

INSTRUCTION

MAQI *SERIES*

Industrial Sewing Machines

1404P,PMD

1412P,PQ,PS

1412PSM,PTV

1012P,PSM,PQ

1402MR

1412MR

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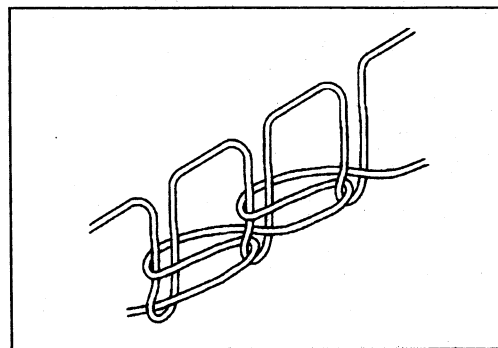
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規格 SPECIFICATIONS

1-1 縫迹的製別 Stitch type

JIS401雙針鏈式機

JIS401 double chain stitch machines



1-2 型號 Model

型號 Model	1404 1404P,PL, PMD	1406 1406P,PL	1412 1412P-PL
針數 No.of needles	2-4	5-6	7-12
綫數 No.of threads	4綫 4 needle threads	6綫 6 needle threads	12綫 12 needle threads
	4綫 4 looper threads	6綫 6 looper threads	12綫 12 looper threads
夾綫裝置的類型 Type of tension set	固定式 Mounted type	分離式 Separate type	分離式 Separate type
打欄寬度 Puller width	55mm	79mm	79mm
最小針距 Minimum gauge width	4.76mm(3/16英寸) 4.76mm(3/16 inch)		
最大針距 Maximum gauge width	38.1mm(1-2英寸) 38.1mm(1-1/2 inch)	70mm	

針 NEEDLES & 綫 THREADS

2-1 針 Needles

藍獅或風琴機針 UO113GS

根據纖維和綫挑選合適的針

UO113GS of Schmetz or Organ

Select the proper needle for the fabric and thread,

<針與針的尺寸> <Needles and needle size>

藍獅 Schmetz	UY113GS UY113GS	Nm75	Nm80	Nm90	Nm100
風琴機針 Organ	UO113GS UO113GS	#11	#12	#14	#16

2-2 換針 Replacing the needle

換針的時候，請確定針的平槽處已朝向機器左邊。

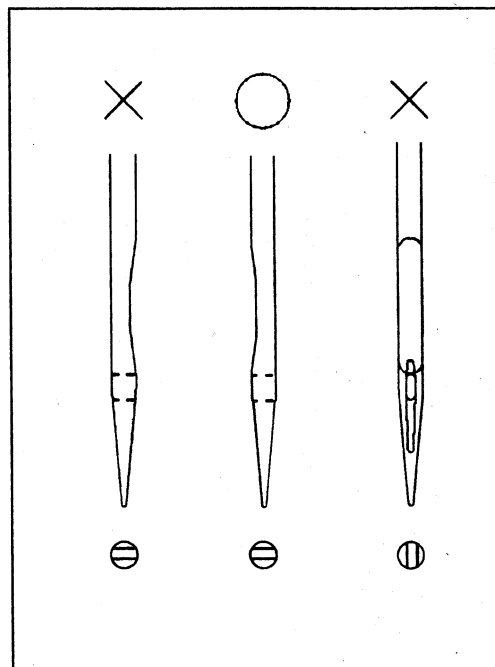
(如圖示)

When replacing the needle, check the needle carefully to see that the scarf is turned to the left of the machine (see the illustration).

<注意> <Note>

換針的時候，必須保證已經關閉機器。離合器馬達在關閉之後還將運轉一段時間。因此，繼續踩腳踏板直到機器完全停止。

When replacing the needle, be sure to turn off the machine. A clutch motor continues running for a while after the machine is turned off. Therefore keep on pressing the pedal until the machine stops.



2-3 穿線 To thread the machine

■ 根據3-11頁所示，正確穿線。

不正確的穿線方式可能引起跳針，斷線或不均勻的線迹。

穿彎針的時候，通過彎針的驅動杆使針座斜向機器前方。

Thread the machine correctly by referring to the next page 3 to 11.

Incorrect threading may cause skip stitching, thread breakage and/or uneven mtch formation. When threading the looper, tilt the looper holder toward the front of the machine by means of the looper drawing bar.

■ 向機器前面傾斜彎針夾 TO tilt the looper toward the front

1. 把機針A調節到其行程的最高處。

2. 用一個手指把B處的線往下壓，把線從軸裏穿出來。

3. 拉出彎針驅動杆紐C到左邊，彎針夾將向機器前面傾斜。

4. 線穿好之後，按住彎針夾D使彎針處於復位狀態。

1. Bring needle bar A to the top of its stroke.

2. Pay out the needle thread from the spool by pressing a finger down on needle threads B.

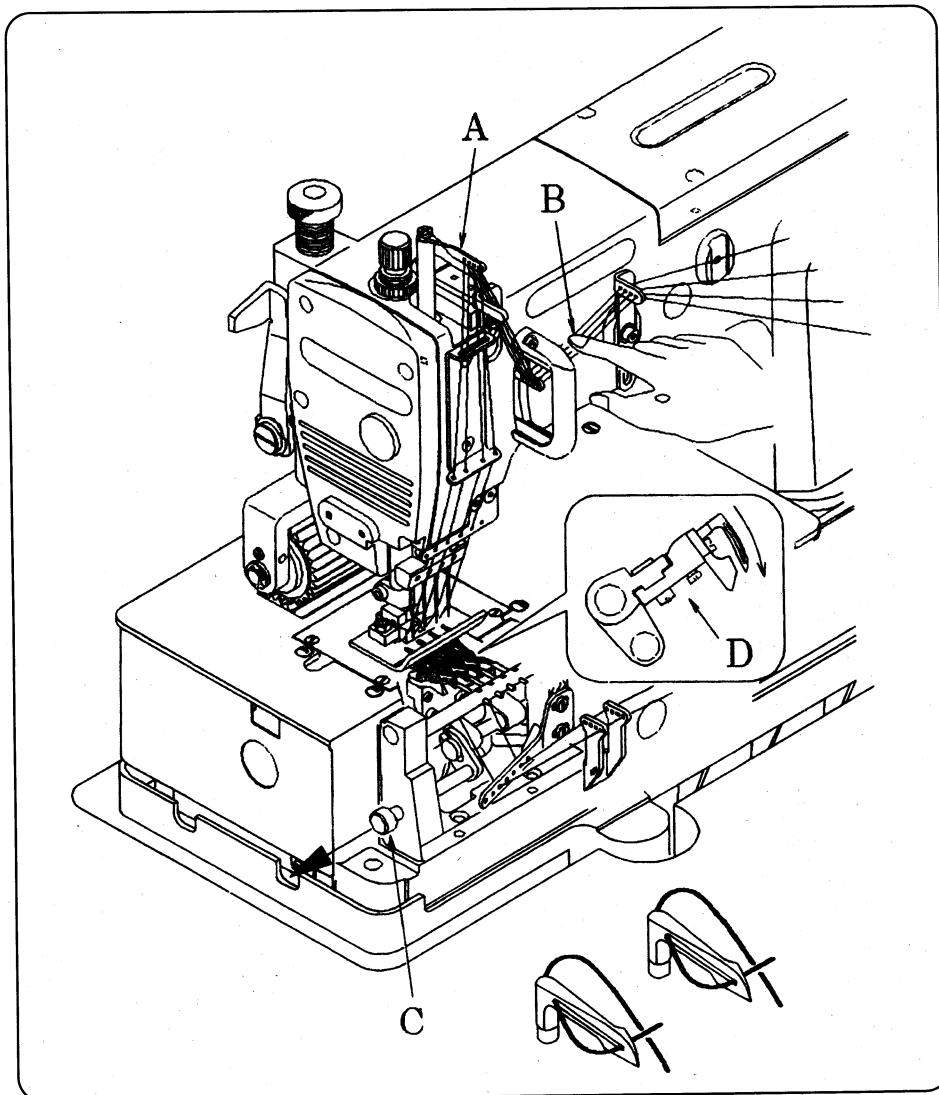
3. Pull looper drawing bar knob C out to the left so that the looper holder is tilted toward the front of the machine.

4. After the machine is threaded, replace the looper by pressing looper holder D into the machine until it clicks.

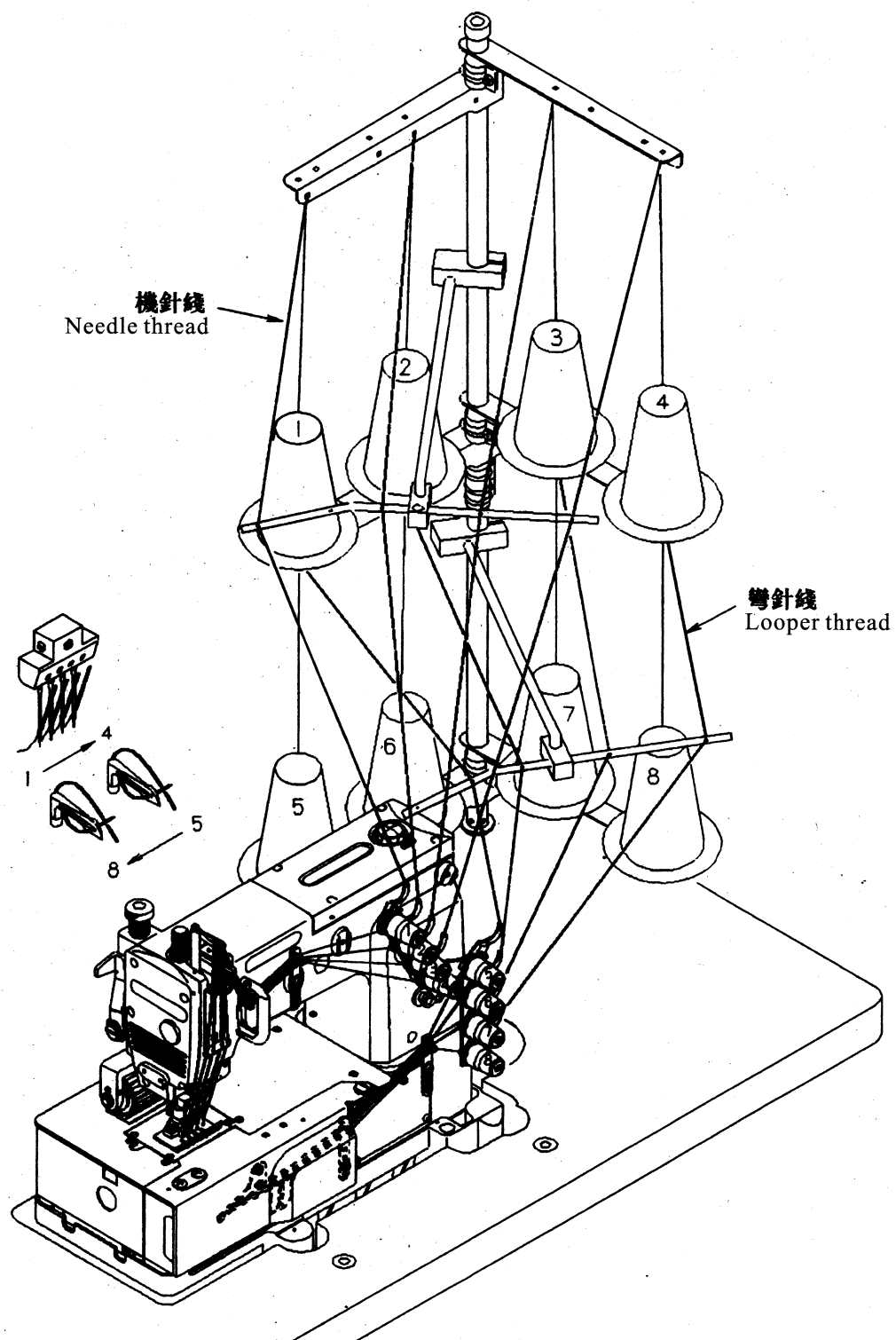
<注意> <Note>

在按鈕C拉出來之後，彎針將露出機器，所以請不要把手指放在彎針旁邊。

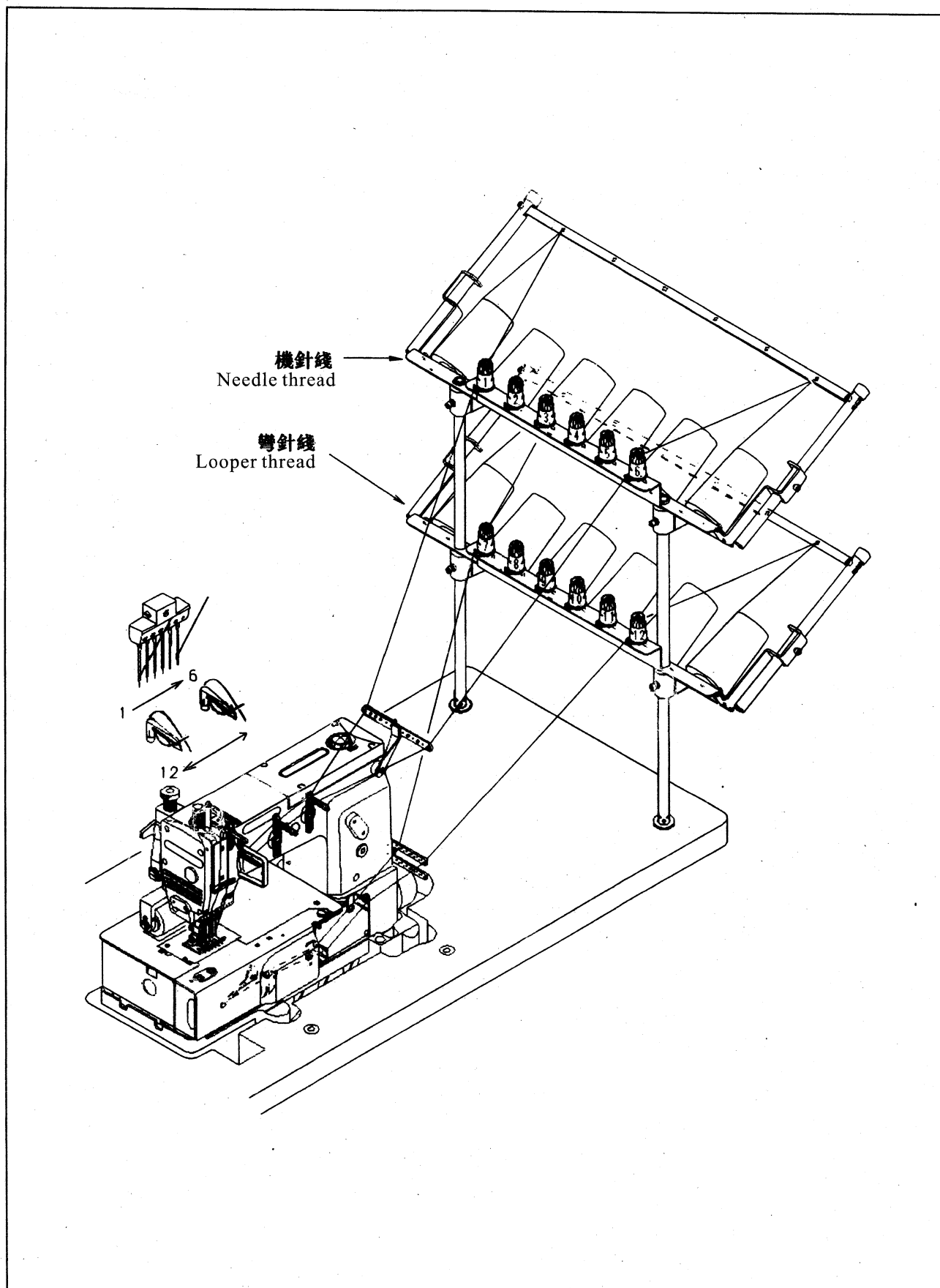
The looper pops out of the machine as soon as knob C is pulled, so do not bring your fingers close to the looper.



