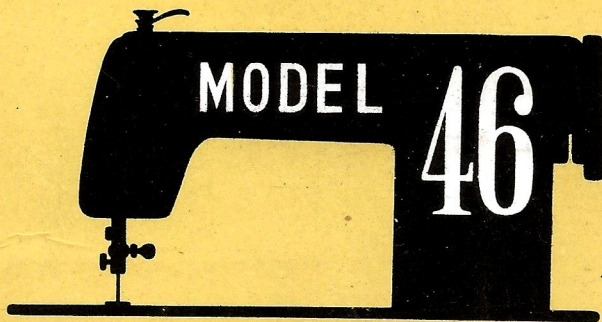


**K E N M O R E**

**I N S T R U C T I O N S**



**A U T O M A T I C   Z I G - Z A G   S E W I N G   M A C H I N E**

Sears, Roebuck and Co.

MRS BESSIE JOHNSON  
DIV 200 MGR  
NEWTON NJ. 7114

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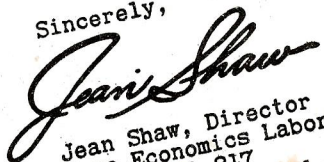
Dear Homemaker:

This booklet has been written for you, to help you use and enjoy fully your KENMORE Automatic Zigzag Sewing Machine.

We urge you to read pp. 2-22 before using your machine. This section explains the operation of the special controls that allow you to do many tedious tasks automatically. The following pages offer suggestions and instructions for specific ornamental and time saving operations. See p. 21 before using the automatic patterns or zigzag stitch.

We feel the KENMORE Automatic Zigzag Sewing Machine is the finest of its kind and we are happy to offer help with any questions you may have regarding the machine.

Sincerely,



Jean Shaw, Director  
Home Economics Laboratory  
Department 817  
Sears, Roebuck and Co.  
Chicago 7, Illinois

