



**Pearson New International Edition**

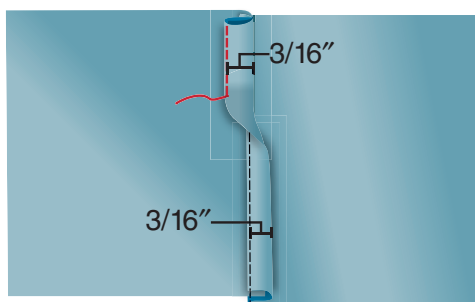
Sewing for the Apparel Industry  
Claire Shaeffer  
Second Edition

# Pearson New International Edition

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## Application: Quick Flat Fell Seam



**FIGURE 5** Quick flat fell seam.

The quick flat fell seam is sewn on a single-needle machine. It is strong and flat, and produces a self-finish suitable for flannel sleepwear, men's shirts, high-end silk blouses, reversible designs, and unlined jackets and coats. When used in ready-to-wear production, it is generally sewn with a felling foot. It is sometimes used in sample rooms as a substitute for the lap seam.

On custom-made men's shirts and designer blouses by Chanel and Yves Saint Laurent, the seams generally lap front over back, even though one seam will be stitched from the hem to the cuff and the other will be stitched in the opposite direction. On better quality shirts by Hathaway, Allen Solly, and Ralph Lauren, both seams are stitched from the hem to the cuff, so that one seam laps front over back and the other laps back over front.

On ladies' blouses and men's shirts, the seam is frequently stitched face to face to create an **inside fell** with one row of stitching on the garment face, but it can be stitched to create an **outside fell** with two rows of stitching on the garment face.

The finished seam width can vary from 3/16" to 1/2", depending on the fabric weight and texture, but when used on the underarm seams of better men's shirts and fine quality ladies' blouses, the seams are finished a narrow 3/16" (Fig. 5). Like the standing fell seam, widths for the two seam allowances are not the same because one seam allowance wraps over the other.

### Directions: Inside Fell

The finished seam width is 3/16". One seam allowance is 3/16" and one is 1/2".

1. Face to face, stack the muslin parts so the underlayer extends 1/4". Fold the underlayer to the left to enclose the raw edge of the upper layer. When sewing better garments, press before stacking the parts. Sew off 3/16".

2. Wrong sides up, open the sections flat. Fold the seam to the left to enclose the raw edge of the underlayer. When sewing better garments, press. With the bulk of the seam toward the left, lower the needle through all layers so the folded edge is aligned with the inside of the foot. Edgestitch the seam flat against the garment.

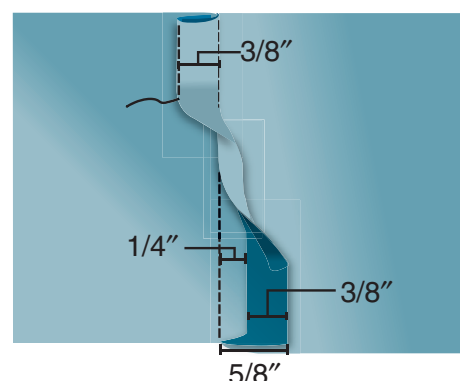
**HINT:** To avoid a twist, use the nippers to ease the folded edge when stitching.

3. Wrong side up, press.
4. Repeat to make a sample with an outside fell, that is, two rows of stitching on the face side.

### Directions: Double-Needle Flat Fell Seam

See the directions for the lap seam.

## Application: Single-Needle Flat Fell Seam (Lsr)



**FIGURE 6** Single-needle flat fell seam.

The single needle flat fell seam is a strong, self-finished seam that wears well and is easily laundered because of its flat finish. Because it is a quality finish and more expensive to sew, the label frequently states "single-needle tailoring." It is suitable for all types of cotton sportswear and blouses, but it is used most frequently for setting sleeves on men's shirts, where it is sewn as an inside fell.

As the name implies, this flat fell seam is sewn on a single-needle machine with two passes. When used for setting sleeves on men's shirts, the seams are finished 3/8" to 1/2" wide and the sleeve laps the shirt body (Fig. 6). (Generally, on ladies' shirts, sleeves are set with a plain seam or topstitched seam.)

