

# From the Beginning A Primer

Section Three Basic Stitching & Fabric

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Basic Stitching

# Stitching – An Overview

In fine hand sewing, one—sixteenth to one—eighth inch is usually the correct distance between stitches for seaming or when making frills (roll/whip). Sometimes less, sometimes more. More accurately, you will learn in some situations to pick up a defined number of threads based on the fabric you are using. As you progress with projects, you will have a fuller understanding of what the distance should be between stitches. With the exception of roll/whip or basting stitches, e.g., those stitches used to hold more than one fabric together so it doesn't slip out of position, err on the side of too short a distance, rather than too long.

In all fine embroidery, the goal of any stitcher should be 16 to 20 stitches per inch using a single strand of floss. This may seem difficult at first, but with time and practice your stitches will become tinier and more precise. Tiny stitches are the mark of excellence in stitching. Dissatisfaction with your embroidery and hand sewing is often the consequence of your stitches being too large.

To increase the dimensions of stitches such as bullions, you might try: 1. picking up longer spaces with more wraps; 2. heavier thread, rather than adding more strands of floss. Keep in mind, some directions from some designers might call for more strands of floss. This is perfectly acceptable when becoming creative. However, when emulating fine embroidery - such as that found on pre-1900 garments and household linens - work with one strand only.

The exception to this is French knots. These should be enlarged by using more than one strand (or a heavier thread) rather than more wraps. If you use more wraps, it is no longer a French knot - but a bullion.

For exquisite results, don't carry your thread from one area to another. This is particularly important on sheer fabrics, but is a good habit to practice even on opaque, heavier fabrics. The rule of thumb is: carry the thread no further than 1/4-inch – less is preferable. You can use previous stitches to weave your thread to another area, if it is a short distance. Otherwise, end the thread and start anew.

Going in and out of fabric is hard on floss. Do not use a strand until it is thin and beginning to fray. Finish your stitch and on the underside, end the thread as suggested in the following pages. The underside of your work should be almost as neat as the front.

That last sentence brings us to another area of contention in today's world of embroidery and hand sewing: neat backs. Remember our discussion of sewing on buttons (Section One). Prior to the mid twentieth century, not much attention was paid to the backs of works. Many highly–prized museum

examples are simply awful on the back side. That includes huge canvas work examples as well as fine embroidery. Ribbon work, by its very nature, creates simply horrid backs. But you wouldn't want to create a beautiful handkerchief with a messy back. As in times past, if both sides will be seen, keep the back side as neat as a possible. If you are creating a table cloth, you don't want a lumpy back where glasses might totter and tip. If the embroidery will be hidden with a lining, don't worry too much about how neat the back side is.

If, in the current climate, you are entering your pieces in juried competition, you will have to take great pains to ensure that the backs of your works are impeccable, no matter their ultimate use.

Be prepared to have thread and yarn twist while stitching. Frequently let it hang loose and unwind itself (see the discussion on "Embroidery Threads", Section Two). An alternative is to bring the needle to the fabric and gently smooth the remaining floss with your fingers. If tangles are a problem - it is often because the leading end is frayed. Snip it off occasionally, or when you experience knotting.

In spite of everyone's best effort, no matter how many years you pursue needlework, you will occasionally have to remove stitches. If it is one or two stitches and the threads or yarns have not been marred or lost their sheen, you can continue to use the remaining length. But if you must remove many stitches, it is a good idea to simply start with a fresh needleful.

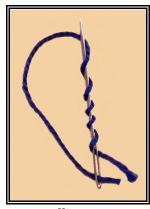
You can remove stitches by clipping one at a time and with tweezers (or fingers) gently pick out the threads. You can sometimes do whole rows by backing out what you have previously stitched, clipping every so often to remove long lengths. You will find in large areas that must be removed, snipping the threads on the right side, then pulling out from the back side is often easier. A pair of tweezers reserved just for needlework is a handy tool to have on hand. They are also wonderful for tugging on stuck needles.

Finally, remember to keep your hands very clean throughout the process. This may require you to wash frequently. Use a mild soap to avoid excessively drying out your skin. Use a hand cream regularly at night or when not stitching. Hand cream can soil the embroidery and mar embroidery threads, so do not use it just prior to stitching. Some of the newer products on the market are fully absorbed and do not transfer. But wait fifteen or thirty minutes before you tackle your sewing or embroidery. If you are working on a project that won't be washed, err on the side of caution and don't use any creams immediately prior to working the piece.