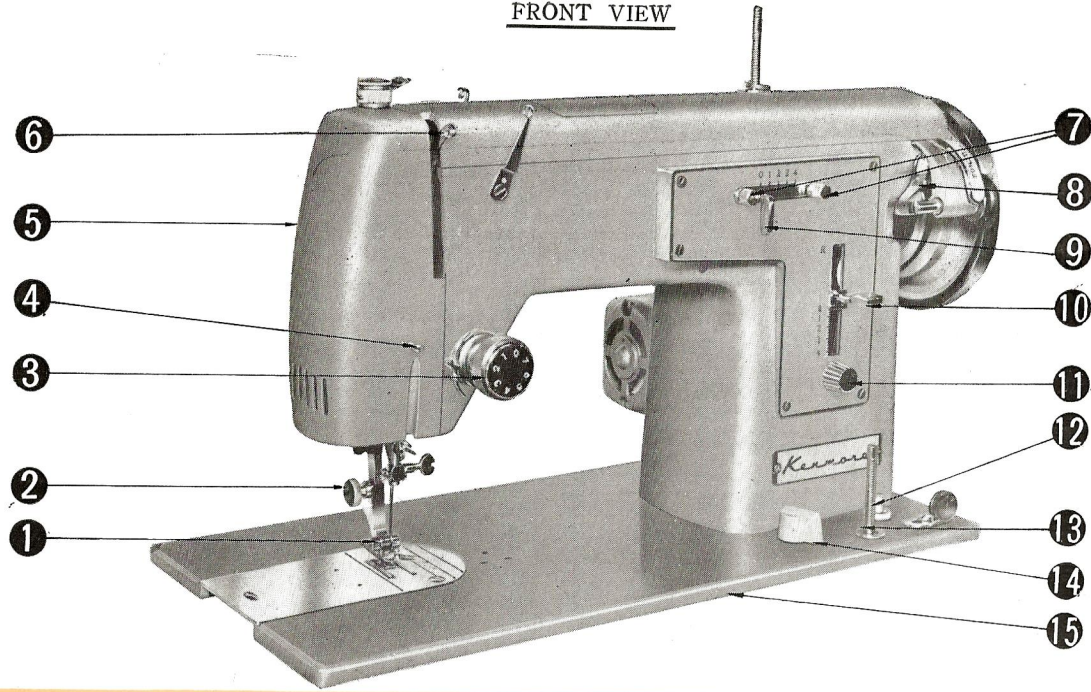
158.462 - Model

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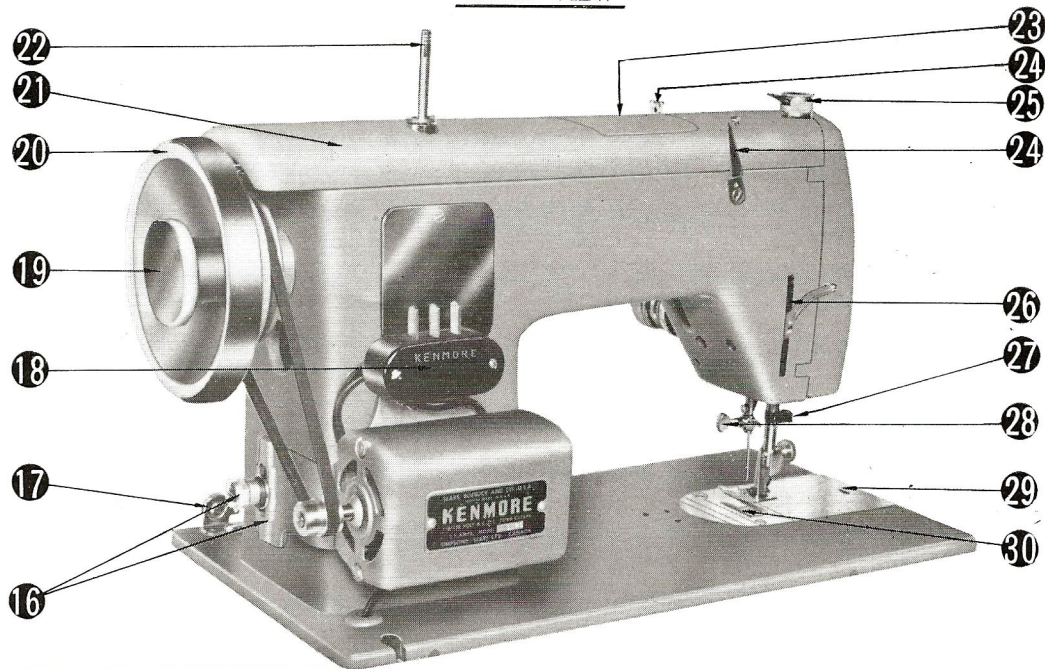
000 - 6480

FRONT VIEW



- |                            |                                 |  |
|----------------------------|---------------------------------|--|
| 1. Presser Foot            | 6. Thread Take-Up Lever         | 11. Stitch Length Lock Screw           |
| 2. Presser Foot Screw      | 7. Stitch Width Lock Screws     | 12. Light Switch                       |
| 3. Thread Tension Assembly | 8. Bobbin Winder Assembly       | 13. Thread Spool Pin for Bobbin Winder |
| 4. Face Cover Thread Guide | 9. Stitch Width Control Lever   | 14. Feed Dog Control Knob              |
| 5. Face Cover Plate        | 10. Stitch Length Control Lever | 15. Nomenclature Plate                 |

BACK VIEW



- 16. Motor Mounting Bracket and Screw
- 17. Bobbin Winder Tension Disc
- 18. Three Prong Connector
- 19. Clutch Knob
- 20. Hand Wheel

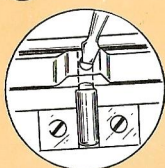
- 21. Arm Cover Plate
- 22. Thread Spool Pin(Retractable)
- 23. Cover to Automatic Decorating Stitch Mechanism
- 24. Upper Thread Guides

- 25. Presser Foot Knob
- 26. Presser Foot Lever
- 27. Thread Cutter
- 28. Needle Clamp Screw
- 29. Hand Hole Cover Plate
- 30. Needle Plate

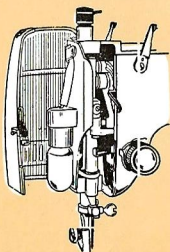
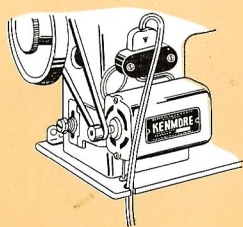
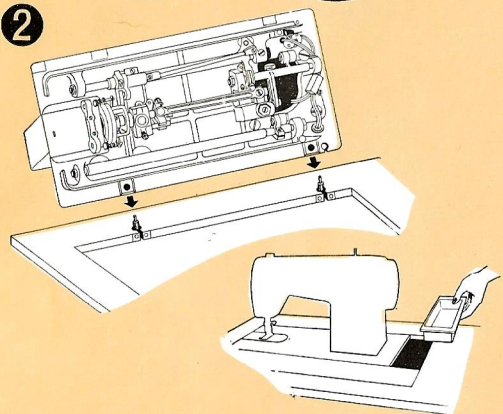
1



3



2



## INSTALLING MACHINE HEAD IN PORTABLE AND CABINET

Loosen the two hinge screws under holes in the rear edge of the machine bed (1).

Raise hinge pins in the cutout (2).

Slip machine head onto the pins and tighten hinge screws securely (3).

Lower machine head to front flap.

When head is in place for sewing, there will be a small open space between the edge of the sewing head and the cabinet. This space is reserved for the convenient plastic accessory tray which fits therein.

## SEWING LIGHT

The sewing light is placed inside the face cover plate as shown, and illuminates the sewing area only. It may be turned on or off by turning light switch clockwise.

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

## CONNECTING MACHINE

Push the plug onto three prong connector over the machine motor.

Plug machine cord into any 110-120V wall outlet. When installed in cabinet, insert grommet with cord in hole in bedplate.

# NEEDLE AND THREAD TABLE

THREAD SIZE	NEEDLE SIZE	STRAIGHT STITCH LENGTH	FABRIC
Cotton 80-100 Nylon A Silk A Machine embroidery	11	1-1½	Sheer cottons, silks, and nylons  Fine laces
Cotton 60-80 Mercerized 50 Nylon A Silk A Machine embroidery	14	1½-2	Light to medium weight cottons Light to medium weight silks Medium weight nylons Light weight woolens
Cotton 40-60 Mercerized 50 Mercerized heavy duty	16	2-3	Heavy weight cottons Medium to heavy weight woolens Heavy drapery fabrics
Cotton 30-50 Mercerized heavy duty	18	3-4	Heaviest cottons as for men's work clothes Heaviest woolen coating

## NEEDLE SIZE

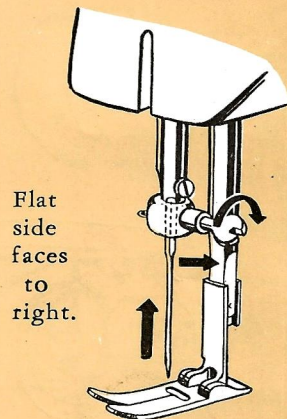
Use KENMORE 6021 needles. The size of the needle should conform to the size of the thread and both should be suitable to the material. The same size thread should be used in the bobbin as on the upper part of the machine for ordinary sewing.

