



Seams and Seam Finishes

Linda Heaton and Marjorie M. Baker, *Textiles and Clothing*

Carefully selected and well-constructed seams and seam finishes are important—even critical—steps in the construction process. They are basic techniques used in the sewing process. The **seam** is the basic structural element of a garment or household textile item. It is the means by which two pieces of fabric are joined together. A **seam finish** is applied to/used on the unfinished seam edge to prevent raveling, curling, or rolling.

Standards

A well-constructed **seam** should be:

- Smooth and even in appearance on the inside and outside.
- Even in width throughout.
- Pressed open or closed, according to the type of seam and how it is used in the construction process.
- If stitched with thread, thread should be appropriate to the fabric type and fiber content and color should match or be slightly darker than fabric.

A well-constructed **seam finish** should:

- Be neat and smooth in appearance, without added bulk.
- Protect the area and prevent the edge from raveling, stretching, rolling, or curling.
- Not be visible from the right side of the garment.

Seams

Seams may be created with thread by hand or machine (sewing machine or serger) or with fusion through chemical bonding. When a serger/overlock machine is used to construct a seam, the fabric edges are finished all in one process.

The basic seams are plain, French, and flat-fell. Unless otherwise stated, a seam is stitched $\frac{5}{8}$ inch from the cut edge. The fabric from the stitching line to the cut edge is called a “seam allowance.”

Consider these factors when selecting a seam and seam finish:

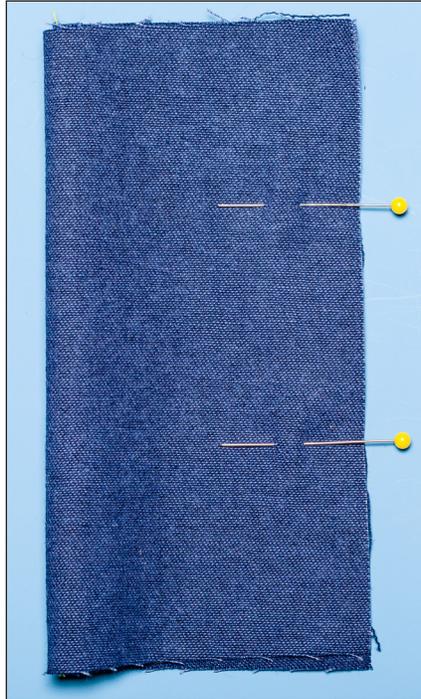
- **Fabric**—Is it tightly or loosely woven? Is it a single knit or double knit? Does the fabric ravel, curl, or roll? What is the weight of the fabric: light, medium, or heavy? Is it sheer?
- **Use of garment**—Is it sportswear or evening wear? How often will it be worn?
- **Care of garment**—Will it be machine-washed, hand-washed, or dry-cleaned?
- **Location of seam/seam finish**—Is it curved or straight? Will it be exposed, as in an unlined skirt? Will it be enclosed, as in a collar seam?
- **Sewing ability and skill**—Are you a novice or an experienced sewer?
- **Equipment**—Do you have only a straight-line stitching sewing machine? Do you have a serger/overlock machine?

Plain

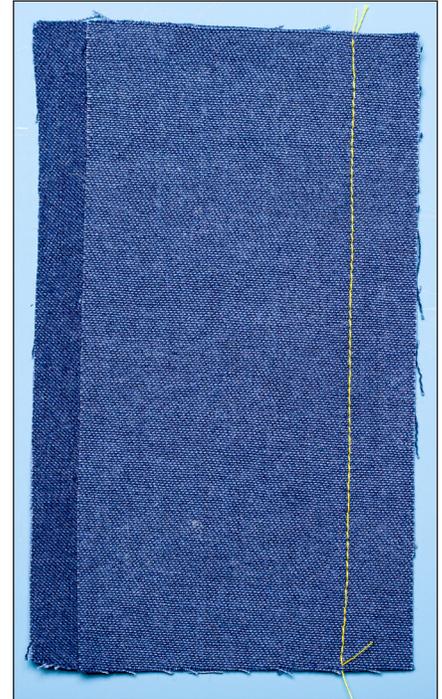
A plain seam is the simplest seam to make and is the basis for many other seams. It is a good choice for the novice sewer. This seam can be used on woven and knit fabrics and on straight or curved areas. It can be constructed by hand or machine. A seam finish is needed on most woven fabrics, especially when the seam is exposed, and when knit fabric curls or rolls. Plain seams may be straight-stitched or zigzagged.

