

SINGER
107G103

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.

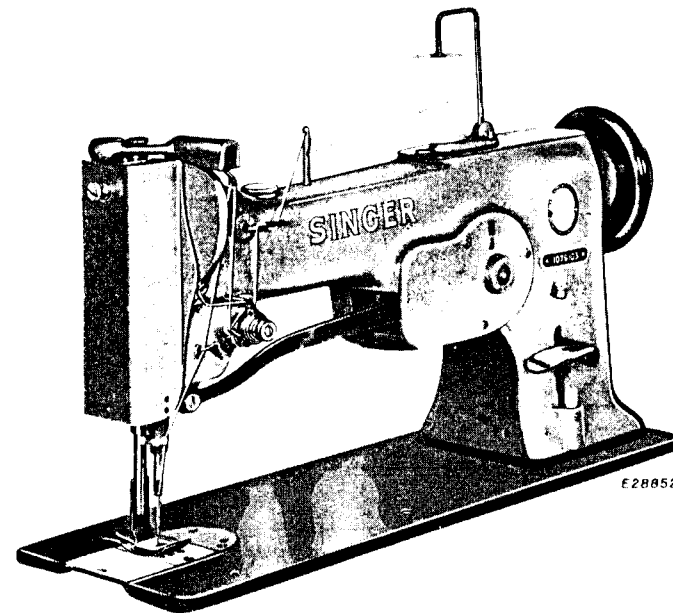
GEAR LUBRICANT

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.**

INSTRUCTIONS FOR USING AND ADJUSTING **SINGER*** SEWING MACHINE **107 G 103**



FOR

HIGH SPEED ZIGZAG LOCK STITCHING

THE SINGER MANUFACTURING COMPANY

DESCRIPTION

Machine 107G103 is a single needle drop feed machine designed for zigzag lock stitching, basting, tacking coat pads and light canvas. It has a feed reversing mechanism which can be either hand or foot operated, at the will of the operator. The needle vibrates up to 5/16 inch to the right of the line of straight stitching.

SPEED

The machine should be driven at a speed not exceeding 2000 stitches per minute. Machine should be run slower than the maximum speed at first 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 by Singer Sewing Machine Company. For description of these oils, see inside front cover of this book.

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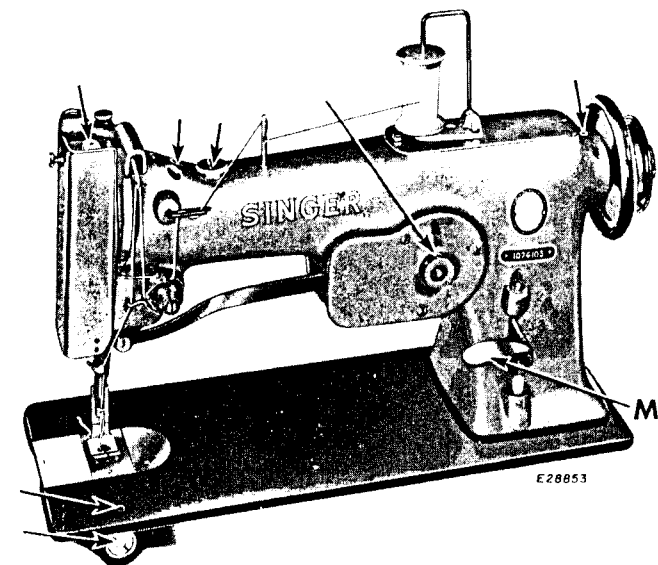


FIG. 2. Oiling Points At Front of Machine

Oil should be applied at each of the places designated by arrows in Figs. 2, 3, 4, 5 and 6. When the machine is in continuous use, it should be oiled at least twice a day.

