Form 18884
(Rev. 836)

INSTRUCTIONS

FOR USING

SINGER

ELECTRIC SEWING MACHINE

(P. H. Built-on Motor)

1200-1

REVERSIBLE FEED LOCK STITCH

FOR DRESSMAKERS

When Requiring Needles, Oil, Parts or Repairs for Your Machine

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THE SINGER MANUFACTURING CO.

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18881

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1200-1

REVERSIBLE FEED LOCK STITCH

FOR DRESSMAKERS

MACHINE 1200-1 ON TABLE 100027 AND STAND 46913

THE SINGER MANUFACTURING COMPANY

Description

Machine 1200-1 is especially suited for dressmakers and home industrial use. It is used on Table 100027 and Stand 46913, as shown on page 1, and is fitted with a knee lifter for raising and lowering the presser foot.

The machine is driven by an electric motor built on the back of its arm, and controlled by a treadle. An electric Singerlight is also built on the arm to throw light on the work.

The machine has a horizontal rotary sewing hook and makes the lock stitch. It has reverse feeding mechanism by means of which the machine stitches as readily in a reverse direction as it does in a forward direction.

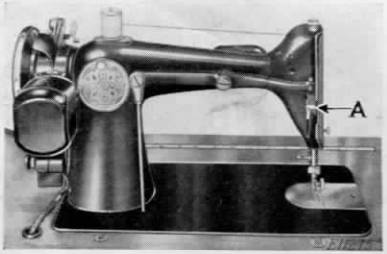

Fig. 2. Rear View of Machine, Showing Motor and Presser Bar Lifting Lever

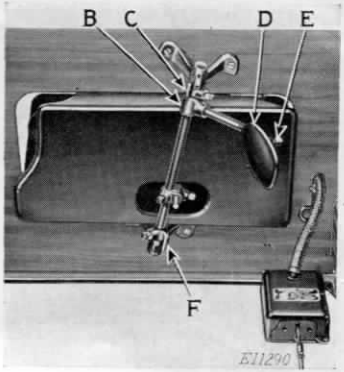

Fig. 3. Underside of Table, Showing Drip Pan and Knee Lifter

The knee plate (D, Fig. 3) may be moved up or down to suit the operator after loosening the set screw (E). It may be swung to the right or left after loosening the set screw in the hub (B).

The stop (C) should be set so that the knee lifter cannot raise the presser bar any higher than it is raised by the hand lifter (A, Fig. 2), in order to prevent strain on the tension release mechanism. The rear stop (F, Fig. 3) should permit a little loose motion of the knee lever after the presser foot has been lowered to the throat plate.

Motor Can be Operated on Either Alternating Current or Direct Current

The electric motor, which is located at the back of the machine, can be operated on either alternating current or direct current, as desired. The standard windings of the motor are for 110 volts, but motors can be furnished for any voltage between 100 and 250.

Special motors for 32 volts direct current, and for 50 volts alternating current and direct current, have also been developed and are available.

Points to Determine Before Connecting Motor to Electric Service Line

Obtain the following information from the Electric Light Company which supplies the electric current for the circuit to which the motor is to be connected:

1. If current is direct, what is the voltage? The voltage range stamped on the name plate of the motor must correspond to that of the circuit.

2. If current is alternating, in addition to the voltage, what is the number of cycles? The number of cycles stamped on the name plate of the motor must correspond to that of the circuit.

The voltage of any circuit and, if alternating current, the number of cycles, can be verified by looking at the name plate on service watt meter installed by the local Electric Light Company.

To Connect the Machine to Electric Service Line

Push the terminal plug at one end of the electric cord as far as it will go on the three-pin terminal block at the right of the machine, as shown in Fig. 7. Attach the plug at the other end of the cord to the nearest electric outlet and the machine is ready for operation.

To Insure Perfect Action of the Machine

When turned by hand, the balance wheel must always turn over toward the operator.

Do not run the machine with the presser foot resting on the feed without cloth under the presser foot.

Do not run the machine when both bobbin case and needle are threaded, unless there is material under the presser foot.

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

The slide over the bobbin case should be kept closed when the machine is in operation.

CAUTION

When you have finished your sewing, always disconnect the plug from the electric outlet.

Singerlight

To turn the Singerlight "on" or "off", a switch is conveniently located at the front of the three-pin terminal block, as shown at D, Fig. 7.

To Remove and Replace the Bulb

Do not attempt to unscrew the bulb. It is of the bayonet and socket type and does not unscrew.

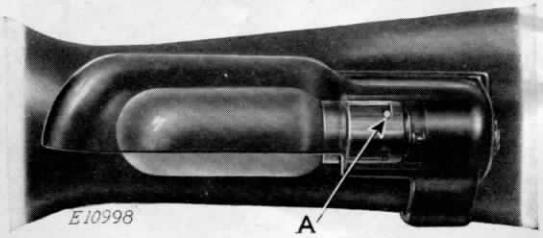

Fig. 4

To Remove the Bulb. Press the bulb into the Singerlight socket and at the same time turn the bulb over toward the machine as far as it will go, then withdraw the bulb.

To Insert a New Bulb. Press the bulb into the Singerlight socket and turn it over from the machine until the bulb pin (A, Fig. 4) enters the notch in the socket, as shown in Fig. 4.

To Operate the Machine

Raise the presser foot (B) by means of the presser bar lifter (C) to prevent injury to the foot (B) and feed (A).

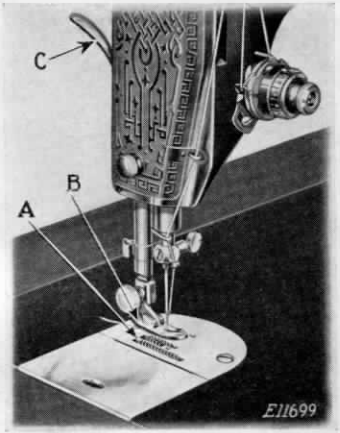

Fig. 5. End View of the Machine

Place a piece of cloth under the presser foot and let the foot down upon it.

Turn on the electric current and depress the treadle. As the pressure on the treadle is increased, the speed of the machine is increased, the speed being controlled entirely by the amount of pressure on the treadle. Operate the machine in this way, without being threaded, until you have become accustomed to guiding the material and operating the treadle.

To Remove the Bobbin

Draw to the left the slide in the bed of the machine and lift out the bobbin with the thumb and forefinger of the left hand, as shown in Fig. 6.

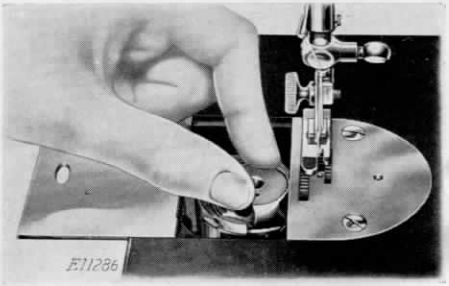

Fig. 6. Removing the Bobbin

To Wind the Bobbin

It is necessary to understand the stop motion (C, Fig. 7) by which the balance wheel (B, Fig. 7) can be released when required, thus permitting the winding of bobbins without running the stitching mechanism.

Release the balance wheel by turning the stop motion screw (C) over toward you. It is necessary to hold the balance wheel while loosening the stop motion screw.

Place the bobbin on the bobbin winder spindle and push it up closely against the shoulder, having

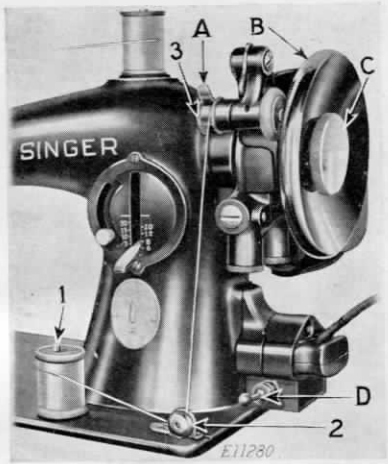

Fig. 7. Winding the Bobbin

the small pin in the shoulder enter the hole in the side of the bobbin. Put the spool of thread on the spool pin (1). Draw the thread under and between the tension discs (2) on the bed of the machine, then pass the thread up and through the hole (3) in the left side of the bobbin, from the inside. Press down on the bobbin and the bobbin winder latch (A, Fig. 7) will drop down and hold the bobbin winder pulley against the hub of the balance wheel. Then press the treadle the same as for sewing.

The end of the thread must be held by the hand until a few coils are wound and should then be broken off. When sufficient thread has been wound upon the bobbin, the bobbin winder is automatically released from the balance wheel.

