Principal Parts of SINGER AUTOMATIC Class 316 G

with numbered arrows to indicate the parts discussed in this instruction book

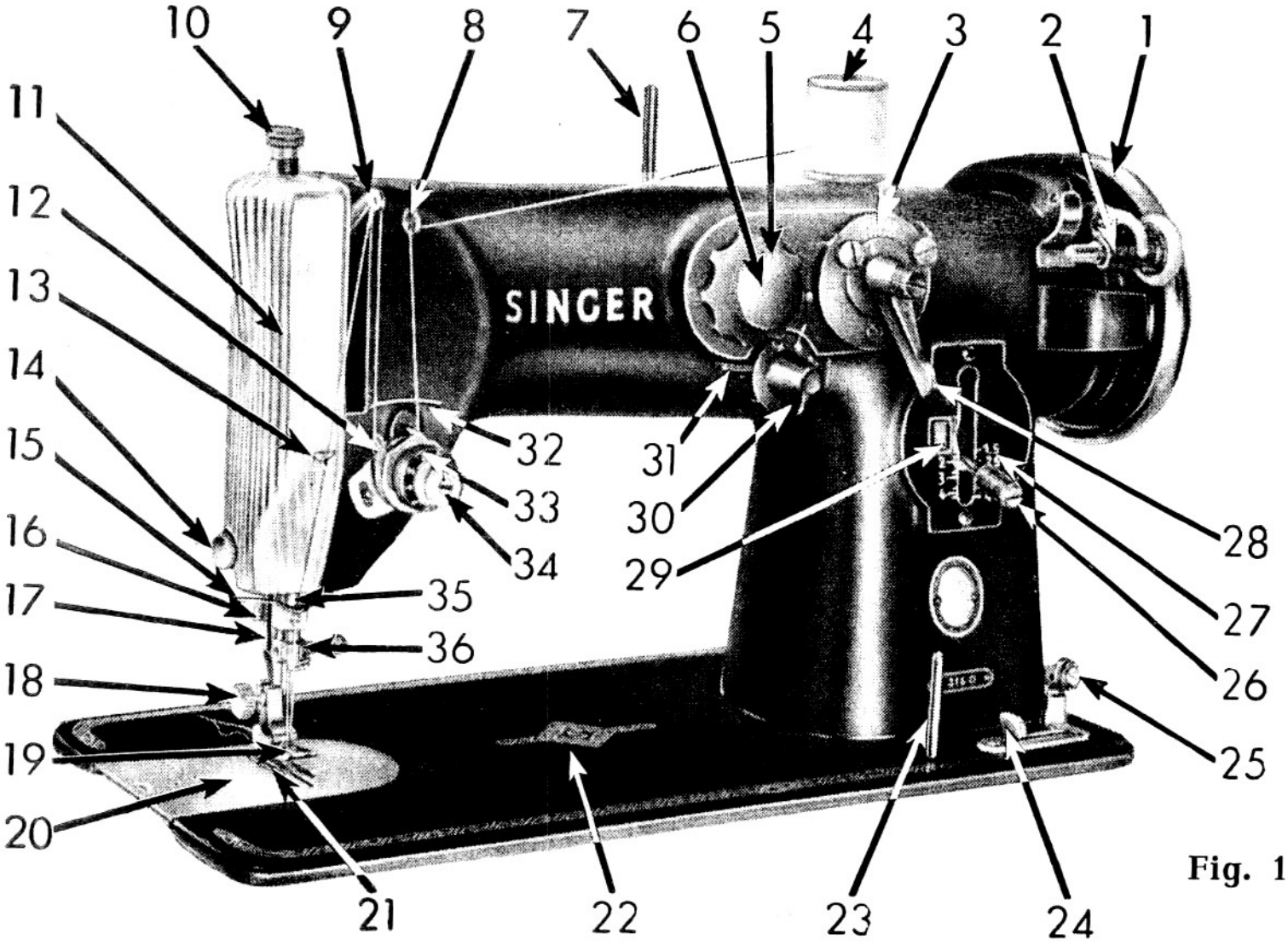


Fig. 1

Names of Principal Parts indicated by arrows in Fig. 1

1. Hand Wheel
2. Bobbin Winder
3. Bight Indicator
4. Spool Pin
5. Fashion Disc
6. Fashion Disc Thumb Nut
7. Spool Pin
8. Thread Guide
9. Thread Take-up Lever
10. Pressure Regulating Thumb Screw
11. Face Plate
12. Thread Take-up Spring
13. Face Plate Thread Guide
14. Face Plate Thumb Screw
15. Thread Guide
16. Thread Cutter
17. Presser Bar
18. Presser Foot Thumb Screw
19. Presser Foot
20. Throat Plate
21. Feed Dog
22. Bed
23. Bobbin Winder Spool Pin
24. Feed Throw-out Lever
25. Bobbin Winder Thread Tension
26. Stitch Regulator and Feed Reversing Lever
27. Stitch Indicator
28. Bight Control Lever
29. Stitch Indicator Notch for Satin Stitching
30. Needle Position Lever
31. Disc Follower Lifting Lever
32. Thread Guide
33. Needle Thread Tension Dial
34. Tension Regulating Thumb Nut
35. Needle Bar
36. Needle Clamp

Table of contents

General Instruction

for the Handling of the Machine

Loosening the Hand Wheel. Before setting the machine in motion, be sure the presser foot is raised by means of the presser bar lifter, to prevent the presser foot and feed dog from damaging each other.

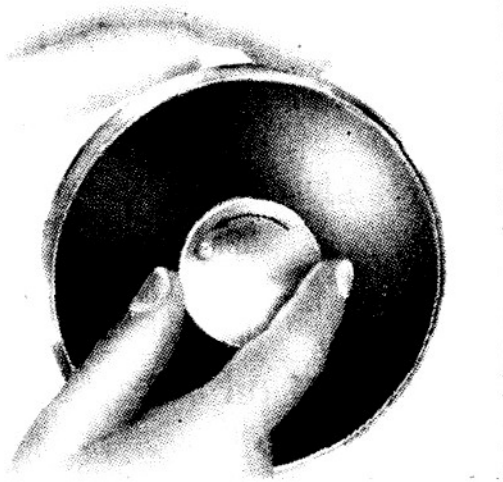


Fig 2
Loosening the Hand Wheel

First it is necessary to become familiar with the mechanism for loosening the hand wheel. This mechanism enables the beginner to practice treadling without actually operating the stitching mechanism. Loosening the hand wheel also enables the operator to wind bobbins without removing the needle or thread from the machine. The hand wheel is released from the stitching mechanism, as shown in Fig. 2, by holding the wheel firmly with the left hand and by turning the friction screw with the right hand as far to the left (counterclockwise) as possible.

Treadle Operating the Machine. If the machine is not furnished with a SINGER Electric Motor, the following method of treadling the machine must be learned: After loosening

the hand wheel from the stitching mechanism, place the feet on treadle of the machine stand, and with the right hand, turn the hand wheel over towards the operator and, by alternately pressing with the heel and toe, try to attain a uniform speed of the driving wheel. As soon as the treadling operation has been mastered and the machine can again be set in motion without turning the hand wheel in the wrong direction, the releasing mechanism (Fig. 2) is again tightened by turning the friction screw toward the right (away from operator) and the machine is ready for sewing. Place a piece of material under the presser foot, lower the foot and work in this manner with the unthreaded machine until the operation of guiding the material through the machine has been learned.

General Instructions. In order to obtain satisfactory work from the machine it is necessary to observe the following:

The hand wheel must be turned only toward the operator.

When the machine is not being used the presser foot should be raised.

As long as there is no material under the presser foot the machine should not be run with threaded needle.

In order to avoid the breaking of the needle, do not pull on the goods while sewing.

The work will be moved by the feed without assistance.

Needle and Thread. The Class 316 G Machine uses SINGER needles of Class 15×1 (flat shank). For perfect stitching, thread should be selected according to fabric to be stitched and needle must be correct size for thread to pass freely through eye of needle.

Select correct needle and thread according to table on page 44. Be sure that needle is not blunt or bent.

Thread breakage is sometimes caused by variations in the thickness of thread. Such breakage is overcome by using a needle of the next larger size.

To prevent this breakage, SINGER thread should be used only. Use link threads for needle and bobbin. Do not use silk on bobbin and mercerized thread in needle or vice versa.

Quality of Needle (Fig. 3). Since defective needles or needles of poor quality can easily break the thread, skip stitches or make

Fig. 3 "SIMANCO" *the trademark for genuine* SINGER Needles

uneven raw edges in your sewing work, be sure to purchase your needles for this machine in a qualified SINGER Shop, where needles of the correct size, for the type of work being done, can be purchased.

To Set the Needle (Fig. 4). Raise the needle bar to its highest position and loosen thumb screw F with the right hand. Take needle in left hand and insert into clamp as far as it will go with flat side to the back and long groove toward you (see arrow Fig. 4). Then tighten thumb screw F.

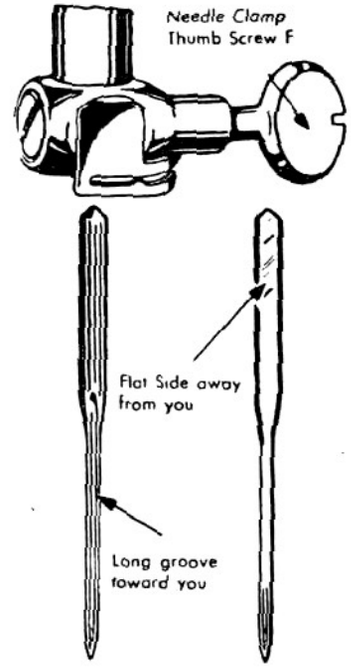


Fig. 4

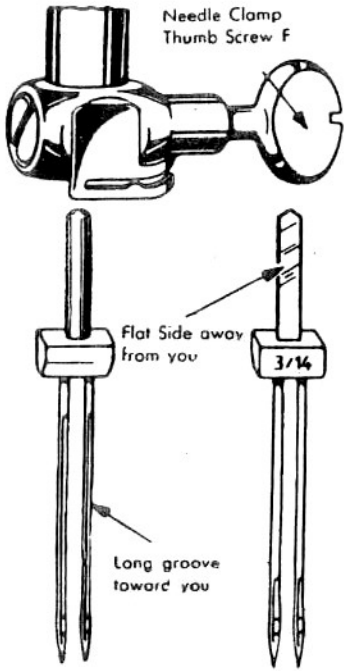


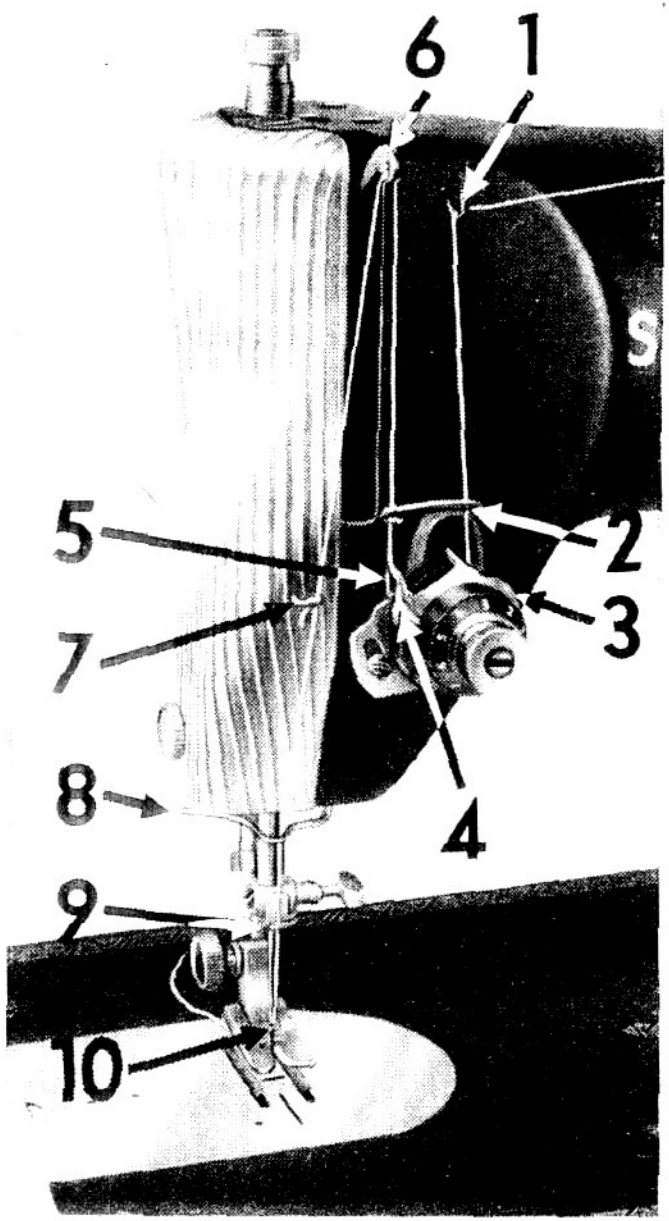
Fig. 5

To Set Twin Needles. Follow same procedure as described for setting single needle.

Before stitching with twin needles, be sure that Needle Position Lever (30, Fig. 1) is set for central position (see page 22, Fig. 30) and Bight Control Lever (28, Fig. 1) is set at 0. Failure to heed this caution will result in the blunting or breaking of the needles caused by needles striking the throat plate.

Upper Threading. — Single Needle (Fig. 6 and 7). Raise thread take-up lever to its highest point, place spool of thread on spool pin and hold spool with right hand. With the left hand lead thread

1. from under side into thread loop 1,
2. down behind thread guard 2,
3. down and from right to left behind or in front of center tension disc 3 (center disc separates threads for twin needle sewing),
4. up and behind the small retaining fork 4,



5. into the loop of the take-up spring 5,
6. up and again behind the thread guard 2 along through loop in take-up lever 6, from right to left,
7. down through guide in face plate 7,
8. down from left behind the thread guide 8 *underneath* the face plate,
9. from right into guide 9 on needle clamp and
10. from front to back through eye of needle.

Draw about two inches of thread through eye of needle with which to start sewing.

Fig. 6 Upper Threading

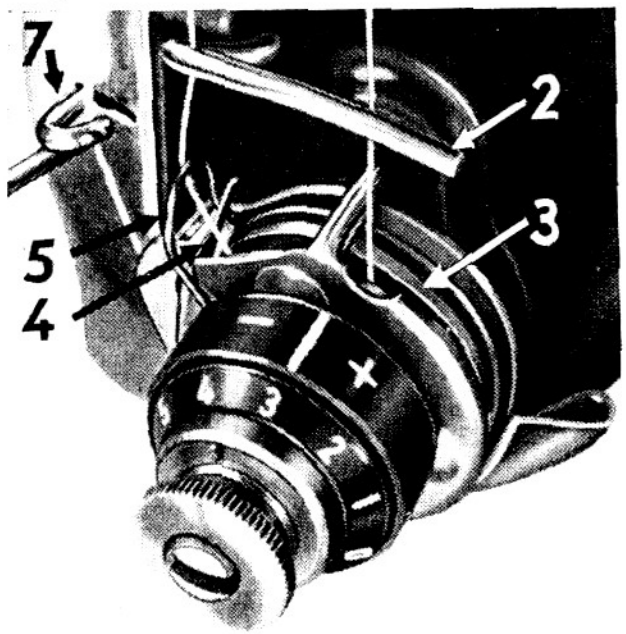


Fig. 7
Threading in Tension Discs

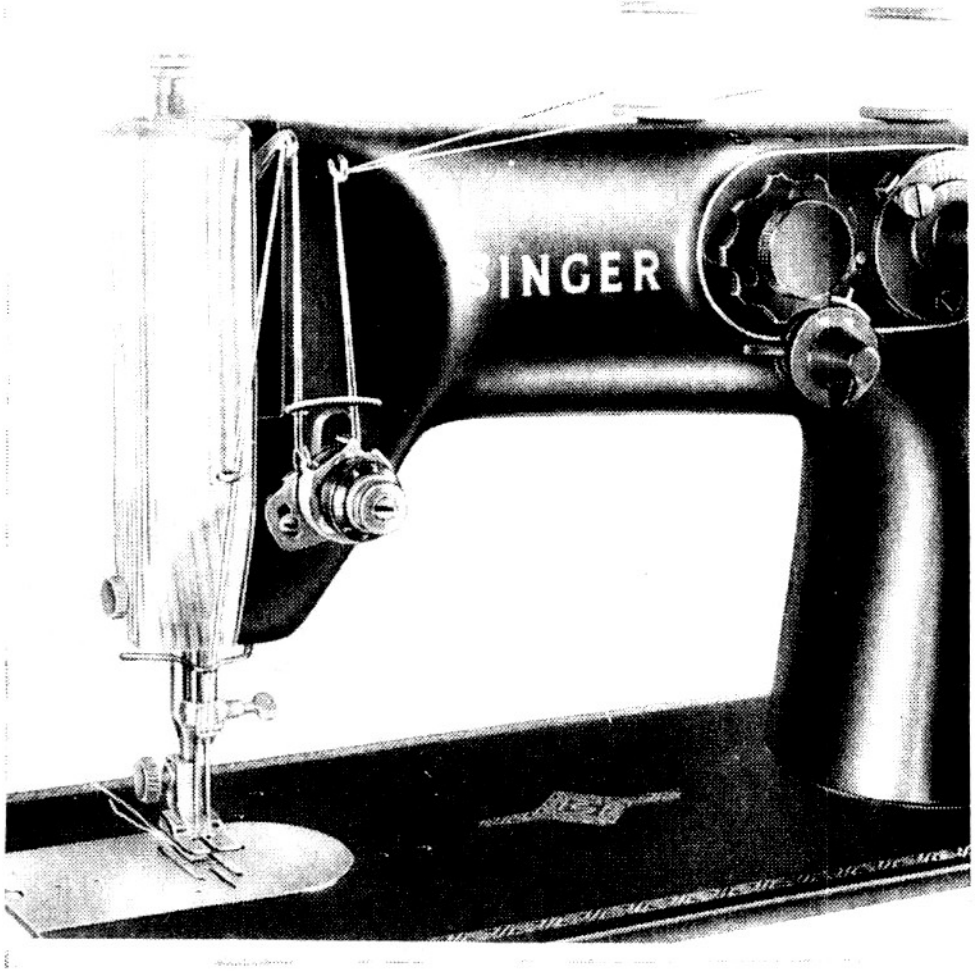


Fig. 8
Upper Threading — Twin Needles

Upper Threading — Twin Needles (Fig. 8) and 9). Raise take-up lever 5 to its highest point and place a spool of thread on each of the two spool pins. Thread each threading point with one thread at a time in the same manner as for single needle threading with the following exceptions:

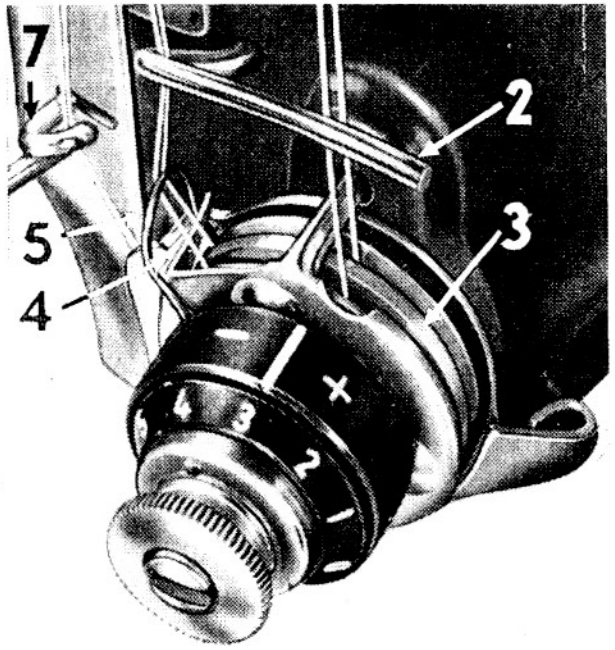


Fig. 9
Upper Threading —
Twin Needles
in Tension Disc

Pass one thread between the rear and center tension discs and the other thread between the center and front tension discs 3.

Thread eye of each needle from front to back. Be sure that threads do not cross over or bind each other. Draw about two inches of thread through eye of each needle with which to start sewing.

SINGER Threader (Fig. 10). For ease in threading, use the needle threader. The presser foot is lowered and the needle bar and thread take-up lever are raised to the highest point. Hold the needle threader with the right hand so that it is behind the needle and its hook is to the right of the needle. Let the hook of the threader slide down the short groove of the needle until it slips into the eye of the needle. Next, lead the hook as far as possible through the eye of the needle, place the thread onto the hook and hold it as shown in Fig. 10. While holding the threader horizontally and lifting slightly upward, draw the hook with the thread backwards out of the needle eye until the end of the thread is completely out of the hook. The needle is now properly threaded.

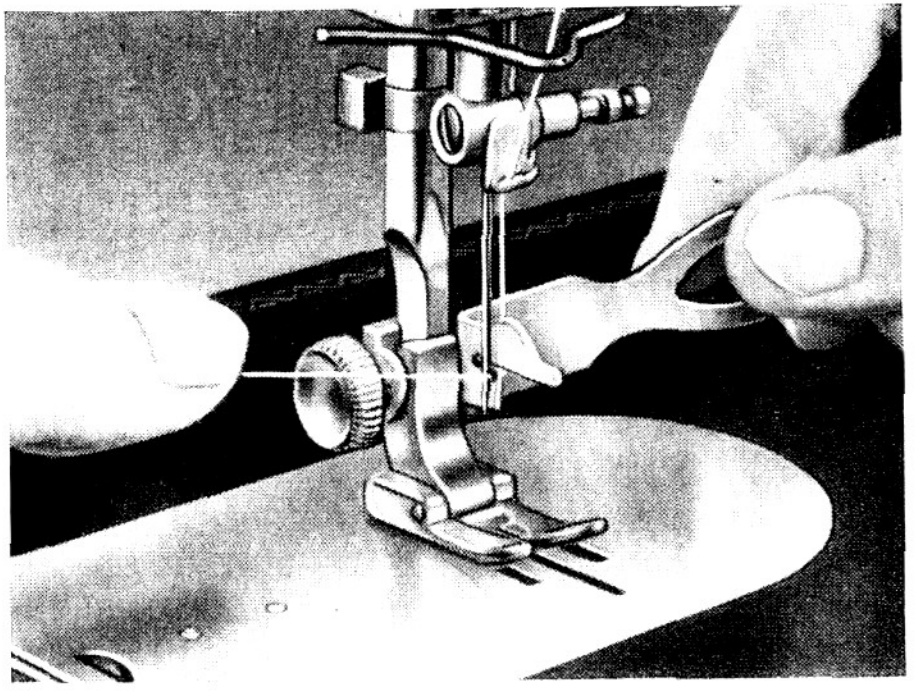


Fig. 10. The Use of the SINGER Needle Threader

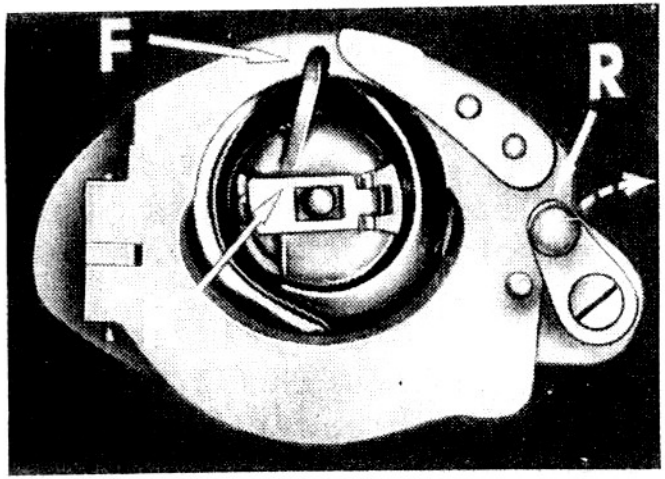


Fig. 11 Removing the Bobbin

To Remove the Bobbin (Fig. 11). With the thread take-up lever at its highest point, grasp the bobbin case latch K in the lower part of the machine, with the thumb and forefinger of the left hand, and draw out the bobbin case. While the latch is open, the bobbin will remain in the case. Upon releasing the latch and tilting the case, the bobbin will fall out.

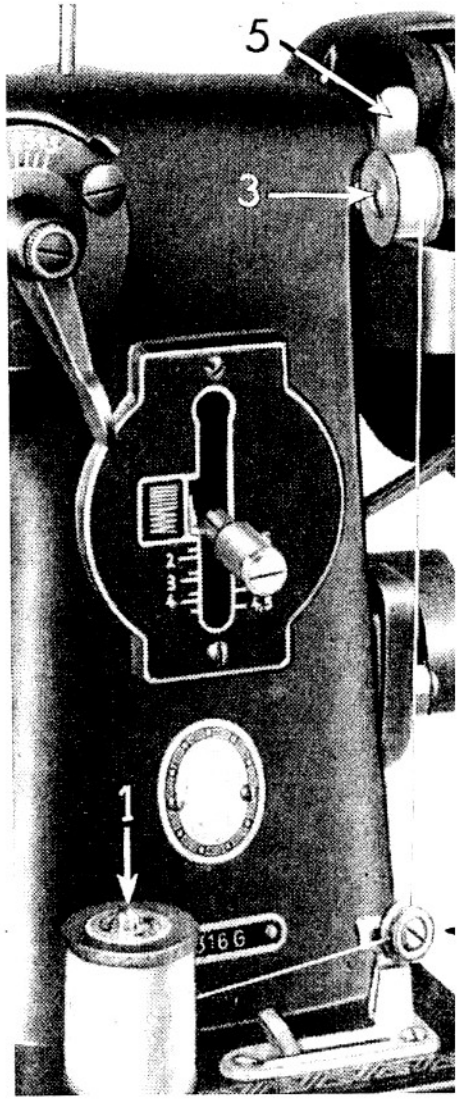


Fig. 12. To Wind the Bobbin

To Wind the Bobbin (Fig. 12). The hand wheel is released as described on page 5. Place a spool of thread on spindle 1, from which the thread is guided under and around tension discs 2 up to the bobbin winder.

Pass the thread from the inside through the slot in the left side of the bobbin and press the bobbin on to the winder spindle 3.

Lightly turn the bobbin and at the same time press it toward the bobbin winder spindle until the small pin in the bobbin winder spindle enters the slot in the right side of the bobbin. Next, press lever 4 downward so that the bobbin winder latch 5 will move downward and will be held fast in position for winding.

The machine should then be set in motion as for regular sewing.

The end of the thread is held fast with the hand for several turns of the bobbin, and then the starting end is broken off. As soon as enough thread is wound on the bobbin it will automatically disengage itself. In case a full bobbin is not required the winder can be raised by lifting lever 5, at any time desired.

Threading the Bobbin Case (Fig. 13, 14 and 15). Hold the bobbin which has been fully wound with thread, in the right hand so that the thread will run off from left to right (Fig. 13). With the left hand, grasp the bobbin case and place the bobbin into it (Fig. 13). Then pull the thread with the right hand through the slot in the edge of the bobbin case (Fig. 14) and farther to the left under the tension spring. Let the end of the thread hang down, next to the position finger of the bobbin case, as shown in Fig. 15.

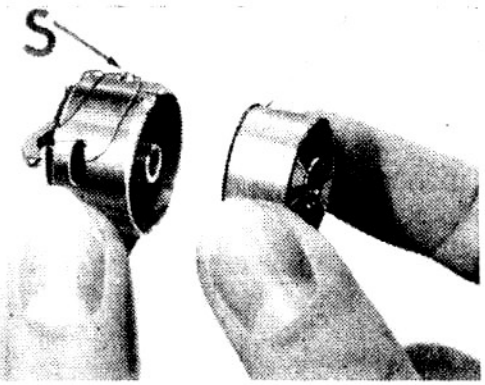


Fig. 13

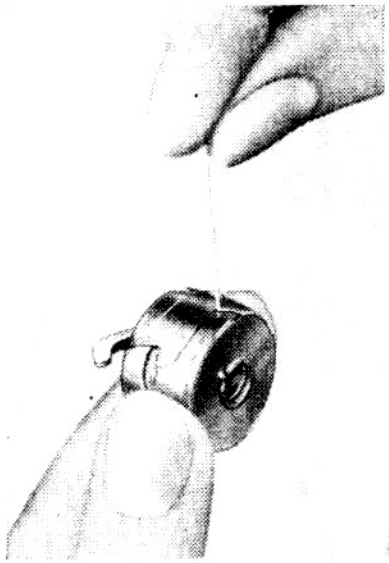


Fig. 14

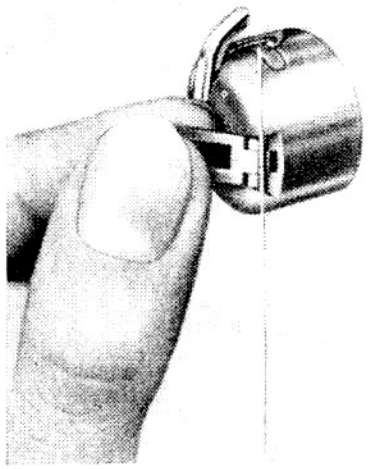


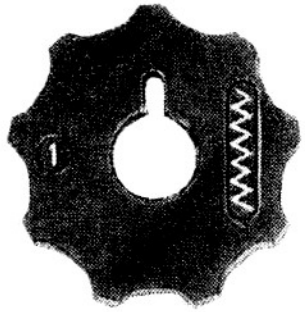
Fig. 15

To Replace the Bobbin Case. After threading, hold the bobbin case by the latch between the thumb and forefinger of the left hand and while keeping the thread take-up lever raised, replace

the bobbin on the center stud of the shuttle body so that the position finger F (Fig. 11) fits into the notch of the shuttle race. The bobbin case must be pressed firmly into the shuttle race so that upon releasing the latch, it will snap into the groove of the center stud; for only then is it protected from falling out.

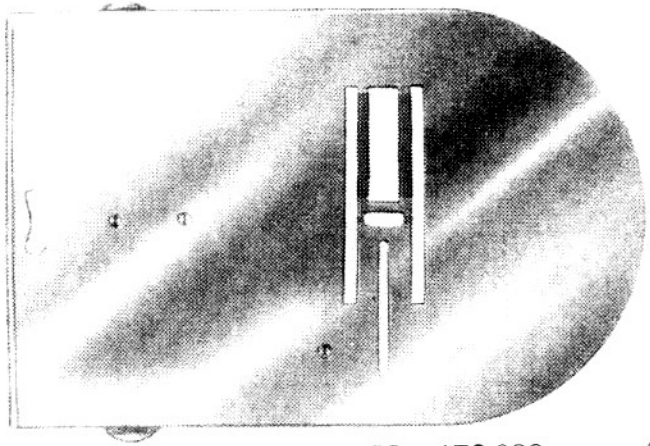
To Prepare for Sewing. For straight stitching and general zigzag work, make sure that your SINGER Class 316 G Machine is equipped with FASHION Disc No. 1 for normal zigzag work, an All-purpose Throat Plate and an All-purpose Hinged Presser Foot. The throat plate and presser foot have the same wide opening to accommodate the swing of the needle. With this normal equipment, as illustrated below, the following stitching can be obtained:

Straight Stitching - Zigzag Stitching - Tuck-Stitching - Ornamental Stitching

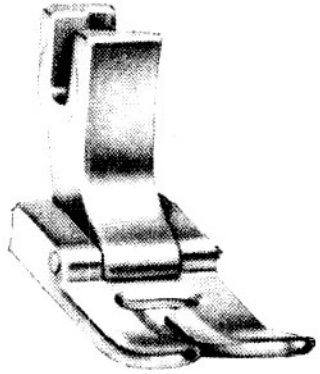


FASHION Disc No. 1 for Normal Zigzag Sewing

The equipment and setting of the Machine for General Zigzag Work!



