SINGER
107W9,W10,W12

USE ONLY **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 a stainless oil is desired, use:

TYPE D — MANUFACTURING MACHINE OIL, STAINLESS, HEAVY GRADE

OTHER **SINGER** LUBRICANTS

TYPE E — STAINLESS THREAD LUBRICANT

For lubricating the needle thread of sewing machines for stitching fabrics or leather where a stainless 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 or in 55 gallon drums.

GEAR LUBRICANT

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

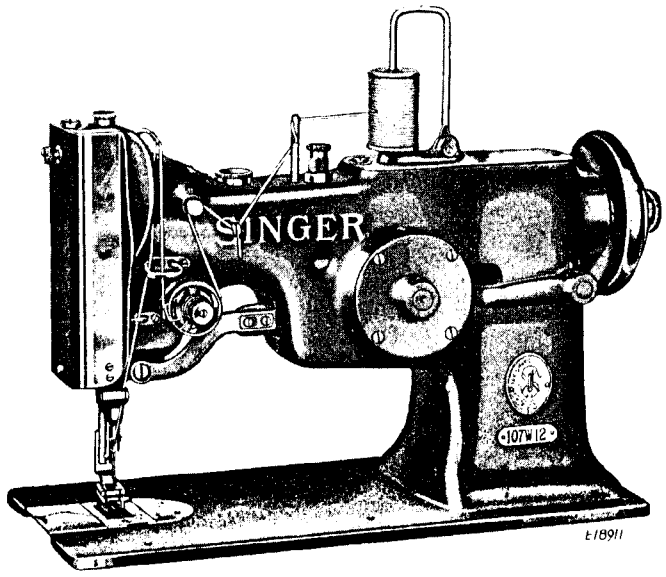
BALL BEARING LUBRICANT

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.**

INSTRUCTIONS

FOR USING AND ADJUSTING

SINGER* SEWING MACHINES



107w9, 107w10 AND 107w12

* REG. U. S. PAT. OFF. BY

THE SINGER MANUFACTURING CO.

TO ALL WHOM IT MAY CONCERN:

The improper placing or renewal of the Trade-Mark SINGER or any other of the Trade-Marks of The Singer Manufacturing Company (all of which are duly Registered Trade-Marks) 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 **SINGER*** PARTS AND NEEDLES IN **SINGER** MACHINES

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

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 107 w 9 is used in the making of hat sweat bands.

To produce work similar to that shown in Fig. 14, page 11, Machine 107 w 9 is fitted with hat sweat attachment 226883. A bias sateen strip is folded over a reed or wire, the strip being simultaneously sewn to the hat sweat. If desired, the reed or wire may be omitted from the strip. The attachment is adjustable for strips from $\frac{5}{8}$ to $1\frac{1}{4}$ inches wide.

The ornamental seam produced by this machine consists of a line of straightaway stitches having a sideway stitch formed at regular intervals at right angles to the straightaway stitching, the needle vibrating to the left in making the sideway stitches up to $\frac{3}{32}$ inch, as shown in Fig. 2.

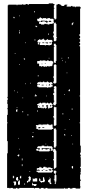


Fig. 2. Stitching Produced by Machines 107 w 9 and 107 w 10

Machine 107 w 10 differs from Machine 107 w 9 only in the fittings, Machine 107 w 9 being supplied with hat sweat attachment and the necessary foot, feed dog and throat plate, while Machine 107 w 10 is fitted for plain sewing, making an ornamental lock stitch which is particularly adapted for edge finishing in the manufacture of men's clothing. It is admirably suited for sewing the underfacing to coat collars and is also used for joining collars to coats.

The ornamental seam produced by this machine consists of a line of straightaway stitches having a sideway stitch formed at regular intervals at right angles to the straightaway stitching, the needle vibrating to the left in making the sideway stitches up to $\frac{3}{32}$ inch, as shown in Fig. 2.

