

*The Art of Embroidery Series*

From the Beginning  
A Primer

Section Two - Hand Work Basics

*Dianne Lewandowski*  
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Dianne Lewandowski  
315 Congress - Oconto, Wisconsin 54153  
920 835-4240  
[www.HeritageShoppe.com](http://www.HeritageShoppe.com)  
[dianne@heritageshoppe.com](mailto:dianne@heritageshoppe.com)

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*Hand Tools*

No discussion about hand sewing or embroidery would be complete without mentioning all the tools and other supplies you will need. Your personal budget and circumstances will dictate how much you spend. Even inexpensive items can be useful if care is taken in their purchase and how they are handled. With that in mind, the following pages contain recommendations for selecting the right materials

Making storage containers for your supplies is a good way to practice your skills. You can make needle rolls – clever little roll-up devices that store the needles you use most often. Scissor cases, pin cushions and an emery<sup>1</sup> can also be made by hand. Some needleworkers adore them, others find a drawer or box is sufficient. Whatever way you choose, take good care of the implements you use, and they will last far longer.

Many students share their frustration at not being able to substitute for items they read about, particularly in older publications. This is particularly a problem with threads and fabric. In some cases substitution is not possible, as nothing is currently available on the market that meets or comes close to a previous written requirement. Sometimes the items are available but only by limited sources and very difficult to locate. Fabric and threads are difficult to write about so that the reader is comfortable knowing exactly what is being talked about. Pictures only partially solve this problem. Names of fabric and threads come and go, either because they are no longer manufactured, or the precise name has been dropped in favor of a new one. Different countries have different terminology for fabrics, fibers and their availability varies from one country to another. What means light weight to one reader may mean something heavier to a different reader who has a broader experience.

To help diminish the student's frustration, all the projects in this series of booklets are mindful of the vast array of materials currently available and include substitutions where possible. Pay attention to fabrics and fibers so that not only are you learning stitches, but learning about weights, twist and weave. Be wary of what you read. Designers or authors often rename stitches and fibers to make them more marketable, or because they have performed only scant research. In the end, you will have to rely on your own good judgment – which this book hopes to strengthen.

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<sup>1</sup>Emery: A small tool, often in the shape of a strawberry, made of cloth and stuffed with corundum – a fine powdered metal used for sharpening.

### Threads – Sewing

Why talk about threads for sewing in an embroidery book? Because almost everything you embellish will have to be finished in some way. This can be plain hemming, or putting seams together. Many embroiderers are also interested in hand sewing. If you don't have a sewing machine, you can still put together a pillow case, a simple shirt, a mat or a small scissor case. But you need to know how to do that efficiently, using the right tools, so the seams or hems don't fall apart with the first washing.

**Thread Types.** Sewing thread is made with cotton, silk, linen, rayon, and cotton-covered polyester. Each has its own specific use for different fabric types and different tasks. Cotton thread is also glazed, mercerized, or coated with beeswax. Depending upon quality or manufacturing process, thread can be easy to use, or prone to knotting. Some are stronger than others and withstand a great deal of tugging. Others break easily. But whether it is strong or relatively delicate does not always determine its use. The student has to learn to fit the tool to the job at hand. This takes practice and experimentation. What is produced today was not produced 20 years ago – and things will change in the next 20 years. This discussion can only give you an overview of the basics so that you can proceed on your own with some knowledge.

**Thread Sizes.** For fine sewing, you will use thread in sizes 40 to 100. The smaller the number, the larger the diameter of the thread. Size 40 is used for basting and other utilitarian needs. Size 60, 70 or 80 for sewing seams and trims. Sizes 70–100 can be used for tucks and other ornamentation.

There is no relationship between a size 40 sewing thread (normally spooled in some manner) or various other threads such as cordonnet (6-cord thread used for crochet or tatting), or flosses (size 25) and embroidery cotton threads (from size 12 to 40). Each type of thread, whether sewing, floss, or tapestry<sup>2</sup>, has its own unique size set up by industry standards.

When sewing seams and manipulating fabric (as in tucks or rolling/whipping), use a thread size that is approximately the same size as the individual threads in the fabric. The thread should almost “hide” in the fabric.

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<sup>2</sup>Tapestry is a term used by many in the industry to designate threads used in embroidery which are plied in such a manner to be non-divisible. Just like sewing thread, you use it as it comes from the skein without taking it apart.

## What Type of Sewing Thread to Use

**Cotton** is suitable for the following grounds: cotton, woolens, silks

**Silk** thread is difficult to find, but also excellent for silk fabrics and woolens.

**Cotton or linen** thread is good for use on linen.

**Buttonhole twist** is a tightly twisted, coarse thread used for buttonholes, as its name implies. But you can also creatively use it in embroidery. It is available in both cotton and silk. Normally it is used for tailored jackets or slacks, and not for shirts, dresses or baby clothing.

To choose the right thread, you first need to look at the size of the threads in the ground fabric you are using.

Use coarser threads when doing basting and other utilitarian jobs such as catch stitching one cloth to another. Quilting requires a strong, coarser thread than you would chose for ordinary sewing tasks.

Use threads that are the same size or finer when seaming, hemming, tucking.

### The Use of Beeswax

Beeswax can be of great help in hand sewing. It not only strengthens the thread, but helps to prevent (though not entirely eliminate) the knotting as mentioned above. This product comes in pre-molded form, often backed by a ribbon for mounting on a chatelaine<sup>3</sup>. Most commonly it is sold in a round plastic container with slits for running the thread through the wax. **Never use bees wax to coat flosses or yarns.**

Use it lightly and carefully, Do not coat the thread thickly. Once through should be enough.