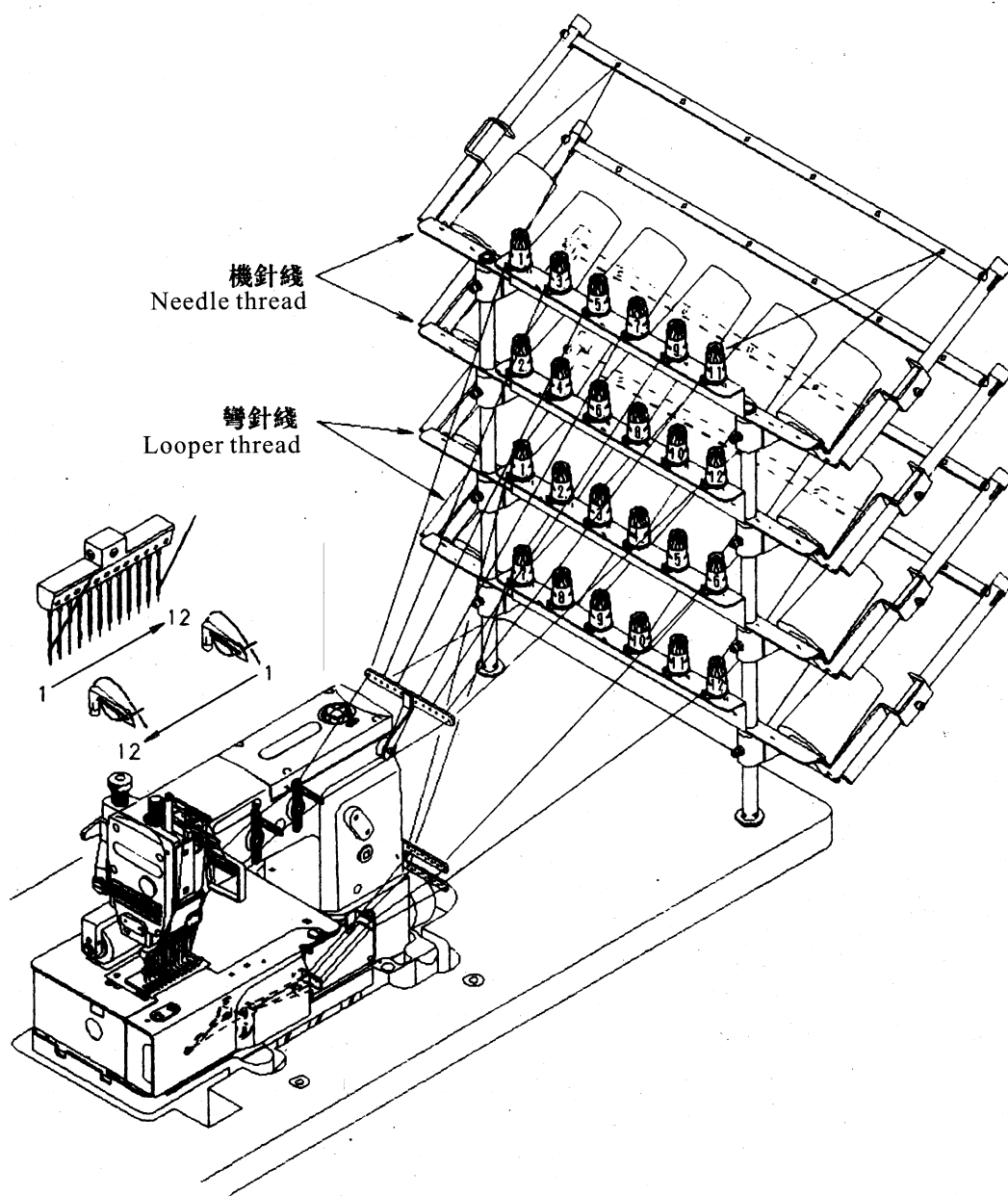
■ 穿線圖 1404 Threading diagram for 1404

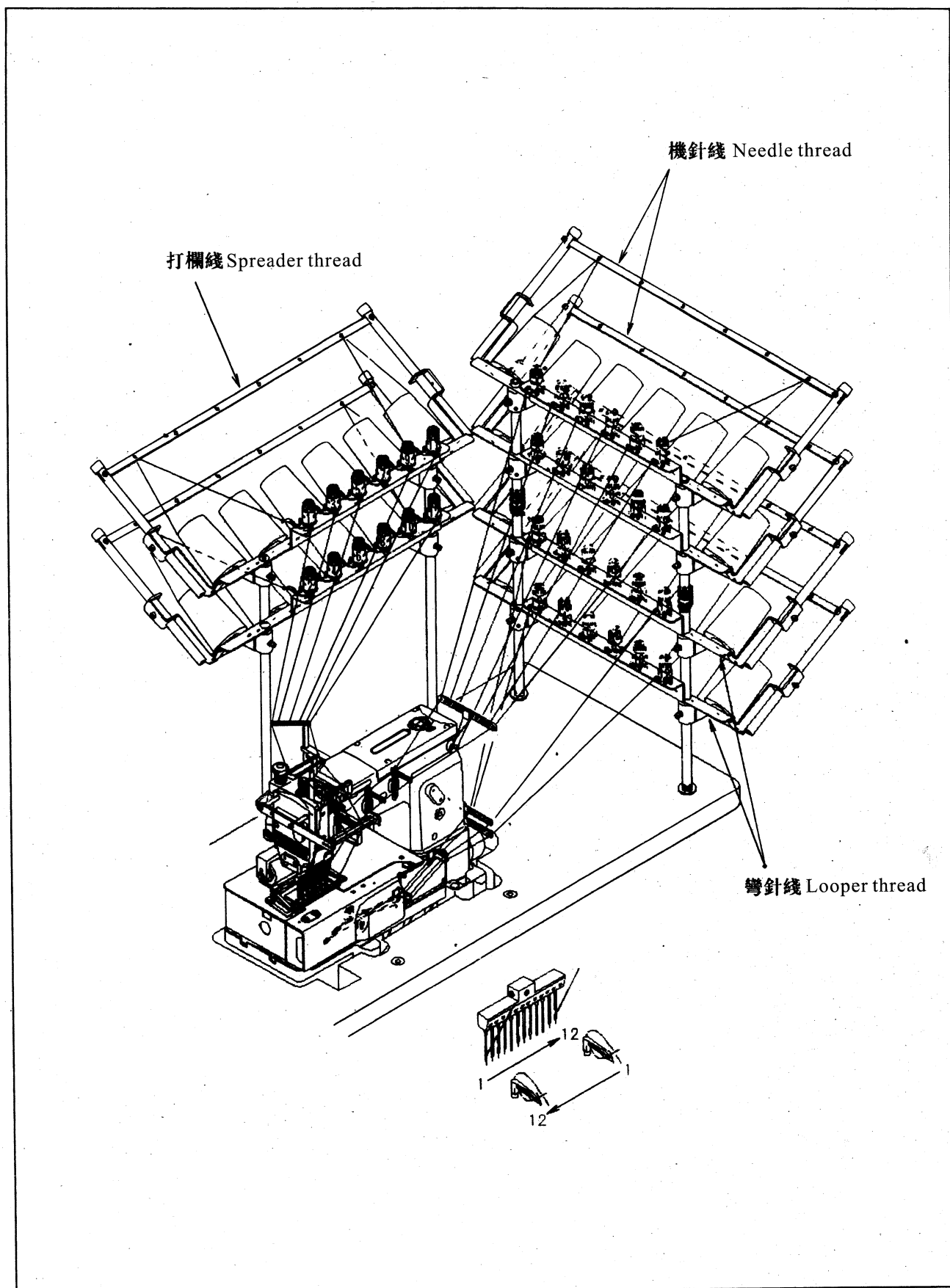


■ 穿线图 1406 Threading diagram for 1406

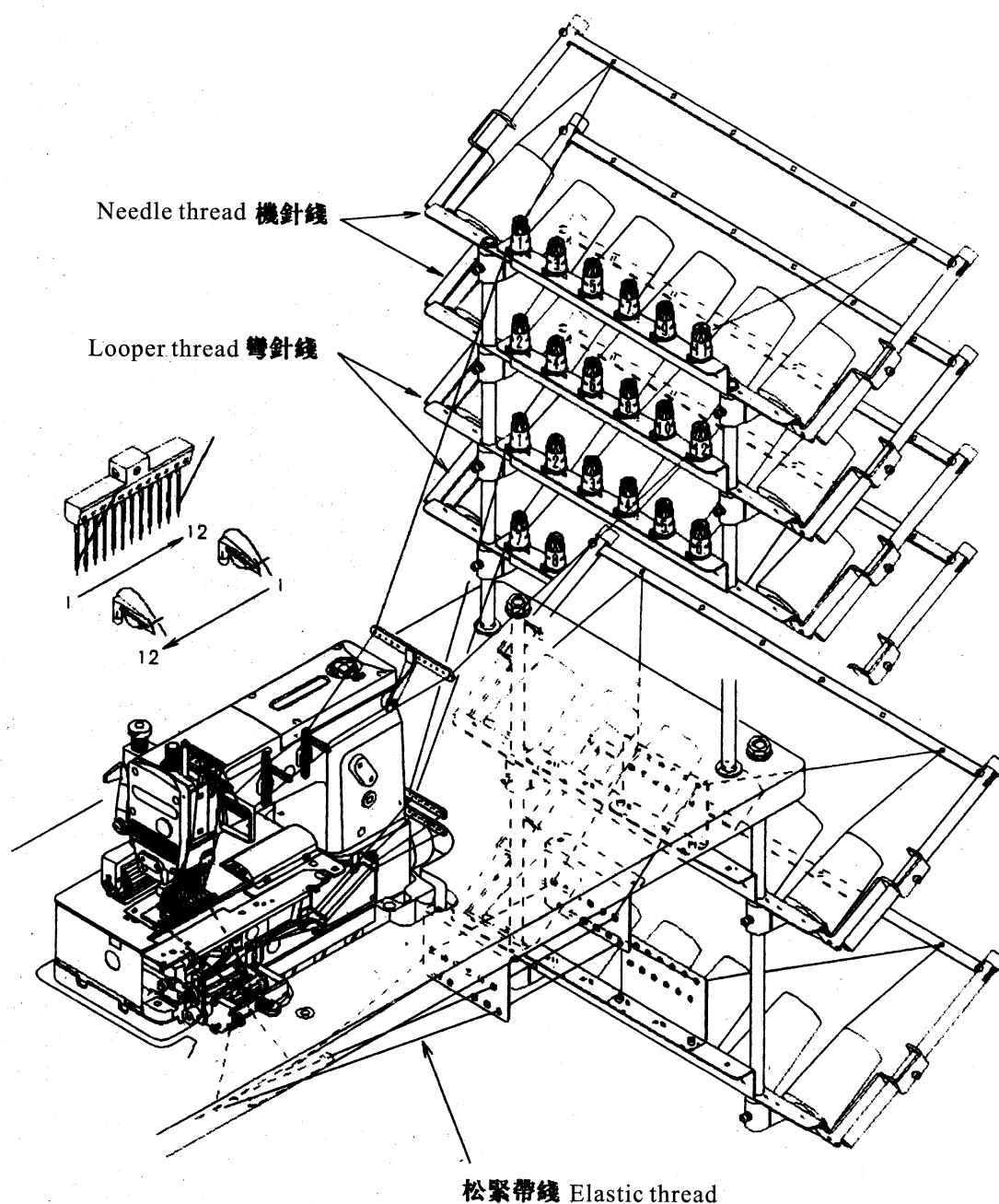


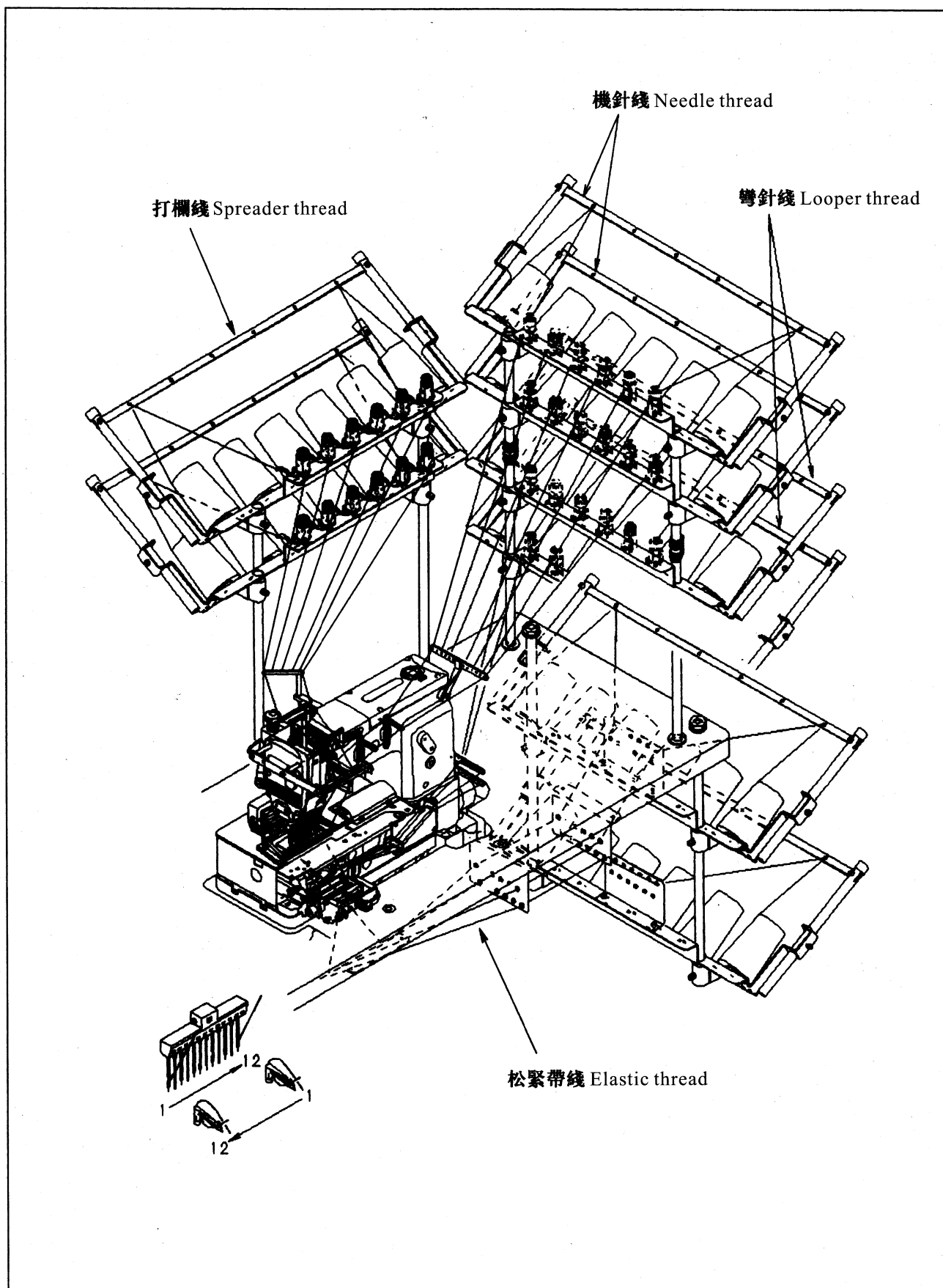
■ 穿綫圖 1412 Threading diagram for 1412



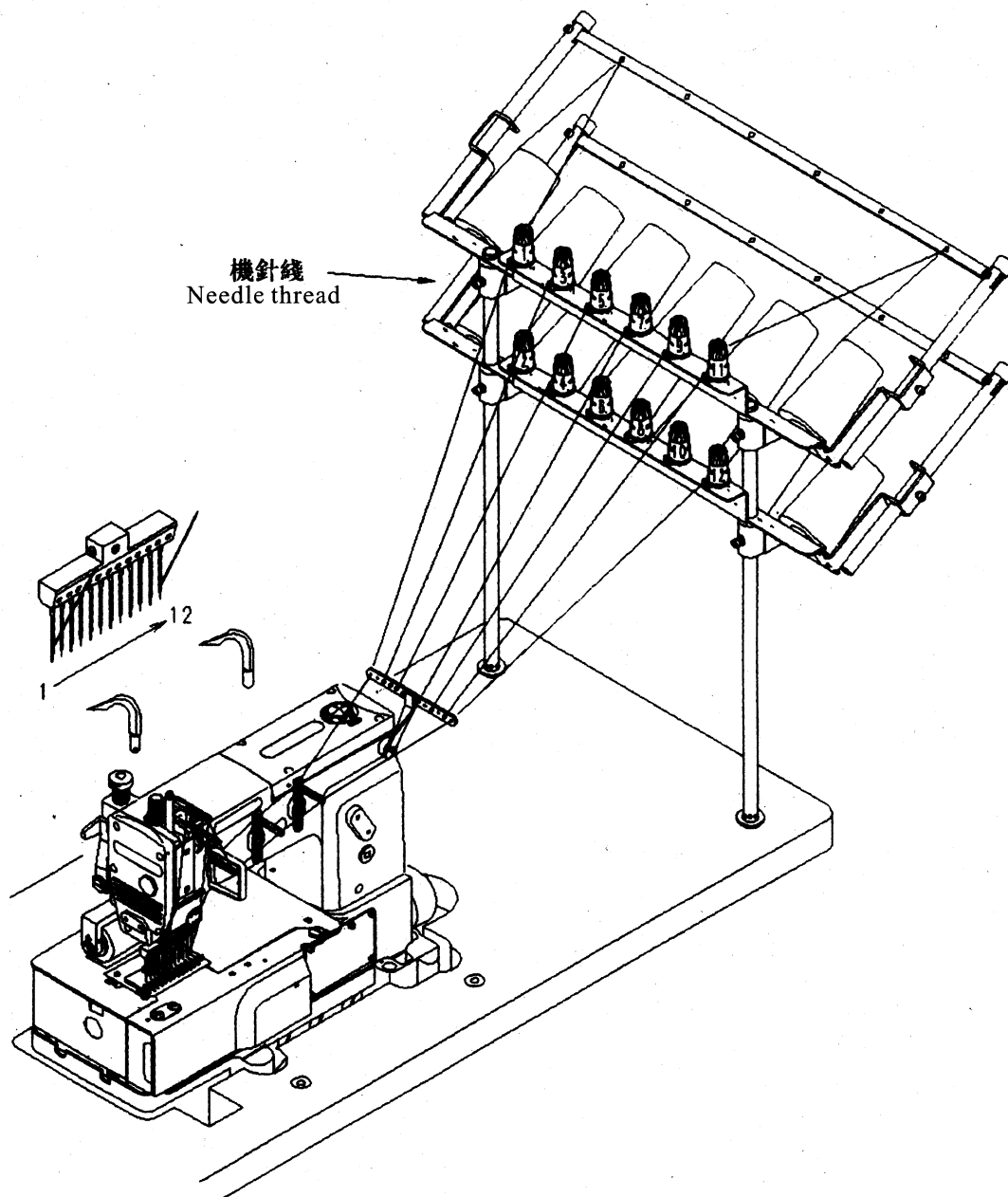


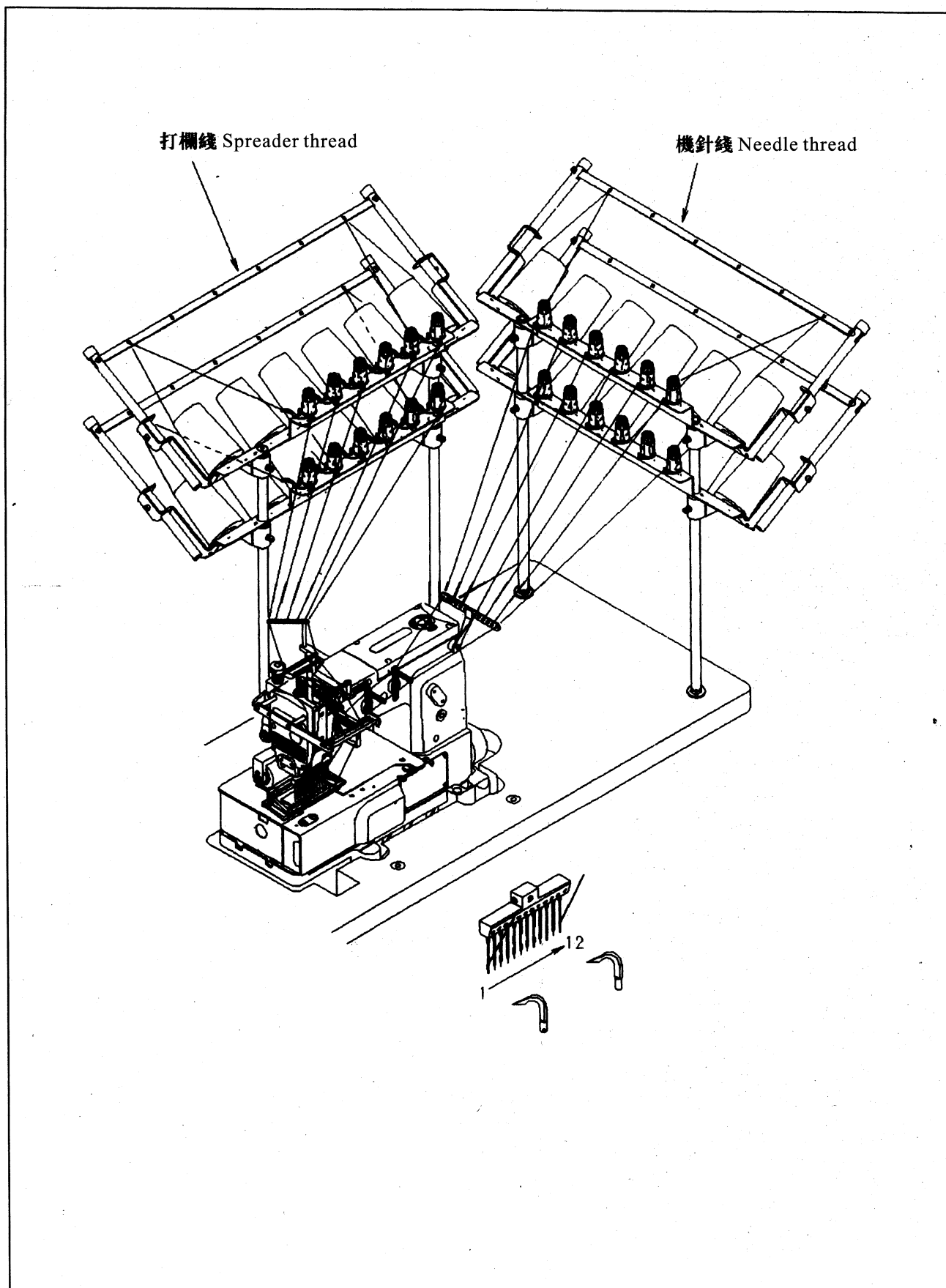
■ 穿線圖 1412PQ Threading diagram for 1412PQ

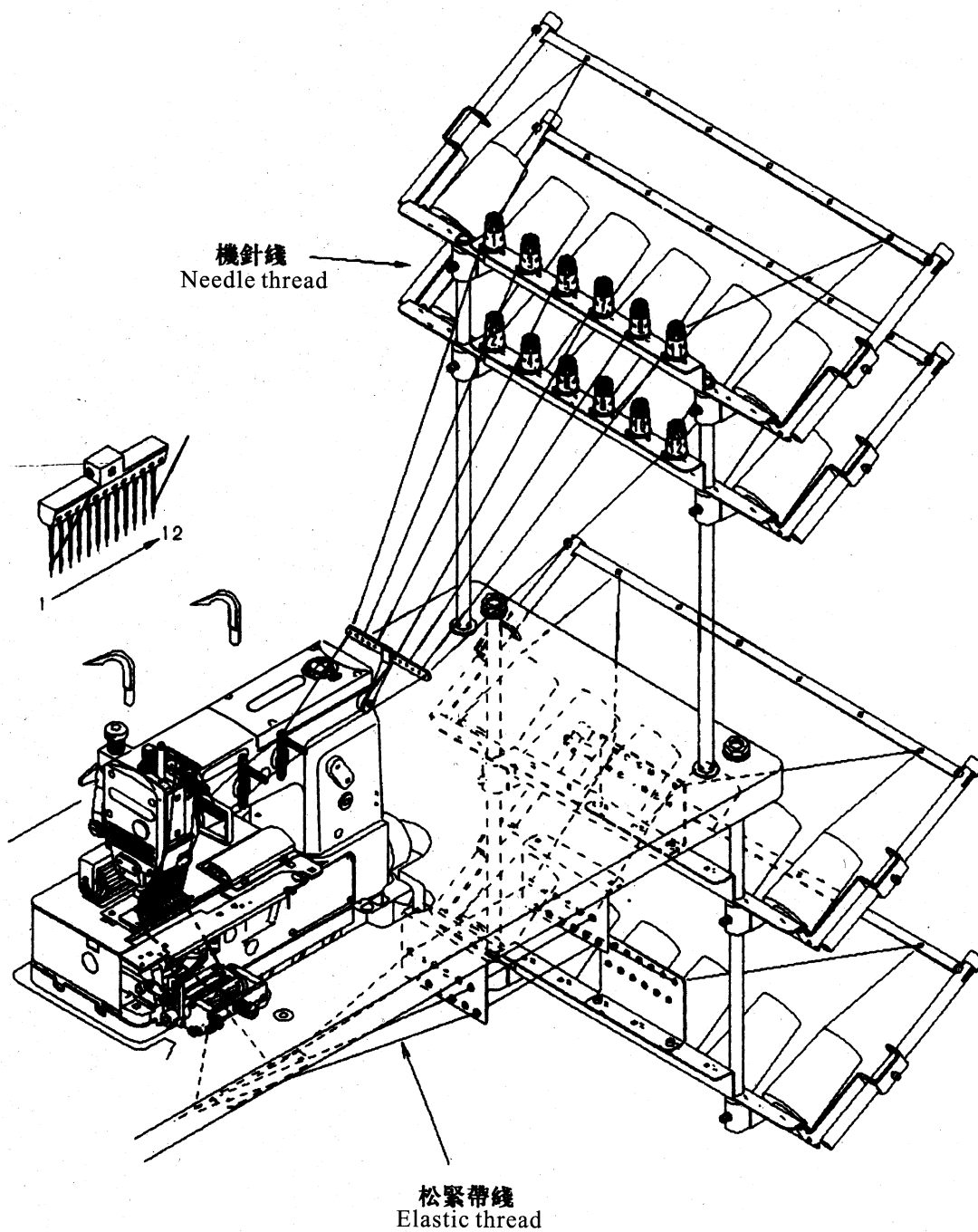




■ 穿線圖 1012 Threading diagram for 1012







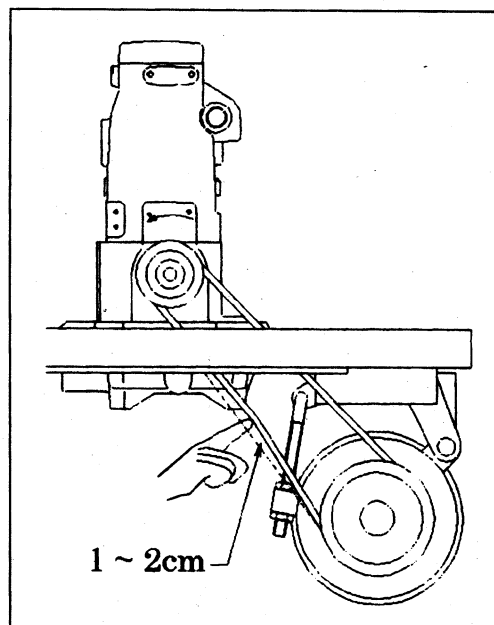
3-1 機器速度及皮帶輪的運轉方向

下表為最大及標準速度表。為了延長機器的壽命，在機器運轉的前200個小時，把機器的速度控制在低於最大速度的15%-20%之內(大概一個月左右)。然後把機器速度控制的標準速度之內。從機器皮帶輪後面看過去，皮帶輪是逆時針旋轉的。

3-1 Machine speed & direction in which the machine pulley runs

Refer to the table below for maximum and standard speeds of the Series.

To extend machine life, run the machine approximately 15-20% below the maximum speed for the first 200 hours of operation (approx. 1 month). Then run the machine at the standard speed. The machine pulley turns counterclockwise as seen from the end of the machine pulley.



3-2 電機及皮帶

電機: 3相, 2極, 400W離合電機

皮帶: M號V型皮帶

根據機器速度選擇合適的皮帶(根據下表所列舉的皮帶輪外直徑)把手指放在皮帶的中間位置, 調節電機的位置, 這樣可以有1-2厘米的偏差(如圖所示)。

3-2 Motor & belt

Motor : 3-phase, 2-pole, 400W clutch motor

Belt : M type V belt

Select the proper motor pulley according to the machine speed (refer to the motor pulley outer diameter on the table below).

Adjust the position of the motor by pressing the finger onto the middle of the belt so that 1-2cm deflection can be achieved (see the illustration on the right).

