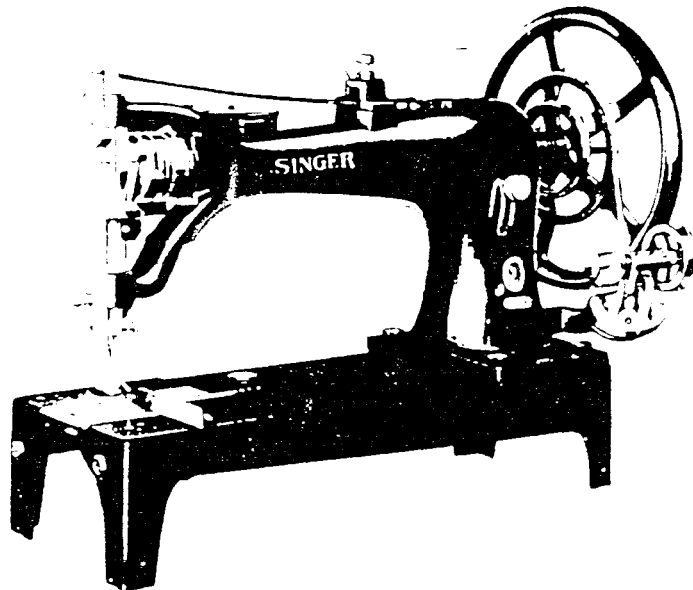


SINGER
CLASS 7
ONE NEEDLE

INSTRUCTIONS

FOR USING AND ADJUSTING

SINGER[®] SEWING MACHINES



OF CLASS 7

ONE NEEDLE

LOCK STITCH

—
— Reg. U. S. Pat. Off. by

THE SINGER MANUFACTURING COMPANY

TO ALL WHOM IT MAY CONCERN:

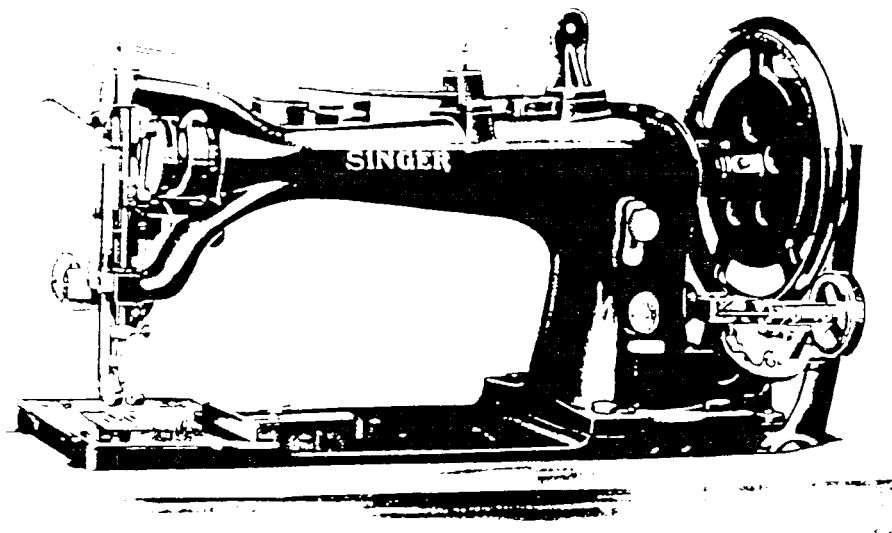
The improper placing or renewal of the Trade-Mark "SINGER" or any other of the Trade-Marks of The Singer Manufacturing Company (all of which are duly Registered Trade-Marks) on any machine that has been repaired, rebuilt, reconditioned, or altered in any way whatsoever outside a SINGER factory or an authorized SINGER agency is forbidden.

THE IMPORTANCE OF
USING **SINGER*** PARTS AND NEEDLES
IN **SINGER** MACHINES

The successful operation of SINGER machines can only be assured if SINGER parts and needles are used. Supplies are available at all SINGER Shops for the Manufacturing Trade, and mail orders will receive prompt attention.

SINGER Needles should be used
in SINGER Machines.
These Needles and their Containers
are marked with the
Company's Trade-Mark "SIMANCO.*"

Needles in Containers marked
"FOR SINGER MACHINES"
are NOT **SINGER** made needles. 2



DESCRIPTION

Machines 7-5, 7-10, 7-11, 7-13, 7-16, 7-31, 7-33, 7-34, 7-41, 7-47, 7-55 and 7-56 each have one needle and one shuttle.

