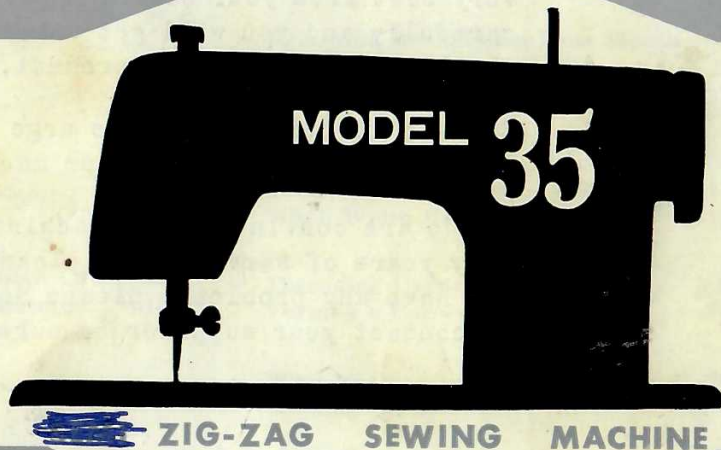


FRISTER & ROSSMANN

INSTRUCTIONS



Dear Homemaker:

This booklet is the key to obtaining the very best from your sewing machine. Follow it carefully and you will get unbeatable value from this superbly made product.

In your own interest we urge you to read pages 2-13 before using your machine.

We are convinced this machine will give you many years of service, and pleasure, but should you have any problems, please do not hesitate to contact your supplier or ourselves.

Sincerely,

Frister & Rossmann Sewing Machines,
350/356, Old Street, London E.C.1.

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IDENTIFICATION, HEAD PARTS

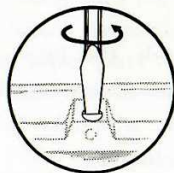


1. Hand Hole Cover Plate
2. Needle Plate
3. Needle Clamp
4. Thread Tension Assembly
5. Thread Take-Up Lever

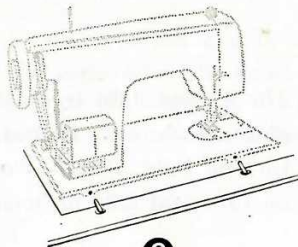
6. Presser Foot Knob
7. Upper Thread Guides
8. Thread Spool Pin
9. Hand Wheel

10. Bobbin Winder Mechanism
11. Stitch Width Control Lever
12. Stitch Length Control Lever
13. Feed Dog Control Knob

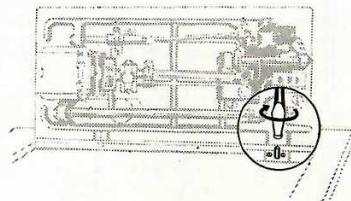
INSTALLING MACHINE HEAD IN CABINET



1



2

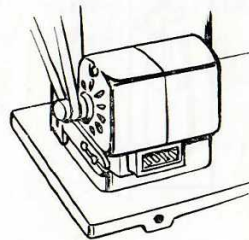


3

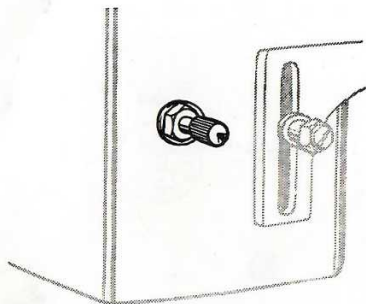
Loosen the two hinge screws under holes in the rear edge of the machine bed (1).
Raise hinge pins in the cabinet cutout (2).
Slip machine head onto the pins and tighten hinge screws securely (3).
Lower machine head to front flap.

CONNECTING MACHINE

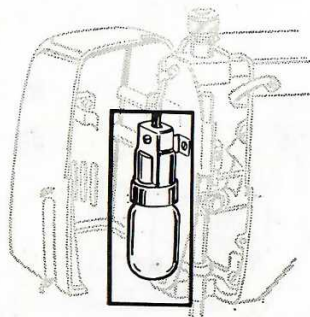
Push the plug onto the connector under the machine motor. See illustration. Plug machine cord into the wall outlet.



SEWING LIGHT



The sewing light is located inside the face cover plate as shown. It may be turned on or off by turning light switch clockwise, which is located on the right side of machine column.



screw cap bulb 15 w

To change bulb, disconnect sewing machine first, and open the face cover plate by swinging it open, twist old bulb away from you and remove. Then insert new bulb.

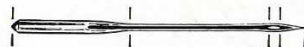
NEEDLE AND THREAD TABLE

NEEDLE SIZE

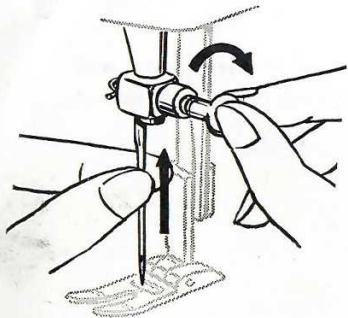
Use System 705 needles. The size of the needle should conform to the size of the thread and both should be suitable to the material. The same size thread should be used in the bobbin as on the upper part of the machine for ordinary sewing. Never use a bent needle nor one with a blunt point.