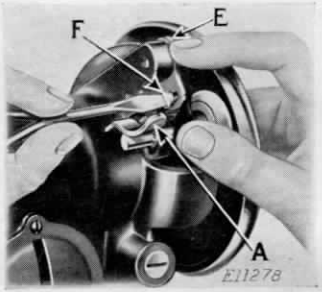

Fig. 8. Adjustment of Bobbin Winder

If the pressure of the bobbin winder pulley against the hub of the balance wheel is insufficient for winding the bobbin, press down the bobbin winder until the latch (A) drops down and holds it, then loosen the adjusting screw (F). With the forefinger, push back the upper end of the slotted plate (E) as far as it will go, as shown in Fig. 8, and at the same time press the bobbin winder pulley against the hub of the balance wheel, then tighten the adjusting screw (F).

If the thread does not wind evenly on the bobbin, loosen the screw which holds the tension bracket (2, Fig. 7) in position on the bed of the machine and slide the tension bracket to the right or left, as may be required, then tighten the screw.

Bobbins can also be wound while the machine is sewing.

To Replace the Bobbin and Thread the Bobbin Case

Hold the bobbin between the thumb and forefinger of the left hand, the thread drawing on the bottom from right to left, as shown in Fig. 9.

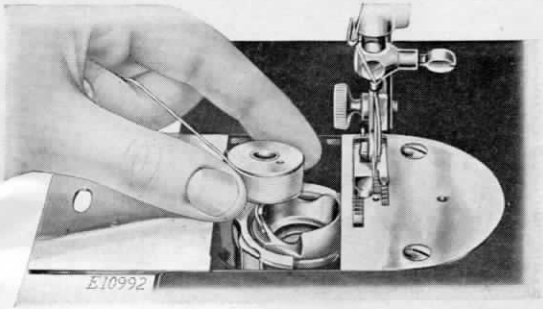

Fig. 9. Replacing the Bobbin

Place the bobbin in the bobbin case and draw the thread into the slot (1, Fig. 10) in the bobbin case, as shown in Fig. 10.

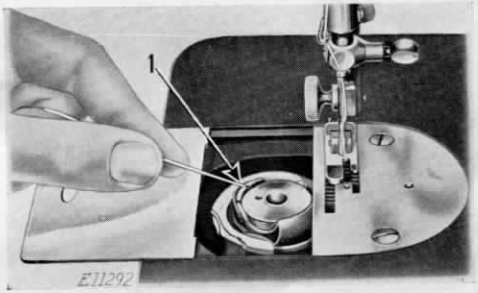

Fig. 10. Threading the Bobbin Case

Draw the thread toward you between the bobbin case and the tension spring until it passes the notch (2, Fig. 11) in the bobbin case, as shown in Fig. 11.

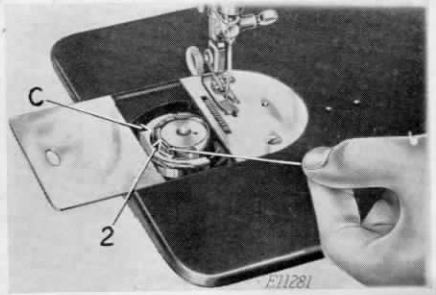

Fig. 11. Bobbin Case Threaded

Then close the slide and at the same time draw the thread into the long notch in the right edge of the slide, as shown at (3, Fig. 12).

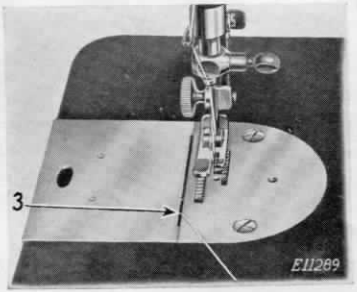

Fig. 12. Under Threading Completed

To Set the Needle

Turn the balance wheel over toward you until the needle bar is at its highest position, and loosen the thumb screw (A, Fig. 13) in the needle clamp

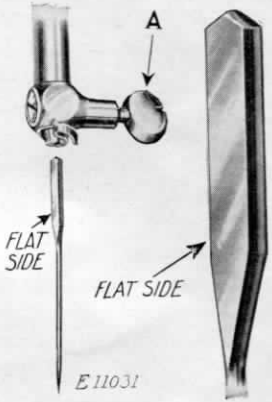

Fig. 13. Positioning of Needle in Needle Clamp

Have the flat side of the shank of the needle toward the left as shown above and put the needle up into the clamp as far as it will go. Then tighten the thumb screw.

Upper Threading

(See Fig. 14)

Turn the balance wheel over toward you until the thread take-up lever (5) is raised to its highest point. Place the spool of thread on the spool pin at the top of the machine and pass the thread to the left through the thread guide (1), down, under and from right to left between the tension discs (2). With the right hand hold the spool to prevent it from turning, and with the left hand draw the thread up into the take-up spring (4) until the thread enters the retaining fork (3), then pass the thread from right to left through the hole in the thread take-up lever (5), down through the guide (6) on the face plate, into the wire guide (7) on the needle bar bushing, into the guide (8) on the needle clamp and **from right to left** through the eye (9) of the needle.

Draw about two inches of thread through the eye of the needle with which to commence sewing.

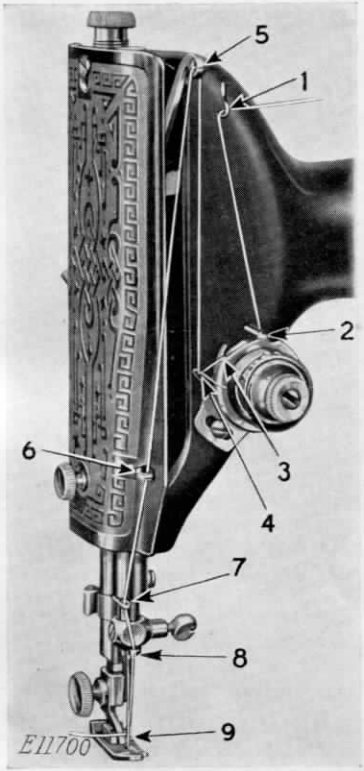

Fig. 14. Upper Threading

To Prepare for Sewing

With the left hand hold the end of the thread, leaving it slack from the hand to the needle. Turn

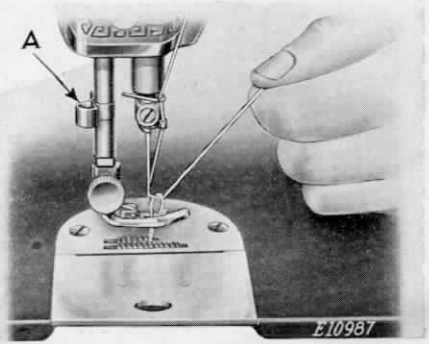

Fig. 15. Drawing Up the Bobbin Thread

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 up with it through the hole in the throat plate, as shown in Fig. 15. Lay both threads back under the presser foot and close the slide.

To Commence Sewing

Place the material beneath the presser foot, lower the presser foot and commence to sew.

When sewing thick material, it may be necessary to turn the balance wheel over toward you by hand to start the machine. This should also be done if the machine stops when sewing across thick seams.

To Remove the Work

Stop the machine with the thread take-up lever (5, Fig. 14) at its highest point, raise the presser foot and draw the fabric back and to the left, pass the threads over the thread cutter (A, Fig. 15) and pull down lightly to sever them. Leave the ends of the threads under the presser foot.

To Turn a Corner

Stop the machine when the needle is at its lowest point. Raise the presser foot and turn the work as desired, using the needle as a pivot, then lower the presser foot.

To Regulate the Pressure on the Material

For ordinary family sewing, it is seldom necessary to change the pressure on the material. If sewing fine silk or flimsy material, lighten the pressure by turning the thumb screw (C, Fig. 32) on the top of the machine over to the left so that it screws up. To increase the pressure, turn this thumb screw over to the right so that it screws down. The pressure should be only heavy enough to prevent the material from rising with the needle and to enable the feed to move the work along evenly. The heavier the material, the heavier the pressure; the lighter the material, the lighter the pressure.

To Regulate the Direction of Feed

To feed the goods **from you,** push down the stitch regulator lever (B, Fig. 16) as far as it will go.

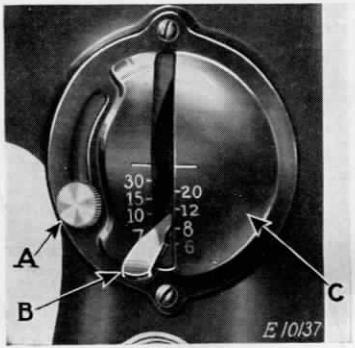

Fig. 16. Showing Lever for Reversing Direction of Feed and Regulating Length of Stitch

To feed the goods **toward you,** raise the stitch regulator lever (B) as high as it will go.

The direction of feed can be reversed at any point of a seam without removing the work from the machine.

Back tacking is therefore readily accomplished and the fastening of the ends of seams is made easy.

