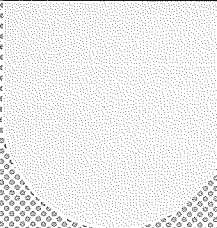
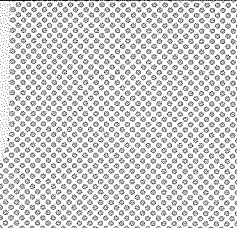
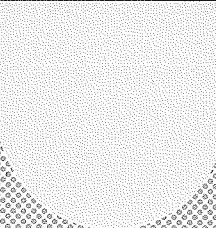
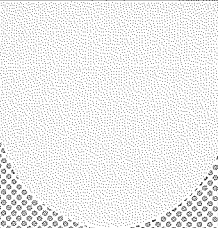
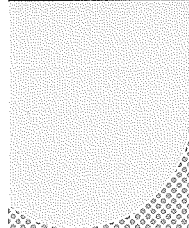
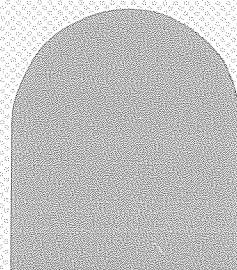
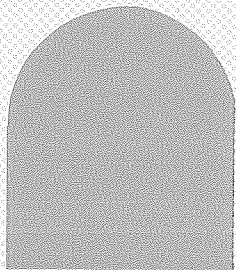
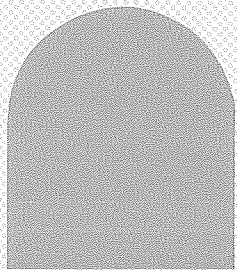


INSTRUCTION BOOK



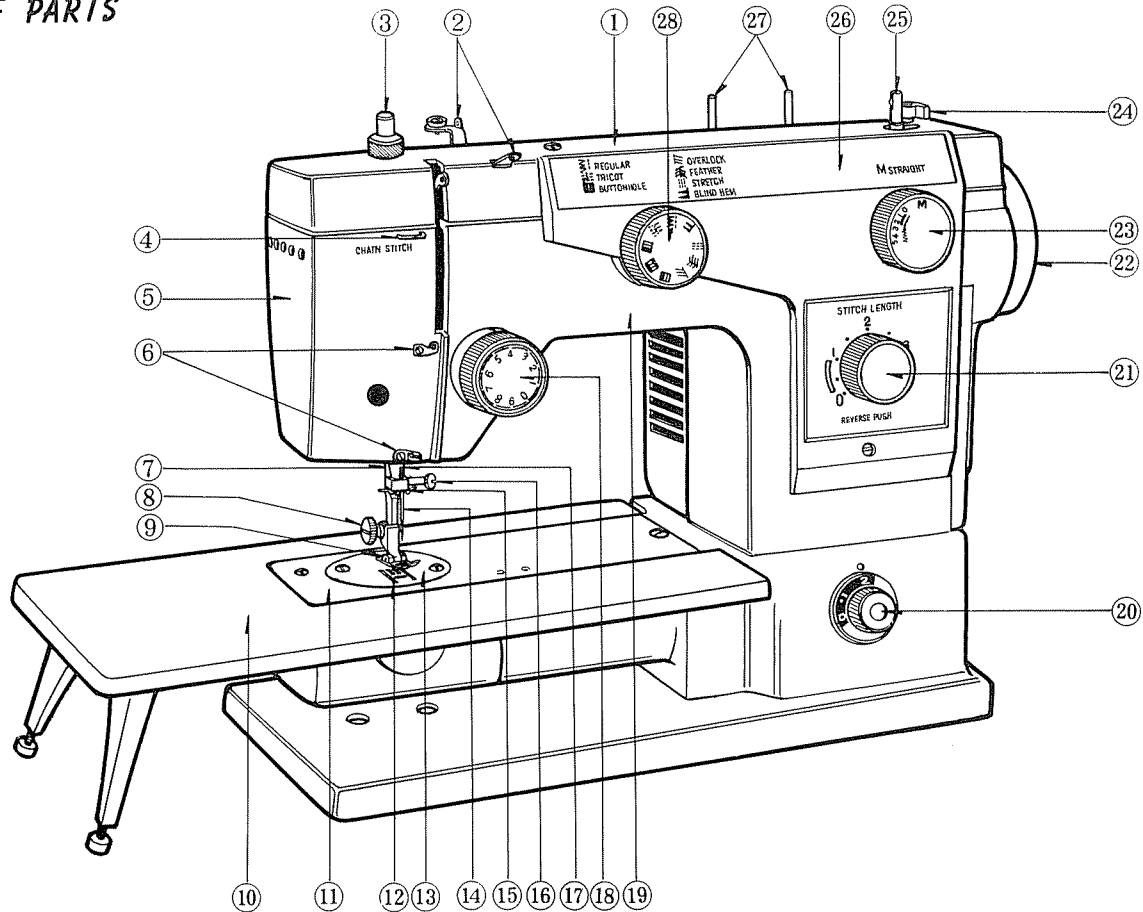
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NAMES OF PARTS



NAMES OF PARTS

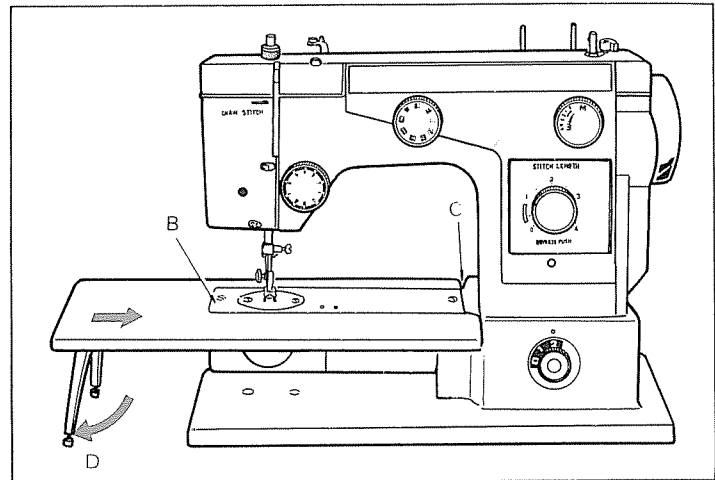
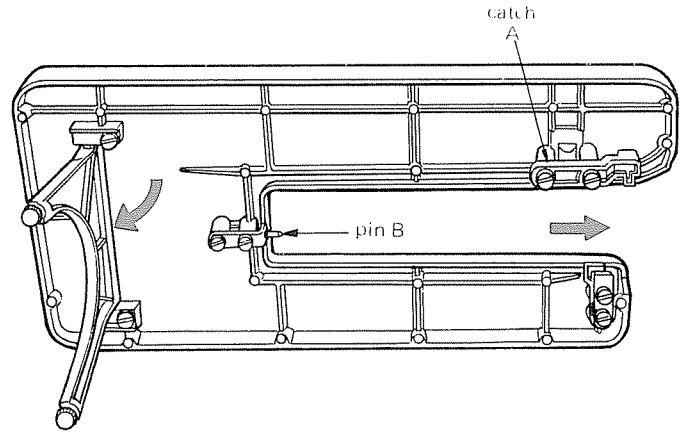
- ① Top cover
- ② Top cover thread guide
- ③ Pressure regulator
- ④ Chain stitch thread guide
- ⑤ Face plate
- ⑥ Face plate thread guide
- ⑦ Presser bar
- ⑧ Presser foot thumb screw
- ⑨ Presser foot
- ⑩ Extension plate
- ⑪ Free arm
- ⑫ Feed dog
- ⑬ Needle plate
- ⑭ Needle
- ⑮ Needle bar thread guide
- ⑯ Needle clamp screw
- ⑰ Needle bar
- ⑱ Thread tension regulator
- ⑲ Arm
- ⑳ Drop feed knob
- ㉑ Stitch length regulator (Reverse feed knob)
- ㉒ Balance wheel
- ㉓ Stitch width regulator
- ㉔ Bobbin winder stopper
- ㉕ Bobbin winder spindle
- ㉖ Control indication panel
- ㉗ Spool pins
- ㉘ Pattern selector

TO ATTACH EXTENSION PLATE

For ordinary sewing, extension plate will make your work easier.

1. Turn down the extension plate support legs with the left hand.
2. Slide the extension plate in carefully to the right, allowing the catch A to engage in the corresponding projection in the free arm and the pin B in the hole at the left end of the free arm.

NOTE: In case of sewing tubular areas, detach the extension plate for free arm sewing.

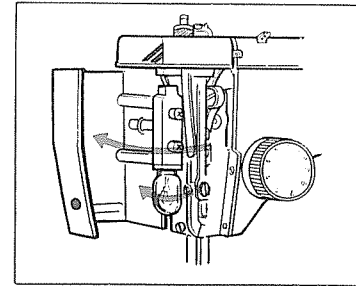
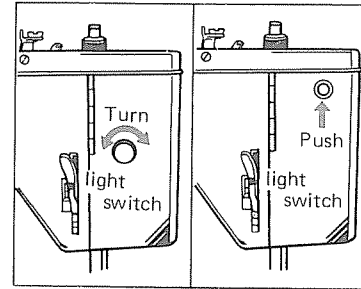


TO USE SEWLIGHT

Sewlight is switched “on” or “off” by means of the switch which is found on the back of the face plate.

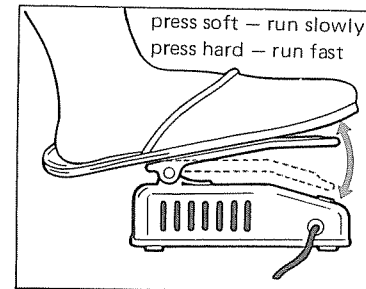
To change the electric bulb, swing open the face plate. Then the bulb can be unscrewed.

In the case of bayonet type bulb, remove the bulb by slightly pushing it upward and twisting it anti-clockwise, and then place a new bulb by fitting the pins on the bulb against the slot, pushing upward and twisting it clockwise.



TO USE FOOT CONTROL

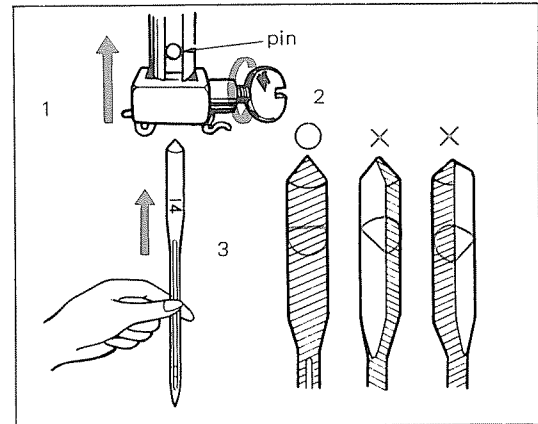
Place the foot control in such a position that your foot rests comfortably on it. Press the foot control while turning the balance wheel to wards you with your right hand. You can control the speed of the machine with foot control—light pressure giving low speed and harder pressure higher speed.