Never use a bent needle or one with a blunt point.

## PLACEMENT OF NEEDLE

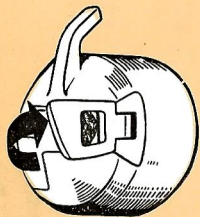
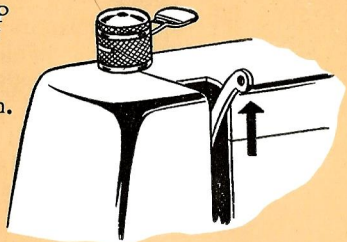
Raise take-up lever to its highest position by turning hand wheel toward you. Loosen needle clamp screw.

Hold 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.

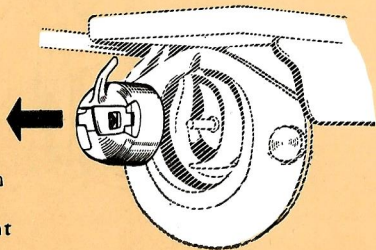


Flat side faces to right.

Take up lever at its highest position.

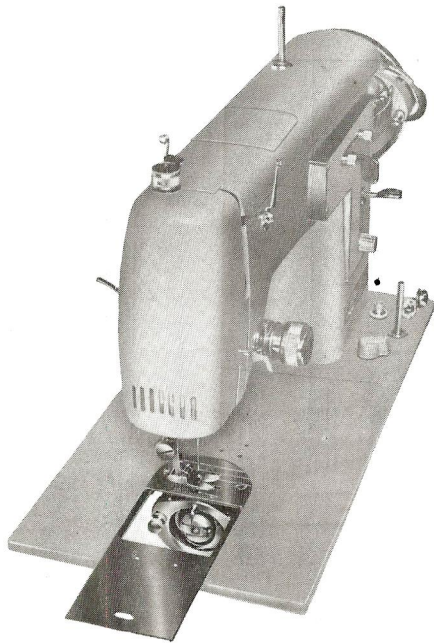


Pull out latch.



Pull bobbin case straight out.

## REMOVING BOBBIN CASE FROM SHUTTLE

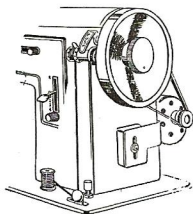




# WINDING THE BOBBIN

1

Place thread on spool post. Draw thread as shown. Bobbin winder tension disc is adjustable. If thread is not winding evenly, move guide to correct this situation.



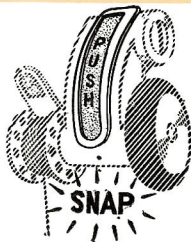
2

Wind thread around bobbin a few times, front to back. Guide bobbin onto bobbin winder shaft.



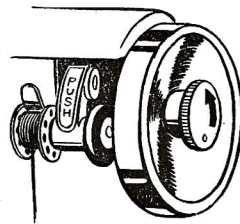
3

Press bobbin winder lever down.



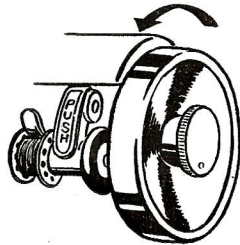
4

Release clutch by turning clutch knob toward you.



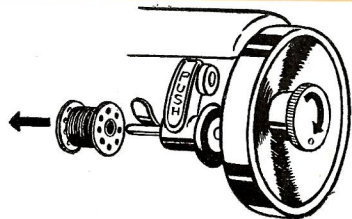
5

Start machine. When bobbin is full, winding mechanism stops automatically.



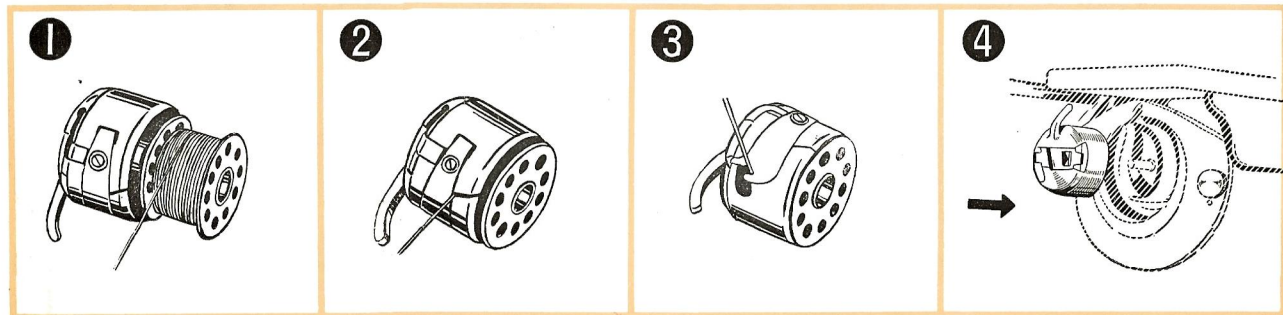
6

Tighten clutch knob and remove bobbin.

