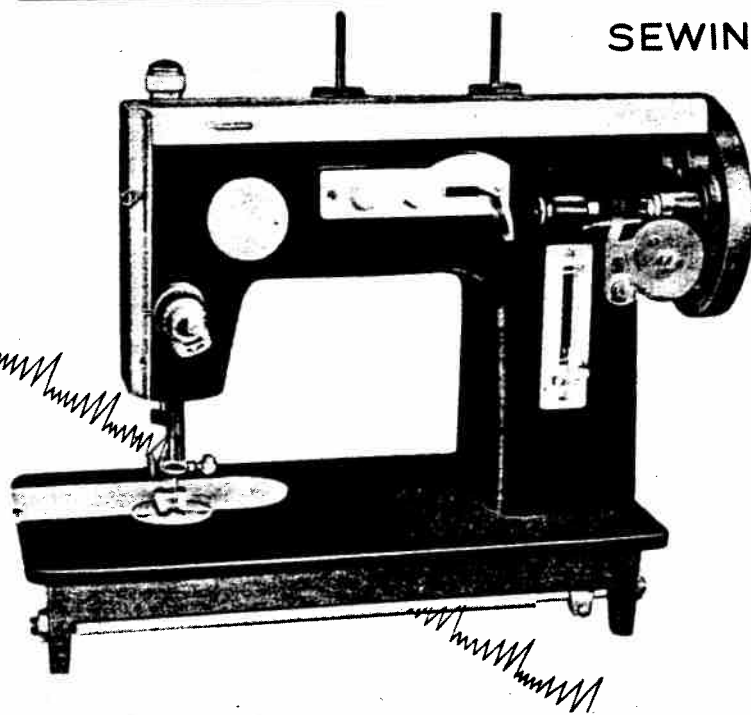


HOW TO USE YOUR

LONG SHUTTLE MANUAL

ZIG ZAG

SEWING MACHINE

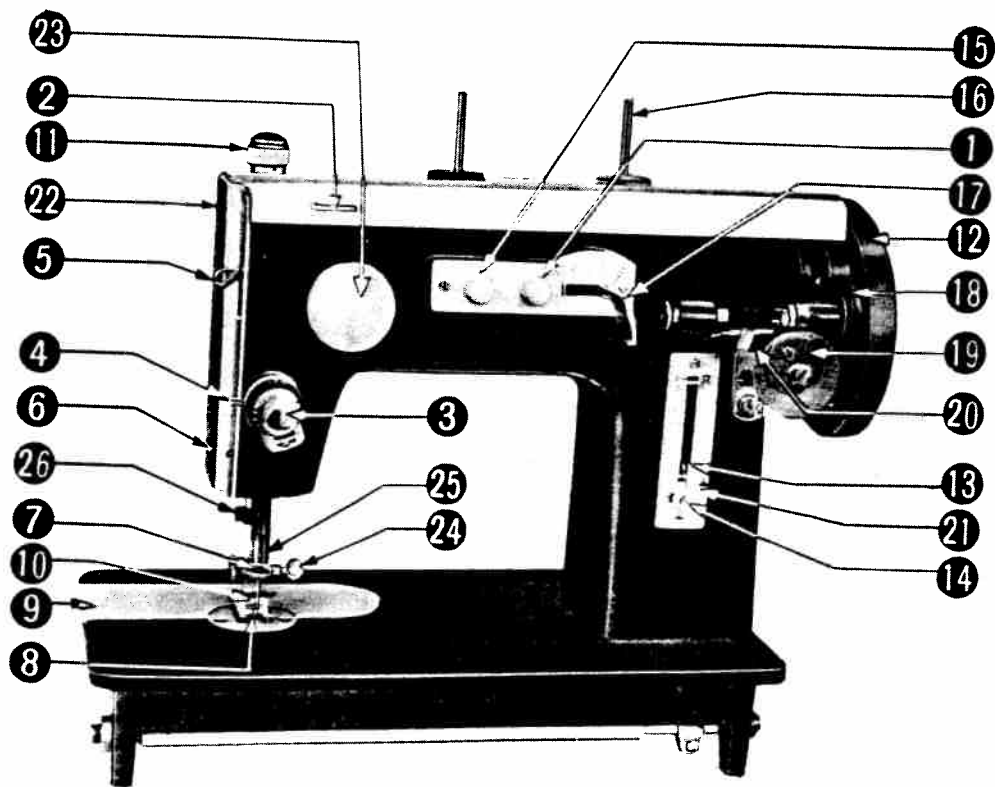


MODEL
NO. 768

80199

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HEAD PARTS IDENTIFICATION

1. Spool Pin.
2. Upper Arm Thread Guide.
3. Tension Assembly.
4. Thread Take-Up Spring.
5. Take-Up Lever.
6. Face Plate Thread Guide.
7. Needle Thread Guide.
8. Needle Plate.
9. Shuttle Cover Plate.
10. Presser Foot.
11. Presser Regulator.
12. Hand Wheel.
13. Stitch Regulating Lever.
14. Stitch Regulator Adjusting Screw.
15. Lock Screw for Indicator.
16. Lock Screw for Indicator.
17. Zigzag Width Regulating Lever.
18. Bobbin Winder. Friction Ring.
19. Bobbin Winder.
20. Bobbin Winder Thread Guide.
21. Stitch Regulating Plate.
22. Face Plate.
23. Thread Take-Up Cover.
24. Needle Clump.
25. Needle Clamp.
26. Thread Cutter.

NEEDLE AND THREAD TABLE

Needle Size	Thread Size	Fabrics
9 00	100 to 150 Cotton 000 & 00 Silk Twist	Very Fine Thin Material, Lace and All Delicate Fabrics
11 0	80-100 Cotton 0 Silk Twist	Summer Dresses, Children's Clothing Corsets and Cloaks
14 1	60-80 Cotton A & B Silk Twist	General Household Sewing, Silk and Cotton Dresses, Draperies.
16 2	40-60 Cotton C Silk Twist	Heavy Damasks, Musline etc.
18 3	30-40 Cotton D Silk Twist	Work and Sport Clothing Furniture Covers etc.
19 4	24-30 Cotton E Silk Twist	Heaviest Material, Sacks etc.

