

OPERATING INSTRUCTIONS

CONSEW

228-11, 228R-11, 238, 238R-1

229, 229R-1, 357, 357R-1, 358,

358R-1, 359, 359R-1, 289R-1

289RB-1

POST TYPE MACHINES

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ONE NEEDLE MACHINES

MODEL	NEEDLE	PRESSER BAR LIFT	PRESSER FOOT	USE
228-11	DP x 7 #9~#20 135 x 7	5 mm	Roller type	Shoe uppers
228R-11	DP x 7 #9~#20 135 x 7	5 mm	Roller type	Shoe uppers
PW-6-3	DP x 7 #9~#20 135 x 7	7 mm	Flat	Corset, brassiere, wig, under wear
PW-6B-3	DP x 5 #16~#18 135 x 5	5 mm	Flat	—do—
238	DP x 17 #14~#23 135 x 17	8.5 mm	Flat	Shoe upper, jumper, sports goods
238R-1	DP x 17 #14~#23 135 x 17	8.5 mm	Flat	—do—
229	DP x 17 #14~#23 135 x 17	8.5 mm	Flat	Shoe upper, sports goods, leather goods
229R-1	DP x 17 #14~#23 135 x 17	8.5 mm	Flat	—do—

TWO NEEDLE MACHINES

357	DP-F22 #11~#18 135 x 7	5 mm	Roller	Shoe upper, Brassiere, corset, under wear
		7 mm	Flat	
357R-1	DP x 7 #9~#20 135 x 7	—do—	—do—	—do—
358	DP x 17 #14~#23 135 x 17	8.5 mm	Flat	Under wear, medium weight leather etc.
358R-1	DP x 17 #14~#23 135 x 17	8.5 mm	Flat	—do—
359	DP x 17 #14~#23 135 x 17	8.5 mm	Flat	Shoe upper, sports goods, leather, vinyl goods
359R-1	DP x 17 #14~#23 135 x 17	8.5 mm	Flat	—do—

NEEDLE GAUGE FOR TWO NEEDLE MACHINES (Standard)

357(R-1)	1.2 mm (3/64")	1.6 mm (1/16")	2.4 mm (3/32")	3.2 mm (1/8")
	4.8 mm (3/16")			
358(R-1)	3.2 mm (1/8")	4.8 mm (3/16")	6.4 mm (1/4")	9.5 mm (3/8")
359(R-1)	12.7 mm (1/2")			

SETTING UP THE MACHINE

Carefully unpack the machine from the packing case and make sure that all small parts and accessories are removed from packing material. Wipe the machine clean and lubricate all oil holes.

SPEED OF THE MACHINE

The maximum speed of the machine (without the reverse stitch mechanism) is 3,000 stitches per minute, and 2,800 stitches per minute in case of the machine with the reverse stitch mechanism.

Machines should be run slower than the maximum speed for the first several weeks so that the parts which are in movable contact become glazed by their action upon each other. The machine pulley turns over toward the operator.

OILING

Do not operate the machine even if only for testing, unless it has been properly oiled at every point requiring lubrication. The arrows on the following illustrations indicate these spots. Oiling must be done at least twice daily in continuous use.

