

SINGER
99W124

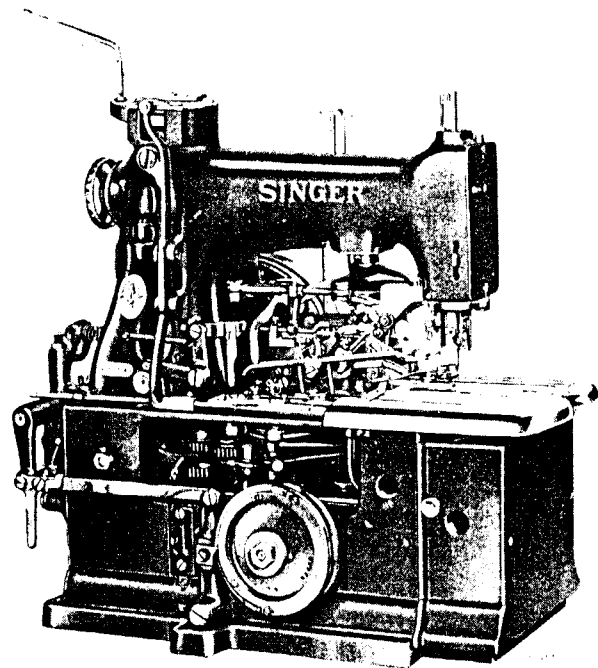
Form 2523w (538)

Supplement for Form 2413w Revised

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SPECIAL INSTRUCTIONS COVERING SINGER MACHINE 99w124

The instructions given in Form 2413w Revised apply to Machine 99w124 with the following additions:



DESCRIPTION

Machine 99w124 is especially designed for making eyelet-end buttonholes (small eye) in collars. The buttonholes can be made 1/2 inch long with a taper bar 1/8 inch in length; or 17/32 inch long with a taper bar 3/32 inch in length, the over-all length of the stitching of both sizes of buttonholes being 5/8 inch.

Unless otherwise ordered, the machine will be sent out to make buttonholes 17/32 inch long with a taper bar 3/32 inch in length.

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This machine has a needle thread trimmer and holding device on the work clamp which cuts the needle thread close to the work at the completion of the stitching and holds the end of the needle thread until after the formation of the first few stitches of the succeeding buttonhole. It is also fitted with an automatic thread and cord trimmer located below the work clamp plates for cutting the needle and looper threads and cord at the completion of each buttonhole.

The following pattern wheels, cutting knife and cutting blocks are made for use with this machine:

LENGTH OF BUTTONHOLE	PATTERN WHEEL	CUTTING KNIFE	CUTTING BLOCK
1/2"	253935	253905	253933
17/32"	253913	253905	253904

Speed

The maximum speeds recommended for the shafts in Machine 99w124 are as follows:

BUTTONHOLE CUTTING SHAFT — 185 to 200 revolutions
per minute.

STOP MOTION SHAFT — 750 to 775 revolutions per minute.

ARM SHAFT — 1500 to 1550 revolutions per minute.

Stitch Regulating Gears for Machine 99w124

GEAR NO.	FEED WHEEL	STITCHES IN BUTTONHOLE
250210	253906	60
250211	253906	50
250212	253906	46
250598	253906	43
250213	253906	39
250214	253906	37
250415	253906	34

To Thread the Needle

(See Fig. 38)

Pass the thread from the unwinder down through the hole (1) in the upper end of the needle thread leader, through the hole

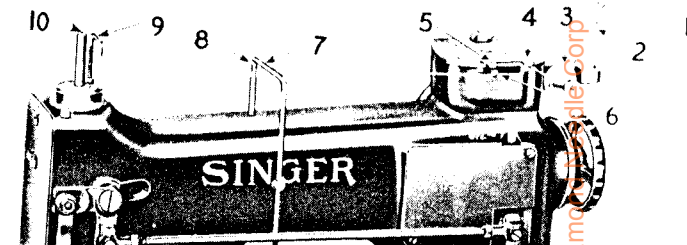


Fig. 38. Threading the Needle

(2) in the lower end of the needle thread leader, from back to front under between the tension discs (3), up through the slot in the take-up thread guide (4), down through the forward hole (5), down through the hole in the end of the thread take-up (6), under the needle thread pull-off (7), through the hole (8) in the top of the needle thread guide pin, under the needle thread pull-off (adjustable) (9), then downwardly through the hollow needle bar (10) (inserting the threading wire furnished with the machine up into the needle bar from below to pull the thread through), pass the thread from back to front or toward you through the eye of the needle as shown in Fig. 6 of Form 2413W Revised.