Normal Throat Plate No. 173 088 for General Zigzag Work



Hinged Presser Foot No. 596 084 for General Zigzag Work

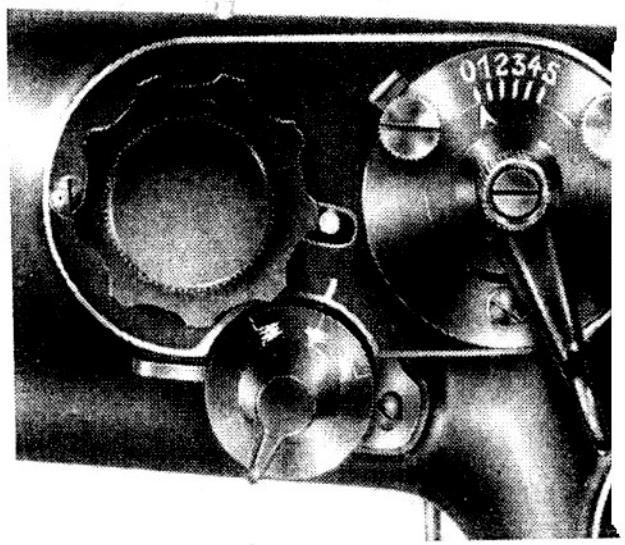


Fig. 16
Setting of Lever for Straight Stitch

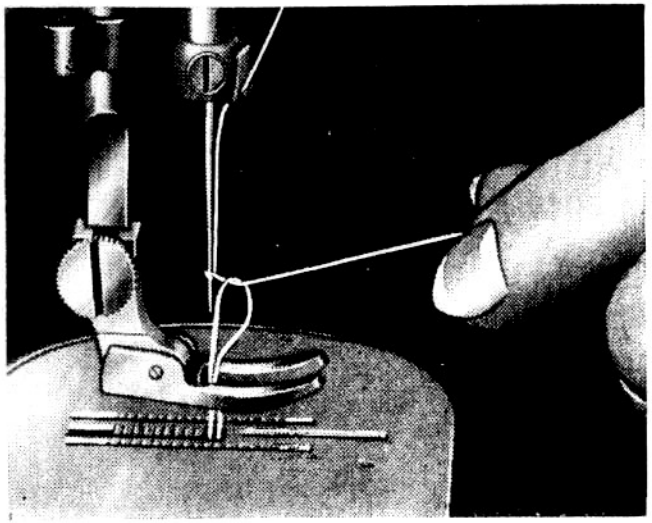


Fig. 17
Drawing Up the Bobbin Thread

The setting of Bight Control Lever and Position Lever, which is necessary for straight stitching, is shown in Fig. 16, page 14. Now draw up the bobbin thread. Hold the end of the needle thread loosely in the left hand and turn the hand wheel with the right hand over toward you until the needle moves down and up again to its highest point, and the thread take-up lever P, Fig. 19, is also raised to its highest point. By pulling the needle thread, the bobbin thread is brought up to the surface, as shown in Fig. 17. Lay both threads under presser foot diagonally across feed to the left or right, depending upon the side of the needle on which the material is placed, so that when the presser foot is lowered the threads will be firmly held between the feed and the presser foot (see Fig. 18).

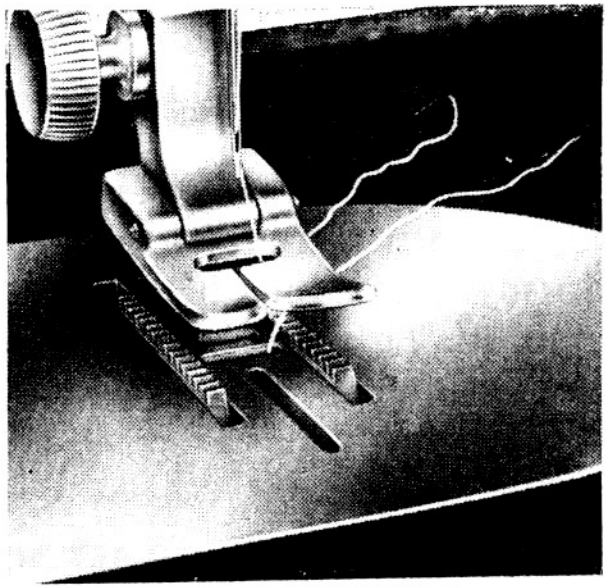


Fig. 18
Threads in Position to Start Sewing

To Start Sewing (Fig. 19). Be sure that take-up lever P, Fig. 19 is at its highest point. Adjust needle position lever (see page 22) and bight control lever (see page 24) to the desired setting. For zigzag stitching, turn hand wheel over toward you until needle is ready for its extreme left stroke of the left needle position, or its extreme right stroke at right needle position.

Place the material under presser foot S (Fig. 19), position the needle in fabric, and lower the foot by means of presser foot lifter Q (Fig. 19). Hold threads which have been drawn diagonally to back under presser foot and start sewing.

Most materials require only guiding for best sewing results. The work will be moved by the feed without assistance. However, the miracle fabrics, such as synthetics, blends with various rayons, puffed weaves, sheers, jerseys and tricots, which, by their nature, require light pressure, also require support in the form of holding the material taut at the front and back of the needle. This support assures a smooth, even seam. Never pull the material when sewing, since this might bend or break the needle.

Never operate the machine without cloth under presser foot.

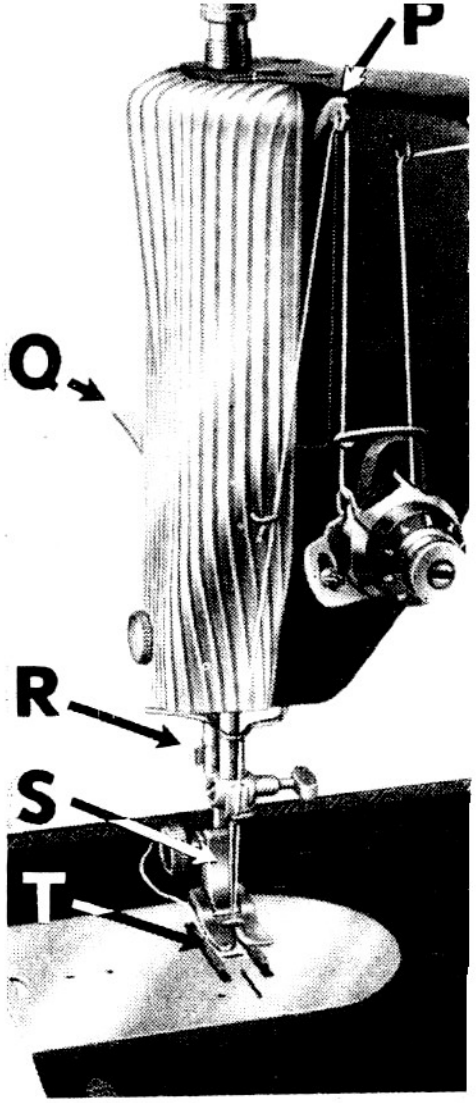


Fig. 19

To Remove the Work. Stop machine and make sure that thread take-up lever P, Fig. 19, is at its highest point. Raise presser foot S, by means of lifter Q and draw fabric back to left, sever threads on thread cutter R, Fig. 19, and place ends of threads again under presser foot diagonally across feed T, as shown in Fig. 18, page 15.

To Alter the Length of Stitch. By means of the stitch regulator, as shown in Fig. 20, the machine can produce stitches between 0 and 4,5 mm in length (maximum length is about $^3/_{16}$ inch.) The desired length of stitch is obtained by placing the indicator Z, which is on the left side of the stitch regulating lever H, so that it is in line with the number of the disired stitch length on the stitch regulator scale. The indicator can easily be moved by loosening the screw on the stitch regulating lever H. For short stitches turn screw to the right; for long stitches turn screw to the left.

Reverse Feed. The change from forward to reverse feed is brought about by raising the stitch regulating lever (H, Fig. 20 — pressed downward for forward feeding) to its highest position until it touches the top contact points. The machine will then sew the same number of stitches in reverse. The direction of the feed may be changed at any time during sewing.

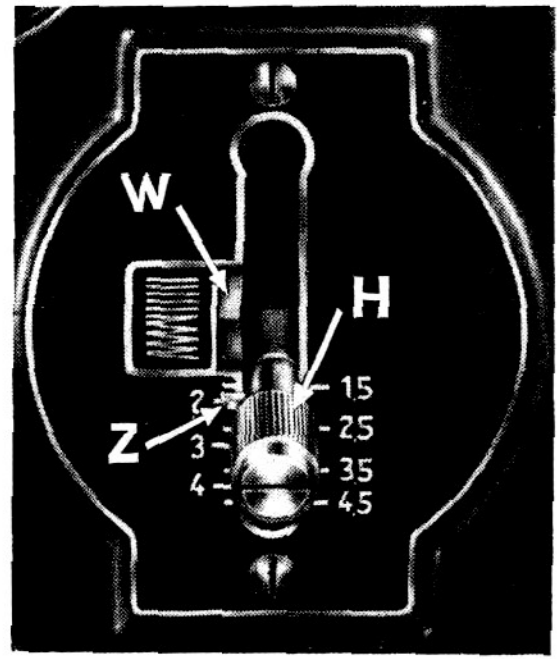


Fig. 20. Stitch Setting Mechanism

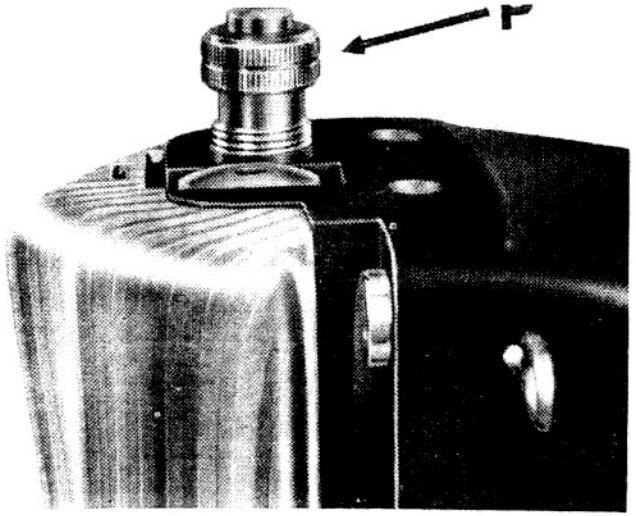
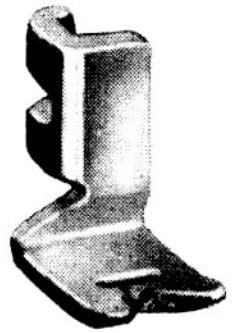


Fig. 21. Pressure Regulating Thumb Screw

Setting the Machine for Satin Stitching and Buttonhole Work. Satin stitching and Buttonhole work is done with a length of stitch between 0 and 1 mm. For setting this fine, short length of stitch, use incline W, Fig. 20. Set stitch regulator lever H so that the indicator Z is a little above the edge of the incline W. While stitching on a scrap of material, carefully and slowly turn lever H so that the indicator Z glides over the incline W into the machine, until stitches are packed evenly without irregularity. The Presser Foot No. 105251 provides a channel for wide satin stitching and ornamental stitching and gives smooth uniform results.

Regulating the Presser Foot Pressure. The presser foot pressure depends upon materials being used. If sewing fine silk or flimsy material, lighten the pressure. For ordinary sewing the pressure on the material seldom requires change.

To set a light pressure, turn the Pressure Regulating Thumb Screw P, Fig. 21, to the left so that it screws upward, until the material can be placed easily under presser foot.



Presser Foot
For wide satin
and ornamental
stitching
No. 105251

Heavy, napped fabrics, require a heavy pressure. To increase the pressure, turn thumb screw over to the right so that it screws downward.

Thread Tension for Straight Stitching. To obtain a perfect stitch, the interlocking of the needle and bobbin threads must take place in the middle of the sewing work, as shown in Fig. 22. If the tension on the needle thread is too tight or the tension on the bobbin thread is too loose, then the needle thread will lie straight along the upper surface of the material, as shown in Fig. 23.

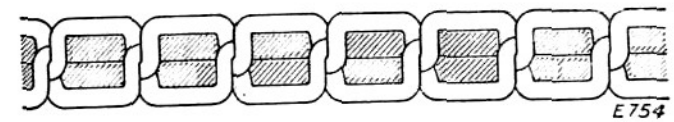


Fig. 22. Correct Seam

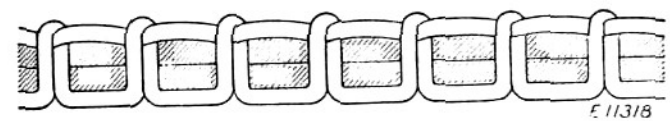


Fig. 23. Too Tight Needle Thread Tens. or Too Loose Bobbin Thread Tension

If the tension on the bobbin thread is too tight or that of the needle thread is too loose, then the bobbin thread will lie straight along the underside of the material, as shown in Fig. 24.

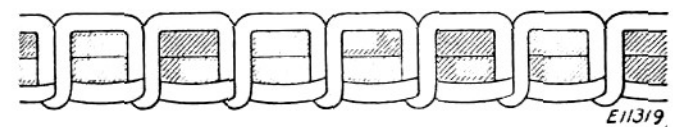
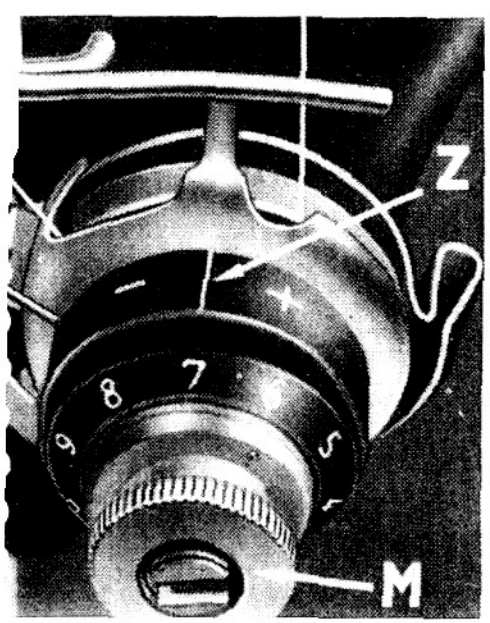


Fig. 24. Too Loose Needle Thread Tens. or Too Tight Bobbin Thread Tension



To Regulate the Upper Thread Tension (Fig. 25). The tension under which the threads are sewn is of the greatest importance for the appearance of the stitches and the firmness of the seam. Some goods or types of work require more and some less tension, therefore, the operator must become acquainted with the regulating of the tensions.

The correct stitch can generally be produced simply by regulating the needle thread tension only.

Fig. 25. To Regulate the Tension

This tension can be changed only when the presser foot is down. By turning the regulating thumb nut M, Fig. 25, the tension of the needle thread can be increased or decreased. If the thumb nut M is turned to the right, to the plus sign, the higher numbers will be indicated by the indicator mark Z, that is, the tension will be increased. If the tension is to be decreased, the thumb nut M must be turned toward the left to the minus sign, so that the lower numbers appear opposite the mark Z. By noting the number at the indicator mark, the previously set tension can quickly be reset every time a change is required.

To Regulate the Bobbin Thread Tension (Fig. 26). The tension on the bobbin thread is regulated by screw S, which is nearest center of tension spring on outside of bobbin case. To increase the tension, turn screw S over to the right. To decrease the tension, turn this screw over to the left.

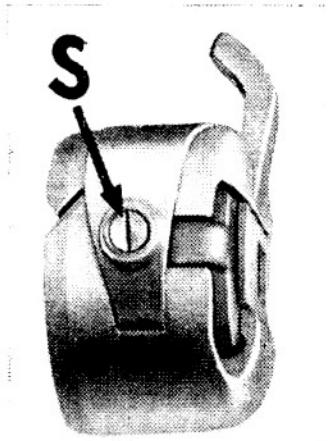


Fig. 26. To Regulate the Bobbin Thread Tension

To Change the Throat Plate. For certain work it is necessary to change the throat plate. Set needle at highest point, then set needle position lever at central needle position (see page 22) and bight control lever at "0". After having shifted the belt the machine is tilted back slightly with the right hand, as shown in Fig. 27.

With the left hand press the rounded end of throat plate up from the underside enough to clear the feed dog. Then slide the plate to the left.

The replacing of the throut plate is done in a similar manner, in which both ends of the

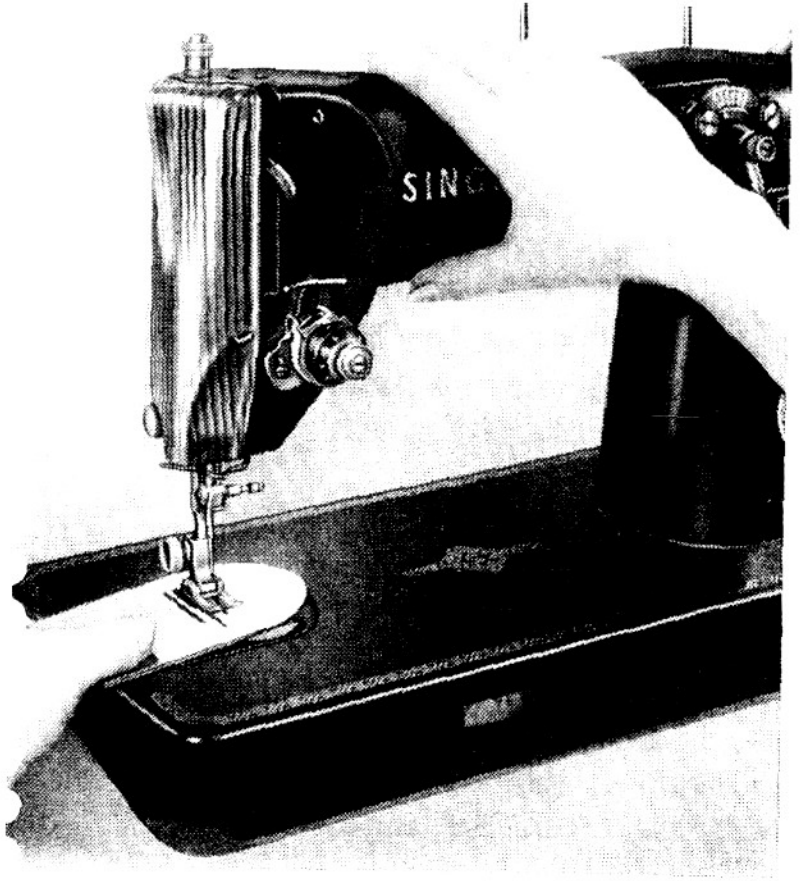


Fig. 27. To Change the Throat Plate

spring are slipped beneath the edge of the bed plate and, while slightly tilted, sliding it into position. Then lower the machine head into place.

To Regulate the Various Types of Stitches (Fig. 28). Fig. 28 shows the bight control and the automatic adjustment, as described in the following paragraphs and with which the operator should become familiarized:

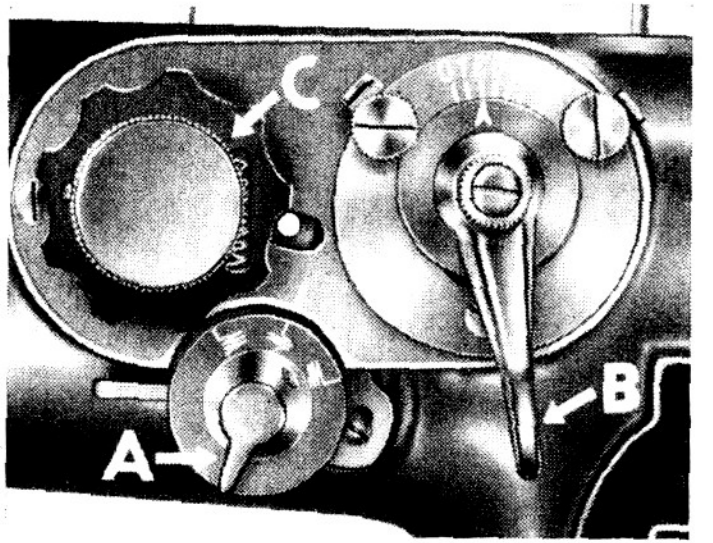


Fig. 28. The Automatic and Bight Control Adjustment

A. Position lever for setting central, left or right needle position.
B. Bight control lever for setting straight or zigzag stitching.
C. Changeable FASHION Disc for automatic sewing for particular zigzag and decorative ornamental stitching.

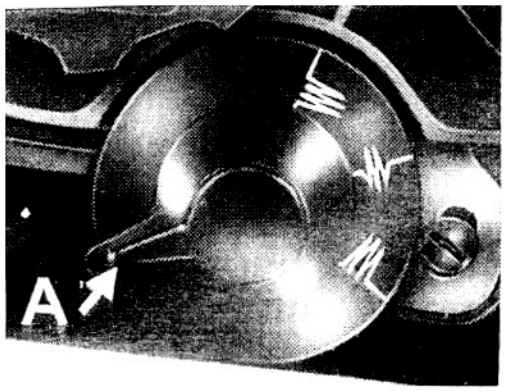


Fig. 29. Left Needle Posit.

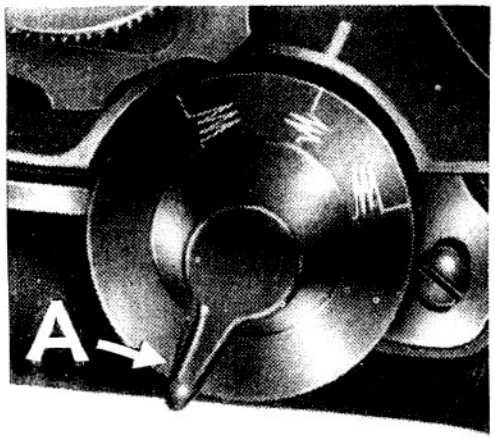
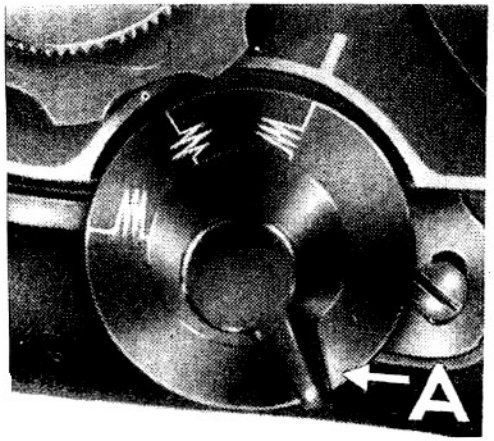


Fig. 30. Central Needle Pos.

Fig. 31. Right Needle Posit.



To Set the Needle Position. The SINGER Automatic Machine can be set for left, central or right needle position, as described below:

When needle position lever A, Fig. 29 is set to the left, then straight stitching will be located at the extreme left position and the needle will vibrate to the right, by changing the bight control lever from 0 to 5 mm, so that the zigzag stitch will lie to the right of the straight stitch (see Fig. 29 A).

When needle position lever A, Fig. 30 is set at central position, then straight stitching will be located at the central position and the zigzag stitch will be located equally to the right and left of center (see Fig. 30 A). If the needle position lever A, Fig. 31, is set to the right, then the straight stitching will be located at the extreme right position and the needle will vibrate from the right to the left (see Fig. 31 A).

CAUTION: Left Needle Position and Right Needle Position are used only with the All-purpose Throat Plate, for straight stitching as well as zigzag stitching.

Raise needle out of fabric before changing positions of Bight Control and Needle Position Levers. All other changes can be made while machine is in operation.

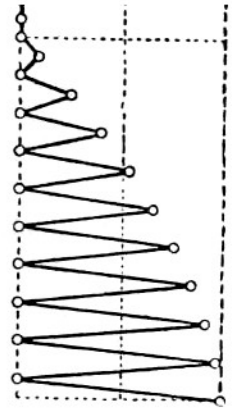


Fig. 29 A

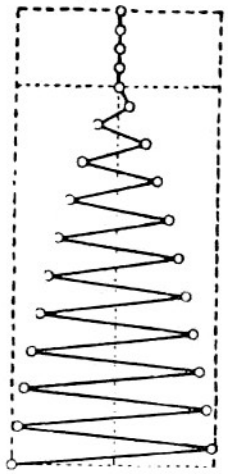
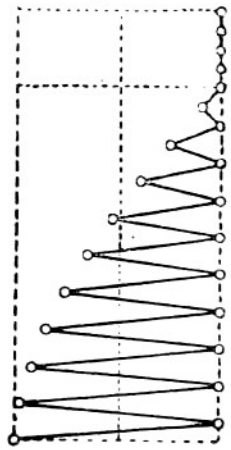
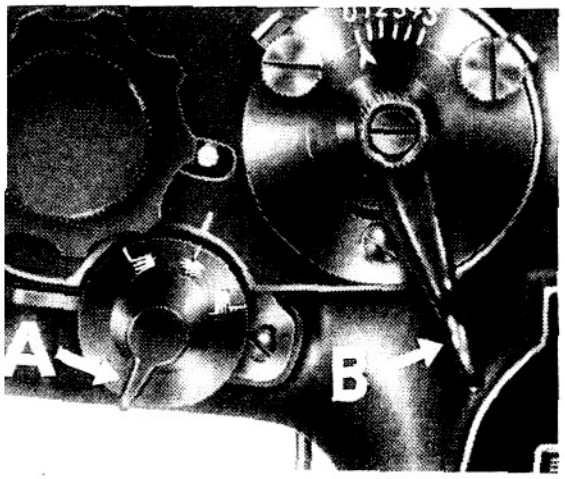


Fig. 30 A





32. Setting for Straight Stitching

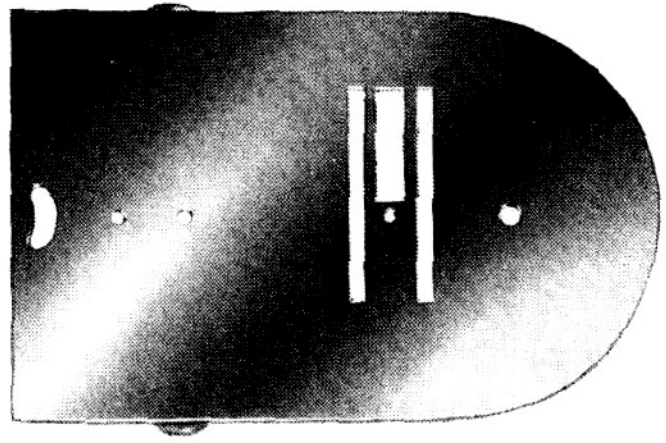
To Set Bight Control for Straight Stitching. The SINGER Class 316 Machine has a mechanism for sewing either a simple straight stitch or a zigzag stitch. However, for general household sewing, the straight stitch is still the most desirable.

If the automatic machine is to be used for straight stitching, then the Needle Position Lever A, Fig. 32, must be set for central needle position and the Bight Control Lever B, Fig. 32, must be set at 0. At this setting any one of the many FASHION discs (pages 27 to 36) can be used in the machine. If the machine is to be used for straight stitching over a prolonged period of time, it is advisable, to use the hinged presser foot for straight stitching instead of the zigzag presser foot and also the throat plate for straight stitching (available at an extra charge) should be placed on the machine.

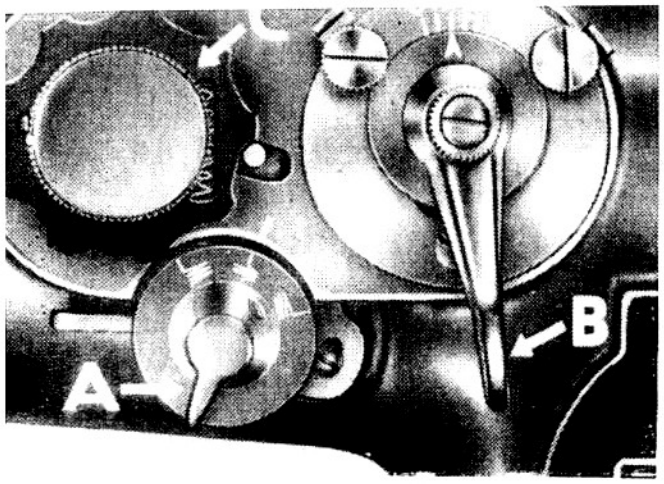
Presser Foot for Straight Stitching No. 506085 →

With this equipment on the automatic machine all the special attachments for the SINGER Household Machines, such as the 12 stitch ruffler, pleating, hemming, binding, etc. can be used.

Make sure that the machine is not set for zigzag stitching, if the presser foot and throat plate for straight stitching are placed on the machine, otherwise the needle will be broken.



Throat Plate for Straight Stitching No. 173090 →



To Set the Bight Control
Fig. 33

Zigzag Sewing (Fig. 33). To obtain general zigzag stitching, FASHION Disc No. 1 (see C, Fig. 33) must be placed on machine. If the Bight Control Lever B is not set at 0, but at any one of the other positions as indicated on the scale, then the machine will sew a zigzag stitch. Each line and number on the scale indicates the width of bight in mm, that is, zigzag and ornamental stitches up to 5 mm in width can be accomplished.

CAUTION: Zigzag and ornamental sewing may only be done when the throat plate with the elongated needle hole is used, otherwise the needle will be broken.

For general zigzag work it is advisable, if not otherwise instructed, always to set the machine for central needle position, as shown in Fig. 33.

Bight Control Limit Screws (Fig. 34). The bight control lever B as well as needle position lever A can be regulated while sewing, and can even be interchanged between straight stitching and zigzag stitching as well as between various widths of zigzag stitches. If, as in sewing buttonholes, the operator wishes to limit the widths of bight, then the stops D and E, Fig. 34, should be used.

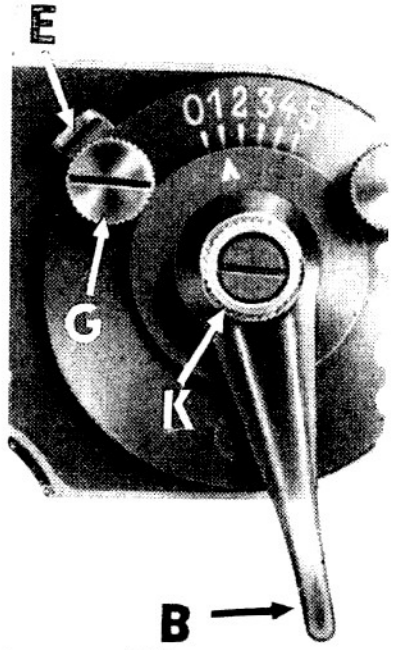


Fig. 34→
To Set the Bight Control Limit Screws

The stops D and E can be adjusted by loosening the screws F and G as follows:

Stop D limits the bight to the right between 2 and 5 mm.
Stop E limits the bight to the left between 0 and 3 mm.

To bring stop D in action, loosen the screw F by hand or screwdriver, set bight control lever B at desired point, for example at line 4, and move the stop D toward the scale until it clicks. Then tighten the screw F again. The bight is now limited between 0 and 4 mm. In the same manner set the stop E and limit the bight to the left, for example at line 2. The machine will then produce zigzag stitches, which are limited between 2 and 4 mm and which are about 2 mm in width.

The stops can be taken out of action, but still keep the bight set at desired limit, by means of changing the screw K (Fig. 34 A and B) one quarter turn clockwise, so that the bight control lever can be swung over the entire scale, which will be necessary, for example, when sewing up zigzag seams on the edges or sewing the bar on the buttonholes. If the screw K is turned clockwise an additional quarter turn, the bight is then limited again by the stops D and E.

← Fig. 34 A
Stops D and E in Action

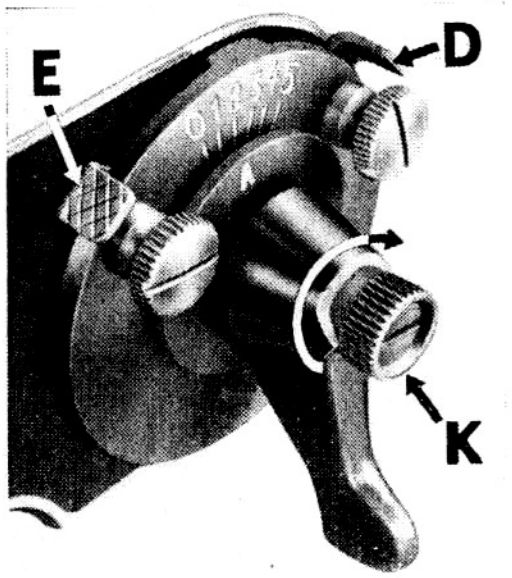


Fig. 34 B →
Stops D and E Out of Action

The Automatic Sewing with FASHION Discs.

To Change FASHION Discs (Figs. 35 and 36). To change the FASHION disc G, follow instructions as listed below:

1. Set needle at highest point.
2. Set needle at central position.
3. Set Bight Control Lever at 0.
4. Remove knurled nut M.
5. Remove FASHION Disc G from the shaft.
6. Lift lever H with the left thumb,
7. while placing new FASHION Disc on shaft W
8. so that the pin J engages at slot L.
9. Replace nut M and tighten securely.

