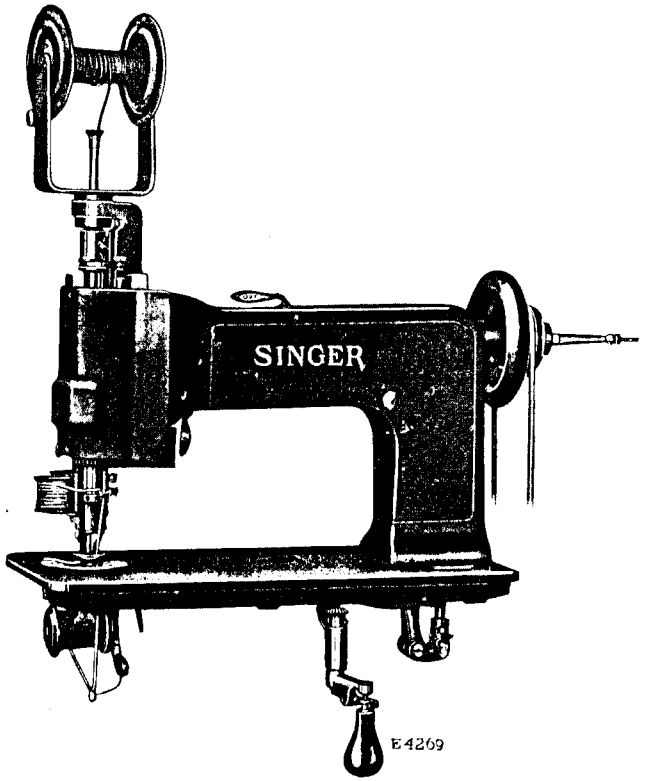
SINGER
114W120,W121

1871 w

INSTRUCTIONS

FOR USING

SINGER SEWING MACHINES



114w120 AND 114w121

THE SINGER MANUFACTURING CO.

Purchasing of Parts and Needles

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

DESCRIPTION

Machine 114w120 makes a single thread chain stitch and is especially designed for producing what is known as three thread cording. It is also adapted for two thread cording, gimp embroidery, ornamental chain stitching, drop or moss stitching, feather stitching, braiding and imitation two needle cording, combinations of which can be used to produce beautiful ornamental effects on waists, suits, cloaks, skirts, dress trimmings, millinery, uniforms, draperies and a large variety of other articles.

The machine has a universal feed movement which enables the operator to stitch in any direction without turning the fabric which is being embroidered. The direction of feed is controlled by means of the hand operating lever, located underneath the machine.

Machine 114w121 is designed for producing spiral braiding in addition to the variety of effects that can be accomplished on Machine 114w120. It is the same as Machine 114w120 with the exception that it has gear shift mechanism for changing the speed of the revolving spool carrier to obtain one, two, three or four stitches to each revolution of the carrier, as desired.

Note: The instructions given on the following pages apply to Machines 114w120 and 114w121, with the exception of the instructions for spiral braiding given on pages 37, 38 and 39, which apply only to Machine 114w121.

Speed

A regular transmitter should be used in operating machines 114w120 and 114w121 which allows the operator on large designs to run the machine at the maximum speed of 1200 stitches per minute and to slow down the speed of the machine to the point where the stop motion, which is part of the machine, can be used. The stop motion is tested to operate up to a maximum speed of 600 R.P.M.

Where the stop motion is not used at all, the lever No. 222594 is removed and the stop motion is made inoperative. The starting, stopping and speed of the machine is controlled by the transmitter.

When the machine is in operation the balance wheel should always turn over from the operator.

To Oil the Machine

When the machine is received from the factory, it should be thoroughly cleaned and oiled.

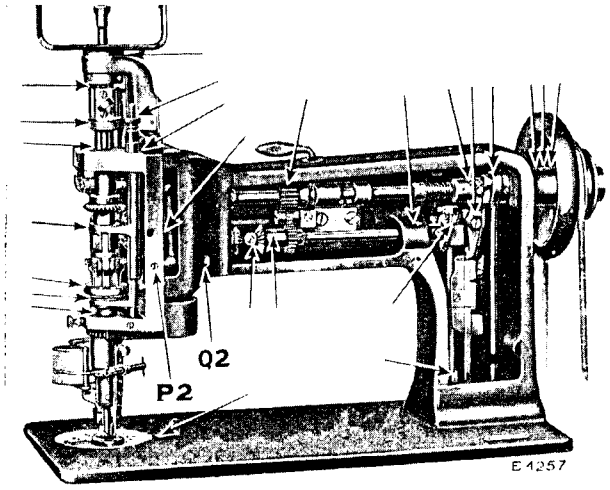


Fig. 2. Oiling Points at the Front of Machine 114w120

To clean the machine, use a little kerosene at the oiling points shown in Figs. 2 to 7, run the machine rapidly one minute, then wipe clean.

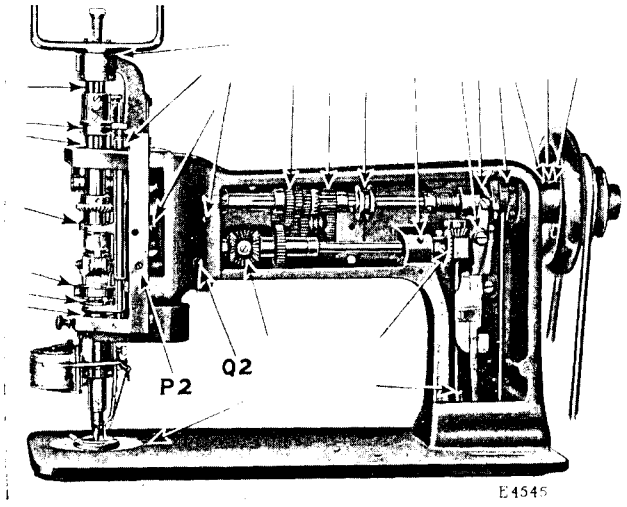


Fig. 3. Oiling Points at the Front of Machine 114w121

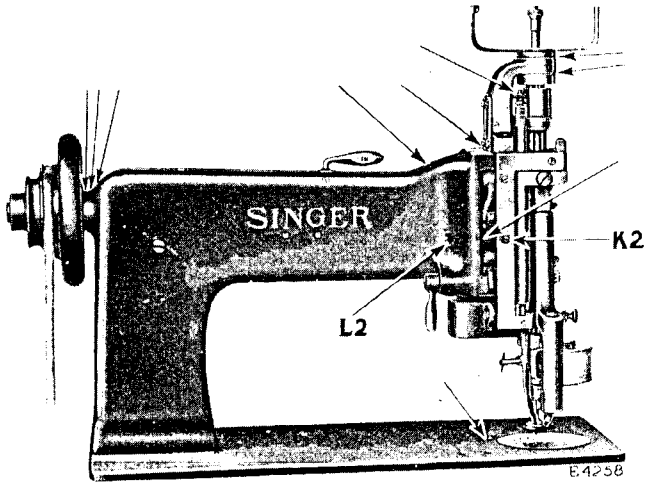


Fig. 4. Oiling Points at the Back of Machine 114w120

Oil should then be applied at each of the places designated by arrows in Figs. 2 to 7. When the machine is in continuous use, it should be oiled at least once each day.

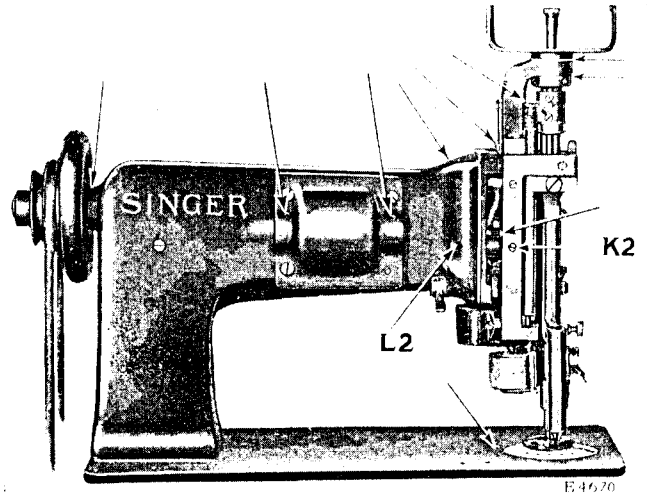


Fig. 5. Oiling Points at the Back of Machine 114w121

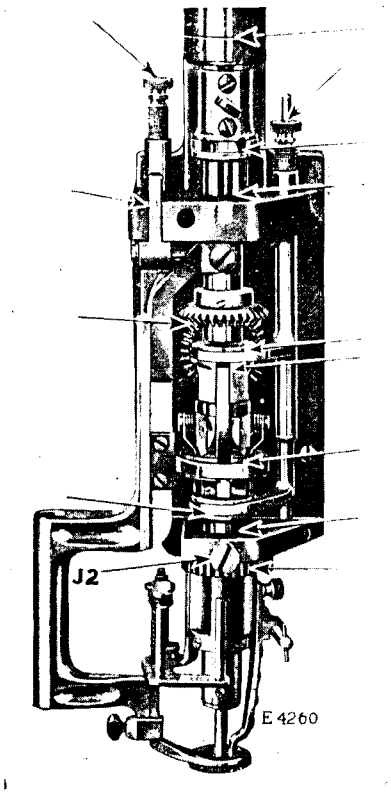


Fig. 6. End View of Machine Showing Oiling Points

Figs. 2 and 3 show the front plate of the machine removed for the purpose of cleaning and oiling. The front plate can be removed after taking out the thumb screw which holds it in position.

