Student's Manual

BY

SINGER

Sewing Machine Attachments

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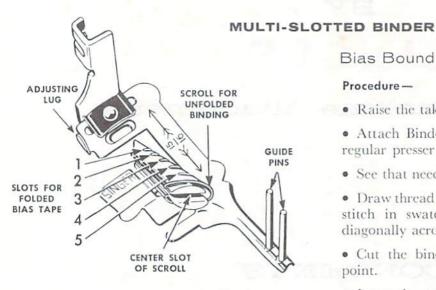
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THE SINGER COMPANY

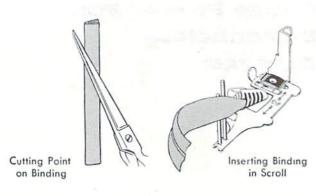
EDUCATIONAL DEPARTMENT . 30 ROCKEFELLER PLAZA . NEW YORK 20, NEW YORK

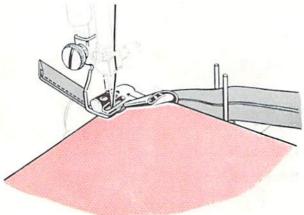
THE MULTI-SLOTTED BINDER AND THE BIAS CUTTING GAUGE



The Multi-Slotted Binder is used to apply commercial binding as well as self fabric bias to an unfinished edge.

Commercial binding in sizes 1 to 5 is inserted from the right into the appropriate slot in the scroll. Unfolded bias 15/16 of an inch wide is inserted into the opening at the end of the scroll.





Bias Bound Edge

Procedure -

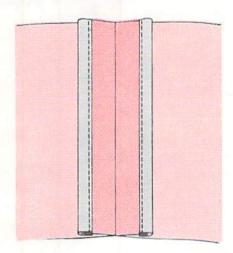
- Raise the take-up lever to its highest point.
- · Attach Binder to presser bar in place of the regular presser foot.
- See that needle enters center of needle hole.
- · Draw thread through needle hole by taking one stitch in swatch of fabric and place threads diagonally across feed.
- · Cut the binding diagonally to form a long
- Insert the pointed end of the binding into the slot and pull through the scroll until the evenly folded edges are under the needle. The free length of binding is held between the guide pins.
- Position the needle, lower the presser bar and stitch.
- Never pull the binding as it feeds through the scroll. Allow the attachment to do the work. Merely guide the edge to be bound well into the center of the scroll as you stitch.
- Position stitching close to the edge of binding by moving the scroll portion to right or left by means of the adjusting lug.
- Do not raise Binder after the stitching is the desired distance from the edge.
- · Insert edge to be bound as far to the right as it will go in center slot of scroll.
- Start stitching.
- · At the end of the seam, continue stitching for 1 or 2 inches on the binding. Clip binding. Do not raise the Binder.

Binding a Straight Edge

Plain Bound Seams

Two seam edges may be bound together to form a plain bound seam. This is especially practical in household articles, such as cushions, simple slip covers and articles made of plastic.

- Join the two edges with straight stitching, then trim the seam to a scant ¼ inch.
- Insert the seam into the center scroll of the Binder and stitch, keeping the edges well into the scroll as you stitch.



Open Bound Seams

Bound seams are excellent for unlined jackets. The seam is stitched in the regular way after the garment is fitted. Press the seams open.

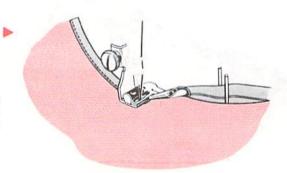
• Bind both edges, using silk or cotton binding, depending on the fabric used.

To prevent edges from stretching or raveling, run a row of stay stitching 1s inch from the edge before binding.

To Bind Inside Curves

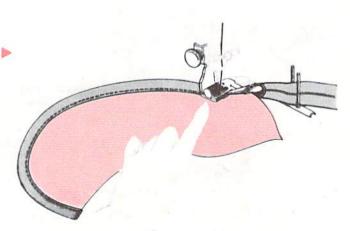
Curved edges require slightly different labric handling than straight edges.

Inside curves are straightened as they are fed into the Binder. If the fabric is soft and has a tendency to stretch, reinforce the edge with a single row of stitching before binding.



To Bind Outside Curves

Outside curves tend to lead away from the center slot of the scroll and should be guided so that a full seam width is taken at the needle point. Do not attempt to pull or straighten fabric into the full length of the scroll. The fabric is best controlled at the left and in line even with the needle. It may be necessary to adjust the lug to the left to bring the stitching into accurate position on the curve.



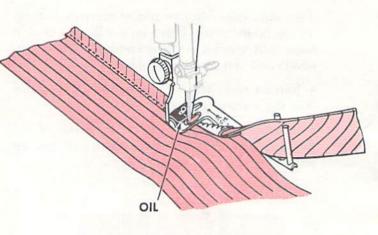
Unfolded or Raw Edge Bias Binding

- Cut bias strips from ¹⁵/₁₆ to 1 inch in width depending upon the fabric.
- · Cut binding diagonally to form a long point.
- Pull binding through scroll for unfolded binding.

Do not stretch the binding, merely guide it, permitting the unfinished edges to swing naturally into the scroll of the Binder.

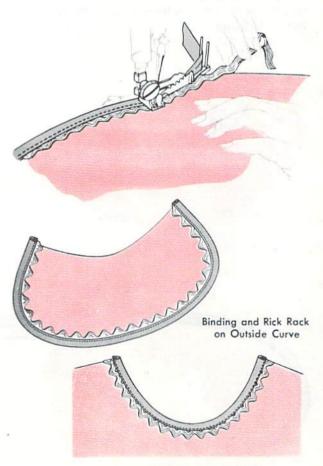
To Oil the Binder

If the lug does not move easily, place a drop of oil under the blue steel spring as indicated. Remove excess oil before using the attachment.



To Bind Plastic Film

When using fabric binding, treat as in average sewing. For plastic binding, cut ½ inch in width and insert in slot on outside of scroll of Binder. Since plastic film does not fray, it is not necessary to fold the edges.



Binding and Rick Rack on Inside Curve

To Bind and Apply Rick Rack Braid in One Operation

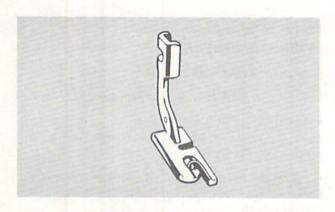
Rick rack braid may be applied to straight or curved edges as they are bound.

• Insert the edge to be bound and the rick rack braid into the scroll of the Binder at the same time; the seam edges must be flush.

The rick rack braid should be fed into the Binder in a *straight line* and against the wall of the scroll, regardless of the shape of the garment to which it is attached. This is especially true on curved seams.

Other types of braids and trimmings may be applied in the same manner.

THE FOOT HEMMER



This narrow Hemmer forms and stitches a perfectly turned hem without basting or pressing.

Hemming

Procedure-

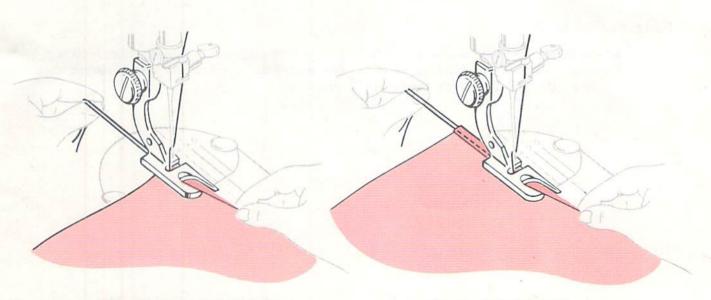
- Raise the take-up lever to its highest point.
- Attach Foot Hemmer to presser bar in place of regular presser foot.
- Draw bobbin and needle threads back under Hemmer.

- Fold edge of fabric twice, and about ½ inch each time. Crease the fold for about 2 inches.
- Place fabric under foot and stitch through creased fold for 2 or 3 stitches.
- Hold thread ends in left hand and guide raw edges in front of Hemmer evenly into scroll.
- Stitch slowly, still holding thread ends until hem is well started.
- Continue guiding fabric with right thumb and finger.

Soft fabrics will enter the scroll best with the foot down; firm, crisp materials with the foot raised.

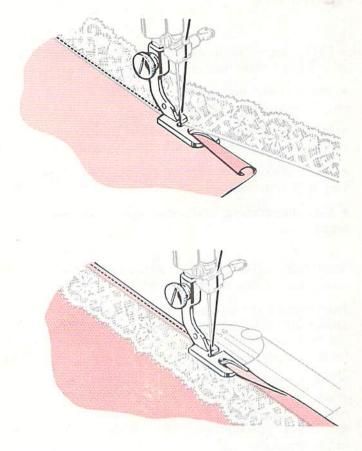
Even feeding is essential to good hemming. The same width of fabric must be kept in the scroll of the Hemmer at all times. A little practice will result in perfectly formed hems.

When hemming material that is cut on the bias grain, first place a row of stitching close to the edge, using a short stitch. Trim as close to the stitching as possible before placing the material in the Hemmer.



Starting Hem at Very End of Material

Hemming Edge of Material and Pulling Back Threads While Sewing



To Hem and Sew on Lace in One Operation

Lace applied over hem-

- Fold and start hem in the regular way.
- Starting about 1 inch down from the end of the lace, place selvage under needle and lower needle to hold lace firmly.
- Raise the foot slightly and slip the lace under back portion of foot without disturbing the position of the fabric.
- Stitch slowly, guiding the fabric with the right hand, the lace with the left. Take care not to stretch the lace.

Lace applied under hem-

Proceed the same way as when making a hemmed seam.

