

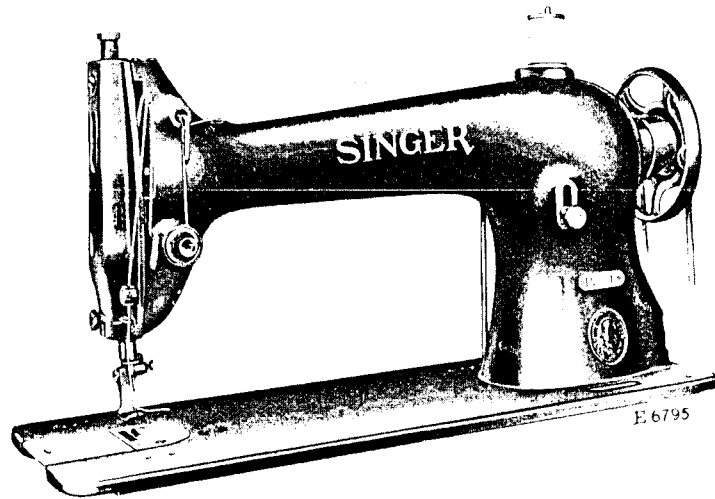
SINGER

155-1

INSTRUCTIONS

FOR USING AND ADJUSTING

SINGER SEWING MACHINE



155-1

THE SINGER MANUFACTURING CO.

To Oil the Machine

When the machine is received from the factory, it should be thoroughly cleaned and oiled.

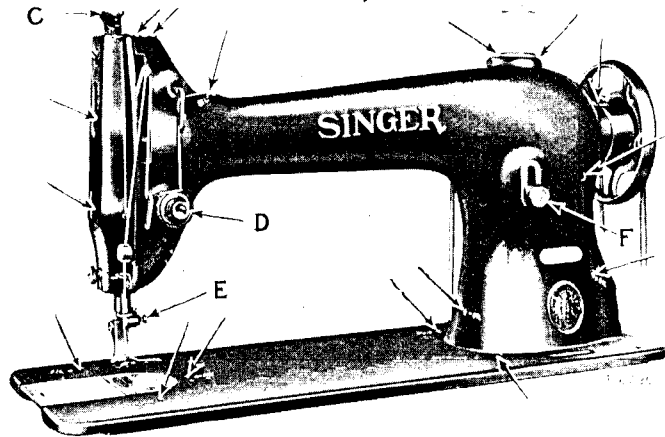


FIG. 2. OILING POINTS AND ADJUSTMENTS AT THE FRONT OF THE MACHINE

Oil should be applied at each of the places designated by arrows in Figs. 2, 3, 4 and 13. When the machine is in continuous use, it should be oiled at least twice each day.

Loosen the thumb screw (J, Fig. 3) in the round cover plate on the back of the machine, turn the cover plate up and oil the bearings which are thus uncovered.