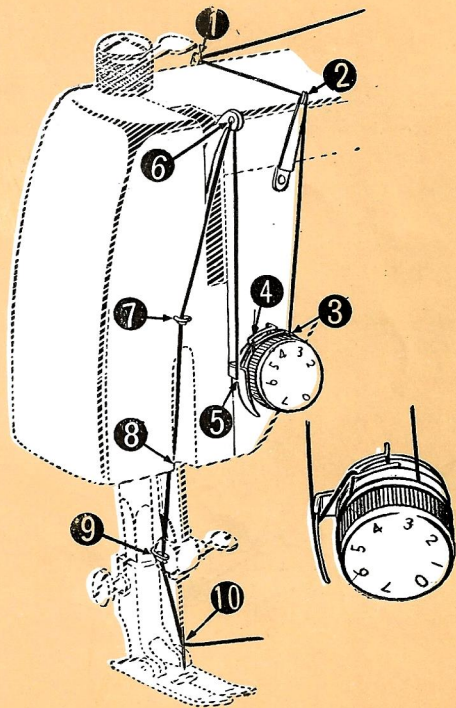
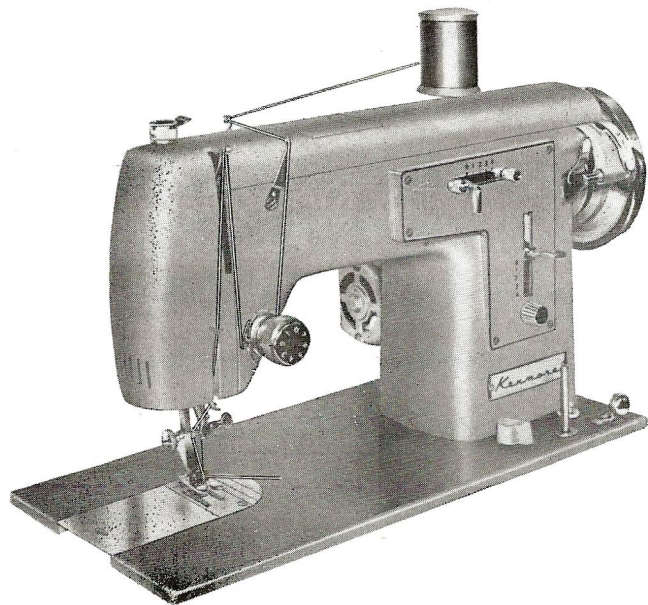


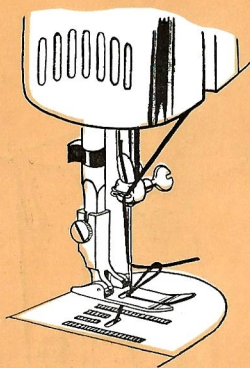
## INSERTING BOBBIN INTO BOBBIN CASE.....CASE INTO SHUTTLE

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



# THREADING UPPER MACHINE





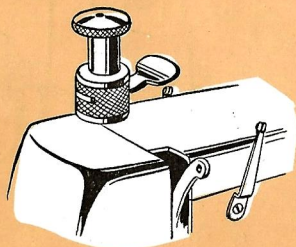
## PICKING UP BOBBIN THREAD

Raise presser foot lever.

Hold needle thread loosely in left hand and rotate hand wheel toward you one complete turn.

Bring bobbin thread up by pulling upper thread (See illustration).

Place threads back under presser foot.



## ADJUSTING THE PRESSURE OF THE PRESSER FOOT

Push down latch 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.

When sewing multiple thickness or heavy material, you may prefer less pressure on the presser foot.

When sewing on sheer fabrics, more pressure may be desired.

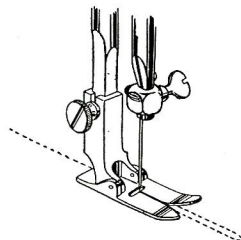
## SETTING STITCH LENGTH

Unscrew stitch length lock screw. Move stitch length control lever to the desired point between 0 and 4. The 4 setting is the longest stitch. The size of the stitch selected will depend on the fabric sewn. See chart on page 5. Recommended stitch lengths are given in numbers. Tighten stitch length lock screw so that forward and reverse stitches will be the same setting.

## REVERSE STITCHING

Move lever up until it stops. Move lever down to original position for forward stitching.

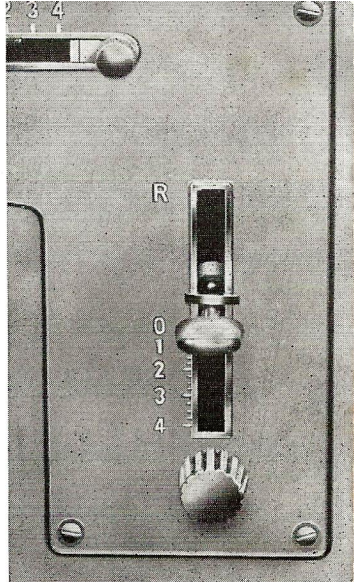
It is best to begin and end most seams with reverse stitching, often called back tacking.