• Slip lace in from the left as you would the second piece of fabric.

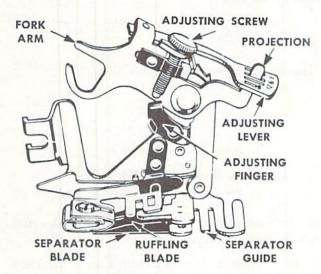
This method is used where a neat finish is desired on both sides of the material.

To Hem Plastic Film

Pass a double threaded hand needle through corner of extreme edge of plastic film to be hemmed. Draw edge of film into scroll of Hemmer by pulling gently on the double loop of thread. Stitch, being careful not to stretch the film.

THE RUFFLER

PRINCIPAL PARTS OF RUFFLER



The Ruffler offers a simple and effective way to make gathered and pleated ruffles. Ruffles may be made separately or made and applied at the same time.

Fork Arm-straddles needle clamp.

Projection—engages slots in adjusting lever.

Adjusting Lever—sets the Ruffler for gathers or pleats. The Number 1 space setting is for gathers and places fullness at every stitch. Numbers 6 and 12 are space settings for pleats, spacing them either 6 or 12 stitches apart. The **star** is for straight stitching and is used when grouping gathers or pleats.

Adjusting Screw—regulates the fullness of gathers or pleats. When turned down to its limit with the adjusting finger in place, the attachment is set for its deepest pleat. When turned upward to its limit and the adjusting finger out of action, the Ruffler gives only a hint of fullness.

Adjusting Finger—is used only for pleating and affects the width of the pleat. It is thrown out of action by bringing it out of contact with the adjusting screw, located directly above it.

Ruffling Blade—forms the gathers or pleats by carrying the fabric to the needle according to the spacing and fullness to which the Ruffler is adjusted.

Separator Blade—prevents teeth of ruffling blade coming into contact with feed of machine or material to which ruffle or pleating is to be applied.

Separator Guide—is slotted to guide seam edges evenly and to separate the ruffle strip from the material to which the ruffle is attached.

Procedure-

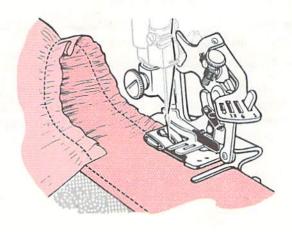
- · Raise the take-up lever to its highest point.
- Attach the Ruffler to the presser bar in place of the regular presser foot, and at the same time, fit fork arm over needle clamp hub. Make sure both presser bar screw and needle clamp screw are tightened securely.
- · See that needle enters center of needle hole.
- Draw upper thread into needle hole after lowering the needle slightly. Place both threads diagonally across feed.

To Adjust Ruffler for Gathering

- · Swing adjusting finger away from the needle.
- Raise adjusting lever and move it until projection can be entered in Slot 1.
- Insert fabric to be ruffled between two blue blades and under first separator guide.
- Draw fabric slightly back of needle.



Correct Position for Material to be Ruffled



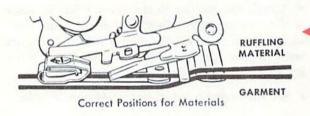
- Position needle, lower presser bar and start stitching.
- For less fullness, turn the adjusting screw upward.
- For greater fullness, turn the adjusting screw downward.

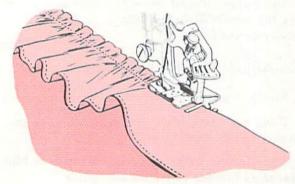
The length of the machine stitch also affects the ruffle fullness since a given attachment setting puts an equal amount of fullness into each stitch regardless of its length. Shortening the stitch makes the ruffle fuller, lengthening the stitch makes it less full.

The texture of the fabric makes a difference in the fullness of a ruffle. Soft fabrics, cut on the crosswise grain, are best adapted for gathering ruffles. Always adjust the Ruffler setting on a swatch of the fabric to be ruffled.

To ruffle organdy and chintz, moisten the fabric along the seam line using a sponge or finger tips and ruffle while damp.

The outer edge of the fabric must be finished before the fabric is ruffled.





To Adjust Ruffler for Pleating

- Move adjusting lever of Ruffler to desired space setting for pleats (either 6 or 12 stitches).
- · Set stitch length.

A short stitch places pleats close together.

- For deep pleats, swing the adjusting finger toward the needle and turn adjusting screw downward as far as it will go.
- Insert fabric to be pleated between two blue blades and under first separator guide.
- Lower presser bar and stitch.

Crisp fabrics cut on the crosswise grain form the sharpest pleats. Glazed fabrics handle best if the glazed side is downward and the soft backing is next to the Ruffler blade.

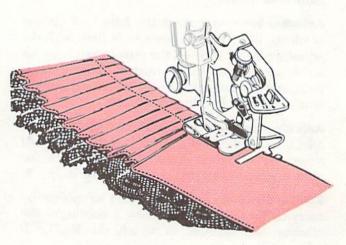
To Make a Ruffle and Sew it to a Garment in One Operation

- Place ruffle strip between two blue blades and under first separator guide.
- Place material to which ruffle is to be attached between separator blade and feed of machine and under first separator guide.
- Proceed as for plain gathering.

Right sides of fabrics are placed together when the seam is to fall to the inside.

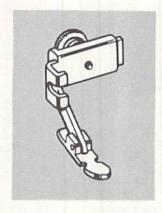


Correct Position for Material



THE ZIPPER FOOT

CORDED EDGES WITH FABRIC COVERED CORD



The Zipper Foot is designed to facilitate the placement of stitching close to a raised edge and is adjustable to either the right or left side of the needle. The hinged feature of this foot insures even feeding over pins, heavy layers of fabric or crossed seams.

Procedure-

- Raise the take-up lever to its highest point.
- Attach the Zipper Foot to presser bar in place of the regular presser foot.
- Loosen Zipper Foot thumb screw and adjust the foot to right or left of needle, as desired.
- Check position of Foot by lowering the needle into the side notch, making sure it clears the Foot.
- Lock Foot in position by tightening the thumb screw.

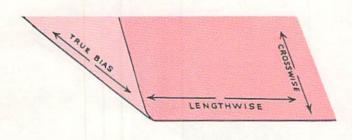
Corded Welting

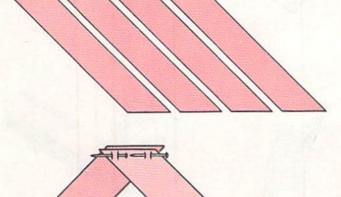
Corded welting is prepared in advance and is then stitched into the seam. The cording is covered with a true bias grain of the fabric.

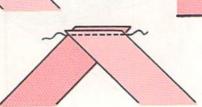
To cut and join bias strips

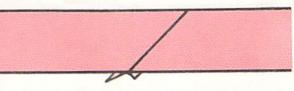
The bias grain is found by folding the *lengthwise* grain to the *crosswise* grain—the diagonal grain is a true bias. Cut along the folded line, then continue cutting strips in widths of 1½ inches plus three times the width of the cord.

Always join bias strips on the *lengthwise grain*. The lengthwise ends offset the width of the seam. The seam is always narrow and pressed open. Match the weave, stripe or design if material has prominence in any of these respects.









Seam Pressed Open

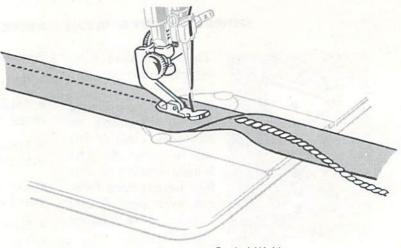
To stitch corded welting

- Adjust Zipper Foot to the left of the needle.
- Encase the cord in the bias strip, raw edges even.
- Place under Zipper Foot with raw edges to the left.
- Position needle, lower Foot and start stitching.
- Stitch close to the cord but do not crowd.

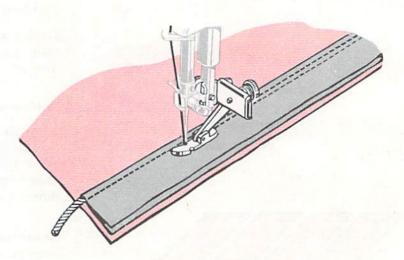
Use a stitch length slightly longer than for seaming the weight of fabric being used.

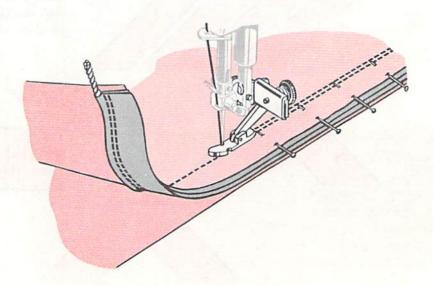
To Make Corded Seams

- Adjust Zipper Foot to the right of the needle.
- Attach corded welting to right side of a single seam edge, using same length stitch as used for welting.
- Stitch close to the cord but do not crowd.
- Place attached corded welting over second seam edge. Pin or baste.
- Keep the first stitching uppermost as a guide and position the seam under the needle.
- Stitch, this time crowding the Foot against the cord.



Corded Welting



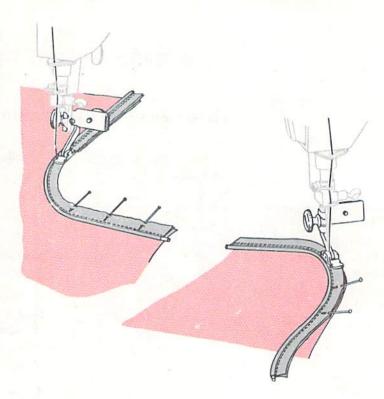


Curved Seams

Curved seams are corded as easily as straight seams. The stitch length used for the first stitching that attaches the cord to the seam is somewhat shorter than for straight seams because of the curve.