<機器速度>

型號	最大速度	標準速度
BH1404P	4500	4000
BH1412P	4000	3500

<Machine speed>

Model	Maximum speed	Standard speed
BH1404P	4500	4000
BH1412P	4000	3500

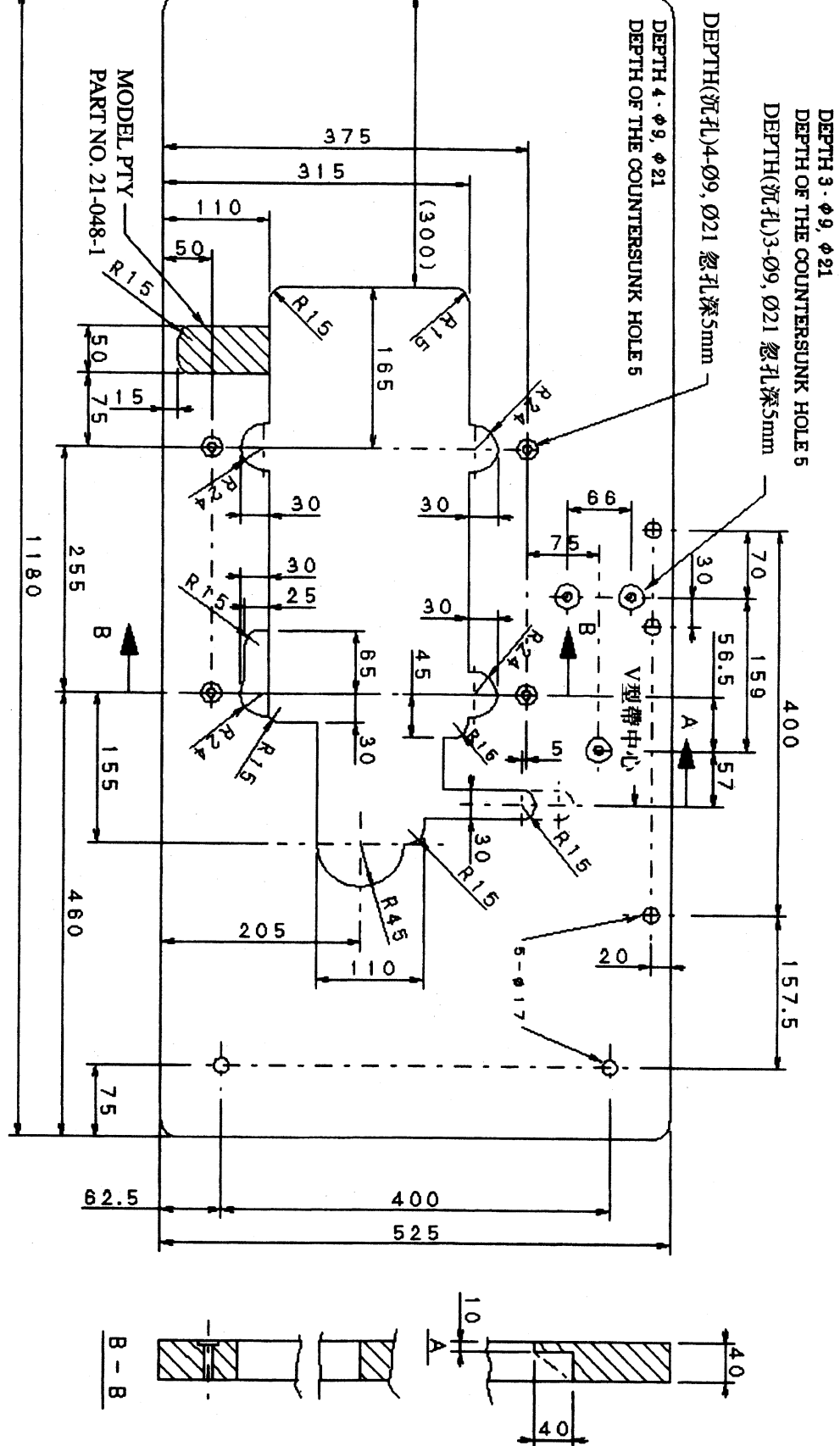
<皮帶輪選擇表>

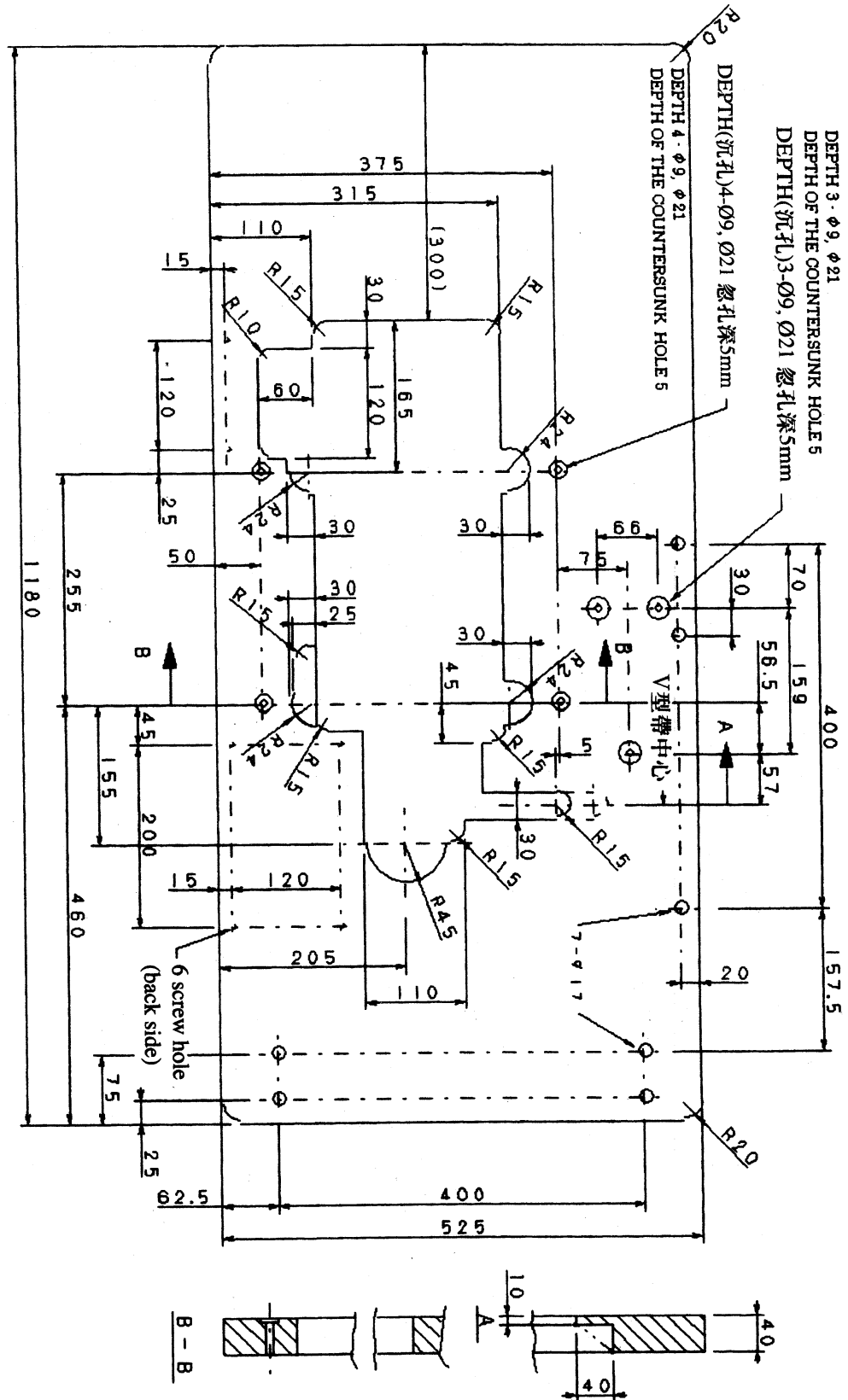
皮帶輪外徑 (mm)	機器運轉速度 (SPM)	
	50Hz	60Hz
60	3150	2950
70	2300	3450
80	3300	3900
90	3700	4400
100	4100	(4900)
110	4500	(5400)

<Motor pulley selection table>

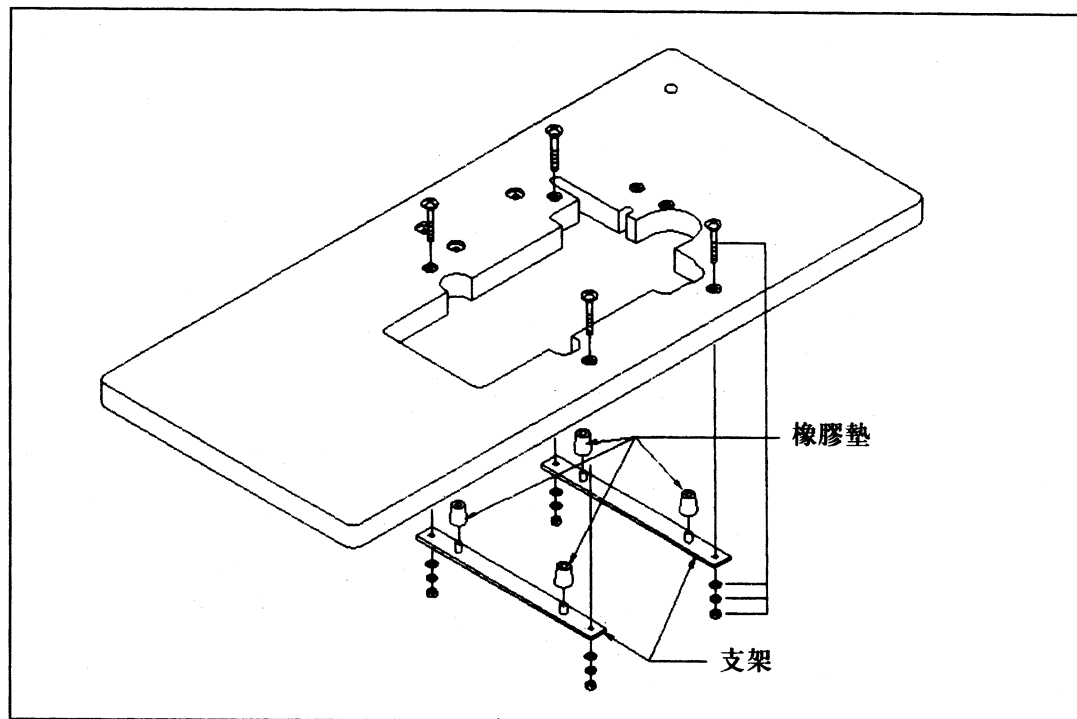
Motor pulley outer diameter (mm)	Machine speed (SPM)	
	50Hz	60Hz
60	3150	2950
70	2300	3450
80	3300	3900
90	3700	4400
100	4100	(4900)
110	4500	(5400)







5-2 怎樣安裝機器 How to install the machine



[6] 彎針和直針之間的同步性 TIMING OF THE LOOPER TO THE NEEDLES

6-1 彎針安裝角度及彎針夾支架位置

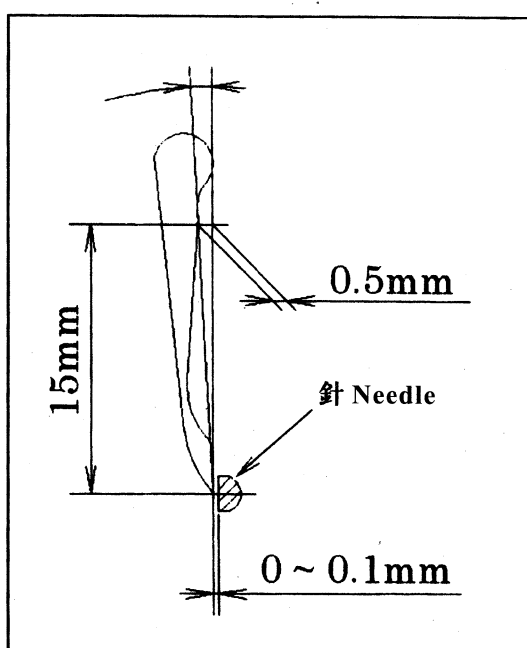
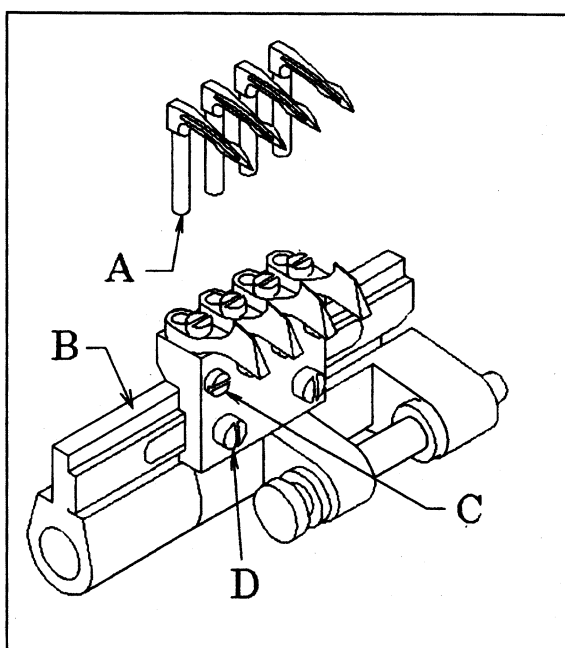
把彎針插到彎針夾之內，直到彎針底部A碰到彎針夾支架B，然後擰緊螺絲C。

當彎針從針旁邊經過的時候，彎針尖直針的凹處必須保持0-0.1mm的距離。通過擰松螺絲D和向左或向右移動彎針夾支架來達到這個要求。

6-1 Angle for installing the looper and position of the looper holder bracket

Insert the looper into the looper holder until bottom A of the looper touches looper holder bracket B. Then tighten screw C.

When the looper passes the needle, there should be a clearance of 0-0.1mm between the point of the looper and the scarf of the needle. Adjustment is made by loosening screw D and moving the looper holder bracket left or right.



6-2 彎針左右運動

當彎針向右運動，從直針旁邊經過的時候，彎針尖必須高出直針的針眼上端1.5mm。

當彎針向左運動，從直針旁邊經過的時候，彎針尖必須高出直針的針眼上端3mm。

6-2 Looper left-to-right movement

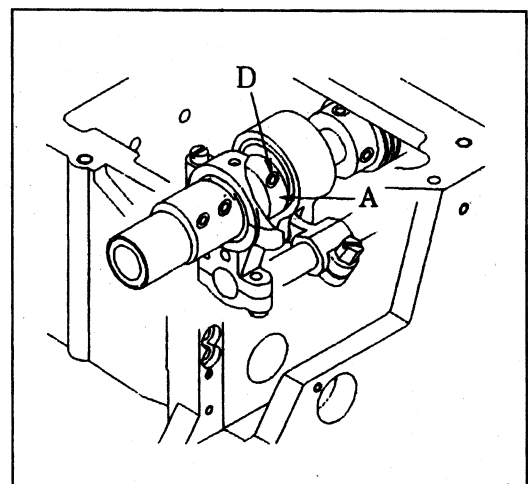
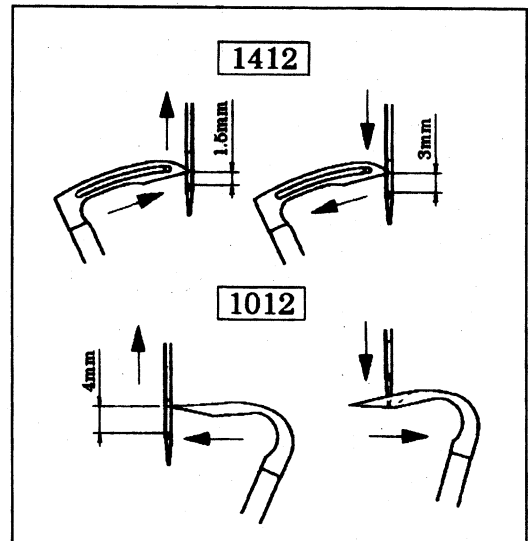
When the looper passes the needle, the point of the looper, moving to the right, should be 1.5mm above the top of the needle's eye. When the looper passes the needle, the point of the looper, moving to the left, should be 3mm above the top of the needle's eye.

■ 單鏈縫，當彎針從直針旁邊經過的時候，針尖必須高出直針的針眼4mm。

■ For single chainstitching, when the looper enters the needle thread loop, the point of the looper should be 4mm above the top of the needle's eye.

■ 移開蓋板，鬆開螺釘B，然後移動曲柄A來達到上述要求。

■ To make this adjustment, remove the cover first, loosen eccentric set screw D and then move eccentric ball A.



6-3 彎針距離

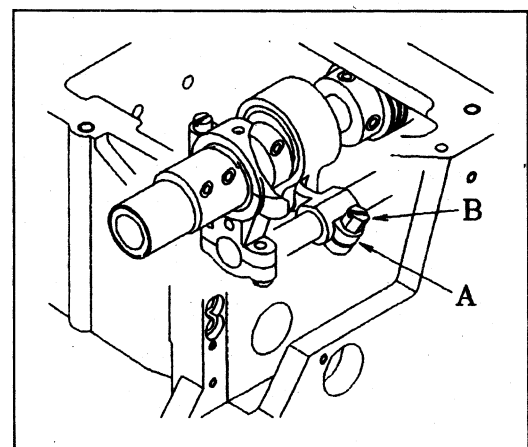
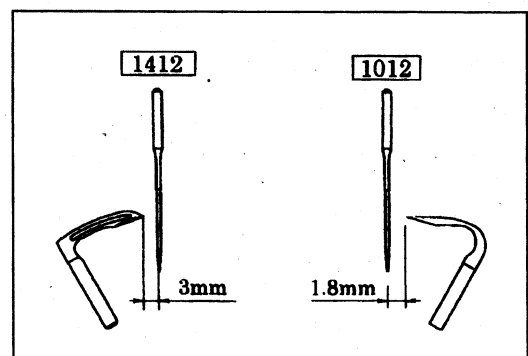
當針杆到達其行程的最低點時，調節彎針距離，使彎針尖與中心的距離為3mm。

6-3 Looper setting distance

When the needle bar is at the bottom of its stroke, set the distance from the point of the looper to the center of the needle should be 3mm.

■ 移開蓋板，鬆開曲柄A上的螺絲B來達到上述要求。

■ Adjustment is made by removing the cover and loosening screw B on looper front-to-back lever A.