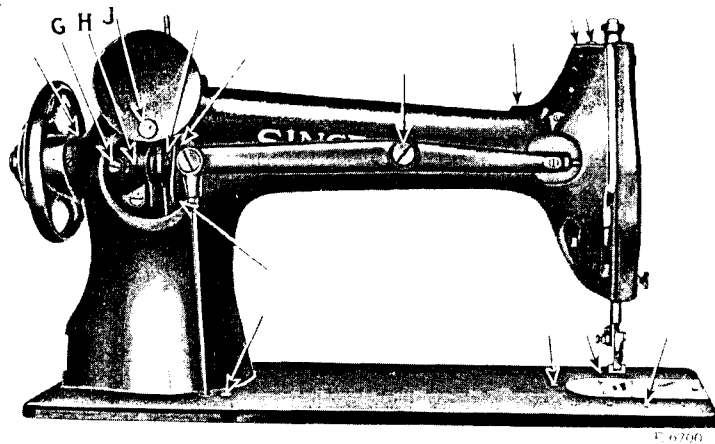


FIG. 3. OILING POINTS AT THE BACK OF THE MACHINE

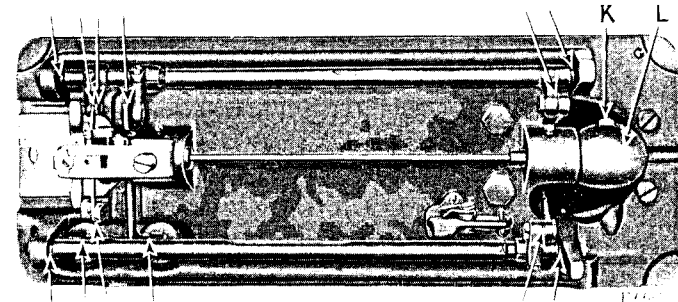


FIG. 4. BASE OF MACHINE, SHOWING OILING POINTS

Special Notice

Occasionally remove the knurled thumb screw (G, Fig. 3) and fill the gear case (H, Fig. 3) with Singer High Speed Lubricant, a grease which is especially prepared for this purpose, then replace the thumb screw (G).

Turn the machine back on its hinges and apply oil at the places indicated by arrows in Fig. 4.

The knurled thumb screw (K, Fig. 4) should also be occasionally removed and the gear case (L, Fig. 4) also filled with Singer High Speed Lubricant.

A drop of oil should be applied to the bobbin case bearing as shown at F2, in Fig. 13, page 10, each time a bobbin is replaced.

Needles

Needles for Machine 155-1 are of Class and Variety 16 x 231, for general work, and 135 x 7 for khaki and heavy overalls.

Needles 16 x 231 are made in sizes 9, 11, 13, 14, 16, 17, 18, 19, 21, 22, 23 and 24. Needle, size 18, is sent with the machine unless otherwise specified on the order.

Needles 135 x 7 are made in sizes 21 and 22.

The size of the needle to be used should be determined by the size of the thread which must pass freely through the eye of the needle. If rough or uneven thread is used, or if it passes with difficulty through the eye of the needle, the successful use of the machine will be interfered with.

Orders for needles must specify the *quantity* required, the *size* number, also the *class* and *variety* numbers separated by an x.

The following is an example of an intelligible order:

“100 No. 18, 16 x 231 Needles.”

The best stitching results will be obtained in using the 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.

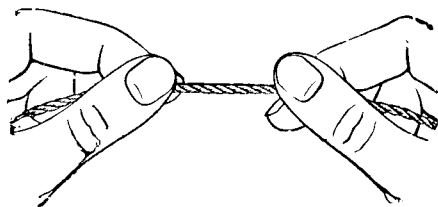


FIG. 5. HOW TO DETERMINE THE TWIST

Hold the thread as shown above. 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.

To Remove the Bobbin Case

Turn the balance wheel over toward you until the needle moves up to its highest point. Draw out the slide in the bed of

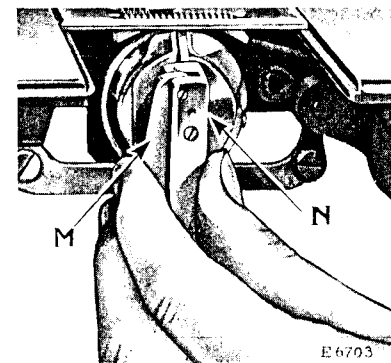


FIG. 6. REMOVING THE BOBBIN CASE

the machine, reach down with the thumb and forefinger of the left hand, press in the latch (M, Fig. 6) and at the same time swing out the latch post (N, Fig. 6) as far to the left as it will go. Then release the latch and lift out the bobbin case as shown in Fig. 7.

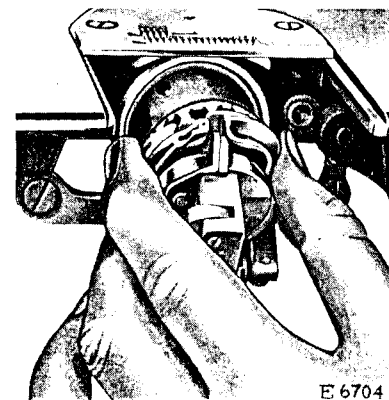


FIG. 7. REMOVING THE BOBBIN CASE

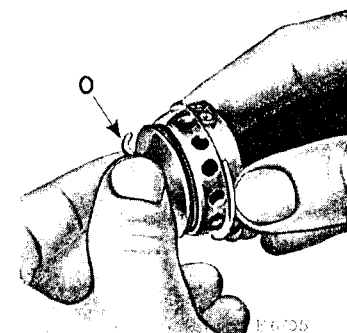


FIG. 8. REMOVING THE BOBBIN

Open the bobbin case latch (O, Fig. 8), turn the open end of the bobbin case downwardly and the bobbin will drop out.

