

SINGER
112W139

USE SINGER* OILS and LUBRICANTS

They insure freedom from lubricating trouble and give longer life to sewing equipment

The following are the correct lubricants for this machine:

TYPE B — MANUFACTURING MACHINE OIL, HEAVY GRADE

When an oil is desired which will produce a minimum of stain on fabrics, even after a long period of storage, use:

TYPE D — MANUFACTURING MACHINE OIL, HEAVY GRADE

OTHER SINGER* LUBRICANTS

TYPE E — THREAD LUBRICANT

For lubricating the needle thread of sewing machines for stitching fabrics or leather where a thread lubricant is required.

TYPE F — MOTOR OIL

For oil lubricated motors and plain bearings in power tables and transmitters.

NOTE: All of the above oils are available in 1 quart, 1 gallon and 5 gallon cans.

GEAR LUBRICANT

This specially prepared grease is recommended for gear lubrication on manufacturing sewing machines.

BALL BEARING LUBRICANT

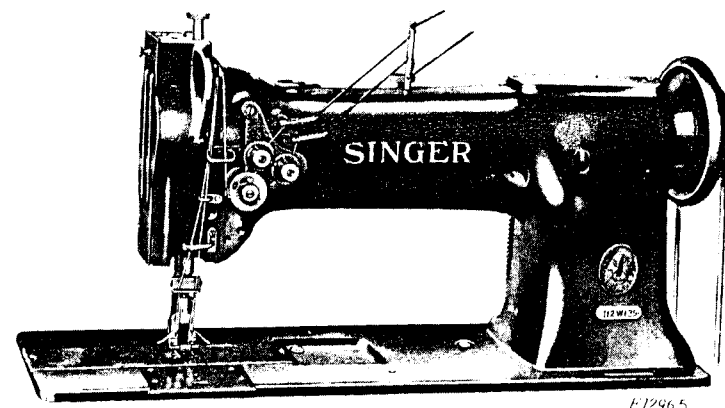
This pure grease is specially designed for the lubrication of ball bearings and ball thrust bearings of motors and electric transmitters, ball bearing hangers of power tables, etc. Furnished in 1 lb. and 4 lb. tins.

Form K6557
(563)

INSTRUCTIONS

FOR USING AND ADJUSTING

SINGER* SEWING MACHINE



112w139

THE SINGER COMPANY

*A Trademark of THE SINGER COMPANY

Printed in Great Britain

DESCRIPTION

Machine 112w139 is fitted with a compound feed and alternating pressers which especially adapt it for stitching canvas, rubberized fabrics and a large variety of other work, including the binding of blankets, etc. Has improved vibrating presser bar mechanism and pressure spring to ensure positive feed at high speed.

The machine has two needles and two rotary sewing hooks and simultaneously makes two parallel lines of lock stitching.

The distance between the two needles may be from $\frac{1}{8}$ to $1\frac{1}{2}$ inches, as ordered.

Speed

The maximum speed recommended for Machine 112w139 is 2900 per minute, depending upon the thickness and kind of material to be sewn. The machine 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. When the machine is in operation, the machine pulley should always turn over toward the operator.

To Oil the Machine

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

Use **"TYPE B"** or **"TYPE D"** OIL, sold only by Singer Sewing Machine Company. For description of these oils, see inside front cover.

Copyright under International Copyright Union

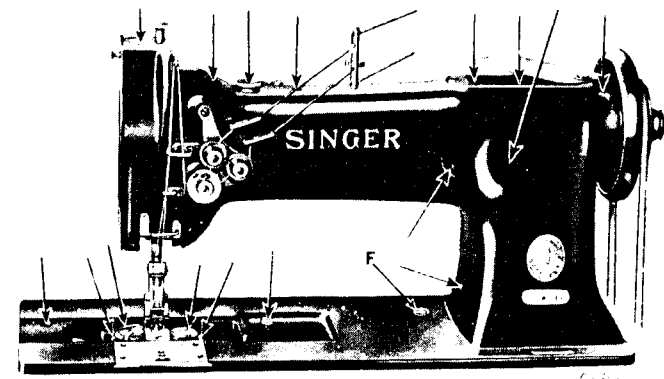


Fig. 2. Oiling Points at the Front of the Machine

Oil should be applied at each of the places designated by arrows in Figs. 2, 3, 4 and 5. When the machine is in continuous use, it should be oiled at least twice each day. Swing back the cover which is on the top of the machine at the right, and oil the bearings which are thus uncovered, then replace the cover.