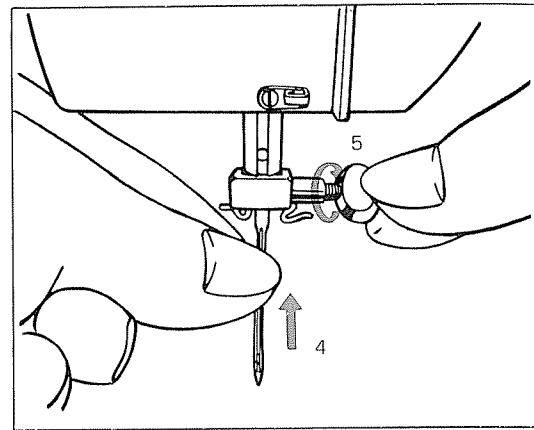
TO INSERT NEEDLE

Insert the needle in the order of 1, 2, 3, 4 and 5.

1. Raise the needle and the take-up lever both to their highest point.
2. Loosen the needle clamp screw.
3. Turn the flat side of the needle to the back.

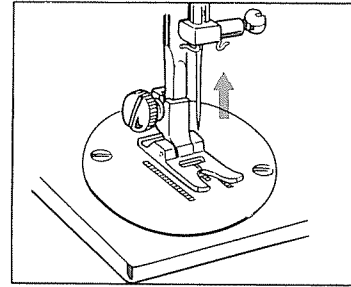


4. Insert the needle as high as it will go until it hits the pin.
5. Tighten the needle clamp screw firmly.

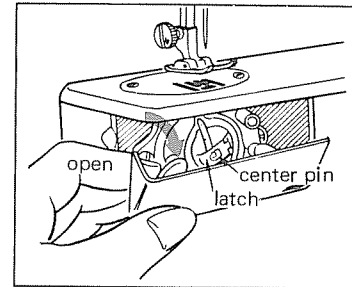


TO TAKE OUT BOBBIN CASE

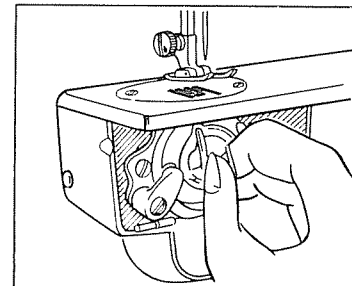
1. Turn the balance wheel towards you until the needle bar is at its highest point.



2. Open the shuttle race cover.

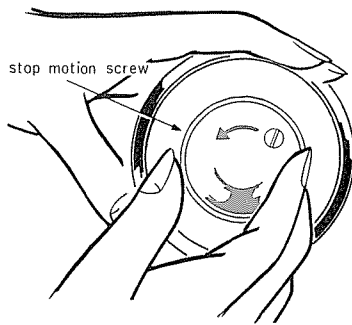


3. Open the latch to its fullest extent and withdraw the bobbin case.



TO WIND BOBBIN

1. While holding the balance wheel with your left hand, turn the stop motion screw towards you with the right hand. This allows the balance wheel to turn freely, disengaging the stitching mechanism. (Fig. 1)
2. Place a bobbin on the bobbin winder spindle and push the bobbin down. Then push the bobbin winder spindle so that the bobbin winder stopper fits into the bobbin. (Fig. 2)
3. Place a spool of thread on the spool pin.
4. Pass the thread between the discs of the thread guide bracket.
5. Pass the end of the thread through one of the holes in the bobbin from inside to outside. (Fig. 3)
6. Holding the thread with your right hand, start machine running slowly until thread is wound several times. Then cut the free end of the thread.
7. Run the machine until the thread is wound sufficient for requirements in the bobbin and stop the machine. Then pull the bobbin winder spindle to its original position. Remove the bobbin from spindle and cut the thread.
8. Tighten the stop motion screw.



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Fig. 1

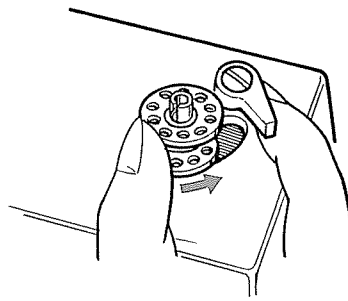


Fig. 2

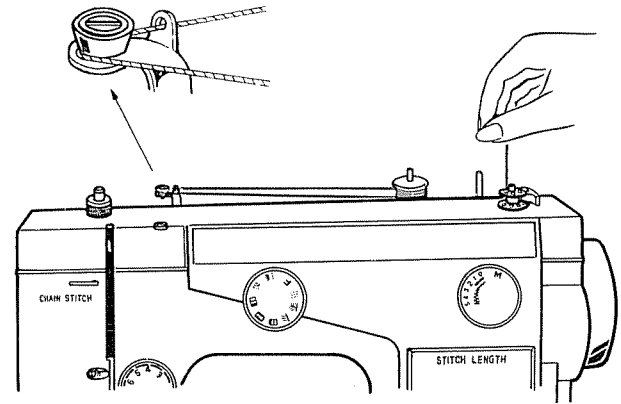
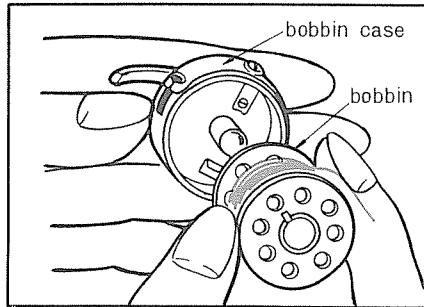


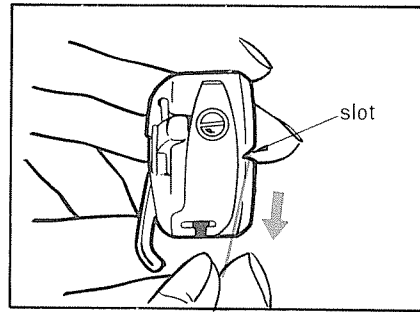
Fig. 3

TO THREAD BOBBIN CASE

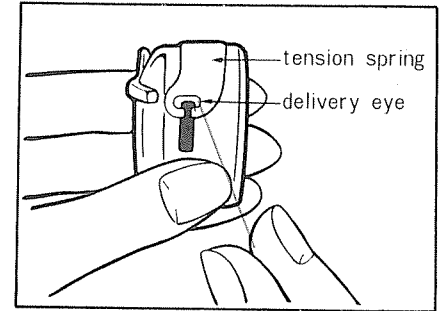
Holding the bobbin between the thumb and the forefinger of your left hand, pull out a few inches of thread.



Holding the bobbin case in your left hand, turn the open side up and place the threaded bobbin into it as shown above.



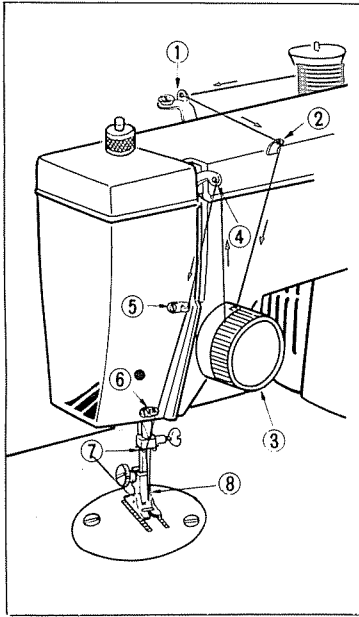
Guide the thread into the slot in the edge of the bobbin case.



Pull it under the tension spring and then into the delivery eye.

* When inserting the bobbin case into the machine, be sure to let the latch catch on the center pin with a click. (See P. 9)

TO THREAD NEEDLE



Raise the thread take-up lever to the highest point by turning the balance wheel towards you.

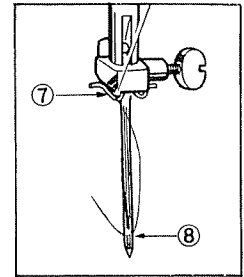
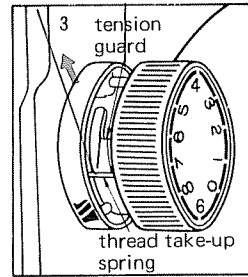
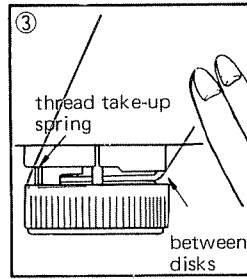
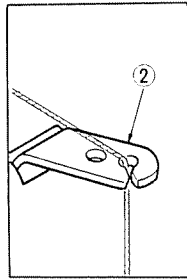
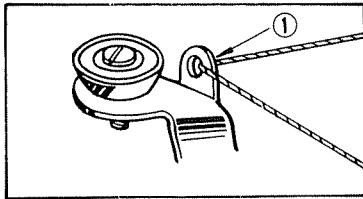
Raise presser foot with presser bar lifter and pass the thread in the order from ① to ⑧.

Pass the thread through top cover thread guides (① & ②).

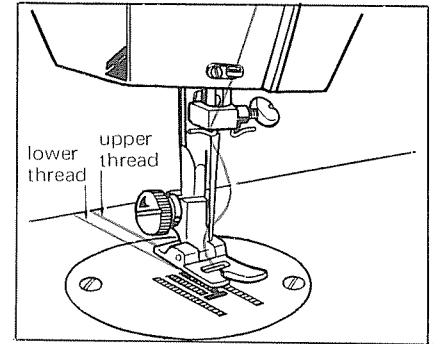
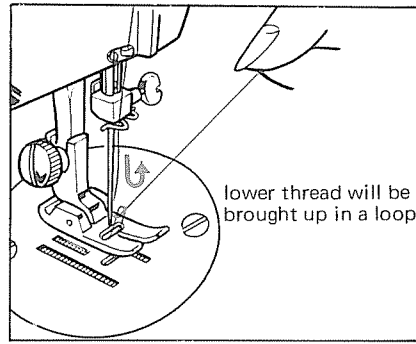
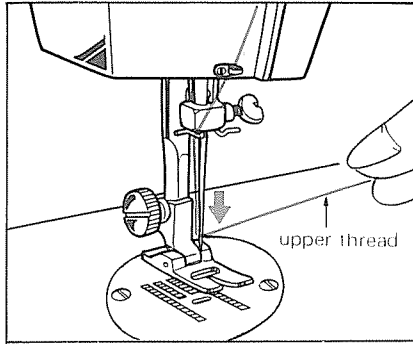
While holding the spool with the right hand, pass the thread between the tension disks ③ from the right and pull it up. By so doing, the thread will automatically pass through and under tension guard. Draw the thread up and through the hole in the take-up lever ④, down through thread guides (⑤ & ⑥), and into the thread guide ⑦ at the lower end of the needle bar.

Then pass through the eye ⑧ of the needle from front to back.

Draw about five inches of thread through the eye of the needle.




TO DRAW UP LOWER THREAD



1. Hold the end of the upper thread with your left hand. Turn the balance wheel towards you slowly until the needle moves down and up again, then stop the balance wheel.
2. Pull the upper thread slowly, then the lower thread will be brought up from the needle hole in a loop.
3. Pull both ends of the threads from under the presser foot and place them away from you.