PLACEMENT OF NEEDLE

Raise take-up lever to its highest position by turning hand wheel toward you. Loosen needle clamp screw. Hold needle so that the flat side is faced to needle bar, slip blunt end of needle as far as it will go into needle clamp. Tighten needle into place with clamp screw.

Flat
side
faces
to
needle
bar.

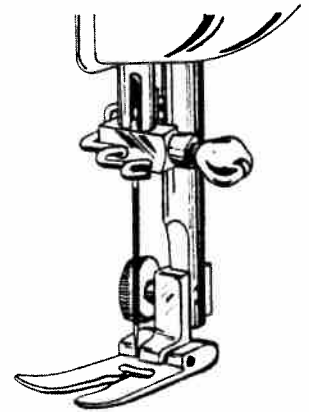
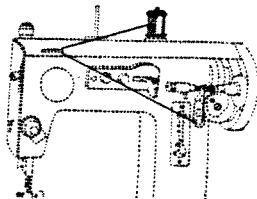


Fig. 2

WINDING THE BOBBIN

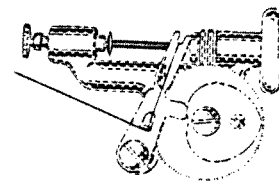
1

Place thread on spool pin and draw thru guide



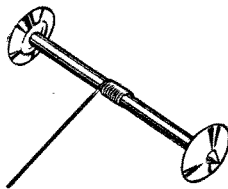
4

Draw thread thru guide on bobbin winder.



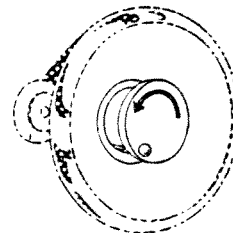
2

Wind thread around bobbin a few times from front to back.



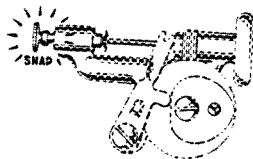
5

Disengage hand wheel by turning inner knob toward you.



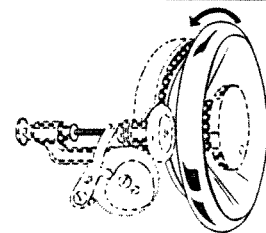
3

Insert bobbin in bobbin winder by pulling out knob.



6

Lift bobbin winder so that rubber ring touches hand wheel. Start machine and when bobbin is full, stop.



NEEDLE

highest position toward you. The side is faced of needle in needle clamp. with clamp



7

Press bobbin winder down, away from hand wheel, cut off the end of thread left exposed. Tighten clutch knob and remove bobbin. Machine will be ready for sewing. Do not wind too full or the bobbin will not rotate freely in the shuttle.

