to the needle plate.  
You can set the value in the range of 0~5.0mm in the unit of 0.1mm according to the type of materials.
- ▶ Bottom position is set according to the thickness of cloth and tape. Approximately 3~4mm of bottom position is appropriate for frill embroidery.
- ▶ Do not set the bottom position value less than 3mm for frill embroidery. .  
If the value less than 3mm is set, the device can be damaged because the iron plate contacts with it. The uniform value should be set for presser foot height of the entire heads. If the height is set differently, the embroidered shapes become different.

## 5) Punching and matters to be noted

### (1) Punching

- ① It is possible to do frill embroidery with a standard running stitch work.
- By using the nipple height setting value, you can make frilled tape shapes necessary for frill embroidery.

### ② Frill embroidery



- When the needle moves from number 1(stitch data) to number 2, the tape is wound off the bobbin. And when it moves from number 2(jump data) to number 3, no backstitch is made and the tape is maintained by the frill guide plate and a frilled shape is formed. Then the needle stitches the tape at number 3(stitch data), fixing frills between number 1 and number 2.

In the case of selecting fill setting in the needle bar setting, when the needle moves back from number 2 to number 3, the bobbin does not rotate and maintains its position of when the needle moves from number 1 to number 2.

You can adjust tape frill amount and height by adjusting the distance between number 1, 2, and 3.

### (2) Matters to be noted

- Stop signals should be given both at the beginning and the end (for trimming).  
(The signals are not necessary in the case of embroidery by using double bobbin.)
- If cord threads or beads are placed on a tape, the tape will become flat.
- It is recommended not to repeat the work on the same area.

## 6) Matters to be noted during the work

NO.	Matters to be noted
1	When setting the nipple height, make sure that the lower part of the frill guide does not contact with the top surface of the needle plate.
2	Set punching and swing amount appropriately as the frill amount is decided depending on the swing amount and length of jump section.
3	When the frill guide is set, if the needle setting leans toward one side, the frill cloth slides into the guide. Make sure to set the frill guide appropriately.
4	If the frill cloth is thick or the bobbin tension is strong, the number of frills decreases.
5	The frill cloth can slide into the guide around the sharp corner area. When conducting punching, avoid the sharp curve area.

## 6

## Cord attachment

### 1) Fixing the attachment to the machine

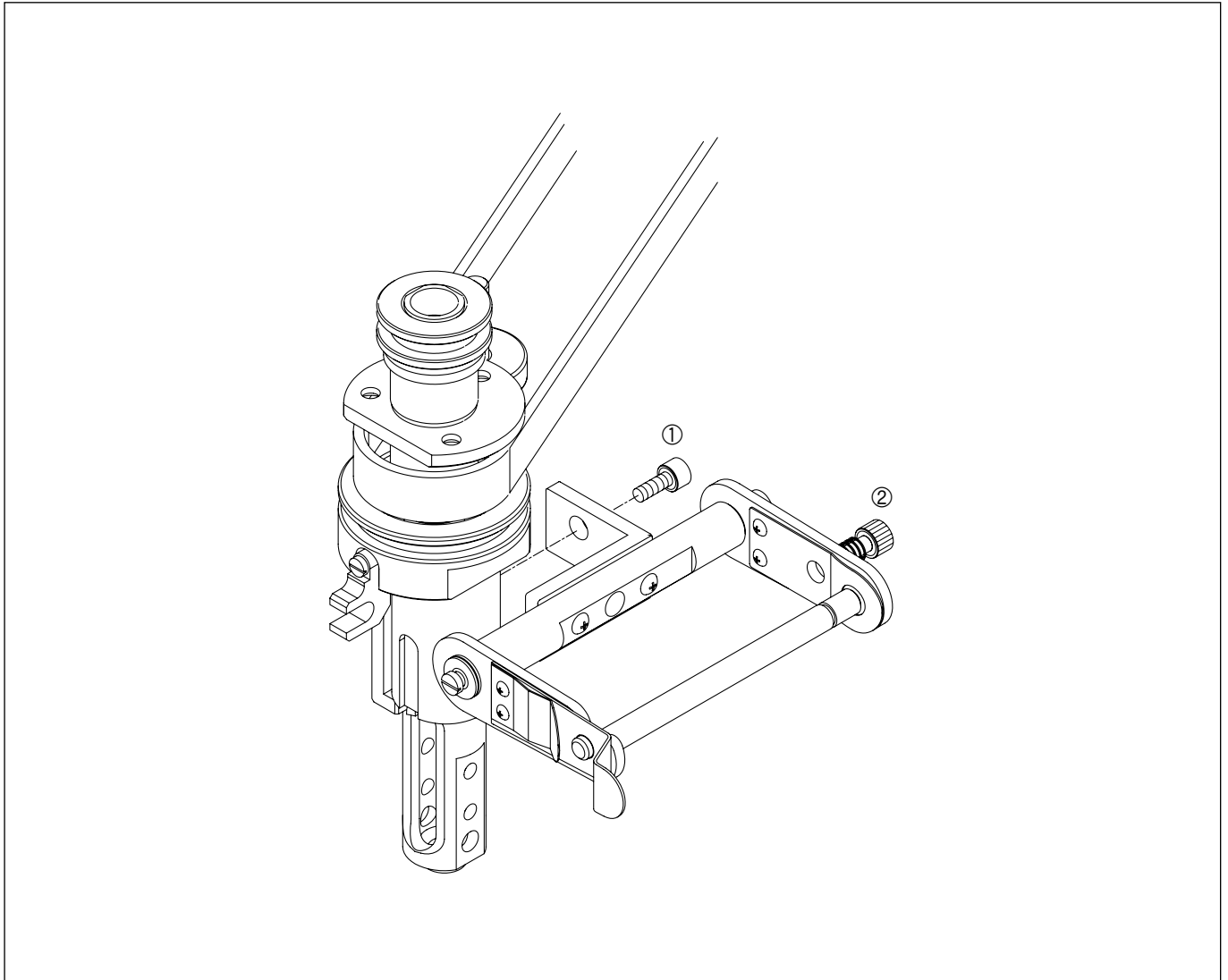


Fig. [6-1]

- ▶ For the cord embroidery, fix a taping attachment or a double bobbin to the machine.
- ▶ The following is the explanation on the embroidery work with taping attachment fixed to the machine.  
The embroidery work with double bobbin will be explained in the Double Bobbin attachment part.
- ▶ As shown in the Fig. [6-1], tighten the screw① to fix the taping attachment.
- ▶ Adjust the tension of thread when it is wound off the bobbin by using the bobbin tension adjusting bolt②.

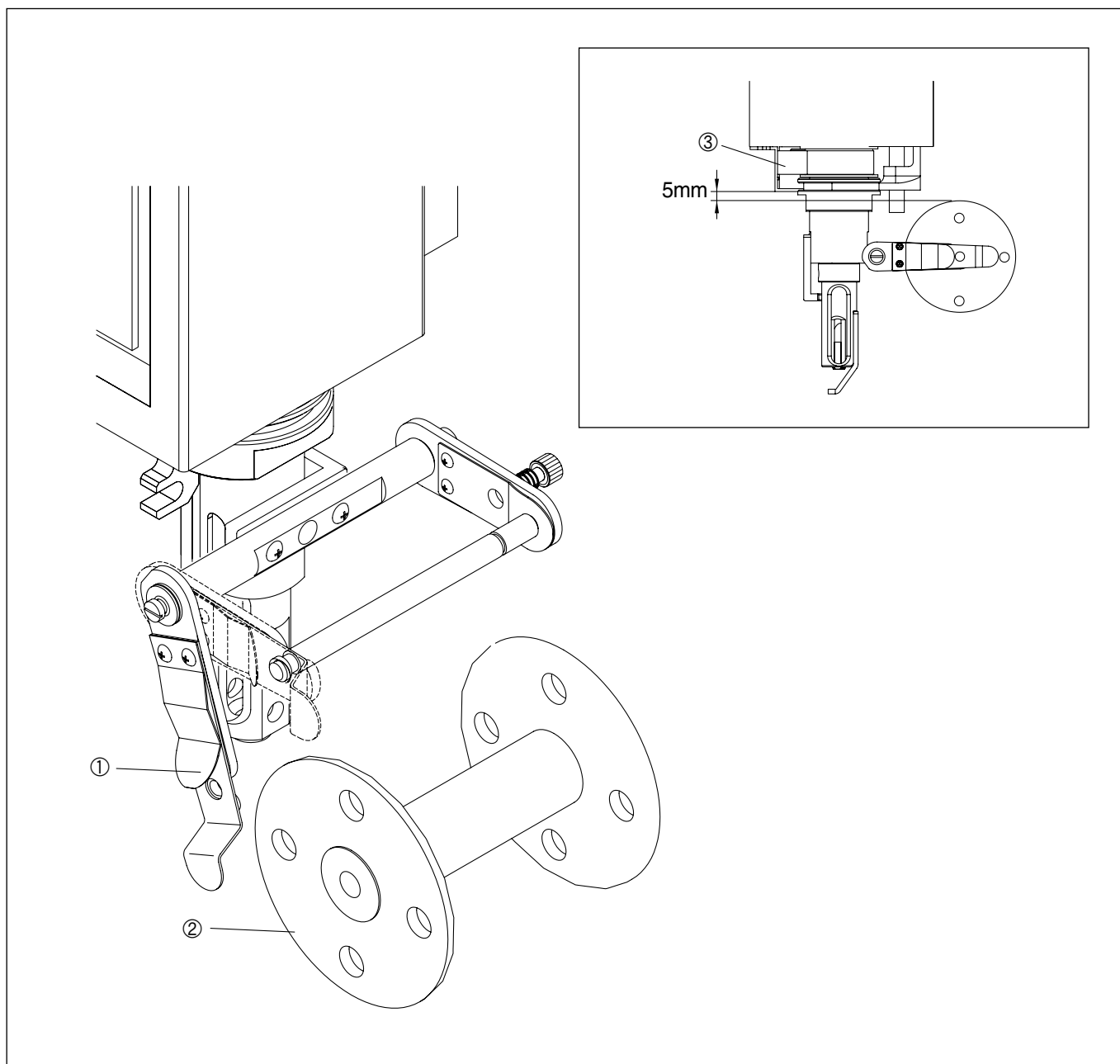


Fig. [6-2]

- ▶ After fixing the attachment, pull the bobbin bracket and the spring① to the side and pull them down to place the bobbin② as shown in Fig. [6-2].
- ▶ When placing the bobbin, carefully adjust it not to hit the pulley cover③ of the M-axis.  
If it is too lowered, adjust it to an appropriate position not to hit the frame.
- ▶ The best position of the bobbin is 5mm away from the pulley cover③ of the M-axis.

## 2) Fixing the cord presser foot and guide to the machine

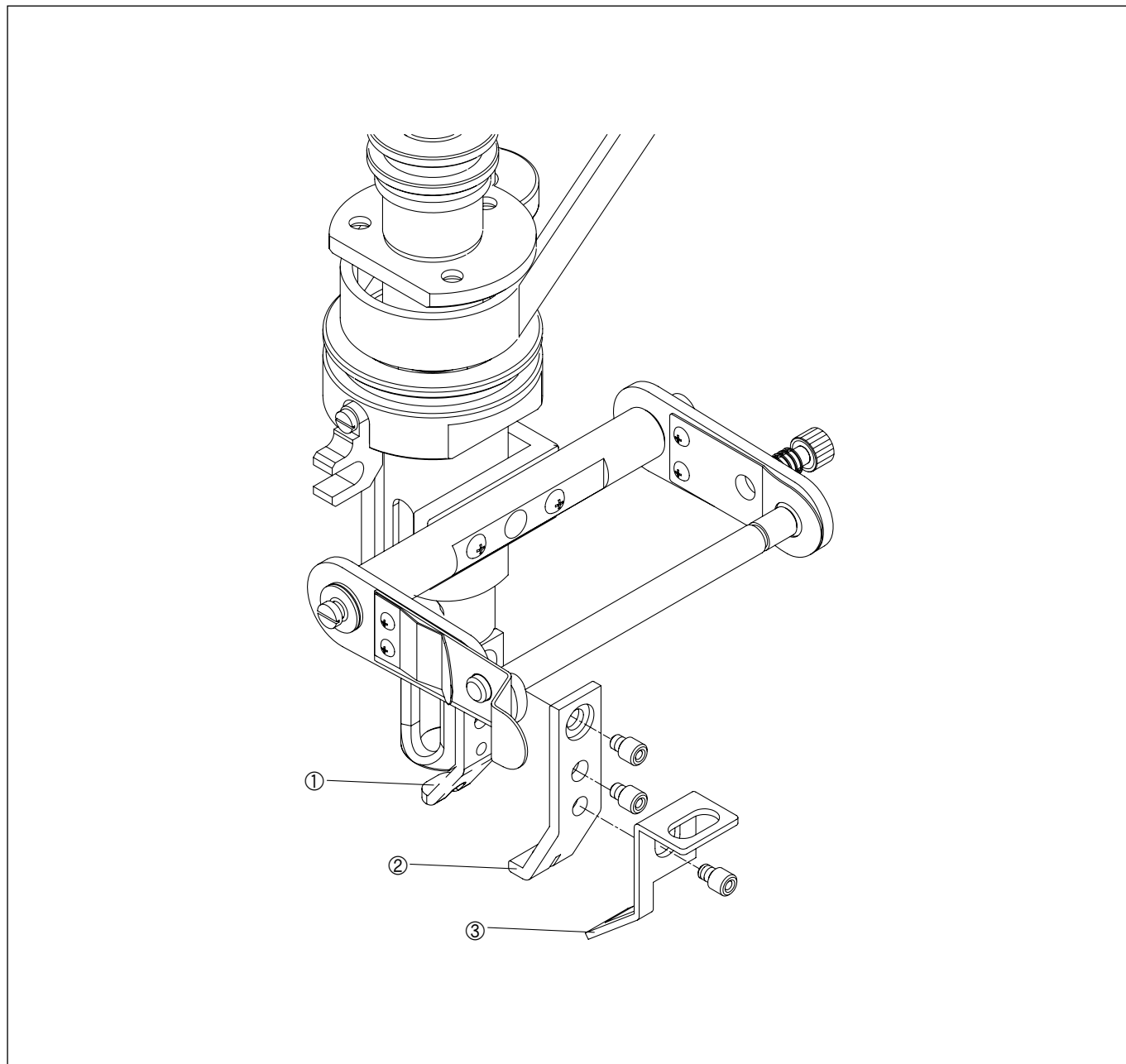


Fig. [6-3]

- ▶ As shown in the Fig. [6-3], remove the standard presser foot① and put the cord presser foot②.
- ▶ Adjust the guide③after fixing it to the cord presser foot.
- ▶ After placing the cord presser foot, check if the needle is accurately aligned with the hole of the presser foot center.
- ▶ If it is not, the work is not conducted and the needle can be broken. In this case, set the presser foot again. If the guide is not set properly, the thread can fall out of the needle.