You won't want to use it in all sewing situations, but it is handy to have. Since it is wax, you should avoid using it in situations where it might harm fabrics, such as silk.

The sticky wax draws dust and grime to its surface quickly and easily. Try to keep it clean by tucking it away when not in use.

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<sup>3</sup>**Chatelaine:** From the French word for head mistress of the castle. She wore about her waist a chain or belt on which were affixed the necessary keys of the household. The term has been borrowed by seamstresses to mean the neck ribbon on which are attached the tools for sewing. More rarely, the seamstress's chatelaine is attached at the waist.

## Embroidery Threads

At the present time, embroiderer's are lucky to have a multitude of thread choices. Like sewing thread, embroidery threads (or yarns as they are sometimes called) come in a variety of materials: cotton, silk, linen, rayon, wool and blends of these fibers. In addition, they come in diverse plain colors as well as variegated. These shaded threads can be subtle or bold, depending upon the manufacturing process. Many needleworkers love to work with the silk threads, as they are perceptibly smooth and feel wonderful in hand.

It must be noted, however, that although we have a vast array, threads on the current market sometimes do not replicate the threads available in previous centuries. It is impossible to work exact copies of some of the fine embroideries that were once accomplished simply because we do not have the materials.

Most beginning embroidery projects use two types in plain colors: cotton floss (mouliné, often called stranded cotton) and pearl cotton (coton perle). Both have a lovely soft sheen. As your experience widens, many other threads are available, including metallics (some with pure gold and silver plating); flat silk threads; broder cottons (non-divisible) used for cutwork and other specialized embroidery; and highly twisted silks and rayons. Some of these threads are quite shiny.

Floss, a two-ply thread, is sold in skeins. A skein is a looped amount of floss. The amount is set by the manufacturer, and is usually 11 to 18 meters. The floss is in a bundle (stranded) which must be stripped to individual threads (see page 13). These bundles can contain as few as four strands or as many as 12.

- Common cotton floss (Anchor, DMC, Madeira) is sold as six-stranded floss and is a medium twist. Because of environmental concerns, the dye process was changed during the early 1990's. For this reason, newer colors may not match older skeins you may purchase, have on hand from an old project, or locate in antique shops. Prior to this time, dyes were very stable, and bleeding was rare. Certain dyes are now more prone to running, especially in the cheaper brands of cotton embroidery threads.
- More tightly twisted thread, which can be cotton, rayon or even silk, is a single strand sold in skeins or balls. Sizes for pearl threads are from 1 (largest) to 12 (finest). Some silks are sold in denier weights<sup>4</sup>, 1000 being the smallest. Rayons of this type are often sold by name, rather than weight (such as Lola). Tightly twisted threads have many uses for embroidery and trims. Brands and types are different.
- Tapestry floss is a non divisible floss currently available in the U.S. in size 4 to 18. It is a chunky

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<sup>4</sup>Denier is a unit of fineness for silk, rayon, or nylon yarn equal to the fineness of a yarn weighing one gram for each 9000 meters.



floss used for padding, general embroidery, or canvas work<sup>5</sup>.

- Other threads with many uses in embroidery are the non divisible broder<sup>6</sup> which come in sizes 12 to 40. Size 40 is slightly finer than one strand of cotton floss. Only size 12 and 16 are readily available in the U.S. and are generally called cutwork thread. If looking for these threads, the European or Australian market has other sizes available, and a few U.S. retailers carry them. These threads are the most beautiful to use in whitework.
- Floche is a multi-ply cotton thread, pre-cut in useable lengths or hanked, which comes in many colors. It is similar to broder threads but not as strong. It is used by smockers because it can readily be flattened for smoother results. A master smocker will often iron it flat prior to stitching.

### Thread Terminology

Fibers are the base material of all threads – the smallest components. Threads are made up of **individual fibers** – or long filaments as in the case of silk – which are spun into long lengths (many thousands of feet). After spinning, they are a **ply**. Different threads have differing numbers of plies which combine (are twisted together) to create a **strand**. Strands are what you use to embroider or sew. Sewing thread, crewel wools and flosses are two-ply threads. You can't separate these plies, for each is too weak on its own and would shred quickly.

Sometimes thread has more plies, which increases the diameter. In other words, makes it fatter. Tapestry cottons, floche, broder and tapestry wools are examples. Like floss or sewing thread, you can't separate the plies, but use them just as they are.

No matter the number of plies, the end result is called a strand. If you are purchasing floss, more than one strand is bundled together. In most cases you must separate (strip) these strands. The reason you separate them is because they are twisted around each other. You won't get a smooth surface if you don't separate them. You will strip the floss for the required number of strands and then place them back together to act as one. You needn't strip floss when you are using it like tapestry cotton: for the bulk. Examples would be chunky border stitches or for padding.

In fine embroidery, one strand is normally used. But in coarser (chunkier or more bold) work, or to provide greater coverage (as in cross stitching) two or more strands can be combined. Sometimes special threads are combined with a single strand to create sparkle or color combinations. It is not unusual to see rayon or metallic threads combined with floss to add pizzazz to a single motif or an entire

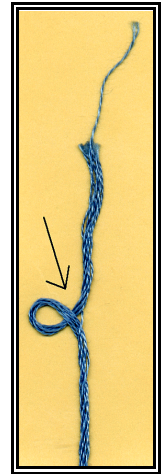
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<sup>5</sup>Canvas work is also known as needlepoint. The term needlepoint has to do with lace making. Needlepoint is also termed *tapestry* in other countries. The scope of this work – on a special mesh ground (canvas) – currently encompasses a wider variety of stitches and techniques. The term canvas work (or canvas embroidery) is now being used by knowledgeable authorities in this class of embroidery.