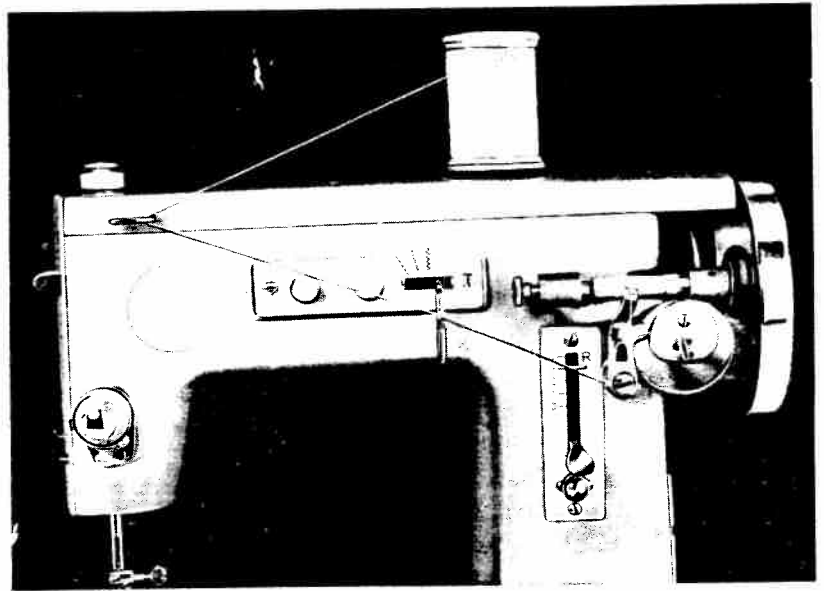
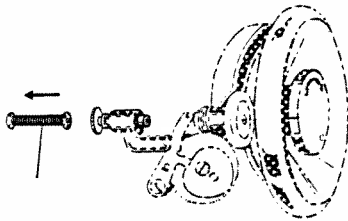


Fig. 3

REMOVING SHUTTLE FROM MACHINE

To remove the shuttle from the shuttle carrier, open the front shuttle slide and turn hand wheel of machine slowly towards you until the shuttle is in full view. Push the shuttle lever sharply downwards and the shuttle will be raised and easily removed as shown in Figure 4. Hold it with the open end downwards and the bobbin will fall out. To replace bobbin, Place the shuttle between the thumb and fingers of the left hand with the pointed end toward you and tension spring uppermost.

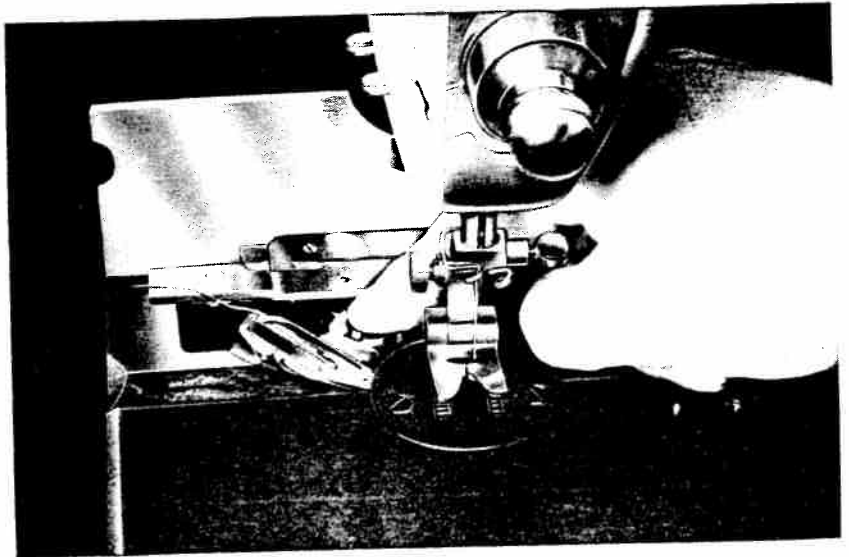


Fig. 4

THREADING THE SHUTTLE

Take the bobbin in the right hand with the thread going from left to right. Leave about three inches of thread hanging. Push the bobbin into the barrel of the shuttle.

While holding shuttle in your left hand pull thread into slot Fig. 5 and all the way towards point. Pull thread to right back from point and under spring, then to left and back. Leave about three inches of thread hanging from the shuttle.

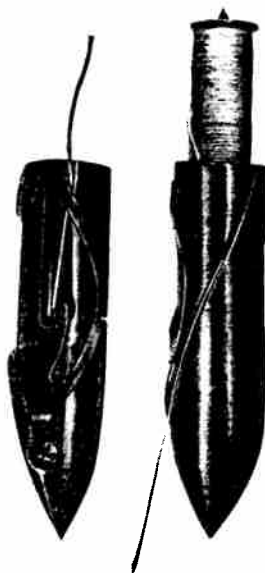


Fig. 5

Place the shuttle in its carrier so that the point is toward you and tension spring uppermost and lay the free end of the thread in the upper end of the shuttle slide as shown in Fig. 6.

