SINGER
CLASS 15

USE ONLY

SINGER

"MANUFACTURING SEWING MACHINE OIL (Cloth and Leather)" for general use

or

"MANUFACTURING SEWING MACHINE OIL (Stainless for White Goods)" where a stainless oil is desired.

These specially prepared oils are the result of extensive research. They ensure freedom from lubricating trouble and give longer life to sewing machines.

THE IMPORTANCE OF USING SINGER NEEDLES FOR SEWING MACHINES

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

Singer Needles can be purchased from any Singer Shop for the Manufacturing Trade.

Genuine 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.

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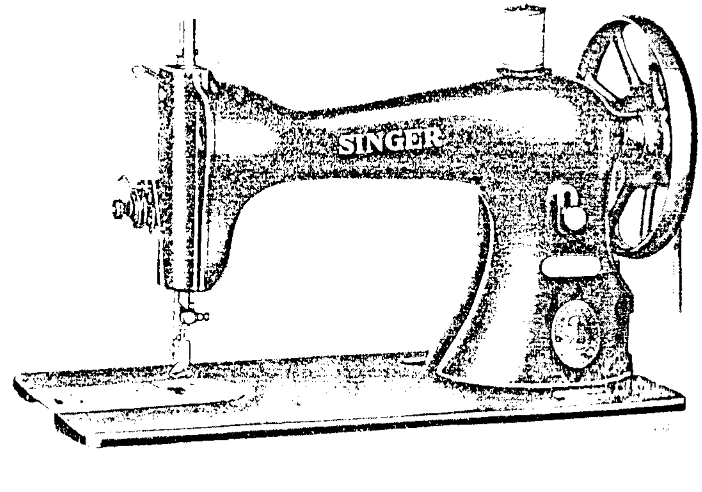
INSTRUCTIONS

FOR USING

SINGER SEWING MACHINES



OF

CLASS 15

CENTRAL BOBBIN, FOR MANUFACTURING

THE SINGER MANUFACTURING CO.

Purchasing of Parts and Needles

Supplies of parts and needles for Singer machines can be purchased at any Singer shop or ordered by mail. If orders are sent by mail, money or a post office order covering their value, including postage, should be enclosed and the order will then be promptly filled and forwarded by mail or express.

DESCRIPTION

Machines of Class 15, central bobbin, for manufacturing purposes, are made in several varieties as described below. They can be driven either by mechanical power or by foot power.

Machine 15-31, drop feed, is intended for general work in light weight fabrics such as are used in dressmaking and the manufacture of infants' wear, etc.

Machine 15-33, wheel feed, is used for general work in light weight leather.

Machine 15-35, drop feed, is especially fitted for making shirts and other articles of linen and cotton.

Machine 15-36 has a wheel feed and trimming attachment and is especially designed for work in leather gloves.

Speed

The maximum speeds recommended for manufacturing machines of Class 15 are as follows:

MACHINE	SPEED
15-31	1600
15-33	1600
15-35	1600
15-36	1490

The machines should be run slower than the maximum speed until the parts which are in movable contact have become glazed by their action upon each other.

Needles

Needles for Manufacturing Machines of Class 15 are as follows:

MACHINE	CLASS AND VARIETY NUMBERS	SIZES
15-31	16 x 73	14 and 16
15-33	16 x 74	11 and 14
15-35	16 x 73	14 and 16
15-36	16 x 97	11 and 14

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. 14, 16x73 Needles."

"100 No. 11, 16x74 Needles."

"100 No. 14, 16x97 Needles."

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

To Oil the Machine

To ensure easy running and prevent unnecessary wear of the parts which are in movable contact, the machine requires oiling. When the machine is received from the factory it should be thoroughly cleaned and oiled, and when in continuous use it should be oiled about twice a day.