To Wind the Bobbin

(SEE FIG. 9)

Fasten the bobbin winder to the table with its driving pulley in front of the machine belt, so that the pulley will drop away from the belt when sufficient thread has been wound upon the bobbin.

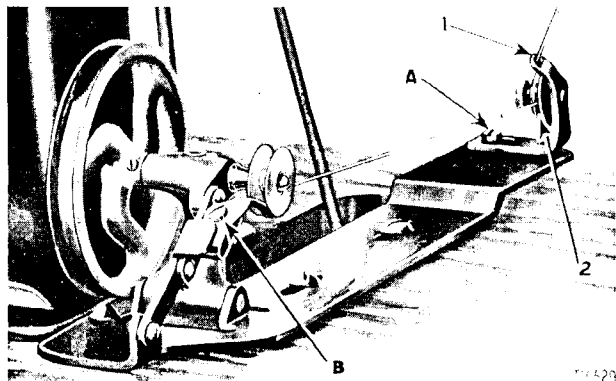


FIG. 9. WINDING THE BOBBIN

Place the bobbin on the bobbin winder spindle and push it on as far as it will go.

Pass the thread down through the thread guide (1) in the tension bracket, around the back and between the tension discs (2). Then wind the end of the thread around the bobbin a few times, push the bobbin winder pulley over against the machine 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 (A) in the tension bracket and move the bracket to the right or left as may be required, then tighten the screw.

The amount of thread wound on the bobbin is regulated by the screw (B). To wind more thread on the bobbin, turn the screw (B) inwardly. To wind less thread on the bobbin, turn this screw outwardly.

Bobbins can be wound while the machine is stitching.

To Thread the Bobbin Case

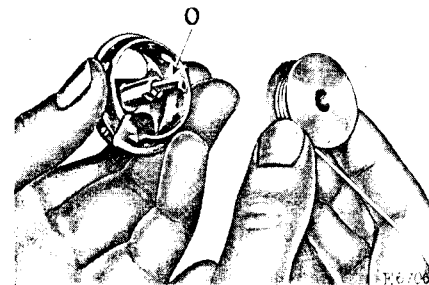


FIG. 10

Hold the bobbin between the thumb and forefinger of the right hand, as shown in Fig. 10, the thread drawing on the bottom from the left toward the right.

With the left hand hold the bobbin case as shown in Fig. 10, the latch (O) being open, and place the bobbin into it.

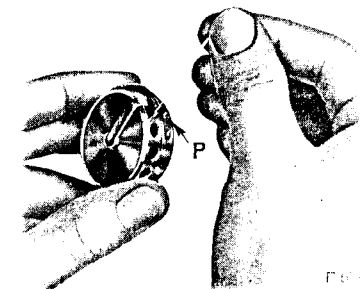


FIG. 11

Then close the latch (O) and pull the thread into the slot in the edge of the bobbin case as shown in Fig. 11, draw the thread under the tension spring and through the delivery eye as shown in Fig. 12.

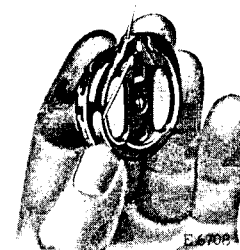


FIG. 12

To Replace the Bobbin Case

See that the needle bar is at its highest point. Place the bobbin case on the bobbin case position plate (Q, Fig. 13) with

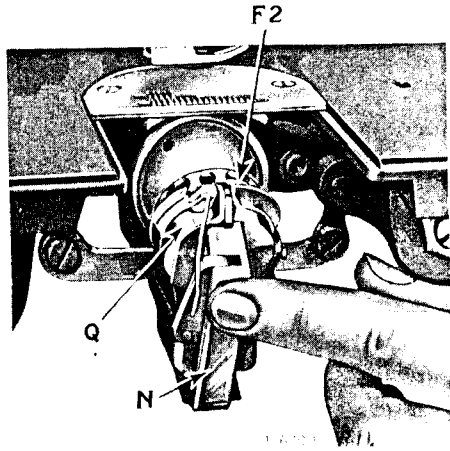


FIG. 13. REPLACING THE BOBBIN CASE

the position finger opposite the notch at the top of the bobbin case, then push in the latch post (N) as shown in Fig. 13. Allow about two inches of thread to hang free and replace the slide in the bed of the machine.