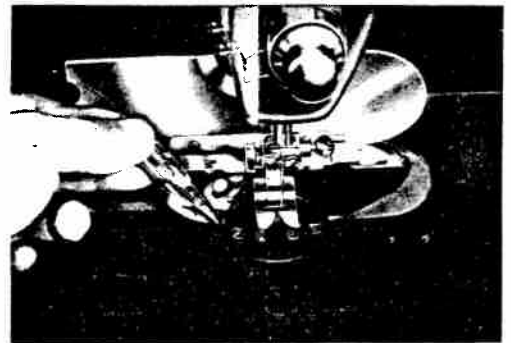


Fig. 6

THREADING UPPER MACHINE

1. Place the spool of thread on the spool pin.
2. And guide the thread through the thread guide.
3. Then downward from right to left between the tension discs.
4. Under the hook of the check spring.
5. Through the take-up lever.
6. Behind the thread guide.
7. Behind the thread guide.
8. Finally through the needle eye, from front to back, leaving about three inches of thread extending.

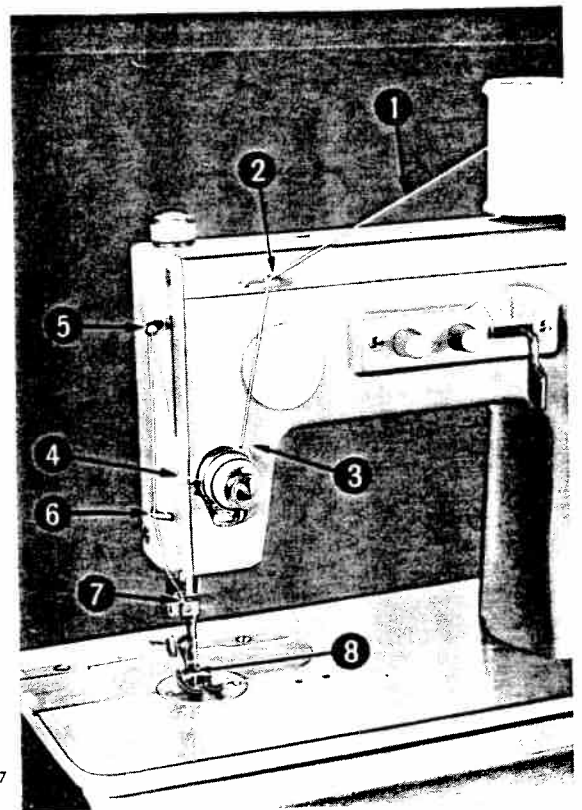


Fig. 7

PICKING UP BOBBIN THREAD

Before starting to sew, raise presser foot lever.
Hold needle thread loosely in left hand and
rotate hand wheel toward you one complete turn.
Bring bobbin thread up by pulling thread.
Place both threads back under presser foot.

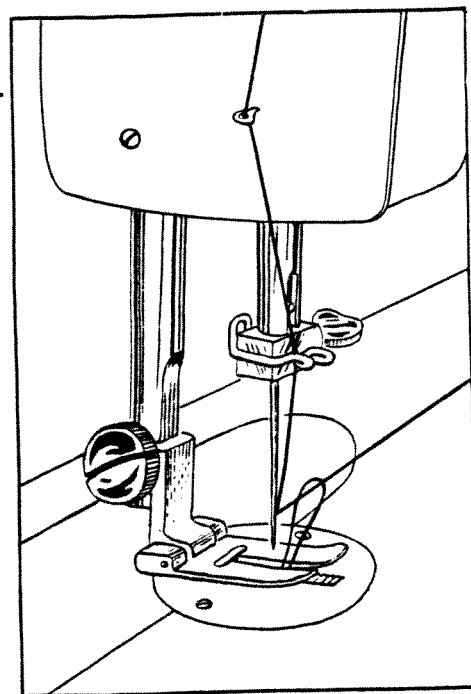


Fig. 8

REGULATING LENGTH OF STITCH

The forward and reverse movements of machine are accomplished by the regulation of the stitch regulator lever. The lower the lever is placed the longer the stitch. As the lever is raised, the stitch becomes smaller, until at about the midway point the direction of stitching changes to reverse, and as the lever continues to be raised, the stitches become larger and larger.

Number 4 is the longest stitch and number 1 is the shortest stitch. When a desired length is obtained, tighten the stop thumb screw in Fig. 9.