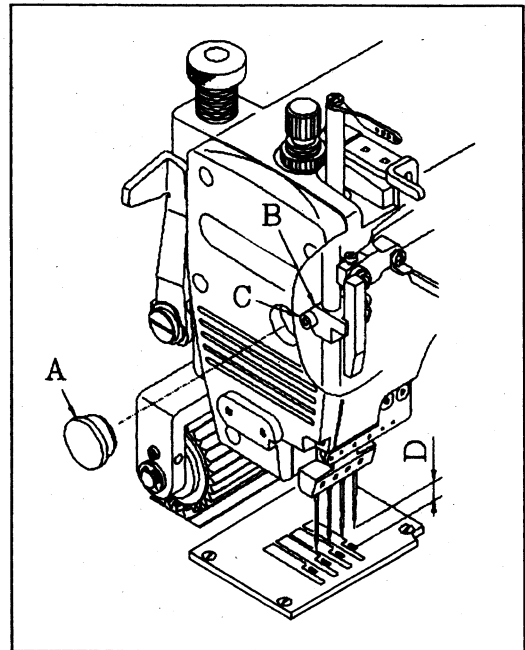
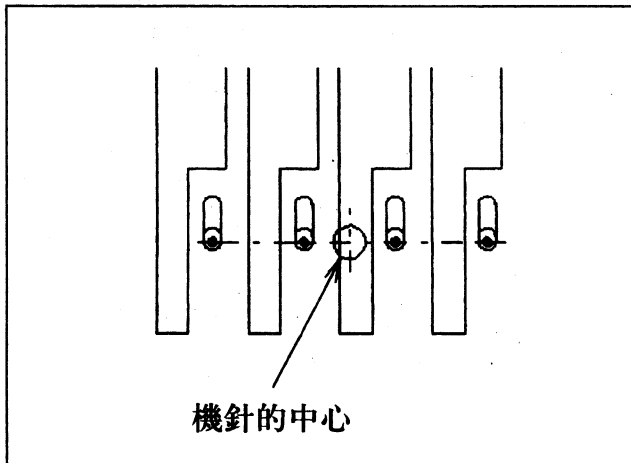
6-4 針的高度 Needle height

當針杆到達其行程的最高點時，移開側蓋板上的橡皮塞A，用拿手鬆開針杆夾緊杆B上的螺絲C。然後根據要求來調高或者調低針杆。

When the needle bar is at the top of its stroke, remove plug A on the side cover plate, loosen screw C on needle bar clamp B with a hexagonal wrench and then move the needle bar up or down as required.

<標準針杆高度D> <Standard needle bar height D>

行程 Stroke	標準模式 Standard model
34mm	13.5mm



<注意><Note>

進行上述調節後，檢查針每次都能準確地到針孔中。

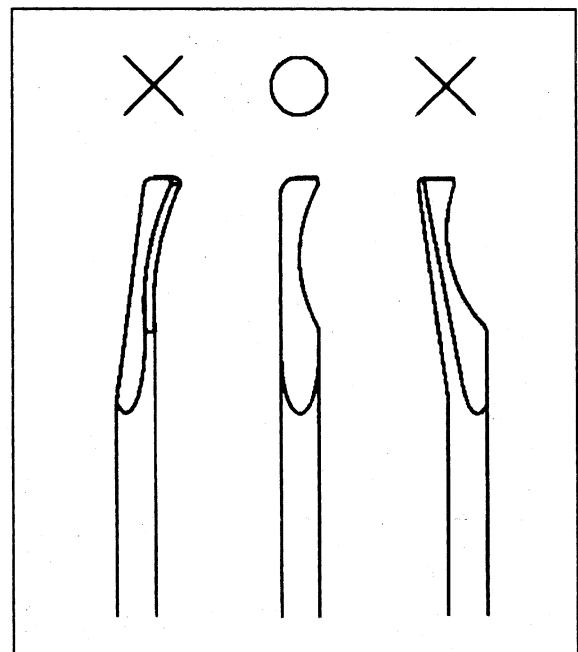
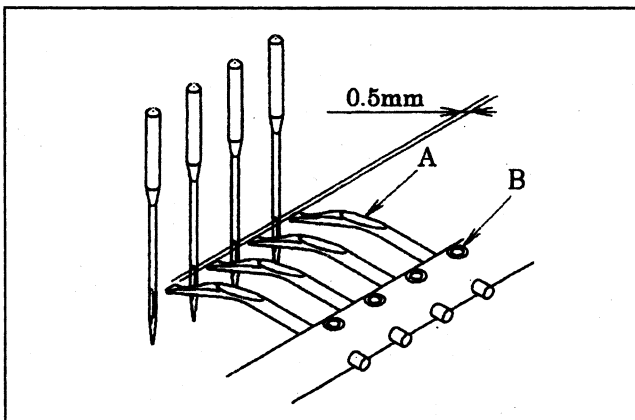
After the above adjustment is made, check to make sure each needle drops correctly into the center of each needle drop hole.

7 調節止動彎針的同步性 ADJUSTING THE TIMING OF THE RETAINER LOOPER

7-1 止動彎針的位置 Position of the retainer looper

安裝止動彎針時使平的一面朝上。此時，針和止動彎針尖之間的距離為0.5mm。通過鬆開螺絲B來達到此要求。

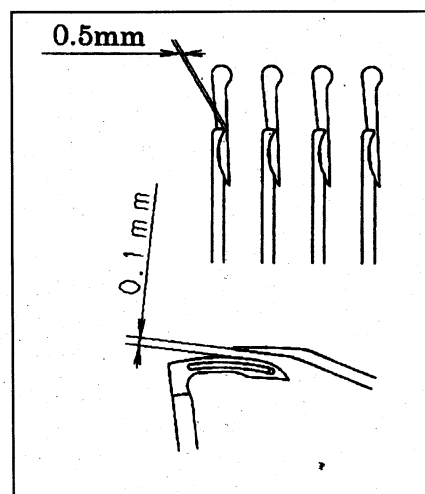
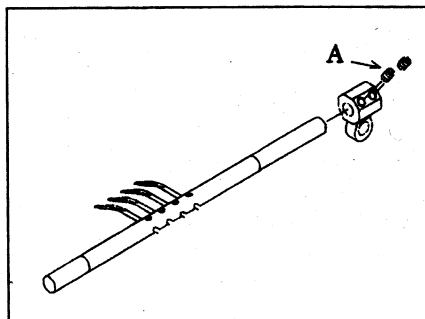
Install retainer looper A so that its flat surface is turned upward. At this time, there should be a clearance of 0.5mm between the needle and the point of the retainer looper. Adjustment is made by loosening B.



7-2 止動彎針與直針之間的同步性 Timing of the retainer loop to the needle

當直針由上向下運動，進入彎針的三角線圈之內，止動彎針必須到達其行程的最右面。首先松開螺絲A，然後從左向右調節止動彎針。當止動彎針達到其行程的最左邊時候，調節止動彎針和右邊的距離大概為0.5mm。然後調節止動彎針和彎針面之間的距離為0.1mm。調整好之後，擰緊螺絲A。

When the needle, moving from the top to bottom of its stroke, enters the triangle of the loop thread, the retainer loop should be at the extreme right end of its travel. To adjust the retainer loop left to right, loosen screws A first. With the retainer loop at the extreme left end of its travel, set the clearance between the retainer loop and the right side of the loop at approximately 0.5mm. Then set the clearance between the retainer loop and the top surface of the loop blade at 0.1mm. After this adjustment is made, tighten Screws A.



8-1 護針板位置 Position of the needle guard

當針離護針最近的時候，針的右面與護針板之間大概有0-0.1mm的距離。

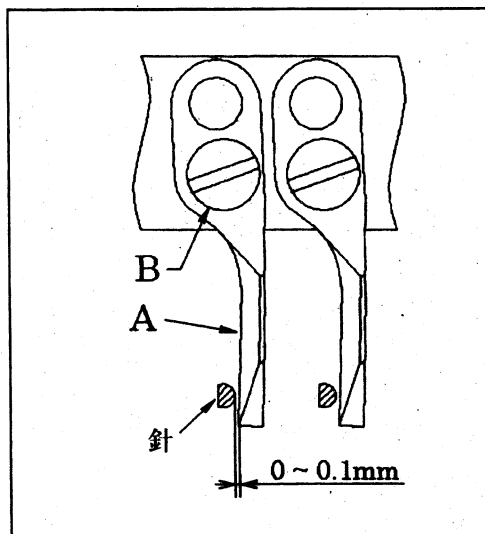
通過松開螺絲B來達到此調節。

When the needle is closest to the needle guard, there should be a clearance 0-0.1mm between the right side of the needle and needle guard A. Adjustment is made by loosening screw B.

<注意> <Note>

在調節好彎針夾支架的位置之後，通過松開固定螺絲來調節護針板的位置，然後擰緊螺絲B。

To adjust the standard type of needle guard, after positioning the loop holder bracket (see 6-1) adjust the loop by loosening the loop set screw. Then tighten screw B.



9-1 送料牙高度及傾斜度 Feed dog height & tilt

當針杆到達其行程的最高點的時候，送料牙的牙齒高出針板1-1.2mm。

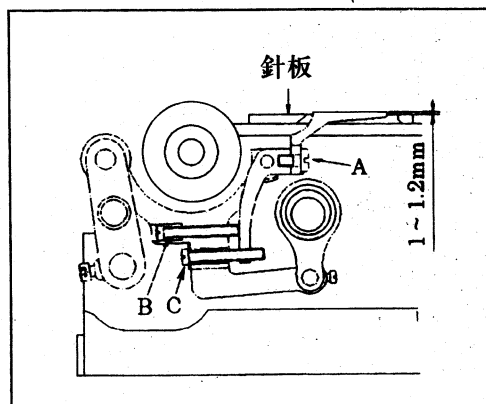
松開螺絲A，然後確認送料牙牙齒是不是與針板的上表面平行。通過調節螺絲B和C來達到此目的。

When the needle bar is at the top of its stroke, the feed dog teeth should be 1-1.2mm above the top surface of the needle plate. Adjustment is made by loosening screw A. Then check to see if the feed dog teeth is parallel with the top surface of the needle plate. Adjustment is made with screws B and C.

<注意> <Note>

當調節送料牙高度的時候，把彎針夾向機器前面傾斜。

When adjusting the height of the feed dog, tilt the loop holder toward the front of the machine.



9-2 針距 Stitch length

針距可以從2mm-5mm之間調節，下表列出了針距以及在1英寸(25.4mm)到30mm之間的針數。

The stitch length can be adjusted from 2 to 5mm with no step. The following table shows the stitch length with the number of stitches within 1 inch (25.4mm) and 30mm.

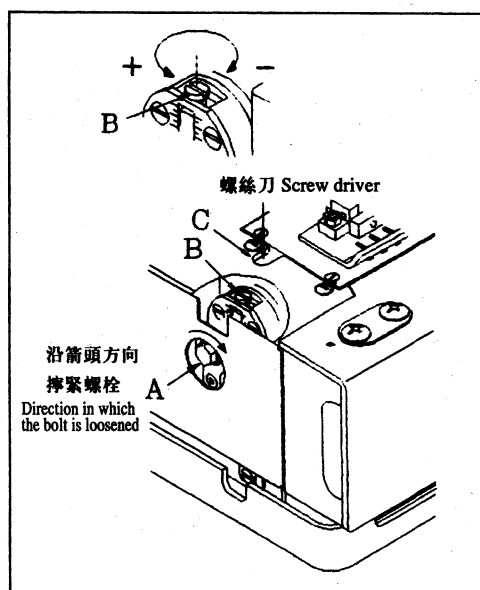
針迹長度(mm) Stitch length(mm)	針數 No.of stitches	
	1" 之內 Within 1"	30mm之內 Within 30mm
2	13	15
3	8.5	10
5	5	6

變換針距

1. 在確認好螺栓擰松的地方，松開螺栓A。
2. 從C插進螺絲刀，順時針旋轉螺絲B。縮短線迹長度。逆時針旋轉螺絲B，增加線迹長度。
3. 通過旋轉螺絲B調節好之后，確保螺栓A擰緊。

To change the stitch length

1. Loosen bolt A while checking the direction in which the bolt is loosened.
2. Insert a screw driver from hole C.
To decrease the stitch length, turn screw B clockwise. To increase the stitch length, turn screw B counterclockwise.
3. After this adjustment is made by turning screw B, be sure to tighten screw A.



<注意> <Note>

在變換針距的時候，確保電機處於關閉狀態。
Be sure turn off the motor when changing the stitch length.

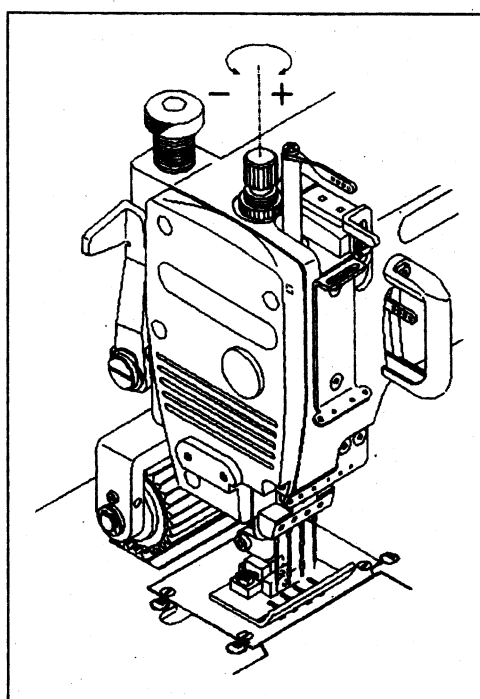
[10] 調節壓腳 ADJUSTING THE PRESSER

10-1 壓腳壓力 Presser foot pressure

壓腳的壓力越輕越好，但是必須保證能夠送料及能夠縫制均勻的線迹。

順時針旋轉調節鈕，可加大壓腳壓力。

The presser foot pressure should be as light as possible, yet be sufficient to feed the fabric and produce uniform stitches. To increase the presser foot pressure, turn the adjusting knob clockwise.



10-2 壓腳位置 Position of the presser foot

把壓腳安裝到壓腳杆上，通過螺絲A來調節，使機針正好從壓腳針孔中心穿過。

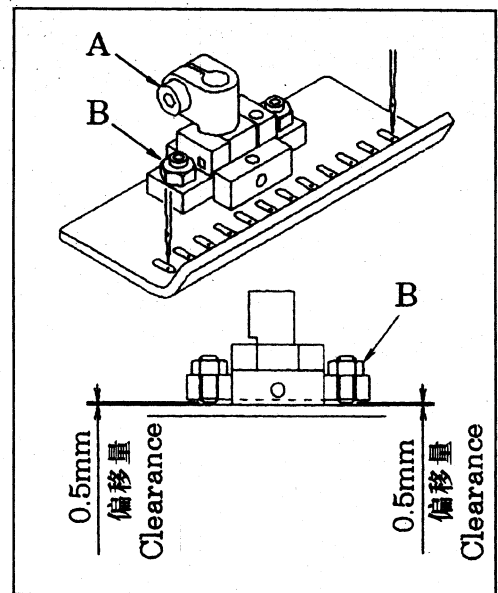
通過螺母B的調節，使壓腳從左端到右端的移動偏移量為0.5mm。如圖所示

Fit the presser foot onto the presser bar so that the needle can drop correctly to the center of the needle drop hole on the presser foot.

Adjustment is made by loosening screw A.

The left-to-right play adjustment on the presser foot is made by loosening nuts B.

Create a clearance of 0.5mm as shown in the illustration on the right.



11-1 手動杆 Manual lever

提升手動杆A，放置及移動面料。

To position or remove the fabric, raise manual lever A.

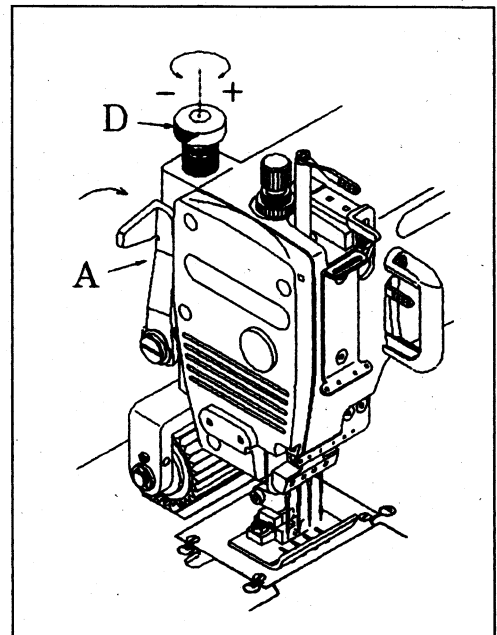
11-2 調整拖輪壓力 To adjust the puller pressure

拖輪的力度越小越好，在保證能够平滑送料的前提下。順時針旋轉旋鈕D以增大壓力。逆時針旋轉則減少壓力。

The puller pressure should be as light as possible, yet be sufficient to feed the fabric smoothly.

To increase the pressure, turn adjusting knob D clockwise.

