

**SINGER**  
12W/14W

USE ONLY  
**SINGER**

“OIL FOR HIGH SPEED SEWING MACHINES  
(Cloth and Leather)”

for general use

or

“STAINLESS OIL  
FOR HIGH SPEED SEWING MACHINES”

where a stainless oil is desired.

These specially prepared oils are the result of extensive research. They ensure freedom from lubricating trouble and give longer life to sewing machines.

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**THE IMPORTANCE OF USING  
SINGER NEEDLES FOR  
SEWING MACHINES**

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

Singer Needles can be purchased from any Singer Shop for the Manufacturing Trade.

**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**

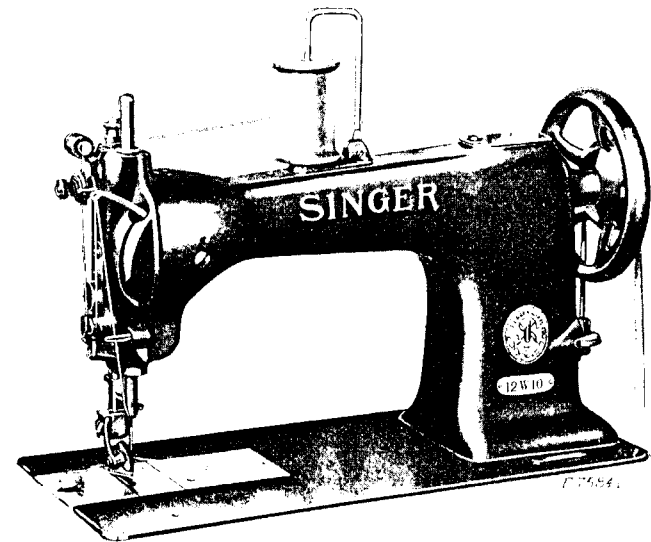
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887 w

**INSTRUCTIONS**

FOR USING

**Singer Sewing Machines**



Machine No. 12 w 10

OF

**CLASSES 12w AND 14w**

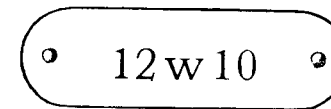
**The Singer Manufacturing Co.**

# MACHINES OF CLASS 12 w

## DESCRIPTION

These machines are of the rotary, variable motion lock stitch type, with the long beak sewing hook, which draws the lock of the threads to the center of the materials, between the upper and under surfaces, thus making a firm seam of fine appearance on both sides.

The specific designation of each Singer Sewing Machine consists of two numbers, separated by a hyphen or letter and stamped upon a number plate, which is attached to the machine, usually upon the arm.



The number before the hyphen or letter designates the **Class** to which the machine belongs, and the number after, the **Variety** of the machine in its Class.

When supplies for a machine are to be ordered and there is any uncertainty as to the correct numbers of needles or parts, the Class and Variety numbers of the machine, as shown on the number plate, should be given to ensure a correct understanding of the order.

# MACHINES OF CLASS 14 w

## DESCRIPTION

Machines of Class 14w make a triple lock stitch and are used in the manufacture of articles which are subject to heavy wear, such as mail bags, traveling bags, heavy gloves, riding breeches, cartridge belts, wagon covers and similar work requiring seams of extraordinary strength.

The needle vibrates forward and backward, making a stitch at each vibration and lays three lines of thread in each stitch or space between two needle holes.

### 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.

### Purchasing of Parts and Needles

Supplies of parts and needles for Singer machines can be purchased at any Singer Shop for the Manufacturing Trade or ordered by mail. If orders are sent by mail, money or a post office order covering their value, including postage, should be enclosed and the order will then be promptly filled and forwarded by mail or express.

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**Speed**

The maximum speeds recommended for machines of Classes 12w and 14w, are as follows:

12 w 23	} <b>1600 stitches per minute</b>	12 w 10	} <b>1800 stitches per minute</b>
12 w 29		12 w 12	
12 w 35		12 w 22	
12 w 102		12 w 112	
12 w 115		12 w 113	
		12 w 116	
		12 w 125	

12 w 202 and 12 w 205—**1200 stitches per minute**  
 12 w 208 and 12 w 209—**300 stitches per minute**  
 14 w 4—**1500 stitches per minute**

Run the machine somewhat slower than the maximum at first and increase the speed after the parts become thoroughly glazed by their action upon each other.