### 3) Thread placement and setting

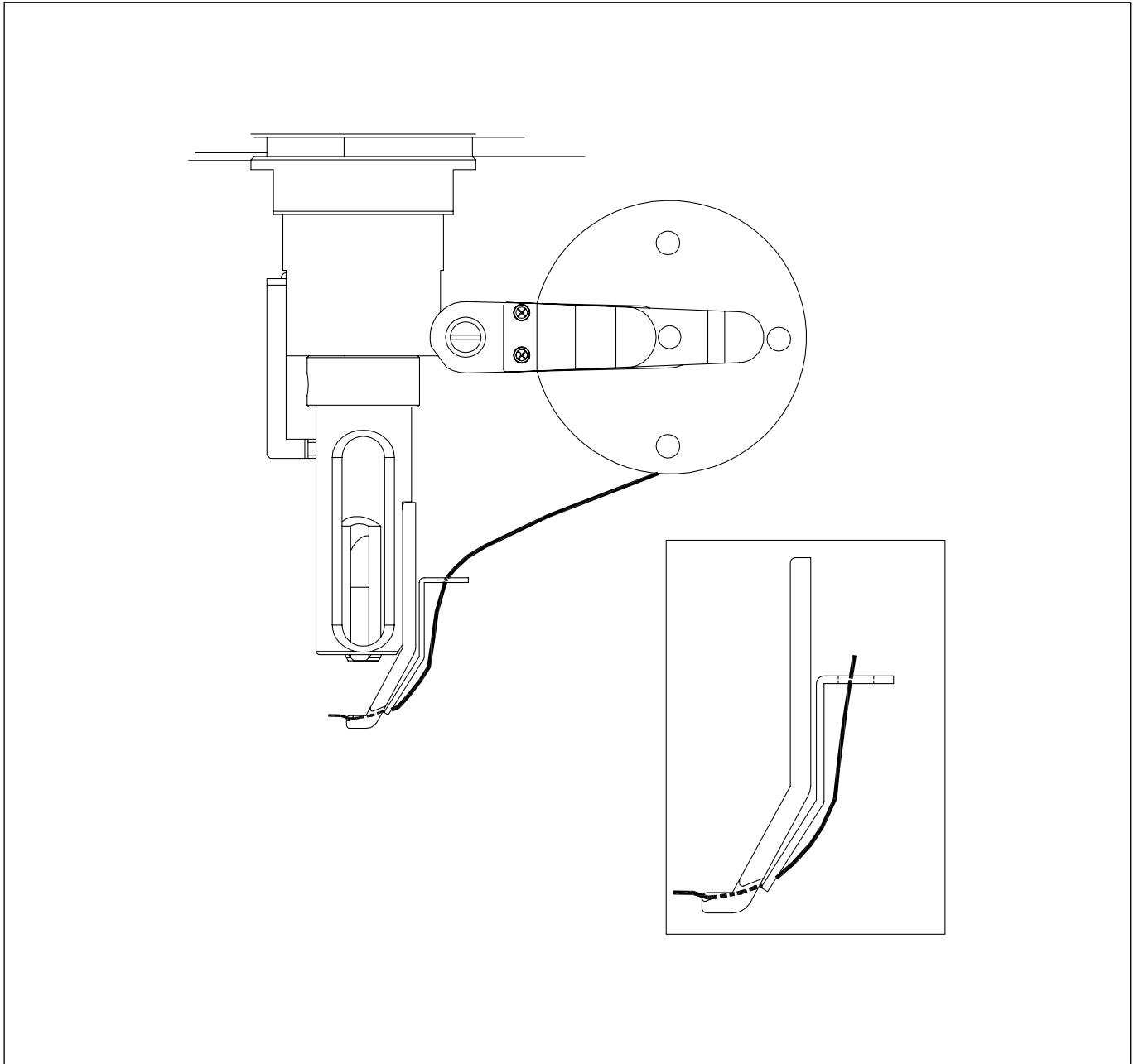


Fig. [6-4]

- The work using standard cord threads and flat type of tape can be conducted.  
Set the presser foot to be aligned with the needle center. And then put the thread to be placed into the hole of the presser foot.  
If the thread is not placed into the hole of the presser foot, you cannot conduct the work.

## 4) Operation

### (1) Needle bar setting

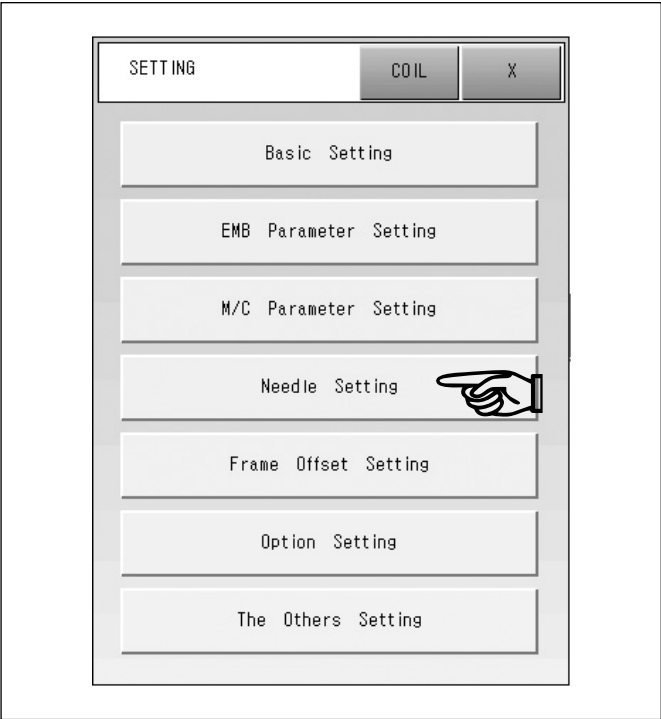


Fig. [6-5]

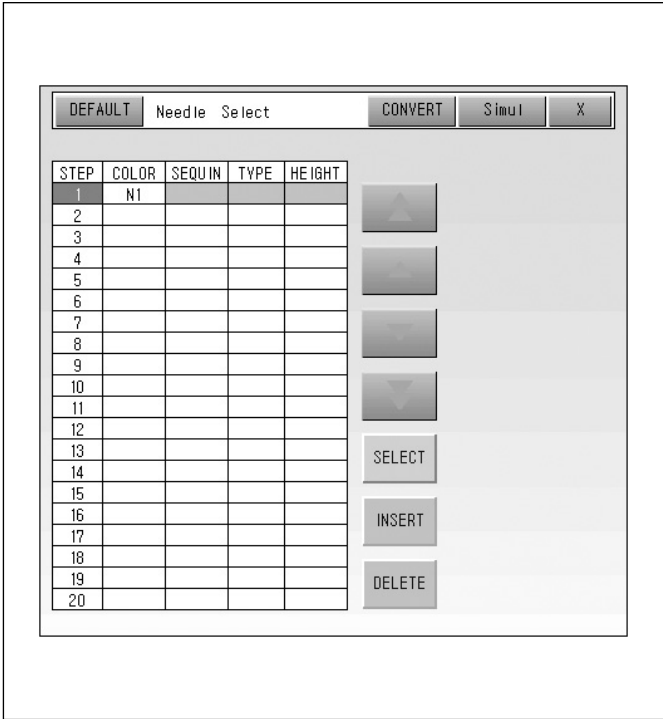


Fig. [6-6]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [6-5].
- ▶ Press Needle Bar Parameter Setting.
- ▶ If a screen like Fig. [6-6] appears, press SELECT in the step corresponding to cord embroidery by using an arrow key.

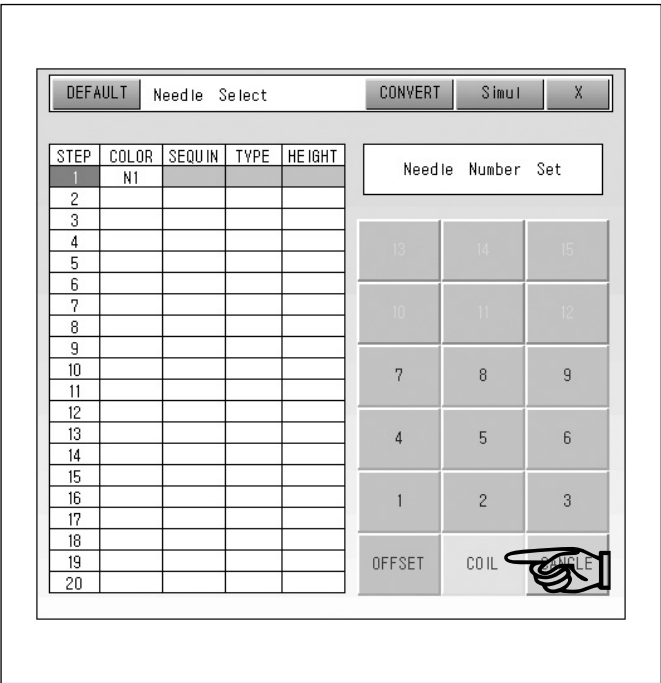


Fig. [6-7]

- ▶ If you press SELECT, you will see a needle bar setting screen as shown in Fig. [6-7].
- ▶ Use the number keypad when setting a standard head needle.  
If you choose COIL, a taping head will be assigned.
- ▶ For cord embroidery, select COIL.



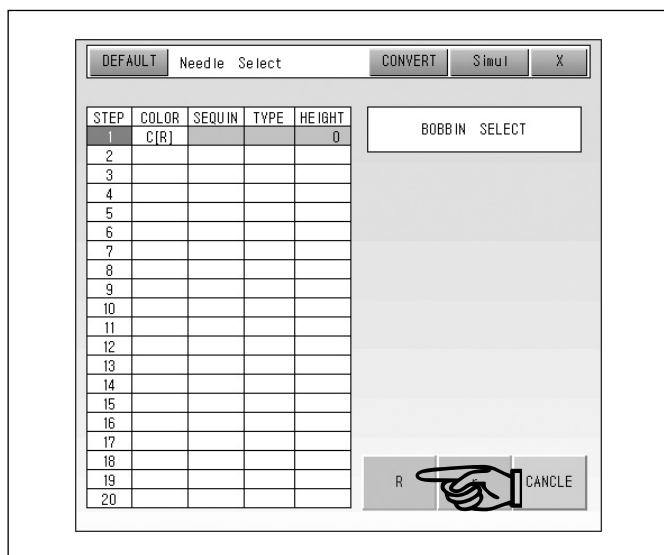


Fig. [6-8]

- ▶ If you select COIL, a bobbin select screen will appear.
- ▶ For the cord attachment, choose 'R' between 'R' and 'r'.
- ▶ If you choose 'r', the coil movement direction becomes reversed and cord embroidery cannot be conducted.

※ When using double bobbin → select 'r'

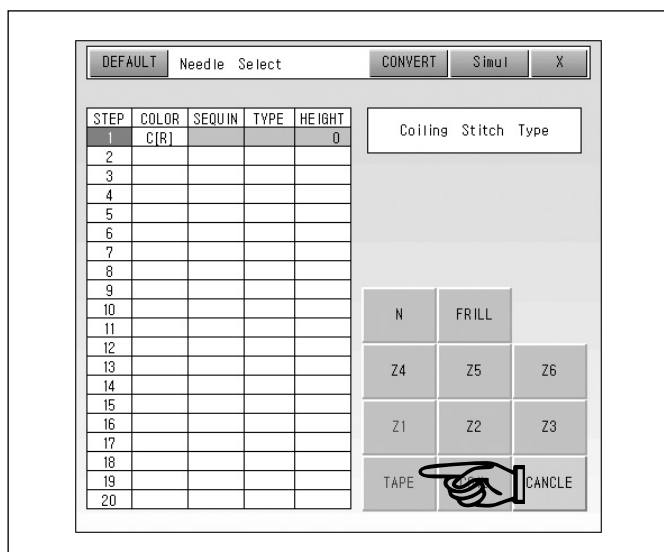


Fig. [6-9]

- ▶ As shown in Fig. [6-9], a stitch type selecting screen appears.
- ▶ For cord embroidery, select TAPE.

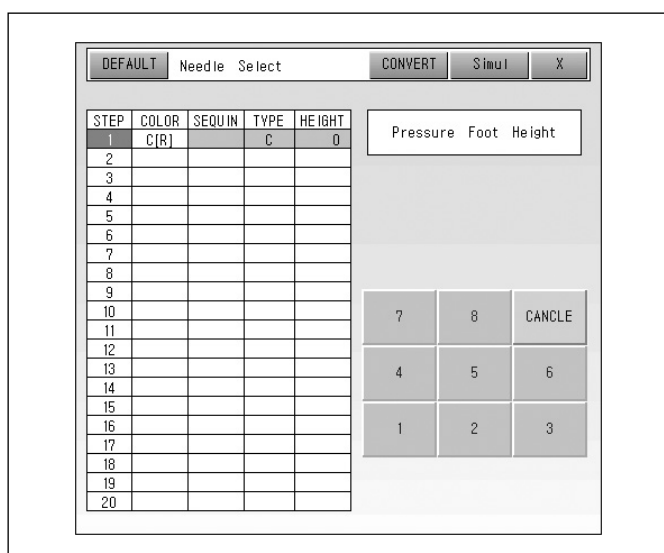


Fig. [6-10]

- ▶ The next phase is nipple height setting. You can set the height from step 1 to step 8.

## (2) Nipple height setting

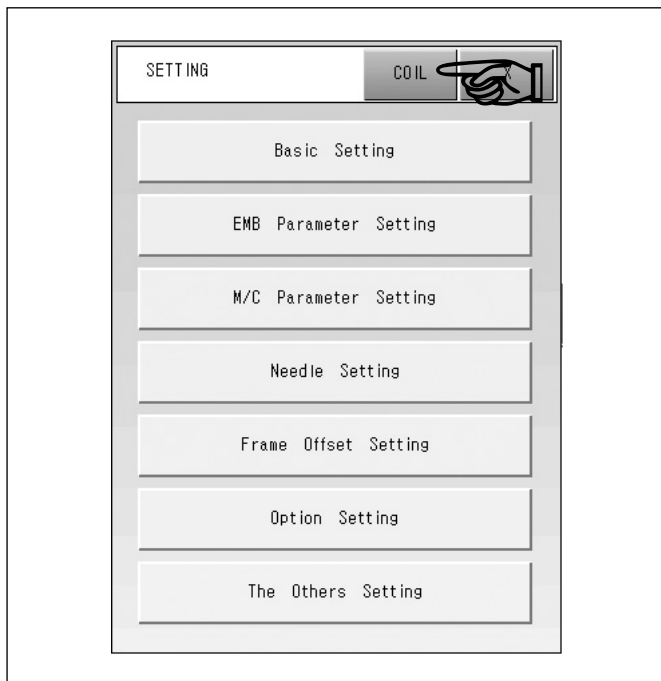


Fig. [6-11]

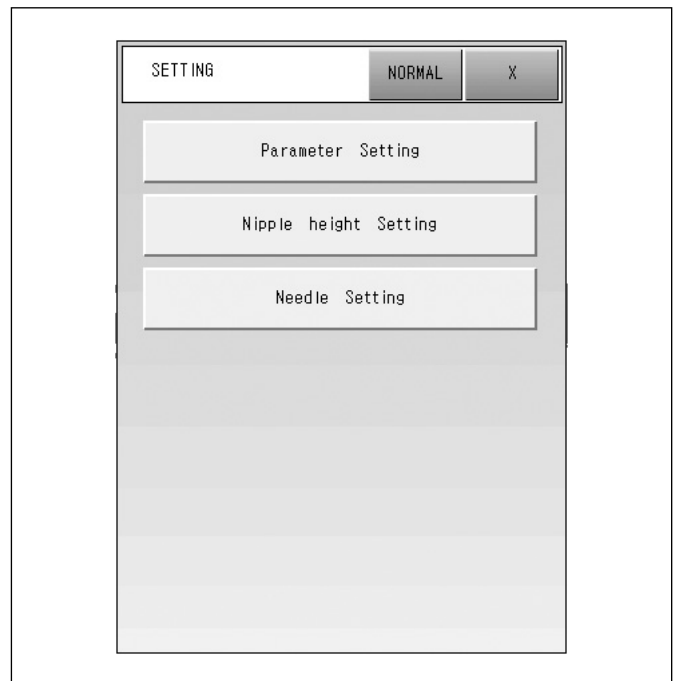


Fig. [6-12]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [6-11]. If you press COIL at the top of the screen, Nipple Height Setting will appear as shown in Fig. [6-12].
- ▶ Press the Nipple Height Setting button, and you will see a screen like Fig. [6-13].