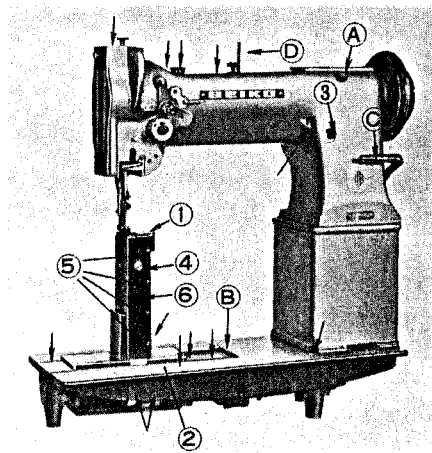


Fig. 1

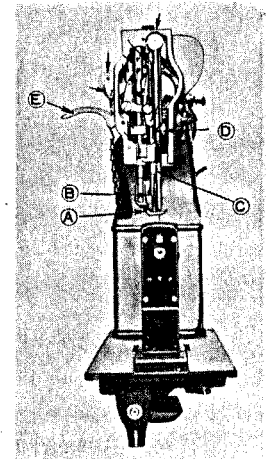


Fig. 2

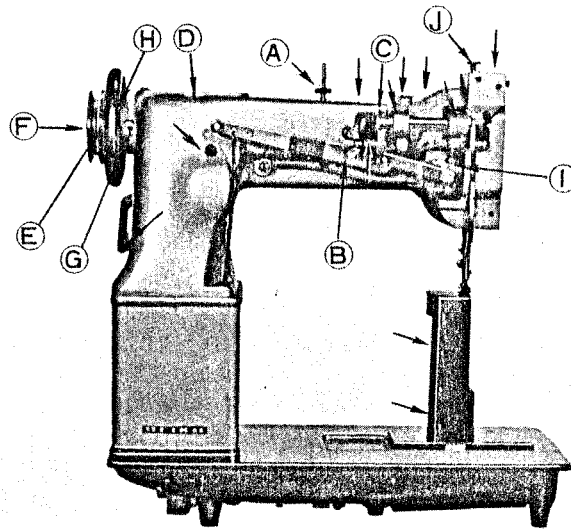


Fig. 3

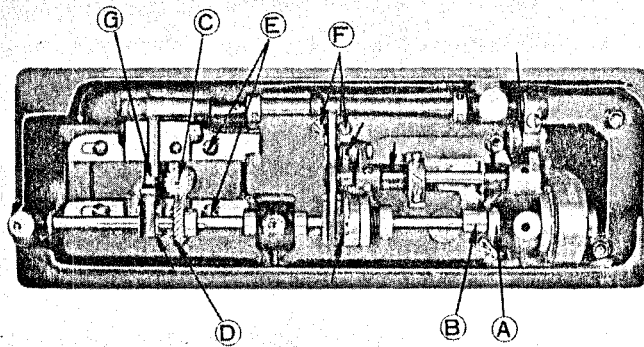


Fig. 4

NEEDLE

The needles to be used on these machines are described on the first page. They are DP×5, DP×7, DP×17 and DP-F22 needles ranging from 9 to 23 in size.

INSERTING NEW NEEDLE

Turn the machine pulley over toward you until the needle bar has reached its highest point.

Loosen the needle set screw and put the needle up into the bar or clamp as far as it will go, with long groove of the needle toward the left and the eye of the needle directly in line with the arm of the machine. Then tighten the screw.

THREAD

The thickness of the sewing thread, which must pass freely through the eye of the needle, determines the size of the needle.

Uneven, knotted or rough thread impairs the satisfactory sewing performance of the machine. Ordinarily, left twist thread is used, but use right twist thread for the left needle of two needle machines for perfect stitching.

ROLLER PRESSER FOOT ON PW-6, 6B, PW-26, 26B

When replacing needle or when inserting needle thread, put the presser bar lifter up. Put down the base of the roller presser foot and pull it to the left, then the roller presser foot opens.

WINDING BOBBINS (Refer to Fig. 5)

The bobbin winder is mounted on the table top with its pulley in front of the driving belt so that the pulley will separate from the belt after the bobbin has been wound with sufficient thread.

Push the bobbin on bobbin winder spindle (3, Fig. 5) as far as it will go. Pass thread from tension bracket (1), then between and around the back of the tension discs (2) bring thread forward. Then wind the end of the thread around the bobbin several times in the direction shown in the Figure 5. Push the bobbin winder lever (4) downward until wheel contacts the drive belt and start the machine.

When sufficient thread has been wound upon the bobbin, the bobbin winder will stop automatically.

If the thread does not wind evenly on the bobbin, loosen the screw (5) in the tension bracket and move the bracket to the right or left as may be required.

Adjustment screw (6) can be turned in or out to increase or decrease the amount of thread wound on the bobbin.

Bobbins can be wound while the machine is sewing.
When fine thread is wound, use light tension.

