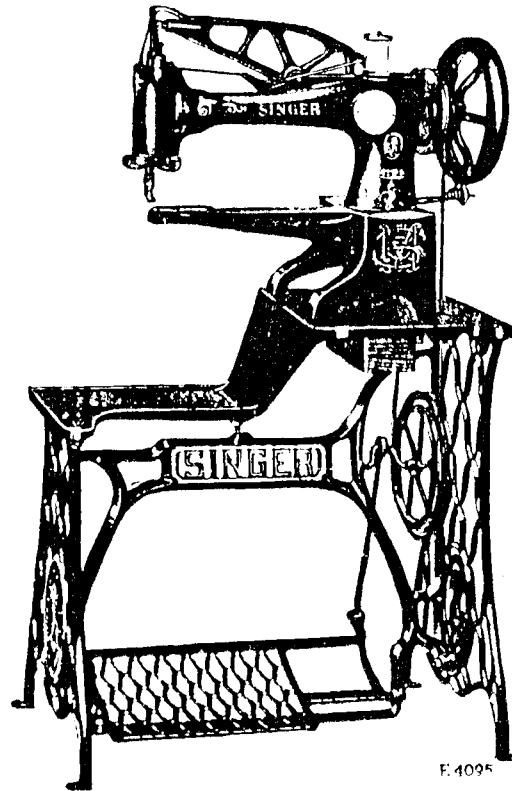


8166

INSTRUCTIONS  
FOR USING  
**SINGER**\*  
SEWING MACHINE



No. 29-4

OSCILLATING SHUTTLE

\*A TRADE MARK OF

THE SINGER MANUFACTURING COMPANY

## 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

Copyright, U. S. A., 1914 and 1923 by  
The Singer Manufacturing Company  
All Rights Reserved for All Countries

## DESCRIPTION

Machine No. 29-4 is intended for use in manufacturing and repairing shoes, and is also useful for stitching other articles made of leather or cloth. It has one needle and one shuttle and makes the lock stitch.

The machine has a cylinder bed which enables it to stitch articles of cylindrical shapes and which adapts it especially for sewing boots and shoes. A detachable table can be furnished when desired, an extra charge being made for it. This table is very convenient when flat work is being stitched.

### To Operate the Machine

Raise the feeding foot. Place your feet upon the treadle and with the right hand turn the balance wheel over toward you; this will start the machine. Continue the motion thus begun by an alternate pressure of heel and toe, until a regular and easy movement is acquired and the balance wheel kept in continuous rotation by use of the feet alone.

When you are thoroughly familiar with the treadle movement, and can restart the machine without turning the balance wheel in the wrong direction, place a piece of material under the feeding foot, let the foot down upon it, and operate the machine in this way until you have become accustomed to guiding the material.

### Needles and Thread

Needles for Machine No. 29-4 are of Class and Variety 29x3 for cloth, or 29x4 for leather, and are made in sizes, Nos. 11, 13, 14, 16, 17, 18, 19, 21, 22 and 23. The size of 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.

Orders for needles must specify the *quantity* required, the *size* number, also the *class* and *variety* numbers separated by an x. The following is an example of an intelligible order:

"100 No. 16, 29 x 3 Needles," for cloth.

"100 No. 16, 29 x 4 Needles," for leather.

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

### Relative Sizes of Needles and Thread

THE FOLLOWING SIZES OF NEEDLES AND THREAD ARE RECOMMENDED:

#### FOR CLOTH—ROUND POINT NEEDLES 29 x 3

SIZES OF NEEDLES	COTTON	SILK	LINEN
11 and 13	80-100	OO, O	
14	60-80	A	
16 and 17	40-60	B-C	
18	30-40	D-E	
19	24-30	EE	60-80
21	20-24		40-60
22	16-20		24-40
23	12-16		16-24

#### FOR LEATHER—WEDGE AND TWIST POINT NEEDLES 29 x 4

SIZES OF NEEDLES	COTTON	SILK	LINEN
11 and 13	60-80	A-B	
14	40-60	C-D	
16 and 17	30-40	D-E	
18	24-30	EE	40-60
19	16-24		24-40
21, 22, 23	12-16		16-24

