SINGER

131W103,W104,W110 to W113

USE ONLY SINGER OILS and LUBRICANTS

They insure freedom from lubricating trouble and give longer life to sewing equipment

---

"Singer Oil for High Speed Sewing Machines"
Cloth and Leather

For all manufacturing sewing machines except where stainless oil is used.

"Singer Stainless Oil for High Speed Sewing Machines"

For all manufacturing sewing machines where a stainless oil is used.

"Singer Motor Oil"

For oiling motors, power tables, transmitters and machinery in general.

"Singer Stainless Thread Lubricant"

For lubricating the needle thread for use on machines for sewing fabrics or leather where stainless thread lubricant is required.

NOTE: All of the above oils are supplied in 1 quart, 1 gallon, and 5 gallon cans or in 55 gallon drums, and can also be supplied in customer's containers.

"Singer Gear Lubricant"

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

"Singer Ball Bearing Lubricant"

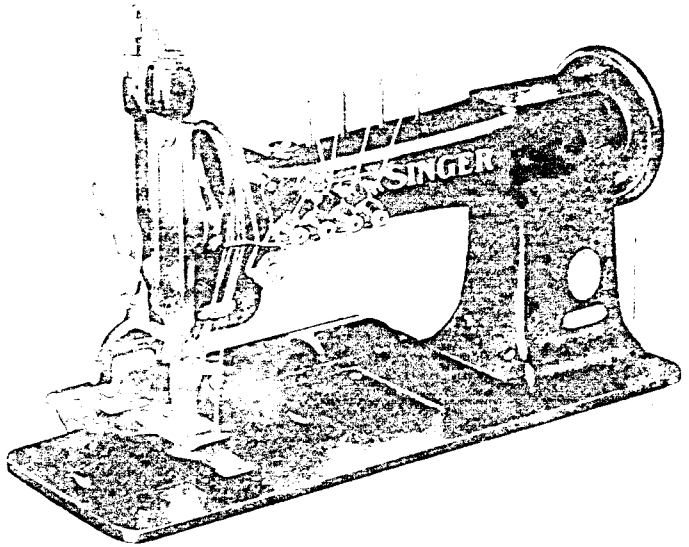
This pure grease is specially designed for the lubrication of ball bearings and ball thrust bearings of motors and electric transmitters, ball bearing hangers of power tables, etc.

NOTE: The above greases are furnished in ¼ lb. tubes and 1 lb. and 4 lb. tins.

INSTRUCTIONS

FOR USING

SINGER SEWING MACHINES



Machine 131w113

131w103, 131w104 AND 131w110 TO 131w113

THE SINGER MANUFACTURING CO.

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.

THE IMPORTANCE OF USING GENUINE SINGER PARTS AND NEEDLES IN SINGER MACHINES

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

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

DESCRIPTION

Machine 131 w 103 simultaneously makes three parallel rows of lock stitching in all descriptions of light and medium weight fabrics, and is used in the manufacture of corsets, skirts, cloaks, suits, etc. It has three needles and three rotary hooks.

Seams can be made, as ordered, with a width varying from 3/8 to 2-1/4 inches between the outside lines of stitching, and as the position of the centre needle remains fixed at all times, the distance from the centre row of stitching to each outside row may be from 3/16 to 1-1/8 inch. Orders for the machine should specify the gauges required.

Machine 131 w 104 has four needles and four rotary hooks for simultaneously making four parallel rows of lock stitching. It is intended for use on all descriptions of light and medium weight fabrics and can be used in the manufacture of a wide variety of work where it is desired to make four rows of lock stitching at one operation.

Seams can be made different widths as desired, the greatest distance between the two outside rows of stitching being 2-1/4 inches while the least distance between rows of stitching is 1/4 inch. Orders for the machine should specify the gauges required.

Machine 131 w 110 is the same as 131 w 103 except that it has a puller feed device which makes it especially suitable for stitching awnings, hemming flags, banding overalls, etc.

Machine 131 w 111 is the same as 131 w 103 except that it has a puller feed device and binder especially suited for binding woolen blankets with silk ribbon.