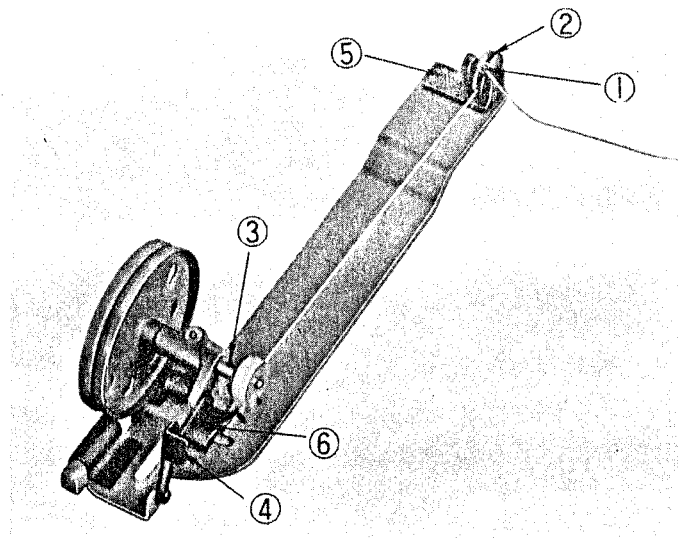


Fig. 5

INSERTING AND REMOVING THE BOBBIN

(a) The hook with a cap (Refer to Figs. 6 & 7)

The figure (6) shows the hook with a cap and the figure A shows single needle machine and the figure B represents two needle machine.

Draw out the slide plate on top of the post, turn the machine pulley over toward you until the needle bar moves up to its highest point.

Raise the projection (a big arrow mark, Fig. 6) on the outside of the bobbin case cap, lift out the cap and remove the bobbin.

Place the bobbin wound into the bobbin case cap (Fig. 7). Then pull the thread into the slot in the eye of the bobbin case cap and under the tension spring (A, Fig. 7).

Place it on the center stud of the bobbin case base, then push down the latch (2, Fig. 6).

Pull out the thread about 5 cm on the needle plate and replace the slide plate.

(b) The hook without the cap (Refer to Fig. 8)

Raise the latch (1, Fig. 8), then the bobbin can be removed.

Place the bobbin wound into the bobbin case, the thread drawing on top from the left to the right.

Pull the thread into the slot (2, Fig. 8) in the edge of the bobbin case and

between the bobbin case opener and the projection (4, Fig. 8) then under the tension spring. Pull out the thread about 5 cm long on the needle plate and replace the slide plate.

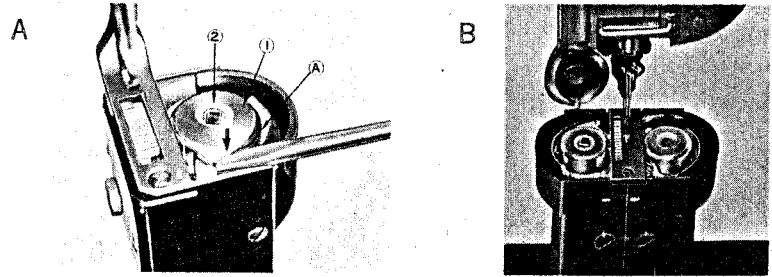


Fig. 6

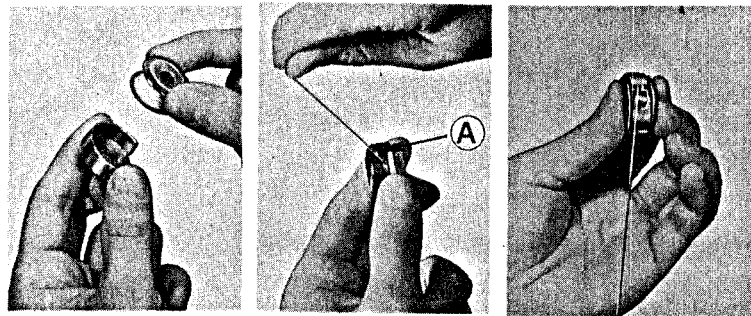


Fig. 7

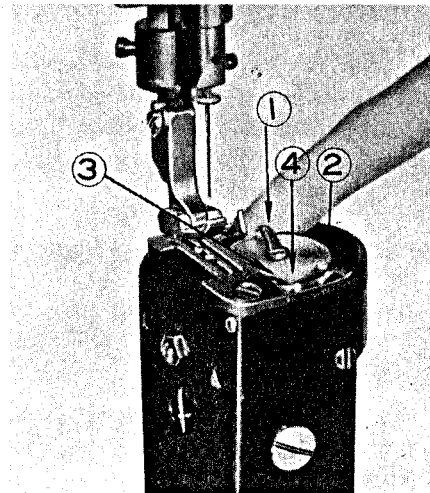


Fig. 8

UPPER THREADING (Refer to Figs. 1 & 9)

