

Vintage Japanese Made Sewing Machine

UNIVERSAL DELUXE ZIG ZAG KAB

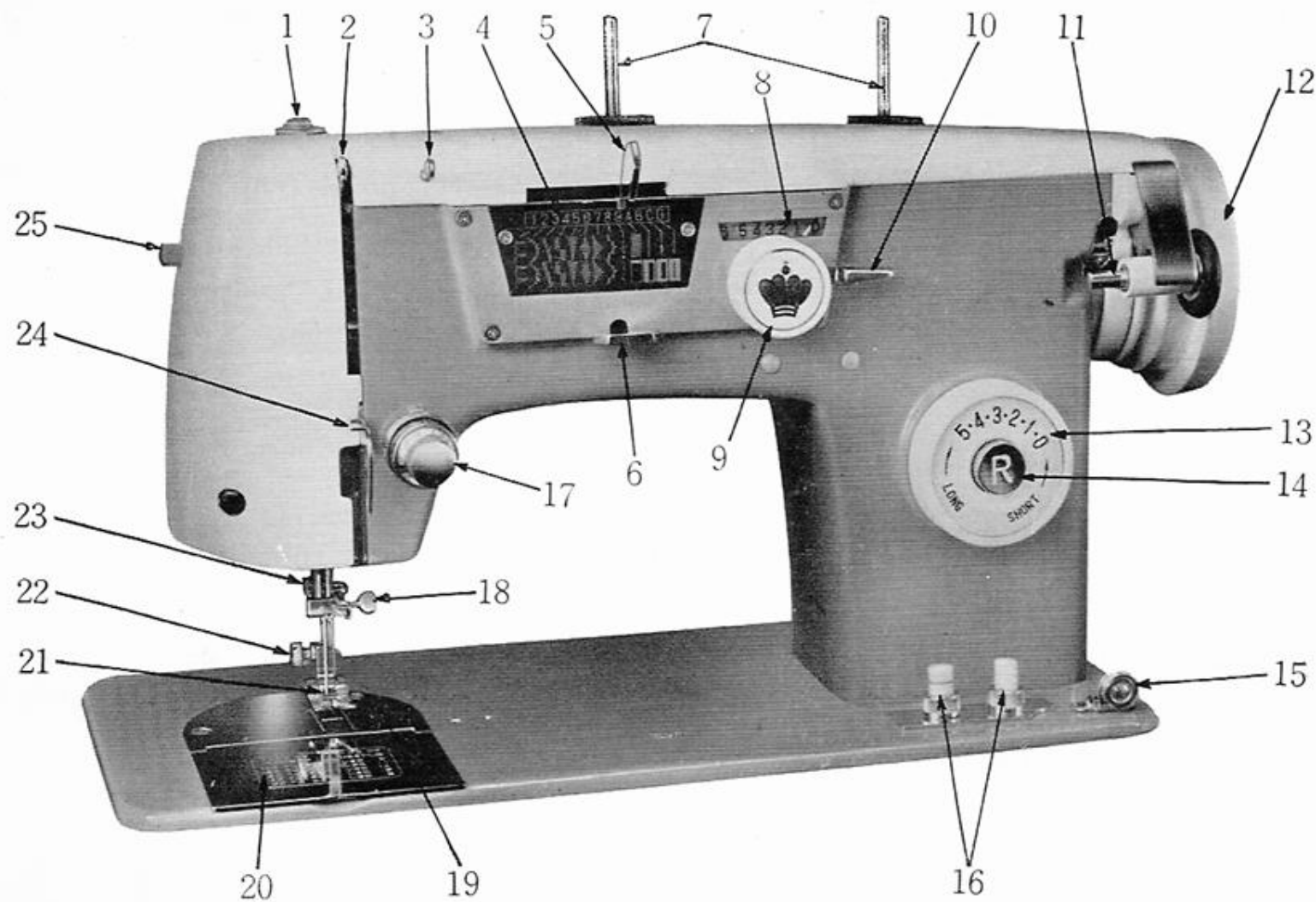
INDEX

Sewing Machine Head Picture	3
Name of Each Part	4
How to Insert the needle	5
How to Thread the Machine	6
How to Wind the Bobbin.....	7
How to Thread the Bobbin Case	8
How to Remove the Bobbin Case	9
How to Insert the Bobbin Case	9
How to Clean the Shuttle.....	10
Prepare to Sew	11
Remove the Work	11
Adjustment of the Upper and Lower Thread Tensions	12
How to Adjust the Tension of the Upper Thread	12
How to Adjust the Tension of the Lower Thread	13
How to Use the Automatic Darning	14
Drop Feed Adjustment	15
Guide to Choice of Needle and Thread	16
How to Sew with Your Machine.....	16~17
How to Regulate the Stitch Length Forward and Reverse	18

INDEX

Automatic Zigzag Sewing	18~19
Single Needle Zigzag Stitch Patterns	20
Twin Needle Zigzag Stitch Patterns	21
Automatic Zigzag Patterns	22
Twin Needle Automatic Zigzag Patterns	23
Changing Needle Plate	24
DIRECTIONS FOR USING ATTACHMENTS	
Sewing on Buttons	25
To Make Buttonholes Automatically	25~26
To Do Embroidery	27
To Use the Hemmer	28
Sewing Braids	28~29
To Use the Cloth Guides	29
How to Clean the Feed Mechanism	30
How to Keep the Machine in Good Repair	30~31
CHECK UP FOR SMOOTH SEWING	31~32
Standard Accessories	33

Sewing Machine Head Picture



Name of Each Part

1. Automatic Darner
2. Thread Take-up Lever
3. Upper Thread Guides
4. Automatic Zigzag Stitch Patterns
5. Pattern Selector Return Lever
6. Pattern Selector Lever
7. Spool Pins
8. Zigzag Width Indicator
9. Zigzag Width Regulatng Dial
10. Zigzag Width Restricting Lever
11. Bobbin Winder
12. Hand Wheel
13. Stitch Length Regulating Dial
14. Reverse Push Button
15. Lower Thread Tension Disc
16. Drop Feed Button
17. Upper Thread Tension Regulator
18. Needle Clamp Screw
19. Needle Plate for Zigzag Sewing
20. Bobbin Case Cover
21. Presser Foot
22. Presser Foot Thumb Screw
23. Thread Cutter
24. Face Plate Thread Guide
25. Lamp Switch

How to Insert the Needle

- (a) Turn hand wheel toward you to raise needle bar to its highest point.
- (b) Loosen the needle clamp screw and insert the needle so that the flat side faces the back of the machine, being sure that the top of the needle shank is up as far as it will go.
- (c) Tighten the needle clamp screw.
- (d) Turn the hand wheel slowly. If the needle is in the center of the hole in the needle plate, it is perfectly inserted.
- (e) Use same procedure when inserting the twin needle.

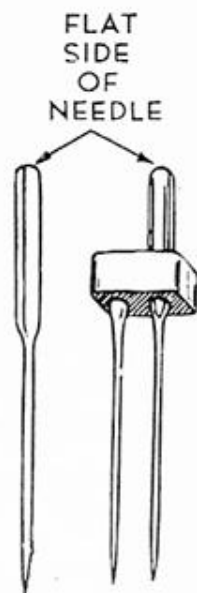


Fig. 1

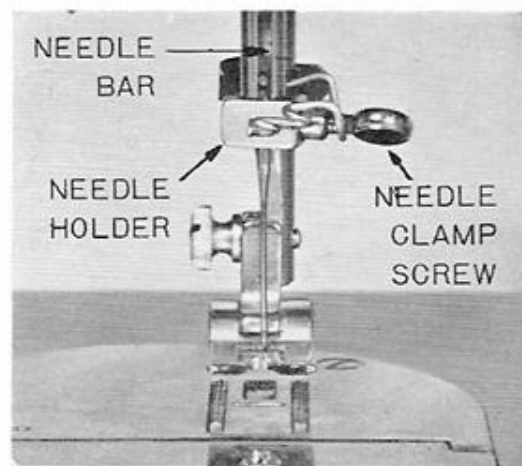


Fig. 2

How to Thread the Machine

- 1). After placing spool of thread on top spool pin (#1. Fig. 3)- and raising the take-up lever to its highest point, pull thread through the following steps from right to left:
 - 2). through eyelet of upper thread guide #2.
 - 3). down through tension discs #3.
 - 4). up into thread check spring #4.
 - 5). under the thread retainer #5 & 6.
 - 6). on up into the eye of the take-up lever #7.
 - 7). down through thread guides 8, 9 and 10.
 - 8). and through needle from front to back.
- For twin-needle threading, use two spools and follow the same procedure, placing the second thread in the guides and discs, making certain not to cross the threads.