Fig. 6 shows the face plate of the machine removed for the purpose of cleaning and oiling. The face plate can be removed after loosening the thumb screw (J2, Fig. 6).

Turn the machine back on its hinges and apply oil at the places shown by arrows in Fig. 7 and all other places where there are

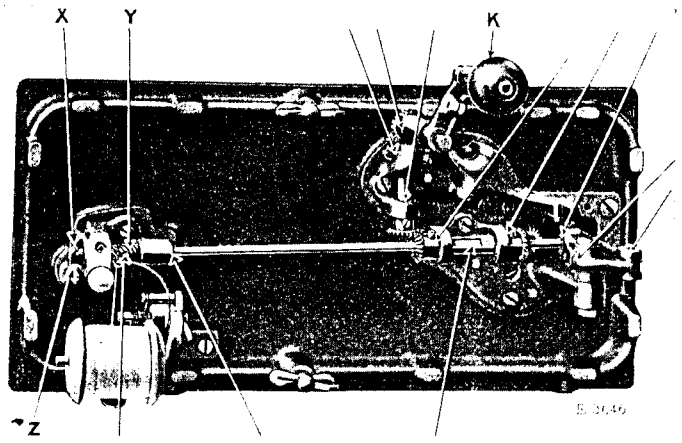


Fig. 7. Oiling Points in the Base of the Machine

Also Adjustments on the Machine

K. Handle for Directing Feed and Operating Stop Motion.
X. Set Screw for Holding Worm Gear in Position.
Y. Worm Gear for Operating the Looper.
Z. Knurled End of Operating Worm Gear for Changing Position of Looper.

parts in movable contact, then bring the machine forward into place.

Needles, Nipples and Thread

Needles for Machines 114w120 and 114w121 are of Class and Variety 137x1, and are furnished in special size numbers which are from 1 to 12. These needles have hooks similar in appearance to those of hand crochet needles.

The needles must be selected according to the thickness and the style of the thread to be used. The thread must not only fill the opening of the hook in the needle, but must slide freely therein.

To correspond with the needle used in the machine, a suitable nipple must be selected, as the needle, in forming the stitch, has to operate through the nipple. The needle must fit nicely in the nipple and slide freely without having any side play. Nipples are furnished in size numbers similar to those of the needles, viz., 1 to 12, and for general work the nipple used should be the same size number as the needle.

The nipple must also be selected with a suitable hole in its lower end to allow the filler cord to pass freely through it.

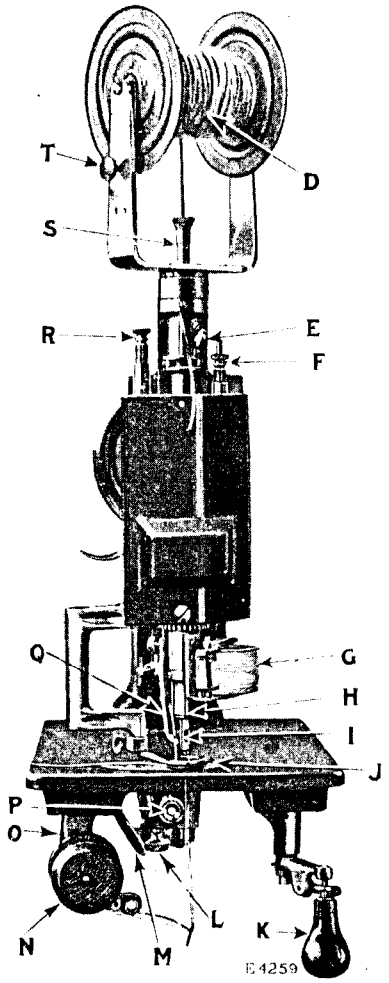


Fig. 8. Adjustments on the Machine

D. Filler Cord Spool.
E. Wing Screw for Needle Bar.
F. Thumb Screw for Regulating Pressure on Nipple.
G. Covering Thread Spool.
H. Nipple Carrier.
I. Nipple.
J. Presser Foot.
K. Handle for Directing Feed and Operating Stop Motion.
L. Thumb Screw for Holding Needle Plate.
M. Lever for Regulating Tension on Needle Thread Spool.
N. Needle Thread Spool.
O. Tension Blade.
P. End of Looper Shaft.
Q. Guide for Covering Thread.
R. Thumb Screw for Regulating Pressure on Presser Foot.
S. Needle Bar.
T. Thumb Screw for Regulating Tension on Filler Cord.

To Set the Needle

A needle hole in the needle plate (A2, Fig. 10) should first be selected. The needle hole should be a trifle larger than the needle, so that the thread, when laid around the needle, will have sufficient space to pass without touching the sides of the needle hole.

To bring the desired needle hole under the needle, loosen the large thumb screw (L, Fig. 10) which fastens the needle plate to the bed of the machine; turn the plate until the correct needle hole is brought into line with the needle, then tighten the thumb screw.

To change the needle, loosen the wing screw (E, Fig. 8) and draw the needle bar upward to remove it from the machine. Then, using the pliers furnished with the machine, remove the old needle and screw the needle of the desired size into the needle bar as far as it will go, having the hook (V, Fig. 9) of the needle pointing in the opposite direction to the opening (U, Fig. 9) in the needle bar as shown in Fig. 9.

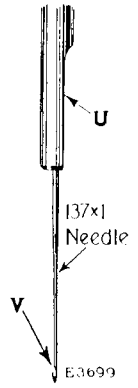


Fig. 9. Setting the Needle

Replace the needle bar and adjust its height so that the fabric to be embroidered can just pass under the point of the needle. See that the handle (K, Fig. 10) is at the front as far as it will go; also see that the hook of the needle faces the front; then tighten the wing screw (E, Fig. 8) which should also face the front.

If the needle, at this height, produces too tight a stitch, raise the needle bar slightly to make the stitch looser.

To Set the Nipple

Raise the needle bar to its highest point, loosen the knurled screw (D2, Fig. 17) and remove the covering thread guide (E2, Fig. 17), then remove the presser foot (J, Fig. 16), take out the thumb screw (L, Fig. 10) and remove the needle plate (A2, Fig. 10). With a small screw driver remove the small screw (G2, Fig. 17) in the upper end of the nipple (F2, Fig. 17), then press downwardly on the nipple to remove it from the machine.

Having selected the nipple of the desired size, fasten it into position on the nipple carrier by means of the screw (G2, Fig. 17) then replace the needle plate, presser foot and covering thread guide.

The correct height of the nipple can be determined by placing a piece of ordinary paper under the end of the nipple. When the nipple is at its lowest point, the paper should be pinched between the end of the nipple and the needle plate. When the paper is removed, the lower end of the nipple should not touch the needle plate.

To change the height of the nipple, insert a screw driver in the hole marked (K2, Fig. 4) at the rear of the machine and loosen the set screw therein. The eccentric adjusting stud (L2, Fig. 4) can then be turned so that the nipple can be set at the desired height, then tighten the set screw in the hole marked (K2).

To Wind the Spools

Remove the screw at the right of the balance wheel, then screw into the balance wheel the taper spindle furnished with the machine for winding the spools, as shown in Fig. 1.

Place the spool on the taper spindle and push it on as far as it will go. Wind the thread evenly on the spool, taking the thread from a cone or spool held by the hand.