**Directions: Single-Needle Flat Fell Seam**

For this sample, the finished seam width is  $\frac{3}{8}$ ". The seam allowances are  $\frac{1}{4}$ " wide on one section and  $\frac{5}{8}$ " wide on the other.

1. Face to face, stack the muslin rectangles so the underlayer extends  $\frac{3}{8}$ ". Sew off a  $\frac{5}{8}$ " seam.

**HINT:** When sewing more expensive garments or learning this application, press the section with the wider seam allowance so  $\frac{1}{4}$ " is folded to the face side before beginning the seam.

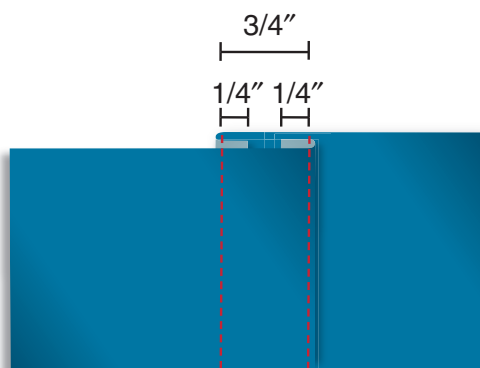
2. Wrong side up, open the sections flat. Fold both layers to the left to enclose the raw edges.
3. With the bulk of the seam toward the right and the seam allowance flat, lower the needle through all layers so the folded edge is aligned with the inside of the foot. Fell the folded edge flat against the garment.

**HINT:** To avoid a twist, stitch with the grain from the widest part to the narrowest. Do not pull on the folded edge while stitching and use the nippers to ease in the edge while stitching.

4. Press the seam flat.

**Optional Sample**

Repeat the application at an armhole seam. Use Patterns 48 (shirt sleeve), 49 (shirt front), and 50 (shirt back) to cut one front, one back, and one sleeve.

**Application: Lap Seam**

**FIGURE 7** Lap seam.

The lap seam is suitable for all types of cotton sportswear, men's shirts, firm and medium-weight fabrics, reversible or unlined garments, and flags. It is used most often on jeans, cargo pants, overalls, and uniforms. The lap seam is a strong, decorative seam that wears well and is easily laundered because of its flat finish. When used on jeans, it is generally called a flat fell seam by home sewers.

The lap seam is sewn with a **folder** in a single pass on a double-needle lockstitch or chainstitch off-the-arm machine. The finished seam has two rows of stitching on both the face and wrong side of the garment. Generally, paired seams lap in the same direction, either front over back or back over front. Levi and Guess use it on jeans, and Arrow, Brooksgate, Gant, and Alexander Julian use it on the underarm seams of men's shirts. (Sleeves on more expensive shirts are usually set with the single-needle or quick flat fell seam described earlier.)

On ladies' garments, the lapped seam is frequently replaced by a double-needle topstitched seam because the topstitched seam is easier and cheaper to sew on shaped seams; also, it does not require special equipment or operator skills. The finished seam width can vary from  $\frac{3}{16}$ " on men's shirts to 1" on reversible garments (Fig. 7).

**Directions: Lap Seam on Single-Needle Lockstitch**

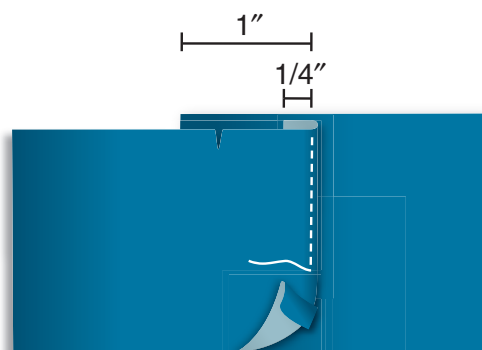
The single-needle lap seam is a strong self-finished seam that will withstand hard wear and is easily laundered because of its flat finish. Although suitable for work clothes, sportswear, jeans, boys' pants, outerwear, men's shirts, reversible designs, and unlined jackets and coats, it is rarely sewn on a single-needle machine, except in the sample room, because it is too costly. The single-needle lap seam varies in width from  $\frac{3}{8}$ " to 1".

