OPERATING INSTRUCTIONS

SEIKO

MODELS

SK-6 SK-6F **SKM-26**

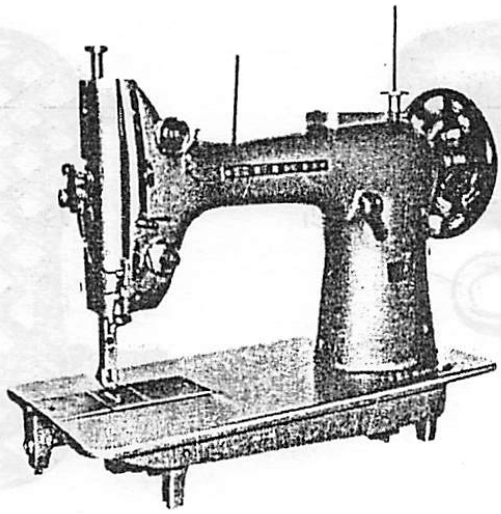
SEIKO SEWING MACHINE CO., LTD.

TOKYO, JAPAN

SPECIFICATIONS

	SK-6, SK-6F	SKM-26
SPEED:	1,200 r.p.m.	800 r.p.m.
ROTARY HOOK:	# 32	# 32S
BOBBIN:	34.5ϕ × 15.6 mm	34.5ϕ × 15.6 mm
NEEDLE:	DD × 1 # 18-29	DD × 1 # 18-29
NUMBER OF NEEDLE:	One	Two
THREAD:	Synthetic # 5-# 00	Synthetic # 2-# 00
FEED MECHANISM:	Drop feed (SK-6) Drop & upper feed (SK-6F)	Drop feed
STITCH LENGTH:	Maximum 13 mm	Maximum 8 mm
PRESSER BAR LIFT:	Maximum 13 mm	Maximum 10 mm
PRESSER FOOT:	Flat presser foot	Flat presser foot & roller presser foot
WORKING SPACE:	254 mm × 195 mm	254 mm × 195 mm

CONTENTS



Model SK-6F

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.