STRAIGHT SEWING

presser foot	straight presser foot
pattern selector	
stitch width	M
stitch length	1 ~ 4

Note: Even in straight sewing, it does not matter at all to use the zigzag presser foot, but in case a fine stitching is required, favorable to replace it with the straight presser foot.

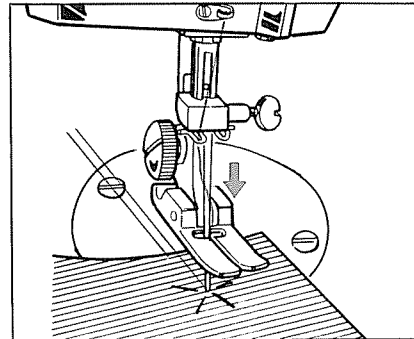
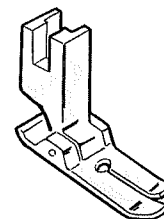
TO START SEWING

Place the cloth under the presser foot.

With the left hand hold loosely both ends of threads and turn the balance wheel with the right hand to let the needle penetrate the point from which to start sewing.

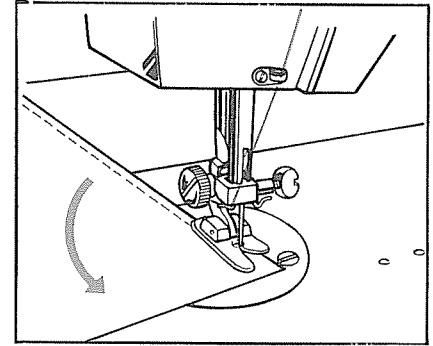
Lower the presser foot on the cloth and start sewing.

presser foot for straight stitch



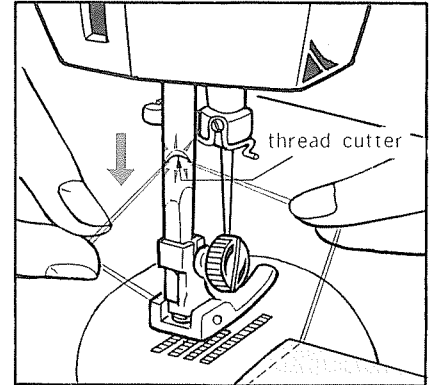
TO TURN CORNER

1. Stop sewing with the needle in the fabric and lift the presser foot.
2. Turn the fabric around the needle.
3. Lower the presser foot and start to sew again.

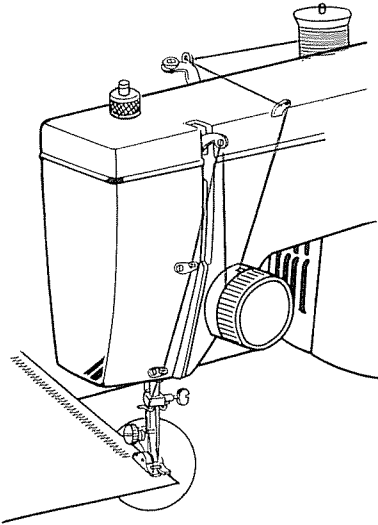


TO FINISH SEAM

1. At the end of a seam, press the reverse feed knob to sew a few stitches for reinforcement.
2. Stop the machine when the thread take-up lever is at its highest point. Raise the presser foot and remove the fabric away from you.
3. Sever the thread with either the thread cutter slotted in the presser bar or with a pair of scissors, leaving about 5 inches of thread from the eye of the needle.



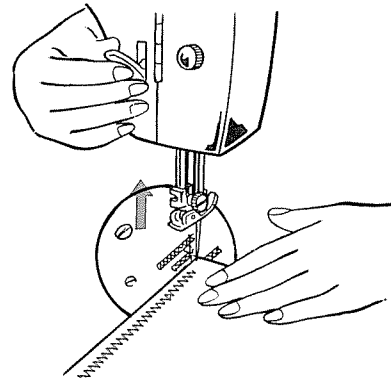
BASIC SEWING CYCLE



Turn the balance wheel towards you. The needle and the take-up lever are at their highest position.

When you come to the end of the seam and it is necessary to remove the work from the machine, it is most important to complete the last stitch cycle fully before lifting the presser foot from the material.

This is done by turning the balance wheel towards you in order that both the needle and the take-up lever are at their highest position. You will then find that the work is easily removed from the machine after you lift the presser foot, and the machine is in the correct starting position for the next seam.



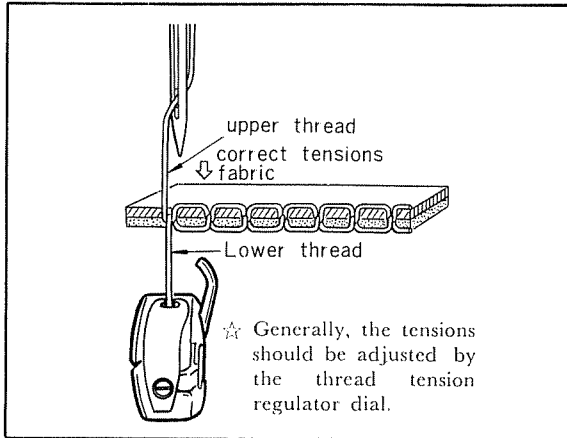
Lift the presser foot.

NEEDLE AND THREAD CHART

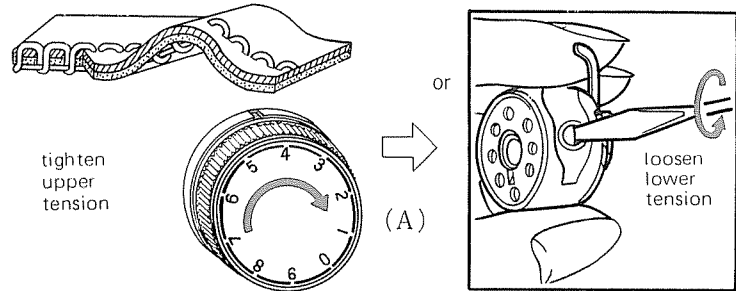
Size of Needles	Cloth	Size of Thread
No. 9	Thin calico, silk, serge and muslin.	No. 80-100 cotton thread or fine silk thread.
No. 11	Thin calico, cotton cloth, crepe de Chine, hosiery and silk.	No. 60-100 cotton thread or ordinary silk thread.
No. 14	Ordinary cotton cloth, thick silk, light woolen goods, towels and shirting.	No. 50-60 cotton thread or ordinary silk thread.
No. 16	Thick cotton cloth, serge and light woolen goods.	No. 30-40 cotton thread or ordinary silk thread.
No. 18	Ordinary woolen goods, trousers, overcoats, thick calico and children's clothes.	No. 30-40 cotton thread or ordinary silk thread.
Twin needle No. 14	Calico, silk, serge, cotton cloth and light woolen goods.	No. 50-80 cotton thread or ordinary silk thread.
No. 11 SS scarfed needle	Jersey, tricot and all synthetic stretch materials.	No.60-100 nylon thread, or No.100-150 silk or cotton thread.

NOTE: Use a good quality mercerized cotton thread, if available, to avoid shrinking when laundered.

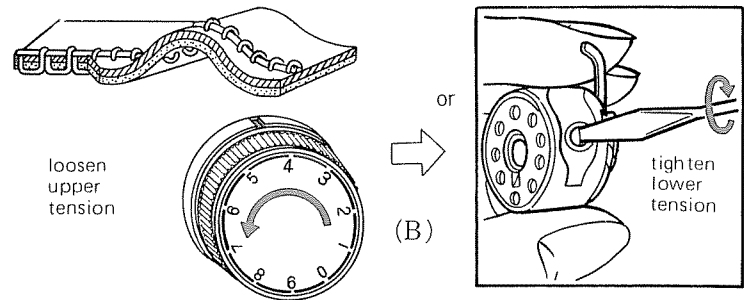
TO REGULATE THREAD TENSIONS



Correct tensions are important for the good appearance of the stitches. If the tensions are not correct, the result will be imperfect stitching. Adjust the tensions as illustrated.



If the lower thread lies in the straight line underside of the fabric, this indicates that the top tension control is too weak. Setting this to No. 5 or higher will usually rectify the stitch.



If the upper thread lies in the straight line on top of the fabric, this indicates that the top tension control is set too tight. Setting this to No. 5 or lower will usually rectify the stitch. If the fault persists, it may be necessary to tighten the lower tension as illustrated (B).

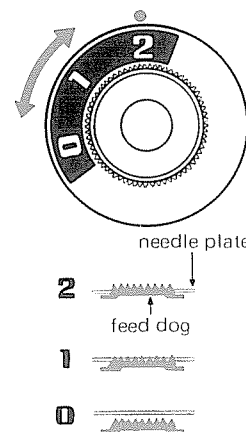
TO USE DROP FEED DEVICE

The drop feed device should be adjusted according to thickness of the cloth.

For sewing average or heavy materials, turn the drop feed knob to “2”.

For sewing light materials like silk, nylon, etc, turn the knob to “1”.

When the knob is turned to “0”, the feed drops below the surface of the needle plate, and you can move freely the cloth for darning or embroidery.

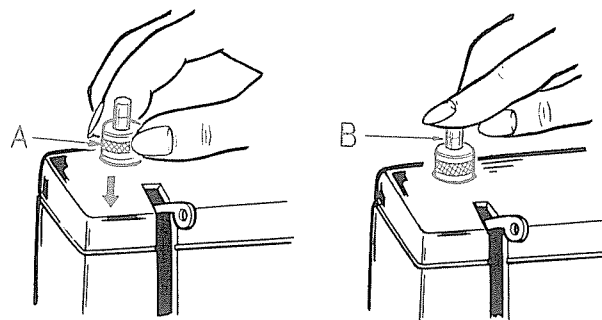


TO ADJUST PRESSURE ON PRESSER FOOT

To release pressure of the foot, press down the ring (A), which will allow the regulator to spring up to its highest position and leave the material free from any pressure from the presser foot.

For sewing thin or light fabrics, press the top of the regulator (B) down slightly to get the required light pressure on the fabric.

For sewing thicker or heavier fabrics, push the top of the regulator down further, in order to get a stronger pressure on the presser foot on the fabric.



TO REGULATE LENGTH OF STITCH AND DIRECTION OF FEED

To regulate stitch length :

Set the line on the stitch length regulator knob against desired number on the stitch length indicator. The numerals represent the stitch length. Lower the numerals, shorter the stitch length.