<sup>6</sup>The word broder is French for embroidery. These threads come in hanks which must be untied and cut for use. They are used as – is from the skein.

embroidery.

**Stripping Multi-Strand Floss.** Stripping is accomplished by first cutting a length of floss, grasping it fairly loosely with your free hand (at the arrow), and pulling out one length with your dominant hand. As you pull, your free hand moves in a downward motion. The strand comes free without tangling when done in this manner.



Stripping  
floss

**How Much Length to Use.** Whether for sewing or embroidery, cut lengths of thread approximately 18 to 20 inches. This is about equal to a point from your fingertips to your elbow. Thread wears out quickly and loses its sheen, and longer lengths can give you more knotting problems. You can cut longer lengths for basting, drawn fabric<sup>7</sup> or drawn thread<sup>8</sup>, and lace stitches.

**More About Thread.** When the sewing machine was first invented, it didn't work very well, and jammed frequently. Sewing thread, at the time, was twisted in an "S" formation. That is, the two plies put together to form the thread were twisted in a direction which looked like the letter **S**. Inventors soon learned that if they twisted it in the opposite direction (**Z**-twist), it stopped jamming. To this day, sewing thread, be it silk, cotton, rayon or linen, is **Z** twist. Flosses and yarns are **S** twist, with the exception of rayon and a few silks, which are also **Z**.

Perhaps because of this twisting coupled with the jamming which was occurring in machine sewing, seamstresses began to believe that thread should only be placed in the needle a certain way or it would kink, knot, fray and cause all kinds of problems. We now know from expert textile engineers that this is fallacy. However, the myth is still perpetuated. Thread, floss and yarns are twisted in such a fashion during the manufacturing process that they are a **double helix**. This means that they are identical no matter which end is used. The process of manufacturing the individual "plies" that ultimately become twisted together to form thread is done in such a manner that there is no direction to any of the minute fibers. Indeed, they go every which way. Even expert hand spinners attest to this fact, since, although it is theoretically possible, the likelihood of all of the individual fibers needed to spin thread being all in the same direction is not humanly possible under most circumstances. Also, as thread comes off a machine it is wound in cones. From these cones, skeins or hanks are made - reversing the leading end.

So, as you are struggling to perfect your skills, take no note as to which "end" of the thread goes in the needle. It doesn't make a difference. In fact, the bobbin on your sewing machine is wound in the

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Also called "pulled work". Its usage comes from the definition of draw, i.e. to shrink or pucker or to change shape by pulling or stretching. Embroidery wherein ground threads are pulled together to create interesting patterns and textures, often accomplished within a motif which has been outlined in embroidery stitches.

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Drawn thread: embroidery wherein specific ground threads are cut and withdrawn from the fabric to create a grid for darning, needleweaving, pulled work etc. Often used in hems. Also referred to as drawn work.

opposite direction. If direction made a difference, the machine wouldn't work. Also, be wary of authorities with graphics which show microscopic "fuzz" all going in one direction on a length of thread, floss or yarn. Examination under a strong hand-held magnifying glass or microscope will prove this is without merit. The fuzzy fibers go every which way.

The most common cause of kinking and knotting of floss and thread is because of the leading thread: the short, free end that comes through your needle's eye. This end wraps around the longer piece and "catches". It is unclear whether static electricity exacerbates this problem, but may be a factor in some instances. The leading end also frays out from the abrasion of sewing/embroidering, so snipping it off helps. It is also quite true that the twisting of threads as you make your stitches creates the problem. Some stitches lend themselves to this over or untwisting, and some stitchers have learned to twist the needle in the opposing direction with every stitch. But if you do this too much, you can also make the problem worse, since there is no way to determine exactly how much of a twist (or untwisting) you are doing with each stitch you place. The best method is to frequently let your thread hang loose. If you have let it go too long, you will see it spin quite rapidly back to its natural manufactured state.

There is a product currently on the market called *Thread Heaven* which is suppose to make thread more manageable. You may wish to experiment to see if it works for you. The manufacturers insist that it has been tested rigorously, including subjecting it to conditions which mimic the aging process. However, it is best to avoid using these types of products on any keepsakes you may stitch until they are proven safe.

Even when taking the utmost pains, your thread will become ragged, and lose its sheen. As you embroider, watch your thread. If need be, start a new length. The difference in your finished embroidery will astound you. Lastly, remember that the frustrations encountered while sewing and embroidering are a part of the whole process. It is inevitable that thread will knot. You can be absolutely certain that the rigors of either task will take its toll on threads. How fast that happens depends upon the job at hand. That these inconveniences arise isn't because you are necessarily doing something wrong. It is just a part of the pursuit.

### Needles

**Needle Types.** Sharps and betweens will be your companions as you sew. These needles are similar in size and appearance: both having a round eye and sharp point. Betweens are shorter and slightly fatter than sharps of the same size.

For embroidery, all needles shown are used. The most often used in this series of booklets are the crewel needles. Also called embroidery needles, they are the same as sharps, but have a long oval eye. This makes it easier, in most instances, to thread with embroidery flosses and yarns. Betweens (the smaller sizes often referred to as quilting needles), are handy for some tasks, such as padded satin

stitching. Chenilles are used for wool, ribbon, tapestry and chenille<sup>9</sup> threads, while straws (also called milliner) are typical for the bullions so often seen in embroideries such as Brazilian and smocking embellishments.