To Regulate the Length of Stitch

The machine can be adjusted to make from 6 to 30 stitches to the inch as indicated by the numerals on the stitch indicator plate (C, Fig. 16).

The number of stitches to the inch that the machine is set to make is indicated by the number which is in line with the upper side of the stitch regulating lever (B, Fig. 16).

To change the length of stitch, loosen the thumb screw (A, Fig. 16) and move it to the bottom of the slot. Then move the stitch regulating lever (B) until its upper side is in line with the number of the desired length of stitch. Now move the thumb screw (A) until the stitch regulating plate touches the lever (B), then tighten the thumb screw (A).

The machine will make the same number of stitches to the inch in reverse direction when the lever (B) is moved to its highest position.

Should forward stitching only be necessary, move the screw (A) down to the bottom of the curved slot and firmly tighten it. The length of the forward stitch can then be changed by moving the lever (B) downward for a long stitch or upward for a short stitch. In this case the lever should not be raised higher than the top line in the scale.

Basting

The longest stitch made by the machine, No. 6 on the stitch indicator, is found satisfactory for basting, after loosening the tension on the needle thread so that the stitches may be easily pulled from the material.

Machine basting is firmer and more even than that done by hand in addition to being much quicker.

To Sew Flannel or Bias Seams

Use a short stitch and as light a tension as possible on the needle thread so as to leave the thread loose enough in the seam to allow the goods to stretch if necessary.

Tensions

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

Fig. 17. Perfect Stitch

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

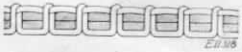

Fig. 18. Tight Needle Thread Tension

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

Fig. 19. Loose Needle Thread Tension

To Regulate the Needle Thread Tension

The tension on the needle thread can be regulated only when the presser foot is down.

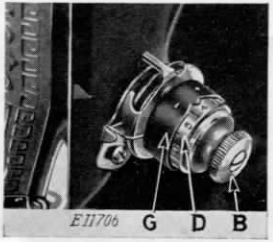

Fig. 20. Needle Thread Tension

The tension index flange (D, Fig. 20) is marked with arbitrary numbers ranging from 1 to 9 which indicate different degrees of tension that can be produced. The numbers do not denote the amount of tension or a particular size of thread. By noting the number which is opposite the pointer on the indicator (G) when set for a satisfactory tension on the work being stitched, the number can be readily reverted to when a change is made in the tension or size of thread.

To increase the tension, turn the thumb nut (B) over to the right until the desired number on the index flange (D) is opposite the pointer, the higher numbers denoting increased tension.

To decrease the tension, turn the thumb nut (B) over to the left, the lower numbers indicating less tension.

The tension indicator (G) is marked with the signs + and —, which also indicate which direction to turn the thumb nut (B) for more or less tension.

To Regulate the Bobbin Thread Tension

The tension on the bobbin thread is regulated by the screw (C, Fig. 11) in the bobbin case tension spring. To increase the tension, turn the screw (C) over toward you. To decrease the tension, turn this screw over from you.

When the tension on the bobbin thread has been once properly adjusted, it is seldom necessary to change it, as a correct stitch can usually be obtained by varying the tension on the needle thread.

To Remove and Disassemble the Needle Thread Tension

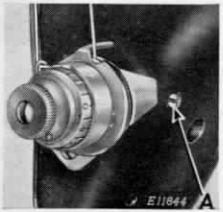

FIG. 21

Loosen the set screw (A, Fig. 21) and withdraw the complete tension assembly from the machine.

Turn the thumb nut (B, Fig. 22) until zero on the index flange (D) is opposite the pointer on the indicator (G), then press in the index flange (D) to disengage the pin (C) in the thumb nut (B) from the flange and remove the thumb nut and flange, the flange stop washer (E, Fig. 23), tension spring (F), indicator

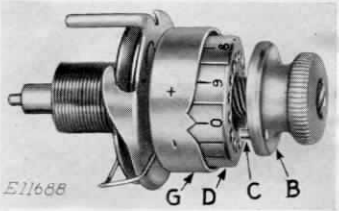

FIG. 22

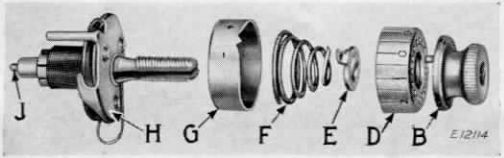

FIG. 23

(G), tension releasing pin (J), and tension disc assembly (H), which includes the thread take-up spring, thread guard plate and two discs.

To Reassemble and Replace the Needle Thread Tension

Place the two tension discs (L, Fig. 24) with their convex sides (high centers) facing each other in position on the thread guard (M). Then pass the eyelet (N) of the thread take-up spring under the thread guard (M), having the coils of the spring above the tension discs, as shown in Fig. 24.

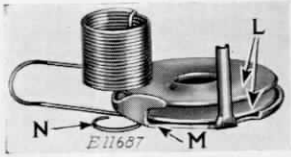

FIG. 24

Pass the threaded end (O, Fig. 25) of the tension stud through the coils of the take-up spring (P), through the holes in the two tension discs (L) and thread guard (M), and through the eyelet (N, Fig. 24) of the take-up spring, having the end of the take-up spring enter one of the grooves (Q) in the stud. Then place the tension releasing pin (J) in the tension stud.

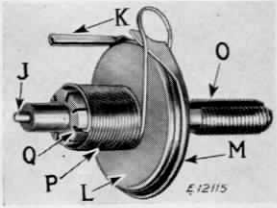

FIG. 25

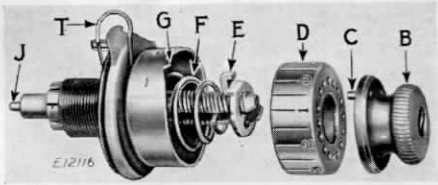

FIG. 26

Hold the parts thus assembled against the shoulder on the stud and place the tension indicator (G, Fig. 26)

on the stud, then insert the tension spring (F) in the indicator with the first half-turn of the spring below the stud or away from the pointer of the indicator as shown in Fig. 26. Now place index flange stop washer (E) on the stud with its extension toward the indicator pointer as in Fig. 26. If spring and stop washer are in correct position, the extension (S) will clear the first coil of the spring as shown in Fig. 27.

Place index flange (D, Fig. 26) on the stud, turn it so that the number 1 is opposite the pointer on the tension indicator (G), and press it inward until the thumb nut (B) can be turned onto the stud. Try engaging the pin (C) in different holes in the flange until one is found which permits the full range of tensions from light to heavy to be produced with one revolution of the thumb nut.

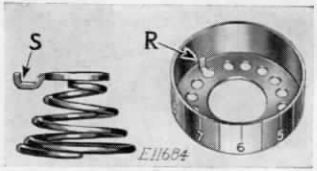

Fig. 27

Lower the presser bar to relieve the pressure on the pin (J, Fig. 26). Replace the complete tension assembly in the machine, having the long lug (K, Fig. 25) enter the hole (U, Fig. 28), the pointer (G, Fig 26) at the top, and the thread take-up spring resting on the regulator plate at (V, Fig. 28), as shown in Fig. 20. Push the complete tension in as far as it will go, then firmly tighten the set screw (A).

The tension on the thread take-up spring (T, Fig. 26) should be just sufficient to take up the slack of the needle thread until the eye of the needle reaches

the goods in its descent. A slight variation in the tension on the take-up spring may be secured by loosening the set screw (A, Fig. 28) and turning the tension stud, with the indicator (G, Fig. 26), to the left for more tension or to right for less tension. However, if the correct tension cannot be secured without turning the indicator pointer (G) to a position inconvenient to read, remove the assembly from the machine, disengage the end of the spring from the groove (Q, Fig. 25) in the tension stud, revolve the spring and place its end in the groove which produces the correct tension.

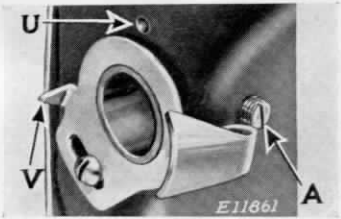

Fig. 28

Ordinarily, the tension on the needle thread is regulated by turning the thumb nut (B, Fig. 26), but if the required tension cannot be produced by this means, adjust the tension as follows: Press in the index flange (D, Fig. 26) to disengage the pin (C) in the thumb nut (B) from the flange and reset the pin in one of the other regulating holes in the flange, turning the thumb nut inwardly to increase the tension or outwardly to decrease it.

HINTS

Machine Working Heavily. If the machine runs hard after standing idle for some time, use a little kerosene in the oiling places, run the machine rapidly, then wipe clean and oil. See following pages.

To Avoid Breaking Needles. See that the presser foot or attachments are securely fastened by the thumb screw. Do not sew heavy seams or very thick goods with too fine a needle. A large needle and thread to correspond should be used on heavy work (see page 61).