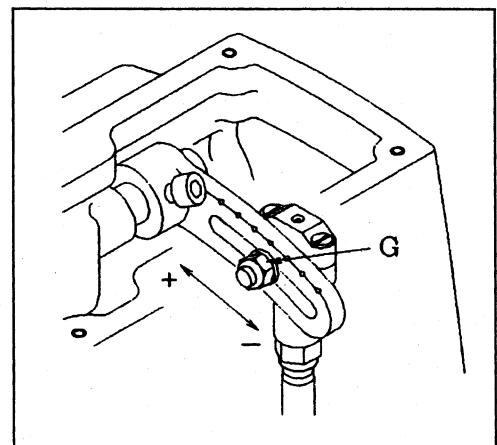
To decrease the pressure, turn adjusting knob D counterclockwise.



11-3 后拖輪的進料量 Adjusting the feeding amount of the rear puller

根據送料牙調節后拖輪的送料量。增大送料量，擰松螺母D轉到左邊，減少，則把它轉到右邊。

Adjust the feeding amount of the rear puller according to that of the feed dog. To increase the amount, loosen nut G and move it to the left. To decrease the amount, move it to the right.



12-1 插入松緊帶并調節前拖輪的送料量

To insert elastic and adjust the feeding amount of the front puller

通過A杆打開/關閉滾筒C，把松緊帶穿進去。

根據送料牙調節前拉料器送料量。

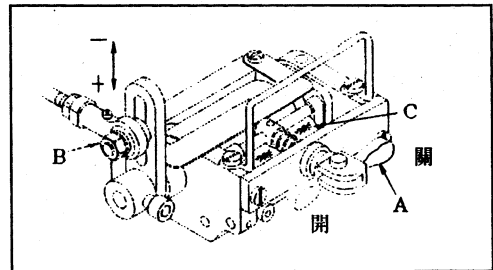
減少送料量，擰松螺絲B并向上升，增加向下移。

Insert elastic by opening/closing small roller C with lever A (see the illustration).

Adjust the feeding amount of the front puller according to that of the feed dog.

To decrease the amount, loosen screw B and move it up.

To increase the move it down.



13-1 線的張力調節 Thread tension adjustment

線的張力會隨着面料，線及針迹長度的不同而變化。直針線的張力可以通過螺母A完成。彎針線的張力可以通過調節螺母B完成。增大張力，順時針旋轉螺母。

Thread tension varies according to sewing conditions such as the fabric, thread and stitch length to be used.

Tension on the needle thread can be adjusted with nuts A.

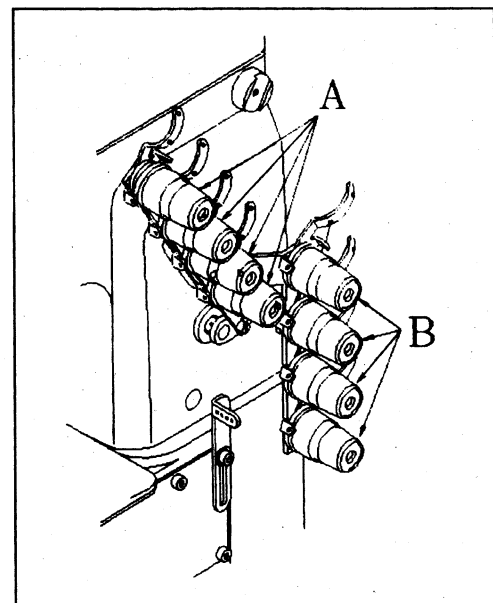
Tension on the looper thread can be adjusted with nuts B.

To increase the tension, turn the nuts clockwise.

<注意><Note>

張力越小越好，但必須確保線迹完整。

The tension should be as light as possible, yet be sufficient to produce uniform stitches.



13-2 過線器的位置 Position of the needle thread eyelets

■ 1402-1404的過線器C在槽的頂端。

On 1402-1404, secure needle thread eyelet C at the top end of the slot.

■ 1406-1412的過線器C在槽的中間。

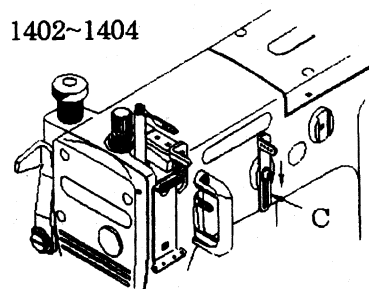
On 1406-1412, secure needle thread eyelet C at the center of the slot.

<注意> <Note>

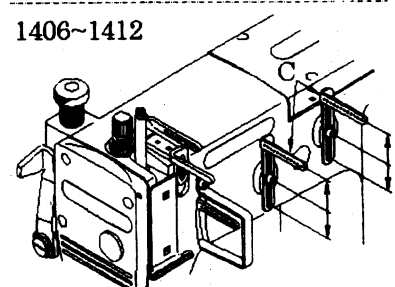
根據所使用的線調節過線器。增大線的張力，把過線器往上調。

Adjust the needle thread eyelets according to the thread to be used. To tighten the needle thread, raise the needle thread eyelets.

1402~1404



1406~1412



13-3 調節針夾綫勾 Adjusting the needle thread guard

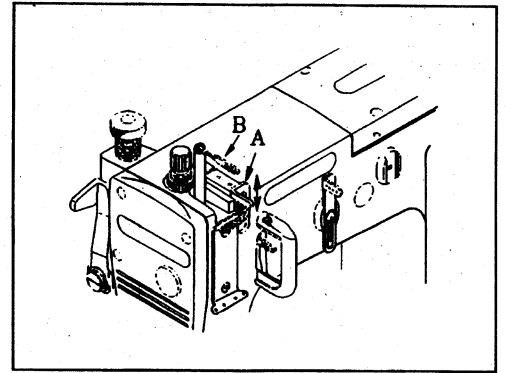
當針杆到達其行程的最低點，針平綫勾A的上表面必須與針杆過綫器B的針眼中心平行。

With the needle bar at the bottom of its stroke, the top surface of needle thread guard A should be level and parallel with the centers of the eyes on needle bar eyelet B.

<注意> <Note>

調高針杆綫勾，以增大直綫的綫環。調低針杆綫勾，則縮小針杆綫環。

Raising needle thread guard A increases the size of the needle thread loop. Lowering needle thread guard A decreases the size of the needle thread loop.



13-4 彎針過綫器的位置及同步性

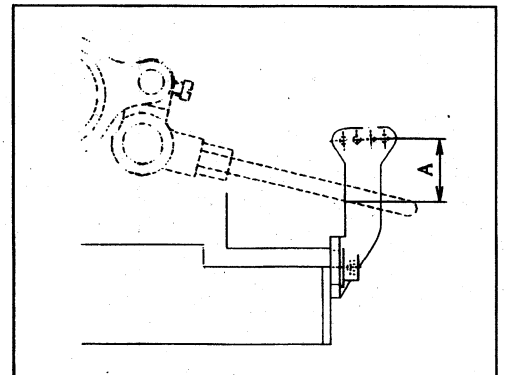
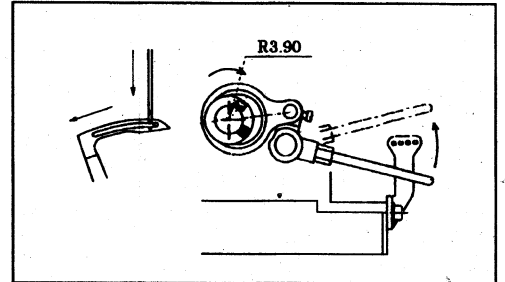
Position and timing of the looper thread eyelet

針杆向下運動，針尖碰到彎針頭的同時，彎針穿綫杆上升。當彎針穿綫杆到達其行程的底端時，根據下表所示調節彎針過綫眼和彎綫杆之間的距離A。

When the point of the needle has reached the underside of the looper blade while the needle bar is descending, the looper thread eyelet bar should ascend.

With the looper thread eyelet bar at the bottom of its stroke, adjust distance A between the eye on the looper thread eyelet and the looper thread eyelet bar by referring to the table below.

綫的類型 Thread type	距離 A Distance A
聚酯綫 Polyester (Tetoron)	8mm
紡成綫 Spun	10mm
羊毛綫 Wooly	15mm



14 PSM 機構 PSM MECHANISM

14-1 凸輪類型 Types of cams

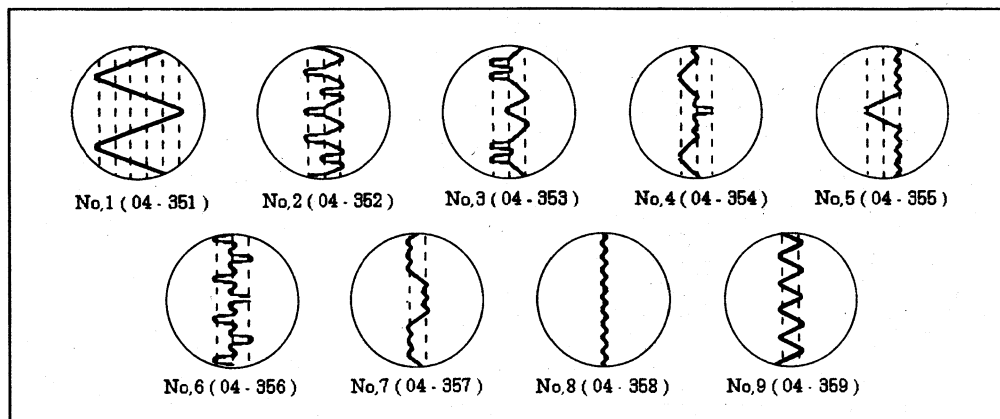
共有九種凸輪，編號為從1到9(九種標準綫迹)。組合兩種凸輪可以產生各種裝飾綫迹。

內凸輪移動上打攪器。外凸輪移動下打攪器并穿過打攪器綫。

There are 9 types of cams from No.1 to No.9(9 types of standard patterns).

Various kinds of decorative stitches can be produced by a combination of 2 cams.

The inside cam moves the upper spreader. The outside cam moves the lower two spreaders and crosses spreader threads.



14-2 制作裝飾綫迹 Producing decorative stitches

將1號凸輪安裝在外側以使用下面兩個打攪器。

從2號到9號凸輪中選擇一個凸輪將其安裝在內側以使用上面的打攪器。

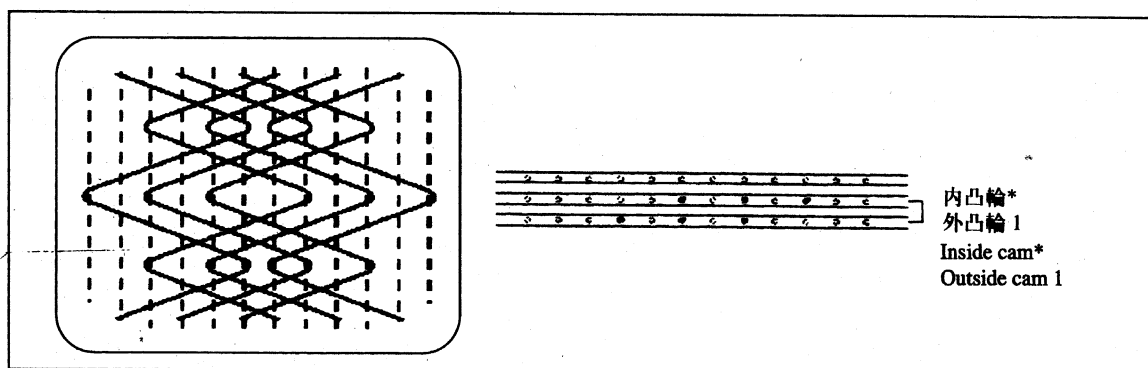
將綫穿過標為●的打攪器眼。按照以上步驟，制動制作如下所示的裝飾綫迹(參閱2號到9號裝飾綫迹)。

Install cam 1 on the outside to use the lower two spreaders.

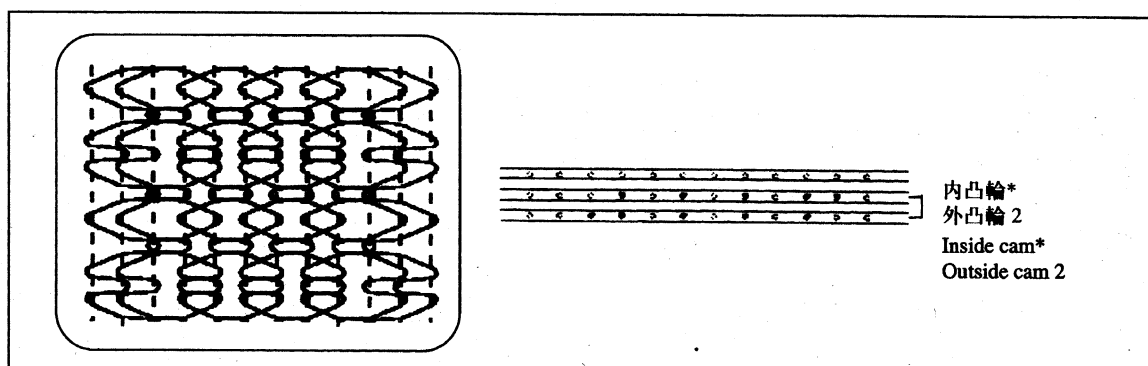
Install any one of cams No.2 to No.9 on the inside to use the upper spreader.

Thread spreaders' eyes marked ●. Following the above procedures automatically produces the decorative stitches below (refer to decorative stitches No.2 to No.9).