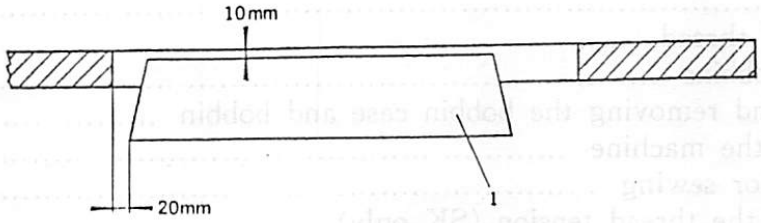


Fig. 1 To attach drip pan to the table

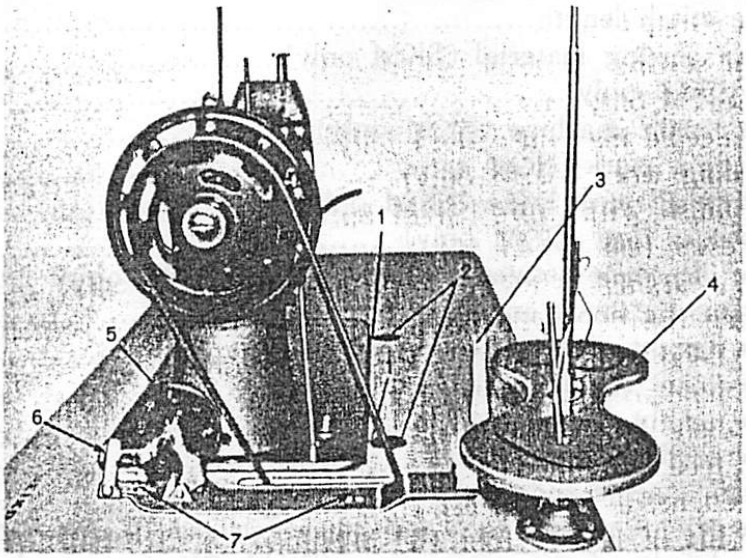


Fig. 2 To install the machine on the table

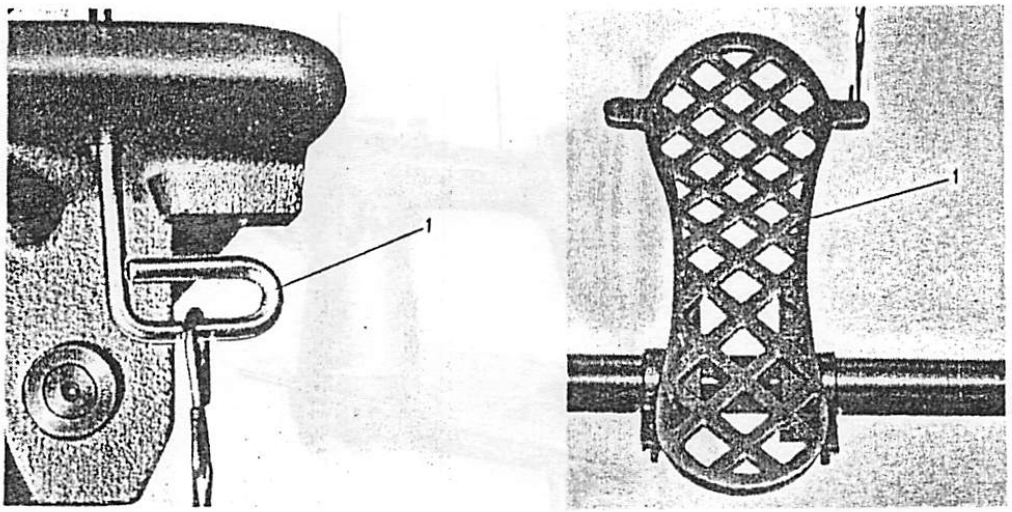


Fig. 3 & 4 - To assemble the pedal

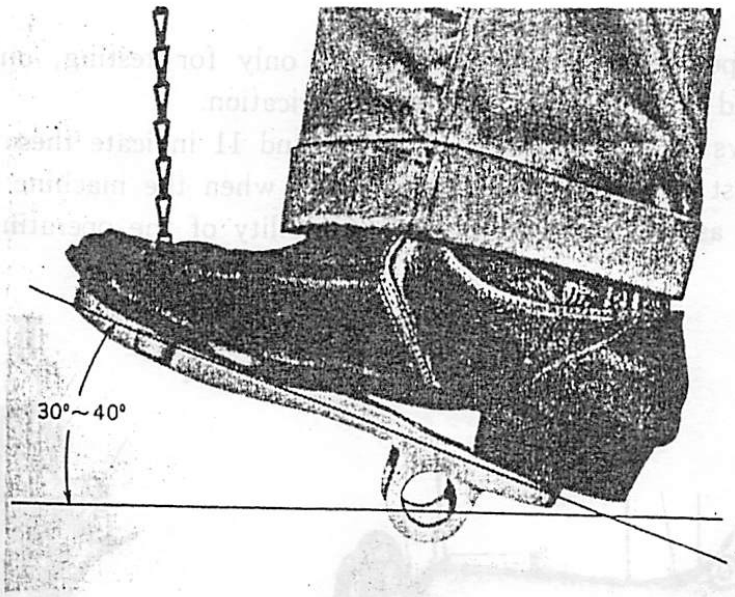


Fig. 5 The proper angle of the pedal

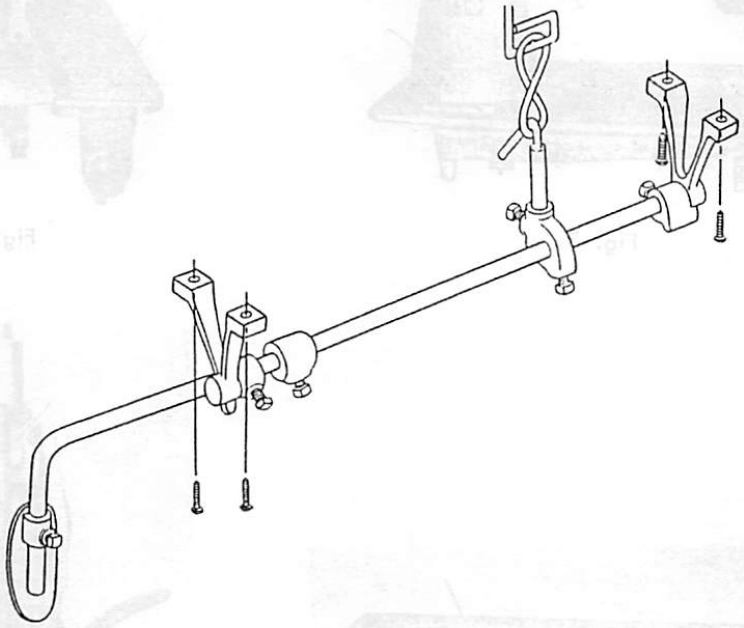


Fig. 6 To assemble the knee lifter (SKM-26 only)

SPEED OF THE MACHINE

The maximum speed for machines of class SK is 1,200 stitches and SKM-26 800 stitches per minute. Machines should be run slower than the maximum speed, until the parts which are in movable contact have become galzed by their action upon each other.

OILING

– Do not operate the machine, even if only for testing, unless it has been properly oiled at every spot requiring lubrication.

The arrows on the figures 7, 8, 9, 10 and 11 indicate these spots.

Oiling must be done at least twice daily when the machine is in continuous operation to assure free running and durability of the operating parts.