## 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. Push 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.



# ADJUSTING TENSIONS

1

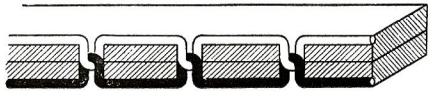


Fig. 1

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

## PROBLEM

## REMEDY

2 Upper thread too tight

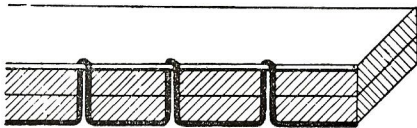
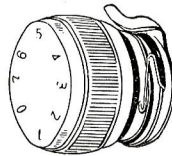
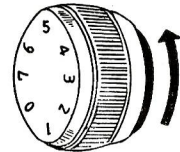


Fig. 2



Decrease Tension



3 Upper thread too loose

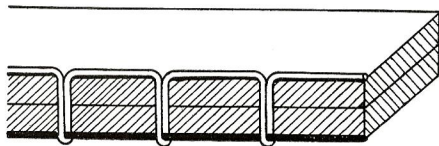
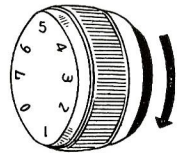


Fig. 3



Increase Tension

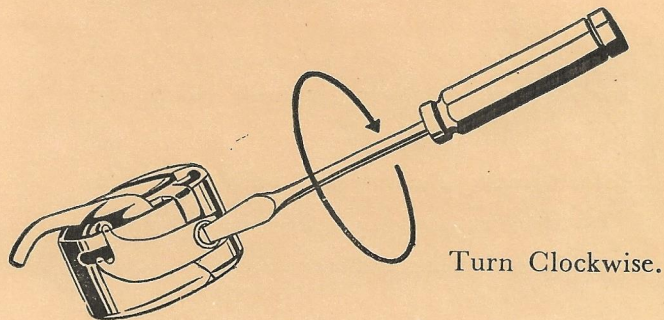


When stitching is unsatisfactory as in figures 2 and 3, adjust the upper thread tension. Lower thread tension is preset and rarely requires adjustment for general sewing.

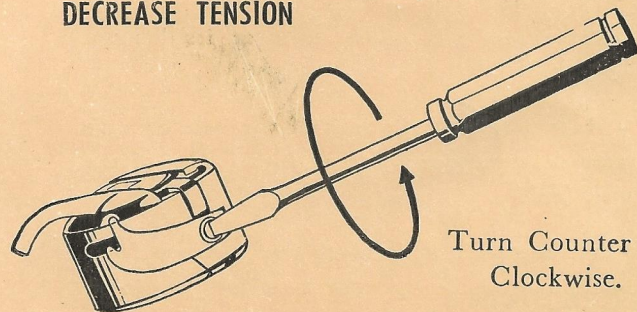
However, if stitch is satisfactory as in figure 1 and seam is badly puckered, the cause may be tight tensions and both upper and lower may be adjusted.

When adjusting the tension on the bobbin case, make slight adjustments with a screwdriver.

## INCREASE TENSION



## DECREASE TENSION



## 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 needle and thread suit the kind of work to be done
- The thread take-up lever is at its highest position
- Make sure that the ends of the threads have been drawn about 4 inches to the rear of the machine

Place material underneath the presser foot, insert the needle into the material by turning

the hand wheel toward you, lower presser foot and start sewing.

To remove the work, first turn the hand wheel toward you until the thread take-up lever is at its highest position, then raise the presser foot, remove the material to the rear and cut off excess thread with the thread cutter located on the presser bar.

**IMPORTANT:** Always turn the hand wheel toward you! When the machine is not being used, place a piece of material over the feed dog and lower the presser foot. Never operate the machine when it is threaded, or if the presser foot has been lowered, unless a piece of material is under the presser foot.



## TURNING A CORNER

Stop sewing machine and make sure needle is in fabric. Raise presser foot. Turn fabric to desired direction. Lower presser foot and go on with stitching.

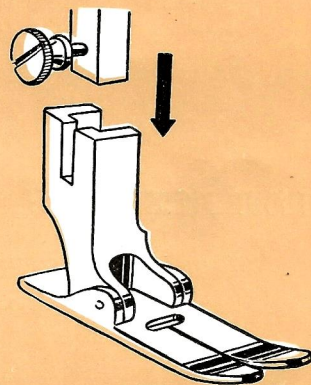
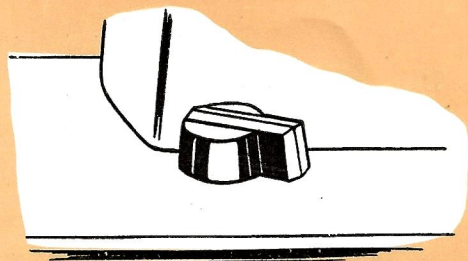
## DROP FEED CONTROL

This knob is situated on right front of machine bed. When knob is turned to the LEFT, feed dog does not pull material. This allows the operator freedom of movement of material. For regular sewing, turn knob to the RIGHT.

## CHANGING THE ATTACHMENT FOOT

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. Loosen the presser foot thumb screw, choose the proper foot, insert from the front. Tighten the screw using the large screw driver and make sure that the foot is secure.