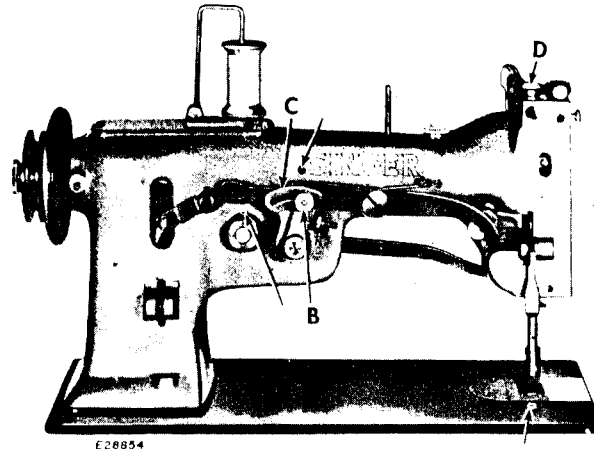


FIG. 3. Oiling Points at Back of Machine

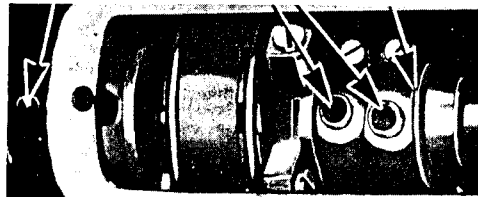


Fig. 4. Oiling Points at Top of Machine

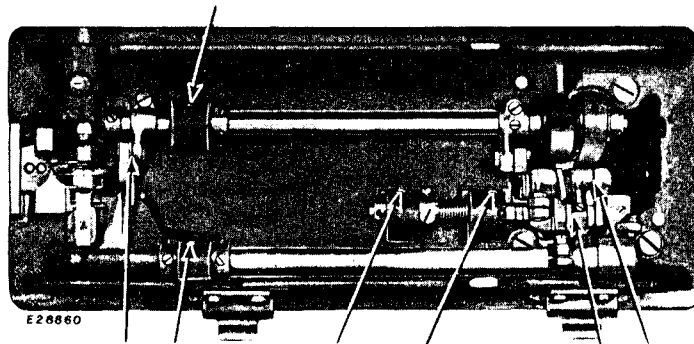


Fig. 5. Oiling Points Underneath Machine

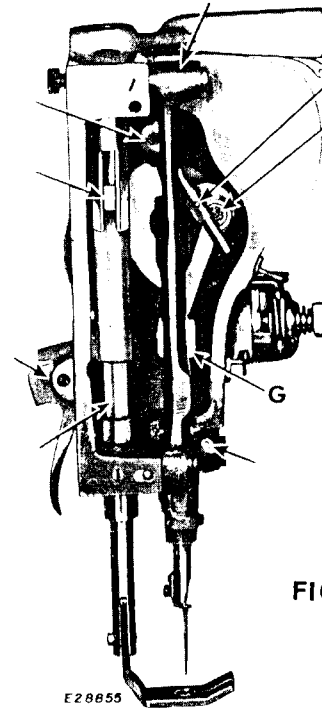


FIG. 6. End View of Machine, Showing Oiling Points

Remove the thumb screw in upper end of face plate and remove face plate. Oil the wick and moving parts which are thus uncovered. Replace faceplate and thumb screw.

NEEDLES

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. Rough or uneven thread, or thread which passes with difficulty through the eye of the needle, will interfere with the successful use of the machine.

Needles for this machine are Catalogue 1902 (135x9) in Sizes 9, 10, 12, 14, 16, 18, 20 and 22.

Orders for needles must specify the quantity required, the size number, and also the Catalogue number.

The following is an example of a correct order:

"100 Size 16—Catalogue 1902 Needles."

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

COMMON CAUSES OF STITCHING TROUBLES—

Bent needle — may cause skipped stitches.

Hook or burr on needle point — may cause picking or fraying of the material.

Clogged needle eye and grooves — will also cause skipped stitches.

Check needles often to make sure that these defects are not present.

THREAD

Use left twist thread for the needle. Either left or right twist thread may be used for the bobbin.

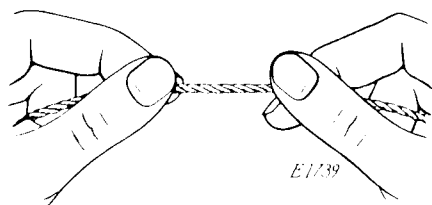


FIG. 6A. How to Determine the Twist

Hold the thread as shown above. Twirl 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 SET NEEDLE

Turn machine pulley over toward you until needle bar moves up to its highest point. Loosen set screw **A**, Fig. 7 and push needle, with long groove to the front, up into needle bar as far as it will go. Tighten set screw **A**.