# **Knots in Sewing and Embroidery**

A discussion of knots is important. Conflicting advice reigns, and it is sometimes difficult for the beginner to sort through all the information and decide for themselves what should be done in a given circumstance.

Why Not Knot? Knots create lumpy surfaces. The rule of thumb is, don't knot in an area that will be seen or readily felt. If it can be hidden in a seam or under surface trim, a knot is permissible. Knots in embroidery are not permissible except in rare instances. Whether this is just because of tradition, or indeed a functional necessity isn't clear in all circumstances.



**Bullion Knot** 

Also, knots are not always permanent. With some slippery threads (or if the knot is poorly made) they can come loose with time. When that happens, only a tiny bit of thread end is left – which will readily ravel, quickly spoiling the embroidery. This is less a problem with sewing.

**How to Fasten Threads.** There are several commonly used ways to fasten threads. I have separated these into two categories (sewing and embroidery) because although some are indigenous to both, they look different and are attacked differently. We will cover sewing first.

1. A bullion knot. Used most often in hand sewing, this is the neatest and most permanent knot. It is also useful when working with rayon threads in Brazilian embroidery.

Bring long end of thread to tip of needle, end facing down. Wind thread around needle anywhere from two to five times. Hold the wraps firmly with the free hand, and pull needle and thread through until the resultant knot is at the base of the long free thread.

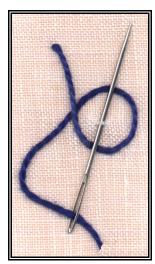
Occasionally the wraps don't knot. Just start anew.

- 2. Knotting over the forefinger. Not always successful or dainty, but useful and quick. It is accomplished by winding the thread once around your index finger so that the thread is over the short end. Roll the thread off the finger. With thumb and index finger, pull the messy little roll toward the short end forming a knot. Snip off excess.
- 3. Back stitching. See illustration on page 11. Used on the fold of a hem or seam. Come up to the front of the work. Take a small stitch to the right, (left if you are left–handed) picking up only a very few threads of the ground. Go in and out about three times. This can cause puckering in very fine or sheer fabrics, so if you use this method, pay attention to what is happening to the fabric.
  - 4. Glover's or slip knot, aka Abbott's knot, is a simple knot that can be used in lace when

whipping to fabric (or if you adventure into making lace), or drawn thread embroidery. Anyplace where you need a tiny knot and there is little or no place to anchor the thread. Make sure the little tail lies on top of the long thread. Pick up just a thread or two of the ground. Pull thread completely through. Snip off tail.

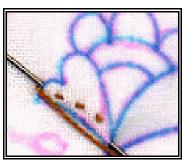
5. Weaving thread ends and beginning with a running stitch is also used in hand sewing situations, although less often. See the next pages on embroidery for details.

There are many other types of knots available to the hand sewer and embroiderer. Some, such as the smocker's knot and bullion, can be used both as a sturdy knot and an embellishment. The ones listed here are the most common, easily executed, and will serve you well.



Glover's Knot

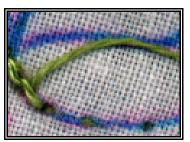
# **Embroidery: The Beginnings**



Running stitch to begin work – first satin stitch laid.



Right side showing tiny stitches while back side has longer stitches.



Running stitch then several outline stitches laid.



Backstitching in small areas.

With fine lines, the running stitch is the most effective. Your needle will pierce the threads as you stitch over them with stem stitch, back stitch, or other straight-line embroidery stitches. This method works well for both fine floss and larger diameter threads and yarns.

The first three pictures represent the normal treatment in the use of the running stitch. Leave a tiny tail at the surface (right-hand side of graphic). Snip off after the first embroidery stitch or two, if it is too long. With experience, you will be able to pull it so that it is just barely visible. Notice that the top thread is quite tiny (going over only about two threads of a fine ground), and the longer lengths are underneath. This reduces surface bulk. In addition, it provides a good piece of thread underneath to pierce when you then work your embroidery stitches.

The fourth illustration shows a tiny back stitch. Use this in areas that are too small for a running stitch. Go in and out the same holes once or twice to firmly secure the thread, then make your first stitch as shown.