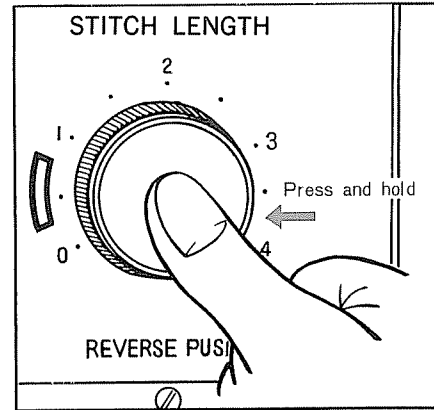
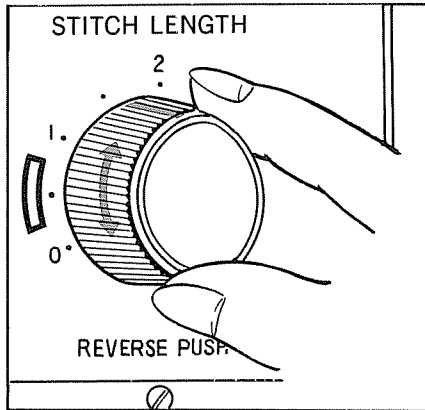
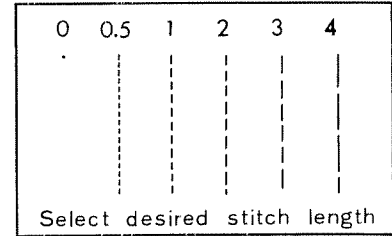
To sew in reverse :

Press the reverse feed knob as far as it will go and keep it in position until desired number of stitches are sewn. Reverse sewing will continue as long as the reverse feed knob is pressed.

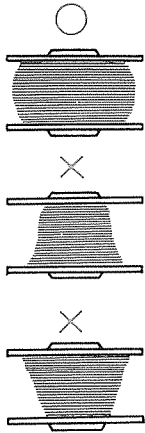
When the reverse knob is released, the machine will return to forward sewing.

Note :

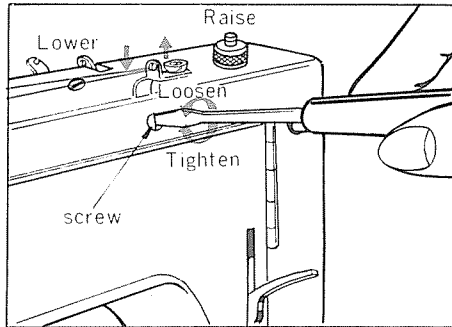
The reverse sewing is very useful when you need a reinforced sewing.



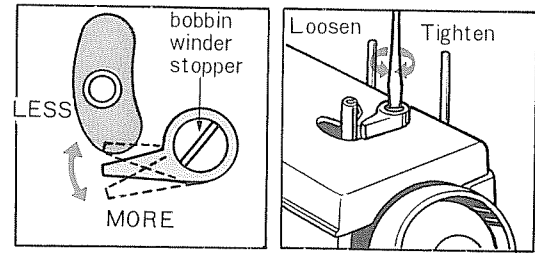
TO ADJUST BOBBIN WINDER



1. The bobbin must be wound evenly.
2. When the bobbin is wound excessively on the lower part of the bobbin, loosen the screw and then raise the top cover thread guide slightly.
3. When it is wound excessively on the upper part of the bobbin, lower the top cover thread guide slightly.




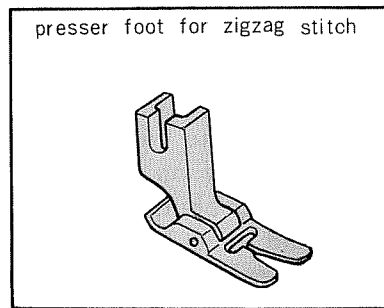
Note: After adjustment, tighten the screw firmly to reset the thread guide.



Note: The bobbin winder stopper should be so adjusted that the thread is not wound too fully in the bobbin. When the bobbin is wound fully, the bobbin will stop automatically. If not, adjust the position of bobbin winder stopper as illustrated above.

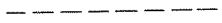

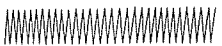


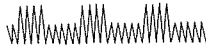

MANUAL ZIGZAG SEWING

presser foot	zigzag presser foot
pattern selector	
stitch width	0 ~ 5
stitch length	0.5 ~ 4



Note: Make sure that presser foot is for zigzag stitch.

By manually adjusting the stitch length and stitch width while running the machine some beautiful ornamental stitches can be made as follows.

Patterns	Stitch Length	Width	Patterns	Stitch Length	Width
	any length	0		any length	slowly 0 to 5 and quickly to 0
	short	5		long and short (repeat)	any width
	any length	1~5		any length	2.5-2
	any length	0.5-0			













AUTOMATIC ZIGZAG SEWING

Special pattern forming cams are built in your machine for the following utility stitches.

presser foot	zigzag foot
pattern selector	any pattern
stitch width	M or 0 ~ 5
stitch length	0.5 ~ 4

Note:

To set dials, please follow the instructions given on applicable pages for each particular type of sewing.

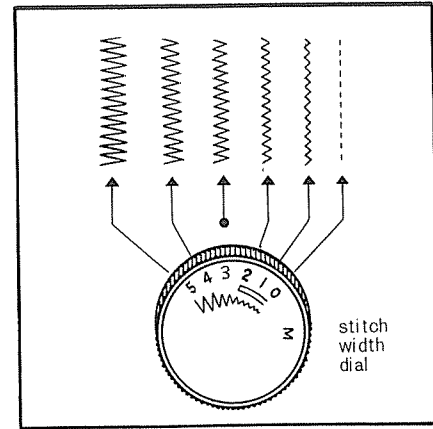
Symbols	Patterns	Stitch Length	Stitch Width	Symbols	Patterns	Stitch Length	Stitch Width
		0.5 ~ 4	0 ~ 5			4	5
		0.5 ~ 4	5			4	M
		4	5			0.5 ~ 4	3 ~ 5

ZIGZAG WIDTH REGULATOR

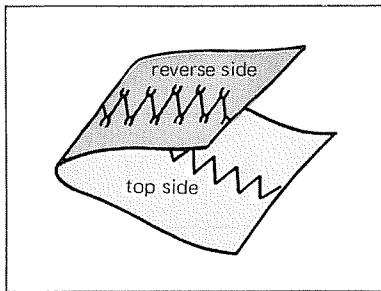
The width of zigzag stitch can be adjusted by means of the zigzag width regulator dial.

Numerals from “0” to “5” on the dial indicate the width of zigzag sewing.

The lower the numeral, the narrower the stitch width.



THREAD TENSION FOR ZIGZAG SEWING






To obtain better zigzag stitches, the upper tension should be slightly weaker than in the case of straight sewing. The upper thread should appear slightly on the reverse side of the material.

- * The selection of the thread tension depends on the type of the materials. Before you start sewing, please test the thread tension if it is suitable for “buttonhole sewing”, “button sewing” or “embroidery” by sewing a sample material.

TWIN NEEDLE SEWING

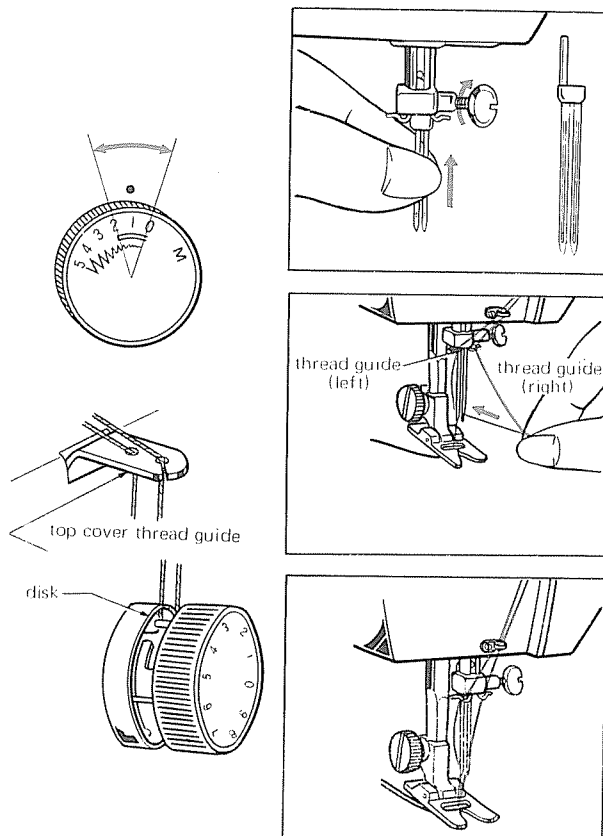
Colorful patterns are sewn with a twin needle using two thread of contrasting colors.

presser foot	zigzag foot
pattern selector	 or 
stitch width	
stitch length	0.5 ~ 1

1. Set the stitch width between “0-2” and do not set over “2” to avoid needle breaking.
2. Insert the twin needle correctly as the same way as you do with the single needle.
3. Place two spools of threads on the spool pins.
4. Separate the threads through the eyes of top cover thread guide and between the tension disks.
5. Then pass through the hole in the take-up lever together.
6. Separate the threads again through the thread guides either side of the needle bar.

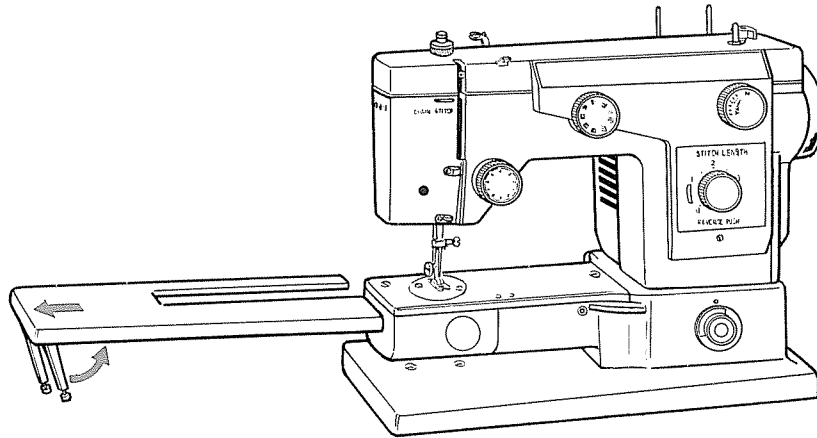
Note: † In turning the cloth at the corner, keep the needle up from the material.

‡ Otherwise the needle will break or bend.

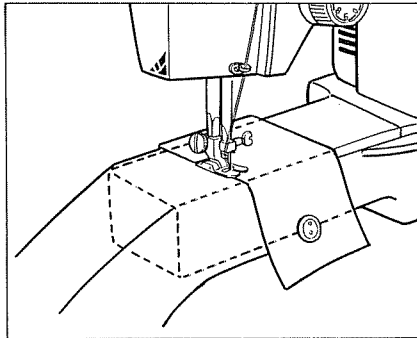


TO SEW TUBULAR AREAS

The free arm feature of this machine is particularly suitable for sewing and darning tubular areas such as sleeves, trousers, socks, etc.