### To Remove the Bobbin

Turn the balance wheel over toward you until the needle bar is at its highest point, then raise the feeding foot. Press down

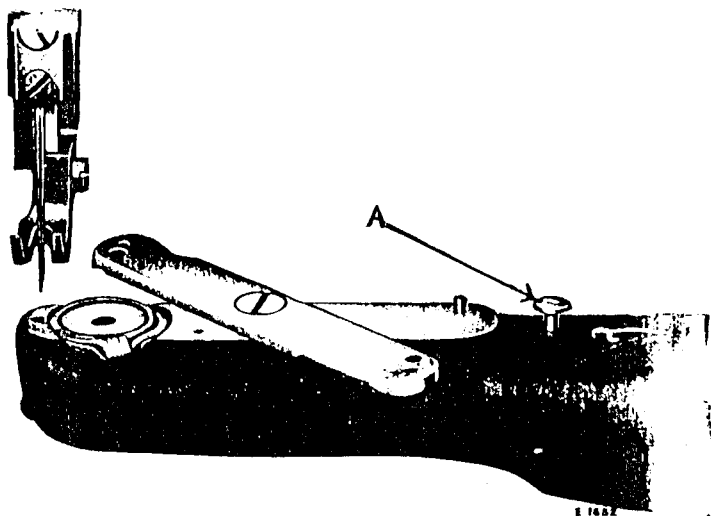


FIG. 3. TAKING OUT THE SHUTTLE

upon the stud A and turn the needle plate as shown in Fig. 3. Turn the balance wheel until the point of the shuttle is nearest you, then lift out the shuttle and bobbin with the thumb and forefinger; turn the shuttle downward and the bobbin will drop out.

### To Wind the Bobbin

Place the spool of thread on the spool pin and pass the end of the thread into the center hole in the bobbin; then place the

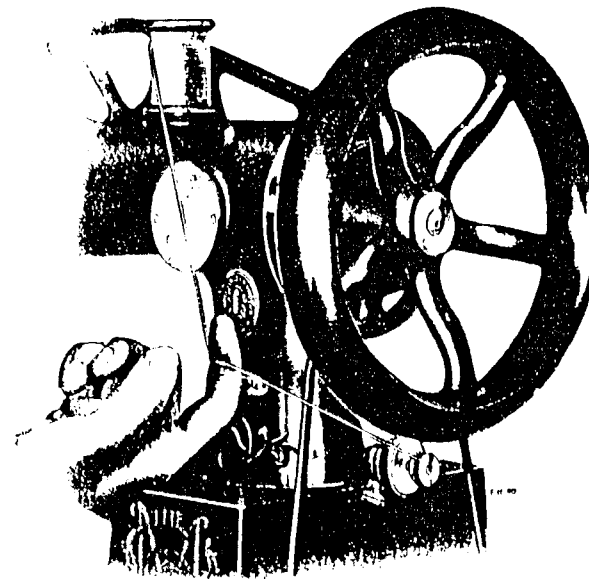


FIG. 4. WINDING THE BOBBIN

bobbin on the bobbin winder spindle and press it on as far as it will go, having the slot in the side of the bobbin at the right. Loosen the thumb screw on the bobbin winder and push it down until the rubber ring presses against the rim of the balance wheel, then tighten the thumb screw.

Raise the feeding foot and run the machine, at the same time guiding the thread with the finger as shown in Fig. 4. When the bobbin is sufficiently wound stop the machine, pass the thread into the slot in the edge of the bobbin and take off the bobbin, loosen the thumb screw on the winder, turn it up and tighten the screw.

### To Thread the Shuttle



FIG. 5

Hold the shuttle in the left hand with the wide opening up, let the end of the thread pass down through the shuttle (see Fig. 5) and drop the bobbin into it.



FIG. 6

Turn the shuttle over in the fingers, holding the bobbin in it, and draw the thread into the slot in the edge of the shuttle and under the end of the tension spring (see Fig. 6); then pass the thread through the delivery eye which is in the upper edge of the shuttle (see Fig. 7).