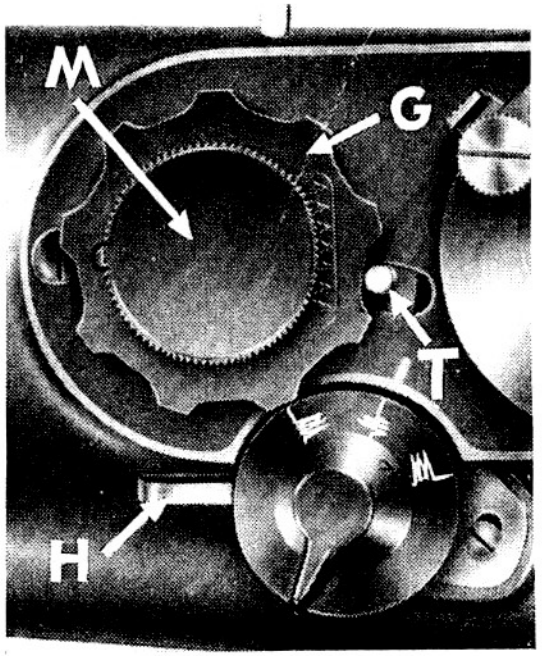
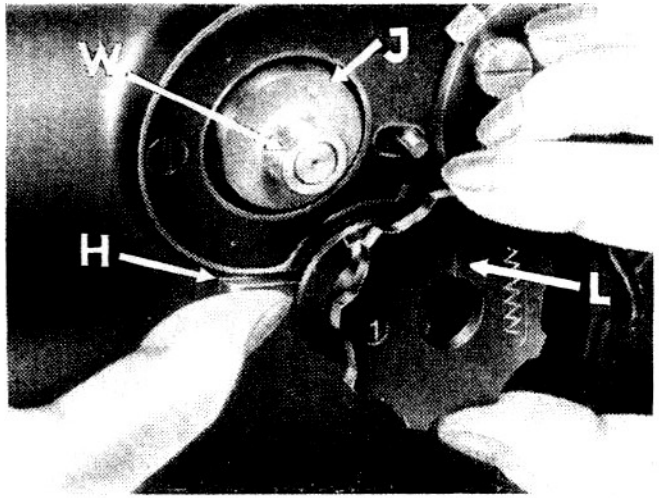


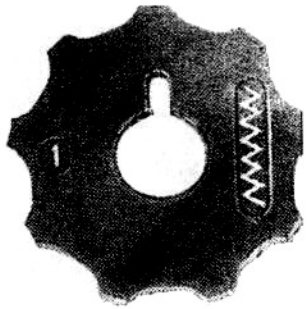
Fig. 35
To Remove the FASHION Disc



Set bight and needle position levers to desired settings and proceed as for regular sewing. Be sure that a FASHION Disc is always placed on the machine, even for straight stitching.

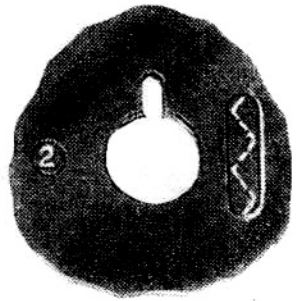
← Fig. 36 To Replace the FASHION Disc

The FASHION Discs. The machine will sew a straight stitch if the Bight Control Lever G, Fig. 34, is set at 0 no matter which FASHION Disc is placed on the machine.



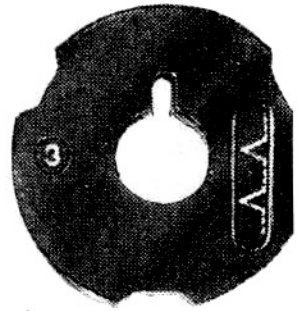
Zigzag FASHION Disc No. 1 for Normal Zigzag Stitch

1. **The Zigzag FASHION Disc No. 1** WWWWWWWWW makes a uniform zigzag stitch in all widths up to approximately 5 mm. This disc is recommended for making buttonholes, sewing buttons, reinforcing seams, marking hairline seams, cording seams, making invisible seams in lace, appliqueing, satin stitching scallops, script stitching and wherever uniform zigzag stitching is desirable. Decorative stitch patterns are produced with Disc No. 1 by varying one or more levers, for needle position, bight and stitch length.



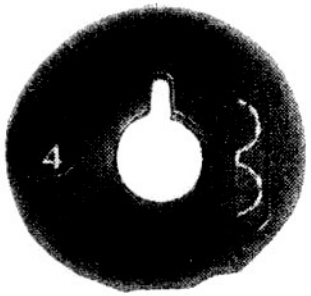
Multiple Stitch Zigzag FASHION Disc No. 2

2. **The Multiple Stitch Zigzag FASHION Disc No. 2** ⋀⋀⋀⋀⋀⋀⋀ makes a three stitch zigzag particularly suitable for reinforcing, patching and mending, as well as for decorative applications. This disc is especially adaptable for use in joining the overlapped seams of interfacings and interlinings, joining seams where there is both lengthwise and crosswise elasticity (for example, tricot), and applying bindings to blankets.

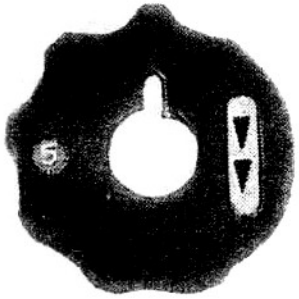


Blind Stitch FASHION Disc No. 3

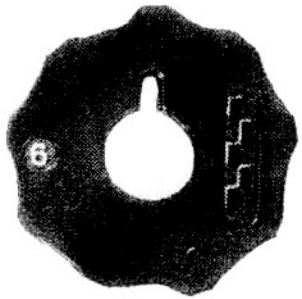
3. **The Blind Stitch FASHION Disc No. 3** ___Λ___Λ___Λ___Λ___ produces a straight line of four stitches followed by a single zigzag stitch to the left. The width of the zigzag stitch is regulated by the bight control lever. The resulting adjustable blind stitch is ideal for hems, facings and zippers. When the lever is set for a wide bight, this stitch is appropiate for overedging seam, hem and facing edges to prevent fraying.



The Scallop Stitch FASHION Disc No. 4



The Arrowhead FASHION Disc No. 5



The Domino FASHION Disc No. 6

4. **The Scallop Stitch FASHION Disc No. 4**  accurately stitches scallops while the fabric moves in a straight line under the presser foot. A single stitch separates each scallop. The length of the scallop is varied by changing the length of stitch, the width of the scallop by varying the bight.

5. **The Arrowhead FASHION Disc No. 5**  controls the formation of the arrowhead stitch pattern automatically. This decorative design can be changed in width by setting the bight. The arrowheads will get shorter by reducing the stitch length setting. The stitches are packed closely together when an almost 0 stitch length is used, and are separated when a longer stitch is used. As a border design or as part of a motif or monogram, the arrowhead design is classic and appealing.

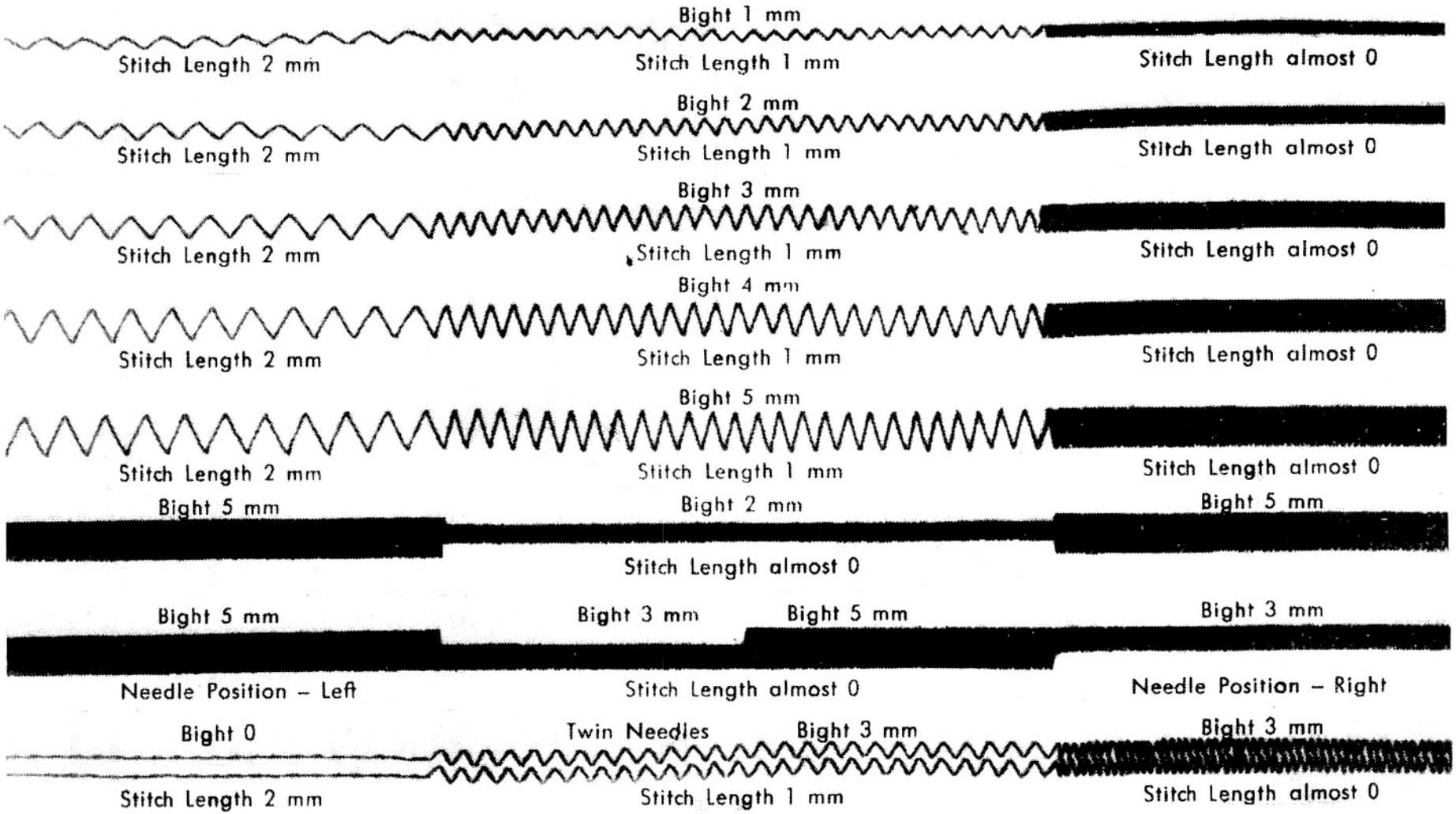
6. **The Domino FASHION Disc No. 6**  forms a decorative stitch pattern attractive for border designs, monograms and motifs on pockets. It is effective when applied to linens, children's clothes, blouses and play chothes. The design can be varied in width by the bight lever, and in spacing by the stitch length. Twin needle stitching is particularly attractive when two colors of thread are used.

Discs 1, 2, 3, 4 and 6 produce the same stitch pattern, whether numbered side of disc is toward or away from the machine. However, Disc No. 5 forms the wide portion of the arrowhead first when disc is placed numbered side away from machine and point or narrow portion of arrowhead first when disc is reversed.

It is advisable to stitch on a scrap of material until that point in the design is reached that is to be reproduced on the work, especially when using the Scallop Stitch and Arrowhead FASHION Discs.

Designs Made with Zigzag FASHION Disc No. 1

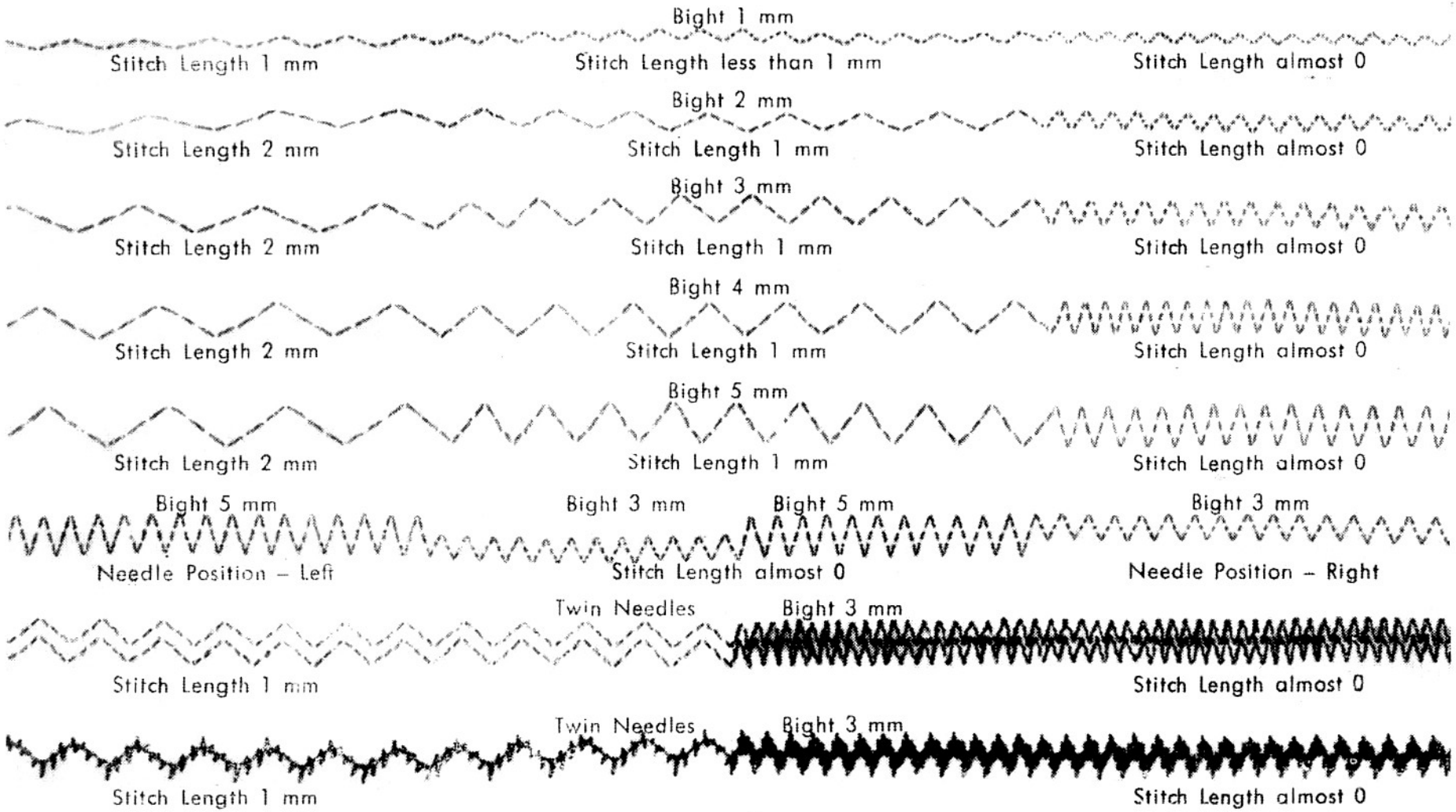
By changing Bight, Length of Stitch and Needle Position (Direction of Stitching, left to right)



Loosen needle thread tension slightly with each increase of Bight above 2 mm and with each increase of stitch length. Satin Stitch Foot No. 105251 should be used with stitch length of almost 0. Use central needle position except when otherwise indicated.

Designs Made with Zigzag Stitch FASHION Disc No. 2

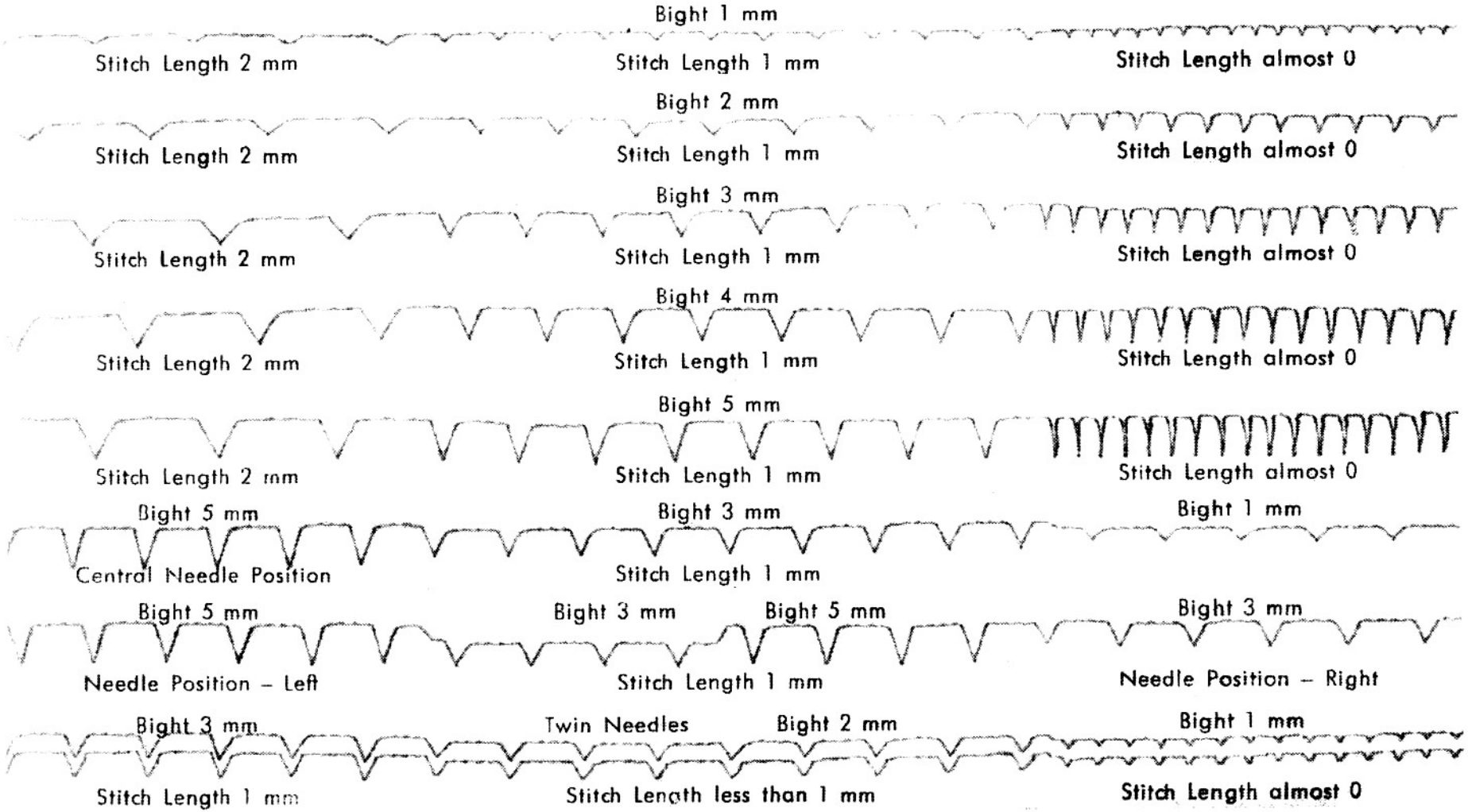
By changing Bight, Length of Stitch and Needle Position (Direction of Stitching, left to right)



For bottom row of twin needle stitching, garment is stitched right side down. When stitching with twin needles use foot for wide satin and ornamental seams No. 105 251. Use central needle position except when otherwise indicated. The All-purpose Presser Foot for zigzag stitching No. 506 084 should be used.

Designs Made with Blind Stitch FASHION Disc No. 3

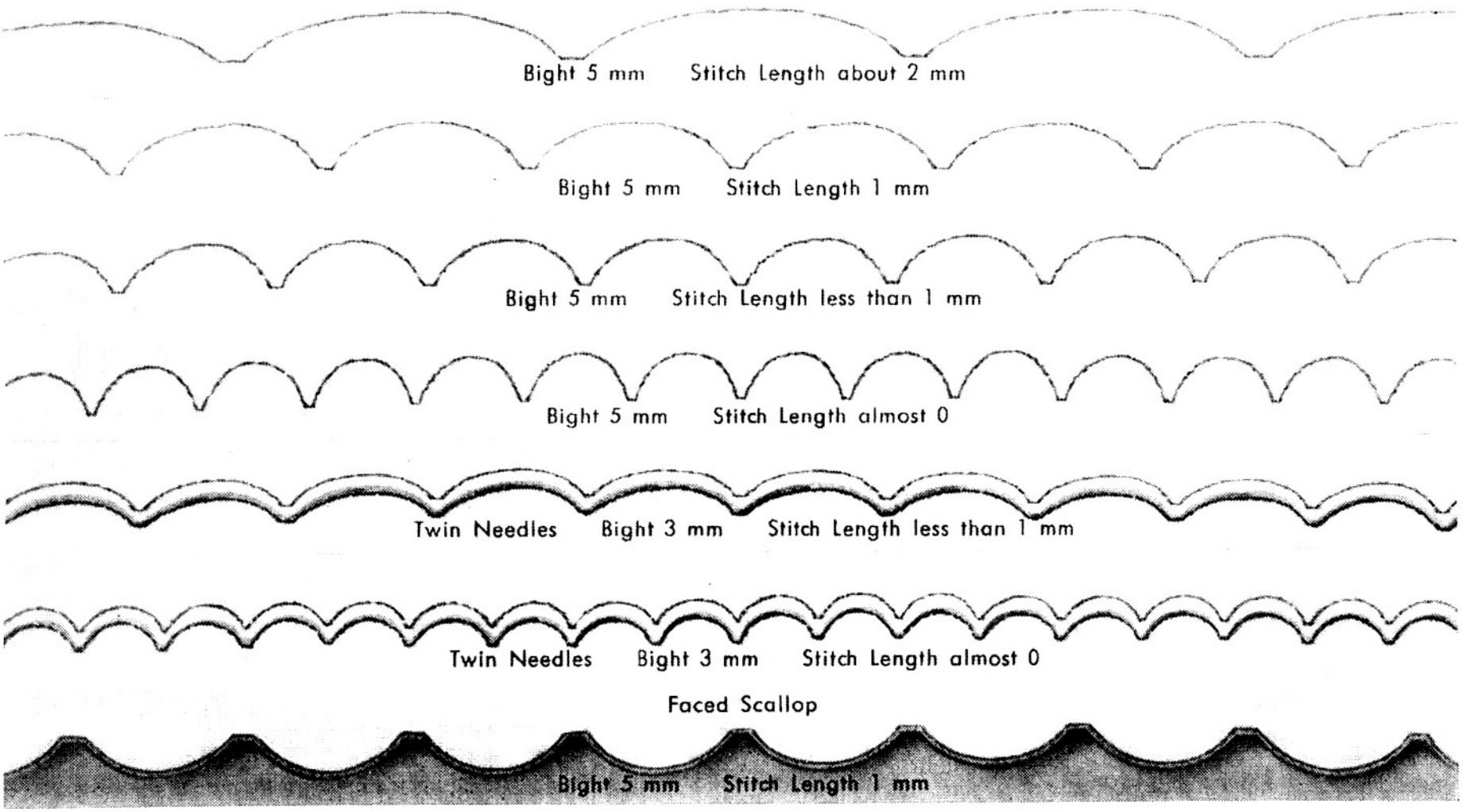
By changing Bight, Length of Stitch and Needle Position (Direction of Stitching, left to right)



Loosen needle thread tension slightly with each increase of bight above 2 mm. When stitching with twin needles use foot for wide satin and ornamental seams No. 105251. Use central needle position unless otherwise indicated. The All-purpose Presser Foot for zigzag stitching No. 506084 should be used.

Designs Made with Scallop FASHION Disc No. 4

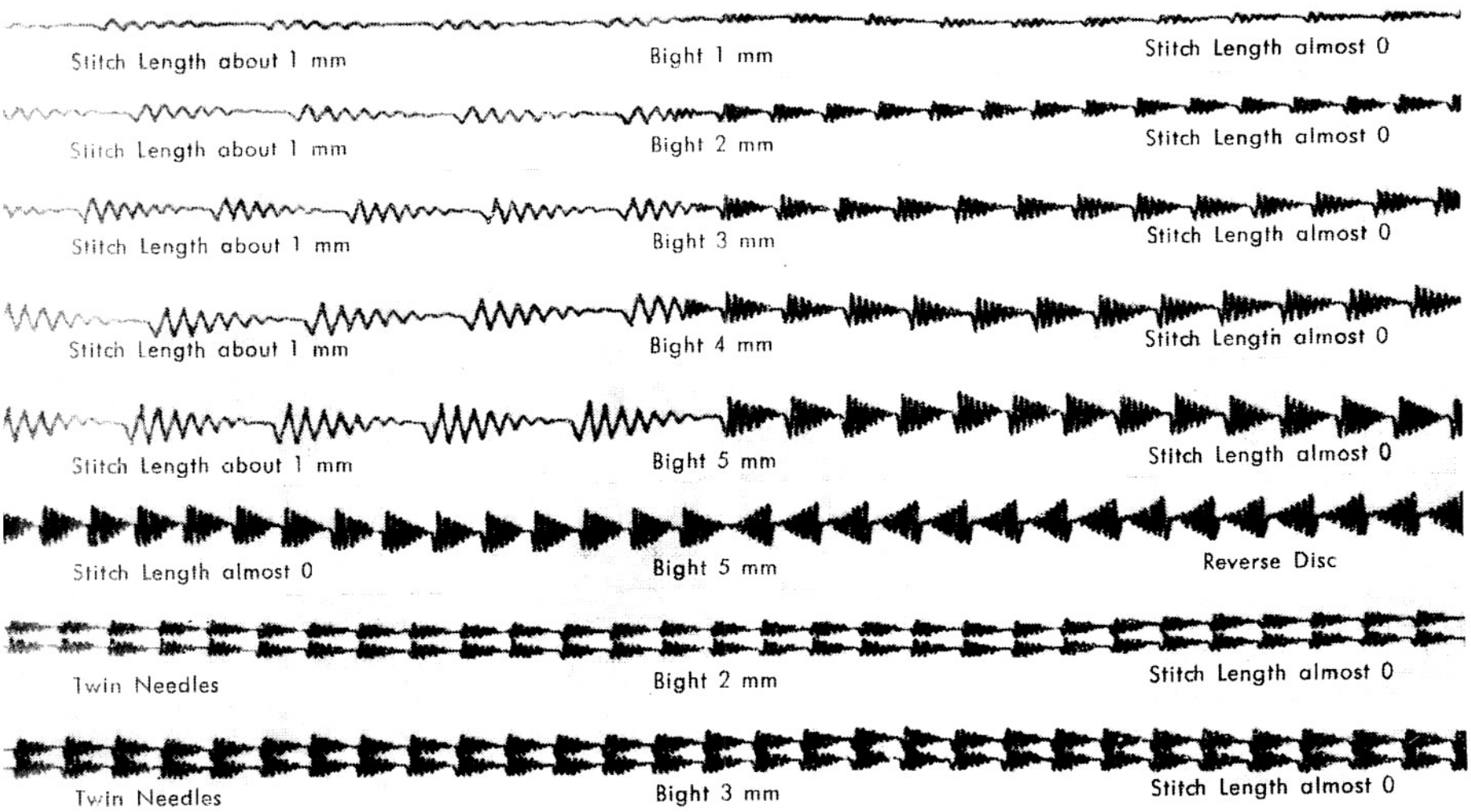
By changing Bight, Length of Stitch and Needle Position (Direction of Stitching, left to right)



Central Needle Position should be used unless otherwise indicated.
All-purpose Presser Foot No. 506084 for general zigzag stitching should be used.

Designs Made with Arrowhead FASHION Disc No. 5

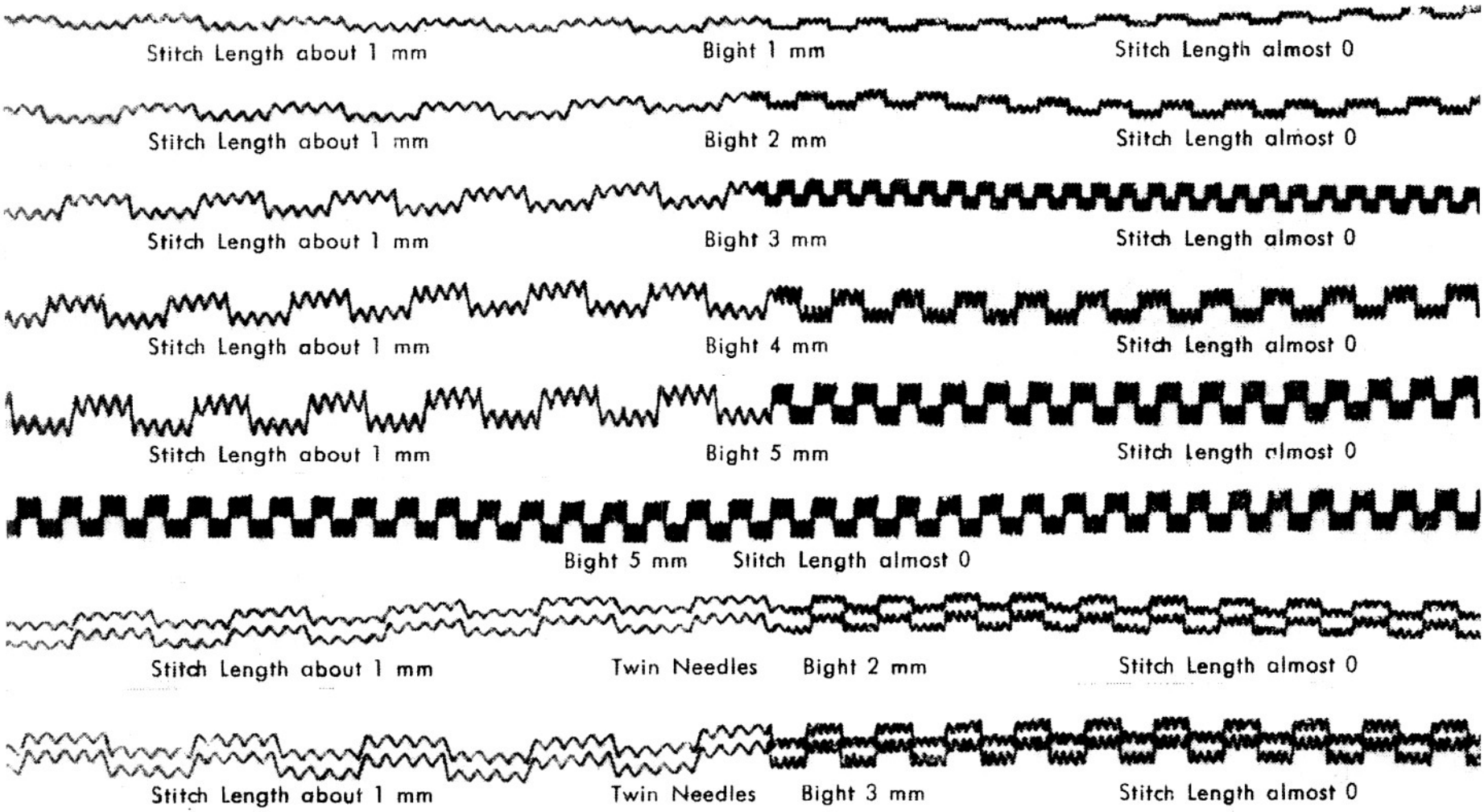
By changing Bight, Length of Stitch and Needle Position (Direction of Stitching, left to right)



oosen needle thread tension slightly with each increase of bight above 2 mm and with each decrease of titch length. Satin Stitch Foot No. 105251 should be used with stitch lenght of almost 0. Central Needle osition is used unless otherwise indicated.

Designs Made with Domino FASHION Disc No. 6

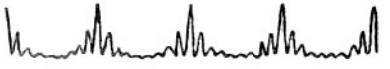
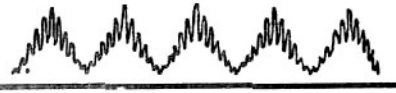
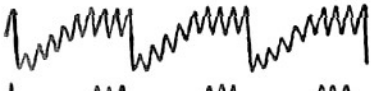
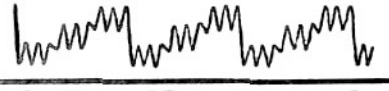
By changing Bight, Length of Stitch and Needle Position (Direction of Stitching, left to right)



Loosen needle thread tension slightly with each increase of bight above 2 mm and with each decrease of stitch length. Satin Stitch Foot No. 105251 should be used with stitch length of almost 0. Central Needle Position is used unless otherwise indicated.