Figs. 3 and 4. Stitching Produced by Machine 107 w 12

Machine 107 w 12 is designed for stitching sweat bands into all grades of soft caps and cloth hats with an ornamental lock stitch.

The needle can be adjusted to vibrate up to $\frac{3}{32}$ inch either to the right or left of the straightaway stitches, as shown in Figs. 3 and 4.

Speed

The maximum speed recommended for Machines 107 w 9 and 107 w 12 is 2500 stitches per minute, and for Machine 107 w 10, 2000 stitches per minute. 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.

When the machines are in operation, the balance wheel should always turn over towards the operator.

Needles

Needles for Machines 107 w 9 and 107 w 12 are of Class and Variety 135x9, and are made in sizes 9, 10, 12, 14, 16, 18, 20 and 22.

Needles for Machine 107 w 10 are of Class and Variety 135x5, and are made in sizes 9, 10, 12, 14, 16, 18, 20, 22 and 23.

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. 12, 135 x 5 Needles."

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

Thread

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

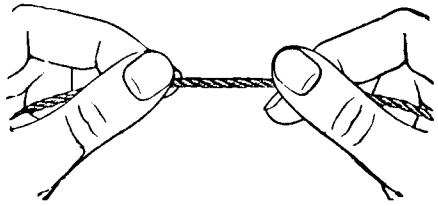


Fig. 5. How to Determine the Twist

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

To Remove the Bobbin

Draw out the slide in the bed of the machine; reach under the bed of the machine with the thumb and forefinger of the left

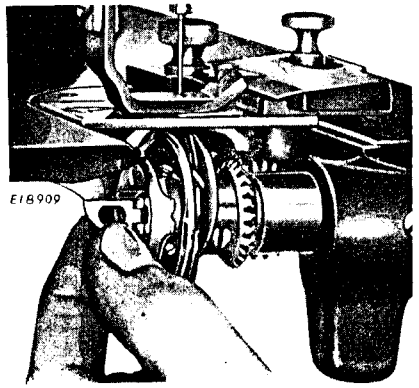


Fig. 6. Taking Out the Bobbin Case

hand, open the bobbin case latch with the forefinger and lift out the bobbin case (see Fig. 6).

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.

To Wind the Bobbin
(See Fig. 7)

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.

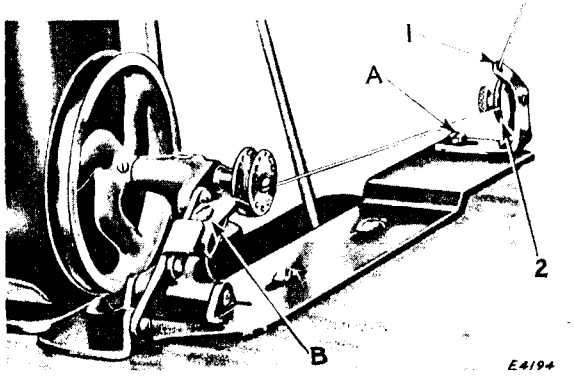


Fig. 7. Winding the Bobbin

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 Thread the Bobbin Case

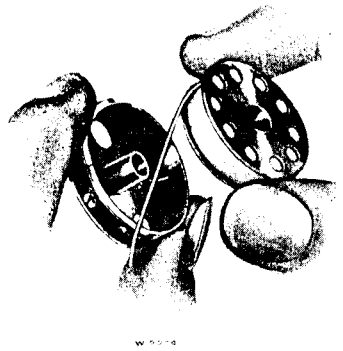


Fig. 8.

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

With the left hand hold the bobbin case open side up, the tension spring being at the front (see Fig. 8) and place the bobbin into it.

Then pull the thread towards the left into the slot in the edge of the bobbin case (see Fig. 9), draw the thread under the tension spring and into the second slot in the edge of the bobbin case; then pull the thread between the bobbin and bobbin case and into the third slot in the edge of the bobbin case, then into the delivery eye, as shown in Fig. 10.