# DARNING

## WITH PRESSER FOOT:

1. Turn feed dog control to LEFT.
2. Press down latch of presser foot knob, see page 10. With release in this position mending, darning, monogram work, etc. may be done.
3. Stretch fabric tightly between two spring embroidery hoops and place under needle.
4. Lower presser bar so thread will have some tension. When you start to darn, move fabric back and forth to cover darning area. Then turn fabric and continue sewing at right-angles to the previous stitching. Always use medium machine speed. You can make any length stitches desired. Slow movement of fabric will make short darning stitches. Fast movement will make long stitches.
5. When you finish darning, raise presser foot and remove fabric. Increase pressure for general sewing by pressing down round top of presser foot knob.

## WITHOUT PRESSER FOOT:

1. Turn feed dog control to LEFT.
2. Remove presser foot.  
Proceed as directed under steps 3 and 4 above.
5. When you finish darning, raise the presser bar and remove fabric.  
Replace presser foot.

## BUTTONHOLES

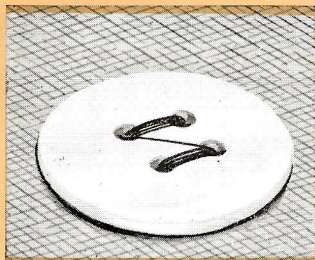
1. Set stitch length near zero
2. Set stitch width on 2.

It is recommended that tailor's chalk be used to determine length of buttonhole before hand.

Stitch forward until desired length for buttonhole is obtained. Stop with needle on the right side of stitching. Raise presser foot and turn material. Lower presser foot and turn handwheel. Take one stitch to the left. Push stitch width lever to 4-drop feed dogs and bartack.

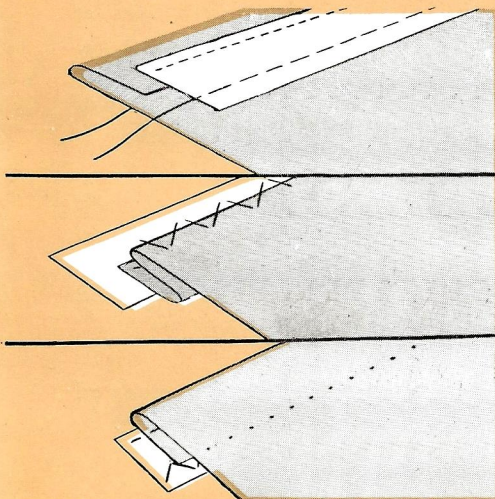
Bartacking should be completed with needle on the left side. Raise feed dogs-return stitch width lever to 2 and sew back to other end of buttonhole. Stop with needle on the left side. Push stitch width lever to 4-drop feed dogs and bartack.

For a firm buttonhole the stitching can be repeated over the same area then spread buttonhole opening.



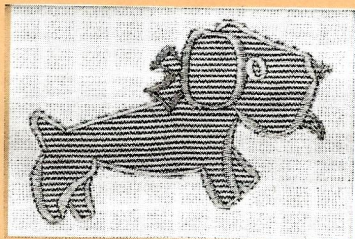
## SEWING ON BUTTONS

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 and lock. Stitch a number of times to hold securely.



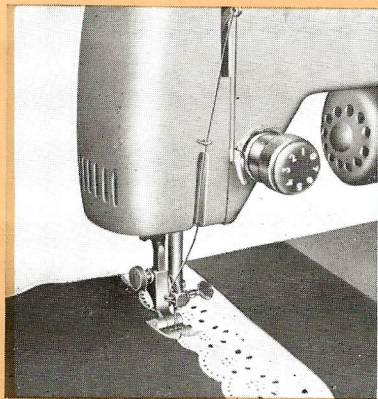
## BLIND STITCHING

Fold and baste hem. Fold back like illustration. Set stitch length to longest stitch. Straight stitch along fold of hem for  $\frac{1}{2}$  inch. Then push stitch width control to widest stitch and take one zig zag stitch (one side will catch fold of garment to give blind stitch, the other side will lock outside of hem fold). Release stitch width control and straight stitch for another  $\frac{1}{2}$  inch and repeat. Practice on scrap of material until you have developed the proper rhythm.



## APPLIQUE

Baste cutout applique to fabric. Set stitch width 2 to 4. Set stitch length  $\frac{1}{2}$ . Zig zag stitch around applique completely covering the raw edge.

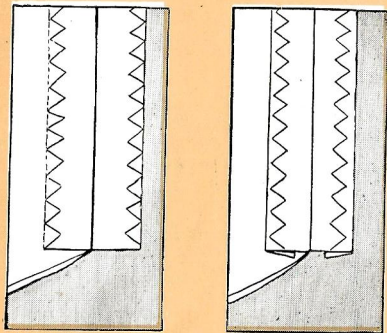


## SEWING ON LACE

Set stitch width to 1. Set stitch length to 1 or 2. Place fabric under the presser foot and place lace on top of fabric overlapping edge by  $\frac{1}{4}$  inch. Start sewing with needle at the left stitch. Position fabric and lace so that needle goes into left edge of lace. To sew two pieces together to make a continuous pattern, use the same method.

## OVERCASTING

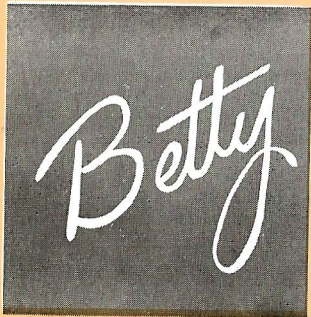
Set stitch width to 4. Set stitch length at 3. Zig zag stitch around raw edge of fabric to completely cover the edge.



