

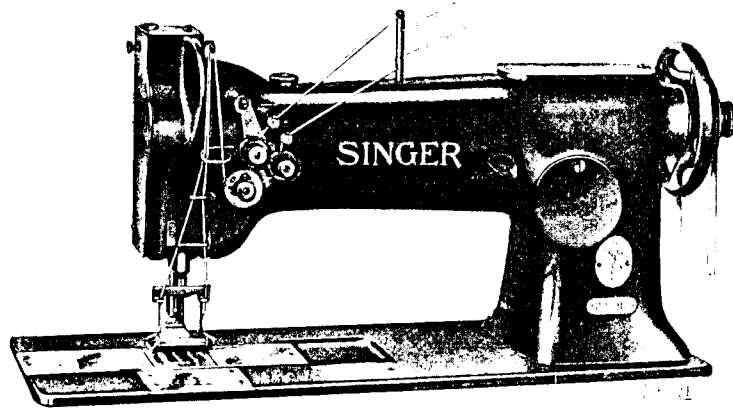
SINGER
112W118

2015w

INSTRUCTIONS

FOR USING

SINGER SEWING MACHINE



112w118

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

Machine 112 w 118 has two needles and two rotary sewing hooks and simultaneously makes two parallel lines of lock stitching. It is fitted with a gathering feed which acts in conjunction with a needle feed and is used for stitching button stays, facings and similar operations in the manufacture of garments made of rayon or knitted fabrics, including underwear, sweaters, etc.

The distance between the needles may be from $\frac{1}{4}$ to $1\frac{1}{2}$ inches as ordered.

Speed

The maximum speed recommended for Machine 112 w 118 is 3000 per minute. 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 balance wheel 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.

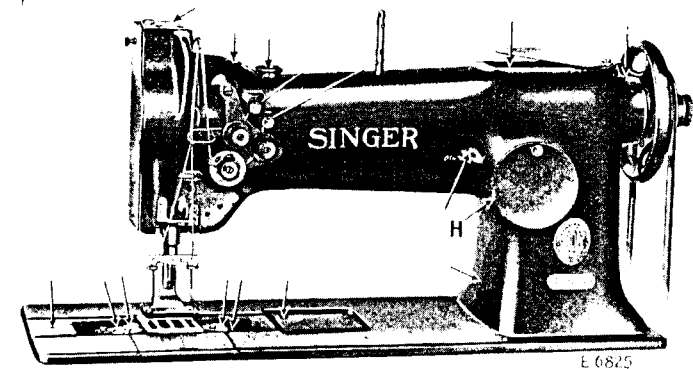


Fig. 2. Oiling Points and Adjustments at the Front of the Machine

Oil should be applied at each of the places designated by arrows in Figs. 2, 3, 4 and 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 raise the round plate (H, Fig. 2) at the front of the machine and oil the bearings which are thus uncovered, then replace the covers.