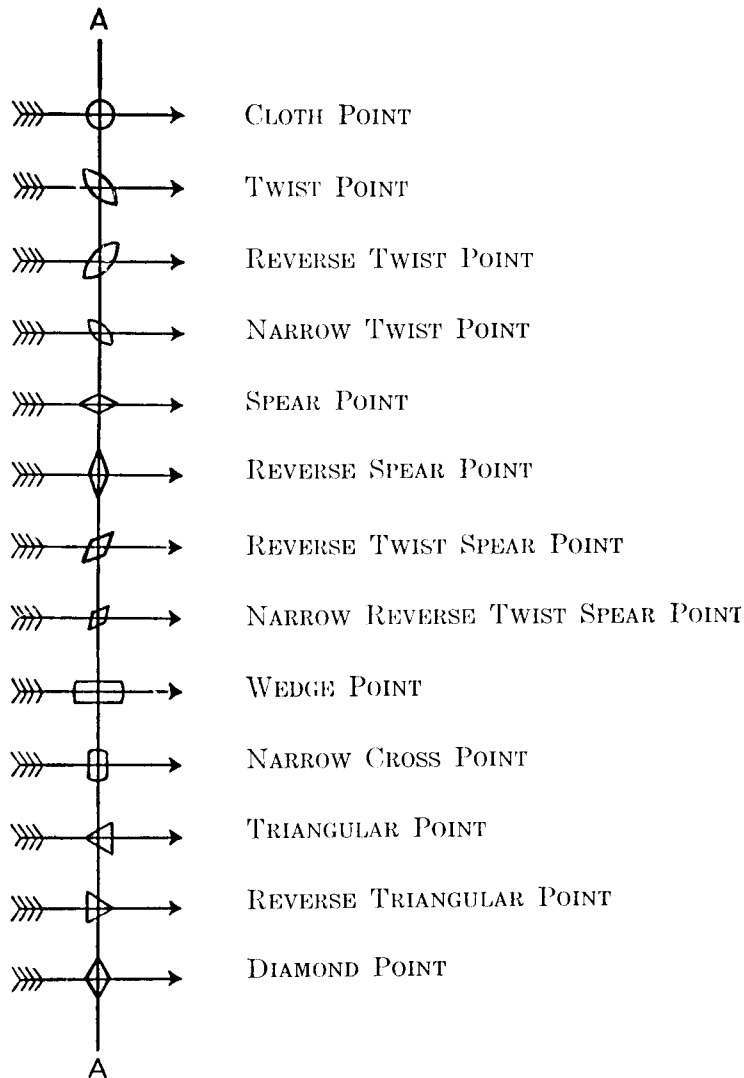
**Description of Needles for Machines of Class 12 w**

Class and Variety	Style of Point	DESCRIPTION	Length from Eye to Upper End	SIZES OF NEEDLES
126 x 1	Cloth	Straight Blade, for Foot Power and General Stitching. . . . .	1 1/2	8, 9, 10, 12, 14, 16, 18, 20, 22, 23, 24, 25.
126 x 3	Cloth	Reduced Blade, High Speed, <i>Special Finish</i> . . . . .	1 1/2	10, 12, 14, 16, 18, 20, 22, 23, 24.
126 x 5	Cloth	Short Point (otherwise the same as 126 x 1 . . . . .	1 1/2	16, 18.
128 x 1	Cloth	Straight Blade. . . . .	1 1/2	8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 23, 24, 25, 26.
128 x 3	Cloth	Reduced Blade, <i>Special Finish</i> . . . . .	1 1/2	9, 10, 11, 12, 13, 14, 16, 18, 20, 22, 23, 24, 25.
128 x 11	Cloth	Long Straight Blade (short shank). . . . .	1 1/2	9, 10, 11, 12, 13, 14, 15, 16, 18, 20.
128 x 2	Leather	Triangular Point, <i>Special Finish</i>	1 1/2	9, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 23.