Pass the thread from the unwinder from back to front through the lower hole in the pin (D, Fig. 1) from the right to the left through the upper hole in the pin, down through three holes (1, Fig. 9) in the thread guide, over from right to left between the tension discs (2), down from right to left around the thread controller (3) up into the fork (4) and (5) in the thread controller disc, up through the thread guide (6), from right to left through the hole (7) in the thread take-up lever, down through the thread guides (6), (8), (9) and (10) and from left to right through the eye of the needle (11). Lay about 5 cm long of thread with which to commence sewing.

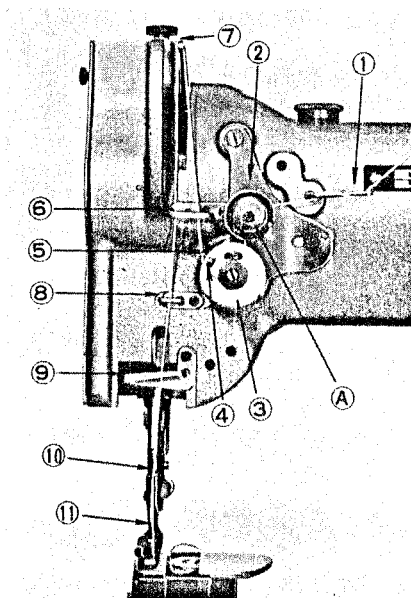


Fig. 9

TO PREPARE FOR SEWING

With the left hand, hold the end of the needle thread, leaving it slack from the hand to the needle, turn the machine pulley over toward you until the needle moves down and up again to its highest point, thus catching the bobbin thread; draw up the needle thread and the bobbin thread will come with it through the hole in the needle plate. Lay both threads under the presser feet.

TO COMMENCE SEWING

Place the material beneath the presser foot, lower the presser feet and commence to sew turning the machine pulley over toward you.

TO REMOVE THE WORK

Raise the thread take-up lever to its highest point, lift the presser foot and draw the material back to the left. Cut the end of the thread a few inches long from the needle.

REGULATING THE THREAD TENSION

The tension on the upper and lower thread should be equal so as to lock both threads in the center of the material to be sewn. The tension of the upper thread is adjusted by the screw nut (A, Fig. 9).

To increase the tension, turn it over to the right. To decrease the tension, turn it over to the left.

The tension on the lower thread is controlled by the screw (A, Fig. 6) nearest the center of the tension spring on the outside of the bobbin case. To increase the tension, turn the screw over to the right. To decrease it to the left.

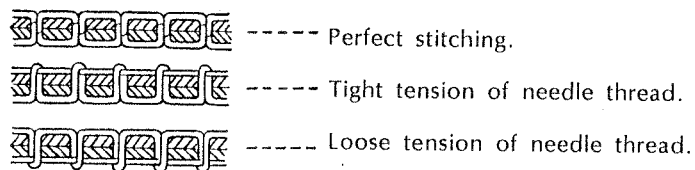


Fig. 10

REGULATING THE PRESSURE ON THE MATERIAL

The pressure on the material is controlled by the screw (A, Fig. 3), to increase it, turn the screw over to the right and to decrease it, turn the screw over to the left.

TO REGULATE THE LENGTH OF STITCH

To change the length of stitch, open the arm cap (A, Fig. 1), where numeral numbers showing the length of stitch can be seen.

Press down the button (B, Fig. 1) in the bed plate of the machine and simultaneously turn the hand wheel slowly toward you.

In due course the plunger will enter into a notch in the feeding mechanism.

Hold the plunger down and continue to turn the balance wheel, either forward or rearward until the desired number of stitch appears. Now release the plunger and replace the arm cap.