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

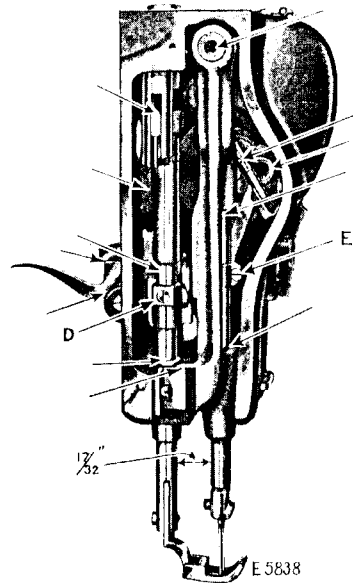


Fig. 3. End View of Machine. Showing Oiling Points

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

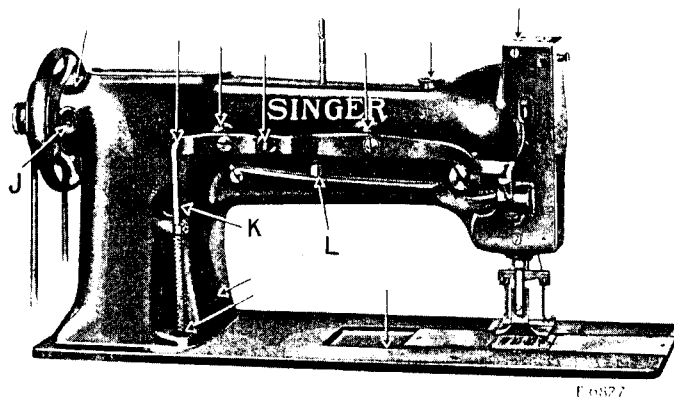


Fig. 4. Oiling Points at the Back of the Machine

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

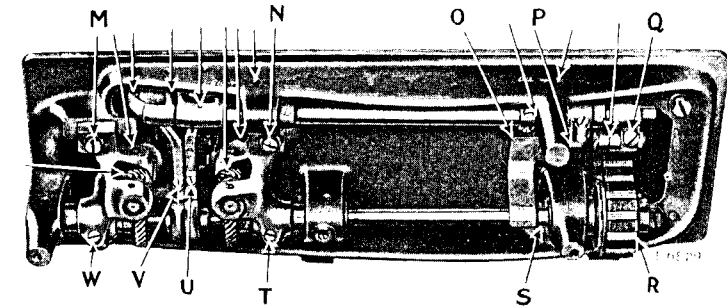


Fig. 5. Base of Machine, Showing Oiling Points

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

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

Needles

Needles for Machine 112 w 118 are of Class and Variety 135 x 7 and are made in sizes Nos. 12, 14, 16, 18, 20, 22 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, also the class and variety numbers separated by the letter x.

The following is an example of an intelligible order:

"100 No. 14, 135 x 7 Needles."

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

Thread

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

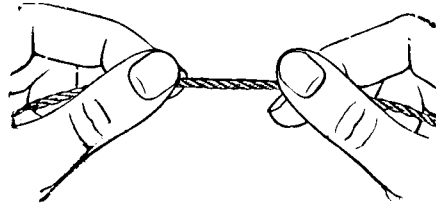


Fig. 6. How to Determine the Twist

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:

SIZES OF NEEDLES	COTTON	SILK
12	70, 80	OO, O
14	60, 70	O, A
16	40 to 60	A, B
18	30 to 40	B, C
20	24, 30	D, E

To Set the Needles

Turn the balance wheel 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. Turn the balance wheel over toward you until the needle bar moves up to its highest point. Insert the finger nail of the forefinger under the latches (F and G, Fig. 7), raise the latches and lift out the bobbins.

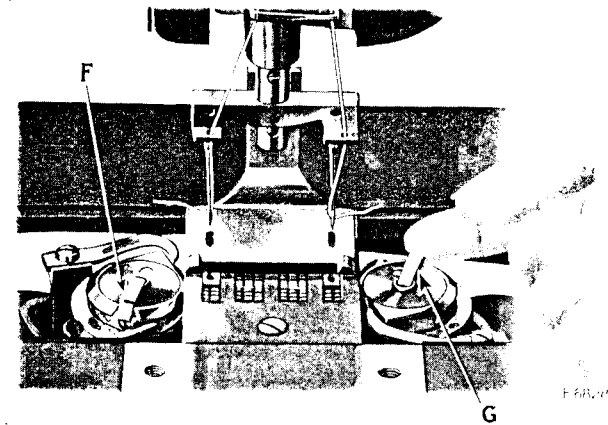


Fig. 7. Removing the Bobbin

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.