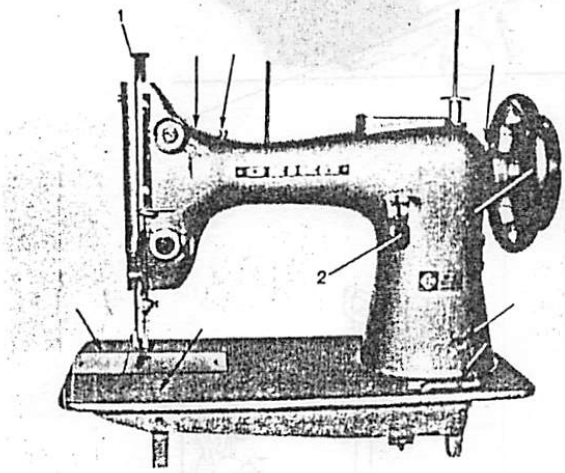


Fig. 7

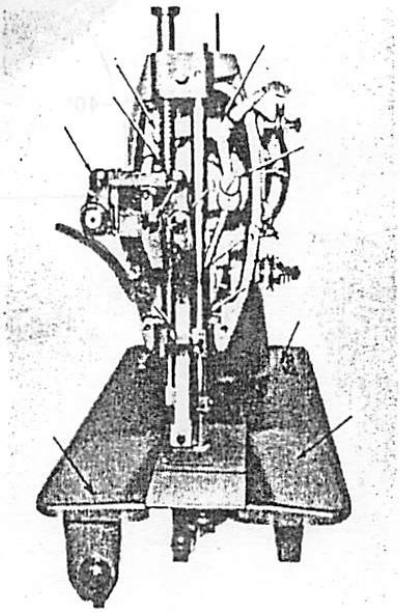


Fig. 8

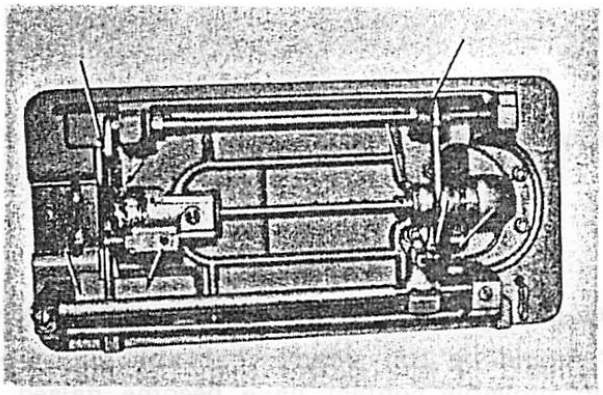


Fig. 9

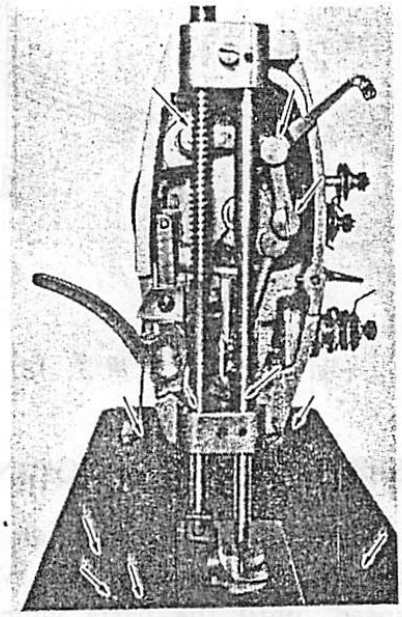


Fig. 10

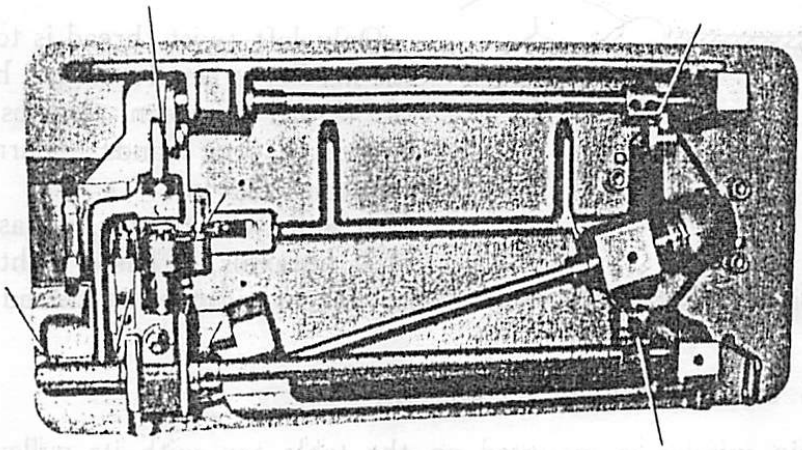


Fig. 11

NEEDLE (SK Fig. 12, SKM-26 Fig. 13)

The machine is set up to use DD×1 in size ranging from 18 to 29.

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

To insert the needle, turn the machine pulley toward you, until the needle bar rise to its highest point, loosen the needle set screw (2) and put the needle up into the needle bar as far as it will go, with the long groove of the needle toward the left (SK), or toward you (SKM). Then, tighten the needle set screw securely.

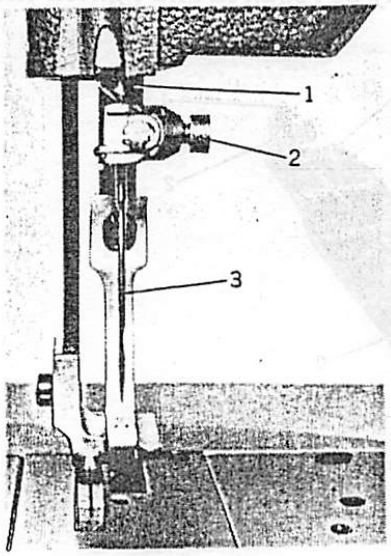


Fig. 12

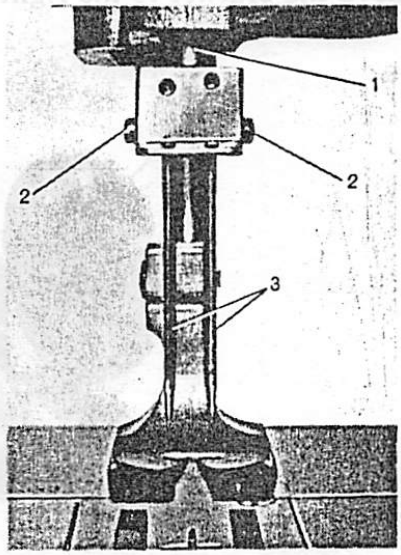


Fig. 13

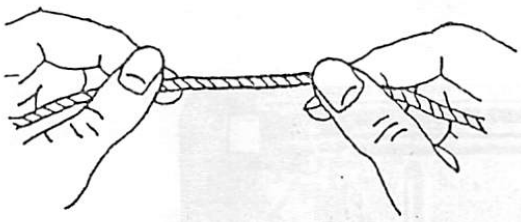


Fig. 14

THREAD

Only left twist thread is to be used for the needle, to test for twist, hold a length of thread between thumbs and index fingers of your hands. Turn the thread counterclockwise.
If it will twist tighter, it has a left twist.
If it unravels, it has a right twist.
The bobbin can be wound with either left or right twist thread.

WINDING BOBBINS (Figs. 2 and 15)

The bobbin winder is mounted on the table top with its pulley (5, Fig. 2) 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 the bobbin spindle (3 Fig. 15) as far as it will go.

Pass the thread from the thread stand downward through the eye (1, Fig. 15) in the tension bracket.

Then, between and around the back of the tension discs (2 Fig. 15) bring the thread forward toward the bobbin and wind from below in clockwise direction several times around the bobbin. Push bobbin winder lever (4, Fig. 15) downward until the wheel (5) contacts the drive belt and start the machine.

After the bobbin is filled with thread, release will cause the wheel to disengage from the belt and winding will stop. Cut the thread and remove the bobbin from the winder spindle.

The adjusting screw (A, Fig. 15) can be turned in or out to increase or decrease the amount of the thread wound on the bobbin.

If the thread does not wind evenly on bobbins, loosen the screw (B, Fig. 15) and move the bracket to the right or left as may be required and tighten the screw.

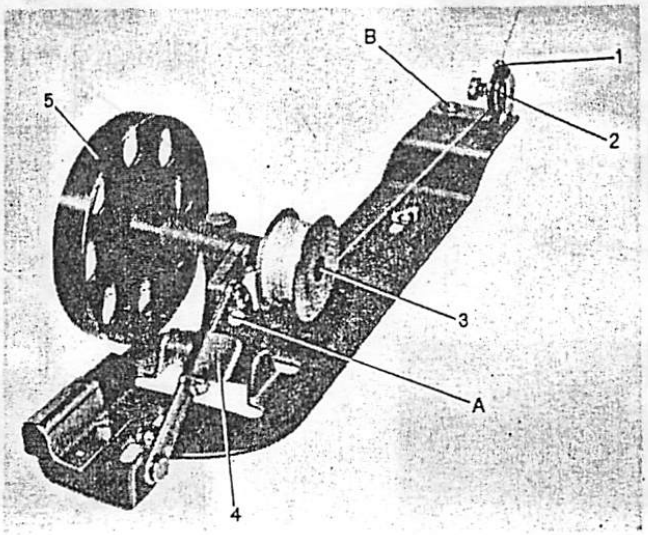


Fig. 15

INSERTING AND REMOVING THE BOBBIN CASE AND BOBBIN

Turn the balance wheel until the needle is above the needle plate.

Push the retainer (1, Fig. 16) to the left like the figure 16, and remove the bobbin case (2, Fig. 16).