**Description of Needles for Machines of Class 12 w**

Class and Variety	Style of Point	DESCRIPTION	Length from Eye to Upper End	SIZES OF NEEDLES
128 x 4	Leather	Narrow Wedge Point, <i>Special Finish</i> . . . . .	1 1/2	9, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 23, 24.
128 x 6	Leather	Points other than triangular and narrow wedge, <i>Special Finish</i> . . . . .	1 1/2	9, 10, 11, 12, 13, 14, 15, 16, 18, 20, 22, 23, 24.
128 x 16	Leather	Short Blade (long shank, narrow wedge point) <i>Special Finish</i> . . . . .	1 1/2	9, 10, 11, 12, 13, 14, 15, 16, 18.
128 x 18	Leather	Extra Narrow Wedge Point, <i>Special Finish</i> . . . . .	1 1/2	9, 10, 11, 12, 13, 14, 15, 16, 18.
128 x 20	Leather	Triangular Point, <i>Special Finish</i> Clearance above eye. . . . .	1 1/2	10, 12, 13, 14, 15, 16, 17, 18, 20, 22, 23, 24, 25.
132 x 1	Cloth	Shank, flattened one side for Trimmer with Stripper. . . . .	1 1/2	9, 10, 12, 14, 16, 18, 20.
132 x 2	Leather	Reverse Spear Point. Shank flattened one side for Trimmer with Stripper. <i>Special Finish</i>	1 1/2	12, 14, 16, 18, 20.
<b>High Arm Machines</b>				
129 x 1	Cloth	(Size 22 and above, Clearance above eye). . . . .	1 3/4	16, 18, 20, 22, 23, 24, 25, 26.
129 x 2	Leather	Reverse Spear Point. (Size 22 and above, Clearance above eye) <i>Special Finish</i> . . . . .	1 3/4	16, 18, 20, 22, 23, 24, 25, 26.
129 x 4	Leather	Reduced Blade, Diamond Point (Size 22 and above, Clearance above eye) <i>Special Finish</i> . . . . .	1 3/4	16, 18, 20, 22, 23, 24.
129 x 6	Leather	Points other than reverse Spear (Size 22 and above, Clearance above eye) <i>Special Finish</i> . . . . .	1 3/4	16, 18, 20, 22, 23, 24, 25, 26.
<b>Needles for Machines of Class 14 w</b>				
130 x 17	Cloth	Stub, for silk, etc. . . . .	1 1/2	9, 10, 12, 14, 16, 18.

## DIAGRAM OF NEEDLE POINTS



Line of Eye Indicated by Arrows  
Line of Stitching indicated by A, A.

arm shaft bearing (front) and through the two holes near the balance wheel oil the arm shaft bearing (back). Move the arm cap aside and oil arm shaft connections (55). Remove the face plate occasionally and oil the needle bar link and all movable parts. Tip the machine back to clean and oil all movable parts on the underside of the bed.

Oil the bearings at both ends of the treadle, pitman and shaft and all other movable parts of the transmitter, etc.

After oiling take the bobbin out and run the machine rapidly for a minute, then wipe off all superfluous oil.

Be careful to use no more oil than is needed, a single drop being sufficient at any point.

**To Oil the Wheel Feed.** Tip the machine back and oil the rim of the feed wheel where the clutch slides upon it and the link at the end of the feed wheel driver where it connects with the driver crank.

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 as before directed. If the machine

SIZES OF NEEDLES	COTTON		SILK	
	COTTON	SILK	COTTON	SILK
8		OOO	200	
9		OO	150	
10	70	O	100-150	OOO-OO
11	60	A	90-100	OO
12	50	B	80-90	O
13	40	C	70-80	A
14	36	D	60-70	A
15	30	D	50-60	B
16	30	E	40-50	C
18	24	EE	30-40	C
20	20		24-30	D
22	16		20-24	E
23	12		16-20	EE
24	8		8-16	

Best results are obtained by using left twist thread; that is, thread twisted over from right to left.

## DIAGRAM OF NEEDLE POINTS

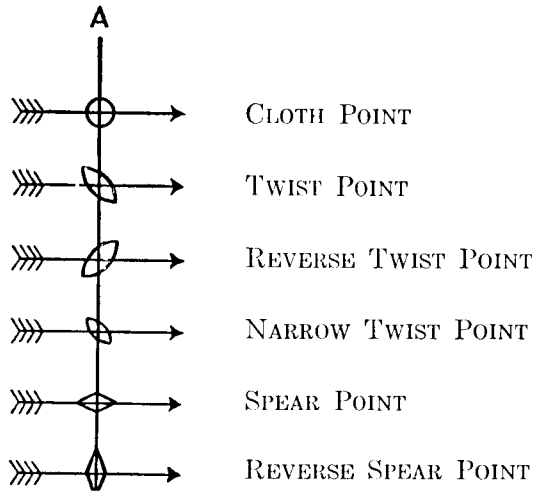


Fig. 1. Transparent view showing the places to oil

## TO OIL THE MACHINE

All places where one part of the machine is in movable contact with another require oiling, and oil holes are provided for all bearings which cannot be reached without them.

Put a drop of oil in each of the oil holes indicated by dotted lines (Fig. 1).

Put a small amount of oil in the hook race two or three times a day if the machine is in constant use.

Keep the inside of the bobbin case clean, and the stud in the center of the rotating hook slightly oiled.

The bobbin winder spindle should be oiled.

On top of the arm (Fig. 1), near the needle bar, there are four oil holes; through the small one nearest the needle bar oil the needle bar connecting link when the needle bar is at its highest point, turn the balance wheel until the needle bar is at its lowest point and through the second front hole oil the groove in the take-up cam, through the third and fourth holes oil the

arm shaft bearing (front) and through the two holes near the balance wheel oil the arm shaft bearing (back). Move the arm cap aside and oil arm shaft connections (55). Remove the face plate occasionally and oil the needle bar link and all movable parts. Tip the machine back to clean and oil all movable parts on the underside of the bed.