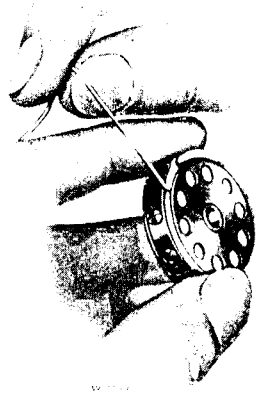


Fig. 9.

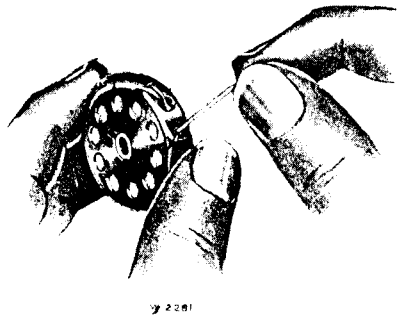


Fig. 10.

To Replace the Bobbin Case

After threading, take the bobbin case by the latch, holding it between the thumb and forefinger of the left hand, place the

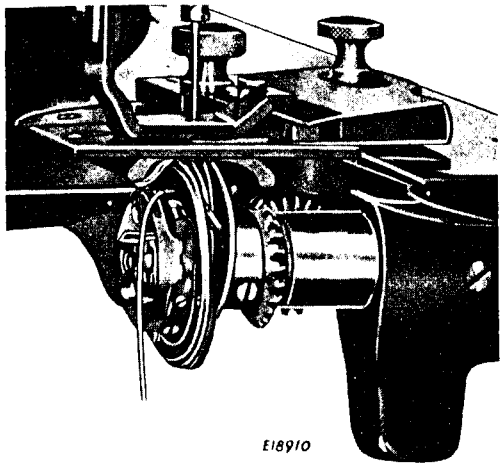


Fig. 11. Bobbin Case Threaded and Replaced

bobbin case on the centre stud of the bobbin case base, release the latch and press the bobbin case back until the latch catches the groove near the end of the stud (see Fig. 11). Allow the thread to hang free and replace the slide in the bed of the machine.

To Set the Needle

Turn the balance wheel over towards you until the needle bar moves up to its highest point; loosen the set screw in the lower end of the needle bar and put the needle up into the bar as far as it will go, with the long groove of the needle squarely towards you, then tighten the set screw.

To Thread the Needle

(See Fig. 12)

Pass the thread from the spool on the machine from back to front through the lower hole (1) in the pin on top of the machine,

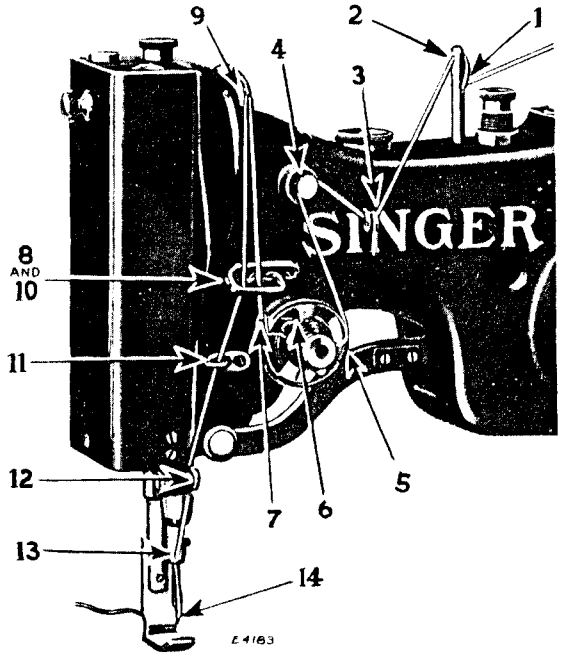


Fig. 12. Threading the Needle

up and from right to left through the upper hole (2) in the pin, to the left through the thread eyelet (3), over the top into the thread retainer (4), down, under from right to left between the tension discs (5), pull the thread up under the thread take-up spring (7) until it enters the retaining fork (6), then pass the thread up through the thread guide (8) and from right to left through the hole (9) in the end of the thread take-up lever, down through the thread guide (10), through the thread guide (11), into the thread nipper (12), down through the hole (13) at the lower end of the needle bar and from front to back through the eye of the needle (14). Draw about two inches of thread through the eye of the needle with which to commence sewing.