Machine 131 w 112 is the same as 131 w 104 except that it has a puller feed device and binder especially suited for binding woolen blankets with silk ribbon.

Machine 131 w 113 is the same as 131 w 104 except that it has a puller feed device and is especially fitted for stitching parachutes.

Speed

The maximum speed recommended for Machines of Class 131 w is 2500 revolutions per minute. The machines should be run slower than the maximum speed at first until the parts which are in movable contact have become glazed by their action upon each other. When the machines are in operation, the balance wheel should always turn over toward the operator.

Needles

Needles for Machines of Class 131 w are of Class and Variety 141 x 1 and are made in sizes Nos. 10, 12, 14, 16, 18 and 20.

The size of the needle to be used should be determined by the size of the thread which must pass freely through the eye of the needle. If rough or uneven thread is used or if it passes with difficulty through the eye of the needle, the successful use of the machine will be interfered with.

Orders for needles must specify the quantity required, the size number, also the class and variety numbers separated by the letter x.

The following is an example of an intelligible order:

"100 No. 14, 141 x 1 Needles."

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

Thread

Use left twist thread for the needles. Either left or right twist may be used for the bobbins.

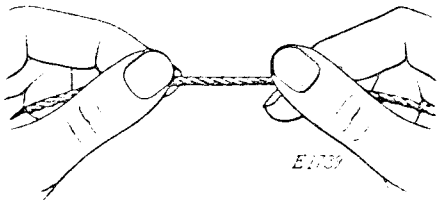


Fig. 2. How to Determine the Twist

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

The Relative Sizes of Needles and Thread

The following sizes of needles and thread are recommended:

SIZES OF NEEDLES	COTTON	SILK
10	80 to 100	000, 00
12	70, 80	00, 0
14	60, 70	0, A
16	40 to 60	A, B
18	30 to 40	B, C
20	24 to 30	D

CAUTION

After setting up, do not start a machine, not even to test the speed, until it has been thoroughly oiled, as instructed below.

To Oil the Machine

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

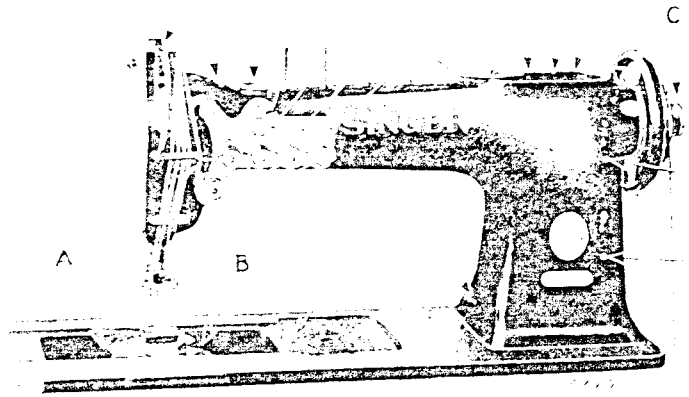


Fig. 3. Oiling Points at the Front of the Machine

Oil should be applied at the places designated by arrows as shown in Figs. 3, 4 and 5. Swing back the cover which is on the top of the machine at the right, and oil the bearings and gears which are thus uncovered, then replace the cover.

When the machine is shipped from the factory, the grease pan (A, Fig.5) is packed with Singer High Speed Lubricant. Occasionally this grease pan should be removed, thoroughly cleaned out and filled to the level of shaft clearance cut with Singer High Speed Lubricant. **Oil should regularly be applied through oil hole at the front of the grease pan (A, Fig.5)** to lubricate the gears and shaft.

The small felt pad on the side of the bobbin cases should be kept wet with oil to lubricate the hook races.