NUMERAL No.	STITCH LENGTH
5	5
6	4.2
7	3.6
8	3.2
9	2.8
10	2.5
12	2.1
16	1.6
20	1.2
24	1

TO ADJUST THE RELATIVE HEIGHT OF LIFT OF THE ALTERNATING PRESSERS

The amount of lift of the alternating presser feet (A & B, Fig. 2) should be regulated according to the thickness of the material being sewn. The feet should lift just high enough to clear the material.

Normally, the feet should lift an equal height, but some grades of work may require that they lift an unequal height.

To change the height of lift of the lifting presser foot and the vibrating presser foot at the same time and the same amount, loosen the wing nut (B, Fig. 3), move it up for increasing the height and move it down for decreasing. Then tighten the wing nut.

To change the height of the lifting presser foot against that of the vibrating presser or vice versa, loosen the hexagon screw (C, Fig. 3) and move up or down the vibrating presser foot as may be required. Then retighten the hexagon screw.

INSTRUCTIONS FOR ADJUSTERS AND MACHINISTS

REPLACEMENT OF THE TIMING BELT

Remove the timing belt from the belt pulley, slide the cover plate (D, Fig. 3), loosen two bearing collar set screws (A, Fig. 11), loosen two set screws of the hand pulley (F, Fig. 3), remove the pulley.

Loosen the rear bush set screw of the main shaft (G, Fig. 3), pull out the rear bush (H, Fig. 3) from the arm of the machine.

The timing belt can be inserted or pulled out through the hole of the rear bush pulled out.

Then turn the pulley toward you until the thread take-up lever reaches its highest point, align the arrow mark on the bearing collar (A, Fig. 4) and the arrow mark (B, Fig. 4) on the timing plate by turning the lower shaft.

In this position, put the timing belt in the belt pulley.

In case of the machine with the reverse stitch mechanism, the reverse stitch lever also be removed.

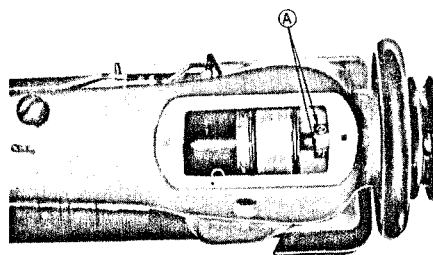


Fig. 11

TO TIME THE FEEDER, NEEDLE PLATE AND NEEDLE

Models PW-7, 8, 7B, 8B, 27, 28, 27B and 28B Machines.

To set the relative position of the feeder to the needle plate, set the feed action to zero, loosen the feed driving crank pinch screw (F, Fig. 4), align the center of the needle hole of the feeder and the hook center line as shown in the Figure 12. Then retighten the crank pinch screw.

Raise the needle bar slowly and examine whether the needle enters into the needle hole center of the feeder.

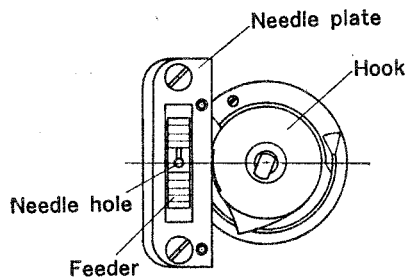


Fig. 12

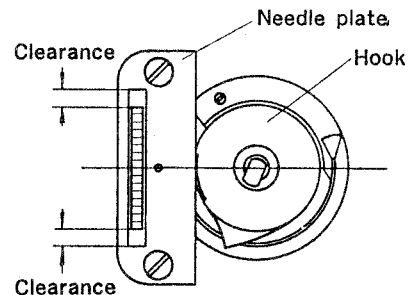


Fig. 13

If the needle does not enter into the center of the needle hole, loosen the inside screw by a screw driver through the hole (3, Fig. 1), move the needle bar lock frame to adjust the needle position to the needle hole of the feeder, then retighten the inside screw.

Models PW-6 and PW-26 machines.

Adjust the feeder by loosening the feed driving crank pinch screw (F, Fig. 4) so that the back and front clearances between the needle plate and the feeder become equal.

TO ADJUST THE HEIGHT OF THE FEEDER

When the feeder is at the highest position, teeth of the feeder should protrude about 1mm long above the surface of the needle plate.

