

Kansai Special

INSTRUCTION MANUAL

R 9 0 0 0

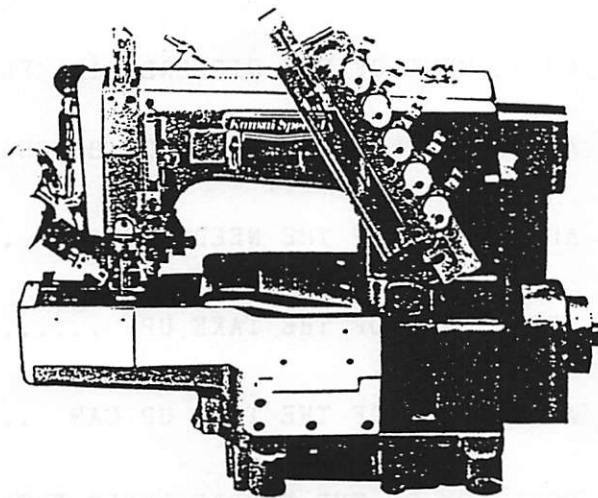


TABLE OF CONTENTS

<u>TOPIC</u>	<u>PAGE</u>
1. R-9000	1
2. MACHINE TYPES	1
3. MACHINE SPEED	1
4. NEEDLES	2
5. TABLESTAND ASSEMBLY	2
6. MACHINE OIL AND FILTER REPLACEMENT	3
7. THREADING AND TENSION ADJUSTMENT	4
8. ADJUSTMENT OF THE LOOPER POSITION	5
9. ADJUSTMENT OF THE NEEDLE BAR HEIGHT	6
10. FEED LENGTH ADJUSTMENT	6
11. ADJUSTMENT OF THE DIFFERENTIAL FEED	7
12. ADJUSTMENT OF THE FEED DOG HEIGHT	7
14. ADJUSTMENT OF THE NEEDLE GUARD	8
15. ADJUSTMENT OF THE TAKE UP	8
16. ADJUSTMENT OF THE TAKE UP CAM	8
17. POSITION OF THE NEEDLE LEVER EYELET	8
18. ADJUSTMENT OF THE TOP COVER MECHANISMS	9
19. THE UNDERBED THREAD CUTTER (UTC)	10

1. R9000

TYPE	WIDTH(IN)	WIDTH (GA)	NEEDLE BAR HT.	LOOPER-NL. DISTANCE
TWO NEEDLE MACHINE	1/8	8 gauge		4
	5/32	10 gauge		4
	3/16	12 gauge		4
	7/32	14 gauge		4
	1/4	16 gauge		4
THREE NEEDLE MACHINE	7/32	14 gauge		4
	1/4	16 gauge		4

Handwritten: 7/32

2. MACHINE TYPES IN THE R-9000 SERIES

R-9101	R-9102	R-9103	R-9202	R-9203
1 needle	2 needle	3 needle	2 needle	3 needle
1 looper	1 looper	1 looper	1 looper	1 looper
double chainstitch	bottom coverstitch	bottom coverstitch	top and bottom coverstitch	top and bottom coverstitch
UYX128GAS needle size 75 to 100	UYX128GAS needle size 75 to 100	UYX128GAS needle size 75 to 100	UYX128GAS needle size 75 to 100	UYX128GAS needle size 75 to 100
differential feed	differential feed	differential feed	differential feed	differential feed

3. MACHINE SPEED AND MOTOR PULLEY

The correct combinations of motor pulley sizes and machine speeds are seen on the chart below. Choose the appropriate pulley size according to the desired machine running speed.

MACHINE SPEED (RPM)	PULLEY DIAMETER (mm)	
	50 HZ	60 HZ
4000	85	70
4500	95	80
5000	110	90

NOTE: The normal rotation of the handwheel is counter clockwise, or in the direction of the operator.

4. NEEDLES

4-1 NEEDLE TYPE

The needle specified for use in the R-9000 series machines is UYX128GAS. The recommended size range is from size 75 to 100. The size used should be selected according to the sewing conditions.

SINGER SYSTEM	9	10	11	12	13	14
MEIRIC SYSTEM	65	70	75	80	85	90

4-2 INSTALLATION OF THE NEEDLES

Install the needles so that their Clearance Above the Eye (CAE) is exactly in the back. Be sure to insert the needle all the way into the needle clamp so that it touches its base. Then tighten set screw A.

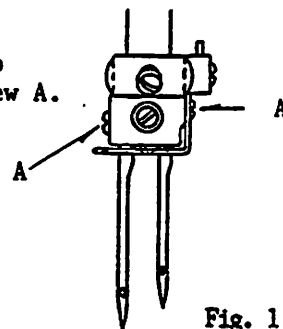


Fig. 1

5. ASSEMBLY OF THE TABLESTAND

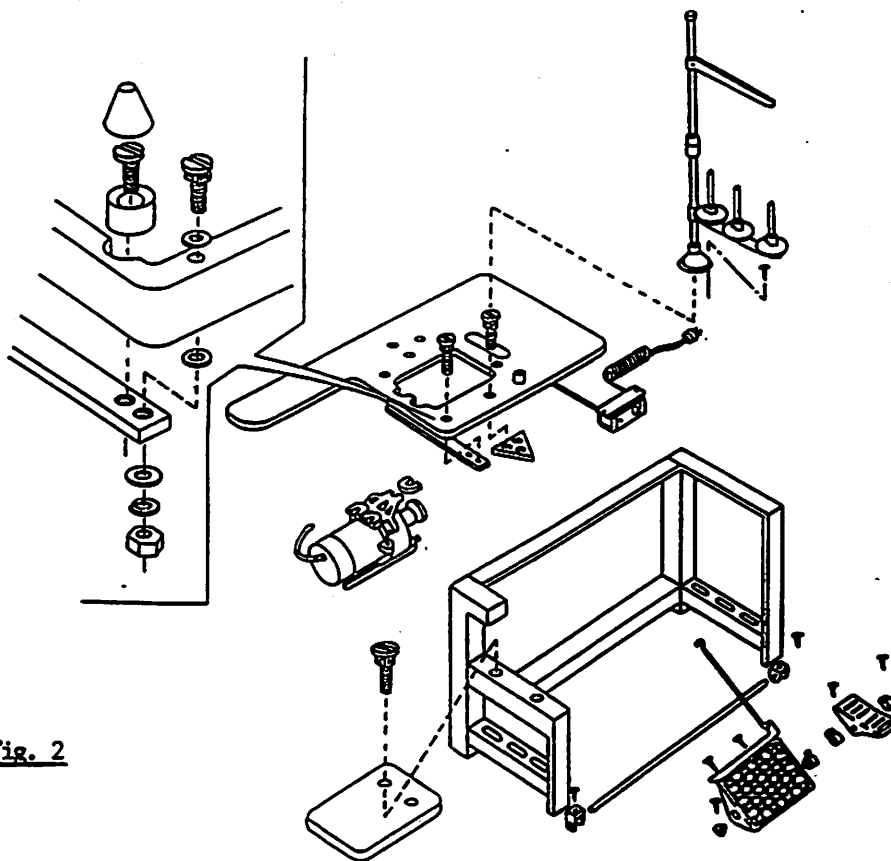


Fig. 2

6. MACHINE OIL AND FILTER REPLACEMENT

6.1 OIL SUPPLY

The lubricating oil recommended for our sewing machines is TELESSO 33. To supply:

1. Remove the oil pot on top of the machine top cover. Insert a funnel into the opening and pour the oil into the funnel.
2. Pour in the oil only until the oil level reaches between the two marks on the oil gauge.
3. Replace the oil pot.