Steps:

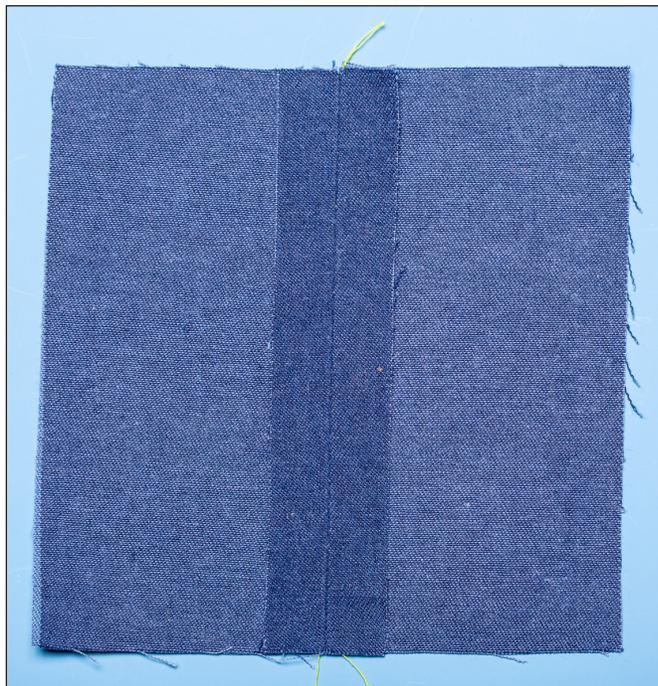
1. Place the right sides of the fabric together, matching the stitching lines. Pin and/or hand baste.
2. Stitch along the $\frac{5}{8}$ -inch seam line. Stitching may begin and end with backstitching (stitch forward a few stitches, then backward, then forward to the end). A narrow, open zigzag stitch can be used on knit or stretch fabrics.
3. Press seam flat and then open.



Plain seam. Start with fabric right sides together.



Plain seam. Sew, leaving a $\frac{5}{8}$ inch seam allowance.



Plain seam. Press seam allowances open.

French

The French seam is strong and durable. Because the raw edges of this seam are completely enclosed, there is no need for an additional seam finish. This seam is usually used on lightweight woven, sheer, and other delicate fabrics. French seams may be constructed by hand or sewing machine.

Steps:

1. Place the wrong sides of the fabric together, matching the stitching lines.
2. Stitch $\frac{3}{8}$ inch from the cut edge of the fabric. Press.
3. Trim to within $\frac{1}{8}$ to $\frac{1}{4}$ inch of the stitching. Press seam open.
4. Fold fabric over at the seam, right sides together, covering the cut edges. Press again.
5. Stitch on seam line, approximately $\frac{1}{4}$ inch from the folded edge, to enclose the raw edges.
6. Press flat and then to one side. Easily done on straight edges, the French seam can also be used on curved edges. The enclosed edges may need to be clipped before pressing in step 3.



French seam. Sew the first line of stitching $\frac{3}{8}$ inch from the edge.



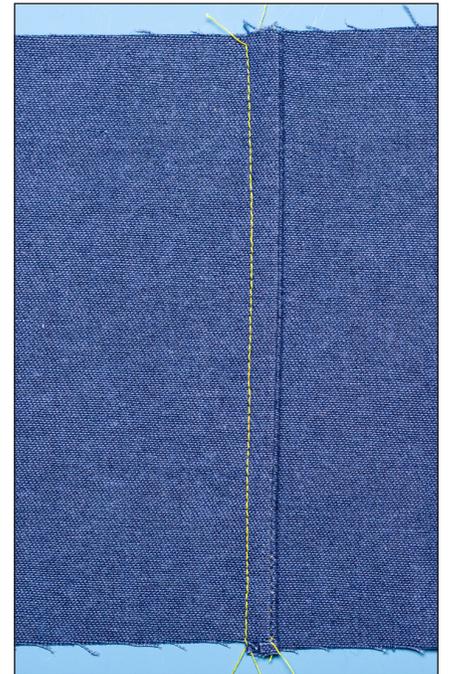
French seam. Trim seam allowance to $\frac{1}{8}$ inch.



French seam. Turn fabric back along seam with fabric RIGHT sides together; sew $\frac{1}{4}$ inch from fold.



French seam. Raw edges of the trimmed seam allowance are enclosed within the seam.



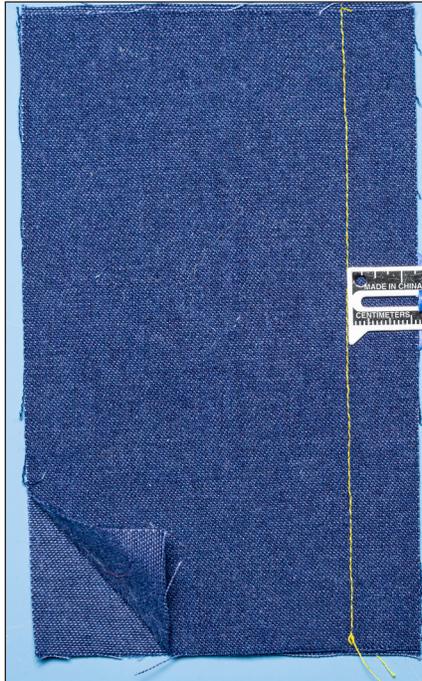
French seam. Press completed seam to one side.