Loosen the thumb screw in the upper end of the face plate, turn the face plate upward and oil the wick and bearings which are thus

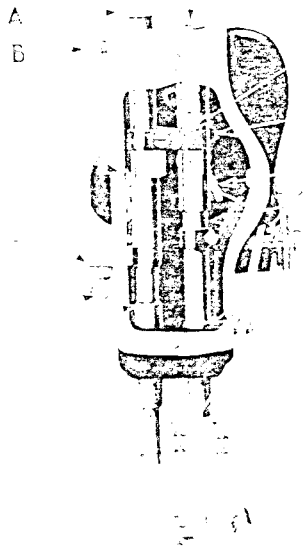


Fig. 4. End View of Machine, Showing Oiling Points

uncovered, then turn down the face plate and tighten the thumb screw.

Turn the machine back on its hinges and apply oil to the places designated by arrows as shown in Fig. 5, and all other places where there are parts in movable contact.

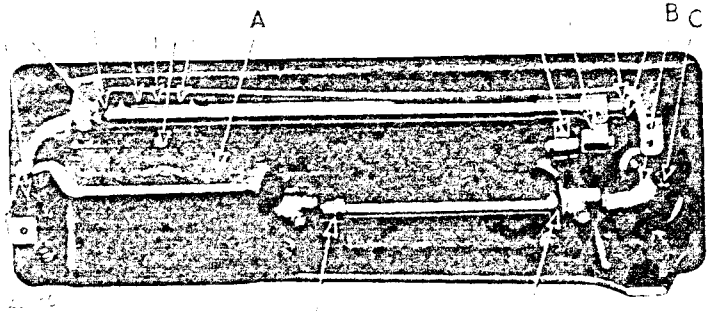


Fig. 5. Base of Machine, Showing Oiling Points

The gear case (B, Fig. 5) should be removed occasionally and filled with the Singer High Speed Lubricant, a grease which is especially prepared for the purpose. The gear case can be easily removed after taking out the screw (C, Fig. 5).

To Set the Needles in Machines 131w103, 131w110 and 131w111

Turn the balance wheel over toward you until the needle bar moves up to its highest point. Loosen the three set screws in the needle holder and put the needles up into the holder as far as they will go, the outside needle or the one farthest from the upright part of the arm having its long groove toward the right, the centre needle having its long groove toward the operator and the inside needle or the one nearest the upright part of the arm having its long groove toward the left. When setting the right and left needles, care should be taken to see that the slab at the top of the needles is set properly into position in the needle holder, then firmly tighten the set screws.

To Set the Needles in Machines 131w104, 131w112 and 131w113

Turn the balance wheel over toward you until the needle bar moves up to its highest point. Loosen the four set screws in the needle holder and put the needles up into the holder as far as they will go, the two left needles or the needles farthest from the upright part of the arm having their long groove toward the right, and the two needles nearest the upright part of the arm having their long groove toward the left. Care should be taken to see that the slab at the top of the needles is set properly into position in the needle holder, then firmly tighten the set screws.

To Remove the Bobbins

Draw out the slide plates in the bed of the machine. Insert the finger nail of the forefinger under the latches (A, B and C, Fig. 6), raise the latches and lift out the bobbins.

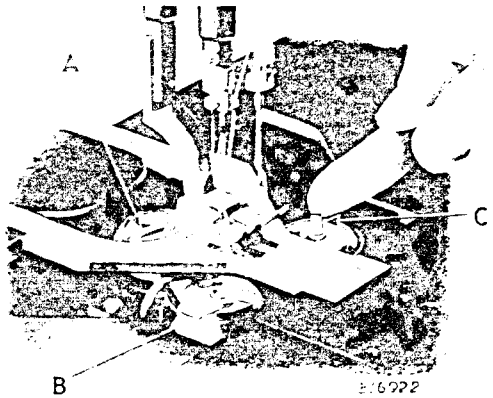


Fig. 6. Removing the Bobbin

To Wind the Bobbin

(See Fig. 7)

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

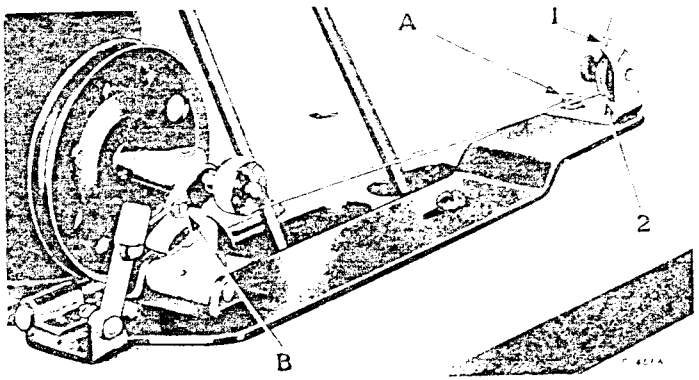


Fig. 7. Winding the Bobbin

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

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

When sufficient thread has been wound upon the bobbin, the bobbin winder will stop automatically.