Loosen the thumb screw in the upper end of the face plate, turn the face plate upward and oil the wick and bearings which

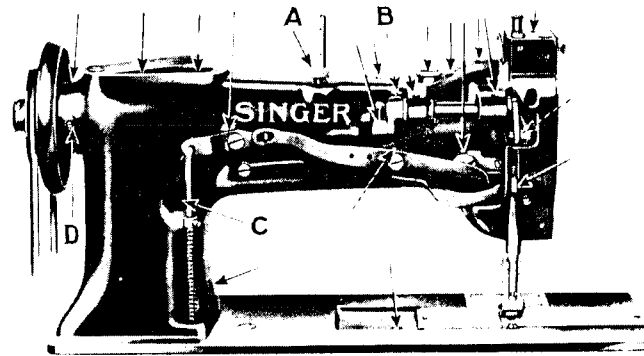


Fig. 3. Oiling Points at the Back of the Machine
Also Adjustments on the Machine

are thus uncovered, then turn down the face plate and tighten the thumb screw.

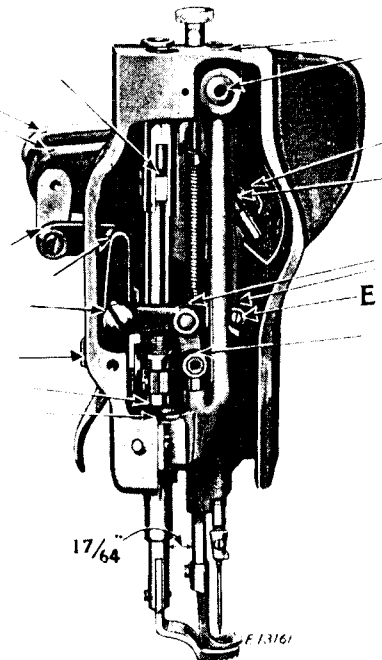


Fig. 4. End View of Machine, Showing Oiling Points
Also Adjustments on the Machine

Turn the machine back on its hinges and apply oil at the places designated by arrows as shown in Fig. 5, and all other

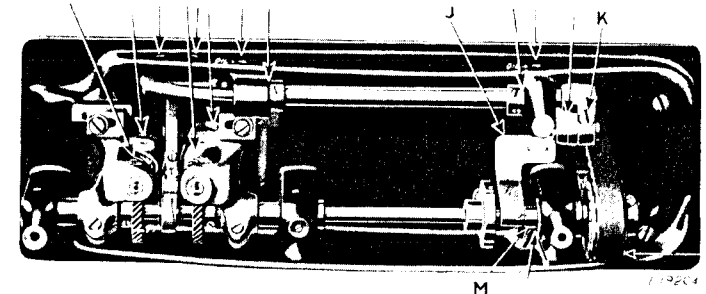


Fig. 5. Base of Machine, Showing Oiling Points
Also Adjustments on the Machine

places where there are parts in movable contact, then bring the machine forward into place.

Oil the bobbin case bearings in the hook races each time a bobbin is replaced.

Needles

Needles for Machine 112w139 are of Catalogue 3305 (126x9) and are made in sizes 14, 16, 18, 20, 22, 23 and 24.

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 and also the Catalogue number.

The following is an example of an intelligible order:

"100 No. 18, Catalogue 3305 Needles."

The best results will be obtained in using needles sold by Singer Sewing Machine Company.

Thread

Use left twist thread for both needles. Either left or right twist thread may be used for the bobbins.

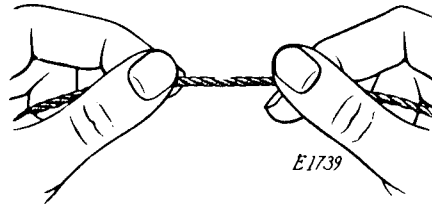


Fig. 6. How to Determine the Twist

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

The Relative Sizes of Needles and Thread

The following sizes of needles and thread are recommended:

Needle Sizes	Cotton Ticket Size	Mercerized Cotton	Nylon or Dacron Denier
9, 10, 11	90/3	————	15, 23
10, 11, 12	80/3	0000	23, 30
11, 12, 13	70/3	000	23, 30, 33
12, 13, 14	60/3	00	33, 42, 46
14, 15, 16	50/3	0	42, 46
16, 17, 18	40/3	A	42, 46, 49, 69
16, 17, 18	36/3	A	42, 46, 49, 69
17, 18, 19	30/3	B	49, 69, 92
18, 19, 20	24/3	C	69, 92, 99
19, 20, 21	20/3	D	92, 99, 115
20, 21, 22	16/3	E	99, 115, 138
21, 22, 23	12/3	F	115, 138
22, 23, 24	10/3	————	138, 207, 220

To Set the Needles

Turn the machine pulley over toward you until the needle bar moves up to its highest point; loosen the set screws in the needle holder and put the needles up into the holder as far as they will go, the inside needle or the one nearest the upright part of the arm having its long groove toward the left, and the outside needle or the one farthest from the upright part of the arm having its long groove toward the right, the eyes of both needles being directly in line with the machine bed, then tighten the set screws.

To Remove the Bobbins

Draw out the slide plates in the bed of the machine. Insert the finger nail of the forefinger under the latches (A and B, Fig. 7), raise the latches and lift out the bobbins.

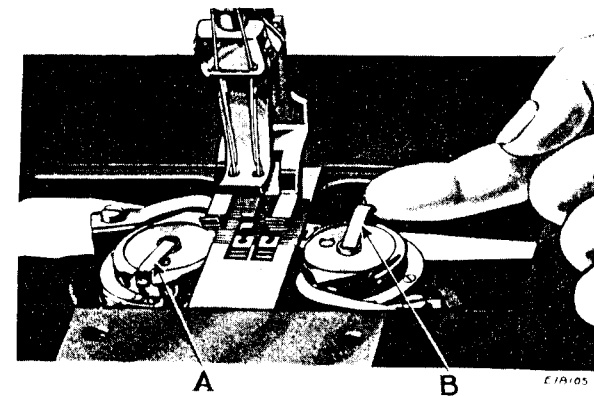


Fig. 7. Removing the Bobbin

To Wind the Bobbin

(See Fig. 8)

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.

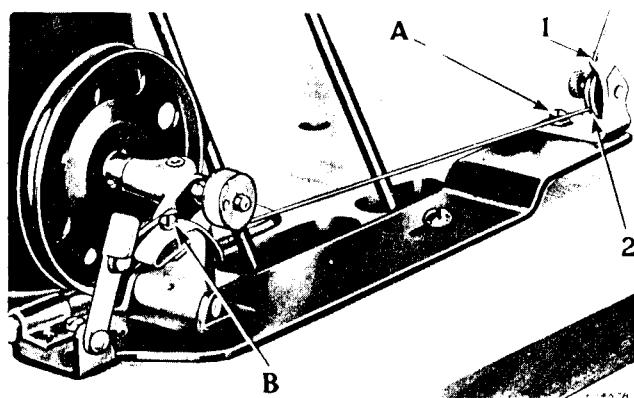


Fig. 8. Winding the Bobbin

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 the screw outwardly.

Bobbins can be wound while the machine is stitching.

To Replace the Bobbins and Thread the Bobbin Cases

The following instructions apply to both bobbins:

Hold the bobbin between the thumb and forefinger of the left hand, the thread drawing on top from the right toward the

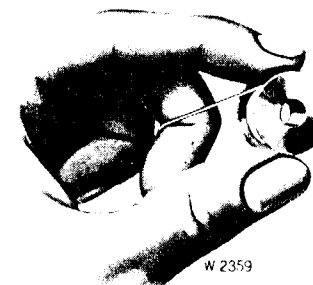


Fig. 9. Direction of Thread on Bobbin

left (see Fig. 9), and place it on the centre stud of the bobbin case, then push down the latch as shown in Fig. 10. Draw the thread into the slot (1, Fig. 10) and back of the projection (2, Fig. 10), leaving a loose end of thread about two inches long above the slide. When closing the slides, leave just enough space for the threads to pass through.

Always oil the bobbin case bearings in the hook races each time a bobbin is replaced.