## WRITING AND MONOGRAMMING

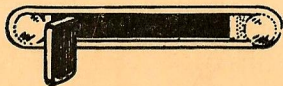
Free Hand	Stitch Width	0 to 4
	Feed Dog	Down

Draw initials or words to be sewn on fabric and fit fabric into embroidery hoops. Writing is done with either zig zag or straight stitching. Remove presser foot. Set stitch width for straight or zig zag stitches as desired. Slip hoop and fabric under the needle, lower presser bar and take one stitch to raise bobbin thread through fabric. Using a medium speed, stitch along marked outline, guiding fabric carefully by hand.

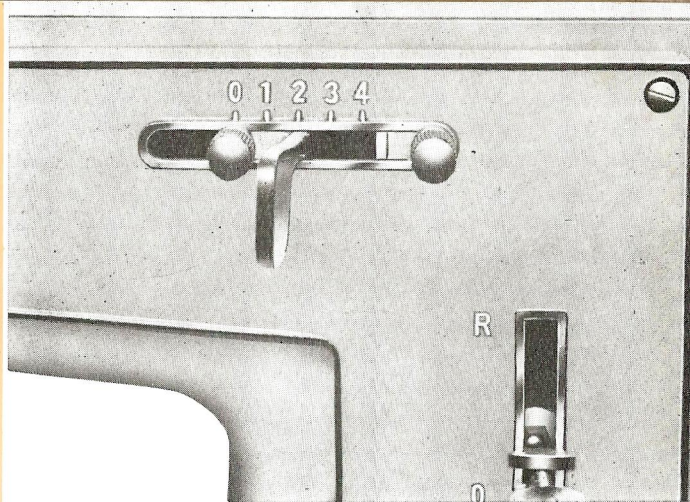


## ZIG ZAG CONTROL

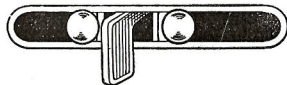
### SETTING STITCH WIDTH



Move stitch width control lever to the desired position between 0 and 4 on the stitch width indicator plate. Zig-zag stitch width increases from 1 to 4. Straight stitching is possible only with control on 0.



### LOCKING STITCH WIDTH



Loosen the stitch width lock screws. Shift lock screw so as to hold the stitch width lever in desired position. Tighten the lock screws firmly.

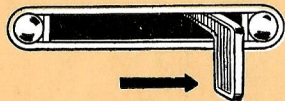
## AUTOMATIC DECORATIVE STITCHING

This machine can sew beautiful decorative and embroidery stitches by means of various discs supplied with your machine. The movements of the needle are controlled by the disc.

The stitch length specified is for an average pattern of decorative sewing. When a looser or tighter pattern of stitching is preferred, it is achieved by setting the stitch length to a shorter or longer stitch to suit your preference.

## INSERTING THE DISC

1. Push stitch width control lever to the RIGHT and keep it there during insertion.
2. Pull Automatic Decorating Stitch Mechanism open. Grasp knob of pattern disc and slip disc onto the shaft. Turn disc slightly until it slips down and the retaining pin enters hole in disc.
3. Release stitch width control lever.