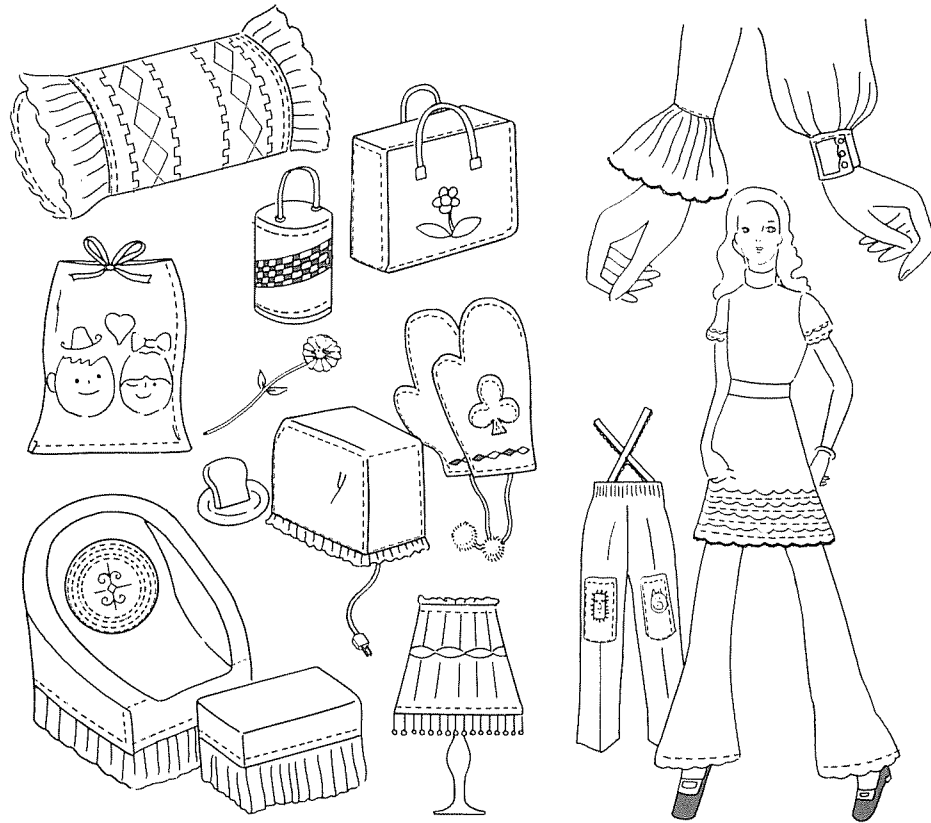


*Sewing procedure:



Insert the tubular fabric in the free arm, lower the presser foot and commence sewing. Guide the cloth gently with your hands.

APPLICATIONS OF FREE ARM FEATURE



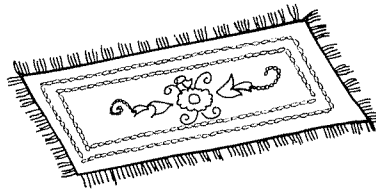
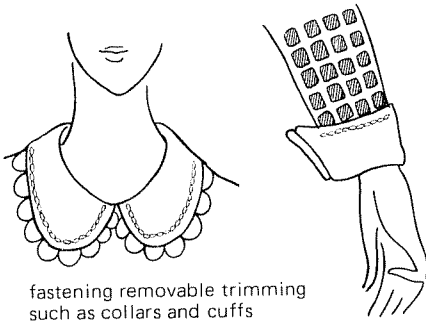
In this section you will find illustrations of ideas where the free arm of your machine will be an aid to your sewing skill.

CHAIN STITCH

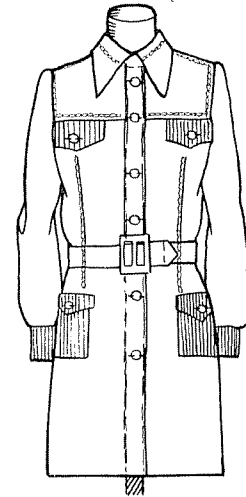
Single-thread chainstitching looks like regular straight stitching on top, but is a series of interlocking loops on the underside of the fabric. Because the stitches are formed by only upper thread, the stitches unravel easily with just a pull on the thread end. Chain stitch is useful for basting, embroidery, etc.

presser foot	buttonhole foot
pattern selector	W
stitch width	M
stitch length	2 ~ 3

- * Chainstitch is only sewn with single needle. Also it cannot be sewn in reverse.
- * Use of No.50 mercerized cotton and silk are recommended.

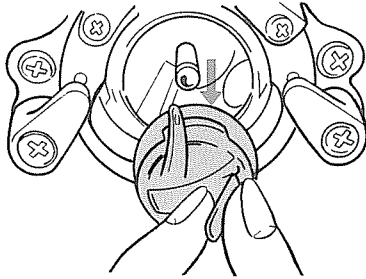


fancy works

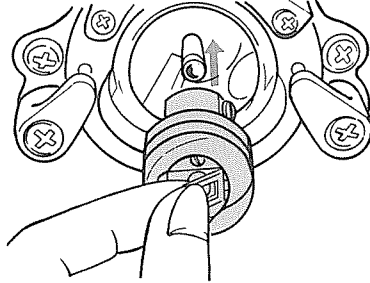


basting

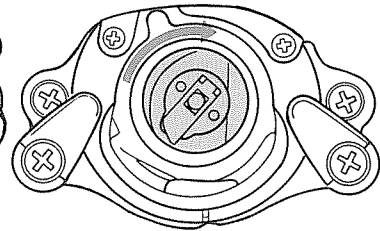
TO INSERT CHAIN LOOPER



Take out bobbin case

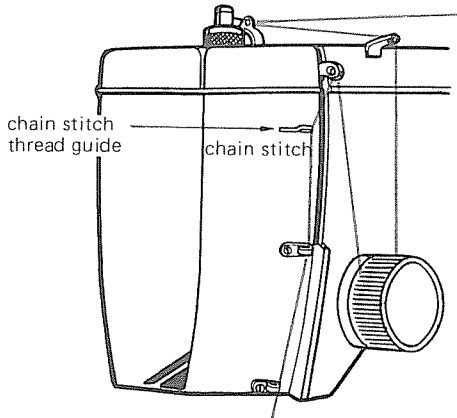


Insert the chain looper



Turn the chain looper clockwise until it stops with a click.

*To take out the chain looper, pull it towards you.



TO THREAD FOR CHAINSTITCHING

Sew in the same procedure as the straight stitch sewing except to pass the thread from take-up lever through chain stitch thread guide.

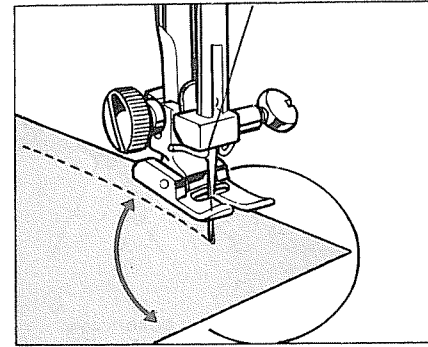
Draw about 10 inches of thread through the eye of the needle before you start sewing.

TO START SEWING

Lower the presser foot and turn the balance wheel towards you slowly to sew the first two or three stitches.

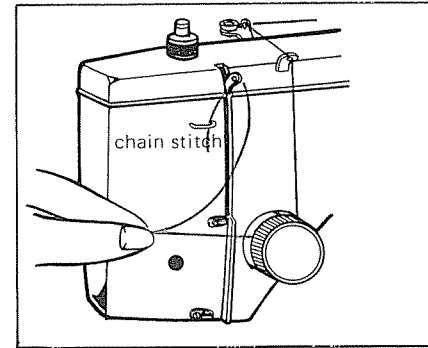
TO TURN CORNER

1. Stop sewing with the needle at its lowest point and raise it again with the needle hole just peeping out of the fabric.
2. Lift the presser foot, turn the fabric around the needle and lower the presser foot again.
3. Turn the balance wheel towards you to sew a few stitches and continue sewing.



TO FINISH SEAM

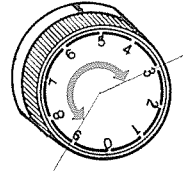
1. Make sure the take-up lever is in its highest position.
2. Raise the presser foot. Pull the thread between the thread tension regulator and the take-up lever, and loosen the needle thread.
3. Draw the slackened needle thread under the presser foot. Hold the loop and cut the thread close to the end of the stitching.
4. Remove the fabric from the machine by pulling it straight back, away from you. This will cause the thread end to pull through the fabric to the underside and form a temporary lock.



TO REGULATE THREAD TENSION

To sew chain stitch, set the thread tension regulator between 3 and 9.

A little stronger tension is recommended.



correct tension



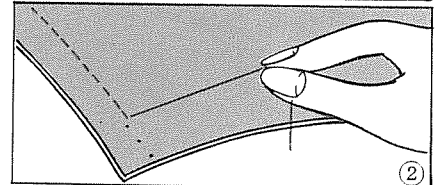
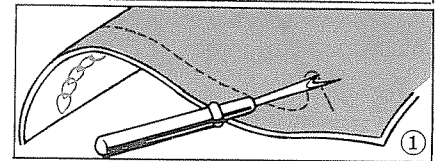
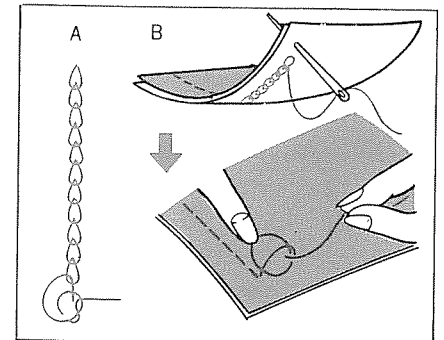
tighten the tension



loosen the tension

TO LOCK THREAD

If you wish to secure the temporary lock made when to finish seam, fold the thread end back over the chain and fasten with hand stitching as illustrated.



TO REMOVE SEAM

1. Pick up the freed thread end from the top surface of the fabric with a seam ripper or the like.
2. With this free thread end the entire line of stitching can be removed by a single pull.

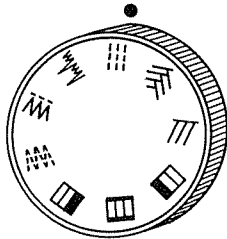
STRETCH STITCH SEWING OR TRIPLE STRAIGHT STITCH

If you want to sew stretch materials, this type of stitches enables you to prevent thread breakings and frayings. It is also useful for sewing stitches, such as crotch depth, pockets, etc., or any part of a garment where there is extra stress or pull.

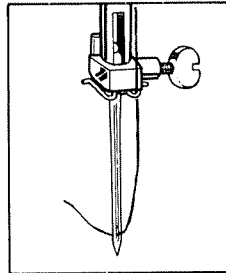
presser foot	straight foot
pattern selector	
stitch width	M
stitch length	4

Note:

- * First set the stitch length dial at “4”, then turn the other dials.
- * To set the machine from stretch stitching to zigzag stitching, be sure to set the stitch width dial at “5” before moving other dials.



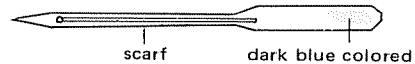
pattern selector

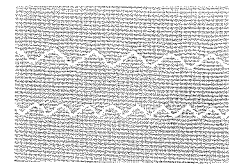


When sewing TRIPLE STRAIGHT STITCH, thread the needle as shown above.