Oil the bearings at both ends of the treadle, pitman and shaft and all other movable parts of the transmitter, etc.

After oiling take the bobbin out and run the machine rapidly for a minute, then wipe off all superfluous oil.

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**To Oil the Wheel Feed.** Tip the machine back and oil the rim of the feed wheel where the clutch slides upon it and the link at the end of the feed wheel driver where it connects with the driver crank.

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 as before directed. If the machine still runs hard, it is certain that some bearing has been overlooked in cleaning and oiling.

## TO REMOVE THE FACE PLATE

Turn the balance wheel until the take-up lever is about half way up or down, then lower the presser lifter, loosen the large screw at the top of the face plate and draw its lower end outward and slide it downward until free. In replacing the face plate move it up under the head of the screw, raise the presser bar lifter until screw (D, see Fig. 2) enters the slots in the gear and face plate, then tighten the large screw.

## TO SET THE NEEDLE

Turn the balance wheel until the needle bar is at its highest point, insert the needle in the needle bar with the short groove toward the arm. Be sure to push the needle as far up as it will go, then tighten the set screw.

It may be necessary to turn the needle to the right or left slightly, if stitches are missed.

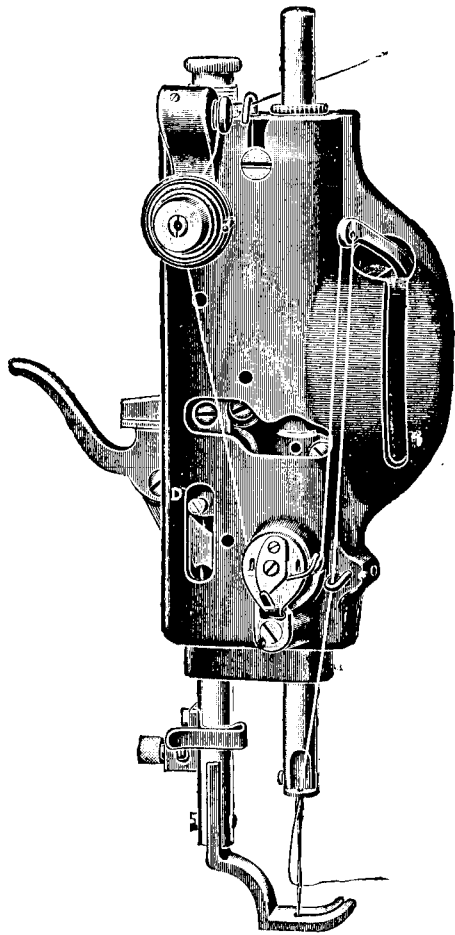


Fig. 2

### TO THREAD THE NEEDLE

Place the spool of thread on the spool holder; pass the thread under the face plate thread guide, up over the thread retainer, down between the tension discs, under the thread controller and up over the notch (arrow, see Fig. 3); thence up through the take-up lever, down through the thread guide (on the front of the face plate) through the needle bar thread guide (at the bottom of the needle bar) and from the left through the eye of the needle toward the arm.

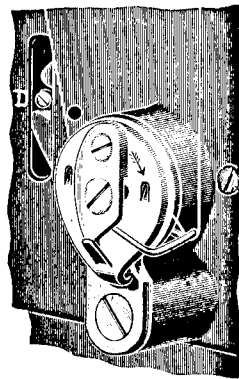


Fig. 3

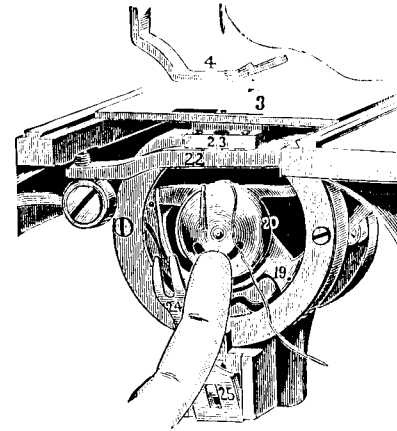


Fig. 4

### TO REMOVE THE BOBBIN CASE

Remove the bed slide (front), press latch (25) down, drop bobbin case holder (24), place the forefinger nail in the slot of the bobbin case as shown in Fig. 4, and draw the bobbin case out.

### TO THREAD THE BOBBIN CASE

Have the thread unwind from the bobbin and draw it under the tension spring as shown in Fig. 5.

### TO PLACE THE BOBBIN CASE IN THE HOOK

Put the bobbin in the case and the case on the stud in the center of the hook. Close up bobbin case holder (24) with the bobbin case in such a position that the stop finger will be in the fork of the holder. See that the joint of holder (24) is free from dirt and lint, and that the holder is held firmly by latch (25).