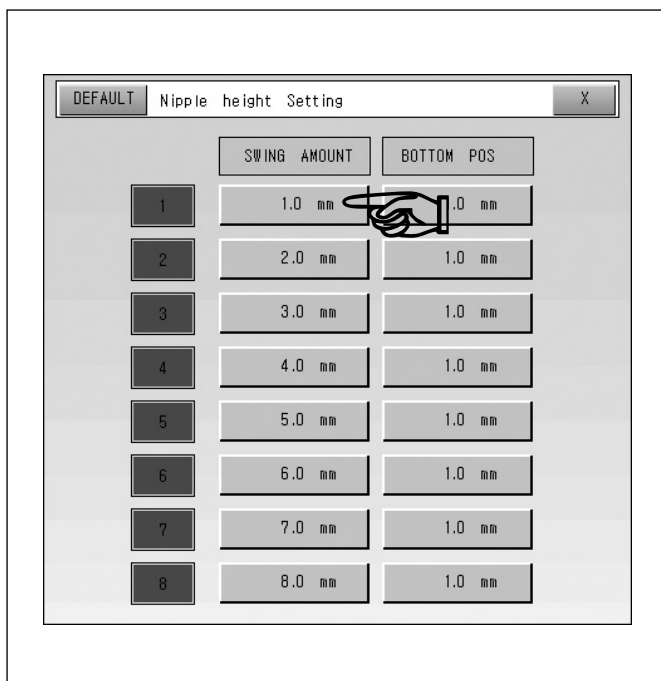


Fig. [6-13]

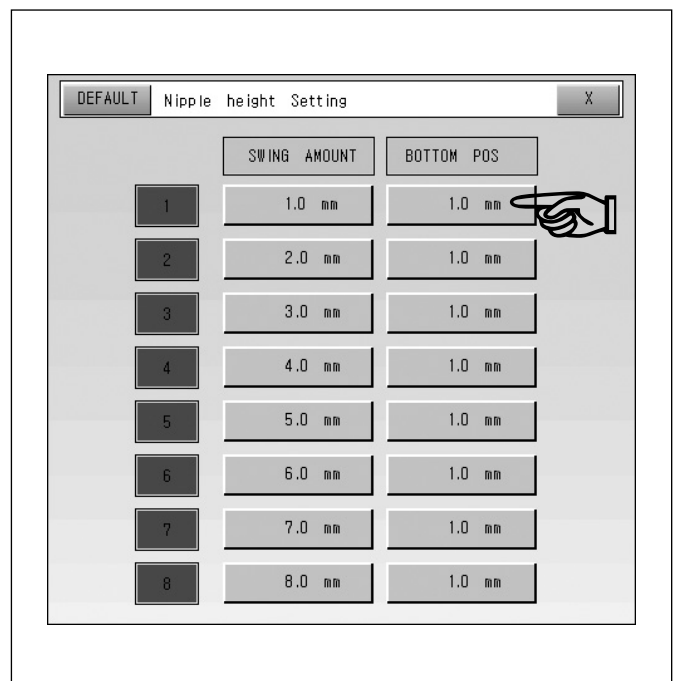


Fig. [6-14]

- ▶ You can save as many as 8 nipple heights as shown in Fig. [6-13].
- ▶ The nipple height is set by selecting height values of up position and down position.

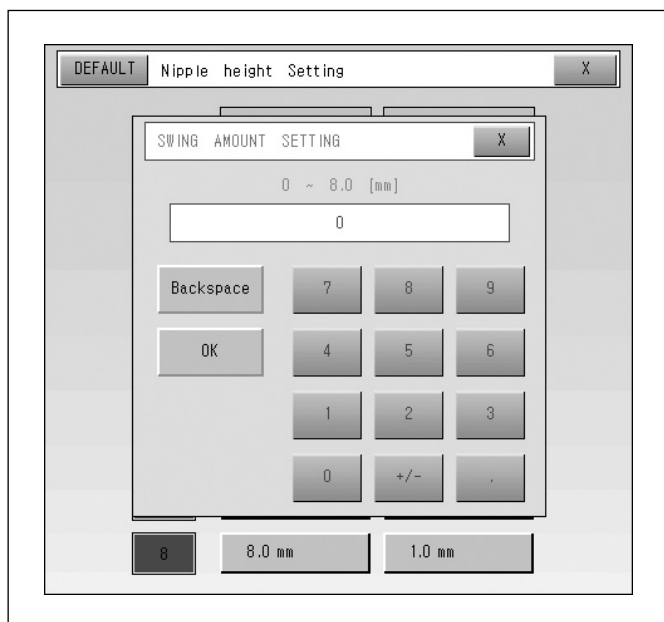


Fig. [6-15]

- ▶ If you choose the first button as shown in Fig. [6-13], a swing amount setting screen like Fig. [6-15] will appear.
- ▶ Swing amount setting is to set a vertical feed distance of the presser foot. You can set the value in the range of 0~8.0mm in the unit of 0.1mm.
- ▶ An optimum swing amount value is set differently according to the type of embroidery materials. The recommended swing amount is 0~2mm and a smaller value is better.

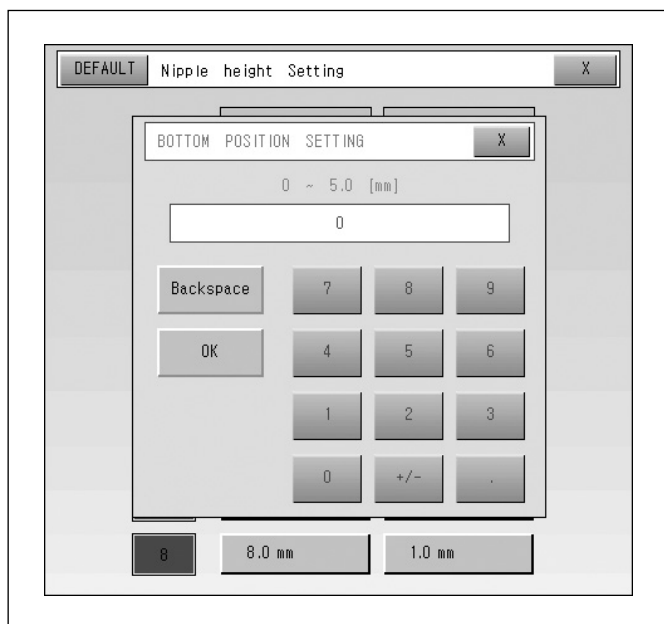


Fig. [6-16]

- ▶ If you choose the second button as shown in Fig. [6-14], a bottom position setting screen like Fig. [6-16] will appear.
- ▶ Bottom position setting is to set a height from the lowest point of presser foot to the needle plate. You can set the value in the range of 0~5.0mm in the unit of 0.1mm according to the type of embroidery materials.
- ▶ An optimum bottom position is set differently according to the thickness of cloth and tape. It is recommended to set the bottom position as close to the upper part of the thread as possible.

---

## **5) Punching and matters to be noted**

### **(1) Punching**

- Conduct a standard running operation.
- The appropriate stitch length is 2.0mm~3.0mm.
- The stitch length should be shorter around the corners.
- If there are standard embroidery and other options, cording and taping are better to be the last process.

### **(2) Matters to be noted**

- Stop signals should be given both at the beginning and the end. -for trimming  
(The signals are not necessary in the case of embroidery by using double bobbin.)
- If cord threads or beads are placed on a tape, the tape will become flat.
- It is recommended not to repeat the work on the same area.

## 6) Matters to be noted during the work

NO.	Matters to be noted
1	Carefully conduct the cord presser foot setting as it is very important to align the needle with the center of the cord presser foot.
2	Too thin cord thread cannot be used for cord embroidery. Use cord threads thicker than 2mm. Cord threads thinner than 2mm are appropriate for zigzag embroidery.
3	If the bobbin tension is too strong, a thread can fall out around the corner area.
4	You may select a different needle (needle no.9) depending on the cord thread used.
5	Use an appropriate presser foot according to the type of cord threads.

## 7

## Double Bobbin attachment

### 1) Fixing the attachment to the machine

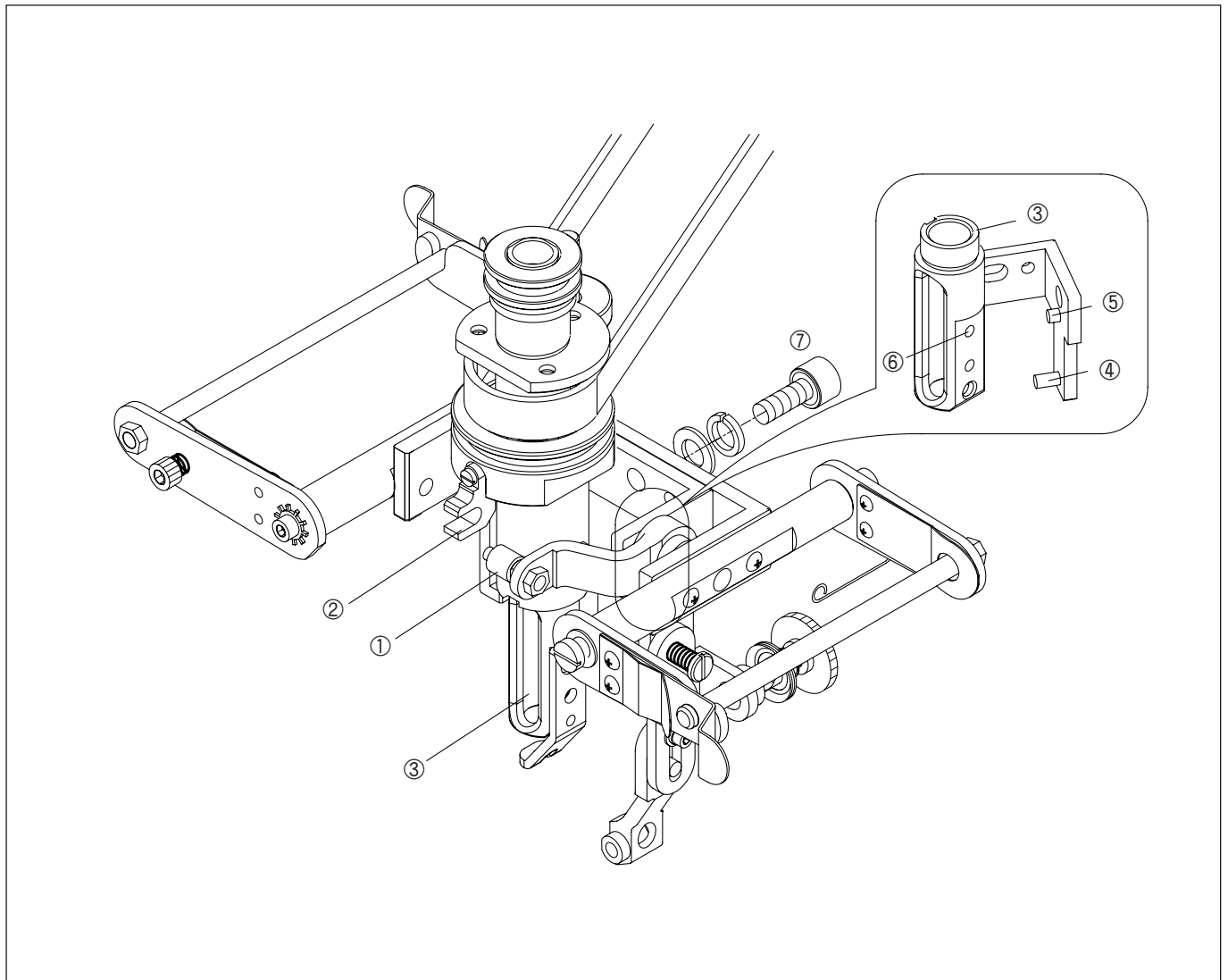


Fig. [7-1]

- First of all, remove the nipple rotary block.
- As shown in Fig. [7-1], put the double bobbin attachment roller①into the rotary ring guide②, place the guide pin④of the double bobbin attachment into the guide nipple groove③, and put the placement standard pin⑤into the hole⑥. And tighten the screw⑦to fix the double bobbin attachment.