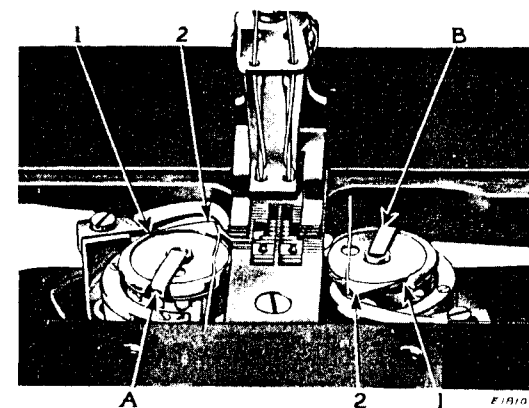


Fig. 10. Threading the Bobbin Cases

Upper Threading

To thread the outside needle or the one farthest from the upright part of the arm, pass the thread from the unwinder from

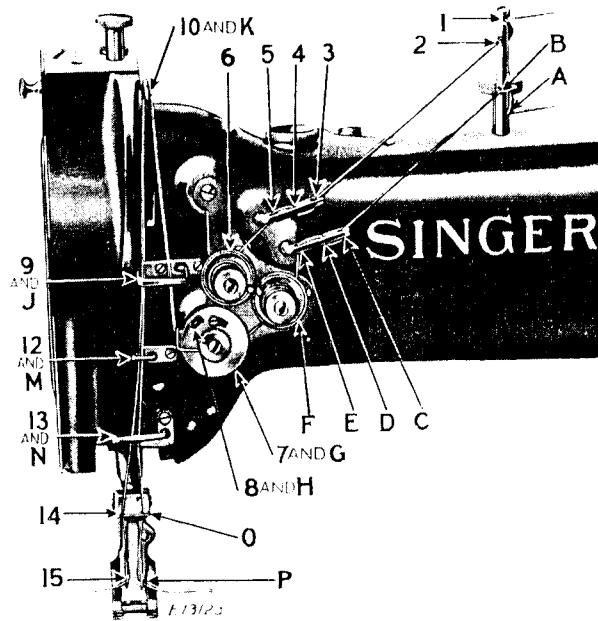


Fig. 11. Upper Threading

back to front through the hole (1) in the pin on top of the machine, then from right to left through the hole (2) in the pin down through the hole (3), up through the hole (4) and down through the hole (5) in the thread guide at the front of the machine, over from right to left between the left tension discs (6), down under from right to left around the thread controller (7), up into the fork (8) of the thread controller against the pressure of the wire controller spring, up through the thread guide (9), up and from right to left through the upper hole (10) in the end of the thread take-up lever, down through the thread guide (9) again, and through the thread guides (12 and 13), down

through the left hole (14) in the needle holder and from right to left through the eye of the left or outside needle (15).

To thread the inside needle or the one nearest the upright part of the arm, pass the thread from the unwinder from back to front through the hole (A) in the pin on top of the machine, then from right to left through the hole (B) in the pin, down through the hole (C), up through the hole (D) and down through the hole (E) in the thread guide at the front of the machine, over from right to left between the right tension discs (F), down under from right to left around the thread controller (G), up into the fork (H) of the thread controller against the pressure of the wire controller spring, up through the thread guide (J), up and from right to left through the lower hole (K) in the end of the thread take-up lever, down through the thread guide (J) again, and through the thread guides (M and N), down through the right hole (O) in the needle holder and from left to right through the eye of the right or inside needle (P).

Draw about three inches of thread through the eye of each needle with which to commence sewing.

To Prepare for Sewing

With the left hand hold the ends of the needle threads, leaving them slack from the hand to the needles. Turn the

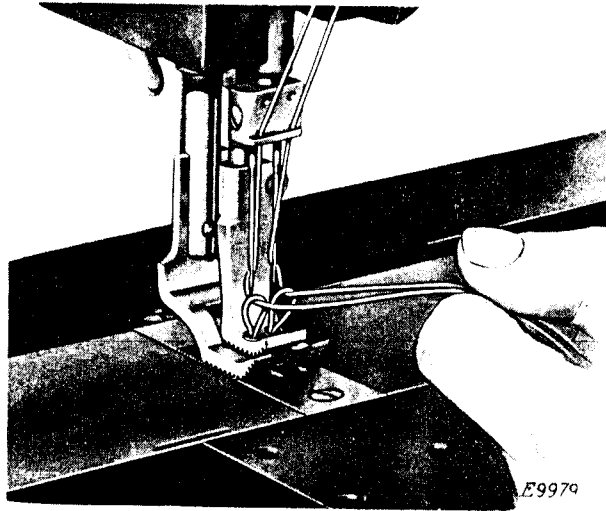


Fig. 12. Drawing Up the Bobbin Threads

machine pulley over toward you until the needles move down and up again to their highest point, thus catching the bobbin threads; draw up the needle threads and the bobbin threads will come up with them through the holes in the feed dog (see Fig. 12). Lay the threads back under the presser feet and close the slides.