Pull up the latch (1, Fig. 17) and lift the bobbin from the bobbin case.

To insert a full bobbin, raise the latch in center of the bobbin case, and place the bobbin on the center post of the bobbin case.

Be sure that the thread draws out from the bobbin from left to right.

Pull the thread into the cut (4, Fig. 18) in the edge of the bobbin case, and from you under the tension spring (5, Fig. 18). Then, pass its end from the back through the hole (6, Fig. 18) in the bobbin case.

Finally, push down the latch to retain the bobbin in position.

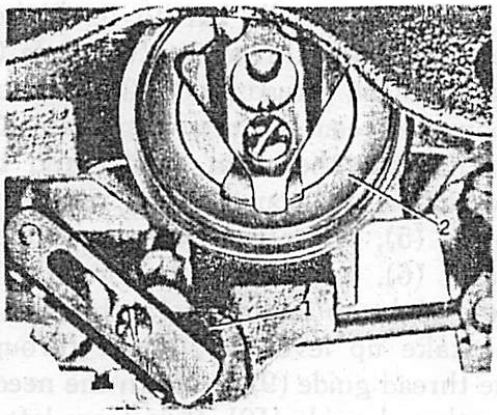


Fig. 16

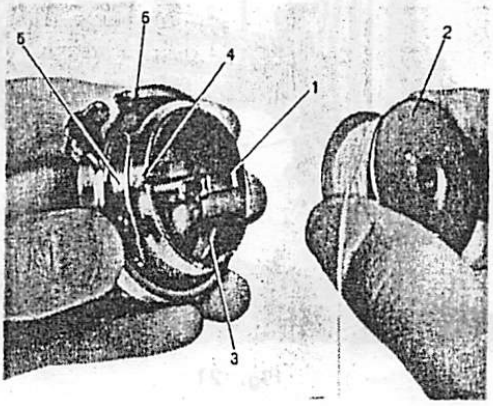


Fig. 17

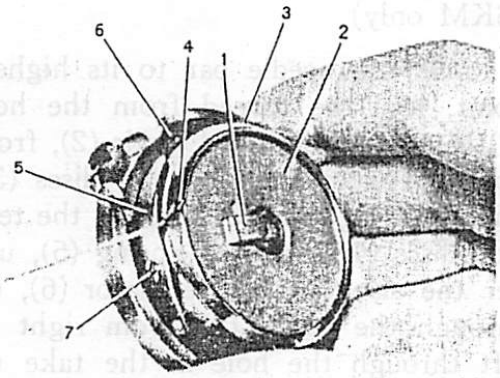


Fig. 18

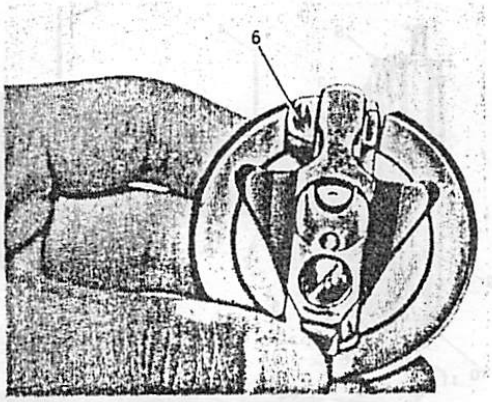


Fig. 19

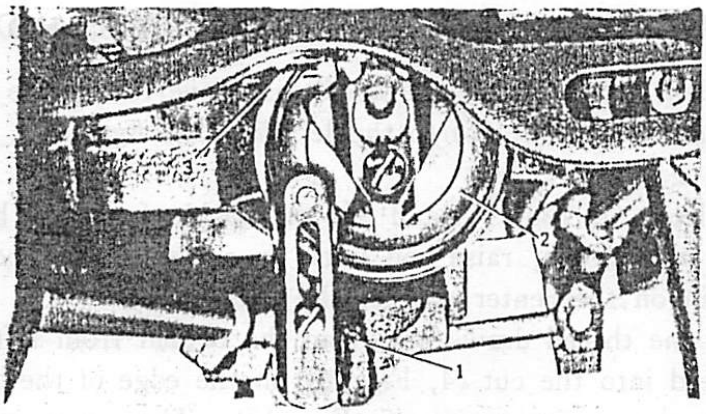


Fig. 20

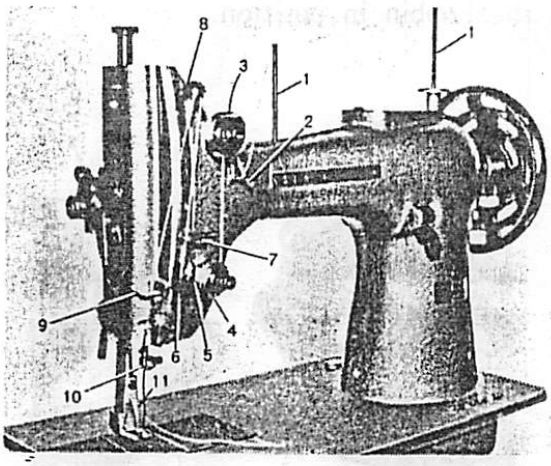


Fig. 21

THREADING THE MACHINE
(SK only)

Raise the needle bar to its highest point, lead the thread into the hole (1) and into the thread guide (2) and from above between the retaining discs (3), down from the right, under and between the tension disc (4), over the spring (5), under the slack thread regulator (6), up through the guard (7), from right to left through the hole in the take up lever (8), down through the thread guide (9), through the needle bar thread guide (10), then from left to right through the eye of the needle, leaving an end of the thread about 10cm long.

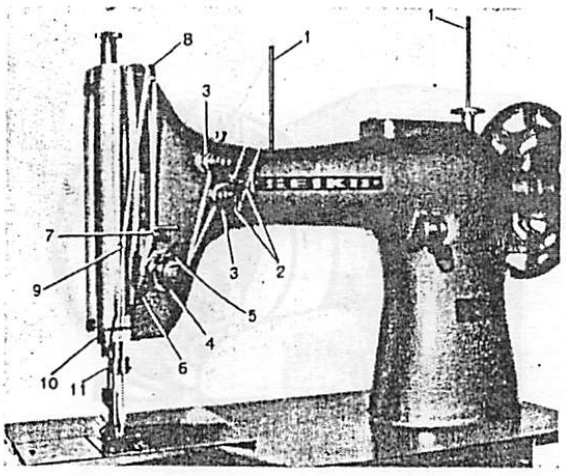


Fig. 22

THREADING THE MACHINE
(SKM only)

Raise the needle bar to its highest point, lead the thread from the hole (1) through the thread guide (2), from above between the retaining discs (3), and from right to left around the tension discs (4), over the spring (5), under the slack thread regulator (6), up through the guard (7), from right to left through the hole in the take up lever (8), down through the thread guide (9) and the thread guide (10), through the needle clamp hole (11), then through the eye of the needle from you, leaving the end of the thread about 10 cm long.