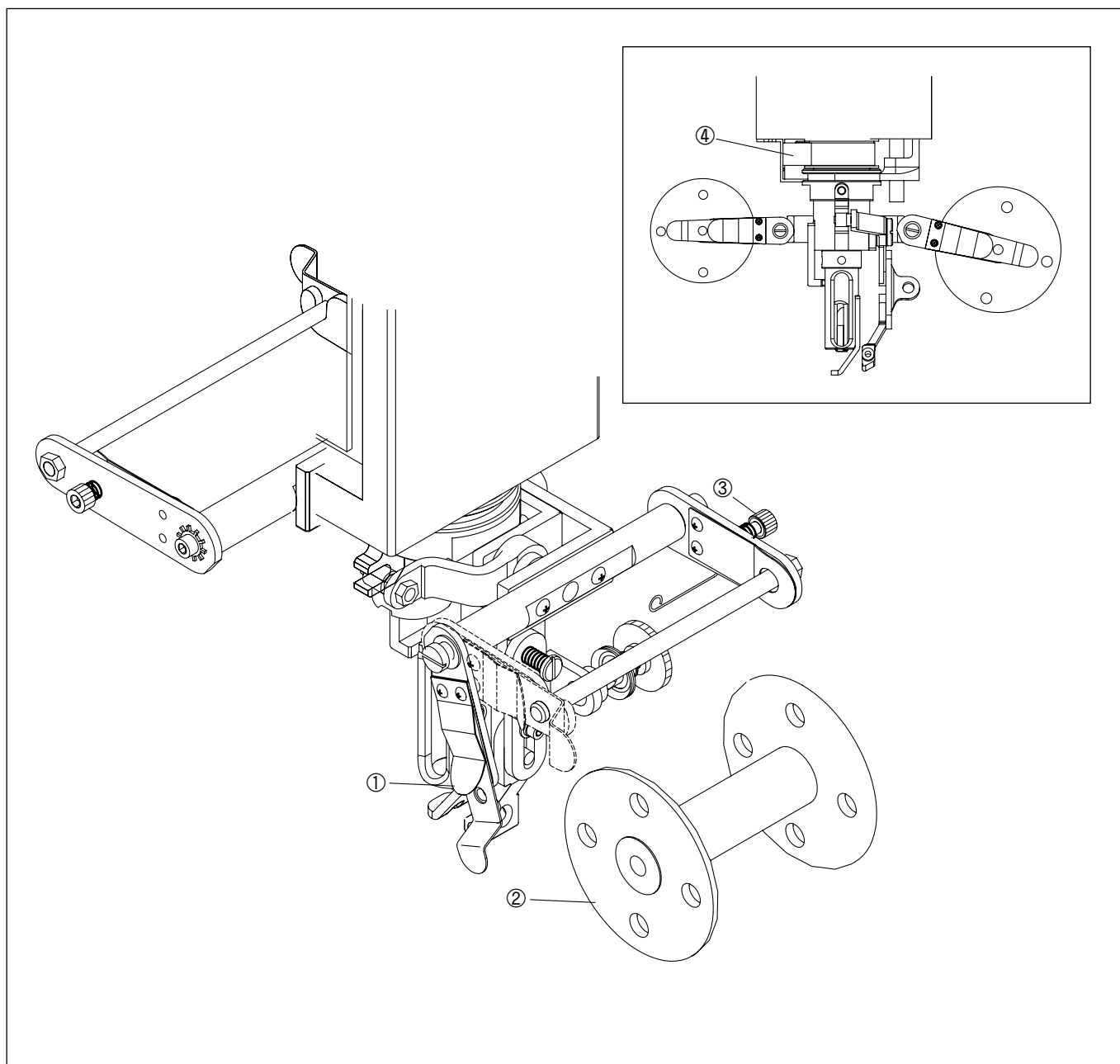


Fig. [7-2]

- ▶ After fixing the attachment, pull the bobbin bracket and the spring① to the side and pull them down to place the bobbin② as shown in Fig. [7-2].
- ▶ When placing the bobbin, carefully adjust it not to hit the lower surface of the pulley cover④ of the M-axis. If it is too lowered, adjust it to an appropriate position not to hit the frame.
- ▶ The best position of the bobbin is 5mm away from the lower surface of the M-axis pulley cover④.
- ▶ Adjust the tension of thread when it is wound off the bobbin by using the bobbin tension adjusting bolt③.

## 2) Types of available embroidery work when using the double bobbin

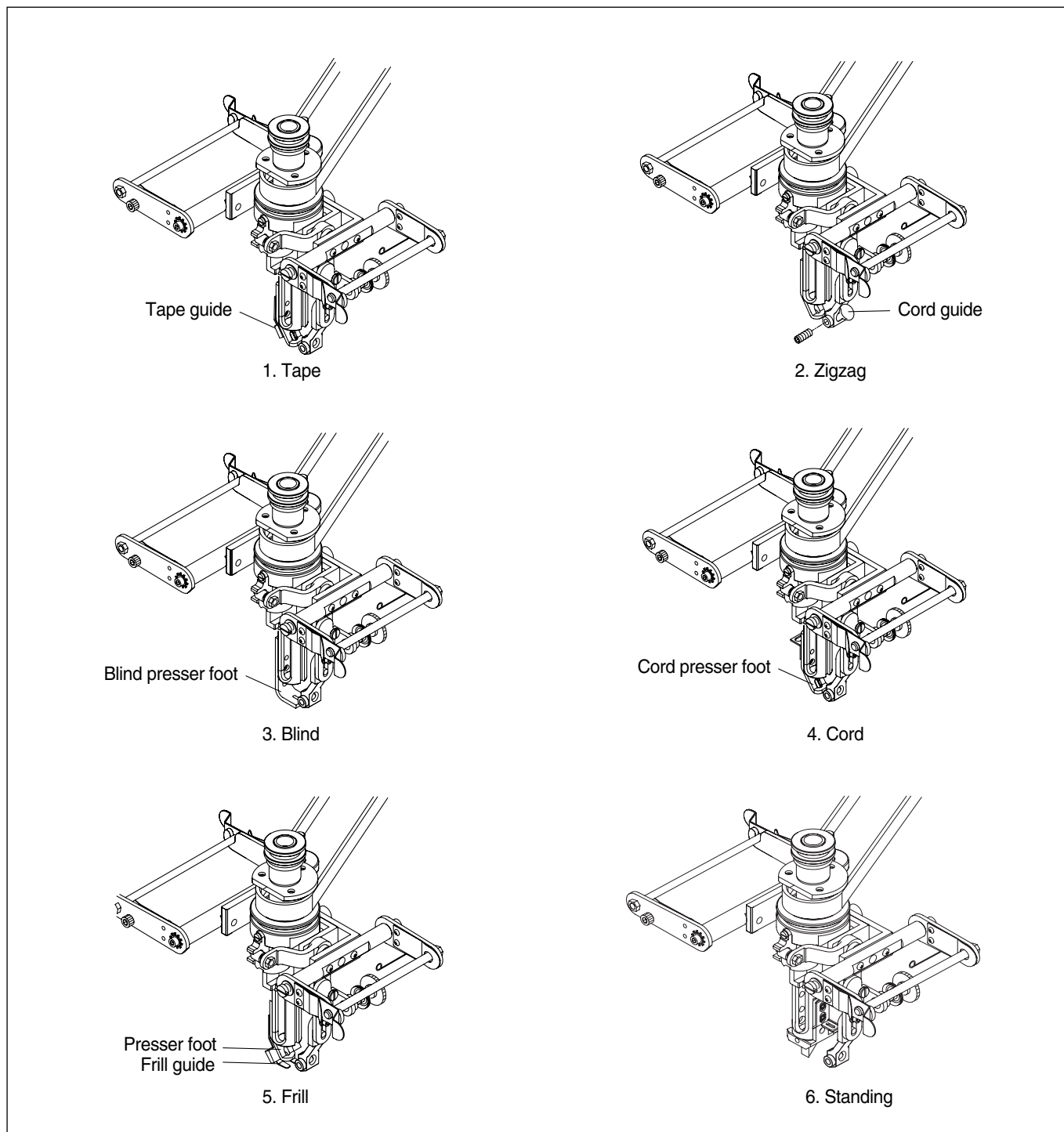


Fig. [7-3]

- ▶ As shown in Fig. [7-3], basically 6 types of embroidery work are available if you change a guide when using the double bobbin.
- ▶ Available works are taping embroidery, zigzag embroidery, blind embroidery, cording embroidery, frill embroidery and standing embroidery.
- ▶ Fixing the guide to the machine is explained in each part of embroidery works.



### 3) Operation

#### (1) Needle bar setting

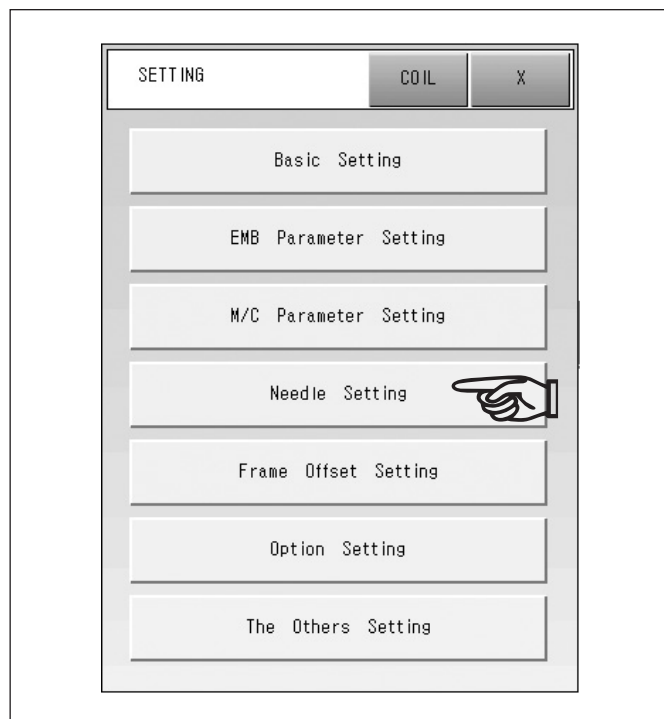


Fig. [7-4]

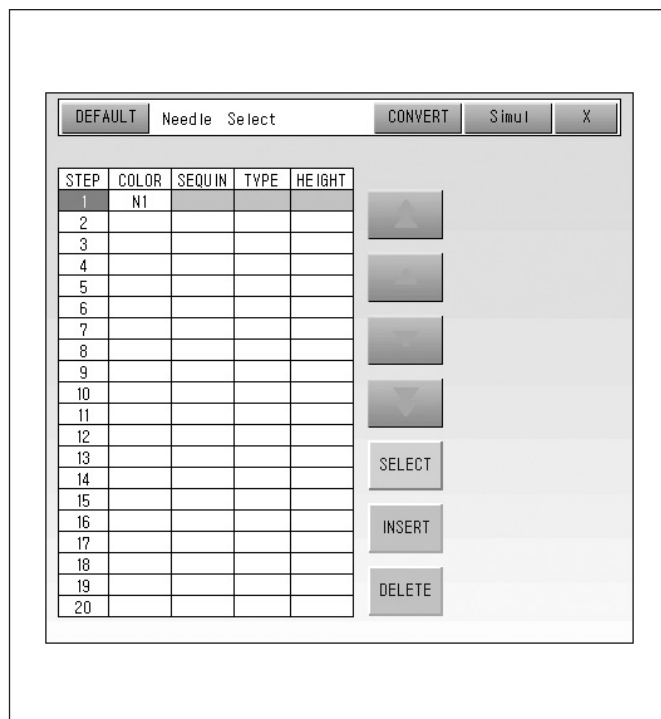


Fig. [7-5]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [7-4].
- ▶ Press Needle Bar Parameter Setting.
- ▶ If a screen like Fig. [7-5] appears, press SELECT in the step corresponding to double bobbin work by using an arrow key.

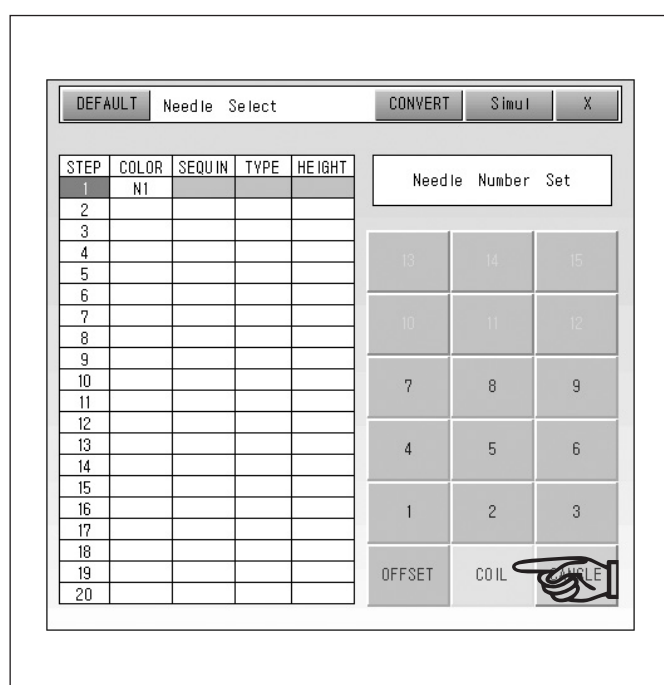


Fig. [7-6]

- ▶ If you press SELECT, you will see a needle bar setting screen as shown in Fig. [7-6].
- ▶ Use the number keypad when setting a standard head needle.  
If you choose COIL, a taping head will be assigned.
- ▶ For embroidery work using double bobbin, select COIL.

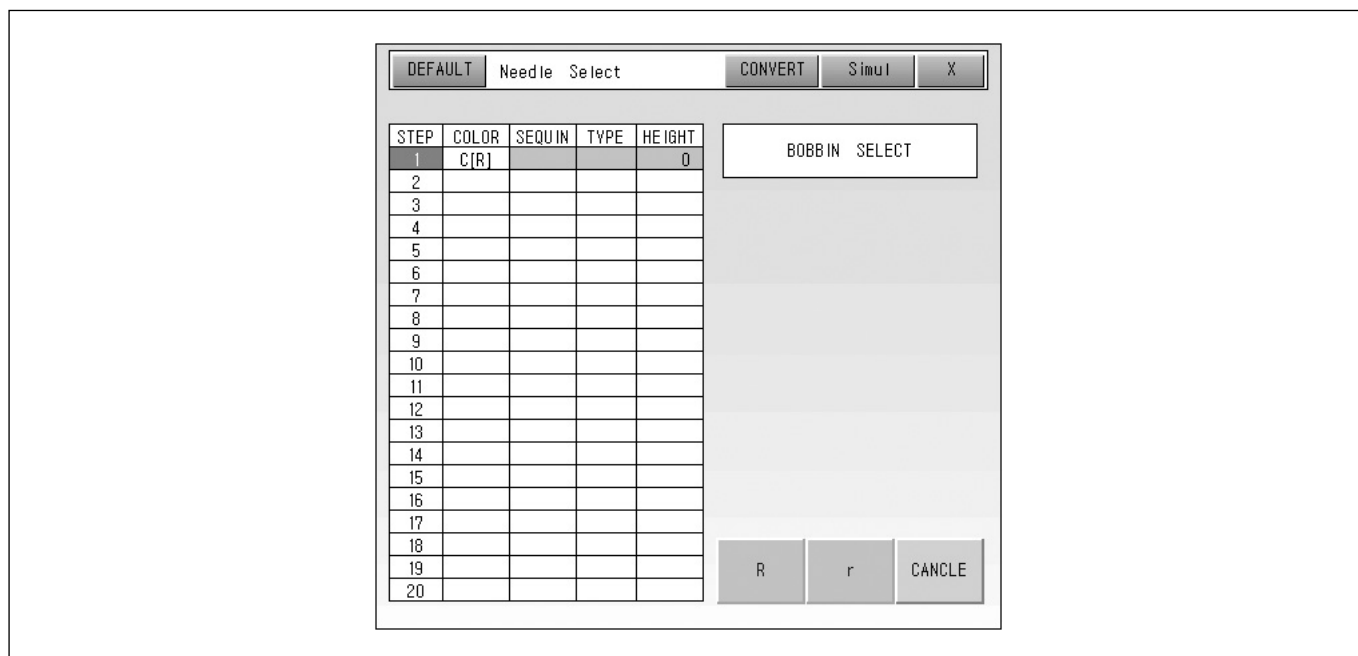


Fig. [7-7]

- ▶ If you select COIL, a bobbin select screen will appear.
- ▶ when using the double bobbin attachment, select a value appropriate for each guide.
  - Taping embroidery: r
  - Zigzag embroidery: R
  - Blind embroidery: R
  - Cording embroidery: r
  - Frill embroidery: r
  - Standing embroidery: r
- ▶ The selected value for the double bobbin attachment is opposite to the value selected for the standard attachment. If the value is not set as presented above, the embroidery work cannot be conducted (except zigzag embroidery).
- ▶ The process of other value settings is explained in each part of embroidery works.