To Prepare for Sewing

With the left hand, hold the end of the needle thread, leaving it slack from the hand to the needle, turn the balance wheel over 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 with it through the hole in the throat plate. Lay the threads back under the presser foot.

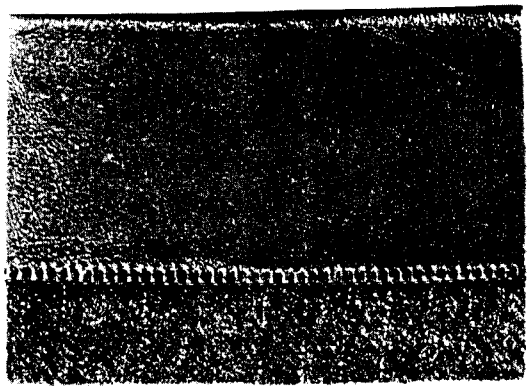


Fig. 13. Section of Soft Cap (full size)
Showing Sweat Band Attached by Machine 107 w 12

Machine 107 w 9. Pass the sweat band, right side up, under the presser foot and against the guide. Pass the cord, reed or wire through the cord hole and back under the presser foot. Insert the covering material for the cord into the folder and draw it back under the presser foot.

To adjust the guide for the sweat band, loosen the rear screw of the attachment and move the guide to the right or left, as required, then tighten the screw.

To adjust the folder for the desired width of the covering material, loosen the front thumb nut of the attachment and move

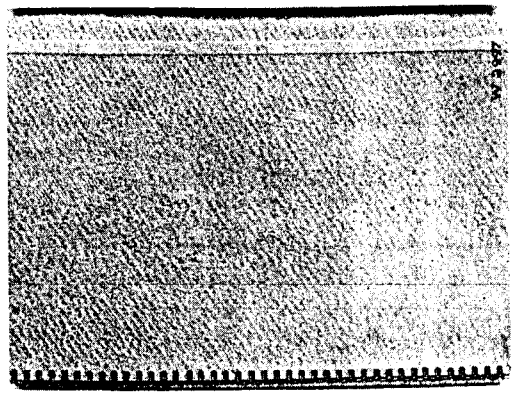


Fig. 14. Section of Hat Sweat (full size)
Showing Stitching Produced by Machine 107 w 9

the guide to the right or left, as required, and tighten the thumb nut.

Machine 107 w 10. For joining the underfacing to coat collars. Lay the coat collar and underfacing together, wrong sides out, in the machine, the outer edge of the underfacing being a short distance in from the outer edge of the coat collar. This is done so that the machine can join the underfacing to the collar by placing a line of ornamental stitches along the edge of the underfacing, the collar afterwards being turned. As the machine makes an elastic seam, the collar is easily turned and the ornamental stitches lie flat, producing a smooth and permanent edge, having the appearance of hand felling.

When desired, buckram lining can be inserted between the underfacing and the coat collar, the lining being simultaneously stitched to the collar with the underfacing. Owing to the formation of the stitches, the edge of the lining is not visible when the collar is turned.