Not shown in the previous illustration is a beading needle. These are very fine needles with tiny eyes which are difficult to thread. They come in varying lengths depending upon the type of beading you will be doing. A number 10 between works quite well for No. 11 and No. 12 (petite) beads should you wish to incorporate them in your work when you don't have a beading needle handy.

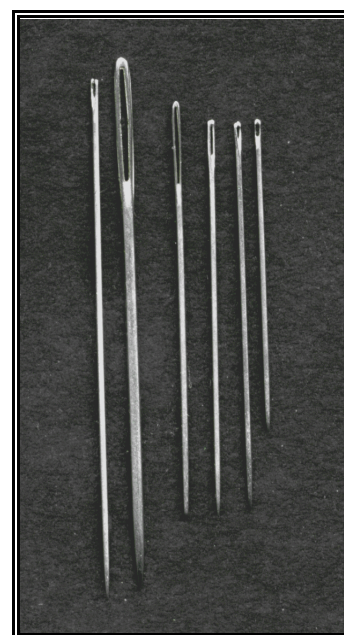
Another serviceable needle for sewing and embroidery is a tapestry needle. These are a hybrid of chenille and crewel, and have a blunt point. This rounded end helps avoid piercing fabric threads, as you can push them out of the way with the tip when necessary. A great tool for many tasks, it is commonly used in counted embroideries such as cross stitch, Hardanger, pulled thread samplers and needlepoint; or, for embroidered laces (needle lace). Some find it beneficial for use in hemstitching and pin stitching<sup>10</sup>.

Always purchase the best needles you can afford. Cheap needles dull quickly, bend and tarnish easily, can have burs at the tips, and often have substandard eyes, making threading a problem. Excellent brands are John James, Hemming, Piecemakers and Colonial. A trick to learn, if you have trouble threading a needle, is to turn the needle around. The stamping process<sup>11</sup> makes the hole larger on one side than the other.

To keep needles free of burrs, as sharp and clean as possible, purchase an emery. The most common is called a **strawberry** and usually comes with a matching **tomato** pin cushion. The strawberry is filled with emery — a fine metal (corundum) used for polishing and grinding. You use the strawberry by piercing it several times with the needle; moving the needle around and in and out until it is again sharp and has a nice shine.

**Needle Sizes.** Like thread, the higher the number, the finer the needle. You will use a No. 7, 8, or 10 sharp, between or crewel for most sewing and embroidery tasks. Make certain you have a good supply in those sizes.

It is also necessary to have sizes 24 through 28 tapestry needles. Size 28 tapestry can be difficult to locate, but if you have a source, it is well worth it to purchase them. Chenille needles size 22 to 26



From left: straw, chenille, tapestry, crewel, sharp, between

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<sup>9</sup>Chenille thread is thick and fluffy thread which resembles a pipe cleaner or the tufts of chenille bedspreads.

<sup>10</sup>Pin stitching is a drawn fabric technique used to apply appliques, at a hem edge, or to create fancy corded lines in embroidery. Hemstitching is a border of withdrawn threads at the hem edge. The remaining threads are manipulated to create many different fancy designs.

<sup>11</sup>The manufacturing process for creating the holes in needles.

accommodate most wool and perlè threads.

**When to Use Which Needles.** Choose a needle with an eye large enough to accommodate the thread. If the eye is too small, it can cause abrasion on the thread, making it fray and lose its strength. A needle the right size may be difficult to thread. So, don't use that as your criteria. If, once threaded, there is room for the thread to move about freely (space all around), it is sufficient in size. If the eye is too large, the thread will slip out too easily, causing you consternation.

The length of the needle can be helpful in keeping stitches even and tiny. Sharps are good for basting, running stitch and general embroidery. Betweens are work horses, used for heavy tasks. In the end, this is another case for experimentation. There are really no hard and fast rules – just guidelines. I was taught to use a 10 between for hemming because it helps to keep the stitches tiny. Research indicates this is not a good use of this needle. However, it works for me. Some people are taught to use crewels for padded satin stitching, and others suggest firmly to use a between. If you are having difficulty, switching needle types may be the answer for you.

In addition, the size of the needle is determined by the ground fabric. The needle must be large enough in diameter to permit a hole large enough for the thread to go through it comfortably. This helps stop excess abrasion. The coarser the ground fabric, the fatter the needle.

## Needle Threaders

These are handy devices to eliminate some frustration. There are several on the market, all of which have a thin wire loop which is inserted into the eye of the needle. The thread is then placed through this wire loop and pulled back through the needle's eye. There are inexpensive ones that have wire attached to a circular piece of thin metal. They don't last long, but you can purchase quite a few at very low cost. The more expensive ones (called a Dololly®) have a long bar next to the loop which aids in getting the loop through the needle's eye. They can be attached to a chatelaine (see page 8) and last a long time. Choose the device that best suits your budget.

What about wetting the thread? Some stitchers are very sensitive about the issue of using saliva as a means to tame the floss end and thread a needle without the need of a threader. Some needleworkers use a dampened sponge as an aid. But this can become quite germ and mold laden if not thoroughly washed each day.