WHEN SEWING STRETCH MATERIALS

- * The scarfed needle as shown below is also used to prevent skipped stitches in sewing stretch materials like jersey or tricot.
- * In order to maintain the shape when using stretch material, use of lining is advisable.






TRICOT STITCH OR MULTIPLE ZIGZAG SEWING

Tricot stitch is well suited for mending such as rents and tears.

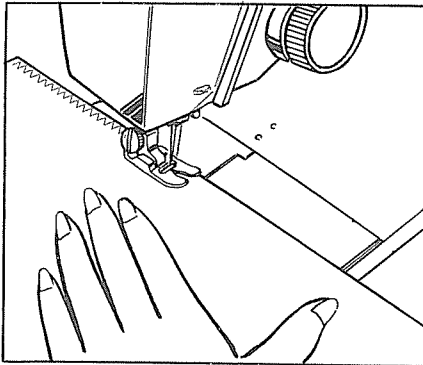
This is also useful for the reinforcement and application of elastic materials.

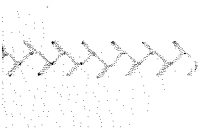
presser foot.....	zigzag foot
pattern selector	
stitch width.....	5
stitch length	0.5 ~ 4

1. Make sure that presser foot is for zigzag stitch.
2. Set the dials as shown left.
3. Commence sewing.

Note :


- * In order to maintain the form or shape of the stretch material, the use of lining is recommended wherever possible.
- * To set the machine from tricot stitching to zigzag stitching, be sure to set the stitch width dial at "5" before moving the other dials.





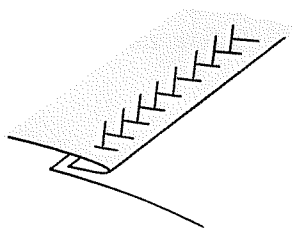
FEATHER STITCH SEWING

Feather stitch is effective as an ornamental stitch when used for mending such as rents and tears.

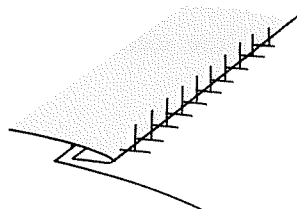
presser foot	zigzag foot
pattern selector	
stitch width	5
stitch length	4

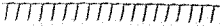
Note:

- * First set the stitch length dial at “4” then turn the other dials.
- * To set the machine from feather stitching to zigzag stitching, be sure to set the stitch width dial at “5” before moving the other dials.
- * This stitch is also suited for sewing stretch materials.




or





OVERCASTING

You can make neat, durable finish for raw-edge seams, especially in bulky fabrics or ones that fray easily.

presser foot	zigzag foot
pattern selector	
stitch width	5
stitch length	4

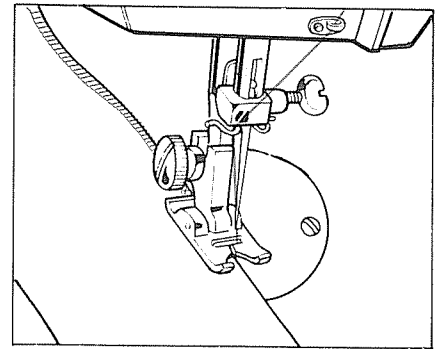
1. Place fabric under foot so that the stitches will be made over the hem.
2. Lower the presser foot and start to sew overcasting.
3. Gently guide the fabric as shown right.
4. Make a test sample to determine correct stitch setting.

Note:


Overcasting will be done most successfully when the right side stitches of zigzag fall slightly off the edge of the cloth.

Note:

- * First set the stitch length dial at “4” then turn the other dials.
- * To set the machine from overcasting to zigzag stitching, be sure to set the stitch width dial at “5” before moving the other dials.



TO SEW BLIND STITCH HEM

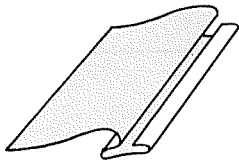
presser foot	zigzag foot
pattern selector	
stitch width	3 ~ 5
stitch length	0.5 ~ 4
attachment	BS hem guide

1. Turn the balance wheel until the feed dog goes down below the needle plate level.
Lower the presser foot.
2. Then loosen the presser foot thumb screw to insert the blind stitch hem guide between the screw and the presser foot.
3. Tighten the presser foot thumb screw making

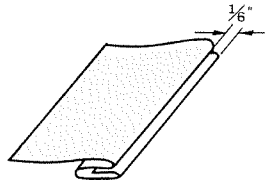
sure that the guide (A) is placed in the middle of the toes of the presser foot.

4. With the fabric inside out, fold it to the desired size of hem. (No. 1)
5. Fold it again leaving a margin of 1/6 inch on the bottom fold (B). (No. 2)
6. Place the fabric under the presser foot with the double fold line against the left side of the blind stitch hem guide.
7. Lower the presser foot and sew as you feed the double fold (C) along the guide.
8. Unfold the fabric and you will have a blind stitch hem. (No. 3)

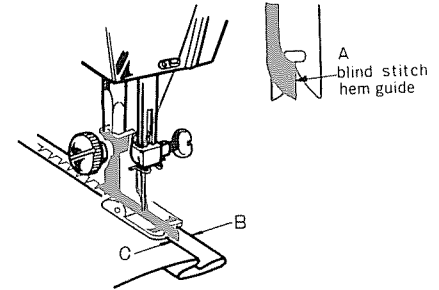
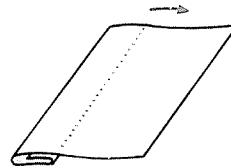
No. 1

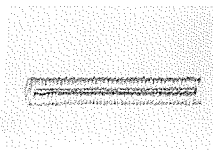


No. 2



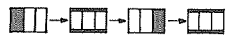
No. 3

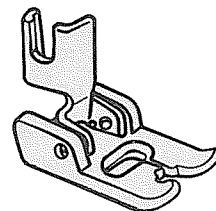




BUTTONHOLE SEWING

The buttonhole stitch maker built into this machine will enable you to sew a buttonhole in a short time without turning fabric.

presser foot	buttonhole foot
pattern selector	
stitch width	5
stitch length	0.3 ~ 0.8



Replace the presser foot with the plastic buttonhole foot.
 With a pencil or tailor's chalk, mark the position and the length of the buttonhole on the fabric.
 Set the stitch length regulator knob at any point within the mark (Fig. 1) depending on what kind of satin stitches you may require.
 (Coarse stitches for a heavy material and fine stitches for a light material are suggested for buttonhole sewing.)

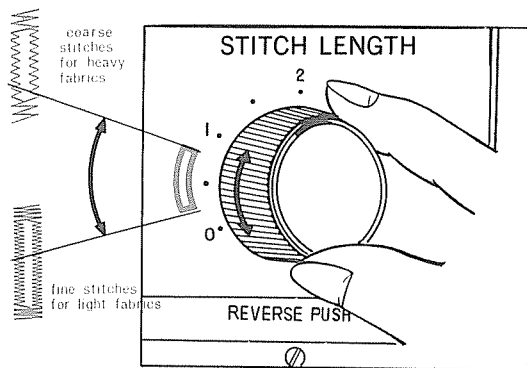


Fig. 1

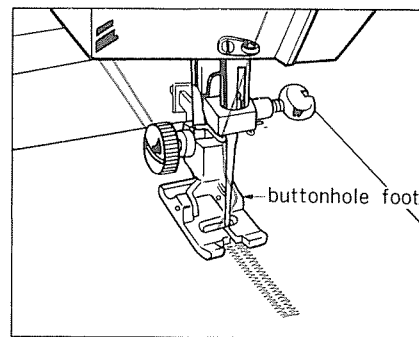




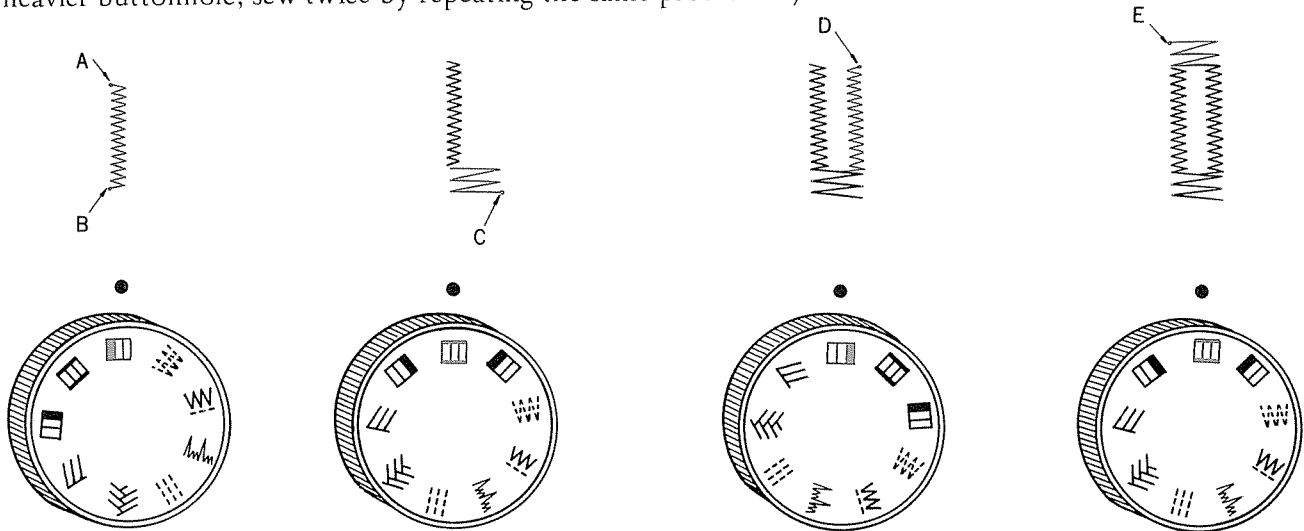
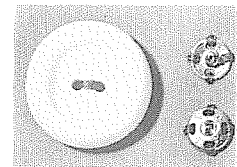


Fig. 2

TO SEW BUTTONHOLE

1. Set the buttonhole knob at “” and turn the balance wheel towards you until the needle comes to point (A).
2. Sew slowly until a desired length is sewn and stop the machine at the point (B).
3. Set the buttonhole knob at “” and sew about five stitches until the needle comes to the point (C).
4. Set the buttonhole knob at “”, sew until the right row is as the same size as the left one and stop the machine when the needle comes to the point (D).
5. Set the buttonhole knob at “” and sew about five stitches until the needle comes to the point (E).
6. To lock the thread, set the zigzag width regulator knob at “0” and sew a few stitches.
7. Cut the slot of the buttonhole with a seam ripper carefully not to cut through the bar tacks. (To make a heavier buttonhole, sew twice by repeating the same procedure.)