Other FASHION Discs for Ornamental Stitching

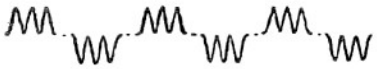
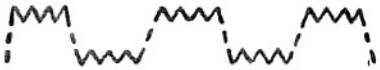
(Can be purchased at an extra charge)

No.	Stitch Designs	Description	Order Number For Single FASH. Disc	Order Number For Sets
7		Shell Stitch	276 307	
8		Solid Scallop Stitch	276 308	2
9		Icicle Stitch	276 309	276 401
10		Banner Stitch	276 310	
11		Key Stitch	276 311	
12		Walls of Troy (solid)	276 312	3
13		Solid Diamond	276 313	276 402
14		Zigzag Point Stitch	276 314	
15		Long Oblique Stitch	276 315	
16		Shingle Stitch	276 316	4
17		Pennant Stitch	276 317	276 403
18		Three-steg Stitch	276 318	

Satin Stitch Foot No. 105 251 should be used with stitch length of almost 0. Crisp lawn, organdy, or tarlatan backing is used if material gathers on single thickness.

Other FASHION Discs for Ornamental Stitching

(Can be purchased at an extra charge)
Continued

No.	Stitch Designs	Description	Order Number For Single FASH. Disc	Order Number For Sets
19		Ball Stitch	276 319	
20		Curved Mending Stitch	276 320	5
21		Thunderbird Stitch	276 321	276 404
22		Semaphore Stitch	276 322	
23		Solid Pyramid Stitch	276 323	
24		Open Pyramid Stitch	276 324	6
25		Spiny Stitch	276 325	276 405
26		Block Stitch	276 326	
27		Fagotting Stitch	276 327	
28		Comb Stitch	276 328	7
29		Pavilion Stitch	276 329	276 406
30		Platform Stitch	276 330	

Satin Stitch Foot No. 105251 should be used with stitch length of almost 0. Crisp lawn, organdy, or tarlatan backing is used if material gathers on single thickness.

To Change the Automatic Ornamental Stitching

As already shown on pages 29 to 34, the FASHION Discs for automatic ornamental stitching Nos. 1 to 6 can produce different designs by changing the bight, stitch length and needle position. Also, on all other ornamental stitching (see Discs Nos. 7 to 30, pages 35 and 36), different designs can be made by changing the bight and needle position, which are especially desirable on dresses, linens, etc.

The multiplicity of this ornamental stitching can be increased by combining different FASHION Discs and colors, especially by using Twin Needles.

Also, the experienced operator can create even greater variations of designs with zigzag stitch FASHION Disc No. 1, by means of changing the bight control lever B, position lever A (see Fig. 28) and stitch indicator H (see Fig. 20) by hand.

Drop Feed Lever. For darning and embroidering, sewing buttons, etc., the feed dog (No. 21, Fig. 1) must be dropped. First set stitch indicator H, Fig. 20, at 0, that is, in the middle of scale. To drop the feed move the lever A, Fig. 37, over to the right as far as it will go.

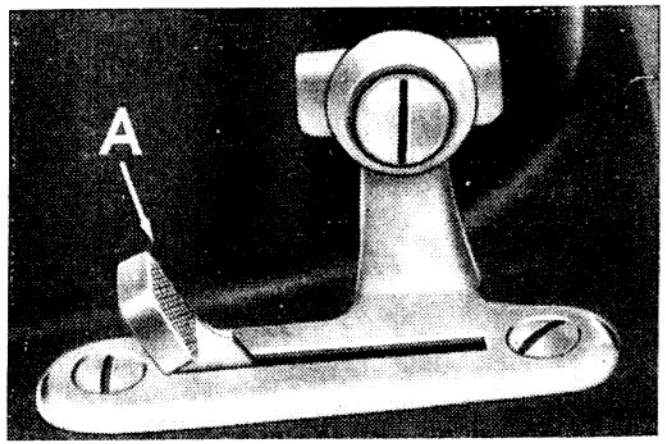


Fig. 37. Drop Feed Lever

If normal stitching is desired again, move Lever A to its original position.

Care of the Machine

Cleaning the Shuttle Race (Fig. 38). If, while sewing, the machine suddenly stops, do not attempt to turn the hand wheel by force, because some lint or a piece of thread has probably become clogged in the shuttle race.

In order to remove the cause of the trouble, raise the needle bar to its highest point, remove the upper thread from the needle and make sure that the drop feed lever A (Fig. 37) is set in its left position. Remove the throat plate and tilt the machine head back on its hinges.

Remove the bobbin case and turn the lever R to the right. The shuttle race will then swing open to the left.

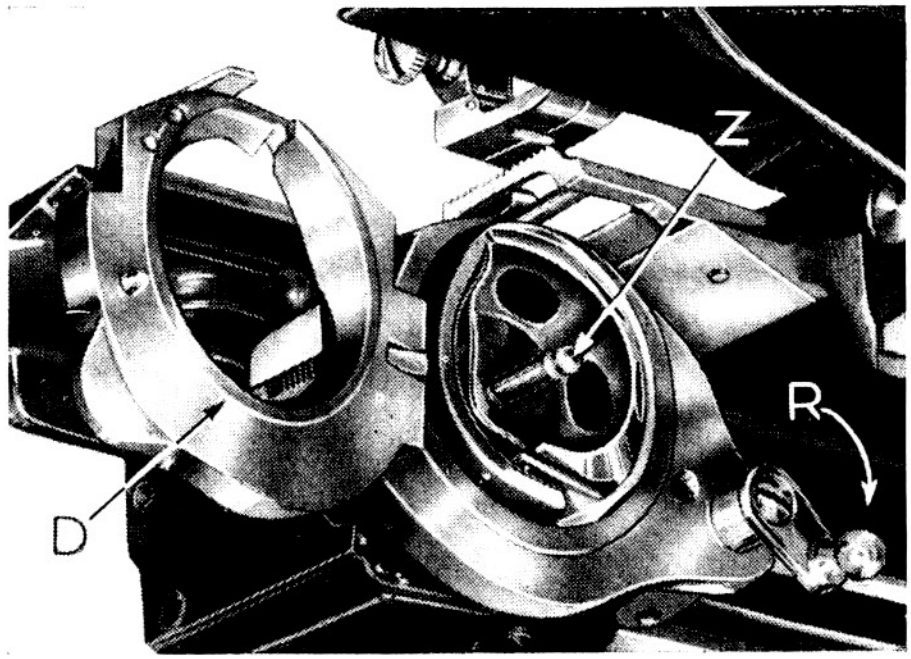


Fig. 38
Cleaning the Shuttle Race

Then grasp the shuttle by the pin Z located in its center and pull it out of its shuttle race.

With a soft cloth, well saturated in oil and a pointed stick, or with a dust brush, the shuttle race must then be cleaned very carefully.

After the shuttle and the open shuttle race cover D have been thoroughly cleaned, the shuttle should be replaced in the shuttle race in the same position as it was before it was removed.

Close and lock the shuttle race cover. If a drop of oil is placed into the shuttle race after the throat plate has been replaced, the machine will again run quietly. It is necessary to clean the shuttle race periodically even when the machine does not seem to be clogged.

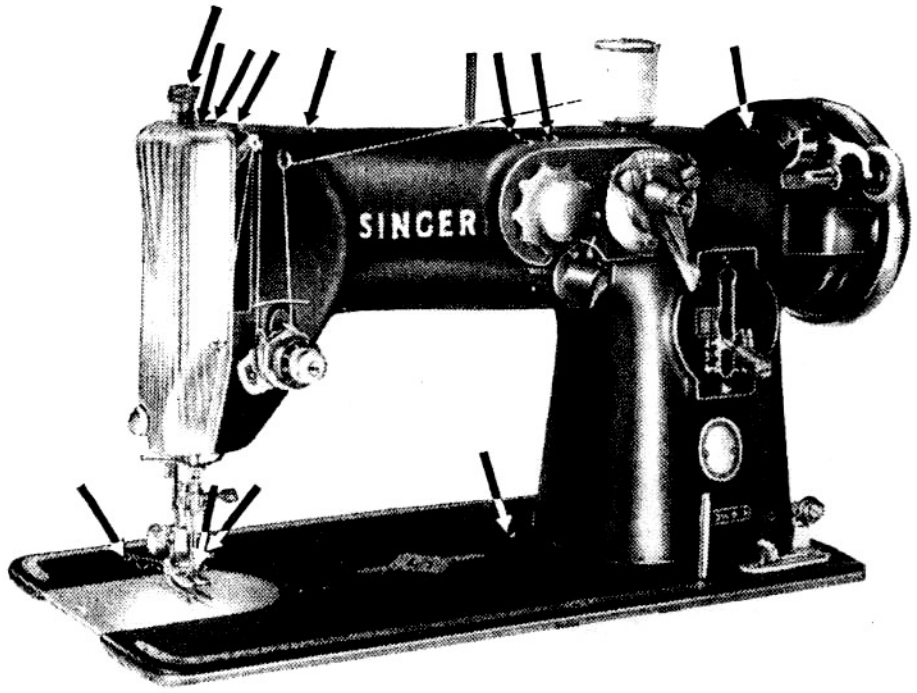


Fig. 39
Oiling Places above the Bed Plate

Oiling the Machine. To insure easy running of the machine and to prevent premature wear of parts that are in contact with each other, the places indicated by arrows in Fig. 39 to 42 require oiling, and if the machine is used continuously, it should be oiled daily. When used only moderately, an occasional oiling is sufficient. One drop of oil at each oiling point is sufficient.

Oil holes are provided for those parts of the machine which are not easily accessible. In order to reach the oiling points behind the face plate (Fig. 40), it is necessary to remove the face plate (see No. 11, Fig. 1). After removing the face plate thumb screw (No. 14, Fig. 1), the face plate easily lifts up and off the machine.

It is very important to remove the cover plate on the back of the machine arm and to oil the friction points revealed behind this plate, as shown by arrows in Fig. 41.

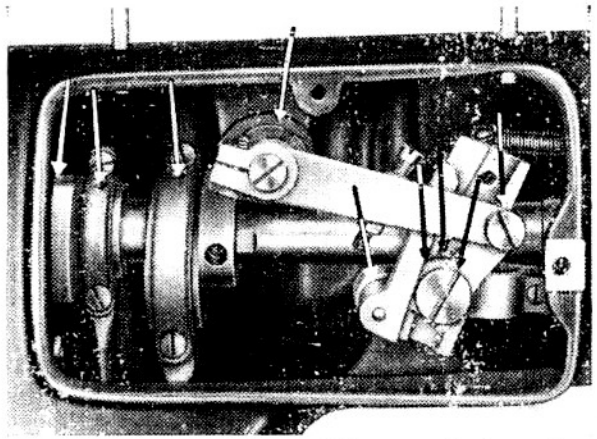


Fig. 41. Oiling Places Behind the Side Cover

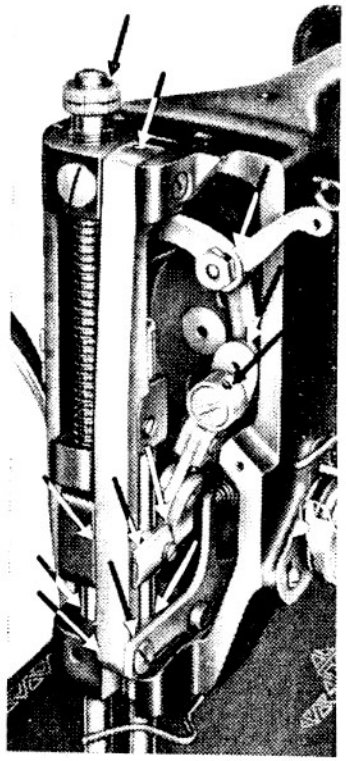


Fig. 40. Oiling Places Behind the Face Plate

To oil the parts under the bed (No. 22, Fig. 1), the machine head must be tilted back after the belt in the center of the belt shifter has been removed.

The shuttle race must also be lubricated with a drop of oil.

The treadle stand must also be oiled occasionally with a drop of oil being applied in the bearings of the hand wheel crank, the treadle and the pitman.

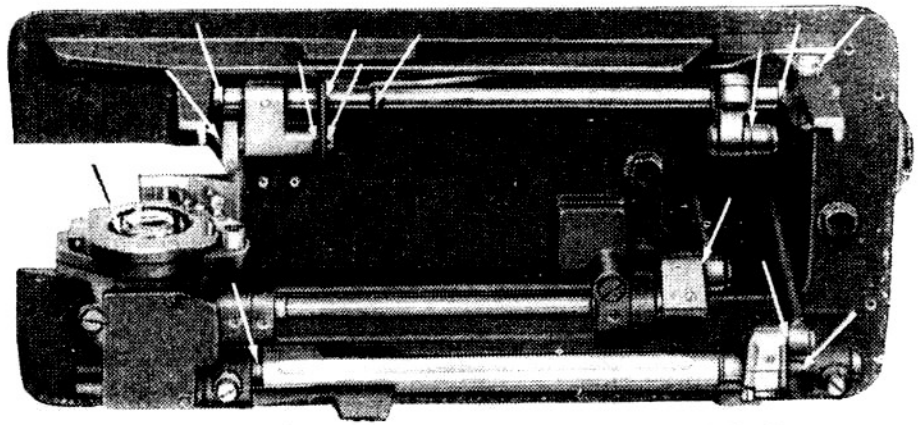


Fig. 42. Oiling Places Under the Bed of the Machine

After the machine has been oiled, allow the machine to run unthreaded for a few minutes to enable the oil to penetrate to the bearings. Excess oil can be removed with a clean rag. Oil of inferior quality, especially salad oil, clogs the bearings causing the machine to work heavily and will lead to a quick wearing out of the machine.

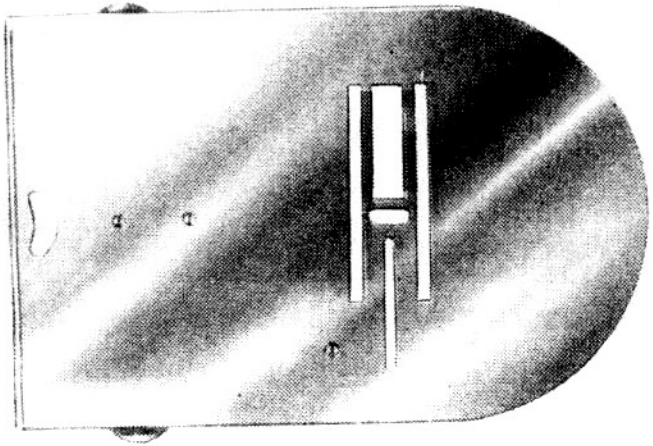
A perfect sewing machine oil of the best quality, bearing the name

— SINGER OIL —

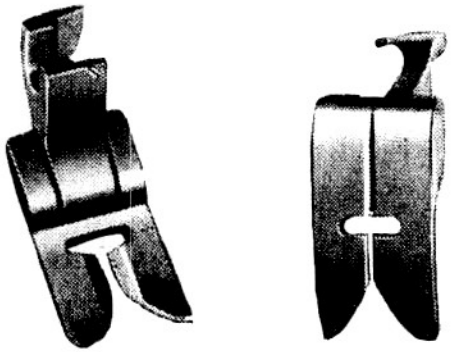
can be purchased from the nearest SINGER Shop.

Machine Working Heavily. Should the machine run hard after standing idle for some time, apply a little oil for cleaning in the oiling places, and then run the machine rapidly. Then wipe clean and oil the machine anew with SINGER Oil.

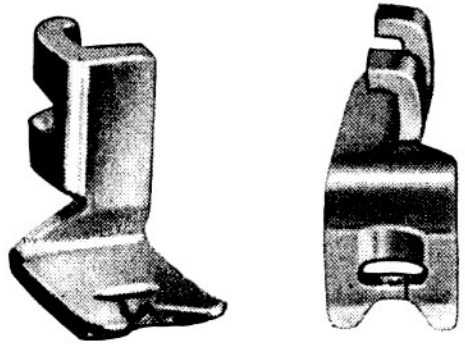
General Equipment for Zigzag and Automatic Stitching



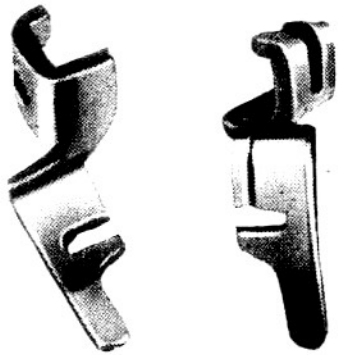
Throat Plate for General Zigzag Work No. 173088



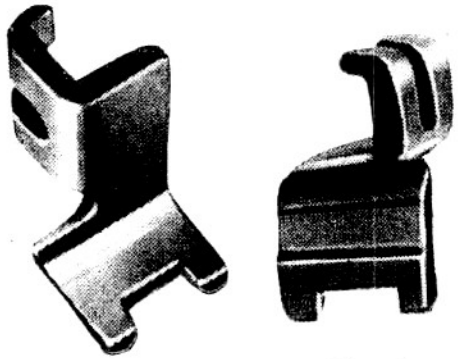
Hinged Presser Foot for General Zigzag Work No. 506084



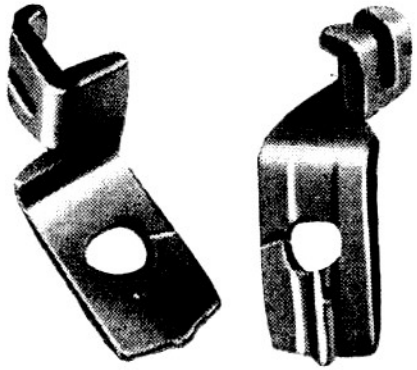
Foot for Wide Satin and Ornamental Stitching No. 105251



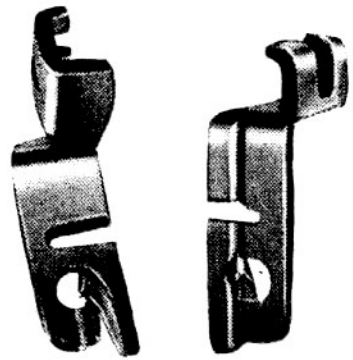
Foot for Small Satin and Ornamental Stitching No. 189650*



Button Sewing Foot No. 189648



Buttonholer Foot No. 86616



Shell Hemmer No. 189653

*obtainable against extra charge

Sewing Suggestions

Breaking of needle might be caused by:

1. Wrong size of needle for thread on material (see page 44).
2. Wrong throat plate or presser foot for the type of work being done (see pages 14 and 23).
3. Wrong setting of needle position lever and/or bight lever (see pages 21 and 24).
4. Pulling of material when stitching (see pages 6 and 16).
5. Loosely fastened presser foot or special fittings.
6. Wrong class of needle (see pages 6 and 44).

Breaking of upper thread might be caused by:

1. A knot in thread.
2. Thread too coarse for needle (see pages 6 and 44).
3. Wrong threading (see pages 8 to 11).
4. Upper tension too tight (see page 19).
5. Needle blunt or bent.
6. Needle set incorrectly (see pages 7 and 8).
7. Roughened hole in throat plate.
8. Wrong arrangement of threads when starting to sew (see page 15).
9. Needle thread tension too light.

Breaking of bobbin thread might be caused by:

1. Wrong threading of bobbin case (see page 13).
2. Bobbin thread tension too tight (see page 20).
3. Bent bobbin.
4. Damaged bobbin case.

Skipping of stitches might be caused by:

1. Wrong setting of needle (see pages 7 and 8).
2. Needle blunt or bent.
3. Needle too small for thread (see page 44).
4. Damaged presser foot.
5. Damaged throat plate.

Looped stitching might be caused by:

1. Wrong threading (see pages 8 to 11).
2. Tensions set incorrectly (see pages 19).
3. Needle too thick for thread used.
4. Incorrect presser foot.

Gathering or puckering of material might be caused by:

1. Failure to use paper or tarlatan backing when zigzag stitching with a very wide bight and/or on sheer materials.
2. Excessive needle and bobbin thread tensions.
3. Incorrect presser foot.

If the suggestions offered here do not correct your sewing problems, call your local SINGER SEWING CENTER.

Needle, Material and Thread

Use Needles 15×1, Twin Needles SF 602 respectively 16×S 901 and as follows: The Index shows the Needle and Thread Sizes which have to be used for the different material, to obtain a perfect stitch.

Sizes of Needles		Sizes of Cotton, Silk or Linen Thread	Stitch Length to fit Straight Seam
9	Very thin material, such as Chiffon, Silk, Organdy, Marquisette, very thin Cotton, Plastic material	100 Cotton 30—50 Darning Yarn Organdy and Nylon Thread	about 1,5 mm
11	Sheer materials, such as Batiste, very fine Cotton, Linen, Shirtings, fine Silk goods, Fustian, artificial Silk, Satin, Organdy, Plastic material	80—100 Cotton 30—50 Darning Yarn Organdy and Nylon Thread	1,5 to 2 mm
12	Lightweight materials, such as Poplin, Cretonne, Chintz, Wool Flannel, Wool Jersey, Wool Crepes, Cotton Velvets	60—80 Cotton Mercerized 30—50 Darning Yarn Organdy and Nylon Thread	1,5 to 2 mm
14	Lightweight materials, such as Shirtings, Bed Sheets, Silk, Calico, Gabardine, Strong Ticking, Rep, Heavy Suitings and Coatings, Household materials	60—80 Cotton Mercerized	2 to 2,5 mm
16	Heavy materials, such as Heavy Cotton, Heavy Silk, Woolen Materials, Ticking, Heavy Winter Coating, Sailcloth, Corsets	40—60 Cotton Mercerized	2,5 to 3 mm

Get your supply of sewing threads and silk at your nearest SINGER Shop.

SINGER THREAD IS QUALITY THREAD

Table of Contents (Part 2)

Application of SINGER AUTOMATIC to construction of garments and furnishings

Straight Stitching

Straight stitching is accomplished with all of the discs when the bight is set at zero. Central needle position is used for straight stitching except in the unusual situation when it is desirable to alter the location of the needle in relationsship to the center of the presser foot.

The All-purpose Presser Foot and All-purpose Throat Plate are frequently used for both zigzag stitching and straight stitching.

The Straight Stitching Throat Plate and Straight Stitching Presser Foot are designed to accommodate delicate, soft fabrics, sheers, crepe weaves and all fabrics where the weave or finish causes the fabric to cling to the needle, either on its upward or downward stroke. The Straight Stitching Throat Plate is always used when free hand straight stitching work is done where the presser foot is removed and the fabric is held in hoops, as described on page 104. The Straight Stitching Presser Foot is often more convenient for following the edge of a lapped seam, the fold of a pleat or when placing an edgestitching on a yoke or collar. The narrow right toe affords an excellent view at the right of the needle for such work.

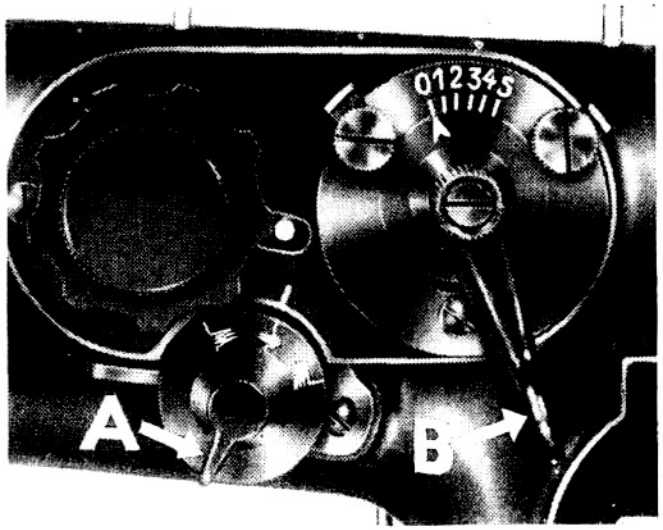


Fig. 43. Machine Set for Straight Stitching with Limit Screws Locked

When the Automatic Machine is used for straight stitching, set Needle Position Lever A, Fig. 43 at central position and Bight Lever B, Fig. 43, at 0. It makes no difference which of the many FASHION Discs is in the machine. It is advisable to test stitch on a scrap of fabric before stitching a garment to determine the correctness of tensions, length of stitch and pressure.

Each of the points for regulating stitch and handling the fabric are simple and easy to regulate. Because of these facilities the SINGER Automatic is superior in its stitching of a wide range of weights and textures of fabrics, and with a variety of threads.

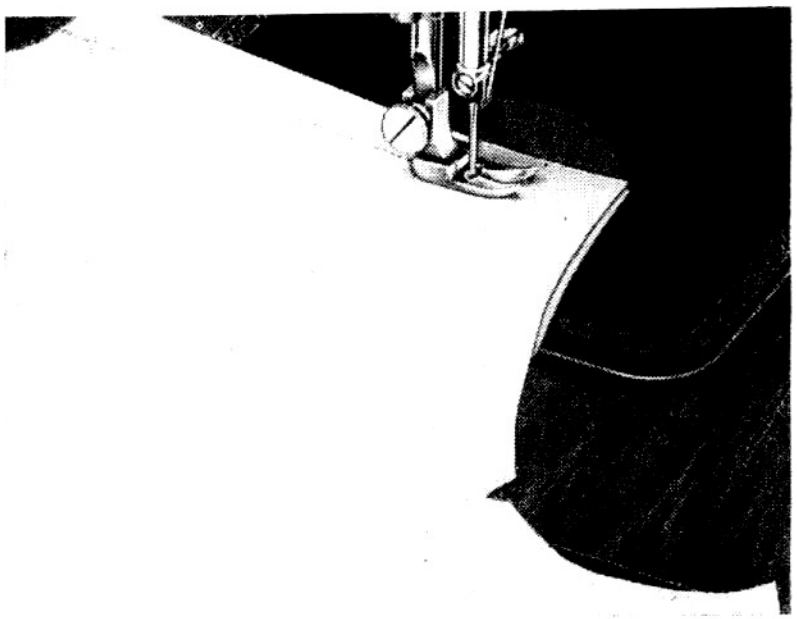
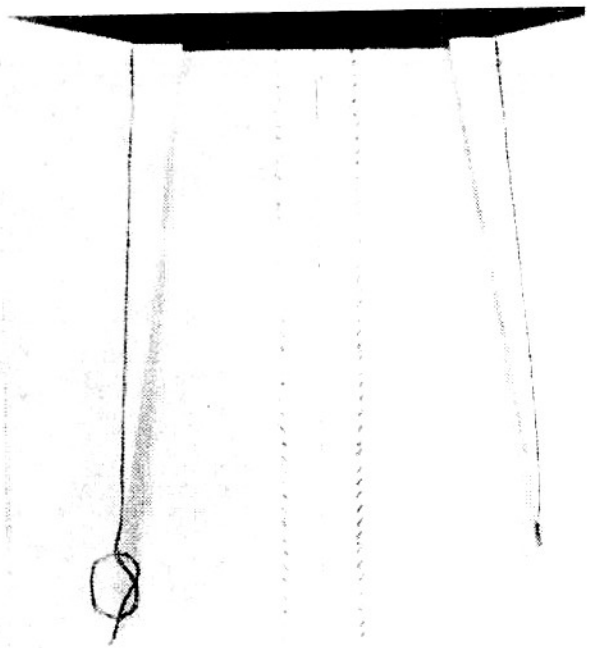


Fig. 44 Seaming Dress Sections

The chart on page 44 is a useful guide to the correct needle, thread and stitch length for a wide variety of fabrics.

Plain seams comprise a large part of general sewing. Seam ends are stayed with back stitching to prevent their opening during fitting and assembling the garment. Position needle a few stitches from the edge of the garment. Hold threads which have been drawn to the back and right under presser foot. Stitch in reverse to the edge and then forward until end of seam is reached. Back stitch again to stay ends of seam.



Darts on Dress Sections are conveniently stayed at the points by stitching beyond the fabric about one-half inch to form a thread chain. Tie these chained threads into a plain knot. The last three or four stitches of a dart must be very close and parallel to the fold, resulting in a smooth shaping of the garment.

Fig. 45. Contour Dart Along Raw Edge

Fig. 46. Torso or Shaped Darts

Fig. 47
Contour Dart Along Raw Edges

Torso or Shaped Darts are stronger and more flexible when stitched with a shallow zigzag. Stitch the points for a distance of one inch with straight stitching. Zigzag center portion.

Use: All-purpose Throat Plate and Presser Foot
Central Needle Position
Bight limit ½ mm
Stitch length for zigzag stitch 1 mm, straight stitch 2 mm.
Zigzag Disc No. 1

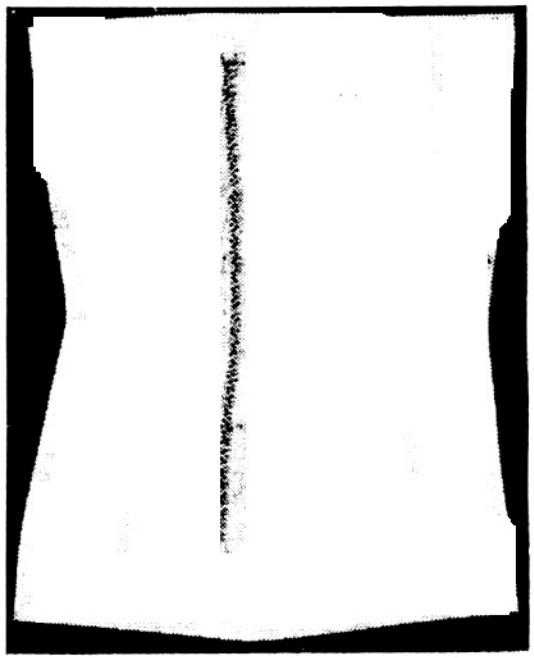


Fig. 48. Contour Dart with Abutted Edges

Contour Darts in Interfacings provide permanent shaping without bulk when cut, lapped and zigzag stitched along raw edges (see Fig. 47). The dart is often cut away, edges abutted and stayed with straight grain strip of muslin (see Fig. 48).

Use: All-purpose Throat Plate and Presser Foot. Central Needle Position. Bight 5 mm. Stitch Length 1 mm. Zigzag stitch Disc No. 2.

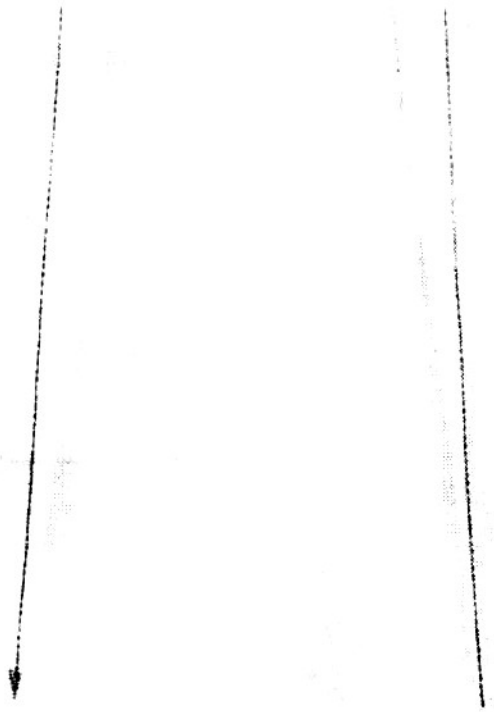


Fig. 49. Single Thread Darts

Accented darts

Darts add styling and interest when stitched with the fold to outside of garment. Thread ends at the point of the dart are eliminated when the single thread principle for stitching is employed. With thread leading through the throat plate from bobbin, thread needle from back to front. Tie bobbin and upper threads together and draw knot through threading points toward spool until a sufficient length of the thread leading from the bobbin has passed the thread guide nearest the spool to complete stitching the full length of the dart. Stitch from point of dart toward edge of garment section and back stitch to reinforce.

Further accent is given to such a dart when an arrowhead is placed at the point. **For Arrowhead, use:** All purpose Throat Plate and Presser Foot. Central Needle Position. 5 Bight. Almost 0 Stitch length. Arrowhead Disc No. 5.