Speed

The following list gives the maximum speeds recommended for Machines of Class 7 having one needle:

<u>Machine</u>	<u>Stitches per Minute</u>
7-5	550
7-10	500
7-11	100
7-13	100
7-16	250
7-31	550
7-33	550
7-34	550
7-41	550
7-47	500
7-55	650
7-56	550

CAUTION - Make certain that the machines are not operated at speeds in excess of the maximum speeds stated above.

During operation, the balance wheel should always turn over toward the operator.

Needles

Needles for machines of Class 7, having one needle, are of the Class and Variety numbers given in the following table:

Machines	Class and Variety of Needles	Description	Sizes of Needles
7-5	7 x 1	For Fabrics	19, 21, 22, 23, 24, 25, 26, 27.
	or		
7-10	7 x 2	For Leather	19, 21, 22, 23, 24, 25, 26, 27.
	7 x 18	For Leather	19, 21, 22, 23, 24, 25, 26, 27.
7-11 7-13	7 x 1	For Paper	19, 21, 22, 23, 24, 25, 26, 27.
7-16	7 x 18	For Fabrics	28, 29, 30, 31.
7-31	7 x 1	For Fabrics	19, 21, 22, 23, 24, 25, 26, 27.
	or		
	7 x 5	" "	28, 29, 30, 31.
7-33	7 x 1	For Fabrics	19, 21, 22, 23, 24, 25, 26, 27.
	or		
	7 x 5	" "	28, 29, 30, 31.
7-34	7 x 1	For Fabrics	19, 21, 22, 23, 24, 25, 26, 27.
	or		
	7 x 2	For Leather	19, 21, 22, 23, 24, 25, 26, 27.
7-41	7 x 1	For Fabrics	19, 21, 22, 23, 24, 25, 26, 27.
	or		
	7 x 5	" "	28, 29, 30, 31.
7-47	7 x 1	For Fabrics	19, 21, 22, 23, 24, 25, 26, 27.
	or		
	7 x 2	For Leather	19, 21, 22, 23, 24, 25, 26, 27.
7-55	7 x 1	For Fabrics	19, 21, 22, 23, 24, 25, 26, 27.
7-56	7 x 1	For Fabrics	19, 21, 22, 23, 24, 25, 26, 27.

The side of the needle to be used depends on the side of the thread which must pass freely through the eye of the needle.

Do not use broken or uneven thread or thread which passes with difficulty through the needle eye, as such thread will interfere with the successful use of the machine.

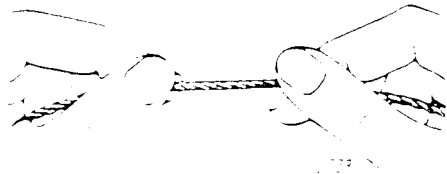
Orders for needles must specify the QUANTITY required, the NEE number, also the CLASS and VARIETY numbers, separated by an X. The following is an example of an intelligible order:

100 No.13, 7 x 1 Needles
100 No.21, 7 x 2 Needles

The best stitching results will be obtained by the use of needles furnished by the Singer Sewing Machine Company.

Thread

Left twist thread should be used in the needle. Either right or left twist thread can be used in the bobbin.



Hold the thread as shown in Fig.3. Turn the thread over toward you between the thumb and forefinger of the right hand: if left twist, the strands will wind tighter; if right twist, the strands will unwind.

Fig.3. How to determine the Twist

To Remove the Bobbin

Turn the balance wheel to bring the needle bar to its lowest position; then, with the curve of the Shuttle Cylinder Opener 120571, shown in Fig.4, conforming to the curve of the shuttle cylinder, insert the small end of the shuttle cylinder opener in the slot (B) in the spring latch beneath the shuttle cylinder, as shown in Fig.4. Press the latch away from the cylinder and turn the cylinder outward or toward the left as far as it will go, as shown in Fig.4, and the bobbin will drop out.



Fig.4. Shuttle Cylinder Opener 120571 in Use

To Wind the Bobbin

Place the bobbin in the bobbin winder spindle and push it up tightly against the shoulder, leaving the small pin in the shoulder enter the slot in the bobbin.