SEWING ON A BUTTON

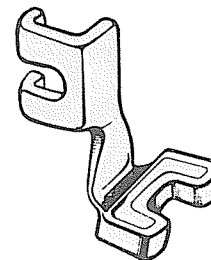
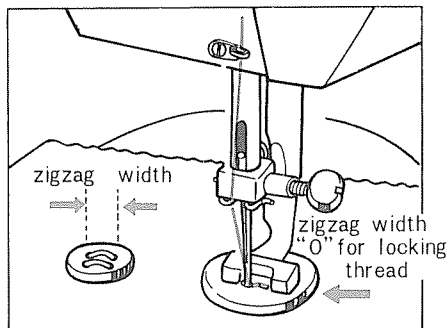
presser foot	button sewing foot
pattern selector	W
stitch width	distance between the holes
drop feed	0

1. Replace the presser foot with the button sewing foot.
2. Place a button on the fabric with its hole in horizontal line and the left side hole underneath the needle.
3. Set the zigzag width knob at "0" and see if the needle drops into the left hole of

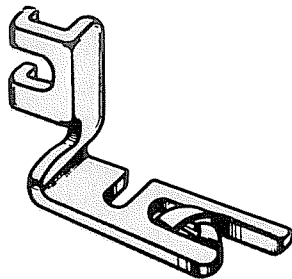
the button by turning the balance wheel towards you slowly.


4. Lower the presser foot on the button.
5. Set the zigzag width knob in accordance with the distance between the holes in the button so that the needle drops in the right hole of the button.
6. Sew five or six stitches slowly.
7. To lock the thread, set the zigzag width at "0" and make three or four stitches.

Note: Hooks are also sewn on by the same procedure.



TO USE HEMMER



presser foot	hemmer foot
pattern selector	
stitch width	M
stitch length	1 ~ 4

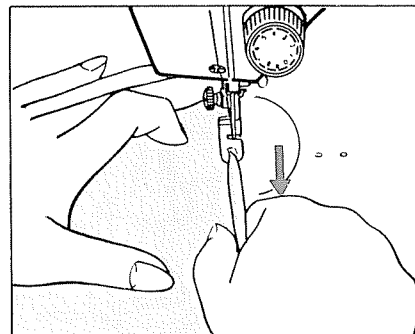
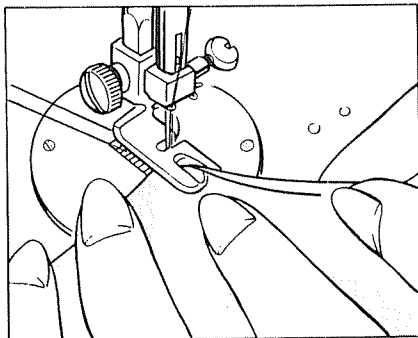
Cut the right corner of the cloth to a point little so that it can be easily inserted into the hemmer.
Folding the edge of the cloth a little, insert it into the mouth of hemmer.

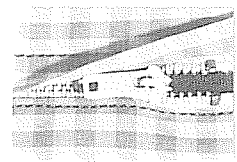
Lower the hemmer foot on the cloth and start stitching slowly.

While sewing, hold the cloth carefully so that it is sufficiently fed into the mouth of hemmer.


When the cloth slips out of the mouth of hemmer, move the cloth to the right.

When the cloth is rolled up excessively, move it a little to the left.





SEWING IN A ZIPPER

presser foot	zipper foot
pattern selector	
stitch width	0
stitch length	1 ~ 4

Using the double purpose zipper foot (zipper and quilter) included in the accessories, you can sew zippers on the fabric.

Loosen the screw (A) to take off the hook shaped quilter attachment (C) from the zipper foot. Attach the zipper foot to the presser bar in

place of the presser foot.

Pin or baste zipper to fabric and place the work in position under the presser foot.

Loosen the thumb screw (B) to set the foot on the left side of the needle, and sew the left side zipper as shown (Fig. 2).

To sew the right-side zipper, loosen the screw and bring the foot (D) to the right side of the needle.

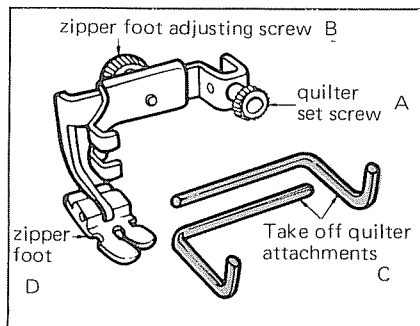


Fig. 1

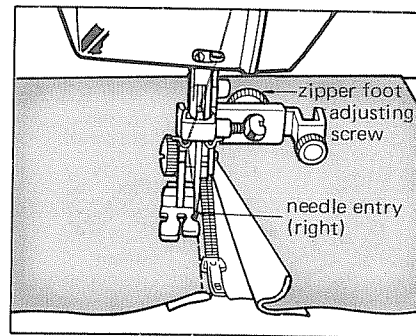


Fig. 2

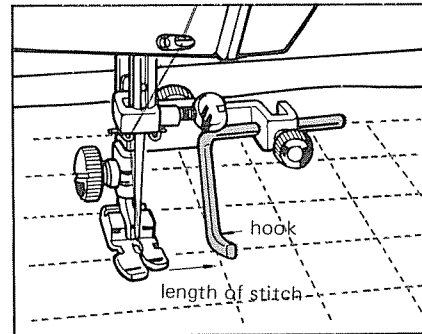
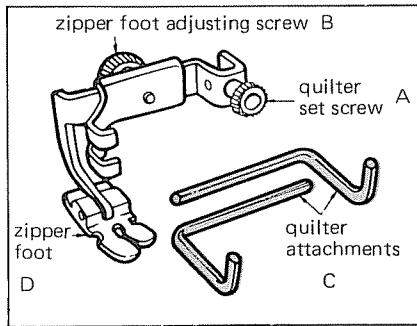
TO USE QUILTING ATTACHMENT

presser foot	zipper foot
pattern selector	W
stitch width	0
stitch length	1 ~ 4

The quilting attachment (C) will enable you to sew parallel lines on padded fabrics without the necessity marking them in advance.

There are two kinds of quilters in the accessories to be attached to the right or left side of the clamp on the zipper foot depending on the distance between the parallel lines.

To attach the quilter to foot, loosen the thumb screw (A) and clamp the quilter by the thumb screw. Adjust the curved hook to the desired distance from the needle and adjust it to press into the fabric. When sewing, the hook should follow the preceding line of stitching.





CLOTH GUIDE

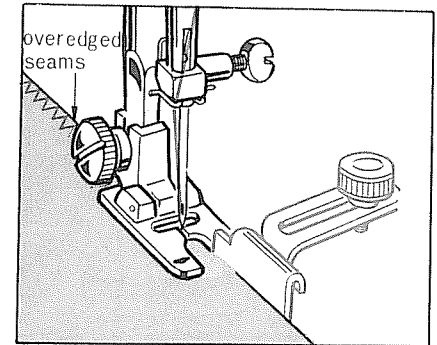
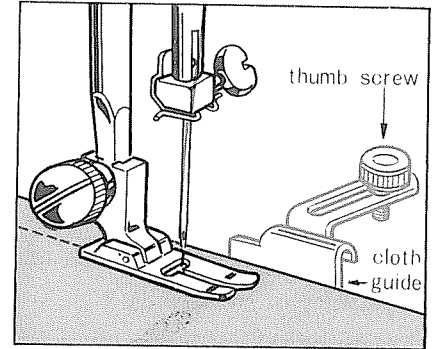
The cloth guide is used for stitching close to the edge of the fabric, or to make a wide hem up to 1½ inches in a straight and uniform line.

1. Place the guide in the holes to the right of the needle plate and tighten the thumb screw firmly, adjusting the guide to the desired position.
2. Run the machine with the edge of the fabric touching the guide.

Note: You can also make overedged seams using the cloth guide.


This sewing assure the durable finish of the cloth if the fabric is likely to ravel.

Lower the presser foot and lock the zigzag width knob at a certain width so that right side stitches of zigzag fall slightly off the edge of the cloth.





EMBROIDERY

presser foot	take off
pattern selector	
stitch width	0
drop feed	0

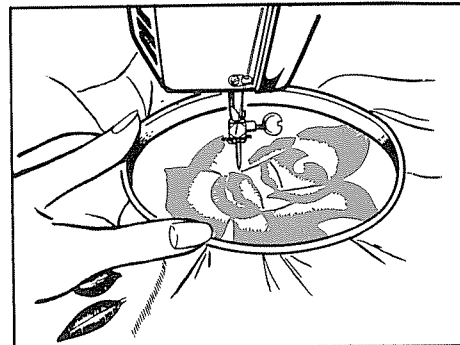
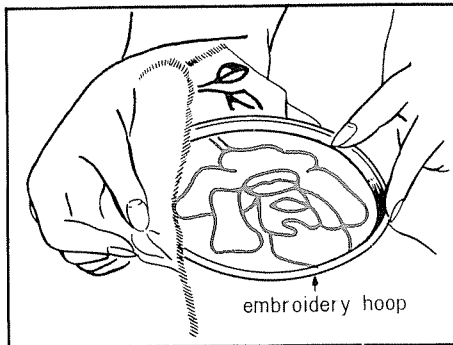
Set the drop feed knob at “0”.

Then lower presser bar lifter and draw your desired design on the fabric with a pencil or tailor’s chalk. Embroidery will be done most successfully when the fabric is stretched and fixed in an embroidery hoop.

Hold the hoop closely on the machine bed with both hands, press the material with your left forefinger in the vicinity of the needle.

While moving the hoop slowly with the left hand following the design in the fabric, move the zigzag width knob to change the width.

(Make tension of the upper thread as weak as possible lest the lower thread be pulled up to on the surface.)



TO REMOVE TOP COVER

Loosen the top cover set screw with a screw driver included in the accessories and then the top cover will be taken off easily.

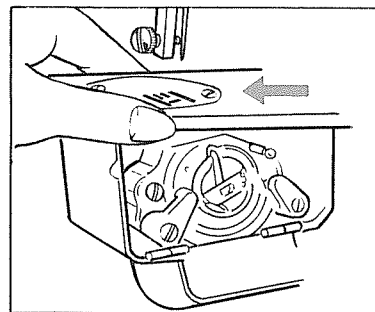
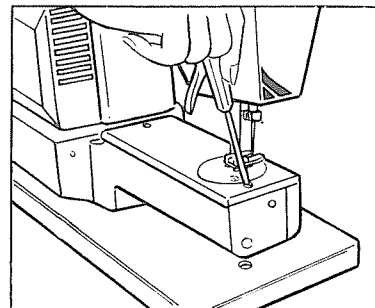
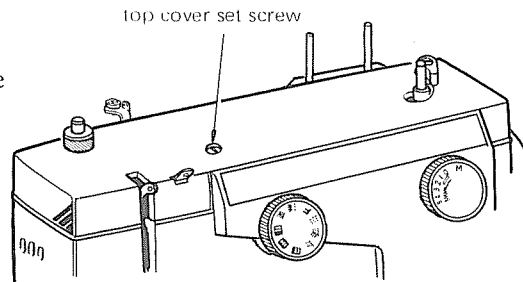
TO REMOVE BED COVER

Raise the needle and remove the foot holder.