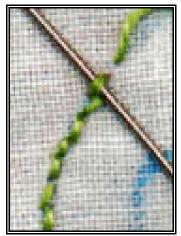
Not shown is a method for anchoring threads in shadow work. With experience, you will be able to leave a thread dangling at the back and catch (pierce) it with your first few stitches. This maneuver is tricky and requires a bit of patience. However, it is very secure and when used on very sheer fabrics has the added advantage of not showing through to the surface of your work and creates no additional bulk. Save this method in your bag of tricks to learn at a later time, as it is not recommended for beginners.

**Using waste knots.** Not used in sewing, but useful in some embroidery situations. A knot is made at the end of the thread. On the *right* side of the fabric, and about four inches away from where you are to begin, take the needle to the back of the fabric. The knot will be on the

right side. Bring your needle and thread up where you need to start and continue with the required stitch.

When finished stitching, clip the knot and pull the end to the back side of the fabric. Thread the end into a needle and weave the end carefully into the backs of the stitches just made.

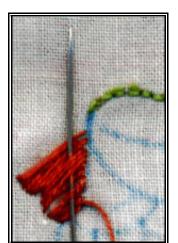
### The Ends



Weaving in threads on back side of work.

The next three illustrations show you how to end the threads. In the first method - used on line stitches such as stem or chain stitch - whip the thread over the stitches. Take care not to pierce the fabric. Simply slide your needle underneath the visible backs of the stitches on the back of your work. If you're nervous about this method, you can return in the opposite direction, piercing the previously whipped threads. This is a very secure method of finishing threads. The last two illustrations show what to do when finishing areas

filled with satin stitch, fishbone, etc. Slide the needle and thread underneath the area, then turn and slide it in reverse as shown. Another method not shown is to pierce the threads as you slide your needle along



Weaving: first pass



Weaving: Second pass

the previously laid with stitches. This is effective when doing laid work where little thread is on the back of the work, or when doing shadow work. In shadow work, pay particular attention that your ending threads stay at the edge of the design. Piercing helps insure this. Be prudent so that you don't pierce the ground fabric, which will spoil the looks of the embroidery.

# **Sewing Method vs Stab Method**

This question of the sewing versus stab method often arises, both because the terms are unfamiliar and because there is controversy as to when to use each one.

The **stab method** is often used when the object is in a hoop or frame. One hand is held beneath the frame and the other hand is kept on top. If this feels awkward, you might try changing the position of your dominant hand. The needle is pushed through the surface with the one hand, while the other catches the needle on the underside and guides it back to the surface. Some needleworkers use one hand to do both motions, but this is not common, and is slow and inefficient.

Although it was said that this method is used for framed pieces, there may be times when you will decide it's the most expedient approach in a non-framed piece. Perhaps one hand is busy guiding or holding the fabric, or you just need to place one last stitch prior to reversing the work and finishing off the ends. Here again, experience will be the best teacher.

The **sewing method** of using needle and thread is most often seen in general sewing, when not using a frame, or when fabric is loosely tensioned in a hoop. While one hand is holding the fabric (or hoop), the other hand guides the needle in and out of the fabric in one motion. Think of running stitch, wherein several stitches are picked up before the needle is pulled completely through. The needle and thread are always in sight at the top of the work.

You can also use the sewing method when a work is framed. But you must loosen the fabric a bit to accommodate it. You cannot use this method on tightly stretched fabric unless it is very spongy. That is, the fabric gives and bounces back. Some linen/cotton blends do this nicely.



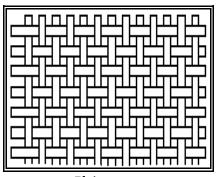
An example of surface embroidery on silk dupioni.



### The Ins and Outs of Grain

hen executing either fine sewing or embroidery, you will be working with individual threads of the fabric. These threads can be quite fine or coarse - depending upon the fabric chosen.

Plain weave is fabric woven with long warp threads on a loom, having weft threads (those threads going left to right) woven over and under the warp threads. These weft threads form the



Plain weave

selvedge edges of fabric. This type of weaving can be even weave (same number of warp threads as weft threads per square inch), or non-even weave (different number of weft threads to warp threads in a square inch). Look at the aida cloth. It is an even weave and woven with four threads going over and under in a special locking manner. Fabrics can be woven in any number of ways, including diagonal weaves (gaberdine, twill). For our purposes, we will be working with non even, **plain weave** fabrics (one thread woven). Typical in this genre is muslin (calico), percale, broadcloth, plain linen, lawn, voile, organdy and batiste.