- On inside curves the seam allowance of the corded welting is full and requires easing.
- On outside curves the seam allowance must be stretched.

Seam blending is important on curved seams since the seam allowance on the welting is bias. Blend the garment and facing seam to within 1/4 inch of the stitching and the welting to within 1/8 inch of the stitching. The seam of the inside curve is slashed and the outside curve is notched.



To Insert a Zipper

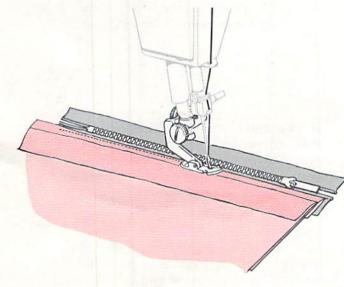
Several methods are used to insert a zipper and in any method used, the Zipper Foot enables you to form an even line of stitching close to the zipper.

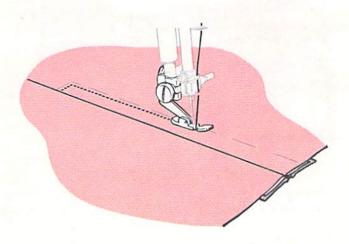
When the zipper is to the right of the needle-

Adjust the Zipper Foot to the left of the needle.

When the zipper is to the left of the needle-

 Adjust the Zipper Foot to the right of the needle.

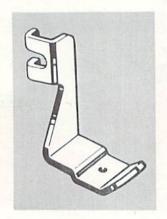




THE GATHERING FOOT

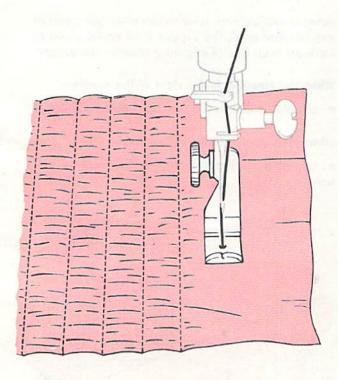
TO SHIRR WITH GATHERING FOOT

Single or multiple rows of shirring can be quickly and expertly placed with the Gathering Foot. Evenly spaced shirring is insured as this foot is designed to lock fullness into every stitch.



Procedure—

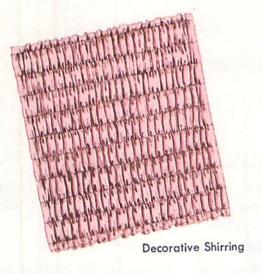
- Raise the take-up lever to its highest point.
- Attach Gathering Foot to presser bar in place of regular presser foot.
- See that needle enters center of needle hole.
- Draw thread through needle hole by taking one stitch in swatch of fabric.
 Place both threads diagonally across feed.
- · Place fabric under Gathering Foot.
- Position needle, lower Foot and stitch. The groove on the front of the Gathering Foot is a guide for stitching.

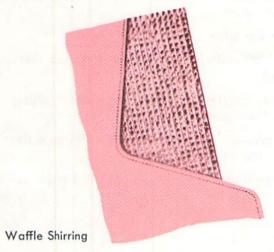


A long stitch produces more fullness than a short stitch. Balanced tensions are always required, but heavy tensions, both upper and lower, produce more fullness than light tensions.

Shirring is usually done on the crosswise grain of the fabric. Soft fabrics, such as batiste, voile, net, silk or similar textures, lend themselves to shirring better than firm fabrics.

Draw a single thread or crease the fabric on the crosswise grain at whatever space is desired. Shirring is placed on each of these lines. Rows of shirring spaced ¼ inch apart may be gauged by the edge of the Gathering Foot.







Decorative Shirring

Many lovely effects are accomplished with simple rows of evenly spaced shirring. A pocket, yoke section or trimming band of self fabric affords an interesting contrast of texture when stitched with the Gathering Foot in rows ¼ inch apart.

Waffle Shirring

Smooth surfaced fabrics are given texture interest by stitching with the Gathering Foot first on the crosswise and then on the lengthwise grain of the fabric, with the stitch length adjusted short enough to give only slight fullness. The edge of the Gathering Foot serves as a convenient guide for width between rows of stitching. Waffle shirring has a broad application on cottons, silks, woolens or rayons and is particularly interesting for details on children's dresses, girls' dresses, blouses, and lingerie.

Machine Smocking

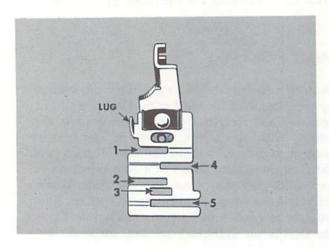
The Gathering Foot is used to produce machine smocking by following a design when stitching. Use heavy-duty thread for bobbin and upper threading. Stitch on the wrong side of the fabric when a heavy thread is used on the bobbin.

To Shirr Plastic Film

Plastic film is very adaptable to the Gatherer and requires no special handling.

After shirring a large quantity of plastic film, the attachment may become too oily to grip properly. Remove this oily or waxy deposit by running a narrow strip of cloth under the attachment. Stitch without thread.

THE EDGE STITCHER



The Edge Stitcher should be used when stitching must be kept accurately on extreme edge of material. The slots, which are numbered from 1 to 5, serve as guides for sewing together laces, insertions and embroideries, making French seams a uniform width and making tucks from the "pin" width to ¼ inch.

To Join Lace and Insertion

Slots 1 and 4 are used for this work. Since slot 1 overlaps slot 4, the edge inserted in slot 1 will be top stitched.

- Place one of the laces in slot 1.
- Adjust the lug to position the stitching close to the lace edge.
- Place the second lace edge in slot 4.
- Position needle, lower presser bar and start stitching.
- Slightly overlap edges of lace while stitching to keep them against ends of slots.

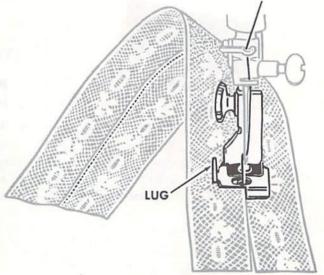
Adjust pressure to correct degree of lightness for even feeding.

Use a short stitch length and balanced tensions.

A MULTI PURPOSE ATTACHMENT

Procedure-

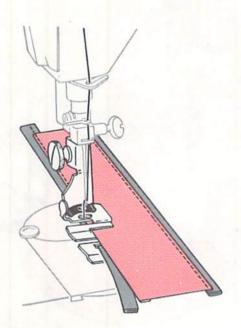
- Raise the take-up lever to its highest point.
- Attach Edge Stitcher to presser bar in place of the presser foot.
- See that needle enters center of needle hole.
- Draw thread through needle hole by taking one stitch in swatch of fabric. Place both threads diagonally across feed.
- The distance from stitching to edge of material is regulated by moving the lug to right or left. This adjustment should first be made on a swatch of the fabric being stitched.



To Join Lace and Fabric Bands

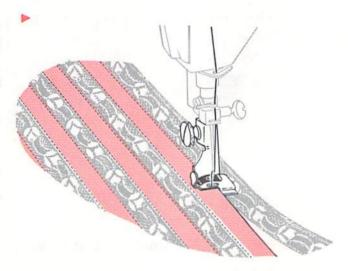
- Fold and crease edge of fabric to which lace is to be sewn and insert in slot 1.
- Adjust the lug to position the stitching close to the fabric edge.
- Insert lace in slot 4.
- Stitch, guiding the bands and lace.

Cut away surplus folded fabric close to stitching.



To Make a French Seam

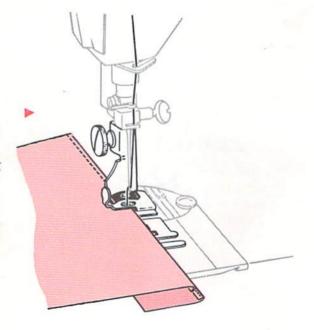
- Push the lug to its extreme right position.
- Insert two edges of material to be joined, wrong sides together, in slot 1 and stitch.
- Trim close to stitching line.
- Fold right sides of fabric together and press, then insert seam in slot 1 and stitch.

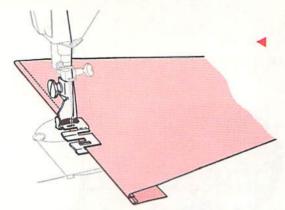


To Pipe with Edge Stitcher

Cut piping bias and twice the width of slot 3. Fold in center and crease.

- Insert piping in slot 3 with folded edge to the left.
- Fold edge of fabric to be piped and insert in slot 4.
- Adjust the lug to position the stitching close to the folded edge.





To Make a Wider French Seam

Push the lug to its extreme left position and insert material in slot 5 for the second line of stitching.

Edgestitched Seams and Facings >

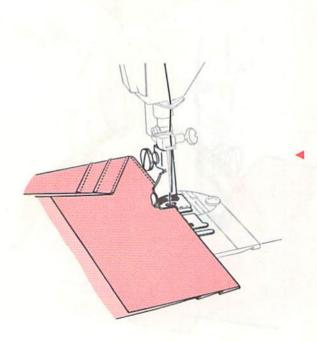
An edgestitched seam is excellent as a finish on neck and front facings, hems and seams.

- Fold under seam edge ½ to ¼ inch and place in slot 1.
- Adjust the lug to the left far enough to position the stitching near the edge of fold.

The Edge Stitcher regulates the stitching a uniform distance from the edge.