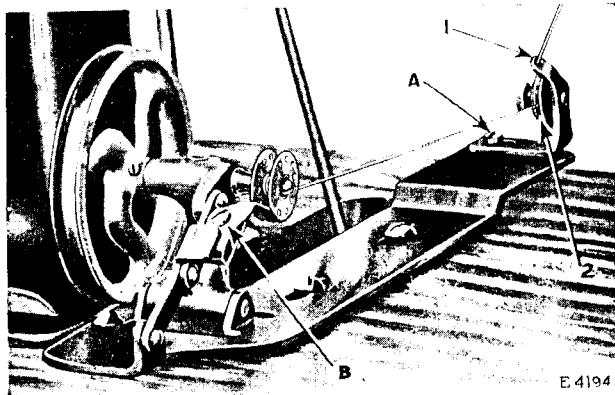


Fig. 8. Winding the Bobbin

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

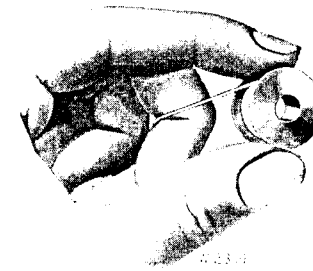


Fig. 9. Direction of Thread on Bobbin

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. 11, page 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.

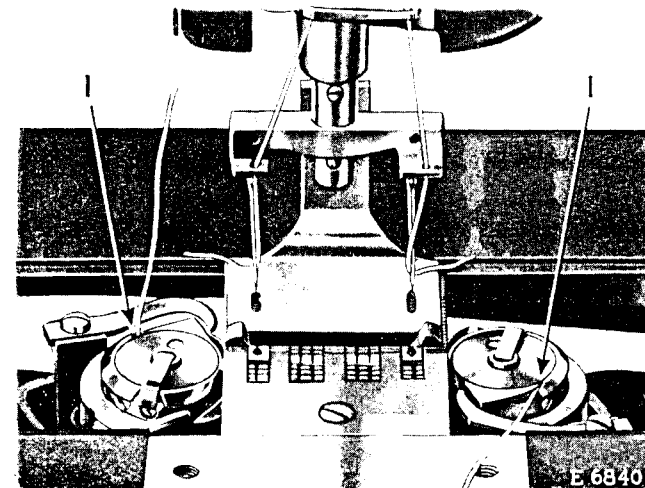


Fig. 10. Threading the Bobbin Cases

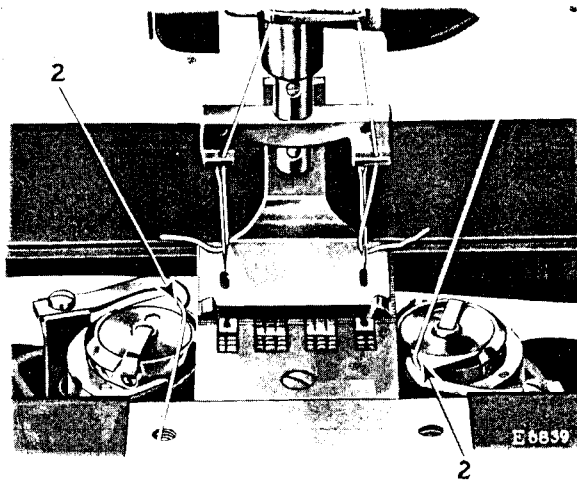


Fig. 11. Bobbin Cases Threaded

To Thread the Needles

(See Fig. 12 on the following page)

To thread the outside needle or the one farthest from the upright part of the arm, pass the thread from the left spool on the spool stand, through the left guide at the top of the spool stand, down and from 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, through the upper thread retainer (3) over from right to left between the left tension discs (4), down under from right to left around the thread controller (5), into the thread controller spring (6) and up through the thread guide (7), up and from right to left through the upper hole (8) in the end of the thread take-up lever, down through the thread guide (7) again and through the two thread guides (10 and 11), down through the left hole (12) in the needle holder and from right to left through the eye of the left or outside needle (13).