To Set the Needle

Turn the balance wheel over toward you until the needle bar moves up to its highest point; loosen the screw (E, Fig. 2, page 4) in the needle clamp and put the needle up into the clamp as far as it will go, with the 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.

To Thread the Needle

(SEE FIG. 14)

Pass the thread from the unwinder, or from the spool on the spool pin on the top of the machine, from right to left through the top hole

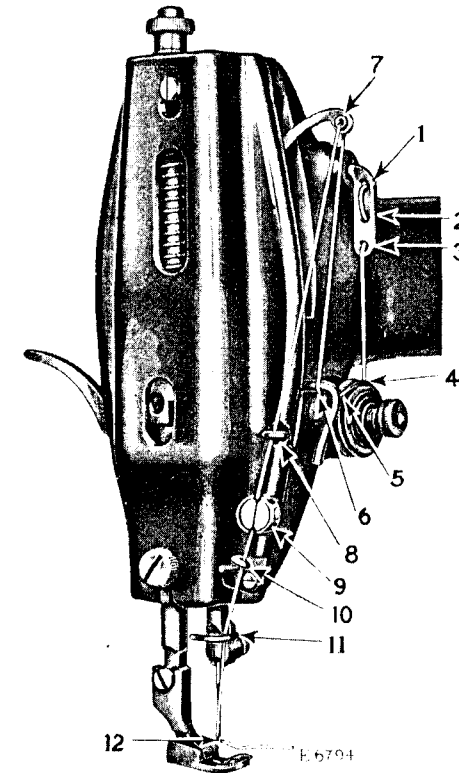


FIG. 14. THREADING THE NEEDLE

(1) in the thread retainer, from left to right through the centre hole (2) in the thread retainer, and from right to left through the bottom hole (3) in the thread retainer, down under from right to left between the tension discs (4), into the thread take-up spring (5), under the slack thread regulator (6), up and from right to left through the hole in the end of the thread take-up lever (7), down through the thread guide (8), into the thread retainer (9), down through the thread eyelet (10), into the thread guide (11), and from left to right through the eye of the needle (12). Draw about two inches of thread through the eye of the needle with which to commence sewing.

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

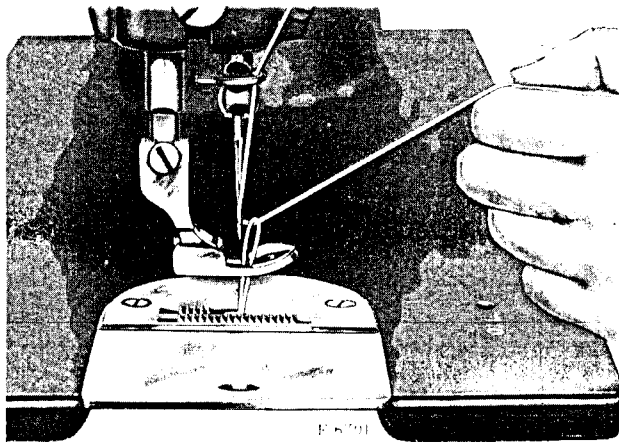


FIG. 15. DRAWING UP THE BOBBIN THREAD

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 up with it through the hole in the throat plate (see Fig. 15). Lay both threads back under the presser foot.

To Commence Sewing

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

To Remove the Work

Let the thread take-up lever rest at its highest point, raise the presser foot and draw the work back and cut the threads close to the goods.

Tensions

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



FIG. 16. 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. 17. 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. 18. LOOSE NEEDLE THREAD TENSION

To Regulate the Tensions

The tension on the needle thread should only be regulated when the presser foot is down. Having lowered the presser foot, turn the small thumb nut (D, Fig. 2, page 4) at the front of the tension discs over to the right to increase the tension. To decrease the tension, turn this thumb nut over to the left.

The tension on the bobbin thread is regulated by the screw (P, Fig. 11, page 9) which is nearest the centre of the tension spring on the outside of the bobbin case. To increase the tension, turn this screw over to the right. To decrease the tension, turn this screw over to the left.

When the tension on the bobbin thread has been once properly adjusted, it is seldom necessary to change it, as a correct stitch can usually be obtained by varying the tension on the needle thread.