To adjust the height, tip the machine back and raise the height of the feeder to its highest position, loosen the set screw (G, Fig. 4), move the feeder up or down as may be required. Then tighten the screw.

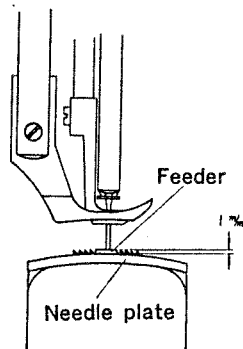


Fig. 14

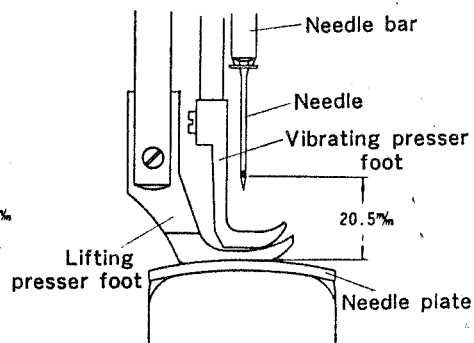


Fig. 15

TO ADJUST THE HEIGHT OF THE NEEDLE BAR

The normal position of the needle bar is, when the needle bar is at its highest position, 20.5mm from the lower end of the needle hole to the surface of the needle plate.

This adjustment is made by lowering needle bar and loosening the screw (D, Fig. 2).

Also, this adjustment can be made at the lowest position of the needle bar, but in this case, the normal position is about 6mm from the hook point to the lower end of the needle hole of the needle.

TIMING BETWEEN THE NEEDLE AND HOOK

After setting up the needle bar position as above, set the feed action to zero and the needle bar to its lowest position, turn the pulley over toward you and adjust so that the hook point comes to the center of the needle, when the needle bar rises about 2.5 to 2.8mm.

For this adjustment, position the large gear (D, Fig. 4) to the center of the small gear (C, Fig. 4) and lock firmly the set screw on the gear (D), loosen the set screw on the gear (C), then set the timing moving the hook. After the timing has been made, retighten the set screw on the gear (C).

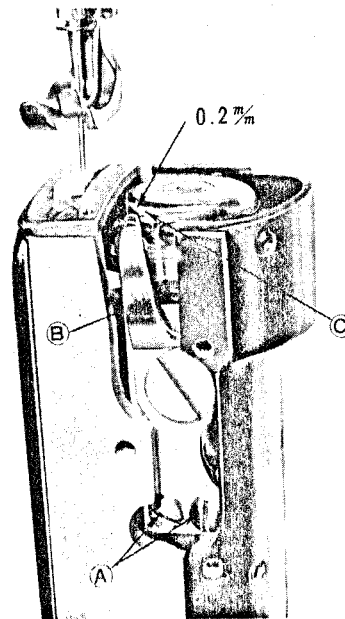


Fig. 16

Normal clearance between the hook point and the grooved portion of the needle is approximately 0.1 to 0.2 mm at the nearest point.

To do this adjustment, loosen the screws (4, Fig. 1) and (E, Fig. 4) and adjust it by sliding the hook saddle (2, Fig. 1) to the right or left as may be required.

Then tighten the screws.

Be sure that the needle is correct and straight one.

ADJUSTMENT OF THE BOBBIN CASE OPENER

Remove the hook saddle cover (6, Fig. 1). The bobbin case lever (B, Fig. 16) is adjusted by loosening the two bobbin case lever screws (A, Fig. 16) and moving the lever forward or backward.

This adjustment should be made so that the opening between this lever and the projection on the bobbin case is just perceptible, about 0.2 mm, when the bobbin case is at the extreme right.

After the correct adjustment, firmly tighten the screw (A, Fig. 16).

THE HEIGHT OF THE PRESSER FEET

The adjustment of the height of the presser feet by the presser bar lifter (E, Fig. 2) is made as follows:

Loosen fully the screw (A, Fig. 3), raise the presser bar lifter, loosen the presser bar lifting bracket screw (1, Fig. 3), then adjust the height of the lifting presser foot by raising or lowering it as may be required.

Then tighten the screws in the reverse order.