To thread the inside needle, or the one nearest the upright part of the arm, pass the thread from the right spool on the spool

stand, through the right guide at the top of the spool stand, down, and from back to front through the hole (A) in the pin on top of

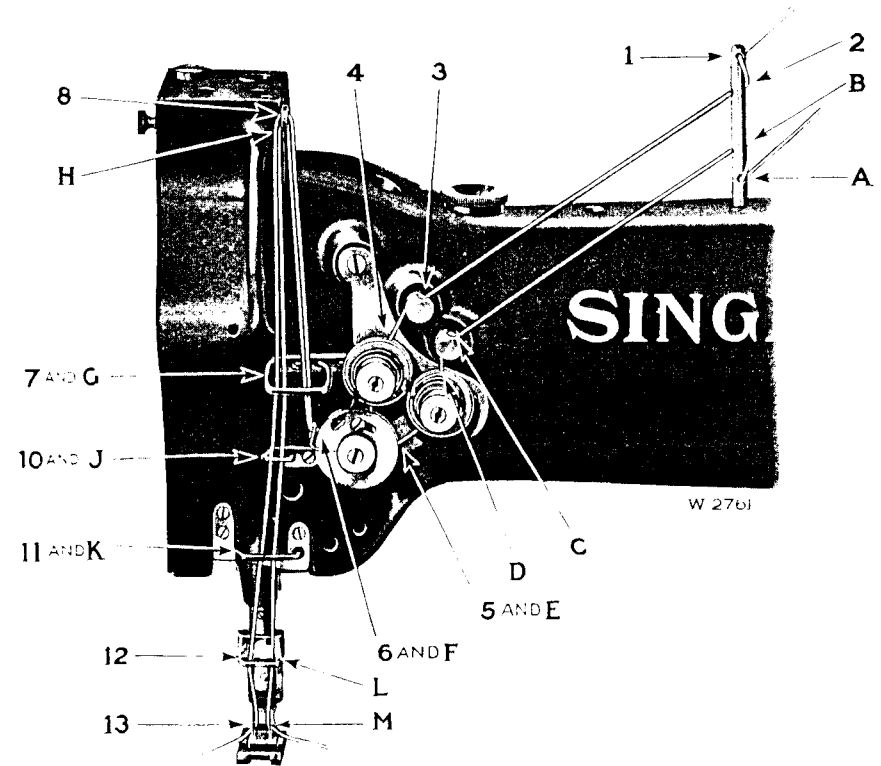


Fig. 12. Threading the Needles

the machine, then up and from right to left through the hole (B) in the pin, through the lower thread retainer (C), under from right to left between the right tension discs (D), down under from right to left around the thread controller (E), into the thread controller spring (F) and up through the thread guide (G), up and from right to left through the lower hole (H) in the end of the thread take-up lever, down through the thread guide (G) again and through the two thread guides (J and K), down through the right hole (L) in the needle holder and from left to right through the eye of the right or inside needle (M).

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

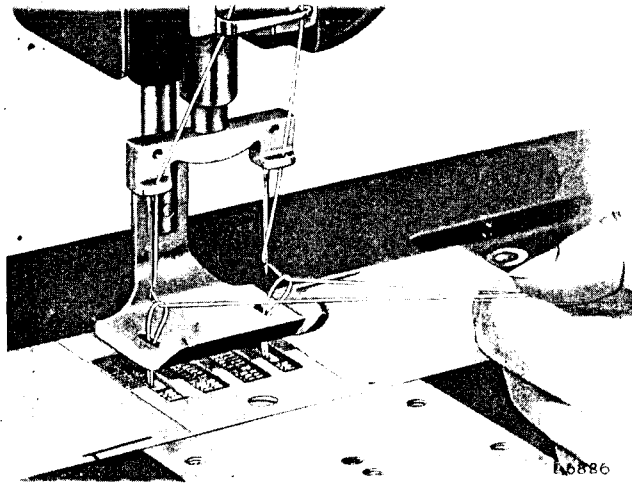


Fig. 13. Drawing Up the Bobbin Threads

balance wheel 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. 13). Lay the threads back under the presser foot and close the slides.