Control of fullness

Contour and shaping is accomplished in garments of soft and sheer fabrics by contour shirring. Equip machine for straight stitching, and with a stitch length of 3 mm, according to the fabric, place five rows of parallel stitching 1/8 inch apart, with the first row 1/2 inch from the outside edge. Draw threads to inside of garment at one end only and tie. Form a pin tuck across the ends of stitching. Form shirring by pulling the threads on inside of garment at second end until shirring has been drawn together sufficiently so that garment sections match (see Fig. 50). Knot thread ends and finish with a pin tuck. Join sections of garment together. Three rows of stitching are visible when finished (see Fig. 51).

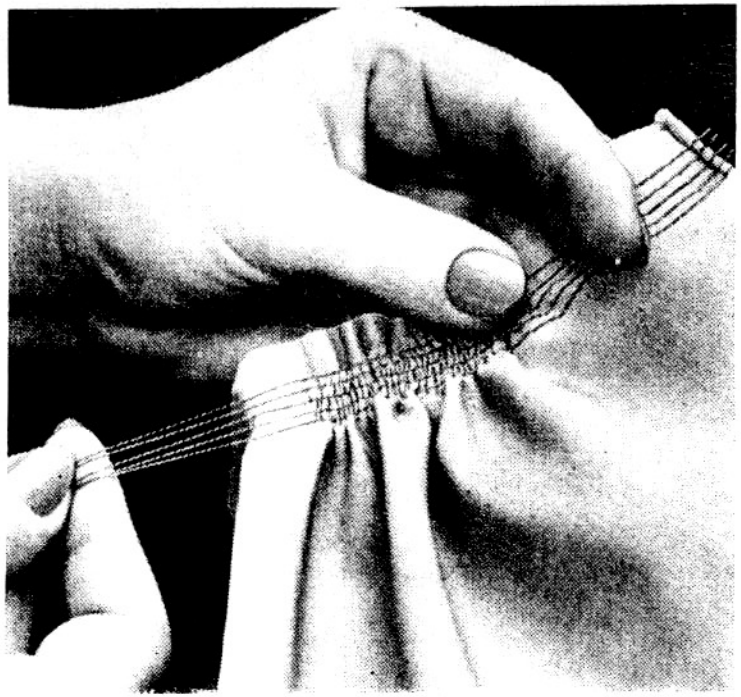


Fig. 50. Contour Shirring in Process

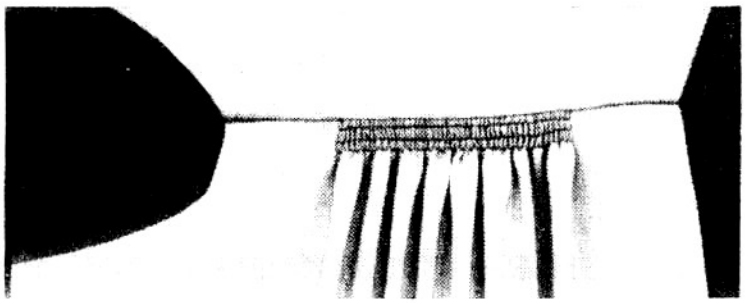


Fig. 51. Contour Shirring Completed

When controlling eased fullness in a sleeve cap, at the elbow of a long fitted sleeve, in the shaping of a circular hem or in joining yoke or fitting seams, two lines of control stitching are used and pin tucks are omitted.

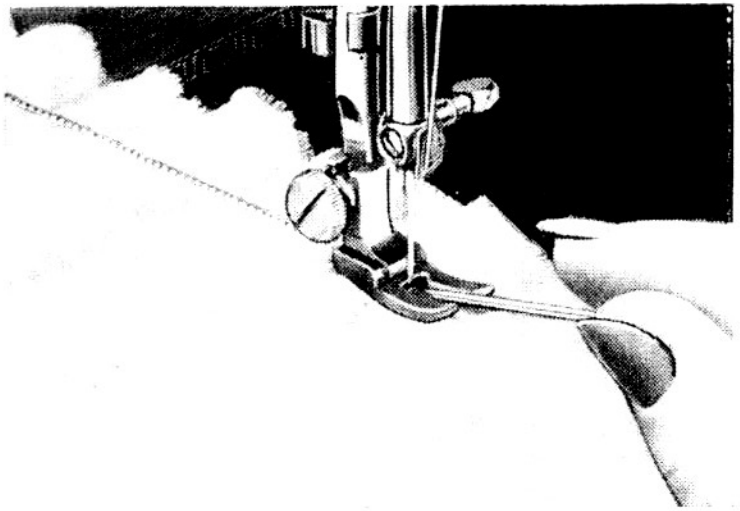


Fig. 52
Couched Elastic Shirring in Process

Couched elastic shirring

Elastic thread is often used to control fullness at the waistline or cuff. Zigzag stitch over one or two strands of elastic thread, drawing the elastic thread to give the tautness desired. Knot ends securely. This treatment provides a snug fit with elasticity. Either side may be used as right side, depending upon the effect desired.

Use: All-purpose Throat Plate and Presser Foot. Central Needle Position. 1 Bight. Stitch Length 2 mm. Zigzag Disc No. 1.

Elastic shirring

Elastic thread is wound on the bobbin without stretching, while regular sewing thread is used in the needle. The machine is regulated for straight stitching. Stitch parallel rows with a 2.5 mm stitch. The bobbin tension is regulated so that it is heavy enough to stretch the elastic thread when stitching, but light enough to avoid breaking or fraying. Thread ends are fastened securely by tying.

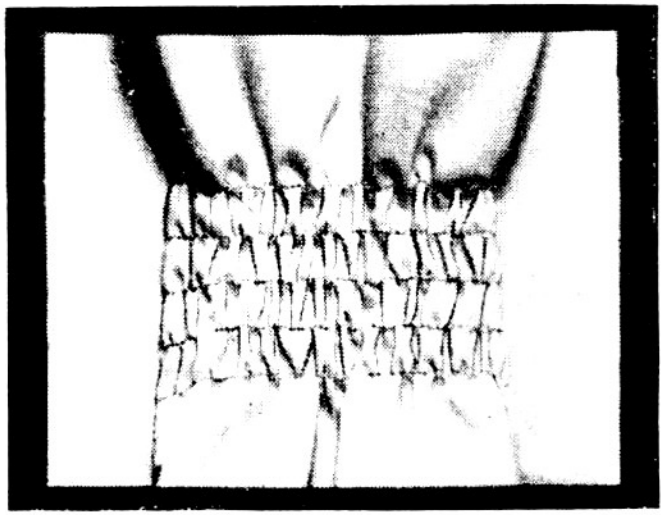


Fig. 53. Elastic Shirring Completed

Invisible seam for all-over lace

For sewing lace dresses it is necessary to make invisible seams.

After seams have been basted and fitted, mark outline of seam on both sections of garment with hand basting. Remove basting that joined seams and lay one section over other with seam lines matching and hand baste. Remove marking stitches. Satin Stitch Foot 105 251 (see page 42) is used to follow outline of lace motif that runs through seam lap. Cut away excess seam up to stitching on both right and wrong sides, using curved embroidery scissors. Work in similar manner for lace insertion on lingerie.

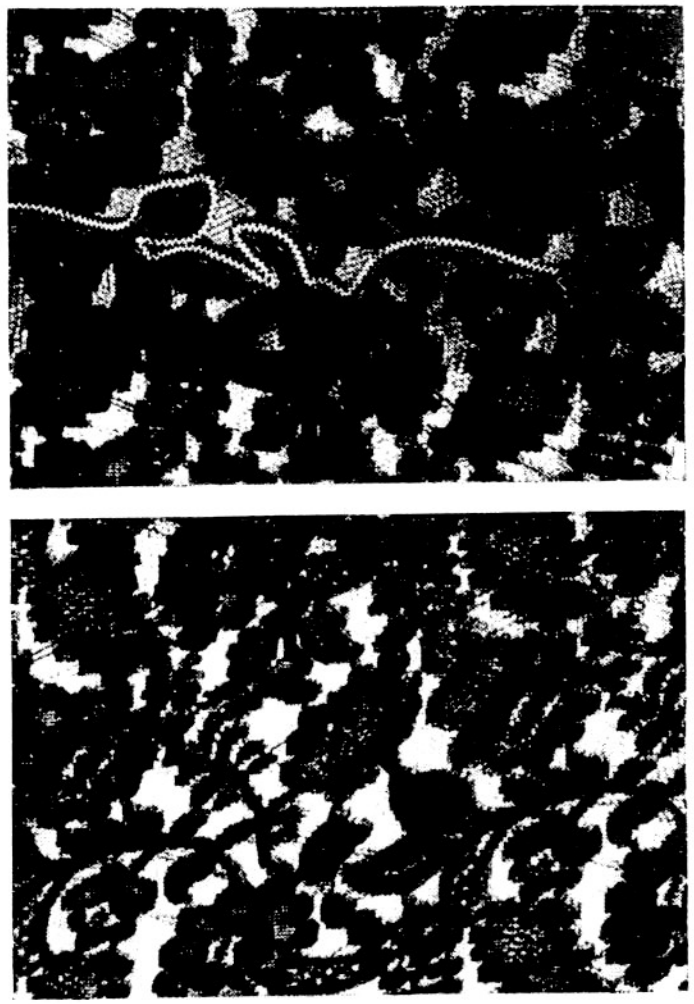


Fig. 54
Invisible Seam for All-Over Lace

Use: All-purpose Throat Plate and Satin Stitch Foot 105 251. Central Needle Position. 1-½ Bight. Stitch Length less than 1 mm. Zigzag Disc No. 1.

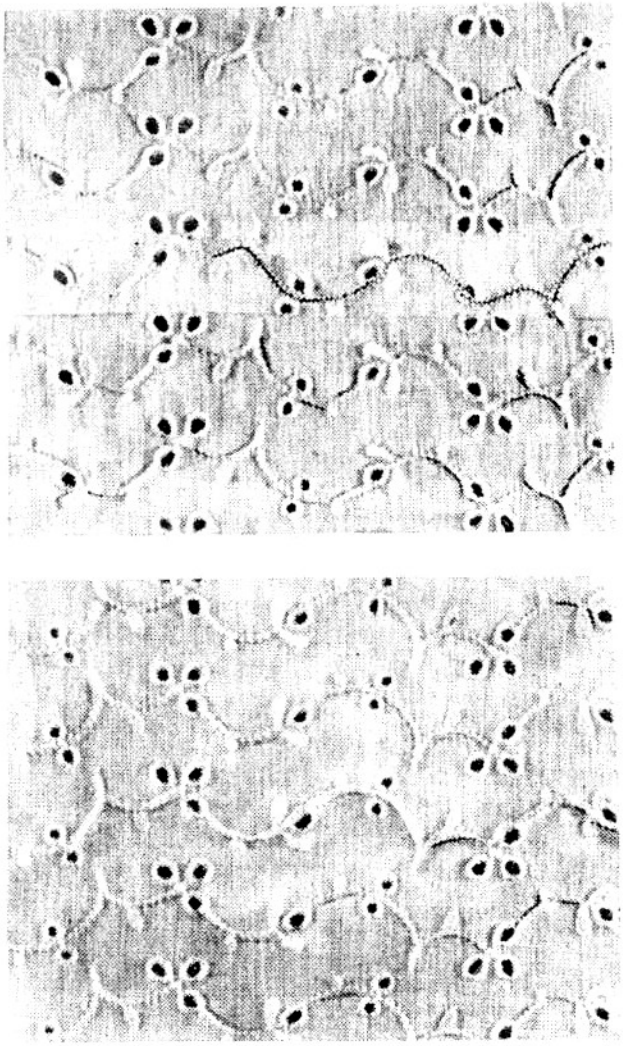


Fig. 55. Invisible Seam
for All-Over Lace Embroidery

Cording seam with satin stitch foot 189 650*
Place a thread through the eye at the front of the foot and lead it underneath the foot. Cover thread with closely spaced zigzag stitches. See page 73 for threading of cord.

Use: All-purpose Throat Plate and Satin Stitch Foot 189 650. Central Needle Position.

* obtainable against extra charge

Fig. 56 Cording a Seam
with Satin Stitch Foot 189 650

Hairline seam in sheers

For a dainty hairline seam in sheers, such as batiste, nylon or organdy, that is also fray-proof, follow shaped seam line with a fine cording stitch, then cut surplus seam away close to line of stitching using embroidery scissors. This type of seam may be used either inside or outside.

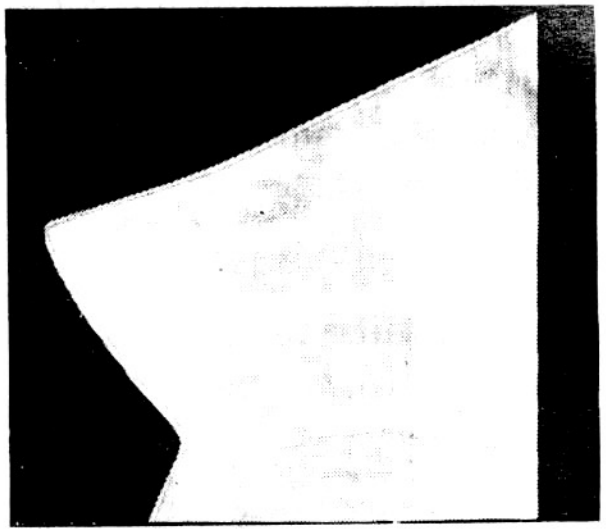


Fig. 57. Hairline Seam in Sheers

Rip-proof seam for lingerie

For rip-proof seams in lingerie, first straight stitch fitted seam on wrong side and press both edges to one side.

Use: 0 Bight. Stitch Length about 1.5 mm.
On right side of garment, top stitch with a fine zigzag stitch letting needle first enter channel of seam, then seam thickness.

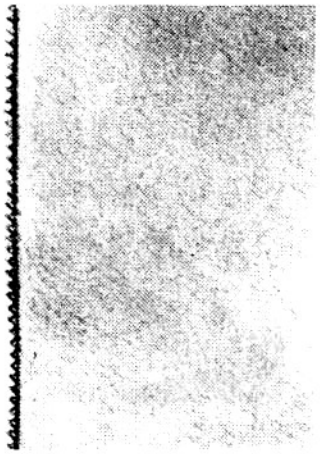


Fig. 58. Rip-proof Seam For Lingerie

Use: All-purpose Throat Plate and All-purpose Presser Foot. Central Needle Position. 2 Bight. Stitch Length 1 mm. Zigzag Disc No. 1.

Invisible seam for horsehair or net bandings

Use: All-purpose Throat Plate and All-purpose Presser Foot. Central Needle Position. 1-½ Bight. Stitch Length 1 mm. Zigzag Disc No. 1.

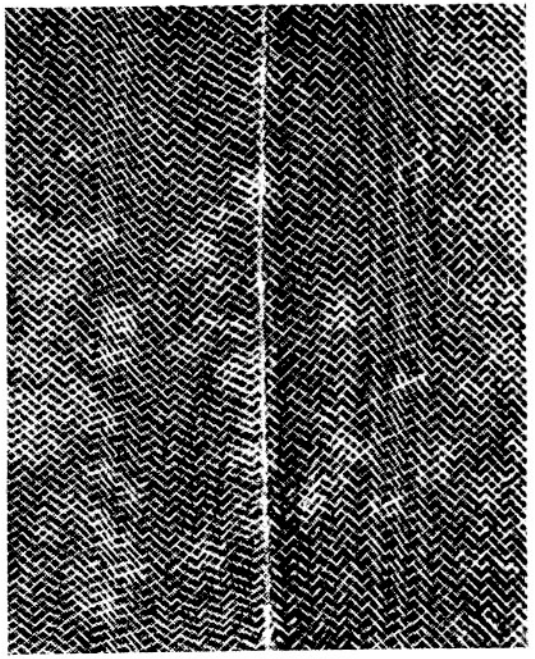


Fig. 59
Invisible Seam in Horsehair

Heavy duty reversible seam

Use: All-purpose Throat Plate and Presser Foot. Central Needle Position. 2 Bight. Length less than 2 mm. Zigzag Disc No. 1.

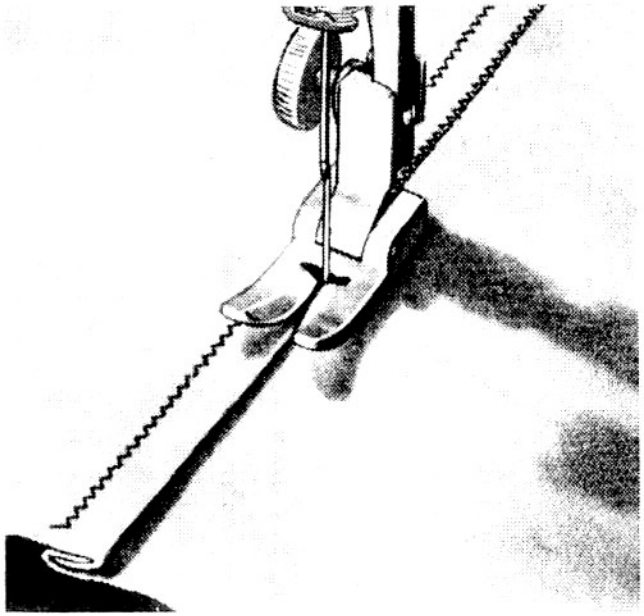


Fig. 60.
Heavy Duty Reversible Seam

For heavy duty, strainproof seams, use double interlocked seam, zigzagged on both sides. Turn **under** raw edge of one section, and turn **up** raw edge of joining section. Interlock two raw edges (see Fig. 60), and zigzag across one seam on right side and across other seam on wrong side, producing a double fell, doubly reinforced, with elasticity against strain when wearing.

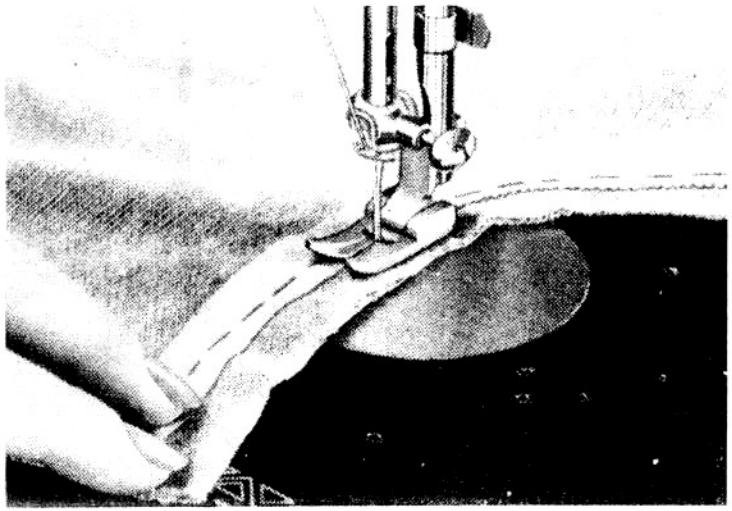


Fig. 61. Stayed Seam in Jersey

Stayed seam for Jersey or Crepe
Seams in fabrics that stretch or bias seams in firm fabrics are often stayed with seam tape for durability. Position seam tape with edge exactly on seam line. If seam is curved, shape seam tape by steaming at the ironing board. Hand baste if necessary. Stitch with fine zigzag stitching.

Press seam open, after clipping on curve.

Use: All-purpose Throat Plate and Presser Foot. Central Needle Position. ½ to 1 Bight. Stitch Length 1 to 2 mm. Zigzag Disc No. 1.

Overlapped seam for interlining
The seams of an interlining are always overlapped to avoid excessive bulk in a garment. Care must be taken to use the full seam allowance. Stitch in the center of the overlap with multiple stitch zigzag. Trim excessive width from seam edges. This seaming is durable, flexible and free of bulk.

Use: All-purpose Throat Plate and Presser Foot. Central Needle Position. 5 Bight. Stitch Length 2 mm. Multiple Stitch Zigzag Disc No. 2.

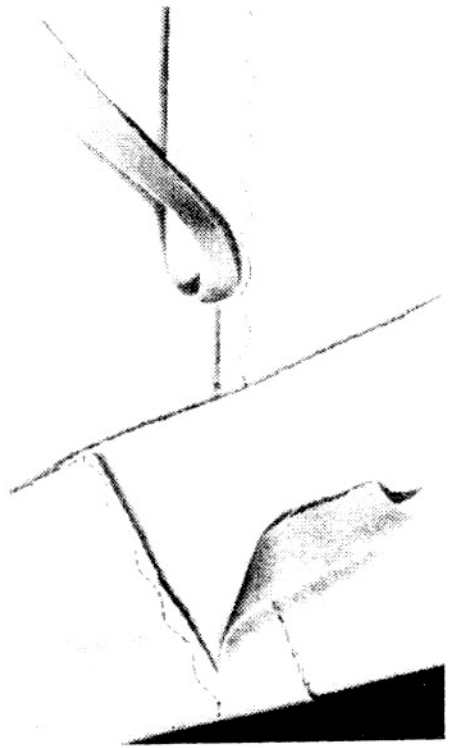


Fig. 62. Overlapped Seam for Interlining

Seam finishes

To overcast open seams

Turn raw edge toward wrong side and, while stitching, let it pass over flanged toe of All-purpose Presser Foot and through slot. Set bight and guide material so that needle, when swinging to the right, pierces material exactly at edge.

Use: All-purpose Throat Plate and Presser Foot. Central Needle Position. 2 Bight. Stitch Length about 1.5 mm. Zigzag Disc No. 1.

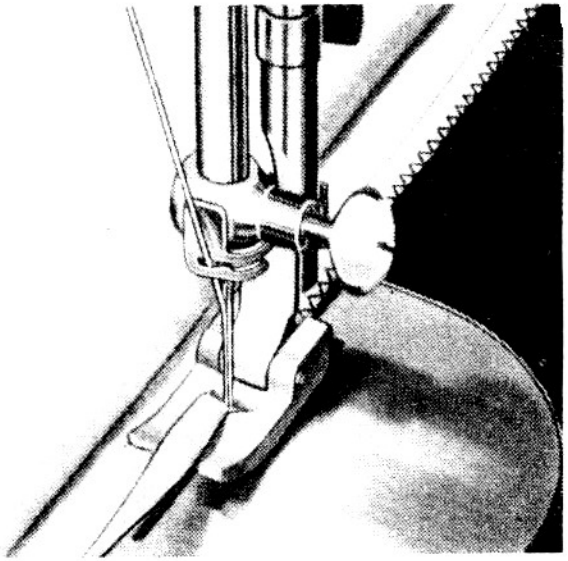


Fig. 63. Overcasting Open Seams

Fig. 64. Finishing Seam in Tricot

To finish seams in tricot or sheers

Step 1. Stitch seam with short straight stitching using Straight Stitching Throat Plate and Straight Stitching Presser Foot.

Step 2. Finish open seam edges together with blind stitch seam. Trim seam allowance close to stitching. This finish prevents fraying and provides a fine smooth edge.

Use: (for seam finish) All-purpose Throat Plate and Presser Foot. Central Needle Position. 1 or 2 Bight. Stitch Length 1 mm. Blind Stitch Disc No. 3.

To overedge seams

Seam edges support the garment and should always carry a durable finish if fit is to be maintained after long wearing. The stitch made with the Blind Stitch Disc is especially durable and free of bulk when used as a seam finish.

When seam edges are pressed in the same direction, they are overedged together, and when pressed open, they are overedged separately.

Use: All-purpose Throat Plate and Presser Foot. Central Needle Position. 4 or 5 Bight. Stitch Length 1 mm. Blind Stitch Disc No. 3.

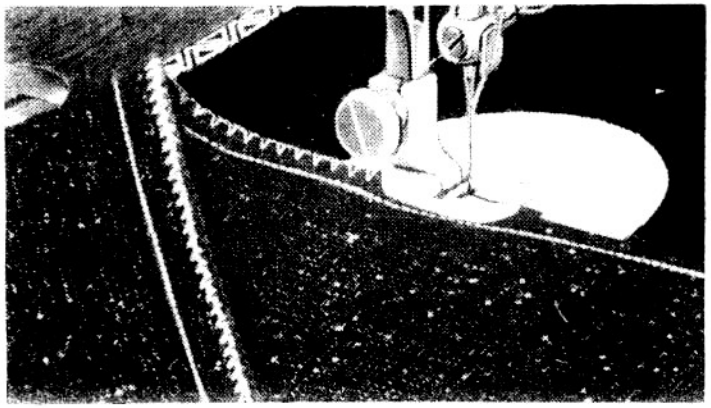


Fig. 65.
Overedging Seam Edges Together

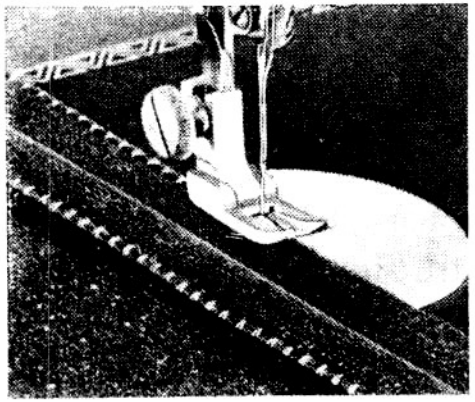


Fig. 66 Overedging Open Seams in Process

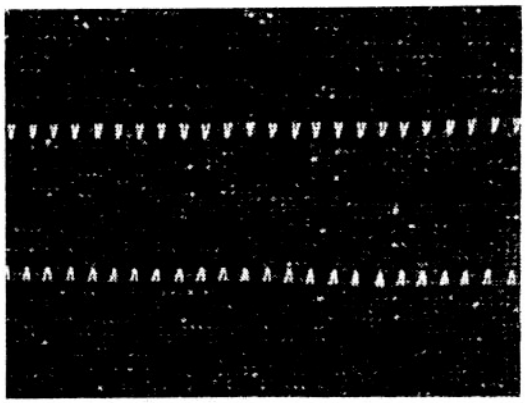


Fig. 67. Overedged Open Seams — Completed

To make buttonholes

Step 1. Marking the Material

Mark position and length of buttonholes with basting stitches (see Fig. 68) or marking chalk, allowing an extra 1/16" in width for cutting space and an extra 1/8" in length for 1/16" bar allowance on each end.

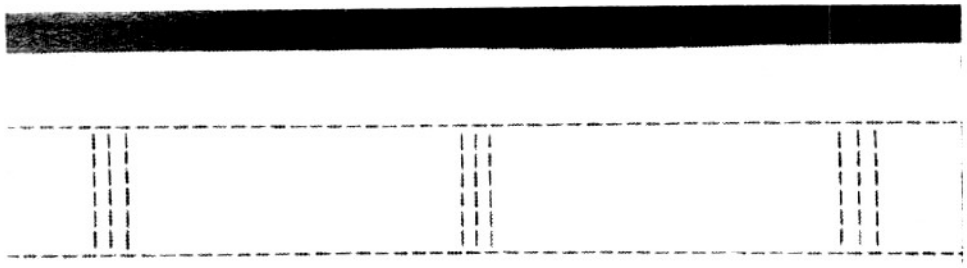


Fig. 68. Marking Location of Buttonholes with Basting Stitches

Step 2. Setting the Machine

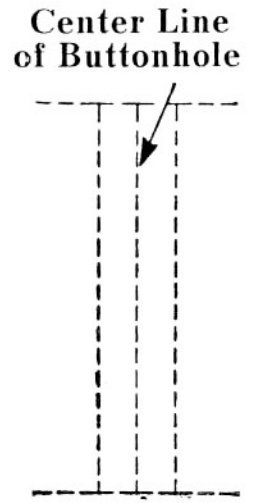
Use: All-purpose Throat Plate and Buttonhole Foot 86616 (see page 42). Left Needle Position. Stitch Length less than 1 mm, almost 0. 2 Bight for Side Stitches of Buttonhole. 4 Bight for Barring Stitches. 0 Bight for Fastening Stitches. Zigzag Disc No. 1.

Note: Bight settings of 2-1/2 for Side Stitches and 5 for Barring Stitches make slightly heavier buttonholes.

Step 3. Guiding

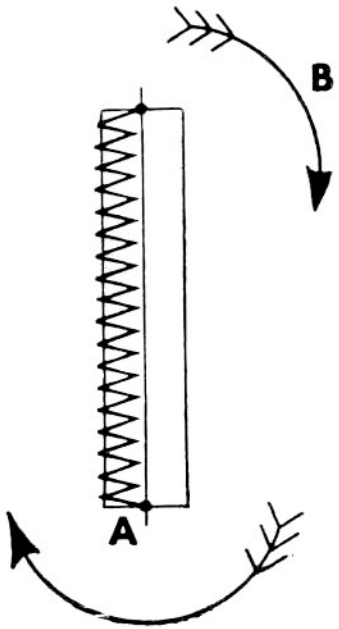
Set bight regulator at "2", position needle just left of central marking ready for left swing, and stitch, using point of Buttonhole Foot as a guide to keep stitches just left of central marking and astride side marking.

(Note slot in Buttonhole Foot for drawing needle and bobbin threads through.)



Step 1

Step 3



Step 4. Pivoting
When point of Buttonhole Foot reaches end of marking, leave needle in fabric at the point nearest central marking, as shown by A in illustrations.

Raise Buttonhole Foot and, using needle as a pivot, turn work around clockwise as indicated at B. Lower Buttonhole Foot and take one (1) stitch, leaving needle in buttonhole marking at point C.

Step 5. Barring
Set bight regulator at "4" for wide swing and take six (6) stitches, leaving needle in fabric at point D at left.

Step 6. Finishing Buttonhole Edge
Return bight setting to "2" and stitch final edge of buttonhole, keeping point of Buttonhole Foot just left of central marking to provide sufficient cutting space.

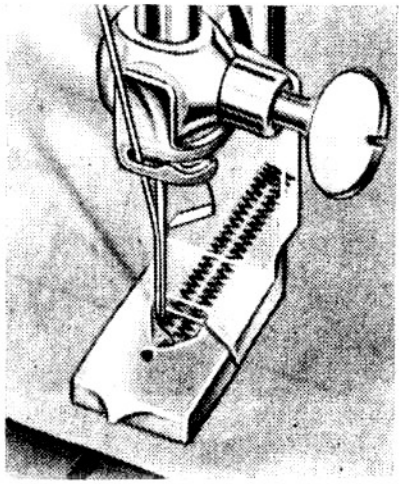
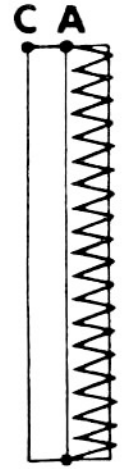
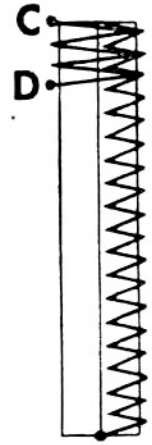


Fig. 69

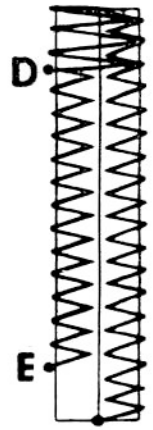
Stop within six stitches of end, leaving needle in fabric at point E at outside marking. This point may be easily determined, while stitching, by observing last stitch in first row at lower edge of opening in Buttonhole Foot.



Step 4



Step 5



Step 6

Step 7.

Finishing Final Bar and Fastening Stitch

Set bight regulator at "4" for widest stitch and take six (6) stitches to complete final bar. Set bight regulator at "0" and stitch length at "0" and take three (3) fastening stitches at point F. Cut buttonhole along line of center marking.

Raised or Gimp Buttonholes

Insert No. 3 Pearl Cotton or Cordonnet Thread through eyelet in front of Buttonhole Foot, as shown in Fig. 71 and proceed as for regular buttonholes as instructed on pages 60 and 61.