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

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

Bobbins can be wound while the machine is stitching.

To Replace the Bobbins and Thread the Bobbin Cases in Machines 131w103, 131w110 and 131w111

The following instructions apply to the three bobbins:

Hold the bobbin between the thumb and forefinger of the left hand, the thread drawing on top from the right toward the left (see

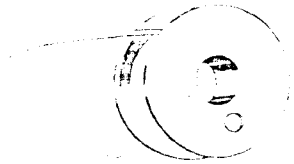


Fig. 8. Direction of Thread on Bobbin

Fig. 8), and place it on the centre stud of the bobbin case, then push down the latch as shown in Fig. 9. Draw the thread into the

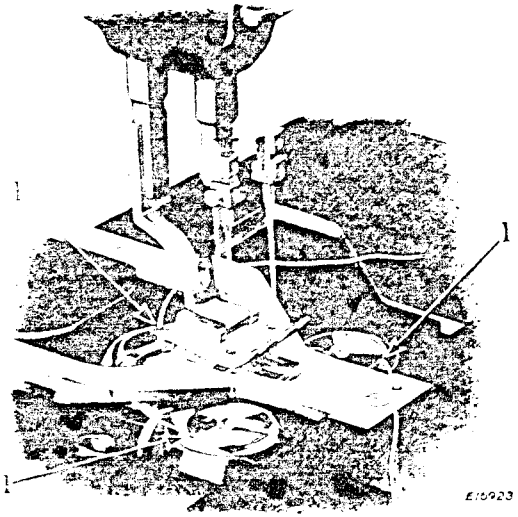


Fig. 9. Threading the Bobbin Cases in Machines 131w103, 131w110 and 131w111

slot (1, Fig. 9) and back of the projection (2, Fig. 10), leaving a loose end of the thread about two inches long above the slide. When closing the slides leave just enough space for the threads to pass through.

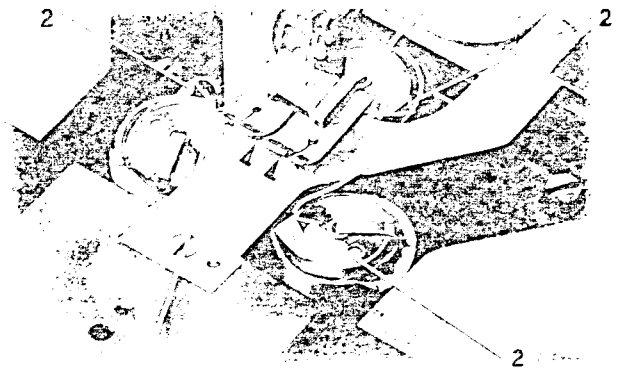


Fig. 10. Bobbin Cases Threaded in Machines 131w103, 131w110 and 131w111

To Replace the Bobbins and Thread the Bobbin Cases in Machines 131w104, 131w112 and 131w113

The following instructions apply to the four bobbins:

Hold the bobbin between the thumb and forefinger, the thread drawing on top from the right toward the left (see Fig.6), and place