The concern in these instances is the possible deleterious effects of saliva over time. It is thought that it may break down the fibers of both the ground and the floss. I have spoken with laboratory clinicians about the effects of saliva on fibers. There has not been proven examples of long-term damage to embroideries or hand sewn items, but I mention it here as a remote possibility. If you wash your projects when finished, there is no need to worry about saliva causing damage. It will be thoroughly removed, and has not been on the project long enough to cause any future damage. Researchers have indicated to me that it is a highly unlikely cause of fiber damage, but is theoretically possible if given ideal conditions not normally encountered in everyday life. The more likely cause for deterioration would be some bacteria that might possibly be in your saliva. But since bacteria can't survive long without the proper medium to reproduce – in this case moist body heat – this is also a very remote possibility.

Again, if you wash your projects, there is no need to concern yourself with either saliva or bacteria. You may hear about this from teachers and other stitchers. If so, simply listen and do what is most comfortable for you.

**Other Methods.** A good strategy is often employed by wool embroiderers, but it is easier using chenille needles with wool threads than with tiny embroidery ones. Wrap the thread tightly around the eye of the needle. With your thumbnail, while the floss is still wrapped, make an indentation into the eye. Squeeze tightly and pull the thread up away from the needle. Still holding the folded thread, try pushing it through the needle's eye.

Some needle workers maintain that bringing the needle to the thread is easier than pushing the thread into a steady needle.



Plain threader and Dololly®

All of these methods produce good results, and each hand worker should decide which is most beneficial. If one method fails, try another. Try the different techniques with different threads. Make certain the eye is large enough to accommodate the thread. Some days nothing seems to work right. Don't let threading a needle come between you and the absolute joy and wonder of handwork.

## Scissors & Shears

These are highly important tools that can cause much confusion as to which type to purchase and why. You will need at least two pair. As with needles, purchase the very finest you can afford. The better ones will hold their edge longer. Be certain that the blades close snugly against each other and cut easily all the way to the tip. This is extremely important and cannot be emphasized enough. Many a project is ruined with poor cutting tools. Surveys<sup>12</sup> of experts in the field of sewing and embroidering recommend most often the Gingher or Solingen brands.

**Embroidery scissors.** Three- or four-inch, having finger holes of equal size. These are used to cut small areas of fabric and the threads and flosses used with these fabrics. Pictured on page 24 are two examples. The gold-plated example is a wonderful scissor that has very fine points and can snip threads without snipping the ground.

Scissors should fit comfortably in your hand, and have very fine points and thin blades. Thread scissors are heavier weight than those used for embroidery, making them perfect for cutting out small pieces of fabric and quickly zipping along a pulled thread line. Although they serve a useful purpose, if you can only afford one, and your purpose is embroidery rather than hand sewing, purchase the finer embroidery scissors.



Thin-bladed sharp embroidery scissors  
and heavier weight thread scissors

Along with fine, small scissors, you should also have eight-inch dressmaker **shears**. Shears are larger than five inches and have unequal sized finger holes: a small one for the thumb and a larger one to accommodate your remaining fingers. Blades can be straight or bent (the handle is bent at an angle away from the blades). Eight-inch bent dressmaker shears are the most common size. Use shears for large cutting projects. Dressmaker shears are used to cut large amounts of cloth in a host of weights – from velvet to organdy. Bents are preferred by many sewers, as they allow you to cut fabric around patterns without a lot of distortion.

Use your scissors or shears only for their intended use. Don't cut anything but fabric and thread, no matter how tempted. Keep them away from other members of the household who might not understand their value. Purchase cheap scissors and shears to keep handy for other tasks. Your prized possessions will keep their razor sharp edge longer (requiring less maintenance) and not become permanently damaged by cutting wire (no matter how fine), paper or plastic. Keep them out of harms way to avoid breaking the tips or loosening the screw that balances the blades. Periodically oil the screw with a drop of fine weight sewing machine oil to keep them working longer and inhibit possible rust. Wipe off the excess prior to using them. Be sure to do this if you store them for long periods.

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<sup>12</sup> Threads – Taunton Press, November 1999 No. 85



When your scissors need sharpening, you will need to find a professional who can grind them back to perfection. A person who owns a cutlery shop usually has the skills needed to hone blades to perfection, and some fabric shops hire skilled craftsmen who can also do the job. If in doubt, get references. Good scissors and shears are expensive.

## Thimbles

It used to be that no self-respecting needleworker would be seen working without a thimble. In schools and industry across the globe, students were not allowed to work without using a thimble. So, is it necessary?

Even amongst avid thimble users, the use of a thimble is relegated to “sturdy” work. Heavier linens, tailoring, multiple layers of fabric. Thimbles aren’t normally used for finer cloths. The use of a thimble also depends upon your point of view. If you love the tactile sense of cloth, and need to *feel* where you are, then a thimble can be cumbersome. But if you have tender skin and don’t want to bleed all over your work (until callouses form), you will need to adjust to one, even on finer fabrics.

**What to do if you decide *not* to use a thimble?** Well, you will probably spill a drop of blood on occasion. And your fingers will get sore until they are calloused. Even then, callouses can be broken (and often are), depending upon the work at hand. If your fingers are sore, use a small piece of bandage until it mends. That usually diminishes the discomfort to a great degree. If a drop of blood stains the fabric, immediately dab it with a solution of isotonic saline<sup>13</sup>. This can be purchased at any pharmacy. This solution will dissolve all traces of blood components. Some women will dab with saliva, which also seems to make the stain disappear. But it does not remove all traces of the blood. Just those you can see. What remains usually comes out when giving the item a final washing. But if you reject the idea of using saliva, saline works even better.

