

SINGER
112W136

USE ONLY SINGER OILS and LUBRICANTS

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

"Singer Oil for High Speed Sewing Machines"

(Cloth and Leather)

For all manufacturing sewing machines except where a stainless oil is desired.

"Singer Stainless Oil for High Speed Sewing Machines"

For all manufacturing sewing machines where a stainless oil is desired.

"Singer Motor Oil"

For oil-lubricated motors, power tables, transmitters and machinery in general.

"Singer Stainless Thread Lubricant"

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

NOTE: All of the above oils are available in 1 quart, 2 quart, 1 gallon and 5 gallon cans or in 55 gallon drums, and can also be supplied in customer's containers.

"Singer Gear Lubricant"

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

"Singer 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.

NOTE: The above greases are furnished in ¼ lb. tubes and 1 lb. and 4 lb. tins.

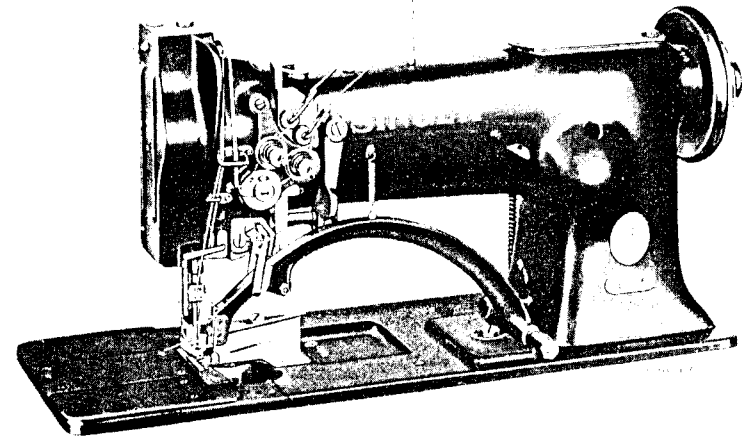
Copyright, U. S. A.,
1914, 1915, 1916, 1917, 1925, 1926, 1934, 1935, 1937, 1940 and 1941
by The Singer Manufacturing Company
All Rights Reserved for all Countries

2825w

INSTRUCTIONS

FOR USING AND ADJUSTING

SINGER SEWING MACHINE



112w136

THE SINGER MANUFACTURING CO.

To all whom it may concern:

The placing or renewal of the name "Singer" (Reg. U. S. Pat. Off. or any of the trade marks of The Singer Manufacturing Company on any machine that has been repaired, rebuilt, reconditioned, or altered in any way whatsoever outside a Singer factory or an authorized Singer agency is forbidden.

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

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

Genuine Singer Needles should be used
in Singer Machines.
These Needles and their Containers
are marked with the
Company's Trade Mark "SIMANCO." 1

Needles in Containers marked
"For Singer Machines"
are not Singer made needles. 2

DESCRIPTION

Machine 112W136 trims and binds trouser pockets, vacuum bags and other articles of light and medium weight fabrics, in one operation. One needle sews the binding and the other makes a line of stitching at the left of the binding. The machine has two needles and two belt-driven rotary sewing hooks, and makes the lock stitch. It has a vertical trimmer and a drop feed. The distance between the needles is 1/8 inch.

Speed

The maximum speed recommended for Machine 112W136 is 2500 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.

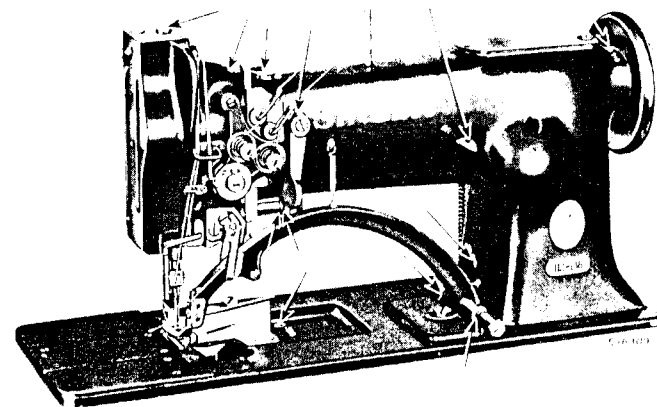


Fig. 2. Oiling Points at the Front of the Machine

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.