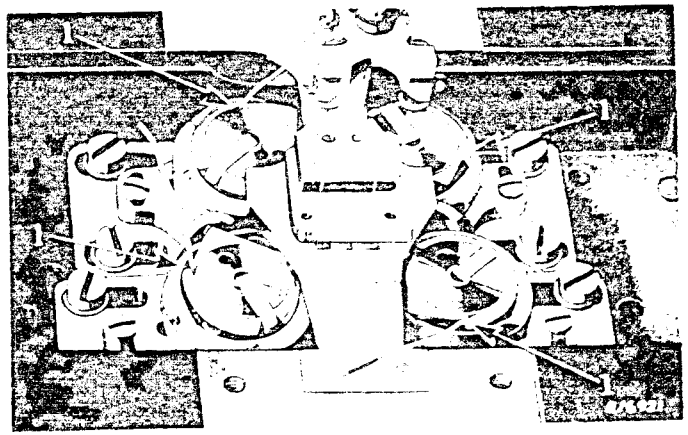


Fig. 11. Threading the Bobbin Cases in Machines 131w104, 131w112 and 131w113

it on the centre stud of the bobbin case, then push down the latch as shown in Fig. 11. Draw the thread into the slot (1, Fig.11) and back of the projection (2, Fig. 12), leaving a loose end of thread

about two inches long above the slide. When closing the slides leave just enough space for the threads to pass through.

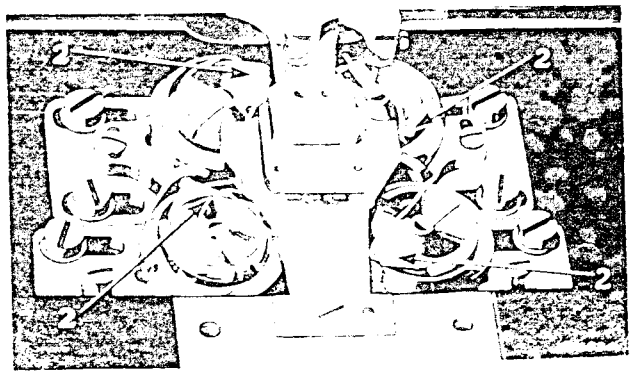


Fig. 12. Bobbin Cases Threaded in Machines 131w104, 131w112 and 131w113

To Thread the Needles in Machines 131w103, 131w110 and 131w111

To thread the outside needle or the one farthest from the upright part of the arm, pass the thread from the unwinder from back to front through the lower hole in the left pin on top of the machine, then from right to left through the upper hole in the pin, through the upper thread guide and thread retainer, over from right to left between the tension discs at the extreme left, under from right to left around the thread controller, into the thread controller spring and up through the thread guide, up and from right to left through the top hole in the thread take-up lever, down through the left hole in the thread guide at the front of the machine, through the thread guide below, through the left hole in the needle holder and from right to left through the eye of the left or outside needle.

To thread the centre needle, pass the thread from the unwinder from back to front through the lower hole in the centre pin on top of the machine, then from right to left through the upper hole in the pin, through the left lower thread guide and thread retainer under from right to left between the centre tension discs, under from right to left around the thread controller, into the thread controller spring and up through the thread guide, up and from right to left through the centre hole in the thread take-up lever, down through the hole second from the left in the thread guide at the front of the machine, through the thread guide below, through the centre hole in the needle holder and from front to back through the eye of the centre needle.

Note: When the needle bar is raised to its highest position the eye of the centre needle can be easily seen, for threading, through the hole in the presser foot.