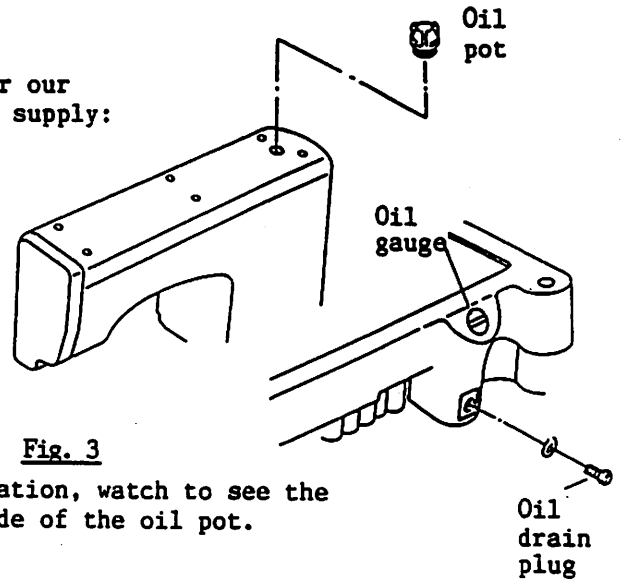


Fig. 3

Note: While the machine is in operation, watch to see the oil is splashing on the inside of the oil pot.

6.2 DRAINING THE OIL

To drain the machine oil, remove the oil drain plug from the front of the reservoir.

6-3. REPLACING THE FILTER

1. Remove the cover plate, "A" on the bottom of the oil reservoir. Filter "B" can now be seen.
2. Remove the filter by gently pulling it from the feed port stem, "C".
3. Replace a new filter onto the feed port stem.

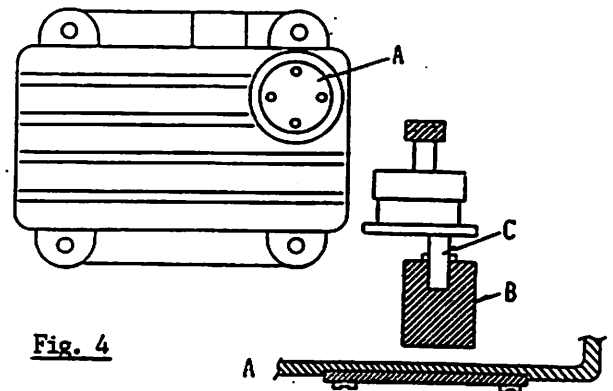


Fig. 4

NOTE:

1. Always check the oil gauge before using the machine to ensure the oil level is correct.
2. Use only the oil specified or its equivalent.
3. If there is no oil splashing in the oil pot, even though the oil level is correct, this suggests there is a clog in the oil filter or oil line. Clean or replace the oil filter. The inside of the oil reservoir should also be cleaned periodically.

7. THREADING AND TENSION ADJUSTMENT

7-1 THREADING

Place the thread through the eyelets and guides according to the diagram below. Lines "D" represent needle threads, line "E" is the top cover thread, and line "F" is the looper thread.

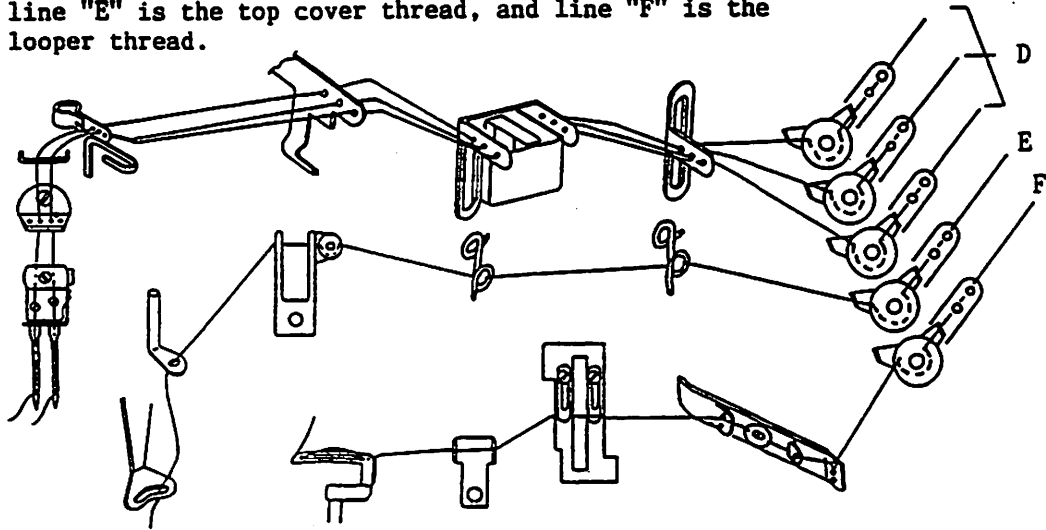


Fig. 5

7-2. TENSION ADJUSTMENT OF THE THREAD

The appropriate thread tension varies according to the sewing conditions (the kind of fabric, the type of thread, the stitch length used, etc.). Adjust the thread tension with the tension regulator nut to suit the sewing conditions.

Turning the regulator nut clockwise increases the tension. Turning the regulator nut counter clockwise decreases the tension.

NOTE: The thread tension should be maintained as low as possible to form a good stitch. Setting the thread tension unnecessarily high is likely to cause thread breakage or skipping.

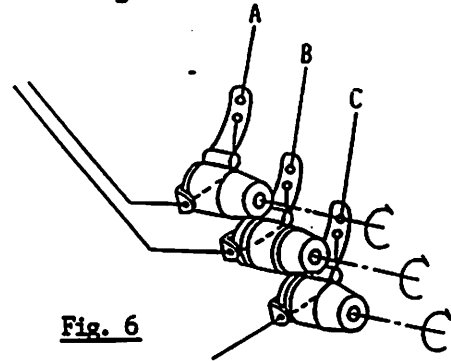
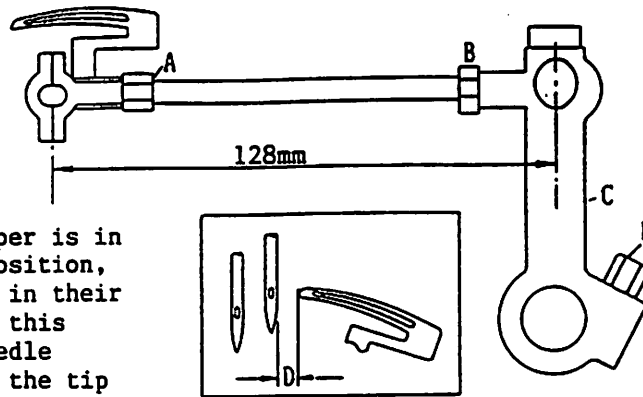


Fig. 6

A and B are needle threads
C is the looper thread

8. ADJUSTMENT OF THE LOOPER POSITION

8-1 THE LOOPER-NEEDLE DISTANCE



At the time the looper is in its extreme right position, the needles must be in their lowest position. At this time, the looper-needle distance, "D", from the tip of the looper to the right side of the most right needle

must be 4mm. This adjustment may be made by loosening the looper drive lever clamp screw, "E" and repositioning the looper holder.