**How to Use a Thimble.** A thimble is used to push the needle through – after the stitch has been taken.

In the U.S. and many other parts of the world, a thimble is used on the middle finger of the dominant hand. However, in parts of India the thimble is used on the second finger of the non-dominant hand, and in Tibet it is used on the index finger of the dominant hand. In some cultures, more than one thimble is used.

There are many types of protectors beside the customary metal thimble. Leather sheaths are often used by quilters, and adhesive pads are now available. Again, experiment, and don’t give up the thimble with your first awkward attempts. It takes times to master the tools of the trade.

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<sup>13</sup> Isotonic saline: 0.9% salt [sodium chloride] to water. Contact lens cleaner or saline nasal spray are good examples.

If you chose not to use a thimble, a strip of adhesive (or an ordinary band aid) will help sore fingers. In some sewing and embroidery situations, the ground fabric is of such a weave that pulling a needle through can be a chore. A small needle-nose plier – or even tweezers – can be of great benefit.

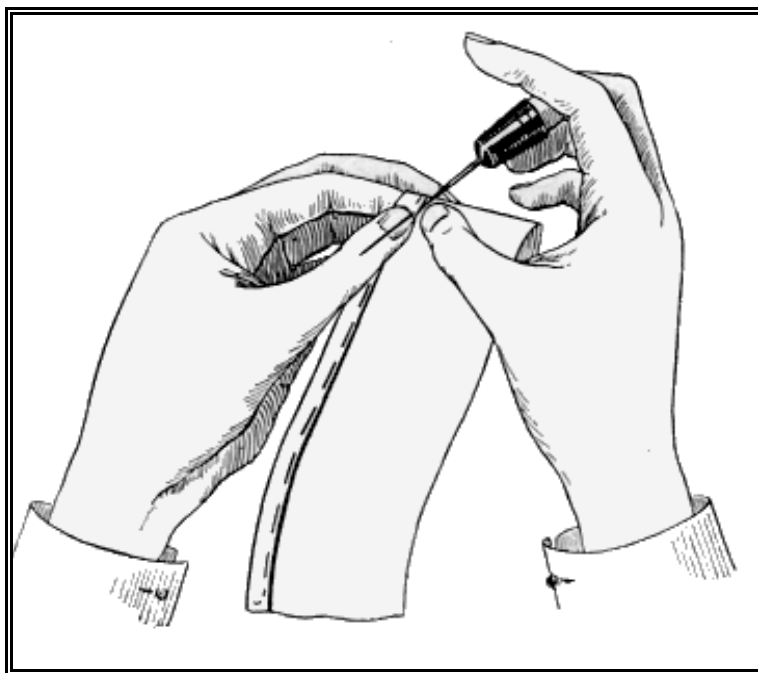


Illustration courtesy of Melissa Roberts  
*Plain Needlework* - Hollis & Bell Publishing.

### Sewing Birds

Prior to the mid nineteenth century, hand sewing was accomplished by pinning a portion of the material to a cushion. This cloth cushion was attached to a heavy base which was set on a table across from to the worker. Charles Waterman, in 1853, patented the first sewing bird. You can now obtain reproductions. Clamped to the edge of a table, the beak serves to hold the cloth tightly. On very delicate fabrics, a small velvet cushion is available on which to pin the fabric. Newer models, shown at left in the illustration, act in the same manner, without a pinning device. The gentle tips hold any type of fabric without harm, so a cushion for pinning is not necessary.

Both types of birds are available, the modern adaptation being considerably less expensive. This model was made by Clover.

These are almost indispensable for hand sewing long lengths of cloth, but aren't needed for smaller lengths. It helps to keep the fabric taut, perpendicular to the worker, and make the work progress more quickly without fuss. If your budget doesn't permit including it, you can use a chair seat cover or arm of chair or sofa on which to affix one end of the fabric. Or, you can devise your own table



**Modern (left) and reproduction sewing birds.**

model. Fill a small, heavy cannister (such as an old heavy brass container) with builders sand and place a fabric cushion inside on top of the sand so that a portion rises over the top of the container. Use a straight pin to anchor your fabric on this cushion.

## Hoops and Frames

There are many types of frames: hand held, tambour, stretcher bars, scroll frames, lap, slate and large floor frames. Frames are used for items that must be kept taut. This includes embroidery for drawn work, canvas work, and even large and complicated cross stitch or free-embroidery designs. The fabric is normally left on the frame until all the embroidery is finished. Which frame you use is a matter of personal preference, or the type of embroidery you are working. Slate frames are used in gold work or pieces with large areas of drawn work, for instance. Stretcher bars allow you to have different lengths on hand, and you tack or staple the work to them. If you are working a large embroidery with more than one person, you might even have to specially commission a frame. Those from various manufacturers have different qualities and features. When you get proficient enough to require framing your work, you will have to do some investigating to get the features you want at a price you can afford.

A small 4- or 5-inch hoop is a good all-around size to have on hand. Wooden hoops are inexpensive and quite suitable. However, cheap ones will not last long - as the threads of the screw strip easily, rendering the hoop useless. The wood is weak and breaks at the hinge joint. The deeper the depth of the wood, the tighter your work will remain for longer periods.

You will also find metal and plastic hoops on the market. In prior centuries, metal hoops were common, with just a slit for expanding. Both were bound to keep the embroidery clean. You can still find metal hoops, and many treasure them. Most often, you fall in love with whatever hoop on which you first learned because you are familiar with its idiosyncracies.