THREAD SIZE	NEEDLE SIZE	FABRIC
Cotton 60 - 100 Synthetic Silk A Machine embroidery	7 - 8 (70 - 80)	Sheer cottons, silks, and synthetics Fine laces
Cotton 60 - 80 Mercerized 50 Synthetic Silk A Machine embroidery	8 - 9 (80 - 90)	Medium weight cottons Medium weight silk Medium weight synthetics Light weight woolens
Cotton 40 - 60 Mercerized 50 Mercerized heavy duty	9 - 10 (90 - 100)	Heavy weight cottons Medium to heavy weight woolens Heavy drapery fabrics
Cotton 30 - 50 Mercerized heavy duty	11 - 12 (110 - 120)	Heaviest cottons as for men's work clothes Heaviest woolen coating

This is the exact length of the needle to be used in your machine. Comparison with this illustration will determine whether the needle you have is the correct one for your machine.



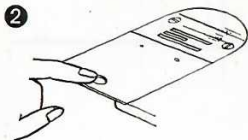
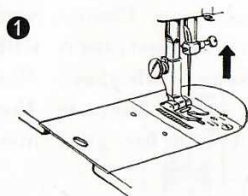
PLACEMENT OF NEEDLE



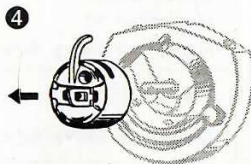
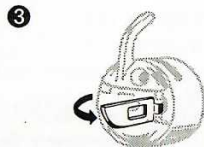
Flat side faces to the right

Raise needle bar to its highest position by turning handwheel toward you. Loosen needle clamp screw. Holding needle so that the flat side is to your right, slip blunt end of needle as far as it will go into needle clamp. Tighten needle into place with clamp screw.

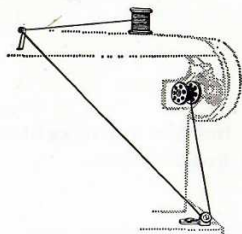
REMOVING BOBBIN CASE FROM SHUTTLE



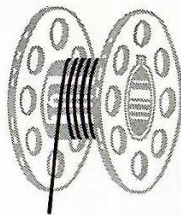
1. Raise needle at its highest position.
2. Open hand hole cover plate.
3. Pull out latch.
4. Pull bobbin case straight out.



WINDING THE BOBBIN



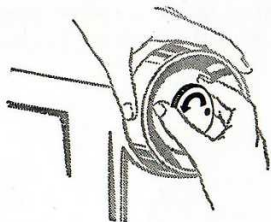
- 1** Place thread on spool post. Draw thread as shown.



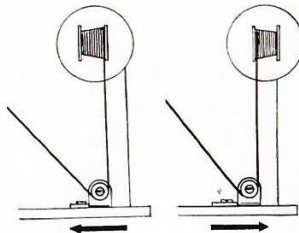
- 2** Wind thread around bobbin a few times.



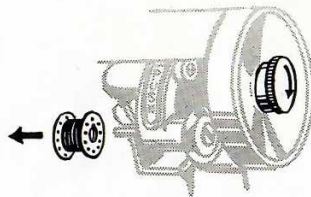
- 3** Press bobbin winder lever down.



- 4** Release clutch by turning clutch knob toward you. Start machine.

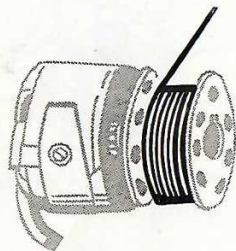


- 5** Bobbin winder thread guide is adjustable. If bobbin winds as illustrated, slightly move thread guide in the direction indicated by arrow to correct this situation. When bobbin is full, winding mechanism stops.



- 6** Tighten clutch knob and remove bobbin.