But, in case of the compound feed machines with drop and upper feed mechanism, the height of the vibrating presser foot must be changed according to that of the lifting presser foot.

To adjust this, loosen the presser bar adjusting screw (J, Fig. 3), lower the presser bar lifter, holding the vibrating presser foot, slightly loosen the hexagon screw (C, Fig. 3), move the vibrating presser up or down as may be required. Then tighten the hexagon screw and the presser bar adjusting screw.

TO TIME THE VIBRATING PRESSER FOOT

The normal timing of the vibrating presser foot is as follows:

When the presser bar lifter is lowered and turn the pulley over toward you, the vibrating presser bar reaches the feeder before the needle hole of the needle reaches the feeder. Further, when the needle rising up, the vibrating presser leaves the feeder after the needle hole has left the feeder.

If the timing is not correct, the adjustment is made by loosening the two screws (A, Fig. 17) and adjust the rotary position of the cam (B, Fig. 17) firster or slower as may be requested.

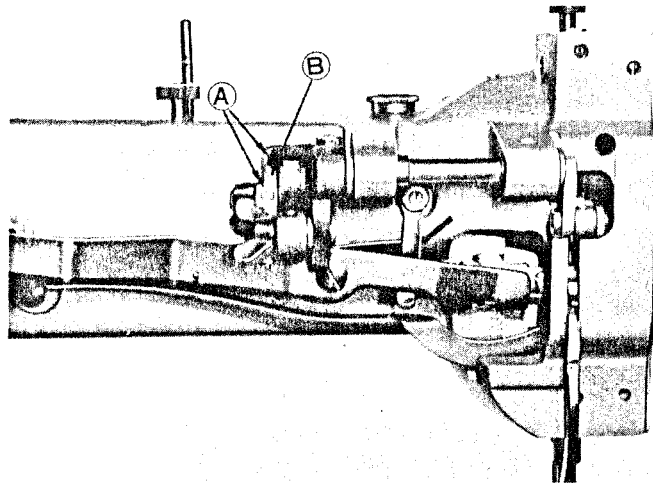


Fig. 17

ADJUSTMENT OF THE ROLLER PRESSER FOOT & AUXILIARY PRESSERS

The normal clearance between the roller presser foot and the needle is about 0.5 mm.

This adjustment is made at the same time when the beforementioned adjustment for the height of the presser foot.

The correct position of the roller presser foot is either it is at the just side of the needle in the same center with that of the needle or it is at a little bit front of the needle.

For this adjustment, loosen the holder set screw (A, Fig. 20) and move the holder (B, Fig. 20) back or forth as may be required. But, be sure that the bottom of the roller presser parallels with teeth of the feeder.

In case of two needle machines, the best position of the large auxiliary presser (C, Fig. 19) is at the back of the right needle and at the side of the needle close to it.

This adjustment is made by loosening the set screw (D, Fig. 20) and moving the auxiliary presser back or forth.

Likewise, the best position of the small auxiliary presser (Fig. 19) is the same as the position of the large auxiliary presser, but to the left needle in this case.

This adjustment is made by loosening the screw (E, Fig. 20).

Ordinarily, the height should be about 0.5 to 1 mm from the bottom of

the roller presser foot to that of auxiliary pressers. The right or left adjustment of the auxiliary pressers is made by loosening the two screws (F, Fig. 20). After the adjustment, tighten firmly relative screws.