To Thread the Cord

(See Figs. 39 and 40)

The work clamp plates having been swung outwardly and the bed end cover removed, pass the cord from the unwinder through the

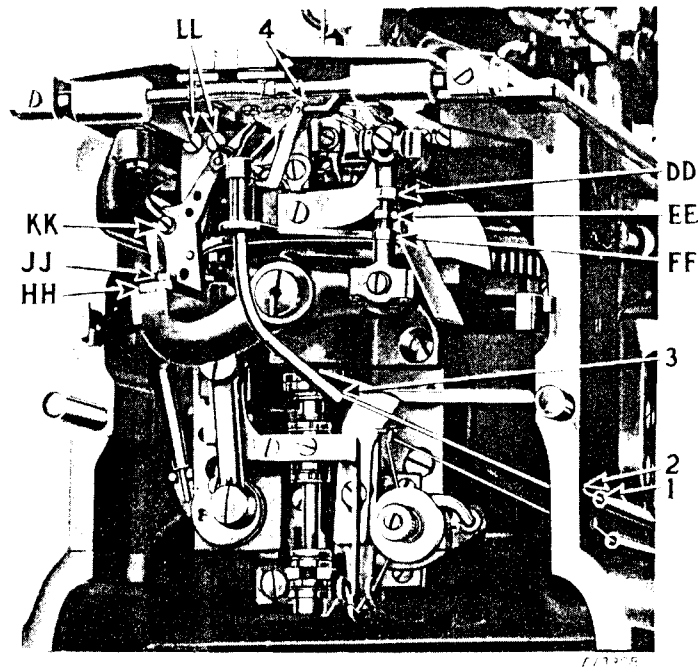


Fig. 39. Threading the Cord

Also Adjustments on Under Thread and Cord Trimming Mechanism and Needle Thread End Nipper

upper brass tube (1, Fig. 39) which is attached to the right side of the machine (using the threading wire furnished for the

purpose), then pass the cord through the upper hole (2, Fig. 39) in the right hand side of the bed of the machine, upwardly through

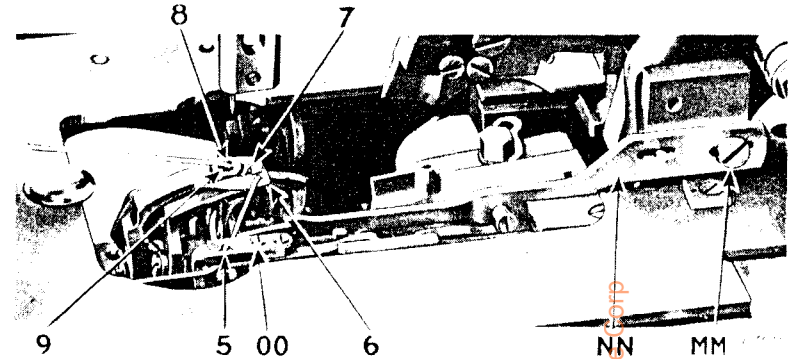


Fig. 40. Threading the Cord

the cord tube (3, Fig. 39) (using the threading wire furnished for the purpose), then pass the cord through the hole (4, Fig. 39) in the end of the cord leader, up through the hole (5, Fig. 40) in the cord guide and under the tension spring which is attached to the guide, down through the right hand hole (6, Fig. 40) in the throat plate, up through the hole (7, Fig. 40) in the throat plate and under the throat plate tension spring, toward you through the hole (8, Fig. 40) near the center of the throat plate, the cord leading toward you through the large needle hole (9, Fig. 40) in the throat plate, as shown above. Then swing the work clamp plates back into place and hook the springs at the rear of the plates to hold the plates in position.

INSTRUCTIONS FOR MACHINISTS AND ADJUSTERS

To Adjust the Tension on the Cord

Owing to the differences in materials and sizes of cords, it may be necessary to change the adjustment of the cord tension to meet the requirements of the work being sewn.

To increase the tension on the cord, turn the screw (00, Fig. 40) downwardly. To decrease the tension on the cord, turn the screw (00) upwardly.