### TO COMMENCE SEWING

Raise the presser foot with the lifter, on the back of the arm head (see Fig. 2). With the left hand take hold of the needle thread, leaving it slack between the hand and the needle, turn the balance wheel toward you until the needle moves down and the take-up lever rises to its highest point, thus catching the bobbin thread; draw the needle thread up and the bobbin thread with it through the needle hole in the throat plate and lay both threads back across the feed dog; then place the material beneath the needle, lower the presser foot upon it, turn the balance wheel toward you and commence to sew.

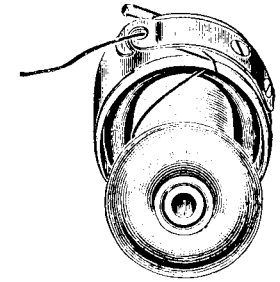


Fig. 5

Form the habit of stopping the machine when the needle reaches the presser foot held up by the lifter, as shown in Fig. 2. The take-up lever is then at its highest position, the tension is released, the work draws out easily, and the needle will not become unthreaded when starting to sew even if only a short end is left through the needle.

### THE TENSIONS

To regulate the tensions, please observe the following:



Fig. 6

The upper and under threads should lock in the center of the material as shown in Fig. 6.

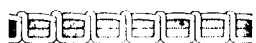


Fig. 7

If the upper thread is held too tightly by its tension, or if the under thread is too loose, the thread will be straight along the upper surface of the material, as shown in Fig. 7.



Fig. 8

If the under tension is too tight or the upper too loose, the thread will be straight along the under side of the material, as shown in Fig. 8.

The tension on the under thread is changed by a very slight turn of the tension regulating screw in the middle of the bobbin case spring (see Fig. 5), turning it to the right tightens and to the left loosens the under tension.

Correctly made stitches, as shown in Fig. 6, can usually be obtained by regulating the upper tension only; turn the thumb nut (see Fig. 2) toward you to tighten and from you to loosen the tension.

**Caution.** Do not try to adjust the upper tension when the presser foot is up as the tension is then loose.

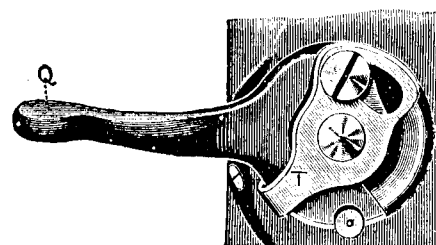


Fig. 9

### TO REGULATE THE LENGTH OF STITCH

Raise feed regulating handle (Q) to shorten or lower it to lengthen the stitch.

If the stitch changes length while the machine is running, tighten the screw which shows under handle (Q).

### THE PRESSURE ON THE MATERIAL

The pressure of the presser foot or of the roller presser should be only heavy enough to assure an even length of stitch and to prevent the work from rising with the needle; if too heavy it will make the machine run harder and be of no benefit.

The pressure is regulated by turning the thumb screw at the top of the arm head through which the presser bar passes (see Fig. 2).

### TO REMOVE THE WORK

Have the take-up lever at its highest point; raise the presser foot, draw the work back and to the left about three inches, then cut the threads near the work, unless ends long enough to tie are desired.

### ROLLER PRESSER

For convenience in threading, press down on the roller and swing it out to the left.

The roller should be set close enough to the needle to steady it and prevent it from staggering, and far enough back to prevent the leather from stretching.

### ALTERNATING PRESSERS

This comprises a combination of vibrating and lifting presser feet each of which acts as a fulcrum for the other to work upon.



### TO REGULATE THE LIFT OF THE ALTERNATING FEET

When the presser bar lifter is up, set the lifting presser foot so that the bottom of the foot is  $\frac{1}{4}$  inch above the throat plate, then lower the lifter and adjust the vibrating foot by raising or lowering it upon the bar until the lifting foot raises sufficiently to allow the material to pass freely beneath it.

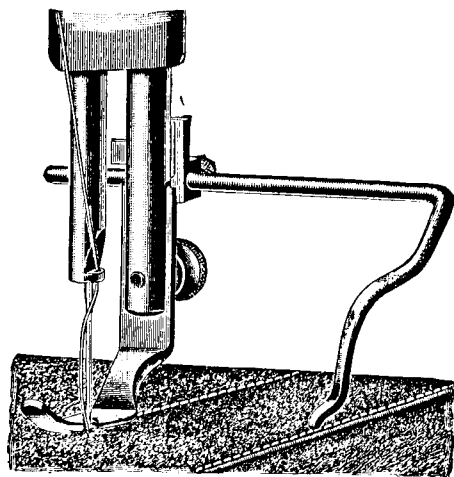


Fig. 10

### QUILTING GAUGE FOR TAILORING MACHINES TO QUILT

Let the finger of the quilting gauge rest upon the bed slide (back) for a guide while stitching the first seam, then raise the finger enough to let the material pass under it without touching and guide the seam last stitched directly under the finger, to assure the seams being an equal distance apart (see Fig. 10).