INSERTING BOBBIN INTO BOBBIN CASE-CASE INTO SHUTTLE



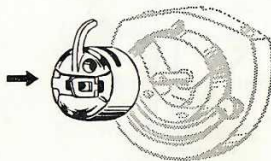
1



2



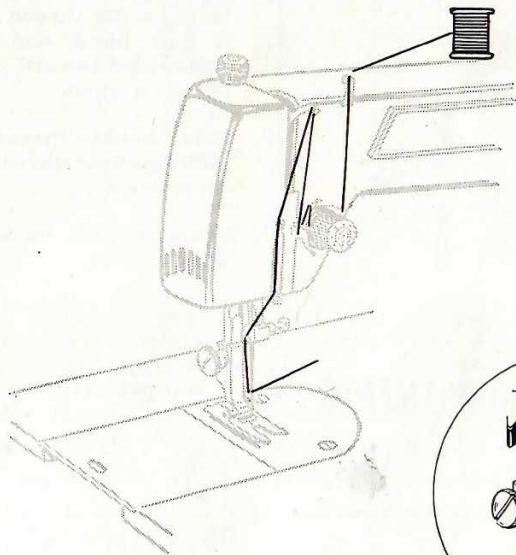
3



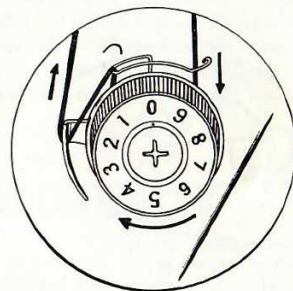
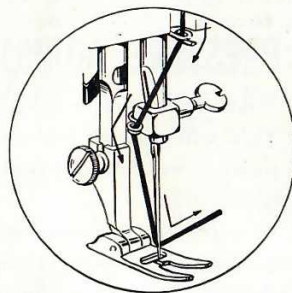
4

1. Guide bobbin onto center pin of bobbin case.
2. Pull thread through slot.
3. Pull thread under tension spring.
4. Holding latch, position case into shuttle, release latch.

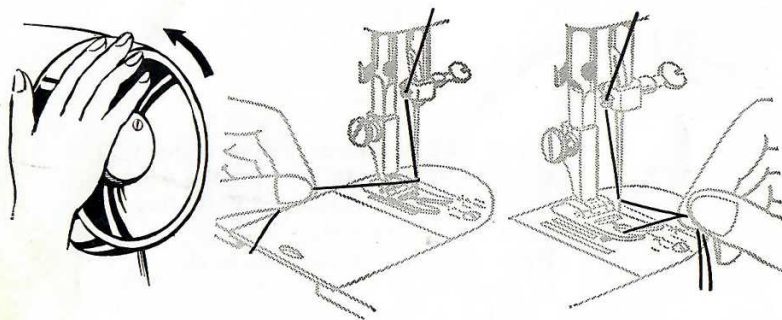
THREADING UPPER MACHINE



- * Raise take - up lever to its highest position by turning handwheel.
- * Guide thread through threading points as illustrated.
- * Draw sufficient thread through eye of needle.

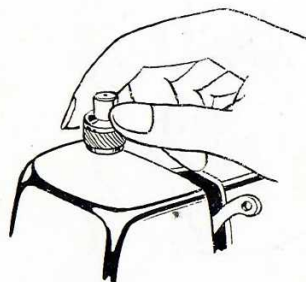


PICKING UP BOBBIN THREAD



1. Raise presser foot lever. Hold needle thread loosely in left hand and rotate handwheel toward you one complete turn.
2. Bring bobbin thread up by pulling upper thread. (See illustration).
3. Place threads back under presser foot.

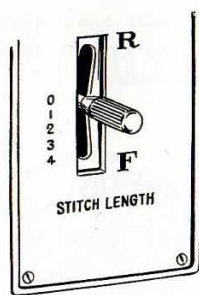
PRESSURE ADJUSTMENTS



Push down outer ring of presser foot knob. (See illustration). This will release pressure of presser foot. To increase pressure, push down round top of presser foot knob until suitable pressure is obtained.

Insufficient pressure may cause skipped stitches or difficulty in guiding the fabric. If feed dog or presser foot marks appear on the fabric, reduce the pressure.

STITCH LENGTH CONTROL

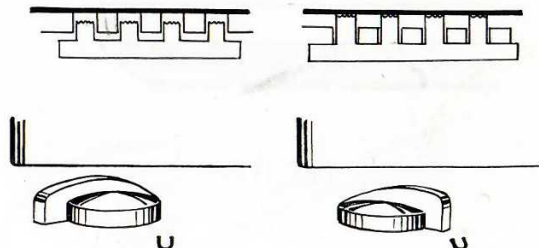


Loosen knob and move stitch length control lever between 0 and 4; tighten knob. The 4 setting is the longest stitch. The size of stitch you select will depend on the fabric you want to sew. Select stitch length and tighten knob so that forward and reverse stitches will be approximately the same size.

REVERSE STITCHING

Raise lever for reverse stitching. Lower lever for forward stitching. It is best to begin and end most seams with reverse stitching often called back tacking.

FEED DOG CONTROL



The feed dog control knob is situated on the right front of machine bedplate. When knob is turned to the left, feed dog drops and does not pull material. This allows the operator freedom of movement of material, as for darning. For regular sewing, turn knob to the right.

TURNING A CORNER

Stop sewing machine with needle in fabric. Raise presser foot. Turn fabric. Lower presser foot and continue stitching.