To Adjust the Cord Pull-Off

After the trimming of the cord, the buttonhole cutting mechanism moves forward to a cutting position, and at the same time actuates the cord pull-off (NN, Fig. 40), causing it to pull the cord back through the horizontal cord hole (8, Fig. 40) in the throat plate.

The cord pull-off (NN) should draw off just enough cord to permit the cut end to extend through the horizontal hole (8, Fig. 40) in the throat plate to the opposite side of the needle opening (9, Fig. 40). This will leave sufficient cord with which to commence the sewing of the next buttonhole.

To adjust the cord pull-off (NN) to pull more or less cord, loosen the screw (MM, Fig. 40) and move the cord pull-off (NN) forward or backward on the buttonhole cutting lever bracket, as required, then securely tighten the screw (MM).

To Time the Needle Thread Trimmer (Upper)

The needle thread trimmer, which is located in the work clamp, should be timed to cut the needle thread immediately after the

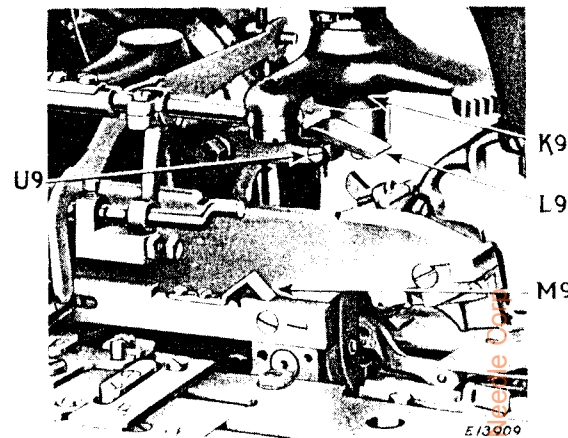


Fig. 41. Adjustments for Timing and Positioning
Needle Thread Trimmer (Upper)

rapid feed has started to move the work clamps back to the stopping position. In case this thread trimmer is not in correct time, loosen the two screws in the collar which carries the tripping plate (L9, Fig. 41) and turn the tripping plate (L9) toward you to cut the thread earlier or away from you to cut the thread later; then securely tighten the two screws. Care should be taken to keep the tripping plate (L9) snugly against the underside of the upper stitch rotating sector (K9, Fig. 41).

When the machine is sewing up the first side of the buttonhole, the thread cutting blade and the clamping blade should start to open, after two or three stitches are made. Care should be taken to see that the cutting and clamping blades do not open too soon or they will come into contact with the needle. When the thread cutting and clamping blades are being opened they must clear the needle by at least 1/16 inch when the needle is on its nearest vibration to the cutting and clamping blades. This adjustment is made by loosening the two screws in the thread cutting operating cam block (M9, Fig. 41) and moving this block toward you to make the trimmer operate later and give more clearance, or away from you to make the trimmer operate earlier and give less clearance, after which securely tighten the two screws in the block (M9).

To Remove and Replace the Needle Thread Trimmer (Upper) Blades

Remove the screw (SS, Fig. 42) from the connecting rod, then remove the clamp check thread clamping section (RR, Fig. 42)

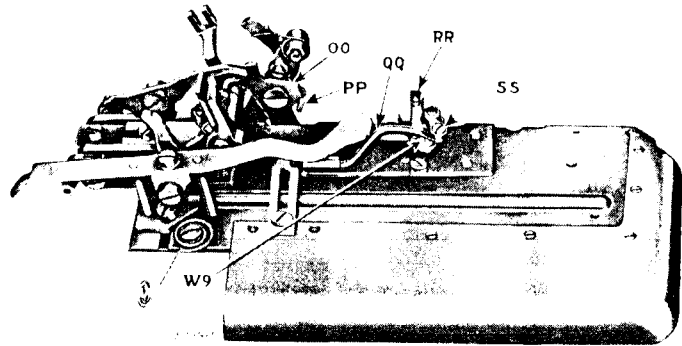


Fig. 42. Adjustments on Needle Thread Trimming Mechanism (Upper)

which holds the clamping and cutting blades. Remove the screw which holds the blades in position and remove the blades.

When replacing the blades, first place the clamping blade next to the clamping section, then put on the cutting blade and securely fasten both blades in position by means of the screw (237) and then securely fasten the clamping section to the clamp check by means of screw (W9, Fig. 42). Next replace the screw (SS, Fig. 42).