Oil should be applied at the places shown by arrows in Figs. 2 and 3 and at all other places where there are parts in movable contact. Loosen the thumb screw in the round cover plate at the

back of the machine, turn the cover plate up and oil the bearings which are thus uncovered. Occasionally remove the face plate by

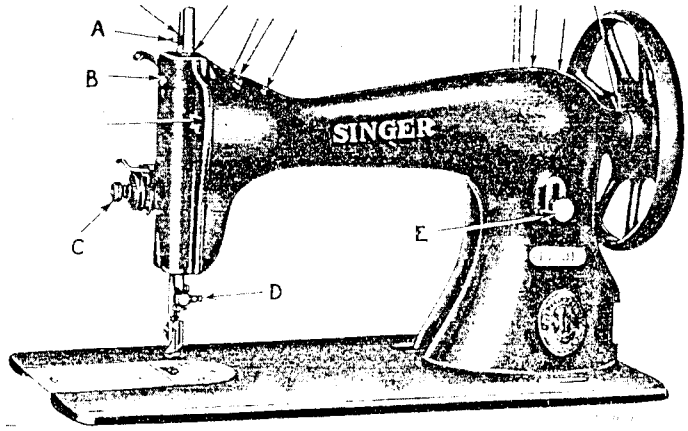


FIG. 2. OILING POINTS AND ADJUSTMENTS AT THE FRONT OF THE MACHINE

loosening the screw (B, Fig. 2) and sliding the face plate upward. Oil the bearings thus exposed and replace the face plate. Oil should be applied to the shuttle bearing in the shuttle race each time a bobbin is replaced.

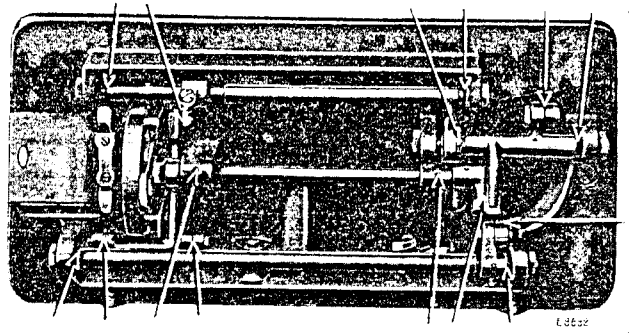


FIG. 3. BASE OF THE MACHINE, SHOWING OILING POINTS

Thread

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

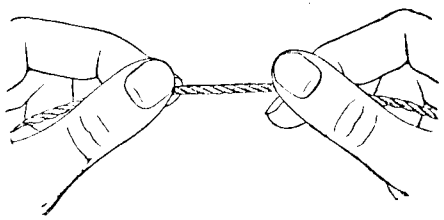


Fig. 4. How to Determine the Twist

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 Take Out the Bobbin

Draw to the left the slide in the bed of the machine. Reach down with the thumb and forefinger of the left hand, open the bobbin case latch (2, Fig. 5) and lift out the bobbin case. While the latch remains open the bobbin is retained in the bobbin case. Release the latch, turn the open end of the bobbin case downward and the bobbin will drop out.

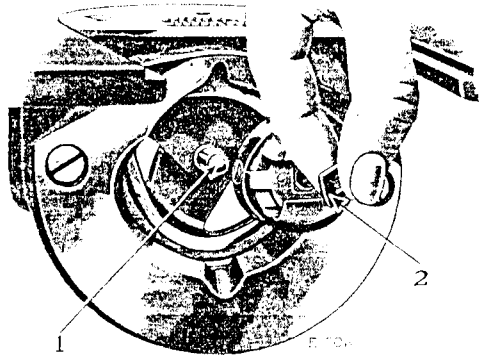


Fig. 5. Taking Out the Bobbin Case

To Wind the Bobbin

(See Fig. 6)

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. Fasten the spool holder to the table directly in line with the bobbin winder spindle as shown in Fig. 6.