Flat-Fell (also called flat-felled)

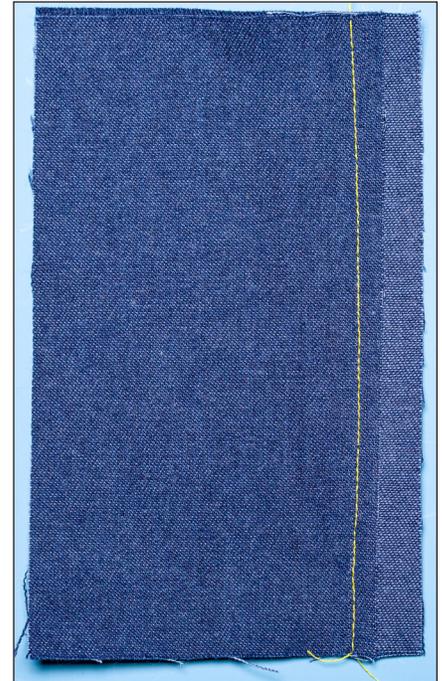
This seam is designed for woven fabrics and straight edges. It is used when constructing sportswear, men's and children's wear, reversible items, and heavy-duty items requiring strong, durable seams. It is usually made with a sewing machine and can be difficult to construct on heavy fabric. No additional seam finish is necessary.

Steps:

1. Place the wrong sides of the fabric together. Stitch along the $\frac{5}{8}$ -inch seam line to make a plain seam. Press seam allowance to one side. Care should be taken to avoid pressing a pleat along the seam line.
2. Trim lower seam allowance (inside seam allowance) to $\frac{1}{8}$ inch.
3. Turn the top seam allowance edge under $\frac{1}{4}$ inch. Press.
4. Stitch folded edge to under fabric, enclosing the raw edges.



Flat-fell seam. Start with fabric WRONG sides together; sew $\frac{5}{8}$ inch seam.



Flat-fell seam. Trim one seam allowance to $\frac{1}{8}$ inch wide.



Flat-fell seam. Fold wider seam allowance over and around trimmed seam allowance; pin flat to fabric.



Flat-fell seam. Top stitch close to fold. Two rows of stitching are visible on the RIGHT side.

Serged

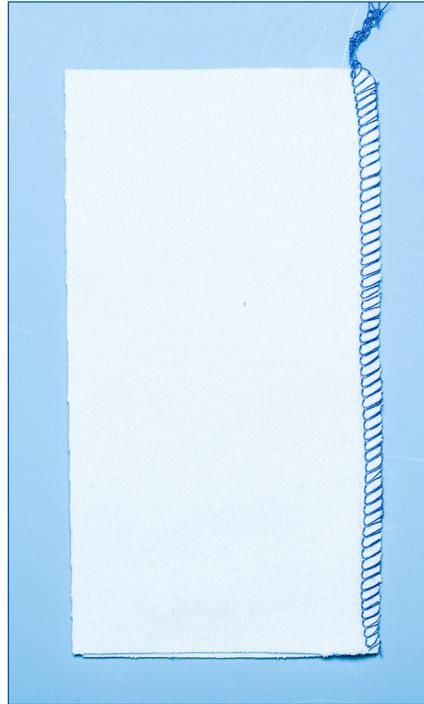
To construct serged seams, you must have a serger/overlock machine. A **3-thread** serged seam is used when constructing knit items, especially when “give” or stretch is important. A **4-thread** seam is used when constructing garments made from woven fabrics and some knit fabrics; it requires the use of a second needle and thread and is more stable than the 3-thread stitch.