For this sample, the finished seam is  $\frac{3}{4}$ " wide, and the seam allowances are  $\frac{5}{8}$ ".

1. Notch the short ends of two muslin rectangles 1" from one long edge.
2. Begin with both parts face up. Lap the left section over the right section, and fold under a  $\frac{1}{4}$ " seam allowance. Align the folded edge with the notch at the top. Lower the needle through all layers so the folded edge is aligned with the inside of the presser foot. Fell the folded edge, using the inside of the foot as a guide. Hold the underlayer firmly

and ease the upper layer slightly as you stitch (Fig. 8).

**HINT:** When learning this seam, fold and press a 1/4" seam allowance to the wrong side on the overlap and to the face side on the underlap.



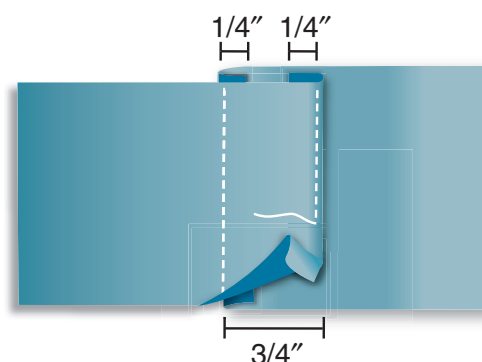
**FIGURE 8** Face-up fell folded edge in place.

3. Turn the parts wrong side up. Fold the edge of the remaining edge to the face if it has not been pressed. Position the part with the folded edge to the left so both rows are stitched in the same direction. Fell along the folded edge (Fig. 9). To avoid a twist, ease the folded edge slightly.
4. Press.

## Optional Samples

1. Make a sample in denim.
2. Measure the finished width. If it is less than the desired width, add 1/8" for the **bend of the cloth**. If the fabric is heavy or bulky, add 1/16" to 1/8" more.
3. Make a sample with a finished seam 3/8" wide.

**HINT:** To estimate the seam allowance width, first divide the finished width by two; add a 1/4" seam allowance to each part.



**FIGURE 9** Wrong-side-up fell folded edge in place.

4. Make a sample with a finished seam 1" wide.

## KEY WORDS

bend of the cloth  
complex seam  
drapery French seam  
folder  
French seam  
hemmed seam

inside fell  
lap seam  
mantua maker seam  
outside fell  
quick flat fell seam  
self-bound seam

single-needle flat fell seam  
standing fell seam  
wrapped seam

## SUMMARY

The self-finished seams include the standing fell seam, the drapery French seam, the French seam, the quick flat fell seam, the single-needle flat fell seam, and the lap seam. These seams do not require a seam finish to prevent raveling because the raw

edges are enclosed during the construction process; with the exception of the standing fell seam, all are complex seams that require more than one run or pass under the presser foot.

## REVIEW QUESTIONS

1. Describe the six self-finished seams and where they are used.
2. Which seam is strongest? Why?
3. Which seams are least conspicuous?
4. Why does the standing fell seam cost less than the French and drapery French seams?
5. Compare the drapery French and French seams.
6. What are the advantages of the drapery French seam?
7. Why is the faux French seam a seam finish instead of a self-finished seam?
8. What is the advantage of the faux French seam?
9. What do the standing fell and quick flat fell seams have in common?
10. How do you avoid a twist when stitching a standing fell seam?
11. What does “single-needle tailoring” mean?
12. Identify two seams that can be used on reversible garments.
13. When do you use a folder?
14. What is a lap seam?

# Hems

One of several edge finishes designed to keep the garment edges from fraying or tearing, a **hem** generally refers to any finish at the lower edge of the garment or garment component, but a hem finish can be used to finish any raw edge.

Defined in ASTM D6193 as edge finishing (EF), hems are made on a single piece of material and can vary in width from less than 1/8" to several inches wide. They can be folded once or twice to either the wrong side or face side of the garment. Most are held in place by machine stitching, hand stitching, fusing, or gluing. They can, however, be left flat and finished by covering the edge with a series of stitches at or over the edge of the material, and occasionally they are simply left raw.