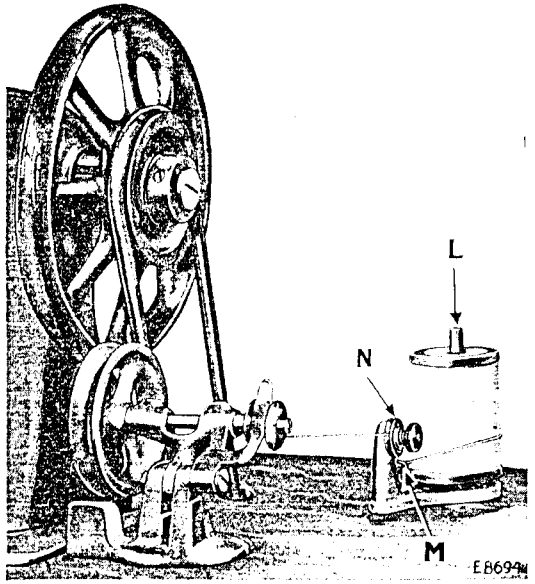


Fig. 6. Winding the Bobbin

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

Place the spool of thread on the spool stand pin (L). Pass the thread forward through the thread guide (M) in the tension bracket, around the back and between the tension discs (N). 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 in the tension bracket and move the bracket to the right or left as may be required, then tighten the screw.

Bobbins can be wound while the machine is stitching.

To Thread the Bobbin Case

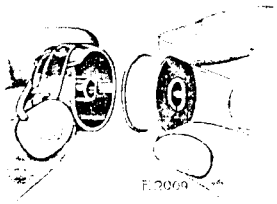


Fig. 7

Hold the bobbin between the thumb and forefinger of the right hand, the thread leading on top from the left toward the right (see Fig. 7).

With the left hand hold the bobbin case as shown in Fig. 7, the slot in the edge being at the top, and place the bobbin into it.

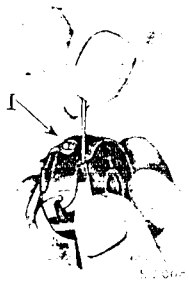


Fig. 8

Fig. 9

Then pull the thread into the slot in the edge of the bobbin case (see Fig. 8), draw the thread down under the tension spring and into the hook at the end of the tension spring (see Fig. 9).

To Replace the Bobbin Case

After threading, take the bobbin case by the latch (2, Fig. 5), holding it between the thumb and forefinger of the left hand; place the bobbin case on the centre stud (1, Fig. 5) of the shuttle body with the position finger opposite the notch at the top of the shuttle race, release the latch and press the bobbin case back until the latch catches the groove near the end of the stud. Allow about two inches of thread to hang free.

To Set the Needle

Turn the balance wheel over toward you until the needle bar moves up to its highest point; loosen the screw (D, Fig. 2, page 5) 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. 10)

Turn the balance wheel over toward you until the thread take-up lever (5) is at its highest point. Pass the thread from the spool

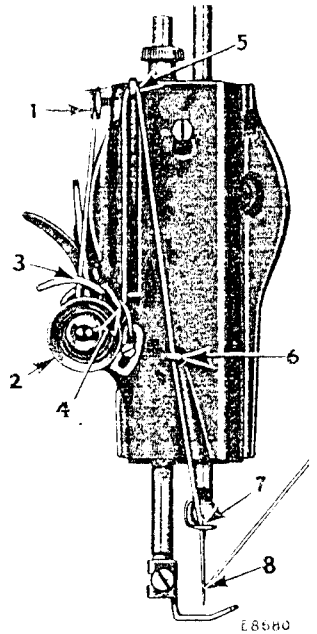


Fig. 10. Threading the Needle

pin at the top of the machine over between thread retainer discs (1), down under from back to front between tension discs (2), back of the tension thread guard (3), into the loop of the thread take-up spring (4), up and from back to front through the hole in the end of the thread take-up lever (5), down through eyelet (6) on the front of the face plate, into wire guide (7) on the needle clamp, and from left to right through the eye of the needle (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 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. Lay both threads back under the presser foot or roller presser.