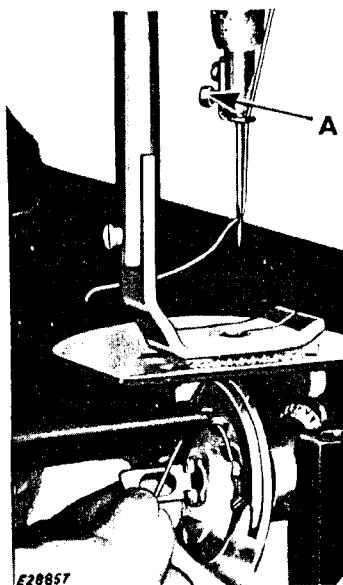


FIG. 7. To Remove Bobbin

TO REMOVE BOBBIN

Draw out slide plate in bed of machine; reach under machine bed with the thumb and forefinger of the left hand, open bobbin case latch as shown in Fig. 7, and lift out bobbin case. While latch remains open, bobbin is retained in bobbin case. Release latch, turn open end of bobbin case downward and bobbin will drop out.

TO WIND BOBBIN

Fasten bobbin winder to table with driving pulley in front of machine belt, so that pulley will drop away from belt when sufficient thread has been wound upon the bobbin.

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

Pass thread down through thread guide **1** in the tension bracket, around back and between tension discs **2**. Wind end of thread around bobbin a few times, push bobbin winder pulley over against machine belt and start machine.

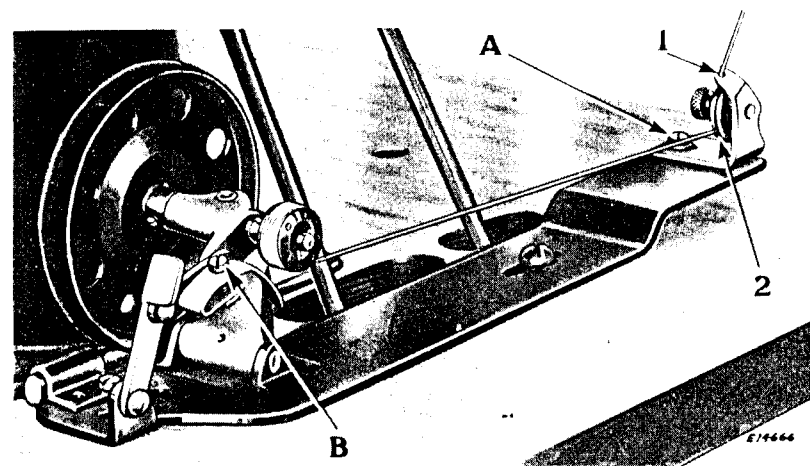


FIG. 8. Winding the Bobbin

When thread has been wound sufficiently, bobbin winder will stop automatically.

If thread does not wind evenly on bobbin, loosen screw **A** in tension bracket and move bracket to right or left as may be required, then tighten screw.

The amount of thread wound on bobbin is regulated by screw **B**. To wind more thread, turn screw **B** inwardly. To wind less thread, turn the screw outwardly.

Bobbins can be wound while machine is stitching.

TO THREAD BOBBIN CASE

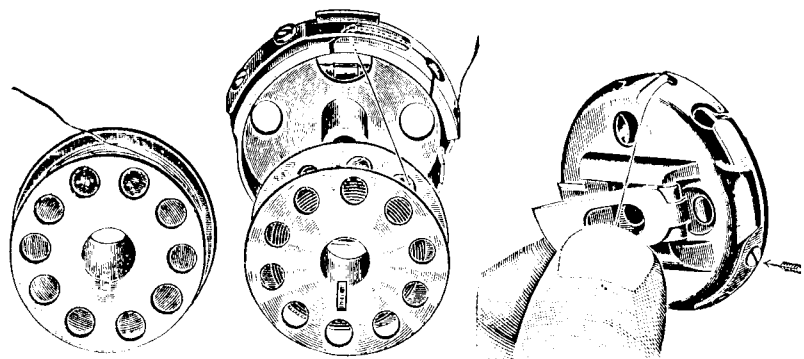
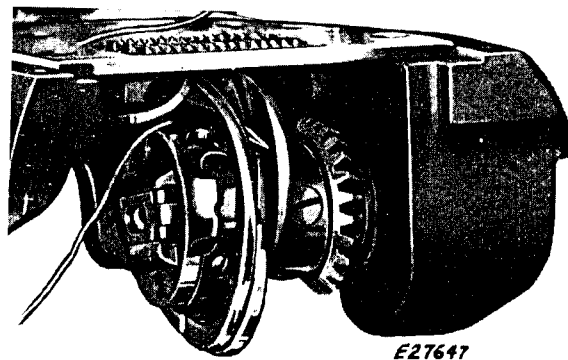