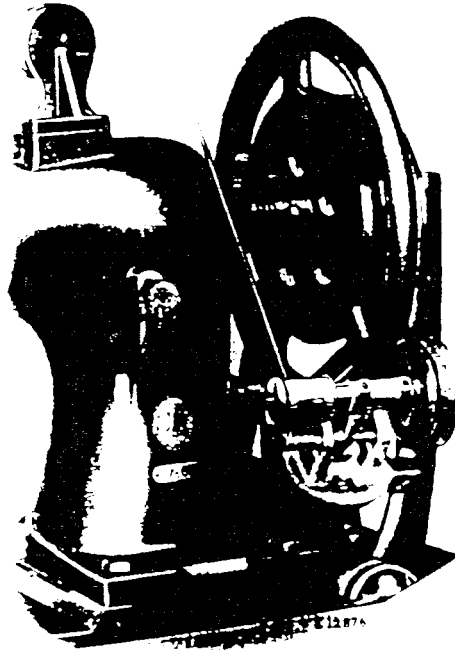


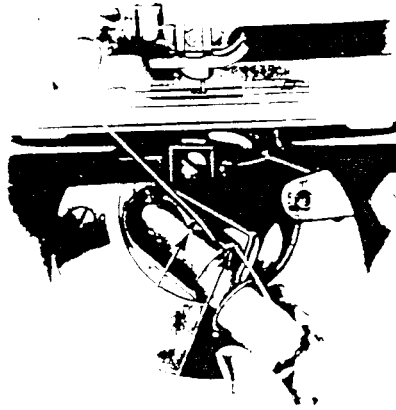
Fig.5. Winding the Bobbin

Pass the thread from the unwinder through the hole in the left side of the bobbin from the inside. Push the bobbin winder pulley up against the balance wheel and place the bobbin winder latch in position as shown in Fig.5. Then start the machine. The end of the thread must be held until a few coils are wound, and should then be cut off. When sufficient thread has been wound upon the bobbin, the bobbin winder will stop automatically.

To Replace the Bobbin and Thread the Shuttle

Take the bobbin between the thumb and forefinger of the left hand, with the thread drawing off from the underside toward the right as shown in Fig.6, page 7. Place the bobbin in the cylinder as far as it will go, draw the thread into the slot (1, Fig.6) in

the cylinder and enter the tension spring and the delivery eye
of the shuttle. Then turn the swivel back until it is locked by the



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Fig. 6. Replacing the Bobbin and Threading the Shuttle

spring later, and allow about three inches of thread to hang free
from the shuttle with which to commence sewing as shown in Fig. 7.

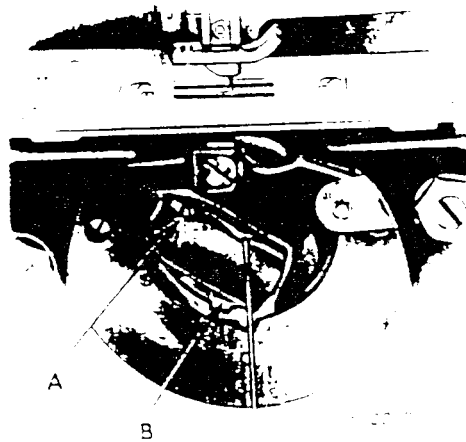


Fig. 7. Bobbin Replaced and Shuttle Threaded

To Set the Needle

Turn the balance wheel over toward you until the needle bar moves up to its highest position: loosen the set screw in the needle clamp and put the needle in the clamp as far as it will go, with the long groove of the needle toward the left and the eye directly in line with the arm of the machine, then tighten the set screw.

To Thread the Needle

(Operator Facing Front of Machine)

Turn the balance wheel over toward you until the thread take-up lever (8, Fig. 9), on page 9, moves up to its highest position.