To oil the edge stitcher

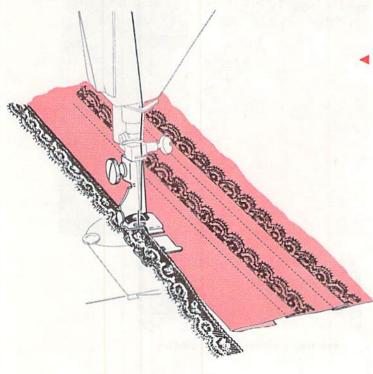
If the lug does not move easily, place a drop of oil under the blue steel spring as indicated. Remove excess oil before using the attachment.



OIL

To Tuck with Edge Stitcher

Dainty tucks from "pin" to ¼ inch can be made of uniform width with the Edge Stitcher. Tucks are usually made on the lengthwise grain of the fabric, but occasionally the design calls for crosswise tucks to emphasize style lines. The lengthwise grain of the fabric is always more firm and for that reason lends itself to tucking.



To Make a Tuck and Sew on Lace in One Operation

Tucking with lace applied underneath is effective and easily done with a single line of stitching.

- Insert folded edge in slot 5 and lace edge in slot 1.
- Adjust lug to the left as far as it will go, see that stitching falls on the selvage of the lace.

If ½ inch or narrower tuck is desired, slot 1 can be used for tucking while the lace is guided into slot 4.

When this method is used to apply tucks and lace to the waist or sleeves, it is necessary to alternate the direction of the stitching on the right and left side.

A short, fine stitch is appropriate. Even feeding is obtained when the pressure is adjusted to the right degree of lightness.

Fabric Requirement for Tucks

When tucks and space are equal, fabric of twice the finished width is required. When the fold of a tuck touches the previous tuck, as in blind tucking, three times the finished width is required. To pin tuck an entire section, such as a pocket, yoke or collar, the fabric should first be tucked then cut into the pattern section. Tucks are always stitched so that the stitching uppermost under the needle is visible when the garment is worn except when lace is applied in the tucking operation.

Always test the stitch length and tuck width on a scrap of the same material before proceeding with the tucking.



To Apply Rick Rack Braid with the Edge Stitcher

Rick rack can easily be applied to an edge with a single line of stitching.

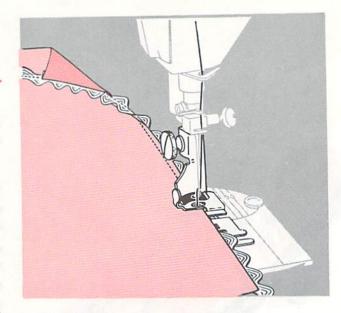
- Adjust the lug for 1/8 inch seam.
- Insert rick rack in slot **3** and draw it back under the needle. Lower the foot and take about *three* stitches in rick rack.

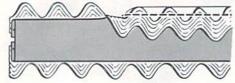
Always keep the rick rack next to the feed.

• Raise the foot slightly and insert the fabric edge in slot 1, right side down. Stitch, guiding fabric close to the edge of the slot.

Turn the seam edge under and place a row of stitching near fold of the fabric if desired.

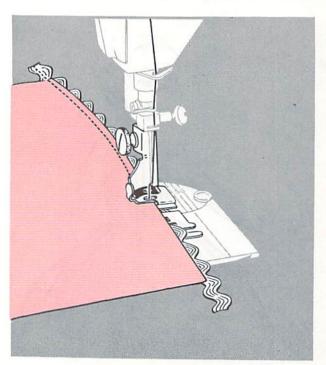
Rick rack, 7/16 inch in width, is held firmly in slot 3.



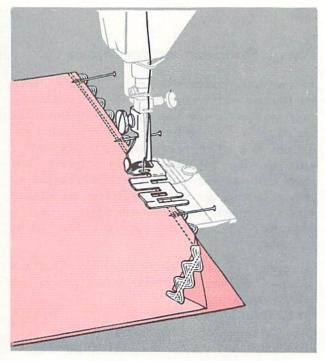


Rick rack on edge of bias binding

To Stitch Rick Rack in a Seam with the Edge Stitcher

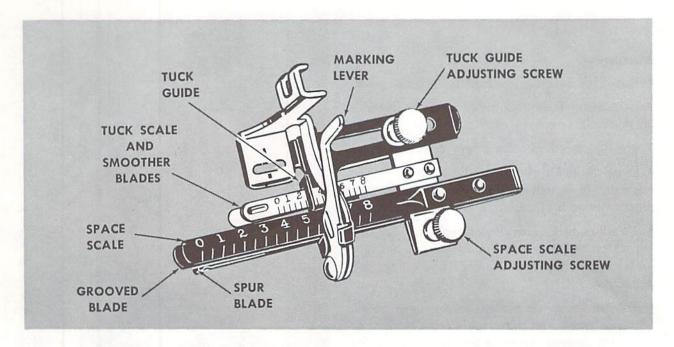


- First stitch the rick rack to a single seam edge.
- Place the attached rick rack over second piece of material and pin pieces together.



- Keep the first stitching uppermost as a guide and position the seam under the needle.
- Stitch slightly to the left of the first stitching, using the Edge Stitcher as a presser foot.

THE TUCKER



The Tucker is a time-saver in making tucks from ½ to 1 inch in size. It carries two scales; the tuck guide, which insures tucks of equal width from start to finish, and the space scale, which insures equal spacing between tucks.

Principal Parts of Tucker

Tuck Scale — Is numbered from **0 to 8** at $\frac{1}{8}$ inch intervals with marks between the numbers spaced at $\frac{1}{16}$ inch intervals. This scale is used to gauge the tuck width.

Tuck Guide—Regulates the tuck width which is determined by setting the tuck guide on any one of the numbers on the tuck scale.

Tuck Guide Adjusting Screw—Locks the tuck guide in position.

Space Scale—Regulates the space between tucks. Is numbered from 0 to 8 at 1/4 inch intervals with marks between the numbers spaced at 1/8 inch intervals. Align the desired number with the needle. The under side of the space scale is grooved and the spur presses the fabric into this groove, marking the fabric for the folding of the next tuck.

Space Scale Adjusting Screw — Locks the space scale in position.

Marking Lever — Is pressed on the spacing scale by the needle clamp, marking the fabric as it passes between the groove and spur blades.

Suggested Settings for Tucking

	Tuck						Space			
				Guide				Scale		
1/8" tucks with no space			1							1
1/8" tucks with 1/8" space			1							11/2
1/4" tucks with no space										
1/4" tucks with 1/4" space										
1/2" tucks with no space			4							4
1/2" tucks with 1/2" space			4							6
1" tucks with no space										

TO MAKE TUCKS

Procedure-

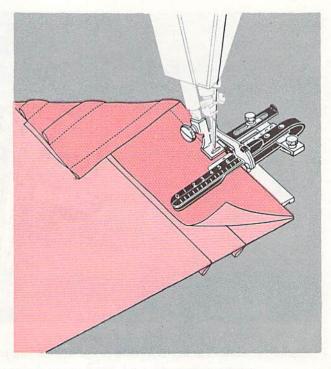
- Raise the take-up lever to its highest point.
- Attach the Tucker to the presser bar in place of the regular presser foot.
- · See that needle enters center of needle hole.
- Draw thread through needle hole by taking one stitch in swatch of fabric. Place both threads diagonally across feed.
- To adjust tuck guide, loosen tuck guide adjusting screw and move tuck guide to left or right until desired width is obtained. Tighten adjusting screw.
- To adjust space scale, loosen space scale adjusting screw and move space scale to right or left until desired space is obtained. Align the number with the needle. Tighten adjusting screw.

The space scale is set after the desired width of tuck has been established.

- Draw a single thread where the first tuck will fall. Fold and crease material the entire length of the first tuck.
- Insert the fabric from the left, placing it between the grooved blade and spur blade on the space scale and between the two blades on the tuck scale. Draw the material toward you until the edge is directly under the needle.

Care should be taken to see that the material is placed far enough to the right to feed against the tuck guide.

When the material is not placed properly between the two blades it has a tendency to work away from the guide and uneven tucks will result.



Tucker set on 4 for Tucks and 6 for Space. Making $\frac{1}{2}$ inch Tucks with $\frac{1}{2}$ inch Spacing.

- Position the needle, lower the presser bar and start stitching.
- When the first tuck is finished, fold the fabric on the mark made by the spur while stitching the first tuck.
- Insert the folded edge in the Tucker exactly the same as for the first tuck. It is important to see that the first tuck is against the inside of the spur.

After lowering presser bar, raise material slightly and adjust it until the folded edge is just touching the tuck guide and the first tuck, or each previous tuck, is against the spur. This insures the material feeding evenly.

To Tuck Without Marking

When making the final tuck of a series, release the marking lever by bringing it forward out of contact with the needle clamp. Return the lever to its original position after the final tuck has been made.

This feature is valuable when using the Tucker in connection with a commercial pattern or

when tucking heavy material which the Tucker will not mark. When using a commercial pattern, the tuck is folded on the marked line and inserted in Tucker after it has been adjusted to the width tuck designated on the pattern. The two blades of the tuck scale will act as a guide and keep the tucks at an even width.

To Estimate Width Necessary When Tucking Fabric

Always in fashion, tucks add smartness and interest to dresses, blouses, neckwear, children's clothes and lingerie.

Since the beauty of a tuck lies in its being done exactly on the woven thread of the fabric and in its explicit accuracy, the Tucker contributes greatly to the attractiveness of the work.

When tucks and spaces are equal, fabric of twice the finished width is required. When fold of the tuck touches the stitching of the previous tuck, as in a blind tuck, three times the finished width is required. Tucks are always stitched so that the stitching uppermost under the needle is visible when the garment is finished.