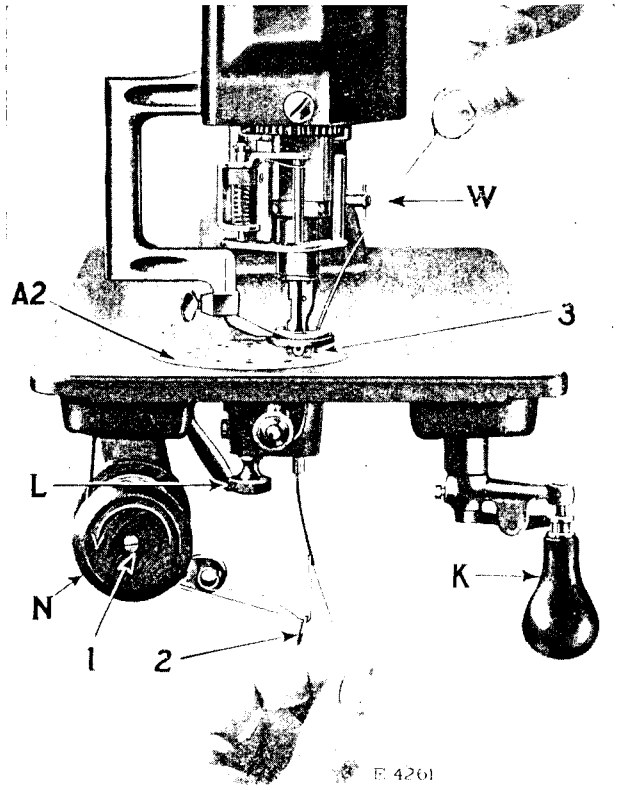


Fig. 10. Threading the Needle Thread

To Thread the Needle Thread

Place the spool (N, Fig. 10) on the spool pin (1, Fig. 10) under the bed of the machine, so that the thread will draw from the underside of the spool to the thread controller (2, Fig. 10). The threading wire (W, Fig. 10) is furnished with the machine for the purpose of drawing the thread from the thread controller (2, Fig. 10) to the top of the needle plate, through the forward hole (3, Fig. 10) and Fig. 10 shows how the thread is drawn from the thread controller (2) to the top of the needle plate.

Having led the thread from the spool to the thread controller (2, Fig. 10), turn the handle (K, Fig. 10) to the front or a little to the left. Raise the presser foot and insert the threading wire in the forward hole (3, Fig. 10) of the needle plate. With the left

hand, catch the thread on the hook of the threading wire underneath the table, holding the thread so that it cannot slip off the hook while being drawn up. After the thread is drawn up, hold the end with the left hand, having a slight tension on the thread.

With the right hand, turn the handle (K, Fig. 10) straight to the left and having started the pulley, bear quickly down and up on the handle (K) so that the needle will pick up the thread for one stitch. Pass the threading wire between the front of the needle and the needle plate and draw the thread directly toward you, leaving the end of the thread as it comes through the hole in the needle plate lying loosely on the plate. The machine is then ready to produce the chain stitch only.

Learning to Operate the Machine

When the machine is set up on table 205348, and foot power stand 25267, place the feet securely on the treadle, and with the right hand turn the balance wheel on the machine over from you. Continue the motion by an alternate pressure of heel and toe on the treadle. This motion should be practiced until the balance wheel can be kept in continuous rotation by the feet alone.

It is important to acquire the habit of turning the balance wheel over from you, otherwise the machine will not form stitches.

When the machine is mounted on a power table, care should be taken to see that the balance wheel on the machine turns over from the operator.

Having secured a piece of cloth about 12 inches square, mark upon it a design similar to the one shown in Fig. 11, then place the cloth under the presser foot so that the needle will enter the end of the line marked 1. Turn the handle (K, Fig.10) to the right and the hook of the needle will be turned in the same direction. Lower the presser foot, start the balance wheel in motion by turning it over from you, grasp handle (K) and pull it downwardly to start the machine. The piece of cloth will be fed along towards the left and when the end of the line at 2 is reached, still depress the handle and turn it directly towards the front. The piece of cloth will then be fed towards the back of the machine. When the point 3 is reached, still depress the handle and turn it straight to the left when the cloth will be fed until the point 4 is

reached. This process should be continued to the point 5, thence to the point 6, and the diagram will then be completed by manipulating the handle (K) without turning the cloth with the hands.

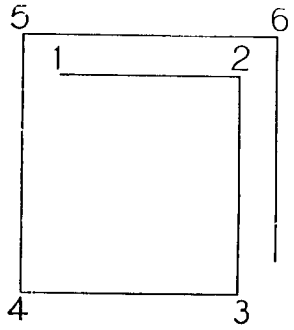


Fig. 11. Diagram for Practice

The operator should next practice embroidering designs similar to those illustrated below:

Fig. 12. Designs for Beginners

These designs can be sketched on white goods such as lawn, and the operator by following them, can become proficient in this way to attempt the embroidering of more intricate designs or patterns.

Three Thread Cording

The three thread cording is produced by means of a needle thread, filler cord and a covering thread.

Fig. 13. Three Thread Cording

The filler cord, or padding material is taken from the spool located at the top of the machine and passed down through

the hollow needle bar, thence through a suitable nipple which guides the cord while the covering thread is being wound around it. The covering thread, consisting of several strands of thread or silk, is taken from the spool mounted on the revolving spool carrier which rotates around the needle bar and filler cord, the guide, which is attached to the revolving spool carrier, winding the covering thread in such a manner that it entirely conceals the filler cord. The single thread chain stitches, which are formed by the needle and looper, stitch the covering thread only, and are underneath the filler cord or padding material, producing a blind stitch cording effect. Many sizes of filler cords and covering threads can be used to produce a great variety of embroidery effects.

To Adjust the Machine for Three Thread Cording

When Machine 114w120 is to be used for three thread cording, the lever (M2, Fig. 14) at the top of the machine must point

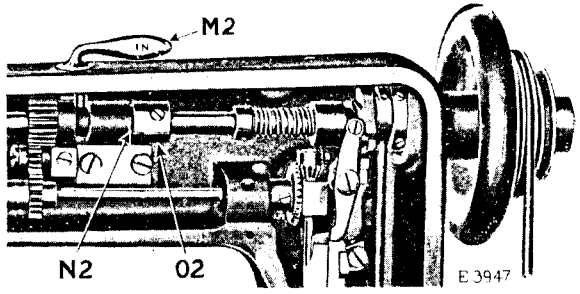


Fig. 14. Showing Lever for Engaging and Disengaging Revolving Spool Carrier

toward the right, so that the word "in" faces the operator. In case the lever (M2) is not in this position, start the machine and while it is running, turn the lever until it points to the right, as shown above. This will engage the revolving covering thread spool carrier.

When Machine 114w121 is to be used for producing the three thread cording effect illustrated in Fig. 13, the lever (R2, Fig. 39) must be placed in the top hole marked 1, so as to make the revolving spool carrier rotate every stitch. Three thread cording effects different from that illustrated in Fig. 13, can also be produced on this machine by placing the lever (R2) in either of the holes marked 2, 3 or 4, so as to make the revolving spool carrier rotate once every two, three or four stitches, thus winding the covering thread so that it does not entirely conceal the filler cord. By using a filler cord and covering thread of contrasting colors, many attractive three thread cording effects can be produced on this machine.

Nipples for Three Thread Cording

Following is a list of the nipples made for three thread cording and the sizes of filler cords for which they are intended:

Nipple		Diameter of Filler Cord
231887	Sent regularly with machine	3/32 inch
231889	Sent regularly with machine	1/4 inch
231891	Sent regularly with machine	5/32 inch

Instructions for setting the nipple are given on page 10.

Additional nipples can be furnished to handle filler cords different from those for use with the nipples originally sent with the machine. In each case, however, it is necessary to send samples of filler cord with the order for nipples. A sample of the covering thread should be also sent with all orders.

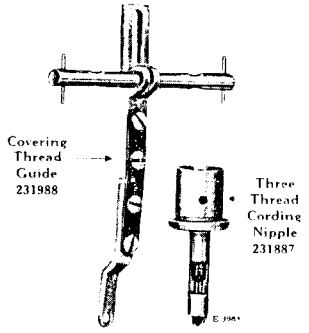


Fig. 15. Fittings for Three Thread Cording

Covering Thread Guide for Three Thread Cording

Attach covering thread guide 231988 (see Fig. 15) to the machine as shown in Fig. 17.