Fig. 7

8-2 THE LOOPER-NEEDLE CLEARANCE

The looper must pass behind the needles to catch the needle loop to form the stitch. The looper position must be adjusted so that at this time the clearance between the tip of the looper, "A" below, and the needle, "C", is 0 to 0.05mm.

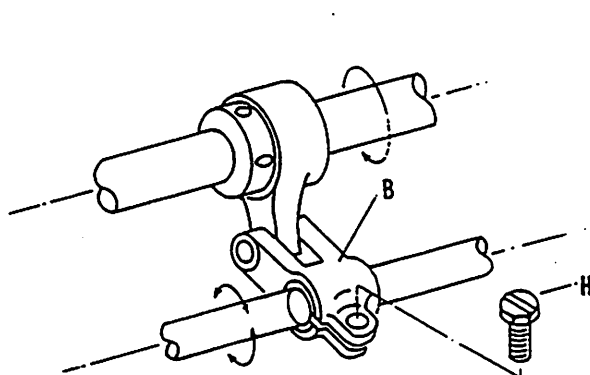


Fig. 8

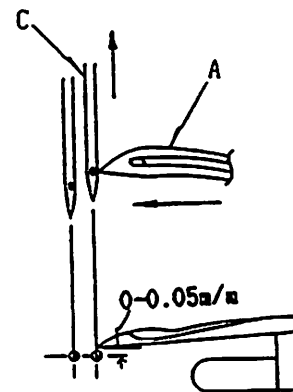


Fig. 9

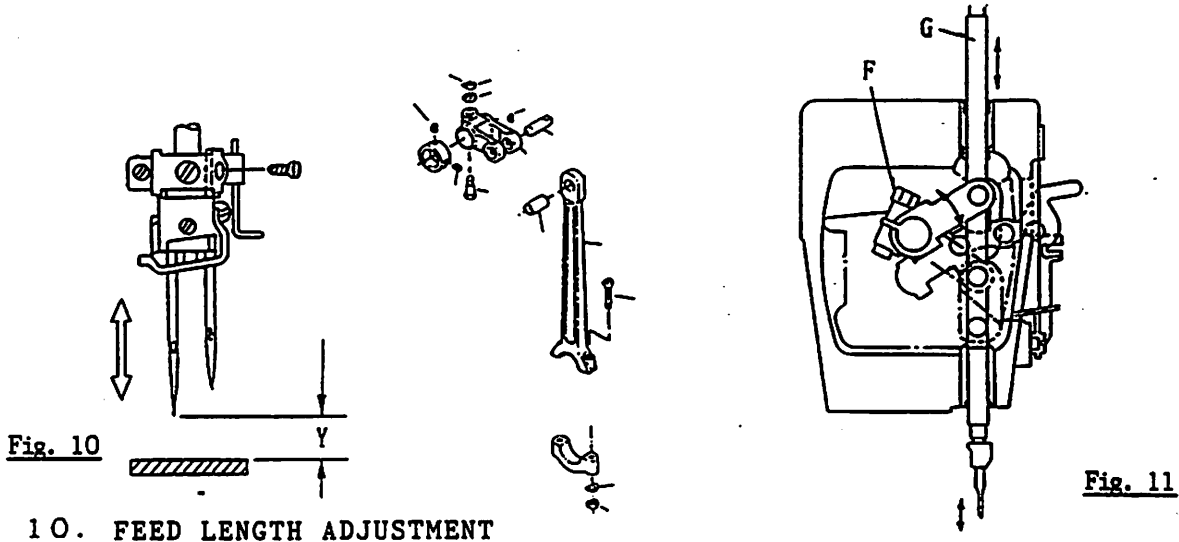
This adjustment may be made by loosening the clamp screw, "H", on the looper rocker lever, "B", and repositioning the looper behind the needles.

9. ADJUSTMENT OF THE NEEDLE BAR HEIGHT

The correct needle bar heights for the various needle gauges are listed below. To adjust, remove the machine head cover. Next, loosen the clamp screw, "F", shown in figure 11. Move needle bar, "G", to the appropriate height and retighten the clamp screw.

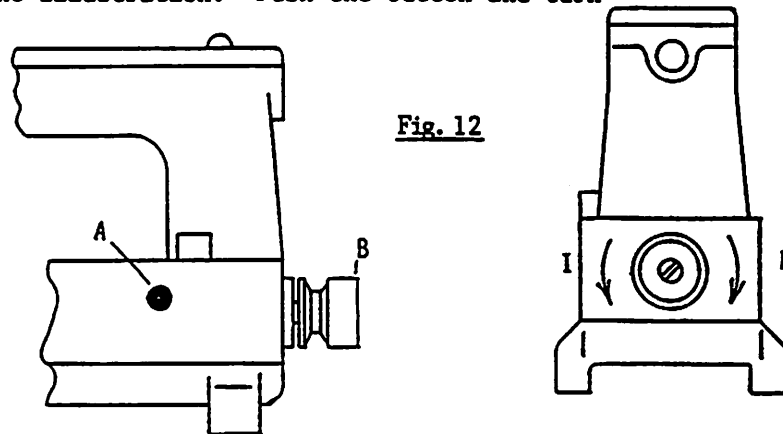
NEEDLE GAUGE WIDTH	NEEDLE BAR HEIGHT
1/8....3.17	
5/32....3.96	
3/32....4.76	
7/32....5.56	
1/4....6.35	

NOTE: The needle bar height is the dimension from the top face of the needle plate to the tip of the left-most needle. (see Figure 10)



10. FEED LENGTH ADJUSTMENT

The feed length adjustment of the R-9000 series machines is by a pushbutton system. To adjust, lower the front cover on the bed of the machine. You will see pushbutton, "A", shown in the illustration. Push the button and turn



the handwheel until the pin falls into place. Then turn the handwheel while holding down the button. Turning the handwheel in the "I" direction makes the stitch larger. Turning the handwheel in the "H" direction -6- makes the stitch shorter.