There are a few fabrics with which you should become somewhat familiar. Below is a table which will help you to determine what they are. They are all plain weaves.

Cotton Materials <sup>1</sup>			
Name	Size	Description	
Batiste	38 and 45	A fine, light, semitransparent cotton made in white and a few colors. Different weights and qualities are made. Used for lingerie, dresses, blouses.	
Broadcloth	36 and 45	A coarser material similar to muslin. Used for utilitarian items, children's clothing.	
Calico	36 and 45	Closely woven, thin cloth, usually with figured designs printed on one side. Used for inexpensive dresses and aprons. See also muslin.	

<sup>&</sup>lt;sup>1</sup> Adapted from Woman's Institute Library of Dressmaking, 1924

Chintz	36 to 72	A medium– heavy cloth, usually printed in floral and striped designs, with a high glaze on one side. Used for upholstery, draperies, etc. Rarely dresses.
Gingham	36 and 45	A firm material dyed in the yarn before weaving. Many combinations of warp and weft are made to form stripes and plaids. Used for dresses, aprons, pillows, smocking.
Lawn	36, 45, 54	Sheer fabric filled with starch or sizing. Used for dresses, aprons and curtains.
Muslin	36 to 72	A firm and loose weave, bleached and unbleached. Used for undergarments, sheets and pillow cases. Many different qualities made. Printed muslin is called calico. To add to the confusion, calico in Australia and the UK is the term used for plain muslin.
Percale	36 and 45	A close firm fabric, plain and in colors. Used for dresses, shirts, sheets, and children's clothes.
Voile	36 and 45	Material having hard– twisted, warp and weft threads woven in open mesh. Extensively used for dresses.

Words cannot convey what fabric is like. The only way to understand fabric is to purchase small amounts and mount samples on a support that you keep in a binder for reference. Batiste is available in silk and cotton. Though the name is the same, they handle quite differently. There are many qualities of fabrics manufactured from all over the world. When making your reference samples, include the different qualities you come across. Know in advance that you will spend sometimes three times more for high-quality fabrics. That may make you want to purchase only the lesser grades. This is folly. The difference in longevity and handling is worth the price. Get to know fabrics of all kinds. Treat them well. They will reward you in many ways.

Which side is the right side? Most manufacturers bolt fabric with the right side (if there is one) facing out. This is for the convenience of the retailer as well as the customer. But if you are purchasing a yard or two, and it is being refolded, you may have difficulty discerning which side is the "right" side. Indeed, with most fabrics, there is no right or wrong side. The woven fibers have either been treated with a finish so both sides will be shiny, or there is no special finish, in which case the woven fibers are the same all the way around. Some fabrics go through a special chemical bath after they are woven. These baths can make the fabric quite shiny, or appear crisp to the touch. Since all of the fabric went through the bath, all sides will be treated equally. These types of finishes are sometimes removed the first time the fabric is washed. Even very expensive, imported fabrics are treated in this manner. In any case, it means one side is as equal as the other.

The only time you can tell the difference is with certain weaves, such as satin or damask; velvet and corduroy, which have a nap; printed fabrics where the dye will be lighter on one side; specialty

finishes such as chintz; linen or silk where existing slubs may (or may not) be more apparent or prominent on one side. For most all other fabrics, there is no right or wrong side. Look at your fabric. Fold part of it back on itself and take a good look in good light. If you can't tell the difference readily, there is no need to concern yourself. Use either side.

I have spoken with authorities on fabrics, and many highly experienced seamstresses. Pay no mind to the tidbits you may hear about holes in the selvage going up on the right side and indented on the wrong side; or how pulling a corner will curve toward the wrong or right side (depending upon who is telling the story). Most selvage edges don't have the holes remaining from the loom. Even if it did, unless it was special fabric as noted above, the threads are equal all the way around. The individual threads which make up the fabric are identical on all sides. Also, fabric is as likely to curve one direction as another, depending upon how hard you pull and exactly where you pull.