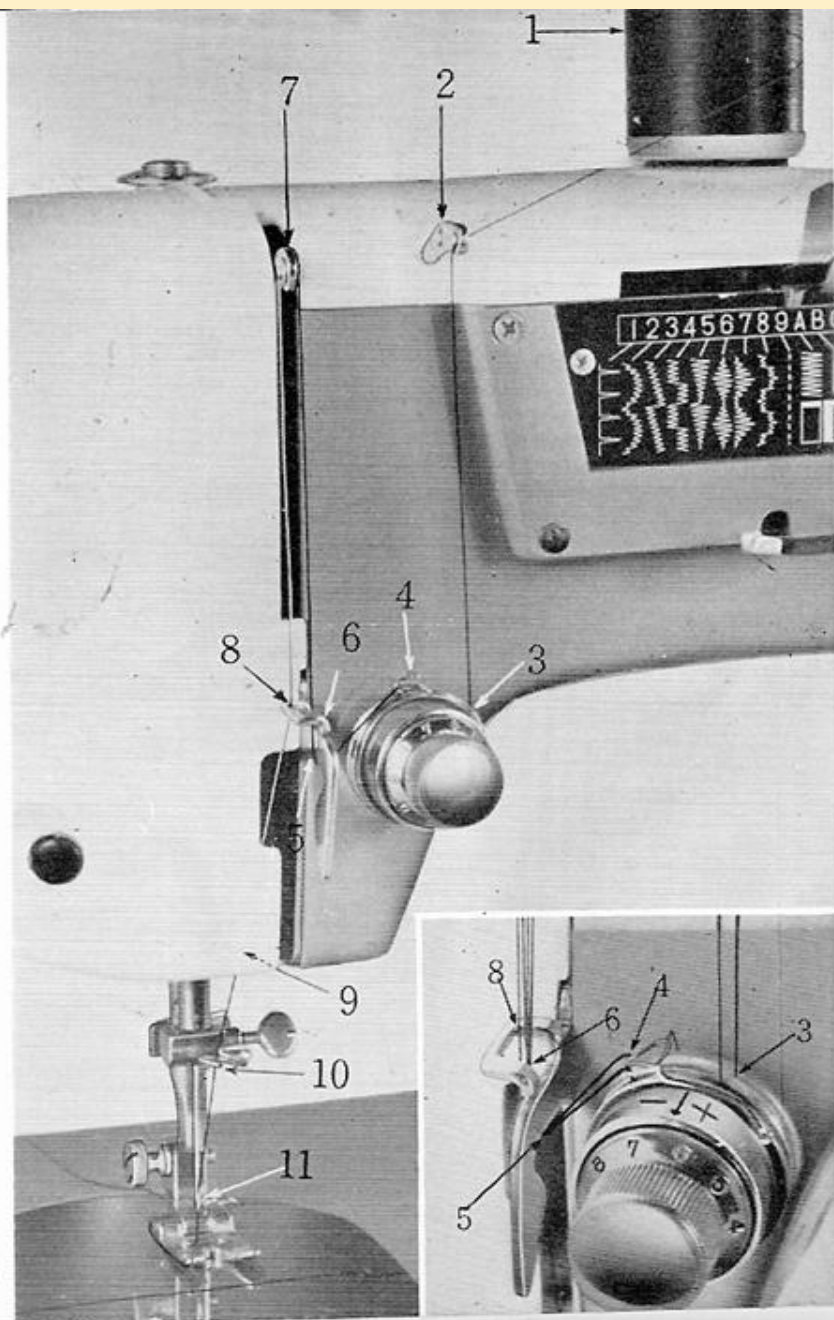


Fig. 3

How to Wind the Bobbin

- (a) Turn the clutch nut in the center of the hand wheel toward you to disengage the sewing mechanism (Fig. 4-1).
- (b) Place the spool on the spool pin pass the end of the thread through thread tension disc, from left to right, and wind the end of the thread around the bobbin seven or eight times, and place the bobbin on the bobbin winder spindle (A, Fig. 4-2). Press the stop latch adjusting plate (B), and the bobbin presser (C) comes into the bobbin. The rubbering (D) then contacts the hand wheel. The bobbin winder automatically disengages when the bobbin is about 90% full.

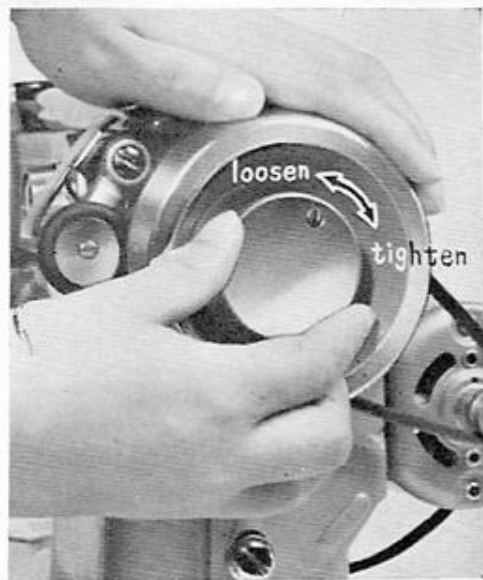


Fig. 4-1

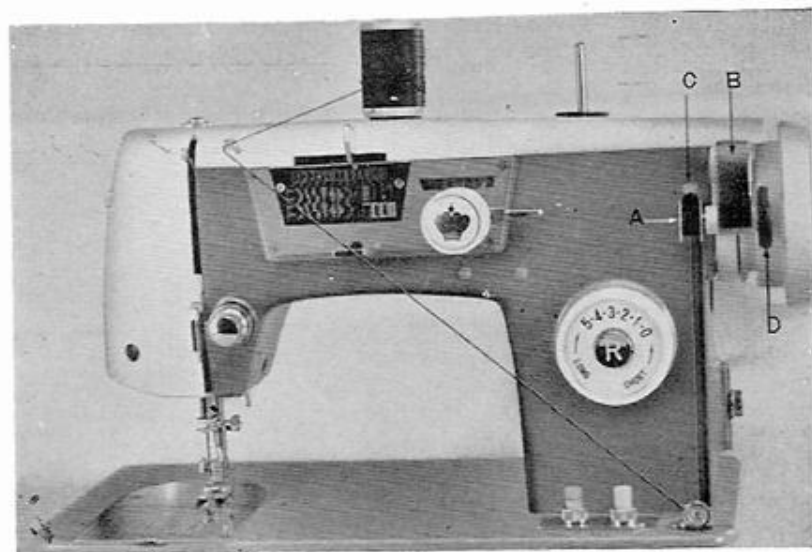


Fig. 4-2

How to Thread the Bobbin Case

- (a) Hold the bobbin in your right hand, pull out the thread about 5 inches, and pull the thread through the bobbin case.
- (b) Pull the thread through the slot in the bobbin case as indicated in Figure B, and let the thread go beneath the tension spring.
- (c) Pull out the thread, and it will come out to the position indicated in Figure C.