4

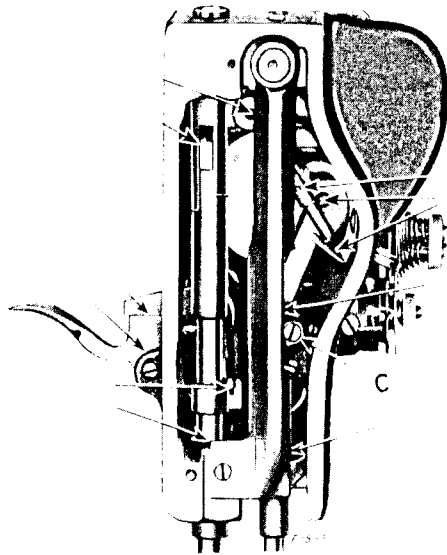


Fig. 3. End View of Machine, Showing Oiling Points

Loosen the thumb screw in the upper end of the face plate, turn the face plate upward and oil the wick and bearings shown in Fig. 3, then turn down the face plate and tighten the thumb screw.

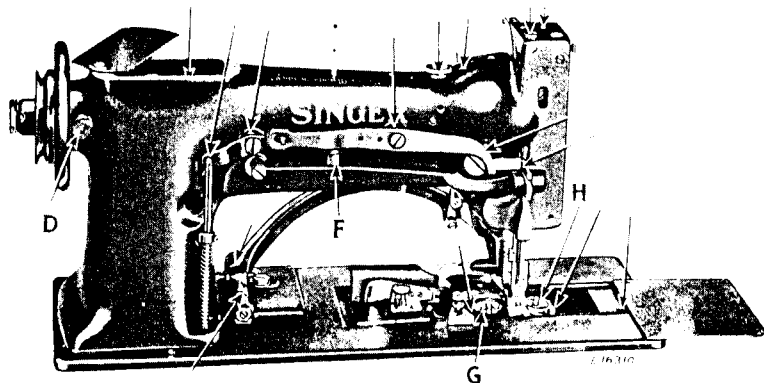


Fig. 4. Oiling Points at the Back of the Machine
Also Adjustments on the Machine

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

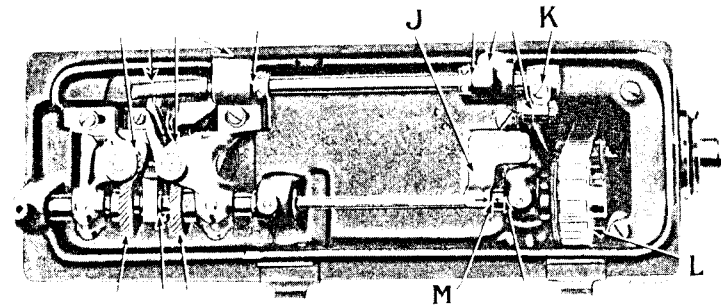


Fig. 5. Base of Machine, Showing Oiling Points
Also Adjustments on the Machine

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

The small green felt pads (at G and H, Fig. 4) on the side of the bobbin cases should be kept wet with oil to lubricate the hook races. When these pads are wet they appear nearly black, and when they appear light green it indicates that they are dry. When a machine is new, oil should be applied to these felt pads each time the bobbins are replaced.

Needles

Needles for Machine 112W136 are of Class and Variety 126X9 and are made in sizes 12, 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, also the class and variety numbers separated by the letter x. The following is an example of an intelligible order:

"100 No. 16, 126X9 Needles."

The best results will be obtained when 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.

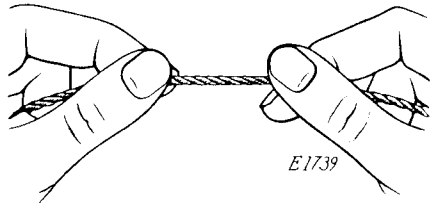


Fig. 6. How to Determine the Twist

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	00, 0
14	60, 70	0, 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 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. Place the thumb or finger under the bobbin case latches (N, Fig. 7) raise the latches and lift out the bobbins.