The height of the covering thread guide (E2, Fig. 17) is governed by the size of the filler cord used. It should be set high enough to permit its lower end to just pass over the filler cord when the machine is sewing.

To change the height of the covering thread guide, loosen the thumb screw (D2, Fig. 17) and move the guide up or down as may be required, then firmly tighten the thumb screw (D2).

To Remove the Covering Thread Spool

Raise the covering thread spool (G, Fig. 8) and draw it away from the needle bar, then lower the spool to remove it from the spool pin.

Equipment for Winding the Filler Cord and Covering Threads

A spool winding outfit is used to unwind the braid or silk from the spools on which it is sold by braid or silk manufacturers, and to wind it on spools which fit Machines 114w120 and 114w121.

While the complete outfit consists of spool winder 231992, spool rack 231993 and skein unwinder 231994, any one of these three units can be purchased separately.

Wood silk is generally used for the covering threads in cording. This silk can be purchased in skeins or on spools. As several threads of this silk are required to form suitable covering threads, the machine is regularly provided with twelve spools, upon each of which one strand of silk can be wound; the silk being afterwards taken from two or more spools and wound by the special equipment upon the revolving covering thread spool of the machine.

To Thread the Covering Thread

Place the spool of covering thread on the spool pin (B2, Fig. 16) as shown in Fig. 16, then press the spool in toward the needle

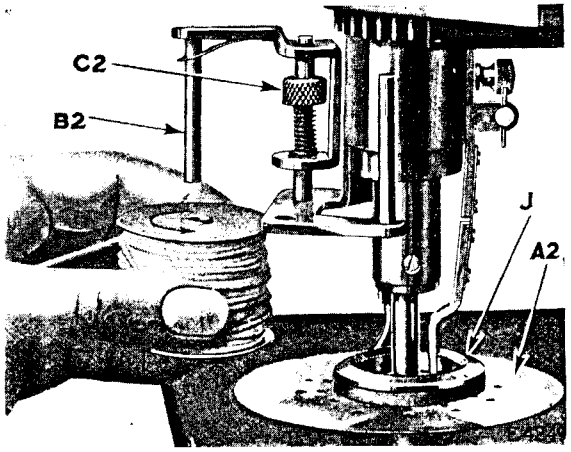


Fig. 16. Replacing the Covering Thread Spool

as far as it will go, until the spool pin drops into the hole in the spool carrier. Pass the thread from the spool around the outside

of the guide pin (1, Fig. 17), down through the hole (2, Fig. 17) in the upper end of the covering thread guide and down through

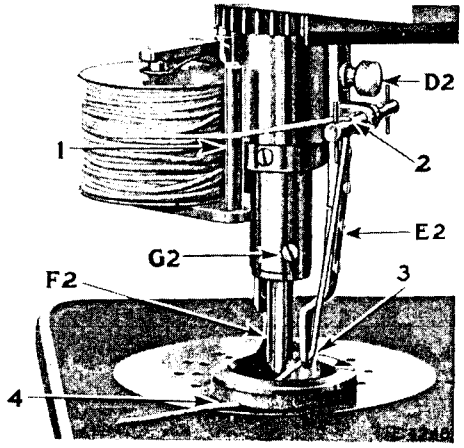


Fig. 17. Threading the Covering Thread

the hole (3, Fig. 17) in the lower end of the guide. Lay the end of the covering thread under the presser foot (4, Fig. 17).

Instructions for threading the needle thread are given on pages 11 and 12.

To Thread the Filler Cord

Place the spool of filler cord on the spool holder (1, Fig. 18) so that when the cord is taken from the spool, the spool will turn in the direction indicated by the arrow in Fig. 18. Fasten the end of the filler cord to one end of the bead chain (112, Fig. 18) furnished with the machine, then pass the chain down through

the hollow needle bar (2, Fig. 18), drawing the filler cord down through the opening (3,Figs. 18 and 19) in the side of the nipple.

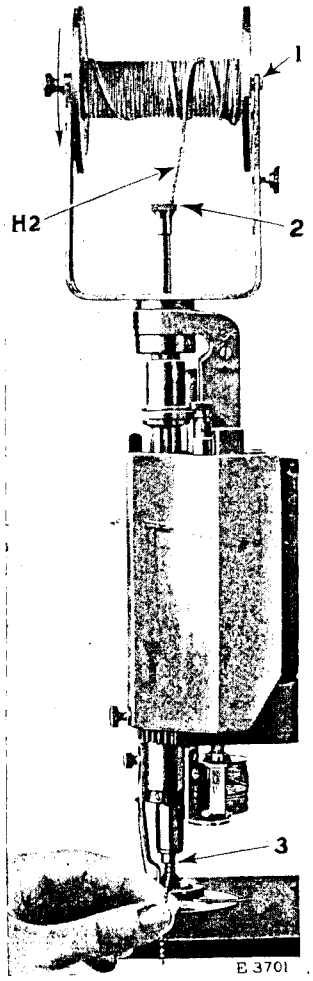


Fig. 18. Threading the Filler Cord

Detach the chain from the cord and pass the cord down through the hole (4, Fig. 19) in the lower end of the nipple, using the

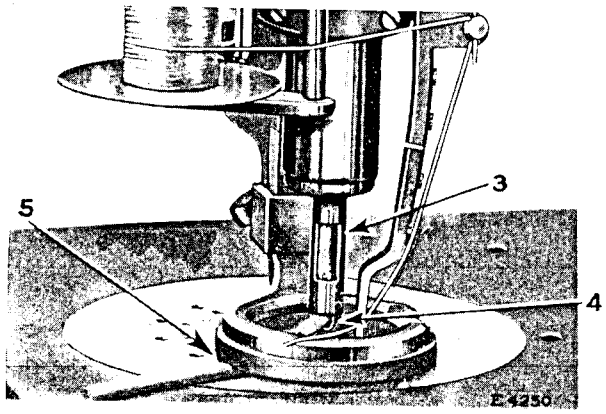


Fig. 19. Filler Cord Threaded

tweezers furnished with the machine. Lay the end of the cord under the presser foot (5, Fig. 19).

Two Thread Cording

The two thread cording is produced by means of a needle thread and an encircling thread, the filler cord being omitted for this work.

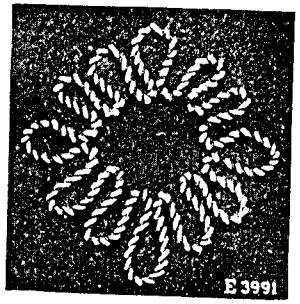


Fig. 20. Two Thread Cording

The encircling thread is wound around the needle thread in such a manner, during the formation of the stitches, that when the work is finished, the chain stitches are visible between the coils of the encircling thread, as shown in Fig. 20.

Nipples for Two Thread Cording

Following is a list of the nipples made for two thread cording, plain chain stitching and drop or moss stitching, and the corresponding sizes of needles with which they must be used:

Nipple		Size of Needle
231903	Sent regularly with machine	3
231904		4
231905	Sent regularly with machine	5
231906		6
231907	Sent regularly with machine	7
231908		8
231909	Sent regularly with machine	9
231910		10
231911	Sent regularly with machine	11
231912		12

A large variety of effects can be obtained in two thread cording by using different sizes of thread and changing the nipple and the needle.

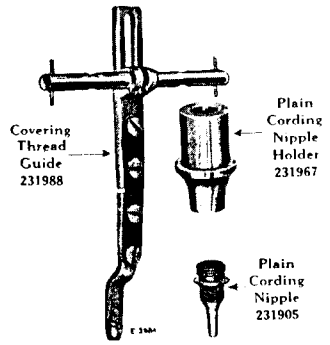


Fig. 21. Fittings for Two Thread Cording

To Adjust the Machine for Two Thread Cording

The threading and adjusting of the machine for producing two thread cording is the same as for three thread cording, with

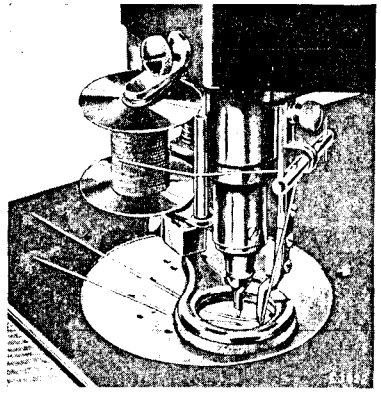


Fig. 22. Machine Threaded and Adjusted for Two Thread Cording

the exception that the filler cord is omitted and a plain cording nipple is used.