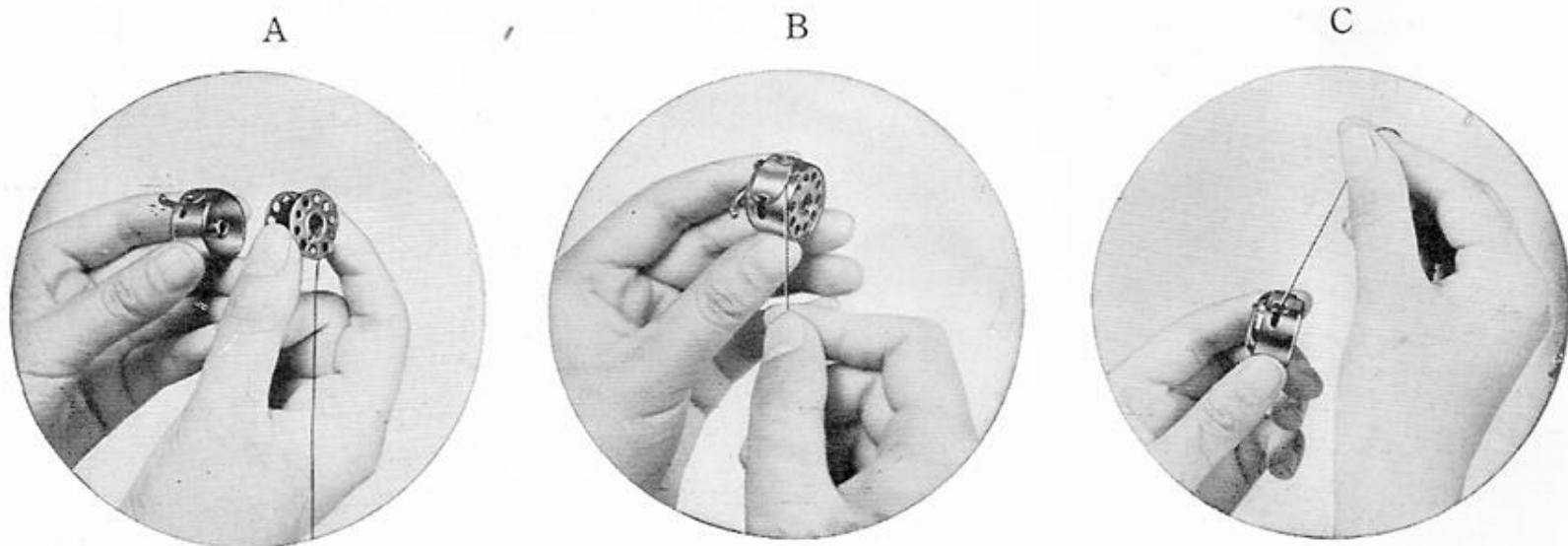


Fig. 5

How to Remove the Bobbin Case

- (a) Raise the needle bar to its highest point by turning the hand wheel.
- (b) Lift the hinge of cover plate.
- (c) Grasp the bobbin case by the latch and take it out.

How to Insert the Bobbin Case

- (a) Raise the latch and mount the bobbin case on the shuttle race. Be sure that the horn goes into the slot in the shuttle race.
- (b) Lower the latch when the bobbin case has been inserted.
- (c) Be careful not to remove or insert the bobbin case when the needle bar is lowered. The shuttle body and the shuttle race may be damaged if this warning is ignored.

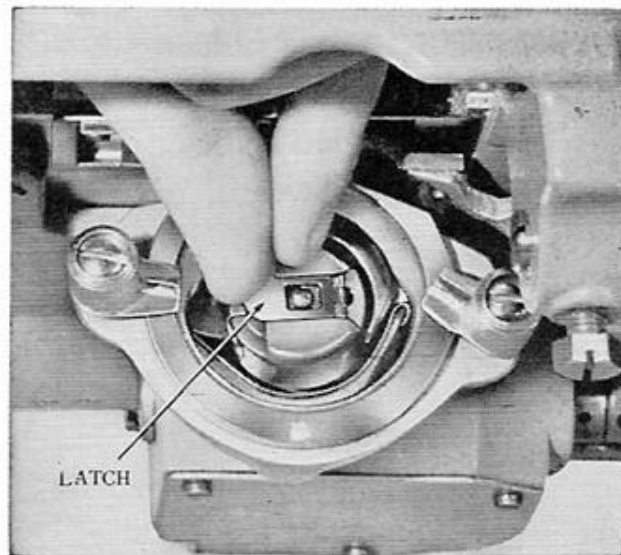


Fig. 6

How to Clean the Shuttle

The shuttle hook cover can be taken out easily and when lint and waste thread have collected in the shuttle hook cover they can be removed and the cover can be cleaned as follows:—

(a) How to Remove it

1. Turn the hand wheel and raise the needle bar to its highest point.
2. Turn the head back.
3. Remove the bobbin case.
4. Turn to the outside the two levers holding the hook cover.
5. Pull the hook towards you, and it will come out.
6. Remove all lint and waste thread.

After cleaning, parts must be oiled and wiped off with a clean soft cloth.

(b) How to Replace it

1. Replace the hook with its horn turned down on the open race.
2. Put on the shuttle hook cover.
Be sure that the setting pin is aligned so that the hook cover does not move.
3. Replace the bobbin case and turn the hand wheel slowly to be sure that everything has been replaced properly.

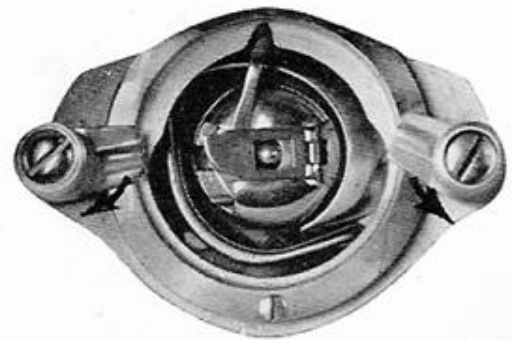


Fig. 7

Preparing to Sew

- (a) Hold the upper thread lightly in your left hand.
- (b) Turn the hand wheel toward you gently with your right hand.
- (c) When the needle bar with the thread inserted into the needle hole has been raised to its highest point, pull the upper thread, and then the lower thread will come out of the needle hole picked up by the upper thread.
- (d) Pull both the upper and the lower threads beneath the pressure foot and pull the ends to the back.

Removing the Work

- (a) When the needle bar has reached its highest point, stop sewing.
- (b) Raise the presser foot and pull the material out towards the back.
- (c) Cut the edges of the upper and lower threads, leaving about 5 inches free at the ends.

This makes it easier to resume sewing on the next seam.

Never operate the machine when it is threaded unless there is material under the presser foot.

Fig. 8

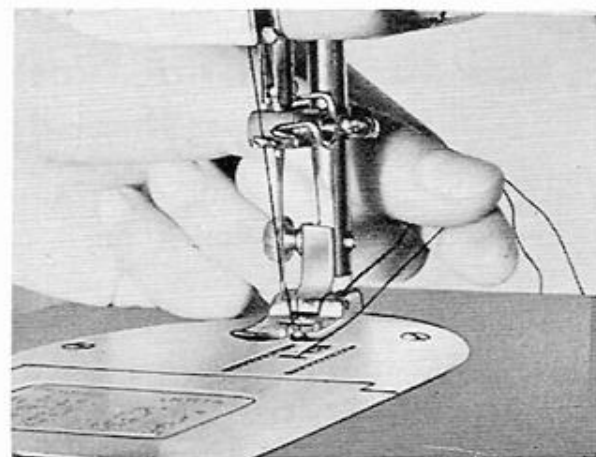
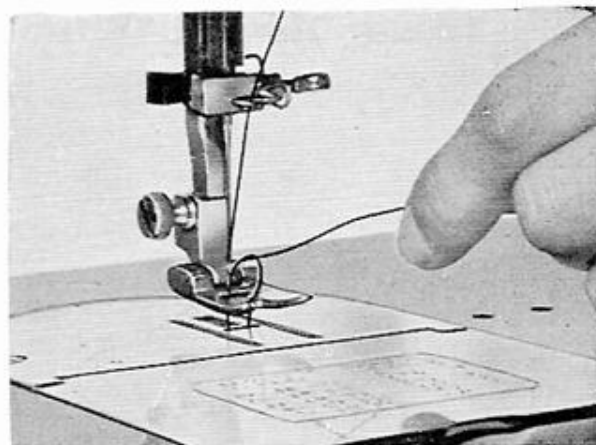


Fig. 9

Adjustment of the Upper and Lower Thread Tensions

- (a) Satisfactory seams can be produced by being sure the upper thread and the lower thread are knotted right in the middle of the two pieces of material being sewn. See Fig. 10A.
- (b) When too much tension is applied to the upper thread, the result shown in Fig. 10B is produced.
- (c) When too much tension is applied to the lower thread, the result shown in Fig. 10C is produced.

How to Adjust the Tension of the Upper Thread

- (a) Usually perfect seams can be produced by regulating the tension applied to the upper thread.
- (b) Turn the upper thread tension regulator (Fig. 11) to the right to increase the tension.
- (c) Turn it to the left to loosen the tension.
- (d) Do not turn it too far at one time of irregular seams will be produced.