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

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

Tensions

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



Fig. 14. 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. 15. 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:

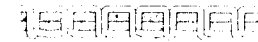


Fig. 16. Loose Needle Thread Tension

To Regulate the Tensions

The tensions on the needle threads are regulated by the two thumb nuts (P, Fig. 18) 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. 17), at the right of the balance wheel.

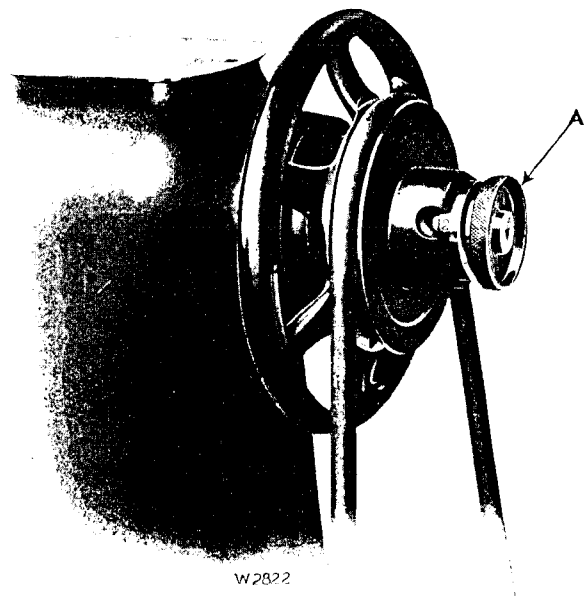


Fig. 17. Stitch Regulator

There is a notch in the hub of the balance wheel as shown in Fig. 17 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 Adjust the Gathering Feed

The gathering feed is regulated by means of the hexagon nut (P, Fig. 5, page 5) in the slotted lever underneath the bed of the machine. To increase the gather of the material, loosen the hexagon nut (P) and move it upwardly in the slotted lever, until the desired effect is produced. For less gather of the material, move the hexagon nut (P) downwardly in the slot. When the desired amount of gather of the material is obtained, firmly tighten the hexagon nut (P).

To Regulate the Pressure on Material

The pressure on the material is regulated by the screw (L, Fig. 4, page 4), at the back of the machine, the screw acting on a flat spring. To increase the pressure turn the screw downwardly. To decrease the pressure turn the screw upwardly. The pressure should be only heavy enough to enable the feed to move the work along evenly.

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 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.

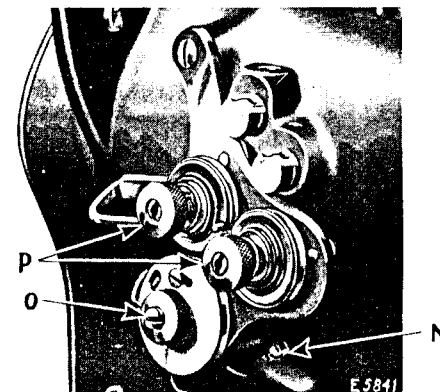


Fig. 18. Adjustment of Thread Controller

When once correctly adjusted to thin material (as it is when it leaves the factory), the thread controller stop is automatically adapted to varying thicknesses by the rise and fall of the presser bar.

To change the thread controller stop for more controller action on the threads, remove the face plate and set the small extension collar (D, Fig. 3, page 4) on the presser bar lower, or for less action set it higher.

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 (N, Fig. 18), located nearly under the tension stud, and turn the tension stud (O, Fig. 18) slightly to the left with a screwdriver, or to decrease the tension turn it to the right and retighten the stud set screw (N).

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. 3) 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 $\frac{3}{32}$ 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 Needle Bar and Presser Bar

The distance between the needle bar and presser bar, after turning the feed regulating spindle head so that there is no feed movement, should be $\frac{1}{32}$ inch as shown in Fig. 3.