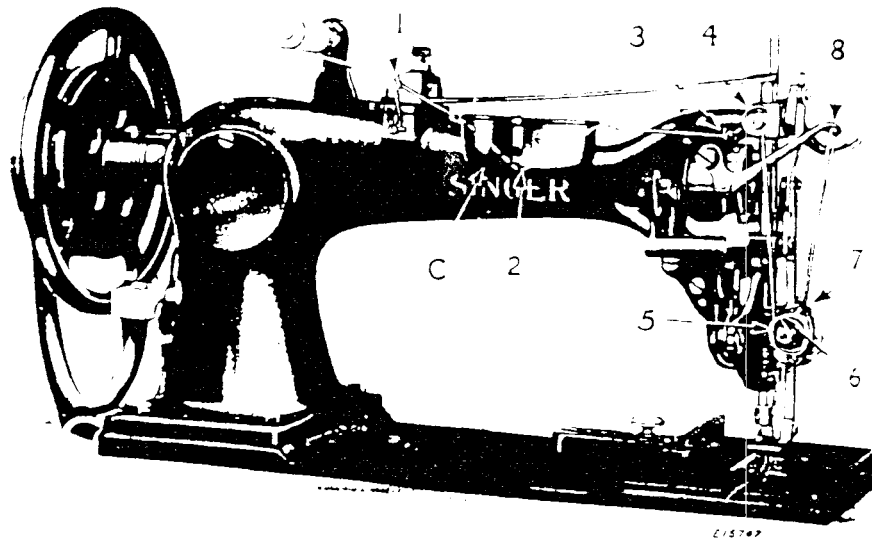


Fig. 8. Threading the Needle on Machine 7-31

Pass the thread from the unwinder, or from the spool on the spool pin on top of the machine, through the eyelet (1, Fig. 8). Raise the lid of the cup (C, Fig. 8) and pass the thread through the hole at the end of the thread post (2, Fig. 8) under the lid. Then close the lid and pass the thread through the eyelet (3, Fig. 8), over from right to left between the thread retainer discs (4, Fig. 8), down under and from right to left around the tension wheel (5, Fig. 8), into the loop of the thread take-up spring (6, Fig. 8), under the staple (7, Figs. 8 and 9), up and from back to front through the hole (8, Figs. 6 and 9), in the thread take-up lever, down through the thread guide (9, Fig. 9), into the slot (10, Fig. 9)

In the illustration the presser foot is in the raised position. The thread is drawn through the eye of the needle (12) and then down through the hole in the lifting presser foot (13). Draw about four inches of thread through the hole in the lifting presser foot with which to commence sewing.

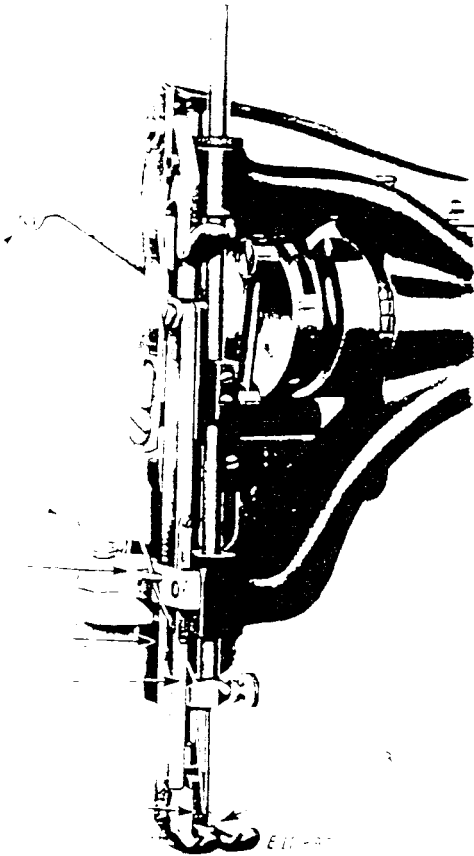


Fig. 9. Threading the Needle on Machine T-31

needle (12, Fig. 9), then pass the thread down through the hole in the lifting presser foot (13, Fig. 9). Draw about four inches of thread through the hole in the lifting presser foot with which to commence sewing.

If it is not desired to oil the thread, the thread should be omitted from the bob (10, Fig. 8).