To Regulate the Width of the Sideway Stitches on Machine 107 w 12

(Operator Standing at the Front of the Machine)

The width of the sideway stitch is regulated by the lever (B, Fig. 16) at the back of the machine. When this lever is set

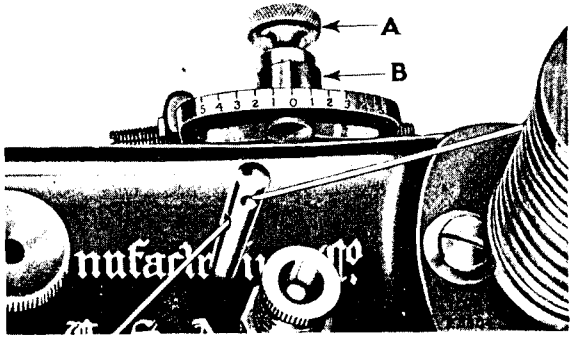


Fig. 16. Adjustment for Regulating the Width of Sideway Stitch.

in line with zero on the slotted position bracket, the machine will make straightaway stitches only. To make the sideway stitches to the left of centre line, loosen the thumb nut (A, Fig. 16) and move the lever (B) to the left until the desired width of stitch is obtained. To make the sideway stitches to the right of centre line, move the lever (B) to the right until the desired width of stitch is obtained. When the desired width of stitch is obtained, securely tighten the thumb nut (A).

To Regulate the Tensions

The tension on the needle thread is regulated by the thumb nut (N, Fig. 17) at the front of the tension discs at the front of the machine. To increase the tension, turn this thumb nut over to the right. To decrease the tension, turn the thumb nut over to the left.

The tension on the bobbin thread is regulated by the screw nearest the centre of the bobbin case tension spring. To increase the tension, turn this screw over to the right. To decrease the tension, turn the screw over to the left.

To Oil the Machine

To ensure easy running and prevent unnecessary wear of the parts which are in movable contact, the machine requires oiling, and when in continuous use, it should be oiled at least twice each day.

Use **"TYPE B"** or **"TYPE D" OIL,** sold by Singer Sewing Machine Company. See inside front cover for descriptions of these oils.

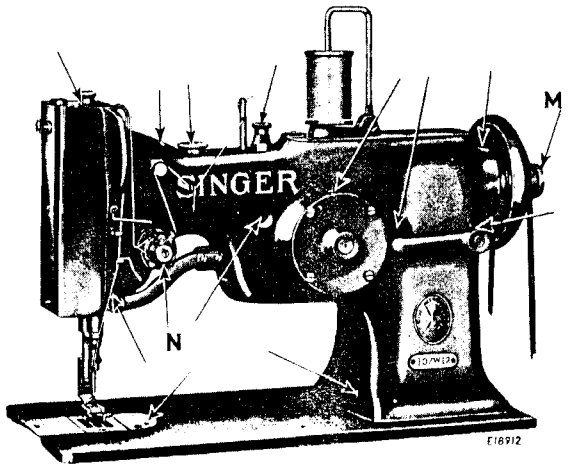


Fig. 17. Front View of Machine, Showing Oiling Points also Adjustments on the Machine

The places where the machine should be oiled are indicated in Figs. 17, 18, 19 and 20, by arrows pointing to the oil holes and bearings.

Oil the bobbin case bearing in the hook race each time a bobbin is replaced.

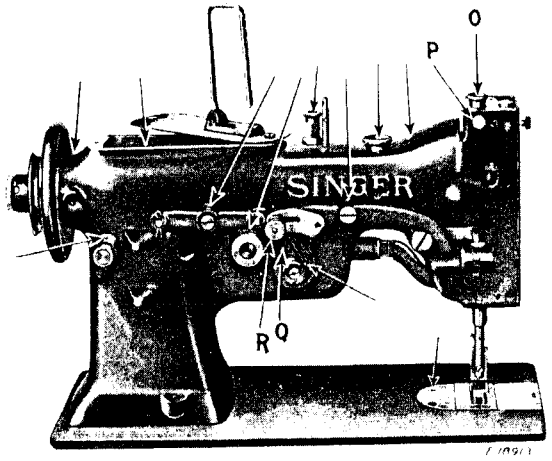


Fig. 18. Back View of Machine, Showing Oiling Points also Adjustments on the Machine