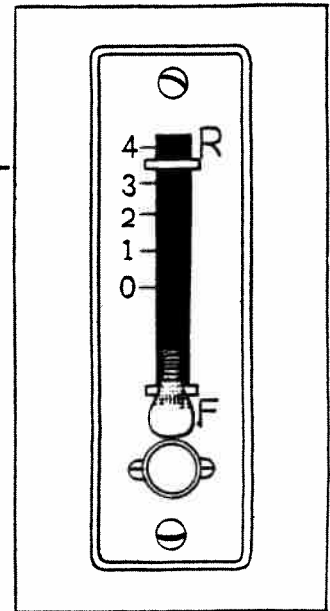


Fig. 9

Recommended Stitch Lengths.

- 1-2 For Most Light Weight Fabrics
- 2-3 For Medium Weight Fabrics
- 3-4 For Heavy Weight Fabrics

ADJUSTING TENSIONS

1

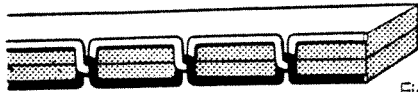
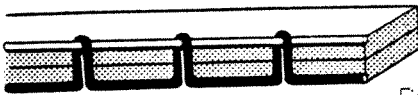


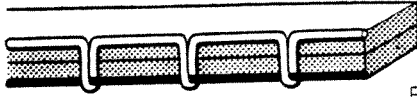




Fig. 10

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

PROBLEM	REMEDY
<p>2 Upper thread too tight</p>  <p>Fig. 11</p> 	<p>Decrease Tension</p> 
<p>3 Upper thread too loose</p>  <p>Fig. 12</p> 	<p>Increase Tension</p> 

When stitching is unsatisfactory as in figures 11 and 12, adjust the upper thread tension. Lower thread tension is preset and rarely requires adjustment for general sewing.

However, if stitch is satisfactory, as in figure 10 and seam is badly puckered, the cause may be tight tensions and both upper and lower may be adjusted.

When adjusting the tension on the shuttle, adjust the screw a half turn at a time with a screwdriver.

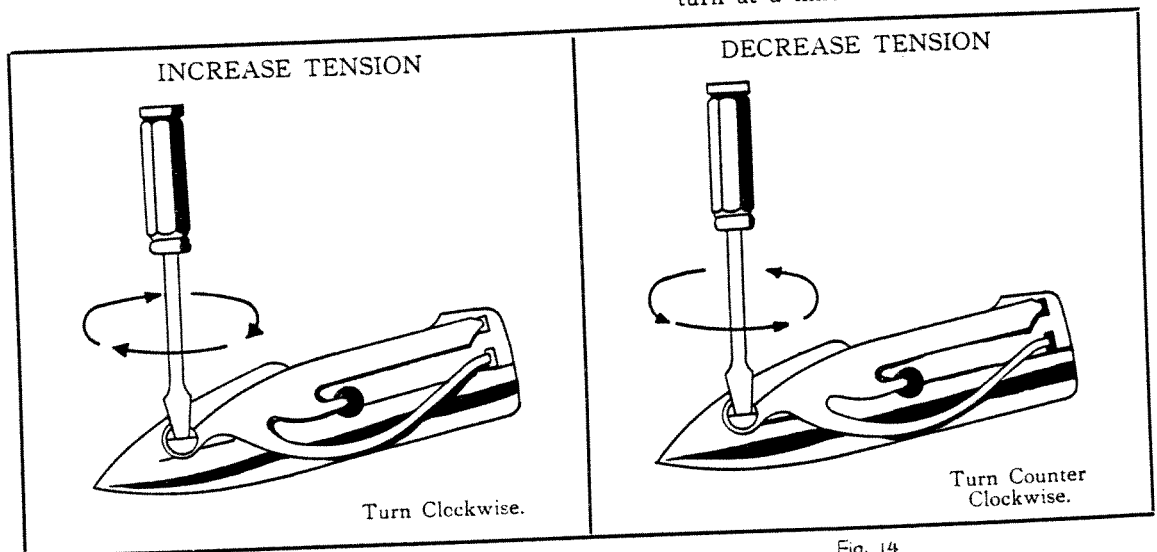


Fig. 13

Fig. 14

Starting To Sew

When machine is threaded, do not operate it without having material under the presser foot.

Place material under presser foot, lower presser foot lever. Insert needle into material by turning hand wheel toward you. As the material feeds automatically, it is sufficient merely to guide the fabric gently by hand. Do not try to help the feeding of the work by pulling the material as this may bend the needle. When passing over thick parts or cross seems, sew slowly and turn the hand wheel carefully by hand.

Removing Work

Be sure take-up lever is at its highest position. Raise presser foot and draw the material away towards the back of the machine, at the same time pulling it slightly outwards to the left. Be sure upper thread is in presser foot slot to avoid bending needle. Leave the ends of the thread a few inches long under the presser foot. Once you have finished working, care should be taken to keep the presser foot raised so that the feed dogs will not be damaged.