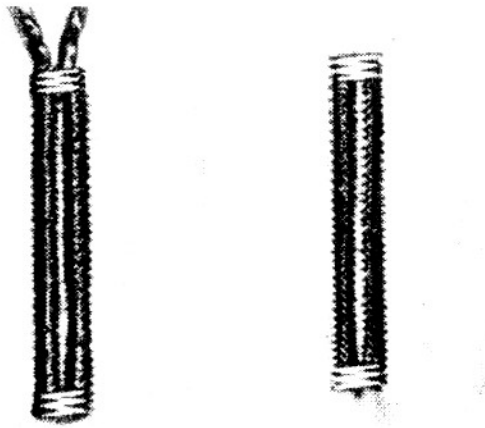


Fig. 72
Gimp Buttonholes

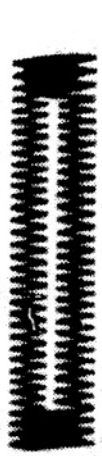
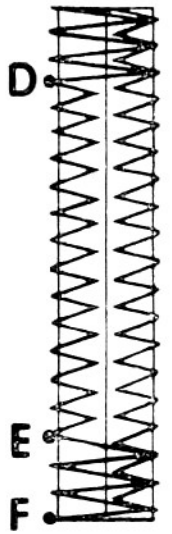


Fig. 70



Step 7

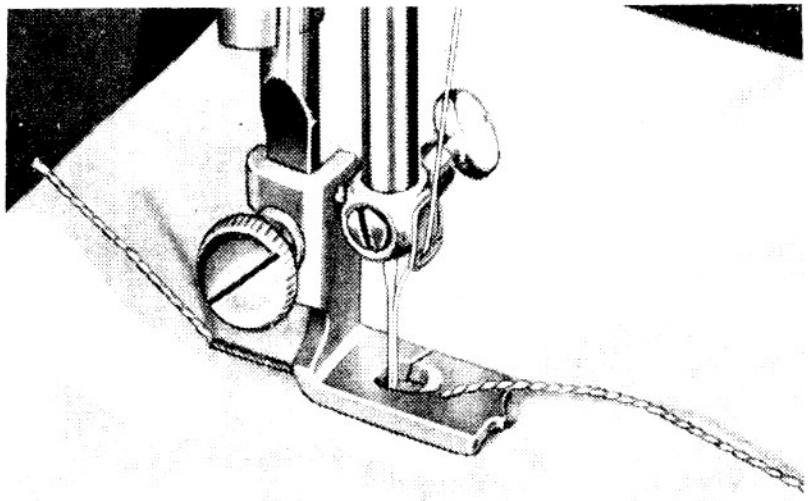


Fig. 71. Making Gimp Buttonholes

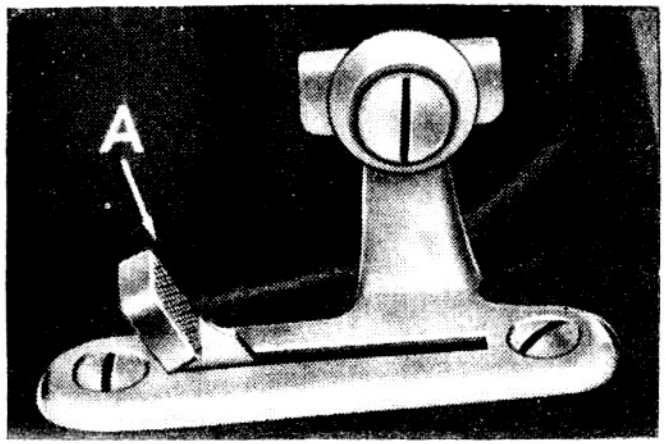


Fig. 73. Drop Feed Lever

To Sew on Buttons

Lower the feed. Set Stitch Regulating Lever H, Fig. 20, at 0 and move the Lever A, Fig. 73 over to the right as far as it will go.

Note: When regular sewing is resumed, return Lever A to its original position.

Use: All-purpose Throat Plate. Button Sewing Foot 189648. Left Needle Position. Approximately 3 Bight. Stitch Length 0. Zigzag Disc No. 1.

With Bight at "0", position button, lower the needle through center of left hole. Then lower Button Sewing Foot. Turn hand wheel over toward you until needle rises to its highest point. Set bight at approximately "3" so that needle, on its right swing, enters center of right hole. Then stitch. Needle should enter each hole six times. To fasten stitch, set Bight at "0" and take 3 stitches in left hole of button.

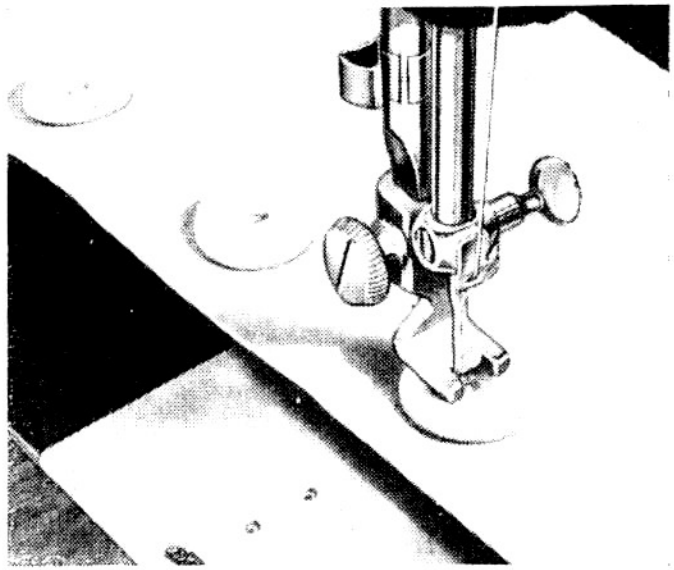


Fig. 74. Sewing on Buttons

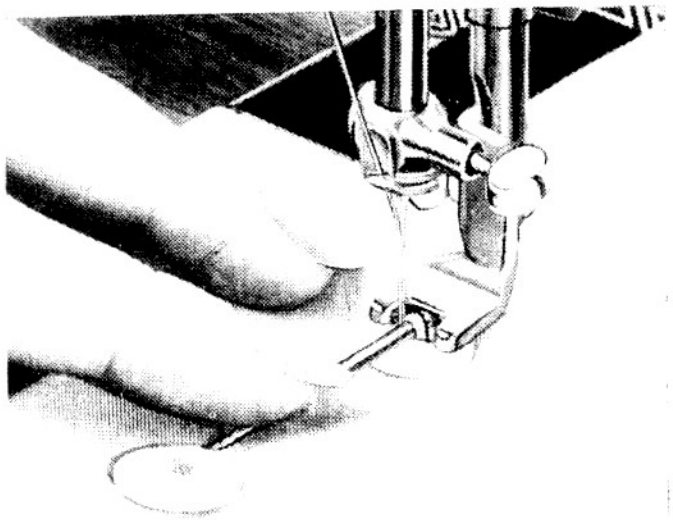


Fig. 75. Seving Buttons with Thread Shank

To Sew on Buttons with Thread Shank

Follow steps outlined above and in addition, hold pin or needle between holes in button to deepen stitches and provide thread shank. A long thread shank results when the heavy end of sewing machine needle is used in place of a pin. Tighten needle thread tension if stitches appear to be loosely set.

To Sew on Snaps and Hooks and Eyes

No Presser Foot is used for sewing on snaps. Instead, hold snap in place with tweezers, stiletto or the point of embroidery scissors.

Lower the Feed as Instructed on Page 63

Use: All-purpose Throat Plate. Left Needle Position. Stitch Length 0. 2 Bight. Zigzag Disc No. 1.

Centering needle in first hole, take 6 overedging stitches, leaving needle in hole at left position on last stitch. Change Bight to 0 and take 3 fastening stitches. Carrying thread across snap, center needle in next hole and change Bight to 2. Take 6 overedging stitches, then returning Bight to 0, take 3 fastening stitches. Continue this process with each hole.

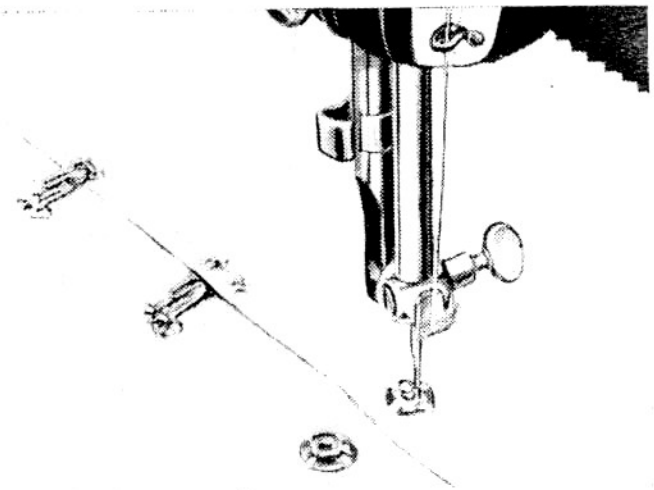


Fig. 76. Sewing on Snaps and Hooks and Eyes

The same procedure and settings are followed when sewing on hooks and eyes except that after taking 6 overedging stitches in first hole of hook, leave needle in center of hole and turn work so that next 6 overedging stitches will carry across bar of hook, then proceeding to second hole, take 6 overedging stitches and changing Bight to 0, finish with 3 fastening stitches.

Follow same procedure for sewing on eye, taking 6 overedging stitches in first hole, 6 overedging stitches across to second hole, 6 overedging stitches to side of hole, and, changing Bight to 0, finish with 3 fastening stitches.

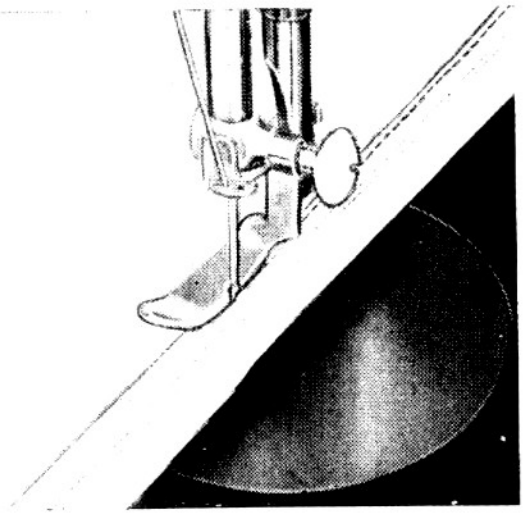


Fig. 77. Cording Foot (left toe) Applying Fold to Zipper Tape

Blind stitched zipper insertion

On chiffons, sheers, velvets and all delicate or textured fabrics, zippers may be inserted with a blind stitch, equal to invisible hand stitching, by using Right and Left Cording Feet. Allow seams 1/4" deeper than average. Use machine basting with stitch length set at about 3.5 mm to close placket on seam line.

Turn a fold in back seam allowance 1/8" from basted seam line and pin this fold to zipper tape, rolling both over finger, while pinning, to ease fabric. Baste, then machine stitch the fold to tape, using 2 mm stitch length and Cording Foot (left toe).

Reinforce closure at each end by stitching across top and bottom of zipper tape and front seam allowance from seam edge toward side seam and back stitch. Turn garment right side out and pin front zipper tape into position, placing pins on right side of garment, through all thicknesses, while rolling over finger to ease fabric. Baste about 3/8" from seam line to provide guide for blind stitching.

Use: All-purpose Throat Plate and Cording Foot (right toe). Central Needle Position. Approximately 2 Bight. Stitch Length 1 mm. Blind Stitch Disc No. 3.

Turning garment inside out, lay slide fastener over feed of machine and turn back the front section of garment to line of basting, creating a soft fold.

Stitch, using Blind Stitch Disc No. 3, a 1 mm stitch length and approximately a 2 Bight. The straight line of stitching will pass through the tape of the zipper and front seam, the sideward stitch will pierce a thread or two of the fold.

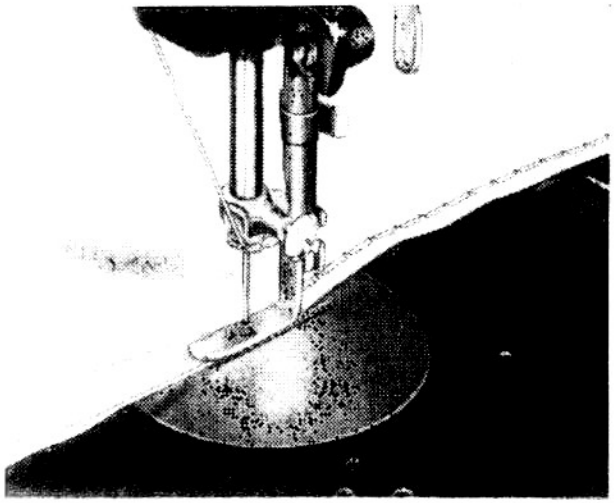


Fig. 78. Blind Stitching Zipper

The needle position lever can be used slightly left of center, the better to position the straight stitching and to control placement of sideward stitch. Should a deeper Bight than 2 be required for thick fabrics, **Left Needle Position** must be used.

Fig. 79. Blind Stitched Zipper Insertion

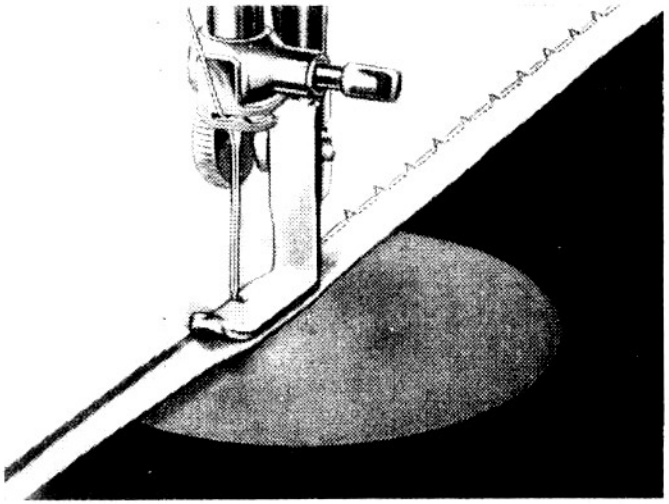


Fig. 80.
Blind Stitched Hem in Process

Blind stitched and decorative hems

Blind stitched hems with folded edge

Blind stitched hems are appropriate for curtains, draperies, table linens and fabric furnishings. Fold, press and baste hem, keeping basting stitches at least 1/4" from upper fold of hem.

Place hem against feed, turning the bulk of the work back in a soft fold. Position needle into folded edge of the hem near this soft fold. The Blind Stitch Disc produces four straight stitches separated by a single sideward stitch to the left. The sideward stitch should pierce the soft fold, resulting in a blind stitched hem. The bight is regulated at 2 or 3, depending on the weight and texture of the fabric. The length of stitch regulates the distance between the blind stitches.

Use: All-purpose Throat Plate and Cording Foot (right toe) 160 846. Central to Left Needle Position. 2 or 3 Bight. Stitch Length 1 to 2 mm. Blind Stitch Disc No. 3.

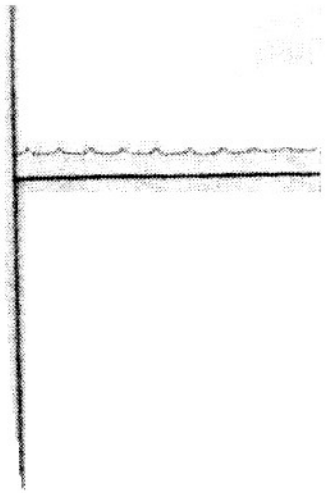


Fig. 81 Blind Stitching Hem Completed

Caution: Left Needle Position must be used when Bight 3 or 4 is used with Cording Foot (right toe).

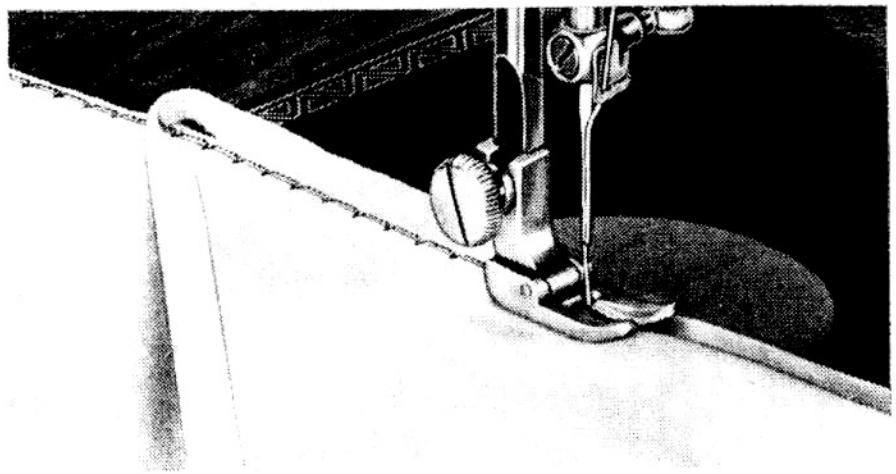


Fig. 82. Shadow Hem for Tricot in Process

Shadow hems for tricot

Baste hem one-half inch from top edge. Position under All-purpose Presser Foot and stitch 1-½ to 2 Bight, 1 mm Stitch and Blind Stitch Disc No. 3.

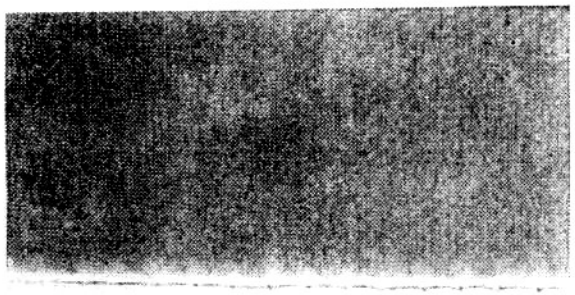


Fig. 83. Shadow Hem in Tricot Completed

Trim raw edge near solid line of stitching. A small stitch will be visible at regularly spaced intervals on the right side of garment. To make this stitch less apparent, reduce width of bight.

Use: All-purpose Throat Plate and Presser Foot. Central Needle Position. 1-½ to 2 Bight. Stitch Length 1 mm. Blind Stitch Disc No. 3.

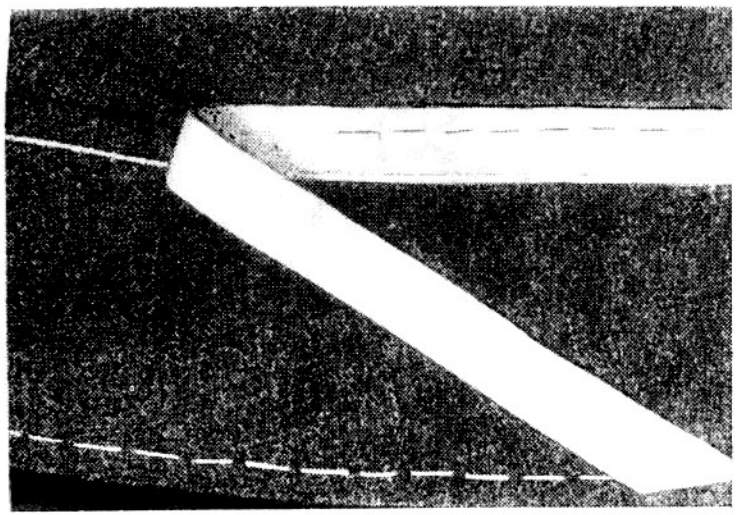


Fig. 84. Seam Tape Basted to Hem Edge Before Blind Stitching

Blind stitched hem finished with seam tape

Hems in skirts, dresses or coats have extra width at the top of the hem to consider. When the garment is flared or circular, there is more fullness in the hem than in pencil slim styles. This fullness must be controlled before the hem is finished, if a smooth hem is to result.

After the length of garment is marked, pin and baste with silk thread one-quarter inch from crease of hem. Press, to shape hem allowance, then measure and cut hem to desired width.

Control fullness by placing a line of straight stitching one-quarter inch from top edge of hem and draw bobbin thread, easing fullness and shaping top of hem to garment. Steam to shrink excess fullness.

Baste and stitch seam tape along this quarter inch control thread. Hand baste through center of seam tape in preparation for blind stitching.

Position hem against feed with inside of garment rolled to the left to form a soft fold at basting line. Blind stitch hem with the machine equipped as follows:

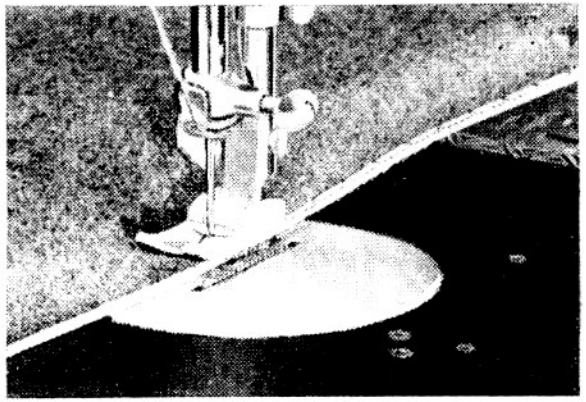


Fig. 85. Blind Stitching Hem Finished with Seam Tape

Use: All-purpose Throat Plate and Presser Foot. Central to Left Needle Position. 1 to 3 Bight. Stitch Length 1 to 2 mm. Blind Stitch Disc No. 3.

Blended circular hem

Circular hems in heavy coatings are smoothly finished, when the fullness is removed, by cutting away narrow wedges at regular intervals to allow the hem to conform exactly to the shape of the garment. The cut should not extend beyond one inch from the lower fold of the hem. Garments where this treatment is used are usually lined and the lining is carried to one inch from the edge.

Bring cut edges together and stitch with Multiple Stitch Zigzag Disc. Should the fabric be loosely woven, an underlay of thin lawn may be used as a stay on the underside.

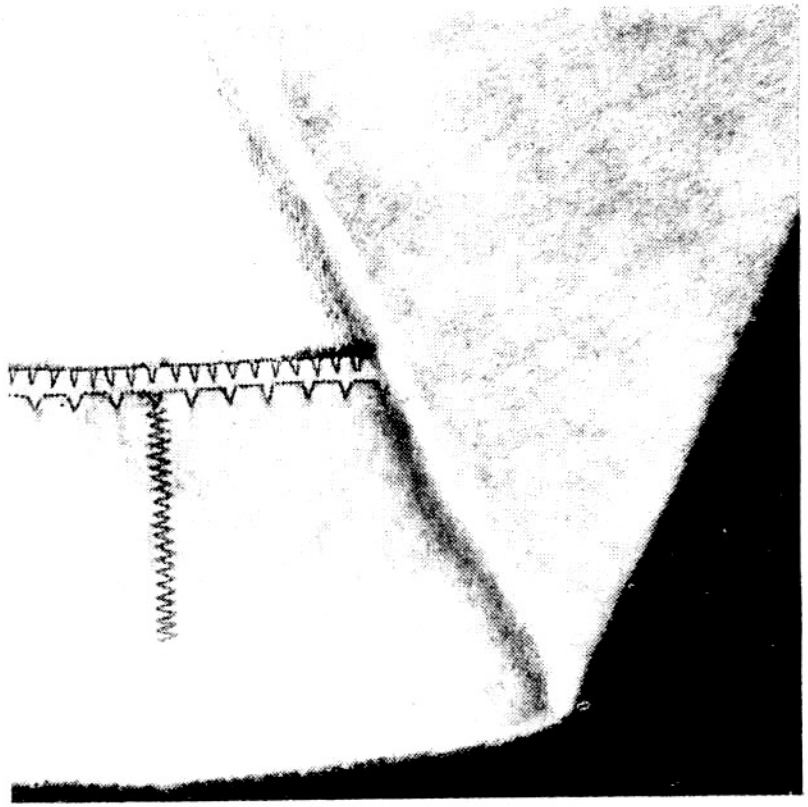


Fig. 86. Blended Circular Hem

Use: All-purpose Throat Plate and Presser Foot. Central Needle Position. 5 Bight. Stitch Length 1 mm. Multiple Stitch Zigzag Disc No. 2.

The edge of the hem is finished by overedging with Blind Stitch Disc No. 3, 5 Bight, and 1 mm Stitch Length, as described on page 59.

Hand baste hem to garment three-eighths inch from top edge of hem. Place hem against feed and turn garment to form a soft roll at basting line as in Fig. 85, page 70.

Use: All-purpose Throat Plate. Cording Foot (right toe) 160846. Needle Position, slightly left of Center. 2 to 3 Bight. Blind Stitch Disc No. 3.

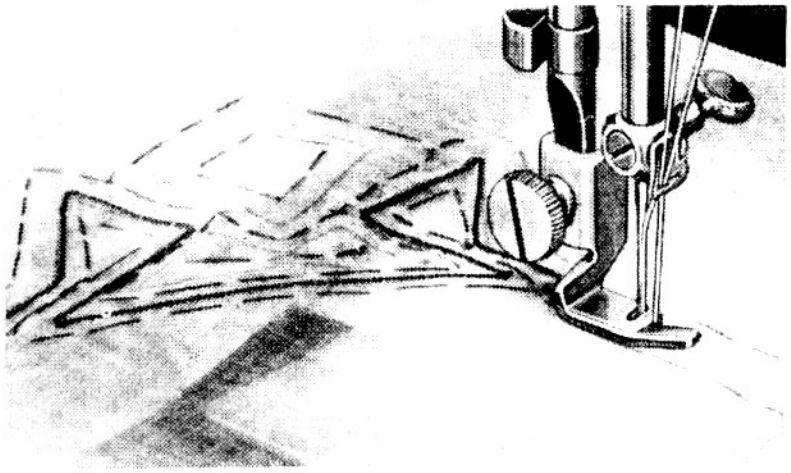


Fig. 87. Applique Shadow Hem in Process

Applique shadow hems

Shadow hems are lovely for table linens of crisp organdy or fine linen, as well as for dresses or aprons of sheer, crisp fabrics. Baste hem to full depth of design, corners mitred where necessary. Mark design on right side. Draw filler cord

through opening in front of Satin Stitch Foot and follow design with fine, closely spaced zigzag stitching. When applique is complete, cut away surplus edge from wrong side close to stitching. See Fig. 88 for threading of cord.

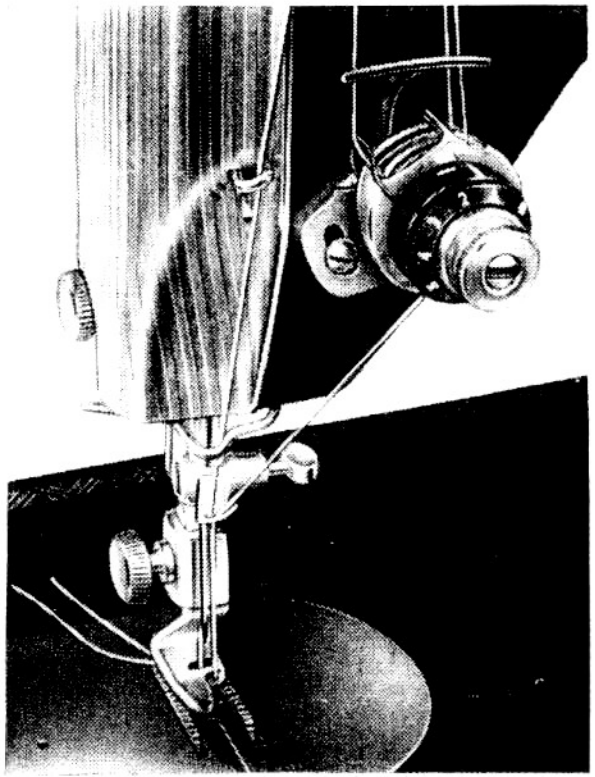


Fig. 88. Threading Satin Stitch Foot with Filler Cord

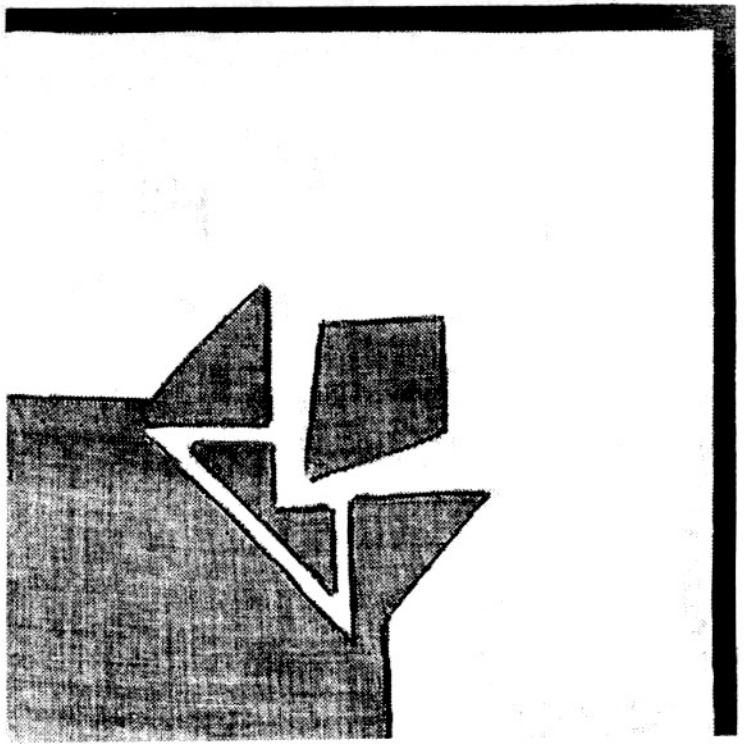


Fig. 89. Applique Shadow Hem Completed

Use: All-purpose Throat Plate. Satin Stitch Foot 189650. Central Needle Position. 1 Bight. Almost 0 Stitch. Zigzag Disc No. 1.

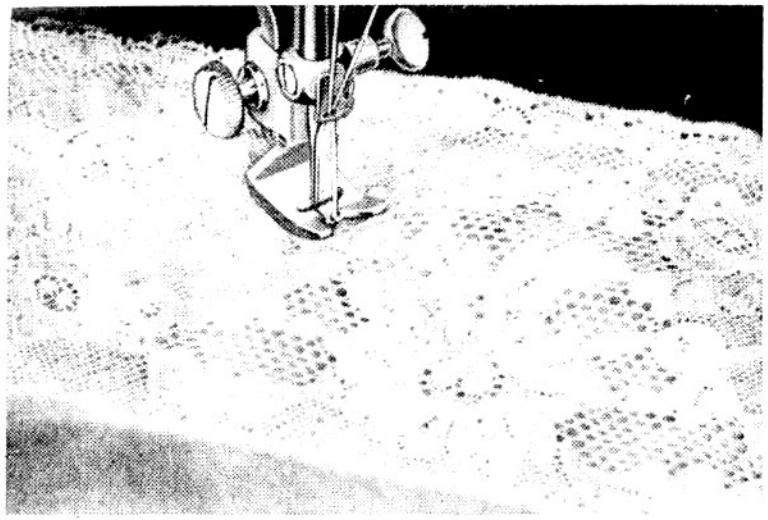


Fig. 90. Outlining Lace Motif with Satin Stitch Foot 105 251

Embroidered lace or Vienna work

Embroidered Lace or Vienna Work is characteristic of high-priced lingerie. Yet it may be very quickly and easily accomplished with Satin Stitch Foot, using fine rayon or silk crochet thread as the filler cord to be covered. See page 73 for threading of cord.

Use: All-purpose Throat Plate Satin Stitch Foot 105 251. Central Needle Position. 1 Bight. Almost 0 Stitch. Zigzag Disc No. 1.

Use wide lace edging with a definite floral design, and baste into position, where desired, on right side of fabric. First follow upper lines of motif nearest edge, covering filler cord with tiny stitches along lines of motif, and continuing in an unbroken, continuous line. Then choose a section of the motif nearest edge and fully outline this separate motif, repeating at evenly spaced intervals for length of the lace. Finally, remove bastings, cut

away surplus lace close to stitches of corded outlines and, from wrong side of garment cut away surplus satin along edge, close to lines of cording.