Having selected the desired nipple (see list of nipples given on the preceding page), screw the nipple into the nipple holder, and place the nipple holder with nipple in the machine, as instructed on page 10.

Attach thread guide 231988 (Fig. 21) to the machine and thread it as shown in Fig. 22.

To Adjust the Machine for Single Thread Ornamental Chain Stitching

When it is desired to use the machine for plain chain stitch work, turn the lever (M2, Fig. 14) until it points toward the left, so that the word "out" faces the operator. This will disengage the revolving covering thread spool carrier.

The nipples for plain chain stitching are the same as those listed for two thread cording on page 20.

Having selected the desired nipple, screw it into the nipple holder (see Fig. 21), then place it in the machine as instructed on page 10.

Instructions for threading the needle thread are given on pages 11 and 12.

To Adjust the Machine for Drop or Moss Stitching

The drop or moss stitch is produced by adjusting the machine so that it will drop the stitches in loose loops on the material. To accomplish this, have handle (K, Fig. 10) to the front, then loosen the wing screw (E, Fig. 8) and turn the needle holder so that the hook of the needle will point directly to the back of the machine, then tighten the wing screw.

Reach under the bed of the machine with the left hand, grasp the knurled end (Z, Fig. 7) of the operating worm gear, draw the worm to the left, and while holding it turn handle (K) directly to the back, then release the knurled end of the gear.

The looper will then be set in the opposite direction to that in which it is required for the chain stitch, or so that the notch of the looper will be at the front of the needle, while the handle (K) is at the front.

The nipples for drop or moss stitching are the same as those listed for two thread cording on page 20.

Having selected the desired nipple, screw it into the nipple holder (see Fig. 21) then place it in the machine as instructed on page 10, and disengage the revolving covering thread spool carrier, as instructed for plain chain stitching on the preceding page.

Instructions for threading the needle thread are given on pages 11 and 12.

By operating the machine and turning handle (K) rapidly, so as to make very small circles of dropped stitch loops laid one on the other, drop or moss stitching is produced. The higher the needle is set, the longer the loop will be. The size of the thread and thickness of the material used will have to be considered when adjusting the machine for drop or moss stitching.

Gimp Embroidery

The method of producing gimp embroidery on the machine is similar to that used in making the three thread cording with

Fig. 23. Enlarged View Showing How Gimp Embroidery is Produced

the exception that the machine is adjusted to wind the encircling thread around the gimp cord in such a way as to permit the gimp cord to show through at intervals, as illustrated above. By using an encircling thread of silk or gold thread, or tinsel with a gimp cord of contrasting color, many pretty styles of work are accomplished.

Fig. 24. Gimp Embroidery

Nipples for Gimp Embroidery

Following is a list of the nipples made for gimp embroidery and the sizes of gimp cord for which they are adapted:

Gimp Nipple		Diameter of Gimp Cord
231969		$\frac{1}{32}$ inch
231971	Sent regularly with machine	$\frac{1}{16}$ inch
231973		$\frac{3}{32}$ inch
231975	Sent regularly with machine	$\frac{1}{8}$ inch
231977		$\frac{5}{32}$ inch

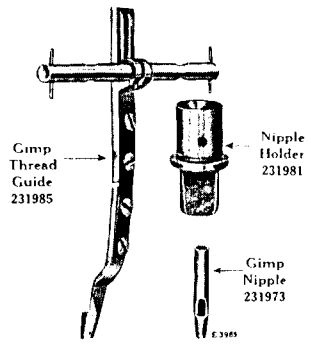


Fig. 25. Fittings for Gimp Embroidery

To Adjust the Machine for Gimp Embroidery

Remove the presser foot, needle plate and nipple, as instructed on page 9. In place of the nipple, use nipple holder 231981 (Fig. 25) and fasten it in the machine by means of the set screw, as shown in Fig. 26, so that the opening in the holder will be at the **back** when the handle (K, Fig. 10) is at the **front**. Having selected the gimp nipple to fit the size of gimp cord to be used, fasten it in position in the nipple holder by means of the set screw, as shown in Fig. 26, so that the opening in the nipple is

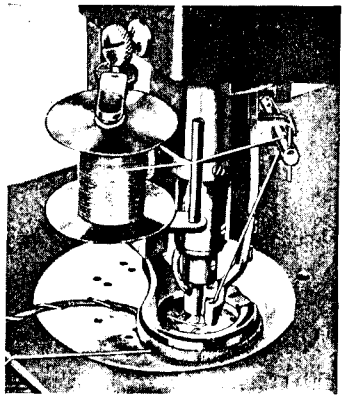


Fig. 26. Machine Threaded and Adjusted for Gimp Embroidery

toward the back of the machine when the handle (K) is at the front. When it is desired to make a very long stitch, use large presser foot 231918 in place of the smaller presser foot 231986. Then replace the presser foot and needle plate.

When using tinsel or fine silk or gold thread for winding around the gimp cord, it is advisable to use thread guide 231985 (Fig. 25) for the encircling thread. To adjust this guide, follow the instructions given for the covering thread guide on page 15.

The tinsel or silk to be used should be wound on the metal encircling thread spool and threaded as illustrated in Fig. 26.

Instructions for threading the gimp cord are the same as those given for threading the filler cord, on pages 17, 18 and 19.

Instructions for threading the needle thread are given on pages 11 and 12.

The length of stitch should be adjusted as instructed on page 34, to produce the desired effect. Many different effects can be obtained by varying the tensions on the encircling thread spool and the gimp cord spool.

Feather Stitching

Artistic embroidery effects are also obtained when the machine is adjusted to produce what is known as feather stitching, this

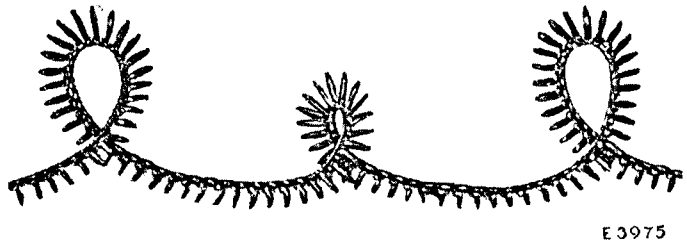


Fig. 27. Feather Stitching

form or ornamentation being sometimes called spark stitching, or star stitching. The feather stitching is produced by means of a needle thread, filler cord and an encircling thread.

To Adjust the Machine for Feather Stitching

Remove the presser foot, needle plate and nipple, as instructed on page 9. In place of the nipple, use nipple holder 231981 (Fig. 29) and fasten it in the machine by means of the set screw, as shown in Fig. 28, so that the opening in the holder will be at the **back** when the handle (K, Fig. 10) is at the **front**.

Nipples for feather stitching are the same as those listed for gimp embroidery on page 23.

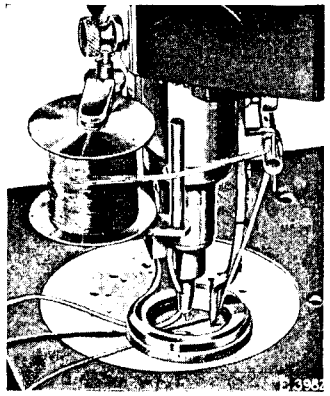


Fig. 28. Machine Threaded and Adjusted for Feather Stitching

Having selected the gimp nipple to fit the size of filler cord to be used, fasten it in position in the nipple holder by means of the set screw, as shown in Fig. 28, so that the opening in the nipple is toward the **back** of the machine when the handle (K) is at the **front.** When it is desired to make a very long stitch, use large presser foot 231918 in place of the smaller presser foot 231986. Then replace the presser foot and needle plate.

Attach thread guide 231988 (Fig. 29) to the machine and thread and adjust it as instructed on pages 15, 16 and 17.

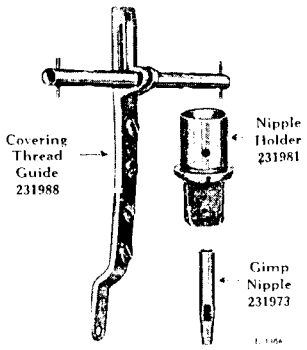


Fig. 29. Fittings for Feather Stitching

Instructions for threading the filler cord are given on pages 15, 16 and 17.

Instructions for threading the needle thread are given on pages 11 and 12.