For a wooden hoop, wind cotton twill or bias tape around the inside hoop only, securing the ends with ordinary sewing thread. Ordinary 1-inch strips of torn muslin will do just as well. Polyester bindings attract dirt, so it is best to stay away from them. The binding will ensure a tight fit. Remove and rebind when soiled. With some high-quality hoops, the binding is unnecessary. Especially when using heavier-weight grounds. If your hoop isn't keeping the fabric taut for long periods, binding helps.

A good habit to develop: ***Always remove the hoop when you are finished embroidering for the day.*** Fabric and embroidery may become permanently skewed. If you follow this rule you won't run into trouble. But I must say that I have been embroidering for years and never encountered a problem with hoops remaining on the work – sometimes for weeks. However, there are some situations, particularly with coarser even weaves and some satins or silks, where you might find trouble with hoops leaving indentations in the fabric which are almost impossible to remove. Be on the safe side and remove your hoops, or make sure the hoop is outside the area you will be cutting out and using.

***Not all embroidery requires a hoop. However, if you choose not to use a hoop, as you stitch, you must use your hands to stretch the fabric, in some situations, to avoid puckering.***

Lots of embroidery can be done sans hoop. Particularly stem stitches, padded satin, chain, as examples. These stitches are done with a sewing method (see Part Three, page 13). They are easier to

do without a hoop. However, you can use a hoop if you prefer. You will need to loosen the tension, however. Don't have the fabric drum tight.

**Placing fabric in a hoop.** For most free-style embroidery, when a hoop is required, it will be the typical round hoop associated with embroidery. When you need to have fabric very taut, there is a good method for achieving this.

Place the fabric on the inner hoop. When the design is centered, place the top hoop on just about half way. Tighten the screw *slightly* and make adjustments to the fabric so that there are no wrinkles and the fabric is lined up squarely. Tighten the screw a little more and push down the outer hoop all the way. If your fabric still shows signs of loose areas, start the process again, or loosen the screw a bit and straighten the fabric. When everything looks good, tighten the screw as much as you can, using a screwdriver, if necessary.

Do not attempt to straighten the fabric when the top hoop is tight. To do so can cause damage to some fabrics. Particularly the finer weights such as lawn or batiste. If you need to readjust your fabric, take everything apart and start again. Remember that you can embroider most things when the fabric is not drum tight. The only time you need it stretched taut is for drawn thread work or satin stitching, where the least slack might distort the final work, as the threads may be tighter than the cloth on which they are stitched. Even then there are modest remedies.

For moderately puckered embroidery, usually a good washing and steam ironing will be sufficient. If this does not solve the problem, you can thoroughly wash the fabric and pin out securely with rust-proof pins as tightly as possible so that there are no visible puckers. While quite damp, steam press. Before the item is completely dry (that is, there is steam and heat still remaining in the embroidery), place a heavy item atop, such as a thick book. Let it sit overnight.

Embroideries should always be pressed face down on a doubled or tripled Turkish towel.

## Tracing, Pencils & Techniques

I have thoroughly tested all of the products mentioned below. There are advantages and disadvantages in each. Read carefully and choose the method which best suits your needs and final outcome. Blue water soluble pencils can bleed on the fabric - creating a wide, feathered line which is quite unsuitable because it leads to wavy or imperfect lines in motifs or stems. The embroiderer is constantly wondering where next to poke the needle.

**Please Note:** Blue soluble pens can fade in time. It might take a few months, however. Bear this in mind when working on a project.



Felt-tip pens are the poorest in this regard. When purchasing, opt for the fine line pens (bottom right above). To prevent this, you can starch your fabric prior to tracing. Not all fabrics can be starched (silk or satin can be permanently marred by starch). The best advice is to test a scrap of fabric first, making certain you can wash it and that the starch will not harm it. Test on a large enough piece for accurate results, such as a 5-inch by 5-inch square.

There is some controversy regarding the long-term effects of these blue soluble pencils. The dyes were reformulated about ten years ago, and the manufacturer insists they will completely remove with water. However, some stitchers still claim that the dye is reappearing some months later when only water is applied. As long as you wash the article in some manner using a soap or detergent, you will have no problem. I have been using these pens for years and have personally never had a problem when thoroughly washed.

A further note of caution is prudent here. Markings must be completely removed with plain, water prior to laundering. Rinse with cool water thoroughly. Some laundry products which contain more than 3% sodium hydroxide or more than 5% sodium carbonate can cause the marks to turn a brownish color if they are not removed before laundering. I have experienced this problem with the newly reformulated Clorox-brand bleach.

Also, never iron any transfer markings using any materials (other than iron-on ink). The markings are “set” by this method, even the soluble ones.

No. 2 and HB pencils (graphite) have been used successfully by some embroiderers. **Do not** use

these pencils on silk fabrics or when using silk floss. The flakes of graphite can become embedded and be impossible to remove. I have personally had this problem and lost hours of work as a result. I have also done tests to make certain it wasn't a one-time event. In every case the piece was permanently damaged. Since you cannot use bleaching agents with silk, leave the graphite pencils for other tasks.

In spite of advice to the contrary, many embroiderers, including myself, have had problems removing graphite markings – even on cottons. They smudge as you work, spreading the graphite flakes. If you opt to use them, make certain it is sharpened, and only use on starched fabric. You will have better luck removing the pencil marks. Only use it in areas that will be completely covered by your embroidery.

A very good choice is a Dixon blue chalk pencil. You do not have to starch your fabric. Keep a sharp point as you trace, for a smooth, thin line. The disadvantage of this pencil is its tendency to smudge. You may have to remark areas as you work. This chalk pencil will remove readily on all fabrics – although it might require a good 20-minute soak.