To Regulate the Length of Stitch

The length of stitch is regulated by the thumb screw (F, Fig. 2, page 4) in the slot on the front of the upright part of the arm. To lengthen the stitch, loosen this thumb screw and move it downwardly. To shorten the stitch, loosen this thumb screw and move it upwardly. When the desired length of stitch has been obtained, tighten the thumb screw (F).

To Regulate the Pressure on the Material

The pressure on the material is regulated by the thumb screw (C, Fig. 2, page 4). To increase the pressure, turn this thumb screw over to the right. To decrease the pressure, turn this thumb screw over to the left.

INSTRUCTIONS

FOR

ADJUSTERS AND MACHINISTS

To Set the Needle Bar at the Correct Height

See that the needle is pushed up into the needle clamp as far as it will go, then remove the face plate.

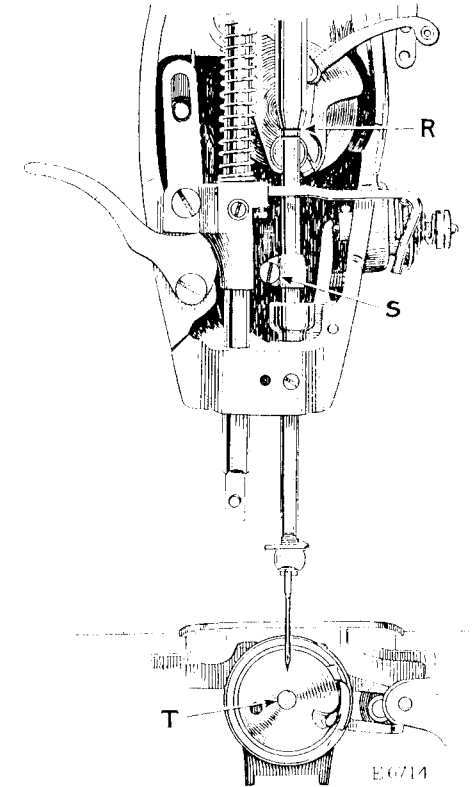


FIG. 19. SHOWING NEEDLE BAR AT THE CORRECT HEIGHT

The needle bar which is in the machine when shipped from the factory has two timing marks near its upper end.

Turn the balance wheel over toward you, until the needle bar moves down to its lowest point. When the needle bar is in this position, the **upper timing mark** on the needle bar should be centred with the lower end of the needle bar bushing, as shown at R, in Fig. 19.

In case the needle bar is not set at the correct height, loosen the screw (S, Fig. 19) in the needle bar connecting stud and move the needle bar up or down until the **upper timing mark** is centred with the lower end of the needle bar bushing, as shown at R, in Fig. 19, then securely tighten the screw (S).

To Time the Sewing Hook

Remove the slide plate and bobbin case. This will give a clear view of the sewing hook and the needle for the purpose of timing.

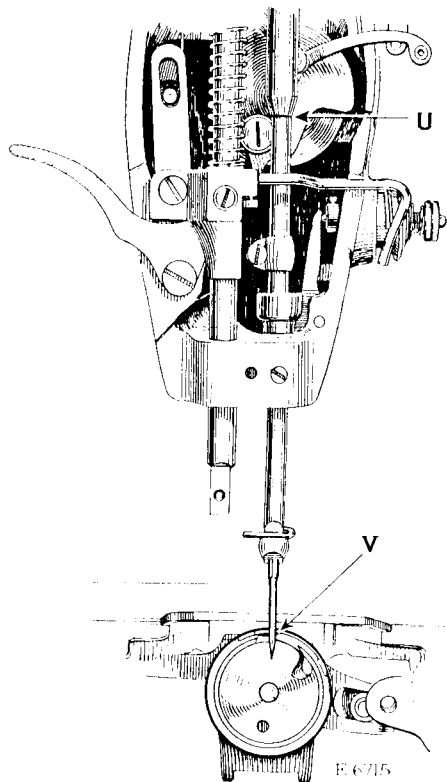


FIG. 20. NEEDLE AND SEWING HOOK CORRECTLY TIMED

To determine whether the hook is correctly timed, turn the balance wheel over toward you until the **lower timing mark** on the needle bar is centred with the lower end of the needle bar bushing, as shown at U, in Fig. 20, when the needle bar is on its upward stroke. When the needle bar is in this position, the point of the hook should be at the centre of the needle, as shown at V, in Fig. 20.