For feather stitching, the needle should be set higher than usual, so that sufficient thread will be drawn up through the fabric for each stitch. Loosen the wing screw (E, Fig. 8) and raise the needle bar about $\frac{3}{16}$ inch, then tighten the wing screw (E). Various effects can be obtained by setting the needle bar higher or lower, as desired.

See that the revolving spool carrier is engaged by having the lever (M2, Fig. 14) point to the right, as instructed on page 13.

The tension on the spool of encircling thread should be made very light by turning the thumb nut (C2, Fig. 16) over to the left.

The tension on the spool of filler cord should be made very tight by turning the thumb screw (T, Fig. 8) inwardly.

By following a circular design or pattern, the tight tension on the filler cord will draw the chain stitches away from the needle punctures on the upper side of the work, as shown in Fig. 27.

Braiding

Various styles of braiding are also satisfactorily produced on the machine, such as sewing through the centre of soutache

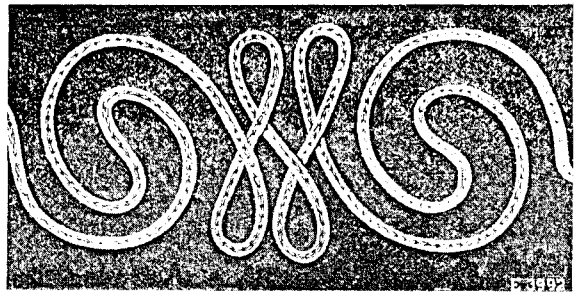


Fig. 30. Soutache Braid Stitched Through the Centre

braid, as shown in Fig. 30, sewing on the edge of soutache braid, as shown in Fig. 31, sewing thin flat braid through the centre and sewing on round braid, braid guides for each of these styles of braiding being furnished, on order, at a charge extra to the machine.

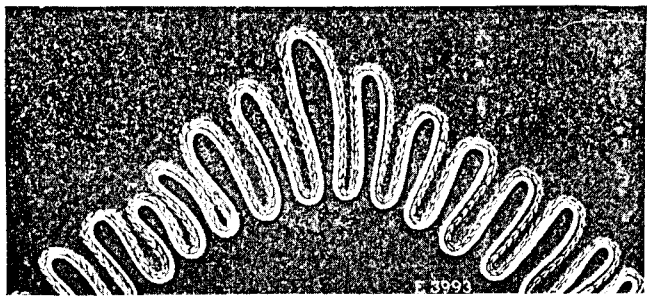


Fig. 31. Soutache Braid Stitched on Edge

Braid Guides

Following is the list of the braid guides made for use with Machines 114w120 and 114w121, and a description of the braids for which they are intended:

For Stitching Through the Centre of Soutache Braid

Braid Guide	Width of Braid
243041	$\frac{1}{16}$ inch
243042	$\frac{5}{64}$ inch
243043	$\frac{3}{32}$ inch
243044	$\frac{7}{64}$ inch
243045	$\frac{1}{8}$ inch
243046	$\frac{9}{64}$ inch
243047	$\frac{5}{32}$ inch
243048	$\frac{11}{64}$ inch
243049	$\frac{3}{16}$ inch

For Stitching on the Edge of Soutache Braid

Braid Guide	Width of Braid
243055	$\frac{3}{64}$ inch
243056	$\frac{1}{16}$ inch
243057	$\frac{5}{64}$ inch
243058	$\frac{3}{32}$ inch
243059	$\frac{7}{64}$ inch
243060	$\frac{1}{8}$ inch
243061	$\frac{9}{64}$ inch
243062	$\frac{5}{32}$ inch

For Stitching Through the Centre of Thin Flat Braid

Braid Guide	Width of Braid	Thickness of Braid
243003	$\frac{1}{16}$ inch	.022 inch
243004	$\frac{5}{64}$ inch	.022 inch
243005	$\frac{3}{32}$ inch	.022 inch
243006	$\frac{7}{64}$ inch	.022 inch
243007	$\frac{1}{8}$ inch	.022 inch
243008	$\frac{9}{64}$ inch	.022 inch
243009	$\frac{5}{32}$ inch	.022 inch
243010	$\frac{11}{64}$ inch	.022 inch
243011	$\frac{3}{16}$ inch	.022 inch
243012	$\frac{13}{64}$ inch	.022 inch
243013	$\frac{7}{32}$ inch	.022 inch

For Stitching on Round Braid

Braid Guide	Diameter of Braid
243066	$\frac{3}{64}$ inch
243067	$\frac{1}{16}$ inch
243068	$\frac{5}{64}$ inch
243069	$\frac{3}{32}$ inch
243070	$\frac{7}{64}$ inch
243071	$\frac{1}{8}$ inch
243072	$\frac{9}{64}$ inch
243073	$\frac{5}{32}$ inch

To Adjust the Machine for Braiding

Disengage the revolving spool carrier by turning the lever (M2, Fig. 14) until it points to the left, the word "out" facing the operator.

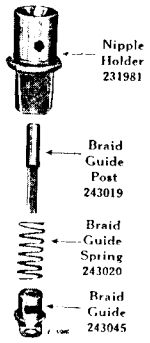


Fig. 32. Fittings for Braiding

Remove the presser foot, needle plate and nipple, as instructed on page 9. In place of the nipple, use nipple holder 231981 (Fig. 32) and fasten it in the machine by means of the set screw, so that the opening in the holder will be at the **front** when the handle (K, Fig. 10) is at the **front**. Place the braid guide post 243019 (see Fig. 32) up into the nipple holder as far as it will go, having the flat side to the front when the handle (K) is also at the front, then tighten the set screw.

Having selected the braid guide (see Fig. 32) to fit the braid to be used, place the braid guide spring 243020 (see Fig. 32)

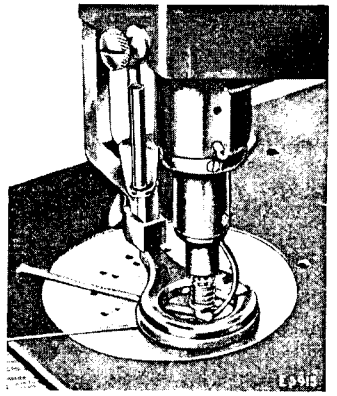


Fig. 33. Machine Threaded and Adjusted for Braiding

around the braid guide post, then place the braid guide on the braid guide post, so that the spring will press downwardly on the braid guide. While holding up the braid guide with the finger, replace the needle plate and presser foot in the machine.

Wind the braid on the large spool (D, Fig. 8).

Instructions for threading the braid are the same as those given for threading the filler cord on pages 17, 18 and 19, with the exception that the braid should be passed from the opening in the nipple holder through the hole in the braid guide, as shown in Fig. 33.

The needle should be set in the needle bar in the **opposite** position to that shown in Fig. 9, so that the hook of the needle is directly in line with the opening in the needle bar. The needle bar should be set in the machine with the hook of the needle to the **front** when the handle (K) is at the **front.**

Instructions for threading the needle thread are given on pages 11 and 12.

The tension on the braid spool should be just tight enough to prevent the braid unwinding from the spool when the machine is stopped suddenly.

To Adjust the Braid Guide for Sewing Through the Centre of Soutache and Thin Flat Braid

If it is found that the needle does not enter exactly in the centre of the braid after the braid is threaded through the braid guide, loosen the set screw which holds the braid guide post and turn the braid guide and post to the right or left as may be required to bring the stitching in the centre of the braid, then tighten the set screw.

To Adjust the Braid Guide for Sewing on the Edge of Soutache and Round Braid

When sewing on the edge of braid, the stitching should be placed as close as possible to one of the edges of the braid. In case the needle does not enter the braid properly, loosen the set screw which holds the braid guide post, turn the braid guide and post to the right or left, as may be required to bring the stitching on the edge of the braid, then tighten the set screw.

Imitation Two Needle Cording

Another very attractive style of embroidery accomplished by the machine, is what is known as imitation two needle cording,

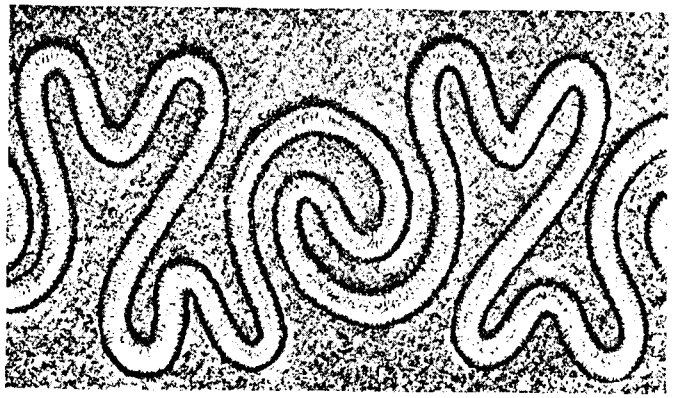


Fig. 34. Imitation Two Needle Cording

the necessary fittings for this work being furnished, on order, at a charge extra to the machine. This work is produced in the same manner as three thread cording, excepting that a flat braid is used in place of the usual round filler cord and a ribbon is substituted for the covering thread.