11 ADJUSTMENT OF THE DIFFERENTIAL FEED

Expose the access port by removing the rubber plug as shown in Figure 13. At this time you can see nut "B". To adjust the differential feed, loosen nut "B" and move the lever up

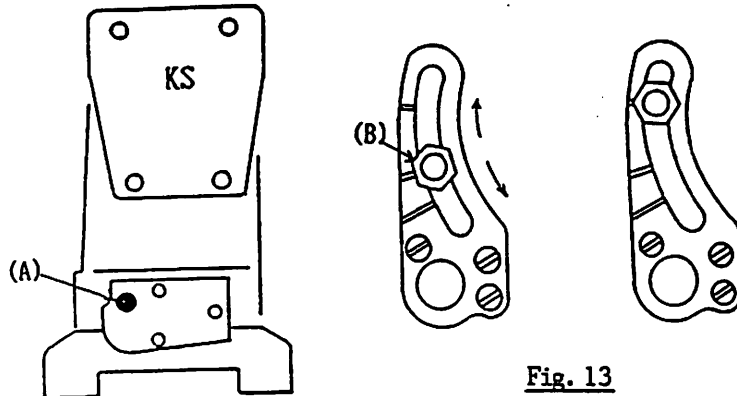


Fig. 13

or down the differential guide plate. Moving the lever up increases the differential. Moving the lever down decreases the differential. Retighten nut "B".

12. ADJUSTMENT OF THE FEED DOG HEIGHT

As shown in Figure 14, the height of the feed dog should be one full tooth height or 0.8 to 1.2mm.

The height of the main feeder is adjusted by loosening set screw "A".

The height of the differential feeder is adjusted by set screw "B".

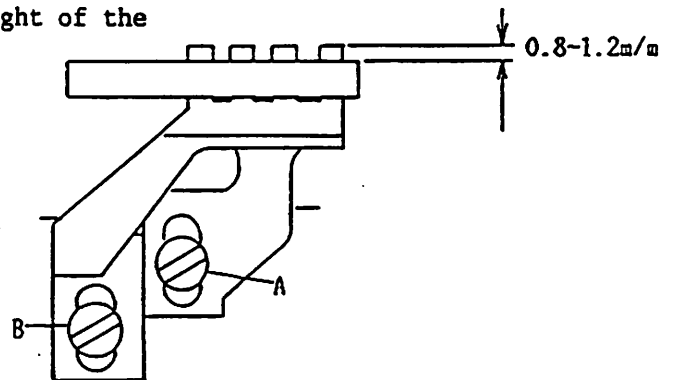


Fig. 14

ADJUSTMENT OF THE NEEDLE GUARD

As the looper is moving from right to left behind the needles, the tip of the looper will reach the center line of the first (right-most) needle. At this time, the needle guard must be in contact with the needles. The dimension from the point of the contacting surface to the tip of the needles should be 0.8 to 1mm and the right-most needle should be pushed slightly forward 0.1 to 0.3mm by the needle guard, as shown in Figure 16.

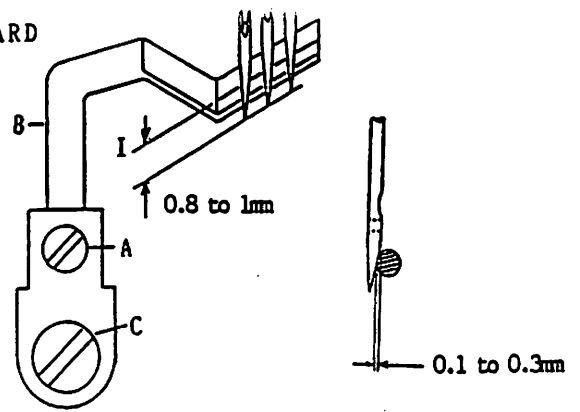


Fig. 16

Adjustments of the needle guard height and angle with respect to the needle line are made with set screw A. Front-back position adjustment is made with set screw "C". Retighten all set screws after adjusting.

15. ADJUSTMENT OF THE TAKE UP $6-7m/a$

As shown in Figure 17, the dimension between the bottom of the retainer "B", and the take up plate, "E", should be 6 to 7mm. Adjust this dimension with set screw "F". Also, as shown, the eye of the looper thread guide, "A", should be in line with the center of the main shaft. Adjust the position of the thread guide with the set screw "G".

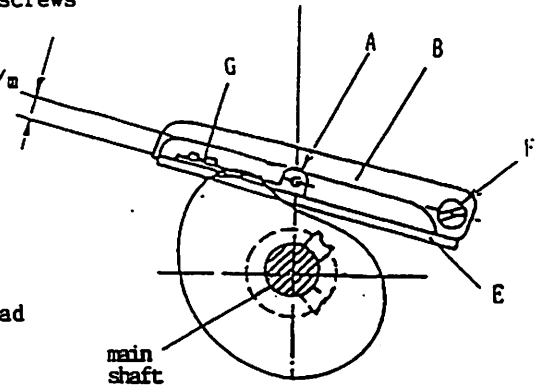
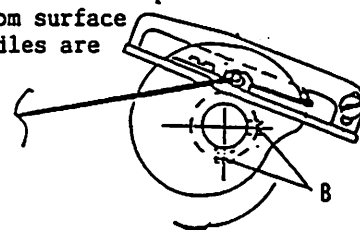
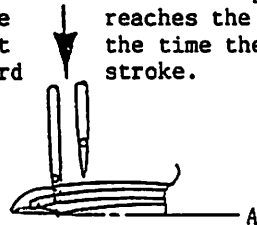


Fig. 17

16. ADJUSTMENT OF THE TAKE UP CAM

As shown in Figure 18, the looper thread should be released from the take up cam when the tip of the left-most needle reaches the bottom surface of the looper at on their downward stroke.

Fig. 18



17. POSITION OF THE NEEDLE LEVER EYELET

At the time the needle lever eyelet is in its upper-most position, the tip of the eyelet should be in line with the "0" mark on the graduated plate in front,

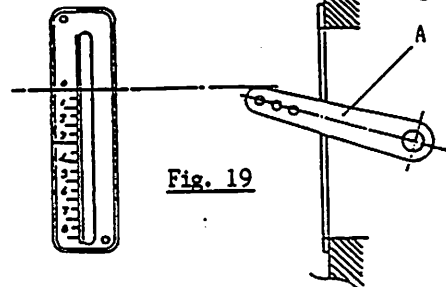


Fig. 19

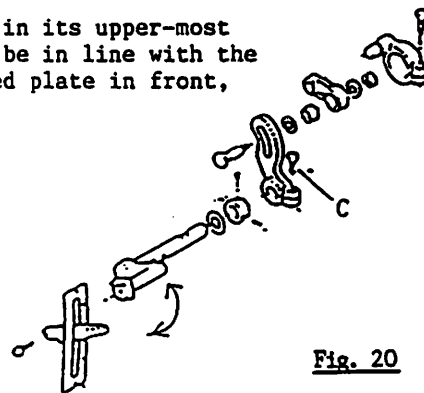


Fig. 20

as shown in Figure 19. To adjust, loosen the set screw, "C", shown in Figure 20, and move the lever arm up or down as necessary. Retighten.

18. ADJUSTMENT OF THE TOP COVER MECHANISMS

a) TOP COVER THREAD GUIDE

The eye of the top cover thread guide should be in line with the "3" mark of the graduated plate in front. To adjust, loosen set screw "D" and move the top cover thread guide, "C", up or down as necessary (see Figure 21). Retighten the set screw.