Proper Tension and Stitch Length

When stitching tucks, balanced tensions are essential as well as a short stitch, as designated for top stitching. Refer to the Fabric, Thread, Needle and Stitch Length Chart in the "Student's Manual of Straight Stitch Machine Sewing", Page 21.

Thread should either blend perfectly with the

fabric in color and texture, or should be in decided contrast.

Always test the stitch length and the setting of the Tucker on a scrap of the same material to make sure the stitch length, tuck size and spacing are satisfactory before proceeding with the tucking.

To Adjust the Tucker

For blind tucks, where the fold of one tuck touches the stitching of the previous tuck, set the tuck guide for the desired width tuck and move the space scale to the same number, in line with the needle. Where space between tucks is desired, such as a $\frac{1}{4}$ inch tuck with spacing of $\frac{1}{4}$ inch between tucks, set the tuck guide on 2 and the space scale on 3 in line with the needle.

To Oil the Tucker

The only place requiring oil is the stud on which the marking lever works. One drop of oil occasionally applied is sufficient.



Cross tucking will add a beautiful trim for pockets, yokes, bands and collar and cuff sets. Cross tucking is usually of "pin tucks" or a tuck no wider than ½ inch and the space between each tuck may vary from ¼ to ½ inch, depending upon the size of the tuck.

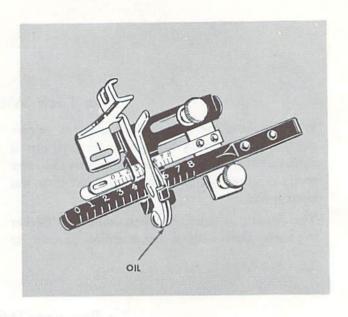
Draw a single thread where the first tuck is to fall.

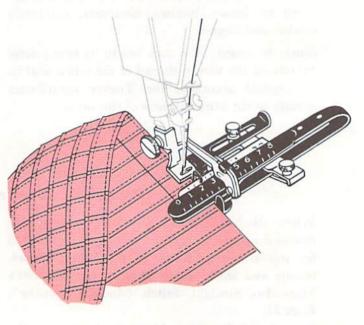
To Make Pin Tucks

The Tucker is set with the tuck scale midway between 0 and 1 and the space scale set on 1.

Tuck the entire piece of material lengthwise, then crosswise over the tucks. Be careful to see that the tucks lie in the proper direction before starting to cross the tucks.

The pin tucking is then cut into bias strips for a band, or it may form an entire yoke or collar section.

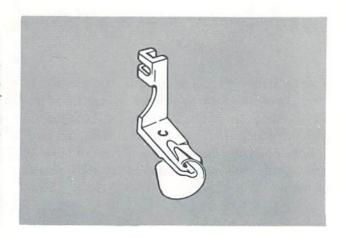




Cross Tucking

THE FLANGE HEMMER

When a very fine hem is required, the Flange Hemmer is excellent to use. It is designed to make a ½6 inch hem. The flange and scroll of this special Hemmer control the most delicate fabrics, forming very fine hems, suitable for chiffon, sheer nylons, organdy and thin cottons. Bias edges can be hemmed with ease.



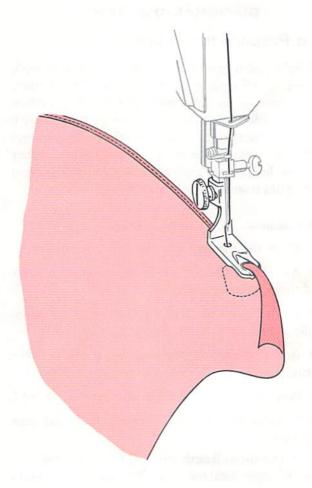
HEMMING

Procedure-

- · Raise the take-up lever to its highest point.
- Attach the Flange Hemmer to the presser bar in place of the regular presser foot.
- See that the needle enters center of needle hole.
- Draw thread through needle hole by taking one stitch in a swatch of fabric. Place both threads diagonally across feed.
- Attach a thread to the corner where hem is to begin by taking about 4 stitches near the edge.
- Holding the thread ends with the left hand and the edge of the material with the right, insert the fabric into the scroll and draw fabric toward you so that the needle will penetrate the very end.
- Lower the foot, position the needle.
- Hold the thread ends at the back and guide the starting of the hem from both the front and back of the Hemmer for a few inches. Continue guiding the hem with the right hand throughout the entire operation.

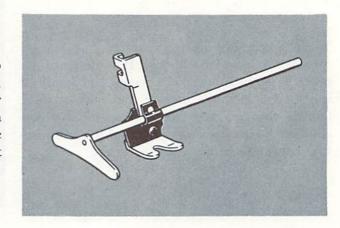
Delicate fabrics require a fine thread, fine needle and a short stitch.

The edges of the fabric should be carefully trimmed of all frayed edges so that it enters the scroll easily. *Do not tear the fabric*.



THE QUILTER

The Quilter is excellent for quilting stitched to form diagonal block and floral or scroll designs, and is especially well adapted to stitching lightly padded materials. The Quilter is designed with a short, open foot and an adjustable or removable space guide that may be used to the right or left of the needle.



DIAGONAL QUILTING

To Prepare the Fabric for Quilting

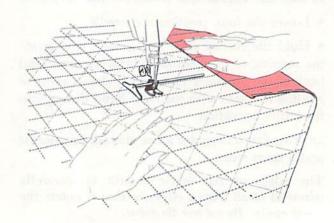
A light padding of outing flannel, canton flannel, sheet wadding or a lightweight wool interlining is basted to the underside of the fabric. When sheet wadding is used, it should be backed with voile, batiste or net to preserve the sheet wadding through wear. Baste the layers of fabric together on the lengthwise and crosswise grains to prevent the plies from shifting.

Procedure-

- Raise the take-up lever to its highest point.
- Attach the Quilter to the presser bar in place of the regular presser foot.
- Draw both threads under the foot and diagonally across feed.
- Adjust the space guide for the width between stitching lines.
- Position fabric with right side next to the feed.
- Position the needle, lower the foot and start stitching.

Use a medium length stitch. The pressure should be slightly heavier than for medium weight fabrics. To stitch diagonal blocks, mark a diagonal chalk line for the first line of stitching. Space each successive row by guiding the edge of the space guide to the previous row of stitching. The space guide may be placed to the right or left of the needle in order to handle the bulk of the material in the most convenient manner.

If a very large piece is being quilted, work from the center of the fabric to the edges. Guide the fabric with both hands placed on the fabric so that the lengthwise grain forms a straight line between the hands. Even quilting with a characteristic soft puff results when this method is followed.



THE GAUGE PRESSER FOOT

Expert and beautiful stitching is accomplished with a minimum of skill and preparation through the use of the Gauge Presser Foot. Single or multiple rows of stitching may be gauged evenly along lapel and facing edges, welt seams or hems.

An accurate set of gauges, lined at ½6 inch and numbered at ½8 inch intervals, accompanies the Gauge Presser Foot, in addition to a small removable toe. One gauge is for use at the left of the needle and three are for use at the right of the needle.

The side walls of the three right gauges vary in depth to accommodate fabric and construction of different thicknesses. With these gauges it is possible to stitch on the very edge of the fabric or an inch from the edge and have an accurately stitched line.

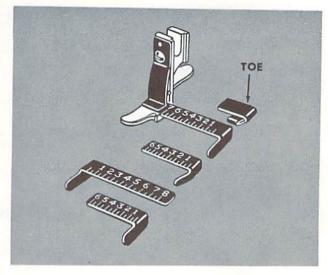


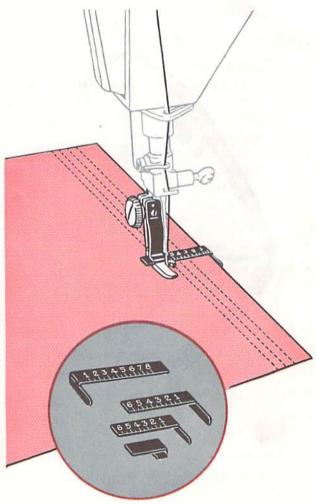
Procedure-

• Attach the Gauge Presser Foot to the presser bar in place of the regular presser foot.

The gauges and small toe are easily released and replaced by pressing downward on the lever at the back of the foot. It is easier to change the gauge when the attachment is on the machine.

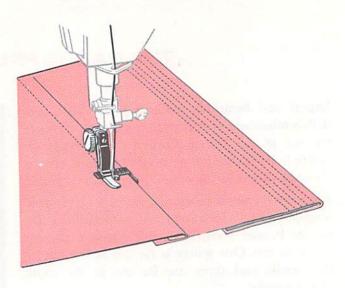
- Draw both threads under the foot and diagonally across the feed.
- Use one of the gauges for the first line of stitching. Select according to the thickness of the fabric. Regulate the gauge line to the needle point.
- Place the garment under the foot so that the edge rides against the inside wall of the gauge.
- Subsequent rows may be stitched, using either the removable toe, guiding it along the previous row of stitching, or a gauge with an appropriate side wall, guiding the rows of stitching from the edge.



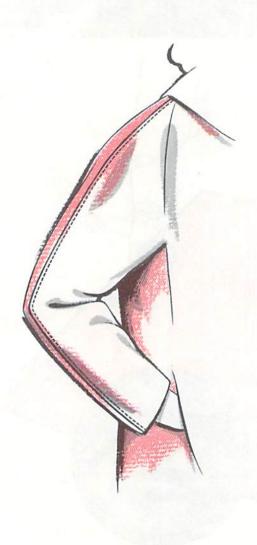


Welt Seams

Welt seams are stitched, using the gauge with the shallow side wall which is guided into the seam's depression.