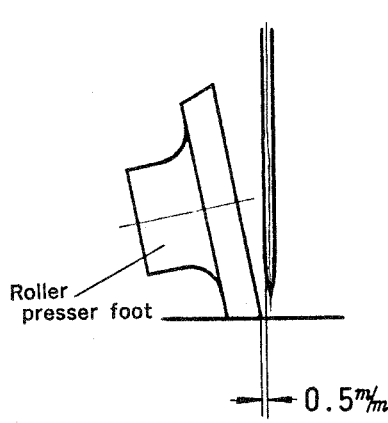


Fig. 18

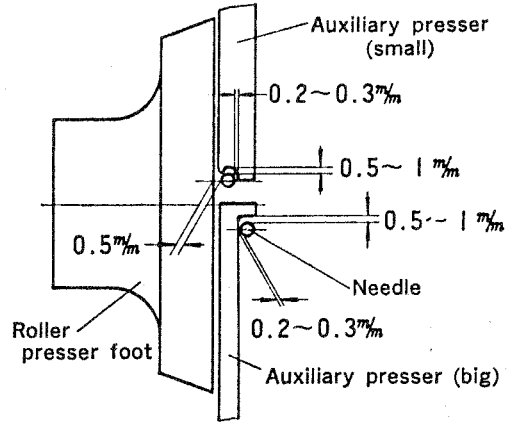


Fig. 19

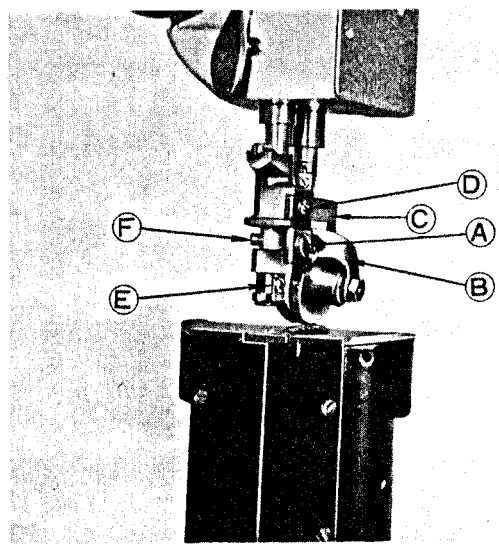


Fig. 20

ADJUSTMENT OF THE THREAD CONTROLLER SPRING

The function of the thread controller spring is to hold the slack of the needle thread until the eye of the needle reaches the goods.

For more controller action on the thread, loosen the stop screw (B, Fig. 21) and set the stop to the right.

For less action, set the stop to the left. Then tighten the stop screw.

To strengthen the action of the controller spring on the thread, loosen the tension stud (C, Fig. 21), and turn the tension stud slightly to the left with a screwdriver, or to tighten its action, turn to the right.

Then tighten the tension screw C.

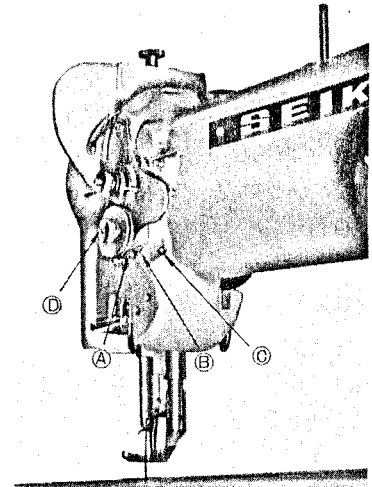


Fig. 21

FINE ADJUSTMENT OF THE FEEDER

In case of the needle and the feeder action do not coincide, or to change the action separately as occasion demands, on the needle feed machines and compound feed machines, the adjustment is made by the screw (A, Fig. 22). Remove the cover plate (2, Fig. 1), loosen the nut (B, Fig. 22), so that the screw A can slide on the oblong groove on the feed dog lever post.

For increasing the feed action, lower the screw A, and for decreasing it, raise the screw.

Then tighten the nut B firmly.

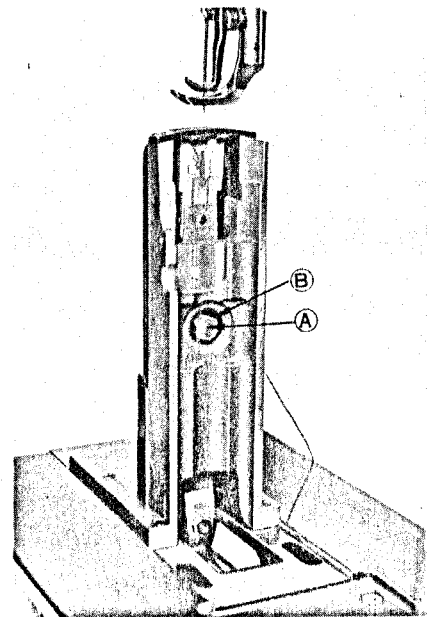


Fig. 22