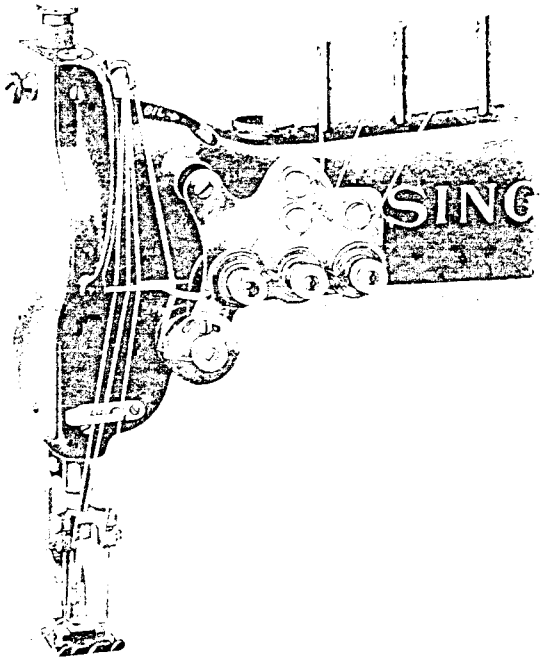


Fig. 13. Threading the Needles in Machines 131w103, 131w110 and 131w111

To thread the inside needle or the one nearest the upright part of the arm, pass the thread from the unwinder from back to front through the lower hole in the right pin on top of the machine, then from right to left through the upper hole in the pin, through the right lower thread guide and thread retainer, under from right to left between tension discs at the extreme right, under from right to left around the thread controller, into the thread controller spring and up through the thread guide, up and from right to left through the bottom hole in the thread take-up lever, down through the hole third from the left in the thread guide at the front of the machine, through the thread guide below, through the right hole in the needle holder and from left to right through the eye of the right or inside needle.

To Thread the Needles in Machines 131w104, 131w112 and 131w113

(See Fig. 14)

To thread the front left needle or the one farthest from the upright part of the arm, pass the thread from the unwinder from

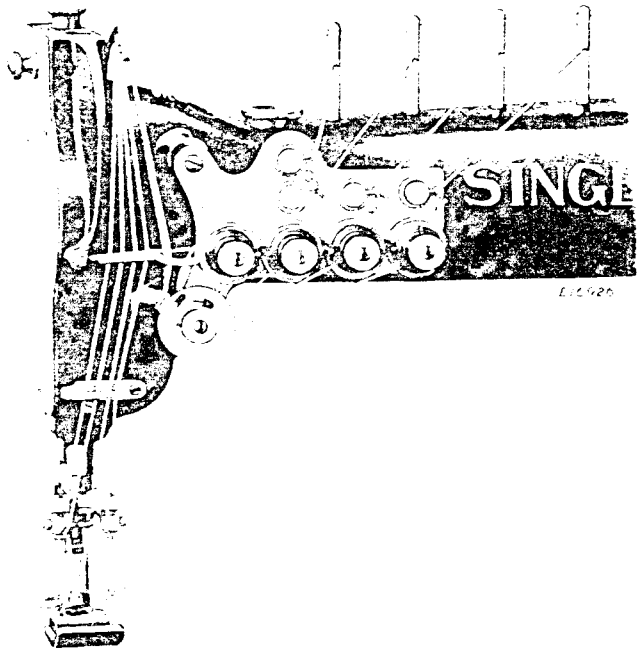


Fig. 14. Threading the Needles in Machines 131w104, 131w112 and 131w113

right to left through the upper hole in the pin at the extreme left on top of the machine, then from back to front through the lower hole in the pin, through the upper thread guide and thread retainer, over from right to left between the tension discs at the extreme left, under from right to left around the thread controller, into the thread controller spring and up through the thread guide, up and from right to left through the top hole in the thread take-up lever, down through the hole at the extreme left in the thread guide at the front of the machine, through the thread guide below, through the thread guide on the front left needle holder and from right to left through the eye of the front left needle.

To thread the rear left needle, pass the thread from the unwinder from right to left through the upper hole in the pin second from the left on top of the machine, then from back to front through the lower hole in the pin, through the left lower thread guide and thread retainer, under from right to left between the tension discs second from the left, under from right to left around the thread controller, into the thread controller spring and up through the thread guide, up and from right to left through the hole second from the top in the thread take-up lever, down through the hole second from the left in the thread guide at the front of the machine, through the thread guide below, through the hole in the rear left needle holder, through the thread guide and from right to left through the eye of the rear left needle.

To thread the rear right needle, pass the thread from the unwinder from right to left through the upper hole in the pin third from the left on top of the machine, then from back to front through the lower hole in the pin, through the centre thread guide and thread retainer, under from right to left between tension discs third from the left, under from right to left around the thread controller, into the thread controller spring and up through the thread guide, up and from right to left through the hole third from the top in the thread take-up lever, down through the hole third from the left in the thread guide at the front of the machine, through the thread guide below, through the hole in the rear right needle holder, through the thread guide and from left to right through the eye of the rear right needle.