initials =  
widthes 1 + small  
length 0 aut.  
no discs

**AUTOMATIC**

**DECORATIVE**

**STITCHES**

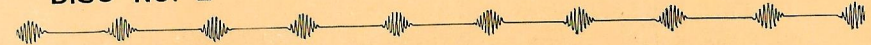
Stitch width 0

Stitch length about  $\frac{1}{2}$

**DISC NO. 1**



**DISC NO. 2**



**DISC NO. 3**



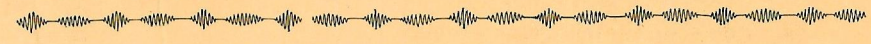
**DISC NO. 4**



**DISC NO. 5**



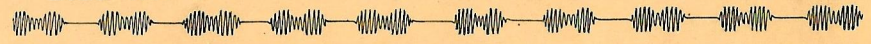
**DISC NO. 6**



**DISC NO. 7**

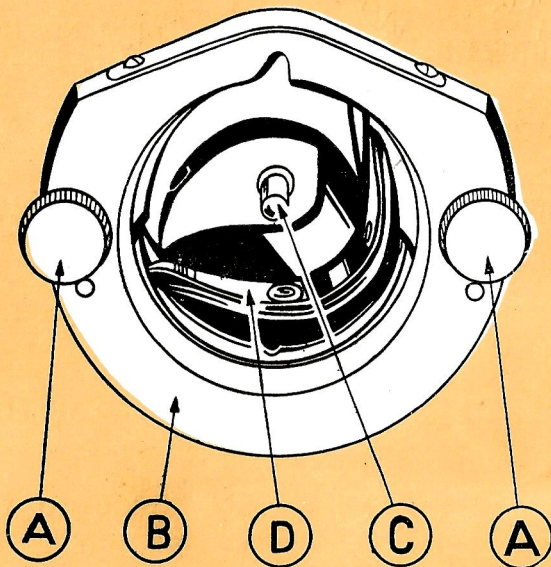


**DISC NO. 8**



## REMOVING LINT

1. Turn hand wheel 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.

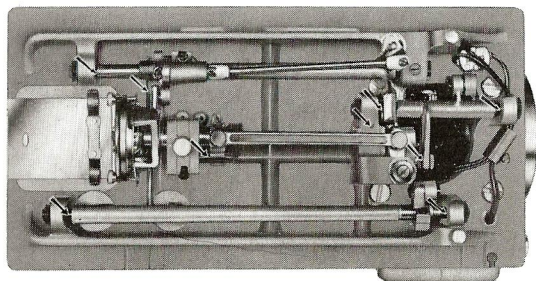
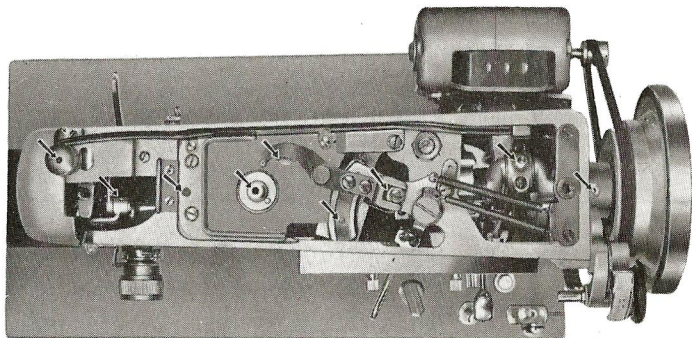


## OILING MACHINE

Keep the moving parts free from dust and threads for quiet and efficient operation. Cleaning should be done with a small brush; never with a sharp or pointed tool.

When machine runs hard or makes excessive noise, place a drop of KENMORE sewing machine oil at the points indicated.

Tilt machine head back to oil points indicated on under side of machine head.



Remove arm cover plate to oil points indicated at top of machine head. It can be taken off very easily with both hands.

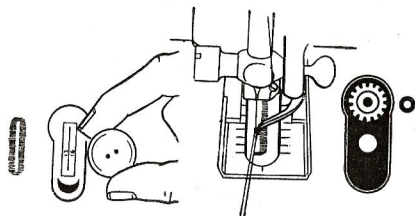
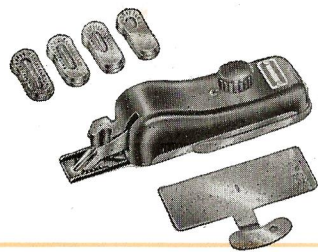
# WHAT TO DO

PROBLEM	PROBABLE CAUSE	CORRECTION
Irregular Stitches	<p>Incorrect size needle.            Improper threading.            Loose upper thread tension.            Pulling fabric.            Light pressure on presser foot.            Loose presser foot.            Unevenly wound bobbin.</p>	<p>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).</p>
Breaking Needles	<p>Pulling fabric.            Incorrect size needle.            Incorrect setting of needle.            Loose presser foot.</p>	<p>Do not pull fabric; guide it gently.            Choose correct size needle for thread and fabric (page 5).            Reset needle (page 5).            Reset presser foot (page 15).</p>
Bunching of Thread	<p>Upper and lower threads not drawn back under presser foot.            Feed dog down.</p>	<p>Draw both threads back under presser foot (page 10).            Raise feed dog.</p>
Puckering	<p>Incorrect thread tension(s).            Light pressure on presser foot.            Using two different sizes or kinds of thread.            Bent or blunt needle.            Loose presser foot.            Fabric too sheer or too soft.</p>	<p>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 5).            Reset presser foot (page 15).            Use underlay of tissue paper or tarleton when stitching.</p>

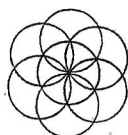
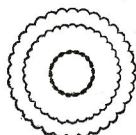
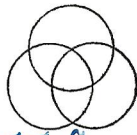
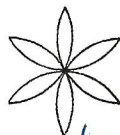
# WHAT TO DO

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 5). Reset needle (page 5). Loosen upper thread tension (page 12). Increase pressure on presser foot (page 10).
Breaking Upper Thread	Starting with take-up lever in low position. Starting to stitch too fast. Improper threading. Tight upper thread tension. Incorrect size needle. Sharp eye in needle.	Take-up lever must be in highest position when starting to sew. 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 5).
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 24).
Fabric not Moving	Feed dog down. Light pressure on presser foot. Threads knotted under fabric.	Raise feed dog. 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 24).

To expand the versatility of your machine and increase your sewing pleasure, these efficient, easy to use attachments are available.



Makes perfect keyhole, slot and eyelet buttonholes. Fast, easy way to stitch exactly matched buttonholes of any size desired. Saves many hours of time and trouble!



60-779.

Add extra decorative uses to your Kenmore automatic with this exclusive new attachment. Stitches even circles automatically. Makes an easy job of scallops, fancy designs.



For sewing ease, a set of sewing feet, applique and braiding foot, button hole foot, button foot, satin stitch foot and plastic foot.

The above attachments are available through your local SEARS store or through mail order

## *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. Bobbin tension may also be reset by this procedure. Use #50 mercerized thread, size 14 needle, and a firm cotton fabric.

Begin with a full bobbin, properly threaded into the case, and 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. Set the stitch length at about 12 stitches per inch. Make a row of bias stitching on a double thickness of your fabric.

- a. If seam is puckered - both tensions are too tight.
- b. If bottom thread is looper - tighten upper thread tension.
- c. If top thread lays on top of fabric - loosen upper thread tension.

Then grasp a good bias seam and pull evenly and firmly until one or both threads break.

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



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