The quilting gauge is reversible for use as a gauge at the left of the needle, if required.

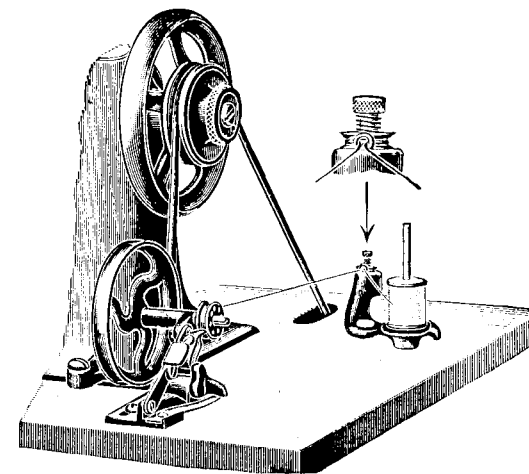


Fig. 11

### TO WIND THE BOBBIN AUTOMATICALLY WHILE SEWING

Lead the thread from the spool under the guide wire, between the tension discs and again under the guide wire as shown in Fig. 11; connect the thread with the bobbin on the bobbin winder; push the bobbin winder up against the belt and as the machine sews the bobbin will be filled and thrown out of action automatically.

The bobbin winder should be placed so that the pulley will drop away from the belt when the bobbin is sufficiently filled.

The tension stud should be set at least nine inches on a direct line from the bobbin so that the thread will traverse evenly across the bobbin. If it does not, swing the spool holder to the right or left until the bobbin fills evenly.

See that the stop latch is set so that the bobbin will not fill more than three layers from its top edge before throwing the bobbin winder out of action.

### KNEE LIFTER

The knee lifter is used for raising the presser foot by knee pressure against the knee plate, leaving both hands free to manipulate the work. If the knee lifter does not raise the presser foot satisfactorily, adjust the rod in the rock lever which connects with the rod in the arm of the machine to lift the presser foot.

**INSTRUCTIONS**  
**FOR**  
**ADJUSTERS AND MACHINISTS**

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**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 reaches the goods in its descent.

When once correctly adjusted to thin material, the stop is automatically adapted to varying thicknesses by the rise and fall of the presser bar.

To change the stop for more controller action on the thread, loosen screw (D, see Fig. 2) which projects through the slot in the face plate, and set it lower, or set it higher for less action.

It may be found advisable to increase the tension of the spring for coarse thread, or lessen it for fine.

To vary the tension of the controller spring remove the face plate and loosen the small set screw (see Fig. 3) which sets the thread controller stud, then from the inside turn the stud forward or backward as required, by using a screw driver in the slot of the screw which holds the thread controller stop and retighten the set screw. In any case when an unusually light tension is used, the tension on the controller spring should be correspondingly light. The coils of the controller spring should be oiled occasionally.

The thread controller stop on trimming and alternating machines is in the form of a crescent. Push on the upper end of the stop to move it for less controller action and on the lower end for more controller action on the thread.

**To Place a New Thread Controller in Position.** Remove the entire thread controller by taking out the largest screw (see Fig. 3) and release the spring by removing the middle screw. (Be careful not to lose the small roller). Place the new spring, the

roller and screw in their positions. Next put the entire thread controller on the face plate, taking care to slide the little tail, on the coil of the spring, into the notch in the stud over which the coil slides.

Oil the small roller occasionally.

### TO RAISE OR LOWER THE FEED DOG

Tip the machine back and turn the balance wheel toward you until the feed dog is at its highest position. Loosen feed lifting cam fork screw (F, see Fig. 1), move the rock shaft up or down until the feed dog is at the desired height and retighten the screw.

Remove the throat plate occasionally and clean the lint and dirt from between the rows of teeth on the feed dog.

### TO RAISE OR LOWER THE WHEEL FEED

Tip the machine back, loosen the set screw (X, see Fig. 1), turn screw (Y) to set the feed the desired height and retighten set screw (X).

In all other respects the manipulation of the machine is the same as that of the drop feed machines described in this book.

### TO CHANGE FORWARD FEED MACHINES TO FORWARD AND BACKWARD FEED

To locate the parts refer to Fig. 1. Shut the feed entirely off by pushing the feed regulating handle up to its highest point. Tip the machine back and with a long screw driver reach up in the arm and loosen feed regulating handle shaft crank screw (B), then force the feed driving fork lever connection clamp down until the lower end is about even with bottom of fork lever (CC), and retighten screw (B); now, loosen screws (E) in the feed driving rock shaft crank and set the feed bar ahead, say  $\frac{1}{16}$  of an inch, or the length of a tooth in the feed dog, and retighten screws (E). This will give a backstitch long enough to fasten the seam. Adjusting for back stitches shortens the capacity for the longest forward stitches.