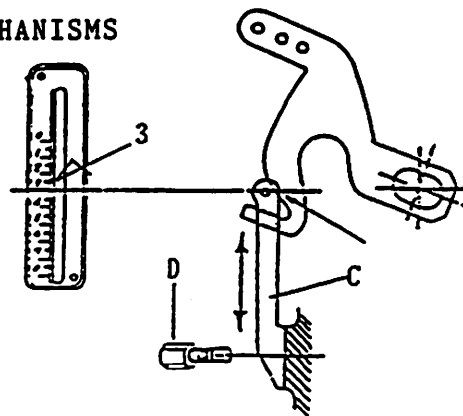


Fig. 21

b) TOP COVER LOOPER

The distance between the top surface of the needle plate and the bottom surface of the top cover looper is 8mm, as shown in Figure 22. This is adjusted by loosening set screw "K" in Figure 23, and moving the top cover looper to the appropriate position. Retighten the set screw. The dimension between the top of the top cover looper and the bottom of the zig-zag eyelet should be set at 0.5mm (Figure 22). To adjust, loosen the set screws "A" and move the eyelet up or down. The dimension from the top of the zig-zag eyelet and the bottom of the L-guide eyelet should be 1mm. Use set screw "B" to adjust.

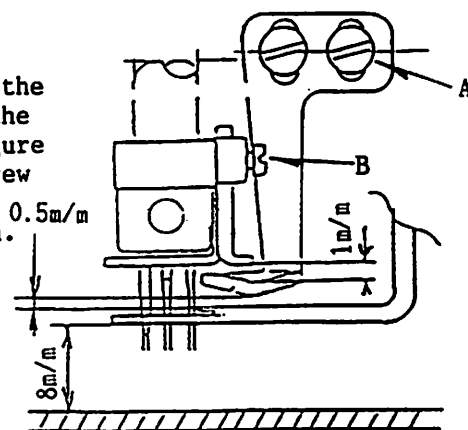


Fig. 22

c) TOP COVER LOOPER WITH RESPECT TO THE NEEDLES

As the hook tip passes the right-most needle, there should be a clearance of 0.5mm, as shown in Figure 23. At the time the top cover looper reaches its left-most position, the dimension from the hook tip to the left-most needle should be 5 to 5.5mm.

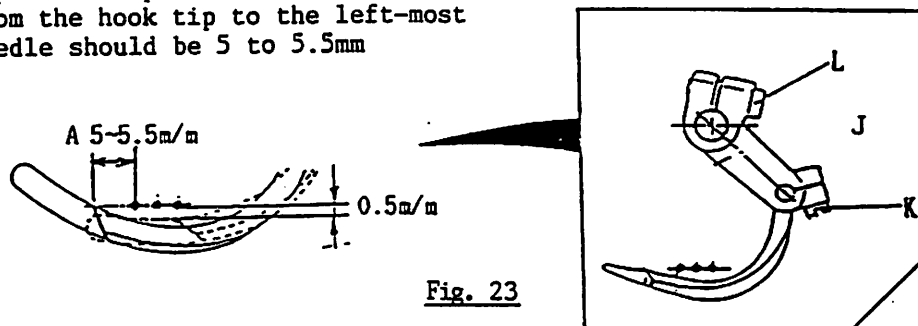


Fig. 23

These two dimensions as described are accomplished by a combination of adjustments of the top cover looper within the spreader lever, "J". (loosen set screw "K" to adjust), and the position of the spreader lever, "J" itself (loosen set screw "L" to adjust).

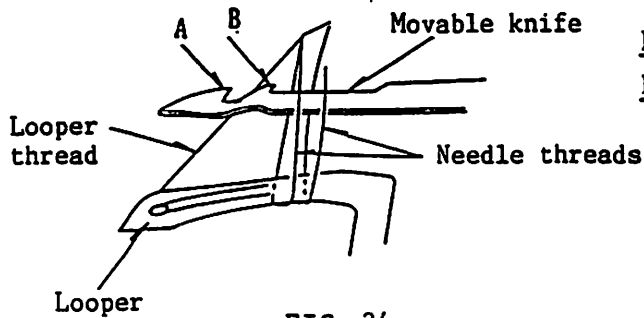


FIG. 24

Point A: Looper thread blade

Point B: Needle thread blade

THE EXTREME LEFT POSITION OF THE MOVABLE KNIFE IS SHOWN IN FIGURE 1 ABOVE. THE CORRECT POSITION IS AS FOLLOWS: THE MOVABLE KNIFE MUST PASS THROUGH THE NEEDLE THREAD LOOP(S) AND STOP IN SUCH A POSITION THAT THE LOOPER THREAD IS BEHIND THE LOOPER THREAD BLADE AND THE NEEDLE THREAD(S) ARE BEHIND THE NEEDLE THREAD BLADE.

PLEASE OBSERVE THE FIVE POSSIBLE CASES ILLUSTRATED AT THE RIGHT:

In Case (a), neither the needle thread nor the looper threads are cut.

In Case (b), both the needle thread and the looper thread are cut. However, since the looper thread is not being cut by the looper thread blade, it will not be caught under the plate spring for holding and will not be picked up with the next stitch.

In Case (c), neither the needle thread nor the looper threads are cut.

In Case (d), both the needle thread and the looper thread will be cut. However, because the movable knife did not pass through the needle loop, the needle thread will be cut in the wrong position and an irregular feeding of the remaining needle thread will result.

In Case (e), the knife is in the correct position and all of the threads will be cut properly and the looper thread will be caught and kept under the plate spring.

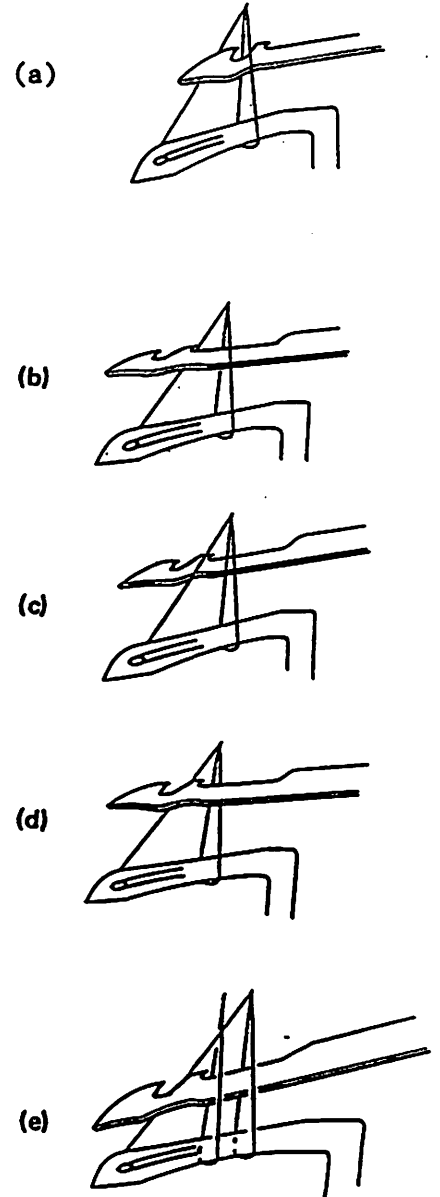


Fig. 25

(a) POSITION OF THE MOVABLE KNIFE AT FULL EXTENSION

In order for the knife to cut the threads in the correct manner, the blade must be positioned as shown in Figure 27. When the movable knife is at full extension (the left-most position), the dimension "A" in Figure 26 must be 1 to 1.5mm. That is, the tip of the needle thread blade must be 1 to 1.5mm to the left of the left-most needle.