FIG. 7

### To Replace the Shuttle

After threading, turn the balance wheel until the shuttle carrier lies at the right hand, then with the point of the shuttle

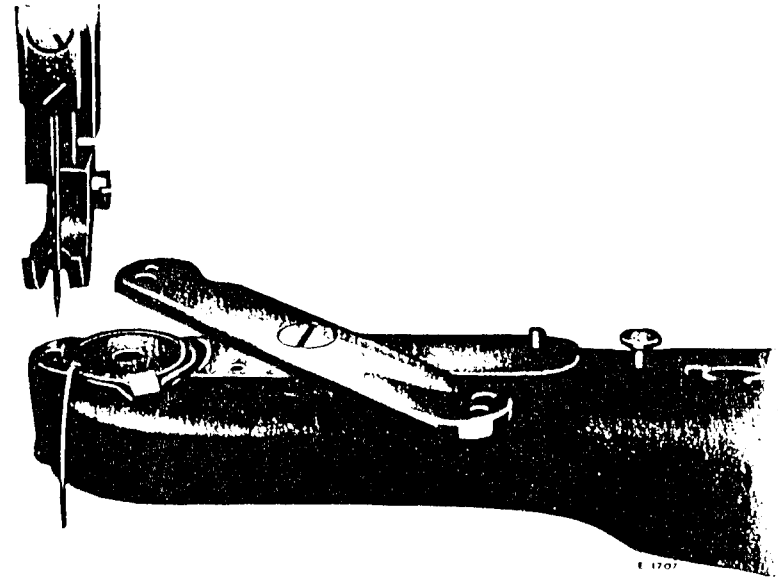


FIG. 8. SHUTTLE THREADED AND REPLACED

nearest you and pointing toward the right, drop the shuttle and bobbin into the recess provided for it, and turn back the needle plate to its sewing position.

### To Set the Needle

Turn the balance wheel over toward you until the needle bar moves up to its highest point; loosen the lower screw in the needle clamp and put the needle up into the clamp as far as it will go with the long groove to the left and the eye directly in line with the machine bed, then tighten the screw. The upper screw in the needle clamp is for use only when it is necessary to set a small needle nearer to, or a large needle farther from the shuttle by loosening the screw and moving the clamp to the right or left.

### To Thread the Needle

Place the spool of thread on the spool pin so that when the thread is drawn off, the side of the spool nearest you will turn to

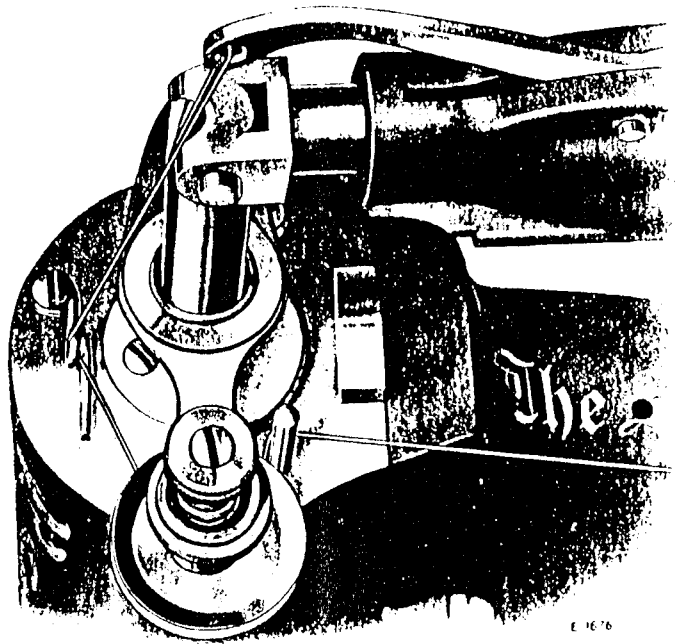


FIG. 9. THREADING THE NEEDLE

the right. Raise the wire in the oil cup on top of the arm, pass the thread under it and press the wire back in position; then pass the thread around the back of the pin which is near the tension discs, and from back to front and right to left between the tension discs, into the thread eyelet (see Fig. 9) and up and from front to back through the hole in the take-up lever. Draw about 10 inches of thread through the hole in the take-up lever and pass it down through the hole which runs through the centre of the needle bar, using the notched threading wire which is furnished with the machine. Then pass the thread from left to right through the eye of the needle. Draw about three inches of thread through the eye of the needle with which to commence sewing.