Use a serger:

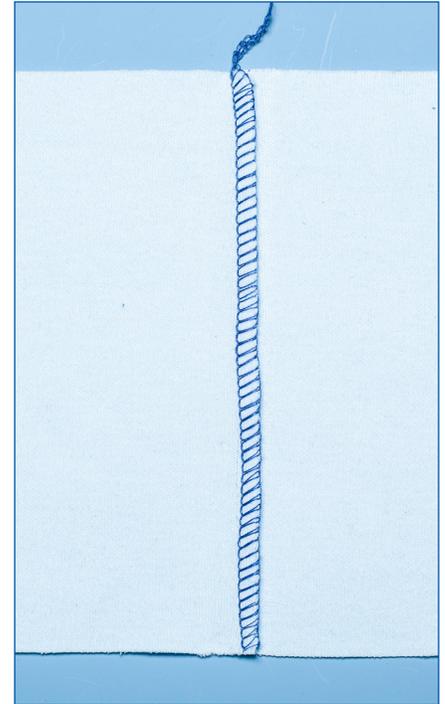
- For loose-fitting garments when it is not important for seams to lie flat.
- When seams will not stay pressed open because of their location, as with sleeves, under-the-arm seams, side seams that are stitched all at one time, and kimono sleeves.
- On most knits when narrow seams are best and the fabric needs to stretch.
- On some lightweight fabrics when the seam should be inconspicuous.

Steps:

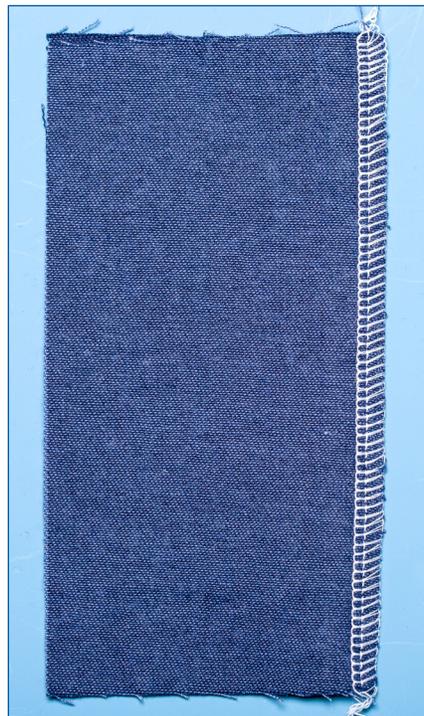
1. Place right sides of the fabric together, matching the stitching lines. The novice sewer may want to hand baste.
2. Guide fabric under the presser foot so that the needle stitches on the seam line. The cutting blade(s) of the serger will trim the seam allowances and the looper threads will encase the fabric edges in thread creating a seam finish.
3. Press flat and then to one side.



3-thread serged seam. Use on knit fabric to allow for stretch.



3-thread serged seam. Press seam to one side.



4-thread serged seam. Use for woven and knit fabrics that require stability.



4-thread serged seam. Press seam to one side.

Special

The following seams are usually used on fabrics that present a greater challenge to sew or in sewing situations that are more complex. They are a must in some circumstances, as noted.

Hairline

The hairline seam is primarily used on sheer and lightweight woven fabrics. It is not appropriate for mediumweight or bulky fabrics. The hairline seam is especially nice for collars and enclosed areas and can be used on straight or curved areas. A sewing machine is necessary. No seam finish is needed on an enclosed seam. Hairline seams eliminate visible seam allowances and are often used in heirloom sewing.

Steps:

1. Stitch along seam line using a short, straight stitch (approximately 14 to 16 stitches per inch) or a narrow, short zigzag stitch. (For a stronger seam or to give the seam more weight, stitch over pearl cotton cord.)
2. Trim close to the stitching, leaving approximately $\frac{1}{8}$ -inch seam allowance. Press seam to one side.
3. Turn right side out.
4. Press.



Hairline seam. Trim seam allowance close to zigzag stitching.

Lapped

The lapped seam resembles a top-stitched plain seam from the right side. This seam may be referred to as a “tucked” or “decorative lapped” seam. There are two ways to construct a lapped seam. One method is used when stitching a seam is difficult or impossible, as in a V-pointed yoke area. The second method is used to eliminate bulk; for example, when joining interfacing pieces or nonwoven fabrics, such as suede, felt, and synthetic suede. The lapped seam is usually done on a sewing machine.

Method I

The seam allowance may need a seam finish unless it is covered by a lining or facing.

Steps:

1. Mark seam allowances on both fabric pieces. On the fabric piece that will be positioned on top (outside), turn and press seam allowance under, along the seam line.
2. Position folded seam allowance on top of the remaining seam allowance, matching folded edge to seam allowance. Pin in place.
3. Edge stitch close to folded edge.
4. Press.

Method II

Steps:

1. Mark seam allowances on both pieces of the fabric. (If working with suede or synthetic suede, you might want to measure and remove a portion— $\frac{3}{8}$ to $\frac{1}{2}$ inch—of the seam allowances before layout and cutting to save fabric.)



Lapped seam. Overlapping seam allowance on woven fabric is pressed under prior to top stitching.



Lapped seam. Overlapping seam allowance on non-woven (Ultrasuede®) fabric is trimmed prior to top stitching.