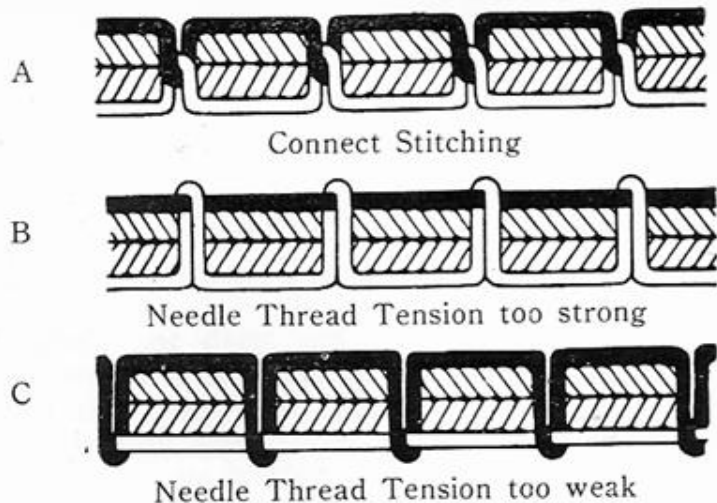


Fig. 10

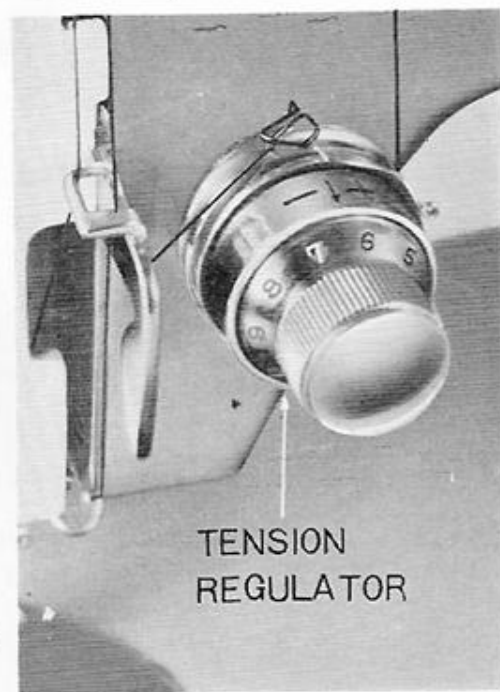


Fig. 11

How to Adjust the Tension of the Lower Thread

- (a) Ordinarily it is unnecessary to change the tension of the lower thread, but there are some fabrics that require a change.
- (b) Turn the screw in the direction indicated by the arrow in order to tighten the tension.
- (c) Turn the screw in the direction indicated by the arrow in order to loosen the tension.
- (d) As it depends entirely upon the tension whether or not you sew well, it is highly important that you learn how to adjust the tension as soon as possible.

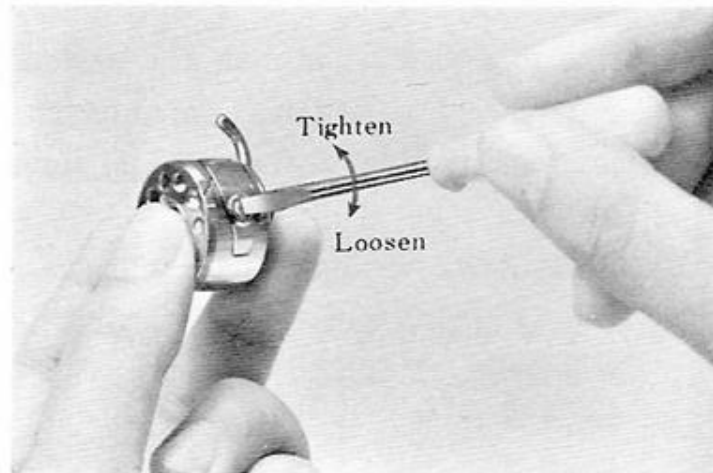


Fig. 12

How to Use the Automatic Darning

- (a) In the case of ordinary cloth, it is seldom necessary to adjust the pressure, but when sewing thin or delicate materials the pressure must be so adjusted that the cloth gets the proper pressure. For instance, too much pressure will cause the material to pucker.
- (b) Press down the patchmatic darning (A) (Fig. 13) and the presser bar will jump up and the pressure will become weak.
Press down the presser bar cover (B), (Fig. 13) and the pressure will become strong.
- (c) You can easily adjust the presser. In the case of embroidering, the presser bar cover (B) should be raised to its highest point.

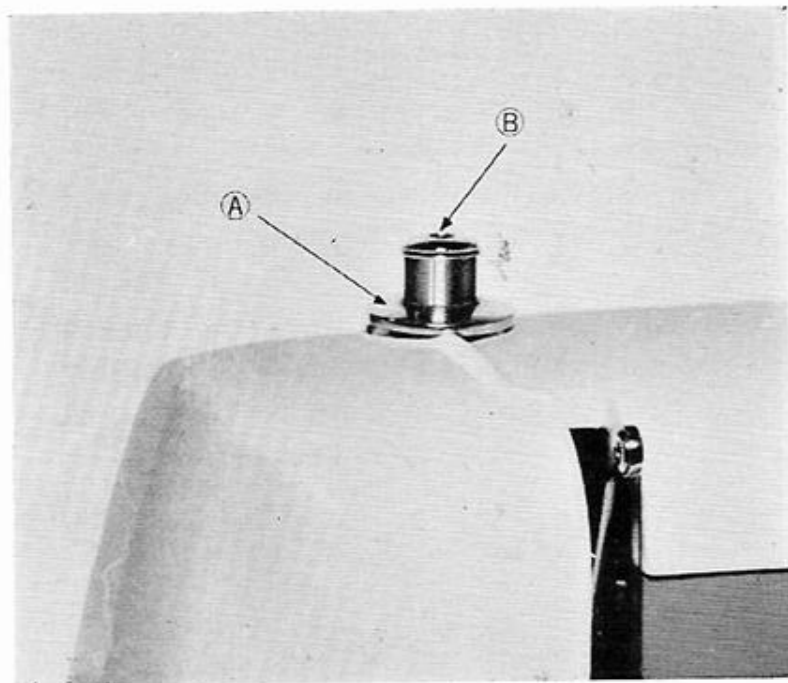


Fig. 13

Drop Feed Adjustment

- (a) In sewing thin or average weight materials, such as ordinary cottons, press down the left button marked "DARN" (A) to the point of red line.
- (b) In sewing thick materials, such as the cloth used for making an overcoat, press down the right button marked "SEW" (B) as far as it will go.
- (c) In embroidering or sewing on buttons the position of the feed dog must be lower than that of the needle plate so that the cloth can be moved freely.
In this case press down the left button marked "DARN" (A) as far as it will go.

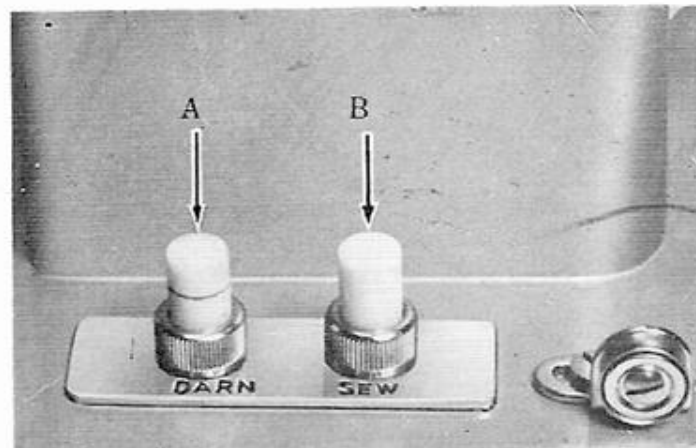


Fig. 14

Guide to Choice of Needle and Thread

Fabric	Needle No.	Cotton Thread	Mercerized Thread	Silk or Nylon
Extremely heavy • tarpaulin, sacking, canvas, duck, etc.	20	10 to 30	Heavy Duty	—
Heavy • upholstery fabric, ticking, denim, leatherette, etc.	18	30 to 40	Heavy Duty	—
Medium heavy • drapery fabric, velveteen, suiting felt, terry, etc.	16	40 to 60	Heavy Duty	—
Medium • broadcloth, percale, gingham, linen, chintz, taffeta, sheer wool, shantung, etc.	14	60 to 80	50	A
Sheer • voile, lawn, dimity, crepe, handkerchief, linen, plastic film, etc.	11	80 to 100	50	A
Very sheer • chiffon, batiste, lace, organdy, Nylon, net, marquisette, etc.	9	110 to 150	50	A

How to Sew with Your Machine

Inserting and Removing the Material

Before placing the material on the machine see that:

- * The machine has been properly oiled, the presser foot and needle clamping screws are both tight (use the large screw driver).