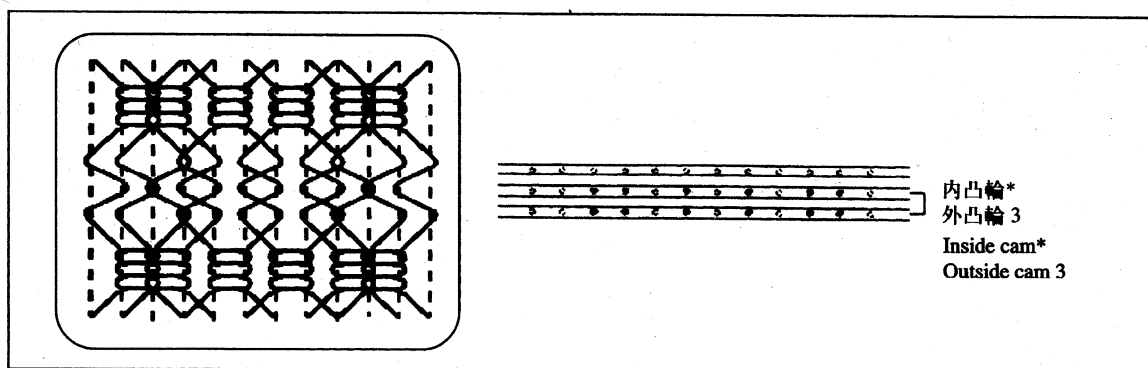
No.1



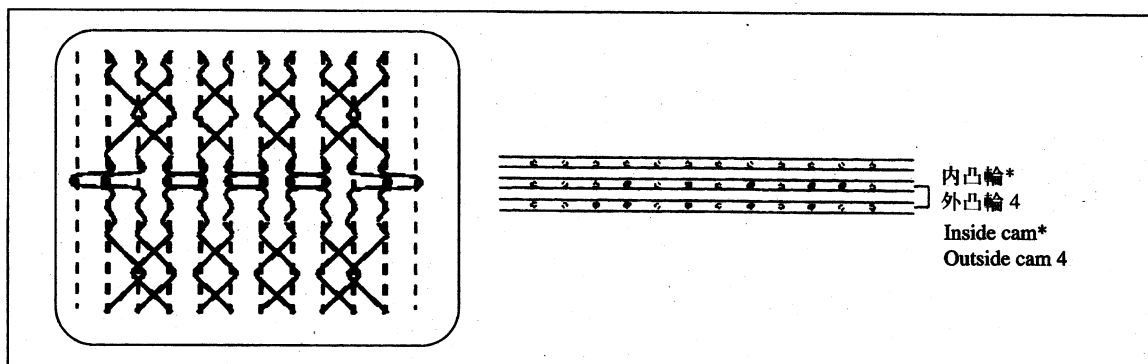
No.2



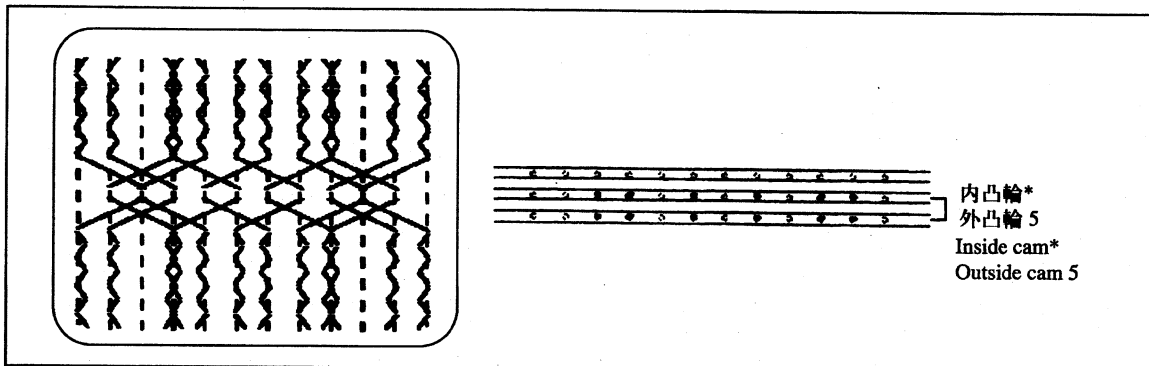
No.3



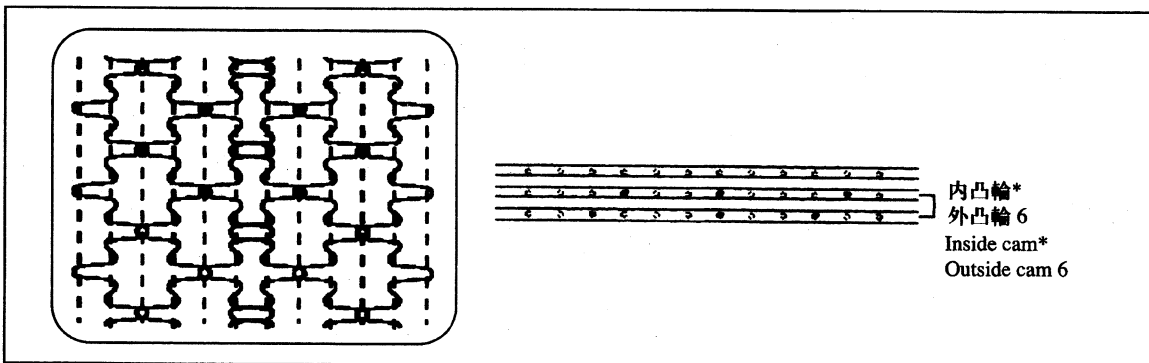
No.4



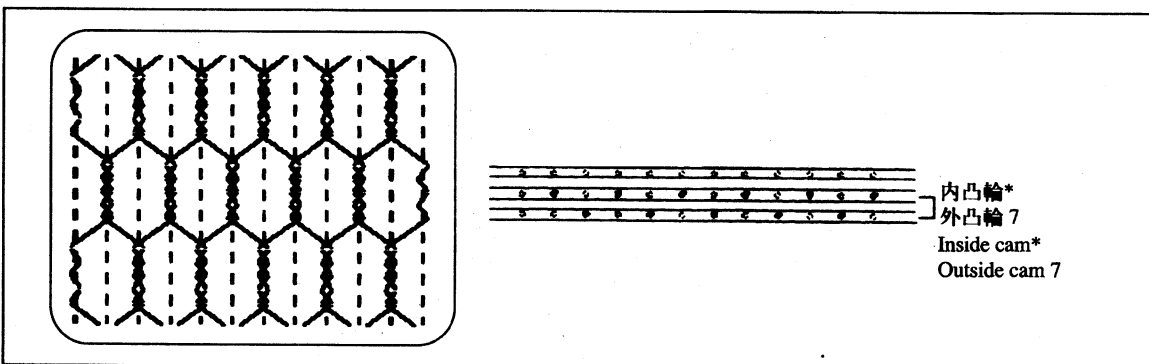
No.5



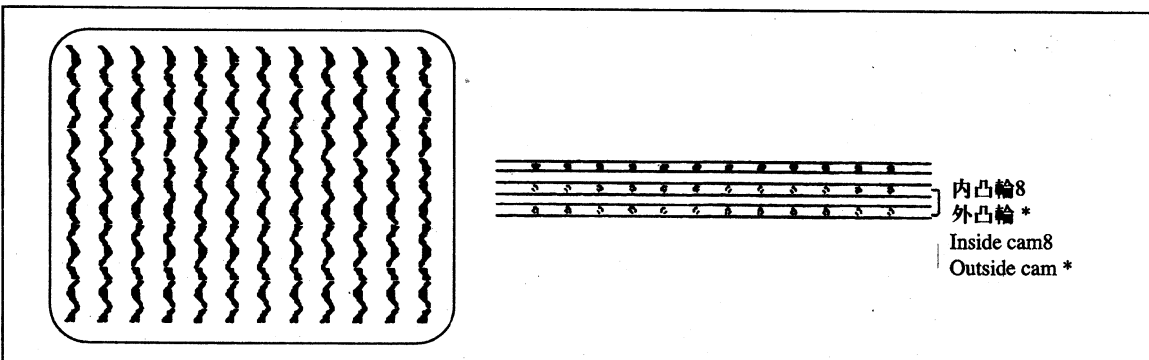
No.6



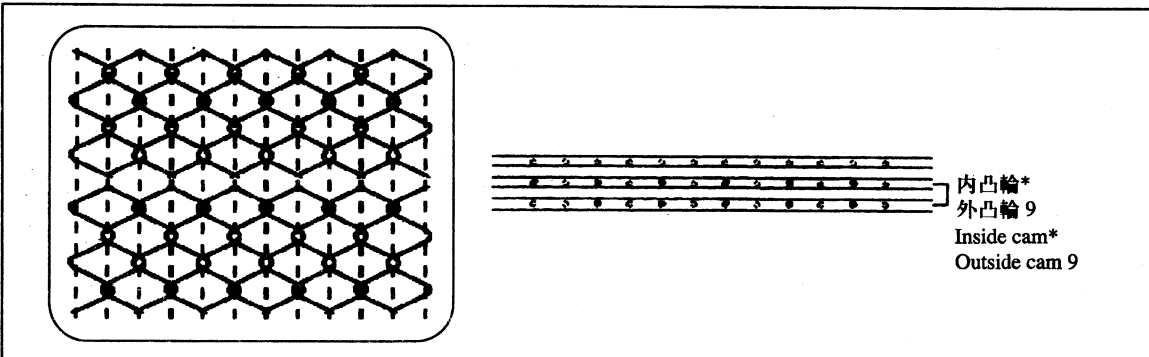
No.7



No.8



No.9



14-3 更換凸輪 Replacing the cams

如欲更換外凸輪B，取下螺母A(注意此螺母為左旋螺紋)。要你更換內凸輪H，鬆開螺絲C和D，並取下軸環。將螺絲F從杆S上取下。然後按箭頭方向向下移動杆S。

To replace outside cam B, remove nut A (note that this nut has a left-hand thread).

To replace inside cam H, loosen screws C and D, and remove the collar. Remove screw F from lever S.

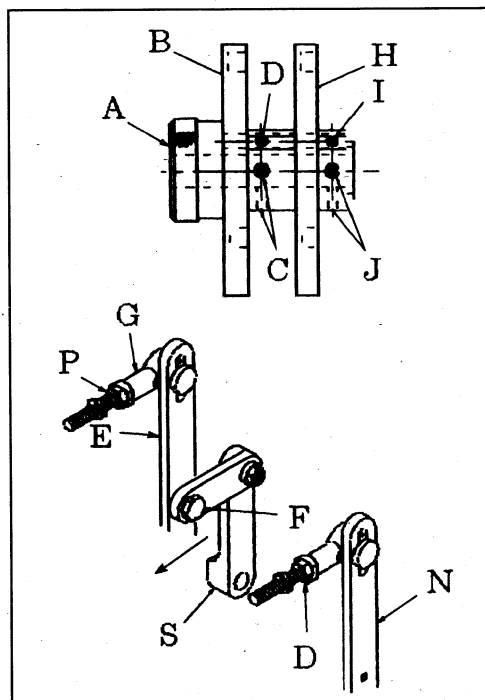
Then move lever S down in the direction of the arrow.

<注意> <Note>

確定給凸輪槽加上潤滑油后再安裝新的凸輪。決不可鬆開螺絲I和J。因為如果鬆開會更改打攪器的定時安排。

Before installing new cams, be sure to grease the cam grooves. Never loosen screws I and J.

Otherwise the timing of spreaders is changed.



14-4 分綫器調速 Timing of spreaders

要調整定時，將8號凸輪設在內側，1號凸輪設在處側。然後按照下面的步驟，通過內側凸輪將打攪器K從左移動到右。打攪器L和M按外側凸輪的反方向移動。

1. 機針開始從其行程頂部移動到底部時，調整凸輪以便分綫器的K、L和M停止移動。鬆開螺絲C和J進行調整(見“更換凸輪”部分)。

2. 分綫器K的位置

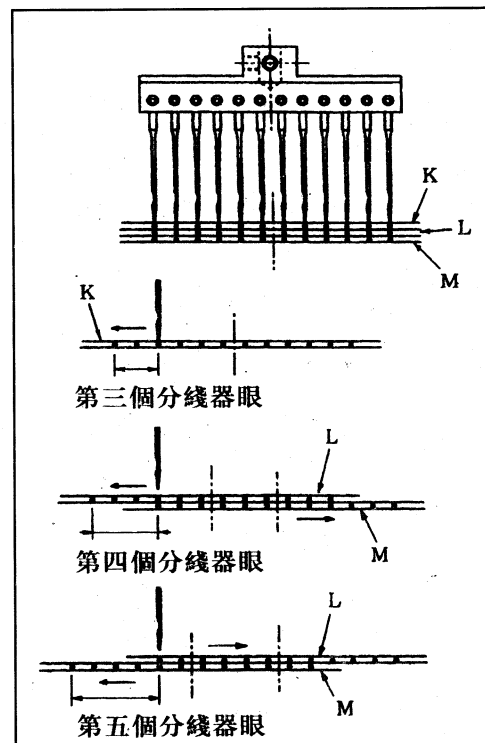
分綫器K位於其行程的最左端時，打攪器K上的第三個分綫器眼應該和機針左側中央對齊。鬆開杆N的螺母D進行調整(見“更換凸輪部分”)。

3. 分綫器L和M的位置

分綫器L位於其行程的最左端時，分綫器L上的第四個分綫器眼應該和左端機針中央對齊。鬆開E的螺母P進行調整(見“更換凸輪部分”)。

分綫器L位於其行程的最右端時，確保分綫器M上的第五個分綫器眼應該和左端機針的中央對齊。

(圖上)第三個分綫器眼，第四個分綫器眼，第五個分綫器眼。



To adjust this timing, set cam No. 8 on the inside and No. 1 on the outside. Then follow the procedures below. Spreader K moves left to right with the inside cam. Each of spreaders L and M moves in the opposite direction with the outside cam.

1. When the needle starts to move from the top to the bottom of its stroke, adjust the cams so that spreaders K, L and M stop moving. Adjustment is made by loosening screws C and J (see "Replacing the cams").

2. Position of spreader K

With spreader K at the extreme left end of its travel, the third spreader's eye on spreader K should be aligned with the center of the left end needle. Adjustment is made by loosening nut P for lever N (see "Replacing the cams").

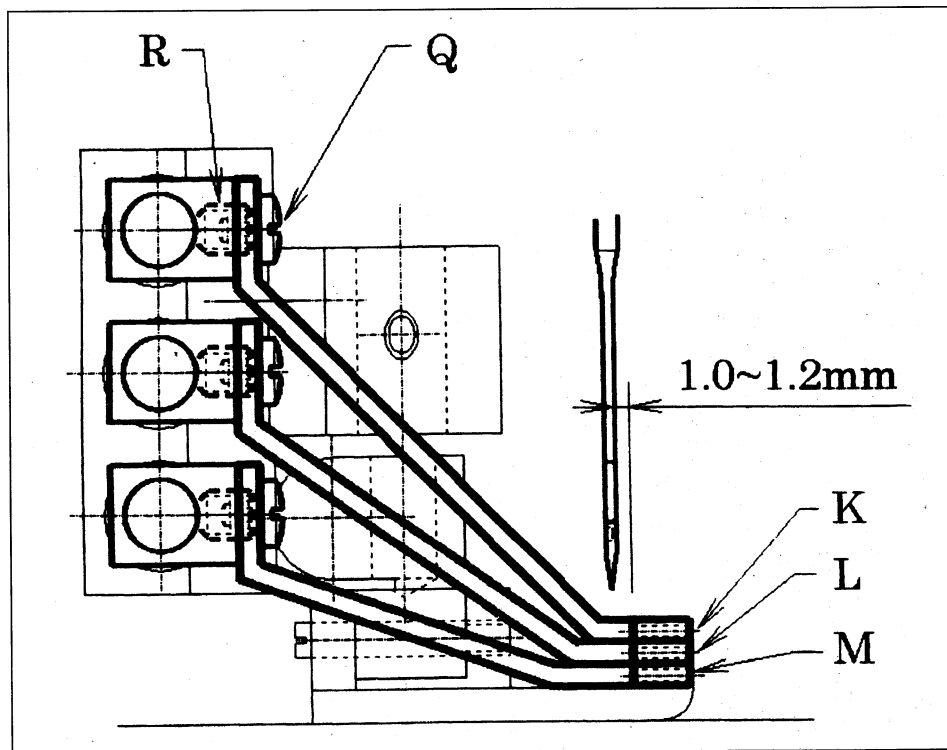
3. Position of spreaders L and M

With spreader L at the extreme left end of its travel, the fourth spreader's eye on spreader L should be aligned with the center of the left end needle. Adjustment is made by loosening nut P for lever E (see "Changing the cams"). With spreader L at the extreme right end of its travel, make sure the fifth spreader's eye on spreader M is aligned with the center of the left end needle.

14-5 調整打攪器 Adjusting the spreaders

打攪器K,L,M以及機針間的間隙應該為1-1.2mm。用螺絲Q上下調整打攪器。
用螺絲R調整打攪器的傾斜度。

The clearance between spreader K, L and M needles should be 1-1.2mm.
Spreader up-and-down adjustment is made with screws Q.
Spreader tilt adjustment is made with screws R.



15-1 拆開并重新組裝包邊蝴蝶

Disassembling and reassembling the binder

■ 拆開包邊蝴蝶

取下螺絲A。按照箭頭B和C所指也就是朝向你將其拉出包邊蝴蝶取下。

■ To disassemble the binder

Remove screw A. Remove the binder by pulling it toward you while referring to arrows B and C.

<注意> <Note>

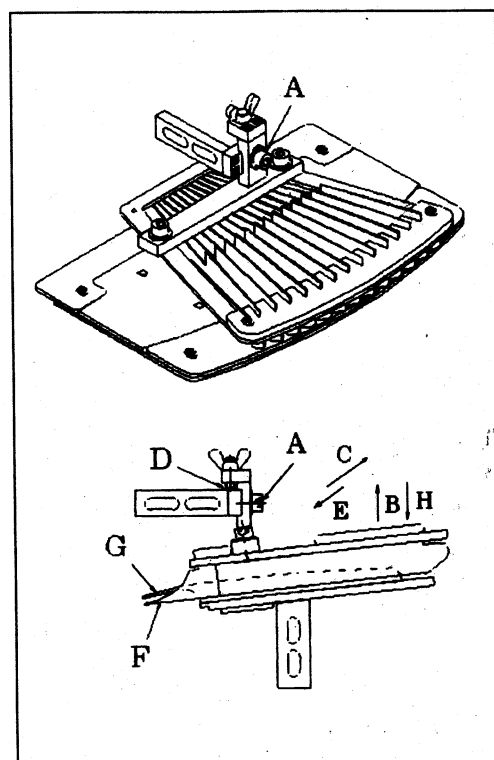
取下包邊蝴蝶時一定要仔細,不要弄壞導布器的兩頭
When removing the binder, be careful not to damage the ends of the fabric guides.