ADJUSTING TENSIONS

1

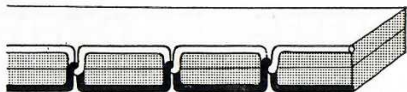


Fig. 1

PROBLEM

2

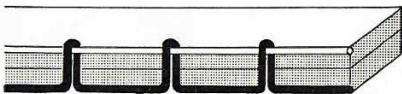


Fig. 2

3

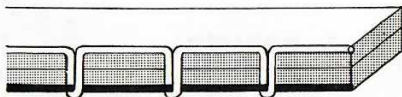
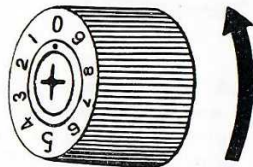


Fig. 3

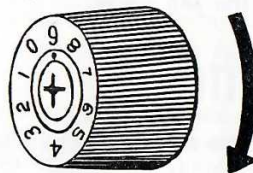
A perfect stitch will have threads locked between the two layers of fabric with no loops on top or bottom.

REMEDY

When upper thread is too tight, decrease tension.

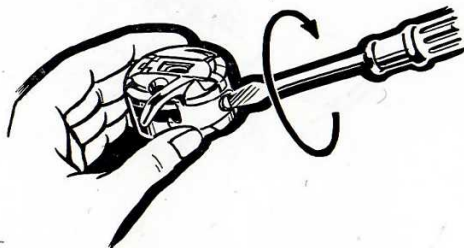


When upper thread is too loose, increase tension.



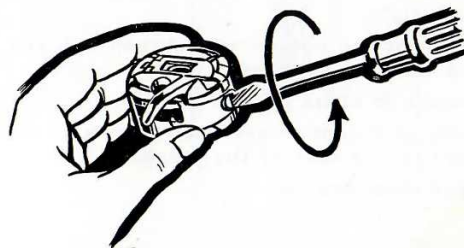
ADJUSTING TENSIONS (CONT'D)

INCREASE TENSION



Turn Clockwise

DECREASE TENSION



Turn Counter Clockwise

When stitching is unsatisfactory as in figures 2 and 3, adjust the upper thread tension. Lower thread tension requires adjustment less frequently than the upper thread tension.

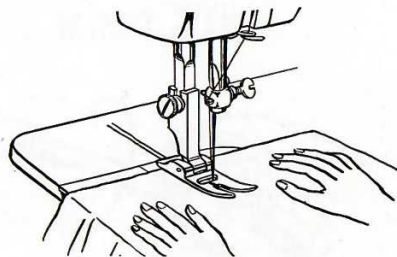
When stitch is satisfactory, as in figure 1 and seam is badly puckered, the cause may be tight tensions and lower may be adjusted. (See page 12)

When adjusting the tension on the bobbin case, make slight adjustments with a screwdriver. (See page 26)

INSERTING AND REMOVING THE MATERIAL

For all kinds of sewing, consult chart page 5.
Before placing the material on the machine see that:

- * The presser foot and needle clamp screws are both tight.
- * The sizes of the needle and thread suit the kind of work to be done.
- * The needle is at its highest position.
- * The ends of threads have been drawn about 4 inches to the rear of the machine.
- * The feed dogs are up.

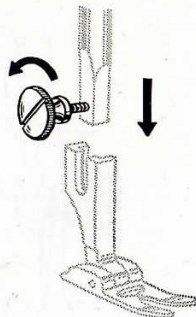


Place material under the presser foot, insert the needle into the material by turning the hand-wheel toward you, lower presser foot and start sewing.
Experiment by sewing of the fabric to be used to determine tension adjustment and correct stitch settings.

To remove the work, first turn the handwheel toward you until the needle is at its highest position, then raise the presser foot, draw materials to the rear and cut off excess thread with the thread cutter located on the presser bar. To avoid sewing off the end of the material, back tack each seam.

IMPORTANT: Always turn the handwheel toward you! When the machine is not being used, place a piece of material over the feed dog and lower the presser foot. Always have fabric under the presser foot when operating the machine. Operating threaded machine without fabric will cause it to jam by forcing lint into the shuttle. See page 22.

CHANGING THE PRESSER FEET

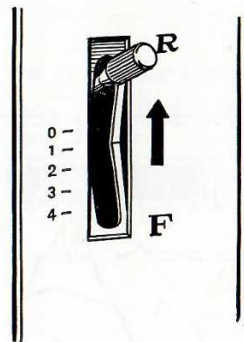


The various attachment feet available for certain kinds of work are to be fastened to the presser bar.

To attach the foot, raise the presser bar to its highest position by raising the presser foot lever. Drop feed dog, loosen the presser foot thumb screw, choose the proper foot and insert from the front.

Tighten the screw using the large screwdriver and make sure that the foot is secure.