To thread the front right needle or the one nearest the upright part of the arm, pass the thread from the unwinder from right to left through the upper hole in the pin at the extreme right on top of the machine, then from back to front through the lower hole in the pin, through the thread guide and thread retainer at the extreme right, under from right to left between the tension discs at the extreme right, under from right to left around the thread controller, into the thread controller spring and up through the thread guide, up and from right to left through the bottom hole in the thread take-up lever, down through the hole at the extreme right in the thread guide at the front of the machine, through the thread guide below, through the thread guide on the front right needle holder and from left to right through the eye of the front right needle.

To Prepare for Sewing

With the left hand hold the ends of the needle threads, leaving them slack from the hand to the needles. Turn the balance wheel

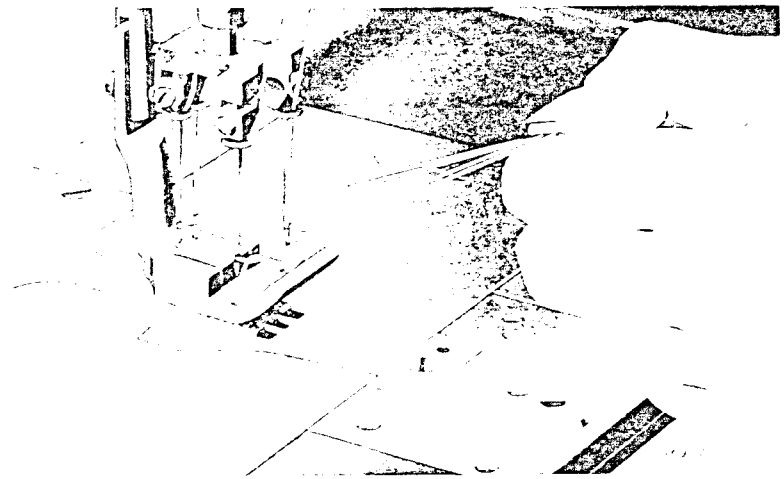


Fig. 15. Drawing Up the Bobbin Threads

over toward you until the needles move down and up again to their highest point, thus catching the bobbin threads; draw up the needle threads and the bobbin threads will come up with them through the holes in the throat plate (see Fig. 15). Lay the threads back under the presser foot and close the slides.

To Commence Sewing

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

To Remove the Work

Have the thread take-up lever at the highest point, raise the presser foot, draw the work back and cut the threads close to the goods. Lay the ends of the threads back under the presser foot.

To Regulate the Pressure on Material

The pressure on the material is regulated by the thumb screw (A, Fig. 4) at the top of the machine.

To increase the pressure, loosen the lock screw (B, Fig. 4) at the back of the machine and turn the thumb screw (A) over to the right or downward. To decrease the pressure, turn the thumb screw (A) over to the left or upward. When the required amount of pressure is obtained, tighten the lock screw (B).

Tensions

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

Fig. 16. 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. 17. 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:

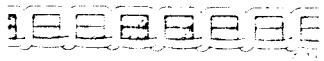


Fig. 18. Loose Needle Thread Tension

To Regulate the Tensions

The tensions on the needle threads are regulated by the thumb nuts at the front of the tension discs on the front of the machine. To increase the tension, turn these thumb nuts over to the right. To decrease the tension, turn the thumb nuts over to the left.

The tensions on the bobbin threads are regulated by means of the screw nearest the centre of the tension spring on the outside of each bobbin case. To increase the tension, turn this screw over to the right. To decrease the tension, turn the screw over to the left.

To Regulate the Length of Stitch

The length of stitch is regulated by the thumb screw (C, Fig. 3) at the right of the balance wheel.

There is a notch in the hub of the balance wheel and the number appearing in the notch shows the number of stitches to the inch that the machine is ready to make.

To lengthen the stitch, turn the thumb screw (C) over toward you. To shorten the stitch, turn this thumb screw over from you.