PREPARING FOR SEWING

With the left hand hold the end of the needle thread, leaving it quite slack from the end to the needle.

Turn the hand pulley toward you until the needle moves down and up again to its highest position, thus catching the under thread.

Then, pull the end of the needle thread you are holding, then the bobbin thread will be brought up with it through the needle hole in the needle plate.

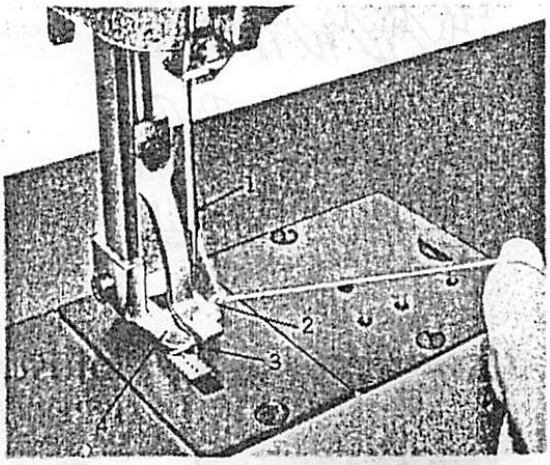
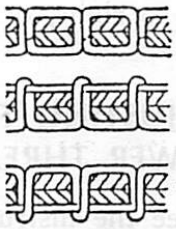


Fig. 23

TENSION OF THE BOBBIN THREAD (Fig. 18)

If it is necessary to alter the tension on the bobbin thread, slightly turn the screw (7) to the right to increase it or turn the screw to the left to decrease it.



- Perfect stitching.
- Tight tension of needle thread.
- Loose tension of needle thread.

Fig. 24

REGULATING THE THREAD TENSIONS (SK only)

For ordinary stitching, the tension of the upper and lower threads should be equal so that both threads are in the center of the goods. If the tension on either thread is stronger than on the other, imperfect stitching will be the result.

A correct stitch can be usually obtained by adjusting the tension on the needle thread.

To increase the tension, turn the thumb nut (1) to the right, or to decrease it, turn it to the left.

If the thread is found to slip in the tension discs without turning them, slightly increase the tension of the retaining discs by turning the thumb nut (3) to the right and decrease the pressure against the tension discs by turning slightly the thumb nut (1) to the left.

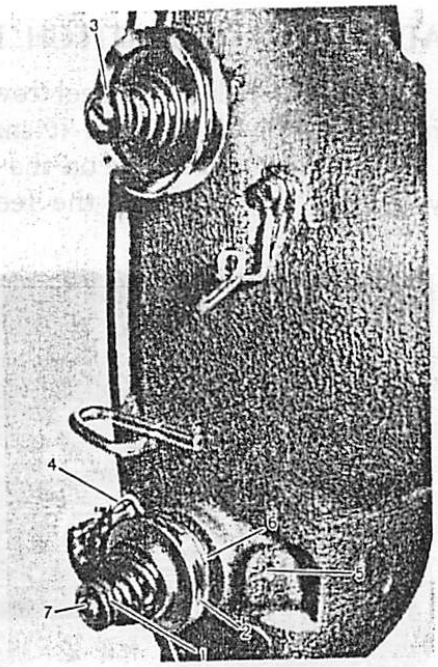


Fig. 25

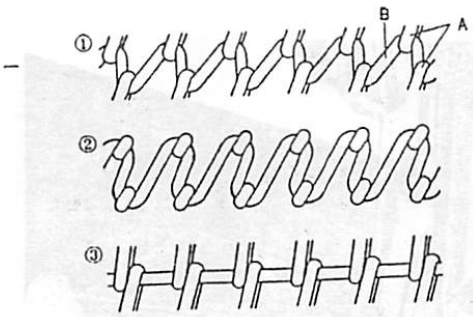


Fig. 26

REGULATING THE THREAD TENSION (SKM only)

The thread tensions of upper thread (a) and lower thread (b) should be equal

1. Correct tension
2. Tight tension of needle thread
3. Tight tension of bobbin thread

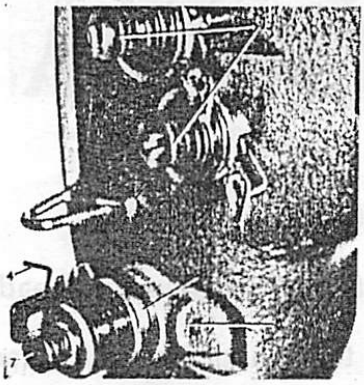


Fig. 27

ADJUSTING THE TENSION OF THE UPPER THREAD

The serrated nut (6) controls the tension of two upper threads. To increase the tension, turn the nut to right, or to left to decrease it.

ADJUSTING THE TENSION OF THE LOWER THREAD

See the instructions for SK machines.

ADJUSTING THE PRESSER FOOT PRESSURE (Fig. 7)

The pressure of the presser foot is regulated by the screw (1).
To increase the pressure, turn it to the right and to the left to decrease the pressure.

ADJUSTING THE STITCH LENGTH (Fig. 7)

Turn the balance wheel toward you, at the same time pressing on the feed regulating lever (2) until it snaps into the feed driving mechanism.

Continue the pressure on the lever and turn the balance wheel either to or from you until the travel of the feed is such as to give the required length of stitch.

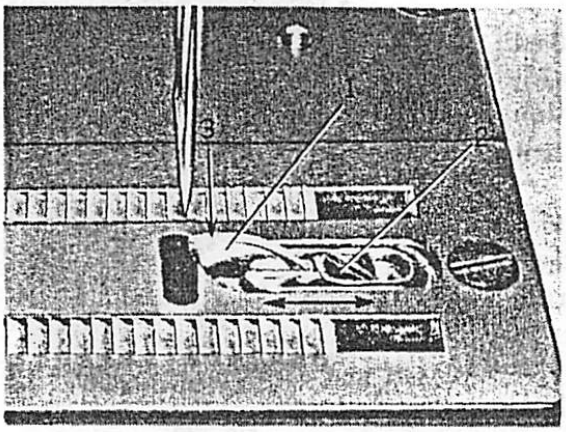


Fig. 28

THE BULGE GUIDE OF SEWING MATERIAL (SKM only)

Normally, edge of the guide (1) comes to the center of the needle plate.