- * The size of needle and thread suit the kind of work to be done (see page 16).
- * The tensions have been properly adjusted.
- * Make sure that the ends of the threads have been passed and the thread take-up lever is in its highest position.
- * Place the material underneath the presser foot, insert the needle into the material by turning the hand wheel toward you lower the presser foot and start sewing.
- * To remove the work, first turn the hand wheel toward you until the thread take-up lever is in its highest position, then raise the presser foot, remove 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 work is under the presser foot.

How to Regulate the Stitch Length Forward and Reverse

- (a) The figures on the dial ① (Fig. 15) show the stitch length setting.
- (b) Turn the dial ① so that the desired stitch length setting comes to the mark ②. Turn right for longer stitches and left for shorter stitches.
- (c) For sewing backward, press the reverse push button ③ inside as far as it will go. This will then cause reverse sewing. When the reverse button is released, the machine will automatically sew forward again.

Automatic Zigzag Sewing

This machine can sew beautiful decorative and embroidery patterns automatically as shown in Figs. 19, 20 on Pages 22, 23 by means

Fig. 15

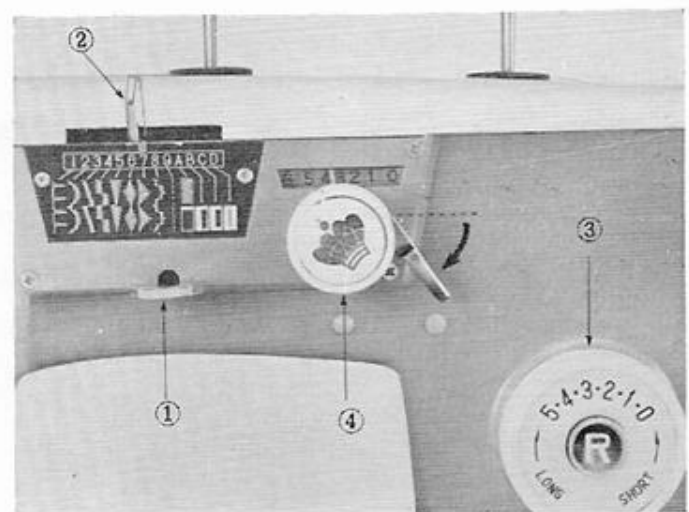
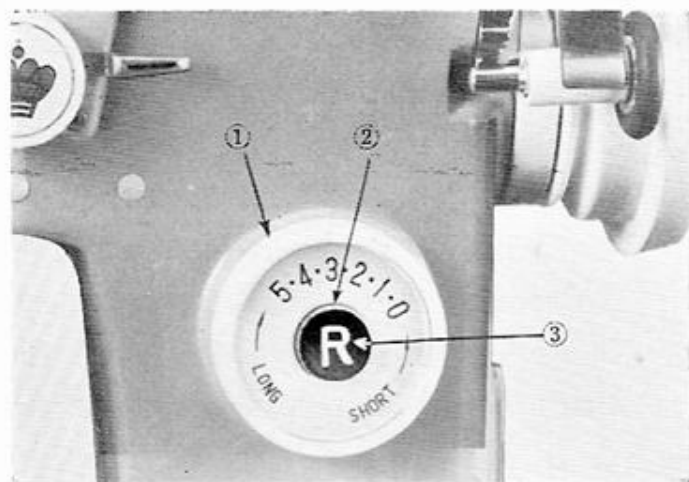


Fig. 16

of the various came which have been built in the arm of the machine so that you will not have to take the trouble of changing the cams when a different design is desired.

Also manual zigzag stitch patterns as shown in Fig. 17 on Page 20 can be produced by the use of pattern No. A.

- (a) Push down the pattern selector lever ① Fig. 16 with thumb of right hand, and while keeping it there move the pattern selector return lever ② to the left side as far as it will go. Then release both levers (① & ②).
- (b) Next, repeat the operation of push and release of lever ① so that the indicating bar points to the desired zigzag stitch. For instance, if you want to sew zigzag stitch pattern No. 8, repeat the above operation seven times, and the indicating bar will stop at your desired point.

Note: Make sure that the lever ① is pushed down or released completely.

- (c) Set the stitch length regulating dial ③ and the zigzag width regulating dial ④ to the desired points. Then start sewing.
- (d) In case the twin needle is used, bring the lever downward as far as it will go, so that the indicator may not move beyond "4".

Note: 1. In zigzag sewing, loosen the upper thread tension slightly, and see that the lower thread does not appear on the surface of the cloth.

2. Be sure to press down the lever completely when using the twin needle. **IF THIS WARNING IS IGNORED, THE NEEDLE WILL HIT THE SIDE OF THE NEEDLE PLATE AND BREAK.**

SINGLE NEEDLE ZIGZAG STITCH PATTERNS

(Use only Pattern No. A)


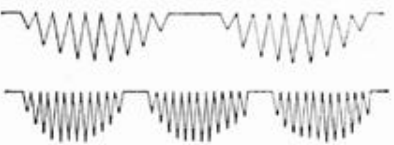

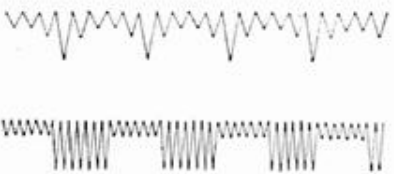
Patterns	Stitch Length	Zigzag Width Regulating Dial
	<p>Long</p> <p>Short</p>	<p>Any point from 1 to 6.</p>
	<p>Long</p> <p>Short</p>	<p>Gradually move from 0 to 6, and return to 0. (Repeat)</p>
	<p>Long and Short (Repeat)</p>	<p>Any point from 1 to 6.</p>
	<p>Long</p> <p>Short</p>	<p>Zigzag width can be regulated by zigzag width regulating dial. Turn the dial quickly in alternate positions.</p>

Fig. 17

NOTE: By using pattern No. A decorative stitches of ordinary zigzag machines can be made. This is one of the special features of this machine.

TWIN NEEDLE ZIGZAG STITCH PATTERNS

(Use only Pattern No. A)

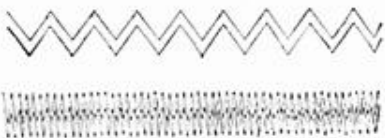


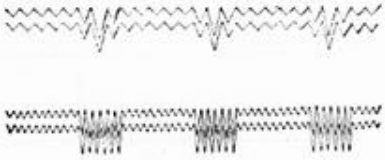
Patterns	Stitch Length	Zigzag Width Regulating Dial
	Long Short	Any point from 1 to 4.
	Short	Gradually move from 0 to 4.
	Long and Short (Repeat)	Any point from 1 to 4.
	Long Short	Zigzag width can be regulated by zigzag width regulating dial. Turn quickly the dial alternately.

Fig. 18

NOTE: While zigzag stitching is being performed with a twin needle, the twin needle lever must always be lowered to the bottom, so that the zigzag width regulating dial cannot be turned beyond "4" in the red area. IF THIS WARNING IS IGNORED, THE NEEDLE WILL HIT THE SIDE OF THE NEEDLE PLATE AND BREAK.