To Commence Sewing

Place the material beneath the presser foot or roller presser, lower the presser bar 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 or roller presser, and draw the work back and cut the threads close to the goods.

To Regulate the Length of Stitch

The length of stitch is regulated by the thumb screw (E, Fig. 2, page 5) 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 (E).

To Regulate the Pressure on the Material

The pressure on the material is regulated by the thumb screw (A, Fig. 2, page 5). To increase the pressure, turn this thumb screw over to the right. To decrease the pressure, turn this thumb screw over to the left.

Tensions

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

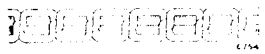


Fig. 11. Perfect Stitch

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:

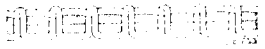


Fig. 12. Tight Needle Thread Tension

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 surface of the material, thus:

Fig. 13. Loose Needle Thread Tension

To Regulate the Tensions

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

The tension on the bobbin thread is regulated by the screw (1, Fig. 8) in 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 the 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 Ensure Perfect Action of the Machine

The balance wheel must always turn over toward the operator.

Do not run the machine with the presser foot or roller presser resting on the feed without cloth under the presser.

Do not run the machine when both bobbin case and needle are threaded unless there is material under the presser.

Do not try to help the machine by pulling the fabric lest you bend the needle; the machine feeds the work without assistance.

The slide over the bobbin case should be kept closed when the machine is in operation.

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 throat plate.

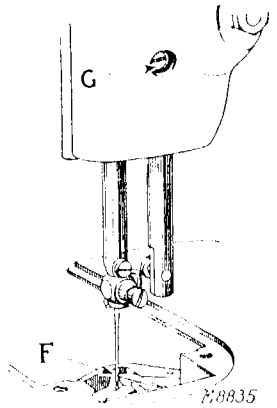


FIG. 14. SETTING THE NEEDLE BAR

Turn the balance wheel over toward you until the point of the shuttle is at the centre of the needle as shown at (F, Fig. 14), then the eye of the needle should be about $\frac{1}{16}$ inch below the point of the shuttle.

If the needle bar is not set at the correct height, loosen the needle bar clamping screw (G, Fig. 14) through the hole provided for the purpose in the arm. Raise or lower the needle bar as required, then securely tighten the clamping screw (G, Fig. 14).

To Remove the Wheel Feed

To remove the wheel feed from Machines 15-33 and 15-36, take out screw (H, Fig. 15) and loosen lock nut (J, Fig. 15). Turn screw centre (K, Fig. 15) to the left until the feed assembly can be removed from the machine.

When replacing the wheel feed, place the rear end of its rock shaft in place on its screw centre, then slip the assembly into

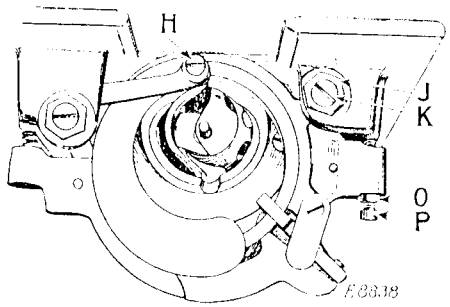


FIG. 15. ADJUSTMENT FOR RAISING AND LOWERING THE FEED WHEEL

position and fasten by turning screw centre (K, Fig. 15) to the right. Tighten lock nut (J) and replace screw (H).

To Remove and Replace the Shuttle Race

NOTE: On Machines 15-33 and 15-36 it is necessary to remove the feed assembly, as instructed above, before removing the shuttle race.

Turn the balance wheel over toward you until the needle bar moves up to its highest point. Take out the two screws (Q, Fig. 16) which hold the shuttle race in position and remove the shuttle race. The shuttle may now be removed from the shuttle race.