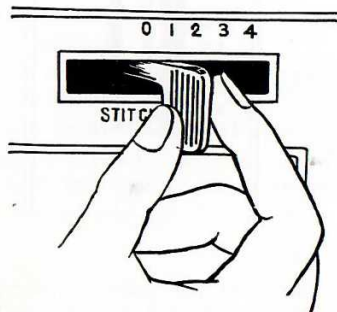
FASTENING A SEAM



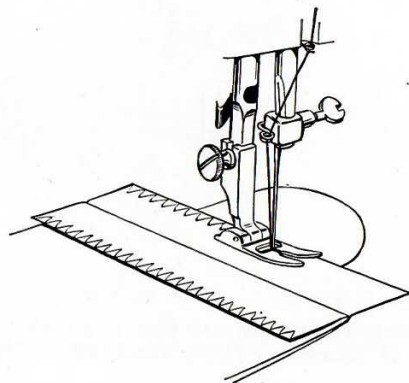
Be sure both threads are drawn back under the presser foot. Lower needle into fabric about $\frac{1}{2}$ inch from beginning of seam. Raise stitch length control lever up for reverse stitching. Stitch in reverse until needle reaches beginning of seam.

Move stitch length control lever down for forward stitching and complete seam. When you reach the end, raise the stitch length control lever and sew back over $\frac{1}{2}$ inch of completed seam.

STITCH WIDTH CONTROL



OVERCASTING

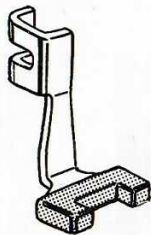


Move stitch width control lever to the desired position between 0 and 4 on the stitch width indicator plate.

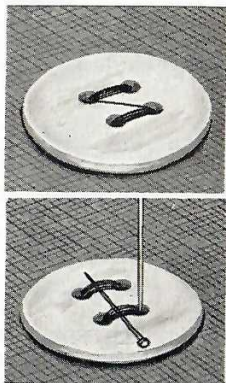
Zigzag stitch width increases from 0 to 4.
Straight stitching is possible only with control on 0.

Set stitch width to 4. Set stitch length at 4. Zigzag stitch around raw edge of fabric to completely cover the edge.

BUTTONS



Center holes in button in slit in presser foot. Lower presser foot to hold securely. Drop feed dogs. Turn handwheel by hand until needle goes into hole in button. Adjust stitch width so that needle goes into second hole. Stitch a number of times to hold securely.



NOTE : To make a small thread shank when sewing on a flat button, place a straight pin or needle between the holes of the button.

BUTTONHOLES



1. Set the stitch width to $1\frac{1}{2}$. Stitch forward until desired length for buttonhole is obtained. Stop with needle tip piercing in the right side of stitching.
2. Raise presser foot and turn material.
3. Set the stitch width to 2 and drop feed dog. Lower presser foot and take one stitch to the left.
4. Set the stitch width control dial to 4. Bartacking should be completed with needle on the left side.
5. Set stitch width to $1\frac{1}{2}$. Raise feed dog and sew back to other end of buttonhole. Stop with needle on the left.
6. Set stitch width control dial to 4. Drop feed dog and bartack.

It is recommended that tailor's chalk be used to determine length of buttonhole before sewing. For a firm buttonhole the stitching can be repeated over the same area - then cut buttonhole opening.

CORRECTIONS

— Instruction books for Models 35, 45 and 46 —

Page

Wrong

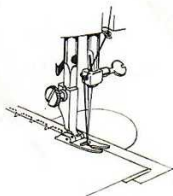
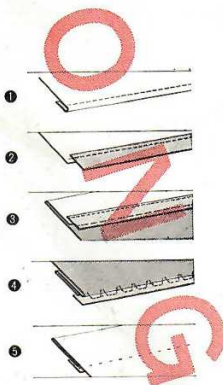
Correct

19

Copy and illustration of blind stitching.

BLIND STITCHING

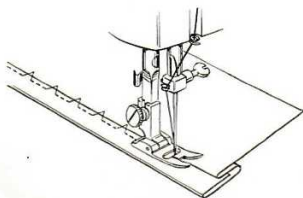
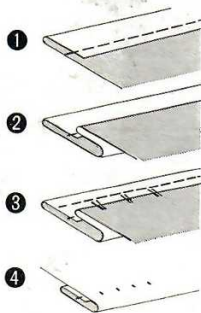
Fold and baste hem. Turn back so that edges of hem project beyond fold. Set sewing machine for straight stitching and stitch along fold of hem for approximately $\frac{1}{2}$ inch. Then zigzag one stitch using stitch width set 2, catching the right side of the material. Continue straight for $\frac{1}{2}$ inch and repeat process until hem is completed.



Material must be passed under the arm of the machine, as correct copy and illustration shown below.