AUTOMATIC ZIGZAG PATTERNS

		Zigzag Width Regulating Dial					
PATTERN No.	6	5	4	3	2	1	0
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Note: Variations of the above patterns can be made by adjusting the stitch length regulator. Fig. 19

TWIN-NEEDLE AUTOMATIC ZIGZAG PATTERNS




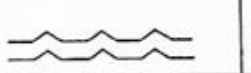




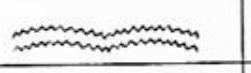


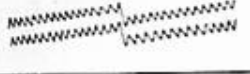
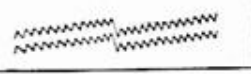
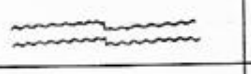
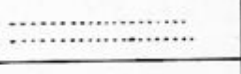


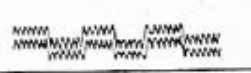
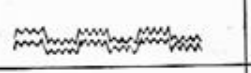


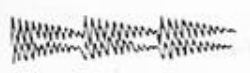
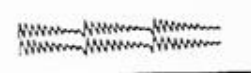
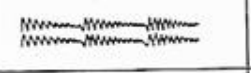




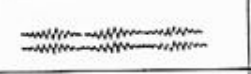


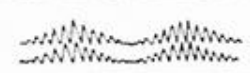
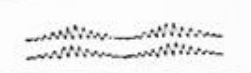
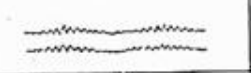
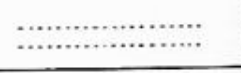
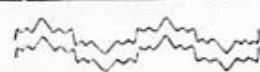

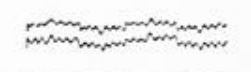
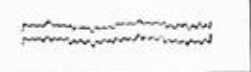





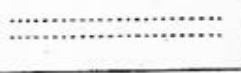


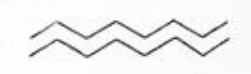
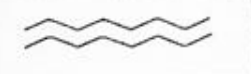

Zigzag Width Regulating Dial							
PATTERN No.	6	5	4	3	2	1	0
1	Cannot be used	Cannot be used					
2	"	"					
3	"	"					
4	"	"					
5	"	"					
6	"	"					
7	"	"					
8	"	"					
9	"	"					
10	"	"					

Fig. 20

Note: 1. Various designs can be made by changing the stitch length.

- * 2. The zigzag stitch width regulating dial must not be turned beyond "4" in the red area when doing automatic zig-zag work with a twin needle. IF THIS WARNING IS IGNORED, THE NEEDLE WILL HIT THE SIDE OF THE NEEDLE PLATE AND BREAK

Changing Needle Plates

- (a) Open the bobbin case cover and replace the ordinary needle plate with that for straight sewing while raising the needle bar and the presser foot to their highest point. (Fig. 21)
- (b) Ordinarily embroidering can be made by lowering the feed dog to the down position.

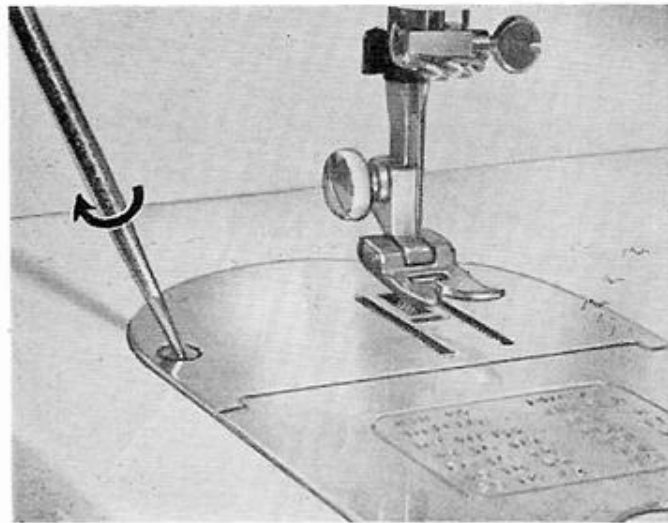


Fig. 21

DIRECTIONS FOR USING ATTACHMENTS

Sewing on Buttons

Change the regular presser foot for the one provided to sew on buttons (See Fig. 22). Push the drop feed button to "DARN" position. Place the button and the fabric under the presser foot.

Determine the width of the stitch by turning the hand wheel slowly toward you allowing the needle to enter each hole in the button.

Take six or seven stitches to fasten the button securely. Then turn the zigzag dial to the narrowest width and take two or three more stitches in on one hole to lock the thread. Repeat the procedure when sewing on fourhole buttons.

Snaps and hooks may be stitched on in the same manner.

To make Buttonholes Automatically

- Change to the buttonhole foot (Fig. 23).
- Set the stitch length (① Fig. 24) between 0 and 1 to achieve a tight stitch.
- Set the zig-zag width (②) between 3 and 4.
- Press pattern selector (④) to #A on pattern plate (③ & ⑤) and sew 4 or 5 tacking stitches.

Fig. 22

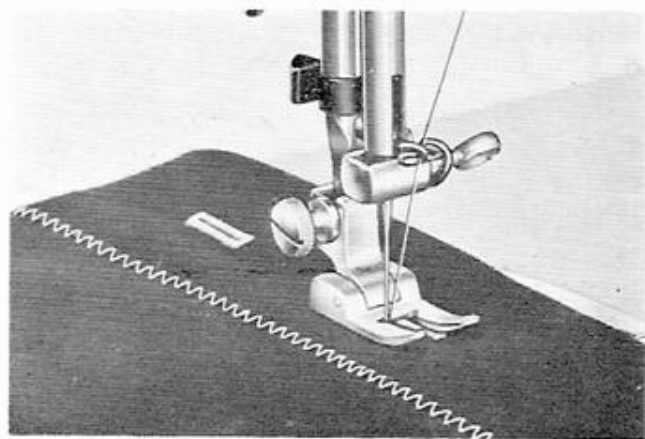
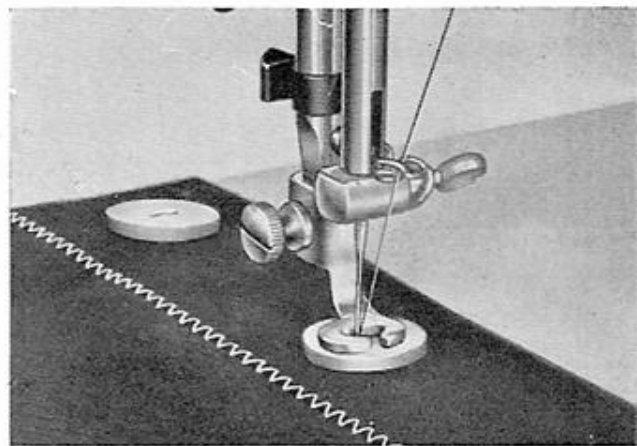


Fig. 23

Then press selector to #B and sew the first side as long or as short as desired. Pull the material slightly. Press selector to #C and do 4 or 5 tacking stitches. Finally, press selector to #D and do the second side, slowing down towards the end so you can match the length properly. In this operation, hole the material back slightly.

- e. When the buttonhole has been sewn, the material in between is cut with the special seam ripper (Fig. 26).

Special note :

You will notice that in the preceding instructions, we recommend that you help by moving the material faster in one case and retarding it in the other. This is because in the very nature of sewing machines, the buttonhole will result in a slight variance in intensity between the two sides. Most people will accept this mild variance as being insignificant. If you wish, however, to have an absolutely perfect buttonhole, you can achieve it with practice in pulling and retarding the material.