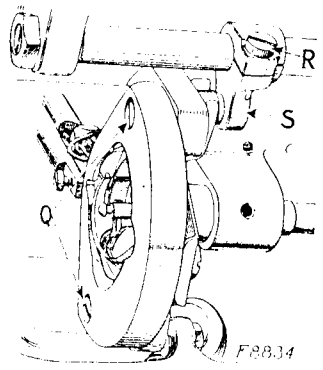


FIG. 16. ADJUSTMENT FOR RAISING AND LOWERING THE FEED DOG

When replacing the shuttle race, have the needle bar at its highest point and turn the shuttle in the race so that it correctly engages the shuttle driver, then securely fasten the shuttle race in position by means of the two screws (Q, Fig. 16).

To Raise or Lower the Feed Wheel on Wheel Feed Machines

The feed wheel should be set so that about the full depth of the teeth projects through the slot in the throat plate. To raise or lower the feed wheel, loosen the lock nut (O, Fig. 15) and lower the roller presser. Turn screw (P, Fig. 15) to the right or left until the feed wheel is at the required height, then tighten the lock nut (O).

To Raise or Lower the Feed Dog on Drop Feed Machines

The feed lifting rock shaft crank (S, Fig. 16) should be set so that when it raises the feed bar to its highest point, slightly less than the full depth of the teeth project through the slots in the throat plate. To raise or lower the feed dog, loosen the clamping screw (R, Fig. 16) and move the feed lifting rock shaft crank (S) until the feed dog is set at the required height, then securely tighten the clamping screw (R).

To Time the Feeding Mechanism

The feeding mechanism should be timed so that the feed dog or feed wheel finishes its feeding movement (away from the oper-

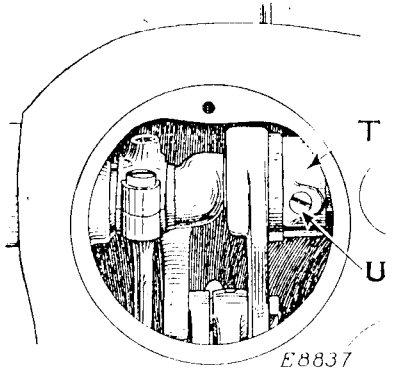


FIG. 17. ADJUSTMENT FOR TIMING FEEDING MECHANISM

ator) when the thread take-up lever (5, Fig. 10, page 9) is at its highest point. The feed should always finish its feeding movement before the needle reaches the goods on its downward stroke.

When it is necessary to time the feeding mechanism, press the stitch regulator (E, Fig. 2, page 5) down to its lowest point for the longest stitch and turn up the round cover plate at the back of the machine. Loosen the feed eccentric set screw (U, Fig. 17) and turn the feed eccentric (T, Fig. 17) until the feed is correctly timed as instructed above, then securely tighten the set screw (U).

To Adjust the Thread Take-up Spring

The thread take-up spring (V, Fig. 18) should be set so that when the eye of the needle reaches the goods on the downward

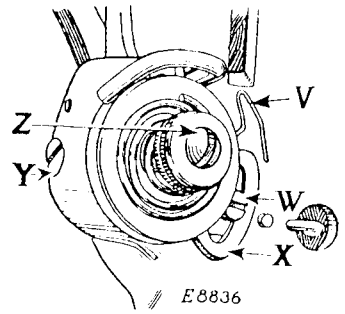


Fig. 18. Adjustment of Thread Take-up Spring

stroke of the needle bar, when sewing, the spring will be through acting and will rest against the thread guard. If the spring is not correctly set, loosen the screw (W, Fig. 18) and move the thread take-up spring regulator plate (X, Fig. 18) downward (to the right) for more movement of the spring, or upward (to the left) for less movement. When the spring is correctly set, securely tighten the screw (W).

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.

To increase the tension on the thread take-up spring (V), loosen the set screw (Y, Fig. 18) at the rear of the tension discs and turn the tension screw stud (Z, Fig. 18) to the right for more tension, or to the left for less tension, then tighten the set screw (Y).