There are transfer pencils available which allow you to trace the design and iron it onto the fabric. Again, the problem of wide lines comes into play. On very fine embroidery, your floss won't cover the lines. They can be permanent, or difficult to remove. If you choose this alternative, test it first. The heat required to transfer the design might damage your fabric.

There is also ground chalk, which is used with a fixative. This is used on either pre-pricked designs, or designs you prick yourself with a chenille needle. To make an authentic mixture:

Purchase some powdered charcoal from an art supply store and a cuttlefish bone in the bird section of a local supermarket or pet store. Place it in a heavy plastic bag. On a suitable pounding surface (cutting board or cement block), break it up finely with a hammer or smooth surfaced meat tenderizer. Continue to powder with a heavy rolling pin. Sieve to retrieve only the finest particles. Combine with the charcoal in the proportions appropriate to your project; i.e. color of ground.

An old method, in which I have had good success, requires a bit of fuss, but is invaluable in some circumstances. This has been tested on cotton and linen. It washes out completely after embroidery.

You will need:

1 heaping teaspoon sugar (white granulated)

1 teaspoon boiling water

Dissolve sugar in water.

Add bluing until desired color is achieved.

☛ Place tracing paper (smooth such as vellum) over the design and trace with a pencil.

- Turn the traced design over. This will allow you to iron with the design a mirror image.
- With a fine camel-hair brush, trace using the brush and bluing mixture. Make your tracing as fine as possible.
- Allow to dry thoroughly. With a dry iron (no steam), iron this “transfer” onto your fabric of choice. Don’t leave the iron on too long. Do a test piece first. If some yellowing occurs on your test piece, it is because you are leaving the iron on too long, or the iron is too hot. Adjust settings and time on your test piece before doing your actual article.



## How to Trace Designs

### Materials:

- ✿ Tracing paper. Depending upon your light source, you may not need tracing paper.
- ✿ Pen or pencil – see preceding discussion.
- ✿ Masking tape
- ✿ A sunny window or light box. A light box is easier to use, but quite expensive. If you do this often, you may wish to purchase one or build your own. It is simply a box (back higher than front) with an ordinary light bulb (fluorescent or incandescent) with a glass or Lucite (clear plastic) cover. My light box: A desk drawer used when necessary. A \$5.00 under counter light placed in the drawer. A large piece of glass from an old picture that fits the top of the drawer. It is easier to trace on this surface than a window - but I use a window more often because it is handier.

Tracing Design to Fabric. Trace the design on tracing paper (if desired). The hatch markings in some patterns are not part of the design. These will help you center and place your design on fabric. With the masking tape, tape the design to your window or light box.

Always do your embroidery before cutting your fabric. If working quilt blocks, leave at least two inches of fabric beyond total design area. Decide where you want the design (such as a skirt). At the center of that area, fold the fabric in half, open and fold in half in the opposite direction. Use these fold lines to guide you in lining up the fabric to the design. Using straight pins, pin fabric to the design in several places. With your preferred pencil, trace the design.

If your fabric ravel easily, you might want to overcast the edges. You can do this by hand, practicing your hand-sewing skills with either a buttonhole stitch or overhanding (whipping, see page 99). You can also use a serger, or the zig zag stitch on a normal machine.

Masking tape was used in the past, especially for canvas embroidery. However, it was discovered that the adhesive crept into the fibers of the canvas and threads, long distances from the tape., thus deteriorating the work. You can safely use masking tape for quick jobs. It will remove readily with a quick soak in water. But don't use it for long-term projects.

**Tracing Designs to Plush Fabric.** Velvets, Turkish toweling and some wools demand an alternative procedure. You cannot trace directly onto the fabric. For velvet, trace the design onto the back (smooth) side with any pen, chalk or pencil which will be readily seen.

If that is not possible, for instance on very dark colored velvets, use the prick and pounce method. If your design is not pre-pricked, you can do it yourself with a chenille needle by pricking every quarter inch or so along the pattern lines. Pounce using a commercial mixture, or make one yourself following the recipe given at the beginning of this section.

You won't ruin the velvet in this process. With needle and contrasting thread, stitch running stitches along the marked outlines. These needn't be tiny stitches. Make the stitches large/small enough to follow nice curves.

You can stitch a back stitch at the center of some areas – such as a bullion rose – rather than stitch the entire outline. Most stitching on velvet is quite undetailed, and the process of stitching the outlines is usually quick. For other plush fabrics such as wool, use the above method or the following alternative:

Pierce the design lines with a chenille needle, punching about every quarter inch (5mm). Pin the design on the fabric and with a black or blue fine-point pen, pierce the design lines and mark at the same time. Only mark those areas that you need to mark (such as the centers of flowers, or a dot for each petal), referring to the pattern to fill in small details without marking them.

A blue soluble pen doesn't work well on wool, but may work sufficiently for you to work the design. It will depend upon the design's complexity. There are other methods which you may encounter, but these are ones I have tried and used successfully.

**Tracing Designs to Dark-Colored Fabric.** Some dark fabrics are transparent enough to trace the design. Using the chalk, you can trace all the details. If this is not possible, you can employ the method for tracing on plush fabrics by pre-punching the design. For the pencil, use a tailors chalk or Prisma® white (or light colored) pencil. You will have to discover which color will show up the best. For quick designs, I have used a piece of sharpened soap. Or, you can prick and pounce using a commercial mixture and dabbing it with felt over the pricked design, or use the recipe given.

As in all of these tracing methods, you may occasionally have to remark the work as you progress with the embroidery.



**Schwalm Embroidery**