## **4) Punching and matters to be noted**

### **(1) Punching**

- Conduct a standard running operation.
- The appropriate stitch length is 2.0mm~3.0mm.
- The stitch length should be shorter around the corners.
- If there are standard embroidery and other options, taping is better to be the last process.

### **(2) Matters to be noted**

- Stop signals should be given both at the beginning and the end. -for trimming  
(The signals are not necessary in the case of embroidery by using double bobbin.)
- If cord threads or beads are placed on a tape, the tape will become flat.
- It is recommended not to repeat the work on the same area.  
→ A needle can be broken on the overlapped area in the case of beading.
- Make notes with 7~8 stitches both at the beginning and the end.
- When beading and taping are conducted simultaneously, select their colors separately.
- Be careful when conducting the beading work around the corner area  
→ For an angular corner, conduct the beading work to make it gentle curve.
- Be careful of the line parallel to the beading line  
→ Gap between lines should be adjusted according to the size of beads.

---

## 5) Matters to be noted during the work

NO.	Matters to be noted
1	Be careful when setting the double bobbin attachment. Make sure that parts are more closely contacted one another and that the bobbin setting is well-balanced.
2	Make sure to check if the double bobbin pin is properly inserted into the hole of presser foot guide.
3	Be careful when selecting a bobbin.
4	For other matters, refer to the each attachment part.

## 8 Standing attachment

### 1) Fixing the attachment to the machine

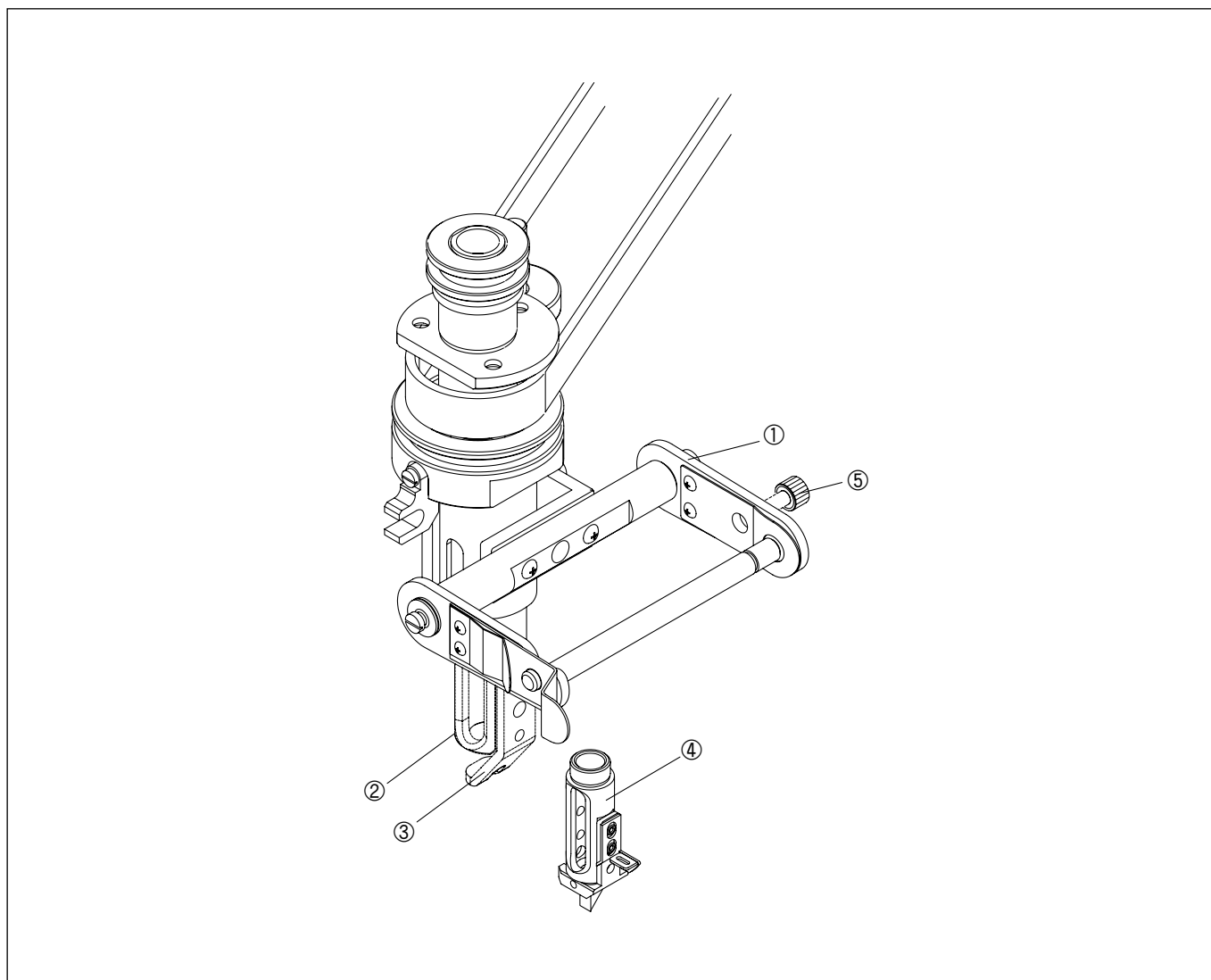


Fig. [8-1]

- ▶ For standing embroidery, fix the tapping attachment (1) to the machine and then remove the standard guide nipple (2) and presser foot (3).
- ▶ And put the guide nipple for standing embroidery (4) with standing tape guide and standing presser foot attached.
- ▶ Adjust the tension of thread when it is wound off the bobbin by using the bobbin tension adjusting bolt (5).

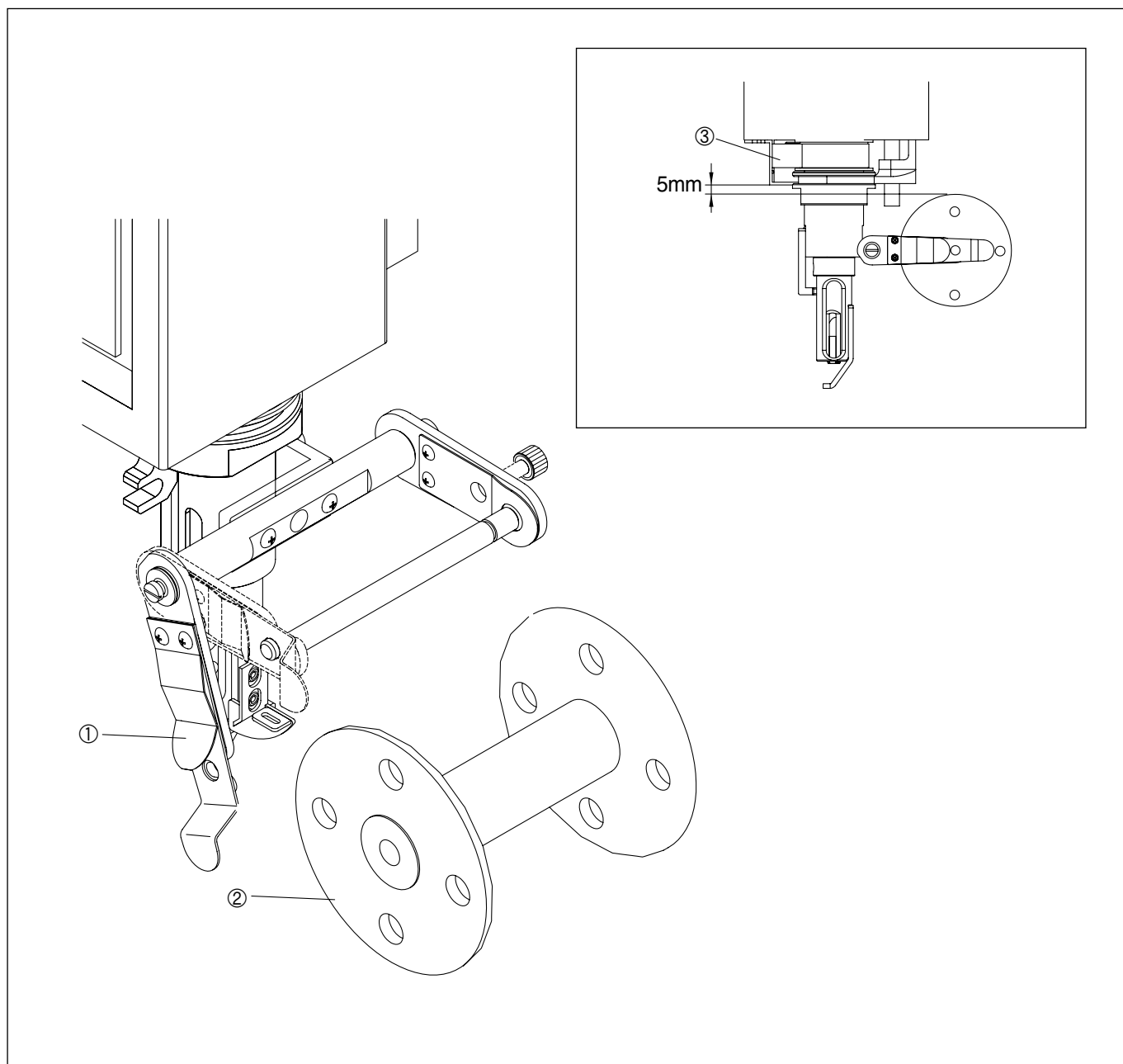


Fig. [8-2]

- ▶ After fixing the attachment, pull the bobbin bracket and the spring ① to the side and pull them down to place the bobbin ② as shown in Fig. [8-2].
- ▶ When fixing the bobbin, carefully adjust it not to hit the pulley cover ③ of the M-axis. If it is too lowered, adjust it to an appropriate position not to hit the frame.
- ▶ The best position of the bobbin is 5mm away from the lower surface of pulley cover ③ of the M-axis.

## 2) Fixing the standing guide nipple to the machine

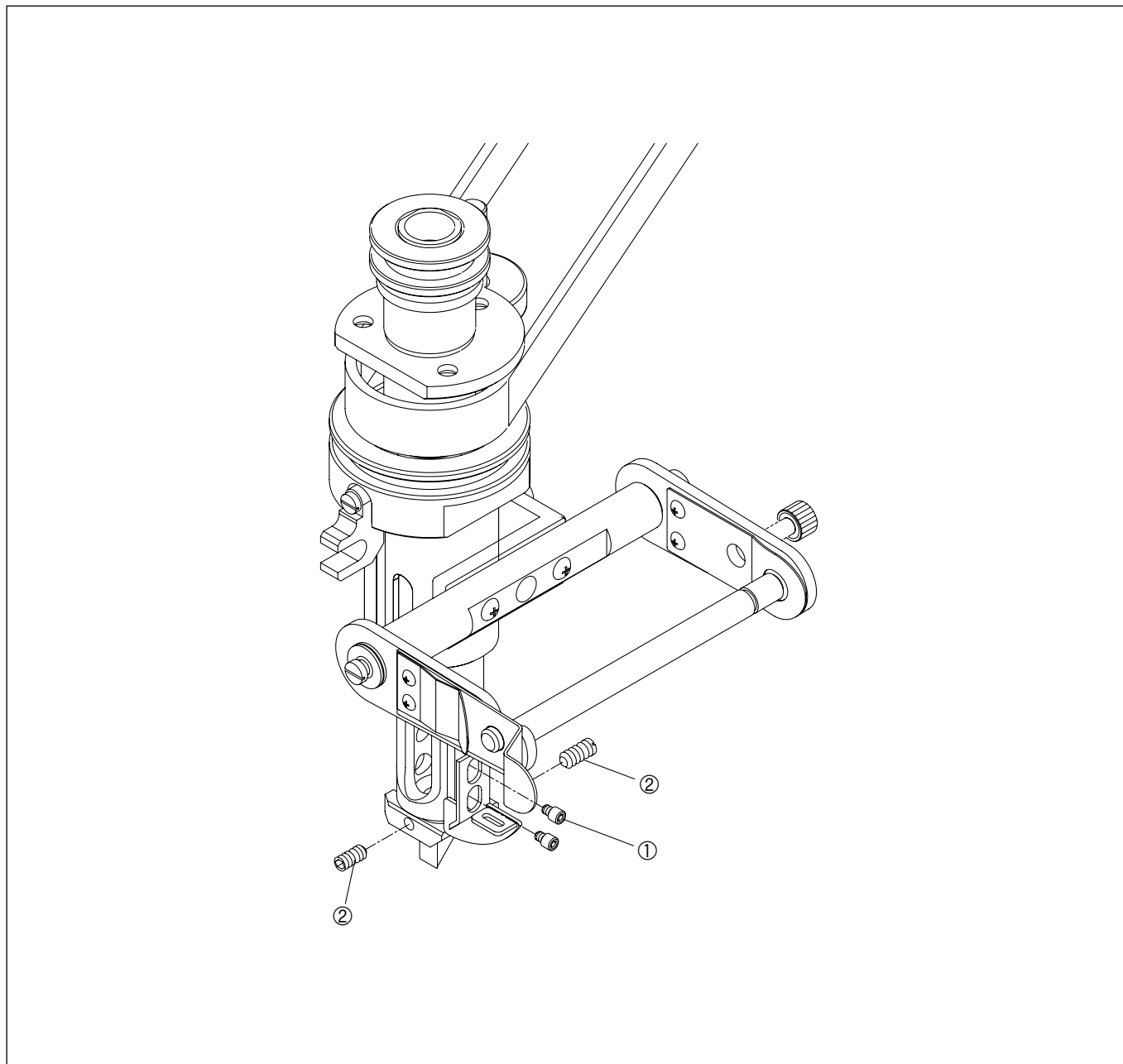


Fig. [8-3]

- ▶ As shown in the Fig. [8-3] set the standing tape guide to be aligned with the edge of the center of standing presser foot by using the screw ①. Make sure that the tape guide should be a little wider than the supplied tape width.
- ▶ Set the standing tape guide and the standing presser foot properly to make sure that the needle does not hit the edge of the standing tape guide.
- ▶ Fix the standing tape guide with the screw ①.  
Fix the standing presser foot with the screw ② from left and right.
- ▶ If the setting is not properly performed, the needle hits the guide, resulting in failed standing embroidery work, loud noise and broken needle.