See that the needle is not bent and avoid pulling the material when stitching.

Breaking of Needle Thread. If the needle thread breaks it may be caused by:

Improper threading.
Tension being too tight.
The thread being too coarse for size of needle.
The needle being bent, having a blunt point, or being set incorrectly.

Breaking of Bobbin Thread. If the bobbin thread breaks it may be caused by:

Improper threading of bobbin case.
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. The needle may be too small or too large for the thread in use.

Free Instruction for using the machine is gladly given at any Singer Shop.

To Oil the Machine

To insure easy running, the machine requires oiling and if used continuously it should be oiled

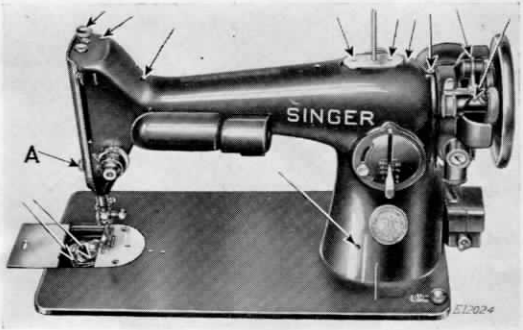

Fig. 29. Front View, Showing Oiling Points

each day. With moderate use, an occasional oiling is sufficient. Oil should be applied at each of the places shown by arrows in Figs. 29 to 33, inclusive. One drop of oil at each point is sufficient. Oil holes are provided in the machine for bearings which cannot be directly reached.

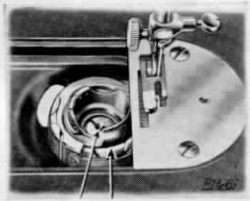

Fig. 30
View of Sewing Hook, Showing Oiling Points

Draw to the left the slide in the bed of the machine. See that the thread take-up lever (5, Fig. 14) is at its highest point, then apply oil to the sewing hook race in the bobbin case and oil hole as indicated by the arrows in Fig. 30, then close the slide.

At the back of the machine is a round cover plate, fastened by a thumb screw. Loosen the thumb screw

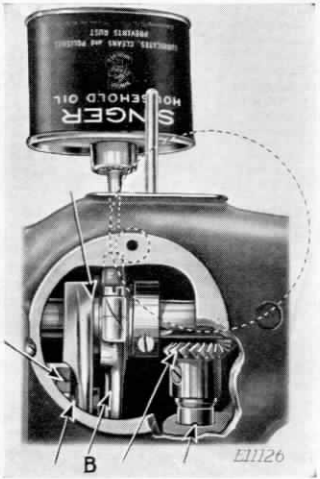

Fig. 31. Oiling Points at the Back of the Machine (Arm Broken Away to Show Oil Hole)

and turn the cover plate upward and fasten by tightening the screw. Turn the balance wheel over toward you until the connecting rod (B, Fig. 31) is at its highest point. Then apply a few drops of oil through the hole in the top of the machine, to the wick which is retained in the cap of the connecting rod, as shown in Fig. 31. Also oil the other moving parts and oil hole inside, turn the cover plate down and fasten it as before.

Remove the thumb screw (A, Fig. 29) near the lower end of the face plate and loosen the screw (D, Fig. 32) near the upper end of the face plate, then raise the face plate and slip it off over the head of the screw (D). Apply one drop of oil at each of the places indicated by arrows in Fig. 32, then replace the face plate and fasten it as before.

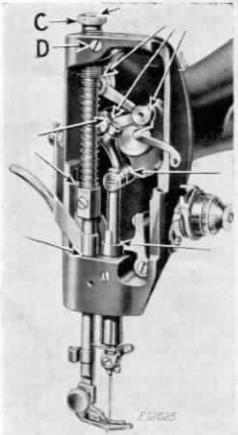

Fig. 32. End View, Showing Oiling Points

To reach the parts underneath the bed of the machine, turn the machine back on its hinges and apply oil to the oil holes and bearings indicated by the arrows in Fig. 33.

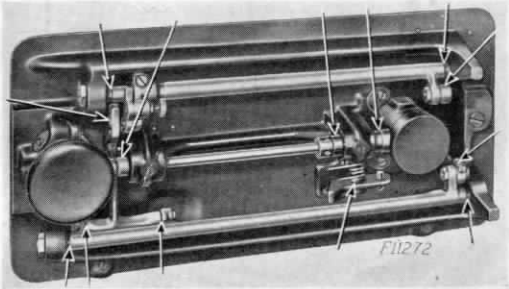

Fig. 33. Oiling Points in Base of Machine

To Lubricate the Motor

USE ONLY SINGER MOTOR LUBRICANT FOR LUBRICATING THE MOTOR. A tube of this lubricant is sent with the machine.

The Singer Motor Lubricant is a specially prepared non-flowing compound which is not affected by varying temperatures. It is the only lubricant which will positively lubricate the motor. Other lubricants, including oil, vaseline or ordinary grease must not be used for lubricating the motor, as they are harmful for this purpose.

When the machine is shipped from the factory, the two motor grease cups (A, Fig. 34) are filled with sufficient Singer Motor Lubricant for approximately one year's use, under ordinary circumstances.

At least once a year thereafter, turn the machine back on its hinges and remove the two thumb screws from the two grease cups (A) and clean out the interior of the cups. Then insert the tip of the motor lubricant tube into the grease cups as shown in Fig. 34, and while holding the tube firmly against the bottom of the grease cups, squeeze about a quarter of a tube of the lubricant into each cup, then replace and tighten the thumb screws.

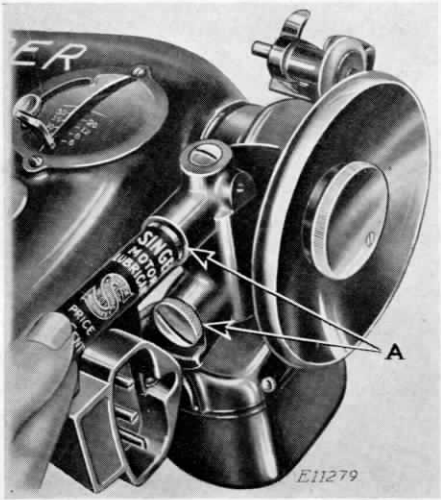

FIG. 34. LUBRICATING THE MOTOR

To Clean the Stitch Forming Mechanism

After considerable use, the stitch forming mechanism in the bed of the machine may become clogged with lint and as this may interfere with the perfect operation of the machine, it should be removed.

It is rarely necessary to remove the bobbin case to clean out accumulated lint, but when required, the bobbin case may be removed and replaced as instructed below:

To Remove the Bobbin Case

(See Fig. 35)

The bobbin case may be easily removed from the machine without taking off the throat plate, although for the purpose of illustration the throat plate and feed dog are shown broken away in Fig. 35.

Remove the bobbin from the bobbin case. Turn the balance wheel over toward you until the end of the hook ring (E) is toward the front of the machine, as shown in Fig. 35. Insert the blade of the small tension screwdriver No. 120378, which is furnished with the machine, into the slot (C) between the ring and the edge of the spring, as shown in Fig. 35. With a downward pressure, turn the screwdriver one half turn to the right so that the screwdriver will drop into the slot and unlock the spring. With the right hand hold the balance wheel to prevent its turning, and with the left place the screwdriver against the edge of the slot in the ring and push it around in a direction opposite to the hook rotation until the circular cut-out (B) is opposite the spring (D). The ring and bobbin case may then be lifted out.

To Replace the Bobbin Case

(See Fig. 35)

When replacing the parts, first place the bobbin case into position with the finger (A) in the opening

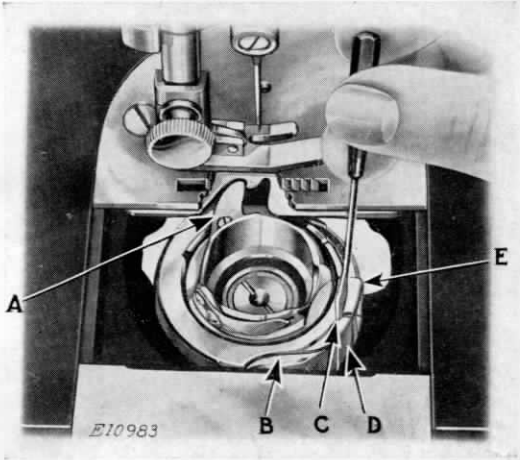

Fig. 35. Bobbin Case in Position (Throat Plate Broken Away to Show Correct Location of Finger A)

in the position plate under the feed dog as shown in Fig. 35. Turn the bobbin case back and forth slightly to make sure that it is properly seated, then place the hook ring (E) in position with the cut-out (B) opposite the spring (D). Press the ring into place and turn it in the direction of hook rotation until the spring locks it in position. Then replace the bobbin.