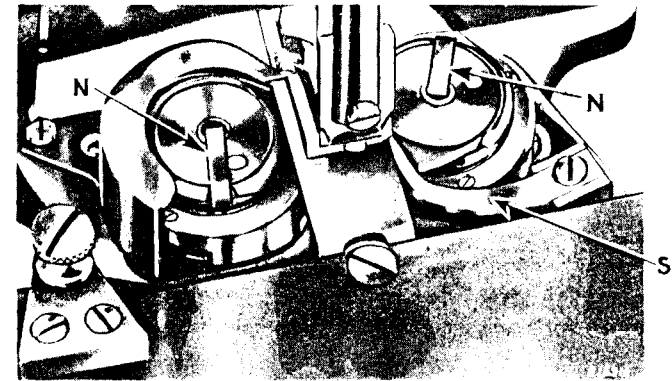


Fig. 7. Removing the Bobbins
(View from rear of Machine)

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.

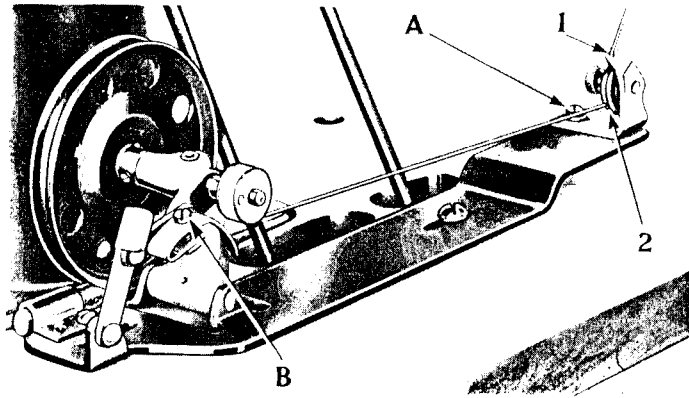


Fig. 8. Winding the Bobbin

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 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 bobbin cases.

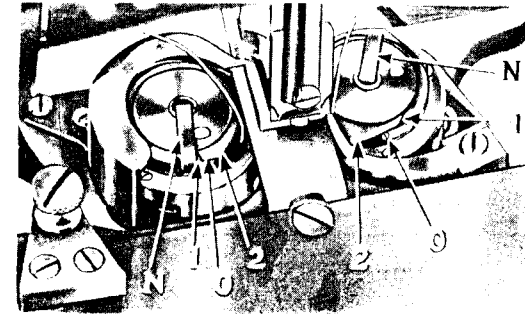


Fig. 9. Threading the Bobbin Cases
(View from Rear of Machine)

Hold the bobbin between the thumb and forefinger of the right hand, the thread drawing on the bottom from left to right, and place it on the center stud of the bobbin case, then push down the latch (N, Fig. 9). Draw the thread into the slot (1) in the edge of the bobbin case and back of the projection (2), 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.

To Thread the Needles

(See Fig. 10 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, down through the hole (3), up through the hole (4), 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 two thread guides (11 and 12), down through the left hole (13) in the needle holder and from right to left through the eye of the left or outside needle (14).