If the feed dog strikes the throat plate, the feed bar has been moved forward too much or too little.

After changing to reverse stitches, the downward movement of handle (Q, see Fig. 9) may be limited by setting stop (T) so as to assure a return of the feed to the former length of stitch, after sewing in the reverse direction.

### TO SET THE NEEDLE BAR

The needle bar which is in the machine when shipped from the factory, has upon it (about two inches from the bottom) two lines  $\frac{3}{32}$  inch apart. When the needle bar is at its lowest point set it so that its highest mark is even with the underside of the arm head.

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

To change a machine fitted with a 128 x to use a 126 x needle, it is necessary to set the needle bar  $\frac{3}{16}$  inch higher, as the 126 x is  $\frac{3}{16}$  inch longer than the 128 x needle.

### TO TIME THE HOOK

Remove the throat plate, turn the balance wheel until the lower mark on the needle bar comes up to the bearing, then see if the point of the hook is at the center of the needle; if it is not, loosen the screws which hold the hook driver, bring the point of the hook to this position and tighten the set screws, if the proper needle is in the machine, the eye of the needle will be about  $\frac{1}{16}$  of an inch below the point of the hook. Then see that the hook does not run close enough to the needle to strike it; if it does, remove the bed slide (back) and loosen the adjusting screw 200334, which is the upper or small screw, and tighten the one just below it, 200564, which holds the bracket to the bed. This will draw the bracket and hook away from the needle. If the hook is too far away from the needle, loosen the screw which holds the bracket to the bed and turn the adjusting screw in until the point of the hook is out to the needle, then tighten the screw which holds the bracket. When the point of the hook is properly adjusted to the needle, the driver should be out far enough to guard the needle, so that the point of the hook cannot catch it if it should spring in going through the work, but not out far enough to

deflect it. If the driver is not out to the needle, one or more hook driver adjusting washers 206634, which are .005 of an inch thick, should be placed on the driver to bring it out to the needle.

### HOOK OPENINGS

The race in which the hook runs, being off center of the bearing of the driver, causes the heel of the driver to strike the heel of the hook and drive it, thus making an opening between the chin of the hook and the lug on the driver at the time when the upper thread is passing between them. The heel of the driver continues to drive the hook until the thread has passed through the second opening, which is at the end of the driver, then the lug on the driver strikes the chin of the hook and drives the hook, making an opening between the heel of the driver and the heel of the hook. It is only necessary to have enough opening to allow the coarsest thread used to pass through freely. This can be ascertained by holding the hook back to take out all of the lost motion, and seeing that the thread will pass freely through all three of the openings. If there is not enough opening, loosen screw 200562, which holds the bottom of the hook bracket to the bed and turn in the small screw 200379, at the left of it. This will tilt the hook bracket and throw it a little farther off the center; care must be taken not to tilt it too much.

Bobbin case stop 204222, should only be far enough away from the bobbin case to allow No. 8 thread to pass between them. If it is not, it can be bent in the middle to obtain the proper position.

### WHEEL FEED

**To Adjust the Feed Wheel Driver Clutch.** Make the stitch full length and at the time the clutch finishes turning the feed wheel see that the top of the feed driver link has at least  $\frac{1}{16}$  inch space between it and the recess in the crank on the feed rock shaft. If there is contact between the link and the crank some part may break. The crank should be so placed to the right or left on the feed rock shaft that it will hold the clutch on the wheel against the rim of the teeth, without binding, so it will work freely.

## GENERAL INSTRUCTIONS

FOR

## TRIMMING MACHINES

To throw the knife out of action, push the handle (on top of the arm), and to throw it into action, press down on the handle.

### TO SHARPEN AND SET THE KNIFE

Sharpen the cutting edge of the knife on the beveled side only and grind off as much from the projection as from the cutting edge to prevent the projection from striking the hook (sewing).

Set the knife so that its cutting edge will pass below the upper surface of the throat plate, when at its lowest point, but high enough so that the projection which passes through the throat plate will not strike the hook (sewing).

### TO VARY THE WIDTH OF SEAMS

Under the bed slide (back) there are two large thumb stop screws holding the throat plate firmly in a set position.

If the needle works too far to the right of the hole, or the seam is too narrow, move the throat plate the necessary distance to the right for a wider seam by turning inwardly the right hand stop screw and pushing the thumb nut at the base of the arm until the needle enters the throat hole, as desired, then fasten the thumb nut and turn the stop screws outwardly until their heads are firmly against the bed of the machine. Reversing these movements sets the throat plate to the left for a narrower seam.