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 balance wheel over

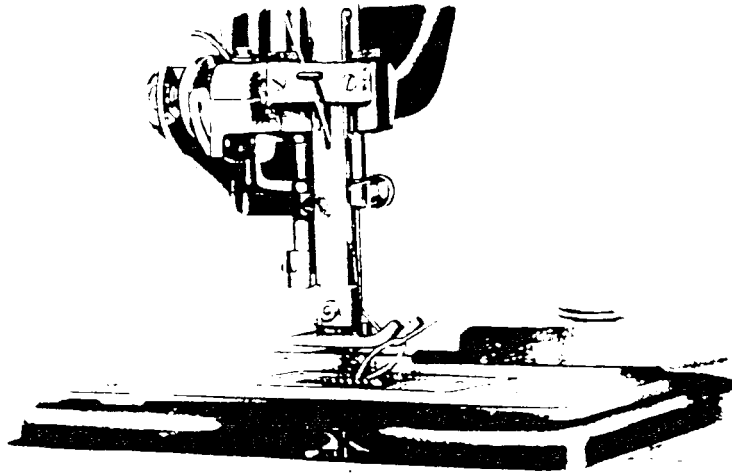


Fig. 10. Drawing Up the Bobbin Thread

toward you until the needle moves down and up again to its highest position, thus catching the bobbin thread; draw up the needle thread and the bobbin thread will come up with it through the hole in the throat plate (see Fig. 10). Lay both threads back under the presser feet.

To Commence Sewing

Place the material beneath the presser feet, lower the presser feet and commence to sew, turning the balance wheel over toward you.

To Remove the Work

Stop the machine with the thread take-up lever resting at its highest position; draw about three inches of thread through the thread retaining discs, raise the presser feet, draw the work back and cut the threads close to the goods. Leave the ends of the threads under the presser feet.

Tensions

For ordinary stitching, the needle and bobbin threads should be locked in the center of the thickness of the material, thus:



Fig.11. Perfect Stitch

If the tension on the needle thread is too tight, or if that on the bobbin thread is too loose, the needle thread will lie straight along the upper surface of the material, thus:



Fig.12. Tight Needle Thread Tension

If the tension on the bobbin thread is too tight or if that on the needle thread is too loose, the bobbin thread will lie straight along the under side of the material, thus:



Fig.13. Loose Needle Thread Tension

To Regulate the Tensions

The tension on the needle thread is regulated by the thumb nut (H, Fig. 15, page 13) at the front of the thread retainer discs, and the thumb nut (J, Fig. 15, page 13) at the front of the tension wheel. The tension on the thread retainer discs should be only enough to cause the tension wheel to turn when the thread is taken from the spool.

The tension on the bobbin thread is regulated by the screw (A, Fig. 7, page 7) which holds the tension spring to the cylinder. To increase the tension, turn the screw over to the right. To decrease the tension, turn the screw over to the left.

To Regulate the Length of Stitch

The length of the stitch is regulated by the thumb screw (G, Fig. 14) in the slot on the front of the horizontal part of the arm. To lengthen the stitch, loosen the thumb screw and move it downward. To shorten the stitch, loosen the thumb screw and move it upward. When the desired length of stitch is obtained, tighten the thumb screw.

To Regulate the Pressure on the Material

The pressure on the material is regulated by means of the hexagon head screw (D, Fig. 14). Loosen the hexagon head lock nut (E, Fig. 14) and turn the screw (D) to the right to increase the pressure, or to the left to decrease the pressure. When the desired pressure has been obtained, hold the screw (D) with a wrench to keep it from turning while the lock nut (E) is being tightened against the bracket (F).

The pressure should be only heavy enough to enable the feed to move the work along evenly, and to prevent the work from rising with the needle.

To Oil the Machine

To insure easy running and prevent unnecessary wear of the machine, all parts which are in movable contact require oiling.