Remove the belt and turn the machine back on its hinges and apply oil at the places designated by arrows, as shown in

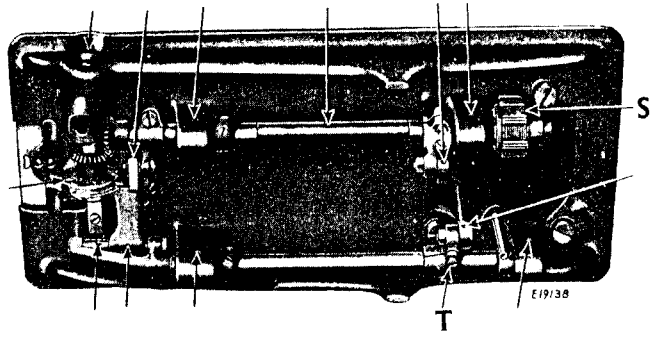


Fig. 19. Base View of Machine, Showing Oiling Points also Adjustments on the Machine

Fig. 19; and all other places where there are parts in movable contact, then bring the machine forward into place.

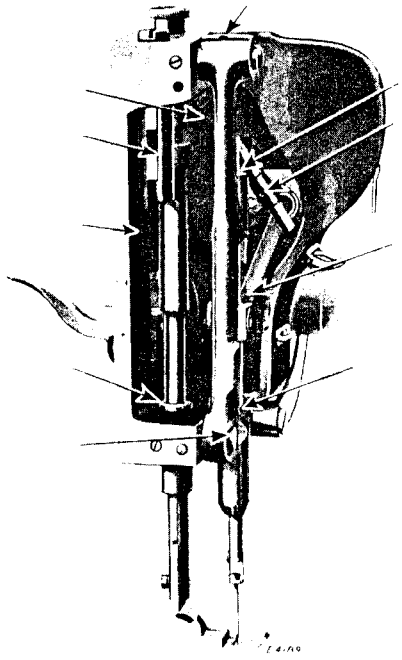


Fig. 20. End View of Machine, Showing Oiling Points

Remove the face plate and oil all of the bearings which are thus uncovered, then replace the face plate. Turn back the cap which is at the top of the arm of the machine and oil the bearings which are thus uncovered, then replace the cap.

INSTRUCTIONS

FOR

ADJUSTERS AND MACHINISTS

Thread Controller

The function of the thread controller spring is to hold back the slack of the upper thread until the eye of the 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.

To increase the controller action on the thread, loosen the stop screw at the right of the tension and set the stop lower, or higher to decrease the action.

To strengthen the action of the controller spring on the thread, loosen the tension stud screw at the right of the stop screw and turn the tension stud slightly to the left, or to the right to lighten the action, then tighten the tension stud screw.

Feed

To take up the lost motion of the feed driving and lifting connections, adjust their hinge and pinch screws.

To prevent the feed dog from striking the central portions of the throat plate, loosen the screw (T, Fig. 19, page 16) and move the feed dog forward or backward until the longest stitch can be taken without the feed dog striking the throat plate, then tighten the screw.

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.