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,

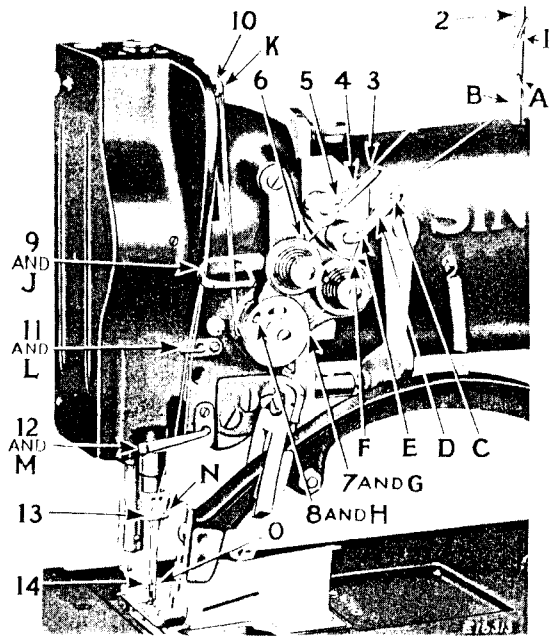


Fig. 10. Threading the Needles

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 the machine, then down and 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, under 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 two thread guides (L and M), down through the right hole (N) in the needle holder and from left to right through the eye of the right or inside needle (O).

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 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. 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 center of the thickness of the material, thus:



Fig. 11. Perfect Stitch

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

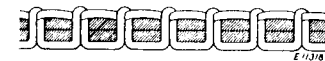


Fig. 12. Tight Needle Thread Tension

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



Fig. 13. Loose Needle Thread Tension

To Regulate the Tensions

The tensions on the needle threads are regulated by the two thumb nuts (J1, 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 (O, Fig. 9) nearest the center of the tension spring on the outside of each bobbin case. To increase the tension, turn this screw over to the right. To decrease the tension, turn the screw over to the left.

To Regulate the Length of Stitch

The length of stitch is regulated by the thumb screw (A, Fig. 14) at the right of the balance wheel.

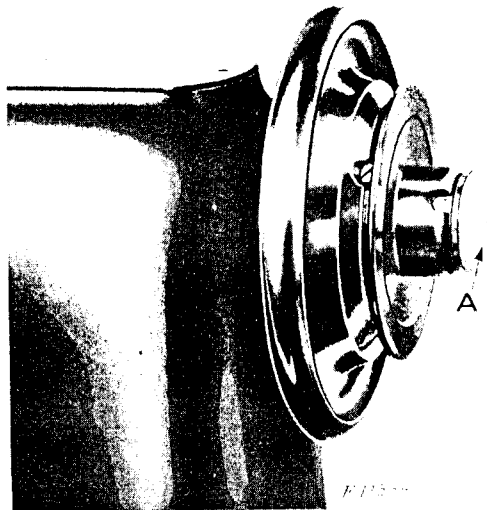


Fig. 14. Stitch Regulator

There is a notch in the hub of the balance wheel as shown in Fig. 14 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 on Material

The pressure on the material is regulated by the screw (F, Fig. 4) at the back of the machine, which acts on a flat spring. To increase the pressure, turn this screw downward. To decrease the pressure, turn this screw upward. The pressure should be only heavy enough to enable the feed to move the work along evenly.

To Adjust the Knives

The upper knife (P1, Fig. 16) should be set so that its cutting edge presses against and just passes the cutting edge of the lower knife (O1, Fig. 16) to ensure cutting the full width.

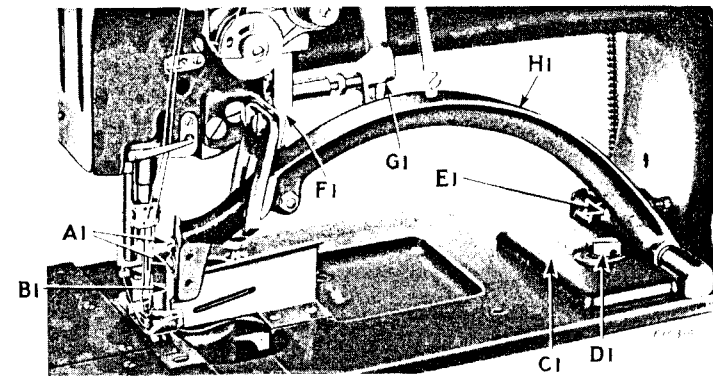


Fig. 15. Adjustments on the Trimmer

The sidewise adjustment of the upper knife is made by loosening the screw (D1, Fig. 15) and sliding the knife arm base plate (C1, Fig. 15) to the desired position on the bed of the machine.