To Commence Sewing

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

To Remove the Work

Have the thread take-up lever at the highest point, raise the presser feet, draw the work back and cut the threads close to the goods. Lay the ends of the threads back under the presser feet.

Tensions

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



Fig. 13. 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. 14. 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. 15. Loose Needle Thread Tension

To Regulate the Tensions

The tensions on the needle threads are regulated by the two thumb nuts (D, Fig. 17) at the front of the tension discs on the front of the machine. To increase the tension, turn these thumb nuts over to the right. To decrease the tension, turn the thumb nuts over to the left.

The tensions on the bobbin threads are regulated by means of the screw nearest the centre of the tension spring on the outside of each bobbin case cap. To increase the tension, turn the screw which is nearest the centre of the tension spring on the outside of the bobbin case cap over to the right. To decrease the tension, turn the screw over to the left.

To Regulate the Length of Stitch

The length of stitch is regulated by the thumb screw (A, Fig. 16) at the right of the balance wheel.

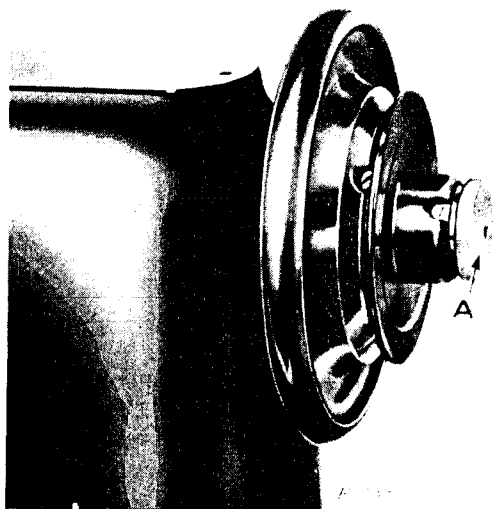


Fig. 16. Stitch Regulator

There is a notch in the hub of the machine pulley as shown in Fig. 16 and the number appearing in the notch shows the number of stitches to the inch that the machine is ready to make.

To lengthen the stitch, turn the thumb screw (A) over toward you. To shorten the stitch, turn the thumb screw over from you.

To Regulate the Pressure of the Presser Feet on the Material

The pressure of the presser feet on the material should only be sufficient to enable the feed to move the work along evenly. To increase the pressure, turn the thumb screw (A, Fig. 3) downwardly. To decrease the pressure, turn this thumb screw upwardly.

INSTRUCTIONS FOR ADJUSTERS AND MACHINISTS

Thread Controller

The function of the thread controller spring is to hold back the slack of the needle threads until the eye of each needle nearly reaches the goods in its descent, as without this controlling action of the spring, the slack thread or silk (more especially silk) will sometimes be penetrated by the point of the needle as the needle is descending.

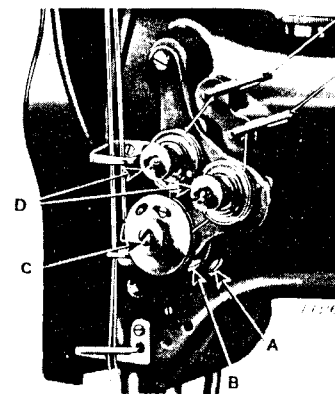


Fig. 17. Adjustment of Thread Controller

To change the thread controller stop for more controller action on the thread, loosen the set screw (B, Fig. 17) and rotate the thread controller spring stop to the right; for less action, rotate to the left, after which securely tighten the set screw (B).

It may be found advisable to increase the tension of the spring for coarse thread, or to lessen it for fine thread.

To increase the tension of the thread controller on the threads, loosen the tension stud set screw (A, Fig. 17), located nearly under the tension stud, and turn the tension stud (C, Fig. 17) slightly to the left with a screwdriver, or to decrease the tension, turn it to the right and retighten the stud set screw (A).