Turning a Corner

1. Stop the machine while needle is still in the material.
2. Raise the presser foot and turn the fabric using the needle as a pivot.
3. Lower the presser foot and resume sewing.

BASTING

For accomplishing quicker, more even and firmer basting, we suggest you regulate the machine in the following manner: Set stitch indicator at No. 4 for the longest possible stitch. Basting is easily removed by pulling bottom thread.

REVERSE STITCHING

To sew in reverse, stop sewing, move stitch regulator lever up until it stops. Reverse stitching will be the same size as forward stitching.

FASTENING A SEAM

The following method of fastening a seam is often called "back tacking."

Lower needle into fabric $\frac{1}{2}$ inch from beginning of seam.

Lower presser foot.

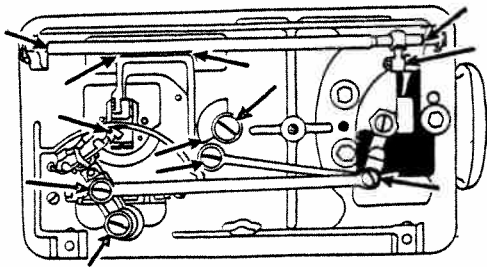
Raise stitch regulator lever up until it stops. Stitch in reverse until needle reaches beginning of seam.

Lower stitch regulator lever and complete seam.

When end of seam is reached, sew in reverse $\frac{1}{2}$ inch.

Remove material and cut thread on cutter.

OILING MACHINE



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

Oil machine at points indicated. Use only one drop of oil at each point. Moderate use requires only periodic oiling.

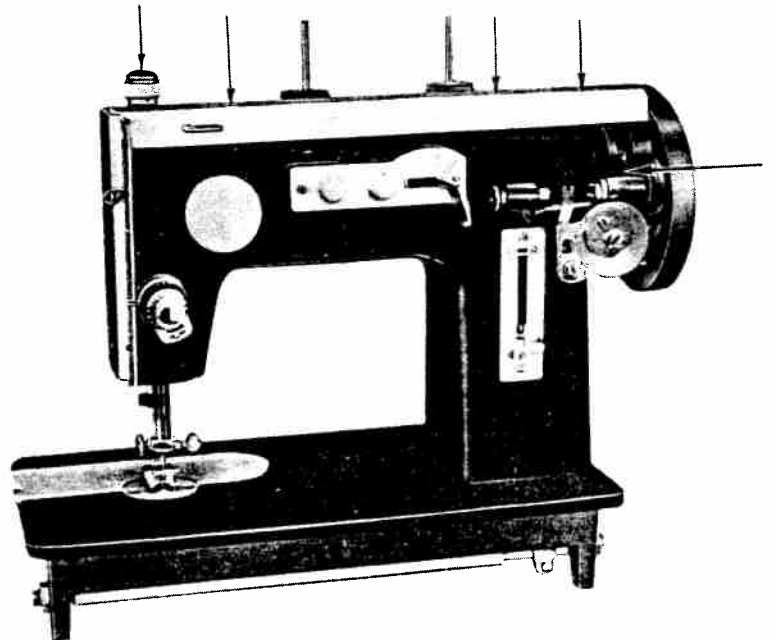
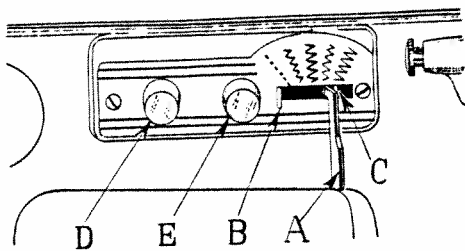


Fig. 15

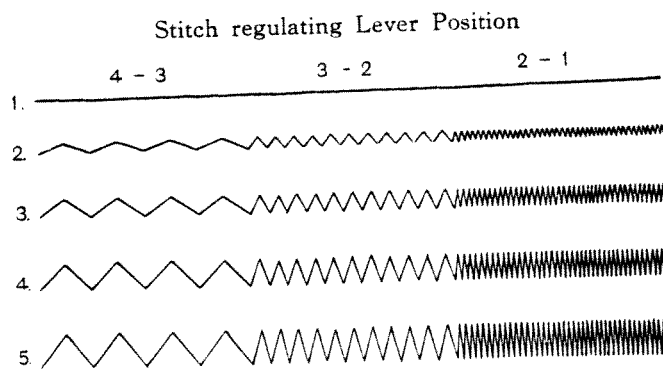
ZIGZAG SEWING AND PATTERN FORMATION

Your zigzag sewing machine, by virtue of its design, permits you to do zigzag sewing and numerous other kinds of work requiring a similar stitch. The controller for the zigzag stitch are located on the arm of the machine. Notice lever "A" which adjusts the width of the zigzag seam. For ordinary straight sewing this lever must be set to the left of marking of straight stitch seam on the zigzag plate. By moving this lever gradually to the right, the machine will sew a zigzag seam of increasing width as indicated on the plate.