How to tell the warp and weft when there is no selvage? It can be tricky. Sometimes there's just no way to tell. But usually you can determine this by pulling out threads in both directions. The warp threads are stronger, and you can usually pull them out without breaking them, or pull out long lengths before they break. Weft threads are less strong, and usually break more quickly.

More about selvage edges. In some instances, the selvage edge is used for sewing. It doesn't ravel, and can be a convenient and useful edge. Other times you will remove it. You will be directed when to do this as you progress. The selvage sometimes pulls the fabric too tightly – creating barely discernible puckers. Snipping it relaxes the fabric. Normally you remove the selvage for this reason. The selvage is also heavy. When doing hand sewing, you often do not want the bulk.

# **Preparing Fabrics**

This book concerns itself with ordinary cottons and linens. Therefore, the directions as outlined here will not necessarily apply to other types of fabrics. With few exceptions including some silks, satins, velvets and occasionally knits and woolens, ordinary cloth needs to be pre—washed before construction. If you are making a large article such as dress, draperies or tablecloths, wash the entire purchased amount of fabric at once without cutting. If making a small article, you can hand wash following the directions below, cutting the fabric about two inches larger than needed. Don't bother worrying about grain at this point.

If you are using a fabric of which you are uncertain, cut a five-inch by five-inch square (use a cardboard template which you make yourself), and wash and dry as instructed below. Check it against your template to note any shrinkage that occurred and allow for that when sewing. Examine the material to see if it responds well to ordinary washing. If not, you may have to dry clean it. In these instances, you must take extra precautions to prevent soil while executing the sewing or embroidery. Some fine

silks (including some silk flosses) require the "dry" dry cleaning method. Consult your professional dry cleaner prior to working on the piece. None of the projects contained in the *Art of Embroidery* series recommend any materials which require this special handling.

Why wash prior to making something? This will ensure that your fabric will shrink, that you will have removed any harsh chemicals, dust and any other contaminants that might harm skin or be ground in as you work on it, Fabric can sit in outlets for long periods of time and collect lots of dirt. But mostly you will wash it so that you will have no further shrinking, and the project will end up true to size.

A note of caution should be made. Some embroidery projects, such as candlewicking or some French quilting, require that you wash after completion of the embroidery. This is because the fabric will shrink up around the stitches. If you are trying something new, be certain to read all directions before you begin.

Linen and cotton require hot water. An ordinary detergent that does not contain bleach or other additives is best. Use a water softening agent if your water is particularly hard. Avoid pure soap products, as they can – in hard water areas particularly – keep washing the dirt and scum back into the material.

Dry cottons thoroughly in the dryer. This ensures they will not shrink further. Dampen using a spray bottle of water and iron on the cotton setting with medium steam.

Don't dry the linen in your dryer. Hang it over a rack of some sort until it is just a bit more dry than when it came from the washing machine. You need to iron linen while quite damp, and may need to dampen some areas if they become too dry by dabbing with a sponge or small cloth dipped in a bowl of clean water set near your ironing board. Spritzing with a spray bottle filled with water usually isn't sufficient. If you use a spray bottle, put plenty of water on the surface.

If the edges raveled during the washing cycle, snip the threads to make it easier to handle. Good linen shouldn't ravel much when pre washing.

Set your iron to the highest setting possible. Linen doesn't scorch readily, and the heat is necessary to remove the wrinkles which developed while washing. Remember to keep the fabric straight as you iron it. Don't tug it too hard in any direction, unless it needs to be straightened. You can always adjust it once you have cut to size.

Silk, wool and rayon require more gentle treatment. These fabrics are generally washed in the gentle machine cycle using warm water, or are hand washed. Many experts suggest washing silks with baby shampoo because it responds more favorably with the protein fibers of the silk. Only use a machine dryer if it has a cooler setting. To be absolutely safe, line dry. Iron with cooler settings as indicated on your iron, with medium steam.

Some silk retains the wrinkles from washing. It is unavoidable and barely noticeable. Many silks become softer after washing, making them easier to handle.

#### **Fabric Grain**

Unless directions tell you to cut or sew on the bias (a diagonal line across the grain lines – precisely 45°), it is important to always sew and/or cut on the grain line (warp or weft threads) of fabric. This gives the proper drape (it hangs correctly and evenly from one edge to another). Most high–quality fabrics are woven on grain. This means they are perfectly square. Lesser–quality fabrics often are not, and you must pull them to get the threads to line up correctly. To do this, grab the fabric at opposite corners and pull hard. On large pieces, you may need someone to help you. Dampening the fabric is often helpful during this process if the piece is being stubborn. Sometimes, very cheaply manufactured fabrics will not straighten, particularly those with manmade fibers. These fabrics will not work well for hand sewing., and will be a frustrating experience. For the lessons described herein, don't use them.