To adjust, loosen set screw "36" in Figure 28 and move the needle stopper "35" to the left or right, as appropriate. Then retighten set screw "36".

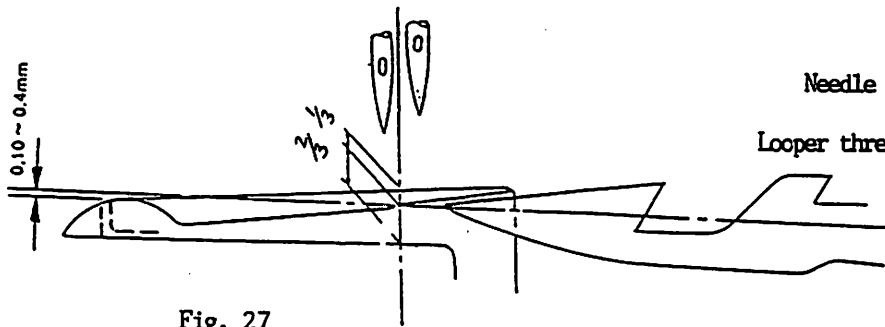


Fig. 27

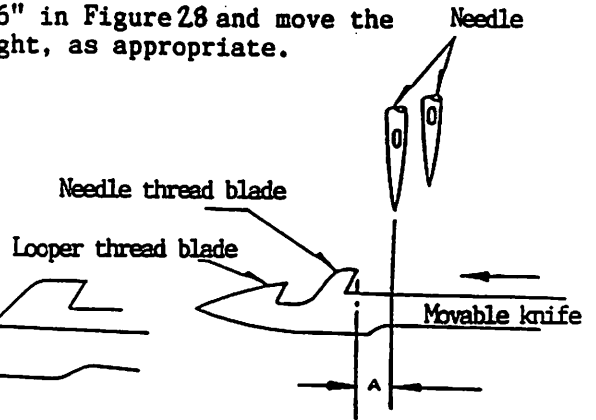


Fig. 26

(b) POSITION OF THE MOVABLE KNIFE WITH RESPECT TO THE LOOPER

The tip of the movable knife should be positioned as shown in Figure 27 above. At the time the tip comes to the center of the needle bar, the tip should be positioned toward the rear two thirds thickness of the looper (see illustration). To adjust this position, loosen the set screws of the assembly 00-6010-9 as in Figure 29 and correct the position. Retighten the set screw.

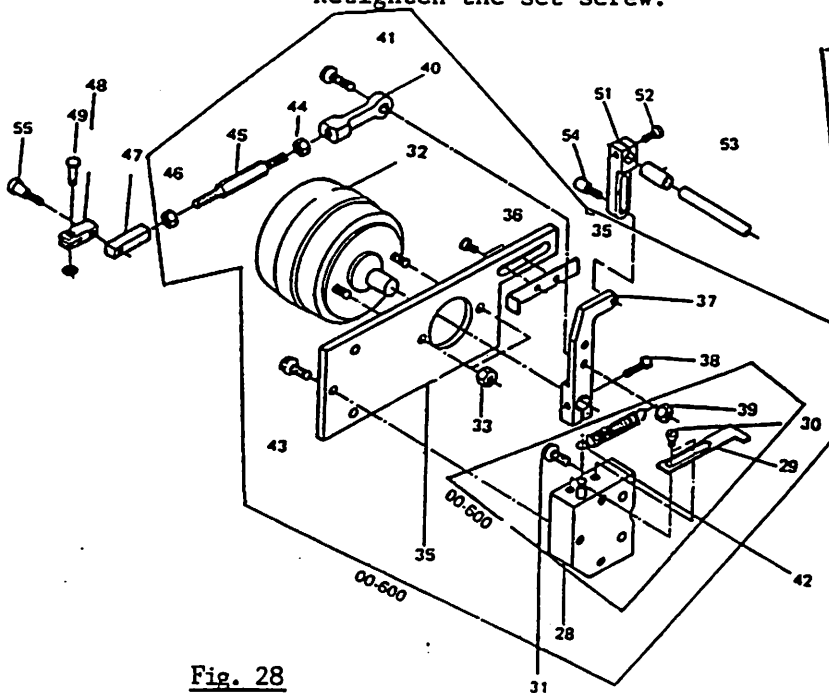


Fig. 28

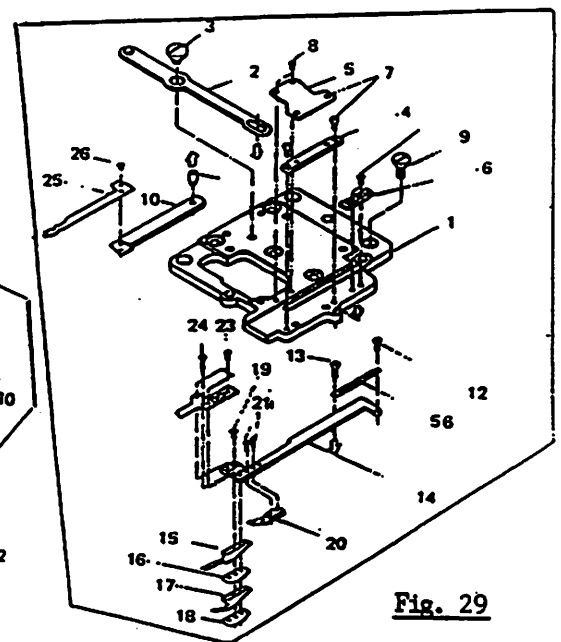


Fig. 29

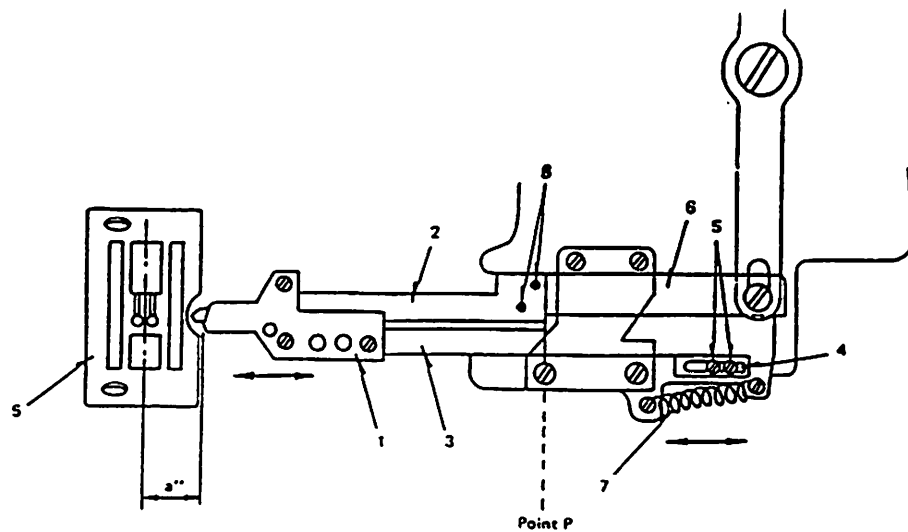


FIG. 30

As seen in Figure 30 above, the standard position of the blade of the fixed knife is 15mm (dimension "a") to the right of the needle center line. If it is necessary to adjust this position, dimension "a" can be altered by loosening set screws "5" and moving the stopper plate "4" to the left or right.