FIG. 9. Bobbin

FIG. 10. Threading Bobbin Case Cap

FIG. 11. Holding Bobbin Case Cap

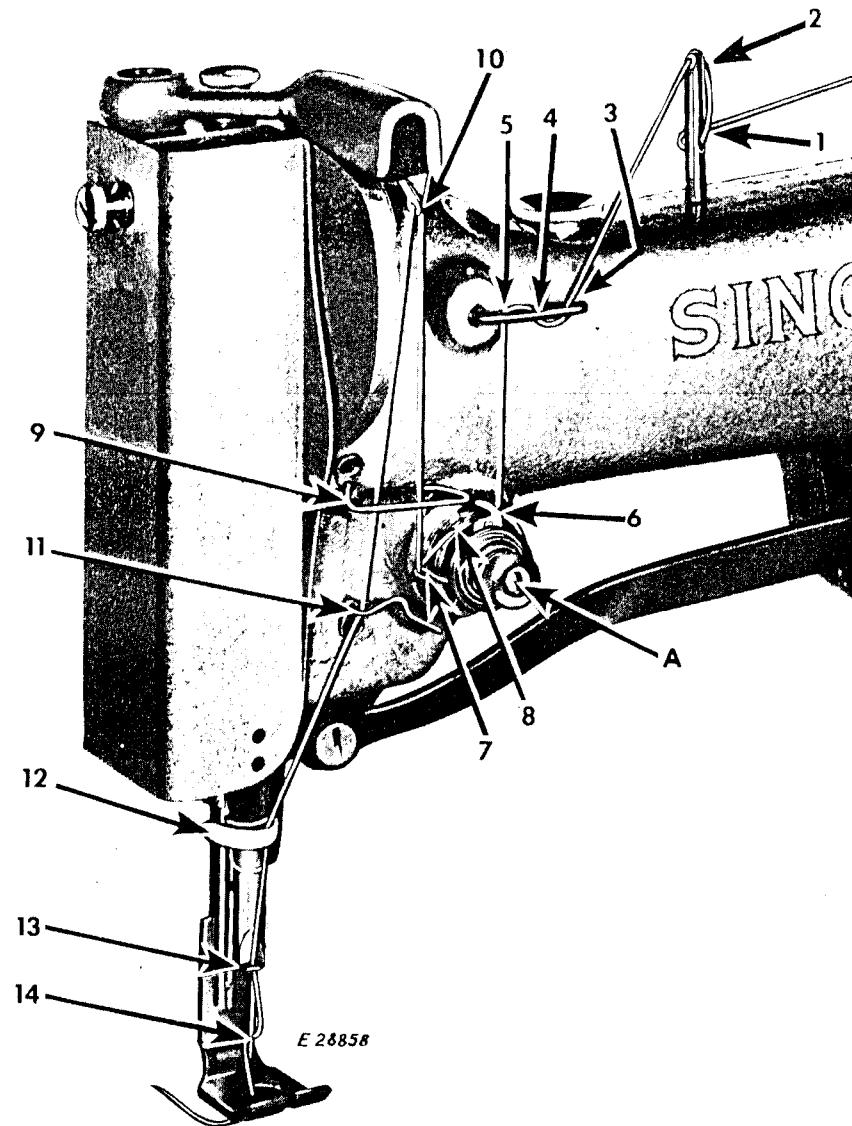
Turn the open end upwards, drop the bobbin into it with the thread unwinding as shown (Fig. 10) and raise the bobbin case latch, then draw the thread into the slot under the spring, down into the next slot and up through the delivery eye; then draw it down between the thumb and latch (Fig. 11) and so hold it until pushed into the hook (Fig. 12).