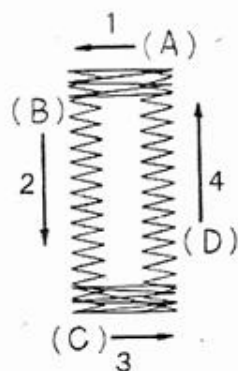


Fig. 25

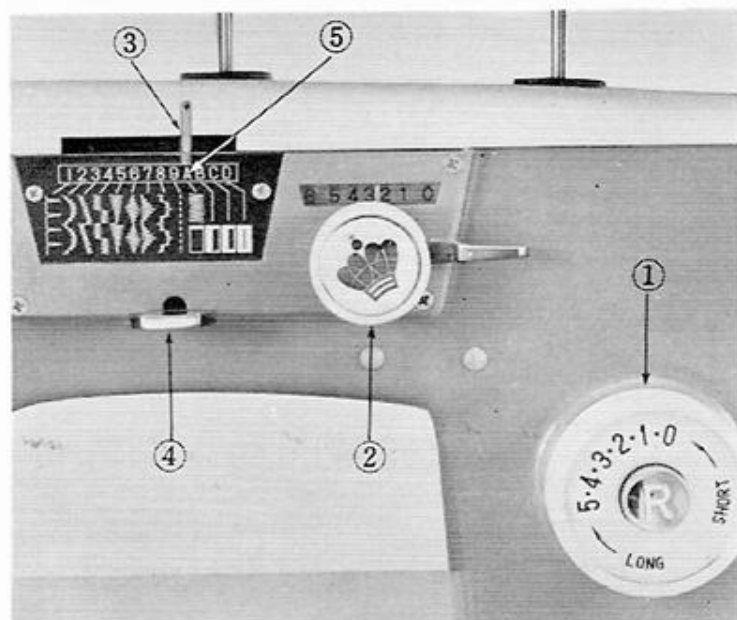


Fig. 24

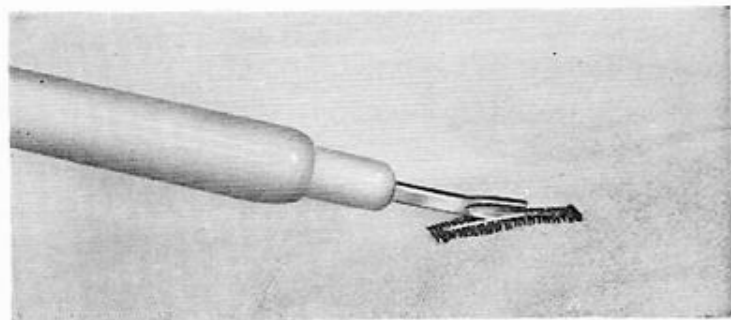


Fig. 26

To Do Embroidery

- (a) Replace the upper and lower thread with embroidery thread.
- (b) Press down the drop feed button marked "DARN" as far as it will go. Remove the presser foot.
- (c) Insert the upper thread into the eye of the needle and in the case of straight sewing.
- (d) Then hang the upper end of the embroidery spring on the needle clamp.
- (e) Make one turn of the hand wheel and pull the upper thread. Then the lower thread will come up together with the upper thread.
- (f) Place the fabric beneath the embroidery spring.
- (g) Align the pattern indicator with #A indicated on the pattern plate and the zigzag width regulating dial can be moved fully between 0 and 6.
- (h) Be sure to lower the presser bar before starting embroidery.
 1. Give tension to the cloth by tightly framing it on the embroidery hoop, and the finishing will be better.
 2. Outline a rough copy of the desired pattern.
 3. Be careful not to move the cloth suddenly : if you ignore this warning, the needle may break.

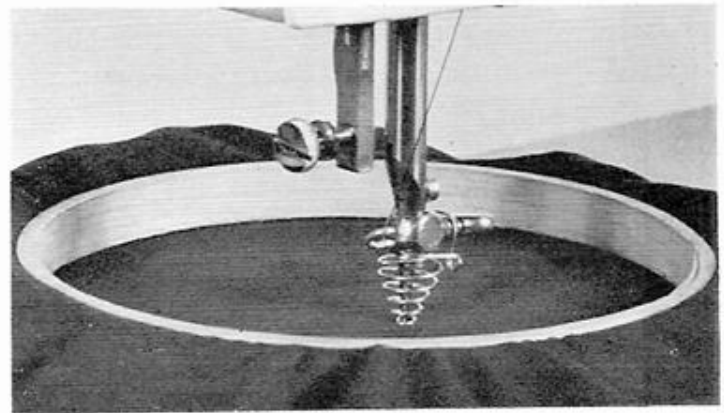


Fig. 27

To Use the Hemmer (Fig. 28)

- (a) With the needle bar at its highest position, attach the hemmer replacing the presser foot and note carefully if the hemmer is fixed with its needle hole to exactly let the needle pass through the center of it. Cut the cloth a little on its right corner so that it can be easily rolled up. Raise the hemmer and insert the cloth under it from the left side with the right edge of the cloth being folded up a little.
- (b) Insert the right corner so that the edge of the cloth is folded right, and pull the cloth now to the point where the needle can catch it. Lower the hemmer foot on the cloth and make some stitches slowly. With the right thumb and forefinger hold the cloth to make a hem with the right edge of the cloth being smoothly rolled.
1. Take care to hold the cloth right to ensure that it is always sufficiently fed in the mouth of the hemmer.
 2. If the edge is slipping out, try to move the cloth a bit to the right, and if it is rolled up excessively move the cloth a little to the left.
 3. By sewing the cloth together with lace on the same hemmer, varied hemming can be done.
 4. With wider zigzag stitches and a stronger thread tension, all kinds of edge sewing is done.
(Patient practice is required to become skillful with use of the hemmer and all other special attachments for sewing.)

Sewing Braids (Fig. 29)

Remove the ordinary presser foot from the machine and attach the braiding foot. Introduce braid through the small hole on the front side of foot.

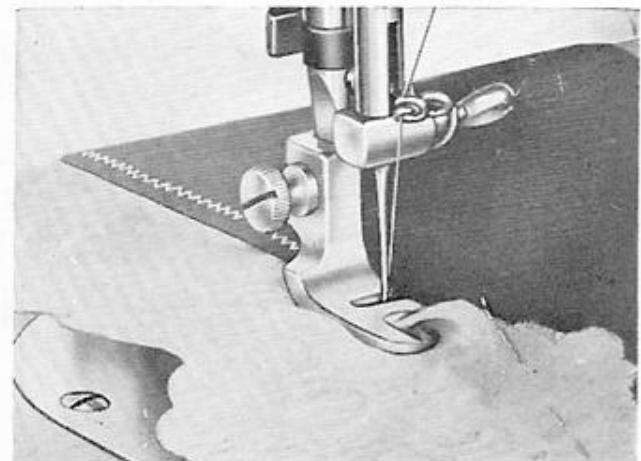


Fig. 28

Adjust the width of zigzag seam and the length of stitch to obtain such a covering of the braid as appears most desirable for the material you are sewing. Using some threads of contrasting colors will enhance the beauty of your braiding.

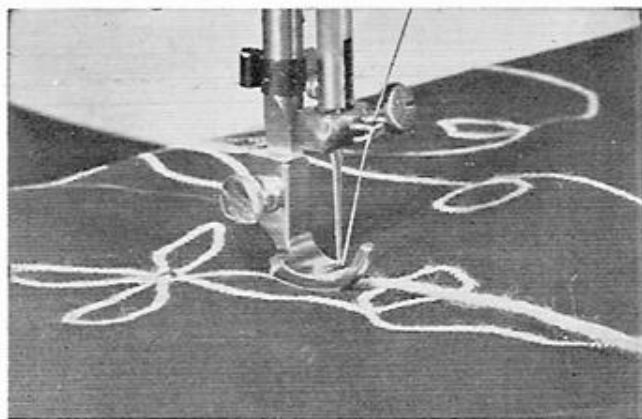


Fig. 29

To Use the Cloth Guides

Cloth guides are used when two parallel seams are to be made on the edge of the cloth.

- (a) Figure 30 indicates the way the cloth guide is attached.
- (b) Figure 31 indicates the way quilting guide is attached.

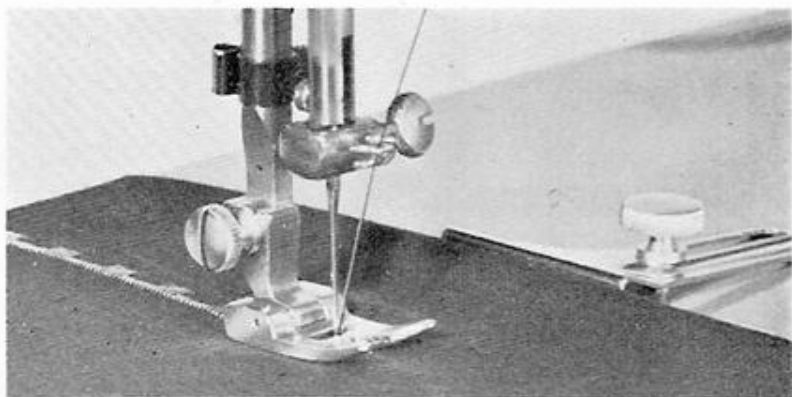


Fig. 30

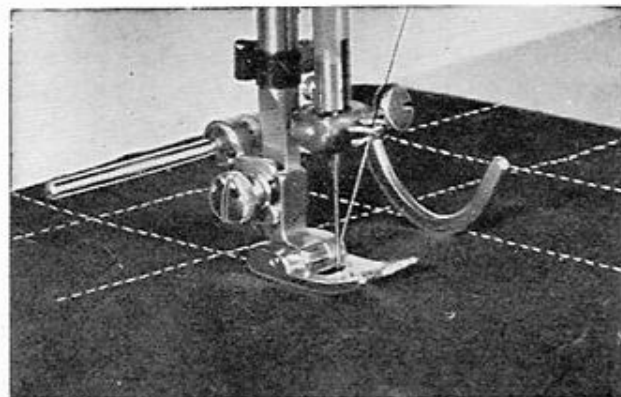


Fig. 31

How to Clean the Feed Mechanism

When you have sewn excessively on any starchy material, lint will accumulate between the feed dog and the needle plate as well as between the feed dog and the open race.