Darning or Embroidering

When darning with fine thread, the use of Darning Foot 121094 is recommended. This darning foot can be purchased at any Singer shop or from any Singer salesman.

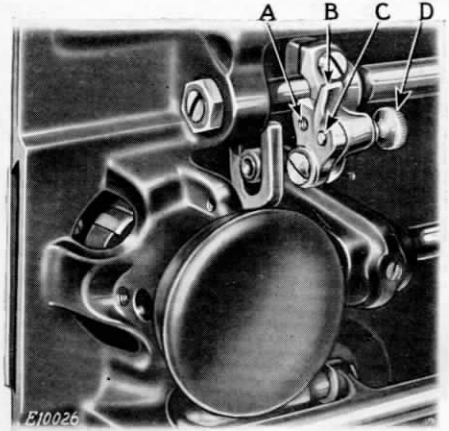

Fig. 36. Adjustment for Darning or Embroidering

Turn the machine back on its hinges. Unscrew the thumb screw (D, Fig. 36), which is located in the lower hole (C) in the feed lifting crank (B). Move the feed lifting crank (B) down so that the thumb screw (D) will enter the upper hole (A). Having inserted the screw in this hole, tighten it firmly. The feed is thus rendered inoperative and will not interfere with the free movement of the work. Bring the machine forward into place.

Move the stitch regulator lever (B, Fig. 16) to its neutral position at the centre of the slot.

Remove the presser foot and let down the presser bar lifter to restore the tension on the needle thread which is released when the lifter is raised.

Draw up the bobbin thread as instructed on page 16.

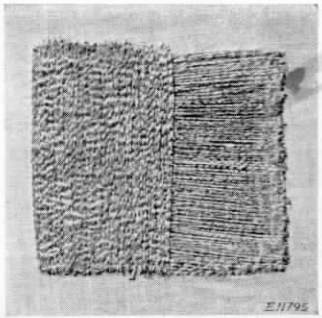

Fig. 37. Darning in Process

When darning flat work, it is advisable to use embroidery hoops to hold the work.

Place the work in the machine, having the unworn part near the hole under the needle. Commence the darning by making a line of stitches across the hole a little longer than the width of the hole. Continue making parallel lines of stitches across the hole, moving the work backward and forward and at the same time gradually moving the work sidewise until the hole is covered with lines of stitches running across the hole. Then commence as before and move the work lengthwise of the hole until the stitches across the hole are completely covered and the darn is finished.

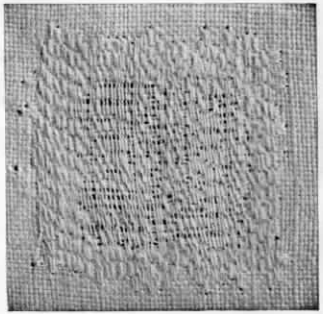

Fig. 38. Darning Finished

When you have finished the darning or embroidery, raise the presser bar lifter and replace the presser foot. Turn the machine back on its hinges and replace and firmly tighten the thumb screw (D) in the lower hole (C) in the feed lifting crank (B) as shown in Fig. 36. Bring the machine forward into place and it is ready for regular stitching.

Stockings and socks, underwear, etc., can be more conveniently darned on the machine with the Singer Darner which can be purchased at any Singer shop or from any Singer salesman.

Instructions for embroidering are contained in the "Singer Instructions for Art Embroidery," sold by Singer Sewing Machine Company at a reasonable price.

Advantages of Machines 1200-1 for Darning or Embroidering

In practically all earlier types of sewing machines if the stitching is reversed, as in darning or embroidery, a knot is formed on the under thread at each stitch, resulting in a poor appearance of the under side of the embroidery or darn. The 1200-1 machine and other late designs of Singer machines are free from this defect.

INSTRUCTIONS FOR USING THE ATTACHMENTS

The Foot Hemmer

Fig. 39. The Foot Hemmer

The Foot Hemmer (Fig. 39) is attached to the machine in place of the presser foot. Raise the needle to its highest point, loosen the thumb screw which clamps the presser foot to the presser bar and remove the presser foot. Attach the Foot Hemmer to the bar, taking care to tighten the screw firmly so that the Hemmer will not become loose when the machine is running. Turn the balance wheel slowly to make sure that the needle goes through the centre of the needle hole and that the lower thread is properly pulled up.

How to Start the Hem at the Very Edge

How to start the hem at the very edge of the material is of great importance in learning to use the Hemmer. If the hem is not started at the edge and the material is pulled bias, a perfect hem cannot be made.

There are several ways of starting the hem at the edge, but the most practical one is as follows:

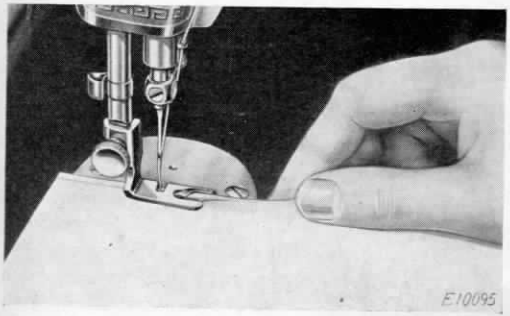

FIG. 40. STARTING A HEM AT THE EDGE

1. Fold over about ⅛″ of the edge of the material at the starting point for a distance of about one inch.

2. Place the material in the Hemmer at an angle leading to the right at a point just beyond the fold.

3. Draw the material toward you through the Hemmer, as shown in Fig. 40, at the same time making the second fold at the very edge. Continue to draw the material through the Hemmer until the edge is just under the needle. Place the upper and lower threads together under the Hemmer foot and assist in starting of the hem by slightly pulling the threads from the back as the machine is run.

Making a Hem with the Foot Hemmer

The same width of material must be kept in the Hemmer at all times. After placing the correct

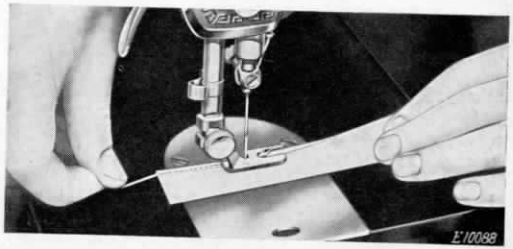

FIG. 41. MAKING A HEM WITH THE FOOT HEMMER

width of material in the Hemmer hold it in a straight line and you will find it quite easy to make a perfect hem. See Fig. 41.

Making a Hemmed Seam with the Foot Hemmer

The hemmed seam is very practical to use on underwear, or in fact on any garment where a straight seam is used and where a small double seam would be suitable.

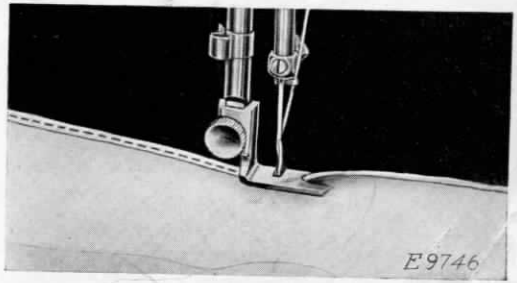

FIG. 42. MAKING A HEMMED SEAM

When using this seam the garment must first be fitted and the edge of the material trimmed, allowing for about one-eighth inch seam. The two edges are placed together and inserted in the Hemmer in the same manner as a single hem. If the material is bulky, the edge of the upper piece of material may be placed about one-eighth inch in from the edge of the lower piece. See Fig. 42.

The free edge of a hemmed seam may be stitched flat to the garment if desired. First open the work out flat, then place the hem in the scroll of the Hemmer, which acts as a guide, holding the edge of the hem in position while it is being stitched.

If the seam is stitched flat to the garment one row of stitching is visible on the right side.

The hemmed seam may be used on muslin, lawn, percale, organdie or other fine materials where a narrow seam is desirable.

Hemming and Sewing on Lace in One Operation

Start the hem in the regular way and with the needle holding the hem in position, raise the presser

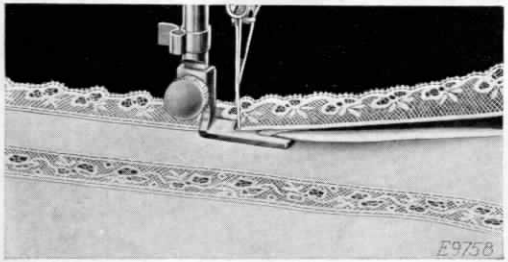

Fig. 43. Hemming and Sewing on Lace

bar sufficiently to allow the edge of the lace to be slipped in under the Foot Hemmer, at the same time bringing it up through the slot at the right of the Hemmer. See Fig. 43. Lower the bar, turn the

balance wheel and catch the edge of the lace with the needle. Guide the hem with the right hand and the lace with the left. Care should be taken not to stretch the lace as it is being fed into the Hemmer.