In case the hook is not correctly timed, loosen the two screws (A2, Fig. 21) in the hub of the hook and turn the hook on the shaft until the point of the hook is at the centre of the needle, as shown at V, in Fig. 20, then tighten the two screws (A2).

The hook should be set as close as possible to the needle without touching. If the hook is too close to the needle or too far away from it, loosen the two screws (A2, Fig. 21) and slide the hook in or out, as may be required, until the hook just clears the needle, then securely tighten the two screws (A2).

To Remove and Replace the Sewing Hook

Remove the needle, slide plate and bobbin case. Take out the bracket holder position screw (Y, Fig. 21) and remove the bracket holder (Z, Fig. 21).

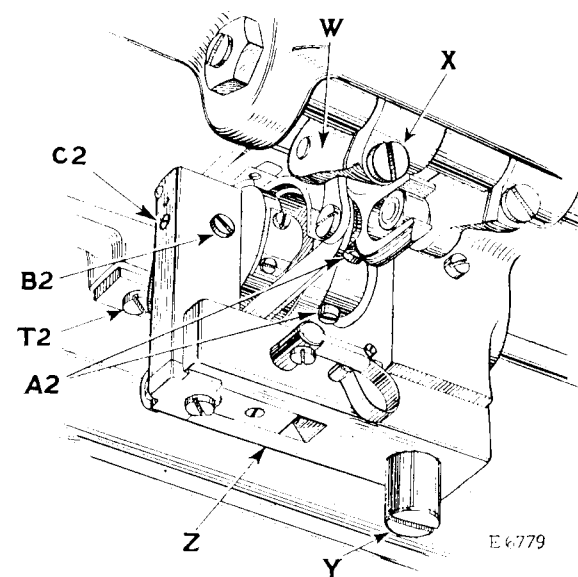


FIG. 21. VIEW OF UNDERSIDE OF MACHINE SHOWING BOBBIN CASE POSITION PLATE BRACKET ALSO ADJUSTMENTS ON THE MACHINE

Loosen the two set screws (A2, Fig. 21) in the hub of the hook, then turn the balance wheel over toward you until the feed bar is raised to its highest point. Take out the hinge screw (D2, Fig. 22) and let down the bobbin case lifter (E2, Fig. 22). The sewing hook can then be removed from the hook shaft.

Place the sewing hook on the shaft, replace the bobbin case lifter (E2) and the hinge screw (D2). Then replace the needle and time the sewing hook as instructed on page 18. Before tightening the two screws (A2, Fig. 21) in the hub of the sewing hook, make sure that the collar (K2, Fig. 26, page 22) is set closely against the bushing so as to eliminate end play in the shaft, then press the sewing hook toward the balance wheel and securely tighten the two screws (A2) in the hook. Replace the bracket holder (Z, Fig. 21) and securely fasten it in position by means of the screw (Y, Fig. 21). Then replace the bobbin case and slide plate.

To Set the Bobbin Case Lifter

The bobbin case lifter (E2, Fig. 22) should be set so that it raises the bobbin case out of contact with the bobbin case bear-

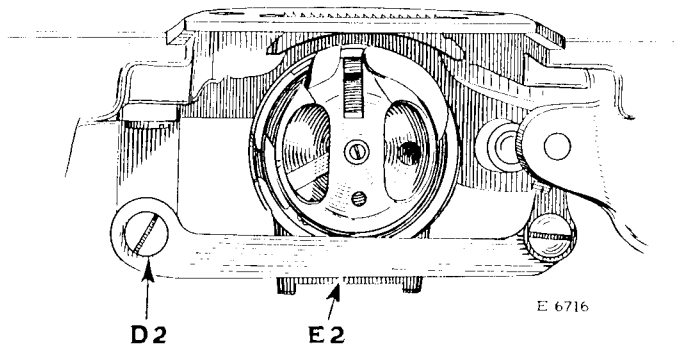


FIG. 22. VIEW OF MACHINE SHOWING BOBBIN CASE LIFTER

ing in the sewing hook when the feed dog is at its highest point. Care must be taken to see that the lifter (E2) does not raise the bobbin case high enough to cause the upper part of the bobbin case to touch the sewing hook. To make this adjustment, loosen the clamping screw (X, Fig. 21) and move the lifter crank (W, Fig. 21) up or down, as may be required, then securely tighten the clamping screw (X).