For the purpose of reverting to a previously used width of zigzag stitch after having done some straight sewing or for special types of work such as sewing buttons or making tacks, indicator B and C will be found useful. These indicators serve as the stoppers for lever A. To set "B" ("C"), loosen lock screw "D" ("E"), turning it to the left. You then will be able to slide same sideways which, at the same time, moves indicator "B" ("C") to the desired marking. Tighten lock screw "D" ("E") by turning it to the right. Thus, when you want to alternate between a narrow and wide zigzag stitch, you used both indicators "B" and "C". You will find this feature especially convenient when making button-holes.

ZIGZAG FORMATION



Zigzag Regulating Lever Position and its description.

Straight stitch.

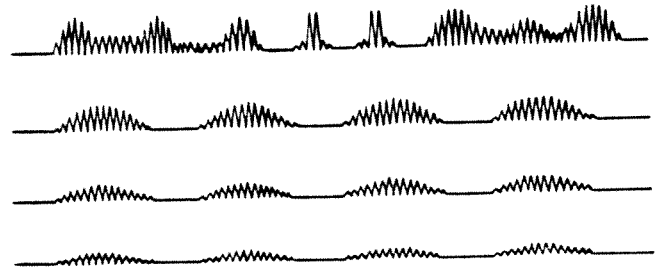
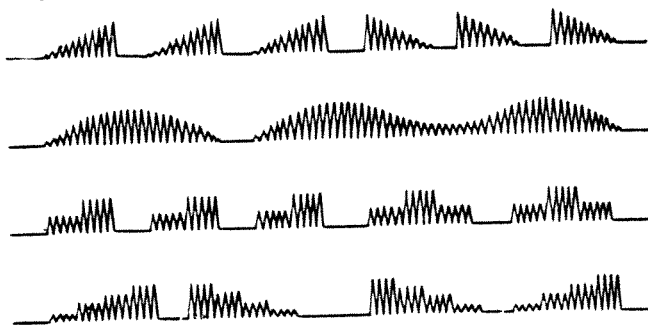
The smallest width, zigzag stitch.

Zigzag small width

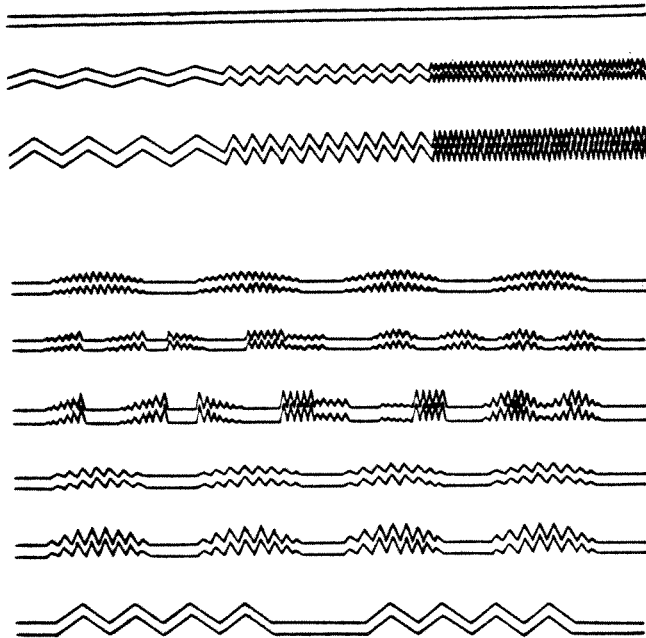
Zigzag medium width

The largest width, zigzag stitch.

By combining the zigzag regulator and stitch regulating lever, you can sew many varied patterns as listed belows :



By using two needle, you can saw fancy patterns as follows :