The upper knife can be adjusted to the correct height by loosening the two screws (A1) and moving the knife up or down on the knife arm, after which the two screws (A1, Fig. 15) should be securely tightened.

To throw the upper knife out of action, push the lever (G1, Fig. 15) to the right as far as it will go. To throw the knife into action, press down the knife arm (H1, Fig. 15).

When the upper knife is thrown out of action, the knife arm adjusting stop screw (E1) should be set to stop the upward movement of the knife arm in a position that will leave about 1/16 inch space between

the upper end of the knife arm link and the lower end of the knife driving bar at (F1), when the knife driving bar is at its lowest position.

The distance from the trimmed edge to the line of stitching should be sufficient to ensure enough material to fill the binding and is determined by the position of the lower knife.

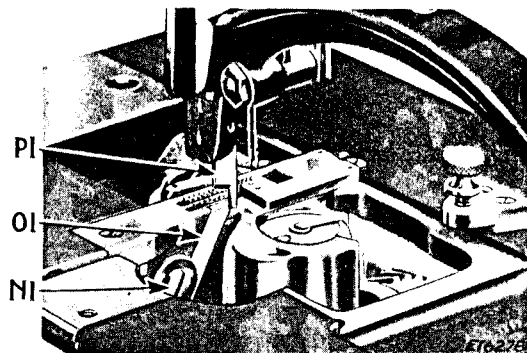


Fig. 16. Adjustment of Knives

The trimming margin is measured from the center of the right hand needle hole to the cutting edge of the lower knife. The proper position of the lower knife (O1, Fig. 16) is with its upper end flush with the top of the throat plate and the knife bearing against the edge of the throat plate in the knife slot.

The lower knife can be adjusted sidewise by loosening screw (X, Fig. 18) and moving the bracket (Y, Fig. 18) to right or left as desired.

The height of the lower knife (O1, Fig. 16) can be adjusted by loosening screw (N1, Fig. 16) and sliding the knife (O1, Fig. 16) to required height.

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.

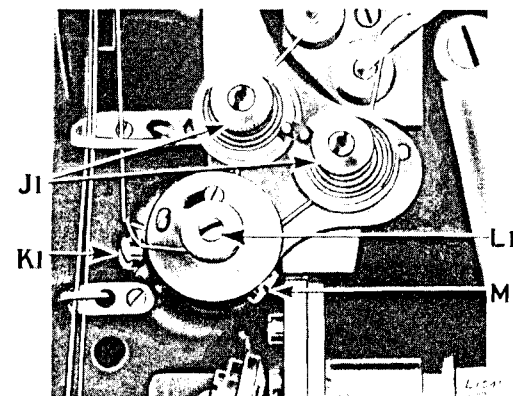


Fig. 17. Adjustment of Thread Controller

To change the thread controller stop for more controller action on the thread, loosen the screw (M1, Fig. 17) and rotate the thread controller spring stop to the right; for less action, rotate to the left, after which securely tighten the screw (M1).

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 (K1, Fig. 17), located at left of the tension stud, and turn the tension stud (L1) slightly to the left with a screwdriver, or to decrease the tension, turn it to the right, and retighten the stud set screw (K1).

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 (C, Fig. 3) and place the needle bar in the correct position as directed above, then retighten the screw (C).

To Set a Needle Bar Which Has no Mark. 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 center of the needles and about $\frac{1}{16}$ inch above the eyes.

To Time the Sewing Hooks

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 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 center of its needle and about $\frac{1}{16}$ inch above the eye.

In case the sewing hooks are not correctly timed, turn balance wheel over toward you until 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 end of the needle bar frame. Then loosen the four screws in the hook shaft gears (T, Fig. 18) and turn the sewing hooks until the point of each hook is at the center of its needle, after which securely tighten the four screws in the gears (T), leaving just enough end play to the shaft for lubricating purposes.

To Adjust the Bobbin Case Opener

The bobbin case opener (W, Fig. 19) should be set so that it touches the bobbin case as lightly as possible, yet turns the bobbin case enough to make a sufficient opening for the free passage of the thread between the throat plate and the bobbin case.