Sidewise Adjustment of the Bobbin Case Lifter

The bobbin case lifter (E2, Figs. 22 and 23), should be set so that its left side just clears the face of the bobbin case position plate (Q, Fig. 23) as shown at U2 in Fig. 23, when it lifts the bobbin case. To set the bobbin case lifter (E2) in the correct position (sidewise), loosen the two screws (X and T2, Fig. 21, page 19) and move the bobbin case lifter to the right or left, as may be required, then securely tighten the two screws (X and T2).

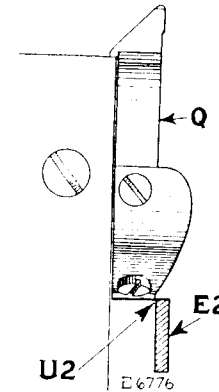


FIG. 23. SIDEWISE ADJUSTMENT OF BOBBIN CASE LIFTER

To Regulate Space for Thread Between the Bobbin Case and Bobbin Case Position Plate

The space between the bobbin case and bobbin case position plate (Q, Fig. 24) should be about .018 inch or just enough to

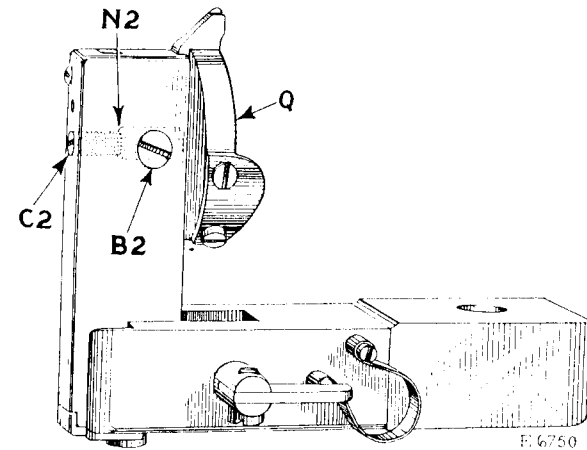


FIG. 24. VIEW OF BOBBIN CASE POSITION PLATE BRACKET SHOWING ADJUSTMENTS

permit size 24 cotton thread to pass through freely. To increase the space, loosen the set screw (B2, Fig. 24) and turn the stop screw (C2, Fig. 24) outwardly. To decrease the space, turn the stop screw (C2) inwardly. When the desired space is obtained, firmly tighten the set screw (B2). Care must be taken to see that the shank of the bobbin case position plate (Q) always rests securely against the stop screw (C2) as shown at N2 in Fig. 24.

To Remove and Replace the Sewing Hook Shaft

Remove the sewing hook as instructed on page 19. Take out the screw (G2, Fig. 25) and remove both sections of the gear case (H2, Fig. 25), then wipe the grease away from the gears.

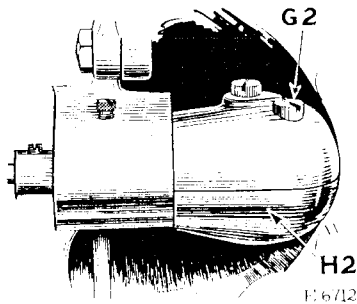


FIG. 25. VIEW OF UNDERSIDE OF MACHINE, SHOWING GEAR CASE

Before removing the hook shaft (J2, Fig. 26) from the machine, carefully note the mating marks on the gears (L2 and M2, Fig. 26). This is important, as the gears may become dislodged when removing the hook shaft, and the marks will enable you to return the gears to their original relative positions.