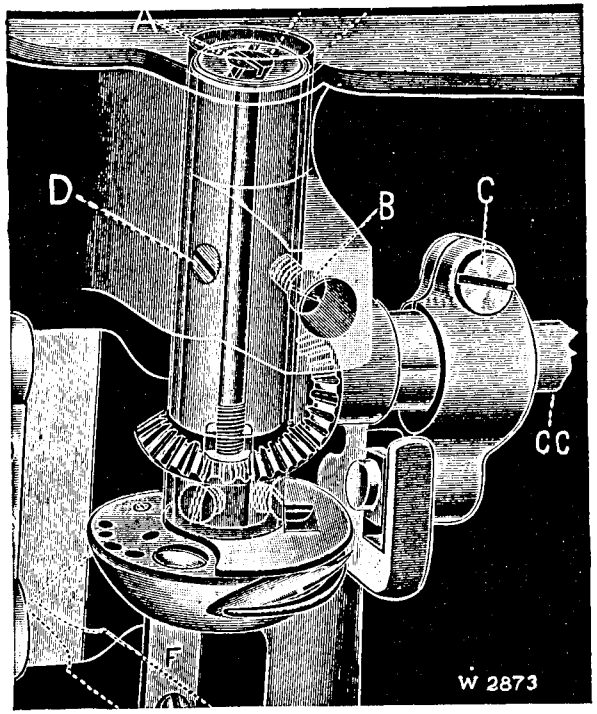


Fig. 21.

Remove the throat plate; clean the lint and dirt from between the feed points and replace the throat plate; tip the machine back on its hinges and turn the balance wheel over toward you until the feed dog is at its highest position; loosen the screw (C, Fig. 21) and raise or lower the feed dog as desired, then tighten the screw.

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

To Time the Movement of the Needle Bar Frame

Loosen the screws in the pinion on the arm shaft and turn the balance wheel over toward you or over from you, as the case may be. The time of the needle vibration cam should be such as to finish the lateral vibrations of the needle just prior to the entrance of the needle into the material; or, in other words, as slow as is practicable before the needle point enters the material.

To See if the Needle Bar is Set Correctly

See that the needle is up into the bar as far as it will go.

There are two lines $\frac{3}{32}$ inch apart about two inches from the lower end of the needle bar, and when the needle bar is at its lowest position, the upper mark should be just visible at the end of the needle bar frame.

To Set the Needle Bar in Correct Time

Loosen the needle bar connecting stud pinch screw and place the needle bar in the proper position as directed above, then tighten the screw.

To Set a Needle Bar which has no Mark

On Machines 107 w 9 and 107 w 10, set the needle vibrating lever (Q, Fig. 18, page 16) in the centre of the slot of the position bracket. Turn the balance wheel until the needle on its left vibration has reached the bottom of its stroke; bring the point of the sewing hook exactly to the centre of the needle and adjust the needle bar until the eye of the needle is about $\frac{1}{16}$ inch below the point of the hook.

On Machine 107 w 12, set the needle vibrating lever (B, Fig. 16, page 14) at zero on the slotted position bracket. Turn the balance wheel until the needle has reached the bottom of its stroke; bring the point of the sewing hook exactly to the centre of the needle and adjust the needle bar until the eye of the needle is about $\frac{1}{16}$ inch below the point of the hook.

To Time the Hook

Remove the throat plate and turn the balance wheel over toward you until the lower mark on the needle bar is just visible at the end of the needle bar frame; if the needle bar and hook are in correct time the point of the hook will be at the centre of the needle and about $\frac{1}{16}$ of an inch above its eye.

Loosen the hook driving belt pulley set screws and turn the balance wheel over toward you until the needle bar moves down to its lowest position and upward until the lower mark on the needle bar is just visible at the end of the needle bar frame, then turn the hook until the point is at the centre of the needle about $\frac{1}{16}$ of an inch above its eye, then tighten the pulley screws, being careful that the end of the pulley hub is flush with the end of the shaft.

To Remove the Hook

Remove bobbin case stop (F, Fig. 21), then remove the hook spindle screw (A, Fig. 21) and withdraw the hook from its socket.

To Set the Hook to or from the Needle

Loosen the two screws (B and D, Fig. 21) and slide the hook to the desired position, then tighten the two screws.