To adjust this, loosen the set screw (2) and move the guide toward the arrow direction.

The shape of the guide can be varied according to the sewing purpose.

GAUGE PARTS (SKM only)

There are three kinds of gauge parts (needle clamps) as 3.5 mm 4.8 mm and 7.5 mm, according to your purpore, replace it to the required size.

ONE OR THREE NEEDLE MACHINE (SKM only)

One needle machine is used for decorative coarse straight stitching.

On three needle machine, either the right or left side (two needles) make moccasin stitch and the other needle makes decorative coarse stitching.

Three needle machine can also be used for only the decorative coarse stitching.

These stitchings can be made by replacing the respective presser foot, needle clamp, needle plate, and feeder.

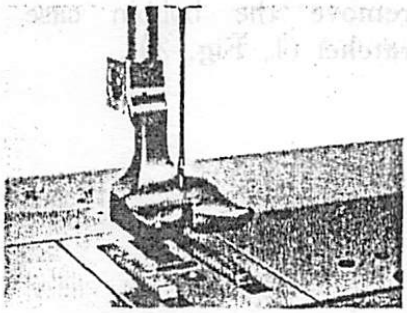


Fig. 29

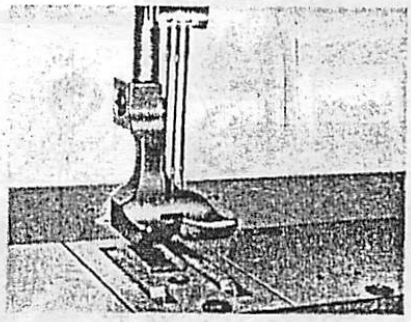


Fig. 30

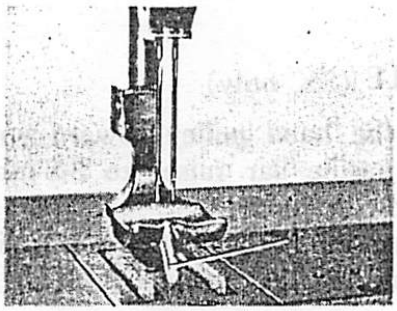


Fig. 31

PIPING OR BEADING WORK (SKM only)

A piping work requires a special needle plate having a hole through which a coad is comming out for the work.

DUMMY-JOINT FINISH WITH KNIFE (SKM only)

A knife fitted on the presser foot makes dummy-joint finish on the shoe uppers. For this work, knife and special presser foot with groove are required.

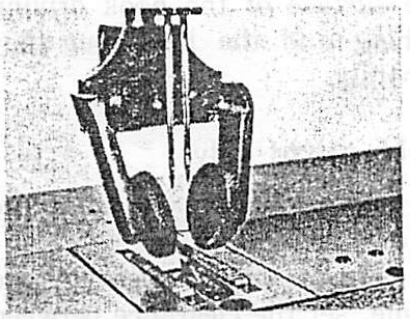


Fig. 32

TWO ROLLER PRESSERS (SKM only)

The roller pressers employing ball bearings allow the curve stitching successfully.

ADJUSTING THE CLEARANCE BETWEEN NEEDLE AND HOOK (SK only)

After adjusting the center of the needle to the hook point, adjust the hook position so that the clearance between the needle and hook becomes 0.1 to 0.2 mm, when the hook point comes to 3.5 mm from the upper end of the needle eye. Then, tighten three screws (2).

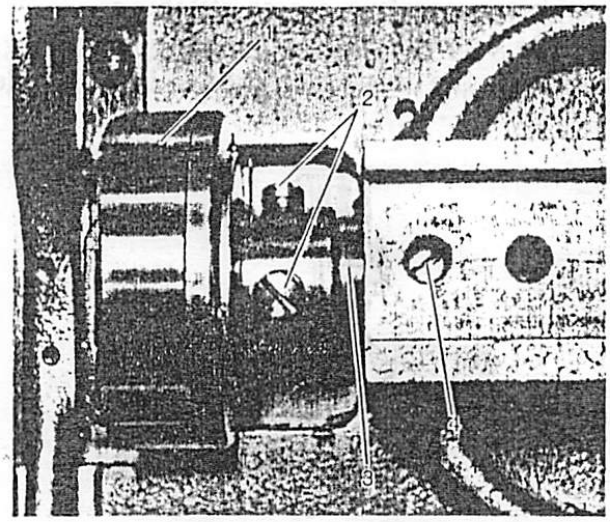


Fig. 33

Move the bushing (3) to fit snugly to the bottom of the hook like the fig. 33 so that it moves slightly, and tighten the screw securely.

To loosen the screw (4), at first remove the bobbin case retainer ratchet (1, Fig. 39).

THE TIMING BETWEEN HOOK AND NEEDLE (SK only)

Loosen the hook set screws (2, Fig. 33), turn the hand pulley toward you until the needle bar raises to 3.8 mm from its lowest point.

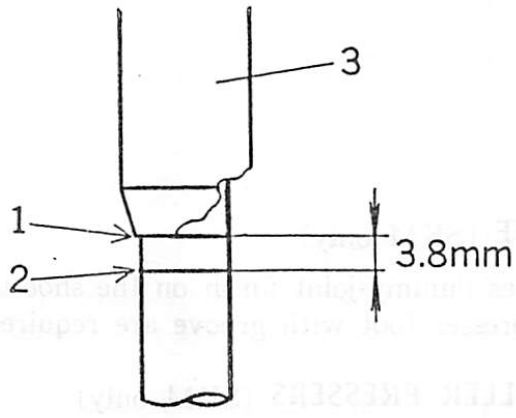


Fig. 34

The dimension between the two basic lines (1) and (2) is 3.8 mm, use it as a standard.

Bring the hook point (2, Fig. 35) to the center of the needle (1, Fig. 35) by moving the hook and tighten three screws (2, Fig. 33).

Be sure that there is no clearance between the surface of the hook driving shaft bushing and the hook but they move smoothly.

THE TIMING BETWEEN HOOK AND NEEDLE (SKM only)

Loosen the hook set screws, turn the balance wheel toward you until the needle bar raises to 3.8 mm from its lowest position.