To Adjust the Puller Feed on Machines 131w110 to 131w113

(see Fig. 19)

The puller feed should be adjusted to feed the material slightly faster than the drop feed of the machine, so that the pulling action of the feed rolls will cause a slight tension on the material between the drop feed and the puller feed rolls.

The speed of the puller feed is changed by moving the end of the connection (A) which is fastened by the hexagon nut (C) in the

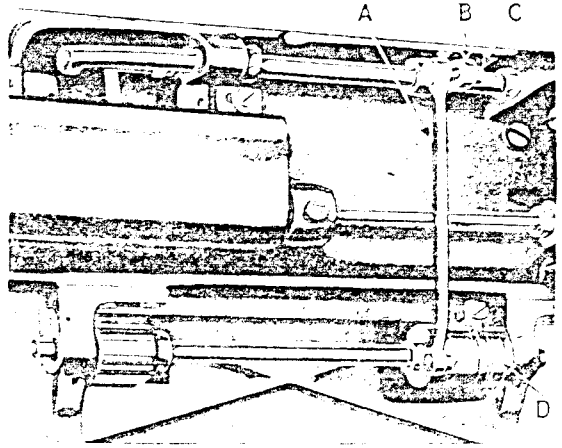


Fig. 19. Showing Adjustment for Changing Speed of Puller Feed

slotted segment (B) on the underside of the bed of the machine. To increase the speed of the puller feed, loosen the hexagon nut (C) and move the connection (A) in the slotted segment away from the shaft. To decrease the speed of the puller feed, move the connection (A) toward the shaft. When the required speed of the feed roll is obtained, firmly tighten the hexagon nut (C).

When the puller feed is once correctly set, it seldom requires attention, as the adjustment for changes in length of stitch is automatically taken care of by the stitch regulator of the machine.

If trouble is experienced with clutch slipping, it is probably caused by oil working into clutch assembly (D). Saturate the clutch thoroughly with gasoline or benzine and run the machine a few moments, after which wipe off surplus gasoline, and then place a drop of oil on hinge screw of connection (A).

To Regulate the Pressure on the Upper Feed Roll of Machines 131w110 to 131w113

The pressure of the upper feed roll on the material should be only sufficient to enable the feed rolls to pull the material from

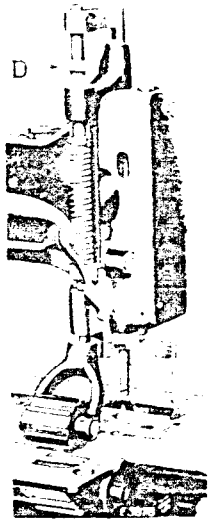


Fig. 20. Adjustment for Regulating Pressure on Upper Feed Roll

the drop feed of the machine without slipping. To increase the pressure on the upper feed roll, turn the thumb screw (D) over to the right or downwardly. To decrease the pressure on the upper feed roll, turn the thumb screw (D) over to the left or upwardly.

Puller Feed Rolls

The two rolls of the puller feed may be either corrugated steel or rubber faced to suit the requirements of the work being sewn.

Following is a list of the corrugated steel rolls which can be furnished, and the classes of work for which they are adapted:

CORRUGATED FEED ROLLS	NO. OF TEETH	CLASS OF WORK
237035 lower (fine)	27	Flags, tents, awnings, balloons and similar work
237036 upper (fine)	27	
237017 lower (coarse)	13	For banding overalls and pants
237020 upper (coarse)	13	
237017 lower (coarse)	13	Comfortables and thick work generally
237045 upper (coarse)	13	

The Rubber Faced Feed Rolls are 237038 (lower) and 237039 (upper). These rolls are used when stitching articles on which it is desirable not to show the marks of the corrugated steel puller feed rolls on either side of the material.

The combination of Rubber Faced Feed Roll 237039 (upper) and Corrugated Steel Feed Roll 237035 (lower) is found most satisfactory for materials which are easily marked on the upper side, but on the underside of which a corrugated steel roll can be used.

The cork faced puller feed rolls are 237048 (Lower) and 237049 (Upper).

These rolls are used when stitching parachute work.

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