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.

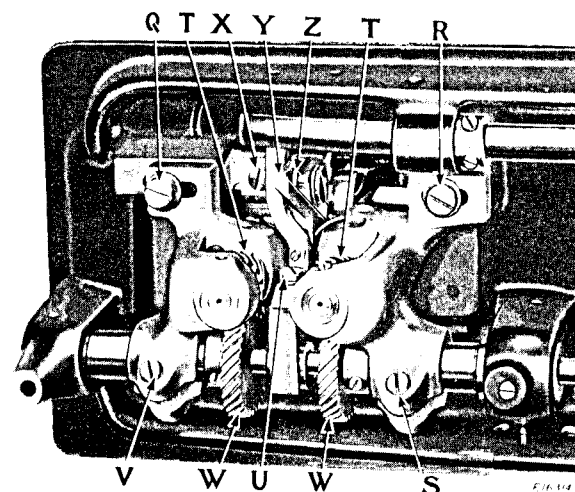


Fig. 18. Adjustment of Hook Saddles

Turn the balance wheel over toward you until the points of the sewing hooks are at the center 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 "AA", 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 Cases from the Sewing Hooks

Remove the throat plate, take out the two screws (P, Fig. 19) and remove the hook guard. Remove the four hook gib screws (X, Fig. 19) from the sewing hooks, lift off the hook gibs (Z), and remove the bobbin cases.

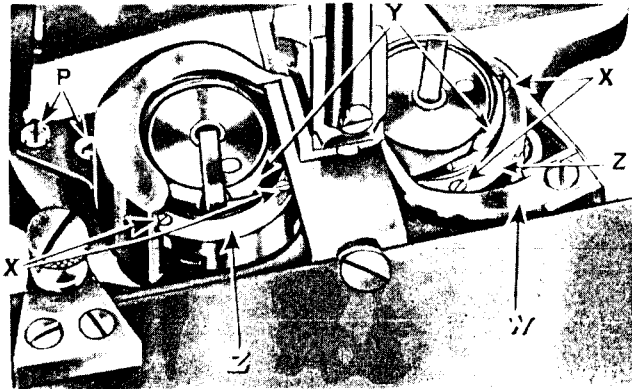


Fig. 19. Removing Bobbin Cases

To Remove the Sewing Hooks from the Machine

Remove the bobbin cases as instructed above, remove bobbin case stop (W, Fig. 19), then take out the four screws from the hook shaft gears (T, Fig. 18) and lift out the sewing hooks.

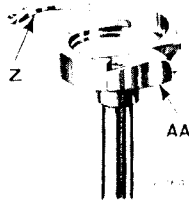


Fig. 20. Sewing Hook Removed from Machine
Showing Hook Washer and Gib

Adjustment of Feed Regulating Spindle Head

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

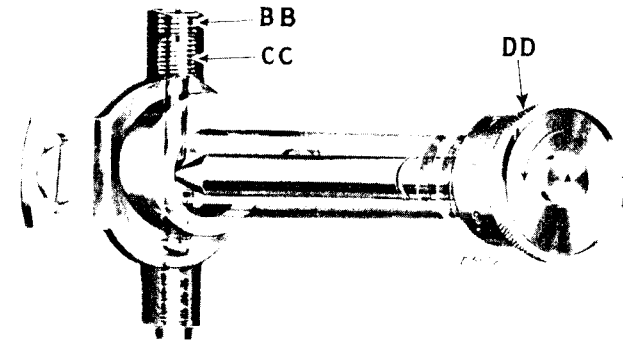


Fig. 21. "X-Ray" View of Feed Driving Eccentric Regulating Bracket and Shaft, showing the feed regulating spindle and adjusting screw (CC) which comes in contact with the cone of the spindle to gauge the length of stitch

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 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. 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 balance wheel towards you until the feed dog is at its highest position; loosen screw (U, Fig. 18) in the feed lifting cam 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.

To adjust feed dog to throat plate slots, loosen screw (K, Fig. 5) and move feed bar until feed dog is in desired position.