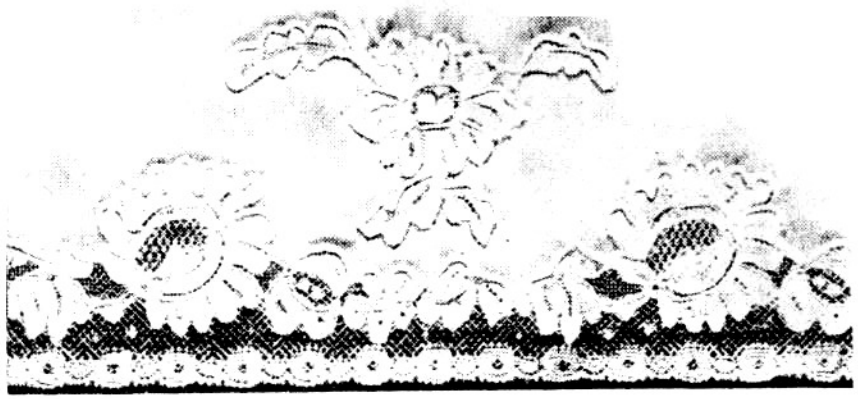


Fig. 91. Lace Motif Embroidered Into Satin

Shell stitched hems

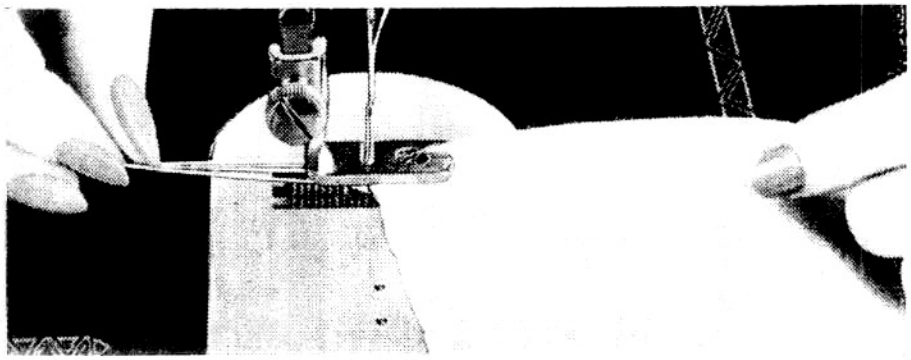


Fig. 92. Leading Raw Edge Into Scroll of Shell Hemmer

Shell stitched hems provide a soft, ornamental finish for delicate fabrics, particularly when material is cut on the bias. Lower shell hemmer over raw edge of fabric on wrong side of material. Take one stitch, raise shell hemmer. Draw the work back and cut threads. Holding both ends of attached needle thread, lead raw edge of fabric lightly into scroll of hemmer, drawing on threads to carry it through.

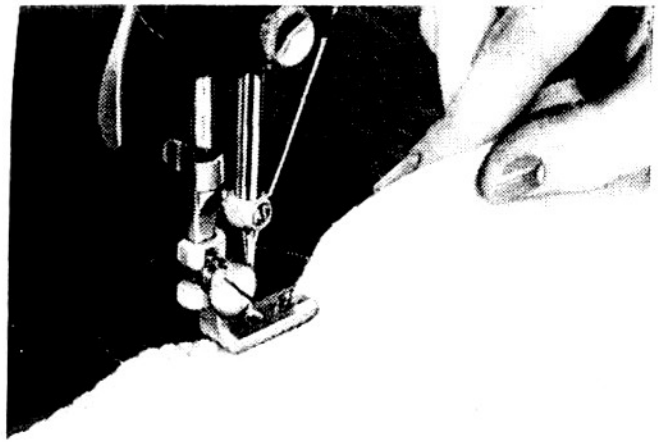


Fig. 93. Shell Stitched Hem in Process

On reaching slot of hemmer, lower the needle into hem, then lower hemmer and stitch.

Use: All-purpose Throat Plate. Shell Hemmer 189653. Central Needle Position. 5 Bight. Stitch Length 3 mm. Zigzag Disc No. 1 or Multiple Stitch Zigzag Disc No. 2 or Blind Stitch Disc No. 3.

Many variations of the soft scallop may be obtained by using different stitch settings and threads.

The automatic stitch designs lend further variation and interest to shell hems.

The shell hems illustrated are stitched with Blind Stitch Disc No. 3 at 3 Bight and 1 mm Stitch Length (Fig. 94), and with Multiple Stitch Zigzag Disc No. 2 at 5 Bight and 1 mm Stitch Length (Fig. 95).

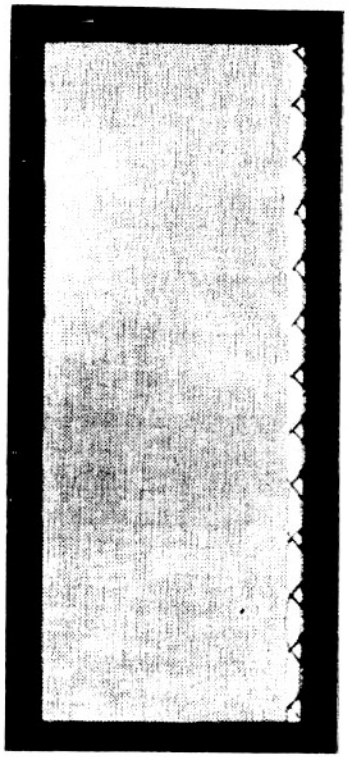


Fig. 94

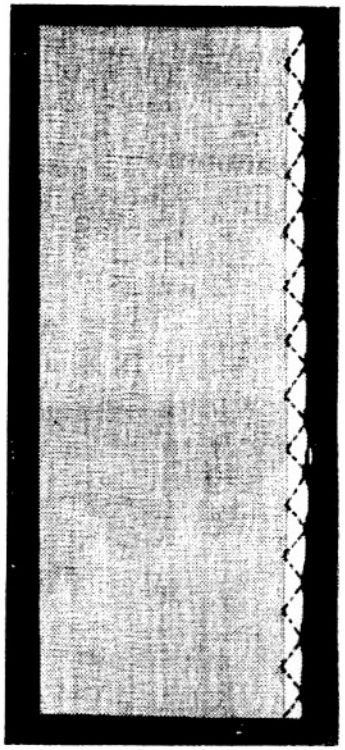


Fig. 95

Completed Shell Hems

Satin stitched scallops

Satin stitched scallops provide a beautiful and durable finish for household linens as well as for wearing apparel.

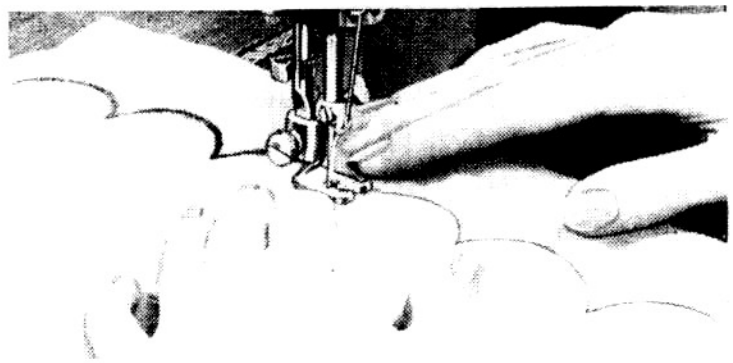


Fig. 96. Satin Stitching Scallops

Use Satin Stitch Foot No. 105251. Prepare the work for satin stitching by using a double thickness stayed with crinoline or organdy, or a single thickness backed with paper. Trace scallops in position, allowing a sufficient margin of fabric (about 2 inches), at right to grasp with right hand in guiding scallops. If, when cutting, sufficient length were not allowed, machine baste a piece of same fabric, or stay fabric just outside marked line of scallop.

Use a size 11 Needle, 50 embroidery or silk thread, very light upper tension and medium light bobbin tension and **most important,** the Pressure on the **Presser Foot** must be set as light as possible so that the fabric can be moved from right to left while satin stitch is being made. The fabric remains straight at all times in line with the feed. Scallops are followed without turning by lightly moving the work, to right or left, so that the needle on its right swing follows the marking for the scallop. This will maintain parallel stitches, evenly spaced, automatically producing the effect of a narrower stitch at the point between scallops and widening to full depth at the arc.

Use: All-purpose Throat Plate Satin Stitch Foot 105251 5 Bight. Almost 0 Stitch. Zigzag Disc No. 1.

To cord scallops

A finely corded edge is used to complete satin stitched scallops used as an edge finish. Lead heavy duty thread into eye of Satin Stitch Foot and carry it through and under foot. See page 73 for threading of heavy duty thread. Position needle close to edge of scallop, lower foot and stitch close to scallop, covering filler cord with closely spaced stitches crowding against scallop all along the way.

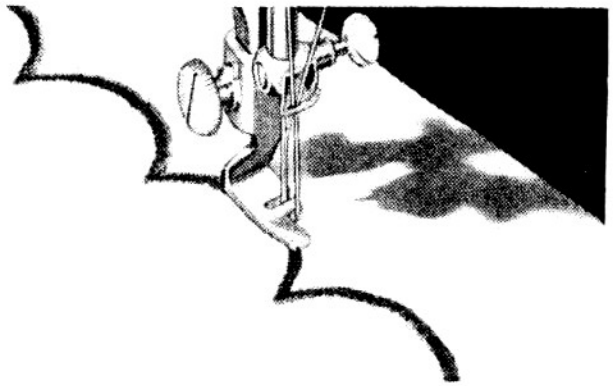


Fig. 97. Cording the Scallops

If scallops border a hem, cut away surplus of hem on wrong side close to inside of scallop. If scallops form an edge, cut away surplus border close to cording stitches on outside of scallop, at the same time cutting away foundation crinoline or organdy.

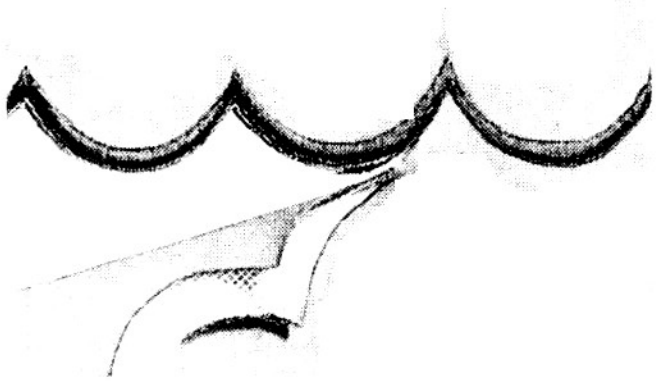


Fig. 98. Trimming Scalloped Edge

Use: All-purpose Throat Plate. Satin Stitch Foot 189650. Central Needle Position. 1 Bight. Almost 0 Stitch. Zigzag Disc No. 1. Medium Pressure Adjustment.

Fringed edges

Use: All-purpose Throat Plate and All-purpose Presser Foot. Left Needle Position. 2 Bight. Stitch Length 1 to 2 mm. Zigzag Disc No. 1 or Blind Stitch Disc No. 3.

Draw a thread marking depth of fringe. Stitch along this line. Beginning at raw edge, draw out threads up to stitched line.

Wide hemstitching is done in same manner as fringed edges, except that threads are drawn to mark width of hemstitching. When using Blind Stitch Disc, stitch to complete one side of hemstitching. Turn fabric and stitch second side, matching stitches. Then draw remaining center threads between rows of stitching.

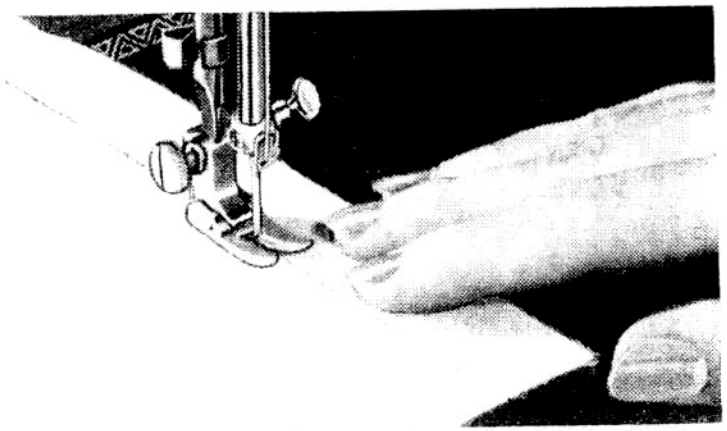


Fig. 99. Following Drawn Thread with All-purpose Presser Foot

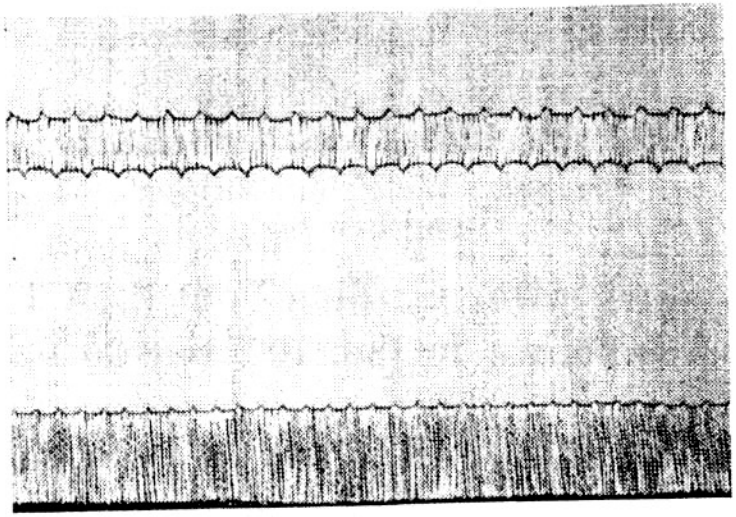


Fig. 100. Blind Stitch Used for Fringed Edge

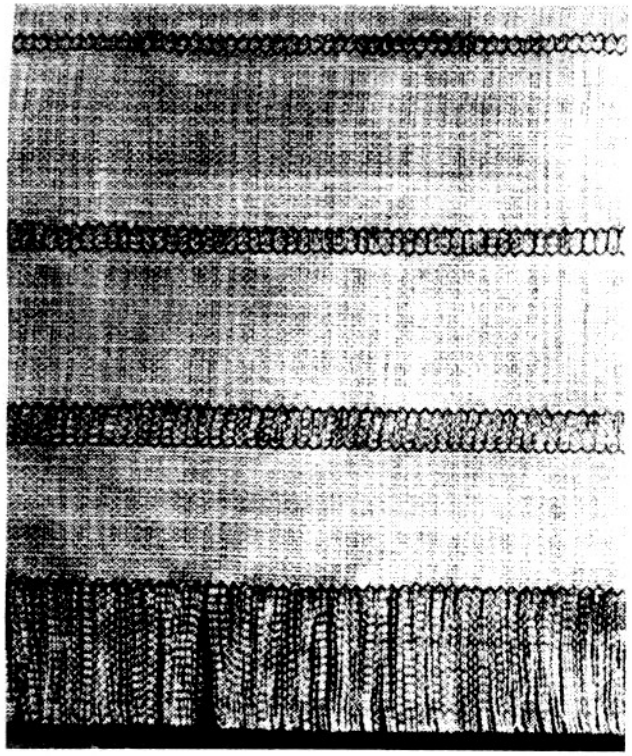


Fig. 101. Wide Hemstitching and Fringes

Zigzag Disc No. 1 or Blind Stitch Disc No. 3 are equally effective to use for fringed edges and wide hemstitching.

Corded edges with fabric covered cord

Use: All-purpose Throat Plate, or Straight Stitching Throat Plate. Central Needle Position. 0 Bight. Cording Foot (Left Toe) 160 845. Cording Foot (Right Toe) 160 846.

To cover Cord cut bias strip twice the width of the seam allowance plus cord. Fold bias over cord, raw edges even, and position needle close to cord, but not into it, and lower Cording Foot (Left Toe). Stitch, guiding the edge of the foot next to the cord, as shown in Fig. 102, but do not crowd the foot against it.

Machine Baste Cord to right side of garment using Cording Foot (Right Toe), as shown in Fig. 103. **Apply facing** and position under needle, with facing next to feed and garment next to foot, so that basting stitch will be in view.

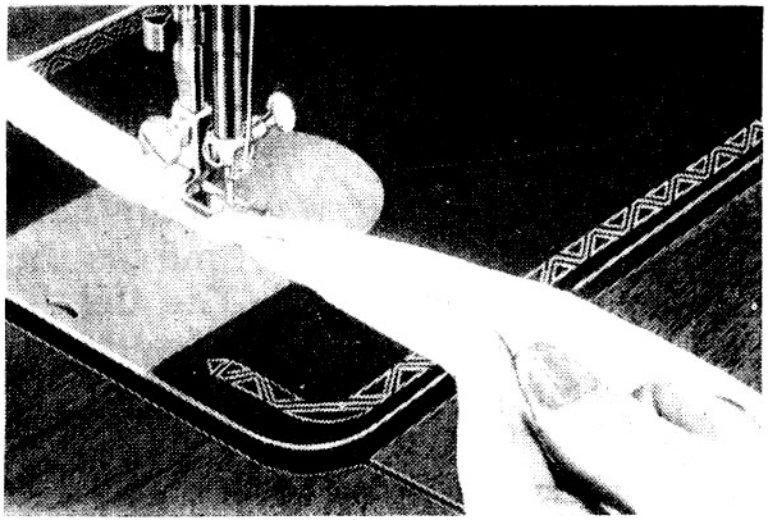


Fig. 102. Covering Cord with Cording Foot (Left Toe)

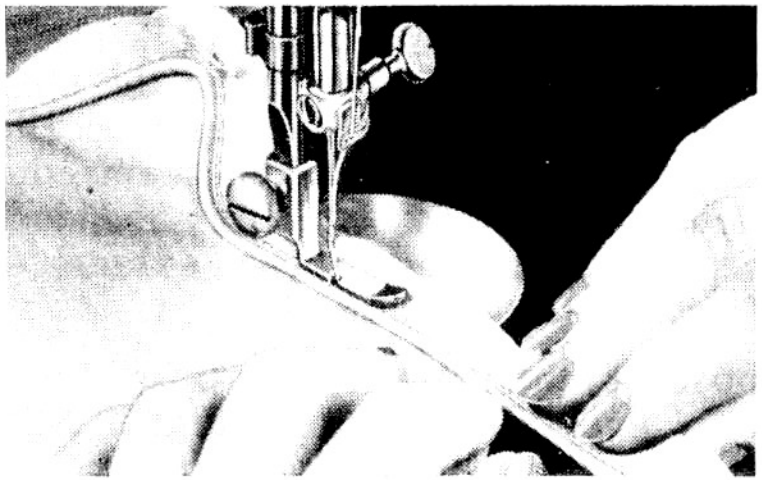


Fig. 103. Machine Basting Covered Cord to Garment

Stitch, this time crowding the foot against the cording and making stitches between the basting and the cording.

Before turning work, blend seams by cutting away seam allowances, the bias to 1/8" and the garment and facing to 1/4".

Corded seams and edges lend smartness to tailored garments. Cushion covers and slip covers are usually finished with corded seams. The cording feet are essential for making corded seams and edges and have many applications in addition to stitching zippers and hems.

Fig. 104. Scalloped Edge in Process

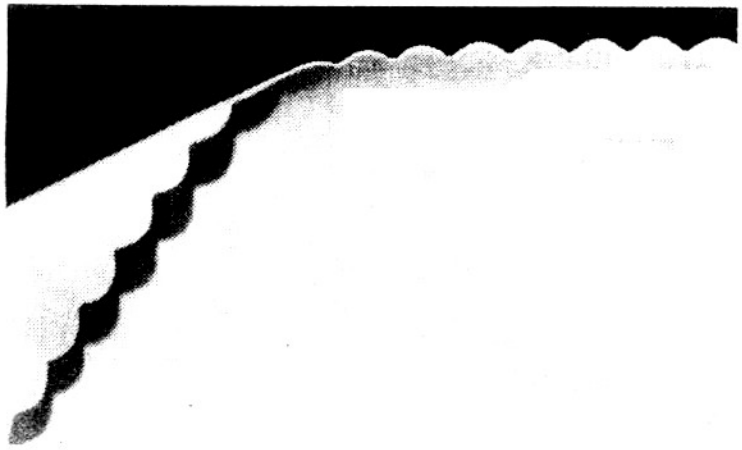


Fig. 105. Scalloped Edge Completed

Scalloping

Scalloped edges

When the Scallop Disc is in use, the needle moves to form a scallop while the fabric moves in a straight line under the presser foot. The depth of the scallop is controlled by the bight setting. A 5 Bight produces a scallop approximately 3/16" deep and each bight setting of less than 5 produces a correspondingly narrower scallop.

The length of scallop varies with the stitch length. A 2 mm stitch length and a 5 Bight produce a scallop approximately 1-1/4" in length, a 1 mm stitch length and 5 Bight give approximately a 3/4" scallop, while a stitch length less than 1 mm produces a scallop of 1/2" in length or less depending upon the stitch. A single straight stitch separates each scallop providing space for cutting when the seam edges are trimmed and turned to form the finished, faced scallop edges. Scalloped edges are used extensively on blouses, dresses and on children's wear.

Use: All-purpose Throat Plate. All-purpose Presser Foot. Central Needle Position. 5 Bight. Stitch Length about 1 to 2 mm. Scallop Disc No. 4.

Stitch in the same way as when making a straight seam. The garment section will pass straight under the presser foot while the needle follows a scallop pattern (see Fig. 104). Trim seam allowance to less than 1/8" and clip into each point between scallops. Blend this narrow seam by clipping small wedges at regular intervals. When the scallop is turned, the seamed scallop edge will have a smooth even contour.

Scalloped Tucks

Scalloped Tucks are formed in the same manner as the scalloped edge. In planning, added width of at least 1/4" must be allowed for seaming and trimming the scallop. Form scallops first, then turn and stitch tuck with straight line of stitching spaced as desired.

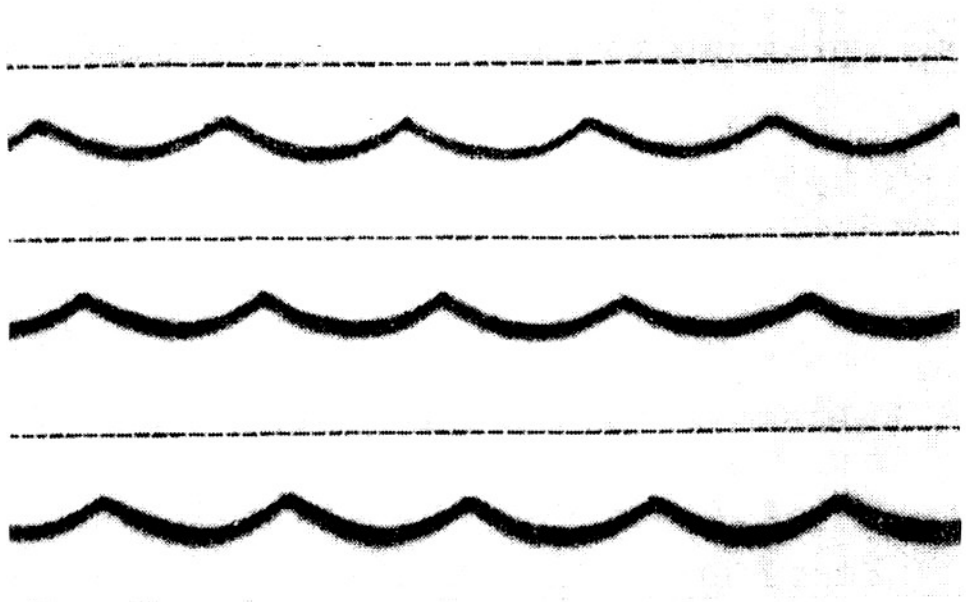


Fig. 106. Scalloped Tucks

Shadow scalloping with twin needles

Sheer fabrics are well suited to shadow scalloping. Limit Bight to 3 and set machine at central needle position. Insert TWIN NEEDLES as described on page 8 and replace presser foot with satin stitch foot. Loosen needle thread tension slightly and set desired stitch length between 1 and 2 mm. If several rows are used, start each row with the stitch pattern beginning at the same point. Should fabric be soft, use an underlay of fine organdy and trim away closely at line of stitching. Shadow scalloping is attractive by itself or in combination with scalloped tucks on blouses, dresses and children's clothes.

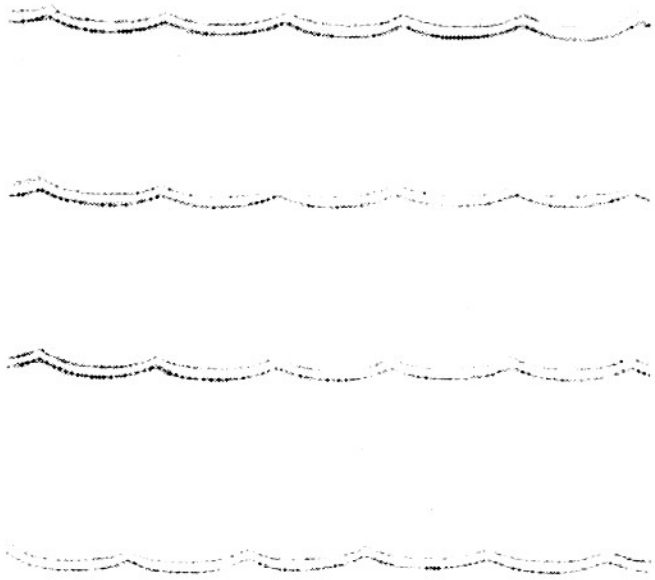


Fig. 107. Shadow Scalloping

Monograms

Attractive variation is given simple monograms when one or more automatic stitch patterns are introduced. Select a monogram from the many transfer design available or sketch one to suit your purpose.

Back fabric with tarlatan, crisp lawn or organdy. Trace or stamp design on right side of material. Cut away backing when stitching has been completed. For monogram in Fig. 108,

Fig. 108

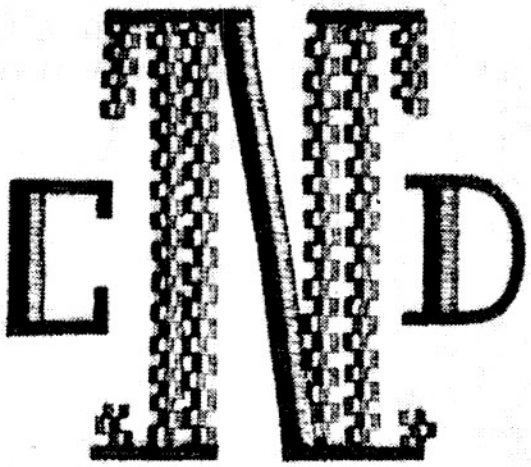


Fig. 109

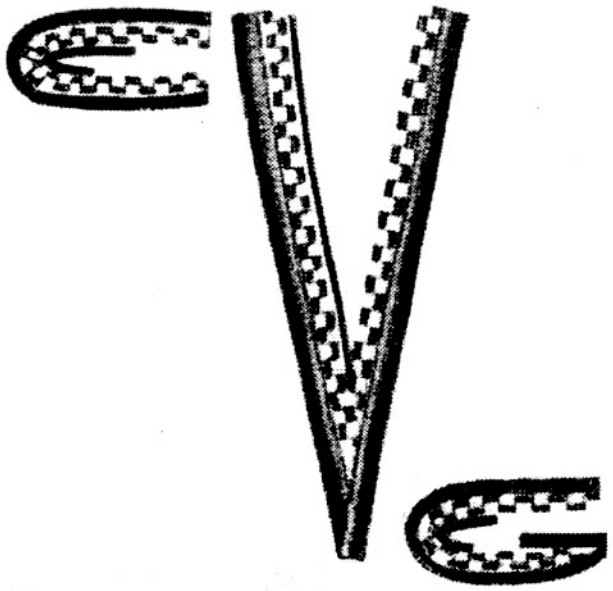


Fig. 110

Use: All-purpose Throat Plate Satin Stitch Foot No. 105251 Central Needle Position. 5 Bight. Almost 0 Stitch. Zigzag Disc No. 1. Arrowhead Disc No. 5.

Twin Needle work, where needles are threaded with contrasting threads or with threads of different shades, is appropriate for monograms. The monogram illustrated in Fig. 109 exemplifies such stitching.

Use: All-purpose Throat Plate Satin Stitch Foot No. 105251. Central Needle Position. 3 Bight. Almost 0 Stitch. Zigzag Disc No. 1. Domino Disc No. 6.

On the monogram in Fig. 110 the straight single bars of stitching are made with a 2-½ bight, the Zigzag Disc and the single needle.

Fig. 111. Script Stitching with Hoops

Twin needle stitching forms the outer lines of the large letter inside of which is placed a line of domino stitching. A narrower bar of satin stitching accents the inside edge of the letter.

Use: All-purpose Throat Plate Satin Stitch Foot No. 105251. Central Needle Position. 3 Bight and 1 Bight. Almost 0 Stitch. Zigzag Disc No. 1. Domino Disc No. 6.

Script stitch

First drop feed as described on page 37. **Use:** Embroidery Plate No. 189632. No Presser Foot. Central Needle Position. 3 Bight. 0 Stitch. Zigzag Disc No. 1.

Script Stitch is most effective for marking baby blankets, household linens, lingerie or accessories.

After tracing or marking lettering on right side of fabric, place in embroidery hoops large enough to encompass word or initials

to be worked, with right side inside hoops. Place work under needle, lower the presser bar, position the needle and follow the outline traced. Should thread breakage occur, check setting of needle, decrease tension and use crips lawn or organdy as an underlay.

Shadow monogram

Shadow monograms have a dimensional appeal accomplished with threads of different colors or shades and with Twin Needles. Proceed as for Script Stitch. **Limit bight to 3 or less** and use a needle thread tension slightly lighter than for Script Stitch. Stitch more slowly when crossing one line of stitching over another. Where lines cross, stitch the first line less dense and allow the second line of stitching to be more prominent.

Move embroidery hoops in forming letters so that most of the motion is away from you. Move hoops with the stroke of the needle, taking care not to bend or deflect needles. Shadow Monograms are equally appropriate for linens and wearing apparel.

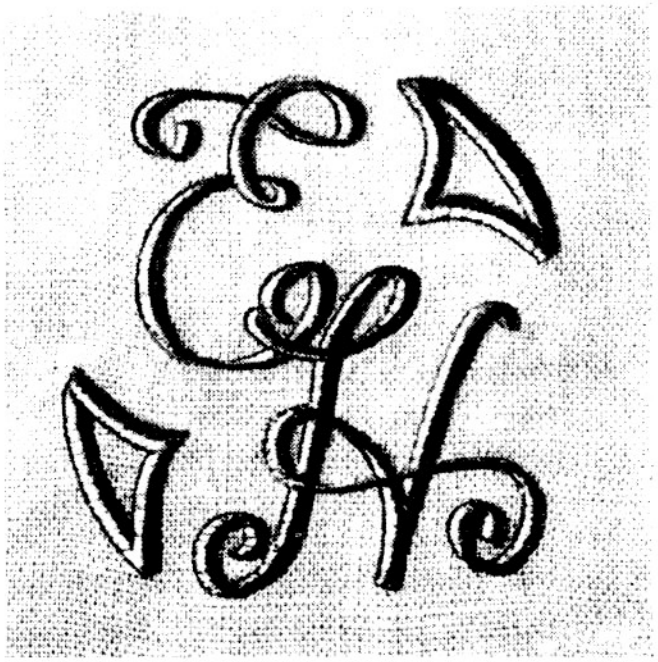


Fig. 112. Shadow Monogram

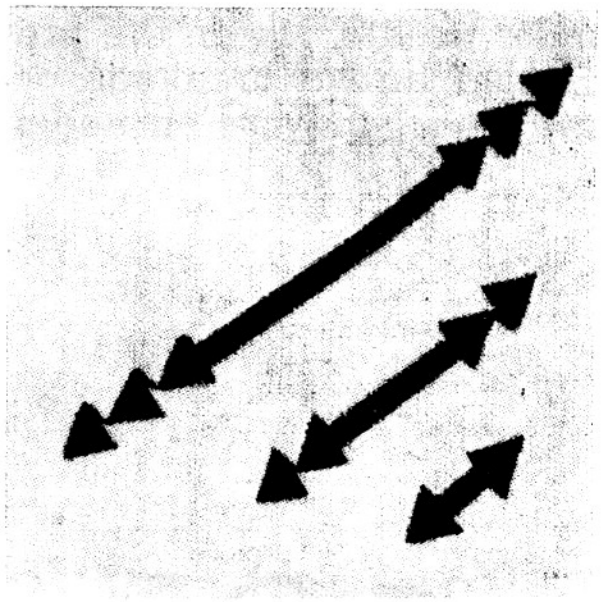


Fig. 113

Designs and motifs

A touch of stitching, smartly placed, is subtle and fashion wise. The motifs illustrated on this page are examples of stitching accomplished with a combination of several discs from simple original designs. When used on a collar point, tie, tab or pocket, they add smartness and individuality. For Fig. 113.

Use: All-purpose Throat Plate Satin Stitch Foot 105251. Central Needle Position. 3 Bight for lines and 5 Bight for Arrowheads. Almost 0 Stitch. Zigzag Disc No. 1. Arrowhead Disc No. 5.

Stitch lines first, add arrowheads. Stitch on a scrap of fabric until the arrowhead is completed and the needle is ready to take the last centrally located stitch at the point. Position needle in the center of the bar of stitching, lower foot and stitch slowly, completing the number of arrowheads desired.

For Fig. 114, equip machine as indicated above and in addition to the Arrowhead and Zigzag Discs, use the Multiple Stitch Zigzag Disc at a **5 Bight** and **almost 0 stitch** length.