### 3)Tape placement and setting

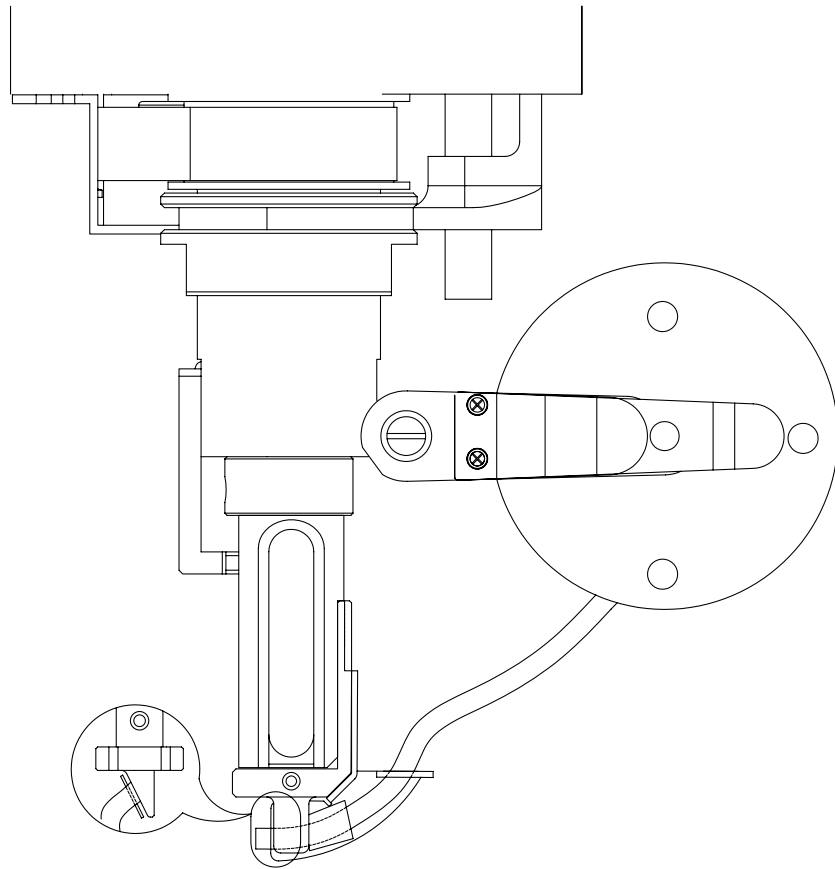


Fig. [8-4]

- As the tape edge should be backstitched, set the guide in a way that the needle can stitch the tape edge.



## 4) Operation

### (1) Needle bar setting

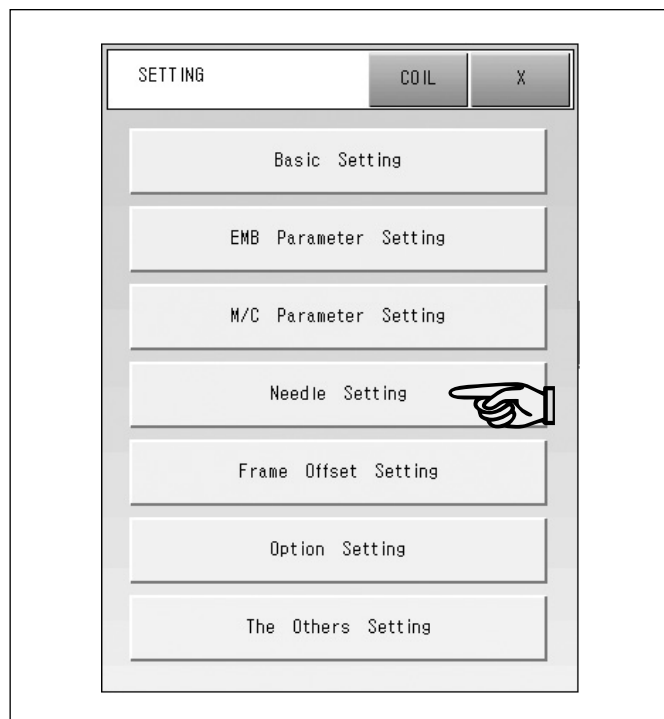


Fig. [8-5]

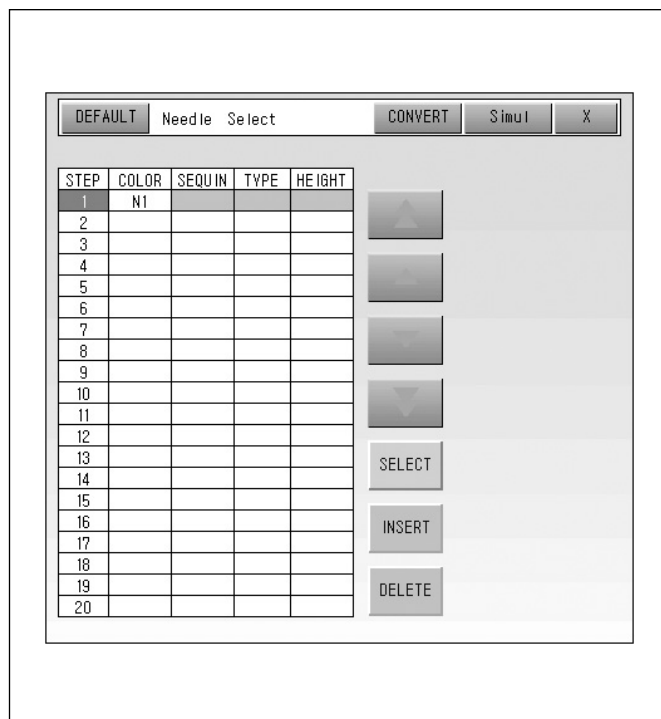


Fig. [8-6]

- If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [8-5].
- Press Needle Bar Parameter Setting.
- If a screen like Fig. [8-6] appears, press SELECT in the step corresponding to standing embroidery by using an arrow key.

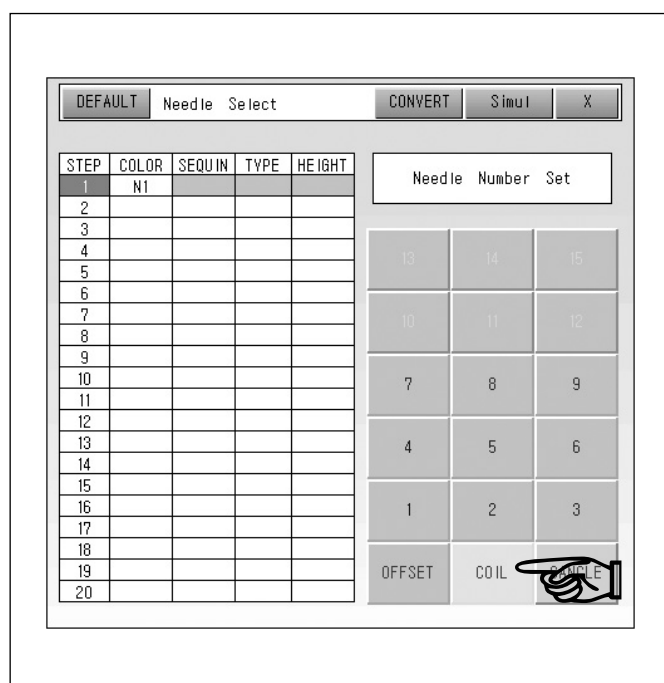


Fig. [8-7]

- If you press SELECT, you will see a needle bar setting screen as shown in Fig. [8-7].
- Use the number keypad when setting a standard head needle.  
If you choose COIL, a taping head will be assigned.
- For standing embroidery, select COIL.

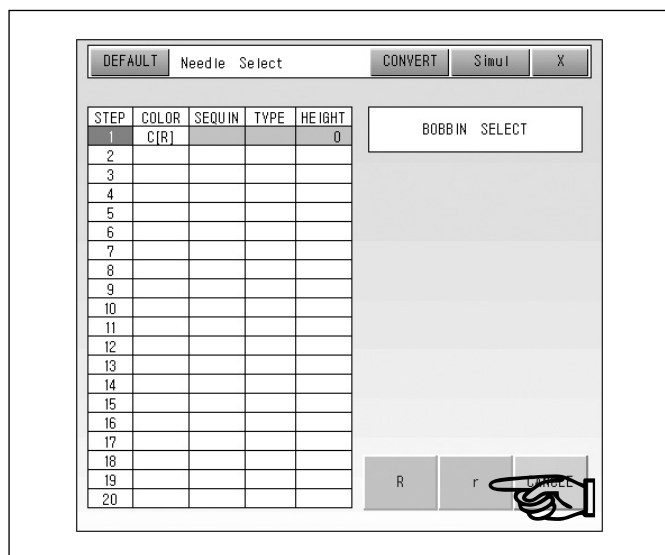


Fig. [8-8]

- ▶ If you select COIL, a bobbin select screen will appear.
- ▶ For the tape attachment, choose 'R' between 'R' and 'r'.
- ▶ If you choose 'r', the standing movement direction becomes reversed and standing embroidery cannot be conducted.

※ When using double bobbin → select 'r'

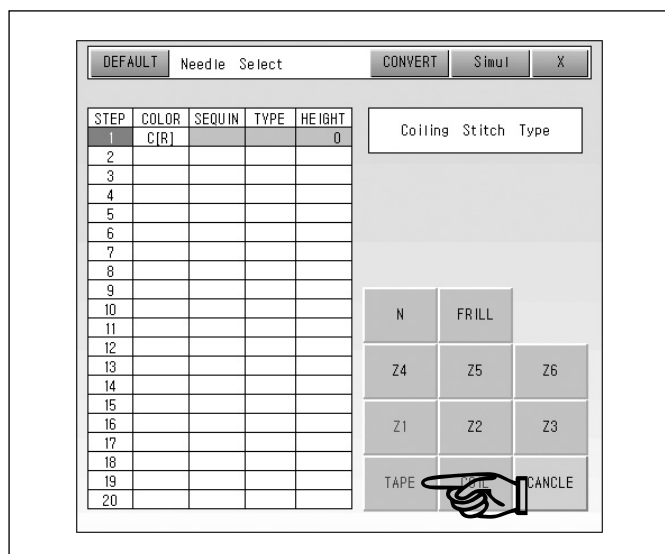


Fig. [8-9]

- ▶ For standing embroidery, select TAPE as shown in Fig.

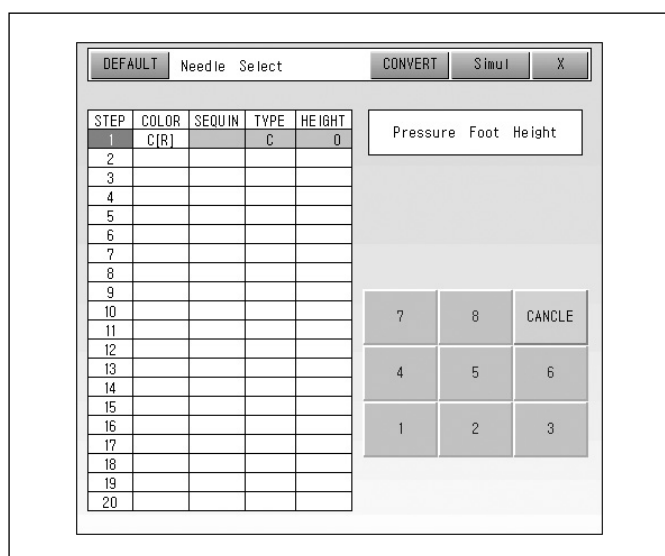


Fig. [8-10]

- ▶ The next phase is the nipple height setting. You can set the height from step 1 to step 8.
- ▶ The nipple height and swing amount are very important for standing embroidery. If their values are not set properly, it can cause loud noise, failure of work and burden on the machine.

## (2) Nipple height setting

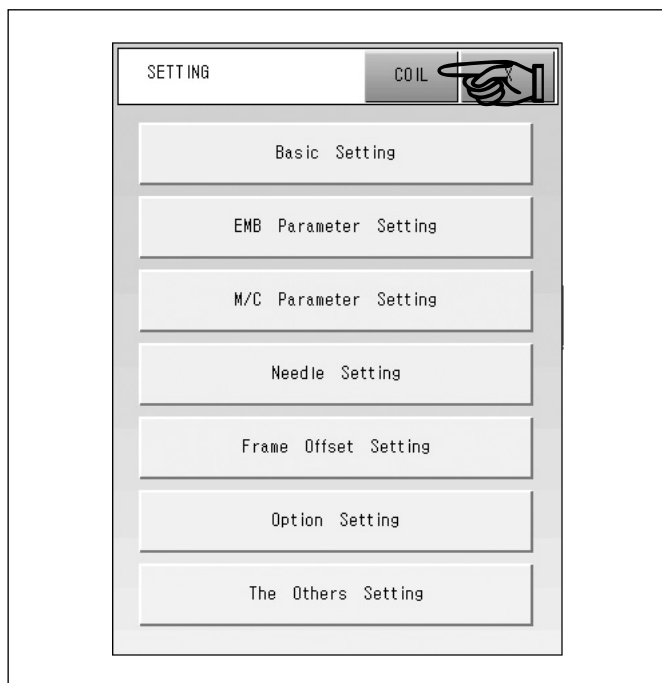


Fig. [8-11]

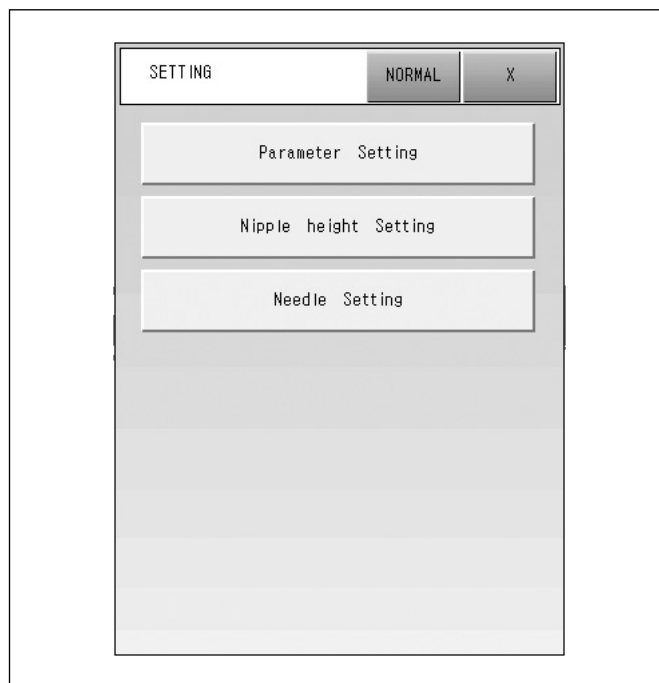


Fig. [8-12]

- ▶ If you press SETTING at the bottom of the main screen, the setting menu will appear as shown in Fig. [8-11].
- ▶ If you press COIL at the top of the screen, Nipple Height Setting will appear as shown in Fig. [8-12].
- ▶ Press the Nipple Height Setting button, and you will see a screen like Fig. [8-13].