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 (A, Fig. 14) and balance wheel; loosen the arm shaft bushing (back) screw (D, 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 (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. 4) at the back of the machine; replace the balance wheel and feed regulating spindle (A, Fig. 14) 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 "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 facilitate the replacing of the belt on the lower pulley, use belt replacer 241538 (A, Fig. 22). Rest the replacer in the

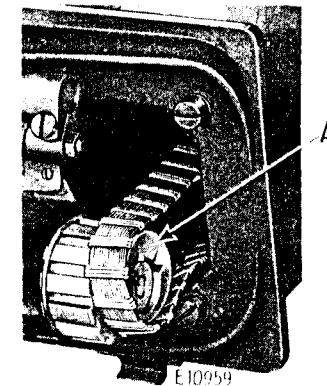


Fig. 22. Putting Belt on Lower Pulley with Belt Replacer 241538

loop of the belt and slide it over the hub of the pulley, as shown in Fig. 22, having the notches in the replacer engage the two set screws in the hub of the pulley. Turn the balance wheel toward you until the belt is fully over the pulley, then remove the replacer.

Note: As belt replacer 241538 will serve for several machines, it is not regularly furnished with the machine, and must be ordered separately.

To Sharpen the Knife

When it is necessary to resharpen the knife, loosen the two screws (A1, Fig. 15) which fasten the knife to the knife holder and remove the knife (B1, Fig. 15).

Grinder 259536 should be used for sharpening both upper and lower knives. As one grinder can be used for several machines, it must be ordered separately.

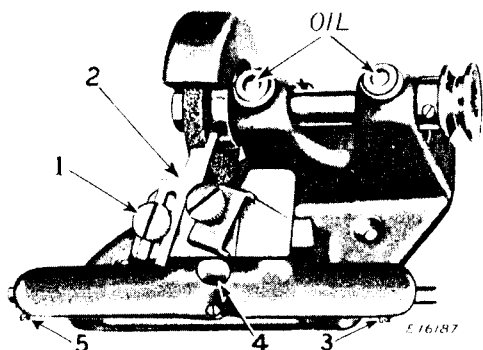


Fig. 23. Grinder 259536
with Knife in Position for Grinding

Place knife (2, Fig. 23) in position on grinder and tighten thumb screw (1) as illustrated in Fig. 23.

Sharpen the cutting edge of the knife on the beveled side only. The least possible amount ground off is usually sufficient. Grind off as much from the projection as from the cutting edge, so as to maintain their relative proportions, and to prevent the projection from striking the hook.

Knife bracket can be moved closer to or away from the emery wheel by means of adjusting thumb screw (4, Fig. 23). The sidewise movement from right to left is controlled by loosening the screws (3 and 5, Fig. 23), moving the collars as desired and tightening screws (3 and 5).

Caution: The knife should barely graze the emery wheel. If held with too much pressure against the emery wheel, the temper of the knife may be drawn until it is too soft for use.

Apply oil regularly to the two ball oilers indicated by arrows in Fig. 23. This will lubricate the bearings of the grinder shaft.

To Sharpen Lower Knife

Loosen screw and pull lower knife (Z, Fig. 18) down off knife holder (Y, Fig. 18).

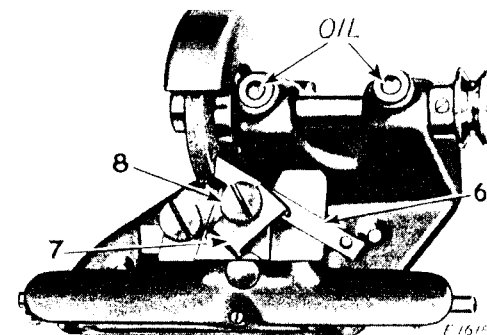


Fig. 24. Lower Knife in Position for Grinding

Place lower knife (6, Fig. 24) in position into the groove under clamping plate (7, Fig. 24) and tighten thumb screw (8, Fig. 24) firmly.

While sharpening the lower knife, see that the cutting edge barely grazes the emery wheel, as the least possible amount ground off is usually sufficient.