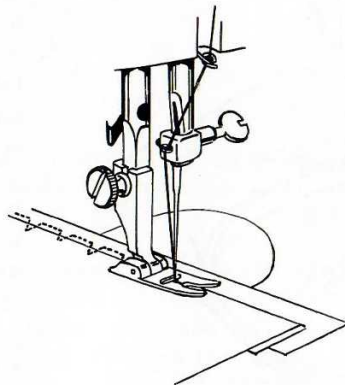
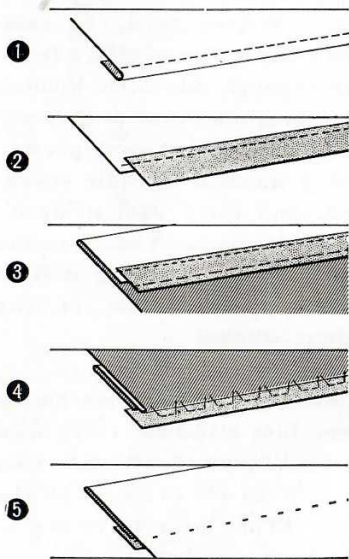
BLIND STITCHING

1. Fold material and baste.
2. Make second fold overlapping basting as shown.
3. Straight stitch for approximately $\frac{1}{2}$ inch, then zigzag one stitch using #2 stitch width position, catching second fold as shown. Continue this procedure until hem is completed.
4. Unfold, exposing right side of material with completed blind stitching. Remove basting and press hem.

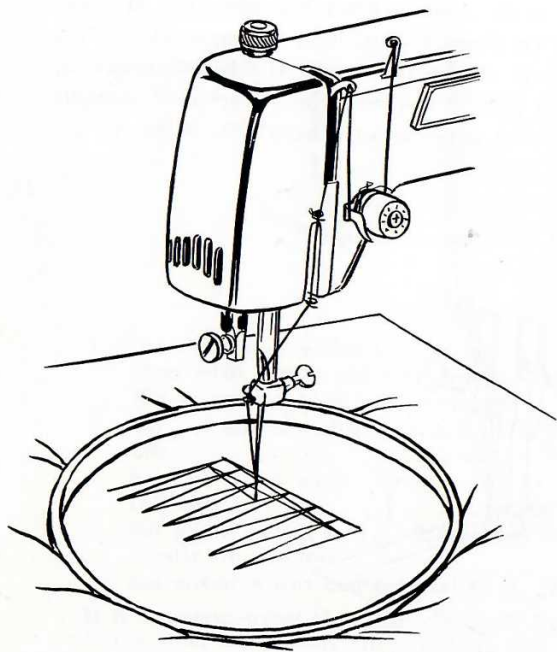


BLIND STITCHING

Fold and baste hem. Turn back so that edges of hem project beyond fold. Set sewing machine for straight stitching and stitch along fold of hem for approximately $\frac{1}{2}$ inch. Then zigzag one stitch using stitch width set 2, catching the right side of the material. Continue straight for $\frac{1}{2}$ inch and repeat process until hem is completed.



DARNING



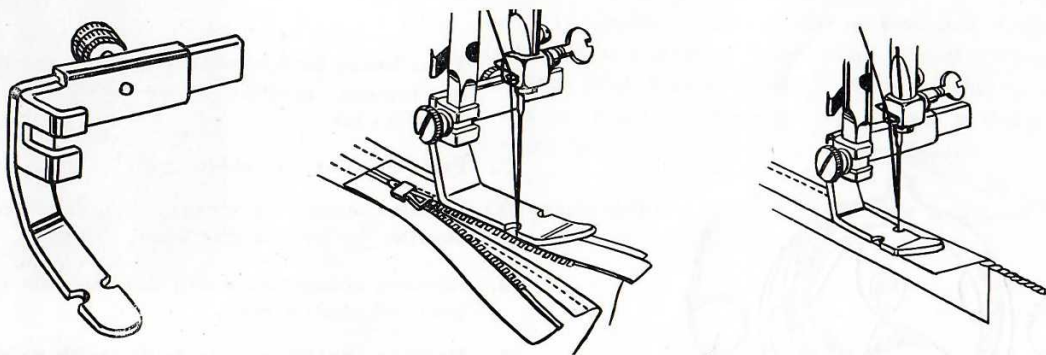
Feed dog control

Left position

Remove presser foot. Stretch fabric between embroidery hoops and place under needle. Draw the bobbin thread up through fabric by holding the upper thread and taking one stitch at the spot where you wish to begin darning. Lower presser bar. Start sewing at a medium machine speed. Move the fabric back and forth with a steady rhythm to cover the darning area. Then turn the fabric and sew another layer of stitching at right angles to the first. Move the fabric fast for long stitches, slowly for short stitches.

If you wish to darn without using an embroidery hoop, leave the presser foot attached, move feed dog control to the left, and push down outer ring of presser foot knob, thereby the pressure on the presser foot is released. Then proceed as above, stretching fabric tightly between hands.