### To Oil the Machine

The machine must be thoroughly and carefully oiled at the places designated by arrows in Figs. 10 and 11, and when in constant use oil should be applied frequently.

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

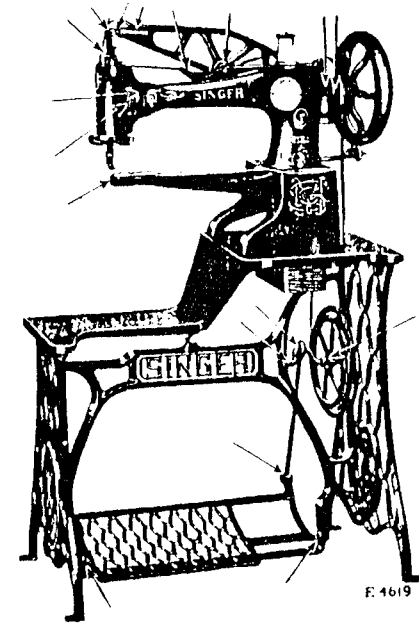


FIG. 10. OILING PLACES IN MACHINE AND STAND

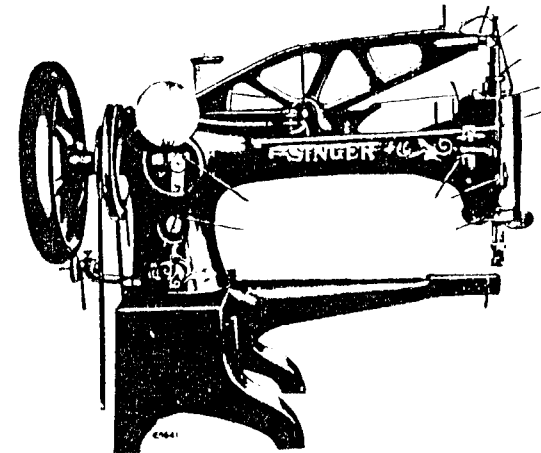


FIG. 11. REAR VIEW OF MACHINE SHOWING POINTS TO BE OILED

### 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

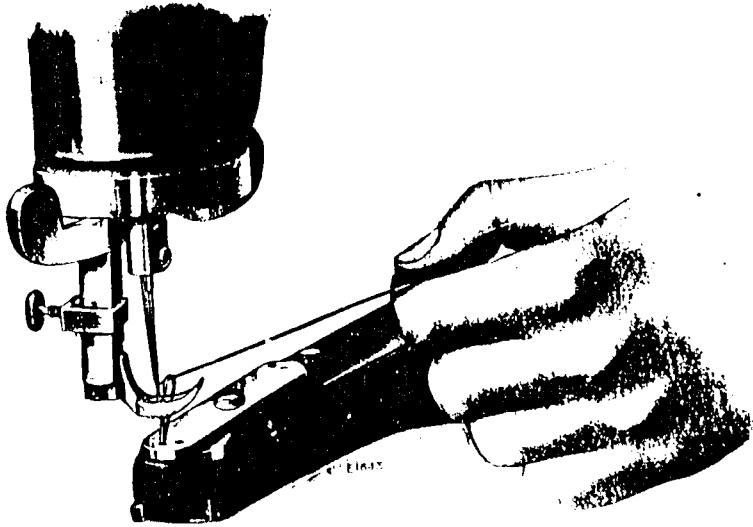


FIG. 12. DRAWING UP OF THE UNDER THREAD

toward you until the needle moves down and up again to its highest point, thus catching the under thread; draw up the needle thread and the under thread will come up with it through the hole in the needle plate (see Fig. 12). Lay both threads back under the feeding foot.