When the clamp check is in position on the machine, the back edge of the thread cutting and clamping blades should be flush with the cutting edge of the opening in the clamp check. The blades can be set in this position by removing the screw (SS, Fig. 42) in the end of the connecting rod (QQ, Fig. 42) and turning the connecting rod over to the right to draw the blades into the clamp check or over to the left to draw the blades out of the clamp check, after which replace and securely tighten the screw (SS) in the end of the connecting rod. Care should be taken to see that the blades open just enough to permit the latch (PP, Fig. 42) to drop freely into the notch of the thread cutting blade operating lever (OO, Fig. 42).

To Adjust the Under Thread and Cord Trimmer

When the under thread and cord trimmer blades are cutting the threads, the upper or stationary blade (BB, Fig. 43) should pass

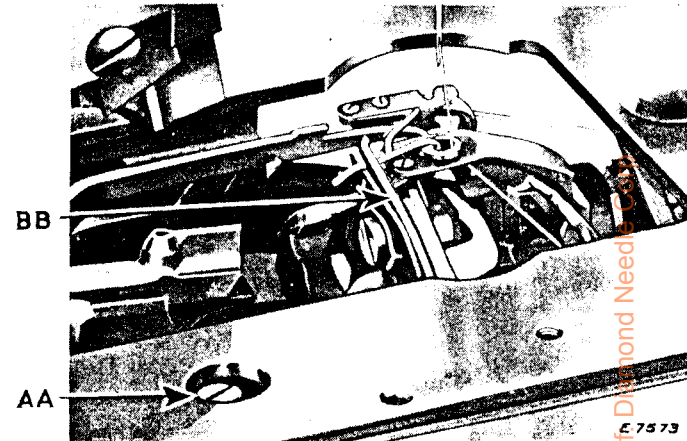


Fig. 43. View of Machine, Showing Under Thread and Cord Trimmer

sufficiently close to the material to gather in both threads and cord lying between the last stitch of the buttonhole and the throat plate and as close as possible to the last stitch to ensure close trimming. To adjust the under thread trimmer, loosen the screw (JJ, Fig. 39), and slide the bracket (HH, Fig. 39) in or out, as required, then securely tighten the screw (JJ). After making this adjustment, see that the stud in the heel of the movable knife projects the full depth through the slot of the movable knife operating cam. If it does not, loosen the screw (AA, Fig. 43) and slide the knife operating cam in or out as required, then securely tighten the screw (AA).

The thread trimmer blades should be adjusted so that when they close, the cutting edges fully pass each other to ensure severing the threads and cord. To make this adjustment, loosen the two screws (LL, Fig. 39) and swing the cam downwardly to cause the trimmer blades to close more, or upwardly to close less, then securely tighten the two screws (LL).

To adjust the trimmer to move further forward across the path of the threads and cord, loosen the two nuts (DD and FF, Fig. 39) and turn the adjusting screw (EE, Fig. 39) to the right. To adjust the trimmer to move further backward, away from the path of the threads and cord, turn the adjusting screw (EE) to the left. Care must be taken to see that the thread trimmer blades are not thrown so far forward as to cause the stud in the heel of the movable knife to strike the end of the slot in the knife operating cam. Then securely tighten the two nuts (DD and FF).

When replacing the stationary blade (BB, Fig. 43), lower the clamps on the work plates without material under the clamps, then set the blade (BB) so that when it is at the end of its forward stroke, the top surface of its point will enter the clearance cut on the underside of the clamp check and pass as close as possible to the clamp check without coming into contact with it. To obtain the proper clearance between the stationary blade (BB) and the underside of the clamp check, loosen the screw (KK, Fig. 39) and move the blade, as required, then securely tighten the screw (KK).

To Sharpen the Thread and Cord Cutting Knives

The thread and cord cutting knives are made with the greatest precision, perfectly shaped and lapped flat to ensure keen cutting. Care must, therefore, be taken when re-sharpening either of the knives to use a fine emery wheel and grind the knives crosswise to the edge, taking off as little as possible to restore the edge and being careful to retain the original angle and curvature. Never sharpen the knives on an oil stone.

To Adjust Needle Thread Pull-Off

The needle thread pull-off (6, Fig.38) should be adjusted to draw just enough thread during the clamping of the work to have a surplus of thread so that the needle thread will not draw out of the thread trimmer when the needle descends to make the first stitch. Adjust downward at (U9, Fig.41) to give a greater surplus of thread and upwards to give less.