Illustrations of Top Stitching on Finished Garment



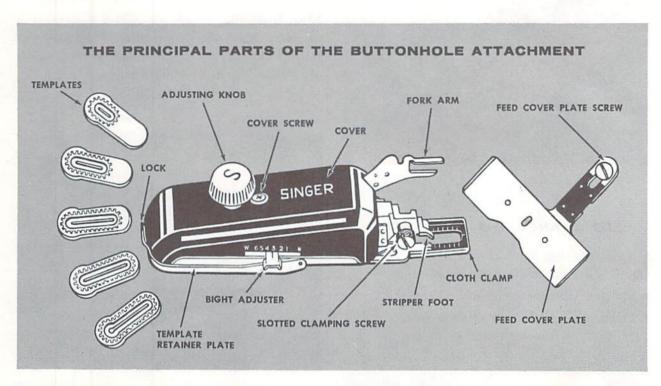


THE BUTTONHOLE ATTACHMENT

The Buttonhole Attachment makes straight and keyhole buttonholes in a great variety of fabrics without any special skill on the part of the operator. Simply insert the size Template required and regulate the width of bight for narrow or wide stitching, according to the fabric. A set of five Templates is furnished with the Buttonholer in sizes $\frac{5}{16}$, $\frac{5}{8}$, $\frac{13}{16}$, and $\frac{11}{16}$, for straight buttonholes, and a keyhole Template for eyelet

end buttonholes $1\frac{1}{16}$ " in length for suits and coats. Buttonholes longer than $1\frac{1}{16}$ " in length may be made by extending the stitching when using the $1\frac{1}{16}$ " Template.

Additional Templates in sizes $\frac{3}{8}$ ", $\frac{1}{2}$ " and $\frac{15}{16}$ " for straight buttonholes, and a keyhole Template $\frac{5}{8}$ " in length are available as well as an eyelet Template for studs and lacings.



Feed Cover Plate-Protects feed of machine.

Slotted Clamping Screw—Fastens Attachment to presser bar.

Templates—Control size and shape of buttonholes.

Adjusting Knob-Locates Cloth Clamp.

Cloth Clamp-Grips fabric firmly.

Lock - Locks Template Retainer Plate in position.

Fork Arm—Straddles Needle Clamp to actuate Attachment.

Bight Adjuster - Determines the width of side stitch.

Template Retainer Plate—Retains Templates in place.

Cover-Encloses moving parts of Attachment.

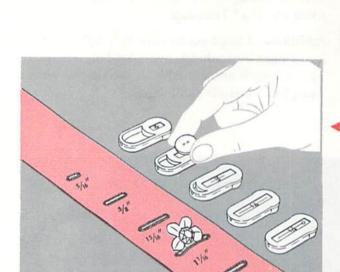
Cover Screw - Holds Cover in position.

Stripper Foot—Holds fabric firmly as stitches are taken.

Feed Cover Plate Screw—Fastens Feed Cover Plate to machine.

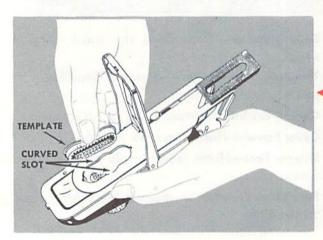
TO SELECT THE PROPER TEMPLATE

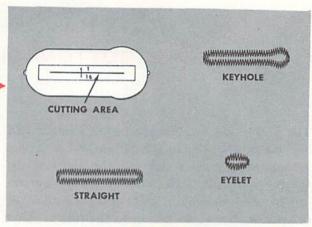
The length of cutting area of the buttonhole is indicated by the measurement line embossed on back of Template.



TO CHANGE THE TEMPLATE

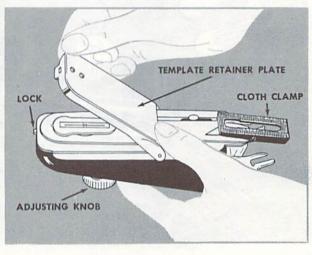
- Turn adjusting knob clockwise until the cloth clamp is in its extreme forward position.
- · Hold attachment as shown.
- Open retainer plate by pressing on the hinged edge, pushing it away from you.





MAKE A SAMPLE TEST STRIP

Make a sample of each buttonhole on a strip of material. Mark the length under each one. Cut buttonholes to test ornamental buttons which are thick or irregularly shaped.



- Place thumb and finger in curved slot and lift out Template.
 - Replace with Template for size buttonhole desired.

It may be necessary to turn the adjusting knob clockwise until gears mesh and the Template drops into place.

Snap the retainer plate back in position.

THREADING

Thread the machine the same as for regular sewing.

TO PLACE BUTTONHOLER ON MACHINE

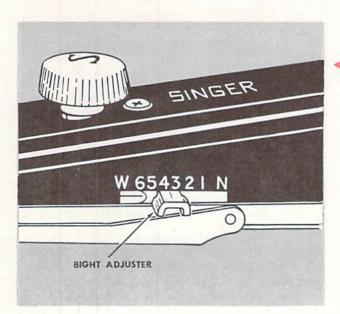
Procedure-

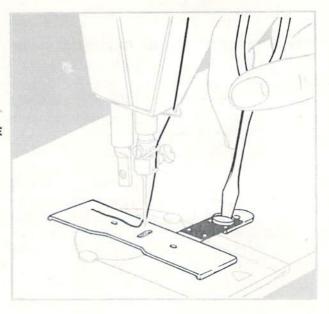
- · Remove presser foot and thumb screw.
- · Raise the take-up lever to its highest point.
- Attach feed cover plate to the machine in either of the two threaded holes at the right of the needle.
- See that needle enters center of needle hole in the plate.
- · Draw up bobbin thread.

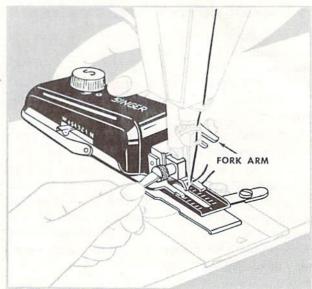
The feed cover plate must be used with the Buttonhole Attachment at all times.

- Leading from the rear, attach the Buttonholer be to the presser bar, at the same time fit the fork arm over needle clamp hub.
- Fasten securely with slotted clamping screw, using the screwdriver.

Turn the thread cutter to the left if it interferes with the attachment.







TO ADJUST THE ATTACHMENT FOR WIDTH OF BIGHT

The width of stitch used for making a buttonhole is known as the bight.

The different widths of bight are numbered from 1 to 6 on the left side of the attachment. With bight adjuster back toward **W**, a wide bight is is accomplished. With adjuster forward toward **N**, a narrower bight is made.

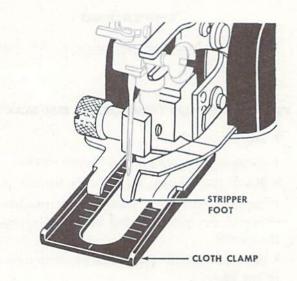
Each of the six settings provides a correct cutting space that eliminates ragged edges.

• To adjust the width of bight, press down on bight adjuster and move it to setting desired.

STRIPPER FOOT AND CLOTH CLAMP

The stripper foot presses firmly on the fabric before each plunge of the needle, and lifts in advance of the movement of the cloth clamp as each stitch is made. This innovation prevents skipped or broken stitches.

The cloth clamp is lined at ½ inch intervals on the right and left sides. These lines are a gauge when placing the material under the attachment and when making extended buttonholes. The center front and back lines are a gauge for positioning the buttonhole on a straight line. The underside of cloth clamp has teeth to hold material firmly.



TO MARK BUTTONHOLE POSITION

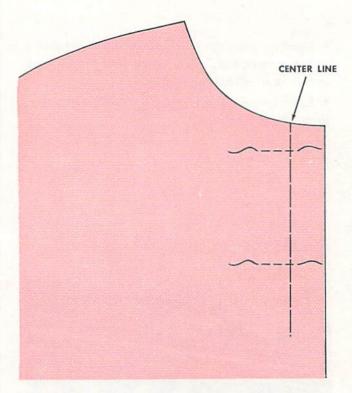
Before making buttonholes, care should be taken in marking not only the end of the buttonhole but also the line of the buttonhole along the thread of the fabric. Mark with basting thread. Allow thread ends to extend beyond buttonhole length.

The general rules for correctly positioning buttonholes are the same regardless of type. The relation of the buttonholes to center line is important. Buttonholes in a horizontal line on the right side are set ½ inch to the left of the center line, while buttonholes in a vertical line are set so that center line is in the center of the buttonhole. The center lines, front and back, are designated on the pattern.

The space from the center line to the finished facing edge must be from three-quarters to once the diameter of the button. With this spacing, the button will not extend beyond the facing edge when the garment is buttoned.

The spacing between buttonholes should be equal. The pattern designates the position of the buttonhole; however, it may be necessary to change the spacing due to pattern alterations or the using of a button that is smaller or larger in size.

If any deviation from size indicated on the pattern is contemplated, the decision must be made before the garment is cut so that proper allowances can be made between center line and the finished edge.



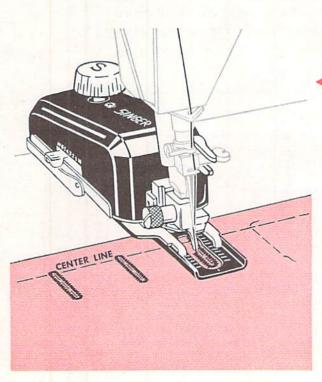
Buttons are sewn on the left side of the garment so that the center of the button falls exactly on center line.