### To Commence Sewing

Place the material beneath the feeding foot, lower the foot upon it and commence to sew, turning the balance wheel over toward you.

### To Remove the Work

Let the needle bar rest at its highest point, raise the feeding foot, then draw the material backward about 3 inches and cut the threads close to the work. Leave the ends of the threads under the feeding foot

## Tensions

For ordinary stitching the upper and under threads should be locked in the center of the thickness of the material, thus:



FIG. 13. PERFECT STITCH

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



FIG. 14. TIGHT UPPER TENSION

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



FIG. 15. LOOSE UPPER TENSION

### To Regulate the Tensions

The upper thread tension is regulated by the thumb nut at the top of the tension discs; to increase the tension turn over to the right, or to the left to decrease. The under thread tension is regulated by the screw near the end of the shuttle tension spring; to increase the tension turn over to the right, or to the left to decrease. When the under thread tension has been once properly adjusted it is seldom necessary to change it, as a correct stitch can usually be obtained by varying the upper thread tension.

### To Turn a Corner

Stop the machine and turn the balance wheel over toward you by hand until the feeding foot is raised, then turn the work as desired using the needle as a pivot.

### To Regulate the Length of Stitch

The length of stitch is regulated by the stitch regulator which is held in position by a thumb screw on the feed bar. Loosen the thumb screw and move the regulator down to lengthen the stitch or up to shorten; the thumb screw must be tightened before commencing to sew.

### To Regulate the Pressure on the Material

The pressure on the material is regulated by the thumb screw which is held in position by the lock nut on the back of the machine at the center of the long arm. Loosen the lock nut and turn the thumb screw around to the right to increase the pressure, or to the left to decrease, then tighten the lock nut. The pressure should be heavier for work in leather than in fabrics and should only be heavy enough to enable the feed to move the work along evenly.

### To Regulate the Lift of the Feeding Foot

While stitching, the feeding foot rises off the fabric after it has moved the work forward, moves toward the needle, and then descends again upon the fabric; it is better that this lift should be only sufficient to clear the thickest part of the work in hand; to adjust the lift loosen the wing nut in the block on the long bar at the back of the machine, and move the block toward the balance wheel to cause the foot to lift higher, or in the opposite direction to reduce the lift.

### To Change the Direction of the Feed

As the work is moved along while stitching by the feeding foot only, the direction of the stitching can be changed as desired by turning the foot around by means of the two handles above it.

### To Ensure Perfect Action of the Machine

When the machine is in operation, the top of the balance wheel must always turn over toward the operator.

Never run the machine without material between the feeding foot and needle plate.

Do not run the machine when both shuttle and needle are threaded unless there is material under the feeding foot.

Do not try to help the machine by pulling the work lest you bend the needle; the machine feeds the work without assistance.

## HINTS

**The Belt.** See that the belt is not too tight; it should always be tight enough not to slip. If too loose remove the hook at one end, shorten the belt and rejoin.

**Machine Working Heavily.** If the machine runs hard after standing idle for some time use a little kerosene or benzine in the oiling places, run the machine rapidly, then wipe clean and oil. If it still runs hard it is certain that some bearing has been overlooked in cleaning and oiling.

**To Avoid Breaking Needles.** See that the feeding foot is securely fastened by the thumb screw. Do not sew heavy seams or very thick material with too fine a needle. A large needle and thread to correspond should be used on heavy work. See page 4.

See that the needle is not bent and avoid pulling the material when stitching, either will cause the needle to strike on the needle plate and break.

**Breaking of Upper Thread.** If the upper thread breaks it may be caused by:

Improper threading of machine.

Tension being too tight.

The thread being too coarse for the size of the needle.

The needle being bent, having a blunt point, or being set incorrectly.

**Breaking of Under Thread.** If the under thread breaks it may be caused by:

Improper threading of shuttle.

Tension being too tight.

**Skipping of Stitches.** The needle may not be accurately set into the needle bar or the needle may be blunt or bent.