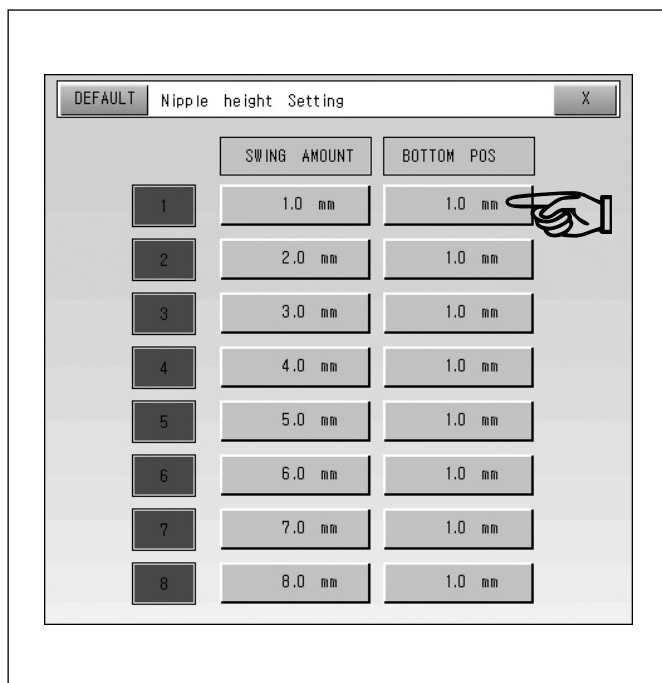


Fig. [8-13]

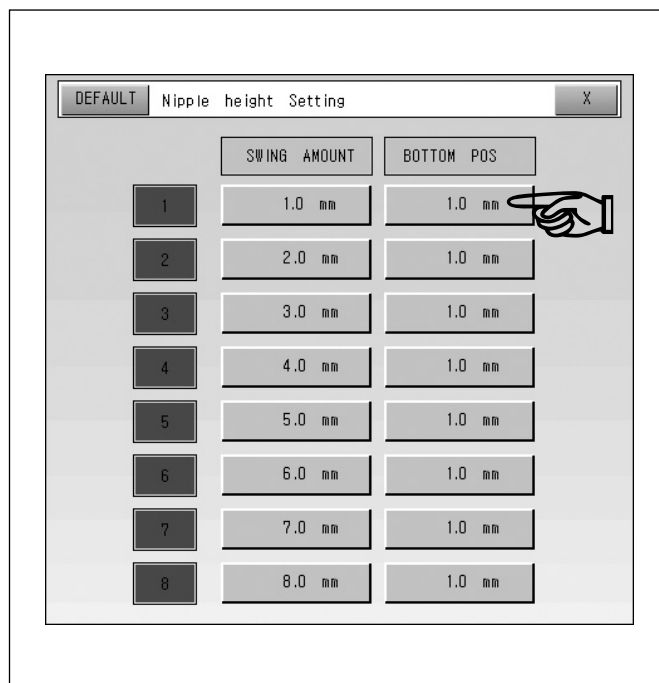


Fig. [8-14]

- ▶ You can save as many as 8 nipple heights as shown in Fig. [8-13].
- ▶ The nipple height is set by selecting the values of swing amount and bottom position.

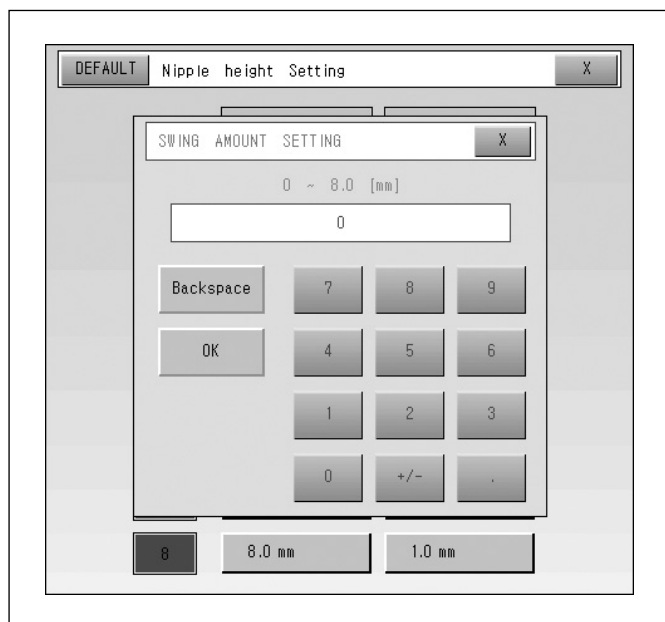


Fig. [8-15]

- ▶ If you choose the first button as shown in Fig. [8-13], a swing amount setting screen like Fig. [8-15] will appear.
- ▶ Swing amount setting is to set a vertical feed distance of the presser foot.  
You can set the value in the range of 0~8.0mm in the unit of 0.1mm.

**[ Note ]**

**The appropriate swing amount is 0~1mm for standing embroidery.**

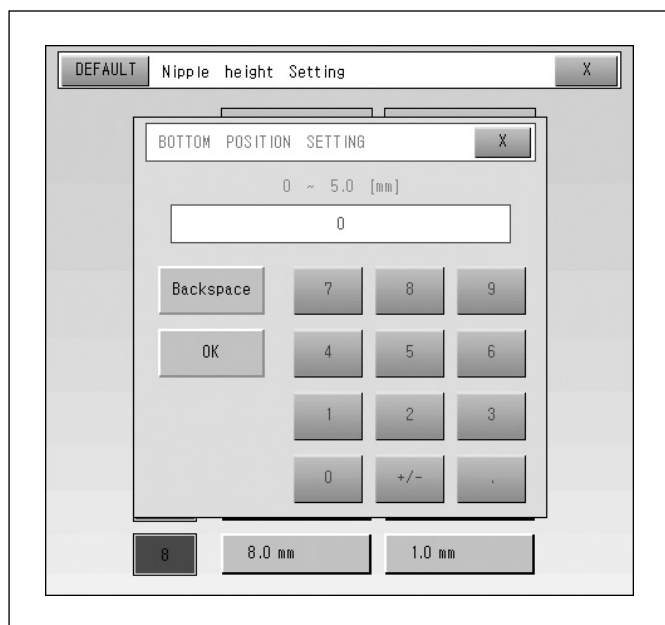


Fig. [8-16]

- ▶ If you choose the second button as shown in Fig. [8-14], a bottom position setting screen like Fig. [8-16] will appear.
- ▶ Bottom position setting is to set a height from the lowest point of presser foot to the needle plate.
- ▶ You can set the value in the range of 0~5.0mm in the unit of 0.1mm according to the type of embroidery materials.

**[ Note ]**

**The optimum bottom position value for standing embroidery is 3mm.**

**The value lower or higher than 3mm may impede the work.**

**[ Note ]**

**If the value is not set to 3mm, it can cause damages to other parts such as needle and presser foot.**

## **5) Punching and matters to be noted**

### **(1) Punching**

- Conduct a standard running operation.
- The appropriate stitch length is 2.0mm~3.0mm.
- The stitch length should be shorter around the corners.
- If there are standard embroidery and other options, taping is better to be the last process.

### **(2) Matters to be noted**

- Stop signals should be given both at the beginning and the end. -for trimming  
(The signals are not necessary in the case of embroidery by using double bobbin.)
- If cord threads or beads are placed on a tape, the tape will become flat.
- It is recommended not to repeat the work on the same area.

## 6) Matters to be noted during the work

NO.	Matters to be noted
1	As embroidery materials can be deviated (when no stitch are made) or lean toward one side in a sharp curve area, it is recommended to punch stitches closely for curve areas when conducting design punching.
2	If the bobbin does not wind off easily, there can be no stitches made because the materials are not wound off the bobbin. Make sure to set the tension of bobbin not too strong.
3	When setting the standing attachment, the hole of standing presser foot should be aligned with the needle drop center by adjusting the screws attached on the both sides of standing presser foot. Otherwise the needle can be broken.
4	After the standing attachment setting, check whether the thread is wound off to the standing tape guide smoothly by repeating the work of putting in and out the thread. If it is not smoothly wound off to the guide, the embroidered shape can be deformed.
5	If the bobbin bracket is placed at an inappropriate position, it can cause an M-axis error due to interference with the neighboring parts.
6	<ul style="list-style-type: none"><li>• Swing amount: 0mm</li><li>• Nipple height: 3mm</li></ul> Note that it is very important to set the values as presented above.
7	If the embroidery materials are too soft or thin, the embroidery work can be failed.

# 03

## Utilizing various types of thread

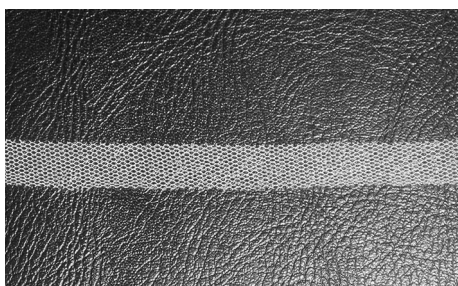
1. Tape attachment .....	124
2. Zigzag Swing attachment .....	126
3. Coiling attachment .....	132
4. Blind attachment .....	134
5. Frill attachment .....	135
6. Cord attachment .....	136
7. Standing Attachment .....	137

# 1

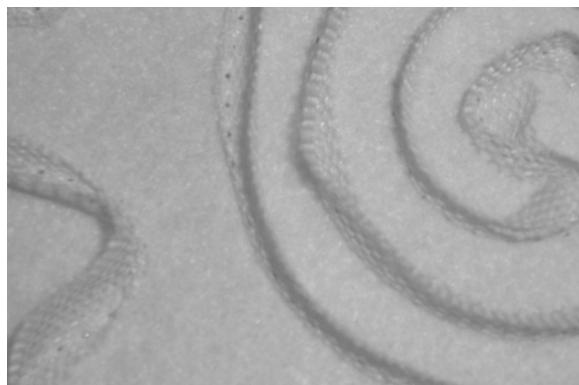
## Tape Attachment

Classification		Description
Type & Characteristics of Thread	Type	Gauze tape (10mm)
	Characteristics	As the size of tape guide ranges from 2 to 40mm, select an appropriate size of tape guide for taping.
Type of Guide		10mm tape guide, double bobbin
Guide Setting		1. Put the thread through the tape guide. 2. Fix the tape guide on the guide nipple.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → r → Tape → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value : 0.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

### ■ Materials ■



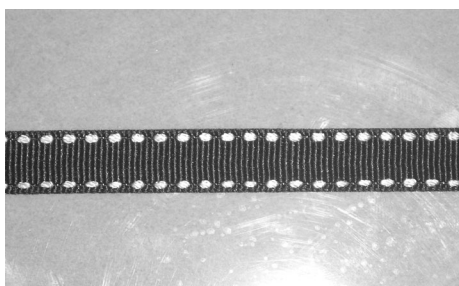
### ■ Example of images ■



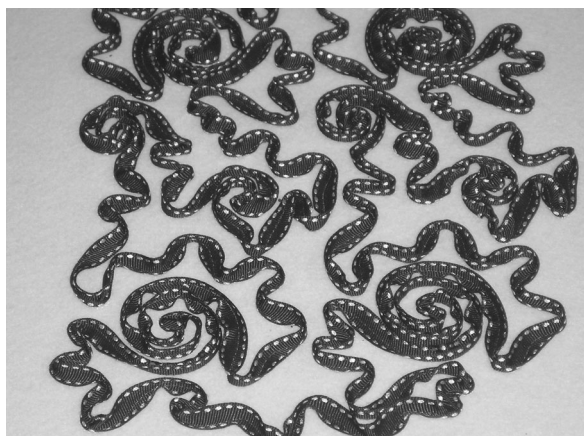
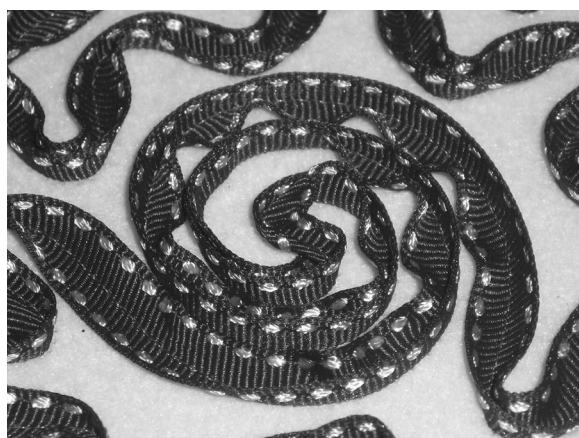


Classification		Description
Type & Characteristics of Thread	Type	Tape (10mm)
	Characteristics	As the size of tape guide ranges from 2 to 40mm, select an appropriate size of tape guide for taping.
Type of Guide		10mm tape guide, double bobbin
Guide Setting		1. Put the thread through the tape guide. 2. Fix the tape guide on the guide nipple.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → r → Tape → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 0.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

#### ■ Materials ■



#### ■ Example of images ■

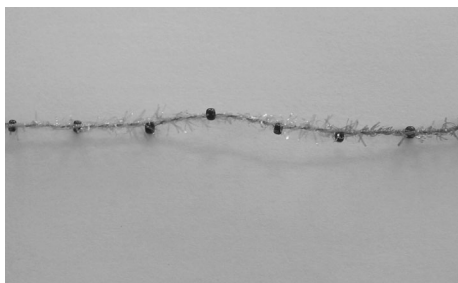


## 2

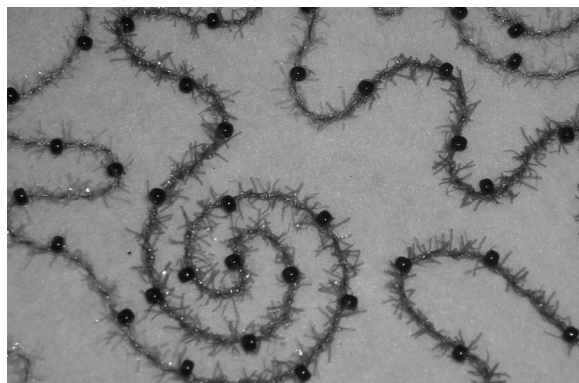
## Zigzag Swing Attachment

Classification		Description
Type & Characteristics of Thread	Type	Glass
	Characteristics	Can be damaged. Use an appropriate size of cord guide as a thread can be stuck.
Type of Guide		φ 2~2.5 cord guide, double bobbin
Guide Setting		1. Put the thread through the φ 2.5 cord guide. 2. Align the double bobbin with the center of presser foot and fix it by tightening the screw.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → R → Z4 → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 5.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

### ■ Materials ■



### ■ Example of images ■



Classification		Description
Type & Characteristics of Thread	Type	Glass
	Characteristics	Can be damaged. Use an appropriate size of cord guide as a thread can be stuck.
Type of Guide		φ 3 cord guide, double bobbin
Guide Setting		1. Put the thread through the φ 3 cord guide. 2. Align the double bobbin with the center of presser foot and fix it by tightening the screw.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → R → Z4 → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 5.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

#### ■ Materials ■

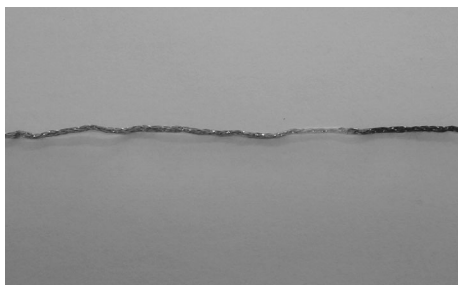


#### ■ Example of images ■

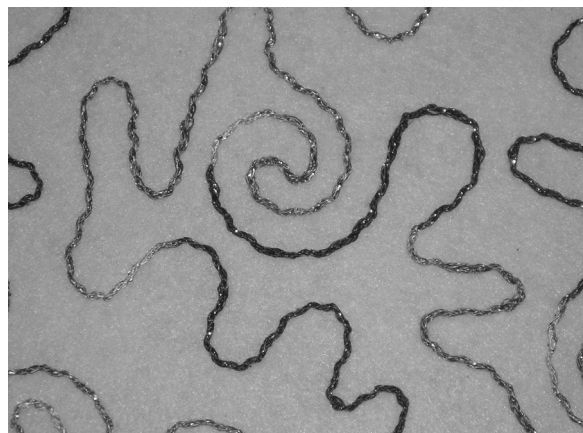


Classification		Description
Type & Characteristics of Thread	Type	Cord
	Characteristics	Three threads of different colors are entwined together, making one thread.
Type of Guide		$\phi$ 2~2.5 cord guide, double bobbin
Guide Setting		1. Put the thread through the $\phi$ 2.5 cord guide. 2. Align the double bobbin with the center of presser foot and fix it by tightening the screw.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → R → Z1 → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 5.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