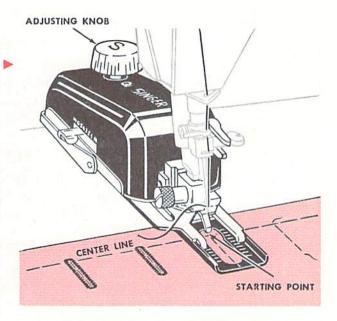
On men's and boys' wear, the buttonholes are on the left side and the buttons are sewn on the right side.

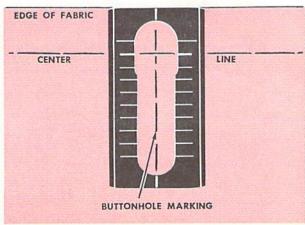
TO MAKE THE BUTTONHOLE

With this method, start the buttonhole $\frac{1}{8}$ inch to the left of center line of the garment.

- · Mark buttonhole for position and length.
- Turn adjusting knob clockwise until the cloth clamp is in its extreme forward position and the needle is at center line and rear of cloth clamp.
- Place the material under the cloth clamp so that buttonhole marking is aligned with the center front and back lines on the cloth clamp and needle is directly above outer edge of marking. The *center line of the garment* is aligned with the second line from the back of the cloth clamp. This is the starting point.
- Drop the presser bar with force so that the material is held smoothly and firmly under the cloth clamp.
- Hold needle thread and take a stitch, drawing bobbin thread up to right side of material.







- Lower needle and hold both thread ends to the left.
 - Clip thread ends after they are fastened with a few stitches.
 - Stitch around the entire buttonhole, overlapping the stitching about three stitches.

When extra strength is desired, stitch around the buttonhole a second time.

- · Remove work from machine.
- Draw threads to underside of buttonhole and tie.

Always make a test buttonhole in the fabric to make sure the width of bight and size of the buttonhole are correct. Always have the same number of thicknesses in the test buttonhole as in the finished one.

Pressure

The pressure should be just heavy enough to hold the material firmly; if too light, it may cause skipped stitches.

The general rule for pressure adjustment is to increase for heavy fabrics and decrease for light-weight fabrics.

Tension

Balanced tensions are usually required when making buttonholes. However, a beautiful effect can be obtained by having the upper tension slightly lighter than the lower tension.

Thread

No special thread is required. No. 50 mercerized cotton and size A silk threads may be used. For these threads, be sure to use size 14 needle. Finer mercerized threads will produce beautiful buttonholes and require a size 11 needle.

Interfacings

Most patterns recommend the use of an interfacing. The correct interfacing should be selected for each fabric.

Perfect buttonholes can be made in all types of materials; however, loosely woven materials, such as jersey or any of the basket weaves, must have an interfacing to hold the material firmly for a neat buttonhole.

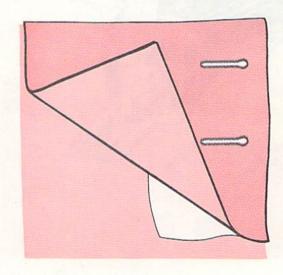
On jersey and crepe fabrics of cotton or synthetic which stretch easily, it may be necessary to place a piece of tarlatan on the underside against the facing to prevent skipped stitches. The tarlatan is cut away when the buttonhole is finished.

CAUTION-

Be sure to blend the seams on the neck and facing edge to remove the bulk.

TO MAKE BUTTONHOLES IN HEAVY FABRICS

Perfect buttonholes can be made in heavy fabric. Be sure to use an interlining. This adds firmness and keeps the buttonhole in shape. A wide width of bight and heavy pressure are required.

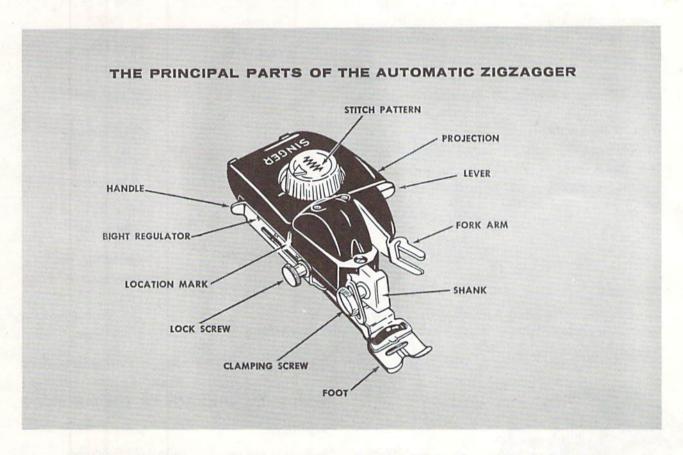


THE AUTOMATIC ZIGZAGGER

Zigzag stitching, decorative pattern stitching, applique and border designs may be done automatically with the Zigzag Attachment. This is accomplished through the interchange of the different Stitch Patterns and adjustment of the width of bight and stitch length.

You can blindstitch hems, mend rips and tears, reinforce seams, overedge seam edges and stitch scallop facings quickly and easily.

With a flick of a lever, plain sewing can be done without removing the Zigzagger from the machine.



Fork Arm—Straddles needle clamp and actuates Zigzagger.

Lever-For straight stitching.

Shank-Attaches Zigzagger to presser bar.

Projection—For lifting cover to remove or replace Stitch Patterns.

Stitch Pattern— Controls basic design produced by Zigzagger.

Location Mark—For positioning Regulator for desired bight.

Handle-For adjusting Bight Regulator.

Bight Regulator - Controls bight.

Lock Screw—Retains adjustment of Bight Regulator.

Clamping Screw— (non-removable)—For fastening Zigzagger shank to presser bar.

Foot—Presses on material and moves it sidewise to form stitch patterns.

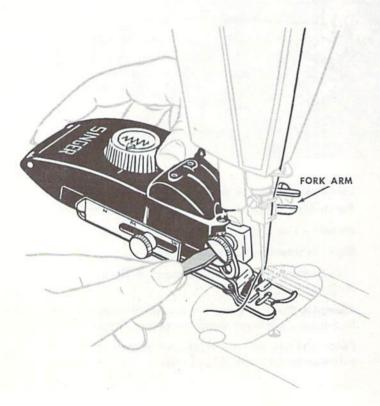
STITCH PATTERNS

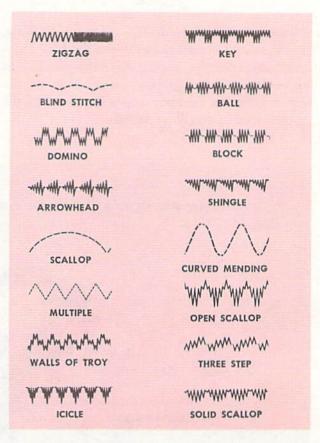
Four Stitch Patterns are furnished with the Zigzagger for producing the basic designs of Zigzag, Blind Stitch, Domino and Arrowhead. Twelve additional Stitch Patterns are available in sets of four.

Each design can be greatly varied by changing the width of bight and stitch length. Combinations of designs made with the Stitch Patterns may be used to produce many pleasing ornamentations.

Often two or more threads of contrasting colors may be used when combining Stitch Patterns. This will create a more decorative and colorful trim for the garment.

Merely insert one of the many Stitch Patterns into the Automatic Zigzagger and sew. Zigzag stitching is broad in its application, effective to use and easy to accomplish.





Threading

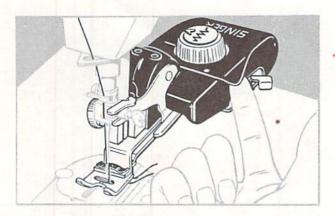
Thread the machine the same as for regular sewing.

TO PLACE ZIGZAGGER ON MACHINE

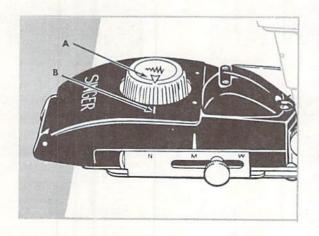
Procedure-

- · Raise take-up lever to its highest point.
- · Remove the presser foot and thumb screw.
- Leading from the rear, attach the Zigzagger to the presser bar, at the same time fit the fork arm over needle clamp hub.
- Fasten securely with the clamping screw, using the screwdriver.
- Pull thread through needle hole by taking one stitch in swatch of fabric. Place both threads diagonally across feed.

Turn the thread cutter to the left if it interferes with the Attachment.

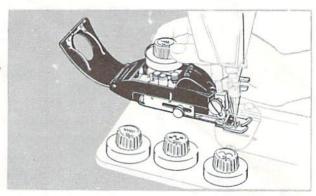


- Place desired Stitch Pattern in position and turn clockwise until it is seated.
- · Close cover.



TO REMOVE AND REPLACE STITCH PATTERNS

- Raise presser bar.
- · Lift and swing cover back as shown.
- · Lift out Stitch Pattern.



 Turn Stitch Pattern clockwise until arrow A points to line B on top of cover.

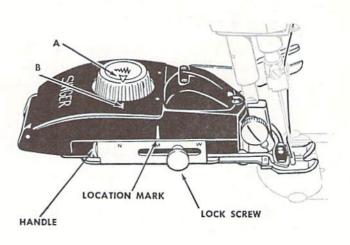
This setting denotes the central position of Scallop, Blind Stitch, Curved Mending and Multiple Stitch Patterns and the beginning of all other Stitch Patterns. It also centers the foot for straight stitching.