To Set the Needle Bar

See that the needles are up in the holder as far as they will go. There are two lines across the needle bar about two inches above the lower end. When the needle bar is at its lowest position, the upper mark should be just visible at the end of the needle bar frame.

In case the needle bar is not correctly set, loosen the needle bar connecting stud pinch screw (E, Fig. 4) and place the needle bar in the correct position as directed above, then retighten the screw (E).

To Set a Needle Bar Which Has no Mark. Set the stitch regulator to indicate 8 stitches to the inch, then set the needle bar so that when it rises $\frac{3}{8}$ inch from its lowest position, the points of the sewing hooks will be at the centre of the needles and about $\frac{1}{16}$ inch above the eye.

Relative Positions of Vibrating Presser Bar and Lifting Presser Bar

The distance between the vibrating presser bar and lifting presser bar, after turning the feed regulating spindle head (A, Fig. 16) so that there is no feed movement of the needle bar, should be $\frac{3}{16}$ inch, as shown in Fig. 4.

If the distance between the vibrating presser bar and the lifting presser bar is more or less than $\frac{3}{16}$ inch, insert a screwdriver in the hole (C, Fig. 3) at the rear of the machine and loosen the screw therein. While this screw is loose, the needle bar frame can be moved forward or backward, as may be required, until the distance between the vibrating presser bar and lifting presser bar is $\frac{3}{16}$ inch. A piece of metal $\frac{3}{16}$ inch wide may be used to determine the correct distance. When making this adjustment be sure to see that the feed regulating spindle head (A, Fig. 16) is adjusted so that there is no feeding movement of the needle bar. When the adjustment has been made, securely tighten the screw at (C, Fig. 3.)

To Adjust the Relative Height of Lift of the Vibrating and Lifting Pressers

The amount of lift of the vibrating and lifting presser feet should be regulated according to the thickness of the material being sewn. The feet should lift just high enough to clear the material. As a rule, the vibrating and lifting pressers should lift an equal height, but some grades of work may require that they lift an unequal height. To change the relative lift of the presser feet, loosen the screw (B, Fig. 3) at the back of the machine, and move the presser bar upwardly or downwardly as required, then securely tighten the screw (B).

To Time the Sewing Hooks

Set the feed regulator spindle head to indicate eight stitches to the inch.

Remove the throat plate and turn the machine pulley over toward you until the lower mark across the needle bar is just visible at the end of the needle bar frame on the upward stroke of the needle bar. If the needle bar and sewing hooks are correctly timed, the point of each hook will be at the centre of its needle and about $\frac{1}{16}$ inch above the eye.

Loosen the two screws in the hub of the hook driving gears (W, Fig. 18) and tap these gears to the right or left on the hook driving shaft until the point of each hook is at the center of its needle. Tapping to the right gives an earlier hook timing, and to the left a later hook timing. Securely tighten the two set screws in each gear.

To Set the Sewing Hooks to or From the Needles

To prevent the points of the hooks from dividing the strands of the threads, they should run as close to the needles (within the scarf) as possible.

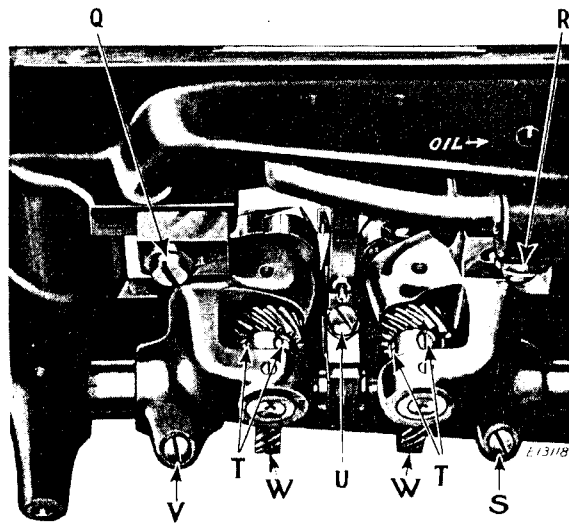


Fig. 18. Adjustment of Hook Saddles

Turn the machine pulley over toward you until the points of the sewing hooks are at the centre of the needles. Loosen the four screws (Q, R, S and V, Fig. 18) underneath the bed of the machine and move the hook saddles to the right or left, as may be required, until the points of hooks are as close to the needles as possible without striking them, then securely tighten the four screws (Q, R, S and V).