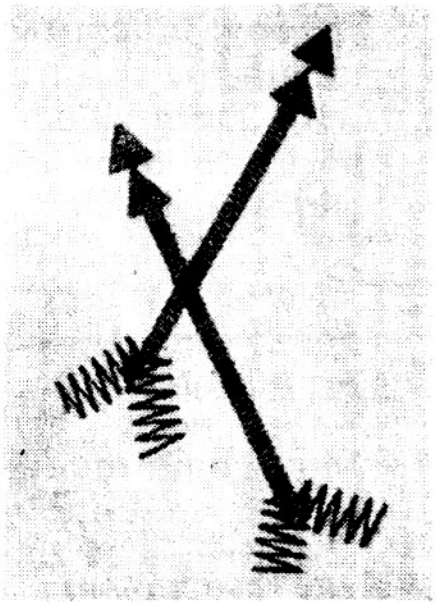


Fig. 114

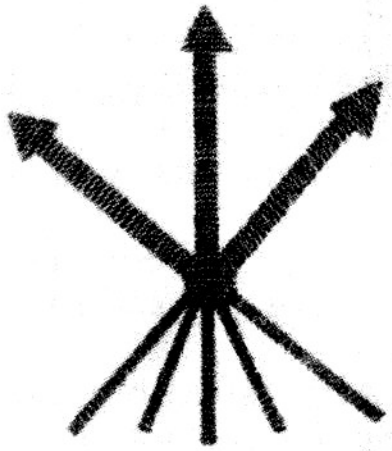


Fig. 115

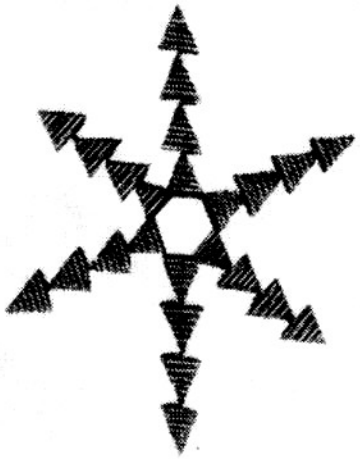


Fig. 116

The Zigzag and Arrowhead Discs are used to form the design in Fig. 115.

The star of arrowheads in Fig. 116 is formed with Arrowhead Disc by stitching from the center outwardly.

Classic designs, such as the one in Fig. 117 are smart when used singly or in groups. The Zigzag and Domino Discs are used, following simple, straight lines.

A combination of the Arrowhead and plain Zigzag stitching produces the simple, interesting motif in Fig. 118. Such designs are easily adapted to the space and dimension of the garment section where they are used.

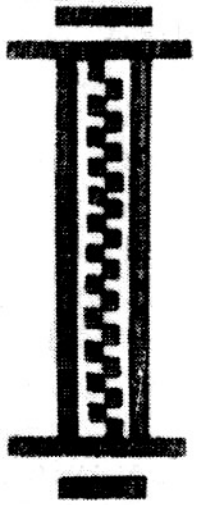


Fig. 117

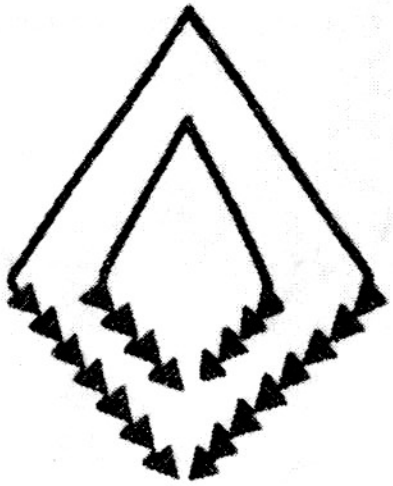


Fig. 118

Border designs

Unlimited variation and expression are possible in border designs when several stitch patterns are used in combination. The width and density of the border can be varied according to the application. In addition to the suitability of such stitching for linens, draperies and apparel as border designs, it is effective on plain fabrics to simulate striped or plaid effects. A popular application of these designs is for pockets, yokes, cuffs and applied bands.

The Scallop and Arrowhead Discs are used to form the attractive design in Fig. 119. Two lines of scallop stitching — **Bight 5,** and **Stitch Length about 1 mm** — are crossed by groups of arrowhead stitching — **Bight 5 Stitch almost 0.**

Three Discs are used in forming the border design in Fig. 120. After stitching the rows of scalloping with a **5 Bight,** and **2 mm Stitch Length,** satin stitched bars are made with Zigzag Disc, **3 or 4 Bight** and **almost 0 Stitch** across points between scallops. Arrowheads accent each solid bar of stitching at **5 Bight** and **almost 0 Stitch.**

Suitable for vertical or horizontal treatment the design in Fig. 121, is made with the Zigzag and Scallop Discs. Scalloping is joined with criss cross bars of stitching. The proportion may be varied according to the application.

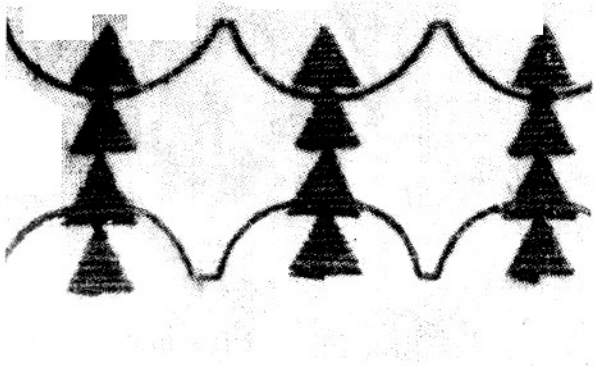


Fig. 119

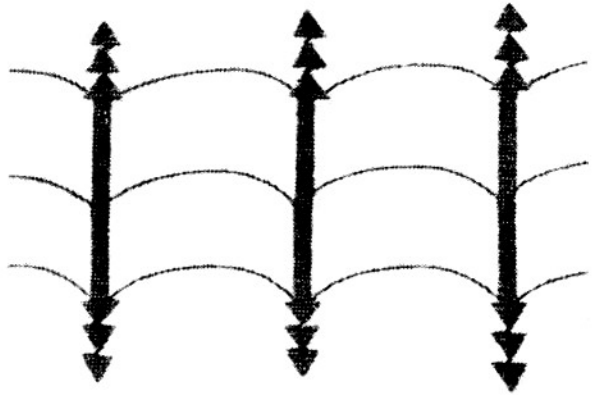


Fig. 120

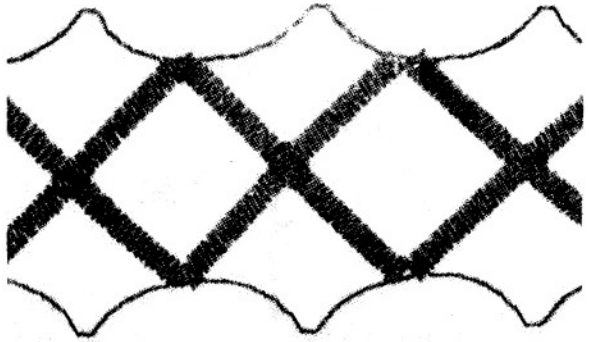


Fig. 121

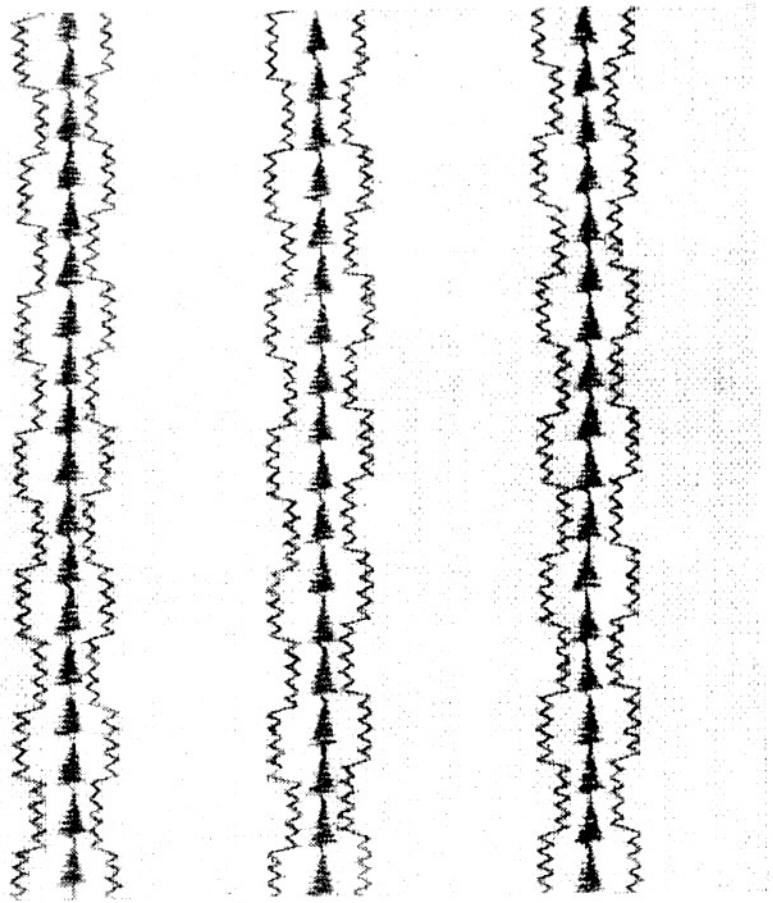


Fig. 122

The design in Fig. 122 is made with Arrowhead and Domino Discs and is appropriate for simple border or as an all-over stripe on a plain fabric.

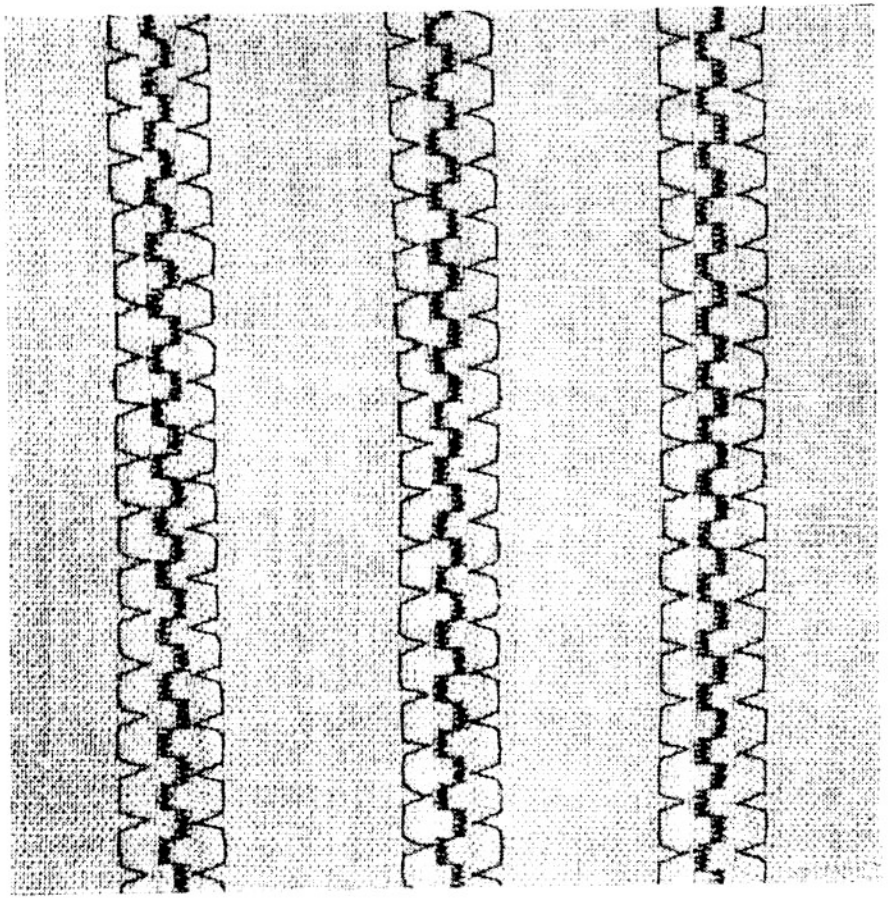


Fig. 123

The Domino and Blindstitch Discs are used in effecting the interesting stripe or border design in Fig. 123.

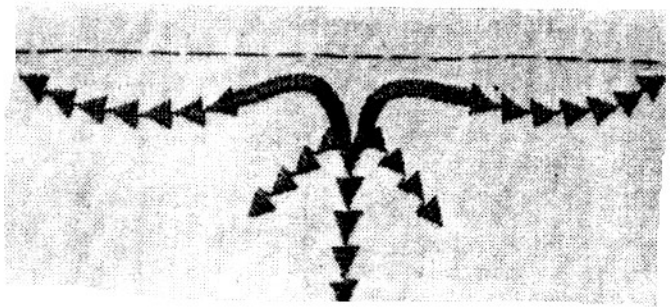


Fig. 124. Step 1 of Pocket in Process

line and the design for stitching with a fine chalk line. A backing of lawn, organdy or muslin provides the body and firmness desirable when satin stitching is used.

The pocket design illustrated in Fig. 124 is stitched using the Zigzag Disc while the machine is set for a **3 Bight** and **almost 0 Stitch.** The Arrowhead Disc is used with the machine regulated for a **5 Bight** and an **almost 0 Stitch.** Trim backing away along outside of stitching when design is completed.

American buttonhole pockets

These buttonholes derive their name from the fact that the pocket slit has a satin stitch finish. Buttonhole pockets accented with stitched designs are effectively made on the SINGER Automatic Machine. Appropriate for dresses of tailored and classic style as well as for blouses, shirts and sportswear, these pockets are simple to make and are sturdy and durable.

Mark position of pocket opening with a basting

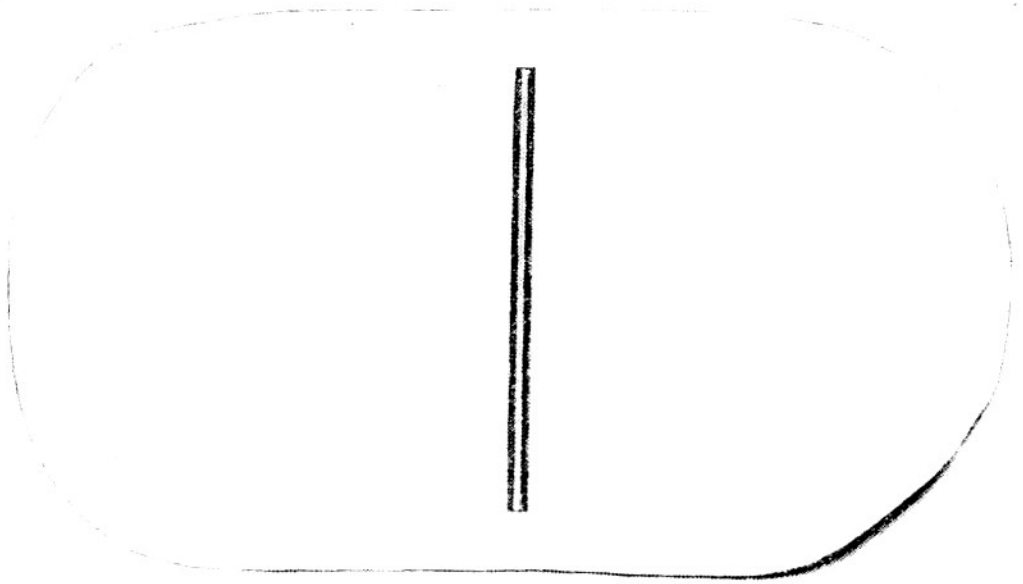


Fig. 125. Step 2 of Pocket in Process

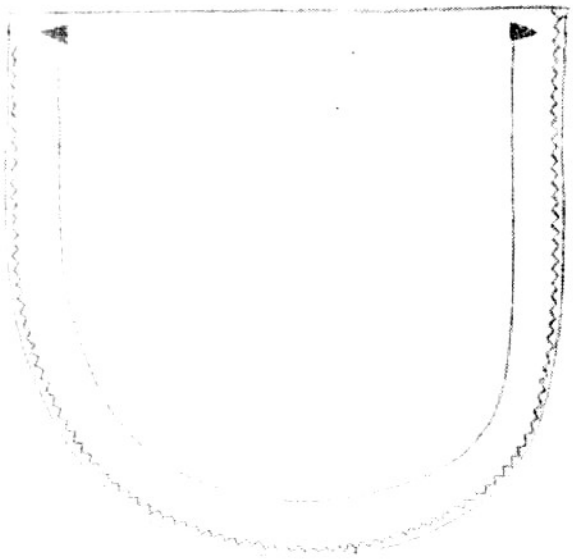


Fig. 126.
Underside of Completed Pocket

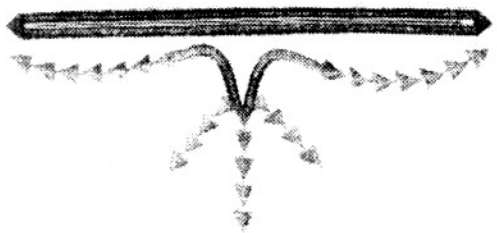


Fig. 127
Right Side of Completed Pocket

Locate pocket section on underside of garment and from the right side, using Buttonhole Foot 86616, a **2-½ Bight,** and an **almost 0 Stitch.** Proceed as for making buttonholes, eliminating the reinforcement bars of stitching at each end. Cut between bars of stitching to form pocket opening as was done in Fig. 125.

Bring pocket sections together and seam with straight stitching. Finish seam with Zigzag stitching to stay edges and prevent fraying. Fig. 126 shows the underside of the completed pocket.

Place Arrowheads at each end of the bars of stitching from right side of garment to reinforce ends of opening and to complete pocket as shown in Fig. 127.

Fig. 128. Right Side of Completed Pocket

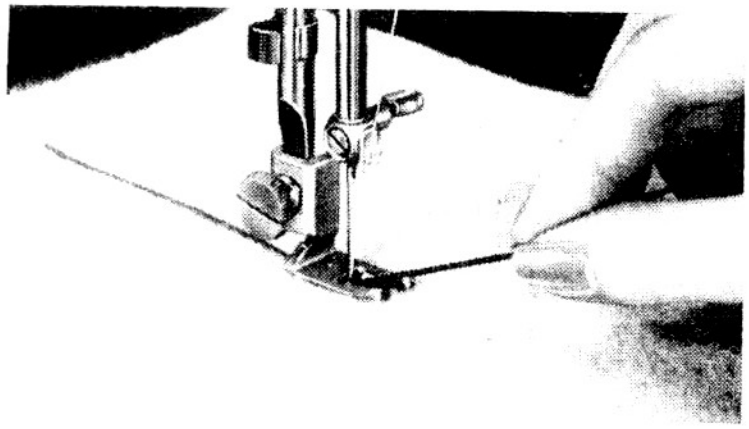


Fig. 129. Soutache Braiding with Satin Stitch Foot

Simple, graceful designs are best for decorative pockets. The styling of the garment will often suggest a line that can be repeated to form the basis of the pocket design. The automatic machine itself will suggest variations in design that are original and interesting, such as the design shown in Fig. 128.

Braiding

Use: All-purpose Throat Plate Satin Stitch Foot 105251. Central Needle Position. 0 Bight. Stitch Length 1 to 2 mm.

Choose a design with simple, continuous, open lines that neither cross nor fall too closely together. Stamp or trace design on face of fabric.

Position Soutache braid under Satin Stitch Foot, then draw braid upward into the needle slot of the foot so that it lies on top of the lateral section of the foot. Stitch carefully, following the design and adjusting braid at points or corners with a stiletto or small screwdriver. The stitching will fall in the center groove of the braid.

When stitching is completed draw ends of braid to back of fabric through an opening in the weave punctured with a stiletto or coarse needle. Fasten braid with hand stitching against the underside of the design for about an inch.

Soutache braid is available in both mercerized cotton and rayon. The mercerized cotton type is a suitable trimming for cottons, linens, homespuns, cotton tweeds and similar

fabrics while the rayon type is best for woolens, synthetic fabrics and silks.

According to fashion trends Soutache braid is featured for table linens, draperies, and fabric furnishings as well as for wearing apparel.

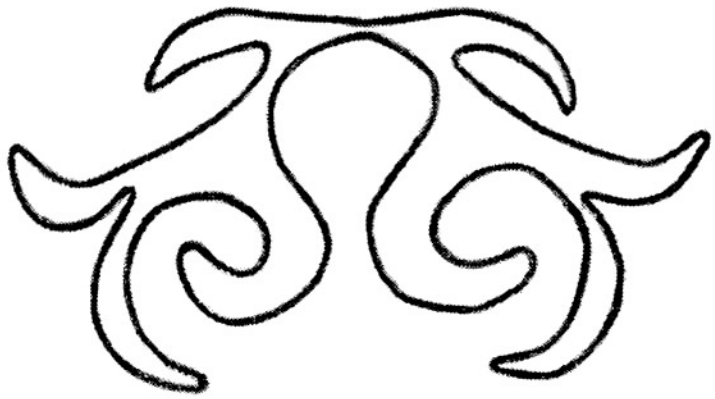


Fig. 130. Soutache Braiding Design Completed

Braiding with gimp

Use: All-purpose Throat Plate Satin Stitch Foot 105251. Needle Position slightly **right** of center. 1 Bight. Stitch Length 1 to 2 mm. Blind Stitch Disc No. 3.

Gimp yarns, available in various sizes in needlework departments, afford an interesting treatment when used as braid. The plain zigzag or the blind stitch can be used, depending on the effect preferred.

Trace design on right side of fabric. Pass gimp through eye of the Satin Stitch Foot. The Needle Position and Bight may be varied slightly from the above settings to accommodate any one of several sizes of gimp yarn.

When design is completed draw ends of gimp to the back of fabric through an opening in the weave punctured with a stiletto or coarse needle. Fasten gimp with hand stitching against the underside of the design for about an inch.

Braiding with rayon or metallic gimp is attractive on synthetics, woolens, felt or heavy silk.

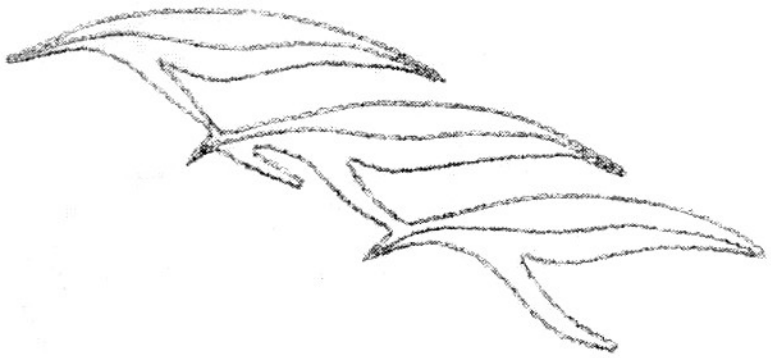


Fig. 131. Gimp Yarn Applied as Braid with Blind Stitch

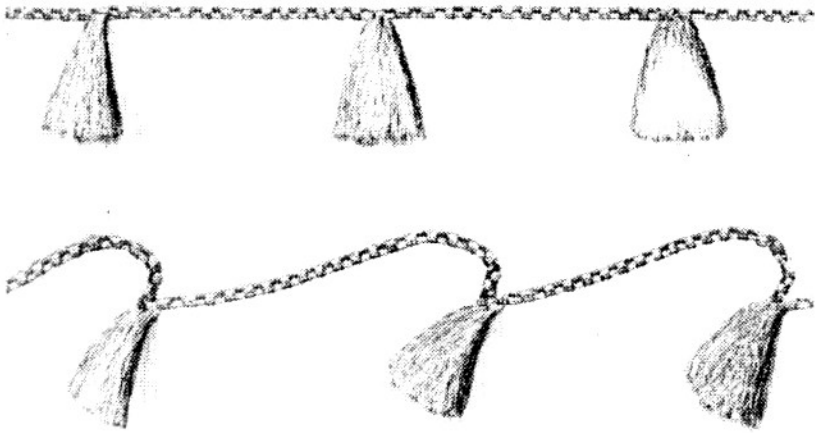


Fig. 132 Novelty Braiding with Straw Yarn

Novelty braiding

Bold, interesting effects result from the use of automatic stitch patterns in combination with novelty yarns. Straw yarn is cleverly applied with the domino stitch. Two strands are held unter the Satin Stitch Foot. Long yarn ends are allowed at intervals in the design to form tufts. Trim and brush yarn to give the effect illustrated in Fig. 132.

Use: All-purpose Throat Plate Satin Stitch Foot 105251. 5 Bight. Stitch Length less than 1 mm. Domino Disc No. 6.

Novelty effects with yarns are attractive for fabric furnishings and play clothes, as shown in Fig. 131. Many clever trimmings are possible by varying the yarn and design as well as the stitch pattern.

Applique

Applique is effective on many types of apparel and fabric furnishings. Fabrics of like textures, as well es fabrics of different textures and weaves, are often used in appliqueing. For example, in lingerie, lustrous satin is appliqued to dull crepe to create beauty and interest by contrast in texture. Print fabrics are sometimes applied to plain fabrics in dresses, children's clothes, play clothes or linens, for accent. In draperies, motif and border prints may be applied to plain fabric of similar texture. When large motif designs are used in applique, the lines or sections of the design are frequently accented by continuing the stitching around these sections to bring out the design. In fabric furnishings such design sections are frequently padded to further accent the design and to give it a dimensional quality. Shadow applique on sheer fabrics is an important variation of plain applique and is described on page 72.

After stitching, portions of the design are cut away giving shadow contrast between portions of the design having double and single thickness.

Bold monograms of contrasting fabric may be applied to bed spreads, blanket covers or other furnishings for the home.

A closely spaced satin stitch is usually used for applique making it unnecessary to turn raw edges to underside. The width of the satin stitch may be varied to accommodate the weave. Fine fabrics are appliqued with a narrow satin stitch, while coarse fabrics require a wide satin stitch. In many cases the design is stitched to the garment with a satin stitch and the edges are trimmed away later. An alternate procedure is often used where the design is stitched to the fabric with a short straight stitch, the raw edges trimmed, and the satin stitch used to complete the outline, resulting in a smooth, lustrous edge. A trial sample is always made to determine the method most appropriate for the particular work being

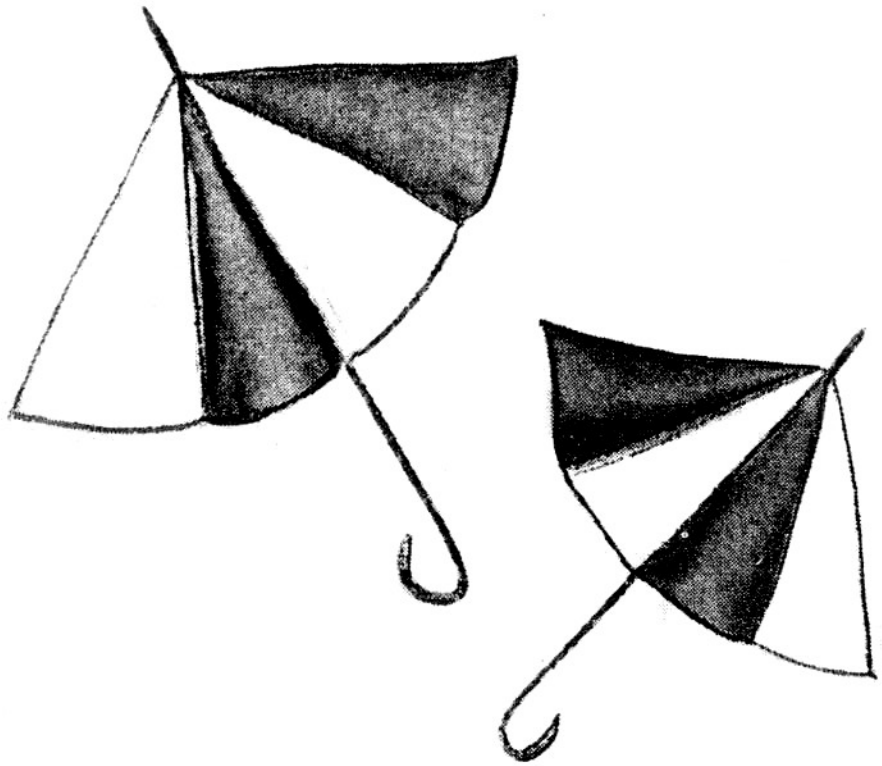


Fig. 134. Applique in Umbrella Design

The outside lines are lightly indicated on the fabric to which the design is to be applied. Any portion of the design to be made with stiching only, is completed before the applique is done. The sections of the applique in the umbrella motif are joined with straight stitching and edges are trimmed. A backing or double thickness of fabric is desirable in such a motif. All edges that are to be free of the garment are finished with satin stitching and trimmed.

Edges that are to be secured to the garment are basted and stitched with straight stitching to the garment. After trimming raw edges away close to the straight stitching, these edges are appliqued with a satin stitch. All thread ends are drawn to be underside of the fabric and tied.

Soft, lustrous, fine threads are appropriate for such stitching. A needle of a size suitable for the threads is used in accordance with the chart on page 44. Increased pressure on the presser bar is frequently necessary to accommodate the multiple layers of material being handled under the foot. Pressure adjustment varies with the weight and texture of fabrics being used.

Stitch until the inside needle has reached the corner. Raise presser foot when needles are out of the fabric. Make a one-eighth turn of the fabric, allowing the inside needle to enter for the second time into the corner stitch penetration. Turn hand wheel until needles go down and up again and rise out of the fabric.

Make the second eighth turn of the fabric. Allow the inside needle to enter for the third time into the corner stitch penetration. Continue to stitch in straight line. When design is completed draw threads to the underside and tie.

When using parallel lines of air tucking, spacing should be such that foot does not ride over a previously stitched row.

Family maintenance sewing

Mending a rent or tear

Household linens, sheets, towels and pillow cases are quickly mended on the SINGER Automatic Swing-Needle Machine by holding an underlay of straight or bias fabric underneath the tear and stitching with the multiple stitch zigzag over the tear bringing the edges of the tear together and reinforcing them. The ends or corners are given added strength by using a shorter stitch length.

Use: All-purpose Throat Plate and Presser Foot. Central Needle Position. 5 Bight. Stitch Length almost 0 and 1 mm. Multiple Stitch Zigzag Disc No. 2.

Mending trouser pocket

Regulate machine the same way as for mending a tear, and stitch pocket together allowing the needle to stitch very close to the edge on its right stroke, reinforcing the edge and closing the seam at he same time.

Elastic waistbands

Use: All-purpose Throat Plate and Presser Foot. Central Needle Position. 2 Bight. Stitch Length 2 mm. Zigzag Disc No. 1.

Stretch elastic while stitching to provide the degree of fullness required in the garment. If a waistband, fit elastic for snugness on the individual and join ends of elastic. Divide both elastic and garment into quarters and pin at these intervals. Stretch elastic between these points to dimension of garment while stitching. With top edge of elastic in line with raw edge of garment, zigzag two rows, following the cords in the elastic. Trim away raw edge of garment near top line of stitching.

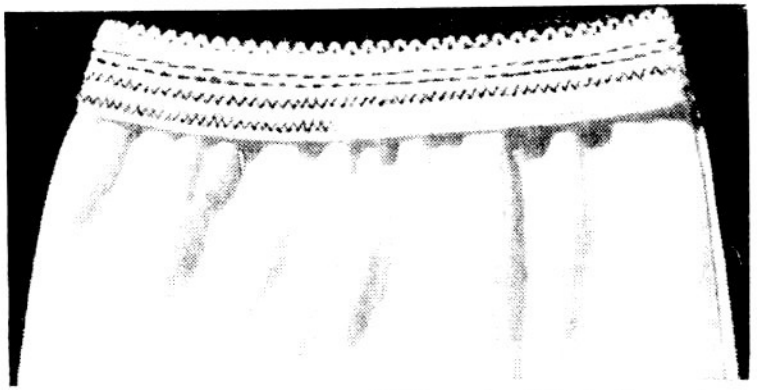


Fig. 139. Renewed Elastic Waistband

Replacing blanket binding

The multiple stitch zigzag is an excellent stitch for applying blanket bindings and affords both a decorative and durable finish. Remove worn binding. Baste new binding securely in place. Stitch, using the All-purpose Throat Plate and Presser Foot, **5 Bight, 1 to 2 mm** Stitch and Multiple Stitch Zigzag Disc No. 2. Increase pressure adjustment to accommodate the thickness of the blanket.

Fig. 140. Blanket Binding Replaced