To adjust the thumb stop screws so that the width of a continuous seam may be changed instantly, adjust the right hand thumb stop screw so that the throat plate may be moved for a wider seam and returned to position for the narrower seam which will leave the movement of the throat plate under the control of the thumb nut.

Throat plates can be furnished to trim .028, .035, .045, .060, .085 or .115 inch from the seam. The trimming margin is measured from the center of the needle hole to the cutting edge of the throat

plate which does not admit of a large needle hole being made in a throat plate with a narrow trimming margin.

To change a machine from one to another trimming margin, it is only necessary to change the throat plate and adjust the knife holder on the knife bar.

#### VERTICAL SEAM TRIMMERS

Throat Plates for Machines Nos. 12 w 20 to 12 w 23

Size of needle hole			Minimum	trimming	margin
60	.....	.028			
"	"	"	56	.....	.035
"	"	"	53	.....	.045
"	"	"	50	.....	.060
"	"	"	46	.....	.060

Should cement collect on the hook (sewing) it may be cleaned off by removing the throat plate and working an oily cloth through the opening in the top of the hook race.

Occasionally oil the back of the hook through the opening in the hook race or take the hook out of the machine and thoroughly clean it.

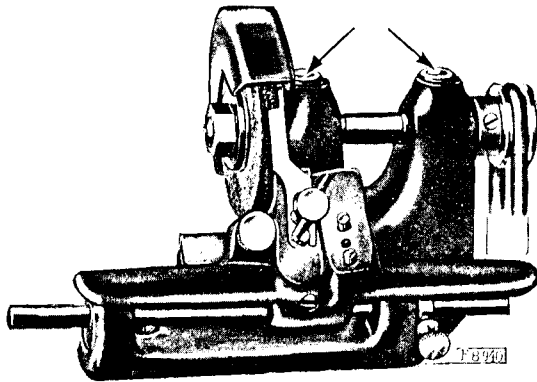


Fig. 12  
Knife Grinder No. 207032

Knife Grinder No. 207032 is necessary. As it can be used for several machines, including the under edge trimmer, it must be ordered separately.

#### INSTRUCTIONS FOR OBLIQUE UNDER EDGE TRIMMING

The knife is held obliquely in the proper position for cutting the linings smoothly and rapidly from under the edge or bead of the uppers, and may be thrown into or out of action, as some parts of a shoe require stitching and trimming and other parts stitching only.

When the trimming distance from the seam is less than  $\frac{3}{64}$  inch, the knife should be set to trim back of the needle, and for over  $\frac{3}{64}$  inch the knife should be set to trim abreast of the needle, which assures clean cut edges while turning corners and small circles. The throat plate should match the position of the knife.

Oil the trimmer bearings, the slots in the guide finger holder, the upright bar of the guide finger, the bearings and connections that drive the trimmer bar, etc.

The knife descends obliquely and must be set so that the cutting edge will press against and pass just below the cutting edge of the throat plate to insure making a shear cut.

To adjust the knife holder closer to or farther from the needle bar, loosen the screw at the back of the knife bar.

The knife holder has two positions for the knife, for trimming either abreast or back of the needle. A change of positions can be made after substituting the proper throat plate and guide finger.

Two guide fingers are made, one for trimming abreast and the other for trimming back of the needle.

Two styles of throat plates are made. One style trims abreast of the needle and the other trims back of the needle.

A throat plate is adapted for but one trimming margin. Throat plates which trim abreast of the needle can be furnished to trim .040, .050, .060, .075, .085 or .115 inch from the seam, and throat plates which trim back of the needle can be furnished to trim .015, .025, .035 or .050 inch from the seam.

## OBLIQUE UNDER EDGE SEAM TRIMMERS

Throat Plates for Machines Nos. 12 w 26 and 12 w 29

Size of needle hole	50	back of needle	.015	Minimum	trimming	margin
" " " "	53	" " "	.015	"	"	"
" " " "	53	abreast of needle	.040	"	"	"
" " " "	50	" " "	.040	"	"	"
" " " "	46	" " "	.050	"	"	"

## BEAD OR RAW EDGE GUIDE FINGER

The correct position of the edge guide finger is slightly at the left of the knife to prevent the knife from cutting the bead or raw edge of the upper. The guide finger can be adjusted to the right or left by loosening the set screw which holds it in position. The back edge of the guide finger should stand as close to the knife as possible without striking it. The guide finger should hang high enough for the facing or lining to pass freely under it to the knife while protecting the bead or raw edge from injury. To hold the guide finger out of action, hang the bar up by the latch.

Genuine Singer Needles should be used  
in Singer Machines.  
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