It is not practical to sew gathered lace on with the Foot Hemmer, as the fulled lace catches in the Hemmer slot.

A very attractive way of applying lace so that the stitching of the hem is not visible is to start the hem in the regular way, slipping the lace in from the left as you would the second piece of material when making a hemmed seam.

ADJUSTABLE HEMMER—Hemming

Remove the presser foot and attach the adjustable hemmer in its place, as shown in Fig. 44. This

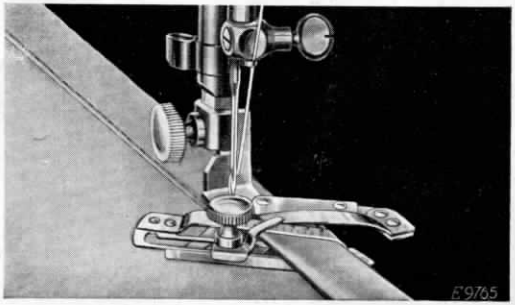

Fig. 44

hemmer will turn hems from $\frac{3}{16}$ inch to $\frac{15}{16}$ inch wide. The adjustment is made by loosening the thumb screw on the hemmer and moving the scale to the right or left until the hem turned is of the desired width. Place the cloth under the hemmer and draw

the edge toward the left under the scale, as shown in Fig. 44. Draw the edge of the cloth back and forth until the hem is formed, stopping with the end under the needle. Lower the presser bar and commence to sew, being careful to so guide the cloth as to keep the hemmer full.

ADJUSTABLE HEMMER—Wide Hemming

To make a hem more than $\frac{15}{16}$ inch wide, loosen the thumb screw in the hemmer and move the scale

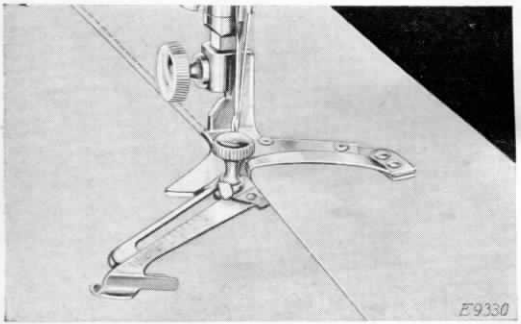

Fig. 45

to the right as far as it will go, then swing it toward you as shown in Fig. 45 and tighten the thumb screw. Fold and crease down a hem of the desired width; pass the fold under the extension at the right of the hemmer, and the edge into the folder as shown in Fig. 45, and proceed to stitch the hem.

Attaching the Binder to the Machine

Raise the needle to its highest point and remove the presser foot from the machine by loosening the

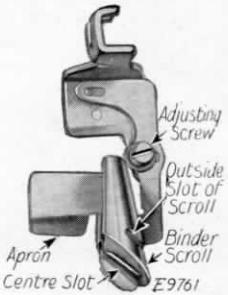

Fig. 46

thumb screw which holds it in place. Compare the foot of the Binder and the presser foot and you will see that they are attached to the machine in the same manner. Attach the Binder to the presser bar. Turn the balance wheel slowly toward you to make sure that the Binder is properly attached to the bar and that the needle goes through the center of the needle hole.

Fig. 47
Cutting Point on Binding

Inserting the Binding in the Binder

Cut the binding to a long point to left, as shown. Insert the pointed end in the binder scroll (Fig. 48) until the pointed end comes through the lower end of the scroll.

Pull the binding through under the presser foot before starting to sew. Note that as the binding passes through the scroll of the Binder the edges are turned in.

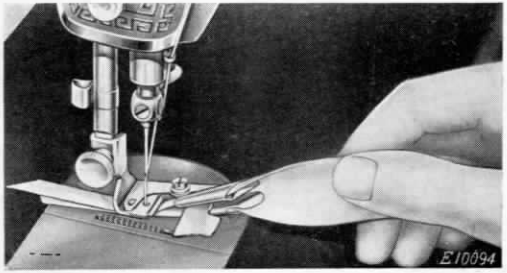

FIG. 48. INSERTING BINDING IN BINDER

Binding May be Purchased Cut and Folded for Use with the Binder

FIG. 49. INSERT FOLDED BINDING IN OUTSIDE SLOT

Folded bias binding may be purchased for use with the Binder. This binding comes in a variety of materials and colors. Folded bindings for use with the Binder must measure ½″ in width. The No. 5 width in standard brands usually measures ½″, but it is always well to be sure of this before purchasing.

Folded binding is inserted in the outside slot of the Binder, as shown in Fig. 49. The Binder is adjusted and operated in the same manner as when using unfolded binding. One-half inch braid or ribbon may be used in the same manner.

A binding inserted in the outside slot of the Binder will be turned only once. It is therefore necessary have finished edges when using binding in this slot.

The Adjustment and Operation of the Binder

The edges to be bound should be held well within the centre slot of the scroll (A, Fig. 50). If the

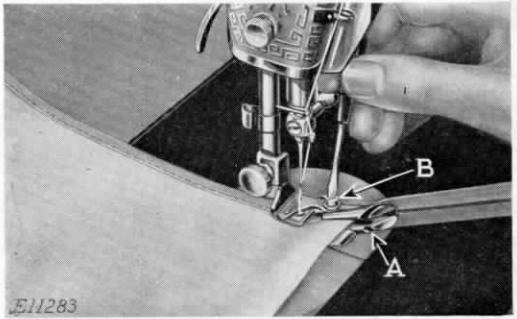

FIG. 50. ADJUSTING THE BINDER

material is allowed to slip away from the scroll when near the needle, the edge will not be caught in the binding. With a little practice it is quite easy to hold the edge in the scroll.

Various materials and conditions require different adjustments of the Binder to bring the stitching close to the edge. A wider adjustment of the Binder is required when binding curves than is necessary when binding a straight edge.

To adjust the Binder for stitching, loosen screw (B, Fig. 50), and move scroll to the right for a narrower adjustment and to the left for a wider adjustment. Care should be taken so see that the screw is well tightened after making an adjustment. To become perfectly familiar with the adjustment of the Binder, practice is necessary.

Binding Outside Curves

Practice is required to bind a curved edge properly. The edge to be bound must be allowed to pass freely

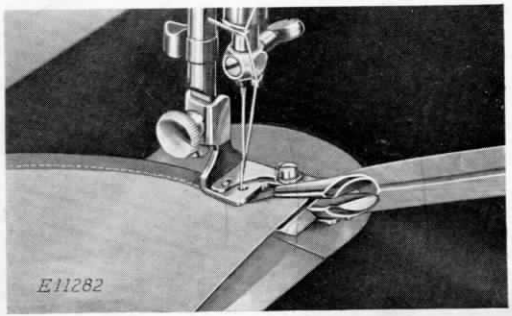

Fig. 51. Binding an Outside Curve

through the scroll and should not be crowded against the wall of it. Guiding should be from the back

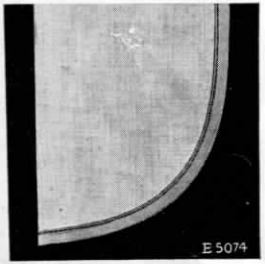

Fig. 52. Sample of Outside Curve

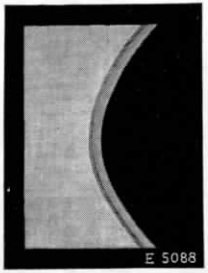

Fig. 53. Sample of Inside Curve

of the Binder and to the left, allowing unfinished edges to swing naturally into the scroll of the Binder.

Never pull the binding as it feeds through the Binder, as bias material is very easily stretched and will be too narrow when it reaches the needle. When this occurs the edges will not be turned.

When binding a curved edge (see Fig. 51), turn the material only as fast as the machine sews. It is not possible to hold the material in the entire length of the scroll when binding a small curve.

Do not push the material in too fast, as the edge will then become puckered, and do not stretch the material or the curve will not be the proper shape when finished. If the stitching does not catch the edge of the binding, the scroll should be adjusted a trifle to the left.

Binding Inside Curves

It will be necessary to practice binding an inside curve on various kinds of material, as this curve is found on nearly all garments which may be finished with a bound edge.

When binding an inside curve with the Binder, straighten out the edge as it is being fed into the attachment. When doing this, care should be taken not to stretch the edge of the material.

If the material is soft, like batiste or crepe de chine, add a row of machine stitching close to the edge of the curve before binding.