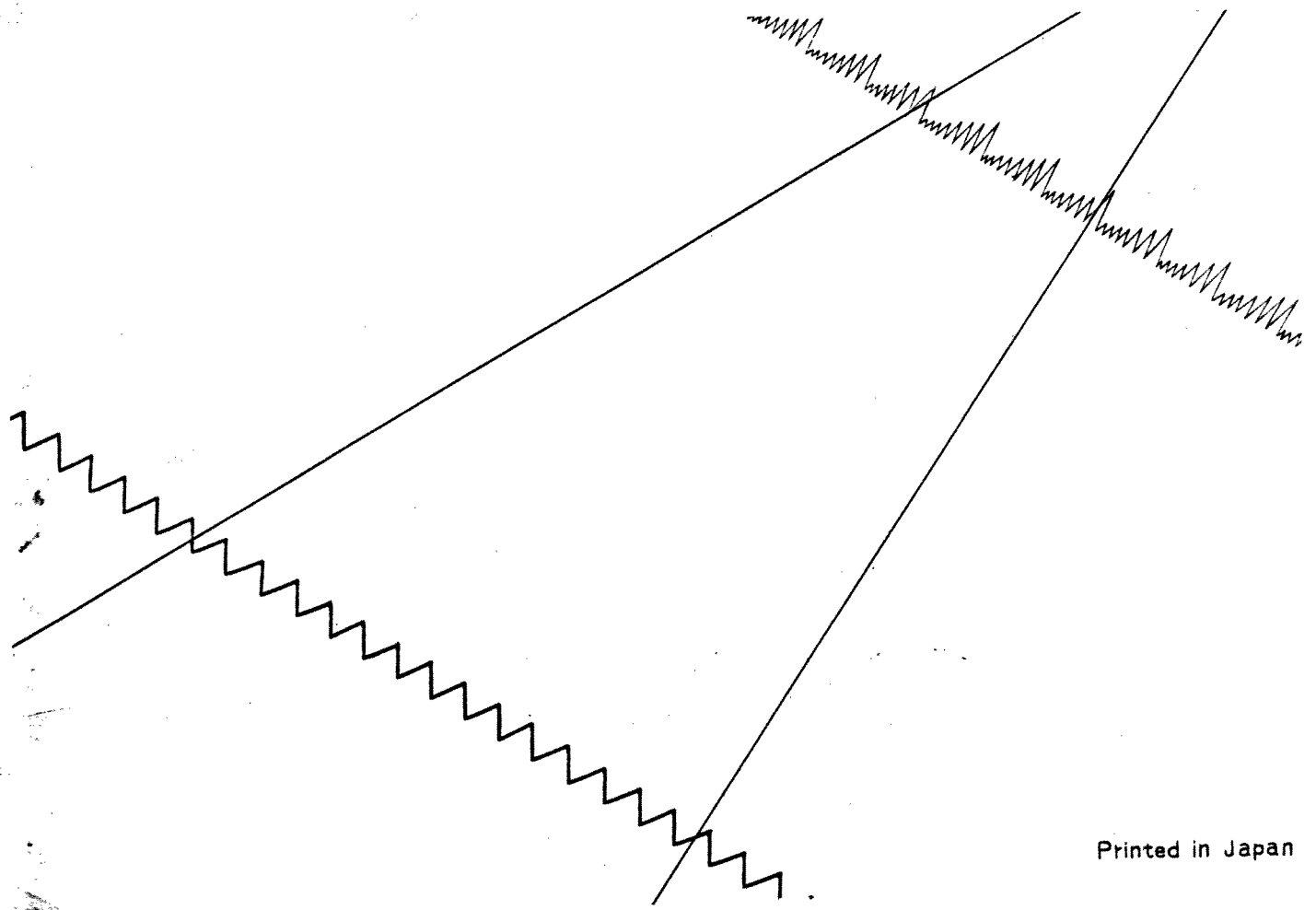


Button hole, Set stitch regulator at 1, and zigzag regulator at small width and stitch for button size, then stop the machine, and move zigzag lever to the largest width and stitch 3-4 times, turn the cloth to the opposite direction and set zigzag lever to small width again, to stitch to the starting point of the button hole. When you come to the starting point, set zigzag lever to the largest width again and stitch 3-4 times.



WHAT TO DO

PROBLEM	PROBABLE CAUSE	REMEDY
Skipped stitches	Crooked needle Incorrect needle size Needle rubbing presser foot	Replace with new needle, Page 4. See page 4 Loosen screw that fastens foot to bar and adjust proper position. (Needle should be a trifle closer to right side of needle hole.)
Breaking threads	Wrong or crooked needle Needle hole chocked with threads Improper threading Top tension too tight Needle rubbing presser foot	See page 4. Pull threads from under side of plate with screwdriver or remove plate and clean. See page 9. See page 12. See "Skipped stitches" above.
Breaking Needles	Pulling material when sewing Needle wrong size or incorrectly set Needle rubbing presser foot	Guide, don't pull. See page 4. See "Skipped stitches" above.
Puckering of Fabrics	Tension not in balance or too tight Blunt needle Presser foot loose in holder	See pages 12, 13. Change needles, see page 4. Tighten
Loose stitching	Tension too loose . . . either top or bottom or both.	See pages 12, 13.
Machine running hard	Needs oiling	See page 16.



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