ADJUSTABLE ZIPPER AND CORDING FOOT

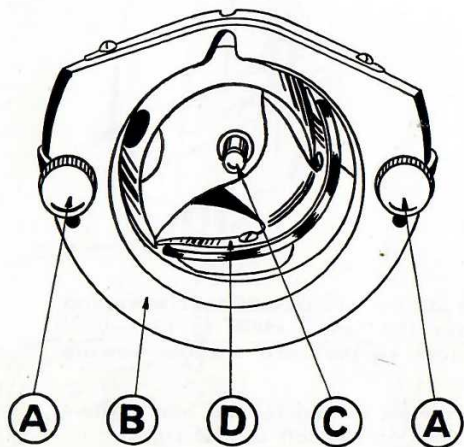


This attachment is both versatile and adjustable. It always allows you to insert a zipper and to cover cord with ease. It also allows the needle to enter the fabric close to the metal part of the zipper without danger of damaging it, and close to the cord without sewing through it.

In order to move the foot from right to left, loosen the screw on the horizontal bar. Move the foot from side to side so that the needle can enter the slot on the left or the right.

If you wish to stitch along the left side of the zipper, adjust the foot so that it is to the left of the needle with the needle passing through the opening on the right side of the foot, but if you want to stitch on the right side of the slide fastener, the foot should be placed to the right of the needle so that the needle passes through the opening on the left of the foot. The same instruction will be applied for cording or welting.

REMOVING LINT

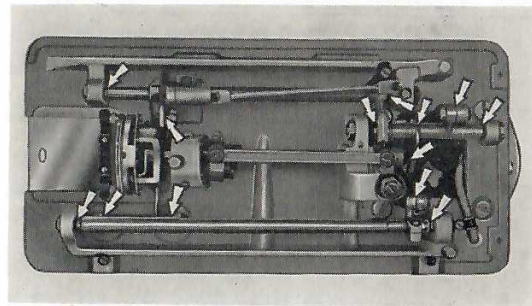
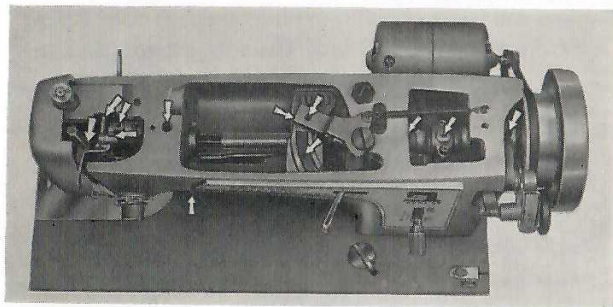
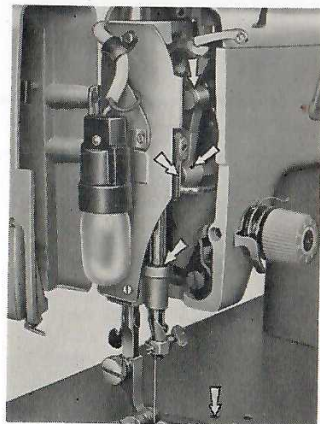


1. Turn handwheel toward you until needle is at its highest position. Remove bobbin and bobbin case.
2. Push buttons (A) sideways.
3. Remove shuttle race cover (B). Then pull out shuttle (C) by grasping axle.
4. Remove accumulated lint and threads from all parts of shuttle race.
5. Replace shuttle in race body, with axle facing out, forming a perfect circle with driver (D).
6. Replace shuttle race cover (B), then insert bobbin and bobbin case.
7. Do not attempt to force any of the above operation.
8. Occasionally remove the needle plate and clean feed dog with a soft brush.

OILING MACHINE

Keep the moving parts free from dust and threads for quiet and efficient operation. Cleaning should be done with a small brush. When machine runs hard or makes excessive noise, place a drop of sewing machine oil at the points indicated.

Tilt machine head back to oil points indicated on underside of machine head.



WHAT TO DO

PROBLEM	PROBABLE CAUSE	CORRECTION
Irregular Stitches	Incorrect size needle. Improper threading. Loose upper thread tension. Pulling fabric. Light pressure on presser foot. Loose presser foot. Unevenly wound bobbin.	Choose correct size needle for thread and fabric (page 5). Rethread machine (page 9). Tighten upper thread tension (page 12). Do not pull fabric: guide it gently. Increase pressure on presser foot (page 10). Reset presser foot (page 15). Rewind bobbin (page 7).
Breaking Needles	Pulling fabric. Incorrect size needle. Incorrect setting of needle. Loose presser foot.	Do not pull fabric: guide it gently. Choose correct size needle for thread and fabric (page 5). Reset needle (page 6). Reset presser foot (page 15).
Bunching of Thread	Upper and lower threads not drawn back under presser foot. Feed dog down.	Draw both threads back under presser foot (page 10). Raise feed dog (page 11).
Puckering	Incorrect thread tension(s). Light pressure on presser foot. Using two different sizes of or kinds of thread. Bent or blunt needle. Loose presser foot. Fabric too sheer or too soft.	Reset thread tension(s) (page 12 - 13). Increase pressure on presser foot (page 10). Upper thread and bobbin thread should be same size and kind. Insert new needle (page 6). Reset presser foot (page 15). Use underlay of tissue paper when stitching.