It is important to be aware of this grain as you work. If you pull too hard in one direction or another while you are working, you will distort the fabric. If you iron carelessly, the same will occur. So you must learn to be gentle, keeping in mind at all times the grain. If it gets distorted, simply dampen and pat out the fabric again, then proceed to iron. There is almost no mistake in sewing/embroidery that can't be remedied in some manner.

Some fabrics can be torn along the grain without a problem. Muslin, percale and broadcloth (and some silk) can be snipped at a desired point and the balance of the measured line torn. Before use, the loose, raveled threads are trimmed off.

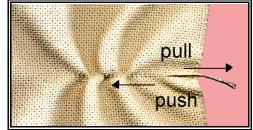
Other fabrics are damaged by this treatment. Very fine Swiss batistes, organdies and lawns can be considerably damaged at the torn edge, and it is not recommended. Some linens cannot be torn readily. You will need to learn to pull a thread prior to cutting out the fabric.

# **Cutting Fabric on Grain**



Snip the edge about a half–inch from the left side of a piece of muslin. Take a fine needle and pull up the snipped thread. An ordinary straight pin is usually too large for this task.

Grab this fabric thread with your dominant thumb and forefinger and *very* gently pull. Your other hand will guide the fabric along the thread as you slowly and carefully inch your way across the fabric. Wad up the fabric so that your thumb is





on top of this thread and your other fingers underneath the fabric.

If the fabric was not cut square when you purchased it, you may not be able to pull the thread across the entire width of the material. If this happens, start again at the selvage edge a little further over, and continue in this way until you can pull a thread entirely across the fabric.

The Dilemma of Pulling Threads. The warp threads are the strongest and easiest to pull. Conversely the weft threads are less strong and more prone to damage as they are manipulated. Sooner or later, whether you are pulling warp or weft threads, the thread will break (unless you get lucky). There are two solutions to this problem.

The first is to cut the fabric along the line where the thread was removed to the point where the thread broke. You should now be able to find the end of the thread and begin pulling again. Continue along the length of fabric that needs to be cut.

The second method is to locate the broken end without cutting. This is often easy to do. Merely pick it out with a fine needle and begin pulling again.

When the thread has been withdrawn across the entire width of the fabric, cut carefully along the line left open where the thread was removed. Your fabric is now ready to measure for our sampler.

A special note about pulling threads in linen. Linen fabric has slubs. These slubs are bulkier bits of thread that you notice throughout the cloth. The higher the quality of linen, the less and smaller are these slubs. It is a natural part of the spinning process. This makes it more difficult to pull threads, as they "hang up" and interfere with the process. But they are also larger and easier to locate than finer cloth such as batiste. This makes the task of locating the broken end much easier.

An additional method: Called "striking", this German method simplifies the process tremendously. The thumb and index finger of the left hand grasps the fabric at the point where the cut is desired. Taking a fine pin or needle with the right hand – on the *wrong* side of the fabric – draw the pin toward you between two threads of the fabric. This will create a crease on the right side. You can cut on this crease.

Although quicker than pulling threads, it is a little more difficult to see the crease in some fabrics. Cut carefully between two threads. Small scissors make this job a little easier.

This method of marking straight grain lines on the fabric has other uses, such as marking tucks, or straight lines of embroidery on which to place feather stitch or other decorative stitches. It is much quicker to do than pulling a thread. But great care must be taken in its precision. Otherwise you may inadvertently cross threads while "striking" and not have a straight line at all.

It is very helpful to "strike" on a hard surface (such as at a table), pulling up the fabric with the one hand as you simultaneously hold the needle with the other hand, keeping this hand also pressed tightly against the surface of the table to keep the fabric taut.



 $\label{thm:continuous} Stumpwork\ Embroidery,\ also\ known\ as\ Elizabethan\ or\ raised\ embroidery.\ Applique\ pieces,\ wires,\ and\ beads\ embroidered\ to\ stand\ up\ three-dimensionally\ from\ the\ cloth.$