Bring the hook point (1, Fig. 36) to the center between two needles (2) and (3), then tighten the hook screws, at the same time, set the clearance between the needle and hook point 0.1 mm to 0.2 mm.

ADJUSTING THE HEIGHT OF THE NEEDLE BAR (SK only)

This should be made after the timing between the needle and hook has been determined. Turn the balance wheel toward you so as to fit the center of the needle to the hook point (refer to Fig. 35).

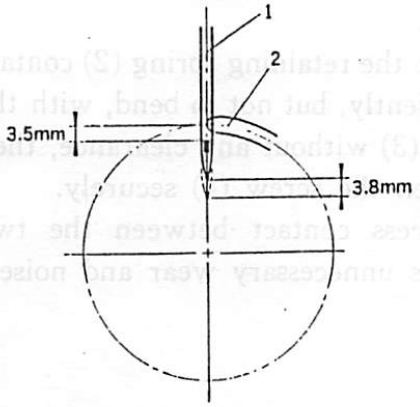


Fig. 35

Loosen two screws (1, Fig. 37), adjust the needle bar up or down so that the upper end of the needle eye comes to down 3.5 mm from the hook point. Then, tighten the screws.

When the needle bar is at its lowest position, adjust the needle bar bushing up and down so as to fit the bottom of the needle bar bushing (3, Fig. 34) and the basic line (1, Fig. 34). Further, turn the hand pulley toward you, confirm whether the hook point comes to the center of the needle or not when the bottom of the needle bar bushing fits to the basic line (2, Fig. 24).

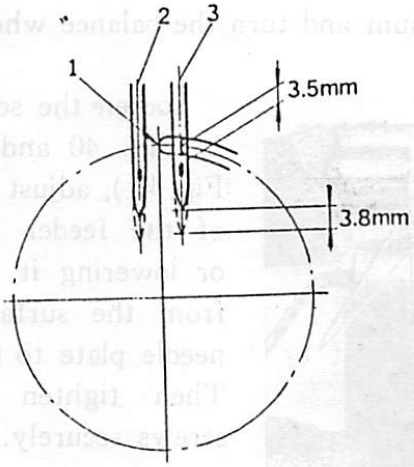


Fig. 36

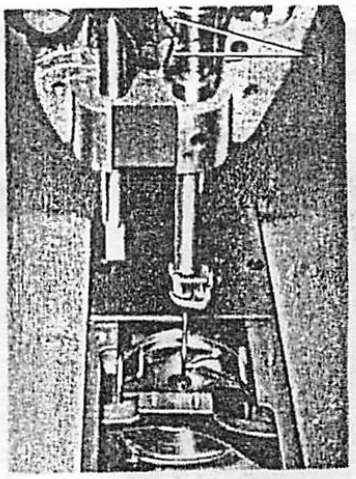


Fig. 37

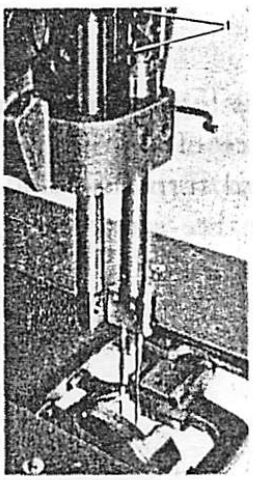


Fig. 38

ADJUSTING THE HEIGHT OF THE NEEDLE BAR (SKM only)

This should be made after the timing between the needle and hook has been determined.

Turn the balance wheel toward you so as to fit the center of the left needle to the hook point.

Loosen the screws (1, Fig. 38), adjust the needle bar up or down so that the upper end of the needle eye comes to 3.5 mm down from the hook point, at the same time, the two needles must be parallel. Then, tighten the screw (1, Fig. 38).

ASSEMBLING THE HOOK RETAINER BRACKET

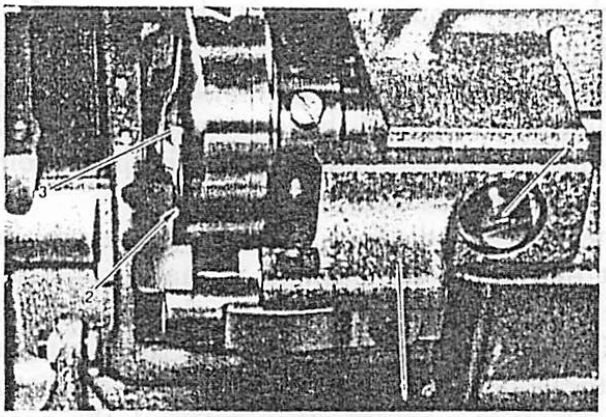


Fig. 39

This must be done after adjusting the clearance between the needle and hook.

Let the retaining spring (2) contact sufficiently, but not to bend, with the hook (3) without any clearance, then tighten the screw (4) securely.

Excess contact between the two makes unnecessary wear and noise.

ADJUSTING THE HEIGHT OF THE FEEDER

Adjust the feed motion to the maximum and turn the balance wheel to raise the feed dog to its highest position.

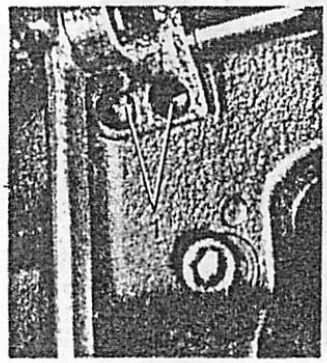


Fig. 40

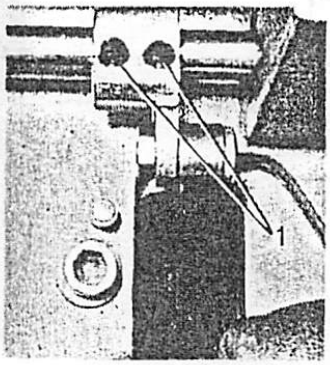


Fig. 41

Loosen the screws (SK, 1, Fig. 40 and SKM, 1, Fig. 41), adjust the height of the feeder by raising or lowering it to 1.4 mm from the surface of the needle plate to the feeder. Then tighten the said screws securely.