The function of the hook washer (E, Fig. 20) (which is attached to the bottom of the sewing hook), is to prevent the point of the hook from striking the needle, if, when passing through the material, the needle is deflected towards the hook.

The upright portion of the hook washer should be sprung with a screwdriver or other instrument until it prevents the hook point from striking the needle; it should not, however, be sprung outwardly enough to deflect the needle from its normal path.

To Remove the Bobbin Case Bases from the Sewing Hooks

Remove the four hook gib screws (C, Fig. 19) from the sewing hooks, lift off the hook gibs (D, Fig. 20) and remove the bobbin case bases (B, Fig. 19).

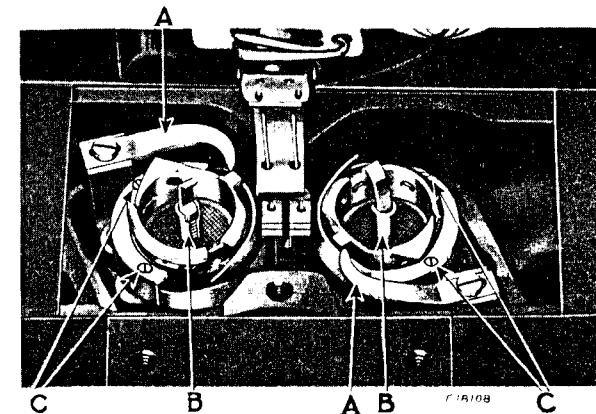


Fig. 19. Removing Bobbin Case Bases

To Remove the Sewing Hooks from the Machine

Remove the throat plate, feed dog and the two bobbin case opening levers (A, Fig. 19). Also remove the bobbin case bases as instructed above, then take out the four screws (T, Fig. 18) from the hook shaft gears and lift out the sewing hooks.

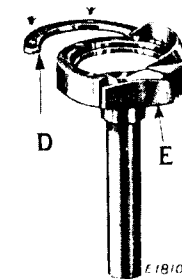


Fig. 20. Sewing Hook Removed from Machine Showing Hook Washer

Adjustment of Feed Regulating Spindle Head

The figures on the feed regulating spindle head (DD, Fig. 21), showing through the notch in the machine pulley indicate

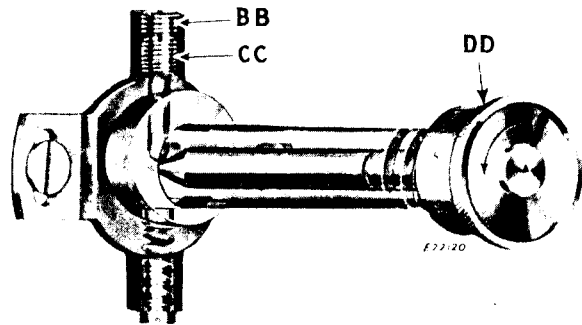


Fig. 21. "X-Ray" View of Feed Driving Eccentric Regulating Bracket and Shaft, showing the feed regulating spindle and adjusting screw (CC) which comes in contact with the cone of the spindle to gauge the length of stitch

the number of stitches to the inch which should be made. If more or less stitches are made, adjust as follows: Remove screw (BB, Fig. 21), set the indicator at 8 and the feed dog at its highest point, a full tooth showing above the throat plate, then adjust screw (CC, Fig. 21) until eight stitches to the inch is the result and replace check screw (BB) firmly.

By making this adjustment with the stitch indicator set at 8 stitches, the full range of the stitch regulator is automatically taken care of so that the number appearing in the notch in the machine pulley will always indicate the correct number of stitches to the inch that the machine is ready to make.

To Set the Feed Regulator so that a Stitch Longer Than the One Desired Cannot be Made. Turn the spindle head (DD, Fig. 21) as far as possible in the direction indicated by the arrow in Fig. 21; remove check screw (BB) and turn screw (CC) down until the machine makes the desired number of stitches to the inch, then turn screw (BB) down tightly on screw (CC) as a check. The stitches may then be changed by turning the stitch regulator (DD) for shorter stitches, but operators cannot make a longer stitch than that limited by the above adjustment.