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FIG. 12.

UPPER THREADING



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FIG. 13. Threading The Needle

Pass thread from spool on machine through points 1 to 14 as shown in Fig. 13. Draw about two inches of thread through the needle eye with which to start sewing.

PREPARING TO SEW

Hold needle thread with left hand, leaving it slack from hand to needle. Turn machine pulley over toward you until needle moves down and take-up lever rises to its highest point, thus catching the bobbin thread. Draw up needle thread and bobbin thread will come up with it through needle hole in throat plate. Lay both threads back across feed dog.

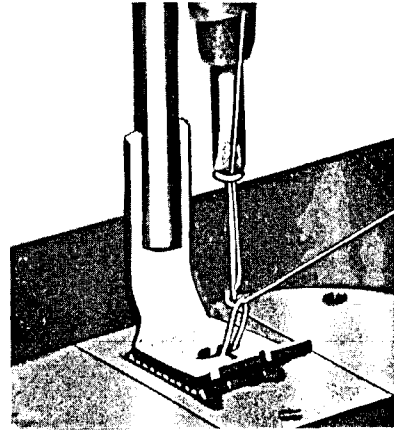


FIG. 14. Drawing Up Bobbin Thread

TO BEGIN SEWING

Place material beneath presser foot, lower presser foot and begin to sew. Be sure machine pulley always turns over toward you.

TO TURN A CORNER

Stop machine while needle is rising, but — before it is out of the material. Raise presser foot and turn the work, using the needle as a pivot.

TO REMOVE THE WORK

Raise presser foot and turn machine pulley until take-up lever is at its highest point. Draw work back from you and cut the threads. Lay ends of threads back under presser foot.

TENSIONS

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

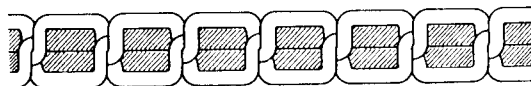


FIG. 15. Perfect Stitch

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

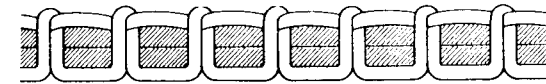


FIG. 16. Tight Needle Thread Tension

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

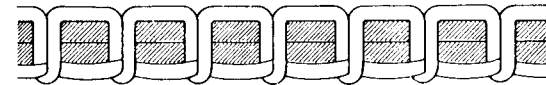


FIG. 17. Loose Needle Thread Tension

TO REGULATE THE TENSION

The tension on the needle thread is regulated by thumb nut A, Fig. 13. To increase tension, turn thumb nut over to the right. To decrease tension, turn thumb nut over to the left.

The tension on the bobbin thread is regulated by the regulating screw, marked by an arrow as shown in Fig. 11. To increase tension, turn this screw over to the right. To decrease tension, turn the screw over to the left.

TO REGULATE WIDTH OF BIGHT

The width of bight or zigzag stitch is regulated by the needle vibrating lever B, Fig. 3 to or from the figure "O" on the graduated scale C, Fig. 3. Each graduation represents a change of 1/32 inch. When the lever "B" is set at "O", the machine makes straight stitches only. The extreme width of zigzag stitch is 5/16 inch.

TO REGULATE THE PRESSURE ON MATERIAL

Pressure on the material is regulated by the screw D, Fig. 3. To increase pressure, turn screw downward. To decrease pressure, turn screw upward. The pressure should be only enough to enable the feed to move work along evenly.

THE FEED REVERSING MECHANISM

To reverse direction of feed, press down the feed reversing handle M, Fig. 2 and the work will feed toward you. Release the handle and work will feed away from you.

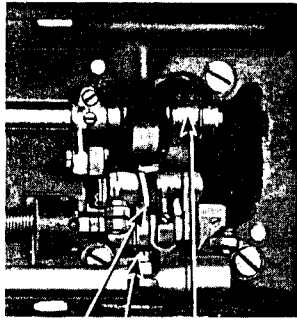


FIG. 18. Forward Feed Position

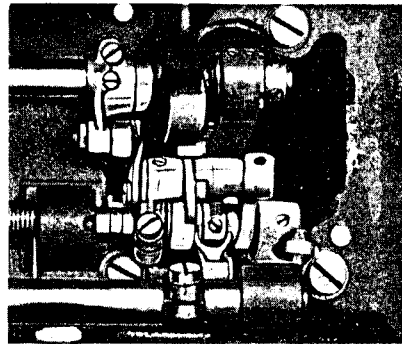


FIG. 19. Reverse Feed Position

For foot operation of reverse feed mechanism, connect the feed reversing treadle chain to the feed reversing lever R, Fig. 18, underneath the bed of the machine.