No clearance is allowed between the fixed knife base "3" and the movable knife base "6" at "Point P", as it will cancel the cushioning effect of spring "7". To adjust "Point P" after the fixed knife position has been established, loosen nuts "44" and "46" in Figure 28 and turn the connecting rod "45" either clockwise or counter clockwise as is appropriate. When there is no longer any space at "Point P", tighten the nuts "44" and "46".

To set the stroke of the movable knife, loosen set screws "30" in Figure 28 and move stopper "29" in either direction suitable.

(D) SET POSITIONS OF THE MOVABLE KNIFE, FIXED KNIFE, AND PLATE SPRING

Movable knife to the stationary knife: As shown in Figure 31 the end face of the needle blade of the movable knife is aligned with the side edge of the stationary knife. To adjust, loosen set screws "8" in Figure 30 and reposition the movable knife. Retighten the screws.

Plate spring to the movable knife: As shown in Figure 31 The edge of the plate spring should line up with the edge of the movable knife between the looper thread blade and the needle thread blade (both edges aligned with line "X").

Plate spring to the stationary knife: As shown in Figure 31 the tip of the low tension plate spring should extend about 1mm beyond the edge of the stationary knife (see dimension "C").

Low tension to high tension plate springs: As seen in Figure 32 the tip of the low tension spring should extend about 2.5mm beyond the tip of the high tension spring (see dimension "D"). These adjustments may be made by loosening the plate spring set screws, repositioning the plate springs, and retightening.

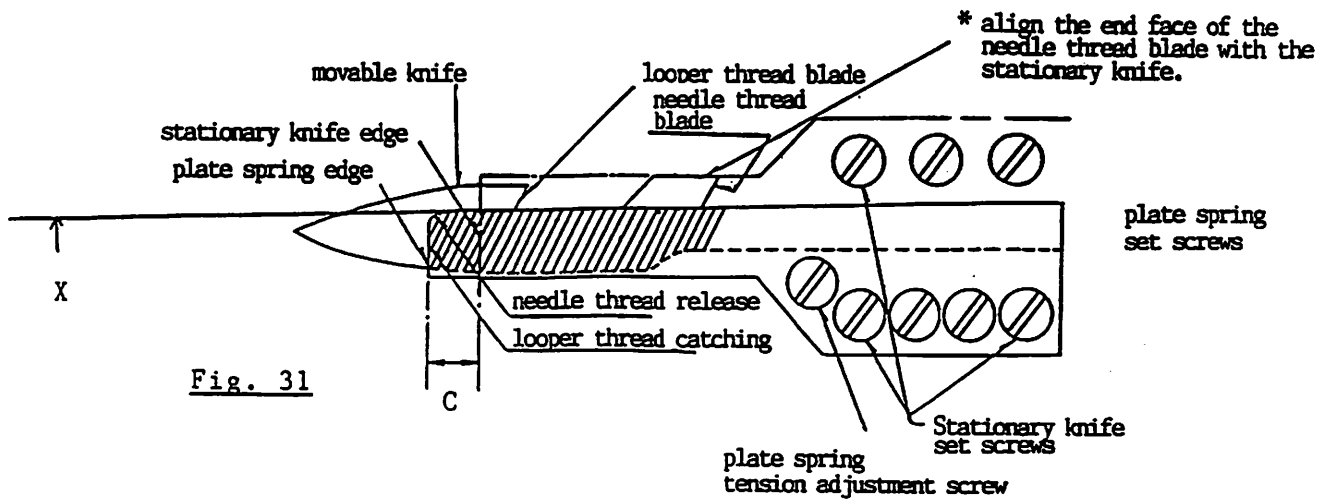


Fig. 31

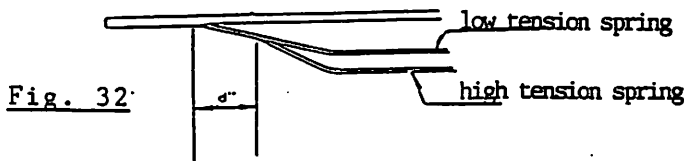


Fig. 32

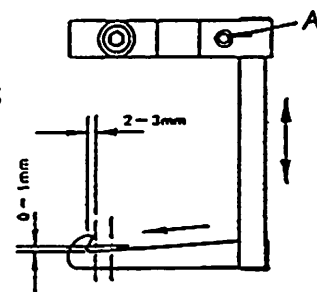


Fig. 33

19-2 WIPER ADJUSTMENT (R-9101/UTC;
R-9102A,C/UTC; R-9103A,C/UTC)

After the knife unit has cut the thread, the wiper ("1" in Figure 34) moves from its uppermost position to the left to pass between the needle thread holder plate spring, "3", and the retaining wire, "2", catch the two needle threads, and return to its uppermost position (shown in Figure 34).

To adjust:

- 1) The wiper position with respect to the needles:

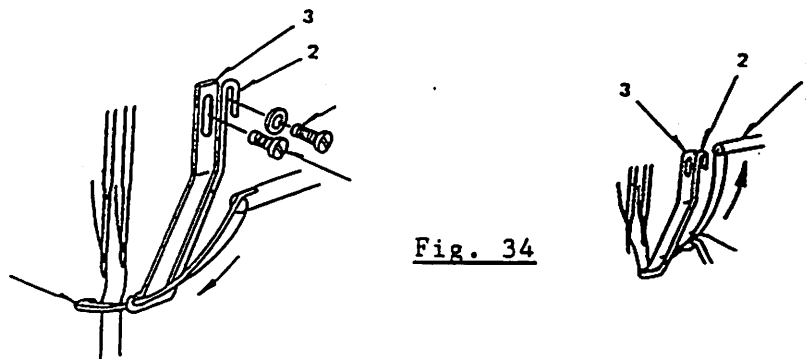


Fig. 34

Set the wiper so that the inner hook edge is 0 to 1mm away from the line of the needle face (see Figure 33 above). Loosen set screw "A" and slide the wiper shaft in or out to the appropriate position.

2) To adjust the wiper height:
Move lever "19" in Figure 35 from its upper-most position to its lower-most position. At this time, the bottom face of the wiper should be 7mm above the face of the needle plate (see Figure 36). To adjust, loosen the set screw "1" in Figure 36 and turn the wiper shaft up or down appropriately to the proper position. Retighten the set screw.

3) The position of the wiper in its lower-most position with respect to the needles:

At the time the wiper comes to its lower-most position, the tip of the hook should be 2 to 3mm to the left of the left-most needle. (see Figure 33). To adjust, loosen the set screw "2" on stopper cam "3" in Figure 36. Turn the cam until the desired position is attained. Retighten.