ADIUSTING THE FEED BAR HINGED STUD

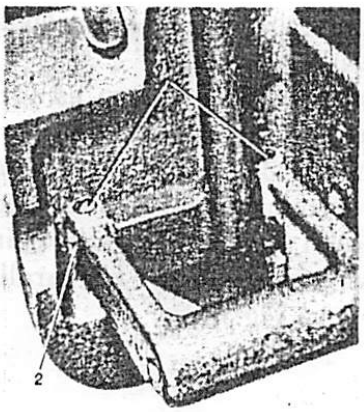


Fig. 42

When the feed dog is at its highest position, if it is not parallel with the surface of the needle plate, loosen the stud screws (1) and turn the stud (2) to get its parallel, then tighten the screws.

TIMING BETWEEN NEEDLE AND FEEDER

The correct timing is as follows:

Adjust the feeding motion to the maximum and turn the balance wheel toward you, after the feed dog has finished its feeding motion and when teeth of the feeder become equal height to the surface of the needle plate, the needle reaches to the needle plate.

To adjust this, pull open the top cover (1), loosen three screws (3) out of five on the feed eccentric adjusting flange coupling (2) and move the feed eccentric adjusting flange (4) for the adjustment.

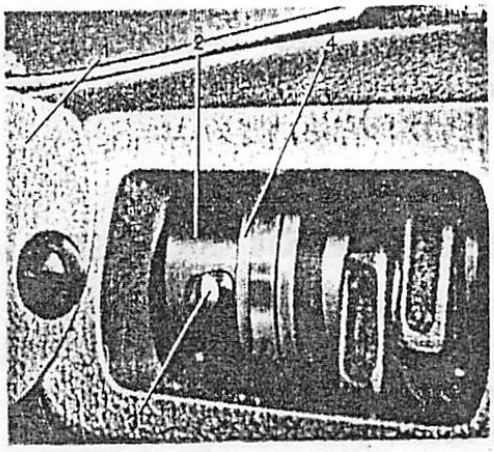


Fig. 43

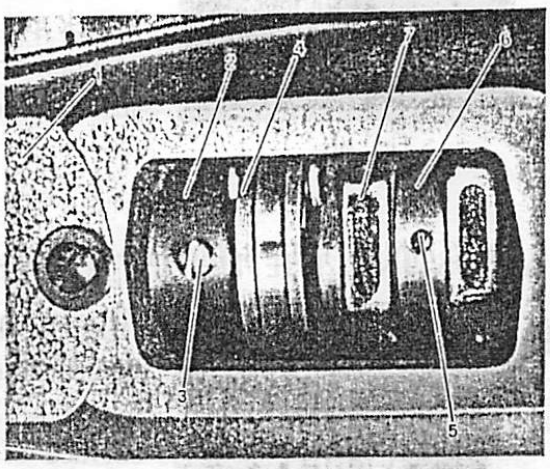


Fig. 44

ADJUSTING THE UP AND DOWN TRAVEL OF THE FEEDER (SK-6F, SKM only)

The adjustment of the up and down travel of the feeder against its back and forth travel is made so that the teeth of the feeder rise to the highest point at the middle position, when feeding travel is the largest.

Loosen two screws (5) and adjust it against the main shaft by moving the feed lifting cam (6).

To make its up and down travel faster, turn the feed lifting cam toward driving direction and to make it slower, turn the cam toward opposite direction.

Be sure to tighten screw pushing the screw against the rod (7) not to make any clearance axialy.

ADJUSTING THE LIFT OF THE PRESSER FOOT AND UPPER FEED DOG

The thickness of the material sewn should control the height of the lift of the presser foot and upper feed dog.

It should normally be just high enough for clearance of the material.

Push the presser bar lifter (1) up, loosen the screw (2), fit the needle hole of the presser foot (3) to the needle and adjust the measure 13 mm between the upper surface of the needle plate (4) and the bottom of the presser foot (3), then tighten the screw (2).

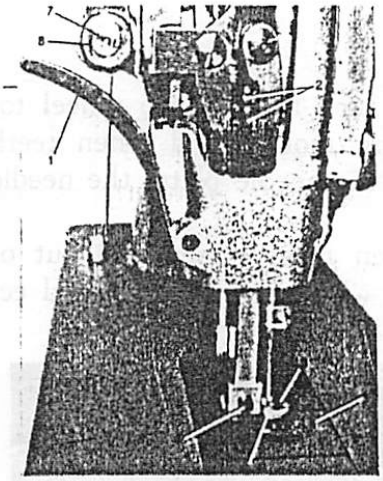


Fig. 45

Lower the presser bar lifter and so adjust the both lift to be always equal height by lossing the screw (6) and moving the upper feeder (5) up and down, when turning the balance wheel.

When raising the lift of the upper feed dog, move the position of the lifting presser bar bell crank driving cam shaft (7) and the bell crank (8) raise the position of the presser foot (5) by the knock pin.

Then the lift of the presser foot (3) must be adjusted according to the lift of the upper feeder (5).

ADJUSTING THE HEIGHT OF THE PRESSER FOOT (SKM, SK-6 only)

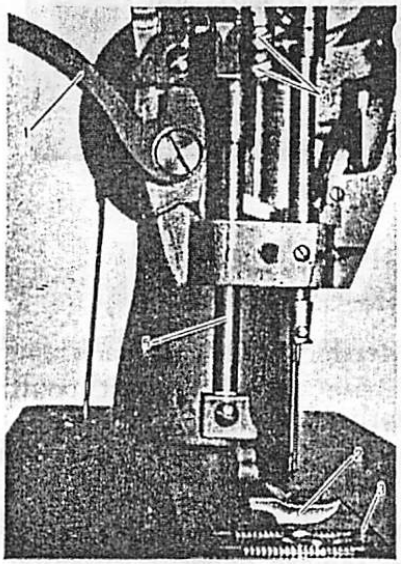


Fig. 46

Raise the presser bar lifter (1) and so adjust the measurement 13 mm or 10 mm (SKM-26) between the bottom of the presser foot (2) and the surface of the needle plate (3).

To adjust this, loosen the screw (4), fit the needle hole of the presser foot to the needle by moving the presser bar (5) up or down, then tighten the screw.

ADJUSTING THE THREAD CONTROLLER SPRING

(SK, Fig. 25, SKM Fig. 27)

Normally, the thread controller spring (4) should hold slack of the upper thread until the needle reaches to the goods, and it should pause.

To adjust this, loosen the screw (5) and adjust it by turning the thread take up spring regulator (6).

To strengthen the tension of the controller spring, loosen slightly the tension screw stud (7) with a screw driver and turn the serrated nut to the right, to lighten the tension, turn to the left. Then, tighten the tension screw stud.