THE 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.

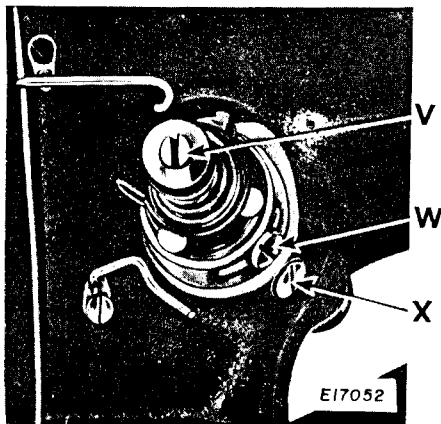


FIG. 20, Adjustment of Thread Controller

For more controller action on the thread, loosen the stop screw W, Fig. 20 at the right of the tension and set the stop lower. For less action, set the stop higher, and retighten stop screw W.

To strengthen the action of the controller spring on the thread, loosen the tension stud screw X, Fig. 20, at the right of the stop screw and turn the tension stud V, FIG. 20 slightly to the left with a screwdriver. To lighten its action, turn to the right and retighten the tension screw stud X.

TO SET THE NEEDLE BAR

See that needle is up in needle bar as far as it will go. There are two lines $\frac{3}{32}$ inch apart around 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 lower end of the needle bar frame.

In case the needle bar is not correctly set, loosen needle bar connecting stud pinch screw G, Fig. 6 and place the needle bar in the correct position as directed above. Re-tighten pinch screw G.

NOTE: IF NEEDLE BAR HAS NO MARK – Set the needle vibrator lever B, at figure "O" as shown in Fig. 3.

Set the needle bar so that when it rises $\frac{3}{32}$ inch from its lowest position, the point of the hook will be at the centre of the needle and about $\frac{1}{16}$ inch above the eye.

The figures on the feed regulating spindle head, showing through the notch in the machine pulley, indicate the number of stitches to the inch which should be made. If more or less stitches are made, adjust as follows: Remove screw A, 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 B until eight stitches to the inch is the result and replace check screw A firmly, making the master adjustment, which controls the other numbers of stitches as indicated.

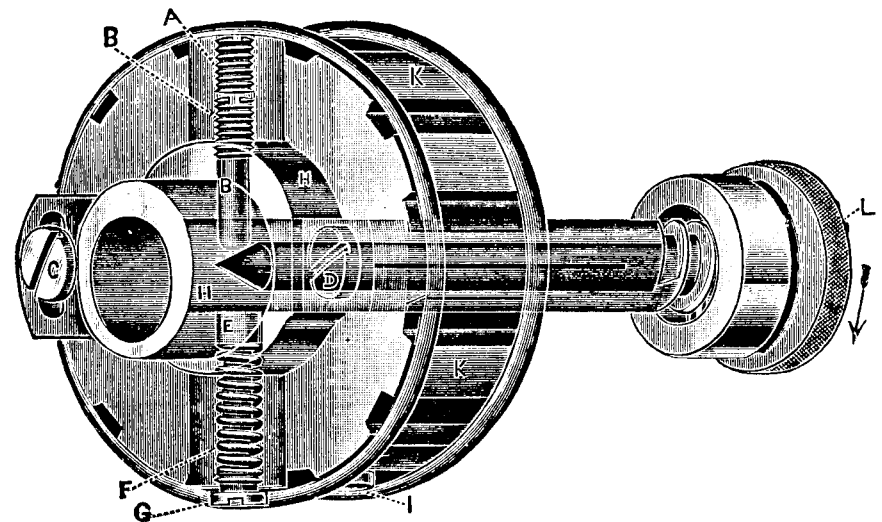


FIG. 21.