4) The position of the wiper in its upper-most position:

At the time the wiper is resting in its upper-most position, the tip of the wiper should be 21 to 22mm above the face of the needle plate (see Figure 35). To adjust, loosen the set screws "32" and "33" fixing levers "19" and "28" respectively, as shown in Figure 36a. Reposition the levers and retighten the set screws.

5) The position of the thread holder plate spring and retainer wire:
These parts should be set 16 to 17mm to the right of the needle bar center (see Figure 35). To adjust, loosen set screws "4" and "5" in Figure 35 and shift the bracket "6" to the left or right as necessary. Retighten. The tip of the thread holder plate spring should be 10mm above the face of the needle plate. To adjust, loosen the set screws "4" and "5" in Figure 34 and move the needle holder plate spring, "3", and retainer wire, "2" up or down to the correct position. Retighten the set screws.

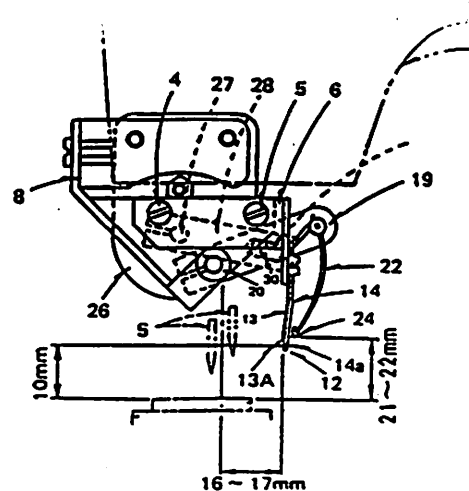


Fig. 35

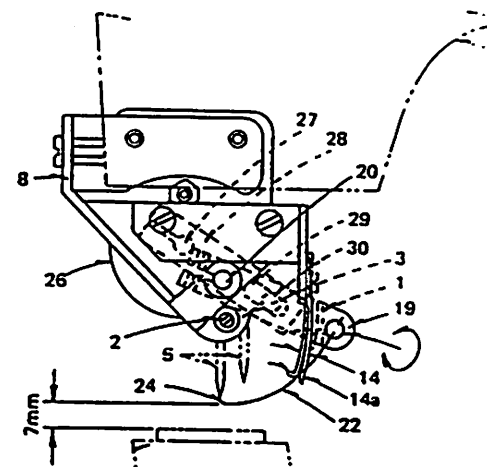


Fig. 36

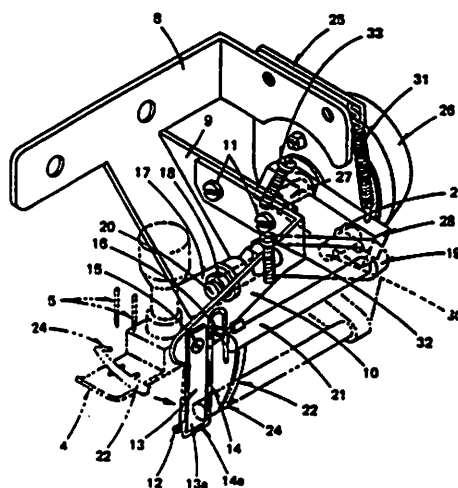


Fig. 36a

19-3 ADJUSTMENT OF THE THREAD PULL MECHANISM

The thread pull mechanism is activated along with the knife mechanism. The standard setting is shown in the illustration to the right. To vary the length of the tails of the cut thread, the position of the thread hooks (#"3") must be altered. Lowering the hooks closer to the thread increases the length of the tails. Raising the hooks away from the thread shortens the length of the tails. To adjust the position, loosen set screws "4", change to the desired position and retighten the set screws.

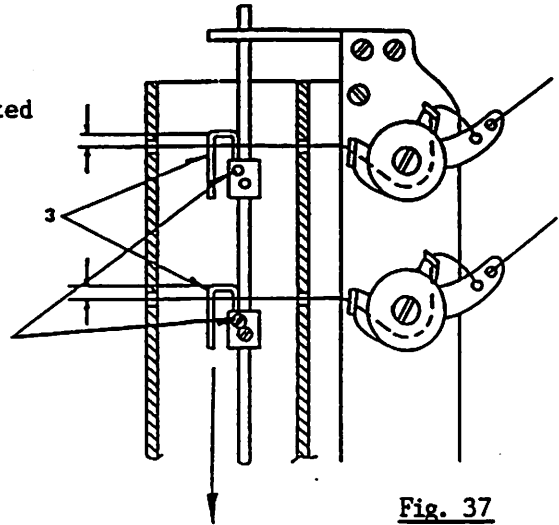


Fig. 37

19-4 INSTALLATION OF THE MACHINE HEAD

The machine head is to be installed onto the tablestand in accordance with the diagram below.

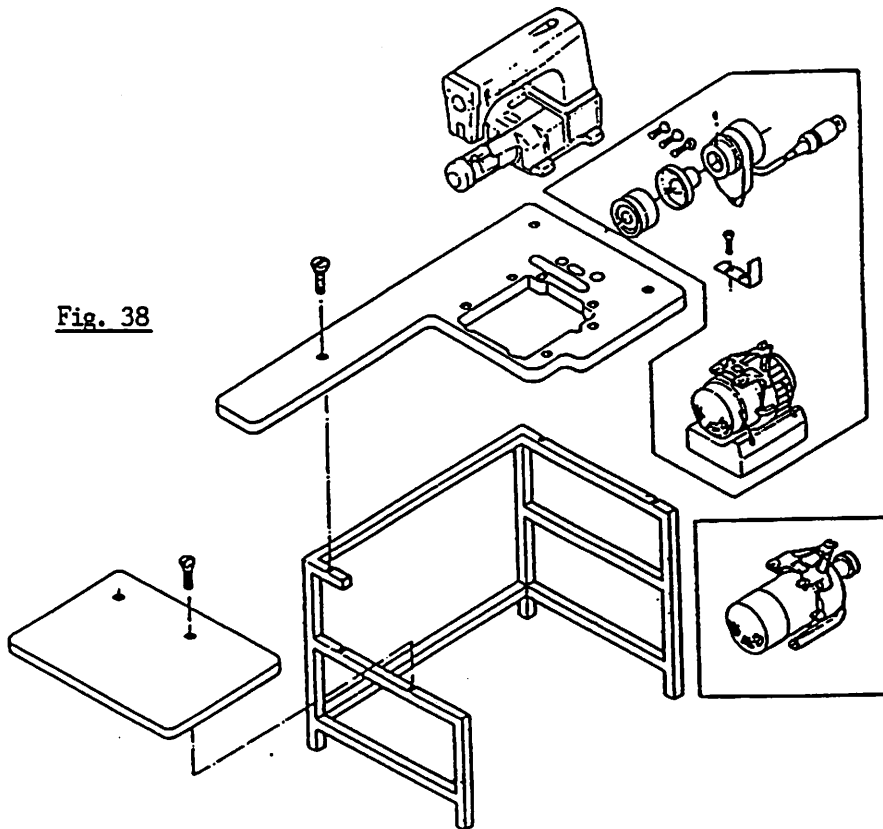


Fig. 38