Nipples for Imitation Two Needle Cording

Following is a list of the nipples which are made for imitation two needle cording and the widths of filler braids for which they are intended:

Nipple	Width of Braid
243023	$\frac{3}{32}$ inch
243024	$\frac{7}{64}$ inch
243025	$\frac{1}{8}$ inch
243026	$\frac{9}{64}$ inch
243027	$\frac{5}{32}$ inch
243028	$\frac{11}{64}$ inch
243029	$\frac{3}{16}$ inch
243030	$\frac{13}{64}$ inch
243031	$\frac{7}{32}$ inch
243032	$\frac{15}{64}$ inch
243033	$\frac{1}{4}$ inch
243034	$\frac{17}{64}$ inch
243035	$\frac{9}{32}$ inch

To Adjust the Machine for Imitation Two Needle Cording

Remove the presser foot, needle plate and nipple, as instructed on page 9. In place of the cording nipple, use nipple holder 231981 (Fig. 35) and fasten it in the machine by means of the set screw so that the opening in the holder will be at the **front** when the handle (K, Fig. 10) is at the **front.**

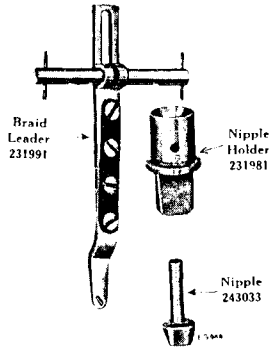


Fig. 35. Fittings for Imitation Two Needle Cording

Having selected the nipple (see Fig. 35) to fit the size of flat braid or filler to be used, fasten it in position in the nipple holder by means of the set screw, so that the opening is toward the **front** of the machine when the handle (K) is at the **front.** Then replace the needle plate and fasten large presser foot 231918 in position in the machine in place of the smaller presser foot 231986.

Wind the filler braid on the large spool (D, Fig. 8).

Instructions for threading the filler braid are the same as those given on pages 17, 18 and 19 for threading the filler cord, with the exception that the braid should be passed from the opening in the nipple holder through the slot in the braid guide, as shown in Fig. 36.

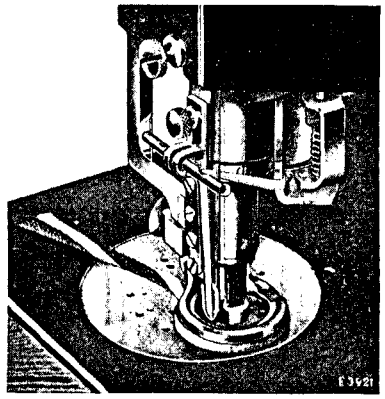


Fig. 36. Machine Threaded and Adjusted for Imitation Two Needle Cording

The needle should be set in the needle bar in the **opposite** position to that shown in Fig. 9, so that the hook of the needle is directly in line with the opening in the needle bar. Set the needle bar in the machine with the hook of the needle to the front when the handle (K) is at the front.

Braid Leader 231991 must be used for imitation two needle cording, as shown in Fig. 35.

Having wound the covering ribbon on the small metal spool (G, Fig. 8), place the spool on the spool carrier as instructed on page 16.

Thread the covering ribbon, as shown in Fig. 36, passing the ribbon directly from the spool through the hole in the upper end of the braid leader, then through the slot at the lower end of the leader.

Instructions for threading the needle thread are given on pages 11 and 12.

To Time the Revolving Spool Carrier

Turn the handle (K, Fig. 10) to the front of the machine, then turn the balance wheel over from you until the nipple reaches its highest point.

To set the revolving spool carrier, loosen the two set screws in the spool carrier driving collar (O2, Fig. 14) and turn the spool carrier until the covering thread guide is at the right of the needle. See that there is little clearance (about $\frac{1}{16}$ inch) between the end of the driving collar and the end of the gear hub at the point N2, Fig. 14, then tighten the two set screws in the driving collar (O2).

To Set the Looper

Allow the stop motion to throw the machine out of action and make sure that it is securely held in its locking position. Raise the needle holder to avoid breaking the point of the needle, remove the needle plate, after removing the thumb screw (L, Fig. 10) and observe the notch in the looper which, when in its correct position, should be at the rear, or slightly to the right of the needle, while the handle (K, Fig. 10) is toward the front.

In case the looper is not correctly set, turn the machine back on its hinges and turn handle (K, Fig. 10) and wing screw (T, Fig. 8) to the front, then loosen set screw (X, Fig. 7) of the operating worm gear (Y, Fig. 7) and turn the gear slightly until the notch in the looper is in its correct position at the rear or slightly to the right of the needle. After having set the worm gear flush with the end of the looper shaft (P, Fig. 8), tighten the set screw (X, Fig. 7).

To Regulate the Length of Stitch

The length of stitch is regulated by means of the eccentric stitch adjusting collar (A, Fig. 37). To shorten the stitch, turn

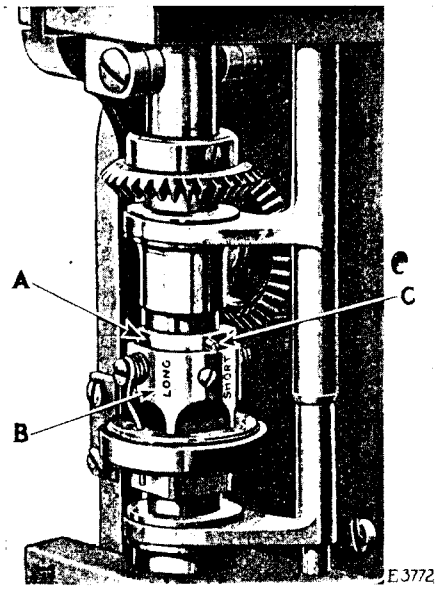


Fig. 37. Stitch Regulator

the handle (K, Fig. 10) to the right, then grasp the stud (C, Fig. 37) and turn the eccentric collar (A) toward you or around to the right in the direction of the word "short" stamped on the feed lever bracket (B, Fig. 37). To increase the length of stitch, turn the eccentric collar (A) away from you or around to the left in the direction of the word "long" stamped on the feed lever bracket. Never move the stud (C) beyond the words "short" or "long" stamped on the feed lever bracket.

To Regulate the Pressure on the Nipple

The pressure on the nipple is regulated by the thumb screw (F, Fig. 8) at the top of the machine and to the front. To increase the pressure, turn this thumb screw over to the right or downwardly. To decrease the pressure, turn this thumb screw over to the left or upwardly.

When the machine is driven by foot power, heavy pressure on the presser foot and nipple will increase the labor of running the machine.

Tensions

If the chain stitching appears too tight, loosen the wing screw (E, Fig. 8) and raise the needle bar slightly, about $\frac{1}{16}$ of an inch, then tighten the wing screw (E) and it will then be seen that the stitch will be looser.

Various effects can be produced by changing the height of the needle bar, as well as by adjusting the length of stitch.

The tension on the spool of needle thread is regulated by the tension blade (O, Fig. 8) which is adjusted by the lever (M, Fig. 8) at the right of the spool. This tension should be only tight enough to prevent the skipping of stitches.

The tension on the spool of covering thread is regulated by the knurled thumb nut (C2, Fig. 16) located next to the spool. To increase the tension, turn this thumb nut over to he right. To decrease the tension, turn this thumb nut over to the left.

The tension on the spool of filler cord should be just tight enough to prevent the cord unwinding from the spool when the machine is stopped suddenly. To increase the tension on this spool, turn the thumb screw (T, Fig. 8) at the side of the spool holder inwardly. To decrease the tension, turn the thumb screw outwardly.

To Regulate the Pressure on the Presser Foot

The pressure on the presser foot is regulated by the thumb screw (R, Fig. 8) at the top of the head of the machine and to the rear. To increase the pressure, turn this thumb screw over to the right or downwardly. To decrease the pressure, turn the thumb screw over to the left or upwardly.