To Raise or Lower the Feed Dog

Usually when the feed dog is at its highest position, it should show a full tooth above the throat plate.

Remove the throat plate; clean the lint and dust from between the feed points and replace the throat plate; tip the machine back and turn the machine pulley towards you until the feed dog is at its highest position; loosen screw (U, Fig. 18) in the feed lifting eccentric fork and raise or lower the feed dog, as may be required, then retighten the screw (U).

When raising or lowering the feed dog, be careful that its underside does not drop low enough to strike the sewing hooks.

The feed dog should be set so that when the needles are down they should be slightly in front of the centre (toward the operator) of the needle holes. In case the needles do not enter the holes in the feed dog correctly, loosen the pinch screw (K, Fig. 5) and adjust the feed dog as required, then securely tighten the pinch screw (K).

To Remove the Needle Bar Rock Frame Rock Shaft

Remove the face plate and needle bar rock frame, then loosen the clamp screw at (C, Fig. 3) and draw out the rock shaft.

To Remove the Arm Shaft Connection Belt from Within the Arm

Slide the connection belt off lower pulley (L, Fig. 5); remove the feed regulating spindle head and machine pulley; loosen the arm shaft bushing (back) screw (D, Fig. 3) at the back of the arm and remove the bushing; lift the belt up through the arm cap hole as far as possible and draw it out through the space normally occupied by the bushing.

Owing to the fact that the sewing hooks make two revolutions to one revolution of the arm shaft, and that the feed lifting eccentric is on the hook shaft, it is possible to have the sewing hooks correctly timed without having the feed eccentric correctly timed. To overcome this, the plate (J, Fig. 5) is attached to the underside of the bed of the machine. This plate is marked with an

arrow at its lower end and directly alongside of the plate is the collar (M, Fig. 5) mounted on the hook shaft, which is also marked with an arrow. When replacing the belt, replace the arm shaft bushing and securely fasten it in position by the screw (D, Fig. 3) at the back of the machine; replace the feed regulating spindle head and the machine pulley, and place the belt on the upper pulley, and then turn the machine pulley over toward you until the thread take-up lever is at its highest point. Then turn the hook shaft with the fingers until the two arrows, one on plate "J" and the other on collar "M", are directly in line. Now, without disturbing either the arm shaft or the hook shaft, slip the belt over the lower pulley (L, Fig. 5). The feed will then be correctly timed with the needle bar.

To Re-engage the Safety Clutch

The hook driving shaft and the shaft of the sewing hook are splined to prevent the hook from getting out of time. The safety clutch located in the lower belt pulley prevents damage in the event of any strain on the sewing hook by releasing the locking lever in the pulley from the notch (D1, Fig. 24) in the collar of the hook driving shaft.

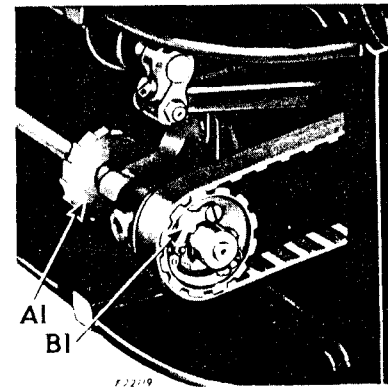


Fig. 23. Safety Clutch Disengaged

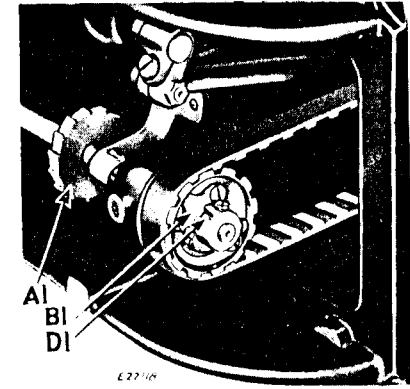


Fig. 24. Operating Position

Draw back the bed slide, turn the machine pulley back and forth slightly, and remove the material that may be jamming the hook. If necessary to re-engage the clutch, press down the lock stud (F, Fig. 2) near the base of the arm to engage the hook driving shaft lock ratchet (A1, Fig. 23) which will prevent the hook driving shaft from turning backward. Turn the machine pulley away from you until the locking lever (B1) snaps into the notch (D1) in the shaft collar as shown in Fig. 24. Release the lock stud and resume sewing.