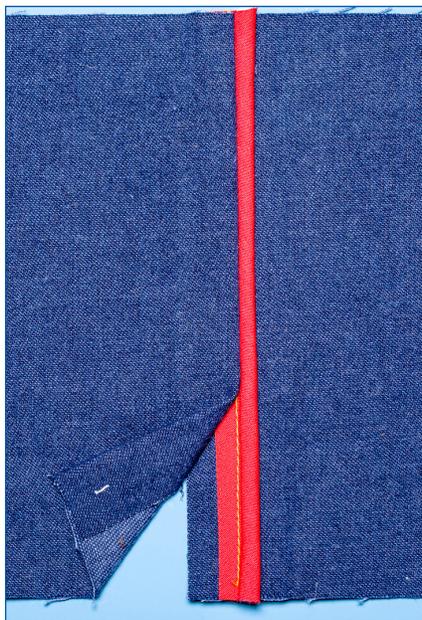
2. On the piece that will be on top, trim away the entire seam allowance (unless you have eliminated it prior to cutting).
3. Position trimmed seam allowance piece on top of untrimmed seam allowance, matching trimmed edge with marked seam allowance. Pin, tape, or glue in place.
4. Edge stitch through all layers of fabric close to the cut edge. (A second row of stitching gives the appearance of a flat-fell seam.)

Corded or Piped

A corded or piped seam is used for both dressmaking and home decor. Covered cording can be purchased and comes in various sizes or you can cover your own. Bias strips should be used to cover cord as it wraps around the cording more snugly than straight grain strips. Cording can be used around collars, cuffs, pockets, or anywhere to add a decorative accent to a seamline.

Steps:

1. Pin or baste cording to right side of one seam allowance with seamlines even and raw edge towards raw edge of seam allowance. Cording will need to be clipped when applied to curved seams or when turning corners. Use a zipper foot or cording foot to stitch close to cording.
2. Place seam allowances right sides together with cording sandwiched in between, adjust needle position slightly so stitching will be between the first stitching and the cording. This will prevent any of the previous stitching from showing on the outer side of the seamline. Stitch the seam.



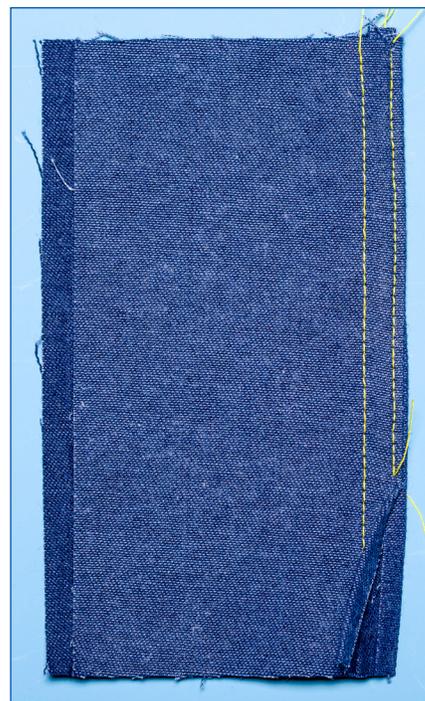
Corded or piped seam. Baste cording/piping to one side along sew line; sew second fabric with right sides together sandwiching cording/piping between the fabric.

Mock French

This seam works on the same fabrics as the French seam. It looks like a plain seam from the right side and a small enclosed double-stitched seam on the underneath side. It can be constructed by hand but is usually done on a sewing machine. This seam is used when a French seam cannot be handled well, such as on a curved seam line. This is an excellent seam to use in the sleeve/armhole area of a sheer, special occasion garment, such as a wedding or prom dress, or a sheer blouse/jacket. No additional seam finish is required.

Steps:

1. Place right sides of the seam allowances together. Stitch along the regular seam line.
2. Press seam open, then flat.
3. Turn in both edges of the seam allowance approximately $\frac{1}{4}$ inch. Press, then press together.
4. Stitch the folded edges together close to the edge.



Mock French seam. Start with fabric RIGHT sides together. Turn under raw edges of both seam allowances and stitch close to the folded edge.

Welt

The welt seam, also referred to as a mock flat-fell seam, provides the same tailored appearance as the flat-fell but is easier to construct. It is best used on fabrics that do not ravel or on items that will be lined or will not have exposed seams or edges. Otherwise, an additional seam finish may be needed.

Steps:

1. With right sides of the fabric together, stitch a plain seam. It is best to have at least a $\frac{5}{8}$ -inch seam allowance. Press seam allowances together to one side, then press open.
2. Determine which direction your final seam will lie. Trim the seam allowance that will be uppermost to the outside of the item to $\frac{1}{4}$ inch. Press wider seam allowance over the trimmed seam allowance.