TO TIME THE MOVEMENT OF THE NEEDLE BAR FRAME

For straight stitching, the needle should run as close as possible to the left edge of the slot in the throat plate. If a straight needle does not run at the left edge of the slot in the throat plate, adjust the eccentric at the lower end of the needle bar frame, which connects it with the pitman. If the eccentric has been removed, be careful when replacing to have the bulge downward.

The needle bar on its upward movement should start to vibrate when the point of the needle is about $\frac{3}{8}$ inch above the throat plate. The vibration should terminate when the needle has reached approximately the same position on its downward movement. If the vibration is not correctly timed, move the needle vibrator driving gear pinion on the arm shaft to the left, or right as required.

TO SET THE FEED REGULATOR

Turn spindle head L, Fig. 21, in the direction indicated by arrow and make the longest stitch possible. Remove check screw A and turn screw B down until machine makes the desired number of stitches to the inch. Turn screw A down tightly on screw B as a check. The stitch can then be changed by turning spindle head L, for a shorter stitch, but operators cannot make longer stitches than the limit that screw B is to produce.

HOOK DRIVING BEVEL PINION SHAFT

The hook driving bevel pinion shaft, driven by arm shaft connection belt K, Fig. 18, runs through the feed lifting rock shaft, which is provided with bearings for the shaft.

TO TIME THE SEWING HOOK

Set needle vibrator lever B, at figure "O" as shown in Fig. 3. Remove throat plate and turn machine pulley toward you until lower mark across needle bar, as it is rising, is just visible at end of needle bar frame. If needle bar and hook are in correct time, the point of the hook will be at the centre of the needle and about $\frac{1}{16}$ inch above the eye.

IF TIMING IS NOT CORRECT: Loosen the hook driving bevel pinion shaft belt pulley set screws and turn the machine pulley toward you until the lower mark across the needle bar is just visible at the end of the needle bar frame, then stop turning and hold the machine pulley firmly. With the left hand, turn the hook until the point is at the centre of the needle, $\frac{1}{16}$ inch above its eye. See that the end play to the shaft is nearly eliminated, then retighten the pulley screws.

TO REMOVE HOOK

Switch bobbin case stop F, Fig. 22 to the position shown by the dotted lines; remove screw A and then remove the hook.

NOTE: Transparent view at left illustrates how the hook and its shaft (which runs in a bushing) are held together by screw A, also showing the feed bar slide block and its crank with hook driving bevel pinion shaft extending out to the right at CC.

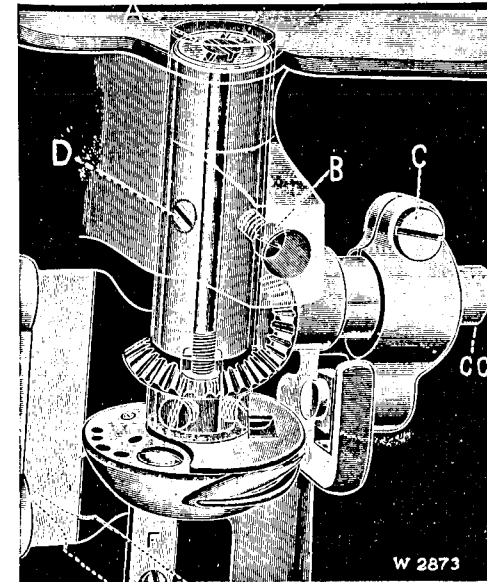


FIG. 22.

TO SET HOOK TO OR FROM NEEDLE

To prevent the point of the hook from dividing the strand of thread, the point should run as close to the needle (within the scarf) as possible.

Turn the machine pulley over toward you, until the point of the sewing hook is at the centre of the needle. Loosen the two screws B and D, Fig. 22 and move the hook to the desired position, then securely tighten the two screws B and D.

FEED

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

To prevent the feed dog from striking at either end of the slots in the throat plate, loosen screw D, Fig. 18 and move the feed dog forward or backward until the longest stitch can be taken, without the feed dog striking the throat plate and retighten screw D.

TO RAISE OR LOWER 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 dirt from between the feed points and replace the throat plate. Tip the machine back and turn the machine pulley toward you until the feed dog is at its highest position; loosen screw C, Fig. 22 and raise or lower the feed dog as required. Retighten the screw C.

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

The Same!

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