To Remove the Arm Shaft

Remove the screws (B and I, Fig. 22) and compression screw (G, Fig. 22); loosen the set screw in the belt pulley, also loosen

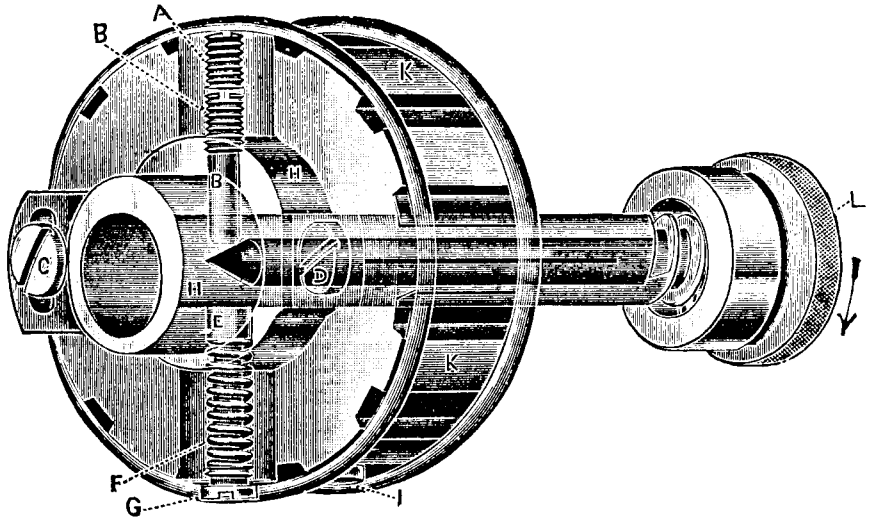


Fig. 22.

the screw and remove the position screw from the feed lifting eccentric and from the needle bar crank; loosen the set screw from the needle bar frame driving gear pinion (on the arm shaft) and draw the shaft out from the balance wheel end of the machine.

To Replace the Arm Shaft and Connections

Return the shaft to its place through the belt pulley, the feed lifting eccentric, the shaft gear, friction washer and needle bar crank; return the position screws to the belt pulley, feed lifting eccentric and needle bar crank, and into their position holes in the shaft; tighten the set screw of each and replace the balance wheel, leaving the least possible end play to the shaft.

To Remove the Arm Shaft Bushing (Front)

After removing the needle bar crank, remove the bushing position screw from the back of the arm, insert a brass rod through the arm cap hole and drive the bushing out.

To Remove the Belt from within the Arm

Slide arm shaft connection belt (S, Fig. 19) off the hook driving bevel pinion shaft belt pulley, remove the feed regulating spindle and balance wheel; loosen the arm shaft bushing (back) position screw 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 formerly occupied by the bushing.

In replacing the belt, see that the hook (sewing) and needle are in correct time before running the belt on the lower pulley and verify the correctness of the timing before commencing to sew.

To facilitate the replacing of the belt on the lower pulley, use belt replacer 244005 (A, Fig. 23). Rest the replacer in the

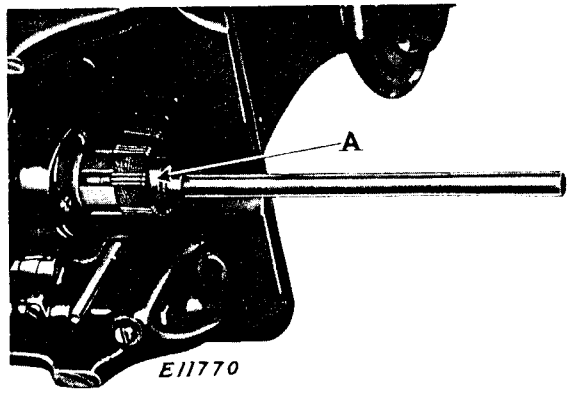


Fig. 23. Putting Belt on Lower Pulley with Belt Replacer 244005

loop of the belt and slide it over the hub of the pulley, as shown in Fig. 23, 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 244005 will serve for several machines, it is not regularly furnished with the machine, and must be ordered separately.