Applying a French Fold to a Curve

A French fold is applied by placing the material under the attachment and stitching the binding in

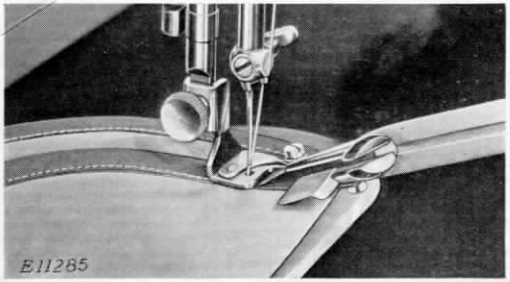

FIG. 54. APPLYING FRENCH FOLDS

position as shown in Fig. 54. A line made by basting or with chalk or pencil may be used as a guide in applying rows where wanted.

DAINTY WAYS TO USE THE TUCKER

Tucking is the natural trimming for fine materials such as lawn, organdie, batiste, etc., and may be made without basting in any width from a fine pin tuck to one inch wide when using the Singer Tucker. The Tucker gauges the width of the tuck and while one tuck is being stitched the mark for the next tuck is being made.

It is so simple to make tucks in this way that it is a joy to plan garments with this fascinating trimming. Then, too, such trimmings may be made without extra cost. The fashion magazines always give numerous suggestions for tucking various garments. The following pages will explain the adjusting and operating of this time-saving attachment.

The Parts of the Tucker and Their Uses

Select the Tucker from the box of attachments, compare it with Fig. 55 and note the names and uses of the various parts, as follows:

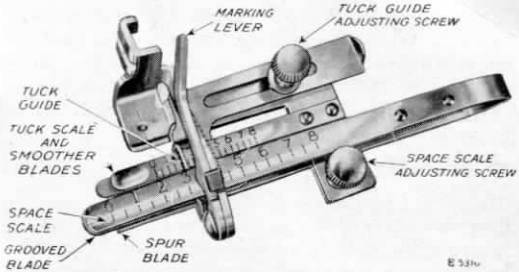

FIG. 55. THE TUCKER AND ITS WORKING PARTS

The Tuck Guide, which is adjustable and may be set for any desired width of tuck.

The Tuck Scale, containing figures which indicate different widths of tucks. The tuck scale also acts as a smoother blade, keeping the tucks of uniform width.

The Tuck Guide Adjusting Screw, by means of which the tuck guide may be set at any point on the tuck scale.

The Space Scale, containing figures on the upper blade which indicate the width of the space between tucks. The middle or **grooved blade** contains a groove into which the material is pressed by the **spur** at the end of the lower or **spur blade,** thus marking the goods for the folding of the next tuck.

The Space Scale Adjusting Screw, by means of which the space scale may be set at any desired point.

The Marking Lever, which presses on the grooved blade, marking the material as it passes between the grooved and spur blades.

Where to Oil the Tucker

The only place on the Tucker that requires oiling is the stud on which the marking lever works. See Fig. 57. One drop of oil occasionally is sufficient. Careless oiling will result in oily blades and soiled material. When the marking lever does not move up and down freely it requires oiling. If neglected, it may become so dry that it will stay down and cause a drag on the material instead of lifting freely as the mark is made.

To Attach the Tucker to the Machine

Raise the needle bar to its highest point, remove the presser foot from the machine and attach the Tucker in its place. Care should be taken to see that the Tucker is securely fastened to the presser bar and that the needle goes through the centre of the needle hole. Note the position of the marking lever, making sure that it is in the lower position and that the needle clamp works on it as the machine sews.

How to Adjust the Scales on the Tucker

The width of the tucks and the space between them is determined by the adjustment of the scales. Adjustment for width of tuck is made by loosening the tuck guide adjusting screw, which allows you to move the tuck guide to the desired figure on the tuck scale. The tuck guide should be set just over the figure you wish to use. The adjusting screw should always be well tightened.

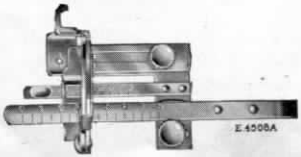

Fig. 56. Tucker Set at Pin Tuck and 2 Space

To adjust for the width of space between the tuck loosen the space scale adjusting screw and move the space scale until the desired figure is directly in a line with the centre of the needle hole. You will find a line in front and back of the needle hole to indicate the centre.

Before starting to sew, tighten the screw well to prevent the scale shifting when the Tucker is in operation.

The figures on the tuck scale indicate the width of tuck in eighths of an inch, the marks between figures are sixteenths. The marks on the space scale are double the width of those on the tuck scale, so that when both scales are set at the same figure, blind tucks without spaces between them are made.

To make space between tucks, first set the tuck scale, then move the space scale to the same number and as much farther to the left as you wish to have space. Each number on the space scale represents one-quarter of an inch and each mark between numbers one-eighth of an inch.

Use the table below to assist you in setting the Tucker.

	TUCK GUIDE	SPACE SCALE
1/8″ tucks with no space	1	1
1/8″ " " 1/8″ "	1	1½
1/4″ " " no "	2	2
1/4″ " " 1/4″ "	2	3
1/2″ " " no "	4	4
1/2″ " " 1/2″ "	4	6
1″ " " no "	8	8

Note Fig. 56, showing Tucker set at a pin tuck and 2 for space.

Where to Insert the Material to be Tucked

Fold and crease the first tuck for its entire length by hand; insert it in the Tucker from the left, placing

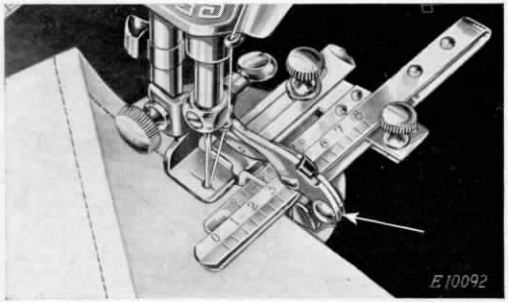

Fig. 57. Proper Position of Material in Tucker

it between the grooved blade and the spur blade of the space scale, and between the two blades of the tuck scale. See Fig. 57.

Care should be taken to see that the material is placed far enough in the Tucker to feed against the tuck guide. Draw the material toward you until the edge is directly under the needle. Lower the presser bar and sew. You will note that the Tucker is making a mark for the next tuck.

When the first tuck is finished, fold the material on the mark made by the spur during the sewing of the first tuck and insert the folded edge in the Tucker. It is most important to see that the first tuck is against the inside of the spur. After lowering the presser bar, raise the material slightly and adjust it until the folded edge is just touching the guide and the preceding tuck is against the spur. This insures even tucks.

RUFFLER

Lines 1, 2, 3, 4 and 5 shown in Fig. 58 indicate where the material is to be placed for various operations, as follows:

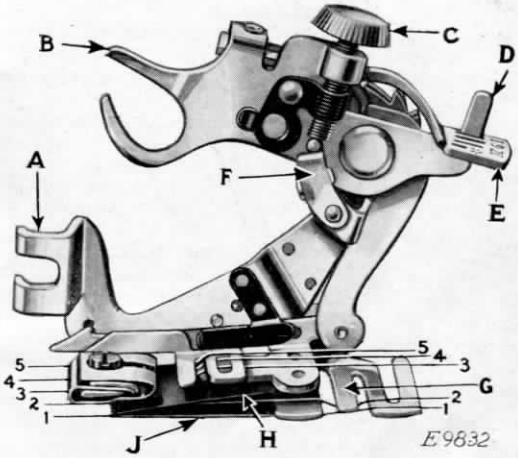

Fig. 58. The Ruffler and its Parts

Line 1—the correct position for the material to which the ruffled material is applied.
Line 2—material to be ruffled.
Line 3—the facing for the ruffle.
Line 4—the strip of piping material.
Line 5—the edge to be piped.

Refer to Fig. 58 when inserting the material in the ruffler.

The names and uses of the principal parts of the ruffler are as follows:

(See References in Fig. 58)

A—Foot—the part by which the ruffler is attached to the presser bar.

B—Fork Arm—the section that must be placed astride the needle clamp.

C—Adjusting Screw—the screw that regulates the fullness of the gather.

D—Projection—the part that projects through the slots in the adjusting lever.

E—Adjusting Lever—the lever that sets the ruffler for gathering or for making a plait once at every six stitches or once at every twelve stitches, as desired; also for disengaging the ruffler, when either plaiting or gathering is not desired.

F—Adjusting Finger—the part which regulates the width or size of the plaits.

G—Separator Guide—the guide on the underside of the ruffler, containing slots into which the edge of the material is placed to keep the heading of the ruffle even; also for separating the material to be ruffled from the material to which the ruffle is to be attached.

H—Ruffling Blade—the upper blue steel blade with the teeth at the end to push the material in plaits up to the needle.

J—Separator Blade—the lower blue steel blade without teeth, which prevents the teeth of the ruffling blade coming into contact with the feed of the machine, or the material to which ruffle or plaiting is to be applied.