#### ■ Materials ■

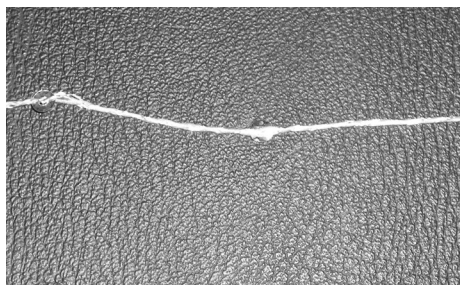


#### ■ Example of images ■

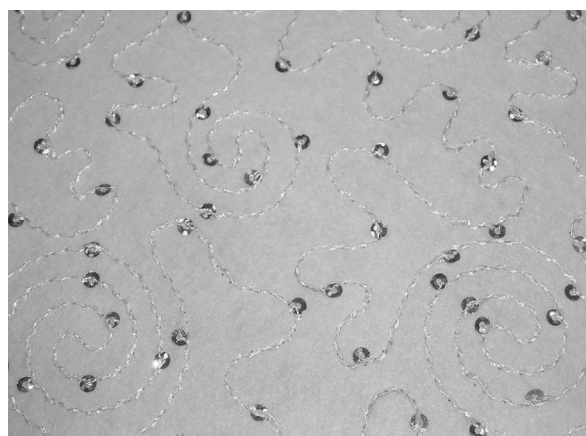
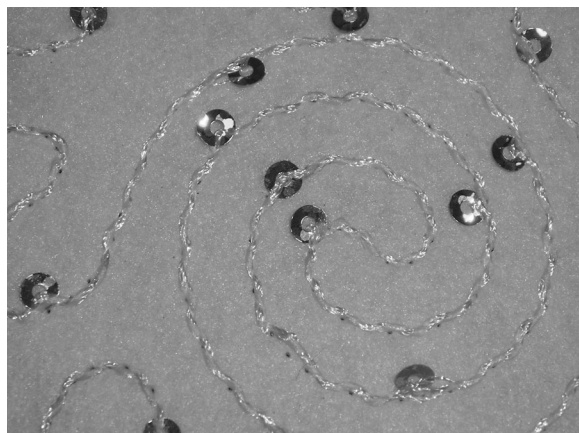


Classification		Description
Type & Characteristics of Thread	Type	Sequin
	Characteristics	Decorated with sequins attached to a thread.
Type of Guide		$\phi$ 4~4.5 cord guide, double bobbin
Guide Setting		1. Put the thread through the $\phi$ 4.5 cord guide. 2. Align the double bobbin with the center of presser foot and fix it by tightening the screw.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → R → Z1 → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 5.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

#### ■ Materials ■

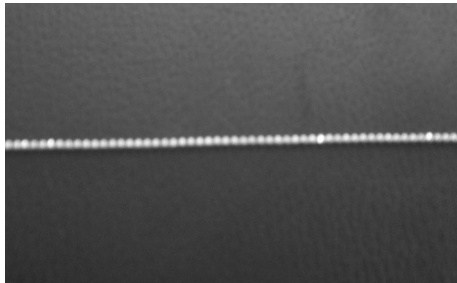


#### ■ Example of images ■

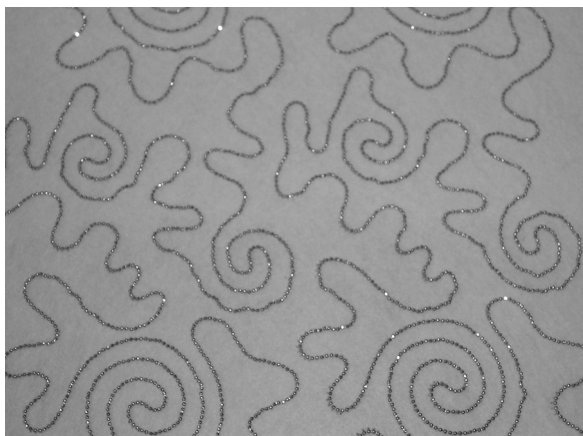


Classification		Description
Type & Characteristics of Thread	Type	Metal bead
	Characteristics	Made of metal (not fabric)
Type of Guide		φ 2~2.5 cord guide, double bobbin
Guide Setting		1. Put the thread through the φ 2.5 cord guide. 2. Align the double bobbin with the center of presser foot and fix it by tightening the screw.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → R → Z1 → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 5.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

#### ■ Materials ■



#### ■ Example of images ■

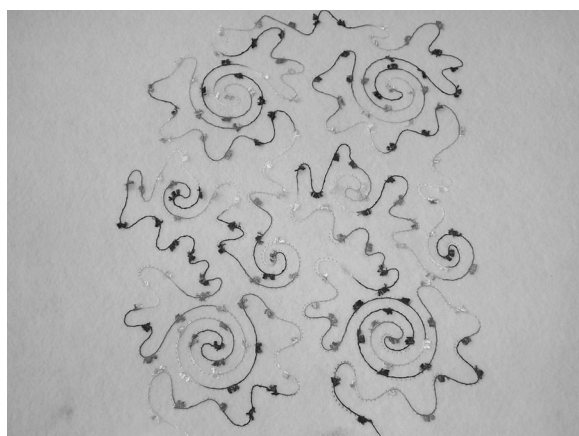
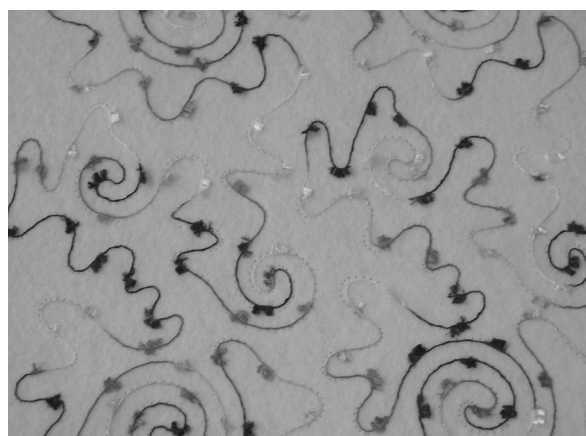


Classification		Description
Type & Characteristics of Thread	Type	Special
	Characteristics	Decorated by short threads entwined around the thread
Type of Guide		φ 2~2.5 cord guide, double bobbin
Guide Setting		1. Put the thread through the φ 2.5 cord guide. 2. Align the double bobbin with the center of presser foot and fix it by tightening the screw.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → R → Z4 → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 5.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

#### ■ Materials ■



#### ■ Example of images ■



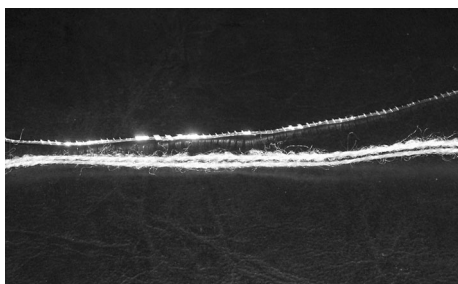


### 3

## Coiling Attachment

Classification		Description
Type & Characteristics of Thread	Type	Cord
	Characteristics	1. Threads coated with gold color
		2. When small $\phi$ cord guide is used, sequins can be stuck in the cord guide. Make sure to use an appropriate size of cord guide.
Type of Guide		$\phi$ 2.5 cord guide, coiling presser foot
Guide Setting		1. Put the thread through the $\phi$ 2.5 cord guide. 2. Fix the coiling presser foot to the guide nipple.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → R → COIL → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 0.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

#### ■ Materials ■



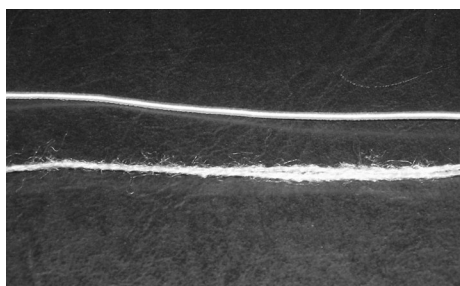
#### ■ Example of images ■



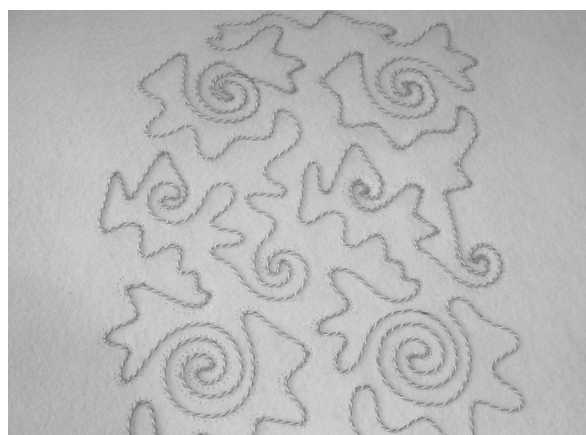


Classification		Description
Type & Characteristics of Thread	Type	Cord
	Characteristics	When small $\phi$ cord guide is used, sequins can be stuck in the cord guide. Make sure to use an appropriate size of cord guide.
Type of Guide		$\phi$ 2.5 cord guide, coiling presser foot
Guide Setting		1. Put the thread through the $\phi$ 2.5 cord guide. 2. Fix the coiling presser foot to the guide nipple.
Operating	Needle Bar Setting	Setting $\rightarrow$ Needle Bar Parameter Setting $\rightarrow$ Select $\rightarrow$ COIL $\rightarrow$ R $\rightarrow$ COIL $\rightarrow$ 1
	Nipple Height Setting	Setting $\rightarrow$ COIL $\rightarrow$ Nipple Height Setting $\rightarrow$ Swing Amount Value: 0.0mm $\rightarrow$ Confirmation $\rightarrow$ Bottom Position Value: 3.0mm $\rightarrow$ Confirmation

#### ■ Materials ■



#### ■ Example of images ■

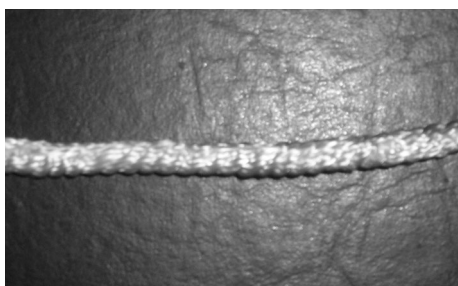


## 4

## Blind Attachment

Classification		Description
Type & Characteristics of Thread	Type	To be decided
	Characteristics	As there are various sizes of blind presser foot, select an appropriate size.
Type of Guide		3.5mm blind presser foot, double bobbin
Guide Setting		1. Put the thread through the 3.5mm blind presser foot. 2. Fix the blind presser foot to the guide nipple.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → R → Tape → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 0.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

### ■ Materials ■



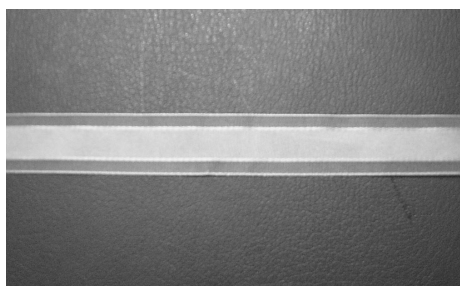
### ■ Example of images ■



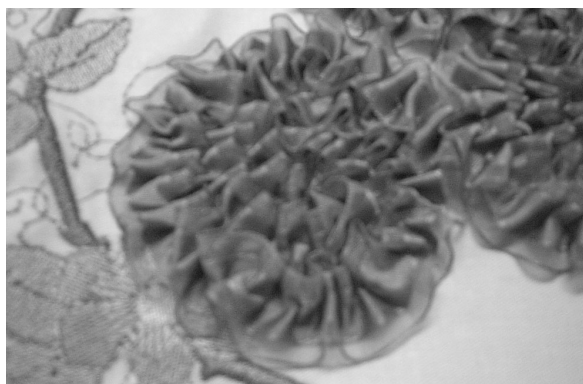
## 5 Frill Attachment

Classification		Description
Type & Characteristics of Thread	Type	Tape (15mm)
	Characteristics	As there are various sizes of Frill Guide, use an appropriate size of Guide.
Type of Guide		Frill Guide, Double Bobbin
Guide Setting		1. Put the thread through the 15 ×16 Frill Guide.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → r → Frill → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 0.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

### ■ Materials ■



### ■ Example of images ■

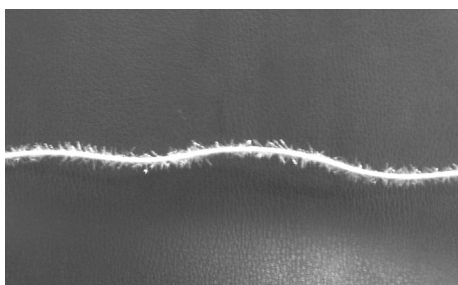


# 6

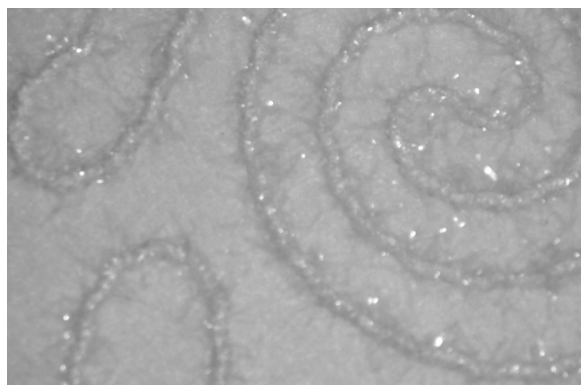
## Cord Attachment

Classification		Description
Type & Characteristics of Thread	Type	Cord
	Characteristics	1. Decorated by ( ) entwined around the thread as in the picture
Type of Guide		φ 2~2.5 cord guide, double bobbin
Guide Setting		1. Put the thread through the φ 2.5 cord guide. 2. Align the double bobbin to the center of presser foot and fix it by tightening the screw.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → r → Tape → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 0.0mm → Confirmation → Bottom Position Value: 2.5mm → Confirmation

### ■ Materials ■



### ■ Example of images ■



## 7 Standing Attachment

Classification		Description
Type & Characteristics of Thread	Type	Sport shoe string
	Characteristics	As there is a presser foot (5mm) exclusively for standing embroidery, replace a standard presser foot with the standing presser foot when conducting standing embroidery.
Type of Guide		5mm standing presser foot, double bobbin
Guide Setting		1. Put the thread through the 5mm standing presser foot. 2. Fix the standing presser foot to the guide nipple.
Operating	Needle Bar Setting	Setting → Needle Bar Parameter Setting → Select → COIL → r → Tape → 1
	Nipple Height Setting	Setting → COIL → Nipple Height Setting → Swing Amount Value: 0.0mm → Confirmation → Bottom Position Value: 3.0mm → Confirmation

### ■ Materials ■



### ■ Example of images ■