■ 重新組裝包邊蝴蝶

將上導布器(F)的兩端對准下導布器(G)。按照箭頭H的方向將向下移動包邊蝴蝶。確保螺絲的D端碰到支架。然后上緊螺絲A。

■ To reassemble the binder

Fit the ends of upper fabric guides (F) onto lower fabric guides (G). Move the binder down in the direction of arrow H. Check that end D of the screw touches the bracket. Then tighten screw A.



15-2 上下調整包邊蝴蝶

Adjusting the binder up and down

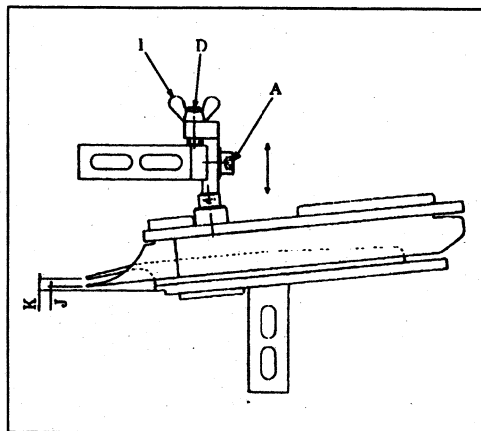
根據所用布料上下調整包邊蝴蝶。按照要求松開螺絲A和翼形螺絲I并轉動螺絲D進行調整。調整完成后，上緊螺絲A和翼形螺絲I。

Adjust the binder up and down according to the fabric to be used. Adjustment is made by loosening screw A and wing screw I and turning screw D as required. After this adjustment is made, tighten screw A and wing screw I.

<注意> <Note>

根據已完工的針綑調整J和K的位置。

Adjust the position of J and K according to the finished pin tuck.

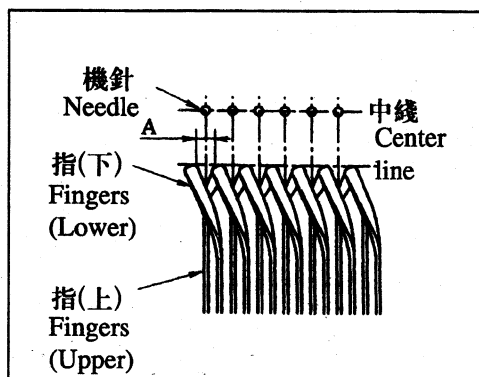


15-3 包邊蝴蝶上、下指的位置

Position of the upper and lower fingers of the binder

將上、下指進行適當定位，使A距離為各機針垂直中線的一半。上、下指所形成的綫應該和機針各水平中綫平行。

Position upper and lower fingers so that distance A is halved by each vertical centerline of the needles. The line formed by the points of the upper and lower fingers should be parallel with each horizontal centerline of the needles.



[16] PQ調整 PQ ADJUSTMENT

A. 調整橡筋綫夾綫器的左、右移動

對於各機針而言，夾綫器左右移動和其行程相同。

<調整>

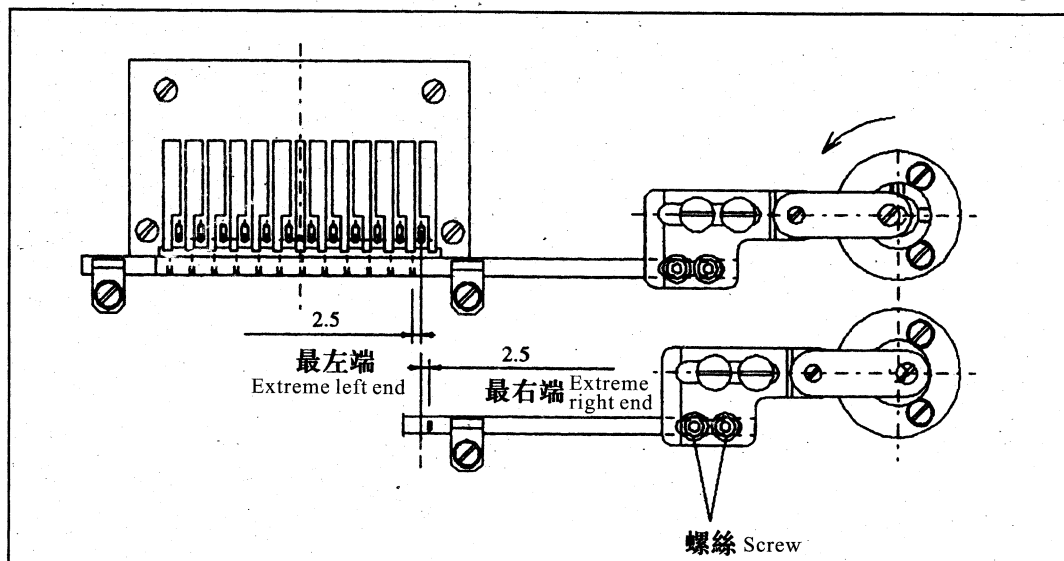
松開夾綫器固定器上的2個螺絲，夾綫器眼應該從個機針左右移動時應該保持等同距離。

A. Adjustment of right & left movement of retainer for elastic thread

The right-left movement of retainer move even of its travel for each needles.

< Adjustment >

Loosen 2 screws on the retainer holder and the retainer eye should keep equal distance of right-left movement from the center of each needles.



B.和針杆行程的關係 Relation with needle bar stroke.

當機針點達到針板頂面時，固定器應該處於行程的最左端或最右端的位置。

<調整>

設定機針點使其位於針板頂面，並保持在此位置，然後在固定器位於最左端或最右端時上緊驅動渦杆齒輪的油泵上的螺絲。

Relation with needle bar stroke.

When the tip of needle reaches at the top surface of needle plate, the retainer should be the position of extreme right end or left end of its stroke.

<Adjustment>

Set up the tip of needle is located the top surface of needle plate and holding the position, then tighten the screw on the oil pump driving worm gear, when the retainer is located the extreme right end or left end.

C.調整橡筋綫張緊度 Adjustment of elastic thread tension

通過PQ的MD-1設備中的連杆調整橡筋綫的張緊度。

<調整>

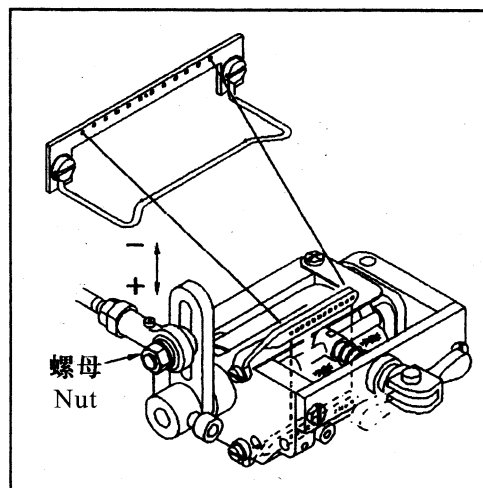
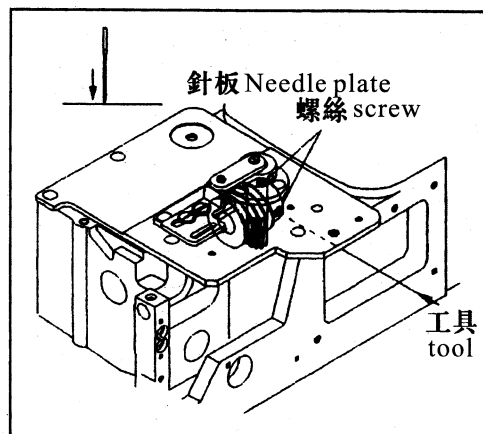
鬆開杆上的螺母，可以通過上下移動螺母調整橡筋綫的張緊度。要提高張緊度，向下移動螺母，要降低張緊度，向上移動螺母。

Elastic thread tension is adjusted by connecting bar in MD-1 device for PQ.

<Adjustment>

Loosen a nut on rod, it is possible to adjust the elastic thread tension by the nut move to up or down. To increase, the nut moves to down.

To decrease, the nut moves to up.



17-1 調整上下撥離器刃 Adjusting low stripper blade

下撥離器刃A的高度(Y)應該為距離針板表面1-3mm，而且鬆開螺絲D並上下移動支架C可以使布料通過間隙(Y)。

(見圖1)

機針和下撥離器刃間的間隙應該為4-5mm，可以鬆開螺絲B並前後移動A對其進行調整。

(見圖1)

The height (Y) of low stripper blade A should be about 1-3mm from the surface of needle plate and then the fabric can be through the clearance (Y) by loosening screw D and move the bracket C to up or down. See the Fig 1. The clearance (X) between the needle and the tip of low stripper blade A should be about 4-5mm by loosening screw B and move A to front or back. See Fig 1.

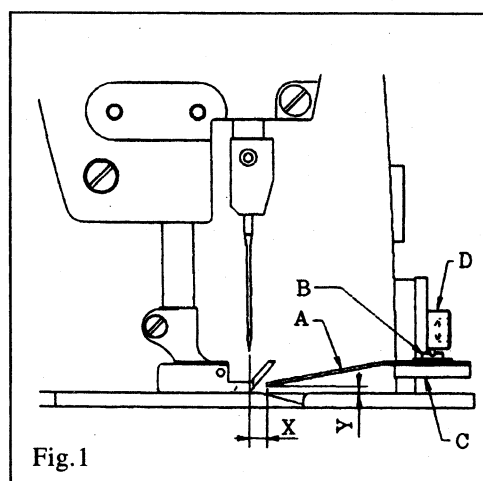


Fig.1

17-2 調整皺褶花邊狹帶 Adjusting the ruffling arm sets

皺褶花邊狹帶的長度應該約為99.4mm，可以松開螺絲A進行調整。

調整完成后再上螺絲A。見圖2

打襠裝置的刃B應該和機針以及針板同時平行，然后小心地上緊螺絲C。

皺褶花邊狹帶應該安到驅動杆F上，上緊螺絲D。然后再上緊螺絲E。

打襠裝置的刃距離機針最近時，打襠裝置的刃應該距離機針中央偏左1mm，松開螺母L進行調整。見圖3、5

The length of the ruffling arm should be about 99.4mm by loosening screw A tighten screw A after that adjustment. See Fig 2. The ruffler blade B should be paralld with the needles and the needle plate at same time and then tighten C screw carefully.

The ruffling arm should be attached the driving shaft F and tighten screw D and then tighten screw E. When the ruffler blade B get the nearest to the needle, the tip of the ruffler blade be 1 mm left-side from the center of needle by loosening nut L.

See Fig 3,5.

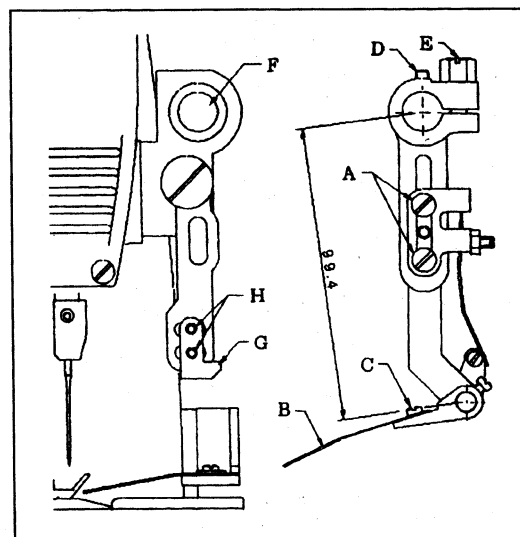


Fig.2

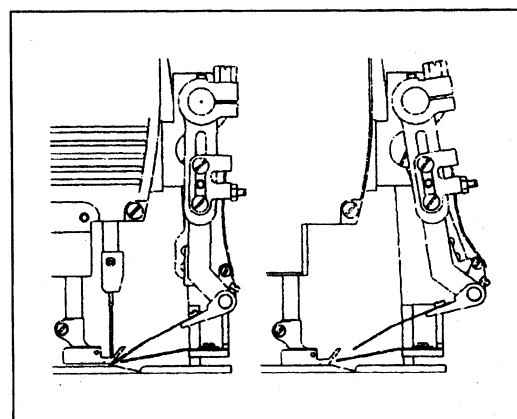


Fig.4

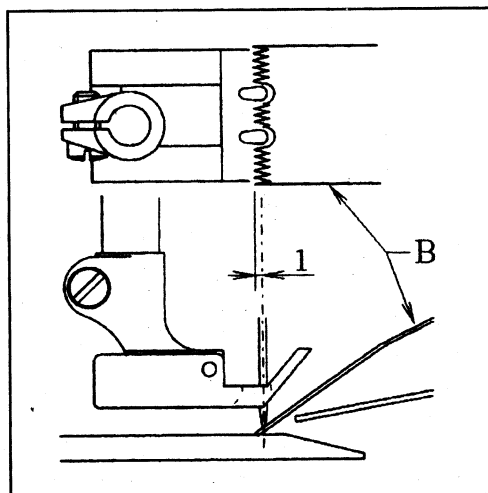


Fig.3

- 打襠裝置的刃B以及下撥離器刃應該為間隙I，松開螺絲H并將制動器板G向左或向右移動進行調整。如果制動器板G在右側，則間隙大。反之，如果制動器板G在左側，則間隙小。應松開螺絲M來調整皺褶花邊狹帶的移動。如果距離K過小，移動就變大。反之，如果距離K過大，移動就變小。見圖5

比如移動位置的距離為35mm。見圖4

- The ruffler blade B and the low stripper blade should be the clearacne I by loosening screw H and move the stopper plate G to left or right.

When the stopper plate G is right, the clearance become wide. On the other hand, when the stopper plate G is left, the clearance become narrow.

The adjustment for the movementum of the ruffling arm should be made by loosening screw M.

When the distance K is narrow, the movement become big. On the hand, when the distance K is wide, the movement become small. See Fig 5.

For exsample, the distance of movement position is 35mm. See Fig 4.

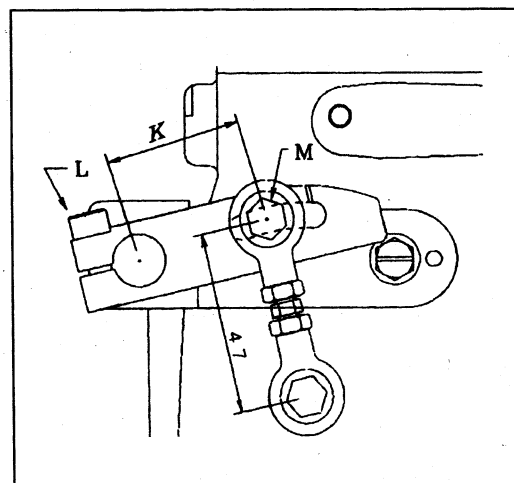


Fig.5

17-3 調整皺褶花邊狹帶的定時

Adjusting the timing of ruffling arm

當皺褶花邊狹帶最靠近機針時，機針應和布料接觸。
如欲調整定時，打開頂蓋，鬆開螺絲(A)後調整定時滑輪
位置。見圖6

When the ruffling blade get the nearest to needle, the needle be touched the fabric.

The adjustment should be made by opening top cover and adjust the timing pulley position after loosening screw (A). See Fig 6.

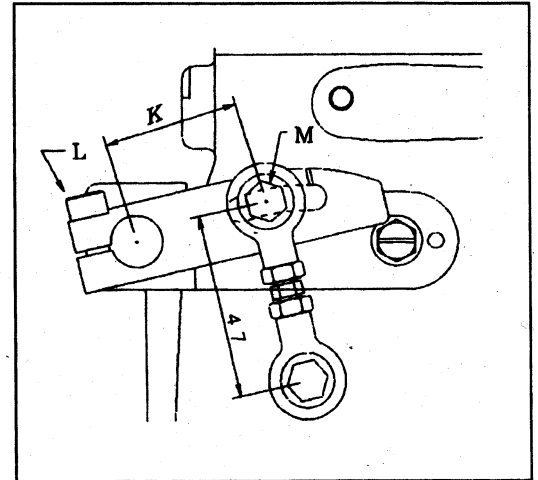


Fig.6

每天工作完成后，將壓腳以及針板取下，然後清潔針板槽以及送布牙周圍的區域。

At the end of each day, remove the presser foot and the needle plate and then clean the slots of the needle plate and the area around the feed dogs.