WHAT TO DO

PROBLEM	PROBABLE CAUSE	CORRECTION
Skipping Stitches	Incorrect size needle. Bent or blunt needle. Incorrect setting of needle. Tight upper thread tension. Light pressure on presser foot.	Choose correct size needle for thread and fabric (page 5). Insert new needle (page 6). Reset needle (page 6). Loosen upper thread tension (page 12). Increase pressure on presser foot (page 10).
Breaking Upper Thread	Starting to stitch too fast. Improper threading. Tight upper thread tension. Incorrect size needle. Sharp eye in needle.	Start to stitch at a medium speed. Rethread machine (page 9). Loosen upper thread tension (page 12). Choose correct size needle for thread and fabric (page 5). Insert new needle (page 6).
Breaking Bobbin Thread	Improper bobbin case threading. Tight bobbin thread tension. Lint in bobbin case or shuttle.	Check bobbin case threading (page 8). Loosen bobbin thread tension (page 13). Clean bobbin case and shuttle (page 22).
Fabric not Moving	Feed dog down. Light pressure on presser foot. Threads knotted under fabric.	Raise feed dog (page 11). Increase pressure on presser foot (page 10). Place both threads back under presser foot before beginning to stitch.
Machine Jamming (Knocking Noise)	Thread caught in shuttle.	Disassemble and clean shuttle (page 22).

ADJUSTING YOUR SEWING MACHINE FOR GOOD STITCHES

When your sewing machine does not sew a properly locked stitch, check the following:

1. Insert a new needle of the correct size for the thread and fabric you are using. Consult chart on page 5 for needle size.
2. The upper and bobbin thread should be matched in size and type.
3. Check threading carefully. See page 9.
4. Check the thread tension balance. Use mercerized thread, and a correct size needle for the fabric you are using. Do not try this test with synthetic thread as it will not break.

Begin with a full bobbin, properly threaded into the case. Set the stitch length at about 12 stitches per inch. Fold a 6" square of your fabric in half diagonally, forming a triangle. Make a line of stitching $\frac{1}{2}$ " from fold.

- a. If seam is puckered - both tensions are too tight.
- b. If the bottom thread lays on the fabric - tighten upper thread tension, and repeat test. See page 12, Figure 3.
- c. If the top thread lays on the fabric - loosen upper thread tension, and repeat test. See page 12, Figure 2.

Grasp the stitching and pull with a snap to make threads break.

- a. If both threads break - tensions are balanced.
- b. If neither thread breaks - both tensions are too loose.
- c. If upper thread breaks - loosen upper tension.
- d. If lower thread breaks - tighten upper tension.

Both threads do not have to break at the same place, but they should break on the same snap.

Bobbin tension may be reset by the following procedure. Start with a loose bobbin thread tension. Tighten the spring screw gradually until bobbin case and full bobbin can be gently lifted from your hand by the end of the bobbin thread.

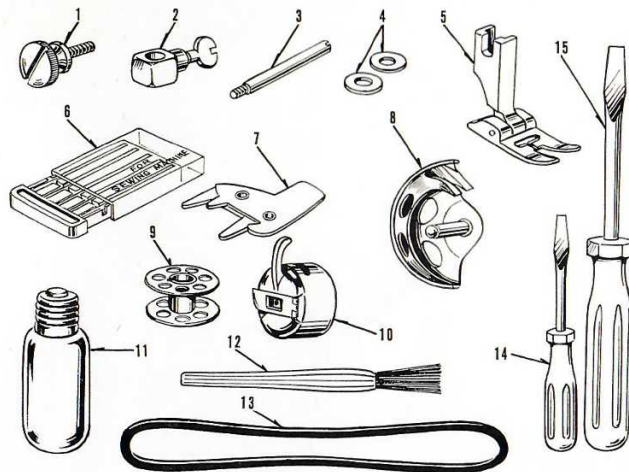
PARTS LIST

All parts listed here may be ordered through your nearest agent.

When ordering these parts, please be sure to mention the following references:

1. Model & serial numbers of machine shown on the nomenclature plate.
2. Parts number(s) and description(s) here.

When ordering by mail, prices will be furnished on request, or parts will be shipped at prevailing prices and you will be billed accordingly.



<u>Ref. No.</u>	<u>Parts No.</u>	<u>Description</u>
1	135	Presser foot thumb screw
2	4611	Needle clamp
3	8286	Thread spool pin
4	2273	Spool pin disc
5	4607	Presser foot
6	727	Pack of assorted needles
7	17165	Needle threader
8	47	Shuttle hook
9	60502	Bobbin
10	60404	Bobbin case
11	17351	Light bulb
12	654	Brush
13	60900	Motor rubber belt
14	1824	Small screw driver
15	1823	Large screw driver

MEMO