- On the right side of the fabric, edge stitch close to the seam line through all layers of fabric. Stitch again, approximately $\frac{3}{8}$ inch away, through fabric and remaining seam allowance on the underneath side.



Welt seam. Use on bulky fabric. Start with a plain seam, trim one seam allowance to $\frac{1}{4}$ inch, and press wider seam allowance over the trimmed seam allowance.



Welt seam. Top stitch close to seam line and $\frac{3}{8}$ inch away to mimic the look of the flat-fell seam.

Seam Finishes

Seam finishes may also be referred to as “edge” finishes, as they may be used in locations other than seam allowances. These locations include hem edges and facings. The method of construction is almost always the same, and the goal is to prevent a raw edge from raveling (woven fabric) or curling (knit fabric).

Edge Stitched

As a seam finish, this technique is reserved for firmly woven fabrics. The finish requires a sewing machine, but it is easy to construct. Edge stitching is suitable for straight or curved seams and edges. Pinking the raw edge is accepted as a seam finish when done in addition to the edge stitching.

Steps:

- With right side of the seam allowances together, prepare a plain seam. Press it open.
- Take one side of the seam allowance (single thickness) and stitch a line of regulation machine stitching (approximately 12 to 14 stitches per inch about $\frac{1}{4}$ -inch from the cut edge).
- Repeat on the other seam allowance.

Optional: Pink the raw edge.



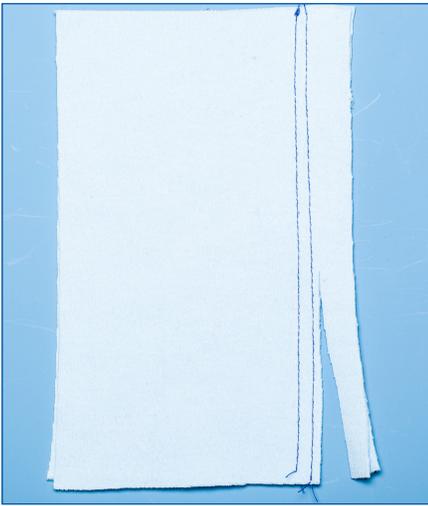
Stitched and pinked seam finish. Edge stitch $\frac{1}{4}$ from raw edge; pink raw edges.

Double Stitched and Trimmed

The double-stitched finish begins with a plain seam. It is used for knit fabrics and on seam allowances that are pressed together to one side and treated as one. It is also used on lightweight knit fabrics to prevent seam allowances from rolling or curling. The technique is ideal for the beginning sewer and may be done several ways. It requires a sewing machine. Some methods require a sewing machine with zigzag or decorative stitch capability. **Note:** The machine overedge stitch is recommended for raveling woven fabrics, not knits.

Steps:

- With right sides of the seam allowances together, prepare a plain seam. Press seam together.
- Stitch a second row of stitching into the seam allowance area approximately $\frac{1}{8}$ inch away from first line of stitching. The second row of stitching can be a straight conventional stitch, a medium-width zigzag.
- Trim close to second row of stitching.
- Press seam to one side.
- If the sewing machine has a machine overedge/overcast stitch, trim seam allowances first and then stitch them together using an overcast presser foot.



Double stitched and trimmed seam.

Use on knit fabrics to prevent fabric from curling and as an alternative to using the serger.

Machine Zigzag

A large seam allowance (up to 1 inch) may be used when cutting out the garment, because the finished seam allowance will be 1/8 to 1/4 inch smaller.

This finish is used on a plain seam on woven fabric. It requires a sewing machine that has a zigzag stitch capability. The finish is used on medium- to heavyweight fabrics, including corduroy. The zigzag stitch length (coverage) must be



Zigzag seam finish. Zigzag 1/8 inch from raw edge; trim close to stitching.

adjusted to accommodate and prevent fabric raveling. The more the fabric ravel, the closer together the stitches need to be (tighten or shorten stitch length).

Steps:

1. With right sides of the fabric together, prepare a plain seam. Press it open.
2. Adjust machine to the appropriate zigzag stitch and length.
3. On one seam allowance (single thickness), stitch close to, but not on, fabric edge (approximately 1/8 inch from raw edge).
4. Trim excess fabric close to the line of stitching. Press.

Machine OverEdge/Overcast

Some sewing machines have a special overedge presser foot and/or machine setting to overcast (sew over) the edges of the fabric without causing the fabric or thread to jam the machine. If your machine has this capability, use this stitch instead of the machine zigzag technique previously described. The overcast technique does not have to be trimmed, nor do you have to allow for larger seam allowances when cutting out the garment.