In this event, to correct the heavy operation of the machine, remove the needle plate and clean the above-mentioned parts.

- (a) Unscrew the needle plate screw with a screwdriver and remove the plate.
- (b) Clean the above-mentioned parts with a brush. (See Changing Needle Plate, Page 24)
- (c) Turn the hand wheel to be sure that everything is operating properly.
- (d) Put the needle plate back in its proper location. Be sure to tighten the screws when the needle bar has been lowered in order that the needle will enter the needle hole correctly.

How to Keep the Machine in Good Repair

(1) Oiling

Oiling is so important that if you should be negligent in this respect you would not only shorten the machine's service life but could also cause it to become out of order.

Do not use too much oil. It is not only unnecessary but may stain or soil the material.

(2) Where to Oil

- (a) The arrows indicate those parts to be oiled. (Fig. 32, 33 and 34)
- (b) Just one drop at a time will do.

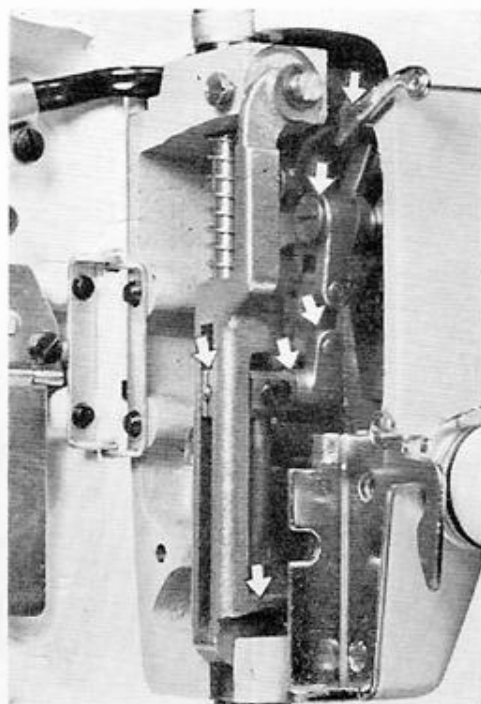


Fig. 32

(3) The Quality of the Oil Used

Oil of poor quality will not only cause the machine to run heavily but also will cause wear and tear of the unit. Use only good quality oil refined for use on sewing machines.

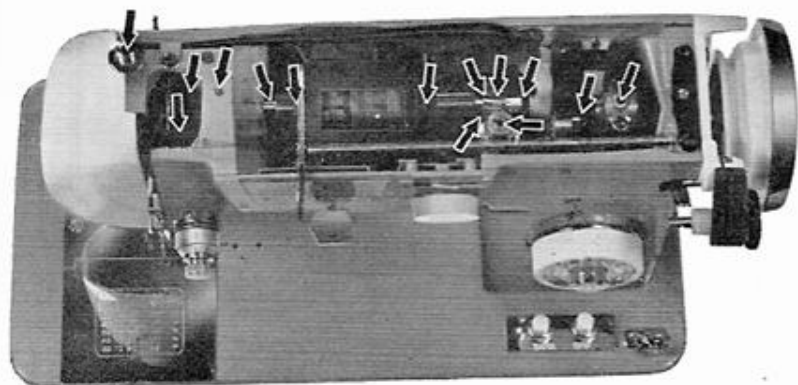


Fig. 33

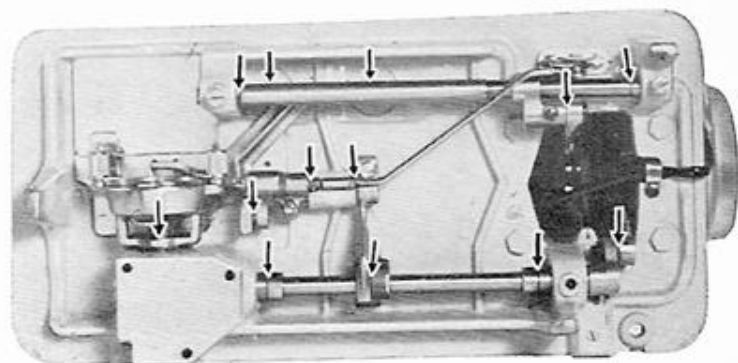


Fig. 34

CHECK UP FOR SMOOTH SEWING

Although your sewing machine is designed for maximum efficiency, should any of the following difficulties occur they can be remedied with minor adjustments.

Upper Thread Breaks.

- Be sure needle is inserted properly.
- Check on correct way to thread machine.
- Use correct needle size for thread.
- Do not have upper tension too tight.

Lower Thread Breaks

- Check correct method of threading bobbin case.
- Be sure lower tension is not too tight.

Needle Breaks

- Do not tug or pull on the fabric while sewing as this will bend and eventually break the needle.
- Be sure presser foot is firmly attached to bar.

Skipped Stitches

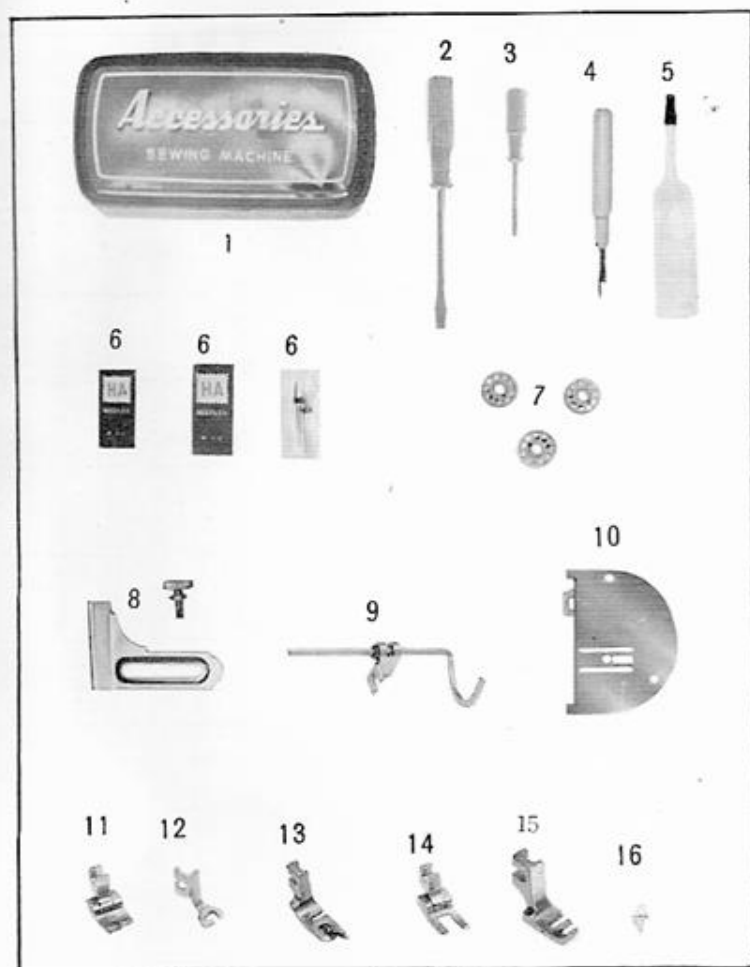
- Do not use a blunt or bent needle.
- Insert needle correctly.
- Use correct needle size for thread.
- Be sure pressure on foot is sufficient when sewing heavy fabrics.

Stitches Loop

- Make sure tensions are properly balanced and that machine is threaded correctly.

Machine Binds

- Clean thread, dust and lint from hook, shuttle and race.
- If condition continues, it may be that the machine is gummy with oil. Apply kerosene through oil holes, run rapidly for a while, and wipe dry. Then lubricate again with fine sewing machine oil.



Standard Accessories

1. Accessories box
2. Screw drivers (large)
3. Screw drivers (small)
4. Seam ripper
5. Oiler with oil
6. Needles in an envelope
7. Bobbins
8. Cloth guide & thumb screw
9. Quilting guide
10. Needle plate for straight sewing
11. Presser foot for straight sewing
12. Button sewing foot
13. Hemmer stitch foot
14. Buttonhole foot
15. Braiding foot
16. Embroidery spring