If the distance between the needle and presser bars is more or less than $\frac{1}{32}$ inch, insert a screwdriver in the hole (K, Fig. 4) 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 needle and presser bars is $\frac{1}{32}$ inch. A piece of sheet metal $\frac{1}{32}$ inch wide may be used to determine the correct distance. When making this adjustment be sure to see that the feed regulating spindle head is set so that there is no feeding movement. When the adjustment has been made, securely tighten the screw at (K).

To Time the Sewing Hooks

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

Remove the throat plate and turn the balance wheel over toward you until the lower mark across the needle bar is just visible at the bottom of the needle bar bushing 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.

In case the sewing hooks are not correctly timed, turn the balance wheel over toward you until the needle bar has descended to its lowest point and has risen until the lower timing mark across the needle bar is just visible at the bottom of the needle bar bushing. Then loosen the four screws in the hook shaft gears and turn the sewing hooks until the point of each hook is at the centre of its needle, after which securely tighten the four screws (T), leaving just enough end play to the shaft for lubricating purposes.

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.

Turn the balance wheel over toward you until the points of the sewing hooks are at the centre of the needles. Loosen the four screws (M, N, T and W, Fig. 5, page 5) 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 (M, N, T and W).

The function of the hook washer  (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 screw driver 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.

Adjustment of Feed Regulating Spindle Head

The figures on the feed regulating spindle head (DD, Fig. 19), showing through the notch in the balance wheel, indicate

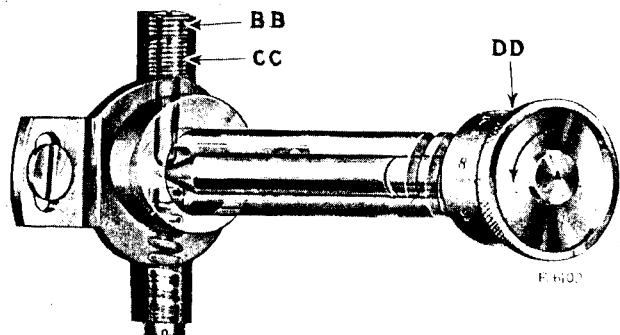


Fig. 19. "X-Ray" View of Feed Driving Eccentric Regulating Bracket and Shaft, showing the feed regulating spindle and adjusting screw (CC) which comes in contact with the cone of the spindle to gauge the length of stitch

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. 19), 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. 19) 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 balance wheel 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. 19) as far as possible in the direction indicated by the arrow in Fig. 19; 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 balance wheel towards you until the feed dog is at its highest position; loosen screw (V, Fig. 5, page 5) in the feed lifting cam fork and raise or lower the feed dog, as may be required, and retighten the screw (V).

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 (Q, Fig. 5) and adjust the feed dog as required, then securely tighten the pinch screw (Q).

The height of the auxiliary feed dog is regulated by loosening the screw (U, Fig. 5) in the feed lifting cam fork and raising or lowering the auxiliary feed dog as required, after which securely tighten the screw (U).

To Remove the Needle Bar Rock Frame Rock Shaft

Remove the face plate and needle bar rock frame, then loosen the clamp screw at (K, Fig. 4) and draw out the rock shaft.

To Remove the Arm Shaft Connection Belt from Within the Arm

Slide the connection belt off lower pulley (R, Fig. 5); remove the feed regulating spindle head and balance wheel; loosen the arm shaft bushing (back) screw (J, Fig. 4) 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 (O, 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 (S, 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 (J, Fig. 4) at the back of the machine; replace the feed regulating spindle head and the balance wheel, and place the belt on the upper pulley, and then turn the balance wheel 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 (O) and the other on collar (S), are directly in line. Now, without disturbing either the arm shaft or the hook shaft, slip the belt over the lower pulley (R, Fig. 5). The feed will then be correctly timed with the needle bar.