Steps:

1. With right sides of the fabric together, prepare a plain seam. Press open.
2. Adjust sewing machine for overedge or overcast setting. (Change presser foot and adjust tension and/or stitch length if necessary.)
3. On one seam allowance (single thickness) edge, align machine needle to stitch approximately 1/8 to 1/4 inch from the edge, allowing it to wrap a thread around the edge as it moves right to left.



Machine overcast seam finish. Use the overcast presser foot.

4. Repeat on the other side of the seam allowance.

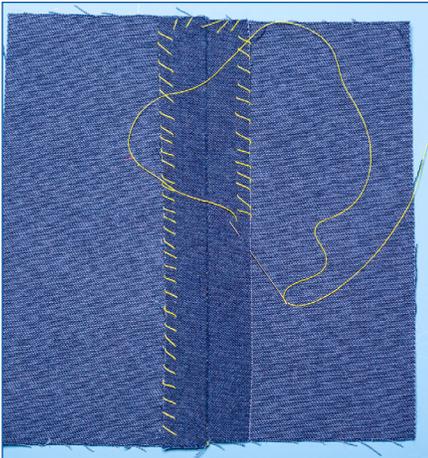
Hand Overcast

This is one of the original methods of finishing seams and edges, predating the invention of the sewing machine. There are occasions when this edge finish is the most appropriate technique. Hand overcast is used on woven fabrics with straight and curved areas. It is also good—and necessary—in areas not suited to other finishing techniques, such as L-shaped areas (created at a kick pleat) and V-shaped areas (created when bulk is removed from a princess-line seam). This stitch is done by hand rather than by machine. Use a hand needle and single thread that matches the fabric color. It is not difficult but may take some skill to get stitches to appear uniform. This finish can be used with other seams that might require a finish other than the plain seam, such as the mock flat-fell or the lapped.

Steps:

1. With right sides of the fabric together, prepare a plain seam. Press it open.

2. Beginning at the end of one seam allowance edge through single fabric thickness, secure thread on the underneath side of the seam allowance, approximately $\frac{1}{4}$ inch from the edge.
3. Bring needle through from bottom to top side. Position the point of needle underneath fabric edge, approximately $\frac{3}{8}$ inch away from the first stitch.
4. Bring the needle and thread through to the right side again. Repeat until the edge is wrapped in thread. Stitches should be secure to the fabric edge but not tight. Fabric edge should remain flat and not drawn. The more the fabric tends to ravel, the closer together your hand stitches need to be.



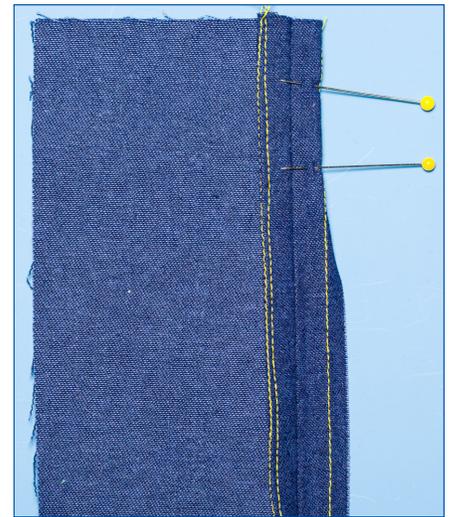
Hand overcast seam. Use in areas that are difficult to seam by machine.

Clean Finished

This finish, also called “turned and stitched,” is used not only for seams but is also used throughout the garment when the fabric is lightweight. It is often used to finish hem and facing edges. It is not appropriate for heavyweight or knit fabrics because it produces bulk. Cutting a wider seam allowance will permit a finished $\frac{5}{8}$ -inch seam allowance.

Steps:

1. With right sides of the fabric together, prepare a plain seam. Press the seam open.
2. Edge stitch $\frac{1}{4}$ inch from the raw edge of each seam allowance.
3. Turn the edge of the seam allowance under at the line of stitching. Finger press.
4. Stitch close to the edge through the folded fabric.



Stitched and turned seam finish. Edge stitch each seam allowance, fold raw edge under along stitching, and sew close to folded edge. Also called Clean Finished.

Bound Finishes

There are several forms of bound seam finishes. They are all appropriate for medium-, medium-heavy, and heavyweight woven fabrics. A bound finish is used frequently on unlined coats and jackets. It can also be used on dresses and other items that have a tendency to ravel. It is often used on hem edges and facings. The substance used for binding should be appropriate for the fabric in terms of care and maintenance. The binding should never add unnecessary bulk. This finish can be constructed by hand or on a sewing machine. This method may be difficult and time-consuming for the novice.

Bound with Binding

Use double-fold bias tape for casual wear and utilitarian items, and tricot binding, such as Seam Great™ and Seam Saver™, for dressy or lightweight items.