To remove the hook shaft (J2), loosen the two set screws in the gear (L2, Fig. 26), also loosen the two screws in the collar

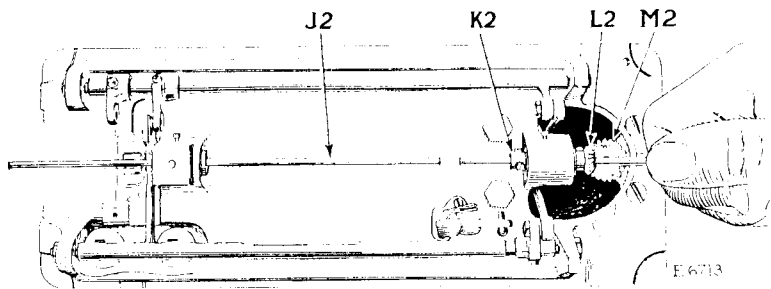


FIG. 26. REMOVING AND REPLACING SEWING HOOK SHAFT

(K2, Fig. 26), then insert the new hook shaft into the gear (L2), from the right hand end, pushing the old shaft out of the gear toward the needle bar by means of the new shaft as shown in Fig. 26. By removing the old shaft in this manner, the relative positions of the gears (L2 and M2) will not be disturbed. When placing the new shaft into position in the machine, see that the

flat portion near one end of the shaft is at the right, so that the set screw which is nearest to the mating mark on the gear (L2, Fig. 26) will bear against it when the gear is fastened in position on the shaft. The shaft should be set so that its left end is flush with the body of the sewing hook as shown at T, in Fig. 19, page 17. When the shaft is correctly positioned, push the collar (K2) closely against the bushing to eliminate end play and securely tighten the two set screws in the gear (L2), taking care that the set screw nearest to the mating mark on the gear bears against the flat portion on the shaft. Then time the sewing hook as instructed on page 18, and replace the bobbin case position plate bracket holder (Z, Fig. 21). Pack both halves of the gear case (H2, Fig. 25) with Singer High Speed Lubricant, replace the gear case and securely fasten it in position by means of the screw (G2, Fig. 25).

Timing of the Feeding Mechanism

As the position screw (O2, Fig. 27) in the feed lifting eccentric (P2, Fig. 27) enters a cut on the arm shaft, the time of the feeding mechanism cannot be altered.

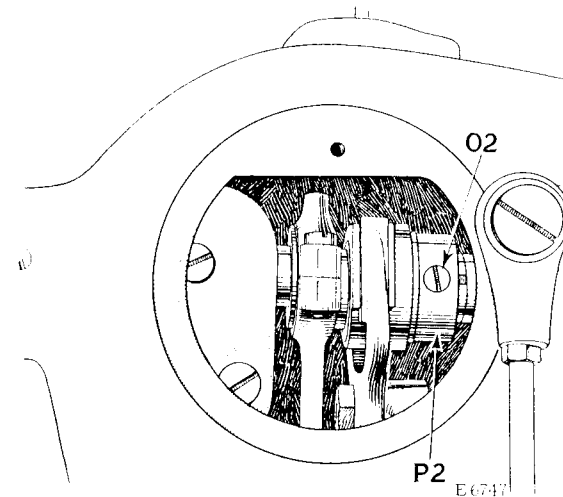


FIG. 27. FEED ECCENTRIC

To Adjust the Thread Take-up Spring

The thread take-up spring (Q2, Fig. 28) should be set so that when the eye of the needle reaches the goods on the downward

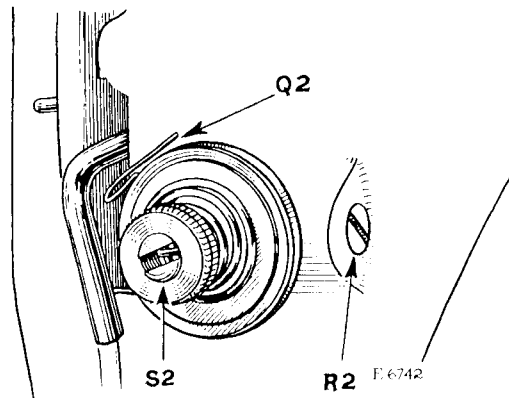


FIG. 28. ADJUSTMENT OF THREAD TAKE-UP SPRING

stroke of the needle bar, the spring will be through acting and will rest against the stop on the thread take-up spring regulator. If the thread take-up spring is not correctly set, loosen the set screw (R2, Fig. 28) in the arm of the machine, and turn the tension stud (S2, Fig. 28) to the right for more movement of the spring or to the left for less movement. When the spring is correctly set, securely tighten the set screw (R2).

The tension on the thread take-up spring (Q2) is regulated by turning the tension stud (S2) to the right to increase the tension, or to the left to decrease the tension.

The tension on the thread take-up spring should be just sufficient to take-up the slack of the needle thread until the eye of the needle reaches the goods in its descent.