To Regulate the Height of the Presser Foot

To ascertain if the presser foot is set at the correct height, remove the rubber ring from the underside of the presser foot. Place a piece of ordinary paper under the presser foot and turn the balance wheel over from you until the foot moves down to its lowest point. If the foot is set at the correct height, the paper will be pinched between the foot and the needle plate. When the paper is removed, the steel portion of the foot should not touch the needle plate. In case it is necessary to raise or lower the presser foot, loosen the set screw (P2, Figs. 2 and 3) and insert a screwdriver through the hole (Q2, Figs. 2 and 3) at the front of the machine and turn the eccentric stud therein until the presser foot is set at the required height, then securely tighten the set screw (P2). When the rubber ring is replaced on the underside of the presser foot, it should bear on the needle plate when the presser foot is at its lowest point.

CORDING HINTS

When cording net, georgette crepe, chiffon and light weight materials generally, a backing is necessary to prevent puckering of the goods, and for this purpose chemically treated crinoline is used, this crinoline being afterwards removed by placing the work in a warm oven, or by the application of a hot iron.

Chemically treated crinoline can be purchased from dealers ready for use, or the mixture for the chemical treatment of crinoline can be prepared as follows:

Receipe for Making the Chemical Mixture

Dissolve one cup of dry lump starch in cold water, then add sufficient boiling water to make thin starch water and add 2 ounces of sulphric acid. Let cool. Having secured a piece of crinoline (about 24 yards), fold it to fit basin and place it in the starch water, leaving it stand for one hour. Then take out the crinoline and hang it up to dry. It is then ready for use.

Method of Stamping

In a majority of cases where chemically treated crinoline is used as a backing for sheer materials, the embroidery design is stamped on the crinoline. The stamping is done by spreading, with a poncette previously saturated with benzine, regular embroiderers' paste over the perforated pattern, which is placed, right side up, over the crinoline.

The material to be corded is then placed over the stamped crinoline, and as the embroidery design can be seen through the material, it is easily followed by the operator. After the cord is sewn on, the crinoline is removed by placing the work in a small oven, or by applying a hot iron to it. The heat causes the crinoline to crumble into a powder, so that there is no trace of the backing left, and the cord and material remain uninjured.

When cording broad cloth, Bolivia cloth, serge, velvet and other similar fabrics, no backing is required and the embroidery design is usually stamped on the face of the material, the best results being obtained by this method. The stamping of the embroidery design is done, in most cases, with powder, which can be procured from embroidery dealers, or, if desired, can be quickly prepared as follows:

Receipe for Making Stamping Powder

Put one cup of zinc white, ¾ cup of powdered resin and ¼ cup of talcum in a basin and mix thoroughly, then sift through a fine cloth. It is then ready for use.

Method of Stamping

The powder is spread by using a poncette over the perforated pattern which is placed, wrong side up, on the face of the fabric to be corded. When the pattern is removed, the embroidery design is clearly shown on the fabric. The cord is then sewn over the design, so that none of the marking is visible when the work is finished.

To Produce Spiral Braiding on Machine 114w121

The spiral braiding is produced by means of a needle or chain stitch thread and a flat encircling braid about $\frac{3}{16}$ inch wide.

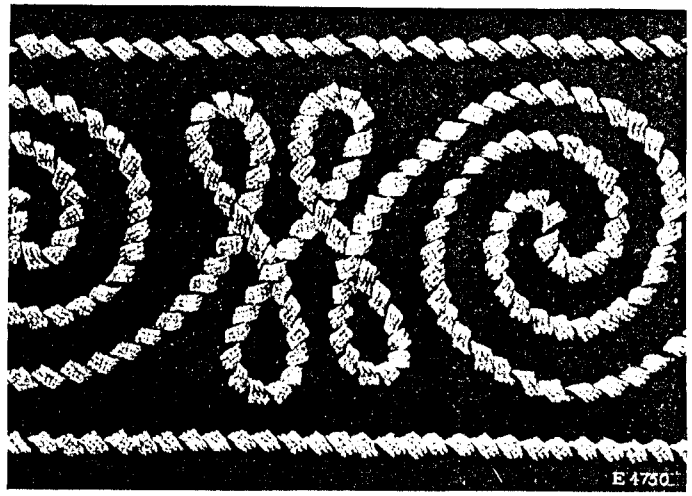


Fig. 38. Spiral Braiding Produced on Machine 114w121

The encircling braid is taken from the spool mounted on the revolving spool carrier which rotates around the needle bar, the braid guide, which is attached to the revolving spool carrier, winding the braid around the needle thread in such a manner that it is stitched to the fabric in a spiral form.

Many pleasing effects can be obtained by changing the speed of the revolving spool carrier so as to make one revolution of the spool carrier to each stitch or one revolution to every two, three or four stitches, as desired, thus enabling the operator to vary the space between the coils of the encircling braid.

To change the speed of the revolving spool carrier, move the gear shift lever (R2, Fig. 39) at the front of the machine until it engages the hole which is marked with the numeral corresponding with the desired number of stitches to be made for each revolution of the spool carrier.

By having the lever (R2, Fig. 39) in the bottom hole marked 4, the revolving spool carrier will rotate around the needle once every four stitches, causing the braid to be wound in a spiral form, which exposes the chain stitches.

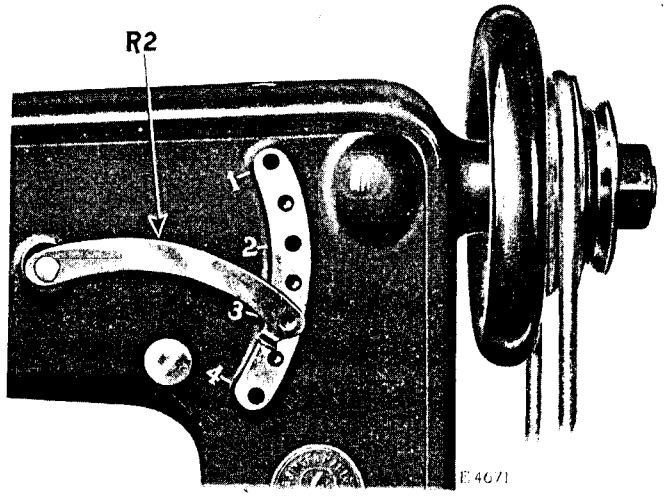


Fig. 39. View of Machine 114w121, Showing Gear Shift Lever for Changing Speed of Revolving Spool Carrier

When the machine is set as described above, a gold or metal thread may be used to produce the chain stitches with a braid of harmonizing color, handsome effects being thus obtained.

When the lever (R2) is moved to one of the zero positions between the holes, the mechanism for driving the revolving spool carrier is thrown out of action and the machine can then be used for regular braiding or any other work not requiring the revolving spool carrier.

Nipples for Machine 114w121

Following is a list of the nipples made for spiral braiding, and the size of the needle with which they must be used:

Nipple		Size of Needle
243306	for small spiral braiding	3
243307	for medium spiral braiding	3
243308	for large spiral braiding	3

Set the nipple in the machine as instructed on page 10.

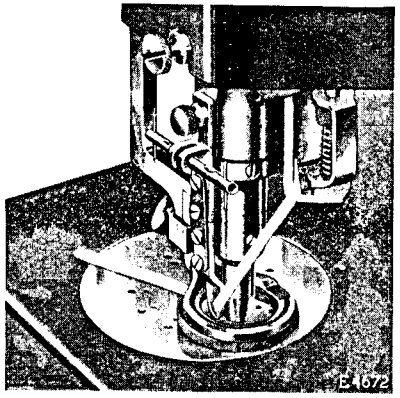


Fig. 40. Machine 114w121 Threaded and Adjusted for Spiral Braiding

Attach braid leader 231991 (see Fig. 35) to the machine as shown in Fig. 40.

Wind the encircling braid on the small metal spool (G, Fig. 8) and place the spool on the revolving spool carrier as instructed on page 16, then pass the braid directly from the spool through the slot in the lower end of the braid leader as shown in Fig. 40.

Instructions for threading the needle thread are given on pages 11 and 12.

When making four stitches to each revolution of the revolving spool carrier, the tension on the encircling braid spool should be very light. This tension is regulated by the knurled thumb nut (C2, Fig. 16) located next to the spool. To increase the tension, turn this thumb nut over to the right. To decrease the tension, turn this thumb nut over to the left.