Set the drop feed knob at “0” to lower the feed dog.

Then loosen the bed cover set screw and open the bed cover.

Draw the bed cover to the left taking care not to scratch the needle plate.



TO CLEAN FEED DOG

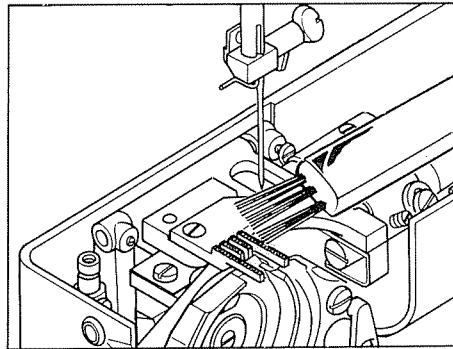
It is necessary to keep the feed dog teeth always cleaned in order to ensure smooth sewing.

Raise needle and take off foot holder.

Unscrew the bed cover set screws with a driver to take off the bed cover from the machine bed.

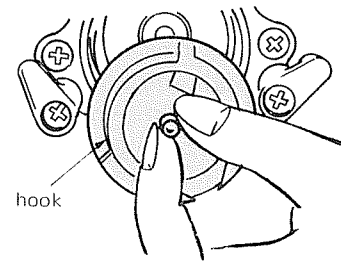
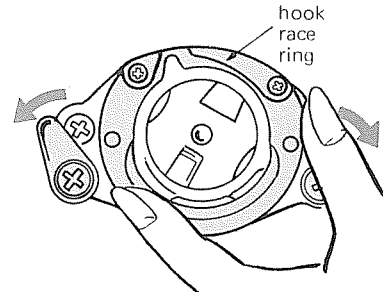
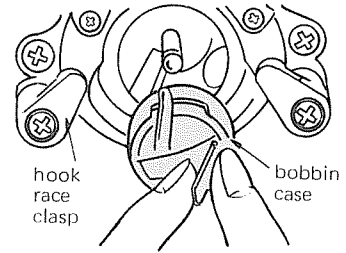
With a brush, clean out dust and lint clogged on the feed dog teeth.

Reset the bed cover.



TO DISMANTLE HOOK RACE

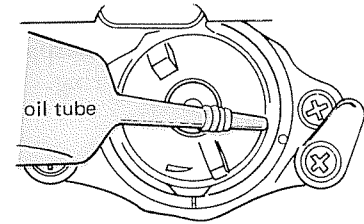
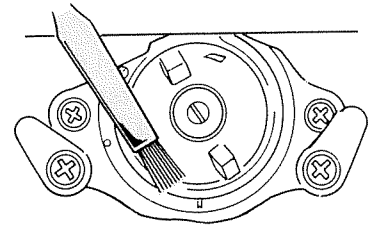
1. Turn the balance wheel towards you, raise the needle bar to its highest point and open the hook cover.
2. Remove the bobbin case by the latch.
3. Open the hook race clasps outward and remove the hook race ring.
4. Remove the hook.



TO CLEAN HOOK RACE

1. Clean the inside of the hook body with a brush. And also clean hook and hook race ring.
2. Apply a few drops of oil after cleaning.

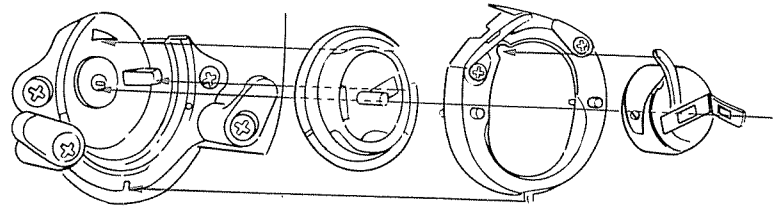
* Do not oil too much. Surplus oil will stain the bobbin thread.



TO ASSEMBLE HOOK RACE

Assemble the hook race in the reverse order.

1. Insert the hook into the machine with its tip against the red marking on the plastic hook driver so that the posts on the hook driver fit into the slots in the hook.
2. Put the hook race ring on the hook race body with its small guide pins against the hole in the hook race body.
3. Hold the hook race ring with the race clasps.

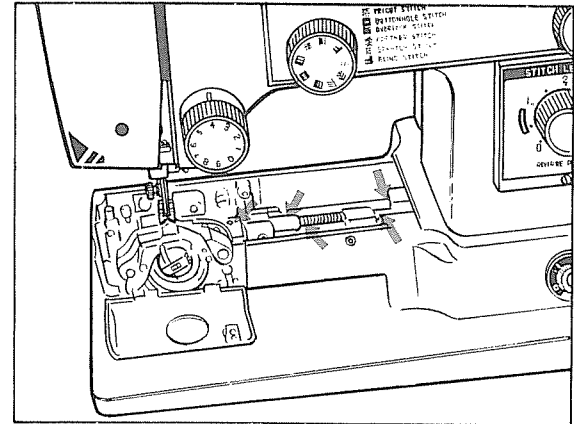
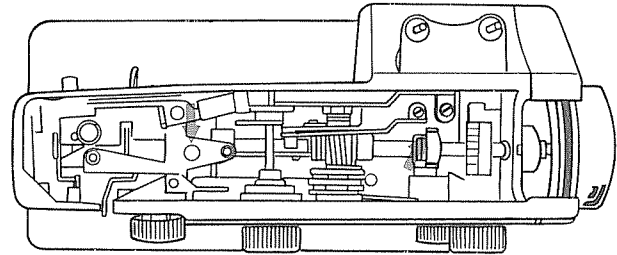
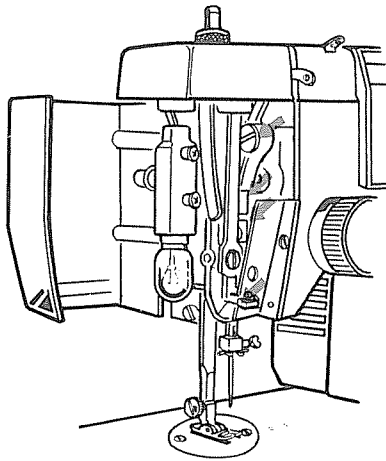


TO OIL MACHINE

Apply a few drops of fine quality sewing machine oil to the points indicated by the arrows in the figures. For a machine in constant use, oil two or three times a week.

In case the machine does not work smoothly due to standing idle for some time, apply a few drops of kerosene at the oiling points, and run the machine rapidly for a minute.

Before oiling, wipe off the oiling points.



TO REGULATE BELT TENSION ON MOTOR

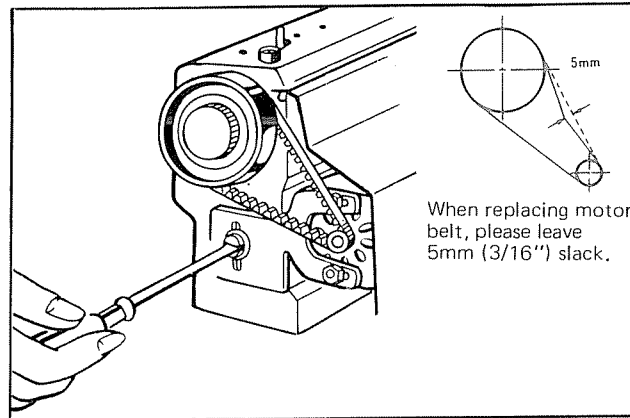
To adjust the belt tension, take off the belt cover and loosen the fixing screw about one turn with a screwdriver.

This will allow the motor to move downward or upward.

Then firmly tighten the screw, and the belt should have the correct tension.

CAUTION:

Do not tighten the belt too tightly.



UNSATISFACTORY CONDITIONS: CAUSES AND REMEDIES

THE UPPER THREAD BREAKS	
CAUSE	REMEDY
1. The needle is not threaded correctly.	Thread the needle correctly.
2. The tension is too tight.	Loosen it.
3. Something is wrong with the needle.	Replace it.
4. The thread used is too heavy for the needle.	Replace it.
5. Thread take-up spring is broken.	Replace it.
6. The needle is not set correctly.	Set it correctly.
7. The needle plate, the hook, or the presser foot is damaged.	Replace it.
THE LOWER THREAD BREAKS	
1. When the lower thread is not wound correctly, it gets entangled.	Wind it properly.
2. The lower thread is off the tension spring of the bobbin case.	Put it in its proper position.
SKIPPED STITCHES	
1. The needle is not attached to the needle bar correctly.	Attach it properly.
2. The needle is either bent or blunt.	Replace it.
3. A worn needle is used.	Replace it.
THE NEEDLE BREAKS	
1. The needle is bent.	Replace it.
2. The needle is not attached properly.	Attach it correctly.
3. The material is too thick or heavy.	Use a needle of the correct size.
4. The material is being pulled by the operator.	Do not pull on the cloth.
5. The needle is of inferior quality.	Replace it with better needle.

CONTINUED

CONTINUED

STITCHING FORMS LOOPS

CAUSE	REMEDY
1. The thread tension is not properly adjusted.	See instructions for adjustment of upper and lower thread tensions.
2. The needle is not threaded correctly and/or the bobbin is and wound properly.	Thread the needle and/or rewind the bobbin properly.
3. The weight of the material and the size of the thread are not appropriate.	See instructions covering the use of proper needle and threads with varying materials.
4. Thread take-up spring does not work well.	Replace it.

SEAMS SHRINK OR PUCKER

1. The thread tension is too tight.	See instructions for adjustment of upper and lower thread tensions.
2. The pressure of the presser foot is too strong.	See instructions for adjustment of the pressure of the presser foot.
3. Stitches are too small for the weight of the material.	Adjust the stitch length.

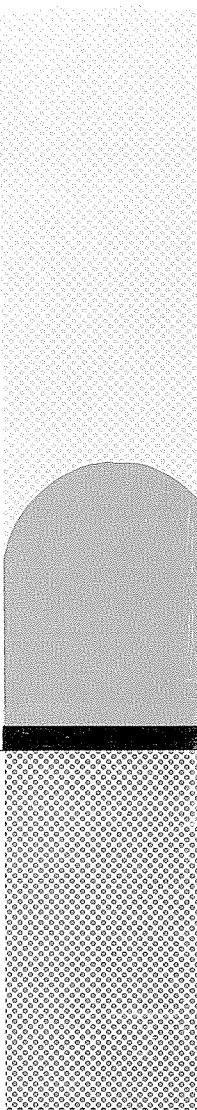
IRREGULAR STITCHING

1. The upper and lower threads are of inferior quality.	Use thread of best quality.
2. The thread is wound around the bobbin unevenly.	Rewind it.

THE MACHINE DOES NOT WORK SMOOTHLY AND IS NOISY

1. The machine is in need of oil.	Apply oil as per instructions.
2. Dust and waste thread have collected in the hook mechanism.	See instructions pertaining to cleaning the race and hook.
3. Oil of inferior quality is used and has coagulated.	Clean thoroughly and oil again with proper sewing machine oil of the best quality.
4. The tension on the belt is too tight.	Loosen the belt tension.

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