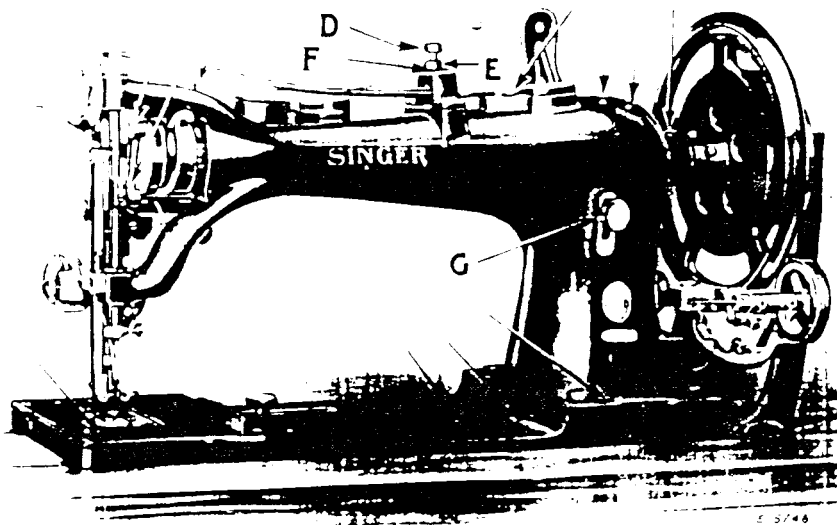


Fig. 14. Oiling Points at Front of the Machine

and when the machine is in continuous use, oil should be applied frequently. Use "TYPE B" or "TYPE D" OIL, sold only by Singer Sewing Machine Company. For description of these oils, see inside iron cover.

The places where the machine should be oiled are indicated in Figs. 14 and 15 by arrows pointing to the oil holes and bearings. Oil should be regularly applied to the shuttle race also in the hole in the hub of the friction driving pulley.

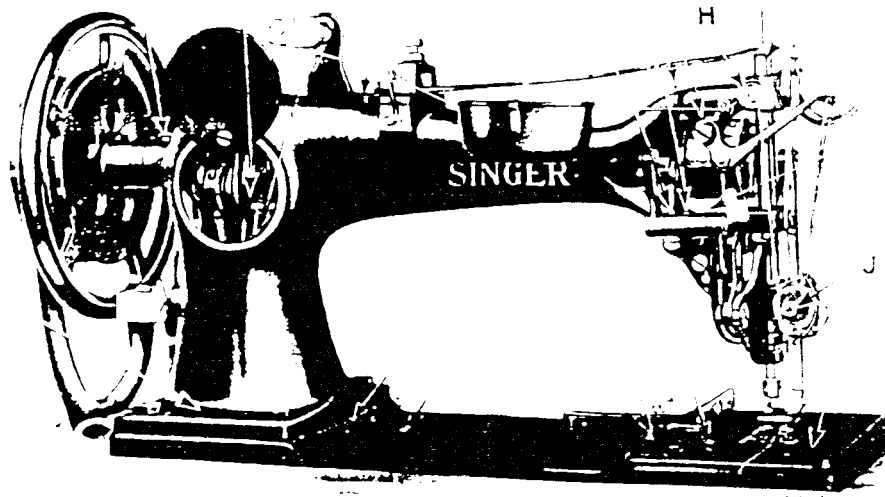


Fig. 15. Oiling Points at Back of Machine

On the back of the arm is a round plate or cover, fastened by a screw; loosen the screw, turn the plate upward and fasten by tightening the screw. Care should be taken to see that all the moving parts inside are sufficiently lubricated. Then turn the cover back into position and tighten the screw.

INSTRUCTIONS FOR ADJUSTERS AND MACHINISTS

To Regulate the Feed Rolls (Machine 7-56)

The movement of the feed rolls should slightly exceed the movement of the feed dog, so that the extent of the pulling action of the feed rolls will be slightly greater than the feeding action of the feed dog. This will insure that the material will be perfectly flat and with no tendency to pucker between the feed dog and the feed rolls.

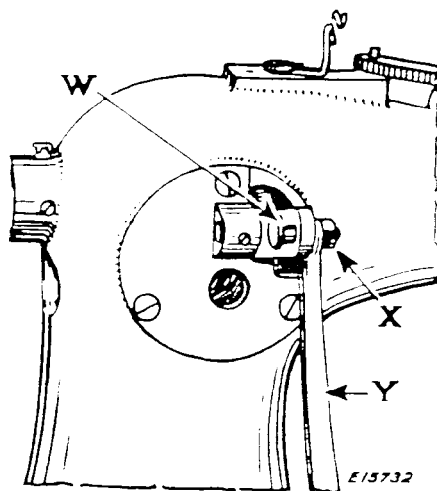


Fig. 16. Adjusting Feed Rolls - Machine 7-56

Only the lower of the two feed rolls is adjustable, the feeding movement of the upper feed roll being imparted to it by the lower feed roll.