To Attach the Ruffler to the Machine

Raise the needle bar to its highest point and remove the presser foot. Attach the ruffler foot (A, Fig. 58) to the presser bar by means of the thumb screw, at the same time placing the fork arm (B, Fig. 58) astride the needle clamp as shown in Fig. 59.

To Adjust the Ruffler for Gathering

The adjusting finger (F, Fig. 59) is not intended for gathering and should be moved toward you or away from the needle, as shown in Fig. 59.

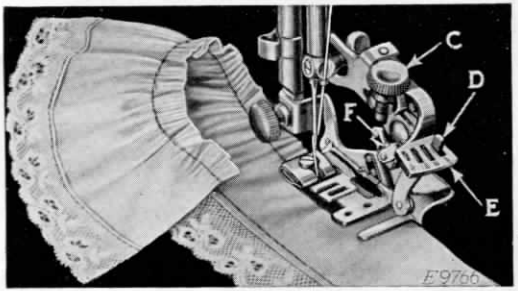

Fig. 59

Raise the adjusting lever (E, Fig. 59) and move it to the left so that the projection (D, Fig. 59) will enter the slot marked "1" in the adjusting lever (E) when the lever is released. The ruffling blade will then move forward and back once at every stitch. Insert the material to be ruffled between the two blue blades, following the line 2 in Fig. 58. Draw the material slightly back of the needle, lower the presser bar and commence to sew.

To make fine gathering, shorten the stroke of the ruffling blade by turning the adjusting screw (C, Fig. 59) upwardly; also shorten the stitch. To make full gathering, lengthen the stroke of the ruffling blade by turning the adjusting screw (C) downwardly; also lengthen the stitch. By varying these adjustments, many pleasing varieties of work can be accomplished.

To Make a Ruffle and Sew it to a Garment in One Operation

Insert the material to be ruffled between the two blue blades, as shown in Fig. 60, following the line

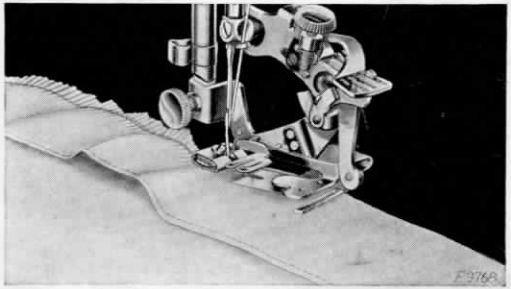

Fig. 60

2, in Fig. 58. Place the garment to which the ruffle is to be attached, under the separator blade, following the line 1, in Fig. 58. Proceed the same as for gathering.

The edge of the ruffled seam can be bound by using the binder.

To Ruffle and Sew on a Facing in One Operation

Insert the material to be ruffled between the two blue blades, following the line 2, in Fig. 58. Place the garment to which the ruffle is to be attached under the separator blade, following the line 1, in Fig. 58. Place the material for the facing over the upper blue blade, as shown in Fig. 61, following the line 3, in Fig. 58. The facing may be straight or bias material. If the facing is to be on the right side of the garment, place the garment and

the ruffle so that the wrong sides are together. If the facing is to be on the wrong side, place the right sides of the garment and the ruffle together.

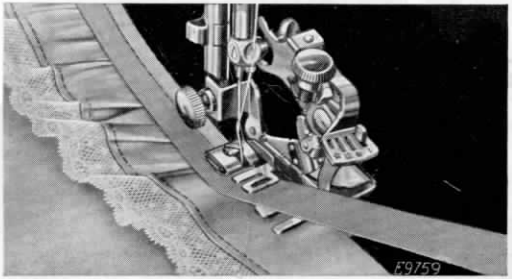

Fig. 61

Piping a Ruffle

Insert the material to be ruffled between the two blue blades, following the line 2, in Fig. 58. This

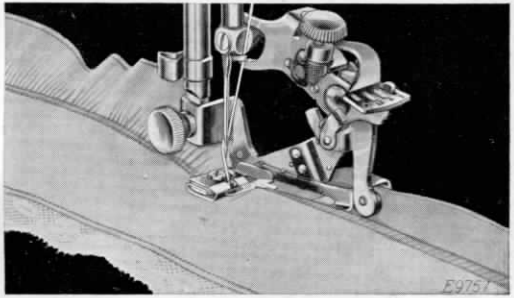

Fig. 62

material must not be over 1¼ inches wide, as it is carried through the ruffler with the finished

edge of the ruffle to the right of the attachment as shown in Fig. 62.

The material for piping must measure about ¼ inch wide when folded in the centre and is usually cut on the bias. Place the piping material in the ruffler, following the line 4, in Fig. 58, with the folded edge of the piping to the right. The material to which the piping and ruffling are to be sewn should be folded on the edge and inserted in the ruffler, following the line 5, in Fig. 58.

To Adjust the Ruffler for Plaiting

Raise the adjusting lever (E, Fig. 63) and move it to the right so that the projection (D, Fig. 63)

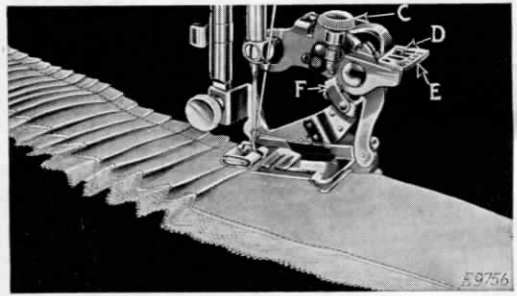

Fig. 63

will enter the slot marked "6" in the adjusting lever when the lever is released. The ruffling blade will then move forward and back once at every six stitches. To adjust the ruffling blade to make a plait once at every twelve stitches, place the adjusting lever (E, Fig. 63) so that the projection (D) enters the slot marked "12" in the adjusting lever. Insert the material to be plaited between the two blue blades, following the line 2, (Fig. 58). The size or width of plaits is regulated by the adjusting screw

(C, Fig. 63) and the adjusting finger (F, Fig. 63). To make a wider plait, move the adjusting finger (F) back or toward the needle and turn the adjusting screw (C) downwardly. To make a smaller plait, turn the adjusting screw (C) upwardly. The distance between plaits is regulated by the length of stitch.

To Adjust the Ruffler for Group Plaiting and Gathering

The ruffler can be adjusted for group plaiting by lifting the adjusting lever (E, Fig. 64) and moving

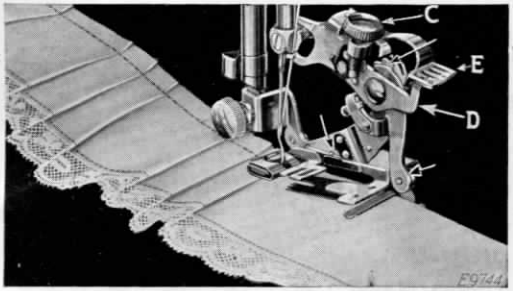

Fig. 64

it to the right so that the top of the projection (D, Fig. 64) enters the small slot indicated by the star on the adjusting lever. This should be done at the points where you wish to make the space between the plaits. The ruffler will then stop and plain stitching will be made. When the desired space has been made, adjust the lever (E) so that the projection (D) enters either the slot marked "6" or the slot marked "12". By alternately making groups of plaits and plain spaces, as shown in Fig. 64, very attractive work can be produced.

To Oil the Ruffler

Occasionally apply a drop of oil to the working parts of the ruffler at each of the places indicated by arrows in Fig. 64. After oiling, operate the ruffler on a waste piece of material to prevent the oil soiling the work. If the ruffler does not plait evenly, a drop of oil may remedy the trouble.

To Use the Cloth Guide

To insure accurate guiding of the work when sewing close to the edge of the goods, the cloth

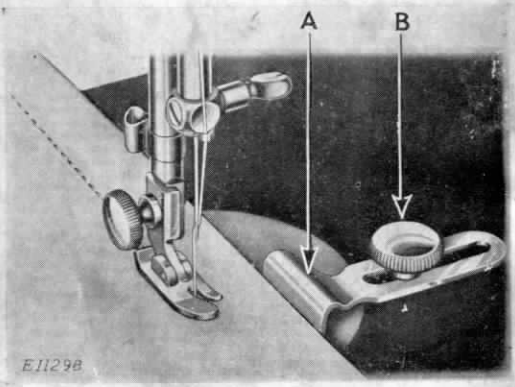

Fig. 65

guide (A, Fig. 65) should be used. Fasten the cloth guide to the bed of the machine by means of the clamping thumb screw (B, Fig. 65), inserting the thumb screw into either one of the two screw holes in the bed of the machine. The cloth guide can be adjusted to bring the edge of the goods as close to the line of stitching as desired.