Steps:

1. With right sides of the fabric together, prepare a plain seam. Press it open.
2. Encase each seam allowance edge in tape/binding. If using bias tape, the longer edge should go on the underneath side. If using tricot binding, pull gently to get binding to fold slightly around the edge to be bound.
3. Stitch in place using a regulation straight stitch or a long zigzag stitch. Press.



Bound seam finish. Use bias tape to enclose raw edges.

Self-Bound

This finish is designed for light-weight fabrics. It is well suited to sheer or see-through items, especially when other finishes do not give them an attractive appearance, as in a sleeve cap or arm hole. At least a $\frac{3}{8}$ -inch seam allowance is required.

Steps:

1. Begin with a plain seam. Trim one seam allowance to $\frac{1}{8}$ inch.
2. Turn remaining seam allowance under $\frac{1}{8}$ inch and press.
3. Turn the folded seam allowance edge again over the $\frac{1}{8}$ -inch seam allowance so that it is enclosed/encased. Stitch close to the folded edge and the first line of stitching. This last stitching can be done by hand or machine.



Self-bound seam finish. Trim one seam allowance to $\frac{1}{8}$ inch; fold wider seam allowance under and over trimmed seam allowance.



Self-bound seam finish. Sew close to fold just inside the original seam line.

Hong Kong

The Hong Kong finish is closely related to the bound finish but may not be as bulky as a bound finish using bias tape. It is used for coats, jackets, and other items with exposed seams. It can add a decorative touch if a contrasting or coordinating print fabric is used as the binding substance. Select a lightweight, firmly woven fabric, such as lining fabric or batiste, to use as binding. Choose a binding fabric that requires the same care techniques as the fabric.

Steps:

1. With right sides of the fabric together, prepare a plain seam. Press open.
2. Cut several $1\frac{1}{4}$ - to $1\frac{1}{2}$ -inch-wide bias strips from lining, light-weight broadcloth/print cloth, or other lightweight woven fabric. Strips can match or coordinate with the fabric color. Sew bias strips together lengthwise, making a long continuous strip.

3. With right sides together, match edge of bias strip to single edge of seam allowance. Stitch $\frac{1}{4}$ inch from edge. Repeat on other seam allowance.
4. Fold bias strip over the edge, encasing raw seam allowance. Press.



Hong Kong seam finish. Sew bias fabric strip to each seam allowance $\frac{1}{4}$ inch from raw edge.



Hong Kong seam finish. Wrap bias fabric strip around and to the back of the raw edge.

5. Stitch in the ditch (the crevice created by the seam) securing the bias strip to the underside of the seam allowance. Trim excess bias fabric close to the line of stitching on the underneath side.



Hong Kong seam finish. Stitch in the ditch to secure bias to the back of the seam allowance; trim excess bias fabric close to stitching.

Serged

The serger/overlock machine can be used to finish seam allowances and as an edge-finishing method. Since knits do not ravel, the serged edge finish is used on woven fabrics only. The serged edge finish may be necessary, however, if a knit fabric edge tends to curl or roll. A 2-thread overedge stitch is used for lightweight fabrics because it creates the least amount of bulk. (Not all 3- and 4-thread machines convert to a 2-thread stitch.) A 3-thread stitch is great for other fabric weights or when a 2-thread overedge is not available. The 4-thread is not necessary and will only add bulk.

Steps:

1. With right sides of the seam allowances together, prepare a plain seam. Press.
2. Set serger for appropriate 2- or 3-thread stitch. Stitch, cutting away approximately $\frac{1}{8}$ inch of the edge of seam allowance. Depending on the construction area and circumstances, edges may be finished separately if they are to be pressed open.



3-thread serged edge finish. Serge seam allowances together; press seam to one side.



3-thread serged seam finish. Serge seam allowances separately and press open.

Other Finishes

The following seam/edge finishes should be used cautiously as they are often selected and used inappropriately.

Pinking—Pinking shears are scissors that leave a zigzag pattern. The sawtooth pattern on the edge of the fabric limits the amount of fraying. Use this finish only on firmly woven fabrics or on items that will receive little wear, as in a garment lining. Pinking is sometimes used as a decorative edge, but it should not be used alone as a seam finish as it does not prevent or retard raveling. Its use in garment construction is limited.

Liquid seam retardant (Dritz Fray Check™, Helmar's Fray Stoppa™, June Tailor's Fray Block™)—Use this commercial product on any fabric element that may fray or ravel, around buttonholes and on the corners of a collar, for example. Do not use in garment areas that might touch and rub the body as it can make some fabrics stiff and scratchy. It is fast, inexpensive, and easy to use.

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