In apparel production, the most common hems are machine-stitched on the blindstitch hemmer and lockstitch machines, but many casual garments and scarves are stitched on overedge machines, while knits are frequently finished on coverstitch machines. Many hems are sewn with a special foot or folder (see Fig. 10.8), but in sample rooms, they are frequently folded by hand.

A hem can be described in several ways: by its name, the method used to sew it, the number of folds or turns it contains, and its width. This chapter categorizes them by application—machine or manual—beginning with the least costly and proceeding to the most expensive.

## Chapter Objectives

After completing this chapter, you will be able to:

- Identify the different types of hems and understand the appropriate application for each type.
- Complete hem applications on the blindstitch hemmer, on the lockstitch machine, and by hand.
- Stitch hems using attachments and by folding them manually.
- Identify special sewing machine feet used to make hems.
- Identify the different types of openings and select the appropriate hemming application for finishing each type of corner.
- Complete applications for finishing corners with hems and facings.
- Complete applications for single and double miters, the single-turn topstitched hem, the double-turned topstitched hem, the narrow rolled hem, and the chiffon hem.
- Evaluate hems.

### BOX 1 Factors in the Selection of Hem Finish and Application

1. Garment type, design, end use, and care
2. Width, flare, and grain of the edge
3. Fabric bulk, texture, weight, type, and transparency
4. Desired durability
5. Difficulty of construction and skill of the operators
6. Equipment available
7. Cost of labor and materials
8. Retail price
9. Designer or manufacturer preference
10. Current fashion trends

## HEMMING ON THE BLINDSTITCH MACHINE

The machine blindstitch hem is the most common hem.

It is stitched on the blindstitch hemmer, which is a single-thread chainstitch machine; it does not have a bobbin. Used on all types of garments at all price points, this hem is the least costly to stitch and the easiest to alter.

### Application: Plain Hem

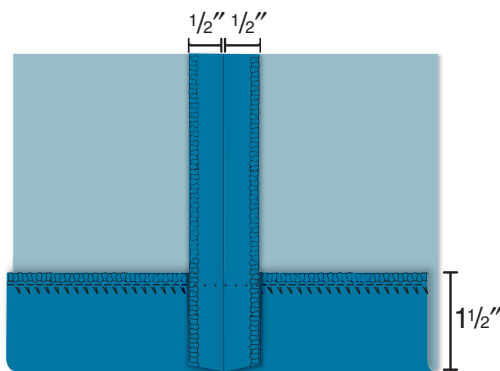
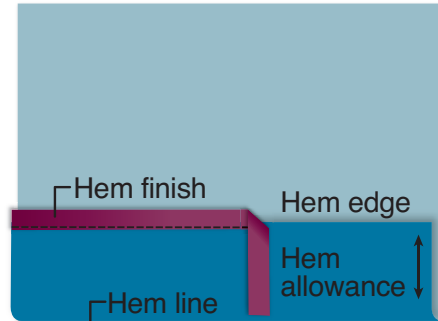


FIGURE 1 Plain hem, machine blindstitch.

For this hem application, the finished hem is 1-1/2", and the guide notches on the vertical seams are located at the top of the hem. They can also be located

### BOX 2 Hem Terminology



Terminology for hems.

- Hem allowance: The width of the unfinished hem or the distance between the hemline and hem edge.
- Hem edge: The raw or finished edge of the hem.
- Hem finish: Application for neatening the hem edge.
- Hemline: The edge of the garment.

at the hemline. One sample is hemmed before it is seamed (Fig. 1). This application would be used only on budget designs.

The second sample is hemmed after it is seamed (see Fig. 4).

### Materials/Supplies

- Four muslin rectangles (21" × 7")
- Threads: mercerized cotton, corespun cotton/poly, all polyester, monofilament nylon

### Directions: Blindstitched Hem

1. Use two rectangles (21" × 7"). Notch the short ends 3" from the hem edge.
2. At the overlock machine, serge the hem (one long) edge and the short ends on each rectangle. When serging the short ends, do not trim away the notches.
3. At the blindstitch machine, set the stitch ratio at 2:1. Set the stitch depth regulator.
4. Wrong side up, place one rectangle on the cylinder of the blindstitch hemmer. Fold the 1-1/2" hem to the wrong side so that the overlocked edge meets the notches on the seam allowances (Fig. 2).