To adjust, loosen nut (X, Fig. 16) and move the upper end of the feed roll connection (Y, Fig. 16) outward (away from the machine) in the slot (W) for more feeding movement of the feed rolls; or move the connection (Y) inward (toward the machine) for less feeding movement of the feed rolls, then securely tighten the nut (X).

Timing

(All Class 7, One - Needle Machines)

The machines are correctly timed at the factory and are so constructed that such timing is permanently fixed. Therefore no adjustment for timing is provided.

To Set the Needle Bar
(All Class 7, One-Needle Machines)

When the shuttle point is at the centre of the needle, the top of the needle eye should be approximately $1/32$ inch below the point of the shuttle.

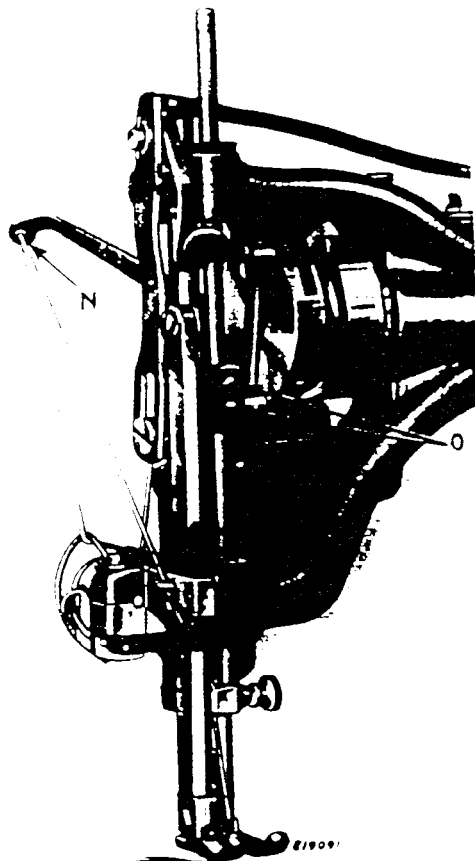


Fig. 17. Setting the Needle Bar

To adjust, loosen the two set screws (O, Fig. 17) and move the needle bar up or down as required, then securely tighten the set screws (O).

NOTE - This setting of the needle bar may be varied slightly depending upon the size of the needle and the thread being used.

To Set the Shuttle with Relation to the Needle

(All Class 7 One Needle Machines)

The shuttle can be adjusted for proper clearance between the shuttle point and the needle.

If a change is made from a very small needle to a much larger one, the shuttle point will perhaps pass too close to the needle, or too far away from it if the change is from a large to a much smaller needle.

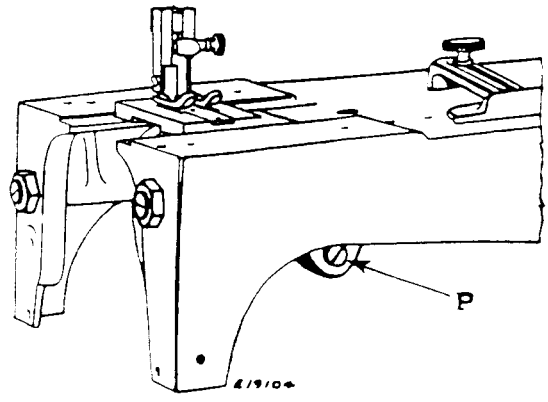


Fig. 18. Setting the Shuttle with Relation to the Needle

In such cases, adjustment is made by loosening the clamping screw (P, Fig. 18) beneath the machine bed, and moving the shuttle race slightly to right or left to suit the needle being used. After which securely tighten the clamping screw (P).

To Time the Feed

(All Class 7 One Needle Machines)

For general sewing conditions, the feed dog should be so timed that it will have completed its feeding action at approximately the same time that the take-up lever (N, Fig. 17) completes its upward stroke.

When the machines leave the factory **THEY ARE PROPERLY TIMED, AND NO ADJUSTMENT IS NECESSARY UNLESS THE POSITION OF THE FEED CAM HAS BEEN DISTURBED.**

~~If adjustment should be required, necessary, remove the~~ arm side cover at the rear side of the machine arm. The feed cam is easily accessible with the arm side cover removed. This cam is provided with two screws. Loosen these two screws and set the cam for earlier or later movement of the feed dog, as required, by turning the cam about the arm shaft to the required position, then securely tighten the two screws in the cam.

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