TO ADJUST BIGHT OR SIDEWISE MOVEMENT OF FOOT

The width of the stitch used in Zigzag Patterns is known as the bight. The setting of the bight regulator, marked with letter N for narrow bight, M for medium bight and W for wide bight, determines the width of the design.

To Adjust Bight

- Raise presser bar.
- · Loosen lock screw.
- Slide the bight regulator forward or backward by means of the handle until desired bight is obtained.
- · Tighten lock screw.
- · Adjust stitch regulator.

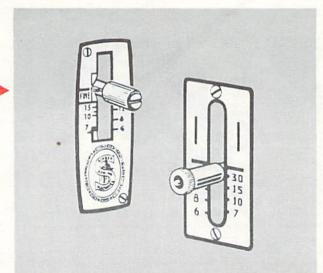


Stitch Length

The stitch regulator controls the closeness of the stitch. On machine 404 set regulator lever on fine and for all other machines on No. 30 or above when making solid designs.

Use No. 12 to 20 stitch length for open spaced designs.

The length and width of all designs depend upon the stitch length and width of bight.



THE GROOVED FOOT

Three grooves mark the foot of the Zigzagger. These grooves serve as guides when stitching.

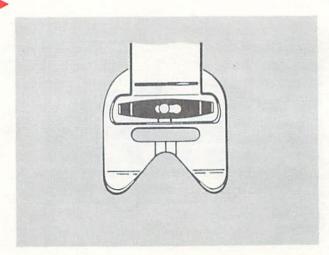
Turn the Stitch Pattern slowly to align the arrow

A with the line B on top of the cover. With this positioning you can determine which of the

three grooved lines to use as a guide.

The center grooved line is used for guiding Zigzag, Blind Stitch, Domino, Arrowhead, Scallop, Multiple, Walls of Troy, Ball, Block, Curved Mending, Open Scallop and Three Step Stitch Patterns.

The grooved line on the right side is for guiding Key, Shingle and Solid Scallop Stitch Patterns. The grooved line on the left side is for guiding the Icicle Stitch Pattern.



To Prepare the Material

Mark scallops or parallel lines on the material with a light brush of the pencil or with chalk. Where several Stitch Patterns are combined, as in banding or border designs, a line is marked where each pattern is to be placed. A spacing of $\frac{3}{16}$ to $\frac{1}{4}$ inch is excellent.

When using soft, sheer textured fabric, or any fabric where the design is on a bias or semi-bias grain, use a backing of one or two thicknesses of crisp lawn, organdy or tarlatan. The backing is basted to the underside of the fabric, then cut away when the design is completed.

When the pattern is used as an edge finish, allow 3/4 to 1 inch for a seam. A line of straight stitching should be made to stay the fabric. The ornamental stitching may be sewn on the straight stitching. Trim close to the stitching when the design is completed.

Always test stitch on a swatch of the fabric to be used, since the width of bight and stitch length should be adjusted to suit the weave, texture or finish of the fabric.

Pressure

Slightly less pressure than for general sewing is required to allow for proper sidewise movement of the fabric when making intricate stitch patterns. The amount of pressure should be varied according to the surface and texture of the fabric.

TO START STITCHING

- Adjust the Attachment for width of bight desired and set stitch regulator for proper closeness of stitching.
- Raise the take-up lever to its highest point.
- Position the fabric under the foot so that pattern marking is aligned with one of the three grooves on the foot, depending upon the Stitch Pattern used.
- Position the needle, lower the presser bar and stitch.
- Operate the machine slowly.

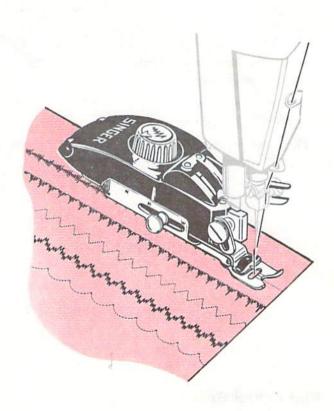
Do not operate the machine without material under the Zigzagger foot.

TO GUIDE THE FABRIC

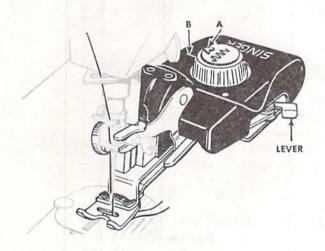
Guide the fabric lightly, allowing it to move with the zigzag motion of the foot, yet firmly enough to keep the pattern marking aligned with the appropriate grooved line on the foot.

Tensions

When making solid designs, such as Zigzag satin stitch, Domino, Arrowhead, etc., use a lighter top tension than for ordinary sewing.



TO ADJUST ZIGZAGGER FOR STRAIGHT STITCHING



- Turn Stitch Pattern so that arrow A points to line B on top of the cover.
- Pull lever forward. Plain sewing can then be
- To resume zigzag stitching, push lever away from you.

Sewing Speed

Operate the machine slowly and guide material lightly so that it moves freely with the zigzag motion of the foot.

Threads

No. 50 mercerized cotton and size Å silk thread may be used. For these threads, be sure to use size 14 needle. Finer mercerized embroidery cotton threads will produce improved effects and require a size 11 needle.

Suitable Fabrics

Firm cotton fabrics, such as lawn, organdy, broadcloth, poplin, chambray, denim, polished

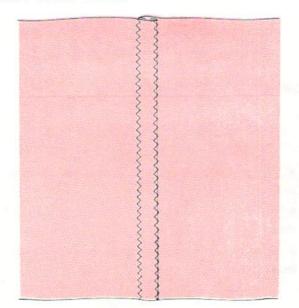
cotton, cotton taffeta and sateen are suitable for use with the Zigzagger. Linen, sheer woolen, silk, felt and synthetic fabrics of firm weave are also effectively stitched

Always select fabrics of a solid color since they lend themselves more readily to ornamental stitching. Never use a fabric that has a definite design.

To Stitch Border Designs

Border designs consisting of three or more rows are formed by first stitching the center row. Subsequent rows are stitched on the right and left sides of the center row, alternating the direction of the stitching, except where each row is a different pattern

Flat Felled Seam



Use—Zigzag Stitch
Narrow to Medium Bight
Stitch Setting No. 12 to 20

Lingerie Seam

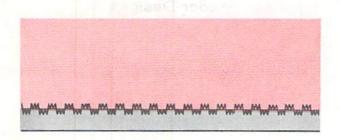


Use—Zigzag Stitch Narrow Bight Stitch Setting No. 15

Decorative Bound Edge

Use—Domino Stitch
Medium Bight
Stitch Setting above No. 30

Machine baste the binding over the edge of ruffle, using the Binder. After the decorative stitching is completed, remove the basting.



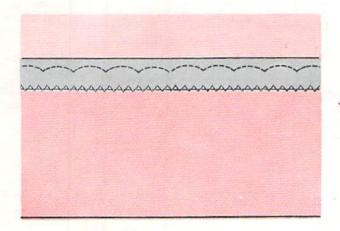
Hem Finish

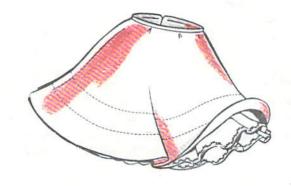
Hems may be finished in a number of ways. Prepare the hem the same as for hand finishing. Hand baste the hem to the skirt ¼ inch from the edge of the finish. Refer to "Dressmaking by SINGER": page 72.

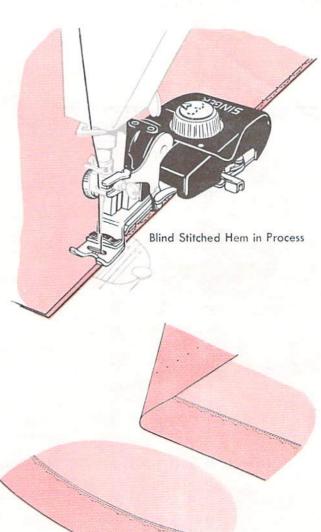
Blind Stitched Hem

Use—Blind Stitch
Narrow Bight
Stitch Setting No. 10 to 15

Working from the wrong side, fold the skirt to the left with the ¼ inch edge of the hem to the right as illustrated. Stitch on the hem edge, allowing the needle to catch only one or two threads in the fold of the skirt.







Underside of Completed Blind Stitched Hems

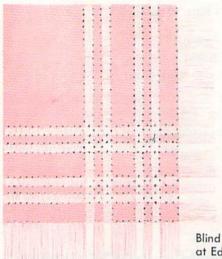
Drawn Work

Use—Blind Stitch
Medium to Narrow Bight
Stitch Setting No. 15 to 20

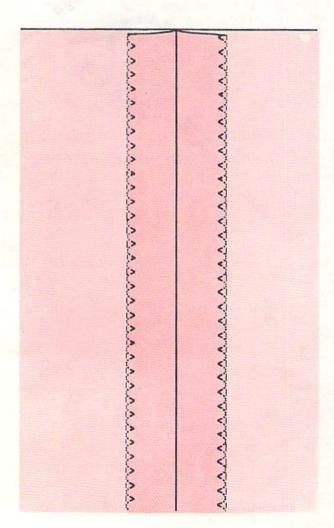
Draw a thread to indicate each edge of the drawn work. Stitch the left side of the drawn work, then turn the material around and stitch the right side from the opposite end. This procedure places the points of the stitching into the solid fabric.

Draw the remaining threads to form open work between the rows of stitching.

Fabrics with a balanced weave are suitable for this decorative treatment.



Blind Stitch Pattern at Edges of Drawn Work





Overedged Seam

Excellent for finishing seams in fabrics that tend to fray.

Use Blind Stitch
Medium to Wide Bight
Stitch Setting No. 12 to 15
depending upon the material.